



The American Society of Plumbing Engineers Philadelphia Chapter

Value Engineering and its Repercussions

In days of old, when knights were bold and wore suits of shining armor, architects and engineers were held in high esteem. But alas, a dark cloud came over the land and the suits of shining armor tarnished and architects and engineer fell from grace.

It was during this dark period that construction management firms arose from the depths of obscurity. Also during this dark period, contractors created a new term, “value engineering”. Yes, value engineering has elevated the contractor’s credibility and has offered him a platform to criticize the contract documents.

Yes, criticize may sound like a harsh word, but that is exactly what the construction management people and the contractors do when they recommend “value engineering”. And what makes this “value engineering” more ironic is that it usually takes place during the bidding process affording each bidding team alternative advantages among themselves with *little regard* toward the *quality* of the project.

Unfortunately, these alternatives are presented to the owner/client in the individual bid packages. Many times the owner/client is not aware of the *devaluation* of the *quality* of the project. The objective of the bid team is to show the owner/client how much money can be saved. This basically shows a *lack of respect* for the design team that designed the project and prepared the documents.

The architects and the engineers are now placed on the defense and they must justify their design should they disagree with the value engineering presented. Should they agree with any of the value engineered items their credibility is now compromised. They must now explain why they did not incorporate these items in their original design package.

Today, the bidding market is very competitive and every bid team is trying to drive their price lower than the next team’s bid. The problem is that in almost every instance a feeling of animosity is created. This now places the bid team and the design professionals in an adversarial position.

There is a solution to this problem and it would create a level playing field and also create a better relationship between the bid team and the design

professionals. Once we accomplish this we would re-establish our credibility with the owner/client.

The solution is rather simple. As the bidding parties review the documents while they prepare their final pricing, they would contact the professional design team and discuss the so-called value engineered items. Should these items be rejected, *that should be that – end of discussing*. But, should the proposed items be agreed upon and approved, the design team can issue an addendum to the project documents.

Any item not discussed and approved prior to the filing of the bid *shall not be approved* after the bids have been submitted. Implementing this procedure will create a more harmonious relationship between all parties and provide the owner/client with a better quality project.

The opinions stated above reflect situations I have witnessed during my 52 years in the heating, ventilation, air conditioning and plumbing industry.

Joseph M. Smaul, P.E., NSPE
Vice President, Education Chairman
Philadelphia Chapter of ASPE