



**UNIVERSITY OF
CAMBRIDGE**

Department of Engineering

CONSTRUCTION ENGINEERING MASTERS DISSERTATION ABSTRACT

Project Cost impact of a hybrid Design-Build / Design-Bid-Build contractual scheme

The downturn in the real estate and construction industry created by the financial meltdown of 2008 triggered creativity in project delivery models. Due to a shortage in cash for clients and an increase in competition at A/E and contractor levels, a new project delivery model has evolved and been adopted over the last 5 years: "Competitive GMP". Though the term is used mainly in the United States, on an international scale it could be translated into: using Low Bid procurement on a Cost+ (CM/GC, Design-Build) project delivery model with incomplete documents at bid time.

Traditionally a client would use Low Bid procurement on a project with complete documents due to the very nature of Lump Sum (or "closed book") payment provisions used on Design-Bid-Build jobs. This would offer the client a low direct cost, but an extended schedule. Alternatively, if the client was pursuing an aggressive schedule, the preferred delivery model would be CM/GC or Design-Build, where a team would be selected using Best Value procurement early in preconstruction. For contractors, the higher risk presented by incomplete documents would be offset by a low risk Cost+ (or "open book") payment provisions at a negotiated fee. In a Competitive GMP scenario however, clients request hard Lump Sum costs using incomplete documents, select the contractor using Low Bid, and then control the budget through a Cost+ payment provision. The expectation is to get "Design-Bid-Build" prices, and a "Design-Build" schedule. Is that true though?

Two of the major ways contractors can lower their bid is through discounts in (1) Fee and (2) Risk Management Tools including Contingency, Holds, and Allowances. Contractors engage in heavy discounts during competition, however, due to the contractual nature of such projects, additional discounts are negotiated with the clients before the final budget is approved.

This paper captures the competitive behaviors of contractors and follows the "life" of such discounts, from the (A) initial budget, to the (B) discounted budget during bidding and negotiations, and all the way through the (C) construction phase of the project where such costs might surface as change orders/claims. The ultimate goal is to see if clients actually end up with a cheaper project by engaging in a Competitive GMP project delivery method, or if the project ends up costing as much as before discounts are applied.

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