

## California Department of Transportation

DISTRICT 12  
1750 East 4<sup>th</sup> Street, Suite 100 | SANTA ANA, CA 92705  
(657) 328-6000 | FAX (657) 328-6522 TTY 711  
<https://dot.ca.gov/caltrans-near-me/district-12>



November 22, 2023

Tay Dam  
Federal Highway Administration  
California Division Administration  
650 Capitol Mall, Suite 4-100  
Sacramento, CA 95814

Dear Mr. Tay Dam:

California Department of Transportation (Caltrans) requests approval to use the Progressive Design-Build (PDB) delivery method on the I-5 Managed Lanes Multi Modal Operational Improvement in Orange County project. The PDB delivery method will award the contract using a qualifications-based selection process. This SEP-14 approval is requested to waive the 23 CFR 636.302(a)(1) requirements.

Please find the attached SEP-14 Workplan for your review and approval. Please do not hesitate to contact me for any questions.

Sincerely,

*Janilee Jablonski*

Janilee Jablonski  
Project Manager  
Caltrans D12 Program & Project Management  
949-279-8850  
janilee.jablonski@dot.ca.gov

# **Special Experimental Project No.14 (SEP-14)**

## **Alternative Contracting Workplan for Interstate 5 (I-5) Managed Lanes Multi Modal Operational Improvements in Orange County (Postmile 28.9 to 44.4)**

### **1 Purpose**

The purpose of the project is to realize and evaluate the benefits of the Progressive Design-Build (PD-B) project delivery method on the Interstate 5 (I-5) Managed Lanes Multi Modal Operational Improvements in Orange County (Postmile 28.9 to 44.4) (herein called the Project). The PD-B delivery methodology allows Caltrans to engage a contractor (Design-Builder) to design, collaborate, and engage with the project team to refine the project scope, optimize design, improve quality, manage costs, and share risks.

California Department of Transportation (Caltrans) expects to realize the following benefits by using PD-B on this project:

- The ability for collaboration of roadway and Tolling System Integration (TSI) during design. PD-B helps to progress the design and construction of the roadway infrastructure in one work package while finalizing the design and integration of the toll system infrastructure in another work package.
- The ability to work with entities with tolling system integration experience in the design phase. Caltrans has no previous tolling design and construction experience as this Project will be the first Caltrans sponsored and implemented tolling project.
- The ability to mitigate and distribute risk in collaboration with the Design-Builder.
- The ability to expedite design and construction schedule through collaboration with the Design-Builder and early work packages in anticipation of the 2028 Olympics in Los Angeles.
- Allows for early involvement with the Design-Builder to create efficient traffic management plans.
- The ability to use real-time construction cost estimating to support design decisions. The Project's cost estimate at Project Approval/Environmental Document (PA/ED) phase utilizes the latest bid environment unit price; however, there remains a risk of volatility in the future. PD-B minimizes constructability issues and has better refined cost estimate validated by independent cost estimate.
- The ability to procure a PD-B through a best value selection process without securing committed funds for the final design and construction total cost. Currently the Project has committed funding through the design phase only.
- The development of the Guaranteed Maximum Price (GMP) is a key

component of PD-B as it allows Caltrans to hire a Design-Builder without a funding commitment for construction until reasonable design details are defined.

### **1.1 Waiver:**

Under 23 CFR 636.302(a)(1), evaluation of price is required in the selection of a design-build team (DBT) if the contract is awarded after the National Environmental Policy Act (NEPA) process is complete. The Project's Final Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) is anticipated to be approved in early 2024. Caltrans intends to undertake this project using the recently executed California Law: SECTION 1. Article 6.7 (commencing with Section 10215) is added to Chapter 1 of Part 2 of Division 2 of the Public Contract Code authorizes the use of Progressive Design-Build delivery method and procure the Design-Builder after the completion of the NEPA process.

Caltrans typically uses the design-bid-build method; however, Caltrans has used Design-Build and Construction Manager/General Contractor procurement methods with positive results.

## **2 Project Scope**

Caltrans proposes to improve the overall regional managed lanes network operations, improve mobility and trip reliability, maximize person throughput by facilitating efficient movement of bus and rideshare users, and apply technology to help manage traffic demand, within the I-5 corridor.

The Project improvement limits include I-5 from Red Hill Avenue to the Orange/Los Angeles County Line, California. The Project improvements are within the cities of Irvine, Tustin, Santa Ana, Orange, Anaheim, Fullerton, Buena Park, La Mirada, and Santa Fe Springs as shown in the Figure 1 below.



Figure 1: Location & Vicinity Map

Currently, segments of the northbound and southbound I-5 High-Occupancy Vehicle (HOV) lanes are classified as degraded as defined by federal standards, with speeds during peak periods on the HOV lanes that drop to less than 45 miles per hour (mph) for more than 10-percent of the time over a consecutive 180-day period during morning or evening weekday peak hour periods. Additionally, the general-purpose lanes of the I-5 corridor experience recurring traffic congestion and heavy demand particularly during peak commuting hours, which exceeds the freeway's maximum operational capacity.

This Project will implement improvements that include a priced managed lanes strategy in each direction to address HOV degradation as follows (Preferred Alternative):

- Converting the existing High Occupancy Vehicle (HOV) lane to an Express Lane, in each direction, between Red Hill Avenue and SR 55.
- Converting two existing HOV lanes to Express Lanes, in each direction, between SR 55 and SR 57.

- Converting the existing HOV lane to an Express Lane, in each direction, from SR 57 to the Orange/Los Angeles County Line.
- Construct additional Express Lane, in each direction, between SR 57 and SR 91.

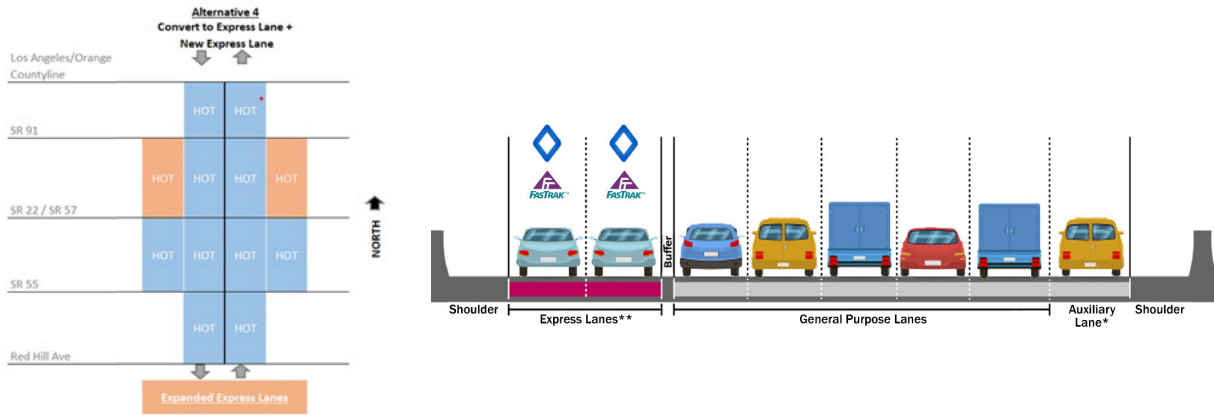


Figure 2: Preferred Alternative Typical Section

The current project’s construction cost for roadway and tolling is the following:

| Project Phase                                | Total         | FY    |
|--|---------------|-------|
|  | \$ M          |       |
| Environmental (Committed)                    | 15            | Prior |
| Design (Committed)*                          | 12.5          | 23/24 |
| Right of Way Support and Capital (Committed) | 0.9           | 23/24 |
| Caltrans Construction Support                | 67            | 25/26 |
| Capital Construction                         | 257           | 25/26 |
| Tolling Cost                                 | 76            | 26/27 |
| <b>Total</b>                                 | <b>428.4*</b> |       |

Table 1: Project’s Cost Estimate

\*The change to PDB will need an additional \$28M for pre-construction support and will be reported at construction allocation per STIP guidelines.

The proposed project is anticipated to be a contract with two work packages. The first work package for roadway construction and the second work package for TSI. The work package schedules will overlap to maximize design coordination.

### 3 Procurement Plan

#### 3.1 Independent Cost Estimator

To ensure efficient and effective use of federal and state funding, Caltrans will procure a separate A&E Consultant Service Contract for an Independent Cost Estimator (ICE). The ICE will provide an independent cost estimate to aid Caltrans in price negotiations with the Design-Builder to ensure the Guaranteed Maximum

Price (GMP) is reasonable and fair for the Final Design and Construction Contract of the Project. The ICE will also advise Caltrans on scheduling and method of construction. The development of the GMP and changes during construction will use an open-book process, and Caltrans and its representatives will have the right to access and copy all records, accounts, and other data used by the Design-Builder in connection with the preparation of the GMP.

### **3.2 Program Management Consultant**

Caltrans will procure another A&E Consultant Service Contract for a Program Management Consultant (PMC) with tolling experience to assist Caltrans in developing the Request for Qualification (RFQ) by assisting with defining roles and responsibilities of the Design-Builder and its sub-consultants and ensure Caltrans involvement in the selection of the Tolling System Integration (TSI) subconsultant; and will provide design oversight support and tolling implementation.

### **3.3 Progressive Design-Build Contract**

Procurement of the PB-D contract is based on a best value selection process. Caltrans will use a single-phase procurement process to select a qualified Design-Builder to deliver the Project.

The RFQ is issued to solicit information, in the form of a Statement of Qualifications (SOQ) followed by proposer interviews that Caltrans will evaluate to determine which proposers are qualified to successfully deliver the Project in a two-part contract:

- Part one: A “Preconstruction Services Contract” which includes the design effort of the Project. The design-builder, ICE, and Caltrans will work together to develop the schedule, cost model, and risk profile for the project. This phase will involve an ongoing cost reconciliation process to ultimately agree on a GMP that is validated by ICE.
- Part two: A “Final Design and Construction Contract” to complete the design and build the Project if a GMP is reached.

Exhibit A shows the typical process for a PDB contract procurement.

#### **3.3.1 Preconstruction Services Contract**

Caltrans will publicly advertise a Request for Qualifications (RFQ) outlining the minimum and desired Design-Builder qualifications. The Caltrans project evaluation team evaluates the qualitative technical proposals according to the criteria published in the RFQ. The top ranked proposers will be short-listed and interviewed. The Preconstruction Services Contract will be awarded to the responsive and responsible proposer with the highest score.

##### ***3.3.1.1 RFQ Development***

The RFQ will identify the evaluation criteria, evaluation process, and scoring criteria. The scoring evaluation criteria will include:

- a) Proposer Experience and Past Performance: Proposers will be asked to demonstrate experience, expertise, competence, capability, and capacity in, and

a record of producing quality work on projects similar to the Project.

- b) Proposer's Key Personnel: Proposers will be asked to identify the qualified personnel for key positions with demonstrated experience and expertise and a record of producing quality work on projects of a similar nature to this Project.
- c) Project Understanding and Approach: Proposers will be asked to demonstrate an understanding of and approach to the management, technical aspects, and maintenance of traffic issues and risks associated with the Project. Proposers will need to show an understanding of and approach to how the Progressive Design-Build process and the proposer's organization will contribute to the success of the Project and meet the Project goals. Proposers will need to have an understanding of the risk sharing and the team relationship between the Design-Builder, and Caltrans.
- d) Quality Management Program: Proposers will be asked to demonstrate their approach in implementing a Quality Management Program under a Progressive Design-Build project in which Caltrans will manage and perform its construction and design owner verification functions, while the proposer is responsible for design Quality Control (QC)/Quality Validation (QV) and construction QC/QV plans and functions.
- e) Price Proposal: Proposer's will be asked to submit the preconstruction services fee and the final design and construction markup.
- f) Interview for Short-Listed Proposers: Short-listed proposers will be asked to interview to demonstrate their ability to perform as the Design-Builder on the Project.

Other criteria that are evaluated but not scored include:

- a) Legal Structure: Proposers are asked to provide documents demonstrating that Proposer's organization, legal structure, team members, and history demonstrate an ability to remain stable and viable for the duration of the Project and be contractually bound to Caltrans.
- b) Financial Capacity: Proposers are asked to provide documents demonstrating their financial capacity to enter into the Final Design and Construction Contract with Caltrans and possess the resources to successfully complete the Project.
- c) Safety Program. Proposers will be asked to describe their past safety record and demonstrate an understanding of an effective safety program.

### 3.3.1.2 Proposer Evaluation

The following is a summary of evaluation procedure of the proposers:

- a) Caltrans forms an evaluation team consisting of a Qualifications Review Committee (QRC), Project Scoring Committee (PSC), Executive Review Committee (ERC), and Process Oversight Committee (POC).
- b) The proposer's SOQ will be evaluated to determine the responsiveness to the RFQ. The Proposers who substantially comply with the requirements of the RFQ will be given a passing rating in this portion of the evaluation. Failure to address a particular requirement or failure to include or deliver an important item of information that is required by the RFQ may be grounds for failing the proposer



on that item.

- c) The QRC will individually review the SOQs. They will then meet and evaluate the SOQs by providing a consensus of the strength and weakness findings for each SOQ based on each RFQ criteria. The QRC will also conduct a project and/or key personnel reference check. The QRC's assessment and reference check is given to the PSC.
- d) The PSC will individually review the SOQs and the consensus of the strength and weakness findings, and independently score. The PSC will meet and determine the consensus score for each SOQ.
- e) A ranking of the proposers will be determined, and a short-list identified. The short-list is submitted to the ERC for review and approval of the short-list.
- f) Short-listed proposers are notified of their interview date, time, location, and interview format.
- g) The PSC conducts interviews with the short-listed proposers and determines the consensus scores.
- h) ERC will review and approve the final ranking of the proposers.
- i) Final ranking of the proposers is determined and sent to the short-listed proposers and posted on the Caltrans web site.
- j) The top ranked proposer submits required information to Caltrans to proceed with the Preconstruction Services Contract execution.

### 3.3.1.3 *Preconstruction Activities*

The following is an overview of the activities associated with the preconstruction phase of a PD-B project:

- a) The PD-B preconstruction phase begins with a Project Team Kick-off Meeting and Partnering Workshop. The Project Kick-off Meeting is used to review the project team's roles and responsibilities, preliminary schedule, Scope of Work, and project goals. The Partnering Workshop is often facilitated by a third party experienced in partnering, with the goal to develop trust, respect, and cooperation among all key players.
- b) The project team meets to prepare a Risk Management Plan/Risk Register. The Risk Register is a tool used to identify, assess, mitigate, retire, and monitor project risks. The Risk Register is updated throughout the preconstruction phase.
- c) The Design-Builder prepares a project Cost Model with input from the project team. The Cost Model is an open and transparent document that defines the Design-Builder's pricing assumptions and will be used by the ICE and the District estimator. The Cost Model is updated throughout the preconstruction phase.
- d) A review set of plans and specifications are developed for each pricing milestone.
- e) At each pricing milestone a Design Review Workshop is held to review and discuss the current design to ensure a constructible and cost-effective design.
- f) At each pricing milestone a Risk Workshop is held to discuss and agree upon how risks and contingencies are quantified and assigned, and how risk is influencing the estimate.



- g) At each pricing milestone a Quality Reconciliation Meeting is held to come to agreement on the bid items and quantities that will be used to develop the project estimate.
- h) At each pricing milestone the Design-Builder, ICE, and Caltrans prepare independent cost estimates for the Project.
- i) At each pricing milestone a Price Reconciliation Meeting is held to reconcile pricing differences between the Design-Builder's estimate and ICE's independent cost estimate.
- j) When it is decided that a GMP should be determined for the project or work package the Design-Builder, ICE, and Caltrans submit their final estimate.
- k) If the Design-Builder's final estimate is acceptable to Caltrans, Caltrans proceeds with awarding the Final Design and Construction Contract.

### 3.3.2 Off Ramp

If Caltrans is unable to enter into the Final Design and Construction Contract or the Design-Builder, ICE and Caltrans fail in the price negotiations, Caltrans will have the following options:

- a) Amend the Preconstruction Services Contract to have the Design-Builder complete the design. Caltrans would complete construction of the project as Design-Bid-Build.
- b) Complete the design in-house. Caltrans would complete construction of the project as Design-Bid-Build.
- c) Re-Advertise for a new Design-Builder and complete the project using Design-Build contracting.

### 3.3.3 Final Design and Construction Contract

If the project or work package has 100 percent design, the construction contract will be similar to a design-bid-build project. If the project or work package is less than 100 percent design, the Final Design and Construction Contract will be similar to a design-build contract which will include project specifics specifications.

#### *3.3.3.1 Early Work Packages (EWP)*

Early Work Packages are a portion or phase of physical construction work (including but not limited to site preparation, structure demolition, hazardous material abatement/treatment/removal, early material acquisition/fabrication contracts, or any action that materially affects the objective consideration of alternatives in the NEPA review process) that is procured after NEPA is complete but before all design work for the project is complete. Caltrans may procure EWPs when construction risks have been addressed (both agency and Design-Builder risks) and the scope of work is defined sufficiently for the Caltrans and the Design-Builder to reasonably determine price.

## **4 Schedule**

Table 2 shows the anticipated timelines for design-bid-build (DBB) and traditional PD-B project delivery methods. Generally, we expect PDB to be significantly faster than

DBB.

| <b>Project Milestones</b>   | <b>DBB</b> | <b>PD-B</b> |
|---|------------|-------------|
| Begin Design  | 12/2023    | 12/2023     |
| Advertise RFQ   | --         | 3/2024      |
| FHWA Review – CA Division   | --         | 9/2024      |
| Award Preconstruction Services Contract                           |            | 8/2024      |
| Ready to List   | 8/2027     | --          |
| FHWA Review and Authorization (E-76) – CA Division                | --         | 12/2025     |
| Contract Award (For PD-B: Final Design and Construction Contract) | 2/2028     | 01/2026     |
| Begin Construction  | 5/2028     | 06/2026     |
| Substantial Completion  | 11/2031    | 02/2028     |
| Express Lanes Open to Traffic                                     | 11/2032    | 02/2029     |
| Construction Contract Acceptance (CCA)                            | 5/2033     | 08/2029     |

Table 2: Project Delivery Schedule by Design-Bid-Build (DBB) and PD-B methods

## **5 Measures for Evaluation of Progressive Design-Build**

Caltrans will evaluate PD-B using time and costs savings.

### **5.1 Schedule**

Section 4 shows the anticipated timelines for design-bid-build (DBB) and PD-B project delivery methods for this Project. Caltrans expects PD-B to be significantly faster than DBB. Caltrans will measure the project duration against the expected DBB schedule and report accordingly in the final report submitted to FHWA.

### **5.2 Cost**

The PD-B delivery method enables Caltrans to engage the Design-Builder early in the project development process to design and construct, optimize the schedule, mitigate risks, and other construction-related processes that ultimately result in project savings. Caltrans will track Project costs against the programmed costs to measure the cost savings benefits of PD-B. The 11-page cost estimate was prepared at PA/ED phase to determine the “programmed cost”. The cost savings results will be included in the final report to FHWA.

## **6 FHWA Review and Reporting**

Caltrans will request review for the Preconstruction Services Contract and the Final Design and Construction Contract from FHWA – CA Division and provide initial, intermediate, and final reports on this Project to FHWA – California Division’s assigned Transportation Engineer/Project Oversight Manager for District 12.

### **6.1 Initial Report**

Caltrans will submit an initial report no later than 3 months after contract award. The initial report will include the number of proposers and identify the selected proposer with agreed to fee and escalation.

### **6.2 Intermediate Report**

The intermediate report will be submitted no later than 3 months after award of each work package. The interim report will include innovations, if Caltrans is awarding a single or multiple work packages and if design is 100% complete or less than 100% complete.

### **6.3 Final Reporting**

No later than 6 months after the completion and acceptance of all contracted work on the Project (Construction Contract Acceptance), Caltrans will prepare and submit a final report to FHWA. The final report will include a comprehensive assessment on the effectiveness of the PD-B project delivery method relative to project cost and time savings and will discuss lessons learned.

Off Ramp Report - If Caltrans exercises the off-ramp option, the final report will be prepared and submitted to FHWA no later than 3 months after the selection of the new procurement method starts. This report will discuss lessons learned, reasons for using the off-ramp, and considerations for selecting the new procurement method.

# **EXHIBIT A**

