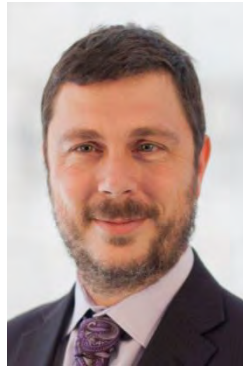




Delivering Architectural Quality in Design-Build and PPP Projects

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Summary

Major bridge structures have a significant visual impact. Such prominent components of our built environment should be designed to be visually pleasing and there is increasing public attention on the aesthetics of bridge structures. At the same time, the current trend in procurement is for many, if not the majority, of such projects to be built through some form of design-build or public private partnership (PPP) process whereby the final design of the project is carried out by a private entity responsible for paying for the cost of construction. This kind of procurement process does not naturally lend itself to delivering a finished product of high aesthetic quality. This paper describes why this is the case and then demonstrates how the procurement process can be refined to bring the quality of the aesthetics under the control of the owner.

Keywords: bridges; design-build; public private partnership; aesthetics; definition design.

1. Introduction

There are a number of reasons why owners may adopt design-build or public-private partnership procurement models such as seeking to reduce the project cost or schedule, leveraging private finance and transferring project risk to the private sector. Whatever the motivation it is clear that the general trend is for major bridge structures to be procured in a manner whereby the construction proponent is asked to offer more than just construction service.

Depending upon the particular procurement variant selected by the owner, the range of services which the proponent may be asked to offer includes design; construction; financing; operation; maintenance; revenue collection; rehabilitation etc. However, to be included within the family of procurement models under discussion within this paper the proponent would provide at least both the design and the construction of the project.



Within the context of this paper, the effect on the aesthetic design of either a design-build or a public-private partnership procurement process or their variants is essentially the same with the root cause being related to the fact that the final design of the project is under the control of a private entity that is paying for the project but not ultimately owning it nor politically accountable for it. Since the profit of the proponent is closely related to the differential between the cost of constructing the project and the

Fig. 1: Bridge over Riviere des Prairies, A25, Montreal