

Memorandum



CITY OF DALLAS

DATE June 7, 2019

TO Honorable Members of the Mobility Solutions, Infrastructure and Sustainability Committee

SUBJECT **Transit Signal Priority- Interlocal Agreement**

On Monday, June 10, 2019, the Mobility Solutions, Infrastructure and Sustainability Committee will be briefed on the Transit Signal Priority pilot project and associated interlocal agreement. The briefing materials are attached for your review.

Please contact Michael Rogers, Director of the Department of Transportation, at michael.rogers@dallascityhall.com if you have any questions or concerns.

A handwritten signature in blue ink, appearing to read 'M. Al-Ghafry'.

Majed A. Al-Ghafry, P.E.
Assistant City Manager

[Attachment]

c: T.C. Broadnax, City Manager
Chris Caso, City Attorney (Interim)
Mark Swann, City Auditor
Billerae Johnson, City Secretary
Preston Robinson, Administrative Judge
Kimberly Bizzor Tolbert, Chief of Staff to the City Manager
Jon Fortune, Assistant City Manager

Joey Zapata, Assistant City Manager
Nadia Chandler Hardy, Assistant City Manager and Chief Resilience Officer
Michael Mendoza, Chief of Economic Development and Neighborhood Services
M. Elizabeth Reich, Chief Financial Officer
Laila Alequresh, Chief Innovation Officer
Directors and Assistant Directors

Transit Signal Priority- Interlocal Agreement

**Mobility Solutions,
Infrastructure and
Sustainability Committee**

June 10, 2019

**Michael Rogers, Director
Department of Transportation**



Presentation Overview

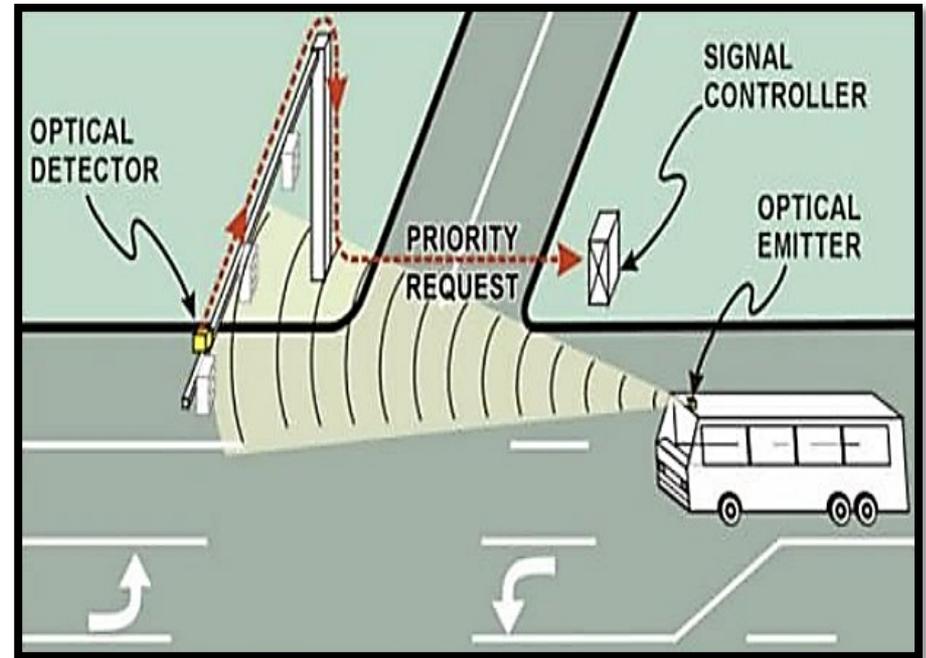
- Background
- Purpose
- Operational Criteria and Issues
- Operational Benefits and Impact
- Routes
- Proposed Implementation Plan
- Next Steps

Background

- The City has been working with DART to:
 - reduce travel time for Dallas residents
 - promote ridership through improvements to on-time performance and reduced travel time
- The pilot program will help to address travel time to places of employment.
- In 2017 DART conducted a speed & delay study along the Belt Line route between downtown Garland station and North Irving Transit Center. The study showed 16% of the route trip time (15-18 minutes) was spent at traffic signals.
- Advancements in signal technology can improve the on-time performance. This technology is referred to as Transit Signal Priority (TSP).

Purpose of Transit Signal Priority (TSP)

- Reduce or eliminate unnecessary stops at signalized intersections
- Modify signal phasing for the bus and provide:
 - Early green light
 - Green light extension
- This process is accomplished through communication between equipment on the bus and the signal controller.



TSP Pilot Program Criteria and Issues

- TSP implementation criteria:
 - Corridors with traffic congestion
 - Corridors that have operation efficiency issues
 - Future Bus Rapid Transit (BRT) / queue jump lanes
- All TSP routes selected under this pilot program meet these criteria with the objective to reduce route traffic signal delays for transit by 25% (5 minutes).

TSP Operational Benefits and Impacts

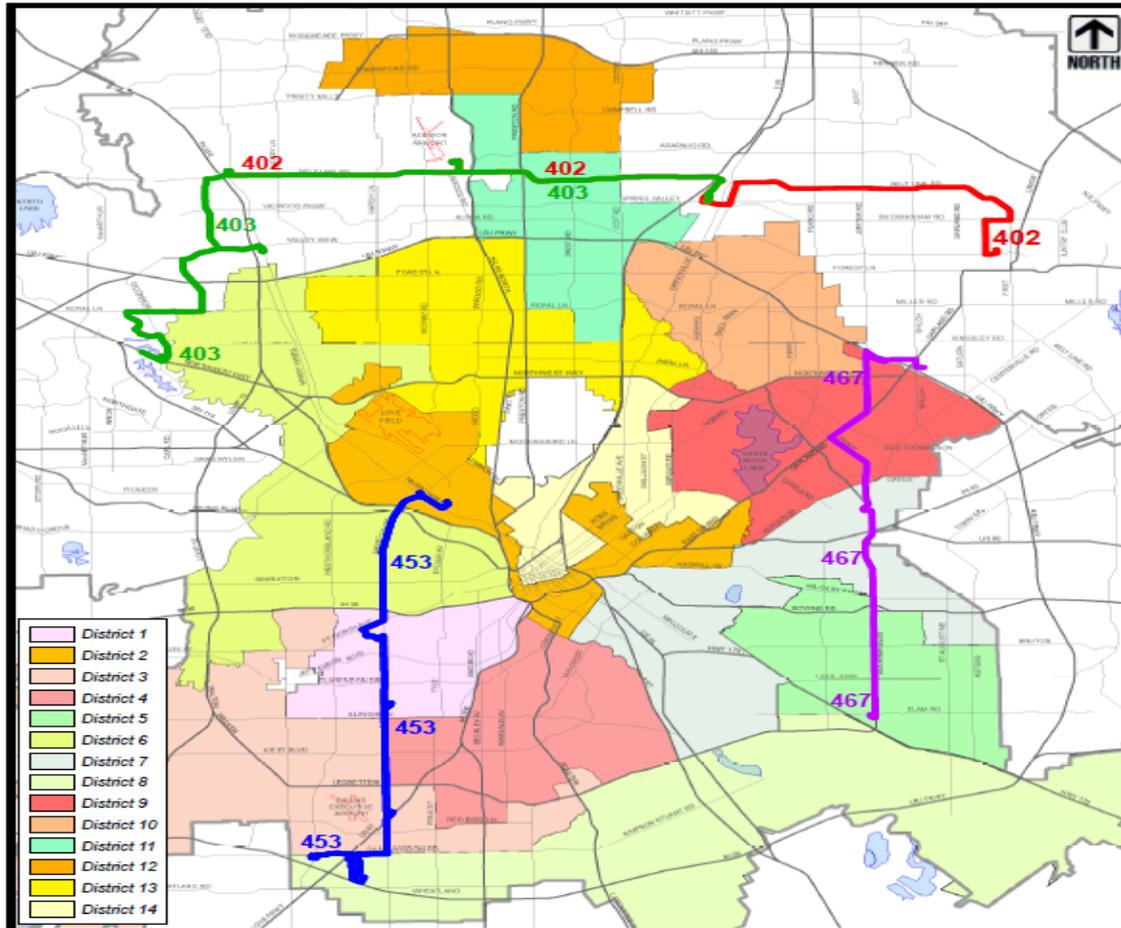
- Provides City of Dallas residents with consistent and reliable service based on meeting targeted performance.
- City emergency vehicles can utilize DART's TSP intersections if emitter equipment is installed on vehicles.
- Prevents DART from having to add additional vehicles to the routes which will help in reducing emissions.
- The system can be integrated into the future City of Dallas advanced traffic control system upgrades.

TSP Routes and Council Districts

Route No.	City Council District	Cities
402 - Belt Line Rd. Between Downtown Garland Station and Downtown Carrollton Station	11	Dallas, Addison, Carrollton, Richardson, Garland
403 – Belt Line Rd. Between Spring Valley Station and Irving Convention Center Station	11, 6	Dallas, Addison, Carrollton, Richardson, Farmers Branch
453 – Hampton Rd. Between Southwest Medical District and Stone Ridge Business Park	8, 6, 4, 3, 2, 1	Dallas
467 – Buckner Blvd Between South Garland Transit Center and Buckner Station	9, 7, 5	Dallas, Garland



TSP Routes and Council Districts



— 402 — 453
— 403 — 467

Selected Routes On-Time Performance

- DART's FY 19 on-time performance goal is 82.5%.
- Routes 402, 403 and 467 are not meeting goal due to:
 - Traffic signal delays
 - Traffic congestion
- Route 453 met goal, but continues to experience traffic congestion issues.

Corridor	Weekday On-Time Performance August 2018
Belt Line (routes no. 402 and 403)	75.56%
Buckner (route no.467)	74.17%
Hampton (route no. 453)	84.66%

TSP Routes Hours of Service and Ridership

TSP- Route Number	Weekday Hours of Service	Weekend Hours of Service	Average Weekday Ridership
402	5AM-11PM	6AM-9PM	1,058
403	5AM-11PM	6AM-9PM	897
453	4:20AM-1AM	5AM-Midnight	2,015
467	4:30AM-1AM	6AM-Midnight	1,810

TSP Pilot Implementation Plan (1 of 2)

- TSP will be implemented in the following corridors as a 5-year pilot project:
 - Beltline-Routes 402 and 403
 - Hampton-Route 453
 - Buckner-Route 467
- DART selected those routes based on FY 18 on-time performance results compared to the FY 19 target of 82.5%.
- The pilot project will be implemented in FY 20.

TSP Pilot Implementation Plan (2 of 2)

- DART will purchase a 5-year subscription service with a service provider in the amount not to exceed \$2,879,785.
- This service includes:
 - Opticom equipment and software – traffic signals and DART buses
 - Hardware and software upgrades
 - Maintenance warranty
- The City of Dallas will not incur any project costs.
- DART's current Speed & Delay study will serve as the baseline study. DART plans on conducting similar studies post TSP implementation to evaluate its effectiveness.

Interlocal Agreement (ILA)

- City of Dallas staff has worked with DART staff to coordinate the implementation of their TSP pilot project.
- This project will require an ILA with DART authorizing DART to use TSP with the City of Dallas' traffic signal systems.
- The ILA will authorize the City of Dallas to use TSP for emergency vehicles that operate on the routes that DART implements.

Next Steps

- Request MSIS support for the June 26, 2019 City Council agenda item for this pilot program.
- Authorize City Manager to execute an interlocal agreement for implementation of DART's Transit Signal Priority pilot project.
- Work with DART in implementing and monitoring this pilot program's effectiveness through annual performance reports.
- Work with DFR to identify equipment and costs that will be needed for emergency vehicles to utilize the TSP system.

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