1. Fixed Budget / Best Proposal

What is it?

Fixed budget/best proposal is a variation of best value procurement procedure in which the STA stipulates the contract price in the proposal request as well as the qualitative and technical evaluation factors for project elements upon which the selection will be determined. Firms then provide proposals addressing the qualitative and technical factors for the stipulated price. Proposals are then evaluated and rated based on the non-cost factors since the price is fixed, and the highest rate proposal is selected for award at the stipulated price (*1*). In general, fixed budget/best proposal is similar to weighted criteria except there is no price component to evaluate (*2*).

Why use it?

Fixed budget / best proposal allows STAs to focus on the critical qualifications and technical aspects of a project. The cost component is already known based on the established fixed price and therefore, the proposing firms will concentrate on developing the best solution to the project aspects for the price given. Innovation increases and constructability can improve when using this best value approach.

For design-build procurement, fixed budget / best proposal permits STAs to develop an RFP that the proposing firms design a proposal to that cost, making this best value approach an efficient way to maximize the use of capital by committing all available funding up front (*3*).

What does it do?

In some instances, the STA may establish a fixed total budget for a project that includes a specified amount for construction. When this occurs, soliciting bids for price is not applicable. The qualifications and technical aspects of the project are the factors that are then evaluated for selecting a construction team.

How to use it?

Molenaar et al (*4*) summarized a fixed budget/best proposal algorithm for design-build best-value procurement using the following steps:

1. Develop qualifications, technical, schedule, and cost evaluation criteria as appropriate for project goals. For each evaluation criteria, the owner must develop a measurable standard against which responsiveness will be measured. Typically a direct point scoring system is be devised around the measurable standards.
2. Publish the design-build request for qualifications (RFQ). The solicitation should contain the following items as a minimum:
3. The fixed budget price
4. Scope of work, plans, and specifications.
5. Bid form.
6. Contract completion date or days.
7. Best-Value evaluation plan listing the qualifications evaluation criteria with corresponding standards.
8. Design-build proposal evaluation plan listing the technical, schedule, and cost evaluation criteria with corresponding standards.
9. Description of what constitutes a non-responsive proposal.
10. Receive Statements of Qualification (SOQ).
11. Evaluate SOQ’s against published standards and determine which proposals are fully responsive in meeting the qualifications criteria.
12. Announce the competitive range made up of all fully responsive SOQ’s.
13. Publish the design-build request for proposals (RFP). The solicitation will contain the following items as a minimum:
14. The fixed budget price
15. Scope of work, plans, and specifications.
16. Bid form.
17. Contract completion date or days.
18. Method to carry forward Step 1 qualifications ranking/scores into final evaluation.
19. Design-build proposal evaluation plan listing the technical, schedule, and cost evaluation criteria with corresponding standards.
20. Description of what constitutes a non-responsive proposal.
21. Evaluate design-build proposals against published technical and qualification standards and determine which proposals are fully responsive in meeting the qualifications criteria.
22. Eliminate any non-responsive proposals from the competitive range. Roll-up evaluation results and determine the final technical point score for each responsive proposal.
23. Compute the technical scores using the formula published in the RFP to identify the best proposal. Award to the highest technical score that meets the stipulated fixed budget and is fully responsive.

When to use it?

Fixed budget / best proposal is useful when the STA knows the price of the project ahead of procurement and can then determine from received proposals if the project scope is achievable within the limits of the stipulated budget (*3*). Fixed Budget / best proposal can be helpful for projects when the maximum scope of a project needs to fit within a tight budget and proposing firms can develop innovative techniques to develop the most attractive offer.

Limitations?

For Fixed budget / best proposal to be used appropriately, the STA must have a firm and accurate understanding of what the project will cost. It is then up to the proposing firms to provide a response based on this initial cost. This process is a reverse of other procurement procedures when the price is provided by the proposing firm based on the information provided by the STA. The STA must have the knowledge and resources needed to conduct a fixed budget / best proposal procurement.

Who uses it?

Michigan is currently the only STA that has experimented with Fixed Budget / Best Proposal. The City of Wheat Ridge, CO has also used fixed budget / best proposal with a weighted criteria process to procure contractors *(1).*

Example

The Michigan Department of Transportation (MDOT) experimented with a Fixed Price Best Proposal innovating construction contracting method (MDOT calls it “Fixed Budget Variable Scope”) in an effort to maximize the work performed on the construction project (*5*). This method of contract procurement allowed MDOT the ability to establish a final project budget and select a contractor based on the best value for the established fixed project budget.

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| Project Timeline | |
| 02-03-2012 | MDOT request for SEP-14 Approval |
| 02-08-2012 | FHWA SEP-14 Approval |
| 02-09-2012 | MDOT/Industry (MITA/MRPA) Partnering Meeting |
| 04-13-2012 | Notice of Bid Advertisement |
| 04-23-2012 | Mandatory Contractor Pre-Bid Meeting |
| 05-11-2012 | Project Bid Letting |
| 06-13-2012 | Contract Award |
| 07-09-2012 | Construction Start Date |
| 09-10-2012 | Construction Completion Date |
| 10-18-2012 | Final Inspection/Acceptance Date |

**Scope of work**

The project scope of work included a maximum of 103.78 miles of hot mix asphalt crack treatment on 15 segments of various roadways in MDOT’s University Region. Roadway cross sections included rural 2 lane, rural 4 lane, urban 3 lane, and rural 4 lane freeway sections. Condition of the various roadway sections added another variable component to the project.

The project was classified as a programmatic categorical exclusion and was approved as part of the General Program Account (GPA) for capital preventative maintenance projects. The portions of the project that were not constructed will be included in future crack sealing projects funded by the GPA.

**Bid Process and Results**

Early in the project development process, MDOT met with representatives from Industry to discuss the innovative contracting method. MDOT used information from that meeting to develop a unique bidding process. In an effort to inform prospective contractors of the new process, MDOT required contractors to attend a pre-bid meeting.

The project had 3 bidders, each providing the maximum number of roadbed miles of work that could be completed for the established project budget of $387,000. In addition, bidders were required to compile their bids in priority order that was set by the Department. The bid results are as follows:

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| Bid Results | | |
| Bidder | Road bed miles bid | Cost per road bed mile |
| No.1 | 74.43 mi | $5,199.52 |
| No.2 | 70.50 mi | $5,489.36 |
| No.3 | 53.46 mi | Bid Not Considered |

The bid document submitted by Bidder No.3 did not follow the requirements set forth by the Department, which were discussed in detail at the Pre-Bid Meeting as well as being defined in the Notice To Bidders for low bid determination included in the Proposal. Because the bid was incorrectly submitted, the bid was not considered.

**Industry Reaction**

There were 3 bidders on this experimental project which when compared to other conventionally bid HMA crack treatment projects in MDOT’s University Region, was slightly lower than average. The other University Region projects averaged 5 bidders.

The Department received feedback from contractors at the completion for the project. The only comment received suggested the maintaining traffic requirements for each section of roadway be more clearly defined in the specifications. Industry agreed with MDOT that this procurement method worked well for this type of project.

Typically, if there is bid savings, the additional money may go to projects with other types of fixes. With this project, the crack sealing industry performed the work estimated and any bid savings came in the form of additional crack sealing work. Industry informed MDOT that one of the benefits they view with this method of contracting is that their niche market received a fixed dollar amount of work, and the allocated budget stayed within their segment of the industry and within the same geographic location.

**Summary**

*Evaluation of Construction Cost Effectiveness:* The letting results from this project were compared with two other conventionally bid HMA crack treatment projects in MDOT’s University Region. The contract award for each of the conventionally bid projects yielded low bids 7.68% and 18.81% below Engineers Estimates, covering 66.90 roadbed miles and 52.09 roadbed miles, respectively. These bids resulted in un­used funding originally intended for crack treatment coverage. Conversely, using the Fixed Price Variable Scope innovating construction contracting method, 100% of the programmed project cost was utilized to treat a maximum coverage of 74.43 roadbed miles. In addition, using average unit prices, the Department estimated a total coverage length of 70.62 roadbed miles for the fixed funding amount of $387,000. Therefore the use of the Fixed Price Variable Scope method yielded an additional 3.81 roadbed miles of coverage. The use of the Fixed Price Variable Scope procurement method effectively used all available funding to provide maximum roadbed mile coverage. The conventionally bid projects did not use all available funding due to low bids and thus did not maximize roadbed mile coverage. This approach met the Department’s expectations.

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| Performance Results | | | | | | |
| Job Number | Construction Year | Budget | Work Type | Expected Work\* | As-Constructed Work | Results |
| 113613 | 2012 | $387,000 | HMA Crack Sealing | 70.62 road bed miles | 74.43 road bed miles | +3.81 road bed miles |
| \* Based on Average Unit Process | | | | | | |

One of the goals of using FPVS is to reduce the amount of work required by staff to manage MDOT’s program. A project with a constrained budget reduces the burden on staff to reallocate funds from projects if the estimate is exceeded or reduced. By using a fixed amount of funds, MDOT did not have to search for additional projects to allocate any bid savings to, or conversely find additional funds from un-let projects. This process saved the Department staff time and effort.

References

1. Design-Build Institute of America (DBIA). *DBIA Position statement of Best value.* Washington, DC, 2012.
2. Beard, Jeffrey L, Michael Loulakis, and Edward C. Wundram. *Design-Build: Planning Through Development*. McGraw-Hill, New York, 2001.
3. Scott, Sidney, Keith R. Molenaar, Douglas Gransberg, and Nancy C. Smith. *NCHRP Report 561:* *Best-Value Procurement Methods for Highway Construction Projects*. National Cooperative Highway Research Program, Transportation Research Board, Washington DC, 2006.
4. Molenaar, K., D. Gransberg, S. Scott, D. Downs, and R. Ellis. *Project No. 20-7/Task 172: Recommended AASHTO Design-Build Procurement Guide – Final Report*. National Cooperative Highway Research Program, Transportation Research Board, Washington, DC, Aug. 2005.
5. Michigan Department of Transportation (MDOT). *Fixed Price Variable Scope Contracting*, Final Evaluation Report Special Experimental Project 14 (SEP-14), CS 84916 – JN 113613A, Jun. 2012.