Mapping of State Transportation Agencies Practices and Perceptions about Project Bundling

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Abstract

- Project Bundling is an innovative contract procurement strategy in which multiple projects are bundled into a single contract.
- This study provides the current state of the practice and perceptions about project bundling among State Transportation Agency (STA) survey participants.
- Major Topics Covered about Project Bundling:
  - Benefits and Challenges
  - Impacts on Project Delivery Methods
  - Concerns Over Bundling

Objectives

- To present the current state of practice of project bundling and its perceptions among STAs

Data and Methodology

- Data Source: Survey (Online using Qualtrics)
- Survey Participants: 35 STA representatives
- Data Analysis
  - Data Visualization and Quantitative Analysis using SPSS
- Comparison of data among two groups of STAs
  i. STAs that have been using project bundling method but no formal process = STAs with low level of experience with bundling
  ii. STAs that are either in the process of standardizing a process or already have a standardized process = STAs with high level of experience with bundling

Preliminary Findings

- STAs with a lower level of experience (n=25)
- STAs with a higher level of experience (n=9)

Figure 1. STAs Level of Experience in Project Bundling

- Bridge Projects (such as, bridge preservation, rehabilitation, replacement projects)
- roadway Projects (such as, new road construction, added lane, shoulder...)
- Safety Projects (such as, highway safety improvement projects, local and rural roads...)
- Traffic Operations (such as, signals, intelligent traffic systems...)
- Others (includes, culvert replacement, ADA ramps, simple asphalt overlay...)

Figure 2. The Frequency of Project Bundling Use per Project Type among STAs

- Design-Bid-Build
- Construction Manager/General Contractor (CM/GC)
- Indefinite Delivery and Indefinite Quantity (DDIQ)
- Public-Private Partnership

Figure 3. Project Delivery Methods Used by STAs for Bundled Contracts

Benefits of Bundling

- Risk of encountering delays in design and construction authorization for one component of the project in a bundle while other components are ready.
- Multiple projects together can present the risk of complexity and potentially compounding the impacts, such as delaying schedule and increasing cost or repetition.

Impact Factor

Figure 4. The Impact Factor of the Advantages of Project Bundling

- Major Factors Considered During Bundling

STAs that have a lower level of experience with project bundling

- Design-Bid-Build: 94.1% (32)
- Design Build: 61.1% (14)
- Indefinite Delivery and Indefinite Quantity (IDIQ): 11.9% (4)
- Public-Private Partnership: 5.9% (2)
- Construction Manager/General Contractor (CM/GC): 2.9% (1)

Figure 5. The Average Impact Factor of Challenges in Project Bundling

- STAs (1 not at all concerned, 2 = of a little concern, 3 = moderately concerned, 4 = concerned, 5 = very concerned)

- The major impact of the project bundling is found to be on time and cost.
- Ensuring adequate staffing levels at each site when multiple sites are relatively apart or working concurrently.
- Possibility of eliminating smaller contractors from competition, thus decreasing bidding competition.

Conclusion and Recommendation

- The authors are currently working on the Case Study for the implementation of Project Bundling by various STAs.
- The authors recommend that the early assessment of project’s suitability for bundling, and identification of bundling opportunities should be performed.
- The regulation communication between stakeholders is the key to minimize the risk in bundled projects.
- Standardized processes and well documented strategies can help reduce concerns over most of the challenges faced during bundling.

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References

