

Masters
of
Design/Build



*Re-imagining the built environment
with top Northeast Ohio firms*

Design/Build: A Trend or the Future?

By Mark Horton

1940s

U.S. Navy adopts design/build in housing projects both stateside and abroad.

1962

NASA employs design/build methods to accelerate the space program during the Cold War.

1968

HUD uses design/build in its urban initiatives in support of the Civil Rights Act.

1975

American General Contractors (AGC) publishes the first edition of *Standard Agreement Between Owner and Design/Builder*.

1985

AIA creates and publishes an entire family of design/build contracts.

1986

Military Construction Authorization Act permits trial use of design/build with each branch permitted to use it on three projects per year.

1993

Design/Build Institute of America (www.dbia.org) is established.

2001

The Pentagon's reconstruction after 9/11 employed three parallel "superprime" design/build teams.

The project delivery approach known as design/build in the last 10 years has become a nationwide phenomenon across all sectors and building types in the construction industry. But is it right for every project? Is it right for yours? And how do you know for sure? The first step is to understand what design-build is, its origins, and what it holds for the future of our industry.

Project delivery is broadly defined as a comprehensive process including planning, design, construction and other services necessary for organizing, executing and completing a building, facility or project. The three primary project delivery systems are design-bid-build, construction management and design/build.

Design/build is defined as a method of project delivery in which one entity, the "design-builder," forges a single contract with the owner to provide for architectural/engineering design services and construction services. Design/build involves a team of qualified design and construction professionals operating under a single contract with single source responsibility.

This is actually a "rediscovered" approach to project delivery. Ancient Egyptians used the "master builder" approach in their prosperous society. The Roman aqueduct system was constructed using a form of the design/build process. Historical landmarks in Paris, France, were commissioned using design-build teams as well. (An evolution of the design/build approach in the United States is offered in the timetable to the left.)

Within this unique delivery approach, there are basically two forms. The Designer led design/build team has the design firm holding the builder's contract. A local outfit, The Austin Company, popularized this approach during post

World War II. Today it is primarily used in highly technical and complex projects such as top-secret weapon systems production. The constructor-led form has the building firm holding the designer's contract, which is most prevalent in the commercial and industrial building industry.

Design/build is defined as a method of project delivery in which one entity, dubbed the "design-builder," forges a single contract with the owner to provide for architectural/engineering design services and construction services.

Fully integrated design/build firms are those that have their design team incorporated as on-staff employees, and represent perhaps the purest form of this project delivery approach.

All three project delivery methods have their pros and cons. Some of the advantages of the design/build approach are:

- Single point of responsibility
- Owner freedom from coordination between A/E and constructor
- Savings in schedule and potentially in costs
- Improved risk management
- Early knowledge of firm costs
- Rewards innovation

Some of the disadvantages of the design/build approach are:

- New territory – parties assuming different risks
- Institutional barriers – procurement and licensing

- Owner relinquishes some control
- Limited availability of insurance/bonding products
- Complexity/steep learning curve

A recent study by the Construction Industry Institute produced some noteworthy results, which seem to favor design/build. Over 350 projects nationwide across all industry sectors ranging in price from \$500,000 to \$5,000,000 were surveyed. Comparisons of design-bid-build versus construction management at-risk versus design/build in the areas of cost, schedule and quality yielded that design/build projects unit costs were 6% lower, designed and constructed 33% faster, and overall had less call-backs for design errors and warranty repairs.

This same study observed compelling trends. The Construction Industry Institute collected data on all projects nationwide in 15 year increments and found:

- In 1985, the design-bid-build approach accounted for 83% of all projects; construction management (at risk) was at 12%; and design/build at 5%.
- In 2000, design-bid-build was at 55% of all projects; construction management (at risk) at 15%; and design/build projects swelled to 30%.
- It is forecast that in 2015, design-bid-build will shrink to 35% of all projects; construction management (at risk) will be down to 10%; while design/build may increase to as much as 55%.

There are certain and distinct project drivers that the design/build approach satisfy well. Chief of those are:

- Early completion requirements
- Unqualified owner staffing
- Desire for single source responsibility
- Need for less conflict

- Potential for lower costs
- Increased quality
- Equal or increased innovation

Considering the attributes of the design/build method that are given in this article, it is not surprising to see such national trends as:

- Increasing use in public sector at all levels of government
- Requests for proposals which include less design specifics in order to encourage design innovations
- Project team selections placing increased value on qualifications over price
- More owners oriented toward achieving performance objectives even at the risk of violating project budget and schedule constraints
- Part of more integrated solutions, which include financing, operation, maintenance and even ownership

In Ohio, design/build in the public sector is in its infancy. After an unsuccessful attempt to use this approach on a municipal project in Blue Ash, the first project in the state's history was the Geneva Lodge & Conference Center by Ashtabula County. On the heels of this successful project, the City of Willoughby used design/build to develop its new municipal courthouse, which is featured in this month's issue. C.T. Consultants acted as the owner's representative on both of these landmark projects, and has come to be recognized as the leading firm in Ohio for managing the design/build process for both public and private sector parties. **P**

Mark K. Horton is director of construction services for C.T. Consultants, an Ohio-based multi-disciplined engineering and architectural consulting firm providing professional services to the public and private sector. For more information on the design/build approach or to determine if it is right for your project, contact Horton at 440.530.2217.

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Cornerstones of Success

Carnegie implements security into the design/build concept

Carnegie Management & Development Corporation's experience and proactive approach to creating facilities that exceed the goal of "design excellence," with a heightened sensitivity to security requirements related to the specific tenant's use, is only the beginning of what distinguishes this company. The Westlake-based company's approach to crafting management and maintenance programs, for special office building users, such as the Federal Bureau of Investigation (FBI), Internal Revenue Service (IRS), Alcohol and Tobacco Tax and Trade Bureau (ATTB) and the Social Security Administration (SSA), as well as banks, financial securities firms and medical/surgical offices, allows the company to provide and maintain high quality services at reasonable prices.

Its buildings maintain a longer useful life, are easily expandable, and are designed to be flexible as uses change. This concept maintains functional efficiency and long-term beauty, while never compromising security. Carnegie buildings will not become obsolete. They create an architectural image and



FIRM FOUNDATION Based out of Westlake, Carnegie Management & Development Corporation has completed design/build projects for a wide range of clients, such as the Federal Bureau of Investigation (FBI), including this facility completed in October 2005.

dignified configuration that projects an inviting presence to the public. The concept of stability, permanency, reliability and integrity are the cornerstones of Carnegie buildings.

Carnegie is proactive with design and works closely with its tenants to create a building that meets the economic

requirements, but exceeds the expectations.

Since it is an asset-based company and owns all of its buildings long-term, Carnegie focuses on low maintenance, high quality construction and materials. Its buildings have lower on-going maintenance requirements and lower utility costs. Its landscaping and site designs utilize natural elements and local plants, trees and flowers that require less water and less care.

Interior finishes include energy management systems that control lights, heating and air conditioning, maintaining more consistent temperatures, and more economical energy use. Its designs provide an increased sense of security in an environmentally sensitive setting that blends the land and buildings into a model that will set the standard for creative design. **P**



Internal Revenue Service



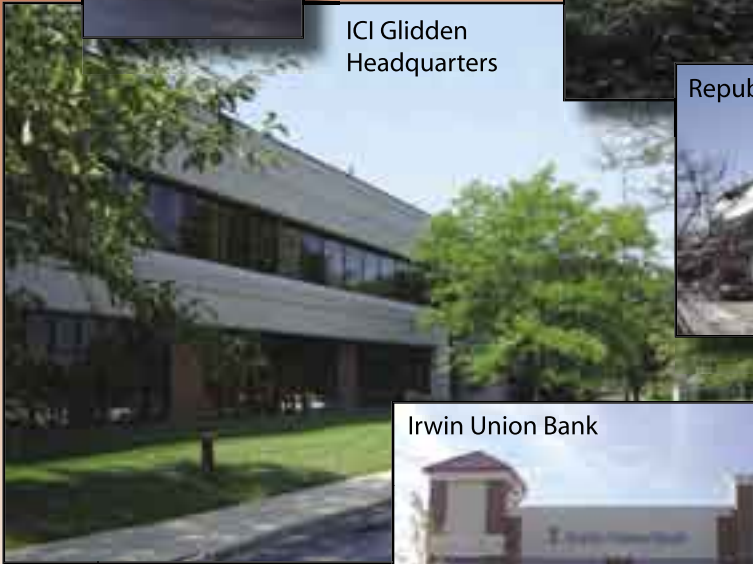
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Building on a Good Reputation

Geis Companies prides itself on history of solving clients' needs

"Our mission is to be the best design/builder and industrial developer in Northeast Ohio, including the management of quality properties," says Fred Geis, president of Geis Companies. "Our vision is to be the total service company which provides our 'full-cycle approach' to assure our client's success in building their future. Our company exemplifies a team of professionals whose belief in stringent quality control is above all other considerations. Giving personalized attention to our clients needs and goals, we deliver the highest quality product and service within firm pricing policies."

The Geis Companies was founded over 36 years ago by the late Erwin Geis and his wife Katy, who continues to help guide the organization today. Their two sons, Fred and Gregory, have continued their parents' legacy of providing personal attention to clients and combining hands-on knowledge with theoretical know-how. The family controlled company maintains a tradition of standing behind what they say and fulfilling promises.

The Geis Companies is a total service firm, offering fully improved industrial land, full building design and architectural services and "turn-key" construction. The firm's main concentration is on industrial, warehousing, office and research and development buildings through design/build expertise for the specific needs of its clientele. The firm works with an established group of subcontractors and suppliers, assuring stability and quality.

"People come to us to do the entire project package, from site selection to 'turn key,'" Geis says. "We are very project-oriented. The more complicated the



HOME BUILT Geis Companies, which employs 60 team members, is headquartered in Streetsboro.

project, the better design/build is for the project."

The 60-employee firm provides full-service architectural and engineering services, including civil, structural, mechanical and electrical. Though most of its projects are in Northeast Ohio, the company has gone where its clients have gone, including South Carolina, Florida, New York and Massachusetts. Geis averages about 30 projects a year, ranging

"We are proud of our reputation and that is what we sell to our clients every day. Our clients have a lot of faith in us based on our reputation."

Fred Geis
Geis Companies

in size from 7,500 to one million square feet. Most are within the range of 50,000 to 200,000 square feet. Buildings are routinely delivered in five months.

"Manufacturing and distribution buildings are the norm for us, what we do best," Geis explains. "We probably do more of these in Cleveland than anyone else."

Geis has developed 13 industrial parks in Greater Cleveland, including parks in Parma, Macedonia, Twinsburg, Streetsboro, Brunswick, Hudson, Brecksville, Massillon, Highland Heights,

Stow, Strongsville, Hudson and Oakwood Village. Completed projects include Swagelok, The Taylor Companies, Le Chaperon Rouge, Essex Office Building, Ferro Corporation, Sterilite, Royal Appliance, Pepsi Cola among many others.

With Cleveland's network of industrial real estate brokers, Geis works on referrals. When the brokers bring in a new deal, the company's sales team, consisting of Gregory Geis, Design Architect Greg Seifert

and Engineer Jeffrey Martin, meets with the client. This team works together to create a plan, from the initial design and pricing through to completion. The firm can also offer advice on financing the building and helps clients when they need to do a 1031 exchange.

"From the initial process there is a smooth transition," Geis says. "The client gives us needs and we solve these needs. We are proud of our reputation and that is what we sell to our clients every day. Our clients have a lot of faith in us based on our reputation."

The firm is also a leader in incorporating green building into their projects and has donated land and planted trees for nature conservancy. In addition to aiding nature, the firm encourages and supports its employees in charitable ventures. The firm has also established The Erwin and Katherine Geis Charitable Foundation to aid needy students in pursuit of higher education. It is no wonder that Fred Geis was named the 2005 "Streetsboro Citizen of the Year" by the Streetsboro Area Chamber of Commerce. Geis Companies has also been named the "2005 Developer of the Year" by the Stow-Monroe Chamber of Commerce as well as being named by the Cleveland Chapter of NAIOP as "Industrial Developer of the Year" for two years in a row. **P**

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Design/Build Firm Offers Diversity, Accessibility *Clients' needs are primary focus at Jr. Properties, Ltd.*

There's nothing "Junior" but the name in Jr. Properties. Rick M. Osborne, Jr., principal, has been involved in the construction field for ten years as vice president of OsAir.

With Jr. Properties, Osborne is focusing on smaller design/build projects.

"With OsAir we constructed our own buildings, but with Jr. we are working on design/build projects with outside clients," Osborne says. "We are different because of our experience [with OsAir] doing our own design/build for bigger clients like Parker Hannifin, Accurate Metal and Saw, SGM Orbis and WRG. We also have our own set of construction people who we've worked with through the years and the same sub-contractors."

Jr. Properties focuses on property management, new construction, historic



ONE ON ONE "We are small enough for personal attention and communication," says Rick Osborne, Jr., principal of Jr. Properties, which boasts a portfolio of numerous projects, including La-Z-Boy Furniture Gallery (below).

restoration and interior build-outs, in addition to design/build. The firm has four inside office personnel and four outside project managers and laborers. The firm also has an in-house architect, Angel Alvarez, who has worked with OsAir for seven years. He brings over

directly."

Osborne also brings a unique perspective to the construction business. He has undergraduate and graduate degrees in geology and has worked with RP Consultants' Environmental Division. His understanding of soil and bedrock aids in his construction work.

Jr. Properties' primary work area is in Northeast Ohio, as far south as Akron. Being located in Mentor (in the historic Matchworks building they own on Station Street), they have many projects in that community. They include a La-Z-Boy Furniture Gallery, Priscilla's boutique, Starbucks, Lake Catholic High School and several strip shopping centers. The firm's focus is on projects 100,000 square foot or less.

"Ideally, we would like to focus on more national accounts in the future and expanding out of Ohio. We offer a solid background, diversity and the ability to grow," says Osborne, adding, "I have two bosses: my wife, of course, and my father." **P**

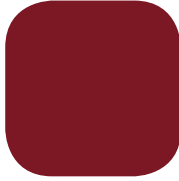
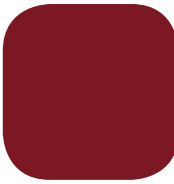
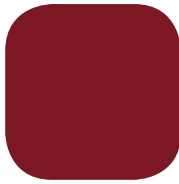
20 years of architectural experience to the firm.

"All the clients that I have, I've always had a good relationship with them, their design and their needs," Alvarez says. "We're there for them. We focus on the client's needs. Most of the clients come to us wanting efficient and economical buildings."

"We work as general manager to get the best prices for the client," Osborne adds. "We are small enough for personal attention and communication. I'm more hands-on ownership with responsiveness. I can be called



Photo by Bill Schuermann



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Relationships First

Teamwork is key at The Krill Co., Inc.

Since its inception in 1932, The Krill Co., Inc. has worked to position itself as preferred builder among elite clients in Northeast Ohio. Working outside of the traditional public market, Krill's "relationship-first" building approach towards construction has allowed the company to open the doors for greater opportunity.

Long before the coined terms of "design/build" or "construction management," The Krill Co., Inc. founders were modifying the general contractor approach by working as a team with owners, designers and subcontractors: a nontraditional approach in a traditional and established industry. The Krill Co., Inc. does not take responsibility for national industry changes towards construction management or design/build, but its approach has influenced its own success and strength in Northeast Ohio.

In the construction industry, owners need to realize that not all contractors can provide the knowledge base or resources to perform each of the three leading approaches to construction. A successful general contractor may not have the ability to provide true professional design/build or construction management services, even though many contractors cross the line as being an expert in every field. Shawn Dixon, president/CEO, has kept pace



PUT IN PERSPECTIVE Long before the term "design/build" became common, The Krill Co. was busy providing this sort of work for high profile clients, such as Sherwin Williams (above).

with the changing environment of the design/build approach while serving on the Associated General Contractors of America National Committee since '98.

Krill's combination of experience, industry-recognized construction management services, an estimating database, proactive scheduling and forecasting, and outsourcing to leading professional designers allows Krill to offer this unique method of delivery. Combined with Krill's success of construction management projects, which make up about 70% of the company's work, the design/build approach is a natural progression for a proactively involved contractor.

The conventional approach to design/build is outlined under one contract between the owner and design/build contractor, with the subcontractors, architect and consultants working as one team to accurately estimate, control costs, reduce the master and construction schedule, and effectively delineate and achieve the design criteria. With the needs and desires different to each owner, The Krill Co., Inc. assembles and creates a team best suited for the project requirements. Besides selecting consultants with the necessary background, Krill considers the subcontractors' history, size

and effective pricing structure, not to mention the need to foster team chemistry. Senior Vice Presidents and Partners David Fischback and Jeffrey Gliebe have led the company's efforts in design/build and construction management through their hands-on approach and shareholder interest in each project. The Krill Co., Inc. is proud of its unique ability in the industry to appoint a senior executive and shareholder to every project, providing today's owners a value that cannot be achieved elsewhere in the local industry.

High profile clients have entrusted the Krill Design Build team to manage their projects through the design/build process. Sherwin Williams, Progressive Insurance, Nestlé R&D Incorporated, Inc., Jennings Hall and the Cleveland Clinic Foundation have all experienced the Krill design/build approach – many as repeat clients on different projects.

The Krill Co., Inc. also works with modified versions of the design/build approach – properly termed within the office as "The Krill Way" – in which owners are provided a level of proactive personalized service unmatched by area competition. A true testament to Krill services and success is through the owner references which contribute to over half of its repeat business. The Krill Co., Inc. offers its client early involvement benefits that fix the design and cost at a much earlier time than conventional contracting methods, allowing a project to be brought to market earlier, which is ultimately more profitable and advantageous to the owner.

As professionally quoted by one of Cleveland's premier and well respected architects, "The Krill Co., Inc. has raised the bar on professional management services for area contractors."

The Krill Team welcomes owners, architects and design professional to experience the highest level of design/build and management services. **P**



TEAMING UP The Krill Co. is led by (from left) Vice President Doug Fischback, CFO Patricia Scheckel, President/CEO Shawn Dixon, and Senior Vice Presidents Jeffrey Gliebe and David Fischback.

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Project Profile: Liberty Harley-Davidson, North Dealership

Marous Brothers Construction

Located in Boston Heights is one example of a recent, successful design/build project in Northern Ohio: Liberty Harley-Davidson North. Recognized at the recent annual awards program for the Design/Build Institute of America's Ohio Valley chapter (see *Properties*, December 2005 for full coverage) with top awards in the DBIA's Best Project – Private Sector Building Under \$15 Million and Distinguished Design/Build categories, the facility anchors a proposed 16-acre retail development and gives motorcycle enthusiasts a uniquely designed new facility to view all the latest offerings from Harley-Davidson.

Designed by the inhouse architectural team at Marous Brothers Construction, this building is somewhat reminiscent of a 1950s diner with its clean, streamlined, chrome-accented architecture.

The building was designed to attract attention from the adjacent highways and to evoke the feeling of "being on the road on a Harley-Davidson," as described in Marous Brothers Construction's awards submission.

Details of the exterior of the building hint at certain components of a Harley-Davidson motorcycle. The front entrance and canopy resemble a motorcycle wheel and fender, while the front window casing takes the shape of the signature exhaust pipes. The "Liberty" name is imprinted on the metaphorical crankcase that cleverly contains two large skylights that illuminate the interior space. The facility contains a display showroom, retail area for Harley-Davidson-licensed accessories, apparel and gift items, as well as a state-of-the-art service and parts department.

Ernie and Rosemary Passeos opened their flagship Liberty Harley-Davidson location in 1987. As tier business pros-



ON A ROLL Marous Brothers Construction's work for Liberty Harley-Davidson in Boston Heights earned the firm two top prizes at the Design/Build Institute of America's Ohio Valley Chapter Awards.

pered with the continuing emergence of Harley Davidson as the icon of American Motorcycles and the world's most popular bike, they queried Harley at the corporate level because they wanted to open a second dealership to capture additional market share. Harley consented, and the owners soon discovered a highly visible and desirable site in Boston Township, with direct access from State Route 8 adjacent to and visible from the Ohio Turnpike. They were referred to Marous Brothers Construction, Inc., a design/builder with substantial automotive industry experience, and they engaged Marous Brothers Construction to help them analyze the suitability of their intended site.

Marous Brothers Construction, which was hired based upon its ability to provide vertically integrated architectural design, engineering and design/build construction services as well as guidance with respect to financing, recognized that the project was an ideal candidate

for using its design/build project delivery method. This decision was made since its project team would be assembled in conjunction with the continuation of design development and construction documents, maximizing the benefits of its methods for controlling cost, schedule and quality. Timely completion was especially important for this project, since the new dealership had to open just five months after the commencement of construction to capture the pre-Thanksgiving and Christmas retail season.

Since Marous Brothers construction provided vertically integrated in-house design and construction services and self-performed over 40% of the work with its own self-performing labor forces, it minimized the owner's risk as a single-source provider; it was also able to reduce its own risk because it was able to control budget, schedule and most importantly, the quality and craftsmanship of the project. **P**

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LOADING DOCKS: 24 ext, Load Levelers, Locks, Seals & Lights • PARKING: Free Surface
RAIL LINE: Yes • COLUMN SPACING 50'x40' • CONST MAT: Precast
SPRINKLER SYSTEM: ESFR • ZONED: Industrial

Building was built in 2004 and instantly became a landmark property on
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