



City of Chula Vista

Staff Report

File#: 17-0338, **Item#:** 4.

CONSIDERATION OF ADOPTING THE TRAFFIC SIGNAL COMMUNICATIONS MASTER PLAN

RESOLUTION NO. 2017-173 OF THE CITY COUNCIL OF THE CITY OF CHULA VISTA ADOPTING THE CITY'S TRAFFIC SIGNAL COMMUNICATIONS MASTER PLAN

RECOMMENDED ACTION

Council adopt the resolution.

SUMMARY

On January 5, 2016, Council approved an agreement between the City of Chula Vista and STC Traffic, Inc. for the development of the City's first Traffic Signal Communications Master Plan (the Plan). The goals of the Plan were to identify the condition of the existing communications system, clearly assess system gaps, and create a tool that could be used as a guide to implement immediate and long term communications Intelligent Transportation System (ITS) technologies to achieve a state-of-the-art traffic signal system.

ENVIRONMENTAL REVIEW

Environmental Notice

The Project qualifies for a Statutory Exemption pursuant to Section 15262 (Feasibility and Planning Studies) pursuant to the California Environmental Quality Act State Guidelines.

Environmental Determination

The Director of Development Services has reviewed the proposed activity for compliance with the California Environmental Quality Act (CEQA) and has determined that the proposed action, adoption of the Traffic Signal Communications Master Plan, falls under a Statutory Exemption pursuant to Section 15262 (Feasibility and Planning Studies) of the State CEQA Guidelines. Thus, no further environmental review is necessary, at this time. However, projects resulting from Traffic Signal Communications Master Plan, may require environmental review and a CEQA determination completed prior to commencing said project(s).

BOARD/COMMISSION RECOMMENDATION

A draft of the Plan was presented as an informational item at the Safety Commission meeting on May 3, 2017.

DISCUSSION

On January 5, 2016, Council approved an agreement between the City of Chula Vista and STC Traffic, Inc. for the development of the Traffic Signal Communications Master Plan. STC staff diligently researched our existing system and records, interviewed City staff, and submitted a complete Plan in early July 2017.

The new Plan encompasses four distinct and critical elements: (1) existing systems assessment, (2)

needs assessment, (3) future system Architecture and ITS elements, and (4) implementation phasing plan including cost-benefit analysis. Each of these elements account for key components to help guide the City toward effective modernization of a comprehensive traffic signal communications network which will support cutting-edge transportation systems and serve as a guiding foundation for the City's deployment of Smart City technologies.

With the City's emphasis on technology to provide excellent and more efficient services to the public, the Plan provides the guiding framework for the repair, upgrade, and expansion of a traffic signal communications network that will utilize the latest in communications technology to provide a reliable and robust communications network for the asset owner and other departments throughout the City in need of a strong and effective communications network.

Implementation of the \$16M Plan is divided into three phases with a goal of full implementation within 10 years (depending on available funding). The three phases are summarized below:

Phase 1: City-Owned Infrastructure (Year 1-3)

- Upgrade existing fiber optic systems to Ethernet communications
- Convert leased phone lines to City-owner wireless systems
- Install video monitoring systems at priority locations
- Upgrade traffic signal equipment to Ethernet-enabled devices Citywide

Phase 2: Infrastructure & Priority Corridors Upgrade (Year 4-6)

- Install fiber optic cable in existing empty conduits
- Install conduit and fiber optic cable to resolve communications gaps
- Upgrade traffic signal equipment on priority corridors with new 2070ATC controllers and CCTV cameras

Phase 3: Citywide Buildout (Year 7-10)

- Complete communications network
- Upgrade remaining traffic signal equipment with new 2070ATC controllers and CCTV cameras for remote monitoring

Pending available funding, the Department of Engineering and Capital Projects, is planning to accelerate the implementation of the Plan and complete the recommended work in the next 5-7 years. This will be accomplished by aggressively seeking grant opportunities, public-public partnerships, and public-private partnerships to secure additional funding and/or share access to others' communications infrastructure. It is also important to note that as technology rapidly evolves and as the City marches on to become a Smart City, it is critical that the recommendations in the Plan be considered by staff, and if desired, be implemented in the most efficient and expeditious manner in order to achieve the best return on our investment and to provide the public with the best available technology/systems which will enhance our citizens' quality of life in the City of Chula Vista.

As a growing city, with dozens of traffic signals yet to be built, this Plan supports our effort to utilize modern telecommunications construction methods that will result in a new network with a much greater level of service and connectivity. This new network will provide the capability to provide more efficient and effective traffic signal coordination timing, reduce travel times and greenhouse gases, and upgrade the network for future implementation of adaptive traffic control systems, video

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monitoring (for traffic) systems, pedestrian and bike counters, and many other ITS, autonomous and connected vehicle, and Smart City technologies.

The Plan is already in use and is serving as a guide for staff to more effectively plan, design, and implement cutting-edge technology that will provide the public with a safer and more efficient network for all modes of transportation.

DECISION-MAKER CONFLICT

Staff has reviewed the decision contemplated by this action and has determined that it is not site-specific and consequently, the 500-foot rule found in California Code of Regulations Title 2, section 18702.2(a)(11), is not applicable to this decision for purposes of determining a disqualifying real property-related financial conflict of interest under the Political Reform Act (Cal. Gov't Code § 87100, et seq.).

LINK TO STRATEGIC GOALS

The City's Strategic Plan has five major goals: Operational Excellence, Economic Vitality, Healthy Community, Strong and Secure Neighborhoods and a Connected Community. The Traffic Signal Communications Master Plan resolution supports the Operational Excellence goal, as it promotes the use of high-end equipment and technology so employees can achieve high quality public service which results in enhanced safety and efficiency to our transportation system. This resolution also supports other major goals in the Strategic Plan since the implementation of a robust traffic signal communications network and advanced ITS technologies will create a strong foundation for the more effective deployment of Smart City Initiative technologies in the very near future.

CURRENT YEAR FISCAL IMPACT

Passage of this resolution will not have any direct fiscal impact on the City. The City Council adopted budget includes \$3.0 million in Measure P - temporary sales tax funds allocated to Traffic Signal Systems.

ONGOING FISCAL IMPACT

Staff will continue to actively seek grant opportunities, public-public partnerships, and public-private partnerships to secure additional funding and/or share access to others' communications infrastructures. Future Measure P funds are also included in the Expenditure Plan for Traffic Signal projects.

ATTACHMENT

1. Traffic Signal Communications Master Plan

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