



DATE: June 26, 2018

TO: Mayor and City Council

FROM: Interim Director of Public Works

SUBJECT: Innovative Deployments to Enhance Arterials (IDEA) Grant: Funding Agreements between Metropolitan Transportation Commission (MTC) and the City of Hayward

RECOMMENDATION

That Council authorizes the City Manager to execute two funding agreements between the MTC and the City of Hayward for the IDEA Grant.

SUMMARY

In February 2018, staff successfully obtained an IDEA grant from the MTC. The City is one of only two cities in Alameda County to be awarded this grant. The grant uniquely positions the City to utilize advanced technologies to better understand and address regional and local traffic congestion. According to the MTC, regional traffic congestion in the Bay Area has grown over 80% between 2010 and 2016. The increasingly congested conditions on freeways increased traffic on local roadways as motorists sought alternate routes. Unlike freeways, which are intended to solely serve motorized traffic, local roadways must accommodate multiple road users (e.g. vehicles, bicycles, and pedestrians), while managing access to businesses, side streets, and residential neighborhoods.

The IDEA grant will allow staff to focus on Hayward's vital east-west and north-south corridors, such as Tennyson Road, Foothill Boulevard, Mission Boulevard, and parallel roadways, such as Second Street. It supports the installation of advanced Bluetooth technologies and procurement of data driven tools to monitor and analyze the City's unique traffic patterns. These advanced technologies will enhance the productivity of adaptive traffic signals, and help reduce congestion.

BACKGROUND

A noticeable portion of traffic volume on local City streets is attributable to regional through traffic. This is explained in part by the City's proximity to several major regional corridors, including I-580, I-880, SR-238, and SR-92. Heavy congestion and accident occurrence on the freeways result in inconsistent traffic volumes and patterns on local streets. As such, regional pass-through traffic in Hayward fluctuates on a regular basis

To help address congestion, the City is on the forefront of implementing adaptive traffic signals on major corridors. They dynamically adjust signal timing based on traffic demand. While adaptive signals and coordination are valuable tools on heavily utilized roadways, they work best when traffic patterns and volumes are consistent. Frequent fluctuations and inconsistent changes in traffic flow and patterns cause adaptive systems to operate at less than maximum efficacy.

To build upon the City's existing traffic signal infrastructure and to maximize its efficiency, staff is exploring the use of advanced transportation technologies and data driven tools that enable robust reporting to increase effectiveness and efficiency of the City's transportation network, and to address traffic congestion issues.

DISCUSSION

Staff successfully obtained a grant under MTC's IDEA program, an initiative that is designed to support cities, counties, and transit agencies in the implementation of mature, commercially available technologies to:

1. Improve travel time and reliability along arterials for autos and transit vehicles;
2. Improve safety of motorists, transit riders, bicyclists, and pedestrians;
3. Decrease motor vehicle emissions and fuel consumption; and
4. Improve knowledge of and proficiency in the use of advanced technologies for arterial operations.

The grant funds will be used toward the deployment of advanced data-collection tools along Tennyson Road, Foothill Boulevard, Mission Boulevard, and Second Street. These technologies will provide detailed and comparable point-to-point reports for staff to better understand regional through traffic and its effects on local roadways. Key benefits of the technology include remote monitoring, and traffic probes that measure travel times and identify common points of delay and congestion throughout the transportation network. Staff will use the data to develop comprehensive short-term and long-term solutions to relieve traffic congestion.

Review by Council Infrastructure Committee (CIC)

Given the grant's timeline, staff was not able to schedule this item on the CIC agenda.

ECONOMIC IMPACT

The IDEA grant allows staff to implement advanced technologies to develop solutions to traffic congestion along vital east-west and north-south corridors. Increased traffic flow and reduced travel times through these corridors will reduce commuters' time on the roads and make local businesses more accessible, which has a potential positive economic impact.

FISCAL IMPACT

The total project cost for the purchase and installation of modern Bluetooth technology on the signals along Tennyson Road, Foothill Boulevard, Second Street, and Mission Boulevard is \$402,000. The grant funds approximately \$302,000 on a reimbursable basis. The City contribution is \$60,000 (15%) in cash, and \$40,000 (10%) in in-kind services. These funds were included in the Adopted FY 2019 – FY 2028 Capital Improvement Program – Street System Improvement Fund.

STRATEGIC INITIATIVES

This agenda item supports the Complete Streets Strategic Initiative. The purpose of the Complete Streets initiative is to build streets that are safe, comfortable, and convenient for everyone regardless of age or ability, including motorists, pedestrians, bicyclists, and public transportation riders. This item supports the following goals and objectives:

Goal 2: Provide Complete Streets that balance the diverse needs of users of the public right-of-way.

Objective 1: Increase walking, biking, transit usage, carpooling, and other sustainable modes of transportation by designing and retrofitting streets to accommodate all modes.

SUSTAINABILITY FEATURES

The advanced transportation technologies will reduce vehicle idling, improve traffic flow, and reduce greenhouse gases. Traffic signal systems also improve pedestrian and bicycle safety at intersections to promote alternate modes of transportation. In addition, the mobility goals established as part of the City's 2040 General Plan, includes the goal of improving local circulation, which is dependent on the operations of the traffic signal system network within the City. By operating and maintaining an advanced traffic signal system, the local circulation goal (Goal M-4), "enhance and maintain local access and circulation, while protecting neighborhoods from through traffic," can be achieved.

NEXT STEPS

Following execution of the fund transfer agreement, a project kick-off meeting will take place between the City and MTC staff. The kick-off meeting is tentatively scheduled for early July 2018. Project schedule and timeline will be determined at the kick-off meeting.

Prepared by: Steven Chang, Associate Transportation Planner
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Recommended by: Alex Ameri, Interim Director of Public Works

Approved by:

A handwritten signature in black ink, appearing to read 'K. McAdoo', written in a cursive style.

Kelly McAdoo, City Manager