



City of Emeryville

CALIFORNIA

MEMORANDUM

DATE: October 30, 2018
TO: Christine Daniel, City Manager
FROM: Andrew Clough, Public Works Director
SUBJECT **Resolution Of The City Council Of The City Of Emeryville Authorizing The City Manager To Execute A Master Funding Agreement With Metropolitan Transportation Commission (MTC)**

Resolution Of The City Council Of The City of Emeryville Authorizing the City Manager To Execute A Funding Agreement For Innovative Deployments To Enhance Arterials (IDEA) Category 2 Project, A Supplement 1 To The Master Funding Agreement With MTC, And For All Other Agreements Necessary To Implement The IDEA Project

RECOMMENDATION

Staff recommends that the City Council adopt the above-referenced resolutions, which are necessary to assure completion of the Innovative Deployments to Enhance Arterials (IDEA) Project.

BACKGROUND

In August 2017, Metropolitan Transportation Commission (MTC) initially invited eligible Bay Area public agencies to submit applications for consideration under a new regional initiative called "Innovative Deployments to Enhance Arterials" (IDEA). The new grant program aims to use \$13 million in federal funds to help cities, counties and transit agencies improve the operation of major arterial roadways and to make these roadways ready for connected and automated vehicle technologies.

The Bay Area has over 33,000 directional miles of arterials and local streets, and approximately 11,000 traffic signals. Many of the region's major arterials carry heavy traffic and experience significant congestion during weekday peak periods. This can lead to loss of productive time, unreliable travel for cars and buses, and increased safety issues for bicyclists and pedestrians.

IDEA is designed to help cities, counties and transit agencies deploy advanced technologies to enhance mobility, sustainability and safety along major arterials. Public agencies may opt to deploy mature, commercially-available technologies on their own or integrated with newer, higher-risk connected and automated vehicle technologies. Agencies also may choose to support regional readiness for future connected/automated vehicle on arterials by deploying pilot concept projects using cutting-edge connected/automated vehicle technologies.

Grant funds were directed towards two categories of projects: Category 1 projects deploy mature, commercially-available advanced technologies. Category 2 projects deploy connected/automated vehicle technologies.

Federal funds available through IDEA are designed to assist agencies with project implementation through capital support and consultant technical assistance. Services to be performed by the consultants will be defined by MTC, in coordination with the grant recipients.

DISCUSSION

On November 17th, 2017, City Staff turned in an IDEA application to MTC for a proposed project that included a fusion of various technology-focused transportation elements to be deployed throughout the City of Emeryville. On February 14th, 2018, MTC's Programming and Allocations Committee released the results and Emeryville's project was selected to be programmed and funded.

Emeryville's project ("Project") elements include:

Automated Traffic Signal Performance Measures (ATSPMs) (Category 1)

ATSPMs are proposed to be deployed at fifteen (15) traffic signals owned and maintained by the City of Emeryville to provide the City with a means to proactively monitor system performance metrics (i.e. corridor travel time, arrivals on red, split failures, vehicle and pedestrian delay). With deployment of ATSPMs, real-time high resolution data will be made available to the City of Emeryville to utilize in analyses of potential isolated or corridor-wide improvements (i.e. signal timing adjustments). The City will also have the ability to utilize the data collected to monitor system performance after deployment of improvements and make data driven decisions. As part of the project, existing 170 traffic signal controllers will be upgraded to 2070 controllers which are needed to support the deployment of ATSPM infrastructure.

Transit Signal Priority (TSP) (Category 1)

The City of Emeryville, in partnership with AC Transit and Emery-Go-Round, is proposing to expand upon its existing TSP system by deploying new and upgraded TSP infrastructure at signalized intersections along project corridors utilized by AC Transit and Emery-Go-Round buses. TSP is a low-cost, mature operational strategy that facilitates the movement of transit buses through signalized intersections to improve transit reliability. Intersections that already have legacy infrared (IR) phase selectors will be upgraded to Opticom multimode phase selectors, and new multimode phase selectors will be procured and installed at locations that currently do not have existing TSP equipment. New Opticom GPS vehicle equipment will be procured for AC Transit and Emery-Go-Round for installation on buses that utilize the project corridors. The City may request support from its on-call traffic engineering consultant to provide technical support in updating the TSP settings and timing parameters for the traffic signals on the project corridors. Through collaboration, the City and transit operators will achieve comprehensive benefits for users of all modes of transportation.

Bicycle Signal Prioritization (Category 2)

Bicycle Signal Prioritization is proposed to be deployed at City owned and maintained traffic signals by utilizing an innovative mobile application that is developed to communicate with the traffic signal controllers and provide detection functionality. The bike application is an innovative, cost-effective, GPS-based advanced bicycle detection solution. The mobile application installed on cyclists' smartphones can be independent of existing agency signal systems and includes an interface that allows a call to be placed to the local controller by sending a secure wireless message from the app to a cloud server. This solution is completely software based and leverages modern technologies without any field construction and works with standard communication protocols (e.g., AB3418, NTCIP). As part of the project, roadway signs and pavement markings to support bicycle signal prioritization would be developed and installed. The City may also request support from its on-call traffic engineering consultant to provide technical assistance.

In September 2018, MTC sent over various funding agreements which will need to be signed and executed in order to begin work on this Project (See Exhibits B, C, and D). The first agreement to be signed is a Master Funding Agreement between MTC and the City of Emeryville that will last through 2027. The new Master Funding Agreement is a funding agreement that will govern both the current Project, and other future projects that may receive MTC grants.

The two other agreements to be executed are a Funding Agreement for Innovative Deployments to Enhance Arterials (IDEA) Category 2 Project – Local Match Contribution and a Supplement 1 to the Master Funding Agreement. Both of these agreements are specific to the Project.

It is anticipated that additional agreements will be needed with MTC, Alameda CTC, AC Transit, and the ETMA to complete this project. Staff recommends for City Council to grant authority to the City Manager to execute all other agreements necessary to assure completion of the Innovative Deployments to Enhance Arterials (IDEA) Project.

FISCAL IMPACT

The MTC Funding Agreement for the IDEA project is summarized in Exhibit A. MTC will provide \$836,936 in funding with a required total estimated local cash match of \$170,888 (15% requirement) and an in-kind match of \$150,050 (10% requirement), for a total project value of \$1,157,874.

Alameda CTC is expected to fund the City's portion of the 15% local cash match, while AC Transit and ETMA will fund their respective required matches for equipment installed

on their buses. Emeryville will be required to pay MTC the entire local cash match and will later be reimbursed by Alameda CTC, AC Transit, and ETMA for their portions.

STAFF COMMUNICATION WITH THE PUBLIC

City Staff has discussed this issue at these times:

1. City Council Study Session – Transportation Projects: Prioritize Potential Capital Projects and Consider ACTC and SB 1 Funding Opportunities on December 19, 2017.
2. Various Public Works/Transportation Committee and Bicycle/Pedestrian Advisory Committee Meetings throughout 2018.

CONCLUSION

Staff recommends that the City Council adopt the attached resolution authorizing the City Manager to execute a Master Funding Agreement with Metropolitan Transportation Commission (MTC), and adopt the attached resolution authorizing the City to execute a Funding Agreement for Innovative Deployments to Enhance Arterials (IDEA) Category 2 Project, a Supplement 1 to the Master Funding Agreement with MTC, and for all other agreements necessary to implement the IDEA Project.

PREPARED BY: Ryan O'Connell, Senior Civil Engineer, Public Works

APPROVED AND FORWARDED TO THE CITY COUNCIL OF THE CITY OF EMERYVILLE:



Christine Daniel, City Manager

ATTACHMENTS

- Exhibit A - MTC Funding Agreement Summary
- Exhibit B – MTC Master Funding Agreement
- Exhibit C – MTC Funding Agreement for IDEA Category 2 Project
- Exhibit D – Supplement 1 to Master Funding Agreement
- Draft Resolutions