

# Alternative Project Delivery - As Seen From The Quality Assurance Viewpoint

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There is great consensus in the California K-12 school design and construction community about how successful we have all been in building high-quality and safe schools for California's children and young adults. There is not, however, a consensus about the best way to contract for the delivery of school projects. As a result, schools are built in the traditional design-bid-build way and also use alternate project delivery methods such as Agency Construction Management, Design-Build, Lease-Leaseback, Construction Management Multiple-Prime, and Construction Management At-Risk.

Most of the law, code, regulation, and agency procedures written to govern California school design and construction anticipated a single general contractor overseen by a team of district employee and architect staff performing construction administration services. For projects using the alternate project delivery methods, the laws, codes, regulations, and procedures may not precisely fit all situations which arise. This has lead to discomfort and questions from inspectors, laboratories, and designers.

These codes, regulations and procedures, however, do give the team members the framework to handle the different project situations that may arise if team members, and particularly team leaders, give some extra attention to certain key points. Listed below are some suggestions from a forum convened among a good cross section of industry participants last Fall:

## **Multiple-Prime**

The additional multiple contracts held by the districts under the construction management multiple-prime delivery method means several different

types of change orders to the different contracts. Not every field condition requiring a change will result in changing every single prime contract, some extra preparation to ensure the whole team is ready for that level of separate tracking will pay off.

The multiple-prime construction manager must assign an experienced and knowledgeable superintendent who can coordinate competing priority inspection requests to the project inspector, specialty inspectors and testing labs. Without a strong ringmaster, requests may be handled first-come, first-served, to the detriment of the project.

Warranty protection for the district will be in the form of multiple-warranty documents, and coordinating calls on these may take some thought.

Construction Managers take pride in their ability to create contract scopes without overlaps which would waste district dollars, without gaps which result in work not planned or material not submitted, and ordered timely. It must be very clear to the labs and inspectors which firm will present what work for testing or call for plant fabrication inspection. Communicating scopes of work to the quality assurance team will pay off in response to testing and inspection needs. The protocol for requesting specialty inspections and laboratory tests must be doubly enforced on multiple-prime projects.

## **Design-Build**

A great advantage of design-build is the single point of responsibility for design and construction which eliminates a great change order risk for districts. Design-build has proven to deliver projects faster and at less cost than other methods. But some concerns arise; the

builder, in most cases, is paying the designer.

Under the traditional delivery methods, labs and inspectors felt that designers of record were available to help them when they questioned the quality of work on site. Unless the district and design-build leaders take some extra steps, the quality assurance team may feel they are alone with no one to call on when they believe safety or quality is at risk. A design-build strength is the ability to make design changes rapidly to save time and improve construction if they still meet the project criteria viewed as a plus. But the quality team may view this as the designers approving whatever the builders happen to build.

Discussing this changed contractual relationship with the entire builder and quality team can assure that the designers still have the code obligation to design to the code and to see that construction conforms to their design.

If the design-build team takes advantage of the foundation increment possibilities allowed by the Code and the Division of the State Architect (DSA), the approach should be reviewed with the geotechnical engineer, testing lab, and project inspector to make sure people are ready to support that early effort.

Designers have always worked on projects alongside district staff well before inspector and lab personnel were assigned, but now builders may have been on board and developed a good relationship with the district staff prior to the quality team being selected. As a result, the quality team may feel they are the "new guys," or odd man out. District leaders must give some extra effort to ensure they have an open door to concerns about building safety and quality.

### **Agency Construction Management**

Where contract personnel take on district roles as agency program managers, project managers, or construction managers, they are wearing the district's hat. District employees usually have the long-term view of the district's benefit while agency personnel may be suspected of favoring short-term interest of schedule and budget above the long-term view of quality and durability. Agency and district leaders must be sure guidelines and priorities are clear to the people acting on the district's behalf and communicate to the quality team that they are expected to raise their concerns at a high enough level to be heard.

Agency personnel aiding the district in hiring and managing contracts for design, testing, and inspection must manage their client's interest, but they need to not step over the line of taking on design responsibility. IR-A 24 gives examples of code responsibility that must remain with the designers of record.

### **Lease-Leaseback**

Some lease-leaseback contracts are often used where projects have extremely short schedules or where designs have too much scope for the budget now available.

If work is too tightly scheduled, say over a short summer modernization, with large crews putting lots of work in place daily, and with liberal use of weekend and overtime work, the testing and inspection staff needs to be planned to match that level of effort. Assistant inspectors may be needed. Extra and early notice for weekend testing should be planned.

If extensive value engineering ideas are to be incorporated into the work, even if the plans have already been stamped, the designers of record should review the field change documents they anticipate will document these cost savings ideas with the project inspector. An expedited approach to getting these documents approved by DSA may be necessary to avoid deviation notices.

### **Construction Management At-Risk**

When the construction manager gives a guaranteed price, he now stands in the shoes of the builder, and can no longer administer contracts for testing and inspection as he might have done when he served in the purely agency role. The district needs to ensure that inspectors and labs know they must openly raise quality, safety or field supervisory concerns, even if the people who adminis-

tered their contract previously are now the "builder" for the project.

### **All Methods**

The approved DSA Inspection and Testing Program which summarizes the requirements of the DSA approved plans and specifications must be followed regardless of delivery methods. Labs must be contracted directly to the districts. Project and specialty inspectors cannot be contracted through the builder.

Involving the project inspector early in plan review and decisions about the project protocols for requesting testing and specialty inspection is a good idea.

The common denominator for alternate delivery methods is bringing the skill, knowledge, and experience of the builder and trade community to work for the district's interest earlier than the traditional design-bid-build method allowed. If school project leaders exercise some thought and planning in using alternative delivery, the skill, knowledge, and experience of the testing and inspection community can continue to have the great benefits for school projects they have given in the past. ■

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