Proposition 1B Traffic Light Synchronization Program Phase II Project Results – Orangethorpe Avenue Corridor and Edinger Avenue Corridor



Background



Orangethorpe Avenue



Orangethorpe Avenue

- Approximate 15 mile east-west corridor
- Includes 44 signalized intersections
- Involves five cities, County, and the California Department of Transportation (Caltrans)
 - Anaheim, Buena Park, Fullerton, La Palma, and Placentia
- Includes two freeway interchanges
- Typical daily traffic volumes 20,000 to 35,000
- Project budget: \$697,585

Edinger Avenue

- Multiple name changes: Edinger Avenue, Irvine Center Drive,
 Moulton Parkway, and the Street of the Golden Lantern
- Approximate 22-mile corridor
- Includes 109 signalized intersections
- Involves seven cities and Caltrans
 - Aliso Viejo, Dana Point, Irvine, Laguna Hills, Laguna Niguel, Laguna Woods, and Tustin
- Includes three freeway interchanges
- Typical daily traffic volumes 15,000 to 43,000
- Project budget: \$846,218

Goals

- Improved traffic flow through traffic signal synchronization
 - Optimized signal timing
 - Reduced number of stops at signals
 - Upgrades:
 - Traffic controllers
 - Central communication system
 - Automated traffic management system
- Inter-jurisdiction cooperation
 - Improved coordination across city boundaries
- Continued monitoring of optimized corridor

Orangethorpe Avenue Results

- Improved traffic flow
 - 11 to 23 percent reduction in travel time
 - 34 to 50 percent reduction in "number of stops"
 - 12 to 30 percent increase in speeds
- Improved air quality
 - Greenhouse gas emissions reduced by 24 million pounds
- Three-year reduced fuel consumption
 - 1.252 million gallons
 - \$4.883 million consumer gas savings

Orangethorpe Avenue Results

Direction	Travel Time Benefit						
	Eastbound			Westbound			
Peak Period	Before	After	Improvement (%)	Before	After	Improvement (%)	
Morning Peak Period							
Travel Time (min)	35.3	28.7	19%	39.7	30.4	23%	
Number of Stops	20.0	10.4	48%	21.4	10.6	50%	
Average Speed (mph)	24.8	30.5	23%	22.1	28.8	30%	
Midday Peak Period							
Travel Time (min)	33.3	29.8	11%	34.8	28.5	18%	
Number of Stops	17.2	11.2	35%	19.2	11.2	42%	
Average Speed (mph)	26.3	29.4	12%	25.2	30.7	22%	
Evening Peak Period							
Travel Time (min)	35.7	30.5	15%	36.4	31.3	14%	
Number of Stops	20.8	13.0	38%	20.8	13.8	34%	
Average Speed (mph)	24.5	28.7	17%	24.1	28.0	16%	

Project Benefit	Greenhouse Gas and Fuel Savings						
	Fuel Reduction (gal)			Greenhouse Gas Reduction (lbs)			
	Before	After	Reduction	Before	After	Reduction	
1 Year	3,734,320	3,316,919	417,401	72,445,809	64,348,232	8,097,576	
3 Years	11,202,960	9,950,758	1,252,203	217,337,426	193,044,696	24,292,729	

Total Fuel Cost Savings (\$)

1 year: \$1,627,863 3 years: \$4,883,590

Orangethorpe Avenue Before/After Video



Edinger Avenue Project Results

- Improved traffic flow
 - 4 to 21 percent reduction in travel time
 - 20 to 54 percent reduction in "number of stops"
 - 6 to 28 percent increase in speeds
- Improved air quality
 - Greenhouse gas emissions reduced by 34 million pounds
- Three-year reduced fuel consumption
 - 1.733 million gallons
 - \$6.794 million consumer gas savings

Edinger Avenue Project Results

Direction	Travel Time Benefit							
	Southbound/Eastbound			Northbound/Westbound				
Peak Period	Before	After	Improvement (%)	Before	After	Improvement (%)		
Morning Peak Period								
Travel Time (min)	46.5	41.7	10%	44.6	39.9	11%		
Number of Stops	25	17	32%	21.1	13.8	35%		
Average Speed (mph)	29.3	32.9	11%	30	33.9	13%		
Midday Peak Period								
Travel Time (min)	47.3	45.6	4%	46.4	41.9	10%		
Number of Stops	28.8	23	20%	27.2	17.8	35%		
Average Speed (mph)	28.2	29.8	6%	28.8	32.2	12%		
Evening Peak Period								
Travel Time (min)	44.1	39.8	10%	48.7	38.6	21%		
Number of Stops	19.8	13.8	30%	24.2	11.2	54%		
Average Speed (mph)	30.4	34.5	13%	27.4	35.2	28%		

Project Benefit	Greenhouse Gas and Fuel Savings					
	Fuel Reduction (gal)			Greenhouse Gas Reduction (lbs)		
	Before	After	Reduction	Before	After	Reduction
1 Year	4,936,878	4,359,124	577,754	96,860,480	85,525,030	11,335,450
3 Years	14,810,633	13,077,371	1,733,262	290,581,439	256,575,089	34,006,350

Total Fuel Cost Savings (\$)

1 Year: \$2,264,796 3 Years: \$6,794,388

Next Steps

- Currently implementing five projects as part of Proposition 1B/Traffic Light Synchronization Program
 - Brookhurst Street, El Toro Road, Katella Avenue, La Palma Avenue, and Yorba Linda Boulevard
- Awarded \$8 million for 17 projects as part of Measure M2/Project P 2010 Call for Projects
- OCTA has released the Measure M2/Project P
 2011 Call for Projects this fall