

COLUMNS



THE FUTURE *for* ARCHITECTS

VOLUME 20, NO. 3 AIA PITTSBURGH, A CHAPTER OF THE AMERICAN INSTITUTE OF ARCHITECTS APRIL 2006



ready for graduate school?

ENROLL IN THE COEDUCATIONAL **INTERIOR ARCHITECTURE** OR **LANDSCAPE ARCHITECTURE** PROGRAM AT CHATHAM COLLEGE

NEW INTERIOR ARCHITECTURE PROGRAM

- Three degrees offered:

Bachelor of Interior Architecture (for women only)

Master of Interior Architecture, for students with a bachelor's degree in a discipline other than interior design or architecture

Master of Science in Interior Architecture, for students with an accredited degree in interior design or architecture

- Program emphasis on social responsibility and a holistic design process in which interior design is integrated with the surrounding architecture
- Sample courses include Interior Architecture Studios, Computer Design Technology, 20th & 21st Century Architecture, Materials & Assemblies, Environment & Behavior, Environmental Systems, Lighting & Acoustics

MASTER OF LANDSCAPE ARCHITECTURE

- Pittsburgh's *only* landscape architecture program
- Earn a professional, applied degree leading to licensure
- Curriculum emphasizes environmental concerns and sustainability
- Sample courses include Landscape Ecology, Historic Landscape Preservation, Soil Science, and Community Design of Public Landscape
- Field work and design integral to curriculum

MASTER OF ARTS IN LANDSCAPE STUDIES ALSO AVAILABLE

www.chatham.edu ■ 800-837-1290 ■ admissions@chatham.edu

Chatham College ■ Woodland Road ■ Pittsburgh, PA 15232

Changes. And More Changes. By Anne J. Swager, Hon AIA



Our communications committee has elected to take on the daunting but worthwhile task of a communication plan for AIA Pittsburgh.

When my daughter Betsy was in junior high

she brought home an intriguing assignment which I can still remember. She had to name five or maybe ten things that her parents had used but that were no longer relevant for her. The only one I remember was the slide rule. My father, an engineer, was extremely adept with a slide rule and I actually was reasonably proficient in high school. Of course that was back when a (as in one) computer took up a whole room and calculators needed cords and cost what a really good PDA/cell phone costs today. By college I could no longer use the slide rule or at least I didn't need to. We had computer labs and calculators on every desk.

Dick Rittelmann's intriguing and important article on the future of the architectural profession in this month's issue talks about many of these profound changes—in how we work and how we receive communication. You need to read his article to get to his conclusions but it will be well worth your time...I promise.

I hesitate to enumerate the changes the AIA has undergone since I started for fear that I will instantly become a dinosaur in your eyes but the changes have been many. The publication you're now reading is a product of a brainstorming session from about 18 years ago. In many ways it has not changed much since its debut issue. Certainly the editorial content has evolved and the graphics have been redone but its mission of a newsletter/magazine or as one member of the communications committee opined "the face of AIA Pittsburgh" has largely remained the same.

What has happened is that *Columns* has been joined by *eColumns* and the website. We only do direct mail occasionally and our directory is online. While we have a variety of communication tools, it's not always clear to us what is getting read and, more importantly, what matters to you.

That's why our communications committee has elected to take on the daunting but worthwhile task of a communication plan for AIA Pittsburgh. Eric Osth, AIA is leading (quite capably I might add) this effort with the

help of Donald Zeilman, AIA who is now chairing the committee. We're happy to say that the committee includes new members Michael Kuchera, AIA and Roxanne Sherbeck, AIA who have much to offer.

The plan will examine our communication tools and evaluate their efficacy with you, the architect, and also our other target audiences. What outcomes should you expect? A change in the design of the different products for one and, at the very least, a clearer understanding of what information comes from what source.

After all, we not only want you to read what we offer but we also want you to be able to retrieve the information if and when you need it. Our ability to do this well will take resources and it will take your willingness to let us understand what you need and what you want.

In March we ran a brief reader survey of *Columns*. By brief, I mean it took less than three minutes to fill out online unless you added comments which many of you did. My favorite statistic is that 23% of you have kept every issue of *Columns* you have ever received. Your biggest complaint? The illegibility of the print. We were pleased with the response and we sincerely thank all of you who participated.

Expect more surveys. We know you have too much to do and so we promise to be brief but we need your input to move forward and to be successful. And we will listen.

If there is one constant in my years with AIA Pittsburgh, it is your willingness to engage with us. No matter how much information there is, and it grows exponentially every day, sharing with each other—as opposed to assuming what the other understands—remains at the root of effective communication. So please let us know what's on your mind by any method—email, letters, phone calls or face-to-face. We relish the opportunity to talk with you.

IN THIS ISSUE

The Future for Architects 6
By P. Richard Rittelmann, FAIA

New Towns for Old
A book review by Rob Robinson, AIA 16

BUILD Pittsburgh 2006
A preview of AIA Pittsburgh's Annual Continuing Education Conference 18

News 4-5
Breaking Ground 20

On the cover: Members of AIA Pittsburgh's Programming Committee: (TOP) Ken Stehle, Assoc. AIA, WTW Architects; Jenn Neal, AIA, Astorino; Tom Price, Assoc. AIA, Strada; Carl Bolton, Assoc. AIA, Perfido Weiskopf; (Bottom) Ana Migone, Assoc. AIA, WTW Architects. Photo by Tracy Certo.

AIA Pittsburgh serves 12 Western Pennsylvania counties as the local component of the American Institute of Architects and AIA Pennsylvania. The objective of AIA Pittsburgh is to improve, for society, the quality of the built environment by further raising the standards of architectural education, training and practice; fostering design excellence; and promoting the value of architectural services to the public. AIA membership is open to all registered architects, architectural interns, and a limited number of professionals in supporting fields.

AIA Pittsburgh
945 Liberty Avenue, Loft #3
Pittsburgh, PA 15222
Telephone: 412/471-9548
FAX: 412/471-9501

Chapter Officers

Thomas J. Briney, AIA, President
James C. Radock, AIA, 1st V.P.
Paula R. Maynes, AIA, 2nd V.P.
Kenneth K. Lee, AIA, Secretary
Chip Desmone, AIA, Treasurer
Anne J. Swager, Hon. AIA,
Executive Director

Columns Staff

Tracy Certo, Editor
Becky Spevack, Coordinator
Joseph Ruesch, Art Director

Editorial Board

Donald G. Zeilman, AIA, chair
Michael Kuchera, AIA
Eric R. Osth, AIA
Roxanne Sherbeck, AIA

COLUMNS is published ten times a year by, and primarily for, members of AIA Pittsburgh, A Chapter of the American Institute of Architects. Preference may be given to the selection of works, articles, opinions, letters, etc. of members for publication. However, in the interest of furthering the goals of the Chapter, as stated monthly at the top of the masthead and in the membership directory, COLUMNS will publish the names of and properly credit non-members, whether as participants in the design of works submitted by a member, or as designers of their own work, or as authors of articles, opinion or letters.

Opinions expressed by editors and contributors are not necessarily those of AIA Pittsburgh. The Chapter has made every reasonable effort to provide accurate and authoritative information, but assumes no liability for the contents.

For information about AIA Pittsburgh, AIA Middle PA and the Northwest PA Chapter, call 1-888-308-9099.
Online: www.aiapgh.org
email: info@aiapgh.org

A Call For Volunteers

Rebuilding Together Pittsburgh

AIA PITTSBURGH is looking for people interested in providing one day of community service for the repair of homes for our elderly, disabled and low-income neighbors.

WHEN: Saturday, April 29, 2006 from 8:00 a.m. - 4:30 p.m.

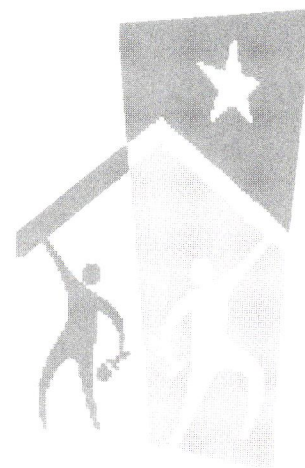
WHERE: This year we will be doing repairs for the home of Betty Alexander of 2459 N. Charles Street on the North Side. She is a 64-year-old woman who lives with her husband in a home that needs many repairs: painting, clean up, carpentry, kitchen and bathroom safety improvements, plumbing and electrical work.

WHO: Both skilled and unskilled volunteers are needed to assist.

NOTE TO IDP INTERNS: This is a great way to fill those community service credits.

TEDCO CONSTRUCTION will be providing the skilled trades people and project management as they have for the past twelve years. Their assistance has been invaluable.

CONTACT: Jennifer Mc Carthey of Loysen + Kreuthmeier Architects at (412) 924-0006 or Email at jennyjomac@yahoo.com. She will be coordinating AIA's volunteers. Please get in touch with her before April 15th so that we can organize work assignments. For other information you may also contact Todd Havekotte 412-486-4350 at TRHArchitect Inc.



2459 N. Charles Street on the North Side will be repaired on April 29th.



AIA Pittsburgh Welcomes New Members



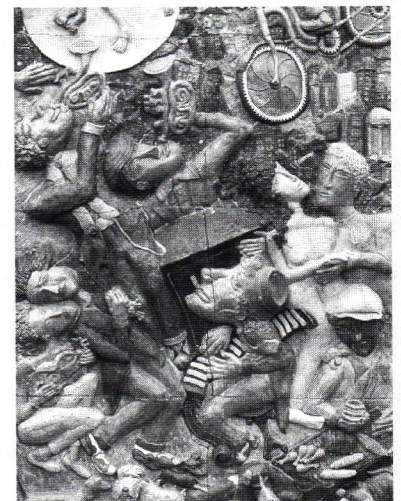
This January, members gathered to welcome those new to AIA Pittsburgh and to enjoy the atmosphere of Six Penn Kitchen. More than 50 people sampled the food and listened as Head Chef Chris Jackson spoke of the concept and development behind this new restaurant in the heart of the Cultural District.

This Yuengling's On Us!



Members gather at the AIA Pittsburgh office for the first "Designing Under the Influence (DUI)", an informal happy hour on the first Thursday of every month. Want to know what your peers think about regional development, downtown revitalization or how the Penguins are doing? April's DUI will take place Thursday, April 6th from 5-7 p.m. at the AIA Pittsburgh office. Topic: Can gaming create spin-off economic development?

Uptown Rhythms



Artist James Simon completed his latest public art piece for Duquesne University's Forbes Avenue garage in Uptown. *Uptown Rhythms* (you must see this in color) is the first part of the university's \$70 million rebuilding effort in the Uptown area. Simon, a local artist with a home/studio on Gist Street, created *The Three Musicians* at 947 Liberty Avenue next to the AIA offices.

THE FUTURE *for* ARCHITECTS

BY P. RICHARD RITTELMANN, FAIA

IN the 1870's, a young man considering a career in architecture had the great fortune to meet with the already famous architect, H. H. Richardson. The young man asked Richardson what he thought was the most important issue in an architect's career. Richardson replied, "*Get the work*". The young man, expecting a more esoteric reply, then asked, "Well, what would be the second most important issue?" Richardson again replied, "*Get the work*." From at least Richardson's time (and probably much earlier) a pattern was set that has prevailed to today: An architect that doesn't "get the work" has no practice. We believe that this long-standing impellant has very nearly run its course and will no longer be the battle cry for the next three decades. What will replace it? *Get the people*.

An alternate title for this article might have been "A Profession in Crisis". I prefer, in this case, not to use the English definition but rather the Chinese version which is represented by two characters which separately mean, "danger" and "opportunity". This represents exactly my view of the future of the profession: In the near future we will be confronted with great dangers and great opportunities. Let's explore the reasons why.



“Tomorrow’s clients will have no need for today’s architects.”¹

Yes, a provocative statement, but one that perceptive analysis will show to be quite prophetic. There are at least eight recognized models available to conduct Long Range Strategic Planning, all of which involve some method of looking into the future. Not all models are appropriate to all enterprises. We have found a blend of two models—Trend Analysis and Scenario Building—to be most appropriate for professional design firms. The primary reason is that we are a service profession and the future trends of our clients strongly impact our future. This certainly doesn’t mean we have no control over our destiny. A myriad of choices lies within the design profession genre. In fact, we constantly strive to differentiate our respective firms. Firms that have assertively differentiated themselves by virtue of their LRSP will likely have no trouble differentiating themselves in their day-to-day marketing. Those firms who try to maintain the status quo and be all-things-to-all-people will always struggle and eventually fail. The only difference between now and ten years ago is that the failure will be more rapid.

The reason? The concept of “singularity” introduced by Professor Jon Von Neuman at Princeton in the 1940s which refers to the convergence of human intelligence (H.I.) and artificial intelligence (A.I.) to the point where the two are indistinguishable. Associated with this principal is that of an increasing rate of change of the H.I./A.I. interface. We see examples of this everywhere we look. A simple example, which has held true since 1965, is Moore’s Law of computer processor performance which states that the processor capability in MIPS (millions of instructions per second) will double every 18 months. The best performers in any business learn to thrive on this accelerating change rate. Those who ignore it or misread it usually fail. The classic dot com failures of 2000-2003 is an example.

This article is not intended to be a treatise on LRSP for design firms. That involves scenario writing that shapes individual firms and involves much sensitivity to a firm’s

particulars, not the least of which is the intent, drive, emotion, ambitions, talents, etc. of a firm’s leaders and personnel.

The prelude to Scenario Building, however, and the focus of this article is Trend Analysis which was popularized by John Naisbett in his 1983 book, *Megatrends*. Trend Analysis is a method of looking into the future which is not futuring or forecasting and certainly not crystal ball-gazing. Instead, it is the recognition of existing facts and directions and extrapolating what is known to what may be the likely outcome.

Trend Analysis provides the innovation fodder that fills the hoppers of the Scenario Builders.

For the sake of organization, we will look at trends in four categories:

- Global Trends
- Industry Trends
- Societal (personnel) Trends
- Practice Trends

GLOBAL TRENDS

THE WORLD IS AWASH IN CASH!

What do you think has been fueling the strong residential market in recent years? Why has there been no significant inflation when the economy has been so strong? Why are interest rates still quite low? Why are Venture Capitalists so willing to fund new ventures?

The answer to all of these questions is in the title. The International Monetary Fund (IMF) estimates that the global cash surplus is now approximately \$11 trillion—equal to the entire U.S. economy. Why is this happening?

- 1) Japanese corporations are making a major recovery from their financial doldrums of the last 20 years, but aren’t reinvesting;



REED CONSTRUCTION

FORECASTING PREDICTS THAT

WE WILL DOUBLE THE EXISTING

U.S. BUILT ENVIRONMENT BY

2030! THAT SEEMS ASTOUNDING,

BUT IT’S REALLY ONLY A

GROWTH RATE OF 3% PER YEAR

COMPOUNDED AND WE EXPECT

TO BE SURPASSING THAT

IN MOST MARKETS.

- 2) oil companies in Russia and the Middle East are making record profits, but are not reinvesting due to political instabilities;
- 3) China is putting cash into the marketplace at an unprecedented rate due to their newfound economic muscle;
- 4) Europeans are saving at unprecedented rates due to concerns over retirement security; and
- 5) U.S. corporations put \$634 billion in profits into company coffers in the last 12 months—twice the rate of just two years ago.

Former Chairman Alan Greenspan noted that we are in uncharted waters with this unprecedented cash availability. The ability of the Federal Reserve to control interest rates by raising or lowering the prime rate has been significantly diminished by the global cash surplus. It's a competitive monetary market and if the Feds try to raise interest rates, the world surplus of cash will push them back down. For a variety of reasons, this cash surplus is likely to be present for some time in the future.

That is why we believe the global construction market will be very strong in the foreseeable future. These cash surpluses will be available to fund most any legitimate venture, including the next round of technology in the U.S. and unprecedented growth in developing countries.

Despite the growth impediments of Middle East political unrest and unprecedented oil prices, many economists believe we are on the verge of a global economic boom of significant proportions.⁽¹⁾

GLOBAL ECONOMIC COMPETITION

Regardless of statements about "global economies", there remains a rather fierce nationalism. Global economic superiority today boils down to one issue: education.

China will graduate nearly 1,000,000 scientists and engineers this year; India nearly 500,000. The U.S. will

graduate 80,000.

The scientists and engineers of a nation are the wealth creators. Science, engineering and architectural graduates are decreasing in the U.S. We have a serious problem in the U.S. because high school graduates want to avoid the intellectual rigor of a scientific or engineering education in favor of softer, less rigorous endeavors. Japan graduates 10 engineers for 1 lawyer. The U.S. graduates 10 lawyers for every one engineer. How can we ever win the Global Economic Competition when we create so few wealth creators and so many wealth disposers? ⁽²⁾

OFF SHORING

Much has been said recently, both pro and con, about off shoring. It's not a new story. Just after WWII, cheap European wages were seen as a threat. In the 1960s and 1970s, the Japanese were supposedly taking U.S. jobs away. In the 1990s, the effect of NAFTA was ostensibly a southern migration of U.S. jobs. And today? We wring our hands over the white collar job exodus to India and manufacturing jobs to China.

Let's review the history of what really happened: the post-war European economy quickly created jobs in Europe, and soon European wages were close to parity with similar jobs in the U.S. Some jobs may have gone to Japan in the 1960s, but that was halted in the 1970s as Japan's economy grew. The exchange rate in 1965 was 320 yen per dollar. In 1975 it was 100 yen per dollar. If NAFTA caused so many jobs to go to Mexico, why did the legal Northward migration of Mexicans increase by 184% from 1994 to 2002? If there is a U.S. concern that we're losing manufacturing jobs to China, proportionately Mexico is losing more. Why? The average manufacturing wage in Mexico (\$1.50/hr) is 600% more than China (\$.25/hr), but the manufacturing jobs in Mexico are more adaptable and attractive to China than U.S. manufacturing jobs. U.S. wages average about 400% more than India's, but U.S. off shoring to India has already created a skilled labor shortage in that country and skilled worker salaries are climbing at more than 15% per year.

Economic strategists state that the salary advantage required for successful off shoring is 300% to 400%. India's skilled labor will soon be below this threshold, but as we will see later in this article, we will likely rely on off-shoring for non-economic reasons.

Thus far we have dwelled on largely economic global issues. When considering Scenario Building, trends in all aspects of global life should be considered. Space prevents us from discussing all of the global trends that may have meaning for us in the future. To give an abbreviated version of some other issues, the following may be interesting:⁽³⁾

A GLOBAL CONSUMPTION BOOM IS AHEAD

While many people in India live in poverty, it is hard to conceive that India also has more people making more than \$50,000 per year than the U.S. does. Many emerging economies are rapidly adding citizens with incomes significantly above poverty level and with substantial disposable income. And they want the kinds of products produced by the U.S. In fact, we are witnessing the beginning of a very long term trend of consumers emerging in growing third world economies wishing to purchase U.S. products. It's not just a material acquisition issue, it's a status issue.⁽⁴⁾

CHINA ON THE EDGE

Many superlatives that can be applied to China's economy, but watch out! There are a lot of State Owned Enterprises (SOEs) in China. These SOEs are not intended to make a profit, but rather to artificially support 40% of China's workers. In late 2006, China must open its economy to foreign competition to join the World Trade Organization. As foreign banks target Chinese banks with much higher interest rates for savings, billions of dollars will move from the Chinese banks that had been using these moneys to fund the SOEs.⁽⁵⁾

THE COMING AGE OF SINGULARITY

As previously mentioned, Singularity is the merging of Human Intelligence and Artificial Intelligence—the phenomenon of accelerated change. The popular spokes-

man is Ray Kurzweil, a well respected inventor and visionary. Some of his predictions:

- By the end of this decade we will have super computers able to emulate human intelligence.
- By 2020 that ability will be in PCs.
- By 2030 Artificial Intelligence will be indistinguishable from human intelligence.
- By 2045 Artificial Intelligence will dwarf human intelligence.⁽⁶⁾

THE INFORMATION REVOLUTION

We've all experienced the first four phases of the Information Revolution:

- 1) The 1960s – main frame computers
- 2) The 1970s – mini computers
- 3) The 1980s – The PC penetrate businesses and households
- 4) The 1990s – The internet revolutionizes communications

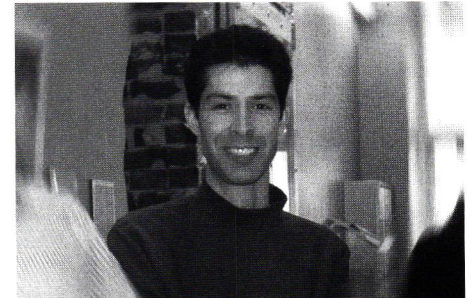
Now comes the fifth wave which is driven by three forces:

- Cheap computing devices
- Infinite bandwidth
- Open standards

The fifth wave really isn't a revolution. It is simply the maturation of the first four phases aided by the evolution of the above technologies. It is where we extract the accumulating intrinsic value of the Internet, PC's, cell phones, PDA's. The Internet will become virtually ubiquitous, just in time for Internet 2. The Telecom industry will suffer further with the advent of VOIP (Voice over Internet Protocol). And the fifth wave will be a great leveling device among companies and businesses where the client will be far less able to distinguish between the "big guys" and the "little guys".⁽⁷⁾

INCREASING ENTREPRENEURSHIP

Don't confuse off shoring with outsourcing. Off shoring is generally recognized as the movement of some parts or all of a company's activities out of the U.S.



FOR 30+ YEARS THE BABY BOOMERS HAVE DEMOGRAPHICALLY BEEN THE "PIG-IN-THE-PYTHON", THE BULGE MOVING THROUGH THE POPULATION BASE. DESPITE THE ASSERTIONS OF MANY POLITICIANS AND SOME ECONOMISTS, WE HAVE NOT HAD A SHORTAGE OF JOBS THROUGH THE PAST 30 YEARS; INSTEAD WE HAVE HAD AN OVERSUPPLY OF WORKERS.

Outsourcing can be done off shore, but the majority of outsourcing for U.S. companies is done within the U.S. This activity is likely to grow significantly in the near future. As major corporations try to be more competitive and flexible, they are looking to outsource many overhead as well as some production activities that were previously done in-house. This is just one of the forces driving the move to increased entrepreneurship. Obviously the present state of computer power, the Internet and the advanced capabilities in IT make it possible for small, boutique companies to serve large mega-corporations with lower cost, and often faster, more creative services.

We believe the demographic problem mentioned later in Personnel Trends will be a driver of the entrepreneurship movement. Baby boomers may be approaching retirement age, but look for many of them to "retire" from their basic career to begin new companies as "seniorpreneurs". From the standpoint of talent, opportunity, finances and technology, there has never been an easier time to start a business than now.

There is a flip-side benefit to this growing entrepreneurship. There are already world-class services such as accounting, marketing, human resources, call centers, IT support, etc. that are available and affordable to the smallest of startups. Health care co-ops may soon be added to that list.

All of this bodes well for the U.S. economy as small businesses have historically provided more jobs proportionately than large corporations. The coming manpower shortage may be mitigated somewhat by small enterprises designed with more flexible time, venue and compensations that will keep people gainfully employed, supplementing their pensions and Social Security well beyond previous retirement ages.

There are numerous other trends which we could discuss but space does not permit. We are frequently asked how all of these issues affect architecture. Often they don't. But they do affect your thinking. Architects are trained to be holistic thinkers. We think at different scale

levels. It doesn't take too great a leap of faith to realize that these global trends are thought provokers. What if I told you there will be a glut of red grapes in Bulgaria this year? Will that affect your architectural strategic planning? Probably not!....Will it affect your thinking? It should. We'll show you why ⁽⁸⁾

INDUSTRY TRENDS

We have seen that the economic trends of the global market are very positive. What about the domestic markets?

Reed Construction Forecasting predicts that we will double the existing U.S. built environment by 2030! That seems astounding, but it's really only a growth rate of 3% per year compounded and we expect to be

surpassing that in most markets. A significant portion of that "doubling" will be the renovation of existing buildings and replacement of existing buildings and infrastructure.

In a recent report on the future of domestic construction, AIA's Chief Economist Dr. Kermit Baker stated: "We're expected to get close to 5 percent real growth in non-residential construction activity this year. After six years of recession – like conditions in the industry, 2006 is shaping up as the year that will launch a non-residential expansion, picking up some of the slack from the cooling residential market. We should see the best year for this sector since 1998 with growth evenly balanced between the commercial/industrial and institutional sectors."

Fig 1. Projected Construction Growth for 2006

Source:
AIArchitect, Jan 13, 2006

	McGraw Hill	Global Insight	economy.com	FMI	Reed Business Information	Consensus
Non-Residential Total	5%	12%	1.7%	4.7%	7.3%	4.7%
Commercial Total	5.0	3.2	2.3	6.1	5.5	4.4
Office	8.0	5.2	0.3	6.0	9.0	5.7
Retail/Other Commercial	2.0	2.5	1.7	4.4	1.2	2.4
Hotel	19.0	3.1	2.3	5.2	6.2	7.2
Industrial Total	12.0	8.3	3.4	13.6	13.6	10.2
Institutional Total	4.0	N/A	1.3	8.6	8.6	4.3
Health	3.0	6.4	-0.7	9.3	9.3	4.0
Education	6.0	6.5	0.9	10.5	10.5	5.7
Religious	3.0	-2.6	N/A	-0.5	-0.5	-0.2
Public Safety	-3.0	N/A	6.0	9.5	9.5	3.4
Amusement/Recreation	7.0	3.1	N/A	5.5	5.5	4.6

For over a decade, the AIA has had a Consensus Construction Forecast Panel. Its charge is to seek estimates from leading construction forecasters and from them develop a consensus forecast. For 2005 and 2006, the Panel chose five forecasters: McGraw Hill, Global Insight, Economy.com, RMI and Reed Business Information. The results of this survey for 2006 are shown in Fig. 1. We've chosen to show all five forecasts and the consensus for two reasons:

- 1) There is a wide range between forecasters in certain sectors, but in the vast majority of markets, all estimates are for growth.
- 2) We see that the Panels consensus is not simply the arithmetic average of all forecasts. Additional judgment of the panel has been applied.

All but two markets show a growth rate well beyond the 3% mentioned earlier which results in a 24-year doubling period. A 5% compounded growth rate has a doubling period of 14 years. In addition to the near term forecasts, most forecasters see this strong growth being maintained through at least 2011. In the 2011 to 2013 time frame, the U.S. could enter a recessionary period due to the demographics of the baby boomers rapidly entering retirement and substantially altering their consumer spending habits.

Many people think the U.S. economy is strongly influenced by our world trade. In truth, it isn't. World trade has about a 23% influence. Consumer spending is still responsible for about 77% of our economy, so when the 76 million baby boomers radically shift their spending patterns downward, a recession (of unknown depth) is likely. Between now and 2013, many interfering influences could prevent a recession altogether.

Fig. 2 shows the historical construction expenditures in various non-residential markets. We see that in the late 1990's all markets were strong with a 5% to 10% growth from the previous year. In 2000 the commercial market, much more than the institutional market, took a precipitous decline. In 2003, the commercial market began to

Fig. 2 Historical Commercial/Industrial and Institutional Construction Spending *Source: U.S. Census Bureau*

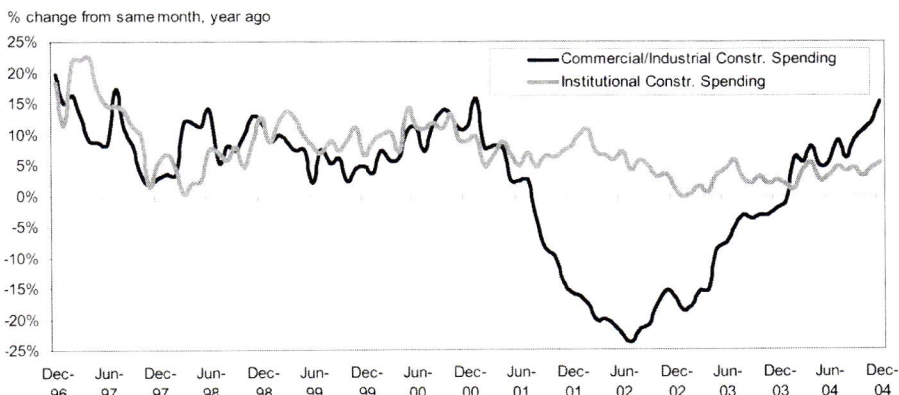
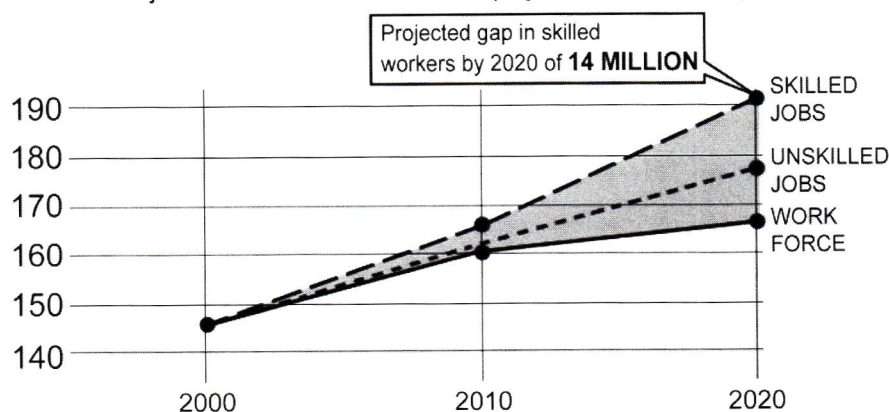


Fig. 3 Numbers of jobs and workers, in millions adjusted for multiple job holdings *Source: U.S. Census Bureau and "Business 2.0" Sept. 2003*

Numbers of jobs and workers, in millions (adjusted for multiple job-holding)

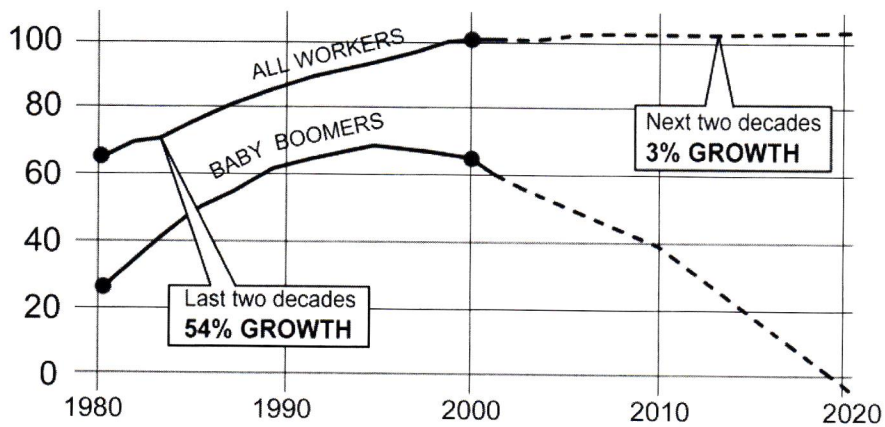


rebound—the projections shown in Fig. 1 are an extension of this trend. The institutional market began additional growth in 2005 and it is expected to strengthen through the next several years at least.

Our economy has proven to be amazingly robust. The negative impacts of a large foreign trade deficit, huge deficit spending by the federal government, the rapid doubling and tripling of energy costs, and the economic

impacts of this year's natural disasters have all failed to significantly dampen this economy. Despite this strong economy, there is still a negative attitude in the general public that has developed an irrational pessimism and has devalued our entire corporate world by about 30%. Our corporations are averaging at least 30% below intrinsic value and we are still enjoying a robust economy. All of this is to say we have a strong economy with 30% of its strength tied behind its back.

Fig. 4 The Impact of Baby Boomer Retirements on Available Workforce Source: U.S. Census Bureau and "Business 2.0" Sept. 2003



PERSONNEL TRENDS

The U.S. is on the very brink of a major shortfall in skilled workers. By 2010 we will have a shortage of seven million workers, five million of those skilled. By 2020, we will have a twenty-two million worker shortfall; fourteen million of those skilled workers. How could such a radical change occur? Keep in mind this is not a forecast but rather, fact—projections based on people already born tend to be amazingly accurate. Fig. 3 summarizes the above graphically while Fig. 4 reveals the reasons why.

For 30+ years the baby boomers have demographically been the "pig-in-the-python", the bulge moving through the population base. Despite the assertions of many politicians and some economists, we have not had a shortage of jobs through the past 30 years; instead we have had an oversupply of workers. We are about to prove this.

Politicians are still touting the need to create jobs, evidently unaware of the government's own data. The data we are presenting is from the U.S. Labor Department and the U.S. Census Bureau. The message? *"It's not jobs, stupid, it's people"*.

The explanation is simple: baby boomers are retiring. While 47% of all architects are over 50 years old, 60% of all NASA scientists are over 50. In the next five years, 30% of all science teachers will retire. Our educational system in no way can produce replacements for retiring baby boomers let alone provide for growth. As Fig. 4 shows, in the two decades prior to 2000, we had a 54% growth in workers. In the two decades following 2000, we will have a 3% growth in workers. We can't have that radical a change in worker supply without a major impact to U.S. businesses.

What are the possible solutions? A major push to get young people to enter the science and engineering professions is a noble effort but it won't solve near-term problems. A possible solution is to increase the number of immigrant architects. The shortage of architects is not a global problem: There is an excess of archi-

Fig. 5 Architectural Graduates (Bachelors + Masters)

Source: National Architectural Accreditation Board

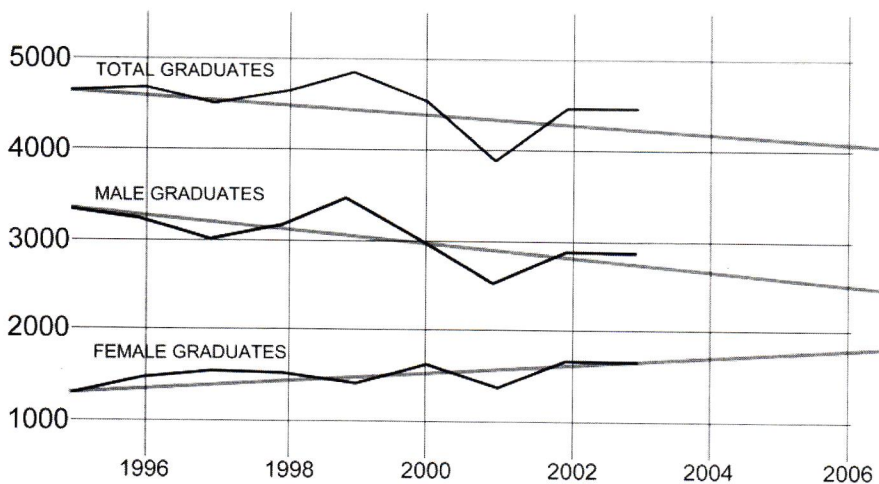
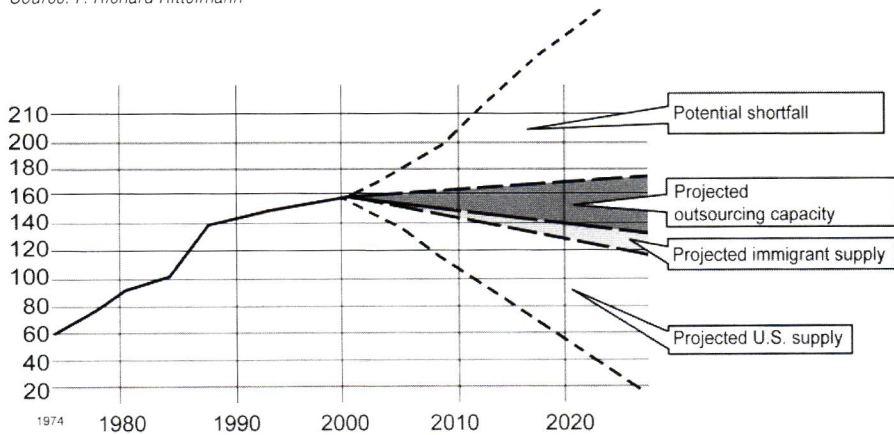


Fig. 6 Potential Sources of Future Architectural Skills*Source: P. Richard Rittelmann*

archs in Western Europe, Eastern Europe, Russia and parts of Southeast Asia. It is a spotty situation around the world. With an excess number of people in the workforce the past 30 years, the public has established a distinct anti-immigrant mind-set bolstered by the illegal immigrant problem. This condition was further exacerbated by 9/11. We have great difficulty bringing superbly qualified architects into the country. Immigrants have pulled our fat out of the fire three or four times in prior history. This is a time they could do it again if we could just get the government out of our way.

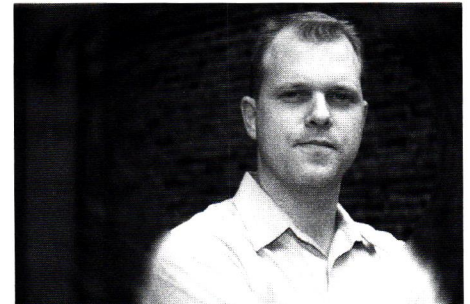
Now that we know that we have a major national crisis looming in skilled worker shortage, let's look at the specifics of the architectural profession; Fig. 5 shows that despite an increase in female architects, there is an overall decline in graduate architects. We must put this in the even broader perspective. The peak years for architectural graduates were the late 1980's when the nation was graduating nearly 9,000 Bachelors and Masters combined. In addition to this graduate decline, we have heard but were unable to quantify, the fact that in recent years, a substantial number of architectural graduates are not going into practice, but are being attracted to other endeavors such as; graphic-arts, animation, entertainment, computer gaming, etc. Even if we discount this bleed-off, Fig. 5 shows that we might count on 4,000 architectural graduates in 2006. That is

only 2.40% of existing practitioners and doesn't even come close to providing the architects needed to replace retiring baby boomers, let alone provide for the projected domestic construction growth.

Fig. 6 attempts to summarize the problem. We have an increasing need for architects determined by the expected increase in construction activity. We show only a 3% compounded growth rate for construction with the assumption that baby boomer architects will retire at the same rate projected for the rest of their peers.

We then show the rate of new architect production by assuming the projected 4,000 rate of 2006 will continue with no further decline. There will be some limited opportunities to hire foreign architects. And we will enjoy some benefits from off shoring, but as we will discuss more in the next section, this may not offer as much opportunity as first thought. This still leaves a considerable shortfall in future architectural skills. Although we expect a significant portion of this gap to be closed by increased productivity per architect, one concern is that the remaining gap, if any, will somehow be done outside the profession, further weakening the architect's position in the building industry.

There is, of course, a counter argument, that with the general over supply of the workforce by the baby



WHILE 47% OF ALL ARCHITECTS ARE OVER 50 YEARS OLD, 60% OF ALL NASA SCIENTISTS ARE OVER 50. IN THE NEXT FIVE YEARS, 30% OF ALL SCIENCE TEACHERS WILL RETIRE. OUR EDUCATIONAL SYSTEM IN NO WAY CAN PRODUCE REPLACEMENTS FOR RETIRING BABY BOOMERS LET ALONE PROVIDE FOR GROWTH.



**MAINTAINING THE
PROFESSION'S STATUS QUO
WILL FURTHER MARGINALIZE
THE ROLE OF THE ARCHITECT
IN THE DESIGN PROCESS.
SHIFTING STRATEGIES SHOULD
BE "FRONT-AND-CENTER" ON
THE RADAR SCREENS OF ALL
DESIGN FIRMS HOPING TO
SUCCEED. CONTROL OF ARCHI-
TECTURAL DESIGN WILL GO TO
THAT ENTITY MOST CAPABLE
AND WILLING TO ASSUME
RESPONSIBILITY.**

boomers there was a corresponding over supply of architects. Some will argue that this has been the condition for quite some time and has contributed to the relatively low wages of architects and the intense competition on recent projects—but if this has been a condition of long standing, why has the percentage of construction put in place by architects been declining? An overabundance should have resulted in increased market share not less. Why haven't more architects been appearing in peripheral roles such as construction, government (regulators), building material and equipment design, etc.?

When we look back over the last 30 year history of the role of the architect in the building industry we see the considerable decline of the architectural press (which I think more telling than others), and the current client demands for increased speed, fewer errors and greater accountability. We can start to get the idea that the coming abundant supply may not be the answer to the profession's ills.

PRACTICE TRENDS

"An Expanding Practice in a Shrinking Universe" was the subject off a recent symposium by the AIA California Council.

- The "Expanding Universe" acknowledged that filling the diverse needs of tomorrow's more sophisticated and demanding clients will require a more collaborative and interdisciplinary team.
 - The "Shrinking Universe" considers that the client sees the architect as lacking in responsibility and accountability and wants to explore alternate solutions.
- The result?**
- Architecture as a profession is being marginalized by outside businesses offering greater, more comprehensive accountability.

Maintaining the profession's status quo will further marginalize the role of the architect in the design process. Shifting strategies should be "front-and-center" on the radar screens of all design firms hoping to succeed. Control of architectural design will go to that entity most capable and willing to assume responsibility.

Construction Managers and general contractors are frequently selling themselves as the technical and constructability watchdog over the professional providing "checks & balances". Yet many owners are deciding they don't want "checks & balances" and the adversarial relationship that is implied (and frequently occurs). They would rather have a single, focused team with singular—not divided—responsibilities all working in the same direction for the same purposes and in the best interests of the client.

The major shift in responsibility that occurs from the Architect to the Contractor at the end of Construction Documents is one of the dumbest traditions in the construction industry. Any thoughtful project manager from outside our industry would readily point out that this is probably the worst possible time in a project to have a major responsibility shift.

We have a major practice challenge! We must develop methods of assuming major accountability and responsibilities for our clients without destroying ourselves financially.

This seems to be a strong recommendation for Design-Build or some variation on that theme. While the Architect is the more appropriate discipline to manage the entire Design-Build process, for some elusive reasons this rarely seems to happen. And in fact, Design-Build rarely happens. The DBIA (Design Build Institute of America) will cite that over 20% of building construction contracts are Design-Build, which may be true. It doesn't mean, however, the process is true design-build. True Design-Build would be a process performed by a D-B team that has done 20 or 30 buildings together and have developed a true team relationship that brings

a distinct efficiency advantage to the client. Since that rarely happens, there is very little true D-B.

Although a few firms around the country can legitimately claim to be a Design-Build firm, many contracts are the result of a one-time matter of convenience between an architect and a contractor with few, if any, prior D-B relationships, particularly with the same team. The client is paying for a learning experience, not design/construction efficiency.

One of the reasons for the lack of true Design-Build in the U.S. is the reluctance of a major architectural firm to develop an exclusive relationship over time with a major construction company to provide numerous D-B opportunities and an even greater reluctance for a major construction company to tie itself exclusively to one architectural firm over time. Does anyone see a significant Long Range Strategic Plan here? If not, let's add some supporting information from trends we see:

- The distinction between architects, engineers and contractors in the minds of the owners will diminish in the years ahead. Design-Bid-Build will also diminish, but will not die.
- BIM (Building Information Modeling) will revolutionize design and production processes. As a tool to enable multidisciplinary participation, it will allow many separate studies or analysis to be accomplished on the same model and it will allow dynamic energy analysis. It has obvious extensions into shop-drawings, construction detailing, bidding documents and procurement documents for contracting. **It should give the architect enormous power and stature in the construction process, but will anyone recognize this?**
- The firm of the future will not be a production shop. This is important because the production of contract documents has been the primary revenue

source of firms in the past. We are transitioning from a production shop to a consultancy. Our clients don't want assistance in determining how to build buildings, but in what buildings to build. This presumes a level of experience that isn't easy to achieve in normal office roles. How do we get these advanced levels of consultant talent?

- Here we will reflect back to the previous discussions on off shoring. Those jobs least susceptible to off-shoring are those of place. The local barber, the UPS deliveryman, and the local roofer have no danger of having their jobs off-shored. The work must be done in-situ. As we increase collaboration, and develop the use of BIM systems, we realize they are more systems of place than those of our previous practice. We could (and have in the past) offshore the detachable tasks of CD's. With BIM we are reducing those detachable tasks for which off shoring is appropriate.

There is much more we could discuss (and will in future articles) about the future of the profession, but the dénouement of this article is:

- **The future building construction market (domestic and global) is going to be stronger than at any time in history.**
- **We are facing a shortfall of architectural skills of unprecedented proportions.**
- **The Profession (and firms) must change to survive.**
- **The architect should build buildings.**

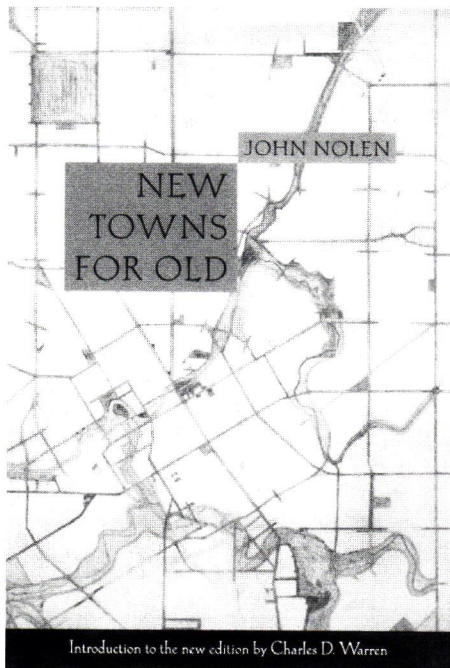
BIBLIOGRAPHY:

- U.S. Census Bureau
- U.S. Department of Labor
- National Architectural Accreditation Board
- AIArchitect, Jan. 13, 2006
- "Business 2.0", Sept. 2003
- "The Futurist Journal", World Future Society 2005 issues
- "Technology Review", MIT Press, numerous issues
- "Design Intelligence" Fifteen New Directions Sweeping the Design Profession, Jan. 2006
- "Kiplinger Forecasts" electronic newsletter.
- Reed Construction Forecasts
- "Architecture and Design Almanac" 2006
- "Trends" e-Magazine
- (1) Sept. 2005
- (2) Sept. 2005
- (3) July 2005
- (4) Oct. 2005
- (5) June 2005, Feb. 2006
- (6) Dec. 2005
- (7) Sep't. 2005
- (8) April 2005

¹ James P. Cramer — Greenway Consulting

NEW TOWNS FOR OLD

BOOK REVIEW BY ROB ROBINSON, AIA
URBAN DESIGN ASSOCIATES



TITLE: *New Towns For Old: Achievements In Civic Improvement In Some American Small Towns And Neighborhoods (American Society of Landscape Architects Centennial Reprint)*

AUTHOR: John Nolen, Charles D. Warren

PUBLISHER: University of Massachusetts Press

DATE PUBLISHED: 2005-05-30

FORMAT: Hardcover Edition

LIST PRICE (USD): \$34.95

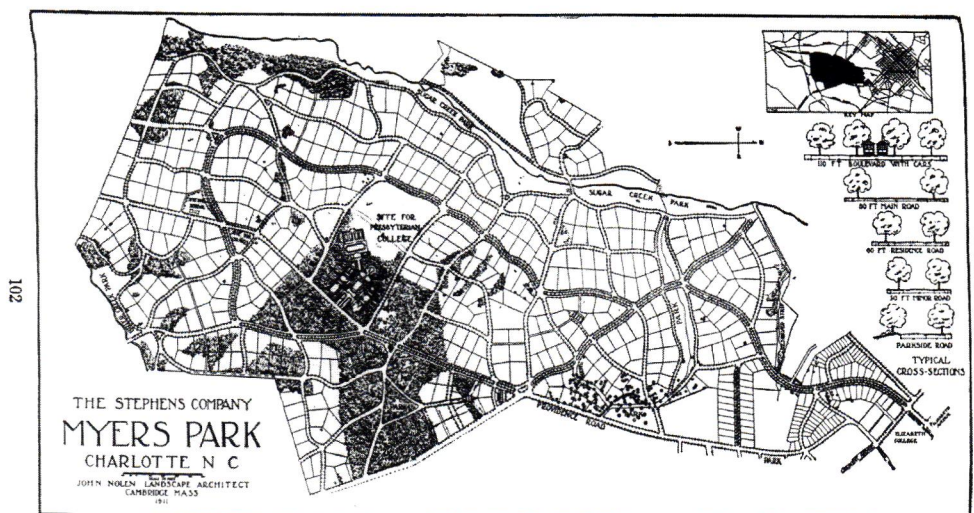
NO. OF PAGES: 228

This review first appeared in
Traditional Building Magazine.

The first thing that strikes you after a few pages of Nolen's original text is the underlying optimism about progress, technology, automobiles, society and civic responsibility that colors the time period of the work we are familiar with. It is the chapter of new urbanism that we don't experience all that often today. *New Towns for Old* is partially a republication of Nolen's last book published in 1927 and a new introduction written by Charles D. Warren that gives us a bit more context about Nolen. The original publication is a series of project descriptions that cover a number of built projects that came out of Nolen's planning firm in Cambridge, Massachusetts between 1905 and 1937. While the project descriptions are a bit difficult to dive into, the project types and the focus of the planning work should be interesting to urbanists working the "middle ground" of new towns, new neighborhoods and small town expansion.

Nolen's legacy picks up on European Garden City planning principles and North American principles established largely by Olmsted with places like Forest

Hills in Long Island, Roland Park in Baltimore; Riverside, Illinois and Palos Verdes Estates in California. These plans come out of a landscape architect's eye for the picturesque and desire for a balance between natural systems and forms and built environments. Nolen's education as a landscape architect in the Harvard program followed undergraduate studies at the Wharton School at the University of Pennsylvania. At Harvard, Olmsted, Jr. was one of his principal teachers. The influence of the body of planning work from Olmsted Senior's office, produced from the unique perspective of the landscape architect, found purchase with Nolen. The design of new urban fabric was more interesting to Nolen than the conventional practice of landscape architecture that focused largely on garden and park design. Nolen was driven and began working on commissions long before graduating. He graduated in 1907 and by 1910 had already worked on planning commissions for San Diego, Roanoke, Va; Charlotte, NC and just started on Madison, Wisconsin. The emphasis on city planning and development mirrored the Olmsted practice model.



MYERS PARK, CHARLOTTE, NORTH CAROLINA

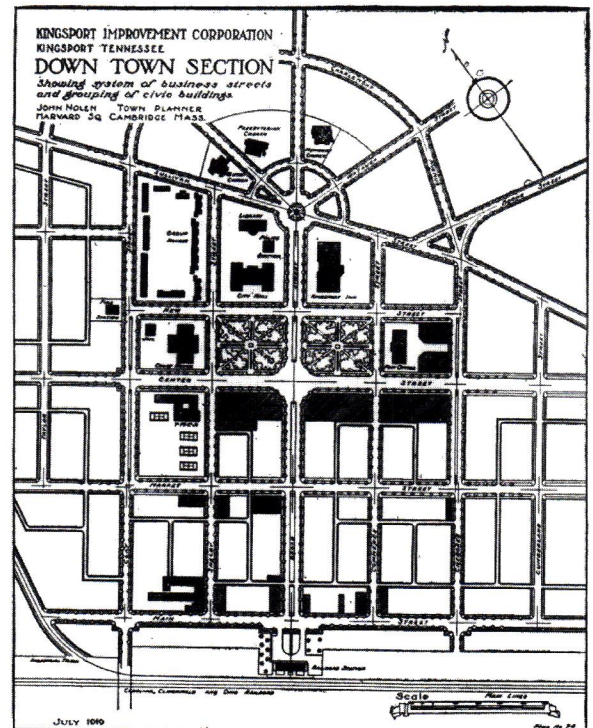
A residential suburb of a thousand acres, developed for the Stephens Company, Charlotte, North Carolina

The time period represented in the book is interesting because of the sponsorship and commissions of complete places rather than bits and pieces of things. There is some of that in the book, but mostly the larger plans of new settlements or precincts reads as a stronger part of the practice. Nolen was determined to change the conventional model of the surveyor's imposed grid over any landscape as the generator of American towns and cities, to a more "fitted" pattern of streets, blocks and public spaces. This reading of landscape form and play against natural forms was part of the legacy and context for Nolen's work. When you study his plans, you are struck by the clarity of the most urban work. Interesting block forms with sufficient, straight ahead block and street fabric within which Nolen inserts geometric twists and turns to create interest and special places. Often the natural preservation of topography or preserved streams and environmental resource areas provide a foil for the regularized geometry. The plans are a study of Nolen's art and method. We can learn great lessons from these well resolved plans as both two dimensional and three dimensional designs.

This work was influenced heavily by the English Garden City movement practiced and promoted by folks like Raymond Unwin. New towns like Letchworth and Welwyn Garden City are reflected in many of Nolen's designs and writings. He toured Europe and became interested in the German approach to city planning which was widely reference as a model in the north east planning schools. There is also a heavy dose of responsibility to make better places for the working class and create an alternative from the overcrowding and often dismal condition of housing in the industrial cities of both Europe and the United States. The thinking extended to social responsibility as a broad topic of the day. The early 1900s became an era for the company town as well as the first public housing efforts for workers in the shipyards during the war effort. The early seeds of ideas about uniform or segregated economic neighborhoods appears in this body of work. While there is an interesting intellectual and patriotic mindset

WHEN YOU STUDY
HIS PLANS, YOU
ARE STRUCK BY
THE CLARITY OF
THE MOST URBAN
WORK.

WE CAN LEARN
GREAT LESSONS
FROM THESE WELL
RESOLVED PLANS
AS BOTH TWO
DIMENSIONAL
AND THREE
DIMENSIONAL
DESIGNS.



KINGSFORT, TENNESSEE
Plan of down-town section, showing system of business streets and grouping of civic buildings

about the quality of life and purpose that directs the planning concepts, there is also a glimpse into the cultural bias and perception of both racial and ethnic incompatibility. Nolen wonders aloud how to control immigrant residents who can't properly maintain or live in the outdoor spaces created by the community plans. The early arrival of strict design guidelines and the predecessor to homeowner associations and regulations pop up in many of the project discussions.

For practicing urban designers and planners, the background information provided by Warren is the most valuable content in this publication. The project descriptions are difficult to digest as more than a bit of context for the commissions. I find that the art of the planning and sensitivity to creating great addresses with public infrastructure is a fascinating hallmark of Nolen's approach. The landscape architect's attention

to the subtle changes in setbacks, street and park character, approach and orientation can be seen in the built work. He was also interested in the same principles embraced by practitioners of urbanism today. Connectivity, walkable neighborhoods, picturesque communities, preservation and enhancement of natural resources, streets for people, defined rural and urban edges – the elements are fundamental to the way we need to think about expanding towns and building new towns. The idea of sustainable design methodology is present in this work, and was an intellectual underpinning in the early 1900s. Reading Albert Shaw's original introduction is not far removed from the discussion we have today about social equity, appropriate balance between nature and the built environment, corporate and civic responsibility and regional sense of place. All issues in the forefront of urban design then and now.

BUILD



pittsburgh

AIA PITTSBURGH'S 5TH ANNUAL CONTINUING EDUCATION CONFERENCE

IN TWO PARTS

KEYNOTE: April 26 at Heinz History Center
EDUCATION SESSIONS: April 27 at the Koppers Building

BUILD PITTSBURGH: *Part 1*

KEYNOTE SESSION WITH MICHAEL GARTNER

WEDNESDAY, APRIL 26, 6:00 - 9:00 P.M.

AT THE HEINZ HISTORY CENTER

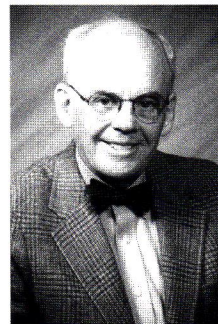
Michael Gartner: "*You Can't Do It Alone*"

Michael Gartner has been a lifelong journalist: He has been Page One Editor of *The Wall Street Journal*, editor and president of *The Des Moines Register*, editor of the *Louisville Courier-Journal*, general news executive of Gannett Co. and *USA Today*, and president of NBC News.

In 1997, he won the Pulitzer Prize for his common sense editorials about issues deeply affecting the lives of people in his community written for The Tribune of Ames, Iowa, where he then was the editor and co-owner. He also has won most other newspaper awards for editorial writing. He is the author of "Outrage, Passion & Uncommon Sense," a book of American history as told through newspaper editorials of different eras.

In early 2000, Iowa Gov. Tom Vilsack named Gartner chairman of Vision Iowa, a board the Legislature established to oversee grants to Iowa's tourist attractions and to disburse up to \$300 million to help Iowa communities build major recreational or cultural facilities. In 2005, Gov. Vilsack appointed Gartner to the Iowa Board of Regents, a group of nine citizen volunteers committed to improving quality of life in Iowa by governing Iowa's public universities and special schools and providing policymaking, coordination, and oversight of these institutions and affiliated centers. Gartner was subsequently elected president of that board.

In addition, Gartner has been a regular columnist for the op-ed page of *The Wall Street Journal* and the editorial page of *USA Today*, a commentator for Iowa Public Radio and the Voice of America, and the ombudsman for *Brill's Content* magazine. Gartner is a lawyer as well as a newspaperman and baseball executive, and he has written extensively on First Amendment issues. He is a member of the bar of New York and of Iowa. 1 AIA/CES LU



Michael Gartner



BUILD PITTSBURGH: *Part 2*

EDUCATION SESSIONS • EARN AIA/CES LEARNING UNITS!

THURSDAY, APRIL 27 AT THE KOPPERS BUILDING

TRACK 1

Regional Issues

SESSION 1 8:30 – 10:00 a.m.

Lessons Learned from Chattanooga

Mary Navarro, Heinz Endowments

The Civic Design Coalition took regional leaders on an information and ideas exchange to Chattanooga in October 2005. This seminar will focus on how Chattanooga transformed their city in part through the power of design and how these lessons can be applied to the Pittsburgh region. *1.5 AIA/CES LUs*

SESSION 2 10:30 a.m. – noon

Case Study: Saving the Meason House

Panel Discussion: Bill Bolger, National Park Service; Harley Trice, Reed Smith, LLP; Arthur Ziegler, Pittsburgh History and Landmarks Foundation

Moderator: James C. Radock, AIA, RSSC Architecture

Numerous individuals and organizations have struggled for decades to save Fayette County's historic Meason House. Built in 1802 by industrialist Isaac Meason, this hand-cut stone house is considered to be one of the finest Palladian mansions in America. This panel discussion will cover the background and history of the house and each of the numerous efforts to preserve this historic home and its current site. What can preservationists, architects, urban planners, sustainable developers and others learn from this process? *1.5 AIA/CES LUs*

SESSION 3 1:00 – 2:30 p.m.

Award Winning Architecture in Pittsburgh

Thomas J. Briney, AIA, Astorino

AIA Pittsburgh Honor Award and Award of Excellence recipients from 2005 will be presented by their firms. Thomas J. Briney, AIA will relay jury comments and provide insights into what makes projects and presentations award winners. *1.5 AIA/CES LUs*

SESSION 4 3:00 – 4:30 p.m.

Gambling on Design in Pittsburgh

Panel Discussion: Members of the Pittsburgh Gaming Task Force

This panel will discuss the logic behind the design guidelines and the accompanying text changes to the zoning ordinance. Come hear their recommendations for which proposal makes the most sense. *1.5 AIA/CES LUs*

TRACK 2

Practice

SESSION 1 8:30 – 10:00 a.m.

Performance Based Evaluations

Janis Shaw, Strategic Energy, L.L.C.

Build insight, empowerment and motivation into your Performance Evaluation process. In this seminar, you will learn ways to institute a Performance Based Evaluation Program that will focus your team members and their energy on outcomes that mutually matter. *1.5 AIA/CES LUs*

SESSION 2 10:30 a.m. – noon

Risk Management for Design Professionals

John P. Sieminski, Esq., Burns, White & Hickton, LLC
Chad A. Wissinger, Esq., Burns, White & Hickton, LLC

Planning, designing and administering construction projects is a complex process fraught with liability risks in every stage. Attendees will learn about the types of project developments and situations that have created issues and led to litigation for their peers through a mix of real-life and hypothetical scenarios that will provide guidance on future claims avoidance. *1.5 AIA/CES LUs (HSW)*

SESSION 3 1:00 – 2:30 p.m.

Nonstandard Owner-Architect Agreements

Michael J. Cremonese, Esq., Burns, White & Hickton
Craig Wisotzki, Acordia Northeast

With increasing frequency, owners are proposing contractual clauses that range from the problematic to the uninsurable. Attendees will learn about the sometimes subtle and sometimes dramatic contractual forms and clauses that may impact upon the standard of care applicable to providers of design services or present additional liability risks. *1.5 AIA/CES LUs (HSW)*

SESSION 4 3:00 – 4:30 p.m.

Mergers, Acquisitions and Other Ownership Transitions

John P. Sieminski, Esq., Burns, White & Hickton, LLC

Business organizations evolve and design professionals are no exception. Issues involving the form in which you do business range from initial form of organization, issues pertaining to merging with another firm, being acquired by, or acquiring, another firm, and succession planning. Attendees will hear a primer on the issues associated with these organizational changes and learn how to anticipate, avoid, and manage troublesome areas. *1.5 AIA/CES LUs (HSW)*

TRACK 3

Technology

SESSION 1 8:30 – 10:00 a.m.

Small Duct Central Heating and Air Conditioning

Ted Brown, Unico

Discover the benefits of Small Duct High Velocity as a space saving, energy efficient heating and cooling system. Understand the differences between these systems and traditional alternatives and how they relate to historic properties. Learn how Small Duct High Velocity heating and cooling systems allow architects freedom of design. *1.5 AIA/CES LUs (HSW)*

SESSION 2 10:30 a.m. – noon

The Advancement of Cavity Wall Design and The Rain Screen Principle

Brian Trimble, Brick Industry Association

This presentation will cover some advanced concepts regarding masonry cavity walls. You thought you knew everything there is to know about cavity walls? Come and learn some newer recommendations from the Brick Industry Association. Topics include insulation in cavity walls, flashing around columns, keeping air spaces clear and functioning, and what I need to know about weather/air/vapor retarders/barriers in brick walls. *1.5 AIA/CES LUs (HSW)*

SESSION 3 1:00 – 2:30 p.m.

Masonry: New Technologies & Equipment

David Sovinski, International Masonry Institute

This presentation will provide an overview of new materials, methods and equipment that are changing the way masonry construction is designed and delivered. *1.5 AIA/CES LUs (HSW)*

SESSION 4 3:00 – 4:30 p.m.

Changing Building Technologies and the Importance of Air Barrier

Stanley Kalb, AIA, Icynene

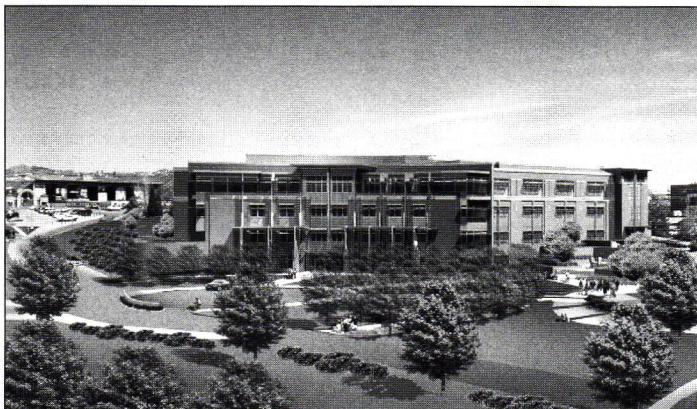
This presentation will be based on an easy to follow condensation of the research in building science over the last ten years that has now begun to influence our ideas about insulation thickness in walls, attics and crawlspaces. We will explore the background of some of the changes that are now surfacing in amendments to the ICC codes. Using practical examples, the importance of an air barrier and new understanding of the mechanism of ice damming will be introduced. *1.5 AIA/CES LUs (HSW)*

EARN UP TO 6 AIA/CES LEARNING UNITS

Contact AIA Pittsburgh for registration information: 412-471-9548 • www.aiapgh.org

From the Firms

► **WTW Architects** have been chosen to design a new student union (below) for the University of Nevada, Reno, incorporating green building principles to uphold the university's environmental policy.



JSA Architecture Planning Engineering Interior Design has been selected by Pinpoint Real Estate Company, a downtown real estate development company, to design a new 12,600 sf retail strip center (below) at the new Pittsburgh Mills Mall in Tarentum, PA. They have also been selected by the same company to design a new 18,000 sf retail strip center (below) as an outlet development adjacent to Center Commons, located near Beaver Valley Mall in Center Township, Beaver County PA.



Pittsburgh Mills



Center Commons

Massaro Corporation recently completed the new \$7.3 million Animal Friends' Caryl Gates Gluck Resource Center (below). This 30,000 sf facility, which is located in the North Hills, includes a state-of-the-art medical suite, innovative animal housing, an education wing, play areas, and nearly a mile of walking trails.



Business Briefs

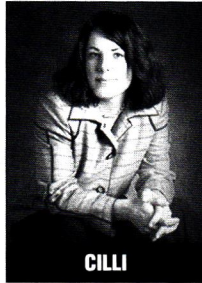
► Sheri Spoharski of **The Design Alliance Architects** has recently been promoted to shareholder, marking ten years with the firm.

Michael Mascaro, Prof. Affiliate, manager of business development at Mascaro Construction Company, LP, was recently appointed to the position of chairman of the Marketing Committee for the Master Builders' Association (MBA).



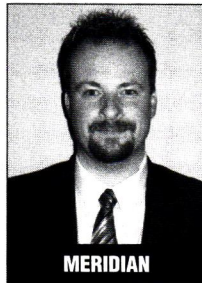
SPOHARSKI

PSI announces the addition of Christine Cilli as a business development manager in their Pittsburgh office. Ms. Cilli comes to PSI with 10+ years experience in marketing and business development.



CILLI

General Industries has named Brian J. Merdian to the position of vice president of sales and operations. Mr. Merdian has served as project manager with General Industries since 1998 with more than 10 years of managing complex construction projects in Pennsylvania and West Virginia.



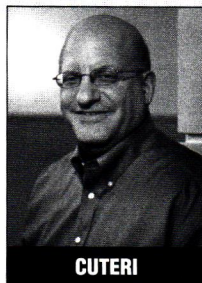
MERIDIAN

Horizon Properties recently announced the hiring of Mark Koontz who will lead Horizon's ongoing land and site development. Mr. Koontz is a registered professional engineer with more than ten years of experience.

Kudos

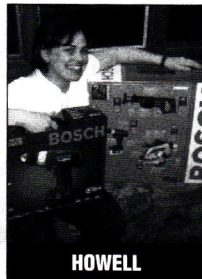
► **Perkins Eastman** was honored by the National Association of Home Builders (NAHB), 50 + Housing Council for three recent projects rated among the "best of the best" in the senior housing industry. Those projects are The Tradition of the Palm Beaches, West Palm Beach, FL, Hatsutomi Royal Care Garden, Japan, and Grand Rapids Dominican Sisters Marywood Center, MI.

Alan J. Cuteri, AIA, principal of **Strada**, recently received a Certificate of Completion from the Society of College and University Planners (SCUP) Planning Institute. Completing all three Institute sessions over the past two years, Al is only one of 28 professionals across the country to earn this certificate.



CUTERI

Jessica Howell, Assoc. AIA of **RSSC Architecture** fared well at the MBA/AIA Pittsburgh's Young Architects Forum Carpenter's Training Program, placing first in a speed competition and doing well in the drawing category.



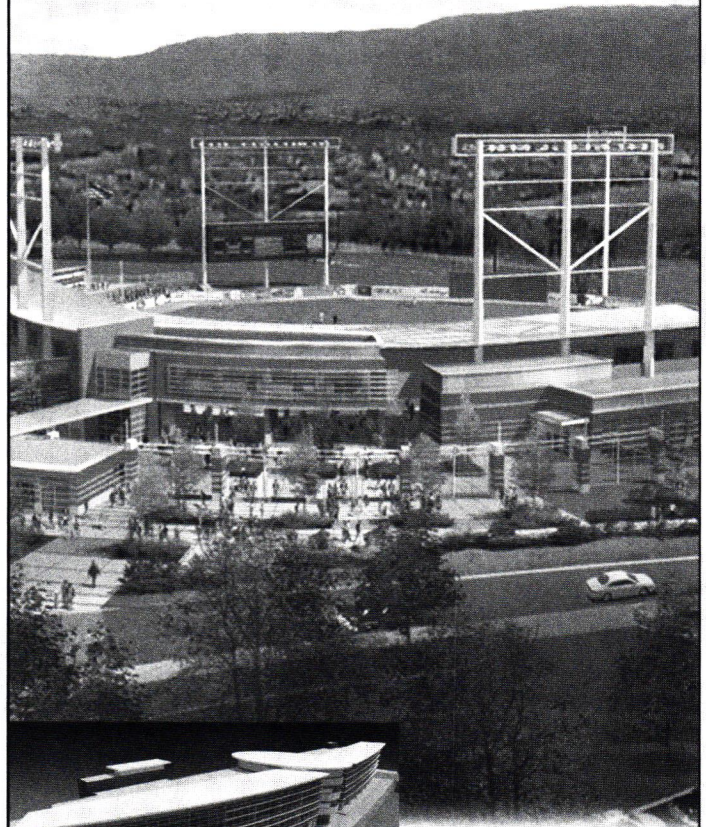
HOWELL

Seven individuals were honored recently for winning the John P. Daley Safety/ Craftsmanship Award at the Ironworker Employers Association of Western PA Annual Dinner. The winners: Jason Trypus, Scott Marshall, Donald Zahorchak, Havey Meyer, Bill Kesneck, Mark Beatty, and Dave Schadel.

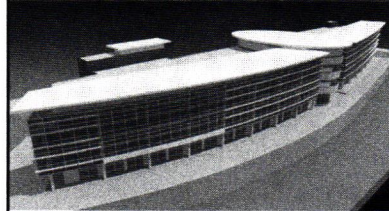
Exciting careers Exciting projects



Samuel Fels High School
Philadelphia, PA



Medlar Field at Lubrano Park
University Park, PA



Conemaugh Technology Complex
Johnstown, PA

L. Robert Kimball & Associates has openings for Design Professionals including:

- * Design Architects
- * Project Managers
- * Structural Engineers
- * Architects - Public Safety Design
- * Mechanical Engineers
- * Business Development Professionals

Kimball
L. Robert Kimball & Associates
Architects and Engineers

Frick Building - North Mezzanine
437 Grant Street
Pittsburgh, PA 15219
Phone: 412-201-4900

615 West Highland Avenue
Ebensburg, PA 15931
Phone: 814-472-7700

email hmnres@lrkimball.com

www.lrkimball.com

CONTRACTORS' DIRECTORY

* Member of the MASTER BUILDERS' ASSOCIATION.

† Member of ASSOCIATED BUILDERS AND CONTRACTORS, INC.

A LISTING OF AREA CONTRACTORS AND THEIR PROFESSIONAL SERVICES. To include your firm in this directory, call AIA Pittsburgh at 412-471-9548.

■ ALLEGHENY CONSTRUCTION GROUP, INC.*

456 Washington Avenue, PO Box 425
Bridgeville, PA 15017
PHONE: 412-221-0500 FAX: 412-221-0188
CONTACT: Laura S. Deklewa

**Commercial / Construction Management
Exterior / General / Industrial / Interior
Renovations / Pre-engineered Metal
Buildings / Certified DBE/WBE**

■ BRIDGES†

1300 Brighton Road, Pittsburgh, PA 15233
PHONE: 321-5400 FAX: 321-9823
CONTACT: Paul R. Bridges/Gus Marquart
WEB SITE: www.BRIDGESPBT.com

**Commercial / Construction Management
Exterior / General / Industrial / Interior
Renovations**

■ BURCHICK CONSTRUCTION CO., INC.*

500 Lowries Run Road, Pittsburgh, PA 15237
PHONE: 369-9700 FAX: 369-9991
CONTACT: Joseph E. Burchick
E-MAIL: burchick@burchick.com
WEB SITE: www.burchick.com

**Commercial / Construction Management
General / Industrial / Interior / Renovations**

■ CAVCON CONSTRUCTION COMPANY

211 Huff Avenue, Suite B
Greensburg, PA 15601
PHONE: 724-834-5220 FAX: 724-834-7533
CONTACT: Michael C. Philips
E-MAIL: mphilips@cavcon.com
WEB SITE: www.cavcon.com

**Commercial / Construction Management
General / Industrial / Design-Build / Metal
Buildings / Project Management**

■ JOHN DEKLEWA & SONS, INC.*

1273 Washington Pike, P.O. Box 158
Bridgeville, PA 15017-0158
PHONE: 412-257-9000 FAX: 412-257-4486
CONTACT: David Deklewa
WEB SITE: www.deklewa.com

**General construction / Construction
Management / Design-Build / Development
Services**

■ DYNAMIC BUILDING CORPORATION†

51 Pennwood Place, Suite 200
Warrendale, PA 15086
PHONE: 724-772-9020 FAX: 724-772-5770
CONTACT: John Nolan

E-MAIL: jnolan@dynamicbuilding.com
WEB SITE: www.dynamicbuilding.com
**Commercial / Construction Management
General / Industrial / Interior Renovations
Multi-Family / Design/Build**

■ GENERAL INDUSTRIES†

15 Arentzen Blvd., Charleroi, PA 15022
PHONE: (724) 483-1600 FAX: (724) 483-0990
CONTACT: Donald Ivill, divill@genindustries.com
WEB SITE: www.genindustries.com

**Commercial / Design-Build / Construction
Management / Industrial / Pre-Engineered
Metal Buildings / General Construction /
Interior & Exterior Renovations**

■ HARCHUCK CONSTRUCTION CO., INC.

4203 Route 66, Building II, Suite 222,
Apollo PA 15613
PHONE: (724) 727-3700 FAX: (724) 727-2800
CONTACT: David A. Harchuck
WEB SITE: www.harchuck.com

**Commercial / Construction Management
Exterior / General / Industrial / Interior
Renovations**

■ A. RICHARD KACIN, INC.†

3875 Old William Penn Hwy.
Murrysville, PA 15668
PHONE: 724-327-6694 FAX: 724-733-5993
CONTACT: A. Richard Kacin, Pres.
**Commercial / Construction Management
General / Industrial / Residential**

■ KUSEVICH CONTRACTING, INC.

3 Walnut Street, Pittsburgh, PA 15223
PHONE: 412-782-2112 FAX: 412-782-0271
CONTACT: George Kusevich, Jr.
E-MAIL: gkjr@kusevich.com
WEB SITE: www.kusevich.com

**Commercial / General / Renovations
Education / Design-Build**

■ LLI/CMi CONSTRUCTION, INC.

9800 A McKnight Road, Pittsburgh, PA 15237
PHONE: 412-369-9220 FAX: 412-369-9223
CONTACT: Rege Etzel
E-MAIL: retzel@llitechnologies.com
WEB SITE: www.llitechnologies.com
**Commercial / Construction Management
General / Industrial / Interior / Renovations**

■ MARCO CONTRACTORS, INC.

100 Commonwealth Drive P.O. Box 805
Warrendale, PA 15095-0805
PHONE: 724-741-0300 x.35 FAX: 724-741-0335
CONTACT: Amy Fonzi

E-MAIL: afonzi@marcocontractors.com
WEB SITE: www.marcocontractors.com
**Commercial / Construction Management
Interior / Renovation / Restaurants / Retail**

■ A. MARTINI & CO.

320 Grant Street, Verona, PA 15147
PHONE: 412-828-5500 FAX: 412-828-6488
CONTACT: Anthony Martini
E-MAIL: afm@amartinigc.com
WEB SITE: www.amartinigc.com

**Commercial / Construction Management
General / Industrial / Interior
Pre-engineered metal buildings**

■ MISTICK CONSTRUCTION†

1300 Brighton Road, Pittsburgh, PA 15233
PHONE: 322-1121 FAX: 322-9336
CONTACT: M. Robert Mistick
**Commercial / Construction Management
Exterior / General / Interior / Renovations
Residential**

■ NELLO CONSTRUCTION COMPANY*

100 Houston Square, Suite 200
Cannonsburg, PA 15317
PHONE: 724-746-0800 FAX: 724-746-1966
CONTACT: Janet Torriero
WEB SITE: www.nello.net
**Commercial / Construction Management
Exterior / General / Industrial / Interior
Renovations**

■ SOTA CONSTRUCTION SERVICES INC.†

80 Union Avenue, Pittsburgh, PA 15202
PHONE: 412-766-4630 FAX: 412-766-4634
CONTACT: Ernie Sota
E-MAIL: esota@sotaconstruction.com
WEB SITE: www.sotaconstruction.com
**Commercial / Construction Management
Exterior / General / Industrial / Interior
Renovations**

■ TURNER CONSTRUCTION COMPANY

Two PNC Plaza, 620 Liberty Ave.,
27th Floor, Pittsburgh, PA 15222-2719
PHONE: 412-255-5400 FAX: 412-255-0249
CONTACT: Joseph Milicia, Jr.

**Commercial / Construction Management
General / Industrial / Interior / Renovations**

■ WJM CONTRACTING, INC.†

P.O. Box 1324, Wexford, PA 15090
PHONE: 724-933-9136 FAX: 724-933-9147
CONTACT: William J. Gormley, Jr.
E-MAIL: wgormley@connfetime.net
WEB SITE: www.wjmc.net

**Commercial / Construction Management
Exterior / General / Industrial / Interior**

■ VOLPATT CONSTRUCTION CORPORATION*

100 Castlevue Road, Pittsburgh, PA 15234
PHONE: 412-942-0200 FAX: 412-942-0280
CONTACT: Raymond A. Volpatt
E-MAIL: rayjr@volpatt.com
WEB SITE: www.volpatt.com

**Commercial / Construction Management
Exterior / General / Industrial / Interior
Renovations**

Xcelic

Corporation

Excellence in Infrastructure Consulting

Designing Solutions in

- Structured Cabling
- Building technologies
- IP Convergence
- Voice over IP (VoIP)
- Video/Security Surveillance
- Wireless

Bicsi
CORPORATE
MEMBER

Member
infoComm
INTERNATIONAL

Phone: 412-204-8491
Fax: 412-204-8535
Email: php@xcelic.com
www.xcelic.com

**We're releasing new software.
To release you
from old frustrations.**



We've redesigned our AIA Contract Documents software to offer world-class simplicity. We've made everything more streamlined and intuitive so you can create, share, and manage documents easier.

- Familiar toolbars and icons.
- Pull-down menus.
- Microsoft® Word and PDF file-saving.
- Enhanced storage and retrieval system.
- Any variances from standard language are displayed in a special report.

To learn more or to download the software, go to www.aia.org or call 1-800-365-2724.

AIA Contract Documents

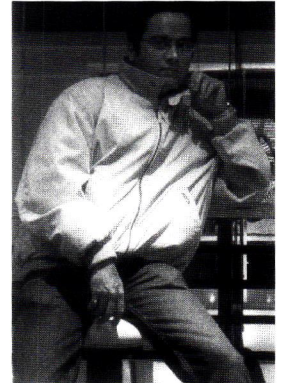
Microsoft® and Microsoft® Word 2000 are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries. ©2003, The American Institute of Architects

UPCOMING ISSUES

- *The Bridges of Pittsburgh*: book review
- Julie Wagner, Assoc. AIA on Habitat Build
- A Juror's Perspective, by Roxanne Sherbeck, AIA

New Member

AIA Pittsburgh extends a warm welcome to **Mandar H. Kulkarni of Foreman Architects**, Engineers of Zelienople. Mandar graduated from the Sir J.J. College of Architecture in Mumbai, India then earned his Master's in Architecture at Penn State University.



His professional goal is to learn as much as he can

and benefit society. Interests include traveling, photography, sketching, painting and topics related to green design and sustainable architecture.

To contact him, email:
mandar.kulkarni@foremangroup.com

Skill

Integrity

Quality

Construction Legislative Issues Monitored

The legislative issues important to the entire construction industry can now be delivered to your inbox.

On behalf of the construction industry, the MBA's Legislative Committee created *The Legislative News*, a monthly newsletter devoted to informing our industry on the primary local, state and federal legislation crucial to our industry, while at the same time reflecting the interests of Western Pennsylvania.

To signup to receive *The Legislative News*, contact the MBA at 412-922-3912 or jobrien@mbawpa.org.

MBA

...just a few of our objectives.

Master Builders' Association Of Western Pennsylvania, Inc.
412-922-3912 www.mbawpa.org

ENGINEERS' DIRECTORY

A LISTING OF AREA ENGINEERS AND THEIR PROFESSIONAL SERVICES. To include your firm in this directory, call AIA Pittsburgh at 412-471-9548.

■ ALLEN & SHARIFF CORPORATION

700 River Avenue, Suite 333
Pittsburgh, PA 15212
PHONE: (412) 322-9280 FAX: (412) 322-9281
CONTACT: Anthony E. Molinaro, P.E.

**Consulting / Electrical / Mechanical
Telecommunications**

■ BARBER & HOFFMAN, INC.

215 Executive Drive Suite 202
Cranberry Twp. PA 16066-6409
PHONE: (724) 741-0848 FAX: (724) 741-0849
CONTACT: Michael R. Miller, P.E.
E-MAIL: bhp@barberhoffman.com
Consulting / Structural

■ BRACE ENGINEERING, INC.

3440 Babcock Boulevard, Box 15128
Pittsburgh, PA 15237
PHONE: 367-7700 FAX: 367-8177
CONTACT: David A. Brace
Structural

■ CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

333 Baldwin Road, Pittsburgh, PA 15205
PHONE: 412-429-2324 FAX: 412-429-2114
CONTACT: Gregory P. Quatchak, P.E.
**Civil / Geotechnical / Surveying / Structural
Environmental / Construction Consulting
Testing & Inspection / Landscape
Architecture**

■ CONWAY ENGINEERING

Investment Building
235 4th Avenue, Suite 1408
Pittsburgh, PA 15222
PHONE: 765-0988 FAX: 765-2530
CONTACT: Bob Conway
Consulting / Structural

■ DODSON ENGINEERING, INC.

420 One Chatham Center, Pittsburgh, PA 15219
PHONE: 412-261-6515 FAX: 412-261-6527
CONTACT: Gregory L. Calabria, P.E.
**Consulting / HVAC / Plumbing / Fire
Protection**

■ ENGINEERING MECHANICS, INC.

4636 Campbells Run Road, Pittsburgh, PA 15205
PHONE: 788-3650 FAX: 787-5891
CONTACT: Daniel Grieco, Jr., P.E.
**Geotechnical / Consulting / Testing &
Inspection / Blasting Vibrations**

■ FAHRINGER, McCARTY, GREY, INC.

1610 Golden Mile Highway
Monroeville, PA 15146
PHONE: 724-327-0599 FAX: 724-733-4577
CONTACT: Dale K. Earl
E-MAIL: design@imginc.us
**Landscape Architecture / Site Master
Planning / Civil / Consulting**

■ FIRSCHING, MARSTILLER, RUSBARKY AND WOLF ENGINEERING, INC.

2 Parkway Center East
Pittsburgh, PA 15221
PHONE: 271-5090 FAX: 271-5193
CONTACT: Daniel J. Wolf / David D. Rusbarsky /
Ted Marstiller, P.E.

**Consulting / HVAC / Plumbing
Fire Protection / Electrical
Telecommunications**

■ GAI CONSULTANTS, INC.

385 East Waterfront Drive
Homestead, PA 15120-5005
PHONE: 412-476-2000 FAX: 412-476-2020
CONTACT: Anthony F. Morrocco, PE/PLS
**Testing & Inspection / Civil / Construction
Monitoring / Consulting / Environmental /
Geotechnical / Structural / Transportation /
Archaeological / Surveying**

■ GARVIN BOWARD ENGINEERING, INC.

180 Bilmor Drive, Suite IV
Pittsburgh, PA 15205
PHONE: 412-922-4440 FAX: 412-922-3223
CONTACT: Joseph F. Boward, P.E.
E-MAIL: jboward@garvinbowardeng.com
**Geotechnical / Forensic / Testing &
Inspection / Consulting / Environmental**

■ THE GATEWAY ENGINEERS, INC.

1011 Alcon Street, Pittsburgh, PA 15220
PHONE: 921-4030 FAX: 921-9960
CONTACT: Rose Griffin
**Civil / Land Development / Structural
Engineer / Consulting**

■ HORNFECK ENGINEERING, INC.

1020 North Canal Street, Pittsburgh, PA 15215
PHONE: 781-1500 FAX: 781-5593
CONTACT: Richard W. Petrie, P.E.
**Consulting / Electrical / Instrumentation
Lighting / Telecommunications**

■ THE KACHELE GROUP

1014 Perry Highway, Suite 100
Pittsburgh, PA 15237
PHONE: 412-369-9020 FAX: 412-369-9021
CONTACT: Tony Moscollic
Structural

■ L. ROBERT KIMBALL & ASSOCIATES

Architects and Engineers
CORAOPOLIS OFFICE:
415 Moon Clinton Road, Coraopolis, PA 15108
PHONE: 412-262-5400 FAX: 412-262-3036
CONTACT: Emil R. "Jack" Lerch, PE
DOWNTOWN PITTSBURGH OFFICE:
Frick Building - North Mezzanine
437 Grant Street, Pittsburgh, PA 15219
PHONE: 412-201-4900 FAX: 412-201-2338
CONTACT: Christopher R. Haupt, AIA
WEB SITE: www.lrkimball.com

**Civil / Site / Water / Wastewater / Indoor
Air Quality / Environmental Site
Assessments / Land Development
Industrial Hygiene and Safety / Mechanical
Electrical / Structural / Telecommunica-
tions / Geotechnical / Transportation**

■ LLI ENGINEERING

808 Penn Avenue, Pittsburgh, PA 15222
PHONE: 412-338-0700 FAX: 412-338-0237
CONTACT: James D. White, P.E.
E-MAIL: jwhite@llitechnologies.com
WEB SITE: www.llitechnologies.com
**Construction / Electrical / Mechanical
Structural / Telecommunications
Commissioning**

■ LOFTUS ENGINEERING, LLC

555 North Bell Avenue, Carnegie, PA 15106
PHONE: 412-429-1396 FAX: 412-429-6474
CONTACT: Glenn Avick, P.E.
E-MAIL: gavick@loftusllc.com
WEB SITE: www.loftusllc.com
**HVAC / Plumbing / Fire Protection
Structural / Electrical / Data-Telecom
LEED Accredited Professionals / Certified
Commissioning Authority CxA**

■ MURRAY ASSOCIATES, INC.

413 Penn Avenue, Turtle Creek, PA 15145
PHONE: 412-823-2020 FAX: 412-824-7302
CONTACT: Jack G. Murray, P.E.
**Geotechnical / Civil / Environmental
Structural / Testing & Inspection
Forensic**

■ PROFESSIONAL SERVICES INDUS- TRIES, INC. (PSI)

850 Poplar Street, Pittsburgh, PA 15220
PHONE: 412-922-4000 FAX: 412-922-4013
CONTACT: Thomas G. Ali, P.E.
E-MAIL: tom.ali@psiusa.com
WEB SITE: www.psiusa.com
**Testing & Inspection / Consulting
Environmental / Geotechnical**

■ SENATE ENGINEERING CO.

University of Pittsburgh Applied
Research Center (U-PARC)
420 William Pitt Way, Pittsburgh, PA 15238
PHONE: 412-826-5454
CONTACT: Gordon T. Taylor
E-MAIL: gttaylor@senateengineering.com
WEB SITE: www.senateengineering.com
**Civil Land Development / Surveying /
Construction Stake Out / Landscape
Architecture / Structural / Electrical /
HVAC / Plumbing**

■ TAYLOR STRUCTURAL ENGINEERS

250 Mt. Lebanon Blvd.
Pittsburgh, PA 15234
PHONE: 412-344-1889 FAX: 412-344-4898
CONTACT: Dirk A. Taylor
E-MAIL: pkoval@taylorstructuralengineers.com
Structural

■ TOWER ENGINEERING

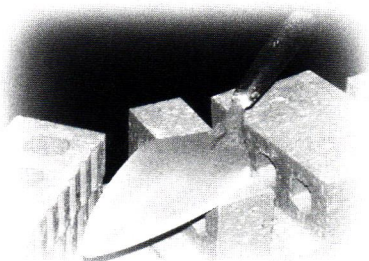
115 Evergreen Heights Drive, Suite 400
Pittsburgh, PA 15229
PHONE: 412-931-8888 FAX: 412-939-2525
CONTACT: James N. Kosinski, P.E.
WEB SITE: www.estower.com
**Consulting / Electrical / Mechanical
Telecommunications / Sustainable
Building Design / Energy Analysis
Building Commissioning**

■ TRANS ASSOCIATES ENGINEERING CONSULTANTS, INC.

4955 Steubenville Pike, Ste. 400
Pittsburgh, PA 15205
PHONE: 412-490-0630 FAX: 412-490-0631
CONTACT: Mark J. Magalotti, P.E.
E-MAIL: magalottim@transassociates.com
Civil / Consulting / Transportation

The Right Materials

- ◆ Fire Resistant
- ◆ Low Maintenance
- ◆ Durable & Safe
- ◆ Aesthetically Valuable



- ◆ Design Flexible
- ◆ Superior Longevity
- ◆ Cost Effective
- ◆ Fast Construction Time

The Right Way

Constructed by Experienced Union Craftworkers & Contractors



International Masonry Institute

We Build For Life

For answers to your masonry questions, call 1-800-IMI-0988.

300 Northpointe Circle, # 303
Seven Fields, PA 16046
Ph: (724) 776-1930
Fax: (724) 776-4963
mtheis@imiweb.org
www.imiweb.org

Add a complete staff of local fleet experts without ever hiring a soul.

From acquisition and insurance to maintenance and disposal, only Enterprise will give you a local Account Team to work directly with you, in person, and take responsibility for your entire fleet. With more locations nationwide than any other company, only your Enterprise Team has access to a complete staff of local fleet management experts. We have over 40 years of experience and as a corporation, currently manage over 500,000 vehicles, so you can rest assured Enterprise knows all the ins and outs of fleet management. Call us today and let Enterprise introduce you to the best fleet management staff you never hired.

Call 1 888-353-3875 toll-free or visit our website at www.efleets.com.



GENERAL SERVICES DIRECTORY

A LISTING OF AREA BUSINESSES AND THEIR PROFESSIONAL SERVICES. To include your firm in this directory, call AIA Pittsburgh at 412-471-9548.

ARCHITECTURAL PRODUCTS

■ BUNTING GRAPHICS, INC.

20 River Road, Verona, PA 15147-1159
PHONE: 412-820-2200 ext. 240
FAX: 412-820-4404
E-MAIL: jody@buntinggraphics.com
WEB SITE: www.buntinggraphics.com
CONTACT: Jody Bunting

Fabricator of Graphics & Signage, Stainless Steel Railings & Architectural Metal Work, Canopies, Sunscreens & Grills, Decorative Truss Work, Cold Cathode Lighting, Custom Light Fixtures, Sculpture & 3D Graphics, Custom Fabrication, Design-Build, Latest Technology & Skilled Craftsmen. (Local 100,000 Sq. Ft. Mfg. Plant)

GRAPHIC DESIGN

■ SEWICKLEY GRAPHICS & DESIGN, INC.

605 Beaver Street, Suite 102, Sewickley, PA 15143
PHONE: 412-741-3777 FAX: 412-741-2346
CONTACT: Donna P. Barger
E-MAIL: dbarger@sewickleygraphics.com
WEB SITE: www.sewickleygraphics.com
Certified WBE / Corporate Identity / Collateral / Web Design and Multimedia Ad and PR Campaigns / Direct Mail / Event Planning

LANDSCAPE ARCHITECTS

■ KENDALL O'BRIEN LANDSCAPE ARCHITECTS

524 Locust Place, Sewickley, PA 15143
PHONE: 412-741-5244 FAX: 412-741-0809
CONTACT: Heather O'Brien or Patricia Kendall
E-MAIL: design@kendallobrien.com
Women Owned Business, Parks and Recreation Planning, Estate Landscapes, Site Master Planning, Streetscapes

■ PASHEK ASSOCIATES, LTD.

619 East Ohio Street
Pittsburgh, PA 15212
PHONE: 412-321-6362 FAX: 412-321-9202
CONTACT: Nancy Lonnott Roman RLA
E-MAIL: nlonnett@pashela.com
WEB SITE: www.pashela.com
Environmental Green Design, Historic Preservation, Park and Recreation Planning, Site Master Planning, Streetscapes, Urban Planning

■ TERRA DESIGN STUDIOS, LLC

73 South 13th Street, Pittsburgh, PA 15203
PHONE: 412-481-3171 FAX: 412-481-3173
CONTACT: Cindy Tyler
E-MAIL: ctyler@terradesignstudios.us
Woman Owned Business, Site Master Planning, Children's Gardens, Campus Planning, Urban Design, Estate Landscapes

■ THE GATEWAY ENGINEERS, INC.

1011 Alcon Street, Pittsburgh, PA 15220
PHONE: 412-921-4030 FAX: 412-921-9960
CONTACT: Jason Jesso
Civil / Testing & Inspection / Consulting Environmental

OFFICE FURNITURE

■ FRANKLIN INTERIORS

Suite 600, 2740 Smallman Street,
Pittsburgh, PA 15222-4720
PHONE: 412-261-2525 FAX: 412-255-4089
Complete project and furniture management. Reconfigurations and installations: non-union and union. Meeting any budget—we are your authorized Steelcase dealer.

PHOTOGRAPHY

■ MICHAEL HARITAN PHOTOGRAPHY

184 Fireside Drive, Pittsburgh, PA 15317
PHONE: 724-941-2002 FAX: 724-941-2002
CONTACT: Michael Haritan
E-MAIL: michaelharitan@hotmail.com
WEB SITE: www.haritan.com
Creative architectural photography of interiors, exteriors and landscape design. Building products, industrial and corporate. Digital and film formats, custom printing. Member: PPA Certified, ASMP

REPROGRAPHICS

■ TRI-STATE REPROGRAPHICS, INC.

907 Penn Avenue, Suite 700, Pittsburgh, PA 15222
PHONE: 281-3538 FAX: 281-3344
CONTACT: George R. Marshall
Document Management, Digital B&W Plotting, Blueprinting, Specs/Binding, Large & Small Format Color Copies, Mounting/Laminating, Supplies, Pickup & Delivery

STORAGE & FILING

■ STUART DESIGN GROUP, INC.

605 Plum Industrial Court, Pittsburgh, PA 15239
PHONE: 724-325-4566 FAX: 724-327-9128
E-MAIL: info@stuartdesigngroup.com
WEB SITE: www.stuartdesigngroup.com
Over twenty years of experience providing the most efficient on-site space/storage solutions for corporate, healthcare, government, library & education clients.

LIST YOUR SERVICES IN THE GENERAL SERVICES DIRECTORY

With the General Services Directory, you can list your business by specialty in *Columns*. List your firm under the heading of your choice.

- Security Systems
- Blue Prints
- HVAC
- Electrical Service
- Design
- Roofing
- Signage
- Windows and Doors
- Brick Waterproofing
- Interior Design
- CADD Services
- Lumber
- Masonry
- Data
- Flooring
- Carpeting
- Tile
- Plumbing
- Others

Call AIA Pittsburgh at 412-471-9548 for details.

When AIA Contract Documents are in force, everyone's interests are in balance.

AIA Contract Documents were created from a consensus of contractors, developers, lawyers, and architects.

They have been written expressly to balance the interests of all parties. They cover all phases of a project from beginning to end.

And, they have been clarified by 115 years of legal precedent. Courts have recognized their legal legitimacy time after time. Which is why no other standard contract document

system is as effective at keeping projects running smoothly and finishing successfully. They're

available in paper or electronic form, with flexible pricing. Plus, our new software release features full Microsoft® Word functionality and improved navigational

aids, as well as formatting and collaboration options. To learn more or to download the software, go to www.aia.org or call 1-800-365-2724.

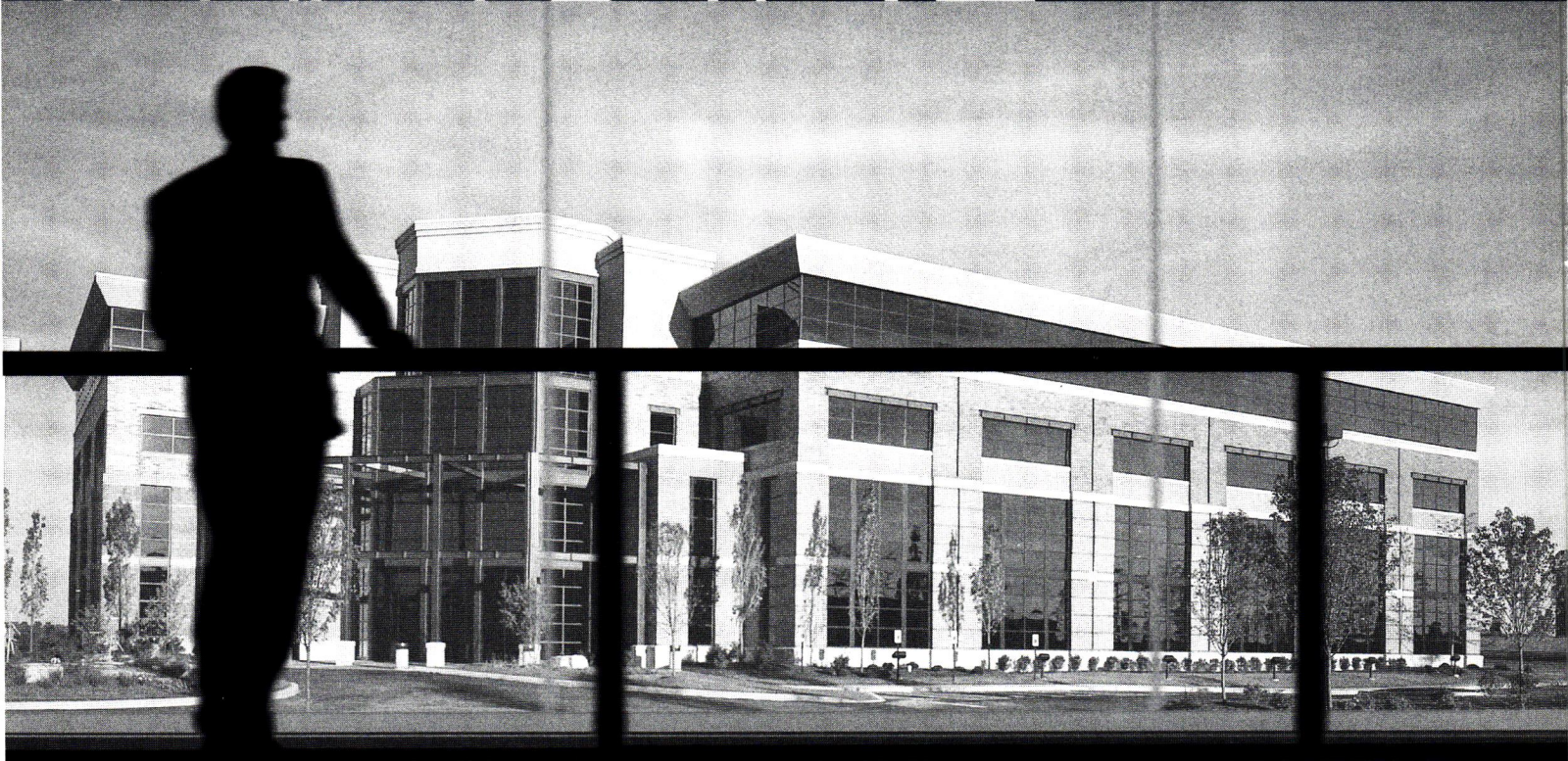


AIA Contract Documents

New software just released. Order now at www.aia.org.

© Copyright 2003, The American Institute of Architects. Microsoft® and Microsoft® Word are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

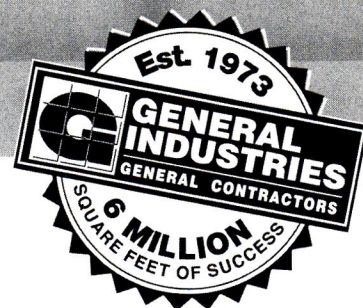
IMAGINE



YOUR VISION BUILT ON TIME AND WITHIN BUDGET, EVERY TIME.

Imagine your top client driving up to their new General Industries-built corporate headquarters; ample parking, immaculate landscaping, inviting entryway and spacious floor plans. All designed by you to best suit the changing needs of their growing business.

As the region's leading commercial contractor, we welcome the opportunity to discuss our strengths in providing a facilities-construction solution that is always delivered on time, within budget and of course, guaranteed to impress your toughest clients.



► CAN WE BUILD AN AWARD-WINNER FOR YOU?

FIND OUT MORE ABOUT BUILDING WITH GENERAL INDUSTRIES.

CALL BRIAN MERDIAN OR MARK CASKEY AT (724) 483-1600

15 ARENTZEN BOULEVARD ► CHARLEROI, PA 15022 ► www.genindustries.com