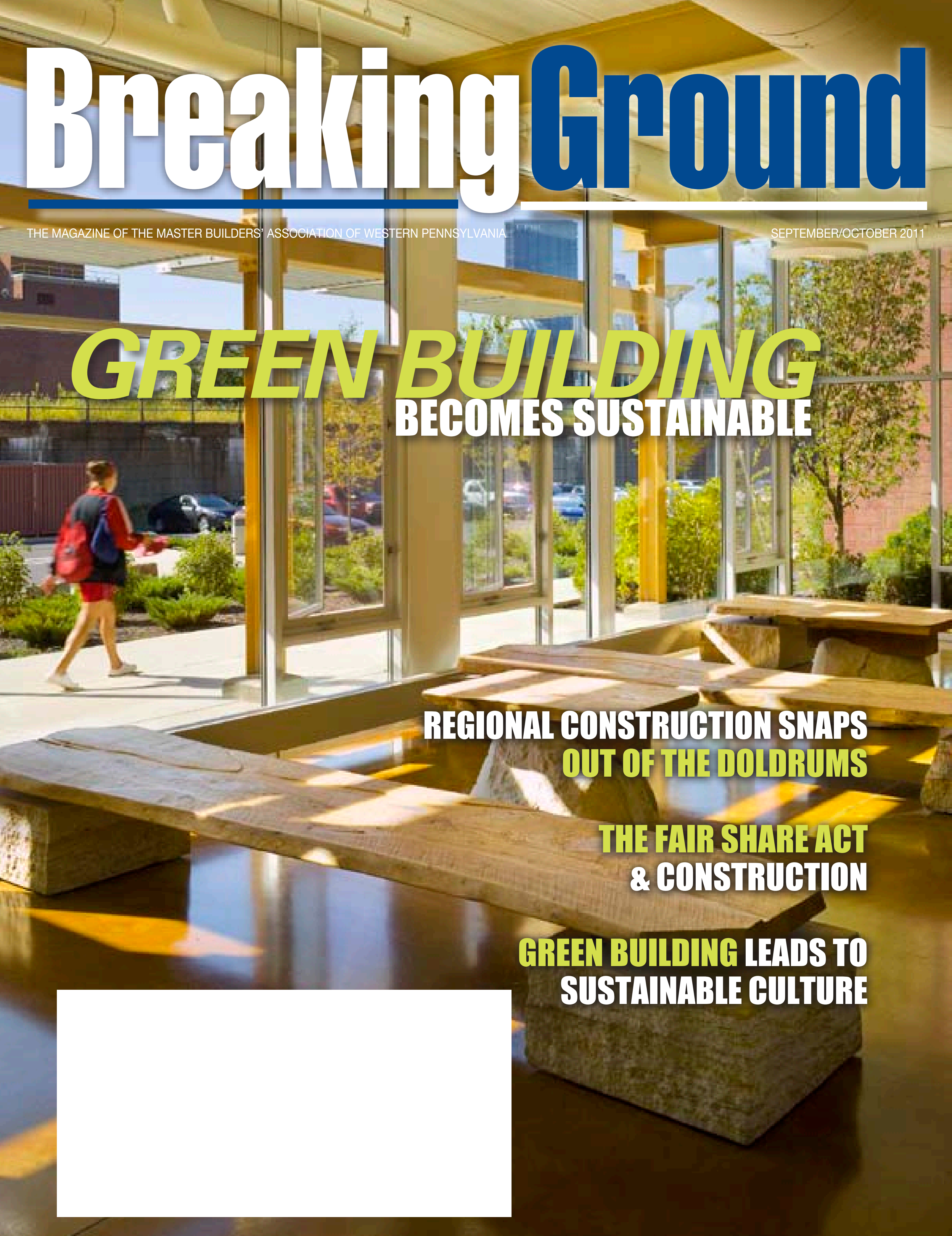
Breaking Ground

THE MAGAZINE OF THE MASTER BUILDERS' ASSOCIATION OF WESTERN PENNSYLVANIA

SEPTEMBER/OCTOBER 2011



GREEN BUILDING BECOMES SUSTAINABLE

REGIONAL CONSTRUCTION SNAPS OUT OF THE DOLDRUMS

THE FAIR SHARE ACT & CONSTRUCTION

GREEN BUILDING LEADS TO SUSTAINABLE CULTURE

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MBA

Publisher's Note

The magazine just turned five years old. In mid-2006 I was still wondering what I'd do when I grew up after selling Pittsburgh Construction News when the Master Builders' agreed to let me try this magazine business. That seems like a long time ago and just yesterday. Those of you who watched Leave It To Beaver when you were young probably know what I mean (that's a middle age reference).

It seems very appropriate to me that our first edition of year six is an update on green building. In some ways the paths of *BreakingGround* and green building have been intertwined. In the fall of 2006 the green building edition was the first BreakingGround edition that was done from scratch editorially. Researching that edition gave me the opportunity to meet one Rebecca Flora and talk to a lot of smart people about what was going to happen with green building. Those people made us look smart when we wrote that green building wasn't a fad and would in fact be very mainstream within a few years.

Five years hence we are involved in a marketing partnership with the Green Building Alliance and doing our best to be a sustainable business. The company vehicle is a Prius, our second. Yes, that sets me up for a lot of grief from my business friends, one of whom says I've inspired him to buy one – as soon as Toyota puts a V-8 in one. This is not saving the world – just money – but it is the kind of small step I have heard a lot about lately.

At the start of the research cycle for the September/October edition I was expecting to have a feature article that talked about the next big things in green building and was particularly prepared to talk about the business case for LEED. While there was some of that the direction that the subjects took me was in the area of the cultural shift that green building has produced. It was fascinating to talk to so many business people who told me how focusing on sustainable buildings had led them to focus on running their business sustainably. So the focus of the article shifted to how green building had changed organizations rather than buildings.

I suppose I should issue a blanket apology to all those who have experienced a similar transformation of their organization but weren't one of the five that were profiled. It's obvious every day that many construction and real estate industry firms have changed their business after "getting" what sustainability is all about. By no means were the subjects picked by merit or volume. They were simply referred to me by someone else and their story was interesting.

Cultural transformation is what sustainability has grown into these days. While it's true that many more projects are not being done to achieve LEED certification, the acceptance of building green is growing exponentially. The advocacy groups like GBA seem to understand that they are approaching a point where mainstream acceptance of LEED standards is on the horizon. The advocacy community also seems to get the idea that pushing sustainability into daily living is the next mountain to climb.

Locally, GBA's Integrating Sustainable Culture program is designed to meet that challenge. They are working with three local manufacturers – Berner International, CENTRIA and MDI Companies – to take their commitment to sustainable living and working to another level. Aside from being an admirable goal the benefits of sustainability within an organization are pretty impressive. The companies that have made the journey talk about non-green concepts like reducing costs of operation and attracting and retaining bright people, especially bright young people.

During the preparation of this edition an icon in sustainability passed away. Ray Anderson was a successful executive in a carpet business that was operating in the traditional manner when he "got it" about green manufacturing. Ray heard some very nasty descriptions of his business practices in 1994 – like thief and plunderer – that made him particularly unhappy because he realized they were accurate. He decided to change the way his company operated and prospered fabulously from it. Ray passed away on August 9, 2011 in Atlanta and I'm sorry I never met him.

Sustainability is an important economic concept. The global economy seems weaker now than it did six months ago and that is causing a lot of fear again, but even in a downturn there are still more people consuming the Earth's resources each hour than the previous hour. When the economy does get growing again the resources will be that much more in demand. We have to ask ourselves now how much more consumption will it take before there are critical shortages of commodities like oil or fresh water or food. That humans would run out of resources was the subject of futuristic movies – usually bad ones – when I was younger. Now there are models that have such shortages occurring in my lifetime. Resources are a key to economic prosperity. Sustaining them would be a good thing.

Jeff Burd

REGIONAL UPDATE

A number of very important regional market influences continue to push the economy of Western PA forward during the summer of 2011, but none of them are now able to provide enough inertia to overcome the sense of renewed uncertainty about the global economy. As business moves back into a more normal mode after Labor Day and investors return from the sidelines, September may prove to be one of the most crucial months to watch since the fall of 2008.

From among the regional drivers the most influential on construction continues to be the industrial segment, especially the expanding natural gas industry. The downstream benefits of the Marcellus Shale are becoming more evident each month. The most direct impact on construction is the expansion of the 'midstream' stage of the gas to market process. Natural gas extracted from the western portion of the shale formation is wet gas, which requires separating the related gases and chemicals before distribution. Much of Marcellus wet gas is being separated at the massive Houston processing plant in Chartiers Township, which is being expanded again in 2011.

The other critical step in the process is compression to allow for storage and distribution. Compressor stations began popping up in remote areas throughout the Marcellus formation in 2009 and 2010. That pace has quickened. Compressor stations vary in size but most cost between $15 and $25 million to construct. Developer MarkWest is underway with two larger stations, the Welling Station in Buffalo Township and the Redd Station in South Strabane, both in Washington County. National Fuel Gas Supply has already proposed a $36 million expansion of the number of engines at Welling and a five-mile pipeline expansion. To the north a 31-acre site on Hartmann Road in Jackson Township north of the Seneca Valley High campus has been given municipal go ahead for Keystone Midstream LLC to develop the Bluestone gas processing plant, a 50 million cubic foot-per-day facility.

MarkWest is also wrapping up the approvals for an expansion of the rail system to create a spur in Chartiers Township to serve the Houston processing plant.

In Natrium West Virginia, CB & I Lummus is doing procurement for a processing plant for Dominion Gas, estimated to be in the $300 million range. The plant will process 200 million cubic feet per day of natural gas and fractionate or separate 36,000 barrels of liquid gas and oil. Dominion's plant will serve both the Marcellus Shale gas fields and the oil-rich Utica formation, which is closer to the surface in eastern Ohio. A second phase of the project will double the processing capacity to 400 million cubic feet.

The region's largest construction project has finally moved from the planning to the construction stages this summer. Excavation has started on the much anticipated rolling mill at the Allegheny Ludlum Brackenridge plant. Construction manager Walbridge has let several early contracts and bidding on the concrete and other key packages should continue throughout the late summer and fall.

On a slightly smaller scale, German-based plastics manufacturer Ensinger is in the process of choosing an engineering/architectural team for a new 270,000 square foot manufacturing and research facility in Washington County, reportedly near its current Meadowlands Boulevard location.

Planning for new projects in the office sector of the market has also accelerated. In July, Mylan Labs acknowledged that it was considering building a new office in Southpointe, the 250,000 corporate office that had been rumored for several months. In the Cranberry area roughly a half dozen new office buildings have been announced, including projects proposed by Elmhurst Group, Echo Realty, Creative Real Estate, Trammel Crow, Keystone Property Group and The Ultra Group that total nearly one million square feet. Among the more intriguing rumors in the office market is that of USSteel seeking proposals from architectural firms to study the feasibility of a new corporate office.

Another sub-segment of the industry that is booming regionally is hospitality. In mid-2011, there are currently ten hotels underway in metropolitan Pittsburgh and one in Waynesburg. Some of this can be attributed to the nomadic nature of the natural gas drilling effort but most of these are not in areas impacted by the Marcellus Shale exploration, like Mt. Lebanon, Monroeville, Latrobe, South Side, the Waterfront and Cranberry Woods. Moreover, there are another nine hotels expected to start in the next six months. And, with the exception of three in the Washington area, all of these are in Allegheny or Butler County. The increased activity is consistent with the upward trend in hospitality construction nationally but the magnitude of the increase in Western PA far outstrips the eight to ten percent national growth forecast.

A more surprising trend is the health in retail activity. The harbingers of a brighter economy - the grocery stores - have been particularly active, with a dozen Bottom Dollar stores, a few Aldi's and a couple Giant Eagle stores in the pipeline. Even though big box activity remains nonexistent, there is activity among department store retailers. Dick's and Target at South Hills Village have been bid. Contracts have been let for JC Penney's space in the former Monroeville Boscov's. Penney's tenant space work should be let in winter 2012 and the retailer is reported to be interested again - along with Cabela's - in the Route 228 corridor where the Simon mall was once

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planned. Cranberry is also being considered as the first site for bulk club BJ's Wholesale.

Over the past eight months the shortfall in public funding, the state budget battle and the more recent federal debt ceiling debacle have created a common wisdom that public construction is dead, however the evidence of the market is somewhat more upbeat. Municipal level road and sewer work was slower coming out to the market, likely due to the uncertainty about what might be coming from Harrisburg but after the budget was put in place the amount of work bid was roughly equal to 2010 volume.

The other category most directly affected by the public budget battles is public education. Because of the rigid seasonality associated with the school year, many regional districts did not authorize projects this summer that might have gone ahead had the fears about Gov. Corbett's proposed cuts been allayed earlier in the year. On the plus side, however, the number of significant K-12 school projects – say $20 million and up – was actually higher this bidding season than last year. And the highest profile K-12 project of this year, Mt. Lebanon's $93 million high school is set to re-bid in November.

Public higher education institutions faced the same logistical issues as K-12 and may have seen more cuts than local districts after the budget passed. And of course, the Department of General Services procurement has been off the volumes of recent years, especially in terms of professional selections.

Hand in hand with the slowdown in public construction the private higher education market still lags the volumes of pre-recession times. The depressed endowments and lower giving of 2008-2010 has given private universities the time to evaluate needs and re-visit master plans. And some schools have been pulling the trigger on projects.

Robert Morris University has started construction on its business school, nursing school, facilities service center and the Concord II student housing center, a total of nearly $30 million contracted in the past twelve months. Grove City College has started the first phase of its $37 million science and engineering center and the $8 million Christian activities center. Duquesne has invested more than $10 million in lab upgrades, nearly $5 million in renovations to locker rooms and athletic facilities, plus the construction of the new $25 million Des Places dormitory.

Several universities are wrapping up revisions to their campus master plans which will result in the design cycle getting underway on significant projects this winter. Washington & Jefferson, Seton Hill and Carnegie Mellon University should each have a major project in 2012.

On the whole, the institutional category remains slower than the 2005-2008 period. The region's biggest buyer of construction projects, UPMC will invest in its facilities at the same rate as in past years but with an emphasis on smaller upgrades instead of new construction in the fiscal year that ends June 30, 2012. The upside of this shift is that more projects will be available from its $250 to $300 million pie. The most exciting prospect in the institutional segment is the potential capital investment in whatever remains of the physical plant of the West Penn Allegheny Health System. Capital outlays at the system's hospitals have lagged for more than five years and judging from the amount of space in the WPAHS facilities and estimates from those familiar with the hospitals, the capital expense over the next five years should top $500 million and could reach $1 billion. As the Highmark/West Penn relationship becomes more defined into next year, it is possible that some of that work will get to the streets in the second half of 2012.

As the fourth quarter approaches, positive regional economic influences from natural gas and industrial growth, falling commercial vacancy rates and much improved institutional outlooks should create more opportunities to build backlogs and fuel a strong 2012. Any regional optimism has to be tempered by the potential cold shower that a double dip recession or mass outflow of liquidity from the stock and bond markets would create. Most Western PA businesses are prosperous because they are globally competitive. While that has helped fuel regional strength it also means that global weakness will put potential projects back on the shelf again.

The macroeconomic news has been drowned out by politics and fear. Most business owners understand that a robust recovery isn't in the cards right now. A calmer September that reinforces at least a tepid recovery of the business conditions will go a long way to soothing fears and encouraging investment. An extended period of volatile stock market activity or another phase of decline globally will simply fan the uncertainty and will threaten to derail what looks like a better 2012. BG


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NATIONAL MARKET UPDATE

After several months of mostly negative news about the economy it is becoming clear that the national construction climate is stuck in neutral for at least the near term. There is some irony in the situation, in that the principle driver in the recovery – improved corporate earnings – remains strong as of the last quarters earning reports. Strong corporations haven't yet become strong hiring machines and the extended period of high unemployment seems to be focusing investors and consumers on the economic news that they mostly ignored during the fourth quarter of 2010 and the first quarter of this year.

The data piles up on both sides of the argument at this point.

On the upside is the strong corporate income and balance sheet picture. Corporate stockpiles of cash are at staggeringly high levels, although it is not being put to use. Financial institutions have mostly healed from the 2008 crisis and their current balance sheets indicate that there is excess liquidity. The latest indicators of credit availability show minor easing in lending conditions and the cost of borrowing appears to be set at record low rates for the foreseeable future. Energy costs have begun to contract. And the recent bad news seems to be a motivation for another round of government spending or intervention, which is likely to include construction.

Weakness in the outlook comes from fears about global finance due to Europe's debt problems and the unknown exposure of U. S. banks to Euro default. Housing sales, prices and starts remain at very soft levels. Foreclosures remain almost one-third of all sales, although the number of new foreclosures has dropped the past few months – perhaps artificially. Federal government inaction and ignorance of the economic impact of their partisan intractability leaves most people skeptical of any positive policy towards the economy. Employment is not improving. Investors are showing diminishing confidence that corporate earnings will continue by moving out of the stock markets in big surges. All of these factors are driving consumer confidence (although not spending yet) down each month.

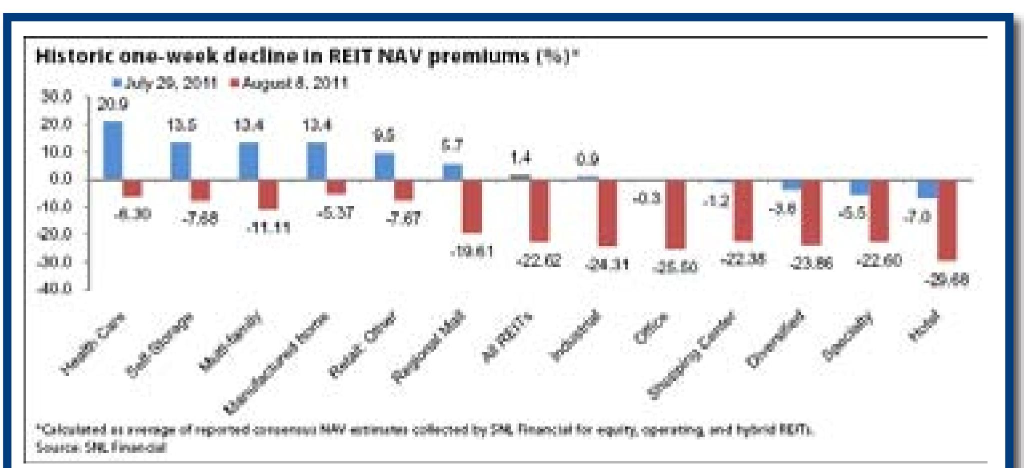
This bad news/worse news cycle is roughly 90 days old and the experts have begun to move from the "soft patch" theory towards the "potential double dip" theory again. In almost every corner the watch word for the moment is uncertainty.

Friday, August 5 was a poster child for the kind of uncertainty that faces business owners. As the business day began the government released its monthly hiring and unemployment data. The news – expected to be gloomy – was the first positive surprise in the employment area in months, with 117,000 new jobs added and unemployment dropping slightly to 9.1 percent. The biggest increases occurred in health care (31,000), retail (26,000) and manufacturing (24,000). Government shed 37,000 jobs, marking the ninth consecutive decline.The Commerce Dept. also revised the June and July jobs added by 56,000.

After 5:00 PM the mood changed as the anticipated downgrade of the U. S. credit rating took place at Standard & Poors. The ratings agency, which chose not to downgrade $1.7 trillion in residential mortgage debt it had rated AAA in 2007, based its downgrade on the political wrangling surrounding the debt limit deal.

The immediate impact of the downgrade was to unsettle the already unsettled markets, as evidenced by the 600+ point decline in the Dow Jones Industrial Average on August 8. What followed was a week unlike any the markets have experienced since the financial crisis in fall of 2008. Even though the volatility has moderated somewhat in recent weeks, confidence has not been rebuilt.

Of greater concern are the many unintended consequences of the ratings downgrade that can impact the real estate – and by extension construction – business.



The S & P downgrade shifted the REIT-to-NAV premiums to discounts in all commercial real estate categories.

The government
will make further reduction in spending ...

One glaring example is the dramatic reduction in real estate investment trust (REIT) pricing that occurred in the run up to the debt deal and subsequent downgrade. For all REITs the pricing declined from a 1.4 percent premium to net asset value (NAV) to a 22.6 percent discount to NAV. This swing was the largest since the December 2008 collapse and will make real estate trusts less functional as a financial instrument unless the momentum swings back, since such a precipitous decline could signal an end to the recent appreciation in NAV.

In 'normal' conditions the overall price of REIT equities should be very close to the underlying net asset value of the properties contained in the trust's portfolio. In declining markets, informed investors will tend to devalue REIT prices ahead of the realized decline in property values, and in expanding markets – like the U. S. commercial market of July 2011 – the price of REIT's tends to trade at a premium to NAV. During the three cyclical swings that have occurred since REITs were common financial instruments, sudden changes in investor sentiment have triggered extreme changes in pricing to NAV because more uninformed investors are in the market. Because the commercial market is in the early stages of recovery from the last recession it's difficult to judge yet whether or not the reaction to the downgrade was simply emotional trader noise or the first indicator that NAV will be falling again to meet the lower pricing.

As unsettling as the roller coaster of news is for consumers there is no shortage of backtracking from the economists and professionals, many of whom have been generally optimistic about the conditions for commercial real estate and construction in the second half of 2011.

"[A]s for liquidity, if the monumental retreat in financial stocks continues, the ability of institutions to lend will be curtailed," concludes Jeffrey Rogers, CEO of Integra Realty Resources. "In these times, banks tend to get more conservative in underwriting. This has the effect of reducing liquidity as transaction volume decreases."

Rogers presented Integra's analysis of the consequences of the downgrade as a significant negative event for commercial real estate. Specifically IRR sees problems arising with corporate confidence, liquidity and demand from government. Their concerns are:

• Hiring will be curtailed or delayed by companies across the board. Demand for commercial real estate will decrease and stall the economy in the short run.

• Banks may get more risk adverse, erasing the gains of liquidity in the market. This will then decrease the ability of investors to purchase commercial real estate.

• Taxes will increase significantly, either in the form of higher rates and/or deduction rollbacks. This will pare back the gains we have seen in hospitality and resort travel.

• The government will make further reduction in spending, thereby sinking GDP and decreasing the demand for commercial real estate.

Reed Construction Data is a national construction tracking service that had been forecasting a mostly flat or slightly declining market for non-residential construction in 2011. They were the most upbeat of all the construction economists until late August when they revised their official forecast.

U.S. Total Annual Construction Spending

(in billions)

	Actual			Forecast		
	2008	2009	2010	2011	2012	2013
New Residential	238.2	141.4	135.8	127.6	136.4	160.5
% change (from previous year)	-34.2%	-40.6%	-4.0%	-6.0%	6.8%	17.7%
Residential Improvements	120.7	119.3	116.8	118.7	129	142.2
% change	-13.9%	-1.1%	-2.1%	1.6%	8.7%	10.2%
Non-residential Building	437.4	379.7	290.9	266.8	275.5	301.6
% change	8.6%	-13.2%	-23.4%	-8.3%	3.3%	9.5%
Non-building	270.9	273.7	269.8	261.3	270.8	289.9
% change	9.3%	1.0%	-1.4%	-3.1%	3.6%	7.0%
Total	1067.2	914.2	813.3	774.5	811.7	894.2
	-7.4%	-14.3%	-11.0%	-4.8%	4.8%	10.2%

Source: U.S. Census Bureau, Department of Commerce.
Forecasts and table: Reed Construction Data.

Reed's chief economist, Bernie Markstein observed in his August 24 blog post, "[We] have reduced our forecast of economic activity, lowering economic growth in second half 2011 from 2.5 percent to 1.8 percent. For the year, GDP will grow 1.7 percent. 2012 GDP is now forecast to increase 1.7 percent as well. We forecast slow improvement in the second half of 2012 into 2013, with 2013 GDP advancing 2.4 percent. We also see a higher risk of recession. We place that risk at 25 percent to 30 percent."

Markstein continued, "The outlook for construction spending remains positive for 2012 and 2013, outperforming GDP growth, though not as strong as before. We project a 4.8 percent decline in 2011, previously forecast as a 4.2 percent decline. The increase in 2012 construction spending has been cut to 4.8 from 10.5 percent."

It's unfortunate that the data does little to point in a clear direction any more than expert opinion. The most recent Census Department data on construction shows that construction put in place for both private and public construction tracking relatively flat from June 2010 to June 2011. Publicly funded construction has dipped roughly ten percent since then, while private non-residential and residential are off about two percent each. The total construction spending is less than two percent off of June 2010 volume, however and June 2011 total of $772.3 billion represented the fourth straight month of increases of less than $10 billion. Reviewing the data since the financial crisis reveals that construction volumes have been stuck in a range between $750 billion and $800 billion since the recovery in mid-2010.

Even the AIA Architectural Billing Index is giving unclear signals about the potential work in the coming quarters. ABI fell for the fourth straight month again in July to 45.1 after a decline in June to 46.3. A reading below 50 means more architects saw a decline in billings than an increase that month. Perhaps the pattern of responses to inquiries is more instructive of the sentiment. Inquiries jumped significantly from 52.8 to 58.1 in June and then slipped to 53.7 in July. Firms have reported increasing and decreasing levels of inquiries in alternate months since February, suggesting that owners are vacillating about releasing projects during most of this year.

A technical analysis of both ABI and construction spending data also suggests that the overall trend is downward, as the movement within the range of activity has been hitting lower highs and lower lows. Like the stock market, the construction market appears to be looking for catalyst up but with each month that passes fewer owners are willing to act without one.

WHAT'S IT COST?

When the Bureau of Labor Statistics released its July reports on the consumer and producer price index the data confirmed earlier forecasts of falling inflation for construction. This is good news for those planning projects but the downside is that declining economic conditions are mostly to thank for the moderating price climate.

Construction materials price inflation rose 0.3 percent in July after a decline in inflation in June as energy prices fell and in the pace of economic growth slowed. For the 12 months since July 2010 the index was 8.9 percent higher. The increase in copper pipe and tube prices was the only significant price rise in July, jumping 7.1 percent. Earlier spikes in energy and metals prices were also the cause of the small increase in the broader PPI, along with the first renewal of activity from Japan since the earthquake and tsunami hit. Japanese orders for American goods have resumed and critical Japanese-made components for U. S. manufacturing have begun to flow as well.

The trend for contracting was also reaffirmed. Increases in each of the four trades tracked rose more or less equal to the increase in the consumer price index rather than the producer prices. Competitive pressures are partly to blame for the lagging inflation. Another factor seems to be the psychological barrier of CPI levels that project owners feel is acceptable for their projects. Increases in prices over the three or four percent range are being rejected. This may also be borne out in the data on building types, which are seeing above CPI inflation only on residential construction, which is generally not subject to the same competitive pressures as non-residential construction.

Commodity and construction pricing will be influenced by the slowdown in global economic growth that began in the second quarter and the excess production capacity and labor. Without a radical change in the economic picture the pricing environment will be weak for materials suppliers for the balance of 2011. Little change in the price index is expected – with a few monthly price declines – into 2012 until the rate of GDP growth climbs above two percent again.

Southwestern PA may see a counter to that trend in a few selected materials. Construction costs are generally not impacted by regional factors aside from the competitive environment but the boom in natural gas exploration has created a concern about shortages in stone and aggregate as well as a potential shortage in available trucks.

PERCENTAGE CHANGES IN COSTS	July 2011 compared to		
Consumer, Producer & Construction Prices	1 mo.	3 mo.	1 yr.
Consumer price index (CPI-U)	0.1	0.5	3.6
Producer price index (PPI) for finished goods	0.4	0.4	7.2
PPI for construction	0.3	1.2	8.9
Costs by Construction Types/Subcontractors			
Residential buildings	0.3	1.1	7.3
New industrial building construction	1.3	1.4	2.3
New warehouse construction	1.2	1.2	2.7
New school construction	1.0	1.0	3.1
New office construction	1.1	1.1	2.5
Concrete contractors, nonresidential	0.8	0.6	0.1
Roofing contractors, nonresidential	1.0	2.7	3.3
Electrical contractors, nonresidential	1.5	1.5	3.9
Plumbing contractors, nonresidential	0.8	0.9	2.5
Costs for Specific Construction Inputs			
#2 diesel fuel	-1.8	-3.6	49.9
Asphalt paving mixtures and blocks	1.2	6.0	8.1
Concrete products	0.1	0.0	-0.1
Brick and structural clay tile	0.2	0.4	-2.8
Plastic construction products	-0.3	3.0	5.8
Gypsum products	-0.6	0.8	-3.7
Lumber and plywood	0.0	-2.3	-2.3
Architectural coatings	0.1	0.1	6.3
Steel mill products	0.5	-0.2	11.8
Copper and brass mill shapes	5.6	1.7	33.6
Aluminum mill shapes	-3.2	-0.4	15.7
Fabricated structural metal	1.2	1.1	5.4
Prefabricated metal buildings	0.4	2.9	13.4
Crude petroleum (domestic production)	1.7	-8.5	36.7
Asphalt (at refinery)	-3.4	26.2	10.7
Cement	-0.4	-0.7	-0.8
Iron and steel scrap	0.8	0.5	28.3
Copper base scrap	3.4	0.3	34.3

Source Bureau of Labor Statistics, Updated August 26, 2011
Compiled by Ken Simonson, AGC Chief Economist

There are several key dynamic components to the stone business which are working together to put upward pressure on the material, which is also a key ingredient in concrete and asphalt products. Over the past decade the competitive nature of the business has been affected by one major player, Hanson Materials whose pricing has historically been aggressive. While that has helped keep pricing lower than expected it has also created an environment that discourages investment in order for quarries to rein in costs. At the same time the boom in stone demand that has come from the Marcellus Shale exploration has also discouraged investment because the gas companies and their construction developers do not operate with long-term supply contracts. Those quarries that have blossomed by selling into the gas industry have had little security and have added trucks to their fleets strategically and been very reluctant to add capacity by expansion or acquisition. It may seem counterintuitive in a demand boom but absent a certainty of steady demand, stone suppliers have been unwilling to risk investment.

Quarries have typically sold stone at discounts in the winter months to keep their fleets rolling rather than having those assets idled in the slower months.

The higher activity in spring and summer gives the price a boost to make up for lost profits from the colder months. The high demand from gas exploration has leveled out that demand cycle so that the higher volume in spring and summer only pushes prices higher, and the increased year-round activity means that truck fleets are at maximum capacity all the time. As the drilling continues to grow, and as construction in general recovers, the cost of stone should inflate by another 20 percent or so in heavier seasons. That price, which at $24 to $25 per ton delivered is already $10 higher than just a few years ago, could reach $30 or more next spring. The increase will also push concrete, masonry and paving costs higher.

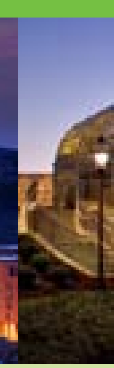
And as the natural gas industry pushes further north into Butler and Beaver Counties, this phenomenon should accelerate since quarries to the north are less prepared with assets to respond to the higher demand.

It is important to remember that the current global pricing dynamics are likely to be a temporary step back in a longer term trend of rising prices for commodities and manufactured goods. Population continues to rise and the most populous nations are those with the most accelerated growth arcs. Until alternative energy resources become widely used the upward pressure from growing demand will drive inflation, irrespective of monetary policy.

For a clue as to when to look for that upward progression to resume you should key in on two catalytic factors. The global growth rate will ignite consumption once clear economic progress is made. This will be particularly true of economic progress in the Asian and sub-continental economies like China, Russia and India. When these nations begin growing domestic production at double-digit rates their consumer demand will outweigh any regional or continental problems elsewhere in the globe, even if the U.S. economy goes into recession. Within three or four months after the global GDP growth rate reaches three percent costs should begin ticking upwards, especially for those commodities most sensitive to energy costs – like virtually all construction inputs. Even with improving signs from China recently there is little likelihood of global growth driving prices until the first quarter of 2012.

The second catalyst will be the revival of the U. S. housing industry. Slow housing has depressed prices for drywall, lumber, plywood, plastics, brick, coatings, and to some degree cement. Construction of new homes has been half of the historical norm for four years. Such an extended depression of demand has not happened in peacetime. Many of the suppliers of these product categories have sought opportunities to raise prices during the past two years but without the primary market, manufacturers are stuck at current levels. Even the most optimistic observers see little chance of a significant increase in housing demand until late 2012 but with capacity for these products at dramatically lower levels than just five years ago, even minor sustained increases in housing construction will trigger faster growth in prices. BG

The green building 'movement' is now roughly a quarter century old. While a number of groups formed 30 years ago or so to help educate consumers and businesses in the wake of the oil crises of the 1970's, advocates for green building really gained a foothold in the 1990's. Some of the milestone dates in green building are important to Western PA businesses – the founding of IBACOS in 1991, the founding of first the Green Building Alliance and then the U. S. Green Building Council in 1993, the creation of LEED in 2000 – but even for a region like Pittsburgh that helped pioneer green building, the participants in sustainable design and construction remained early adopters only until the middle of the last decade.



GREEN BUILDING
becomes sustainable

As late as five years ago the conventional wisdom on green building was that it was more expensive, that it wasn't feasible in all building categories (especially commercial properties), that it was alright for educational purposes but not practical, and even that it was still just a fad. Much has changed in five years.

In the intervening half decade, the transition from early adoption to mainstream has exploded most misconceptions about green building, and LEED-certified buildings in particular. Contractors are chock full of LEED Accredited Professionals (and now LEED Green Associates). Commercial real estate developers consider construction of space that isn't green to be a leasing liability. And scarcely a project of any significance – and many of no significance – has been announced that isn't pursuing LEED certification.

The impact of that shift in attitude on the built environment is tangible. In fall 2006, Pittsburgh had more LEED-certified buildings than any other city with 22 projects. As of September 1, 2011 there were 133 LEED-certified projects in the GBA listing, with many more registered to be certified.

Green building in its visionary stage was a 'right thing to do' that had societal benefits. Its pioneers and early adopters embraced those benefits but they also discovered that the principles of green building could help their businesses in tangible ways. Quite logically, the advocates for green building often found it difficult to understand the need for proving the case for LEED certification or even creating a sustainable process within an existing business. Advocates commit to a position quite fully and often don't have empathy for those who don't 'get it'. Today's green building advocates seem to understand that the business case for green building is compelling enough that it isn't necessary for companies to 'get it' in order to behave sustainably.

Mike Schiller is the executive director of the GBA. He's an entrepreneur (many times over) who comes from the technology sector and sees a parallel between the adoption cycle of green building and the development of new technologies.

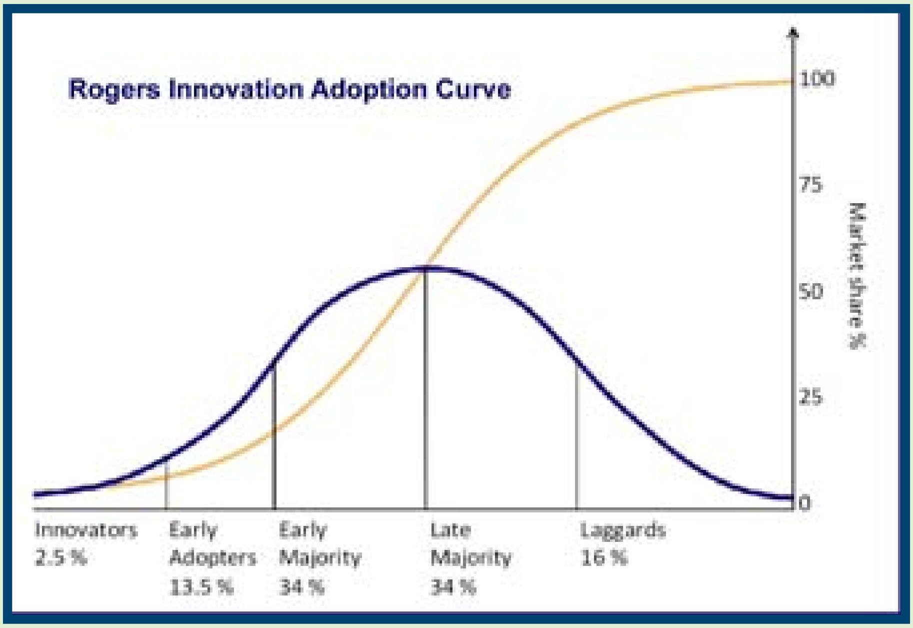
Schiller uses the Rogers Technology Adoption Lifecycle model to map the progress of green building. Everett Rogers was a sociologist whose 1962 book, *Diffusion of Innovations* described how ideas and technology were adopted by different kinds of users. Rogers categorized the users as innovators, early adopters, early majority, late majority and laggards. Adoption depended on the awareness, willingness and evaluation of the idea by each adopter.

Since the advent of Internet and computer technology there has been an adaptation of Rogers' curve by Geoffrey Moore that helps describe why high tech companies with great ideas and products don't always prosper after early success. The theory is that because of poor marketing, product development or other mismanagement an innovation fails to jump from early adopters to early majority adoption, thus preventing sufficient market share to sustain the innovation. Moore calls this gap between adopters the "Valley of Death" for technology products. Schiller feels that green building has reached that valley in 2011.

"The early adopters are the dreamers, the visionaries. They want to accomplish something new and the financial return – while not forgotten – isn't the reason they want to do something," Schiller explains. "Pragmatists, those that are part of the majority need a reason to do something new. They tend to be in the middle of their careers and they aren't going to do something to risk damage to their job or division or company."

Schiller believes that green building has been able to prove that the solutions work – green roofs don't leak, daylighting improves the workspace – but that getting to the mass market will require reliable data that can justify making sustainable choices in the same way you might justify an acquisition. To that end, Green Building Alliance is completing the research and design of its Database to Analyze Sustainable and High-Performance Buildings (DASH). GBA expects the first version of DASH, which will focus on energy, to be introduced in 2012.

"The purpose of DASH is to provide sufficient data to all decision-makers so that it's clear that green buildings and green techniques make financial sense and to help everyone involved in the process make good decisions about products or process," says Schiller. "We will build on DASH, provide users what information



The adoption of LEED and green building has reached the point of saturation between early adopters and early majority that Geoff Moore describes as the Valley of Death in the innovation adoption bell curve.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they want, improve on ways to get information into the database, but the first version needs to get out in the market."

The evolution of green building's adoption is accelerating. It may seem like a protracted struggle for long-time advocates but the reality is that the development and construction marketplace was predominantly skeptical only five or six years ago. That sustainable construction has accelerated its pace of adoption during one of the more wrenching economic downturns since the Great Depression speaks volumes about the impact green building is having in the workplace.

Perhaps the most lasting effect of green building has been its impact on the cultures of companies that gained experience in sustainability because it was necessary for their business.

Sustainability is a bit like religion in that once you accept the tenets of the faith it's difficult to go back to your earlier behavior. While most companies involved in design and construction have had some experience with a green building project without altering their daily *modus operandi*, more companies are adapting their processes and systems to align with the sustainable practices of their clients because more of the clients are adding sustainability to their core values. And the real catalyst for that change is often the expectations of the next generation.

The next generation of key project managers, engineers and architects, estimators and brokers who are now thirty-somethings were, for the most part, educated in college by a faculty who stressed living green. The group of young professionals who are five years behind them had sustainable living ingrained in their education from middle school on, and the crop of college graduates that are entering the workforce – and who will from now on – have been recycling, composting and learning about conserving the earth for their entire lives.

These 'sustainable natives' are the employees and consumers whose expectations businesses will have to meet for the future. You may not believe that buildings or V-8 trucks or landfills are causing climate change but the next important demographic group in the pipeline does. An employer who doesn't operate in a sustainable manner risks being viewed as an employer who doesn't care about their most valuable asset. That's not a great way to attract the best talent.

Firms that have invested in green buildings and then in creating a sustainable workplace have found that the best return on that investment has been the engagement of their workforce. The employees are willing to align their personal objectives with an employer that demonstrates that it wants to make the workplace more like their personal space.

Companies that have adopted sustainability as a core value have noticed more tangible results than just better retention and engagement of employees. They have also seen the benefits that would be expected from having a talented and engaged workforce: growth and improved profitability.

The poster child for this business transformation for more than a decade has been InterfaceFLOR, an Atlanta-based carpet manufacturer. In 1994 their CEO, the late Ray Anderson was researching a presentation for the company's task force on the environment when he had what he called a "spear in the chest" epiphany reading Paul Hawken's The Ecology of Commerce. Hawken's thesis was that corporations had a responsibility to behave responsibly towards the environment, creating as small a carbon footprint as possible, and that the marketplace would reward them.

> ... generating its own electricity, and eliminating its emissions ...

Interface embarked on "Mission Zero," a process of shifting from petroleum-intensive products and processes to those which reduce or eliminate waste and harmful emissions while increasing the use of renewable materials and sources of energy. The goal of Mission Zero is to bring Interface's carbon footprint to zero by making new carpeting from discarded carpet, generating its own electricity, and eliminating its emissions and waste to landfills.

In fifteen years InterfaceFLOR grew their business to $1.1 billion and its constant focus on sustainability allowed the company to manage processes so efficiently that it figured savings of $262 million in waste alone.

Ray Anderson's vision has transformed an industry. It has also created a significant period of growth and profitability for Interface. In the process of taking what he calls an "industrial dinosaur" to a new level of responsibility he also led Interface into a market share leadership role, doing well as they did good.

The Interface vision has been shared by a number of Western PA companies that are thriving by making their companies greener.

CENTRIA

Moon-based CENTRIA is a manufacturer of metal roof and wall panels, floor systems and also applies paint coatings to their products and for other customers. The products CENTRIA makes are a big part of the building envelope and play a significant role in the energy performance of buildings. Like many manufacturers of building products of CENTRIA's age, the company evolved its view of sustainability as a byproduct of making sustainable products.

In CENTRIA's case, the development of more energy efficient products was actually done by its predecessor companies. CENTRIA was founded 1996 as an equal partnership between H. H. Robertson and Smith Steelite, which had been formed only three years earlier as a merger between Steelite and E. G. Smith. All three companies were based in the Pittsburgh area, with plants in the region as well. Each company had a well-deserved reputation for engineering innovation and each had responded to market pressures for more energy efficient buildings by developing insulated panels.

As the demand for green buildings grew, CENTRIA began to transform its good practices into sustainable practices. "The company's leadership team saw sustainability growing in general and wanted to maintain its leadership role in the building products industry by staying ahead of the game," says Rick Brow, CENTRIA's director of marketing. "I think the significant point in time was when we decided to seek Cradle-to-Cradle certification."

Cradle-to-Cradle is a rigorous certification process meant to establish criterion for sustainable manufacturing. Cradle-to-Cradle is not associated with LEED, and certification is not a one-time thing; products have to be re-certified each year and the manufacturer has to show continuous improvement in their processes. CENTRIA's submission to the Cradle-to-Cradle review signaled that they were going to focus on sustainability throughout their organization. The decision brought early rewards as CENTRIA's Formawall Dimension Series® insulated panel became the first exterior envelope product to become Cradle-to-Cradle certified.

CENTRIA managed their business in ways that adapted well to sustainability. They looked at constant process improvement as a key to business excellence. It was not much of a leap to realize that managing the waste at the manufacturing plant included limiting or eliminating waste that went to a landfill. Its plants benefitted from minimizing the energy needed to make its products. The company embraced Six Sigma practices. These and other business process improvements became more focused on sustainability as time went on. The company recently was honored for its in-house recycling program and received a Governor's award for the installation of a new low-emitting coatings line at their Ambridge plant. This past March, CENTRIA completed a Life Cycle Assessment (LCA) on their Formawall Dimension Series panels further defining the environmental impacts of the product in comparison to other wall system assemblies.

The focus on sustainability invades the product development process. "Our products rest on three legs – aesthetics, performance and sustainability," explains Brow. "When we are promoting to architects, the aesthetics and performance of the panels are important but architects and owners are also concerned with the sustainable qualities of the products." CENTRIA reviews new products for all three of these virtues and evaluates whether or not they are adding harmful chemicals to the environment during the manufacturing process or adding to the company's carbon footprint.

Innovating isn't without challenges, of course.

Innovating isn't without challenges, of course. Several years ago CENTRIA developed a new product that integrated photovoltaic film with the roof panels, working with a PV film manufacturer to create EnergyPeak roof panels. Positioning the product with other manufacturers so that they would sell through their distribution became problematic. Rather than discontinue a product line with a viable environmental benefit, CENTRIA chose to spin the product line off to another company.

Rick Brow acknowledges that the current market conditions make it more difficult to develop new product lines and technology but he's confident that CENTRIA will continue to improve the performance of their lines and improve the processes by which they make them. Differentiating CENTRIA from other manufacturers and types of building envelope systems is easier to do when all three legs of the stool are sound.

BAKER & ASSOCIATES

By Duncan Penney's recollection he was the second LEED AP at the Moon Township office of Baker & Associates when he joined the company in 2003. Earlier this year Baker saw its roster of LEED Accredited Professionals swell to 100. Most businesses don't reach 100 employees. Getting that many architects and engineers accredited happened at Baker as the result of an ongoing, patient, cumulative effort, much like its green building experience in general.

Baker & Associates management team is (left-to-right) Ronald Kretz, AIA, LEED Green Assoc., A/E Operations Manager; David Martin, PE, Director of Architecture, Engineering & Planning; and Joseph Chaffin, AIA, Director of Architecture.

Baker's first brushes with green building came at the behest of one of its biggest clients, the federal government. At the time the government was trying to take a leadership role in green building through its Spirit program. Baker was commissioned to design and write the Design Build RFPs for 12 PA Air National Guard projects being planned under the Spirit guidelines and make an evaluation of their sustainability characteristics. Baker had been working on government Spirit projects since 2000 and was aware that best practices in green building were being updated all the time. The Spirit guidelines were at the time "green building on training wheels," according to Penney.

As a result of its examination of the Spirit program the government began a shift to requiring their projects be designed as though they were to be LEED-certified; however, they chose not to actually register the projects to avoid paying for the certification process. Penney estimates that two-thirds of the federal jobs they designed were done so that they would have qualified for LEED Silver but were never submitted for certification. Eventually, government began to sub out the auditing it was doing with its own staff and decided that if it was incurring the costs anyway they should begin to submit the projects for LEED certification. While that certainly sounds like the kind of logic only the federal government could apply, Penney insists that the rigor of the process proved valuable to firms like Baker.

"We were accumulating the knowledge base by doing all this work for the government and the knowledge expanded throughout the firm as design teams migrated from project to project," he explains. "Then we began adding what we knew to our process of question and answer with all our clients, both LEED questions and business questions. That level of planning and questioning became part of the process on all our jobs."

Another benefit of the government work was that Baker learned how to make projects with lean budgets work as LEED-certified jobs. Building a small storage building or no-frills aircraft hangar as a LEED project required in-depth knowledge of what was available and painstaking planning to find every opportunity. Some 60 percent of their government work is now design/build. Baker has developed a process of working with their construction partner to develop a LEED strategy and checklist that details how they will achieve every credited planned.

Baker is currently working on 30 projects that are required to meet LEED silver standards by the government, varying in size from small maintenance facilities to a 1,000-person lodging facility at Ft. Lee, NJ. Penney says that because of their planning most of these will eventually be certified as LEED Silver and several will be LEED Gold without any additional cost.

"Our marketing people tell us that it makes their job easier," says Penney. "Even when we are submitting with contractors there is an extra comfort level that we can handle the LEED certification."

"We've experienced 30 percent growth the last three or four years as a result of our decision to pursue the federal facilities market as one of our strategic markets seven or eight years ago," says Ron Kretz, who manages Baker's architectural business. The firm has grown to 290 people worldwide and 52 of the 82 professionals in Pittsburgh are Accredited Professionals. He notes that Baker provides a financial incentive for their staff to get accredited or become a Green Associate.

In the past year Baker has taken their commitment level up another notch by hiring Eamon Geary, who had previously worked for the GBA, to direct the firm's sustainability efforts in architecture. Geary brought continuing education programs in house in 2011, a change which gives the firm more flexibility and broadens the educational opportunities. He points out that the program control allows for interdisciplinary education that wouldn't otherwise happen, allowing architects access to ASHRAE programs they would rarely see for example. Geary is able to respond to specific program requests from their architectural staff and then craft a program to the requirements of AIA's continuing education.

Baker's management is confident its growth during a recession is in no small way due to their emphasis on sustainable design solutions. Aside from the business development, the firm is getting noticed for its efforts. In its July source book Engineering News Record ranked Baker #1 on a list of Green Firms in the Multi-Unit Sector.

Joe Massaro III receives the LEED certification recognition for the renovation and expansion of their offices at 120 Delta Drive in 2009.

MASSARO CORPORATION

When the Massaro Corp. began its ownership transition from the founder to his children in 2002, it was evident early on that the company was going to do some things differently. Part of the change in culture was to devote resources and follow the direction of the ideas the company felt passionate about. One of those was *not* green building.

Less than a decade later, Massaro Corp. is one of the contractors leading the way in corporate sustainability but the genesis for the transformation was hardly idealistic.

When it came to green building there was no epiphany or any movement towards sustainability as part of an overarching cultural change. At the middle of the last decade Steven Massaro, who was responsible for business development, noticed that the company was beginning to lose out on opportunities because of their inexperience with green building. At that point, few of Massaro Corporation's competitors had experience with LEED projects either but a number had developed an interest in building green or had begun to respond to the sea change in the industry.

"We began to miss out on interviews for projects that we would normally have been getting because we didn't have any LEED experience," he remembers.

Joe Massaro III, the firm's president, characterizes the decision to invest in green building as completely pragmatic. He recalls the discussions with his siblings – Steven, brother David and sister Linda – as being focused on the business ramifications. "We talked about it and no one had a passion for green building. We had a passion for diversity but this [green] wasn't on our radar," he says. "But we had started to see more and more RFP's and RFQ's with requirements for LEED on them and it was costing us opportunities so that was our concern. At that point we decided that any of our people who came in contact with clients would become LEED AP's."

The plan paid dividends. Within a short period of time, as LEED-certified projects proliferated, Massaro Corp. began to land green work. As often happens with industry paradigm shifts, that practical decision about LEED professional training developed into something else. Many of those who took advantage of the LEED accreditation were younger professionals who had grown up with sustainability as a core value of their education. While their leadership intended to be 'green' as a business development strategy, this newer generation of Massaro associates had something more meaningful in mind.

> ... a culture that encouraged employees to cross departmental lines ...

"We started getting work but then we found out our younger generation did have a passion for green," says Joe Massaro. "A group of our employees came to me and asked if they could build a garden. I asked them to put a plan together that spelled out what they needed from us and why they wanted the garden."

That plan asked for a small piece of ground and $8,000 from the company. The employees proposed tending and watering the garden, as well as using the crops as an outreach to help feed the homeless in the region. The Massaro's saw it as a relatively minor investment in engaging their employees, but the project began to fit into an overall strategy for engagement that would change the culture.

"One of our competitive advantages is our employee's commitment to our business, their engagement with Massaro Corporation," explains Joe Massaro. "If we're asking them to be more engaged in our business, they have a right to expect their employer to be more engaged in the things that matter to them. Sustainability became something that fit in with the culture we were trying to cultivate."

What Massaro envisioned was a culture that encouraged employees to cross departmental lines to solve corporate problems, one that built upon the lessons learned from experiences to more effectively solve problems in the future. The leadership formalized an outreach – Massaro Serves – to make societal responsibility part of the values that it expects its employees to share with the company. And sustainability began to weave its way throughout the culture. The company's growth necessitated an expansion of their offices in RIDC and the project became the focus of a deeper commitment to green building. The 8,100 square foot addition and complete renovation received LEED certification in June

2009. Providing a sustainable physical environment then led to promoting sustainable employee lifestyles.

"Wellness became a part of our sustainable commitment," says Steve Massaro. The company created a full service exercise facility on site, holds wellness education sessions, and created a lunch facility that offers healthy food in place of high-calorie, low-nutrition snacks. Signage throughout the office provides information about the value of sustainable practices to both individuals and society as a whole.

As sustainability became one of the corporation's basic values Massaro responded by resourcing an internal group it calls the Green Team. The team is responsible for maintaining the focus on sustainability and raising the bar for the corporation. Earlier in 2011 they finalized an initiative that has moved Massaro Corp. into new territory for a contractor, that of LEED educator.

PNC Financial completed the largest LEED silver office in 2000 and plans a cutting edge LEED-certified building in the Tower at PNC Plaza.

One problem that arises with a company's expansion of its LEED professional base is the administration and expense of maintaining the LEED associate knowledge base. To help solve the problem of managing the use of a third party educational provider, the Green Team suggested that Massaro Corp. become a LEED continuing education provider, which was a first for a contractor in Pennsylvania. Its first session was on documentation for LEED-certified projects and it attracted 26 attendees from outside the firm, including 21 architects.

Steve Massaro dismisses the idea that the continuing education could lead to new business from the attendees but admitted the value of the experience. "Getting that many architects inside our offices to see how we operate is certainly a great opportunity."

PNC

In Pittsburgh, few companies have approached sustainable building and operating in the way PNC Financial Services has. The owner of one of Pittsburgh's first corporate LEED certified buildings – and the first LEED Silver in the nation when opened – PNC has taken the lessons learned along the way to establish an unparalleled record of green building development.

The origins of PNC's commitment to sustainability have morphed into a more popular legend of corporate giant being dragged into sustainability kicking and screaming. During the design of PNC's Firstside Center in 1998, the head of PNC's real estate team, Gary Saulson met with the Green Building Alliance's then-executive director Rebecca Flora and made the decision to pursue LEED certification for the project.

"We were already in the process of planning when the GBA approached us and suggested that we make the structure green," Saulson says. "The idea had merit, but we were skeptical that the expertise, materials and additional funds could be found to

In Pittsburgh, few companies have approached sustainable building and operating in the way PNC Financial Services has.

erect an environmentally friendly building with that kind of scale, especially since work was underway. Fortunately, both the project team and PNC leadership were open-minded, and our research quickly determined that we could not only make the building a model of sustainability, but we could do it without much additional expense."

When PNC completed Firstside Center in 2000, it was the first building to be certified under LEED 2.0 and it was the largest green building of its time. In the aftermath of Firstside's opening and subsequent silver certification the company discovered that the proper planning discipline – an essential part of a sustainable design process – could allow them to do all of their projects as LEED certified buildings, including branches, and do so profitably.

As an owner-occupier, PNC could look at the construction of a building as the first step in a longer cycle of operation. They had the 'luxury' of also analyzing the impact that a sustainably-designed facility would have on the employees working there. All of these variables could be measured against the expectations of how they previously built facilities and the true cost of ownership would emerge.

What PNC found was that Firstside cost 25 percent less per kilowatt hour to operate than its sister building in Philadelphia, which wasn't LEED certified. They discovered that absenteeism in the center fell, productivity rose and stories of fewer headaches or asthma attacks began to emerge from their employees at Firstside. PNC also re-examined its branch bank model and hired a team of consultants and architect that created a replicable branch that used a fraction of the hot water, 40 percent less energy and could be built quicker and for \$100,000 to \$150,000 less than its competitors' branches. In the process PNC also hastened USGBC's development of LEED criteria for prototype designs that would encourage even more LEED-certified buildings among retail and service businesses.

"All of our new construction is designed to be LEED-certified, and we work hard to raise the bar with each new set of blueprints," says Saulson. "Three PNC Plaza has green features we could not have included at PNC Firstside Center ten years before. PNC Place in Washington, D.C. is more green - it is certified LEED-Platinum - than Three PNC Plaza, even though those two buildings were completed just one year apart. The Tower at PNC Plaza will include features that will advance the state of green technology when it opens in 2015, and those will far exceed the energy efficiency of what we built in Washington in 2010. So the pace of innovation has accelerated at PNC, and will keep accelerating."

The cumulative effect of their focus on green building has added up to 134 LEED-certified buildings by the end of August 2011.

PNC Realty Services is also working to drive more sustainable practices in ways that have nothing to do with construction.

"We have cut paper use in our facilities. We have brought more locally sourced produce and meat into our cafeterias, and we are working with our corporate technology partners to identify more energy efficient computers and printers," says Saulson. "The effect of our green efforts is sustained, and it is spreading within the organization."

Few corporations have been able to position themselves as an environmental leader as well as PNC has. At a time when banks have so openly been associated with so many negatives, PNC has been able to leverage all of the benefits associated with sustainably building and operating their facilities to be seen as a good guy among bad guys. That has translated into unexpected consumer response.

Michael Harreld is the regional president of PNC Bank in Washington DC. He was fairly typical of the bank's management in that he didn't see any direct benefits from gaining a reputation as the "green bank." That's changed. Banks are not the most popular in the current climate, but PNC's image helps to separate it from the "bad" banks in consumers' eyes. Harreld knows that he has depositors and borrowers because PNC is viewed as a friendlier alternative to his competitors.

THE BURNS & SCALO COMPANIES

Like many siblings, the two brothers who run the Scalo businesses are uniquely close and yet often approach business problems as though they had nothing in common. As they view running their businesses in a sustainable way each has developed a passion for the subject, but they came to it from different directions.

Jack Scalo laughs when asked why he began to focus his business on green roofs and solar installations. "I'm a capitalist," he says. "We've always tried to be different in a positive way. I always say the view never changes from the rear. For me, the lightbulb went off when I saw that solar and green gardens were complements to our core business. Roofs are such wasted space but we saw this as a way to add value to the roof."

Jack Scalo is president of Burns & Scalo Roofing and Cuddy Roofing, businesses his father helped found. His company has made a splash with green roofs of late, having completed both the Gates Hillman Center roofs at Carnegie Mellon

> "We've always tried to be different in a positive way."

The roof at Burns & Scalo headquarters has been converted into a $1 million Sunscape Demonstration project of solar arrays and green garden varieties.

and the County Office Building's massive green roof last year, but Cuddy also did the first green roof in Pittsburgh in 2001 when McKnight Realty put a green garden on a small roof during the renovation of the former Gimbel's Store into the Heinz 57 Center. They were recently awarded a $1 million contract to put a green roof on the David L. Lawrence Convention Center, the largest such roof to date.

Jack Scalo says the County Office project was an eye opener, with new technologies in engineered soil media and varieties of vegetative roof solutions, "real Star Wars stuff," he says. "It's helped identify us as the green roofer in the region."

Scalo is even more passionate about another sustainable business, Scalo Solar. The business of installing solar arrays is still very new to Western PA, especially when you consider the large amount of existing roof stock. The solar business was what Scalo had in mind in particular when he spoke of adding value to the roof.

"Our customers asked us to keep water out, which isn't very exciting," he explains. "With solar, the roof suddenly becomes a space we can do something different and very productive with."

"With solar, the roof suddenly becomes a space we can do something different and very productive with."

Scalo Solar is in the photovoltaic array market, but installation of panels and tubes is only a part of the equation. Because owners are inexperienced in solar or don't have the right financial structure, Scalo Solar has to develop the proper financial model for the project, often maintaining ownership of the completed solar array and selling a reduced power purchase agreement to the owner. Rooftop PV systems also require integration and modifications to the existing roof and often the replacement of the roof. That creates opportunities for the roofing business as well, and opportunities that allow Burns & Scalo to be compensated for the value they add to the project.

"We're really solar developers," says Scalo. "These are design/build jobs so we are involved early to analyze the shade, advise on using green gardens and make sure that landscaping choices don't create shade problems later. We help with building orientation if it's new construction."

"The big advantage to our roofing business is that in a solar deal the roof comes along for the ride. You want to match the roof warranty to the warranty for the solar panels so you're not removing a solar system to replace a roof sooner. With solar projects we're usually replacing a better roof than would normally be installed."

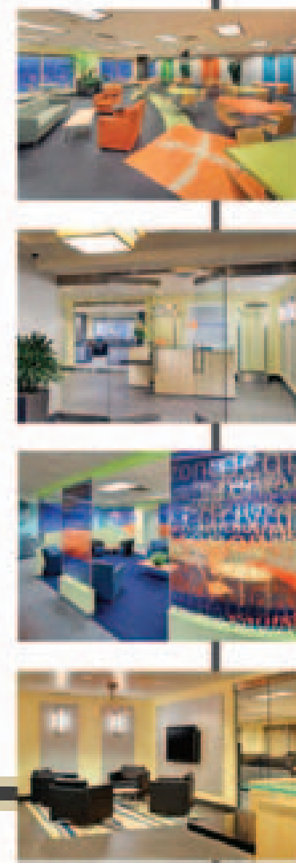
Working with green building solutions has shifted the way Burns & Scalo views its business and how it approaches the market. The company's focus is now on building envelope solutions, emphasizing their role in keeping weather out and energy in. For the solar business they have had to become very proactive in leveraging other opportunities, using leads for roof projects as chances to talk with building owners about solar power and the advantages to the building owner. Marketing solar has also sparked a decision to invest in the business that is significant. Over the winter, the company converted its own roof at their corporate office into a solar and vegetative Sunscape Demonstration project.

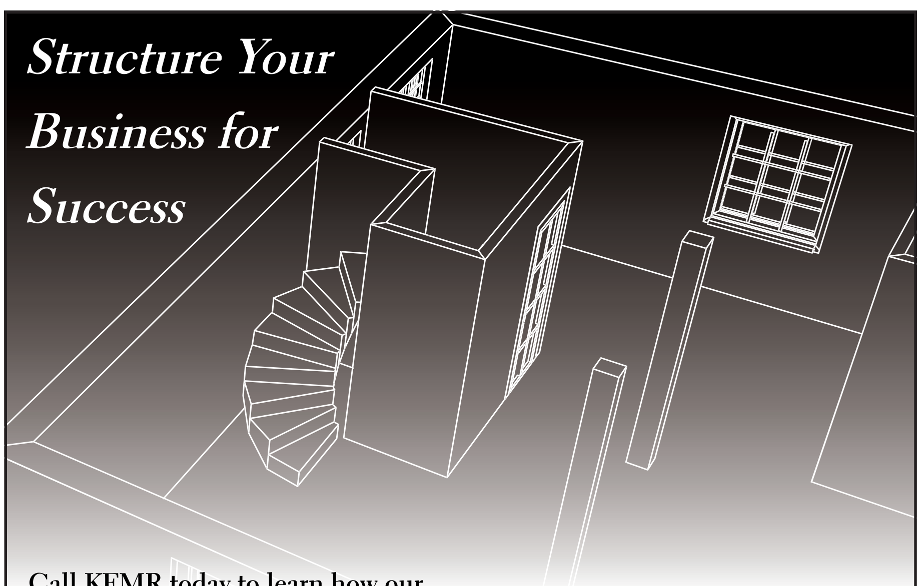
The project attracted a $500,000 grant from the Department of Energy that also required a matching investment from Burns & Scalo. The completed project is being monitored and data shared with university researchers, as well as being compiled by Scalo Solar. Investing in the industry was important to Scalo and the unexpected benefit was that it put Scalo Solar in the place where its customers are and created empathy for their issues.

"In this business we're selling experience as much as anything and you can't sell experience if you don't have the experience," Scalo says. "We had to walk the walk and we're generating the empirical data to show clients what they can expect. The one thing we really learned from this experience is that anyone who's buying has never done this before."

The demonstration project provides another benefit for Scalo Solar: it's a place to show off its capabilities. "We're like a car dealer with the only showroom in town," says Scalo.

The real estate and development side of the Scalo Companies is run by Jim Scalo. Like many in the commercial real estate industry his focus on sustainability was sparked by the demands of his customers, most of whom had no interest of their own in green building until the latter part of the last decade.





... they were achieving a more sustainable environment

"We started recognizing that larger corporate customers were asking for green space and it forced us to look at how we were developing and improving our buildings," he says. The result was a shift in culture at Burns & Scalo Real Estate Services that started with how they were planning their new construction but that began to inform how they ran the company. "Sustainability is something I believe has both an internal and external message."

Scalo says that one of their big early lessons was overcoming the market's perception that the cost of doing LEED-certified construction was prohibitive, particularly for tenant improvements, which are the bulk of Burns & Scalo's projects. The firm's property and construction management team discovered that with careful product selection and thorough buying of construction services they can improve their tenant spaces within the same cost allowances that were used in the past. As those spaces were turned over in their buildings Jim Scalo became aware that he was still competing on the same level against older buildings that had made no effort to make the space more sustainable.

"I thought about a trademark when I saw our new construction was being lumped in with older Class A properties that weren't changing," he says. "That's when we came up with the concept of Class G to differentiate our buildings for tenants who wanted green space in existing buildings. After a while I realized that we had to let others use it for it to become meaningful."

Class G was designed to measure and track how the property was operated and maintained, as well as the way it was constructed. Most of Burns & Scalo's properties were buildings that were built before LEED existed and involved tenant improvements that were so limited that they could not register for LEED-EB, yet the company found that they had many tenants and prospective tenants who either wanted or were mandated to find green space. Scalo wanted to be able to provide those clients with a quantifiable, verifiable measure that could show success in creating sustainable space. To help flesh out the concept into action and steer Burns & Scalo's sustainability he hired former Green Building Alliance executive director Holly Childs in spring 2010. They developed a long list of sustainable build-out and operations actions that could be used by tenants to show how they were achieving a more sustainable environment and created a point system that allowed for Class G tenants to post their achievement and update as they improved their processes.

"People are doing the right thing with their real estate but most aren't taking any credit for it," Scalo notes. "How do you take credit? You hang a plaque. You use a ranking as a way of educating your clients and employees and giving credentials to the effort."

By summer 2011 Jim Scalo and long-time advisor Joe Blattner had capitalized Class G as a stand-alone business entity, with plans of creating an online self-reporting platform for users all over the globe. Michael Embrescia was hired to run the Class G business.

In just about two years, the emphasis on green building has made a defining impact on Burns & Scalo Real Estate Services' business and their corporate culture. Scalo feels the focus on sustainable workplace is part of a new culture in managing a business and attracting the right kind of workforce.

"Look, I try to emphasize – it's become my pet peeve – that all things being equal, why would you not do things in a sustainable way," he says. "Internally and externally it sends the right message that we care about the people we do business with. For our people, if we can relate sustainability to personal values as well as professional then they engage more fully with our business."

"The 'my way or the highway' style of management doesn't work anymore," continues Scalo. "When you put a Blackberry in someone's hands you are in their life full time. They aren't working nine-to-five anymore. I want a TGIM culture, where people are excited to come back to work on Monday and a sustainable workplace is a big component of that." BG

Photo by Ed Massery Photography.

SARAH HEINZ HOUSE EXPANSION

STAN PITTMAN THOUGHT ABOUT THE QUESTION A MOMENT AND THEN SAID, "I'D DO IT AGAIN." PITTMAN IS THE EXECUTIVE DIRECTOR OF THE SARAH HEINZ HOUSE AND HAD BEEN ASKED ABOUT THE PROCESS OF ADDING 30,000 SQUARE FEET TO THE NORTH SIDE FACILITY THAT HAS BEEN A POSITIVE INFLUENCE ON THOUSANDS OF YOUNG PEOPLE FOR 110 YEARS. AFTER SEVERAL YEARS OF PLANNING AND FUNDRAISING, TWO YEARS OF CONSTRUCTION AND A COUPLE YEARS OF OPERATIONS, PITTMAN HAD THE LUXURY OF TIME TO REFLECT UPON THE EXPERIENCE. "WE'RE SERVING SO MANY MORE PEOPLE FROM THE COMMUNITY NOW THAT IT'S TURNED OUT TO BE EXACTLY WHAT WE WANTED IT TO BE."

The Sarah Heinz House was the fruition of a shared mission of H. J. Heinz and his son Howard. The younger Heinz had been moved by the plight of youth in New Haven, CT when he attended Yale. He founded a boys club for North Side youth called the Covode House near the Heinz factory in 1901. By 1903 the club opened admission up to girls as well. Covode House primarily served children of immigrant Heinz factory workers but its reach into the surrounding neighborhood created the need for more space within a decade.

The new building – named for Howard Heinz's late mother – took two years to build and opened in 1913. Its planning had been meticulously overseen by Heinz and the purpose of the place also inspired H. J. Heinz, who remarked at the dedication ceremony that the Sarah Heinz House would "become a factory for building character."

For the next 90 years the Heinz House would serve that purpose. As the North Side began to experience decline in the 1960's the Heinz House became a sanctuary for kids growing up in a tough neighborhood. Programs were expanded. Alumni of the programs who had moved out to the suburbs took their kids into the Heinz House so that they too could benefit from the experiences there. By 2003, an optimum usage study of the Heinz House found that it was at maximum capacity in every program. Pittman took the results to the Heinz House's board of directors with the message that they could serve no more members of the community. The board responded by authorizing the planning of the expansion.

As it turned out the planning took more twists and turns than anyone could have foreseen.

The first stages of working towards the project went swimmingly. Sarah Heinz House put out a request for proposals and interviewed five architects later in 2003. The building committee decided that each member would write up their own review of each firm and identify their selection independent of the other members. Such a methodology can make it difficult to reach consensus but the committee members unanimously selected Rothschild Doyno Collaborative (RDC) to design the project.

"They seemed the most in touch with our mission and understood our rationale for the project," recalls Pittman. "Their proposal captured the essence of who we are."

Selecting the architect was the last part of the planning process that went smoothly, however. The most obvious issue at the start was the site because of the unusual location and orientation to the surrounding infrastructure. Heinz House sits on an island of land at the intersection of Chestnut Street and Route 28, just north of the Heinz manufacturing complex and east of the Veterans Bridge ramps. Complicating the problem further was the fact that the Heinz House did not own the odd parcels which adjoined their property, one of which was actually a Lamar Advertising billboard site. In fact, the problems related to the site were only beginning.

Rothschild Doyno did the programming for the new construction, which was to include a new gymnasium, swimming pool, locker rooms, dance studio, exercise and activity rooms, and started planning for 30,000 square feet of new space. The Heinz House began making arrangements to acquire two parcels of land.

Acquiring property wasn't a straight forward process. As the design of the expansion evolved the new space was encroaching on more and more of the land west of the building. At the end of the desired property was a set of Lamar billboards, which were built on top of a railroad line retaining wall. Lamar was not anxious to move from such a busy site so the Heinz House came up with a proposal to allow Lamar to locate the same square footage of billboard space in other parts of the city. After some persuading, the City of Pittsburgh agreed and Lamar sold the land to Heinz House.

Another difficult part of the entitlement process was the abandonment of North Canal Street, which was adjacent to Sarah Heinz House and would be the southern boundary of the new construction. While the city was not reluctant to abandon the street, Pittsburgh Water and Sewer Authority required that Heinz House make separation of the sanitary and storm sewers part of the project, a significant addition to the scope. Rather than constructing all new stormwater infrastructure, a rainwater bio-capture system was suggested. PWSA was going through a transition at the time but following some anxious meetings agreed to the solution.

During design, PennDOT announced that they would be rebuilding the failing retaining wall along Route 28 on the north side of the building site. While it was good news that the state was going to shore up the wall that retained the north side of the Heinz House property, the PennDOT schedule for the project put construction of the wall project after the start of construction of the Heinz House expansion and that was a major headache.

"PennDOT's design involved lateral support structures that extended 180 feet under out site," explains RDC partner Ken Doyno. "They tied back underneath the new gym. The foundation for the gym was friction pin piles under grade beams. That meant that we had to place the pilings to avoid the anticipated lateral support that would be built for the retaining wall later."

As the site headaches piled up – and more would crop up later in the project – one of the more obvious options for the project would seem to have been the selection of another site. Doyno says that wasn't an option. "I don't think they ever thought about moving," he says. "The reason Route 28 bends around there was the Heinz family was insistent upon preserving the building through the years."

Stan Pittman doesn't completely agree. "We certainly entertained moving to another site. We exhaustively studied it," he says. "The board gave full discussion to that option and determined that the communities we served were well-served by the existing location and depended upon the service that Sarah Heinz House provides. On top of that, the location was important to a lot of our volunteers, who are the lifeblood of the organization."

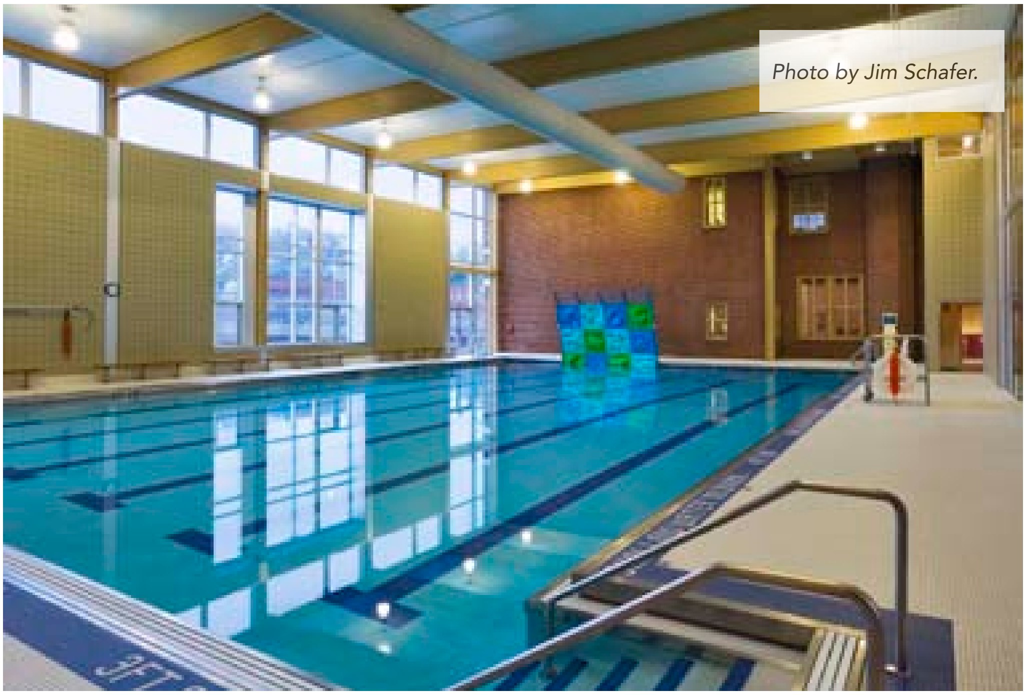


Photo by Jim Schafer.

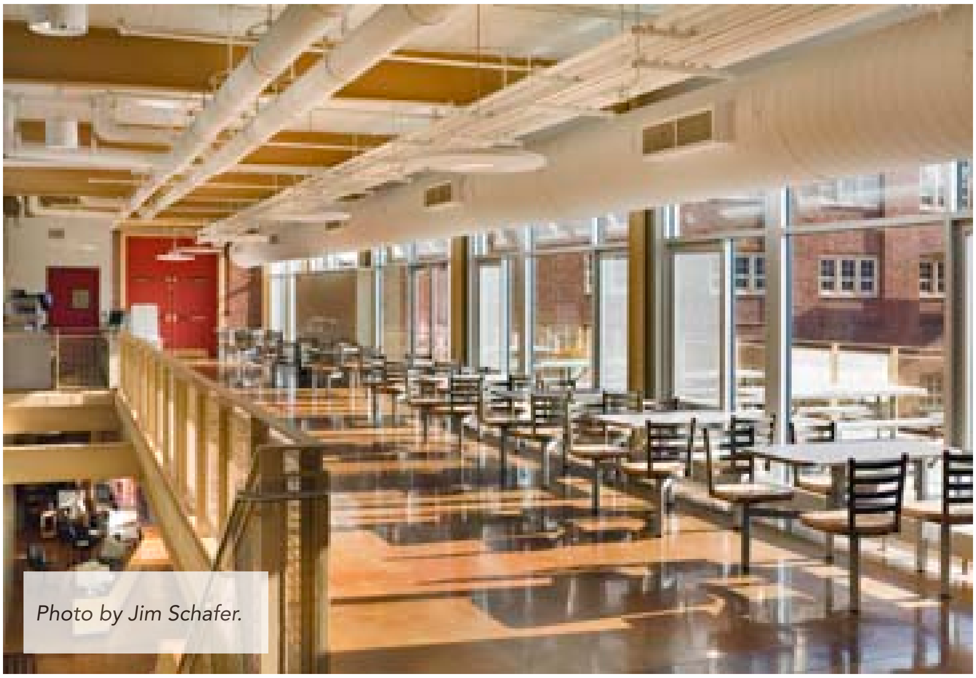


Photo by Jim Schafer.

"McDonough contributed the idea of moving of the locker rooms to beneath the gymnasium, which gave us the two-story circulation space between the old and new buildings," he says. "That made the new building shorter at one end and gave us more of the site."

The change in design that RDC made in response to the relocation of the locker rooms solved several problems at once. By freeing up two floors of connecting space the change influenced RDC's decision to make the two-story corridor relate to both the old and new buildings but also to the neighborhood that the Heinz House serves. This purpose bent the design towards glass, which in turn added more daylight to the building and also resolved the question of the historical or modern approach. What was designed was a two-story glazed addition awash with natural light and views of the skyline and surrounding neighborhoods and allowed swimmers to have the benefit of the light and views beyond. The lower building height made for a more comfortable transition between the old and the new.

While the site and property acquisition problems were being solved a design dilemma arose for the addition itself. The existing Heinz House is an imposing brick and stone three-story-plus building that obviously had historical significance, but matching the existing structure with the limitation of today's materials and labor costs was impractical.

"The board was focused on mimicking the historical look of the existing building," says Doyno. "There was this tension between the historical approach of the masonry characteristics and the modern approach with new forms of masonry and glass and steel."

Also bogging down the design process was the nature and connection of the addition. To meet the program needs the RDC design looked at several options, including leaving a green space in between the existing and new construction. Programming was dictating a three-story addition, which allowed the more historical design approach but didn't allow for accomplishing other aspects of the plan. At this point a convergence of some other interests in the project produced a solution to some key design questions.

One of the principal funding sources for Sarah Heinz House is the Heinz Endowments. They had committed millions to the project and were influential in supporting RDC's initiative for green building on the project. One of the Heinz Endowments' long-time partners in sustainability is architect William McDonough, who the Endowments' leaders invited to consult with the team for the Sarah Heinz House job. Ken Doyno says McDonough made a critical suggestion that liberated the design.

"Sustainability fits in well with one of our key concepts, which is healthy choices."

Another key aspect of the project was the sustainability of the design and construction. Rothschild Doyno is an advocate for green building on every one of their projects and the Heinz Endowments have been pioneers of sustainable practices in all facets of living. For the Sarah Heinz House board, however there was a period of education as they wrestled with the perception of the cost/benefit. The project's cost had gone up through scope creep and some unexpected inflation in steel and concrete during the planning and green building was still viewed as a luxury by many in the industry, particularly uninitiated owners of buildings.

"Heinz Endowments influenced us about sustainability," says Pittman. "As we discussed it as a board we convinced ourselves it was the right thing to do. Sustainability fits in well with one of our key concepts, which is healthy choices. We met with the architects and decided that LEED Silver was attainable within our budget."

LEED was still new to the mainstream market in 2004 but RDC had developed a planning approach that made consensus easier. Their planning even made it possible to reach beyond LEED Silver.

"We put all the possible points on the table and got the aspirational goals out there as well," Doyno says. RDC's plan took advantage of the many opportunities the tough urban site offered for converting unsustainable qualities into sustainable features. "There were enough options that we actually had a cushion to reach silver and we always had other possibilities of things that could have been done as the job progressed. Everyone committed to going for [higher LEED certification] when the fruit got low enough. Anyone would do that if you can get gold instead of silver."

While this extended planning was going on the board decided to bring a construction manager on board so that they could feel comfortable that the costs of their decisions were being vetted. General contractors were interviewed in 2004 and Dick Corporation – now dck worldwide – was selected.

Dovetailing the final design and pre-construction process proved to be invaluable once the construction got underway because the site problems weren't completely gone yet. Work started on the addition in June 2005. Almost immediately thereafter PennDOT made its decision to replace the Route 28 retaining wall, necessitating the foundation design change on the fly. But the bigger surprises came during excavation.

Foundations from long-demolished buildings were encountered on the site, discoveries that aren't uncommon in Pittsburgh, but the work came to a halt when three previously unknown fuel storage tanks were found on the site of the new gymnasium. "We had to stop excavation there and bring in a third party to remediate the site," says Dan Dean, dck's project superintendant. "The tanks had to be removed properly, then the over-excavated soil had to be removed and the soil tested before proceeding.

Photo by Josh Franzos.

From discovery to testing we probably lost 30 days. It caused us to re-sequence the schedule but we were able to make up some of the time other places even while the problem was being remediated."

Because so many obstacles were managed during the planning, construction was unremarkable once the building came out of the ground. Or at least that was the case for the new construction.

"The addition was essentially a stand-alone new building," says Dean. "The new building itself went very well. There was good coordination between us, the owner and architect. But the renovation of the existing building was very tough. We had to coordinate construction with Sarah Heinz House's programs so they could function as normally as possible. Our crews worked early so there was a clean break before their members arrived every day after school but it wasn't so easy for the staff and all the other programs."

The renovation scope was fairly invasive as the project called for re-purposing a number of key areas – the pool, gym and game rooms – that were important to the members and program participants. A new stair tower for fire escape was added and a very difficult four-stop elevator installation had to be accomplished. No clear vertical space existed to accommodate the elevator shaft so different structural modifications had to be made on all four levels.

"We installed the elevator in the basement and then drilled holes in the ceiling to laser shoot the area above," explains Dan Dean. "We had to know the exact makeup of each floor. The building wasn't configured to do it except one floor at a time so we had to build each level's shaft support and then move up to the next floor."

Renovations were sequenced to minimize the impact on staff and participants but the construction was going to be very disruptive no matter. For Heinz House staff it meant crowding and moving and occasional utility interruptions. For members it meant the temporary loss of some of their favorite programs, which also had quite an impact on staff and volunteers who counted on the daily outlet for pent up energy to make the after school members more attentive.

"We never lost a day of operations but it wasn't always easy," recalls Pittman. "For a while all our staff's offices were in one room. You can imagine that wasn't very convenient but it was toughest on our members. They lost their playground when the new construction started; then they lost their swimming pool; then they lost their games room."

The games room is especially important to the social dynamics of the member programming because it is primarily a hang out for the teenagers away from the younger participants. Without it there were some frustrated teens, not a good thing for the volunteer leaders.

"The game room was hard for the kids to deal with," says Dean. "We had to move it several times with the sequence of the project. The final destination was the old pool. That part was something. There were people swimming in it one day and when they left, we immediately started taking it apart, removing coping and setting steel for the conversion to the new game room."

Construction continued on the renovation phase until December 2007 but the major work was completed to open the expanded Sarah Heinz House in April 2007. The results exceeded what the board and staff has expected and the new facility's size precipitated another change in the organization's operations. Rather than leave so much of the building vacant during the day, Heinz House decided to open up programming to more of the community, starting with a Silver Sneakers program that now serves 300. Additional senior and adult programs were initiated and fitness memberships were expanded.

When the project started, Sarah Heinz House was serving 750 members and roughly 800 non-members in community oriented programs. The new programs have mushroomed the Heinz House footprint. There are 1,043 members and an additional 4,725 youths served in related programs. During the school year an average of 318 young people attend the programs daily. The process of planning and construction mirrored the kind of collaborative effort to which Heinz House aspires.

"I can't help but smile when I walk into the building and see the social corridor and its view of the pool and the neighborhood that they serve across the highway. You don't even notice Route 28 at all," says Doyno. "From that entrance you get the cross connection to the city in all directions. The architecture expresses the purpose of Sarah Heinz House well."

Dan Dean's pride in the project came from the relationships he built. "I've worked with a variety of owners in different types of facilities and this owner and the staff was incredible to work with," he says. "They brought you in as part of their family. There was no one person who made this job happen. It was a team of us and our subs, the architect, the owner's staff and the volunteers together."

For Stan Pittman it was about four years of pretending to be a construction manager as well as trying to do his job as executive. Wearing two hats and raising $11.4 million dollars is something he tells his peers not to do. But the stress of the effort has receded with the pleasure of operating in the new facility.

"I'm glad we did it," he laughs. "And I pray we did as good a job of planning this building as H. J. did on the original. That building worked for about 90 years. If we can say the same thing some day we'll have done pretty well." BG

PROJECT TEAM

Sarah Heinz House	Owner
dck worldwide	General Contractor
Rothschild Doyno Collaborative	Architect
William McDonough + Partners	Consulting Architect
BDA Engineering	Mechanical/Electrical Engineer
Taylor Engineering	Structural Engineer
Fahringer McCarty & Grey	Civil/Site Engineer
Pashek Associates	Landscape Architect
H. F. Lenz Co.	Commissioning Consultant
Ruthrauff/Sauer	HVAC/Plumbing
Ferry Electric Co.	Electrical
Marsa Masonry	Masonry
Phoenix Roofing	Roofing
Zeus Construction	Drywall/interiors
H. B. Reynolds Co.	Curtain wall
Noralco Inc.	Demolition/excavation
Eisler Landscapes Inc.	Landscaping

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DUCTMATE INDUSTRIES

THE STORY OF DUCTMATE INDUSTRIES IS SOMEWHAT ATYPICAL OF COMPANIES IN THE CONSTRUCTION INDUSTRY AND OF COMPANIES FROM THE MON VALLEY. THEIR'S ISN'T A RAGS-TO-RICHES TURNAROUND STORY. IN FALL OF 2011 THE COMPANY IS THRIVING, DEALING SUCCESSFULLY WITH THE CHALLENGES OF A SIGNIFICANTLY SMALLER CONTRACTING VOLUME AND TIGHTER COMPETITION AMONG ITS CUSTOMERS, AND WITH MANAGING A LONG-TERM WORKFORCE THAT HAS LITTLE OR NO EXPERIENCE WITH LAYOFFS. DUCTMATE'S CEO, RAY YEAGER IS EMPHATIC THAT CHANGES IN THE COMPANY'S CULTURE HAVE HAD AS MUCH TO DO WITH DUCTMATE'S CONTINUED HEALTH AS ITS PENCHANT FOR STRATEGIC PLANNING.

The Ductmate team on the roof of their Charleroi offices (from left-to-right) Ernie O'Brien, Pete Arnoldt, Cindy Omstead, Katie Flynn, Ray Yeager, Doug Gudenburr, Dan Bruno, Mark Smith, Ed Rafalski, and Tony Plantz.

"We're a very strategic organization," says Yeager as he points to the firm's current plan, a two-inch document called DMI 2015. "I live and die by that plan, refer to it all the time. When we did this [in 2010] we added sustainability as a fourth strategic objective so that we plan to operate the business in a way that improves the environment in which we live in every way. That objective has become part of our corporate culture."

Yeager and the company's other owners are passionate about Ductmate's remaining a leader in operating in an environmentally responsible manner, but the passion doesn't supersede their other business objectives. They simply don't see corporate sustainability as a burden to the overall objectives.

"Ductmate is a very fiscally responsible company too," explains Yeager. "We are a lean enterprise and are committed to lean manufacturing. We disagree with the idea that being sustainable costs us anything extra. I believe you can operate sustainably and maintain a competitive cost structure if you take the time to plan properly."

> Ductmate Industries saw its sales take off globally right from the start...

The decision to commit to sustainability was not a wrenching one for Ductmate, perhaps because its history is rooted in the original "green" building movement. In 1977, as the U. S. economy was suffering through a second serious recession in the decade, Peter Arnoldt and two others founded Ductmate to help the HVAC industry combat the second Arab oil crisis. Arnoldt was an engineer and he developed a duct connection that had an integral sealant in the profile that allowed for leak free ductwork. The product, called Ductmate 35, made a measurable difference in energy efficiency and its ease of use saved measurable time in the field. Touting energy savings to engineers and owners and labor savings to contractors, Ductmate Industries saw its sales take off globally right from the start.

Like many multi-partner startups, Ductmate experienced a shakeup in its ownership during its first decade. After one founder retired and another left to start a new business, Peter Arnoldt was left as the remaining owner. In 1984 he hired Ray Yeager away from PPG Industries as the company's controller. During the next two decades, Ductmate continued to grow its line of energy efficient, labor saving products and experienced several management changes.

Arnoldt sold the business in 1990 to an investment group funded primarily by the Pennsylvania State Teachers and managed by Russell Rea Zappala & Gomulka. Five years later RRZ executed its plan to return its funds to their investors and sold Ductmate to Arnoldt's sons and son-in-law, along with Ray Yeager as a minority owner. In 2005 the ownership reorganized leaving Bruce Arnoldt and his brother-in-law Tim Omstead co-owners with Yeager, and Yeager was named president and CEO. By this time the company was organized as a group of businesses under the DMI Companies umbrella, which included the Ductmate brand, along with a similar product line under the Ward Systems name and a fire protection products company called Air Technologies Inc. The product lines included a growing line of accessories for the HVAC industry, like duct connectors, pipes and fittings, sealants, dampers, access doors, controls and pipe hangars.

Through the changes, with one brief exception, Ductmate's management focused its decisions about new products and acquisitions on creating more energy efficient systems. The focus on energy savings began to inform the company's internal decision making as well.

As the company grew during its third decade in business, Ductmate's corporate management outgrew its office space in their Monongahela plant. Ductmate explored several options for building a new facility on its 17-acre property in Monongahela but ultimately decided to take a very different path. Rather than expanding its footprint at the plant, Ductmate's leadership decided it was time to "practice what it preached," according to Yeager and bought an empty bank building in downtown Charleroi in 2003. The renovation allowed Ductmate to showcase its products and it gives Ductmate the opportunity to demonstrate what can be done, even in a less-than-efficient envelope. For example, the climate in the offices on all four floors varies by only two degrees throughout. The project has been registered with the U. S. Green Building Council and DMI expects to see their headquarters certified Silver under LEED for Existing Buildings.

It was also at this time that the management team became aware that their history and commitment to energy efficiency could lead them to the fore of the burgeoning green building movement. In 2006, DMI started a new business called RCx Building Diagnostics to provide energy analysis and audits, LEED assistance and retro-commissioning on small to medium sized buildings. Staffing RCx with energy experts added to the company's knowledge base about green building and made them realize that sustainability was about more than just products. Yeager says that their experiences showed them how decisions about sustainability could impact the culture of the company. With the entire industry beginning to focus increasingly on green building, Ductmate had a leg up on the changes that were coming and found that its employees were ready to take additional steps towards becoming a sustainable corporation.

Their next big step was to create a sustainability scorecard for their employees. Employees could rack up points for making their homes more energy efficient and less wasteful. Sustainable decisions about personal lifestyles could add to the totals, including those that improved the employees' wellness. And those that made the best choices and changes weren't given pats on the back. In 2010, winners received iPads for their efforts.

By the time that Ductmate revisited its strategic plan in 2010 it was clear that sustainability had become one of its core values, as well as a core business. In addition to adding sustainability as a fourth strategic objective, DMI laid out a plan for achievement of its goal of improving the way of life of its customers and employees.

"We created three initiatives for improving our way of life," explains Yeager. "First is health and wellness. Second is a commitment to a lean environment, which involves a commitment to continuous improvement. And then third is our focus on sustainability in all things. These are part of our culture of keeping our employees. One of our strategic objectives is to keep Ductmate a preferred place of employment."

Yeager likes to return to the fact that the sustainable culture is still about maintaining an edge in the marketplace and turning a profit. DMI Companies have annual revenues of between $75 and $100 million, depending on the ebb and flow of the construction market. Their products are market share leaders – with some lines exceeding 30 or 40 percent of the market – and Ductmate is the overall market leader in HVAC accessories by a fair margin. And some of their more extreme sustainability goals have paybacks that justify the effort, regardless of the environmental benefits.

For example, this year the office building needed a new roof. Ductmate hired Burns & Scalo to replace the old roof with a white reflective membrane and also included a solar tube system that uses both the direct sunlight and the reflected light of the roof to generate electricity. By solving a common problem with a sustainable solution Ductmate also made a business decision that will have a complete payback in six to eight years.

Yeager tells of a recent 'dumpster dive' to analyze the waste at their Monongahela plant. "We did the dive between 7:00 AM and noon and bought the whole plant lunch to explain the results," he says. "We analyzed what we could recycle and found that 62 percent of our material was being recycled and 38 percent was going to the landfill. The team that organized the dive set a goal of zero waste going to the landfill by 2015. Now that's not attainable – you'll always have food that has to go to landfill for instance - but in working towards zero percent we save thousands of dollars in waste hauling."

The emphasis on sustainable business has made Ray Yeager an apostle on the subject. Ductmate focuses on the continuous improvement so much that he often gets impatient about the pace of change.

"I'm speaking to the HARDI convention – that's the heating, air-conditioning and refrigeration distributors – in reaction to their magazine's article that said the whole industry is going sustainable because of its products," he chuckles. "When I read it I thought they were missing the boat and sent out a letter critical of the article to our employees. Peter Arnoldt, who works with RCx, wrote back saying that I was looking at it wrong. He said it was a great start. I think that's a great way to look at it."

"When I speak I always tell the group that they have to crawl before they walk, walk before they run. We had to learn our way to this point and it doesn't take long before it's part of everything you do." BG

Company Facts

Ductmate Industries Inc.

210 Fifth Street, Charleroi PA 15022

724-258-0500

FAX 724-258-5494

www.ductmate.com

Employees: 225

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NEW PENNSYLVANIA LEGISLATION LIKELY TO SIGNIFICANTLY IMPACT PENNSYLVANIA CONSTRUCTION COMPANIES AND OTHER BUSINESSES

By Richard W. Saxe, Jr.

The lega l landscape in Pennsylvania was altered dramatically on June 27, 2011 when Governor Tom Corbett signed into law Senate Bill 1131, better known as the Fair Share Act. The Fair Share Act was originally enacted into law in 2002 but was overturned by the Pennsylvania Supreme Court on technical grounds. The law was again passed by the Pennsylvania General Assembly in 2005 but former Governor Ed Rendell vetoed the legislation.

Passage of the Fair Share Act brings Pennsylvania in line with approximately 40 other states that already have similar legislation in place. Under the new law, Pennsylvania's doctrine of "joint and several" liability has been significantly modified in cases of negligence.

THE OLD LAW

Under the prior law, a defendant who was just marginally responsible for injury or harm could be made to pay 100 percent of the damages. This is what is referred to as joint and several liability. If multiple defendants are found liable for a plaintiff's injuries, damages are assessed to each defendant according to their percentage of fault. Under the old law, each of the defendants was potentially liable for the entire amount of the judgment in the event the other defendants were unable to pay even though their proportionate share of liability was different.

For example, suppose a plaintiff filed a lawsuit against three defendants and Defendant A was found to be 50 percent at fault, Defendant B was found to be 45 percent at fault, and Defendant C was found to be 5 percent at fault. Under the prior law, if Defendants A and B failed to pay their proportionate share of the judgment, Defendant C could be forced to pay 100 percent of the judgment amount even though it was held to be only 5 percent liable for the injury. Defendant C, who paid the entire judgment amount, still had the right to seek contribution from the non-paying defendants but this would result in further litigation and additional legal fees. Moreover, if the non-paying defendants went bankrupt or had insufficient assets, the paying defendant would still be left "holding the bag" at the end of the day.

Opponents of the old law believed it was unfair and too often resulted in frivolous lawsuits or attacks on defendants with perceived "deep pockets." A plaintiff could include a defendant who played little role in causing the injury in the hope of a large verdict or quick settlement. Consequently, defendants who believed they were not at fault or perhaps only minimally responsible were faced with a difficult choice. On one hand, they could pay much more to settle a case than they might otherwise. However, if they chose not to settle but instead proceed to trial, they would expend significant legal fees and still potentially be forced to pay 100 percent of the award if the other defendants did not pay, even in those instances where their liability was determined to be nominal.

THE NEW LAW

The Fair Share Act changes the old law to allow defendants found at fault to pay only the portion of the judgment commensurate with their liability. So in the above example, Defendant C is now only required to pay 5 percent of the judgment amount regardless of whether Defendants A or B pay their share of the judgment. Courts are now required to enter a separate and several judgment against each defendant.

The passing of the Fair Share Act is being lauded by business groups throughout the Commonwealth including the Pennsylvania Chamber of Business and Industry and a number of insurance industry coalitions. These groups argued that, unless serious reform was effected, business development and job growth in Pennsylvania would be hindered. They also contend that lawsuit abuse will decrease because of the new law.

Opponents of the legislation argue that the changes will result in less compensation for victims of injuries. They maintain that, in the event one or more of the defendants fail to satisfy its share of liability, individuals will now be exposed to the risk of not being made whole for their injuries instead of companies with greater assets.

EXCEPTIONS

As with most legislation, there are several noteworthy exceptions to the end of joint liability under the Fair Share Act. Under the new law, liability shall be

several, and not joint, except in actions involving an intentional misrepresentation or an intentional tort, in suits concerning the release or threatened release of a hazardous substance under the Hazardous Sites Cleanup Act, or in civil actions in which a defendant violated Section 497 of the Liquor Code.

Additionally, and importantly, the new law does not apply to defendants who are found to be 60 percent or more liable. In these cases, the defendant will still be responsible for 100 percent of the award if the other defendant(s) fails to pay its proportionate share of the judgment amount. So, for example, suppose Defendant A is held 60 percent liable and Defendants B and C are each held 20 percent liable. If Defendants B and C fail to pay their proportionate share, Defendant A will be responsible for the entire amount of the award. As with the old law, Defendant A will continue to have the right to seek contribution from the non-paying defendants.

IMPACT ON THE CONSTRUCTION INDUSTRY

As with most businesses, the Fair Share Act should benefit Pennsylvania construction companies. First, the passage of the new law will likely cut down on the number of lawsuits filed against defendants who had little or no connection to a plaintiff's injuries. Because a defendant is no longer potentially on the hook for the entire amount of a judgment even if it is found only nominally liable, plaintiffs will likely be dissuaded from including such entities as defendants in lawsuits. Moreover, in those instances when a solvent entity is named as a defendant in a lawsuit, it will no longer be compelled by the threat of joint and several liability to settle a frivolous lawsuit out of fear that it would have to pay for a damages verdict disproportionate to its alleged share of culpability.

House Majority Leader Mike Turzai (R-Allegheny County) co-sponsored the legislation to align the potential results from litigation with the liabilities of the parties. "I really think the impact will be most profoundly felt in settlement discussions and in the decision-making process about whether or not to bring suit," he says. "The two most common questions [a lawyer] would ask their client are, what do you think is your potential liability and how much money do you have? The law allows businesses to more narrowly focus on the risk exposure they can control. They can only reasonably take steps to minimize the risks that are within their control, not risks that are someone else's to control."

In addition to impacting legal strategies during settlement discussions, the new law is likely to impact insurance costs. Proponents of the new law argued that by reforming the doctrine of joint and several liability, and consequently reducing a business' and its carrier's potential exposure, a reduction of insurance premiums will follow. It is too early to determine whether insurance carriers have amended the costs of premiums to reflect the changes in the law but businesses should continue monitoring their insurance policies.

EFFECTIVE DATE

Finally, it should be noted that the new law applies to causes of action that "accrue on or after the effective date," i.e., June 28, 2011. Accordingly, all causes of action arising before June 28, 2011 will still proceed under the old joint and several liability rule.

In sum, it certainly appears the passage of the Fair Share Act is a win for the Pennsylvania business community, including construction companies. As with all new legislation, it will take time to reveal the true impact of the law's changes and whether such changes will improve the business climate in Pennsylvania. BG

Richard W. Saxe, Jr. is a shareholder in the Construction Services Group at the Pittsburgh, PA law firm of Babst, Calland, Clements and Zomnir, P.C. For more information or questions please contact Mr. Saxe at (412) 394-5679 or email at rsaxe@babstcalland.com.

Financial Perspective

Going Green for Less Green

By Richard Spence, CPA, CCIFP, CVA and Sean Kocan, CPA

OVERVIEW:

The 2010 Tax Relief Act signed into law on December 17, 2010 extended the life of a Treasury Department program that provides cash payments to renewable energy project developers under Section 1603 of the American Recovery and Reinvestment Act. This extension provides applicants an additional year to apply for and receive direct Federal reimbursements of a portion of costs incurred on qualified energy property which can have immediate impacts on an applicant's cash flow. These grants are an attractive alternative to other available tax credits which are often not fully-beneficial due to the fact that renewable energy investments are often associated with start-up tax losses and several funding rounds, often resulting in limitations on the utilization of investment tax credits. As of June 29, 2011, approximately $7.8 billion of payments have been received by applicants, of which approximately $286 million were paid to Pennsylvania residents for 289 individual biomass, geothermal heat, small wind, solar electricity, solar thermal, and wind properties.

FORM AND AMOUNT OF CREDIT:

The grant, or credit, is generally equal to 10% or 30% of the basis of the qualifying property, depending on the type of property. The basis of property generally is its original cost plus costs for installation and freight incurred in its construction as determined in accordance with general income tax accounting. However, this cost basis is reduced by costs that will be deducted for federal income tax purposes in the year in which they are paid or incurred. Two common examples of this situation are the Section 179 deduction and the deduction of intangible drilling and development expenses for geothermal property. Qualified basis must be reduced for the amount of the deductions taken in the year of acquisition.

Specified Energy Facility / Property	Applicable Percentage of Eligible Cost Basis	Credit Termination Date
Large Wind	30%	January 1, 2013
Closed-Loop Biomass Facility	30%	January 1, 2014
Open-Loop Biomass Facility	30%	January 1, 2014
Geothermal under IRC Sec. 45	30%	January 1, 2014
Landfill Gas Facility	30%	January 1, 2014
Trash Facility	30%	January 1, 2014
Qualified Hydropower Facility	30%	January 1, 2014
Marine & Hydrokinetic	30%	January 1, 2014
Solar	30%	January 1, 2017
Geothermal under IRC Sec. 48	10%	January 1, 2017
Fuel Cells	30%	January 1, 2017
Microturbines	10%	January 1, 2017
Combined Heat & Power	10%	January 1, 2017
Small Wind	30%	January 1, 2017
Geothermal Heat Pumps	30%	January 1, 2017

Eligible energy projects and their associated tax credits

ELIGIBLE APPLICANTS:

Applicants eligible to receive Section 1603 payments include the owner or the lessee (with certain conditions) of the qualifying property and must originally place the property into service.

Certain persons are not eligible to receive payments, including:

- Any Federal, state or local government, including any political subdivision, agency or instrumentality thereof;
- Any organization that is described in section 501(c) of the Internal Revenue Code and is exempt from tax under section 501(a) of the Internal Revenue Code;
- Any entity referred to in paragraph (4) of section 54(j) of the Internal Revenue Code; or
- Any partnership or other pass-through entity, any direct or indirect partner (or other holder of an equity or profits interest) of which is an organization or entity described above unless this person only owns an indirect interest in the applicant through a taxable C corporation.

Eligible Property:

Qualified property must be used predominantly within the United States and be originally placed in service between January 1, 2009, and December 31, 2011, (regardless of when construction begins) or placed in service after 2011 and before the credit termination date (see table to the left) if construction of the property began during 2009, 2010, or

2011. Placed in service is defined as when the property is ready and available for its specific use.

Construction is deemed to begin when physical work of a significant nature begins or through satisfaction of a safe-harbor provision. Physical work of a significant nature does not include preliminary activities such as planning or designing, securing financing, exploring, researching, clearing a site, or testing. The safe-harbor provision allows for the determination of physical work of a significant nature beginning when more than five percent of the total cost of the property has been paid or incurred.

Qualified property, or "specified energy property," includes only tangible property subject to depreciation or amortization that is an integral part of the activity performed by a qualifying energy-producing facility and physically located at the site of the qualifying facility. Generally, a qualified facility must be capable of operating as an independent unit even though the property is installed at the site of an existing facility. Certain modifications to property installed on an existing facility qualify as specified energy property even if the facility was placed in service prior to the initial effective year of 2009.

APPLICATION PROCEDURES:

Applicants interested in receiving payments under Section 1603 may submit an application online through the Department of Treasury's website. Applications may only be submitted after the property is placed in service or its construction has commenced but must be submitted before October 1, 2012. Upon review of the application, the Treasury will provide notice of its approval, denial, or request for additional information. Payments on approved applications are made generally within 60 days from the later of (1) the date of receipt of the complete application or (2) the date the property is placed in service.

Among other information, applicants must submit with their application documentation to support the cost basis claimed for the property. This includes a detailed summary of all costs; however contracts, copies of invoices, and proof of payment is not required but should be retained and made available upon request.

Type of Renewable Energy Project	Examples of Specified Energy Property
Biomass and Trash Facilities	Property used at the plant site for unloading, transfer, storage, reclaiming from storage, or preparation of the material to be processed at the plant.
Geothermal Facilities	Equipment that transports geothermal steam or hot water from a geothermal deposit to the site of ultimate use.
Electricity-Generating Facilities	Storage devices, power conditioning equipment, transfer equipment, and parts related to the functioning of these items.
Solar Facilities	Equipment that (1) uses solar energy to generate electricity, to heat or cool a structure, or to provide solar process heat; or (2) uses solar energy to illuminate the inside of a structure using fiber-optic distributed sunlight.
Qualified Fuel Cell Property	A fuel cell power plant that has a nameplate capacity of at least 0.5 kilowatt of electricity using an electrochemical process and has electricity-only generation efficiency greater than 30%.
Small Wind Energy Property	A wind turbine that has a nameplate capacity of not more than 100 kilowatts.

For properties that have a cost basis in excess of $500,000 but less than $1 million, applicants must submit an independent accountant's agreed upon procedures report certification to the accuracy of all costs claimed as part of the basis of the property. For projects relying on the 5% safe harbor provision with an estimated eligible cost basis of $1 million or more, applicants must submit an audit report from an independent accountant on the eligible costs of the specified energy property paid or incurred by December 31, 2011.

Hill Barth & King can assist you in determining the most beneficial tax election for you among the various available options, including the Section 1603 grant, and Sections 45 and 48 production and investment tax credits. In addition, our Construction Industry Group is capable of providing you the required certifications and independent accountant's reports required for certain application situations. Contact us today for more information about how Hill, Barth & King can help you maximize your tax savings at construction@hbkcpa.com or calling Richard Spence at (724) 934-5300. BG

OPERATING SUSTAINABLY AFTER THE PLAQUE GOES UP

In the 1972 movie The Candidate, Robert Redford plays a brash, long-shot candidate for senator from California who captures the voters' fancy and wins the election. In the final scene Redford's character asks his campaign manager a question that goes unanswered over the din of celebratory noise, "What do we do now?" Many owners of new LEED-certified buildings know that feeling.

One aspect of green building that has come more into focus as time has gone by is that operating the building in an energy efficient and environmentally sound way is as important as building it that way. Designing and constructing a LEED-certified building certainly gives you a leg up on a better performing facility but after the first decade of LEED we have come to understand that the process of pulling together a certain number of credits and running a green project doesn't assure that the building will function better than the existing building stock. The understanding of sustainable has also been broadened and focused more sharply over time. And operating sustainably is as important as building it that way.

> ... operating the building in an energy efficient and environmentally sound way is as important as building it that way.

Life cycle cost analysis puts the cost of construction of a building at only 20-40 percent of the total cost of ownership after 30 years. And a 2006 U. S. Forest Service study of occupied life cycle costs found that the cost of the salaries and benefits of the occupants over 30 years was 18 times the cost of new construction, at government pay scales no less. Regardless of how conservative or comprehensive your estimating is, the cost of operating and maintaining an occupied commercial or owner-occupied building dwarfs the first cost.

If operating a building costs five times or twenty times what it costs to build the structure in the first place then the reward for doing so sustainably should be that much greater.

As might be expected, one of the most important ways to ensure that a green building operates sustainably is to plan for that eventuality. Architects and engineers are trained to think about the operating ramifications of their design decisions but with increasing frequency a consultant will be brought in who specializes entirely on the green building aspects of the design. This consulting specialty was most commonly referred to as LEED consulting but over time that is morphing into the more general sustainability consultant.

Chris Klehm sees that shift in nomenclature as reflective of the shift in responsibility. "If the consultant you're interviewing starts by asking about what level of LEED certification you want you might want to talk to another consultant!" Klehm runs the Pittsburgh office for Sellen Sustainability, a consulting firm from Seattle. "It's important to ask about the corporate mission and how the project is expected to fulfill that mission. What is the impact of the project on the business model? How will the corporation change as a result of building a green building?"

Klehm advocates involvement with the design and decision-making at the early stages. "There are so many ways to make sustainable decisions that save money over time and save up front costs," he says. "And a lot of 'green' decisions can lead to un-green ways to operate. You have to ask why the decision is being made."

He gives the example of the decision to use flushless toilets in an institutional setting as enhancing the water efficiency credits but points out that such a decision, although laudable, is often made with a plumbing design that isn't compatible to smooth operations.

"Are the toilet fixtures laid out below the level of the sinks so they get wash through when water drains from those fixtures?," he asks. "If not, the flushless fixtures won't work properly and the bathroom won't be very pleasant. A LEED building can operate poorly if it's poorly designed."

> The mills consume so much energy and it's tough to make an impact.

Justin Griffith is the general manager of the Regional Learning Alliance in Cranberry Woods. He laughs when the example of the flushless toilet layout is related to him. "That describes our bathrooms to a 'T'," he says. "We regularly have to manually pour water into the urinals because of odor and to keep them wet.

The RLA was one of the earliest LEED NC buildings in the region, opening its doors in 2006. There is an educational component to the occupancy of the building but its main purpose is more like that of a hotel or private conference center. For that reason, the RLA building may have been the first commercial LEED building in Pittsburgh. Because the Alliance partners were all educational institutions the building management has worked to use green cleaning and maintenance products. But that sense of the educational purpose also drove decisions to incorporate new technologies into the design of the building, a decision Griffith says he would advise against in future.

"One lesson we learned when new technology is introduced into the market is that you may not want to be the first to adopt it," he notes. "It seems that many of the products we have in our building are vastly improved in operations and efficiency just a few years later. I talked with our architect recently and they said that a number of the products that were chosen had been updated since our project. We've seen that in replacing furnishings and some of the carpet. There are many more options now for color and texture than in 2005."

LLI Engineering's Jamie White has worked on the mechanical and electrical design of many LEED-certified buildings, including Westinghouses's million-square foot LEED Gold campus in Cranberry Woods. To him the advantage of taking possession of a LEED building is the scale of the problems.

"It's not so much big issues in a LEED-certified building. Good design in good design. Good construction is good construction," he says. "The big thing is commissioning the building and at the end of the warranty period re-commissioning it. Usually if the building isn't performing well it is something minor that can be found in a retro-commissioning."

White explains that the commissioning after the fact allows the building owner to compare the performance to that of a year before. Heating and air-conditioning performance can be degraded by faulty dampers, poor balancing or improper control settings. It's also not uncommon to find that something was missed during the commissioning, especially at the end of a large or complex project with a long schedule.

"I'm a big proponent for retro-commissioning to look for broken components or energy hogs in the system," White says. He's especially emphatic about the need in commercial buildings. "Owner-occupied buildings with long-term owners or long-term tenants tend to take a real active interest in how the building is maintained, but in rental property most of the problems are outside the scope of an HVAC maintenance contract. Landlords should be aware that their HVAC maintenance contractor isn't going to be looking for things that will improve the performance of the building."

Regardless of whether the building owner built or renovated with the rigor of a LEED certification process, there are many reasons for the owners and occupants to push for optimum operation of a building. John Wilhelm, president of CJL Engineering sees the bar being raised to another operating level.

"We're getting more clients interested in zero energy buildings," he says. "Especially for owner-occupied buildings there is a push to generate all of the power needed on site. You don't have to be off the grid but just have to generate as much power as you use."

"Photovoltaic is really the way to do it. The ones we're doing around here are going that way, not wind," he continues. "What you do is drive the energy use down as much as possible. Use a really tight building envelope, low lighting, really efficient equipment and systems and then create the generation system to offset the usage. I think the real opportunities are with manufacturing. The mills consume so much energy and it's tough to make an impact. You can have a mill that uses 180 megawatts and only one megawatt is lighting, but you can work on the lighting at least. That may be worth hundreds of thousands each year."

Working on little things can make a big impact over the course of a few years and it seems to be the best course of action for moving an organization's sustainability culture forward. Aiming for smaller victories is also a more inclusive strategy for helping the average building owner or tenant to make progress towards a sustainable culture. That means influencing behavior as much as building systems.

Michael Embrescia is the director of Class G, a private rating system aimed at recognizing owners and tenants for making sustainable operating decisions. As he talks to businesses interested in their concept he finds himself in the position of tamping down the fervor of the conversation.

"The first thing I ask is why they are interested in operating more sustainably," he says. "Is it mission-driven? Are they shooting for water or energy efficiency? Or are they going for a safer work environment, because there's a different response for each."

"When I was at GBA there seemed to be three main motives for doing a LEED certification: one was for marketing reasons, to show clients or employees a commitment to the environment; second was to differentiate a business from its competitors; the third was when it was driven by the mission of the organization. Sustainability has to work with the overriding goals of the business or there will be push back from the users."

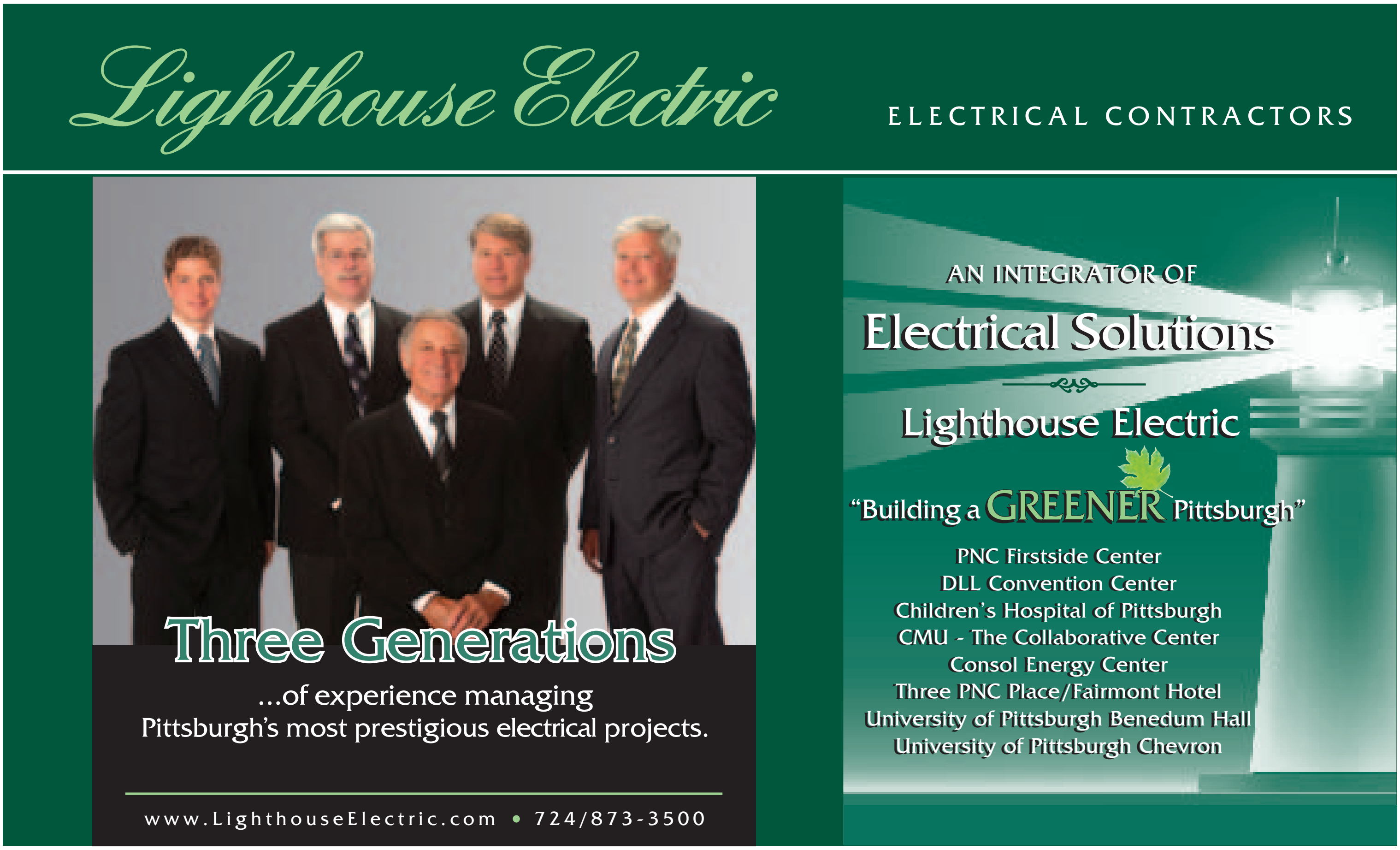
Many of the organizational goals of building users are unrelated to construction so the decisions made about the building's use may have more to do with enabling recycling or composting, changing to daylight cleaning or focusing purchasing on buying from local sources rather than the rock-bottom supplier. These kinds of choices show a commitment to a long-term vision that is better for the employees or the firm's customers. It is putting into practice the trite but true concept of thinking globally but acting locally. For the organization, though, the added benefit is a workforce that's more engaged in its goals. That sort of symbiotic relationship can lead to an escalating pattern of caring decisions by management and workforce.

Chris Klehm tells a story of a thoroughly unusual measure his company is taking at its headquarters office in Seattle.

"Sellen is replacing all the door knobs with copper hardware because copper is anti-microbial," he says. "I think it's going to cost the company $15,000 but they are going to use it as an experiment and track the incidence of illness this winter to see if it cut down on colds and infections. That will help them advise clients who are looking to optimize the safety of the work environment but it also sends a great message to Sellen's employees."

That greening a building's environment could lead to social responsibility and better citizenship is a surprising consequence for pursuing sustainable construction and operations. Embrescia does not find it to be unintentional from the perspective of green building advocacy.

"Sustainability is both a business decision and a lifestyle decision," he says. "Remember that we both work and live at the office. We're going to take practices learned at the office to the home." BG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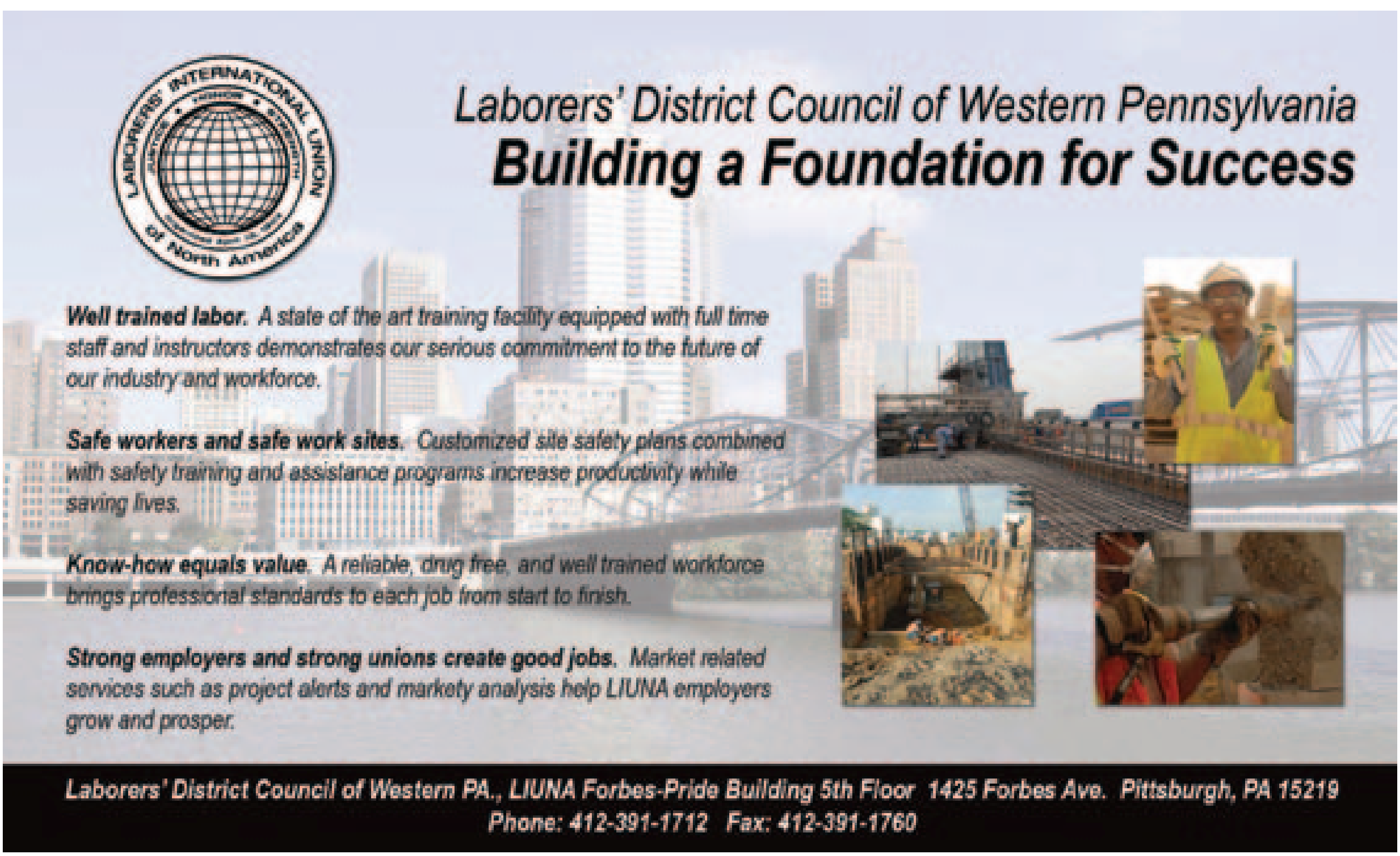
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Laborers' District Council of Western PA., LIUNA Forbes-Pride Building 5th Floor 1425 Forbes Ave. Pittsburgh, PA 15219
Phone: 412-391-1712 Fax: 412-391-1760

MBE/WBE Company Spotlight

EISLER LANDSCAPES INC.

Throughout Pittsburgh's industrial heyday the company that maintained the estates of the rich and powerful was Eisler Landscapes Inc. The company was founded in 1926 by John Eisler and had found a niche that many envied.

"He worked for the bluest of blue bloods in Pittsburgh," says Eisler's president Eric French. "John's clients were the best in town – the Scaifes, Mellons, Hillmans and Heinz. John had a really good Rolodex."

Eisler also played a key role in the sites of Renaissance One, handling the landscapes at iconic venues like Point State Park and Mellon Square. John's sons didn't get involved in the business and as can happen when a founder remains at the helm for almost 60 years, the business fell off as the years went on. His granddaughter Sherry Kyne had always been interested in the business however, going out to job sites with her grandfather when she was young. When John Eisler passed away in 1984, Sherry took over the ownership of the company.

While Eisler Landscapes was still the landscaper to the stars in Pittsburgh, it would take a couple of years of Herculean effort to keep the enterprise going in a market that was reeling from the loss of its principle industry. Sherry Kyne's vision for Eisler drove her to rebuild the staff with educated professionals, hiring horticulturists to help manage the business. Eric French was hired shortly after graduating from Penn State in 1986. French had started his own landscaping business to put himself through college and he set about expanding Eisler's contracting business. Soon after French started Eisler landed a $1.5 million restoration of Elm Court in Butler, a job that gave a boost to their growth plans. About a year later the new company landed its first commercial job, the plaza at Two Oliver Plaza.

In a relatively short period of time Eisler built its commercial resume and has maintained its mix of business at 50/50 residential and commercial most years. Over time the leadership made a series of decisions about direction that have paid dividends, especially in this latest downturn.

One of Eisler's biggest strategic assets is the wholesale production nursery that it operates in Prospect PA near the intersection of Route 422 and Interstate 79. The nursery ships to contractors and distributors all over the northeastern U. S., going as far west as Chicago. Having a healthy nursery as part of its business allows Eisler to control its plants very closely. They can manage quality, costs and risk of loss to a high degree. The company's management has also chosen several very solid niches to specialize in and invested in them.

Eisler developed an expertise in wetlands mitigation and relocation. To support that business more effectively the company purchased heavy equipment for excavation. Gaining experience in excavating gave Eisler the confidence to begin self-performing its own site work, which gives it more control and reduces risk on its landscape contracting jobs. The experience gained in managing other trades in the site work package helped Eisler gain a strong foothold as a higher end residential swimming pool contractor. Outdoor living areas have become an Eisler specialty, including the installation of the pool's utilities and mechanical systems, pool houses and even outdoor kitchens.

The company's commercial experience in plaza work helped them develop expertise in creating planted gardens in urban areas, experience that translated well as the industry moved more and more into sustainable construction.

"We've always been 'green' but the technology has really changed now," says French. "Now we specialize in green roofs. Ten years ago if someone talked about a green roof we called it a plaza. The terminology has changed but so has the construction technology. I've seen older planted roofs that literally had three feet of soil or more on the roof, but the current technology is a few inches of engineered soils, sedum mats and specialized kinds of plants." French points out that the purpose of a planted roof is different as well. "The purpose now is for stormwater best management practices and maybe for an owner to get some marketing impact. A green roof also has a cooling benefit. On a three or four story building it can drop cooling costs by 30 percent."

Eisler has provided the green roofscape work for Burns & Scalo/Cuddy Roofing on the Gates Hillman Center at Carnegie Mellon, the Allegheny County Office Building and the recently awarded million dollar vegetative roof at the Convention Center.

While their nursery is located in Butler County, French points out that 80 percent of their landscape contracting business is in Allegheny County, including roughly $3 million in tree planting as part of the urban forest program in the City of Pittsburgh over the past few years.

Eisler is parlaying its sustainable knowledge base and site work experience to get ahead of what Eric French thinks will be the next big thing for his business: bioswales and rain gardens. With the region's most populous areas under a consent order from 2006 to fix the combined sewer outfall problem, and nowhere near the $3 billion to $10 billion needed to build separate storm and sanitary sewers, the use of biorention structures offers a low-cost alternative to the sewer infrastructure.

"We're doing a demonstration rain garden under a Federal grant at the Shaler Municipal Building on Wetzel Road," says French. "We made a conscious decision to get ahead of conservation with the government by helping with research and setting protocols. Rain gardens will be the future of stormwater retention because of the combined sewer problem. A rain garden allows you to control the water on site instead of off the roof.

The Shaler project aims to demonstrate the success of the rain garden at retaining rainfall runoff on the building lot instead of tying into the storm sewer system. If the project succeeds, a multi-billion dollar opportunity could follow.

Gaining expertise at green roofs and rain gardens will position Eisler Landscapes ahead of the mainstream in sustainable landscape construction. The broad set of capabilities makes it hard for people to label Eisler and sometimes makes it easy to overlook them.

"We're this crazy Swiss Army knife kind of a company," says French. "We do site work and excavation, green roofs and landscape design. We do lots of education. We're positioning ourselves to build rain gardens. The thing I hear from customers all the time is 'I didn't know you did that.'". BG

Company Facts

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INDUSTRY & COMMUNITY NEWS

Young Constructors and Architects Meet

The MBA's Young Constructors and AIA Pittsburgh's Young Architects Forum held a networking event at Cioppino on August 11 to kick off their upcoming season of cooperative events. 70 professionals from regional contracting, architectural and development companies attended.

PenTrust's Tyler Noland with Mike Embrescia (right) of Class G.

Melanie Buzgan Dower (left) and Michelle Nermon of Rothschild Doyno Collaborative with Nello's Billy Hinton.

PNC Real Estate's Joe Pascarella and wife Kelly at the YC/YAF networking event.

Club Noir Raises Money for Rebuilding

Nearly 400 guests came to Club Noir, the gala to benefit Rebuilding Together Pittsburgh's Operation Urgent Care Program at the Westin Convention Center May 20. Guests bid on works by 16 local artists during the silent auction before moving on to the gaming tables inside the ballroom

Carroll, Gerry and LuLu Maynard with RTP board member Frank Hammond.

AIA-MBA Honors William English

On August 24, the AIA-MBA Joint Committee announced that William F. English, AIA, posthumously received the 2011 James Kling Fellowship Award. Mrs. Darlene English, widow of the late Mr. English, accepted the award on behalf of the English family. Mr. English was a registered architect that spent his entire 40-year career (1958-1998) at the firm that bore his name in 1979, Valentour English Bodnar & Howell. The James Kling Fellowship Award was established by the AIA-MBA Joint Committee to recognize those individuals who best exemplify collaboration between the design and constructor professions.

Retired Jendoco president Tom Murphy (left) with the MBA's Jack Ramage and AIA executive director Anne Swager.

(left-right) David English, Mrs. Darlene English, Sue English, and Bob Bodnar

Massaro Serves Every Child

Every Child Inc. honored companies/organizations for their contributions to the nonprofit. ECI awarded Massaro Corporation with the Empowered Lives Award for the corporation's impact on the local community.

On August 10, 2011 a group of Massaro employees spent the day at La Roche College landscaping an outdoor courtyard. Patrick Lydon, a landscape architecture student at West Virginia, who was a Summer Intern at Massaro led the group with a great landscaping plan and helped to bring the project to completion. The landscaping crew from Massaro included: Pat Stone, Dave Manella, Kevin Nestor, Tony Pokusa, Justin Lamb, Maureen McGinley, Laura Petrak, Jean Mignogna and Hilary Purcell.

Massaro intern Patrick Lydon working in the courtyard at LaRoche.

Deborah Knox of Knox Consulting with Meyer Unkovic & Scott' Chad Michaelson at GBA's Happy Hour on the Roof at Scalo Solar's Demonstration Roofscape.

IDC Architects were represented at the GBA Happy Hour on the Roof by Tiffany Haile (left), Nicole Graycar and Laura Gebhard (right).

Jennifer DiNardo from ACTION-Housing with Chris Massetti of Donwil Corp.

Ryan Burke (left) of Huntington Insurance with ASA board president Darren Pellman and Frank Poerio Jr.

ASA OUTING

Bill Tomko III (left) with Seubert's Brian Hartman and Babst Calland's Rich Saxe and David White (right) at the American Subcontractors Association golf outing at Chartiers CC.

(Left-to-right) Jaci Yunker of the Pittsburgh Builders Exchange, Lisa Wampler of Cohen Seglias, with Nicley Contracting's Mike Stepek and Dave Nicely.

BIM Education

Building Information Modeling (BIM) is changing the way projects are constructed. This emerging practice requires new mindsets and technological improvements in efficiency and cost control. To receive a broad understanding and essential knowledge on BIM, sign up for the MBA's four unit BIM Education Program:

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Unit 4 - BIM Process, Adoption & Risk Allocation

For information on the BIM Education Program, including a description of each BIM unit visit:
www.mbawpa.org/bimeducationprogram.asp

The first offering of the BIM Education Program sold out. A second offering will soon be scheduled. This announcement will be made in the MBA News, the region's construction industry e-newsletter that is sent the second and last Tuesday of each month. To become a recipient of the MBA News, please visit the MBA homepage (www.mbawpa.org) and sign up today.

MBA
Master Builders' Association
Of Western Pennsylvania, Inc.

631 Iron City Drive, Pittsburgh, PA 15205

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www.mbawpa.org

AWARDS & CONTRACTS

John Deklewa & Sons was the successful contractor for the $1.2 million tenant fitout for Damon's Restaurant being developed by Ed Dunlap in the Delmonte Center on the North Shore. Axis Architecture is the architect of record for the project.

Joy Mining awarded a contract to John Deklewa & Sons for $1.3 million renovations to their offices in Franklin, PA. The project was designed by Becky Jarold of B. Jarold & Co. LLC.

Deklewa has begun construction on the infrastructure and first building at the Alpine Point business park the company is developing along Washington Pike in South Fayette Township. The new park will include a 21,000 square foot new office building for Columbia Gas and a total of 220,000 square feet of new space. Gateway Engineers has designed the park. Premier Architecture is the building designer.

The Brownstone Group of Jacksonville FL has selected John Deklewa & Sons as contractor for its Latitude 40 entertainment complex in North Fayette Township. The project involves a complete renovation of the former Roomful Express, a two-story, 60,000 square foot building. Roy Williams Architecture is the designer.

Cannery Casino Resorts located in Las Vegas Nevada, has contracted Carl Walker Construction to design/build a 408,000-square-foot parking garage with spaces for 1,362 cars at the Meadows Racetrack and Casino in Washington, PA. The project, valued at over $14 million, is scheduled for completion in May of 2012.

In Mount Lebanon, PA, Carl Walker Construction has been contracted to design/build a 60,000-square-foot commercial mixed-use facility for Springhill Suites. Owned by Kratsa Properties, the structure will include spaces for 81 cars and will be completed by October of 2011. This project is valued at over $3 million.

Pittsburgh based Impakt Development Inc. has also contracted Carl Walker Construction to design/build a 32,000-square-foot 86-space garage at the Fifth Avenue School Lofts, a residential development located in Pittsburgh, PA. The project is valued at nearly $1.3 million and will be completed by June of 2012.

The federal government has contracted Carl Walker Construction to design/build a 247,000-square-foot parking structure in Cincinnati, OH with 700 parking spaces at the Cincinnati VA Medical Center. The project is valued at $8,666,150 and will be completed by September 2012.

Gurtner Construction Co. was the successful contractor for the $30 million Cornell Elementary/Intermediate School, a new 127,000 square foot building in the McKeesport Area School District. The architect for the project is J. C. Pierce llc.

Gurtner Construction Co. was awarded a contract for construction of a new $2.7 million ballfield facility by West Mifflin Area School District. The project, which includes a 10,000 square foot field house, was designed by Graves & McLean Architects.

ATI Allegheny Ludlum awarded a contract to Uhl Construction for expanding and upgrading their ESR Facility located in Latrobe, PA. The upgrade consists of adding two new electro slag reduction furnaces and an 8,280 expansion of their existing plant. The crane runway will be extended into the building extension and a new 27.5 ton capacity crane will be added.

Carnegie Mellon University selected Jendoco Construction Corp. as construction manager for the restoration of Hammerschlag Hall. Perfido Weiskopf Wagstaff Goettel is the architect for the $2 million project. Jendoco was also the successful contractor on the $750,000 renovation to the CMU Robotics Lab in Lawrenceville. The architect is Lami Grubb Architects.

Jendoco Construction was awarded a contract for tenant improvements for West Penn Allegheny General Hospital offices on two floors of the ALCOA Productivity Center on the North Side.

Mascaro Construction was awarded a construction management contract for lab renovations at Carnegie Mellon's Doherty Hall. The $3 million project was designed by IDC Architects.

Mascaro Construction Co. is working with UPMC to renovate the Reidbord Building (former Ford Motor Co. building), located in the North Oakland section of Pittsburgh. The current scope of work involves renovation and rehabilitation of the building facade.

Upper St. Clair Veterans Park broke ground in late July. As the construction manager, Mascaro will coordinate and manage construction of the project and self-perform the concrete foundations for the monuments.

Mascaro is providing preconstruction services for the University of Pittsburgh, Johnstown Campus, Nursing/Health Science Facility. This project consists of the new construction of a two-story, 23,000-square-foot building to the existing Engineering & Sciences Building. It will include new biology and chemistry teaching laboratories and classrooms for nursing and allied health along with associated support space and complete site development of the surrounding building area.

Mascaro completed UPMC Magee-Women's Hospital operating room renovation. It involved renovations to auxiliary space behind the operating rooms suite area to accommodate new equipment.

In July, Mascaro began renovation work of the eighth floor at UPMC's corporate facilities in the USS Building. The work will provide an additional 40,000 square feet of office space to house UPMC health plan employees.

Huntington Federal Building, awarded to Mascaro by the General Services Administration, is moving into the construction phase in Huntington, West Virginia. The scope includes modernizing the seven-story building and complying with Section 106 of the National Historic Preservation Act. This project is partially funded by ARRA.

Blackhawk School District awarded a $15 million general trades contract to Yarborough Development & Construction for the addition and renovation of the Highland Middle School in Chippewa Township, Beaver County. VEBH Architects is the architect for the project.

PJ Dick was awarded General Contracting Services for the revitalization of Allegheny Public Square. The work includes demolition of existing paving, planters, walls, steps, fountain systems and supporting mechanical and electrical systems. The site will be excavated and filled with appropriate material to establish a new topography with added artwork and landscape. The project also includes a new maintenance vault.

PJ Dick was awarded General Contracting Services for the construction of a New Diesel Maintenance Shop for Consol Energy located in Margaret, WV. The work includes a new 12,000 square foot pre-engineered metal building which will house a fully operational mining equipment maintenance shop, including overhead cranes, rail road access, service pits and all supporting mechanical and electrical systems. Additionally, this contract includes all associated site work, including all utility services to the building.

The Pennsylvania Air National Guard selected CMP, a small business firm and mentor PJ Dick Inc. as contractor for the $7 million repairs to Hangar Buildings 301-302 at the 171st Air Refueling Wing in Moon Township.

A 2011 Brick in Architecture Award was presented to PNC Triangle Park. This award, presented by the Brick Industry Association, honors the highest level of brick design excellence that offers style and sustainability spanning all building sectors. PNC Triangle Park was named Best in Class. The landscape architect was LaQuatra Bonci Associates, the builder was PJ Dick Inc. and the mason contractor was Cost Construction.

STEVENS has started construction on the early phases of bulk excavation for the new $1.2 billion Allegheny Ludlum rolling mill in Brackenridge PA. Walbridge is the construction manager for the project.

dck pacific guam, a dck worldwide company, was awarded a Construction Manager-at-Risk contract to build the Guam Regional Medical City. Located on a six-acre site, the first phase of this development is planned as a six-story, 260,000 sq. ft., 130-bed, $250 million state-of-the-art hospital.

Wal-Mart has awarded Oakview dck, a dck worldwide company, its 37th Wal-Mart project. The $9.1 million facility is located in Shenandoah, Iowa. In addition to the new 95,670 square foot building, the scope includes 50,000 cubic yards of earth work, the asphalt parking lot, and the installation of a new traffic signal.

BRDC, dck worldwide's joint venture with Burns & Roe, was recently awarded two more design-build projects totaling $12 million at U.S. Naval Base Guantanamo Bay, Cuba. The first involves renovations to Gold Hill and Leeward Galleys at GTMO. The second involves renovations to the Navy Exchange, which serves as the grocery store/mall for the base and the Cold Storage, which is the storage location for all refrigerated/frozen products shipped to the island.

Oakview dck, a dck worldwide company, will serve as general contractor for its 102nd Darden Restaurant, a $1.9 million Olive Garden in Grand Forks, ND.

dck worldwide received the Pittsburgh Business Times' Healthiest Employer First Place Award in its category based on business size (100 to 499 employees). The award for dck worldwide's Working on Wellness program was based on scores of a survey of corporations' wellness programs and their strategies. The program has been in effect since 2008 and is geared toward promoting good health among the employees and their families.

Landau Building Company was selected to renovate the 4th floor at the Hillman Cancer Center into the new Mario Lemieux Center for Blood Cancers. The center will serve more than 25,000 patients a year.

FedEx Ground awarded Poerio Incorporated a contract to renovate space in the Sewickley, PA FedEx ground facility. Renovations include exterior work, fencing and gates along with renovations of the security station and offices. The project is scheduled to be completed fall 2011. FedEx also awarded a contract to Poerio for the construction of the salt storage facility in Northern Kentucky. The facility is approximately 600 square feet that includes asphalt, concrete, steel and vinyl covering.

JCPenney Department Store awarded a contract to Poerio Inc. for the renovations of the shoe department at its Greensburg store in Westmoreland Mall. The renovation includes reconfiguration of the sales floor, new wall coverings and flooring. The project is to be completed fall 2011.

Rycon Special Projects Group is responsible for the renovation of three projects at UPMC: Monroeville Urgent Care, West Mifflin Imaging Center and Children's Hospital Window Replacement.

At the Frick Building on 5th & Grant Street, Rycon Special Projects Group will complete renovations for First Niagara Bank by late September.

ADA upgrades are underway at the University of Pittsburgh Bellefield Hall. Rycon Special Projects Group will finish this project before October.

Massaro Corporation has been selected by PNC Financial Services to serve as the CM for the renovation to an existing PNC branch in Washington, PA. The 3,000 square foot, one-story project is slated for completion in December of this year. DLA + Architecture & Interior Design is the architect.

Volpatt Construction was the successful contractor on St. Clair Memorial Hospital $310,000 OPSU renovations in Mt. Lebanon. The project was designed by VEBH Architects.

University of Pittsburgh Medical Center awarded Volpatt Construction the contract for UPMC Shadyside Hospital SJS Medical Office. IKM Inc. is the architect. BG

FACES & NEW PLACES

Landau Building Company is pleased to announce that Phil Dorenkott has joined the company to perform Business Development. Phil joins Landau after spending over twenty-five years with USG Corporation in various sales and marketing roles. Phil is a graduate of Miami University and earned an MBA from the University of Pittsburgh.

Kirk J. Alcorn has also joined Landau Building Co. as a Senior Estimator. Kirk comes to Landau with over thirty years of construction experience as a project manager, superintendent and estimator. He also owned his own construction company for a number of years.

Jendoco Construction Corporation is pleased to announce that Elizabeth James, AIA, LEED AP, NCARB has joined our team as Estimator and BIM Coordinator. Liz brings more than 25 years of architectural design experience and is proficient in Revit. She will facilitate pre-construction modeling and BIM Coordination.

PJ Dick Inc. is pleased to welcome Ronald Sherman as a project superintendent.

A. Martini & Co. is pleased to welcome Mike Yohe as Estimator. Mike graduated from Indiana University of Pennsylvania and has nine years of experience in estimating in the region.

John Kurgan has been promoted to chief operating officer at Michael Baker Corp. Baker also announced that Michael Zugay has been promoted to chief administrative officer in addition to his duties as executive vice president and CFO.

Massaro Corporation is pleased to welcome Jessica Ramsey as the new estimating assistant. Reporting to Joe Tavella, VP of Estimating, Jessica is responsible for preparing and sending departmental correspondences and packages. Massaro also welcomes Thomas Edwards and Dave Parker as project managers. Prior to Massaro, Dave held a project manager position at The Design Alliance. Tim Pratt joined Massaro as a new Project engineer. Tim is a recent graduate of the University of Pittsburgh where he earned his degree in civil engineering.

Massaro Construction Management Services, LLC (CMS) welcomes Richard Hollibaugh as new site manager and Ryan Cole as new Building Information Modeling (BIM) project engineer. BG

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

By Mike Schiller

Part 1 – Kudos to the USGBC

It seems like I can't open the paper's Sunday Business Section or flip through an issue of the Pittsburgh Business Times without reading about another project earning or registering for LEED certification. In the last six months alone, we've seen fourteen local projects achieve LEED certification (including The Pittsburgh Opera, Children's Hospital, K&L Gates law firm, Carnegie Library in the Hill District, Longwood at Oakmont, and two buildings each at Clarion and Indiana Universities.) LEED works in process include a waste handling facility, a truck shipping depot, bus terminals, museums, shopping malls, theaters, schools, and a 40-story downtown skyscraper aiming for LEED Platinum (in case you hadn't heard)!

The truly remarkable part of all this green building achievement has been accomplished without government mandate. As an avowed free-market capitalist (witnessed by the Stanford MBA in my closet), I don't want the government (or anyone) telling me what or how I can serve my customers. But, at the same time, as a passionate outdoorsman and environmentalist, I want people to make good decisions that allow for the protection and preservation of the natural world for our next generations.

So, I applaud the United States Green Building Council (USGBC) for creating a LEED program that is both visionary and meaningful -- and yet completely voluntary. To be sure, LEED is not perfect, and economics help drive demand, but from what I see, the USGBC has leveraged that bête noir of high school students everywhere, peer pressure, into a powerful motivator. No one requires your next project to be LEED certified, and yet, no one wants to be left behind. No one wants to be uncool and not have a LEED certified project -- or at least a pack of "green" projects rolled up in the sleeve of their t-shirt.

As of April 2011, we have 69 LEED certified buildings in Pittsburgh, 129 in Western Pennsylvania, and 363 in the Commonwealth of PA. In Western PA alone, there are another 264 buildings registered! Each and every building happened because people wanted them to happen, not because they were required. Kudos, USGBC.

Part 2 – Now what?

The International Green Construction Code (IGCC) is currently out for comment and will be released for adoption in March 2012. When/if it is adopted (no sure thing in Pennsylvania – more on that the next time the editor allows me this space), all buildings built to every aspect of the IGCC will be equivalent to a LEED building built today.

Which begs the question: if peer pressure seems to be working, and most buildings will essentially be LEED certified by today's standards, then what's next?

Well, BROADER, DEEPER, and FURTHER, of course.

"Broader" in the sense of looking beyond the building envelope and the immediate building site to consider an entire set of properties as interconnected and interdependent. LEED-ND (Neighborhood Development) addresses many of these issues. Eco-districts, gaining traction in Portland and elsewhere, go even further in considering energy generation and management (renewables, smart grid), water and waste management, transportation efficiencies, and economic development.

"Deeper" in the sense of meeting ever more challenging goals – say, meeting the 2030 Challenge goal of a 60% reduction in energy, water, and carbon impact – and not just for a single building, but for an entire business district or an entire city. Or even deeper to meet the Living Building Challenge (LBC) and combine a zero net energy, zero net water, zero toxic material, locally-sourced building with a sense of beauty and equity. Four buildings in the world have met this standard so far, but as an inspiration and expansion of what we think about every day, the LBC is one of the leading concepts.

"Further" in the sense of thinking beyond just "reducing" and "reusing" and towards regenerative buildings that actually give back to the environment in a positive way. Nothing right now is further than producing surplus energy, creating clean water and clean air, and, ultimately, generating healthier occupants. Still in a formative stage, the concept of Restorative Design is just being defined -- and even USGBC wants to ultimately drive their LEED standards beyond minimizing impact to actively improving the environment.

Locally, all these ideas have some foothold. LEED-ND projects are underway in East Liberty, Larimer, Oakmont, and, notably, the 28 acres that house the Civic Arena. The Phipps Sustainable Landscape project is on target to meet the Living Building Challenge, while both the new Frick Environmental Center and part of Chatham University's Eden Hall campus will strive for the LBC in the near future. GBA is garnering support for having the entire Pittsburgh Central Business District meet the 2030 Challenge. Alcoa recently announced their new smog-eating aluminum panels and Western Pennsylvania has no shortage of renewable energy and water management companies vying to change the world.

It's exciting times, and while I can't tell you how it's all going to turn out, I am confident that mainstream news media will continue to have plenty of green building stories. I'm hoping to see a lot of you there.

About the author: Mike Schiller is the CEO of Green Building Alliance, based in Pittsburgh, PA. GBA promotes smart solutions for the built environment throughout the 26 counties of Western Pennsylvania. Mike is a native Pittsburgher who recently returned after five years of living in the Pacific Northwest. He was previously the founder and CEO of Confluence Technologies and Venture Outdoors.

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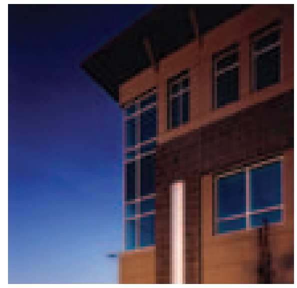

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– Andrew Gildersleeve, executive vice president, The Elmhurst Group

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