

DBB or CMGC?

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Background

- BSD voters passed a \$680M bond in 2014
- Bond included 1 greenfield elementary school & 3 replacements
- 'Prototype' approach to the 4 new schools
- Sato and Vose were the first to be constructed
- Sato was **CMGC**. Vose was a **prequalified hard bid**.
- Both Vose and Sato had completion dates of August 2017
- Sato had earlier start due to greenfield

Results: Sato compared to Vose

- Final construction cost: **Vose \$29,156,420** **Sato**
\$33,014,876
- From our analysis, direct construction costs (excluding site work, general conditions, and all markups) of both projects were very similar
- Sato greenfield sitework was approximately \$2M more
- CMGC general conditions and overhead roughly \$2M more
- Overall schedule performance of both projects was very similar
- Change orders for both projects (including contingency for Sato) were nearly identical

Possible reasons for CMGC being more expensive

- Higher overhead and GC costs
 - Hard bid contractors intentionally run on as low of GC's as possible to provide a competitive advantage. For Vose we found that this was not ideal. Moving forward we set minimum PM staff requirements in the bid documents
- The DBB contractors bid the projects with higher profit margins and are willing to accept more risk than a CMGC
 - The CMGC contractors want to reduce their own risk on the project, generally this means they include additional insurance coverage as a project cost to buy out risk (ex. SubGuard)
- CMGC's may be inclined to limit the bid pool to subcontractors they like to work with and have a track record of success

Thoughts on using a prototype

- Benefits

- Reduced design costs, roughly \$1M savings each for Hazeldale & William Walker.
- Efficiency in construction process, works the “bugs” out of the design, lessons learned.
- Reduced change orders as a result. This has been our greatest savings.
 - Vose change orders: \$3,725,420
 - Hazeldale change orders: \$2,078,582

- Drawbacks

- Limited options for site design, WW in particular is not ideal.
- Limited options for customization, not responsive to culture/neighborhood.

Lessons Learned / Conclusions

- CMGC for Sato would have been more effective if the schedule had allowed more time for the contractor to participate in constructability review
- Both Design-Bid-Build and CM/GC are appropriate delivery methods. When the scope and schedule are well defined, the DBB delivery method was more cost effective
- CMGC delivery method appropriate when you have: undefined scope, challenging schedule, complicated phasing, limited owner experience
- Guaranteed Maximum Price (GMP) set early
- Tighten contractual language regarding contingency use
- For ACMA, we are using a prequalified DBB procurement. We were able to get the benefits of constructability review by hiring a firm that specializes in them
- Vose schedule was strained. We achieved occupancy for the students on time, but there was a lot of work left to complete. I am not sure a CMGC would have made a difference. One year is not long enough for construction of 90,000 SF

Questions?



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