



August 1, 2022

To: Regional Planning and Highways Committee *For*

From: Darrell E. Johnson, Chief Executive Officer

Subject: Amendment to Agreement for Additional Design Services for Interstate 5 Improvement Project Between Yale Avenue and State Route 55

Overview

On November 9, 2020, the Orange County Transportation Authority Board of Directors authorized an agreement with TranSystems Corporation for the preparation of plans, specifications, and estimates for the Interstate 5 Improvement Project between Yale Avenue and State Route 55. An amendment to the existing agreement is required for additional design services.

Recommendation

Authorize the Chief Executive Officer to negotiate and execute Amendment No. 1 to Agreement No. C-0-2371 between the Orange County Transportation Authority and TranSystems Corporation, in the amount of \$984,228, for additional design services for the Interstate 5 Improvement Project between Yale Avenue and State Route 55. This will increase the maximum cumulative obligation of the agreement to a total contract value of \$13,458,941.

Discussion

Interstate 5 (I-5) improvements between Yale Avenue and State Route 55 (SR-55) (Project) is part of Project B in the Measure M2 (M2) freeway program. In the updated Next 10 Delivery Plan, adopted by the Orange County Transportation Authority (OCTA) Board of Directors (Board) in December 2021, the Project is listed as one of the M2 freeway projects to be implemented through construction.

The Project will add one general purpose (GP) lane in both directions on I-5 between Yale Avenue and SR-55. The project will reestablish existing auxiliary lanes and provide new auxiliary lanes where necessary, and provide continuous access to the high-occupancy vehicle (HOV) lanes. The plans, specifications, and estimates (PS&E) for the Project are currently being prepared.

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Additional project scope has been identified, which requires further effort to complete the design on schedule. An amendment to the project design contract is recommended for the following additional services:

Jamboree Road Northbound (NB) Off-ramp

At the beginning of the design phase, the California Department of Transportation (Caltrans) requested that an additional lane be added to the Jamboree Road NB off-ramp to accommodate the volume of traffic exiting the freeway, and to reduce the potential for traffic back-up from Jamboree Road onto the I-5 mainline. This fourth lane on the off-ramp will provide additional NB I-5 storage for traffic exiting at Jamboree Road. A traffic analysis, performed using Vissim software, supports the need for an additional lane at this off-ramp.

The additional design services to be provided include the following:

Additional design and preparation of PS&E is needed for roadway, drainage, signage, stage construction/traffic handling, electrical, pavement, pavement delineation, lighting and traffic signal modifications, loop detectors and loop detection cables, associated engineering reports, survey/right-of-way engineering services, and construction support. Additional geotechnical borings, geotechnical design, and materials reports are also needed.

Overhead Signage

Since the project report (PR) for this project was finalized at the end of the environmental phase, changes to Caltrans' design requirements for overhead signage has resulted in the need to replace signage that was to have remained in place. The Project Development Team has successfully reduced the number of signs that would have otherwise been replaced; however, there are approximately 18 that still need to be replaced that were not previously identified, and were therefore not included in the scope of the contract.

As a result of these new overhead signs, additional design services to be provided include the following:

- Roadway design to include new median barrier tapers, additional signage plans, stage construction plans for freeway closures (to install new signage), additional quantity sheets and traffic analysis to estimate projected delays, and queue lengths on interchange ramps due to freeway closures.

- Additional geotechnical borings, foundation reports, updates to the Environmental Revalidation and Environmental Commitments Record, and environmental analysis are also needed due to the addition of the new overhead sign structures.

Sound Walls

At the beginning of the design phase, a review of the reasonableness and feasibility of the sound walls proposed in the PR was conducted. The review was performed to ensure state and federal requirements are met for the funding and construction of sound walls, with all proposed sound walls having to be both feasible (i.e. provide a minimum of noise attenuation) and reasonable (not exceed a construction cost estimate per benefitted receptor).

As a result of the reasonableness and feasibility analysis, changes to the lengths and limits of sound walls will necessitate a redesign of the sound walls and other nearby facilities as compared to what was identified in the final PR. Based on an updated noise analysis, an overall reduction in the length of sound walls is estimated to save \$5.5 million in construction costs.

Landscaping Design

Upon further field review of the existing landscaping along this stretch of the I-5, it has been determined that additional landscaping will be required for this project. This section of the I-5 was constructed in the 1950's, widened in the 1980's, and HOV lanes were added in the 1990's. This has resulted in irrigation, landscaping, and hardscaping that has been installed over time, some of it decades old. A more detailed analysis of the existing landscaping shows that much of the landscaping and irrigation has reached the end of useful life. As a result, an increased level of effort will be needed to prepare the landscape design.

Maintaining a patchwork of existing landscaping also becomes problematic during construction as many of these areas are used as lay-down and staging areas by the freeway contractor. Additional landscaping design is needed to replace the existing landscaping that will be removed.

Fact Sheet for Exceptions to Ramp Metering Policy

As part of the efforts to encourage carpooling and as an effective traffic management strategy, the Caltrans 2016 Ramp Metering Design Manual (manual) sets standards for metering entrance ramps to highways. The manual calls for HOV

preferential lanes to be provided wherever ramp meters are installed. The addition of the HOV lane can be eliminated if it is determined that the HOV preferential lane will be under-utilized, or if there is a need for additional queue storage for the GP lanes. Based on traffic analysis, there are nine on-ramps which will not have HOV preferential lanes, necessitating the preparation of an Exceptions to Ramp Metering Policy Fact Sheet, which is reviewed and approved by Caltrans District 12 and Caltrans headquarters.

Procurement Approach

This procurement was handled in accordance with OCTA's Board-approved procedures for architectural and engineering services, which conform to both state and federal laws. The original firm-fixed price agreement was executed on May 6, 2021, in the amount of \$12,474,713, for the preparation of the Project PS&E. It has become necessary to amend the existing agreement to include additional design services, as shown in Attachment A.

OCTA staff negotiated the required level of effort with TranSystems Corporation to provide the additional design services as described above. Staff found TranSystems Corporation's price proposal, in the amount of \$984,228, to be fair and reasonable relative to the negotiated level of effort. Proposed Amendment No. 1 to Agreement No. C-0-2371 will increase the total contract value to \$13,458,941.

Fiscal Impact

The Project is included in OCTA's Fiscal Year 2022-23 Budget, Capital Programs Division, Account No. 0017-7519-FB103-1OD, and will be funded through M2 revenue.

Summary

Staff requests Board of Directors' approval to authorize the Chief Executive Officer to negotiate and execute Amendment No. 1 to Agreement No. C-0-2371 between the Orange County Transportation Authority and TranSystems Corporation, in the amount of \$984,228, for additional design services for the Interstate 5 Improvement Project between Yale Avenue and State Route 55.

Attachment

- A. TranSystems Corporation, Agreement No. C-0-2371 Fact Sheet

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