

ADDENDUM 1

REQUEST FOR PROPOSALS

**The Research Corporation of the University of Hawaii
requests proposals for the**

**V2X-Enabled Interconnected Traffic Control System Innovations on the
Nimitz Highway and Ala Moana Boulevard Arterial**

for the

**College of Engineering
University of Hawaii
Honolulu, HI**

October 11, 2019

NOTICE TO OFFERORS

To Prospective Offerors:

This Addendum #1 is issued for this RFP and is hereby incorporated as of the date of this Addendum.

Reference: RFP Page 11, Section 2.6 MAJOR TASKS AND DELIVERABLES. This section to be replaced with the following:

2.6 MAJOR TASKS AND DELIVERABLES

- Install and upgrade all the Advanced Transportation Controllers (ATCs) at up to 36 intersections and the overall arterial control system should handle peak-hour traffic at Levels of Service (LOS) D or better (This LOS performance target should not result in degradation of performance on adjacent coordinated intersections managed by the existing control system) completed by 3/31/2020
- Install and upgrade the video image processor-based traffic detection system as needed at up to 36 intersections and the video calibration and validation should be completed by 3/31/2020
- Arterial control system calibration and coordination completed by 6/30/2020
- Initial field testing and control performance evaluation in terms of control delays, arterial travel time, overall numbers of stops, and green waves (the Purdue Coordination Diagram should be used as a performance evaluation outputs) completed by 12/31/2020
- Initial V2X applications (including but not limited to 1) Red Light Violation Warning, 2) Pedestrian in Signalized Crosswalk Warning, 3) Advanced Traveler Information System, 4) Transit Signal Priority, and 5) Queue Warning supported by the existing standards: IEEE 802.11-2016, IEEE 1609.2, SAE J2945, SAE J2735, RSU should be OmniAir Certified and meet or exceed specification 4.1, and certified OBU's) deployment and testing completed by 9/30/2020
- Field testing and control performance evaluation completed periodically (every six months or more frequently) in the following three years to re-calibrate, analyze, optimize traffic control performance and seamlessly integrated with TSP system, incident management system, and V2X user application modules by considering the changes in terms of driver behavior, travel demand, corridor management, and infrastructure network adaptability
- Further V2X application testing (including but not limited to 1) Dynamic Speed Harmonization, 2) Intelligent Traffic Signal System, and 3) Probe-enabled Traffic Monitoring) and parameter calibration completed periodically (every six months or more frequently) in the following three years
- Arterial control system calibration, performance assessments, re-calibration, and re-assessments completed periodically (every six months or more frequently) from 2020 to 2023
- Functional module evaluation and integration including management, cooperative CV deployment, adaptive control coordination, etc., completed periodically (every six months or more frequently) from 2020 to 2023
- Control system safety performance quantified by number of different types of

crashes/VMT or vehicle volumes along the arterial and operation efficiency quantified by control delays per intersection and overall travel time through the arterial evaluation completed periodically (every six months or more frequently) from 2020 to 2023

- Technical report to summarize project activities and achievements
- Provide full maintenance support including changeout of upgraded equipment and respond to system failures and damages within a minimum timeframe (less than 2 hours) for the duration of the project.

END OF ADDENDUM