Alternative Delivery Method

Overview

Presented by
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Office of Innovative Design & Delivery
Agenda

- Delivery Methods
- Benefits
- Project Delivery process
- Challenges
- Project candidates features
- Q&A
Delivery Methods

• Design-Bid-Build
• Alternative Delivery Methods
  ▫ CMGC
  ▫ Design-Build
Design-Bid-Build (D-B-B)

- Traditional Project Delivery process
- Design must be complete prior to Advertise
- Award to lowest responsible bidder
CMGC Two-Part Contract

**PRE-CONSTRUCTION**

- Construction Manager
- Professional Services
  - Cost Estimating
  - Subcontracting Plan
  - Scheduling
  - Material Procurement
  - Utility Coordination
  - Construction Phasing
  - Constructability Review
  - Risk Analysis
  - Quantity Verification
  - Third Party Approval

**CONSTRUCTION**

- General Contractor
- Construction Services
  - Price Agreement
CMGC

- Procure a Construction Manager during environmental (recommended) or design phase based on best qualifications
- Construction Manager provides input and services during design phase (aka Preconstruction Services)
- If price is agreed to, Construction Manager becomes the General Contractor
- If the fair and reasonable price is not agreed to, project will be advertised
Preconstruction Services

• Open and transparent
  ▫ CT share plans, specs, drawings, etc.
  ▫ Contractor details pricing assumptions including software used

• Partnering and collaboration
  ▫ Contractor needs to assist and develop solutions
  ▫ Analyze risk impacts and cost before the final schedule and cost of the project is determined
  ▫ Jointly analyze, allocate, and mitigate risk
  ▫ Manage risk that can adversely impact schedule and budget
Early Work Packages

Commonly used for:
- Securing long lead material
- Utility/early work packages
- Constructing an independent portion of the project
- Streamline Delivery

Key Considerations:
- Clearly define scope and schedule
- Establish independent utility among other work
- Maintain severability option
- Define package size that maintains CMGC engagement in remainder of project
CMGC “Bid” Process

When design of project or portion is complete:

Three Estimates:
1. Engineer’s Estimate
2. Construction Manager’s Cost Estimate
3. Independent Cost Estimate (ICE)

Two Possible Outcomes:
1. Caltrans gets fair price – Proceed with build
2. Caltrans doesn’t get fair price – Proceed to bid
Allocation

Support Cost for Design Phase
- Develop PS&E
- Construction Manager
- Independent Cost Estimator

Construction Capital Cost
CMGC Benefits

- Cost certainty
- Schedule optimization
- Assist with permits/3rd party approvals
- Streamline delivery to Construction
CMGC Benefits (Cont.)

- Design quality
- Innovation opportunities
- Specialized qualifications
- Risk mitigation
CMGC Challenges

- Estimate reconciliation (bid-based vs. cost-based estimates)
- Higher support costs (Contractor and ICE)
- Redesign to implement contractor suggestions
- Negotiating price with a single “bidder”
CMGC Project Candidate Features

- Construction Capital over $10M
- Well defined project scope
- High level of technical complexity
- Opportunities for innovation
- Schedule acceleration
Program Success

Implemented innovations at award were reported as SB1 Efficiencies

- FY 17/18 - $47.7M
- FY 18/19 - $14.4M
- FY 19/20 - $36.4M
- FY 20/21 - $59.6M
- FY 21/22 - $47.3M

Total reported $205.4M
Program Success

Cosumnes River Bridge Replacement Project

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American River Bridge Deck Replacement Project

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Design-Build (D-B)

- Awarded design and construction of project to single entity
- Awarded to low bid or best value proposer
Design-Build Benefits

- Risk Transfer
- Need to accelerate the schedule
- Cost certainty
- Alternative Technical Concepts
Design-Build Challenges

- Less control over final design
- Quality may be subordinate to cost
- Defining the project at 30% design
- Setting proper stipends
D-B Project Candidates Features

- High level of technical complexity
- Opportunities for innovation
- Schedule acceleration
Program Success

Design-Build projects under the Demonstration Program (SBX2 4) – Caltrans delivered 8 projects

- No Claims

- $59.85M construction capital saving due to innovation

- Construction contract award
Recap

**Design Bid Build**
- Identify Need
- Planning (PID)
- Environmental (PA&ED)
- Design (PS&E)
- Right of Way
- Construction

**CMGC**
- Identify Need
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**Design-Build**
- Identify Need
- Planning (PID)
- Environmental (PA&ED)
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Commission allocates Construction funds

Design EWP1
Design EWP2
Const EWP1
Thank you!