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Agenda Item #:

Staff Report
City of Manhattan Beach

TO: Honorable Mayor Montgomery and Members of the City Council

THROUGH: Geoff Dolan, City Manager

FROM: Richard Thompson, Director of Community Development
Erik Zandvliet, City Traffic Engineer

DATE: June 17, 2008

SUBJECT: Presentation of a City Council Work Plan Item Regarding Intelligent Transportation System Projects along Rosecrans Avenue and Sepulveda Boulevard

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RECOMMENDATION:
Staff recommends that the City Council receive and file this report.

FISCAL IMPLICATION:
Costs for maintenance of the traffic signal systems are included in the City's traffic signal maintenance budget.

BACKGROUND:
The City Council, in its 2008-2009 Work Plan, asked Staff to investigate and provide a status update on the ongoing traffic signal system improvements on both Rosecrans Avenue and Sepulveda Boulevard. This report gives an overall description of the projects and current status on its implementation. Representatives from Los Angeles County Department of Public Works and Caltrans have been invited to the presentation to assist in helping answer any technical questions regarding the two traffic signal systems.

DISCUSSION:
Intelligent Transportation Systems, or ITS, is a collective term for traffic signal systems that are coordinated and communicate with a central Traffic Management Center (TMC). This TMC could be located nearby or at a regional center that controls many traffic signal systems. A traffic management center is usually staffed with personnel that can monitor the operation and performance of the traffic flow as well as respond to critical traffic events by changing signal timing remotely in real-time. An ITS may include closed circuit television cameras (CCTV), in-pavement traffic flow detectors and changeable message signs. Often the traffic management center makes traffic flow information available to other public service providers that provide real-time traveler information to motorists through the Internet, wireless broadcasts, GPS services, radio and TV

coverage. The system goals are to reduce motorist travel time and delay, as well as to reduce overall air pollution and travel distance.

Rosecrans Avenue Traffic Signal System

The South Bay Cities Council of Governments (SBCCOG) received transportation funding several years ago to implement one of the first ITS systems in the County. Los Angeles County Department of Public Works managed the work on behalf of the member cities, who own the signals and streets within their jurisdictions. One of the first roadways to be completed is Rosecrans Avenue. Between 2005 and 2007, traffic signal modifications were completed at six intersections through three separate construction contracts. The work was done in conjunction with major street improvements that were required as mitigation measures for nearby developments, such as adding travel lanes and additional left turn pockets.

The intersections and updated timing dates are:

1. Rosecrans Avenue at Village Drive (8/1/07)
2. Rosecrans Avenue at Parkway / Nash Street (12/20/07)
3. Rosecrans Avenue at Market Place / Apollo Street (12/17/07)
4. Rosecrans Avenue at Redondo Avenue / Douglas Street (7/16/07)
5. Rosecrans Avenue at Manhattan Gateway / Continental Circle (7/5/07)
6. Rosecrans Avenue at Aviation Boulevard (7/07)

New traffic signal timing was installed between July and December 2007 as street improvements at each individual intersection became operational. The system was connected to the LA County's Traffic Control System, called KITS, on August 3, 2007. The system communicates locally via wireless spread spectrum radio antennas mounted on the traffic signal poles which is then linked by modem to the KITS Traffic Management Center in Alhambra.

The current traffic signal system extends from Village Drive to Ocean Gate Avenue in the City of Hawthorne. The signals run on a 120 second cycle between 5:30am and 8:30pm weekdays, with various pre-set timing adjustments made at certain times to accommodate peak hour traffic flows. The signals operate freely (on a demand basis) during the late evening. Staff is aware of only one operational issue at this time: at Rosecrans Avenue and Parkway a few vehicle detectors are not functioning, which is causing timing inefficiencies.

In response to recent citizen requests, the City authorized LA County in March to retime the signals to further enhance traffic flow, especially during the weekends. This retiming effort is almost completed and is expected to be implemented within the next few weeks, pending the necessary approval from the City of El Segundo, which shares ownership of the signals with Manhattan Beach.

Sepulveda Boulevard Traffic Signal System

In the past year, the California Department of Transportation (CALTRANS) has undertaken a task to upgrade their traffic signal controllers and timing along State Route 1 – Sepulveda Boulevard

from the Orange County line northerly to Malibu. The work included fiber optic communication lines, new signal controllers, additional vehicle detectors and CCTVs (at Manhattan Beach Boulevard). The work in the City was completed in July 2007 and the system is now connected with the CALTRANS Adaptive Traffic Control System (ATCS) located in Glendale. This new equipment enables CALTRANS operators to monitor traffic flow and congestion on a real-time basis and modify timing plans if problems occur.

The intersections are:

1. Sepulveda Boulevard at Rosecrans Avenue
2. Sepulveda Boulevard at 33rd Street
3. Sepulveda Boulevard at 30th Street
4. Sepulveda Boulevard at Marine Avenue
5. Sepulveda Boulevard at 18th Street
6. Sepulveda Boulevard at Manhattan Beach Boulevard
7. Sepulveda Boulevard at 8th Street
8. Sepulveda Boulevard at 2nd Street
9. Sepulveda Boulevard at Longfellow Avenue
10. Sepulveda Boulevard at Artesia Boulevard

The portion of traffic signal system that runs through Manhattan Beach extends from Hughes Drive to Artesia Boulevard. The signals run on a 200 second cycle (over 3 minutes) between 6am and 8pm weekdays and 10am to 8pm on weekends with various pre-set timing adjustments made at certain times to accommodate peak hour traffic flows. While this long cycle length has not changed in many years, minor changes have been made to some green times in response to increasing traffic volumes. The signals operate freely (on a demand basis) during the late evening.

Staff is not aware of any further signal timing changes planned by CALTRANS at this time. However, a construction project is planned at Sepulveda Boulevard/Manhattan Beach Boulevard to lengthen the westbound to southbound left turn lanes. In addition, the City has two projects to construct dual left turn pockets at Sepulveda Boulevard/Marine Avenue and at Sepulveda Boulevard/Manhattan Beach Boulevard during the next fiscal year. These projects are expected to relieve some traffic congestion along Sepulveda Boulevard.