



**METROPOLITAN  
TRANSPORTATION  
COMMISSION**

# **PROGRAM FOR ARTERIAL SYSTEM SYNCHRONIZATION (PASS)**

## **FY19/20 CYCLE**

## **PROGRAM SUMMARY**

MTC Contact:

Robert Rich

PASS Program Manager

Tel: 415.778.6621

Email: [RRich@BayAreaMetro.gov](mailto:RRich@BayAreaMetro.gov)

# PASS FY19/20 Cycle Program Summary

#	County	Project Sponsors	# of Traffic Signals	Timing Plans/Services	Project Consultant
1	CC	City of Antioch	30	Weekday AM/PM peaks	TJKM
2	CC	City of Concord	32	Weekday AM/midday/PM peaks	TJKM
3	SM	City of Daly City	21	Weekday AM/midday/PM peaks, Weekend peak/off-peak	Kimley-Horn & Associates
4	AL	City of Fremont	22	Weekday AM/midday/PM school/PM peaks, Weekend peak/off-peak	Iteris
5	AL	City of Livermore	43	Weekday AM/PM peaks	Kimley-Horn & Associates
6	SC	City of Mountain View	22	Weekday AM/midday/PM peaks	TJKM
7	CC	City of Pittsburg	7	Weekday AM/midday/PM peaks	TJKM
8	SC	City of Santa Clara	26	Weekday AM/midday/PM peaks, Weekend peak/off-peak	Iteris
9	CC	City of Walnut Creek	20	Weekday AM/midday/PM peaks, Weekend peak/off-peak	Kimley-Horn & Associates
<b>Total Signals</b>			<b>223</b>		

Note: AL = Alameda, CC = Contra Costa, SC = Santa Clara, SM = San Mateo

## Benefit/Cost Summary\*:

**Total Lifetime Benefits: \$95,421,442**

**Total Program Costs: \$1,060,175**

**Overall Program Benefit/Cost Ratio: 92:1**

\*Fremont "Before" study was in Feb. 2020 (pre-Covid) while "After" study was in Apr. 2022, so results are likely impacted by travel pattern changes.

## LIFETIME (5 YRS) PROGRAM BENEFITS:



Auto Travel Time Savings: 21% (3,267,155 hrs.)



Average Increase in Auto Speed: 30%












Fuel Consumption Savings: 4% (2,296,234 gal.)



Total Emissions Reduced: 369 tons  
(ROG, NOx, PM2.5, CO)

# PASS FY19/20 Cycle Summary of Benefits

Lifetime (5 Years) <sup>†</sup> Project Benefits	Antioch	Concord	Daly City	Fremont*	Livermore	Mountain View	Pittsburg	Santa Clara	Walnut Creek
<b>Benefit/Cost Ratio</b>	<b>21</b>	<b>33</b>	<b>24</b>	<b>229</b>	<b>27</b>	<b>54</b>	<b>68</b>	<b>157</b>	<b>49</b>
 <b>Auto Travel Time Savings (%)</b>	8%	18%	19%	24%	17%	26%	28%	33%	17%
 <b>Auto Travel Time Savings (hours)</b>	77,827	133,886	112,959	1,485,371	120,650	181,777	66,104	913,861	174,720
 <b>Average Reduction in Auto Signal Delay (%)</b>	56%	63%	52%	40%	52%	40%	63%	56%	52%
 <b>Average Reduction in Number of Stops (%)</b>	47%	44%	45%	28%	45%	24%	44%	55%	45%
 <b>Average Speed Before (mph)</b>	18	26	16	22	24	16	14	18	18
 <b>Average Speed After (mph)</b>	19	32	19	28	28	22	20	27	22
 <b>Fuel Consumption Savings (%)</b>	-1%	3%	4%	7%	6%	2%	4%	5%	4%
 <b>Fuel Consumption Savings (gal)</b>	-6,215	57,188	47,298	1,585,287	92,135	13,580	8,914	430,492	67,555
 <b>Total Emissions Reduction (tons)</b>	3.6	8.9	8.8	214.4	8.9	8.1	2.3	104.5	9.8

<sup>†</sup>Program benefits are assumed to be 100% on the first day after implementation of the new timing plans, declining steadily to zero by the end of the fifth year.

\* Fremont "Before" study was in Feb. 2020 (pre-Covid) while "After" study was in Apr. 2022, so results are likely impacted by travel pattern changes.