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

## Background



## 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

|  | Travel Time Benefit |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Eastbound |  |  | Westbound |  |  |
|  | 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 |
|  | tal Fuel Cos | Savings (\$ 1 year: 3 years: | $\begin{aligned} & 1,627,863 \\ & 4,883,590 \end{aligned}$ |  |  |  |

## Orangethorpe Avenue Before/After Video


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## 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

| Peak Period | Travel Time Benefit |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Southbound/Eastbound |  |  | Northbound/Westbound |  |  |
|  | Before | After | Improvement <br> (\%) | 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 Fue | $\begin{array}{r} \text { ost Savings } \\ \hline 1 \text { Yea } \\ 3 \text { Year } \end{array}$ | $\begin{aligned} & \$ 2,264,79 \\ & \$ 6,794,388 \end{aligned}$ |  |  |  |

## 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

