STRATEGIC SELECTION OF TRAFFIC SIGNAL EQUIPMENT

NCTCOG PUBLIC MEETING
OCTOBER 15, 2024

REGIONAL TRAFFIC SIGNAL EQUIPMENT INVENTORY

Overview

NCTCOG conducted a regional inventory to establish a Regional Traffic Signal Minimum Standard and identify traffic signals that don't have equipment to meet the standard.

List of Equipment Included in the Regional Traffic Signal Equipment Standard:

- Cabinets
- Controllers
- Coordination (GPS Clocks)
- Communication
- Vehicle Detection
- Flashing Yellow Arrow (FYA)
- LED Signal Bulbs

PARTNER AGENCY ELIGIBILITY

- Public Sector Partner Agencies within the 10-County Non-Attainment Area (Cities, TxDOT, Etc.)
- Actively using INRIX traffic signal performance platform.
- Confirm agency agrees to share traffic signal and detector data in standard format that is consistent with Traffic Management Data Dictionary (TMDD) 3.03(d).

PRIORITIZATION AND FUNDING TABLE

Prioritization Order	Cost	Revenue
	Total Funding Allocated	$30,720,000
1. Coordination (GPS Clocks)*	$507,000	$29,633,000
2. Communication	$4,430,000	$25,203,000
3. Vehicle Detection	$102,960,000	($77,757,000)
4. Flashing Yellow Arrow (FYA)	$12,985,000	($90,742,000)
5. Controllers*	$580,000	($90,742,000)
6. Cabinet	$12,555,000	($103,297,000)
7. LED Signal Bulbs	$87,500	($103,384,500)
Total funds needed	$134,104,500	($103,384,500)

*RTC funded coordination and controller as part of 2022 M&O Allocation in the amount of $720,000. Due to inflation, these cost are have increased to $1,087,000. TxDOT Dallas has already implemented communication districtwide, the above number reflects this.

Proposed Filter and Criteria for Remaining Funds

Filter 1: Regional Traffic Signal Priority Arterials (Y/N) (FHWA functional classification: principal, minor, collector roads with 8 or more signals)

Filter 2:Vehicle Detection Working Properly (Y/N)

Criteria 1: Signals with worst average control delay per vehicle from INRIX signal analytics (Ranking)

METHOD

Step 1: Overlay vehicle detection improvements on traffic signal priority arterials GIS layer.

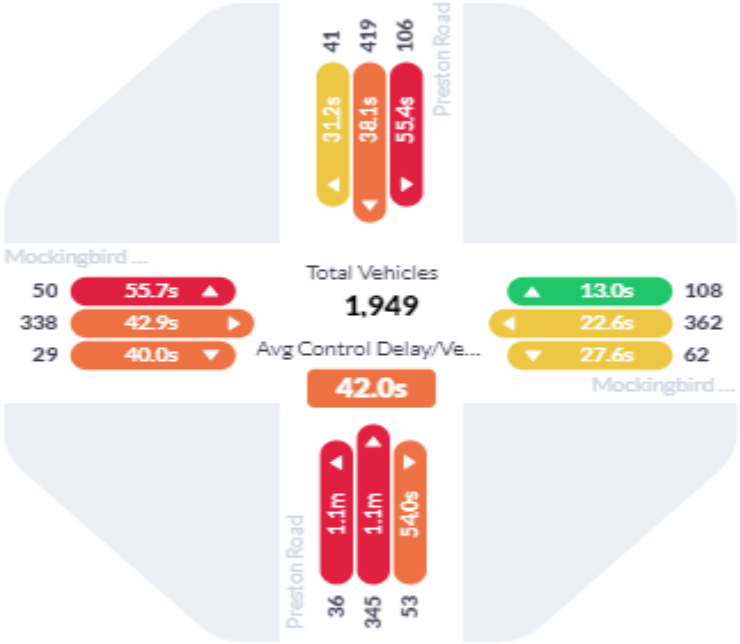
Step 2: Analyze remaining Average Control Delay per vehicle

Step 3: Select locations for improvement based on criteria

INRIX SIGNAL ANALYTICS SNAPSHOT

Average Control Delay/Vehicle (24 hour): The average control delay per vehicle is the average time that a vehicle is delayed at a signalized intersection due to traffic control devices, primarily caused by stopping, deceleration, acceleration, and queueing at traffic signals.

A <= 10 seconds
B > 10 - 20 seconds
C > 20 - 35 seconds
D > 35 - 55 seconds
E > 55 – 80 seconds
F > 80 seconds



SCHEDULE

Action	Meeting	Date
Action - Funding Approval	RTC	February 2024
Public Meeting		October 15, 2024
Action - Approval of Project Selection Process	STTC	October 25, 2024
Action - Approval of Project Selection Process	RTC	November 14, 2024
Scoring by NCTCOG		Nov. – Dec. 2024
TIP Modification Requests Due		December 6, 2024
TIP Modification Approval	STTC	February 28, 2025
TIP Modification Approval	RTC	March 13, 2025
FHWA Approval Expected		June/July 2025

CONTACT US

Natalie Bettger
Senior Program Manager
nbettger@nctcog.org | 817-695-9280

Gregory Masota
Principal Transportatio Planner
gmasota@nctcog.org | 817-695-9264