



CITYWIDE TRAFFIC SIGNAL TIMING UPDATE

Public Works Department

Meeting

Transportation Board: November 2, 2022

BACKGROUND

1. As part of the “Bylaws of the Transportation Board of the City of Riverside”, The Public Works Department, Traffic Engineering Division will provide an update of the City’s traffic signal timing and coordination efforts and projects to expand and/or upgrade signal communications.



DISCUSSION

1. Signal Timing and Coordination Efforts

2. Traffic Monitoring

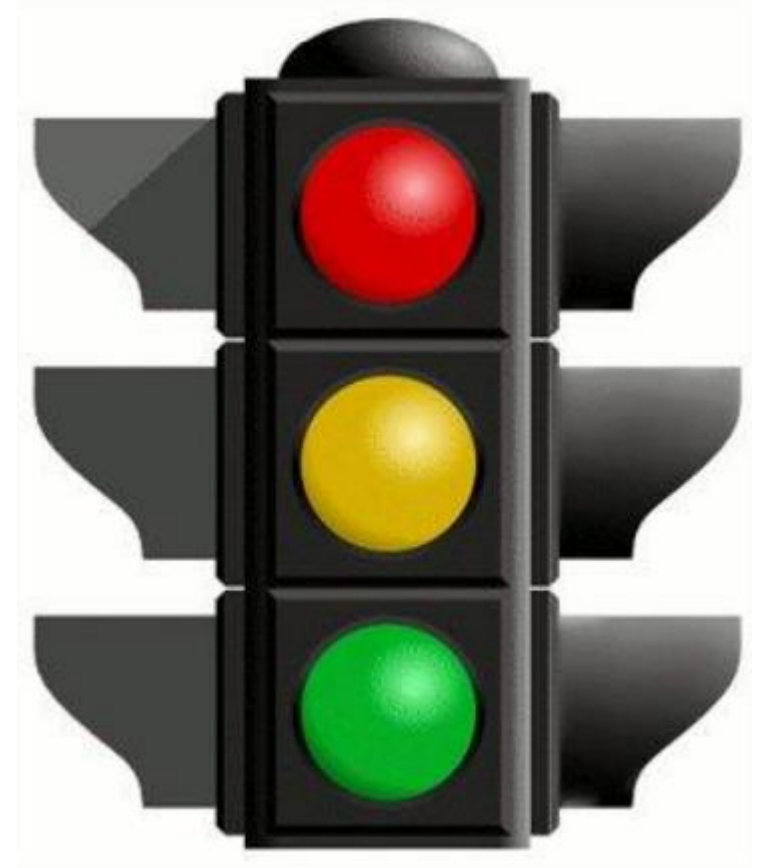
3. Evaluation Process



4. Awarded Grant Projects and Look Ahead

SIGNAL TIMING AND COORDINATION EFFORTS

1. The Process of optimizing the operations of signalized intersections and updating signal timing as required
2. One of the most cost-effective ways to improve traffic movement
3. Benefits include improved travel time, delay reduction, and fuel savings



TRAFFIC MONITORING

1. City maintains 394 signalized intersections, with an estimated half of the signals having coordination timing
2. Replacing and updating equipment to monitor signals and major streets from the Traffic Management Center (renovated 2018)
3. Make temporary signal timing adjustments based on current conditions, roadway incidents, special events and construction projects



EVALUATION PROCESS

1. Corridor signal timing evaluation:
 - a. Existing studies are conducted at peak hour time of days (AM, Mid-day, PM)
 - b. Traffic conditions and volumes are modeled using Synchro computer program to optimize signal timing and coordination
 - c. New coordination timing is generated and implemented
 - d. A follow-up field study is then conducted to fine tune the corridor
 - e. Before and after studies are compared using a Corridor Synchronization Performance Index (CSPI) report to analyze improvements

AWARDED GRANT PROJECTS AND LOOK AHEAD

HSIP Cycle 7

1. Deploy new signal timing plans for 35 traffic signals in the Downtown Area (\$1.6M)

HSIP Cycle 8

1. Install new controllers, upgrade controller software, and new central system for the TMC to monitor signals (\$600K)

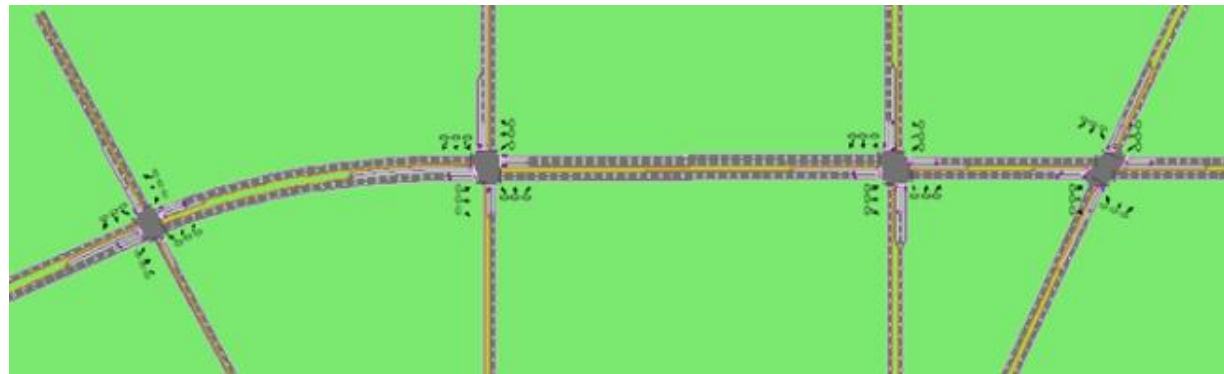
SiFi Networks Riverside, LLC

1. Development agreement for a Citywide Fiber Optic Network at no cost to the City (Council Meeting May 17, 2022)



EXAMPLE SLIDE

1. Synchro computer program modeling example



STRATEGIC PLAN ALIGNMENT



Infrastructure, Mobility & Connectivity

Ensure safe, reliable infrastructure that benefits the community and facilitates connection between people, place and information.

6.2.

Maintain, protect and improve assets and infrastructure within the City's built environment to ensure and enhance reliability, resiliency, sustainability, and facilitate connectivity.

Cross-Cutting Threads

This item aligns with each thread.



Community Trust



Fiscal Responsibility



Sustainability & Resiliency



Equity



Innovation

RECOMMENDATIONS

That the Transportation Board:

1. Receive and file this presentation