



TH 13 SIGNAL OPTIMIZATION PROJECT

South Metro Area, MN

CLIENT:

Minnesota Department of Transportation

REFERENCE:

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SERVICES PROVIDED:

- Requirements Definition
- Data Collection
- Existing Conditions Analysis
- Corridor Modeling
- Crash Analysis
- Optimized Signal Timing
- Econolite Controller Input
- Field Implementation and Fine Tuning
- Benefit Analysis Report

Project Description:

Trunk Highway 13 is an east/west Arterial traversing the southern metro area serving commercial, commuter and industrial traffic destinations. The project consisted of developing and implementing coordinated signal timing plans for 14 signalized intersections located within three zones through the cities of Savage, Burnsville and Eagan. Key considerations and corridor issues included achieving two-way progression, greater than 10 percent heavy truck traffic, Burnsville High School traffic and the 35W and TH 77 system interchanges.



Roles and Responsibilities:

Alliant Engineering conducted travel time, intersection delay and saturation flow rate studies along the corridor. Utilizing calibrated existing condition traffic models, five optimized timing plans were developed for the peak and off-peak time periods. Alliant Engineering supported Mn/DOT staff with the implementation of the timing plans into the Econolite Aries Zone Manager, conducting field reviews and fine-tuning of the implemented signal timing plans. As part of the timing plan development, Alliant Engineering provided Mn/DOT with an overall corridor traffic analysis and recommendations for future geometric and signal operation improvements.



End Result:

The project was completed in June 2006 with the completion of the field implementation/fine tuning, after studies and benefit analysis report. As a result of the signal optimization, a 30 percent improvement in peak hour travel times and a greater than 30:1 benefit/cost ratio was achieved.



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