



Subject Bid Analysis and Unbalanced Bids

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From Associate Administrator for
Engineering and Program Development

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To Regional Federal Highway Administrators
Direct Federal Program Administrator

As a result of a recent Office of Inspector General field audit in Region 6, we have been requested to issue additional guidance on the subject of bid analysis and unbalanced bidding. We offer the following for your information and use in administering the Federal-aid highway program.

Policy:

The FHWA policy on analysis of contract bids is found in FHPM 6-4-1-6, paragraph 11.c. It requires the evaluation of the unit bid prices for reasonable conformance with the engineer's estimate. Bids with extreme variations from the engineer's estimate, or where obvious unbalancing of unit prices has occurred, should be thoroughly evaluated by the State highway agency (SHA) and FHWA. If the award of the contract would result in an advantage to the contractor with a corresponding disadvantage to the SHA and FHWA or if the competitive bidding process is jeopardized, then appropriate steps must be taken by the SHA or Division Administrator to protect the public interest.

Accuracy of Estimated Quantities:

When items are bid unusually high or low in relationship to the engineer's estimate, the accuracy of the estimated quantities should be checked. If, after examination, the estimated quantities are determined to be a reasonably accurate representation of actual anticipated needs, then the low bid should be further evaluated for unbalancing.

On the other hand, in cases where it is concluded, after examination, that the estimated quantities are not a reasonably accurate representation of actual anticipated needs, the SHA and division office should consider rejecting all bids, correcting the quantities, and re-advertising. However, an error in estimated quantities should not cause an automatic rejection of bids. Two factors need to be considered: (1) whether the public interest would be best served by making the award and (2) whether any bidder would be treated in an unfair manner if the award were made.

The bids should be rejected if: (1) the public interest would be best served in cancelling the defectively estimated proposal or (2) awarding the contract to the apparent low bidder using a corrected quantity estimate would be unfair to the other bidders who had relied on the original quantity estimate to develop their bid. (Attached is an example.)

Unbalanced Bids:

In discussing unbalanced bids, it is best to define two terms: mathematically unbalanced and materially unbalanced. An unbalanced bid may be only mathematically unbalanced or the bid may be mathematically and materially unbalanced.

A mathematically unbalanced bid is one containing lump sum or unit bid items which do not reflect reasonable actual costs plus a reasonable proportionate share of the bidder's anticipated profit, overhead costs, and other indirect costs, which he/she anticipates for the performance of the items in question.

A Comptroller General's opinion further defined a mathematically unbalanced bid as follows:

"A bid is mathematically unbalanced if the bid is structured on the basis of nominal prices for some work and inflated prices for other work; that is, each element of the bid must carry its proportionate share of the total cost of the work plus profits."
Matter of: Howell Construction, Comp. Gen. B-225766 (1987)

There is no prohibition per se against a contractor submitting a mathematically unbalanced bid unless an SHA has adopted a specific contract requirement precluding such submittal.

While mathematically unbalanced bids are not prohibited per se, evidence of a mathematically unbalanced bid is the first step in proving a bid to be materially unbalanced. A materially unbalanced bid has been defined as:

"A bid is materially unbalanced if there is a reasonable doubt that award to the bidder submitting the mathematically unbalanced bid will result in the lowest ultimate cost to the Government. Consequently, a materially unbalanced bid may not be accepted."
Matter of: Crown Laundry and Dry Cleaners, Comp. Gen. B-208795.2, April 22, 1983.

To determine whether a bid is unbalanced, it needs to be evaluated for reasonable conformance with the engineer's estimate. There are no specific parameters, such as amount or percent of variance from the engineer's estimate, that constitute an unbalanced bid. However, any evaluation process should undertake to determine why the bid is unbalanced, what effect the unbalancing will have on the contract, and if there is an effect, will it be to the detriment of the SHA and/or FHWA. When evaluating for detrimental effects, contract administration and competitive issues should be included along with cost.

There are numerous reasons why a bidder may want to unbalance his/her bid on a contract. One reason is to get more money at the beginning of the project. The bidder does this by overpricing the work done early in the project. This is called "front loading" the contract. The leading case in the "front loading" area is Matter of: Riverport Industries, 64 Comp. Gen. 441 (1985). Here the Comptroller General held that if the bid is front loaded, regardless if it is the lowest bid, it "should be viewed as materially unbalanced since acceptance of the bid would result in the same evils as an advance payment. An advance payment is prohibited by law." The "front loading" may also be materially unbalanced due to the cost of money that must be paid out early versus over the normal construction of the project.

Another reason is to maximize profits. The bidder does this by overpricing bid items he/she believes will be used in greater quantities than estimated in the proposal and underpricing items he/she thinks will be used in significantly lesser quantities. Care should be exercised to ensure that mobilization bids do not mask unbalancing. If bidders are bidding too high on mobilization, the SHA should be encouraged to alter its specifications to reduce any accelerated payment for mobilization or to limit mobilization to a fixed percentage of the contract.

An unbalanced bid may be an attempt by the bidder to simplify the bidding. The SHA may have created bid items that lend themselves to unbalancing. As an example, a specification may call for specific items to be paid for by the hour, such as a roller for compacting embankment and water to aid compaction to be paid for by the gallon. In this case, it may be better to set up the bid item as "Embankment, Compacted," paid by the cubic yard. The roller and water usage would be necessary but incidental to the bid item. Another example which may encourage unbalancing is the establishment of bid items for equipment hours or activity hours which in all likelihood will not be needed. When unbalancing on these types of bid items occurs, agreement should be reached with the SHA to rewrite the specifications to provide bid items which will cover likely work activities. Only items for work and equipment that are expected to be used on the project should be included in the proposal.

One method which an SHA may want to consider to avoid the problems of unbalanced bids is to insert into its contract specifications a specific clause prohibiting unbalanced bidding. Bids subsequently shown to be mathematically unbalanced would be rejected as non-responsive. It is important that such a clause contain clear and explicit language as courts have noted that "contractors are entitled to know how their bids will be evaluated; they cannot effectively compete when the standards for judgment exist only in the contracting officer's head," North Virginia Van Company v. U.S., 3 Cl. Ct. 237 (1983).

All SHA's, as a minimum, should be encouraged to adopt the AASHTO Guide Specifications for Highway Construction provision found in Section 102.07(e) or similar language:

"102.07 Irregular Proposals. Proposals will be considered irregular and may be rejected for any of the following reasons: . . .

(E) If the Department determines that any of the unit bid prices are significantly unbalanced to the potential detriment of the Department."

Use of the AASHTO Guide Specifications or similar provisions will facilitate the rejection of bids which are deemed to be materially unbalanced. States implementing unbalancing provisions should advise the bidders in the bid proposal that, when bid prices are not commensurate with the work involved, justification may be required and may involve delay in the award of the contract or possible rejection of the bid.

When a low bid contains token bid prices (i.e., penny unit bids), front loadings, or bid prices with large variations from the engineer's estimate, it should be considered a mathematically unbalanced bid and further evaluated. Engineers performing bid analysis should be aware that signs of apparent unbalancing in bidding may be an indication of more serious criminal activities such as collusion and bid rigging. Studies of collusion and bid rigging show that such activities are often accompanied by suspicious bidding patterns such as "unbalanced bids," "token bids," "front loading," "identical bidding," and "complimentary bidding."

Bid Analysis:

An analysis of unbalanced bids may be aided by the use of one of several computer software packages now available in many SHA's such as the Bid Analysis and Management System (BAMS) or Highway Collusion Detection System (HCDS) programs. However, the final analysis should not preclude the use of engineering judgment.

In analyzing bids, the following should be considered:

1. Is the bid mathematically unbalanced? Are the unit bid prices in reasonable conformance with the engineer's estimate and other bids?
2. If awarded, what effect will unbalanced bid items have on the total contract amount?
3. If quantities are incorrect, will the contract cost be increased when the quantities are corrected?
4. On items where the quantities may vary, will the lower bidder remain as low bidder?
5. If the bid is unbalanced, will the unbalance have a potential detrimental effect upon the competitive process or cause contract administration problems after award?

Where obvious unbalanced bid items exist, the SHA's recommendation to award or reject a bid needs to be supported by written justification. The justification should include the detrimental effect or lack of detrimental effect. A bid found to be mathematically unbalanced to some degree but not found to be materially unbalanced may be awarded if the SHA's specifications permit. However, prior to concurrence in the award of any mathematically unbalanced bid which is not materially unbalanced, the Division Administrator should determine the reason for the unbalancing and, when warranted, take appropriate steps to protect the Federal interest such as conditioning Federal participation.

When a low bid is determined to be mathematically and materially unbalanced, the Division Administrator must take appropriate steps to protect the Federal interest. This action may take the form of concurrence in an SHA's decision not to award the contract to the submitter of the unbalanced low bid. If on the other hand, the SHA decides to proceed with the award and requests FHWA concurrence, the Division Administrator's action could range from nonconcurrence to concurrence with contingency conditions limiting Federal participation.

Finally, if unbalancing is found to be caused in part by questionable SHA specifications or procedures, the division office should work with the SHA to facilitate appropriate and timely revisions.

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Attachment