

Sandy City Signal Synchronization Project

PRESENTATION OVERVIEW

- Signal System Background Information
- How Traffic Signals Work Together
- Signal Timing Process
- Signal Retiming Results
- Where to go from here
- Questions



Sandy City Signal System

- 9 signal corridors needing signal coordination to improve performance
- 44 signals maintained
 by Sandy City & Salt
 Lake County
- 40 signals maintained
 by UDOT within Sandy
- Last update completed 2009
- Avenue Consultants selected to update system Spring 2019



Project Goals

- Reduce travel time
- **Reduce emissions**
- Update to current signal timing standards

Project Team









Signal Structure Split: time Coordinated signal phase(s):prioritized phases, allotted each phase. set to begin at a specified time each cycle. NBL EBL ← WBT SBT WBL SBL → EBT NB1 Cycle length: time needed to serve all signal phases.

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When each signal within the corridor operates at the same cycle length, coordinated phases can be aligned so vehicles arrive at each signal during the green time. This improves corridor progression, reducing the amount of time vehicles wait at a red light.

UPDATED CYCLE LENGTHS











- Travel times thru Probe Vehicles and Large Data Sources
- Automated Traffic Signal Performance Metrics (ATSPMs)
- Observations



CREATE MODELS & OPTIMIZE TIMINGS

- Synchro engineering program to visualize and measure potential changes
- Multiple potential changes reviewed to determine best way to proceed

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PROJECT TEAM REVIEWS & IMPLEMENTS

- Review timings in collaboration with stakeholders
- Install new signal timings

avenue Consultants







FINE TUNE SIGNAL TIMING & REVIEW RESULTS

- Observe and adjust timings to match corridors
- Review signal timing metrics
- Get feedback from city and citizen







WHERE TO GO FROM HERE

Listen to feedback from citizens

- Configure ATSPMs at signals
- Review intersection improvement recommendations
- Retime signals every 5 years
 - Based on UDOT recommendation approx. \$1,600 per signal



