

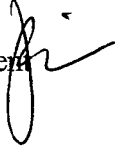


# Staff Report

## 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:** November 18, 2008

**SUBJECT:** Status Update of a City Council Work Plan Item Regarding Intelligent Transportation System Project along Rosecrans Avenue

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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 item was first presented to the City Council on June 17, 2008. Los Angeles County representatives attended the meeting and acknowledged that the traffic coordination needed additional fine-tuning and several vehicle detectors were not functioning. This report provides an update on the current traffic signal operation along Rosecrans Avenue.

**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). A TMC 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 as well as make real-time information available to the traveling public 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.

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 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, and between 6am and 8:30pm on weekends, 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. The intersections are:

1. Rosecrans Avenue at Village Drive
2. Rosecrans Avenue at Parkway / Nash Street
3. Rosecrans Avenue at Market Place / Apollo Street
4. Rosecrans Avenue at Redondo Avenue / Douglas Street
5. Rosecrans Avenue at Manhattan Gateway / Continental Circle
6. Rosecrans Avenue at Aviation Boulevard

It should be noted that the Rosecrans Avenue ITS system is not connected to the Sepulveda Boulevard ITS system due to different communications protocols and “closed” system structure of State highways such as Sepulveda Boulevard. Due to this limitation, drivers approaching or leaving Sepulveda Boulevard may experience a short delay at the next few traffic signals before beginning to catch the flow of green lights along either system.

The first signal coordination 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 phone modem to the KITS Traffic Management Center in Alhambra. The County has also provided the City with a workstation to monitor these signals from City Hall via a secure internet connection to the TMC.

In August 2008, LA County technicians conducted field observations during the peak hours and subsequently made adjustments to the signal timing. This retiming effort is now completed.

Before the latest timing was implemented, City staff conducted a series of time-delay studies along Rosecrans Avenue to establish the pre-existing conditions in the AM and PM peak commuting hours, when congestion is greatest. The “before” study was conducted during the week of July 7, 2008 between Sepulveda Boulevard and Aviation Boulevard. The “after” study was conducted during the week of November 10, 2008. Five runs were made in each direction for each peak period, totaling 40 total runs. A comparison of the “before” and “after” studies indicated the following:

**ROSECRANS AVENUE  
TIME-DELAY STUDY COMPARISON**

<b>PERIOD</b>	<b>Average Time (Minutes:Seconds)</b>			<b>Average Delay (Minutes:Seconds)</b>		
	<b>Before 7/8/08</b>	<b>After 11/08</b>	<b>Change</b>	<b>Before 7/8/08</b>	<b>After 11/08</b>	<b>Change</b>
<b>AM PEAK</b>						
Eastbound	2:13	3:26	+1:13	0:34	1:02	+0:32
Westbound	3:31	2:40	-0:59	1:28	1:07	-0:21
<b>PM PEAK</b>						
Eastbound	4:07	4:05	-0:02	2:03	1:41	-0:22
Westbound	3:46	2:27	-1:19	1:06	0:33	-0:33

**CONCLUSION:**

At this time, the signal coordination along Rosecrans Avenue is operational and had been fine-tuned to minimize overall stops and delay for traffic in both directions. Average vehicle delay is low in comparison to other highly signalized streets in the South Bay region. Staff will continue to monitor the ITS system and notify LA County Traffic Operations if any anomalies occur. Staff recommends that the City Council receive and file this report.