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Beware of Value Engineering Look-Alikes

The following material is provided for informational purposes only. Before taking any action that could have legal or other important consequences, speak with a qualified professional who can provide guidance that considers your own unique circumstances.

Many project owners have turned to value engineering (VE) as an effective method to minimize waste and cost and to maximize efficiency and profitability on new construction projects. Performed correctly, VE has proven to be advantageous for all parties involved and presents income opportunities for design firms who become certified value engineers. Performed incorrectly, however, VE presents the potential for added costs and liabilities to the design firm of record.

The opportunity for added costs and liabilities increase when uncertified individuals attempt to apply the value-engineering concept on an informal or unscheduled basis. Demands for redesign typically occur late in the design process, often without additional compensation for the design firm of record. Worse, changes can be made to the original design during the construction phase, often without the designer being notified.

Formal Value Engineering

Value engineering refers to detailed, systematic procedures implemented to achieve optimum value from a construction project. The goal is to eliminate design and construction features that add cost but do not add to a project's quality, life, utility or appearance.

Certified value engineers analyze design concepts, specifications, construction techniques, materials, building systems, building types, and up-front versus life-cycle costs to arrive at the best overall value. Often, the value engineer works closely with the architect or engineer of record; in fact, many value engineers prefer to include the designers on the evaluation team.

Formal or "scheduled" VE is planned at the onset of the project as an integral part of the design process. Ideally, a value engineering team includes the value engineer, key representatives of the owner, the prime design professional, the contractor, the construction manager (if any) and the project's professional cost estimator (if any).

Through formal meetings, the group identifies potential savings, large or small. The owner and the prime design professional evaluate these findings and discuss the impact of the group's recommendations on the

project. Key to the cost-effectiveness of this approach is that the owner's decisions are implemented by the prime design professional during the initial design development phase, thereby eliminating the need to go back and revise schematic design documents. Carried out in this manner, VE can be an enormous benefit to both the owner and the design professionals as a way of verifying the planning, design and financial wisdom of their decisions.

VE Look-Alikes

Value engineering is sometimes used to describe a very different process, usually marketed to project owners as a cost-cutting tool. "Informal" value engineering is typically performed by design professionals, general contractors, construction managers, cost estimators or others who are not certified VEs. The cost consultant provides advice to the owner and the prime design professional during each phase of the project. There is usually no formal, pre-scheduled value engineering process.

Worse case, this informal process can deteriorate into what amounts to unscheduled second-guessing of the original designer by the contractor, construction manager or other consultants hired to cut up-front costs with little concern for long-term value. In fact, some of these so-called VE firms base their compensation on how much money they save. This sort of value engineering can quickly undermine the designer of record and reduce the quality and safety of the project.

Too often, this type of unscheduled VE excludes or severely limits the involvement of key team members. Typically, the VE firm unilaterally makes cost-cutting recommendations to the owner. The owner then decides what changes to make in the project scope, building systems or materials, and directs the design professional to revise the design concepts and previously prepared documents accordingly.

There are several issues to consider here. Introducing value engineering late in the course of the project — particularly during or after the construction documents phase — is risky and expensive. You and

your project team will face a whole new set of problems and potential liabilities.

Late VE can disrupt the design and construction drawing preparation process. It may mean rethinking fundamental decisions, subsequent redesign and reproduction of construction documents to reflect the changes. All this will require additional time that will impact schedules and budgets. The introduction of new players late in the design process usually introduces new agendas, sometimes undisclosed, with perhaps a different set of values. The result can mean reduced quality, increased life-cycle costs, or threatened project safety — all resulting in increased liabilities.

Certainly, in an adversarial process, there is a much greater likelihood of conflict and claims. There is also a greater potential for errors in revising the construction documents after bids have been received because of the tight time constraints under which such revisions typically need to be made. Changes made in haste may not allow for proper coordination and checking. There is often significant pressure to accept a lesser level of quality or inferior products or building systems — although these cheaper alternatives may significantly increase the costs of operation and maintenance over the life of the project.

Protect Yourself from VE Drawbacks

Clearly, for the designer of record, value engineering raises many questions and concerns:

- If your design is evaluated, what is the extent of your responsibility to modify it?
- Are you expected to perform substantial redesign work with no additional compensation?
- Do you have the right to disagree with the value engineer's recommendations?
- Do you have a responsibility to make changes that you believe are inappropriate?
- What happens if the changes affect the permits or licenses obtained for the original design?
- What if a lawsuit results from the redesign changes — are you liable?

In any project where VE is contemplated, certified specialists should direct VE. Furthermore, compensation for value engineers should never be based on savings carved out of the original design. Such an arrangement creates a clear conflict of interest.

Contractual Protection

If you are the design professional of record and you know or believe value engineering will be performed on your project, anticipate it in your contract. Develop a clear understanding with your client as to the extent of your obligations to redesign in order to accommodate any decisions based on the value engineering. Your contract should include a clause to limit responsibility for redesign and to give you the ability to object to the recommendations of the value engineer. In addition, make certain any redesign you provide will be performed as an additional service and compensated for accordingly.

Here is a sample clause found in the latest edition of *DPIC's Contract Guide*:

VALUE ENGINEERING

If the Client retains the services of a Value Engineer (VE) to review the Construction Documents prepared by the Consultant, it shall be at the Client's sole expense and shall be performed in a timely manner so as not to delay the orderly progress of the Consultant's services. The Client shall promptly notify the Consultant of the identity of the VE and shall define the VE's scope of services and responsibilities for the Consultant. All recommendations of the VE shall be given to the Consultant for review, and adequate time will be provided to the Consultant to respond to these recommendations.

If the Consultant objects to any recommendations made by the VE, it shall so state in writing to the Client, along with the reasons for objecting. If the Client requires the incorporation of changes in the Construction Documents to which the Consultant has objected, the Client agrees, to the fullest extent permitted by law, to waive all claims against the Consultant and to indemnify and hold

harmless the Consultant from any damages, liabilities or costs, including reasonable attorneys' fees and costs of defense, which arise in connection with or as a result of the incorporation of such changes required by the Client.

In addition, the Consultant shall be compensated for services necessary to incorporate recommended value engineering changes into reports, drawings, specifications, bids or other documents. The Consultant shall be compensated as Additional Service for all time spent to prepare for, review and respond to the recommendations of the VE. The Consultant's time for performance of its services shall be equitably adjusted.

Of course, if you feel there is a threat to public health and safety if certain recommendations are implemented, document your refusal to make such changes and follow up with both the VE and your client to try to reach a resolution. If your concerns are not allayed, walk away from the project. In addition, you may have a duty to notify appropriate building safety agencies in accordance with your obligations under your license.

Conclusion

During the design process, you engage in your own form of value engineering each and every day. You've made thousands of cost-benefit decisions based on your knowledge and experience. The quality of these decisions largely depends on your understanding of the owner's expectations, desires and requirements. Frequent, open and clear communication allows you to consider alternative solutions, propose choices for the owner, try different approaches and deliver creative and cost-effective design solutions.

If an owner proposes value engineering as a cost-control measure, point out that while scheduled VE can add value, it doesn't always translate into savings. In the first place, the process adds additional design development fees with no guarantee of reduced construction costs. The owner's net savings amount to the cost savings discovered, minus the cost of the formal VE process.

Also point out that the cost of VE will include additional fees for revising any previously completed design and construction documents as well as the additional cost to coordinate changes that may need to be made to other documents. If the owner proceeds with hiring an outside value engineer, include contract language similar to the example provided here to ensure adequate compensation and to limit the added liability exposures.

Can We Be of Assistance?

We may be able to help you by providing referrals to consultants, and by providing guidance relative to insurance issues, and even to certain preventives, from construction observation through the development and application of sound human resources management policies and procedures. Please call on us for assistance. We're a member of the Professional Liability Agents Network (PLAN). We're here to help.