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Memorandum

Date: February 21, 2018

To: Transportation Authority Board

From: Eric Cordoba – Deputy Director for Capital Projects

Subject: 03/13/18 Board Meeting: Approval of the Construction Manager/General Contractor Project Delivery Method for the Yerba Buena Island Westside Bridges Seismic Retrofit Project

RECOMMENDATION ☐ **Information** ☒ **Action**

Approve the Construction Manager/General Contractor (CM/GC) Project Delivery Method for the Yerba Buena Island (YBI) Westside Bridges Seismic Retrofit Project

☐ Fund Allocation
☐ Fund Programming
☐ Policy/Legislation
☐ Plan/Study
☒ Capital Project Oversight/Delivery
☐ Budget/Finance
☐ Contract/Agreement
☐ Procurement
☐ Other:

SUMMARY

The Transportation Authority is the project sponsor for the YBI Westside Bridges Seismic Retrofit Project (Project). The Project has significant complex technical and physical topographic construction challenges. Based on a Value Analysis Study that we completed for the Project, in 2016 we worked with Assemblymember David Chiu and obtained state authorization through Assembly Bill 2374 to use the CM/GC project delivery method for the Project. The enacted legislation (Attachment 1) requires that after an evaluation of the traditional design-bid-build method of construction and of the CM/GC method, the board of the regional transportation agency (i.e., the Transportation Authority) adopt the procurement strategy in a public meeting. We conducted the required evaluation and concluded that the CM/GC project delivery method would provide numerous advantages over the traditional Design-Bid-Build delivery method and should be utilized for final design and construction of the Project.

DISCUSSION

Background.

The Transportation Authority is working jointly with the Treasure Island Development Authority (TIDA) on the development of the I-80/YBI Interchange Improvement Project. TIDA has asked the Transportation Authority, in its capacity as the Congestion Management Agency, to lead the effort to deliver the I-80/YBI Interchange Improvement Project because of our expertise in funding and interacting with the California Department of Transportation on design aspects of the project. The scope of the I-80/YBI Interchange Improvement Project includes two major components: 1) the YBI Ramps Improvement Project, which includes constructing new westbound on and off ramps Phase 1 (on the east side of YBI) to the new Eastern Span of the San Francisco-Oakland Bay Bridge (SFOBB)

and the YBI Southgate Road Realignment Improvements Phase 2; and 2) the YBI Westside Bridges Seismic Retrofit Project on the west side of the island.

We are 99% complete with the YBI Ramps Improvement Project – Phase 1, which included constructing new westbound on and off ramps (on the east side of YBI) to the new Eastern Span of the SFOBB. Final close out efforts will be completed in the Spring 2018. It is now proceeding with implementation of two additional construction projects including the YBI Westside Bridges, which is the subject of this request.

The YBI Westside Bridges Project encompasses reconstructing or seismic retrofitting eight (8) existing bridge structures on the west side of YBI, several of which were constructed in the 1930s. These structures essentially comprise a viaduct along Treasure Island Road, just north of the SFOBB. Treasure Island Road, with these bridge structures, is a vital component of the YBI traffic circulation system and serves as an important part of the on and off-ramp system to the SFOBB.

Construction of the YBI Westside Bridges Project is scheduled to begin in early 2020 and be completed by summer 2021.

Project Challenges.

The Project is uniquely located along the western edge of YBI along steep terrain on the hillside overlooking the San Francisco Bay, which will make it challenging to implement. The construction work includes demolishing three existing bridges, reconstructing new bridges, and construction of new retaining walls, associated roadway improvements and the seismic retrofit of 5 existing bridge structures. Not only is the location challenging, but the Project presents numerous complex structural (bridge/retaining wall foundations) and geotechnical challenges (unstable soils), as well as difficult construction access (very steep terrain) and environmental constraints (construction adjacent to and above the San Francisco Bay).

As part of the Project implementation process, we conducted a Value Analysis Study (required per Federal funding regulations), which was completed in 2014. The study determined that the challenges and constraints associated with the Project create an increased-level of risk and complicate the constructability. The study indicated that with the geometric, geographic, and technical constraints for the Project, the Transportation Authority should investigate how to best identify and minimize risk during construction. Given these challenges and constraints, one key recommendation provided in the Value Analysis Study was to evaluate utilizing the CM/GC delivery method for the Project.

The Value Analysis Study recognized that in a traditional Design-Bid-Build process (contractor selected based on low bidder), a project of this technical complexity requires bidders to spend a significant amount of time and money prior to submitting a bid which may reduce the number of qualified bidders. The Value Analysis Study found that (1) the CM/GC project delivery method is best used on projects with complex, high-risk scope and (2) the CM/GC process would minimize the risk for the Transportation Authority and the contractor, which would ultimately lower the Project cost and accelerate the schedule, while improving overall project delivery. The Value Analysis Study also found that this project delivery method creates an environment for innovation, team work, and overall project success. The study concluded that the CM/GC process provides the ability for the public agency, design engineer and contractor to jointly identify risk and allocate the responsibility for mitigation to the most capable party and provides the ability to manage this risk throughout the

lifecycle of the Project.

Project Delivery Methods.

Under the CM/GC project delivery method, the Transportation Authority would engage a construction contractor during the project design process to act in an advisory role and to provide valuable preconstruction input during design with the goal of lowering overall construction time and construction risks. The CM/GC Contractor would provide constructability reviews, value engineering suggestions, construction estimates, and other construction-related recommendations. The CM/GC Contractor can provide valuable input during design towards discovering prior to construction potential design errors and/or omissions and therefore mitigating any resulting project costs. This arrangement is intended to mitigate project construction risks, with the goal of reducing costs and expediting the delivery schedule.

Under Design-Bid-Build, which is the traditional project delivery method, the public agency designs, or retains a designer to furnish complete design services, and then advertises and awards a separate construction contract based on the designer's completed construction documents. In Design-Bid-Build, there is no contractor who provides input during the preconstruction and design phase, therefore there is a higher risk for additional project costs due to any design errors or omissions discovered during construction.

As required by Assembly Bill 2374, we recently completed an evaluation for these two project delivery methods, Design-Bid-Build (contractor selected based on low bidder) and CM/GC (contractor selected during design phase to provide input on design with option to construct the project if an agreed upon price is established). The evaluation concluded that the CM/GC project delivery method would provide numerous advantages over the traditional Design-Bid-Build delivery method in delivering this Project and therefore would be the better project delivery method for the Project. Attachment 2 includes the Project's evaluation and recommendation of the CM/GC project delivery process.

Upon Board approval of staff's recommendation, we propose to issue a CMGC Request for Qualifications in April 2018, and bring a contract award to the Citizens Advisory Committee in May 2018 and to the Board in June 2018.

FINANCIAL IMPACT

The recommended action would not have an impact on the adopted Fiscal Year 2017/18 budget. The project will be funded by Federal Highway Bridge Program – Seismic Retrofit funds, State Prop 1B – Seismic Retrofit funds, and Treasure Island Development Authority funds providing the local match.

CAC POSITION

The CAC will consider this item at its February 28, 2018 meeting.

SUPPLEMENTAL MATERIALS

Attachment 1 – Assembly Bill 2374
Attachment 2 – Summary of Project Delivery Method Evaluation

Assembly Bill No. 2374

CHAPTER 753

An act to amend Sections 6971 and 6972 of the Public Contract Code, relating to public contracts.

[Approved by Governor September 28, 2016. Filed with Secretary of State September 28, 2016.]

LEGISLATIVE COUNSEL'S DIGEST

AB 2374, Chiu. Construction Manager/General Contractor method: regional transportation agency: County of Placer: bridges.

Existing law authorizes regional transportation agencies, as defined, to use the Construction Manager/General Contractor project delivery method, as specified, to design and construct certain expressways that are not on the state highway system if: (1) the expressways are developed in accordance with an expenditure plan approved by voters, (2) there is an evaluation of the traditional design-bid-build method of construction and of the Construction Manager/General Contractor method, and (3) the board of the regional transportation agency adopts the method in a public meeting.

This bill would authorize the use of the Construction Manager/General Contractor method for the construction of 2 specified bridges that are not on the state highway system. For the purposes only of this authorization, the bill would include the County of Placer within the definition of a regional transportation agency. The bill would also remove the requirement that a project be developed in accordance with an expenditure plan approved by voters.

This bill would make legislative findings and declarations as to the necessity of a special statute for bridges located in the County of Placer and the City and County of San Francisco.

The people of the State of California do enact as follows:

SECTION 1. (a) The Legislature finds and declares that the County of Placer should be considered a transportation planning agency for the purposes of this Chapter 6.7 (commencing with Section 6970) of Part 1 of Division 2 of the Public Contract Code in order to effectuate the construction of a replacement bridge span using Construction Manager/General Contractor authority. The Federal Highway Administration had authorized full funding for the replacement of the county-owned and maintained Yankee Jims Road Bridge Project in the County of Placer and has encouraged the use of Construction Manager/General Contractor methods to complete this project. The geography, topography, and location of the bridge present many

potential complex challenges, and the Construction Manager/General Contractor could reduce delays and ensure that such challenges are fully understood at the outset of construction.

(b) Nothing in this act shall extend any other authority to the County of Placer as a transportation planning agency under any other law.

SEC. 2. Section 6971 of the Public Contract Code is amended to read:

6971. For purposes of this chapter, the following definitions apply:

(a) "Construction manager" means a partnership, corporation, or other legal entity that is able to provide appropriately licensed contracting and engineering services as needed pursuant to a Construction Manager/General Contractor method contract.

(b) "Construction Manager/General Contractor method" means a project delivery method in which a construction manager is procured to provide preconstruction services during the design phase of the project and construction services during the construction phase of the project. The contract for construction services may be entered into at the same time as the contract for preconstruction services, or at a later time. The execution of the design and the construction of the project may be in sequential phases or concurrent phases.

(c) "Preconstruction services" means advice during the design phase, including, but not limited to, scheduling, pricing, and phasing to assist the regional transportation agency to design a more constructible project.

(d) "Project" means either of the following:

(1) The construction of an expressway that is not on the state highway system.

(2) The construction of the following bridges that are not on the state highway system:

(A) Yerba Buena Island (YBI) West Side Bridges Seismic Retrofit Project.

(B) Yankee Jims Road Bridge Project in the County of Placer (Replacement/Rehabilitation).

(e) "Regional transportation agency" means any of the following:

(1) A transportation planning agency described in Section 29532 or 29532.1 of the Government Code.

(2) A county transportation commission established under Section 130050, 130050.1, or 130050.2 of the Public Utilities Code.

(3) Any other local or regional transportation entity that is designated by statute as a regional transportation agency.

(4) A joint exercise of powers authority established pursuant to Chapter 5 (commencing with Section 6500) of Division 7 of Title 1 of the Government Code, with the consent of a transportation planning agency or a county transportation commission for the jurisdiction in which the transportation project will be developed.

(5) A local transportation authority created or designated pursuant to Division 12.5 (commencing with Section 131000) or Division 19 (commencing with Section 180000) of the Public Utilities Code.

(6) The Santa Clara Valley Transportation Authority established pursuant to Part 12 (commencing with Section 100000) of Division 10 of the Public Utilities Code.

(7) The County of Placer.

SEC. 3. Section 6972 of the Public Contract Code is amended to read:

6972. (a) A regional transportation agency may utilize the Construction Manager/General Contractor method of procurement to design and construct projects pursuant to this section.

(b) A regional transportation agency may enter into a Construction Manager/General Contractor contract pursuant to this chapter after evaluation of the traditional design-bid-build method of construction and of the Construction Manager/General Contractor method and the board of the regional transportation agency affirmatively adopts the procurement strategy in a public meeting.

(c) The entity responsible for the maintenance of the local streets and roads within the jurisdiction of the expressway shall be responsible for the maintenance of the expressway.

SEC. 4. The Legislature finds and declares that a special law is necessary and that a general law cannot be made applicable within the meaning of Section 16 of Article IV of the California Constitution because of the unique circumstances regarding bridge transportation construction projects in the County of Placer and the City and County of San Francisco.

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Attachment 2

SUMMARY OF PROJECT DELIVERY METHOD EVALUATION

On February 13, 2018 the San Francisco County Transportation Authority ("SFCTA") project management team and its outside project consultants for the Yerba Buena Island Westside Bridges Seismic Retrofit project ("Project") met at the SFCTA offices to evaluate whether the traditional Design-Bid-Build method (aka lowest bidder method, "DBB") or the Construction Manager/General Contractor method ("CM/GC") would be the optimal delivery method to utilize for the design and construction of the Project. The evaluation panelists were:

Eric Cordoba, SFCTA Deputy Director
Dale Dennis, SFCTA Project Manager
David Dickenson, WMH Corporation, design engineer
Mike Scott, WSP USA Inc., construction management – resident engineer
Mike Lohman, HDR Engineering, Inc., design consultant
Mike DiGregorio, HDR Engineering, Inc., design consultant

1. Review of Preliminary Project Goals and Constraints

The evaluation panel began by identifying the Project attributes, and potential project goals and constraints. The panel cited the Project budget, scheduling constraints, potential milestones, stakeholders and risks. It also identified the following Project goals: (1) complete the project on budget while minimizing cost risk; (2) complete the project on schedule while minimizing delay risk; (3) select the best team (collaborative contractor and design/CM team relationship); (4) maximize safety of workers; and (5) select the best team (collaborative contractor and design/CM team relationship).

The primary Project specific constraints identified:

Complete project on schedule;
Project must not exceed a specific amount;
Must adhere to standards by San Francisco Public Works, San Francisco Municipal Transportation Agency, San Francisco Public Utilities Commission, San Francisco Bay Conservation and Development Commission, and American Association of State Highway and Transportation Officials (AASHTO); and
Challenging physical and environmental site location.

2. Evaluation Criteria

The panel then evaluated the DBB and CM/GC methods with respect to the following selection factors:

Delivery schedule;
Project complexity and innovation;
Level of design;
Cost;
Initial risk assessment;
Staff experience/availability (of SFCTA);
Level of oversight and control; and
Competition and contractor experience.

For each delivery method, the panel took considerable time and discussion identifying the opportunities and obstacles for the project under each of the above selection factors; first under the DBB method, then under the CMGC method. Some factors had multiple opportunities and multiple obstacles; others had only opportunities or only obstacles, and some had none. After

that discussion, the panel then gave each respective delivery method one of the following ratings: (1) most appropriate delivery method, (2) appropriate delivery method, (3) least appropriate delivery method, or (4) not applicable.

At the conclusion of the above proceedings, the panel reviewed the selection factor ratings given for each delivery method and concluded that the most appropriate delivery method for the Project would be the CMGC method.

3. Recommendation

Based on the above, the evaluation panel recommends that, pursuant to Public Contract Code §6972, SFCTA affirmatively adopt the CMGC method for design and construction of the Project.