

Regional Traffic Signal Timing Program Phase V – Executive Summary

Project Overview

In 2010, the North Central Texas Council of Governments (NCTCOG) launched the Regional Traffic Signal Retiming Program (RTSRP), the goal of which is to maximize the capacity of the existing roadway system by improving traffic operations through signal retiming along selected corridors, in addition to reducing mobile source emissions, improving mobility, and enhancing safety.

Through the RTSRP program, North Texas residents benefit from improved air quality, reduced delay, higher reliability, reduced fuel consumption and vehicle emissions, reduced congestion, and improved efficiency throughout the region.

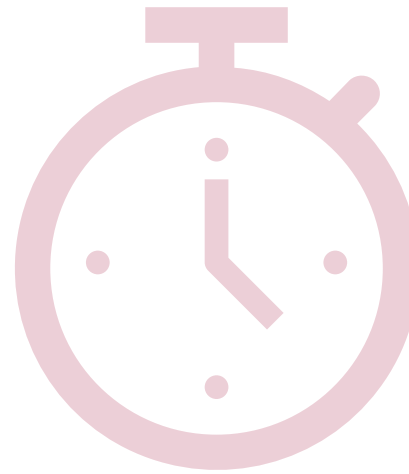
Phase V of RTSRP started in April 2019 and included corridors in Dallas, Garland, and Richardson. A team of consultants led by Kimley-Horn and Associates, Inc. was selected to complete 290 RTSRP Phase V signalized intersections. This project has achieved interlocking, seamless progression along more than 70 miles of arterial streets without regard to jurisdictional boundaries.

The project intersections are also part of the North Texas “Regional Super Network,” a cross-jurisdictional control group spanning hundreds of intersections and nearly a dozen municipalities in North Texas.

The new timing plans implemented across Dallas, Garland, and Richardson have successfully achieved the goals of RTSRP Phase V: to maximize the capacity of the existing roadway system by improving traffic operations through signal retiming along selected corridors in addition to reducing mobile source emissions, improving mobility, and enhancing safety. Through the RTSRP program, North Texas residents benefit from improved air quality, reduced delay, higher reliability, reduced fuel consumption and vehicle emissions, reduced congestion, and improved efficiency throughout the region.

Annual Delay Savings

This project was evaluated for changes in Annual Delay (total vehicle-hours and total driver delay savings) based on total reduction in delay in both directions and average peak period bidirectional traffic volume.



Annual Reduction in Delay

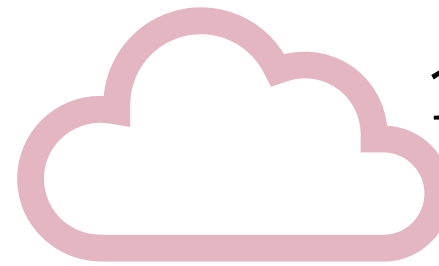
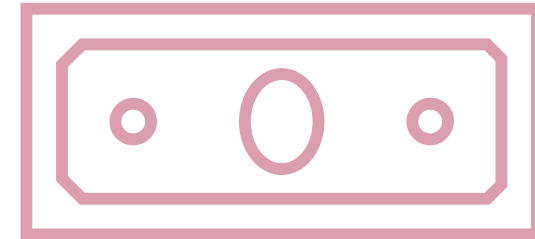
1.2 million

vehicle hours

More than 133 years

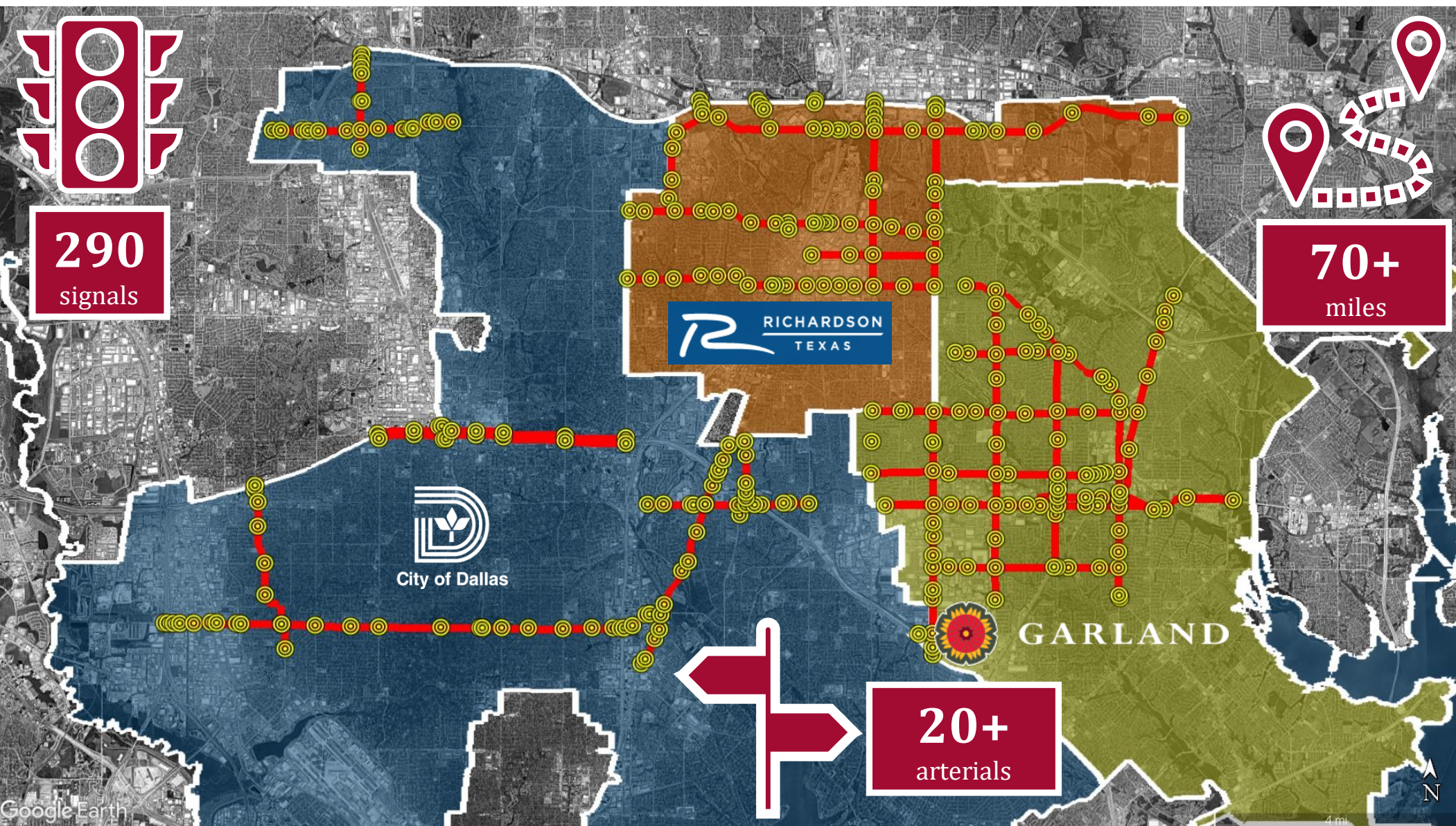
\$25.4 million

Annual Peak Period Delay Savings



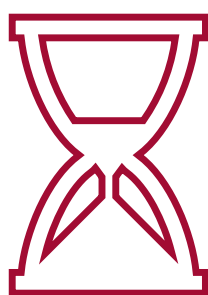
148,000+ kg

Annual Reduction in Emissions



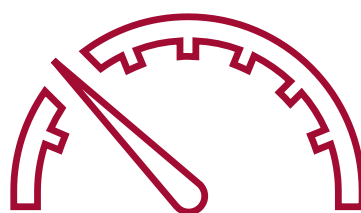
Measures of Effectiveness

Project results were also estimated from the Synchro models averaging all corridors. Measures of effectiveness (MOEs) compared included total travel time and stops along with three categories of emissions (CO, NOx, and VOC).



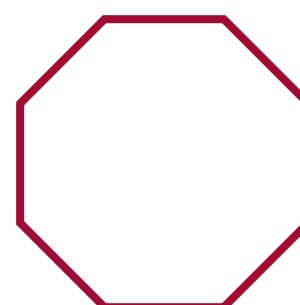
↓ **14%**

Total Delay
1.2 million hours saved per year



↑ **4%**

Average Speed



↓ **6%**

Total Stops
45.8 million fewer stops per year



↓ **5%**

CO, NOx, VOC Emissions