

METRO-MOBILITY TALKS

Traffic Signal Coordination Plan

SIGNIFICANT REDUCTIONS IN TRAVEL TIME AND FUEL CONSUMPTION

Corpus Christi motorists could save approximately \$4.1 million to \$8.5 million annually in fuel costs if traffic signals along five well-traveled corridors were optimized and other improvements made, according to a traffic signal coordination study commissioned by the Corpus Christi Metropolitan Planning Organization (MPO).

The MPO hired HDR Engineering, Inc. (HDR) to look at five high-traffic areas in an effort to increase mobility and reduce delays, travel time and fuel consumption. The study's main goal is to help provide efficient progression and mobility along the main streets without unduly increasing delay on cross-streets during both morning and evening peak periods.

HDR, based in Omaha, Nebraska and with an office in Corpus Christi, found that optimizing traffic signals and making other improvements would, in most cases, result in a considerable reduction in network travel time, network delay, and fuel consumption.

HDR presented its findings to the Corpus Christi City Staff on August 5 and to the MPO's Technical Advisory Committee on September 17. The estimated cost savings are based on implementing short-term changes (approximately \$4.1 million in savings) and long-term changes (approximately \$8.5 million in savings) and cover a four-hour peak period (7 a.m. to 9 a.m. and 4 p.m. to 6 p.m.) in a typical weekday along the following five routes:

- Staples Street (Shopping Way to Saratoga Blvd)
- Alameda Street (Staples/Ayers to Robert Dr.)
- Horne Road (Prescott to Ayers)
- Gollihar Road (Prescott to Ayers)
- Ocean Drive (Buford to Louisiana)

Field review and analysis of existing conditions revealed poor progression along the five corridors during peak periods. The study found that savings could be significantly higher if optimized signal-time plans were utilized during off-peak hours as well.

Short-term changes, which mainly included signal timing optimization, were developed for immediate implementation. Long-term changes included the addition of turn lanes, updating phase sequences to match industry standards, and signing/stripping improvements.

The study found that recommended changes could sometimes result in an increase in delay, travel time and/or fuel consumption on minor streets and, as a result, total fuel consumption for the whole network could increase in some cases. But a minor increase in fuel consumption would be offset by the projected delay savings and improved mobility.

Figure 1 shows estimated savings were quantified by performing a benefit-cost analysis. The analysis found that the benefits outweigh the costs and that significant savings can be realized for each dollar spent, if signals are properly coordinated and maintained.

HDR will present these findings to the Corpus Christi Transportation Advisory Committee on October 26, 2:30 p.m. at City Hall Council Chambers. The public is invited to attend.

If you have any questions regarding this or other Metro-Mobility Talks articles please contact us at ccmpo@cctxmpo.us or visit our website at www.corpuschristi-mpo.org.

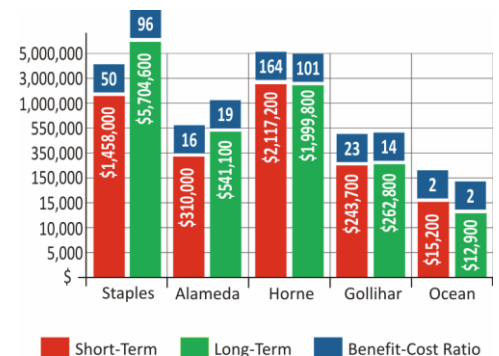


Figure 1 - Net Benefit Monetization