"Improving your Alternative Delivery Project from Cradle to Grave", *Renee L. Hoekstra, CVS, President, RH & Associates, Inc., 6677 W. Thunderbird Road, Suite K183, Glendale, AZ 85306, (623) 266-3943 (800) 480-1401*

Alternative Delivery Projects including Design/Build (D/B), Construction Manager at Risk (CMR) and Construction Manager/General Contractor (CM/GC), have provided some unique opportunities and challenges for organizations now embracing these methodologies. These new delivery methods require new approaches and changing existing approaches, often entrenched in our organizations. We cannot just try and make these methodologies fit into the standard delivery method of design/bid/build.

This presentation/paper is geared towards helping the Transportation Department, consultant and contractor to better excel with these methodologies. RH & Associates, Inc. (RHA) has been working with these various methodologies over the past four years in several process approaches including scoping, value engineering and partnering. All of these process approaches should be embraced on every project to ensure overall program, project and team success. The basis for this presentation is RHA's past and current experiences and is geared to help others learn from the many successes and challenges that have been encountered. Why reinvent the wheel!

So let's talk about your internal agency before we even get to the project itself. Does your organization embrace these other delivery methods and if so, have you made a conscious effort to educate and train your staff on working differently? These are very important questions that need to be answered. You cannot expect to throw your staff into a new methodology and not give them the tools to do the job. This will only lead to project and team failure as well as extreme frustration with whatever methodology they are working with. One important reason is that these are good delivery methods that lead to real success, however, if we don't nurture them by the way they are managed, these methodologies will quickly be removed from our contracting repertoire.

Internal (Agency) Staff Understanding Their Roles and Responsibilities

So often agency staff members are so tied to "the way we always do things", that it is very difficult to get them to understand that their roles in Alternative Delivery are very different. Their role is no longer one of just sitting back and waiting to criticize and instill their project preferences, but to be a part of the problem solving and issue resolution process throughout the project. Being engaged and an active participant in the project at hand is critical to the project and team's success. In Design/Build the Agency must remember that they must take a leadership role, not sit back and wait to see what the D/B team is going to provide. The same is true with CMR and CM/GC especially since the Agency manages both the design and construction contracts. The owner, regardless of the delivery method, must understand they are now a part of this important delivery team and they must actively provide ideas, question approaches, give

input throughout the design process and not just at the designated design delivery packages, i.e. 30%, 60%, etc.

Designer Understanding Their Roles and Responsibilities

Just like the agency, the consultant world must also learn that their roles change significantly during the use of Alternative Delivery Methods. Much has changed in this arena in several states and the consultants that have embraced the changes and modified their approaches and have truly become part of the team, are seeing great successes. Those that are still working under the old adage that "we're professionals and we don't work for contractors" are still struggling to see the true benefits of these delivery types. Now mind you, their role truly changes from a D/B to a CMR type of delivery method. There have been numerous times when designers have either stated or thought "no contractor is going to tell me how to do my job". This is absolutely the wrong behavior. The benefit of many of the alternative delivery methods is that we actually get to design what we are going to build. We learn from our contractor partners about means and methods and how they actually construct things. What a valuable tool for the project and for the consultants to learn.

Contractor Understanding Their Roles and Responsibilities

Many contractors have been working in the Alternative Delivery arena for many years in the private sector. However, they are beginning to see that there are still significant differences between these methodologies in the public sector. Public procurement laws and regulations still limit the projects in some ways. There is a need for contractors to realize that their roles and responsibilities truly change depending on the contracting method being used by the agency. They must learn to take a stronger role, which sometimes is not one that is comfortable to them, at least during the design phase. Those contractors that have embraced their roles are, like the consultants, seeing some great success. Other challenges that have to be overcome are for contractors to be able to manage and control complete project budgets and schedules starting with the design phase. They need to be assertive in providing information regarding decisions being made that negatively impact budgets, realizing that they are responsible for helping to keep the project on track, meaning, within budget and on time. This is a new and very uncomfortable role. One other area where there have been challenges is that many contractors know how to bid projects based on plans and specifications, but they do not know how to accurately provide conceptual cost estimating. A very critical part of the project development process for Alternative Delivery.

Improving Project Success

So let's move on to how to structure your project from beginning to end to help reduce and potentially alleviate some of the frustrations that have occurred on your projects. Remember, the information that is being provided here is based on experience and is not theoretical. Basically,

"been there, done that", so you might as well have an opportunity to learn from these experiences, unless you truly want to experience them yourself. If so, you can skip to the end.

I had briefly mentioned the three elements that will be addressed; Scoping, Value Engineering and Partnering. All have a part to play in successful project delivery with very different approaches.

PROJECT SCOPING

Alternative Delivery Method projects can often prove to be very challenging because of the newness of the process to many if not all stakeholders involved. This includes owners, designers, construction managers and contractors. Over the past four years, RH & Associates has had the opportunity to work with several agencies in multiple States, consultants and contractors helping them to better understand the various methodologies, to minimize or avoid some of the challenges that can often arise. This has been accomplished by holding a scoping meeting at the beginning of the project.

This workshop should be held as soon as all of the players are on board, as this is a team approach. The purpose of the workshop is to help open up critical lines of communication by understanding many of the process elements that can be frustrating since the Alternative Delivery Methods are very different from the normal design/bid/build process. RH & Associates has developed a program to address all of these issues. At a minimum, the following elements are discussed:

- **Delivery Method Process Expectations** – the purpose of this element is to ensure that team members discuss what they believe or expect the outcomes might be from using this type of process. Often, individuals or firms/agencies have expectations that are either not discussed or are not realistic. This is an opportunity to reduce any frustration that might occur later in the project due to the fact that these expectations were not expressed at the beginning of the project.
- **Elements of Communication** – it is important that all elements of communication are discussed, including the importance of on-going and consistent communication. The team should develop an overall team communication plan, identifying the main points of contact for all organizations. Another key part of communication is knowing who to talk to based on the issue or the need. Roles and responsibilities of the organizations and possibly the key team members are important to discuss. There have been many frustrations over the past several years of organizations not being sure of what their roles and responsibilities might be or expectations that may be tied to those roles and responsibilities as it relates to Alternative Delivery. This is a critical part of the Scoping Process.
- **Project Goals** – in order for team members to be able to focus on what is important, the overall project goals/objectives must be discussed so that all team members are going in

the same direction. Normally at this stage, both the overall goals and specific design goals might be discussed, leaving the construction goals to be established during the Partnering session. At times, it may even be important to take this one step further and develop specific action plans for each goal. This helps the team members to have a stronger alignment with ensuring that the project and the team will succeed.

- **Issue Resolution** – this is important to identify early on to ensure that the team and the project can continue moving forward in a positive manner. There will be times when there are disagreements between the various players and a process on how to work through the issues is important. The real challenge is also that we need to be responsive to one another, we have to provide information in specific ways, and we need to be flexible. So what happens when team members, during design, are not working this way? Thus, the need to develop an issue resolution plan. This is very different than a conflict management plan for construction, so it is important that the team establish the rules by which the plan will be used. There cannot be a standard set of rules, it is critical the team develop them during the workshop. This ensures a comfort level for all team members that escalation can and will happen as needed, without anyone taking issues personally.
- **General Administration Project Elements** – this portion of the workshop goes hand in hand with the roles and responsibilities section of the program. This provides an opportunity to get the team to discuss and agree on elements within the Alternative Delivery process that can sometimes be a challenge if agreements or approaches are not made early in the process. These include the following:
    - *Design Reviews/Meetings/Reconciliation* – this gives the team the opportunity to discuss the process on when design reviews will occur (i.e. 30%, 60%, 90% and 100%), what is expected with those submittals, who is the reviewing team and identify the process for review and who is involved. There should also be a discussion on informal and/or over the shoulder types of reviews. Also, once reviews have been completed, how will comment reconciliation occur.
        - Expectations of the contractor's involvement during the design process with reviews, i.e. constructability is also very important.
    - *Value Engineering* – is there a need to do a formal value engineering workshop and how will value engineering be addressed during the design phase and then how will value engineering be addressed once the project is in construction. This is a very important element for the team to come to an agreement at the beginning stages of the project. If not, this can lead to some misunderstandings and disagreements at a later stage in the project.
    - *Project Meetings* – what types of meetings will be needed, the occurrence of the meetings and who will need to attend. This is very important during the use of CM/GC and/or CMR as the meetings required during the design phase are often increase twofold. The owner and consultant must have accounted for this in their budget.

- **Budget Management** – it is important to understand who will be in charge of the budgeting/cost estimating/control portions of the project. Also, will there be a need for a third party cost estimate where reconciliation may be needed. This is where many misunderstandings can occur and a strong understanding of approach is needed (i.e. the process for design changes and communicating how those changes impact the budget). This is to ensure that all team members know how the changes impact the overall budget. A discussion may also need to include line items such as contingencies and allowances to ensure the definition and use are agreed upon.
- **Schedule Management** – similar to budget management, the process of establishing and updating the schedule as well as communicating changes must be developed together as a team. Included in the schedule discussion should be a good understanding of early construction element approaches, early procurement needs, and escalation of materials. This might help to identify varying design/construction packages. For CMR and CM/GC it is very important to discuss and understand multiple GMPS related to impacts to schedules.
- **Risk Analysis** – this is one area where the team should spend some time at the beginning and then at various stages of the project. It is recommended that a preliminary discussion occur about how the team will identify, track and mitigate or manage risk throughout the project. A separate 1-day workshop could even be allocated to the team to develop a Risk Analysis Plan and then identify the various stages that the plan should be reviewed and updated. As projects progress, risks can be eliminated, mitigated and others might be identified, so doing an analysis just once is not the best approach.
- **Follow-up and Maintenance** - the final element to discuss would include follow-up meetings with the team which could occur throughout design or at a minimum should occur once construction starts in the form of a Partnering meeting to include all stakeholders, including subcontractors and potentially operations, maintenance and management staff as needed.

VALUE ENGINEERING

This has truly been a struggle with teams on alternative delivery projects. When the question is asked about “are you doing value engineering”, the answer is “why of course, that is what alternative delivery affords us automatically”. You can understand the frustration, as this is not a completely true statement. In many of the alternative delivery projects that I have worked on, the term value engineering only comes up when all of a sudden we realize the project is over budget, so we’re cost cutting, not adding value. Many would say that this would be described as “de-value engineering”.

Alternative delivery projects should still focus on a formal approach to ensure that all project items can be considered and discussed and that the focus of “adding value” becomes the norm

not the exception to the rule. There are a couple of ways that this can be done as expressed below:

- **Design/Build** – a formal workshop can be held with the owner and the preliminary design engineer or an independent team prior to the RFP being released. However, this approach does not gain the knowledge and opportunities that the contractor will bring to the table. Understanding that the D/B team will bring opportunities and ideas through the RFP package as part of the price package. Once the D/B team is hired, wouldn't it make sense to get the team together, including the owner and their representatives to do a formal VE meeting to discuss the ideas and opportunities brought to the table by the D/B team, but also to discuss other opportunities and ideas as an entire team. This could lead to some other VE opportunities that should be documented and brought forward to help the project and show the continued benefits of the D/B process. The only caution here would be that this needs to be addressed in the RFP package as to how, if any, the VE cost savings, if any, should be shared or included in the final contract. If this is done prior to the final contract, it could be part of the negotiation period. Just food for thought.
- **CM at Risk or CM/GC** – since both the contractor's and designer's contracts are held by the owner, why wouldn't we bring the two factions together and hold a formal VE workshop to gain the insight and experience of the construction team. This is best done when the contractor is first brought into the project. However, if the CMR firm is hired at the same time as the designer, a formal VE session should be added to the overall schedule to allow team members to take a couple of steps back and look at the entire project in a more holistic manner versus piece meal. This will help ensure that everyone is focusing on other opportunities, not just reducing costs. The great thing with this process is that the entire team is already familiar with the project so much of the Information Phase is reduced. The team may also be able to reduce or eliminate the time to do complete write-ups of the ideas. However, it is important to note that the ideas need to be documented, costed and then determined whether they should be accepted in sort of documentation. They would then be turned over to the design team to add into the project scope. What is key here, is that the ideas and opportunities are documented. This helps to identify the positive aspects of the CMR and/or GM/GC process that would not have been possible in a design/bid/build scenario.

Value engineering should not be taken lightly when using alternative delivery methods. Do we inherently benefit from these contracting methods without a formal process, the answer is yes, but we are still missing the mark and not taking advantage of the total possibilities that are afforded to us as a team. Additionally, there may be some non-quantifiable or qualitative value benefits that can also be identified and captured that is truly a benefit to the agency. This might include reduced impact to the traveling public, reduced impact to the environment, added sustainability, program improvements, schedule improvements, advanced construction items, plan validation and/or functional improvements, etc.

PARTNERING

Partnering has, for quite some years, continued to be a valuable tool in construction projects. However, many believe that because we are using alternative delivery, Partnering is not necessary. Don't fall into this trap. The process is still very valuable, but the approach much change. The approach must be a phased approach; one for the design phase and one for the construction phase. Now, if the team has used Scoping, this might take care of the design partnering, it all depends on the focus. Once construction is about to start, the team with all of the new construction team members should convene for a formal partnering session. The time needed for a workshop is greatly reduced because we have already been working together and we just need to bring the new players on board and get them up to speed with how the team wants to continue working together on the project. This will now include, establishing the construction related project goals and the formal conflict management plan.

Partnering is a great tool to help manage the team's relationship. We have so many tools and project controls for the actual construction aspects of the project, but we are often missing the tools to help us manage one of the most important elements of the project, THE TEAM. I mention this because after facilitating more than 700 teams in the past 17 years, it has been proven over and over again, that a good working relationship makes it easier for the team to focus on resolving issues and solving problems and not looking for who to blame.

Conclusion

If a project team really wants to focus on successful project delivery, all three of these process tools should be applied to your alternative delivery projects. Regardless of the size of a project, these should be considered. The difference is that depending on the size and complexity, this will and should dictate the level of effort in each of the areas. These process approaches focus on a more pro-active approach to "problem avoidance", not by ignoring them, but by discussing and planning for those things that often cause us the most difficulty, including managing our team. In order for these processes to be successful, you must schedule them into your projects and ensure that adequate budgets have been provided, which in the overall scheme of things and the overall project budget, are a pretty minor cost.

Those projects where some if not all of these processes have been used, have seen great success in both projects and teams. All of the teams develop great working relationships and look forward to working together in the future on other projects. I would say this is a true definition of project success.