

Constructor Interviews

1. Participants:

- a. Bill Ernstrom, Vice President for Major Strategic Projects, Walsh Group. (312)563-5439, bernstrom@walshgroup.com
Walsh Group is a large national constructor/design-builder based in Chicago, IL. Walsh Group is comprised of the Walsh Construction Company and Archer Western. The Walsh Group is recognized as one of the top 15 largest contractors in the United States. Walsh has substantial transportation experience and is ranked by ENR as the 4th largest highway contractor in the United States. Though Walsh is not a local WA state contractor, they agreed to share DB perspectives as a national DB contractor.
- b. Max Kunej, President, Max J. Kunej Co. (509)535-0651; max@maxkunej.com
Max J. Kunej Co. is usually a prime contractor; however, they also occasionally perform work as a joint venture. The company built WSDOT's first design-build project and primarily performs projects dealing with structures and bridges. Max has been the Co-Chair of the AGC WSDOT Design-Build Committee. Examples of design-build projects include the SR532 to Camano Island Corridor Improvement Project, I-5 Skagit River Bridge Emergency Design-Build, I-84 Quarry Bridges Design-Build, and the SR 500/Thurston Way Design-Build.
- c. Bill Grady, KLB Construction. (425)355-7335; billg@klbconstruction.com
KLB Construction is a family owned earthwork contractor based in Washington doing work in Washington, Oregon, Arizona and Colorado. KLB has approximately 215 employees and has performed work on approximately 10 design-build projects in Washington and Oregon as a subcontractor performing grading work.
- d. Anthony Stordahl, Novito Construction. (206)372-1452; antstordahl@yahoo.com
Novito Construction is a certified DBE subcontractor that provides traffic control services and equipment. The company has worked on several design-build projects as a subcontractor, including the I-405 South Bellevue project, the Everett HOV lanes project, and the 1-405/Renton Stage 2 project.
- e. Jaime Lee, Lakeside Industries. jaimel@lakesideind.com.
Lakeside Industries is an asphalt paving subcontractor. In addition, they have been the prime contractor for smaller projects, including smaller design-build projects. They have also been a joint venture partner for a design-build project. Usually, they be on almost every project with asphalt from \$100,000 to \$10,000,000.
- f. Paul Mayo, Flatiron Corporation, (425) 508-7713; pmayo@flitironcorp.com
Flatiron is a large transportation and infrastructure contractor with an annual construction volume of over \$1 billion. They have four active design-build projects with WSDOT and have completed several others.

2. DB Procurement:

One respondent noted that their company has a team that specializes in design-build projects because design-build projects require people with a different mindset than design-bid-build projects.

Several respondents noted their belief that WSDOT is generally doing a good job in its procurement; however, there were some comments noting that it would be preferable to have standard practices among the varying WSDOT regions. The AGC/WSDOT Design-Build Committee received compliments in its work in helping WSDOT standardize its practices.

Several respondents noted issues with the cost of design-build procurements and voiced concerns regarding the strain on the company to respond to multiple major design-build procurements. One respondent appreciated WSDOT's attempt to make the process less expensive for the proposers in limiting the list of key personnel to three people because there is a cost to keeping those key personnel available during the procurement. Lowering the number of people that must be locked into a project is helpful. One respondent noted that they are hesitant in participating in design-build projects because the paperwork required for both the procurement and the project itself is far more extensive than what is required in design-bid-build.

The extent to which WSDOT issues prescriptive designs prior to the procurement has also been an issue. In some cases, WSDOT has taken the design to an advanced stage, which restricts the design-builder's ability to innovate. Several respondents would encourage WSDOT limit the number of prescriptive designs in the procurement and instead focus on performance based criteria to the greatest extent possible.

Several respondents noted the importance of limiting the number of shortlisted proposers to 3. The respondents noted that 3 is the preferred number of shortlisted finalists because these procurements tend to be expensive. Design-builders do not want to spend huge sums on the procurement when there is a smaller chance of their being successful. Linked to the number of shortlisted proposers is the stipend provided by the owner. Several respondents noted that the stipends provided by WSDOT were appropriate for the deliverables required; however, the respondents recognized that the stipends do not cover the actual costs of the procurement. One respondent noted the importance of knowing the amount of the stipend at the beginning of the procurement because the amount of the stipend is part of the design-builder's go/no go determination.

One respondent noted that the requirement that design-build teams have experience as prime contractors for smaller design-build projects inhibited the ability of smaller design-builders to be able to gain experience as a prime contractor. The suggestion was that for smaller projects, prime design-builders should receive credit for their work as subcontractors or joint venture partners on larger projects.

The alternative technical concept program as implemented by WSDOT has been working well.

The proprietary "one on one" meetings are working well. The owner gets a feel for the team that will be working on the project and a good understanding as to whether the team can work together. WSDOT's process was compared favorably by one respondent to King County's process, which was considered to have too many meetings. There were no concerns regarding confidentiality of the process. Indeed, the meetings allow design-builders and the owner to vet possible ATCs.

Shortlisting of finalists is not consistent between the WSDOT regions. With the same qualifications, a design-builder can be graded at the top or the bottom of the list. In addition, some regions appear to selectively use references to either promote or disqualify a proposer. One suggestion to alleviate this concern was to standardize the qualifications requirements and make the evaluation of the SOQ more objective and less “political”.

Although shortlisting to three is preferred, there are two design-builders who appear to always be in the shortlist, and the remainder of the field seem to be vying for only 1 spot on the shortlist. The system has evolved into 2 “prequalified” design-builders that by virtue of their prequalification, remain in that spot because they are more likely to get the project. The experience in design-build projects in WA is being collected in two proposers. One recommendation was to make a conscious decision on smaller projects to spread the award of the projects to other entities.

3. Design

One recurrent issue with respect to the design is the perception that WSDOT requires designs and shop drawings from design-build teams to be more extensive than designs in design-bid-build. The more extensive design requirement increases costs. In addition, the increased number of designs are counter-productive to one of the benefits of design-build, which is that the designer does not need to provide as complete of a design to the constructor because the designer and constructor are part of the same team, and the design-builder is ultimately responsible for the finished product. For example, in a WSDOT design-bid-build project, a designer can provide a design/shop drawing that may have application across multiple, similar situations. In a WSDOT design-build project, the designer is often required to produce a specific, separate design for each situation, regardless of the similar application. The respondent compared a design-bid-build project where 10 – 12 shop drawings sufficed with a similar design-build project that required 200.

Several people commented negatively on the extent to which designs in design-build are subject to multiple, and sometimes conflicting, revisions. This problem appears to stem from some confusion regarding prescriptive specifications that are WSDOT “preferences” rather than “requirements”. If the specification is a requirement rather than a preference, the procurement documents should be very clear. WSDOT needs better consistency with respect to how it interprets project requirements.

The amount of time for review is a source of criticism with respect to the alternative technical concept (“ATC”) process. When a design-build team proposes an ATC, the amount of time that WSDOT takes to approve the ATC can be lengthy. As the ATC is being considered, the design-build team must continue to progress the project under the previous design, resulting in sometimes significant inefficiencies if the ATC is accepted. This issue is connected to the extent to which WSDOT provides prescriptive designs. The ATC process generally is not necessary when the project requirements are performance, rather than prescriptive.

Management of the design is extremely important to the success of a design-build project. A successful collaborative design process will have a significant impact on the lack of re-design, which impacts the schedule and the ultimate cost of the project.

The consultants reviewing the design are paid by the hour, which equates to increased and unnecessary review of the plans and a negative incentive to productivity. In addition, by using

consultants rather than their own employees, WSDOT is not developing a good pool of people with design-build experience. The consultants are being utilized at a high (decision making) level in the organization, and these folks should really be WSDOT employees.

WSDOT should use different consultants for the review of the documents than the ones who developed the bridging documents because the bridging designer can become too entrenched in their own design to appreciate alternative designs.

4. Construction

The amount of paperwork that design-build teams need to move during the inspection process is "astronomical" compared to design-bid-build projects. The quality assurance requirements for design-build are far in excess of what is required of design-bid-build. By the time a design-build project gets to construction, the people in the field are not doing anything differently than what they would do in design-bid-build; however, the level of proof required by WSDOT for testing in a design-build project is significantly higher. When there are over the shoulder reviews during the design process, the paperwork during the construction and inspection process is dramatically reduced. One respondent noted that WSDOT tended to "gold plate" construction administration in design-build beyond what is necessary for any delivery method.

The number of change orders are significantly lower in design-build.

One problem noted was the lack of buy in from outside agencies. It is the constructor's obligation to handle these issues, and WSDOT does not always obtain the franchise agreement.

There have been issues with unforeseen conditions. Initially WSDOT was "hands off" on the topic, but it is now working better with clearer risk allocation. The additional risk on the design-build team associated with ATCs was noted.

The requirement for construction administration is not consistent between the regions, which affects the price of the project.

The use of consultant in this is also problematic because although the consultant is authorized to say "no", they have little authority to say "yes" to changes or innovative solutions.

5. Designer-Constructor Relationship

There is a higher interaction and coordination between the designer and constructor in design-build. It is quicker and easier to fix design problems in a design-build project because there is no argument that the design-build team is responsible for the design.

Several respondents commented on problems with the WSDOT designers engaging in a "turf war" with the design-build team designers. The specific project in question was the first project in that WSDOT regional office, and it highlighted for the respondent the importance of training in alternative delivery and selecting people with the right attitude for design-build projects.

One issue between the designer and the constructor is the perceived lack of schedule urgency on the part of the designer. Designers are not usually subject to strict deadlines, but a delay by the designer can have a profound impact on the project, both on the schedule and if not on the schedule, the potential financial impact on acceleration to meet the schedule.

One constructor noted that he looks for a designer who has a focus on designing for safety during the construction, which can have a significant positive impact on the project during the construction period.

6. Improvement

One of the most frequent suggestion to improve design-build is to involve the constructor as early as possible in the project. With early collaboration, the design-build team can provide a better design earlier and get the design right the first time rather than wasting time and resources pursuing designs that are inefficient to construct. The constructor can often provide local knowledge regarding means and methods, the most suitable equipment to be used for a specific region, and the availability of materials locally. In design-bid-build projects, WSDOT has previously used designers who are located out of state who don't have the local knowledge that the local constructors have. One respondent noted that it is a huge mistake to design a project without providing budget parameters or including the constructor who is tracking the overall price.

WSDOT personnel would benefit from training on design-build delivery, particularly in those regions where they have not had extensive experience. There should be a focus on increased consistency between WSDOT offices. One respondent noted that "you never know" how the offices will interpret project requirements.

WSDOT inspectors should understand that there is a difference between quality assurance and verification. The WSDOT inspectors should be verifying that quality assurance has been performed, not re-performing the design-builder's quality assurance.

Having a separate WSDOT office with people in it who are familiar with design-build would be a big improvement. Design-build requires a different mindset than design-bid-build. One respondent noted his opinion that it is difficult for one person to have both mindsets.

Co-location for bigger projects was noted by several people as beneficial, not just with communications but also reducing the need for unnecessary design work and speeding up the inspection process. The people in the room have first-hand knowledge of the decisions.

WSDOT needs to move away from being increasingly prescriptive in its procurements. Prescriptive requirements decrease innovation and increase risk on the agency. If WSDOT needs to be very prescriptive in a project, it should consider not using design-build as the delivery method.

WSDOT needs to determine some way to monitor/measure its success and make people accountable for failures.

WSDOT needs to do a better job of risk assessment and selection of delivery method. It needs to weigh the risks without the politics.

7. Most Important Factors for Success

Assuring that the lines of communication are open and the relationships are positive. Again, co-location of the owner and the design-build team was noted by numerous people as a helpful to the process. It is essential that the key people on the project are personally compatible.

A comment that was uniform among all respondents was the necessity to assign people to the project who are well trained in and oriented toward design-build delivery. This requirement is true not just of the design-build team but also of the agency. "It all comes down to the quality of the people on the project." "Let us give you what you want in a creative way that will save time and money." WSDOT should continue to interview people involved in the project to sort out those who are truly competent in the delivery method from those who simply pay it lip service. Good leadership skills are essential, and WSDOT does not seem to be cultivating that within the agency.

Prior to the procurement, the owner needs to look carefully at why it has selected design-build for the project. Design-build is not appropriate for every project. Appropriate project selection is essential to its success.

Designer Interviews

The designer interview participants were in part recommended our ACEC review panel representative. All have had experience with WSDOT DB.

1. Participants

- a. Jonathan Turcott, Principal SDA Engineers, (206)484-3245, jturcott@sdaengineers.com, SDA Engineers is a civil engineering, project management and planning company. Jonathan has been doing design-build since 2007.
- b. Richard Prust, Principal ARUP Engineers (310)578-2881, Richard.prust@arup.com, ARUP is a national engineering company that performs work in a wide range of projects, including infrastructure, vertical construction, and project management. Although Richard is currently located in the Los Angeles office, he spent 9 years in the Seattle office.
- c. Don Oates, Managing Principal KPFF Engineers (206)382-0600, don.oates@kpff.com KPFF is a national engineering firm that performs work in a wide range of projects, including civil, structural and specialty engineering on both transportation and vertical projects.
- d. Eric Crowe and Heather Weeks, Jacobs Engineers, (425)452-8000, Jacobs is an international engineering firm with experience in a wide variety of industries, including transportation, aerospace, mining, power and utilities, telecommunications, and water/wastewater.

2. Design-Build Procurement

WSDOT is conducting its procurements well.

The amount of the stipend and the willingness of the design-builder to pay the stipend to the engineer is extremely important and is a limiting factor in the ability of firms to propose on design-build projects. The cost of the stipend is always only a percentage of the overall cost of the procurement.

Uniformly, the respondents noted the importance in shortlisting to 3 finalists because of the huge investment that firms make in submitting proposals.

3. Design

There is a big difference at WSDOT between how the management of the design in design-build versus design-bid-build. WSDOT requires more extensive designs in design-build than in design-bid-build, and it is counter-productive to the benefits of design-build.

WSDOT has attempted to enforce design-bid-build specifications on design-build projects, which has not been successful. There is little value to WSDOT to the requirement to provide the extent of the deliverables that is currently required.

The project team is far more effective when the people at the agency executing the project are not the same people who developed the RFP because the people who developed the RFP become attached to the RFP and are not inclined to accept ATCs.

WSDOT's design tool and the manual that dictates on how designs are prepared is often in conflict with CADD and does not provide value in design-build. An example is that WSDOT asks for full deliverables for the entire project rather than deliverables by stages. A staged design process would be helpful in a long stretch of road. WSDOT is increasing its flexibility in this issue, but it remains an issue.

Design-build designs do not need to look like design-bid-build designs. WSDOT is not consistent in what it requires. The current manual is not written for design-build.

It is difficult when an owner that is used to design-bid-build wants to review more than what is needed so that its engineers can "put their mark" on the design. Reviews that come back with more stringent requirements than what is in the RFP increase costs. The review process needs to be carefully crafted for each project.

4. Construction

Working closely with the constructor during the design process dramatically decreases issues that arise during construction, and having the design team involved during the construction is a benefit and is helpful to resolve issue that arise during construction.

A well-defined construction administration process is essential. The parties need to understand and be very clear regarding the role of the engineer of record. The problem in design-build is that the design-builder often expects less involvement from the engineer of record than it should, and the owner expects more involvement.

5. Designer/Contractor Relationship

It is extremely important to select the design-build partner carefully. Some design-builders attempt to shift too much risk to the design team. Although larger firms can accept more risk, smaller engineering firms have difficulty with accepting more risk. In addition, some design-builders recognize the value of the engineer. A good engineer can save the design-builder significant sums of money.

The RFI process can become a conflict between the designer and the constructor. The parties need to be clear as to the extent to which the designer will be involved during construction. One respondent noted a lesson learned that he now draws a bright line regarding when his services are completed.

It is vital to put together a good team with good communications. Ultimately, it is the personalities of the people working on the project day to day that will set the tone of the project.

The standard of care is an important point of negotiation. Engineers should only provide the normal standard of care. Contractors are often trying to pass through a higher standard than what can be insured.

6. Recommendations for Improvement

One respondent noted that there is no legal recourse for engineers to be promptly paid for services as there is for subcontractors. This underlies a basic issue with the DB prime contractor treating its designer as another subcontractor and not as a key teaming partner. The prompt payment language in Washington should be clarified to include engineers. Some contractor led design-builders have attempted to enforce pay-if-paid policies in public projects for engineers.

WSDOT needs to be careful that its procurement process does not allow design-builders to buy projects with a low price.

The worst problem in design-build is when an owner has an overly stringent review process.

7. Biggest Factor for Success

A good teaming partner is essential to the success of the project. When a constructor treats an engineer like a design-bid-build subcontractor, it becomes extremely problematic, particularly when the constructor led design-build entity attempt to shift an unreasonable amount of risk to the engineer.

Having the right people on a project is essential. Not everyone is cut out for design-build. People who are not suited to design-build are a hindrance to the project. "If you have the right people on all sides and all are open minded and not attached to a specific design", then the project will be successful.

Co-location is a great benefit, provided that the right people are involved on the project. Design-build works best when the barriers preventing communication are down.

Providing enough flexibility to allow the design-build team to be innovative is important.

The primary benefit for design-build is the expertise and the innovation that the constructor can bring. When the owner is clear as to what is important in the procurement, the owner can get the best solutions. When an owner provides a full design, then it loses the benefits and might as well select based solely on price. The question becomes how far is too far? The owner needs to provide just enough design for proposers to get the parameters of the project and only specify what it important.