



Architects Tell All

Rather than let pride have its place, some architects admit mistakes, learn from construction crews and, in so doing, build better structures. Meet the Collaborators.

By Mark L. Johnson



In the chronicles of building history, architects, general contractors and subcontractors will go down together as having built many gorgeous, functional and sturdy structures. They'll do it banging heads, of course. Disagreements over design intent, poor documentation and gnarly contract details are inevitable. But not all situations will end up being adversarial. Some architects welcome communication, flex in the field, accommodate construction crews and even rewrite

“We look for a little give-and-take,” says Paul Quast, AIA, LEED AP, senior associate at Hickok Cole Architects in Washington, D.C. “That’s not to say we want to be taken advantage of. Nor do we want to be so constrained and strict that we demand what’s unrealistic. We just think conversation helps.”

It’s about collaboration—having an open dialogue during construction. But what does that mean? For an answer, AWCI’s Construction Dimensions turned

to two Hickok Cole architects—Quast, mentioned earlier, has 20 years of experience in architecture, and John Murray, AIA, associate principal with the firm, has 37 years of experience. We asked about their firm’s collaborative effort.

Why?

AWCI: Why is collaboration so important to your firm?

JOHN MURRAY: It’s important at the very beginning of construction, when we first

meet the general contractor. We need to establish that we’re here to support each other. Contractors have a lot of information, and this helps us improve our designs and our documents. We realize that drawings are not always perfect.

PAUL QUAST: Of course, some architectural firms are inclined to dig in their heels. We try to come up with amicable resolutions that won’t compromise the design, but afford the ability for everyone to come out better. In a case where we see a better way than what the contractor is trying to achieve, we think collaboration can lead to a good end.

Do you invite GCs to collaborate with you before projects begin?

QUAST: You have to remember that any project will have a competitive contracting approach. Even though we can rec-

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“ You have to remember that any project will have a competitive contracting approach. Even though we can recommend a GC, we're still up the wind, so to speak, of who gets the lowest bid and who negotiates the contract with the owner. ”

ommend a GC, we're still up the wind, so to speak, of who gets the lowest bid and who negotiates the contract with the owner. So, I think pre-award meetings are the time to interview the GC's project team, with the owner, to understand how they function during the construction process. This sheds light on how amicable or adversarial the process will be and how happy everyone will end up being with each other's work. The last thing we want to do is end the project on a sour note with liens and animosity.

Is your collaborative effort new among architects?

QUAST: No, I'm sure there are many firms that approach it this way. But, I think as a firm we strive to not have prima-donnas in design or construction. We like to think we have personalities that are fairly easy to get along with.

MURRAY: We just believe that all of us—the architect, the GC and the subcontractors—have to respect the other parties and have an understanding of their contractual role with the owner of the project. Construction is one of those unusual conditions where we work together, but we have no contractual relationship with the contractors.

How? Exactly how is your office set up to collaborate on projects?

QUAST: We're an open office. We have open cubicles, and we usually place people of similar project types together in one

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area. We might have four people working on construction, and they feed off each other. They'll understand problems and solutions for different phases of projects and for different types of projects.

We also create a learning atmosphere. If someone comes to me and asks a two-minute question, I'll give a 10-minute response, rather than just say, "Here's the answer. Now go your merry way." So, we have a collaborative sharing of information, experiences and lessons learned.

Can you give an example?

QUAST: We just had a meeting today at lunch for an hour and a half on a project that finished the construction documents and started construction. We discussed the successes, the failures and where we could improve, such as how to better respond to the GC, reduce RFIs and

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reduce confusion. We're always looking for ways to improve the conversation.

Where?

So, your collaborative effort is more of an internal thing?

QUAST: There are many avenues for discussion. But, we think the process should occur not just in our office, but also outside the office in the construction trailer.

At jobsite meetings?

QUAST: Yes. In the general context of things, we as architects put out contract documents, which include drawings and specifications that convey our design intent. We're not experts in the field of construction, though we know many things about it, and we're learning every day. No two projects are the same. No two contractors are the same. The way to go about getting the design we spent so much time on built the way we want it is to listen, take information under advisement and apply it to our design. There's no way we can live in a vacuum and just shoot emails back and forth. We have to interact face to

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face. We have to go look at things in the field to come to resolutions that we might not have realized during our design and documentation.

And this, frankly, can be profitable for you?

MURRAY: Yes, I believe we are more profitable. The projects do end up better. As we move onto the next project, we benefit from what we've learned from the contractor.

I remember a project where we had a gypsum board partition, a light cove and a bulkhead. Aesthetically, we wanted a certain amount of space between the face of the light cove and the wall below it. In drafting the detail we tried very hard to make it constructible. But, the subcontractor had built more examples of that situation than we could imagine. So, in discussing how we wanted to see

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- John Murray



it and listening to their suggestions to make it easier to install, we worked out a better detail. It took a collaborative effort among people with greater experience at assembling parts to complete a nice, constructible detail.

With Whom?

Do you normally involve subcontractors in your collaborative process?

MURRAY: It varies. Our access to subcontractors is limited to what the general contractor allows. Many times, though,



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We spent four hours on the scaffold. In the end, one small portion done in situ allowed us to prepare better details. The sub was happy. They could work faster, more efficiently, cleaner and over multiple days instead of one long day.

- Paul Quast



the GC is happy to arrange such meetings. It makes their life easier.

So, why not meet more often with subs?

MURRAY: Contractually, the subcontractors need to come through the general contractor. If a sub contacts us, we notify the general contractor, so they can observe the discussion and we can listen to the sub's suggestions together. We usually can resolve any misunderstandings of how the sub interpreted our drawings. Sometimes, we revise the detail based on their input.

QUAST: During our design stage we have sometimes, on our own, contacted some subcontractors. Now, we can't say that subcontractor is going to do the work. But, they know the quality of the work we do. We know the quality of work they do, and we can assist each other in the

design concept during documentation. We'll ask questions like, "Can you give us an idea of where this might stage? Where will the crane go? What do we have to think about?" The sub will give us good advice. The information makes our drawings better.

So, the input of subcontractors is very important to you, and you accept their input.

MURRAY: Frequently, with office build-outs or office space planning, the locations of walls are marked out on the slab, and we'll walk that with the contractor and the drywall subcontractor. In a recent experience, we walked an existing building, and the subcontractor pointed out where things were located and how he adjusted things from the plan—or thought we should adjust things from the plan. We looked at the conditions. We looked at

the obstacles in the way of the partitions. We said, "Does it work if you move it to this position?" The subcontractor said, "Yes, that's a better location" and "If we make this little shift this way, it will avoid this other obstruction and the finish will be more uniform and not as cut up." It all worked out very well.

QUAST: We really want the GC to be part of the discussions. Suppose a sub is working on an exterior wall, and the studs are to receive a brick veneer. We agree to something off-line from the GC, and the sub agrees to build it that way. Then, the brick installer says, "Well, it's not in the drawings. Who agreed to that? Why wasn't I informed?" There are things that we might not have thought about in a conversation with the wall sub that could affect the brick sub, who's putting in his anchor ties connected to the studs.

Honestly?

Some subcontractors feel the quality of building documents is not as good as it once was. Do you agree?

MURRAY: It may be hard for us to speak for the whole industry, but I'll say that our documents have not diminished in quality. Occasionally, we're given documents from other architects, especially when something is already built or we come into a project. Quality can vary greatly firm to firm.

QUAST: In the past 40 or 50 years, the manner in which documents were issued and the type of documents issued has changed. We work on projects where we get the original set of documents from the mid 1960s, when they were all hand drawn with the intent being worked out in the field. You go back 60 to 80 years, and documents had every detail, every

dimension noted—as if the architect was the contractor. We're in a transitional phase now with documentation, which involves two-dimensional CAD drawings going to three dimensions. We're working with programs like Revit, which is a 3-D modeling program, and we're asking, "How much is enough information? How much do we need to put onto the

piece of paper they work off of to build? What is our liability, and is it OK to give the GC the 2D or 3D CAD file for their use?" So, we're at a point of flux.

One subcontractor said, "Architects shouldn't do drawings until they have two years' experience in a construction trade. It would solve so many prob-

“I'm still learning every time I go to the job site. Every contractor has a different method of approaching a construction situation or problem, and it's fascinating to see how others approach it. After every construction experience, the next set of drawings I help put together changes, hopefully, toward the better.”



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lems.” What’s your response?

MURRAY: I’d say there is truth in that statement. But in our office, young architects early in their career receive mentoring and training from more senior architects. I believe that someone just out of school should not do a set of drawings, at least without some type of supervision.

Even so, I’m still learning every time I go to the job site. Every contractor has a different method of approaching a construction situation or problem, and it’s fascinating to see how others approach it. After every construction experience, the next set of drawings I help put together changes, hopefully, toward the better.

QUAST: When I graduated from college, I tried to get a job in construction. A contractor said, “Do you have any construction experience or trade experience?” I said no, and he said I couldn’t get a job with him. I wanted to learn, but he wouldn’t hire me because there were other guys who had more experience and had the intent to make it their profession.

Suppose a wall sub is bidding a job, and the 05400 section spec says, “Drawings are schematic only—engineering to be provided by contractor of this section.” Do architects expect subs to hire engineers before they bid?

MURRAY: We do expect the 05400 assemblies to be engineered. And, the building structural engineer typically will not design the 05400—an engineered



Sometimes it takes a great deal of effort to make collaboration work. All parties need to want to participate, and it may take a while before the different parties realize it’s to their benefit.

metal stud wall—because it tends to be a specialist who understands wind loads, dead loads and other factors. But on our projects, most of the partitions are not of the engineered variety.

QUAST: It may raise the cost, but it will raise the cost for all the bidders. That’s understood.

MURRAY: But usually the Chapter 9 support partition doesn’t require an outside engineer. There are so many tables from the metal stud manufacturers for interior partitions about the spans and the height of the partitions versus the size of the

stud and the gauge of the metal. At this point, we usually select the thickness of the wall; the gauge is dependent on the vertical height.

QUAST: It comes back to, do they stamp the drawings or do we stamp the drawings? Most times there are performance criteria. If the sub can prove that a specific spacing and gauge meet our criteria for performance, and they engineer it that way by whatever manufacturer we allow, they may come up with a better scenario than we might.

What Now?

Give us another example of how your collaborative effort works in practice.

QUAST: Often, we allow a mockup to be done in situ. Recently, one project had a BASWaphon ceiling in a 40-foot-high lobby, and we requested a mockup. We were up on the scaffold one day looking at the cove and reveals, to find out where we could make our details better. The subcontractor said, “If we could do an edge trim here, we can get a better finish and produce more in a less time.” So, we discussed convenient locations where the sub could do a day’s work and



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have a clean edge at a joint that would almost disappear anyway. We looked at the sprinkler heads and the light fixtures. We spent four hours on the scaffold. In the end, one small portion done in situ allowed us to prepare better details. The sub was happy. They could work faster, more efficiently, cleaner and over multiple days instead of one long day.

How would you sum up the value of collaboration?

QUAST: When projects in construction are long, say two and half years, you don't want to dig in your heels on day one and say, "This is the way it's going to be." It lends itself to a contentious two and a half years. But, if the contractor and his subs try to understand the intent of our documents, they'll come back and give us information. If we understand what they're trying to achieve in assembling

the building, we can address our details better. As a result, even though we have contractual obligations, we can have flexibility and communication between all parties that works.

MURRAY: Sometimes it takes a great deal of effort to make collaboration work. All parties need to want to participate, and it may take a while before the different parties realize it's to their benefit. The

reality during construction is you see the contractor and the construction crew more often than you see your family, so you want a good family dynamic. There are fewer headaches, and the end-product is better. ●

Mark L. Johnson is an industry writer and marketing communications consultant. You can reach him on Twitter via @markjohnsoncomm.

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