

**Metropolitan Transportation Commission
Regional Network Management Committee**

September 12, 2025

Agenda Item 2c

**Contract Amendment – U.S. Highway 101 (US 101) Adaptive Ramp Metering Planning
and Implementation: Parsons Transportation Group, Inc. (\$1,100,000)**

Subject:

Request for approval of a contract amendment with Parsons Transportation Group, Inc. (Parsons) to add \$1,100,000 for software development activities as part of the US 101 Adaptive Ramp Metering Planning and Implementation project.

Background:

Adaptive Ramp Metering has been implemented in the San Francisco Bay Area along I-80 in Alameda and Contra Costa Counties, as well as along I-880 in Alameda Santa Clara Counties. The current contract has started deploying Adaptive Ramp Metering on US-101 in San Mateo and Santa Clara Counties. Looking ahead, MTC, in partnership with Caltrans, plans further deployments on SR-237 later this year, and on US-101 in Marin County and I-80 in Solano County in early 2026. Ramp metering is a freeway management strategy that improves operational efficiency and safety by creating smoother traffic patterns by preventing large groups of vehicles from entering the freeway at once. The Adaptive Ramp Metering projects further enhance the ramp metering operation by quickly adapting to changing traffic conditions throughout the day. These projects are made possible through a strong partnership between MTC and Caltrans. MTC provides the funding and leads project implementation, while Caltrans serves as the system operator and will be responsible for ongoing operation and maintenance once the projects are deployed.

During Adaptive Ramp Metering implementation on US 101, a system limitation was discovered. The PC-Based Data Concentrator, which serves as the interface between the Advanced Transportation Management System (ATMS) and the field controllers that control the ramp meter signal, has reached its maximum capacity and cannot scale to support additional Adaptive Ramp Metering implementation. To solve this, Caltrans plans to decommission the current PC-Based Data Concentrator and enable communication directly between the ATMS and field controllers using the Universal Ramp Metering Systems software module, which is already

in use in District 7. Without resolving this PC-Based Data Concentrator capacity issue, the US-101 Adaptive Ramp Metering implementation cannot be completed, and future deployments on other corridors will also be blocked.

MTC is also working with Caltrans to identify an advanced way to improve the process for updating system configurations within the ATMS. The current Adaptive Ramp Metering algorithm is highly configurable, with adjustable thresholds for volume, occupancy, and speed at individual ramps. However, modifying these parameters requires staff to manually implement changes and monitor their effects over time. This can be a time-consuming trial-and-error process. To make this more efficient, a simulator will be developed to run within the ATMS, recommending parameter adjustments based on predicted corridor performance.

Contract Amendment:

The current contract value is \$1,387,578.23. Staff requests approval of a contract amendment with Parsons to add \$1,100,000, bringing the contract to a new total not to exceed the amount of \$2,487,578.23. The proposed amendment will fund the following activities to address the current PC-Based Data Concentrator limitation, improve the process for updating system configurations, and support current and future Adaptive Ramp Metering deployment across Bay Area freeway corridors:

- Integrate the Universal Ramp Metering System module with ATMS to replace the PC-Based Data Concentrator.
- Deploy a simulator for Adaptive Ramp Metering within ATMS to generate parameter recommendations for District 4 engineers and transportation management center operators.

Parsons is neither a small business enterprise (SBE) nor a disadvantaged business enterprise (DBE). Its subconsultant, Elite Transportation Group, Inc. (ETG), is a certified DBE and SBE firm.

Issues:


None identified.

Recommendations:

Staff recommends that the MTC Regional Network Management Committee authorize the Executive Director or designee to negotiate and enter into a contract amendment with Parsons in an amount not to exceed \$1,100,000 for integration of Universal Ramp Metering Systems and an Adaptive Ramp Metering Simulator into the ATMS.

Attachments:

- Attachment A: Disadvantaged Business Enterprise and Small Business Enterprise Status
- Attachment B: Request for Committee Approval – Summary of Proposed Contract Amendment



Andrew B. Fremier

Disadvantaged Business Enterprise and Small Business Enterprise Status

	Firm Name	Role on Project	DBE* Yes / No	If DBE Yes, List #	SBE** Yes / No	If SBE Yes, List #
Prime Contractor	Parsons Transportation Group, Inc.	Project management, software development for Universal Ramp Metering Systems module and Adaptive Ramp Metering Simulator, implementation and integration, technical support and training	No		No	
Subcontractor	Elite Transportation Group	Universal Ramp Metering Systems testing and implementation Adaptive Ramp Metering Simulator testing	Yes	45726	Yes	2011002

*Denotes certification by the California Unified Certification Program (CUCP).

**Denotes certification by the State of California.

Request for Committee Approval

Summary of Proposed Contract Amendment

Work Item No.: 2661

Consultant: Parsons Transportation Group, Inc
Oakland, CA

Work Project Title: US 101 Adaptive Ramp Metering Planning and Implementation

Purpose of Project: To implement Adaptive Ramp Metering on US 101 in Santa Clara and San Mateo Counties

Brief Scope of Work: Develop software to integrate the Universal Ramp Metering Systems module with ATMS to address the system capacity issue and deploy a simulator within ATMS to enhance operations.

Project Cost Not to Exceed: \$1,100,000 (this amendment)
The contract value before this amendment: \$1,387,578.23
Maximum contract amount after this amendment: \$2,487,578.23

Funding Source: CMAQ/STP

Fiscal Impact: Funding is included in the FY 2025-26 MTC Budget

Motion by Committee: That the Executive Director or designee is authorized to negotiate and enter into a contract amendment with Parsons Transportation Group, Inc. to provide software development services described above and in the Regional Network Management Committee Summary Sheet dated September 12, 2025, and that the Chief Financial Officer is authorized to set aside \$1,100,000 for such amendment.

Regional Network
Management Committee:

Alicia John-Baptiste, Chair

Approved: September 12, 2025