

**SOUTH COAST AQMD/MSRC**

**CONTRACT ML05014**

**Florence Avenue / Mills Avenue Signal Synchronization Project**

**FINAL REPORT**

**Prepared for the Mobile Source Air Pollution Review Committee  
(MSRC) under the AB 2766 Discretionary Fund Work Program**

**By:**

**LOS ANGELES COUNTY**

**DEPARTMENT OF PUBLIC WORKS**

**900 South Fremont Avenue**

**Alhambra, California 91803**

**December 2018**

### **Acknowledgments:**

This project was completed in partnership with the County of Los Angeles Department of Public Works (Public Works), our consultant Transportation and Engineering Solutions, Inc., contractor California Professional Engineering, Inc. and the City of Santa Fe Springs with partial funding provided by the Los Angeles County Metropolitan Transportation Authority (Metro).

This report was submitted in fulfillment of ML05014 for the Florence Avenue/Mills Avenue Signal Synchronization Project by the Los Angeles County Department of Public Works under the sponsorship of the Mobile Source Air Pollution Reduction Review Committee (MSRC). Work was completed as of September 2018.

### **Disclaimer:**

The statement and conclusions in this report are those of the contractor and not necessarily those of the Mobile Source Air Pollution Reduction Review Committee (MSRC) or the South Coast Air Quality Management District (SCAQMD). The mention of commercial products, their sources or their uses in connection with material reported herein is not to be construed as either an actual or implied endorsement of such products.

### **Project Description and Work Performed:**

In May 2007, Public Works was awarded a grant to design and construct traffic signal synchronization improvements for fifteen (15) traffic signals along a 4.9 mile segment of Florence Avenue/Mills Avenue. Public Works was to upgrade each traffic signal to Federal and State standards by providing additional vehicle detection to enable each intersection to operate as a fully actuated signalized intersection and to enable each signal to utilize time-based coordination.

The goal of this project, completed in partnership with the City of Santa Fe Springs with partial funding provided by Metro, was to improve traffic signal operation along Florence Avenue/Mills Avenue. The work included retiming the traffic signals to improve the overall progression of traffic along and crossing the route. Additionally, modified signing and striping was installed to improve overall progression. Upgraded equipment and other roadway improvements were installed which included: highway safety lights, signal standards and mast arms to increase visibility of mast arm-mounted vehicle heads. The Project also cut back median noses out of crosswalks, and installed a fully protected left turn phasing for the east and west approaches of Mills Avenue at Mulberry Drive.

### **The following improvements were installed:**

Various improvements were installed with coordination timing along Florence Avenue/Mills Avenue. Specifically, the work completed at each intersection was as follows:

Florence Avenue at Norwalk Boulevard –

- Installed Vehicle Detection Loops
- Installed ADA compliant pedestrian push button
- Replaced Pedestrian Heads with Countdown Pedestrian Heads
- Installed new signs

Florence Avenue at Bloomfield Avenue –

- Installed new poles with 12 feet mast arms
- Installed new video detection cameras
- Installed vehicle detection loops
- Replaced Pedestrian Heads with Countdown Pedestrian Heads
- Installed new traffic signal conduits
- Installed new signs
- Installed curb access ramps per Caltrans Standard
- Relocated traffic signal cabinet
- Cut back median nose

Florence Avenue at Shoemaker Avenue-

- Installed new poles with 12 feet mast arms
- Installed new video detection cameras
- Installed vehicle detection loops
- Replaced Pedestrian Heads with Countdown Pedestrian Heads
- Replaced vehicle heads with 3-12" LED Vehicle Heads
- Installed ADA compliant pedestrian push buttons
- Installed new traffic signal conduits
- Installed curb access ramps per Caltrans Standard

Florence Avenue at Painter Avenue –

- Installed new poles with 12 feet mast arms
- Installed vehicle detection loops
- Installed Detector Lead In Cables
- Installed ADA compliant pedestrian push buttons
- Installed new traffic signal conduits
- Installed curb access ramps per Caltrans Standard

Florence Avenue at Laurel Avenue –

- Installed vehicle detection loops
- Replaced Pedestrian Heads with Countdown Pedestrian Heads

Florence Avenue/Mills Avenue at Telegraph Road –

- Installed new poles with 12 feet mast arms
- Replaced Pedestrian Heads with Countdown Pedestrian Heads
- Replaced vehicle heads with 3-12" LED Vehicle Heads
- Replaced Safety lights with new LED Highway Safety lights
- Installed crosswalk
- Installed new traffic signal conduits
- Installed curb access ramps per Caltrans Standard

Mills Avenue at Trumball Street –

- Installed new poles
- Replaced Pedestrian Heads with Countdown Pedestrian Heads
- Replaced vehicle heads with 3-12" LED Vehicle Heads
- Replaced Safety lights with new LED Highway Safety lights

Mills Avenue at Broadway –

- Installed vehicle detection loops
- Replaced Pedestrian Heads with Countdown Pedestrian Heads
- Installed new signs

Mills Avenue at Mulberry Drive –

- Installed protected left turn phasing for the east and west approaches
- Installed new poles with 12 feet mast arms
- Installed new video detection system
- Installed vehicle detection loops
- Replaced vehicle heads with 3-12" LED Vehicle Heads
- Replaced Pedestrian Heads with Countdown Pedestrian Heads
- Installed new traffic signal conduits

**Problems Encountered:**

**Construction Delays:**

- Utility conflicts that required extensive design modifications.
- Change order to install a fully protected left-turn phasing for the east and west approaches of Mills Avenue at Mulberry Drive.

**Emissions Benefits:**

This project has resulted in improved movement of vehicles and decreased the amount of time motorists being stopped at red traffic signals. It has reduced delays on Florence Avenue/Mills Avenue from Orr and Day Road to Whittier Boulevard, thereby alleviating motorists' frustrations air pollution and operational costs. As a result of this project, the

average reduction in peak hour travel time per vehicle for the route for eastbound traffic was 0.27 minutes. This reduction results in an estimated saving of 0.98 gallons of fuel, and 0.95 tons of CO2 per vehicle. Reduction in peak hour travel time per vehicle for westbound traffic was 0.32 minutes. This results in an estimate savings of 1.18 gallons of fuel, and 1.14 tons of CO2 per vehicle per day (Graph attached). It should be noted that while these travel time savings may appear to be minimal, the travel time savings were offset by increases in pedestrian crossing times required at all traffic signals which were mandated by the Federal government. Had these changes not been required at the same time as the implementation of these improvements, the route would have realized a greater travel time reduction and subsequently, greater emission savings.

### **Photographs & Outreach:**

Public Works issued a Press Release (attached) on October 25, 2018, to recognize AQMD/MSRC for the funding it has provided to design and construct traffic signal synchronization improvements for Florence Avenue/Mills Avenue signal synchronization project.

### **Summary and Conclusions:**

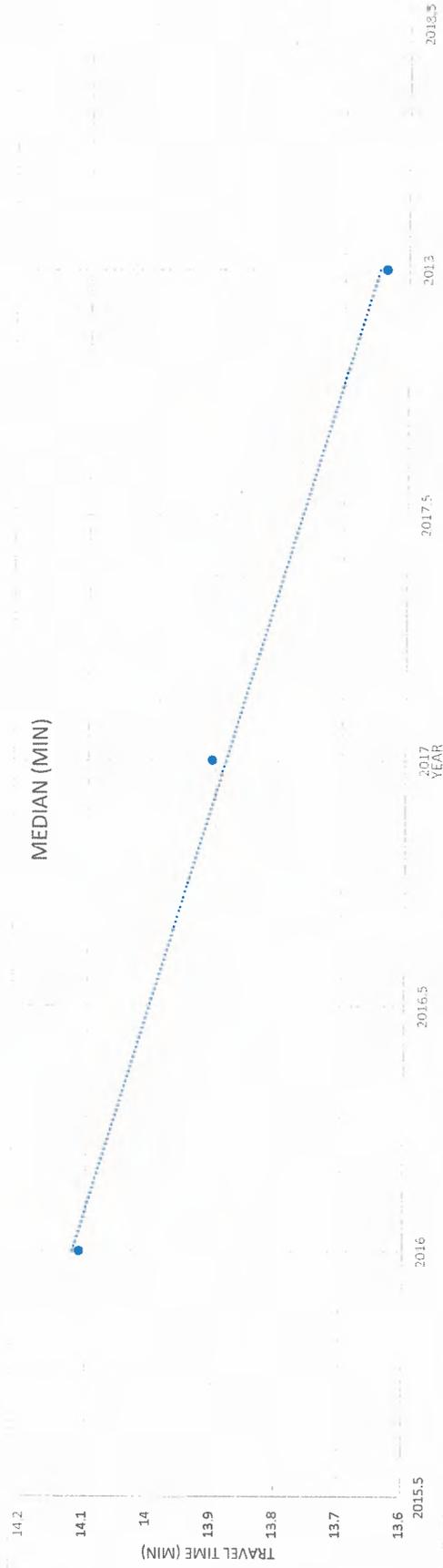
This project enabled Public Works to improve the movement of vehicles and decrease the amount of time motorists will be stopping at red traffic signals by synchronizing and adjusting the timing of 15 traffic signals along the route.

Although major improvements have been achieved with this project, Public Works is continuing to work with other agencies to alleviate traffic congestion Countywide.

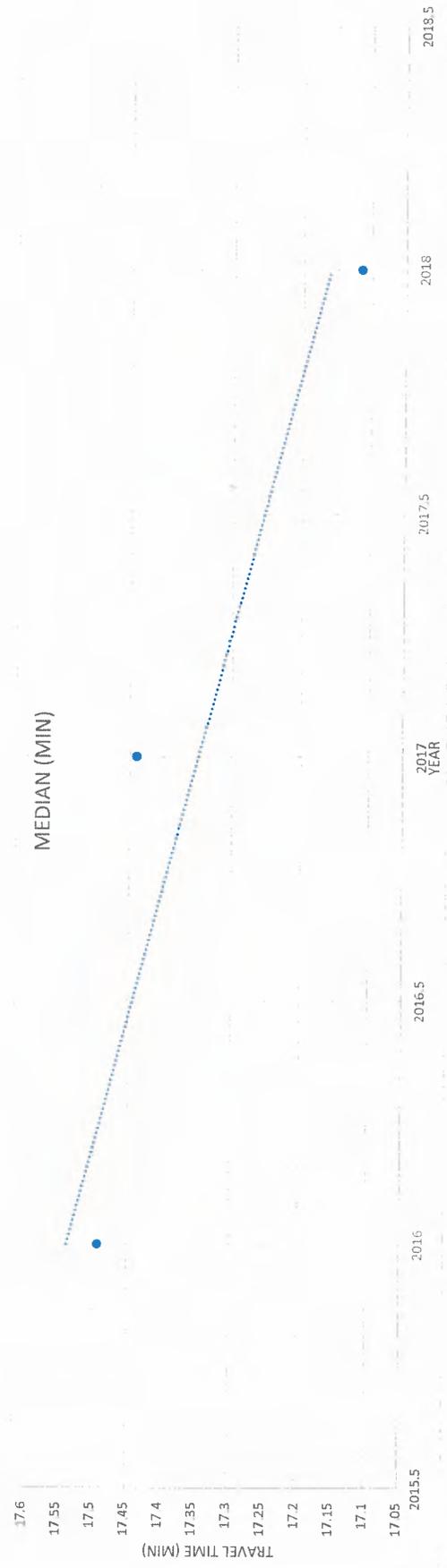
P:\t\pub\WPFILES\FILES\TRA\MSRC-GRANTS\MSRC AQMD Florence-Mills TSSP Final Report (2).doc

# TRAVEL TIME SAVINGS PER VEHICLE

## AVERAGE Peak EB Florence Ave-Mills Ave from Orr and Day Road to Whittier Blvd



## AVERAGE Peak WB Florence Ave-Mills Ave from Orr and Day Road to Whittier Boulevard





LOS ANGELES COUNTY DEPARTMENT OF PUBLIC WORKS  
CONSTRUCTION DIVISION

**NOTICE OF FIELD ACCEPTANCE**

Project Name	FLORENCE AVENUE/MILLS AVENUE FROM ORR AND DAY ROAD TO WHITTIER BOULEVARD	Project ID No.	TSM0010312
Project Description	Modification and synchronization of traffic signals; reconstruction of curb and gutter, sidewalk, and curb ramps; installation of striping and pavement markings; and the performance of other appurtenant work.		
Contractor	California Professional Engineering, Inc.		
Today's Date	9/12/2018		

To:	David MacGregor
Division	Road Maintenance
From:	Steve Burger
Division	Construction

The field acceptance date for this contract is 8/30/2018.

Additional comments for Maintenance Division:

Resident Engineer/Inspector	Cindy Schwebke
Area Supervisor	Omid Emam
Office Engineer	Anoush Hovsepian

CC: Construction Division (Caddick)

## **Salynne Wong**

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**From:** Cindy Schwebke  
**Sent:** Tuesday, October 23, 2018 11:04 AM  
**To:** Salynne Wong  
**Cc:** Anoush Hovsepian  
**Subject:** FW: Project # TSM0010312

Good morning Salynne,

Please see the e-mail below from the City of Santa Fe Springs for the Florence Project (TSM0010312). As for the antenna's he is referring to, the County will be installing them in this next week.

Have a great day and be safe

Cindy Schwebke  
Construction Inspector  
Los Angeles County Public Works  
Mobile: (626)228-9033

-----Original Message-----

**From:** Johnny E. Chavarria <JohnnyChavarria@santafesprings.org>  
**Sent:** Friday, October 12, 2018 9:02 AM  
**To:** Cindy Schwebke <CSchwebke@dpw.lacounty.gov>  
**Cc:** Thomas R. Lopez <ThomasLopez@santafesprings.org>; Robert A. Garcia (Engineering) <RobertGarcia@santafesprings.org>  
**Subject:** Fwd: Project # TSM0010312

Sent from my Verizon, Samsung Galaxy smartphone

----- Original message -----

**From:** "Johnny E. Chavarria" <JohnnyChavarria@santafesprings.org>  
**Date:** 10/12/18 8:46 AM (GMT-08:00)  
**To:** cschwebke@dpw.lacounty.gov  
**Cc:** "Thomas R. Lopez" <ThomasLopez@santafesprings.org>, "Robert A. Garcia (Engineering)" <RobertGarcia@santafesprings.org>  
**Subject:** Project # TSM0010312

Good morning, This email is to confirm that all of the work done on Florence Av. In Santa Fe Springs has been completed and inspected. Per our conversation the only thing we need is for the county to pick up and install the antennas. Please let us know if we can be of any further assistance.

Thursday, October 25, 2018  
FOR IMMEDIATE RELEASE

## **Traffic signal synchronization provides smoother commutes in Whittier and Santa Fe Springs**

Los Angeles County Public Works has completed construction on a traffic signal synchronization project that will improve traffic flow along Florence Avenue and Mills Avenue from Orr and Day Road to Whitter Boulevard.

The project relieves motorists from lengthy red-light traffic stops and congestion along a five-mile corridor that extends through the unincorporated community of South Whitter and the cities of Santa Fe Springs and Whittier.

Upgrades include 15 synchronized traffic signals and vehicle detectors placed along Florence Avenue and Mills Avenue. Together, these improvements coordinate traffic flow and adjust the timing of traffic signals between intersections.

Construction was funded by grants from the Metropolitan Transportation Authority (Metro) and the South Coast Air Quality Management District Mobile Source Air Pollution Reduction Committee. Additional funding for the project was provided by Los Angeles County and the City of Santa Fe Springs.

The project results in an easier commute, enhanced walkability and safer streets for local families.

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Media Contact:

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