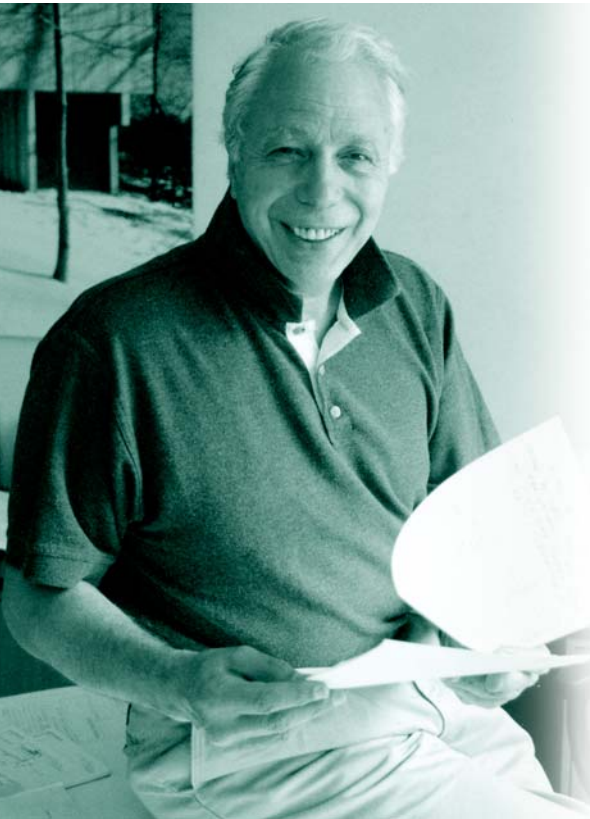


ON DESIGN-BUILD

Ciardullo

ROOTS What's interesting, having gone to engineering school and worked as an engineer, is the point of view I gained as an architect about design-build. Usually, design-build puts architects and professionals in what appears to be initially a bad position. The contractor has the contract. They say, "I didn't anticipate this," and push it back at you. It becomes a pushing thing. Architects have to learn to be pushed, and how to push back – gently if they want to do design-build.

John Ciardullo, RA, NCARB. Principal-in-Charge. John Ciardullo Associates. Architect. Engineer. Educator. Earned a Master of Architecture from Harvard and Civil Engineering degree from Bradley. His design-build work includes the largest public school construction project in the country – the Glen Oaks Campus in Queens, New York. A man for all seasons in the season of design-build.



SCHOOL I went to Bradley in Peoria, Illinois to study engineering. And then I went to Harvard to study architecture. I worked as an engineer while going to school. So I show up to get credit for structures, and they find out I'm an engineer and invite me to teach engineering. "Would you pay my tuition," I asked? They did.

TEACHING I meet my class. "Oh, you're the engineer," a guy says. I had my portfolio, which of course they wanted to see. "How did you learn how to draw," they asked? "I went to art school," I said! So, since I was the only guy in my class who could draw, I would teach drawing to them as well as engineering!

BUSINESS I started my own business in 1970. We have 47 people, multi-talented. A lot of our work is for the NYC School Construction Authority. We've completed over 100 new construction or capital improvement projects. We do everything, except for MEP design.

DESIGN-BUILD New York City wanted to build these schools fast. Contractors contacted us as well as other firms with a schematic. The school authority would release it, and it didn't have any real detail to it. So, the job was bid, and a contractor would win. But then what? No one would want to do it! Well, we did. They just didn't know how to approach it. But if you want to get jobs up fast, there's no substitute for design-build. The Glen Oaks project is going to be completed in a little over two years from initial design to occupancy. That's a \$206 million high school for teaching professionals, two elementary intermediate schools on 19 acres of the existing 32-acre site.

EARLY INVOLVEMENT All I did was give the contractor a foundation plan so they can get some firm numbers. And that's what I would do. We would start winning every one of these things. As it progressed, people started to understand. If you did the preliminary design, you can get better pricing. That's how we got into it. If you don't know what the final design will be, you fly blind. It can put the architect and professionals in a very precarious position – unless you have the ability to communicate. It's that pushing and being pushed thing I was referring to.

OWNERS The owner has to know what he wants and will accept in terms of quality on design-build. Because it's going so fast, the quality may go down, and you have to try to hold the line. To do that, you have to have an idea of what the owner really wants. When someone asks for your approval, you have no power like in a design-bid-build. The contractor hired you, and that makes it precarious. You have to know how to work together to assure the quality. It's tricky.

RELATIONSHIPS The key to design-build is the team approach. We have good relationships with our contractors. We are there to help them. When I first started, the contractors did some of the work themselves, but now? They are so busy running the job, they have no time for the work. So we do it. We become their "partners" and the job gets done. And we partner with everyone – the general down to the subs.

FABRICATORS Each steel fabricator has unique ideas. In design-build, you have a chance to deal directly with the specialty contractors like fabricators. You can get some real insight from them. They send us their details, and that's what's wonderful about design-build. The subs will come over and the next thing you know we're having a meeting that turns into something grand.

EXPERIENCE The design-build project has to be occupied at a certain time. Quality can suffer if not handled right, and right means with experience. The sequences... you have to control the sequences of construction. Somehow, it all gets done. Look for people with experience. I've learned that nothing substitutes for experience.

STEEL When it comes to design-build, steel works extremely well. What we try to do is get the structural framing resolved while the foundation is still in the works. The programs we have today, well, it's a lot easier (I used to do that by hand!). If you program right, in a weekend, you can have the design. Steel is flexible, and that makes it ideal for design-build. Steel is by far the fastest and best. You can come back and modify it. So it's been the mode of building for schools, and with the new requirements, steel is just beating concrete. When I talked to the contractor, they were comfortable with steel, and it was the most cost effective. The period of time was really short, too, and you had to get a system. Steel is that system.



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