Beacon St/ Graham Ave Corridor Study

Abrams Rd to Winslow Ave

Public Meeting

October 16th, 2024

City of Dallas Department of
Transportation & Public Works

Presentation Outline

- Background
- Existing Conditions
- Future Growth and Capacity
- Alternative 1
- Alternative 2
- Grand Ave Corridor Study
- Next Steps

Study Location & Objective

- Evaluate options for accommodating a bike facility to connect the Santa Fe Trail to Grand Avenue shops, Samuell-Grand Park, and the Trinity Forest Spine Trail

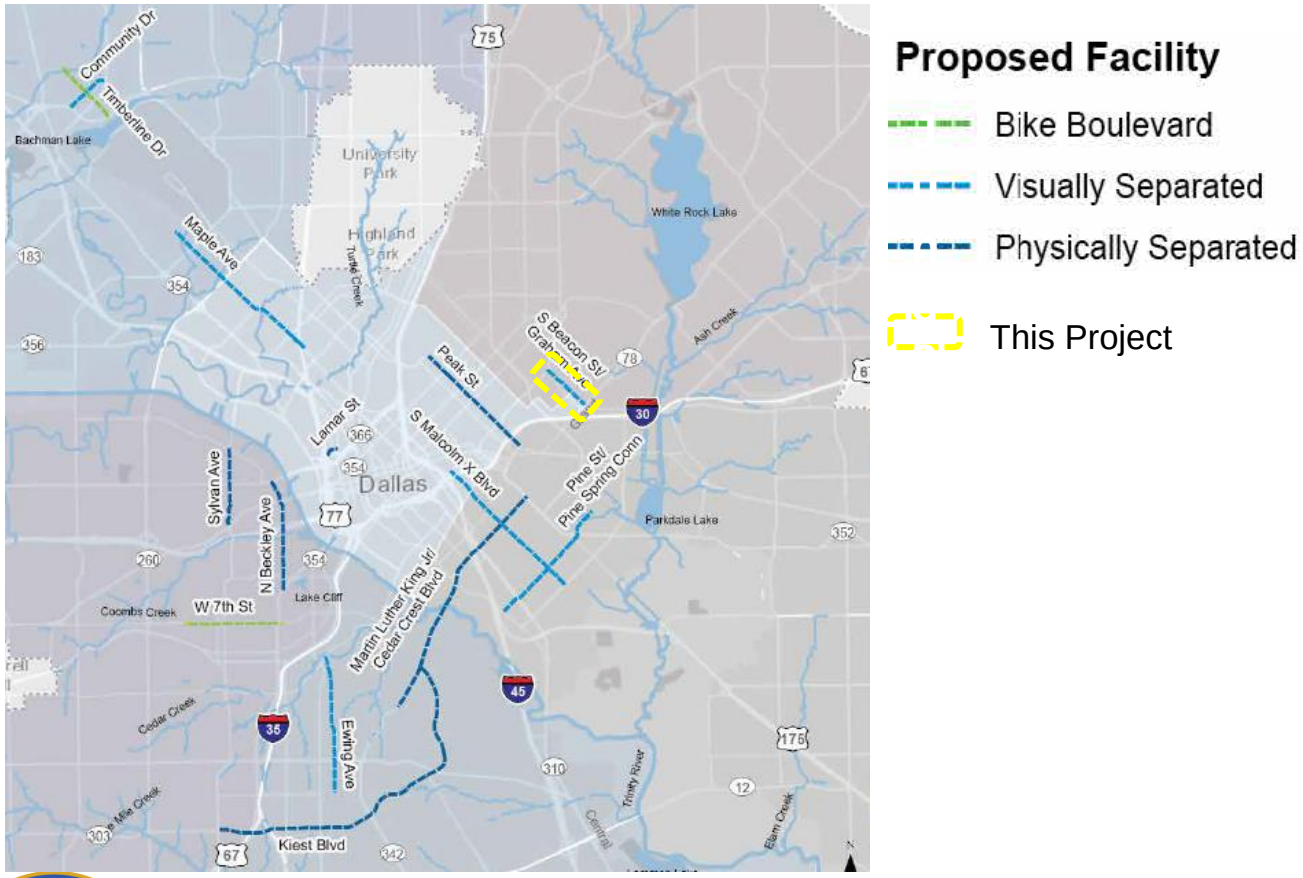
- Evaluate options for, and pros/cons of, converting Beacon and Graham from one-way operations to two-way operations
- Select a configuration to advance to detailed engineering and implementation

Background

Dallas Bike Plan Update (Draft)

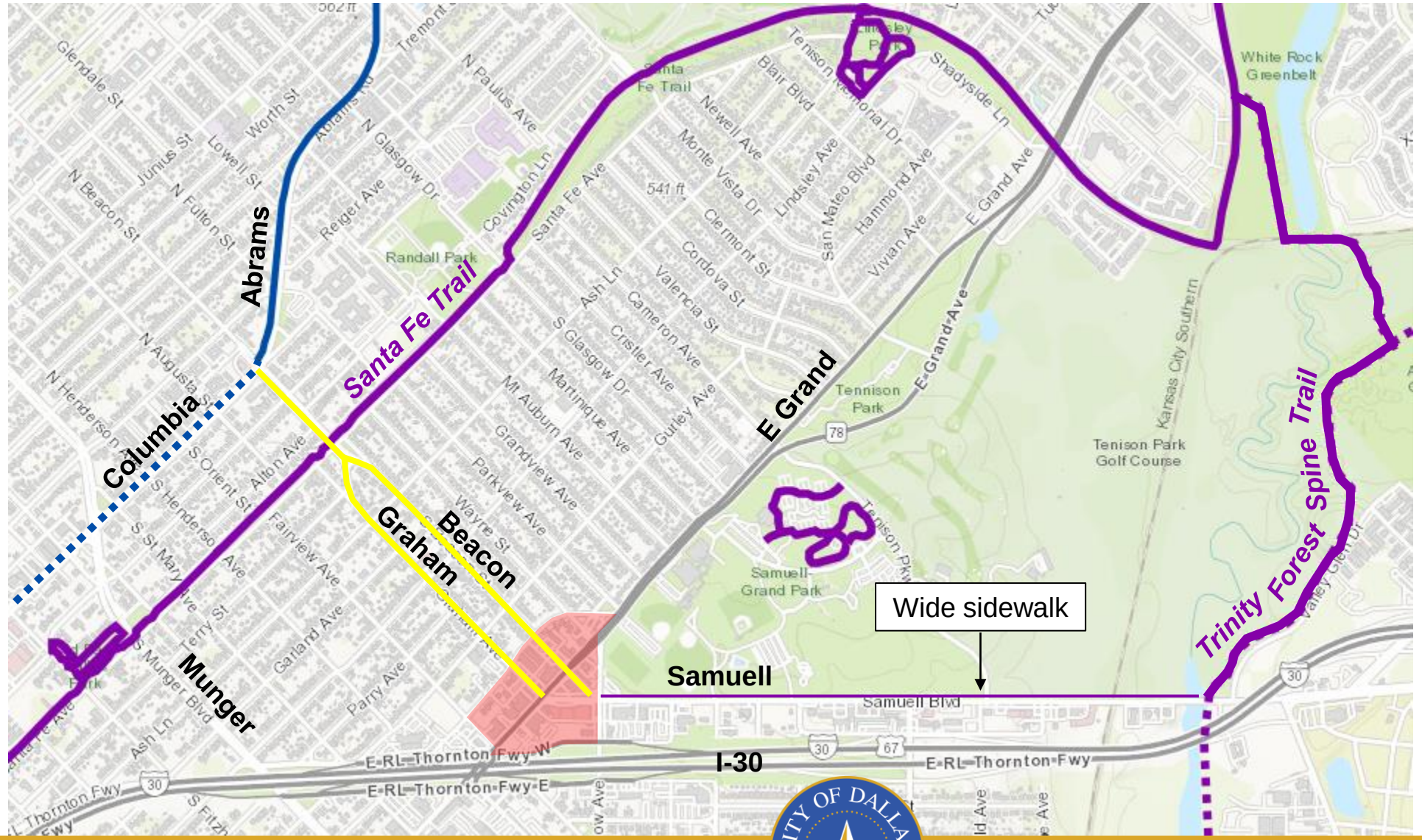
- The latest draft of the Dallas Bike Plan update identifies bike lanes on Beacon and Graham as one of the Top 15 Priority Projects for implementation.
- There are a lot of options and challenges with implementing these bike lanes, which is why more detailed study is needed

Top 15 Priority Projects (Draft - June 2023)



www.bit.ly/DALLASBIKEPLAN2024

Bike Connections



One-Way to Two-Way Conversions

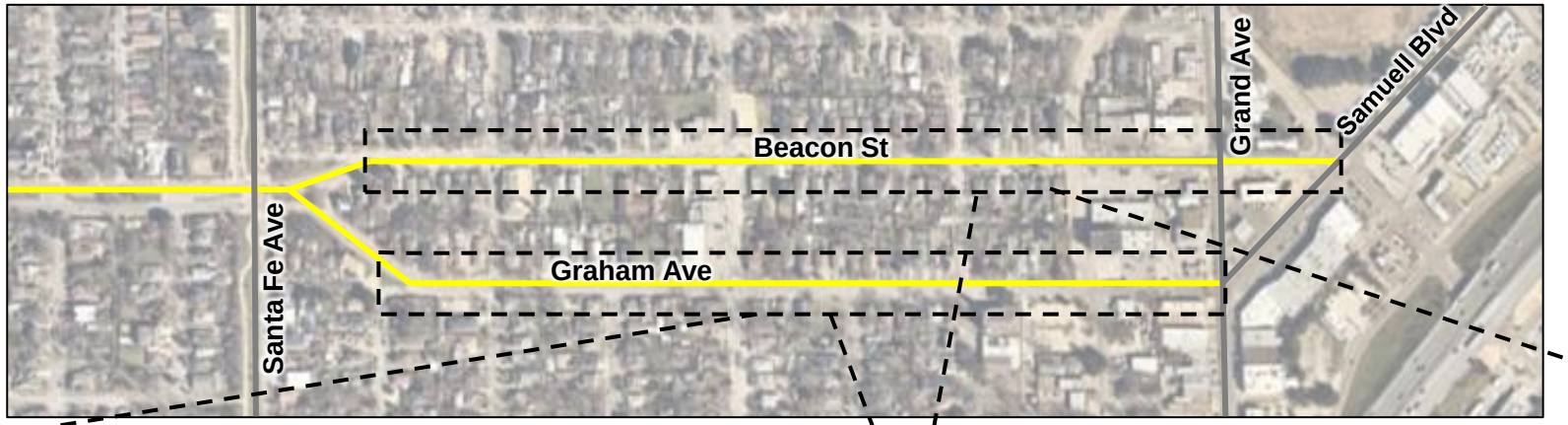
- There has been a lot of interest in converting one-way streets to two-way operation in recent years
  - Haskell & Peak – study underway
  - Tyler & Polk – recently converted
  - Elm & Commerce in Deep Ellum – project underway
  - McKinney & Cole – project underway
- Therefore, a one-way to two-way conversion feasibility analysis was included in this study's scope

Scope of This Study

- Existing conditions analysis: analyze crash data, traffic volumes, origin-destination travel patterns, infrastructure condition
- Alternatives analysis: analyze different alternatives that would reduce the number of travel lanes, convert roads from one-way operation to two-way operation, change intersection configuration, etc.
- Collect public input ← ***We are here***
- Finalize recommendations: short-term and long-term

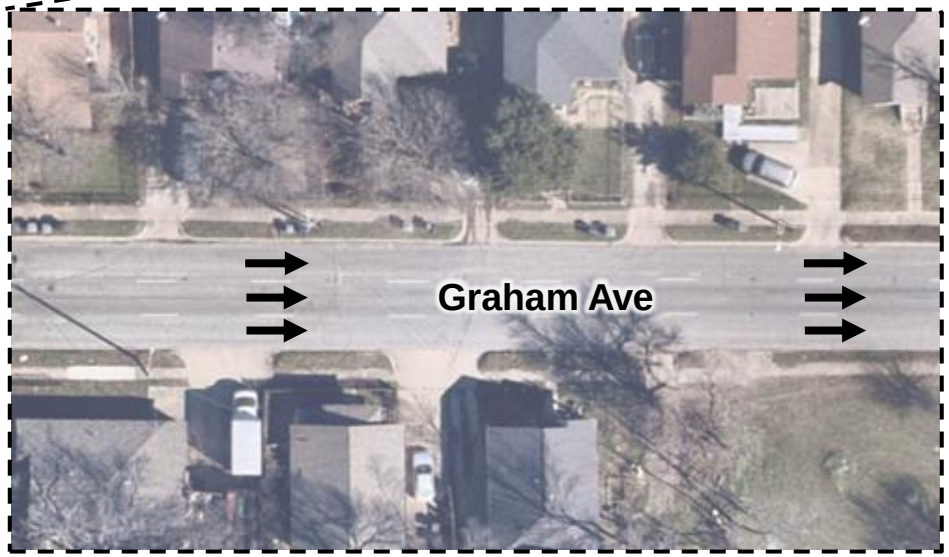
Existing Conditions

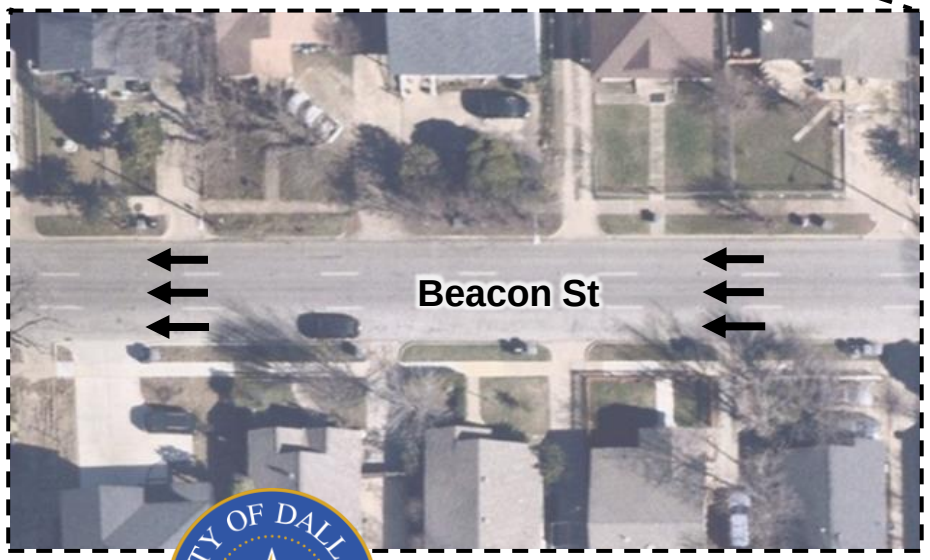
Existing Cross-Sections: One-Ways



Between Santa Fe and Samuell/Grand, the project corridor streets are **one-way** with **3 lanes** in each direction

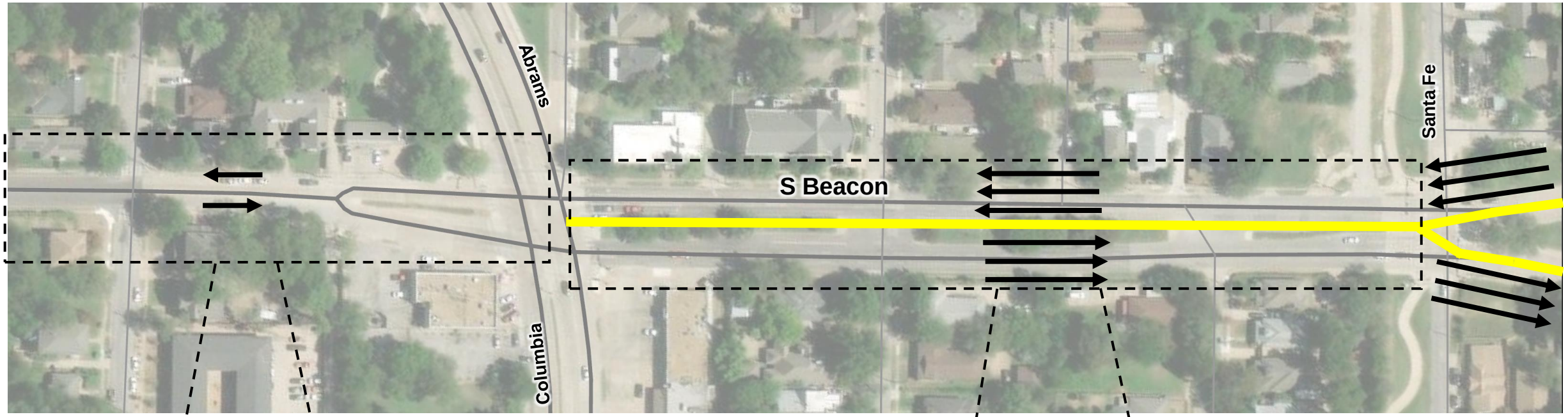
Graham Ave - Southbound Traffic
Beacon St - Northbound Traffic





*The surrounding area is mainly single-family residential; however, the corridor carries at least **90%** of commuter, or **"cut through" traffic** during the peak hours.*

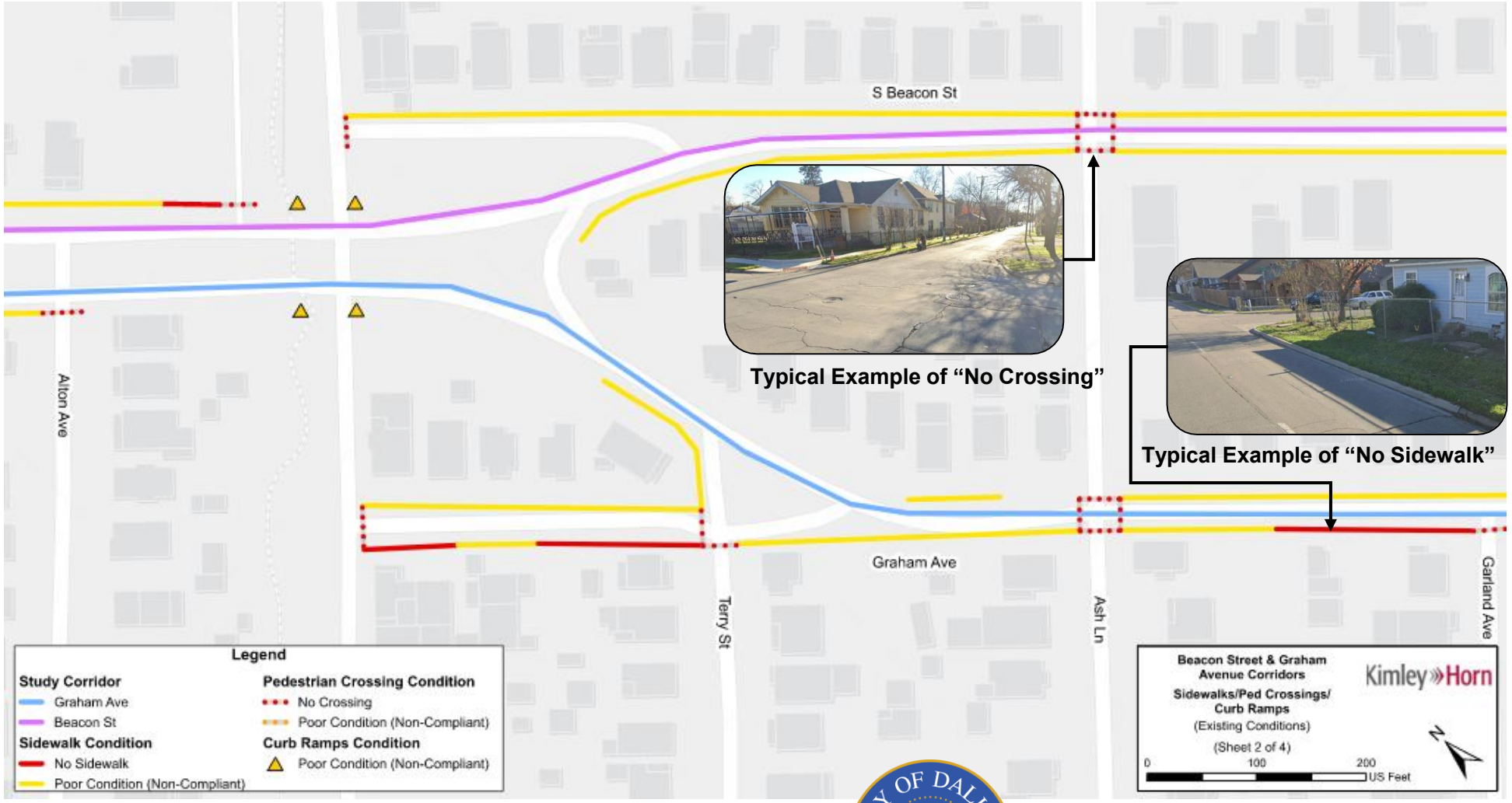
Existing Cross-Sections: Two-Ways



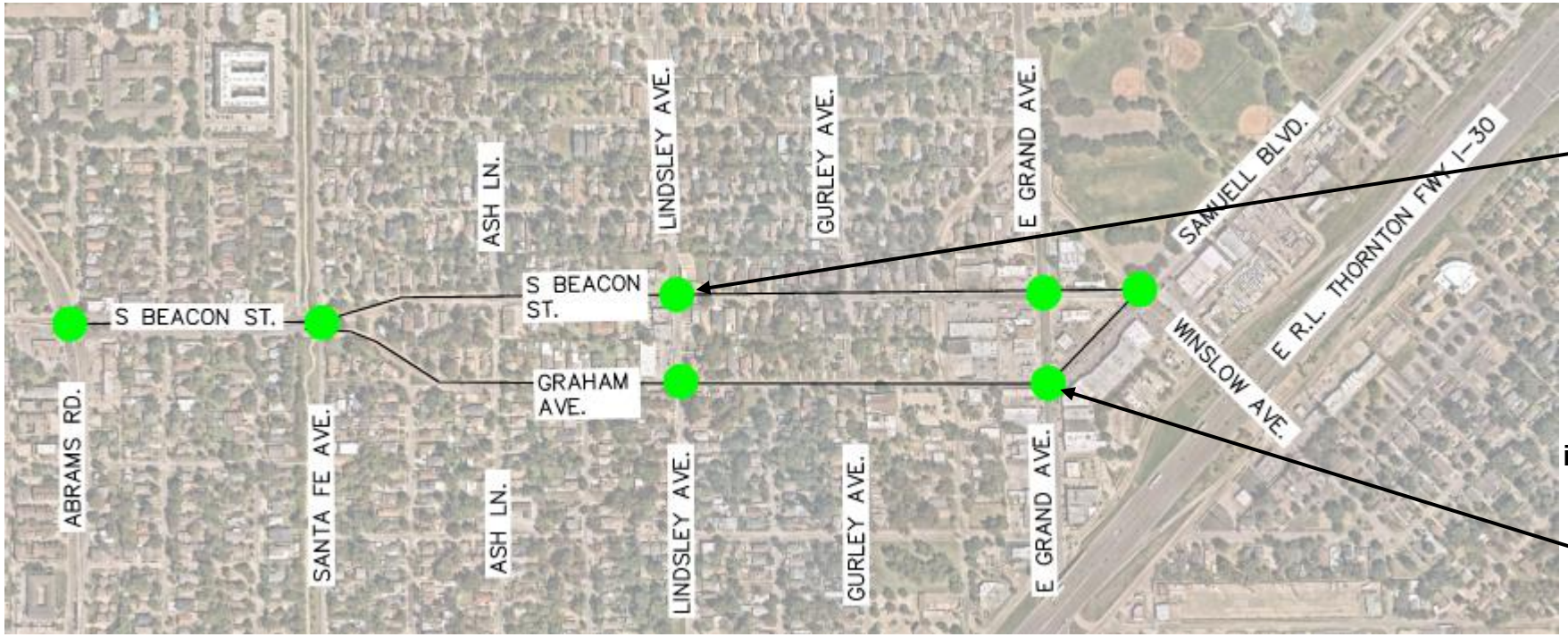
North of the study corridor, N Beacon transitions to **1 lane** in each direction.

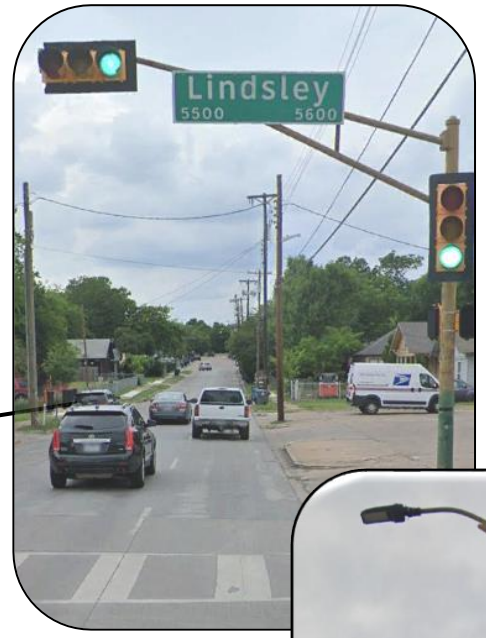
On the study corridor between Columbia/Abrams and Santa Fe, the project corridor streets are **two-way** with **3 lanes** in each direction

Sidewalk Deficiencies



Traffic Signal Deficiencies

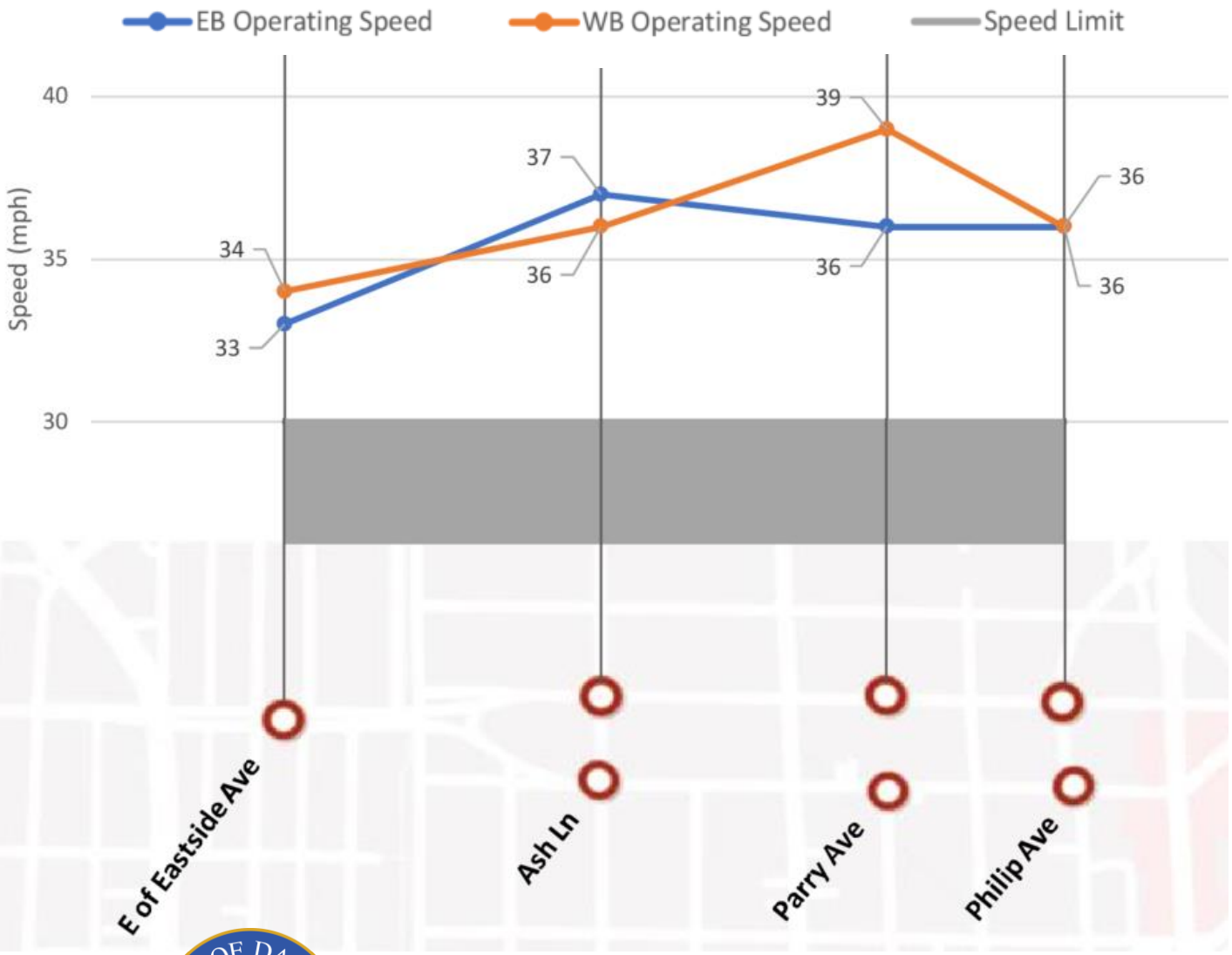


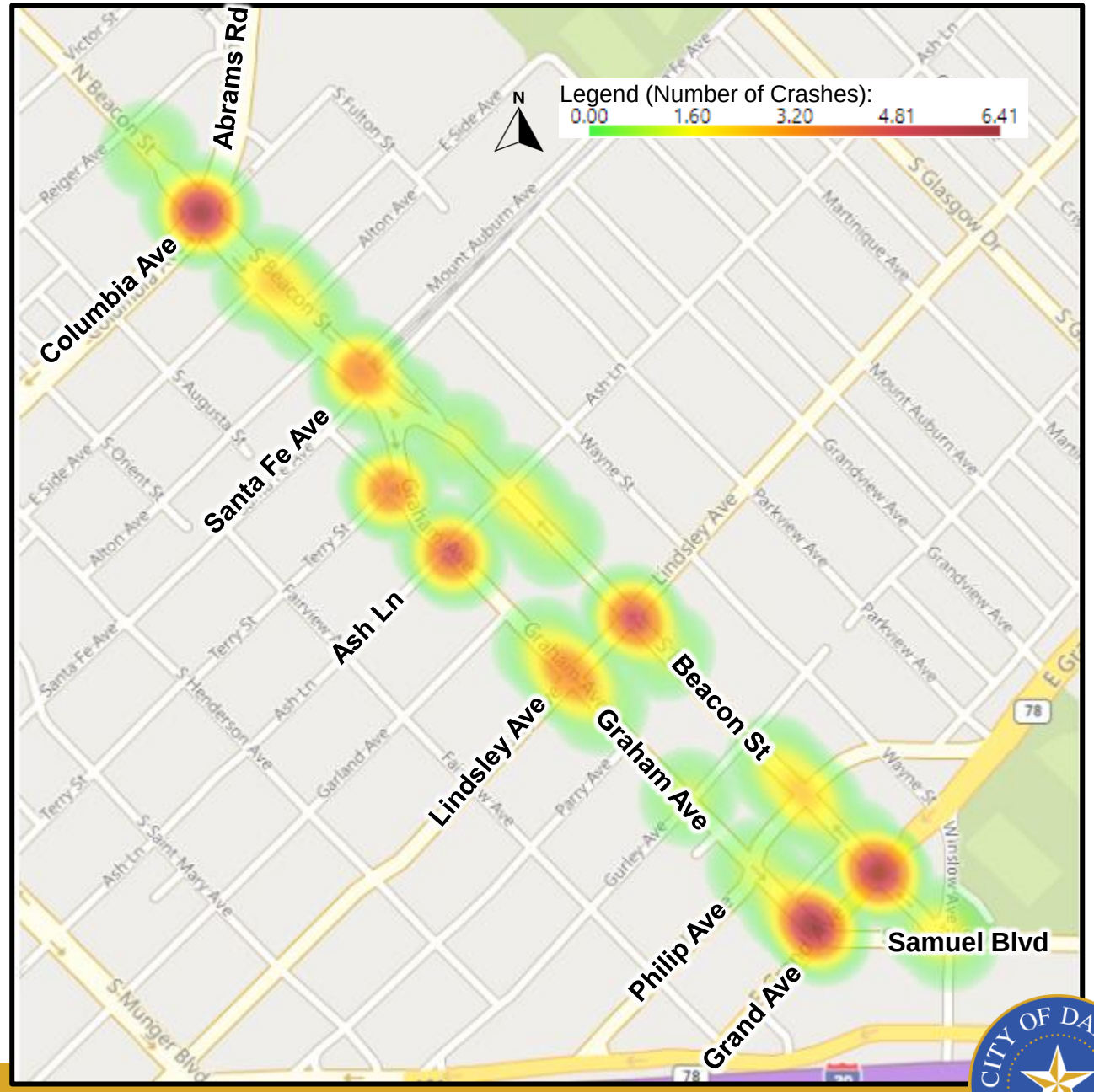


Examples of the old/deficient signal infrastructure along the corridors

Speeds

- Speed Limit: 30 mph
- Average Speed EB (Graham): 35.5 mph
- Average Speed WB (Beacon): 36.25 mph





Crash Summary

Crashes from Jan 2018-June 2023:

- 196 Total Crashes
- Most crashes occur at signalized intersections
- 3 Pedestrian/Cyclist Crashes – all with minor injury
- 3 Severe-Injury Crashes – all due to running a stop sign or traffic signal
- No Fatal Crashes

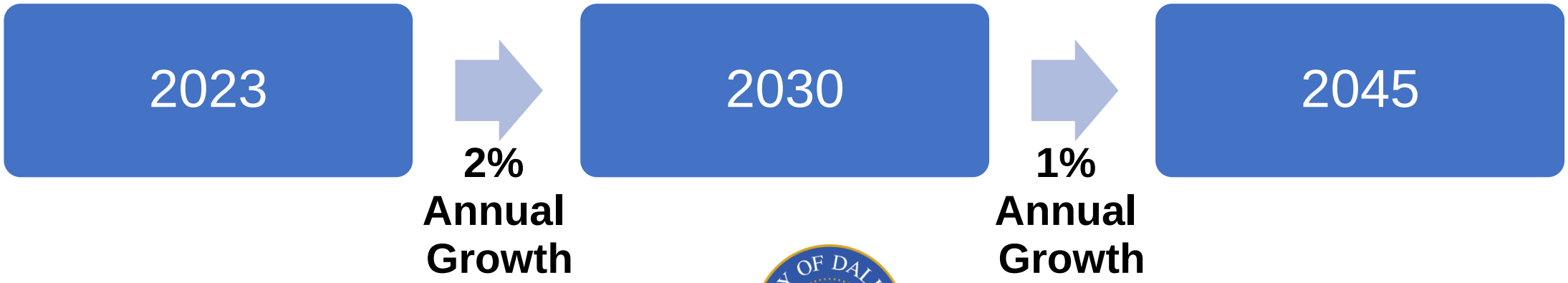
Summary of Existing Conditions

- There is existing sidewalk along most of the project corridors, however, the pedestrian accommodations are aging and there are many areas with **sidewalk, crosswalks, and ramp deficiencies.**
- The large cross-section (3-lanes in one direction) acts as a “raceway” during non-congested times, leading to **speeding concerns**.
- The existing **signal infrastructure** is over 50 years old and is in need of replacement.

Future Growth and Capacity

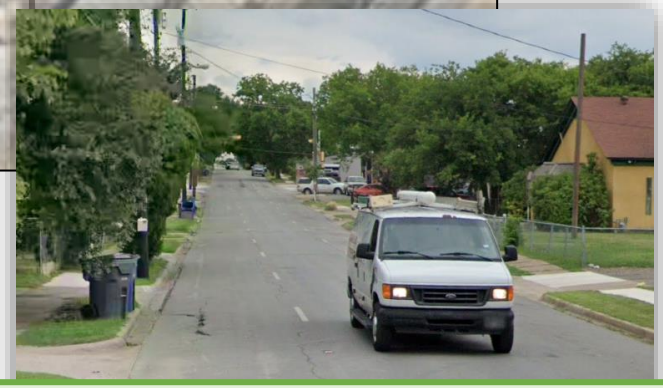
Future Expected Growth

Year	Historical Daily Traffic Count Locations					
	Samuell Blvd South of Grand	Graham North of Grand	Beacon North of Grand	Beacon North of Philip	Graham North of Gurley	Beacon North of Ash
2023	6,293	6,293	5,714	5,699	6,426	5,993
2009	5,970	4,960	3,480	4,350	5,190	4,980
Annual Growth	0.38%	1.72%	3.61%	1.95%	1.54%	1.33%
Average Annual Growth	**1.75%**					
Assumed (2023 to 2030)	**2.0%**					
Assumed (2030 to 2045)	**1.0%**					



Future Roadway Capacity

Through 2045, **excess capacity** is expected to be available on both Beacon St and Graham Ave with the **existing 3-lane one-way configuration**. The existing configuration leaves **over 50% of available traveled space** underutilized.



50% of available traveled space would not be used if the existing cross-section is maintained.

As part of this study, we looked at potential improvements that could:

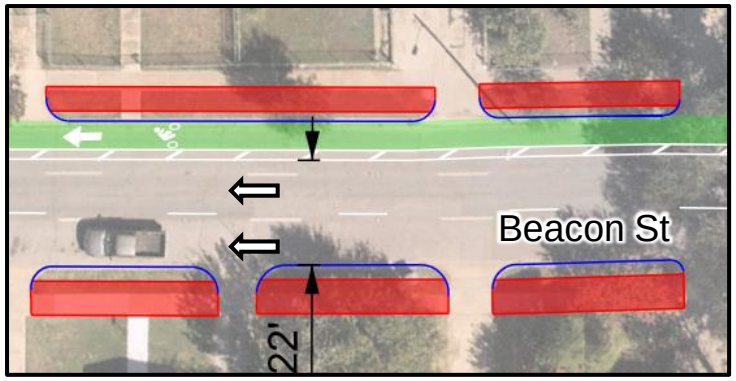
- **Better-utilize the available space**,
- **Control speeds**, and
- **Provide connectivity from Santa Fe Trail to neighborhood and nearby amenities**.

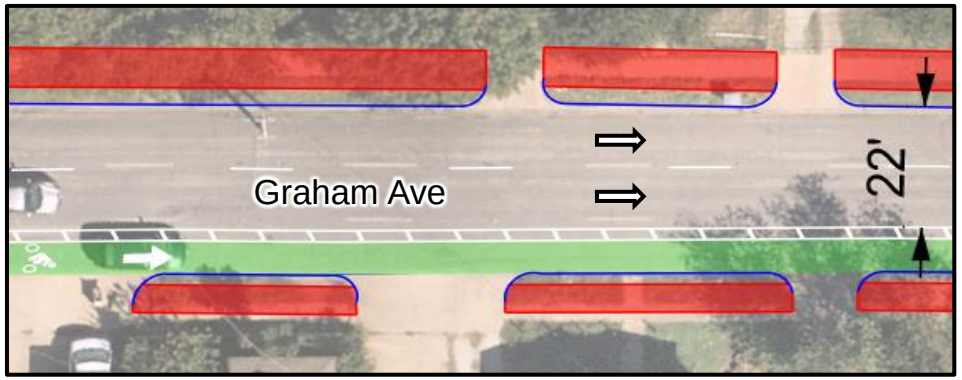
Potential Alternatives Overview

Proposed Alternatives Overview

Alternative 1

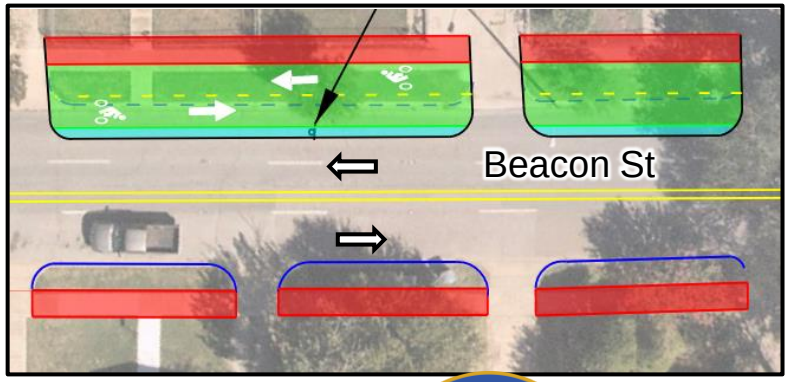
- Keep existing **one-way** street configuration
- Convert one travel lane to an **on-street bike lane** on both Beacon St and Graham Ave west of Abrams Rd





Alternative 2

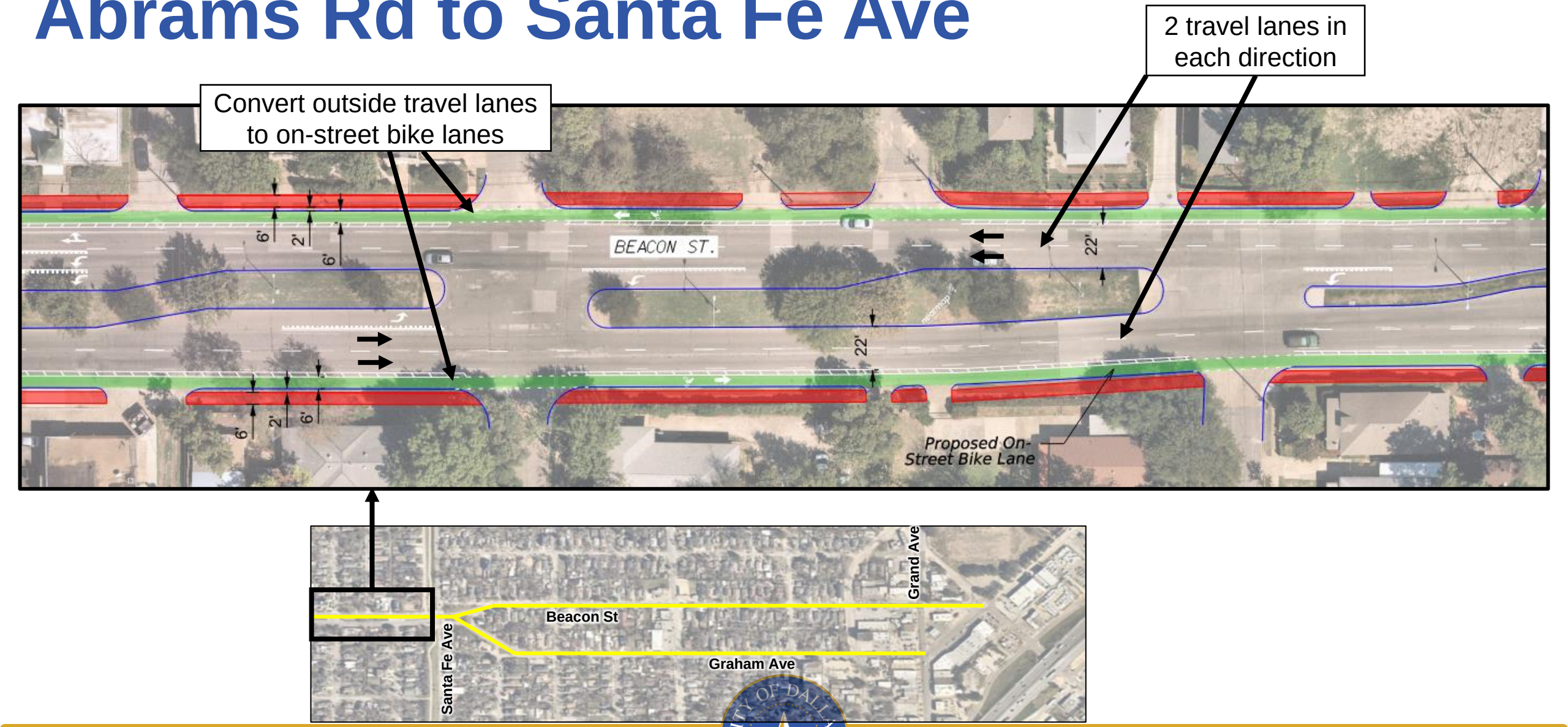
- Convert Beacon St and Graham Ave from one-way to **two-way** streets
- Convert one travel lane to an **on-street bike lane** on Beacon St north of Santa Fe Ave
- Adjust outside curb and install a **two-way cycle track** on Beacon St south of Santa Fe Ave



Alternative 1

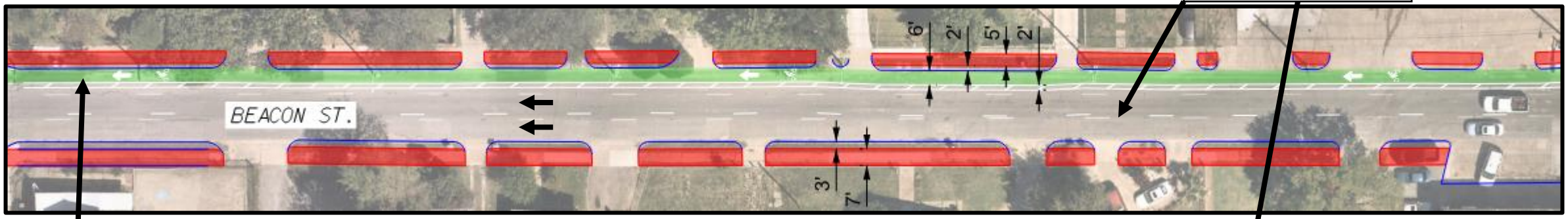
Maintain one-way traffic, on-street bike lane in outside travel lane

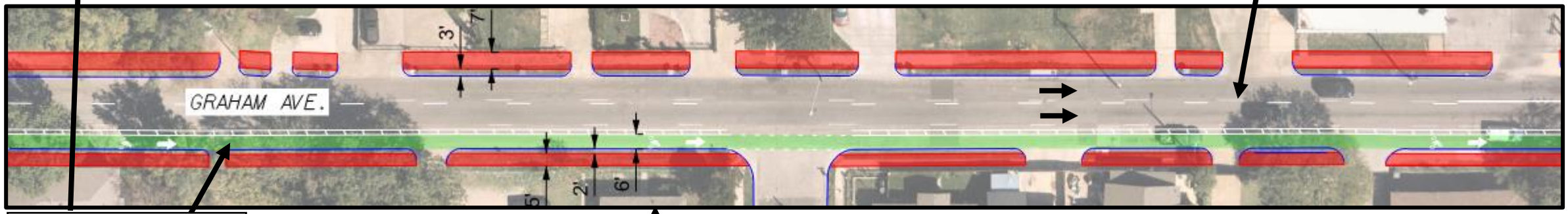
Abrams Rd to Santa Fe Ave



Santa Fe Ave to Gurley Ave

2 travel lanes in each direction



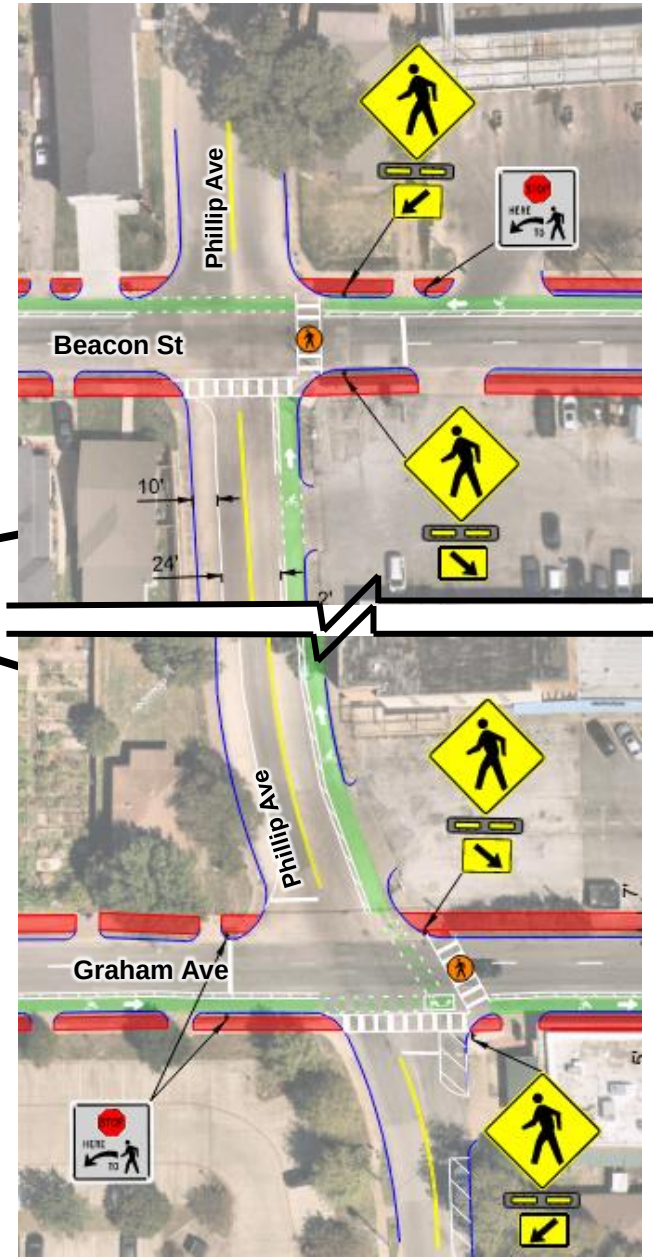


Convert outside travel lanes to on-street bike lanes

RRFB at Phillip Ave

Bike lane on Phillip Ave provides connectivity to Samuell Grand Park for southbound bicyclists

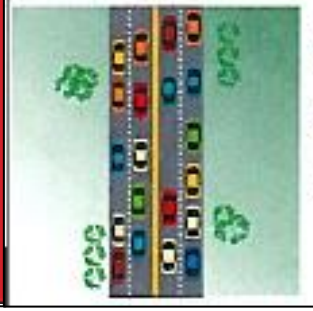
On-street bike lane on Phillip Ave



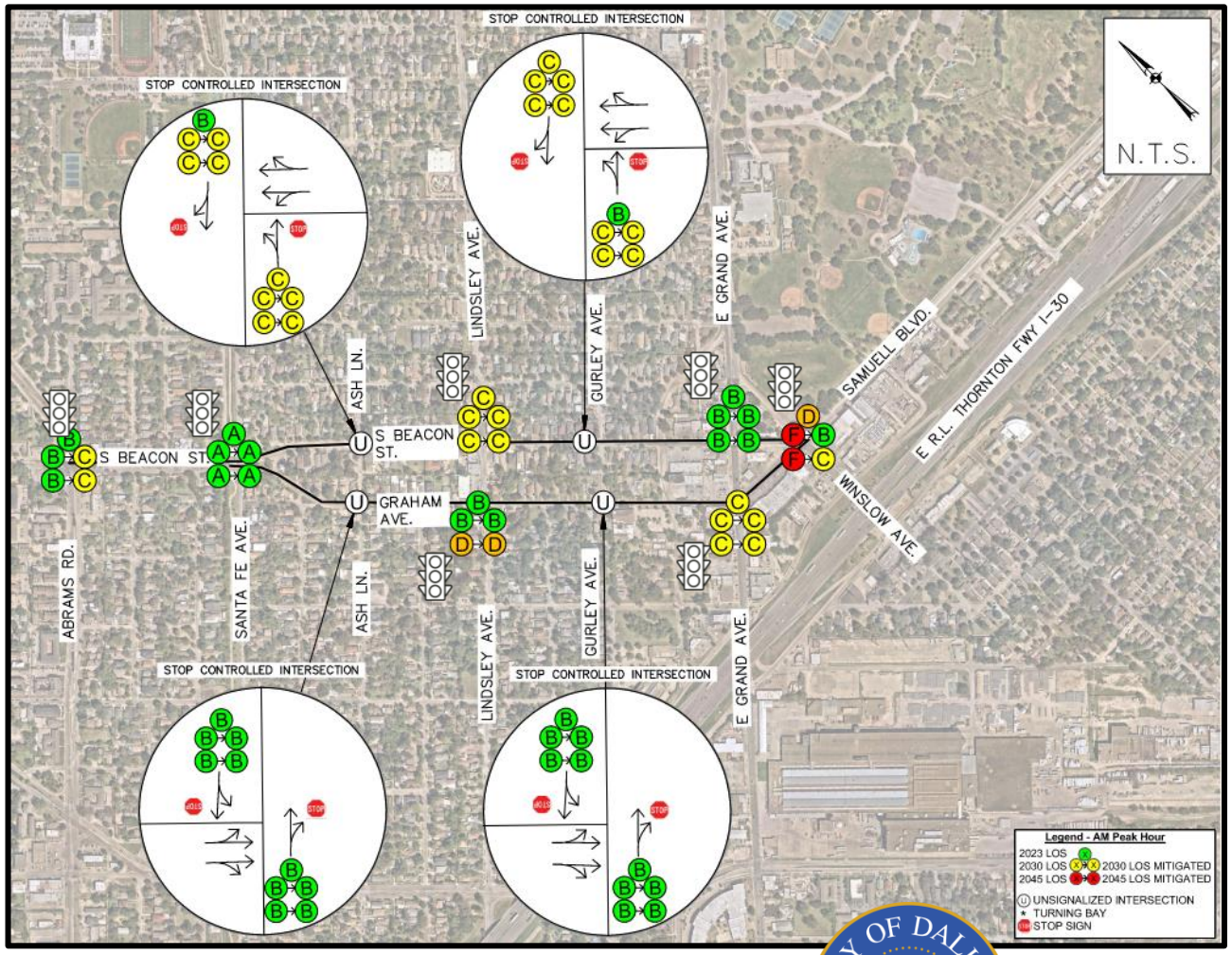
Alternative 1 Traffic Analysis

What is Level of Service (LOS)?

LOS	Roadway Segment
A	 Free-flow conditions. Vehicles unaffected by other vehicles. Movement within the traffic is good. Minor disruptions to flow are absorbed without change to speed.
B	 Free-flow conditions. Other vehicles become more noticeable. Less freedom to maneuver. Minor disruptions to flow are absorbed, although local deterioration in LOS is more obvious.
C	 Traffic density on roadways becomes noticeable. Traffic becomes affected by other vehicles. Travel speeds may become reduced. Queueing occurs with serious traffic disruption.

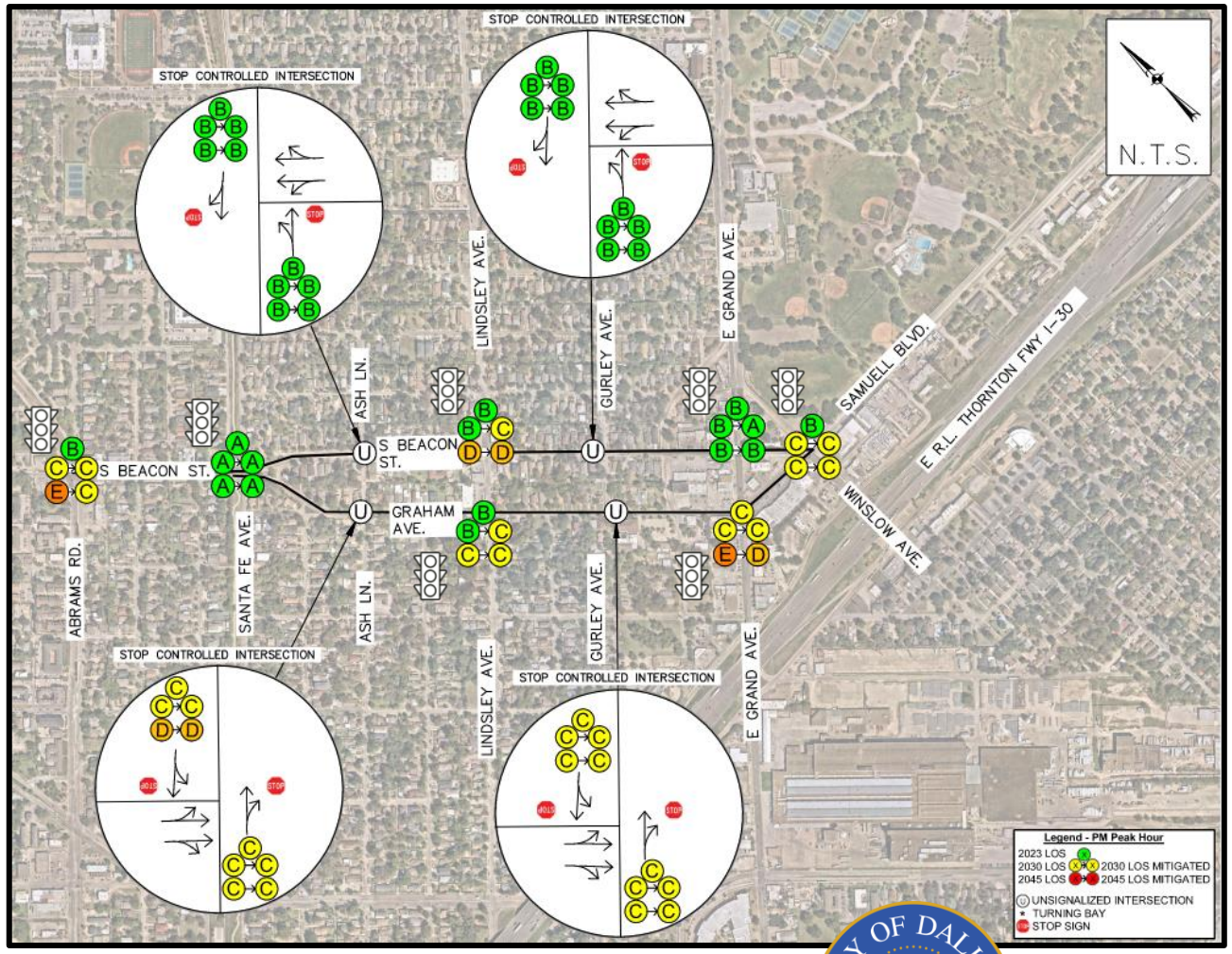
D		Movement becomes restricted due to traffic congestion. Speeds decline slightly with increasing flows. Minor disruptions can be absorbed without extensive queues forming and the service deteriorating.
E		Operations at or near capacity. Minimum spacing for maintaining uniform flow. Speeds are highly variable and unpredictable.
F		Forced or breakdown in vehicular flow. Vehicle speeds are less than 30 mph. Complete congestion.

AM Peak Hour (Alternative 1) Intersection LOS Evaluation



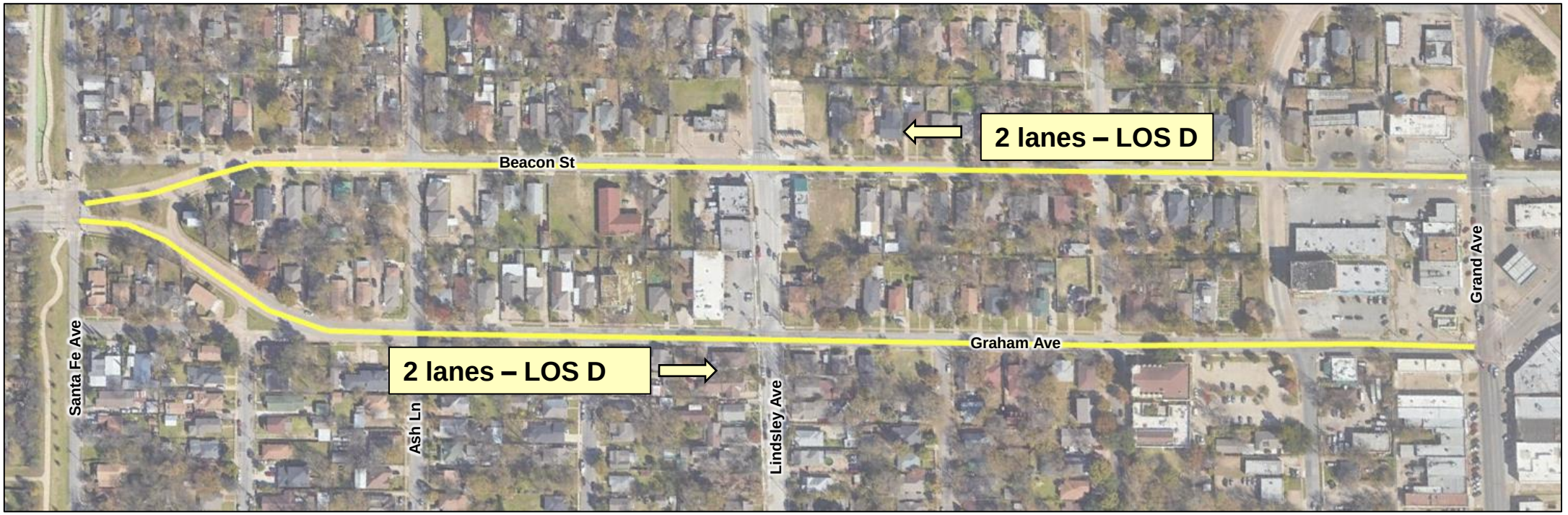
All signalized intersections are projected to operate at **acceptable levels** (LOS D or better) during the **AM peak hour in 2045** with lane reduction and signal timing adjustments.

PM Peak Hour (Alternative 1) Intersection LOS Evaluation



All signalized intersections are projected to operate at **acceptable levels** (LOS D or better) during the **PM peak hour in 2045** with lane reduction and signal timing adjustments.

Link LOS Analysis – Critical Peak Hour



With **two traveled lanes**, both Beacon St and Graham Ave are expected to operate **favorably** at LOS D during the critical peak hour **through 2045**.

✓ Conclusion: **No significant increase in vehicular travel time** is anticipated with the proposed **road diet** improvements.

Alternative 2

Two-Way Conversion, Cycle Track on Beacon St

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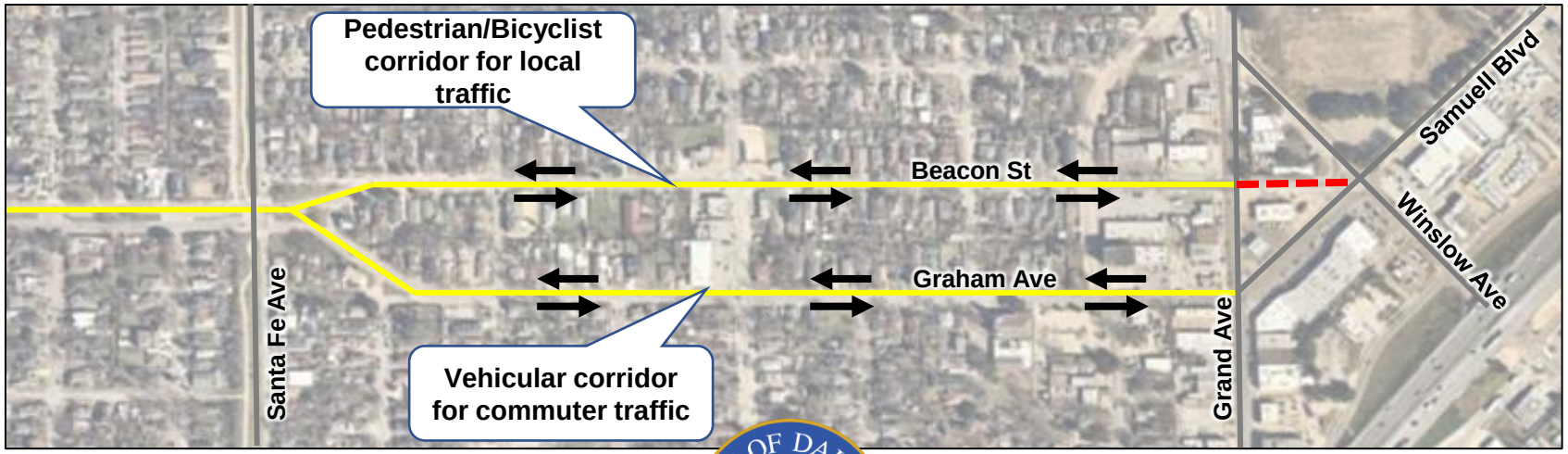
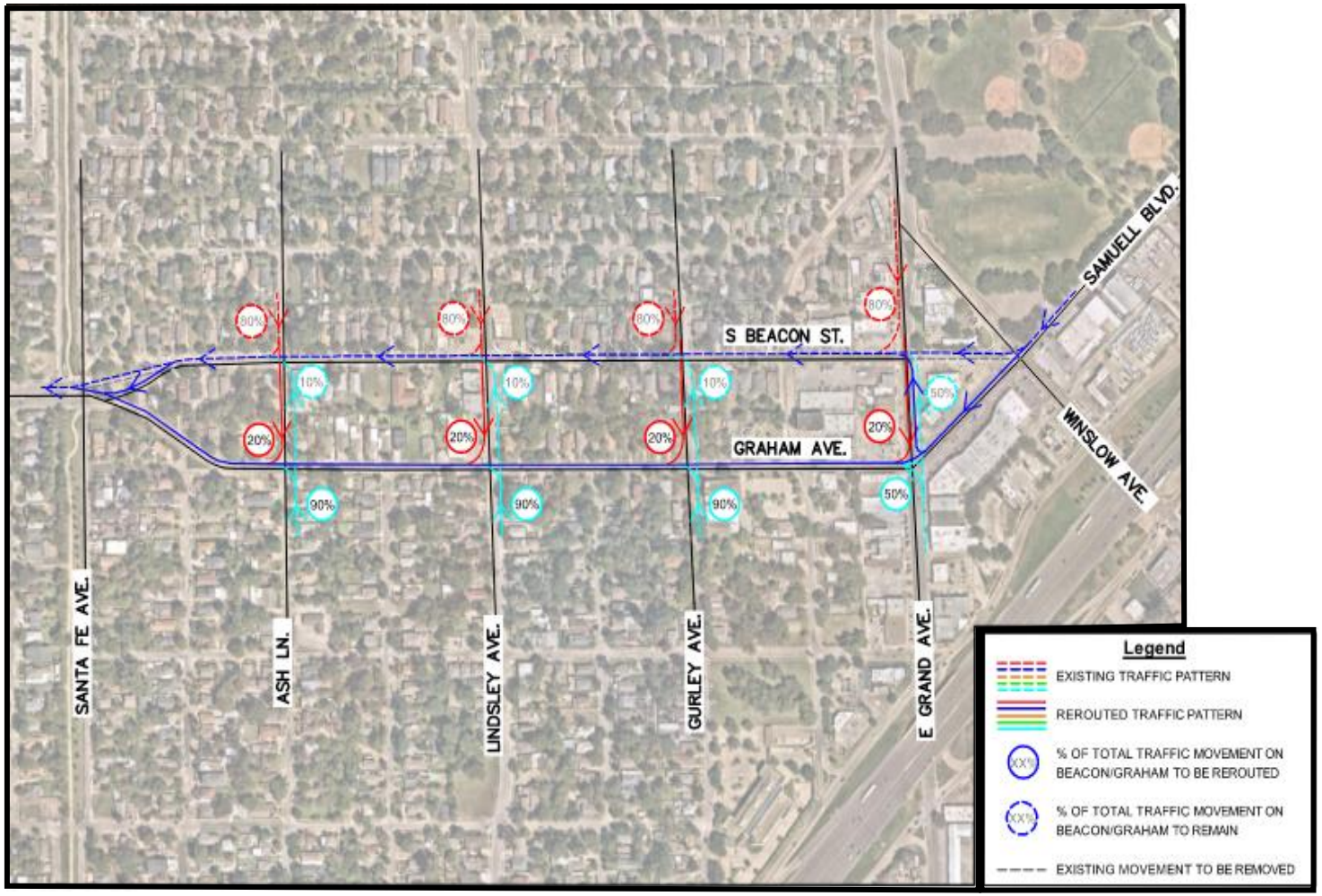
TEXAS

Alternative 2 Traffic Circulation

- With the one-way to two-way conversion:
  - Graham Ave would continue to serve as a more vehicular-centric roadway that serves longer-distance travel
  - Beacon St would become a pedestrian/bicyclist local street that serves mainly neighborhood traffic
- Beacon St between Grand Ave and Winslow Ave is recommended to be closed to vehicular traffic to aid in this new traffic pattern (avoid having a very complex intersection at Samuell Blvd and Winslow Ave).



Trip Rerouting for One-Way to Two-Way Conversion



90%* traffic rerouted **from Beacon St to Graham Avenue**

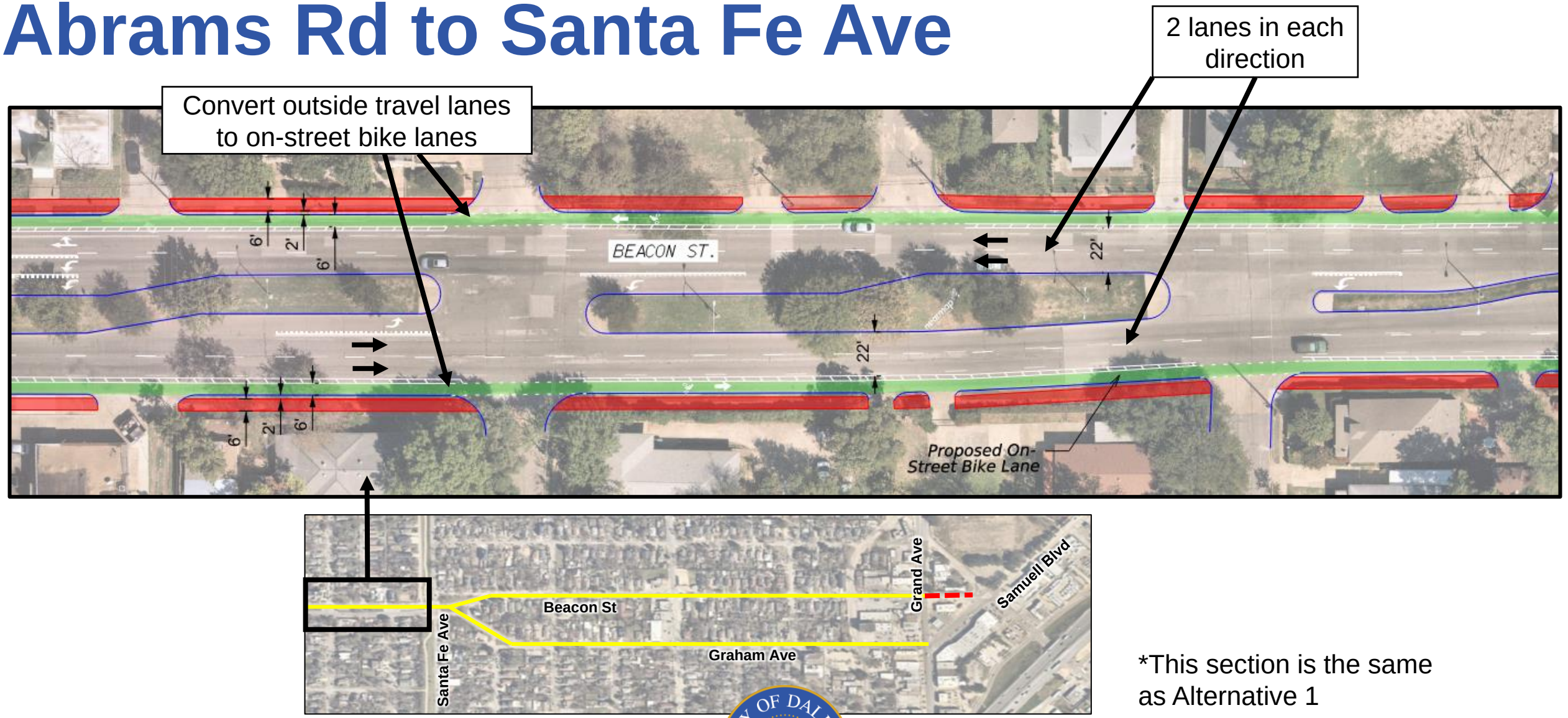
10%* traffic rerouted **from Graham Ave to Beacon St**

Graham Ave ⇨ Commuter/main vehicular route

Beacon St ⇨ Pedestrian/cyclist local route

Percentages shown are averages

Abrams Rd to Santa Fe Ave



*This section is the same as Alternative 1

Santa Fe Ave Intersection

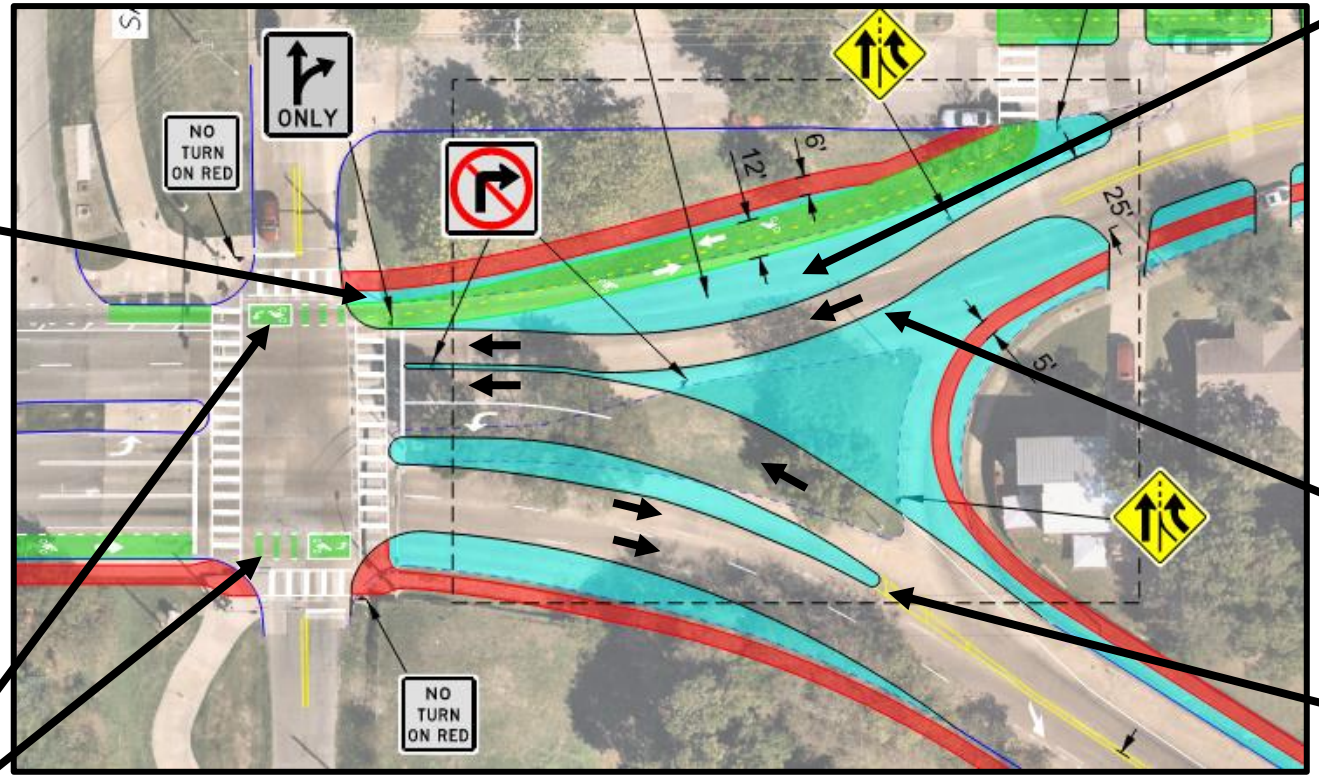
Proposed Landscaped Amenity Zone

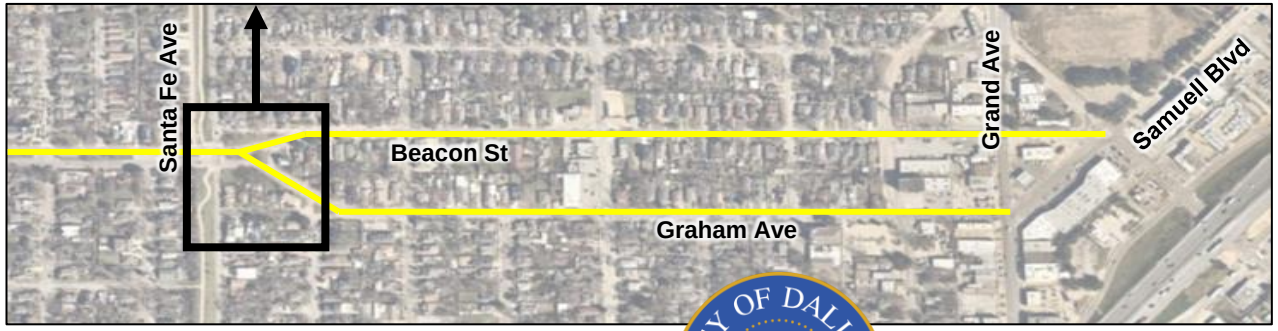
Two-way cycle track begins

Free movement from Beacon St

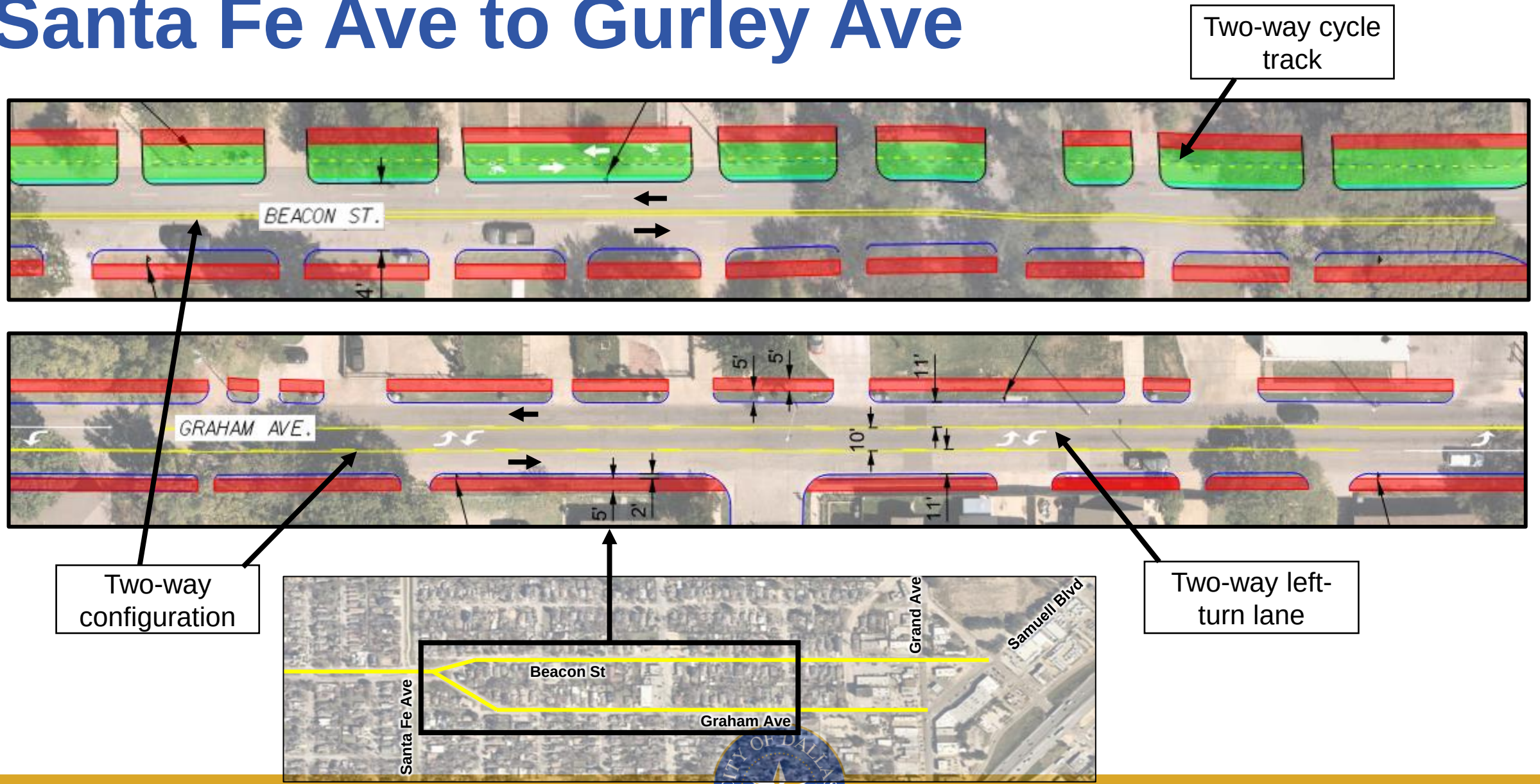
Two-way traffic on Graham Ave

Designated bike crossing

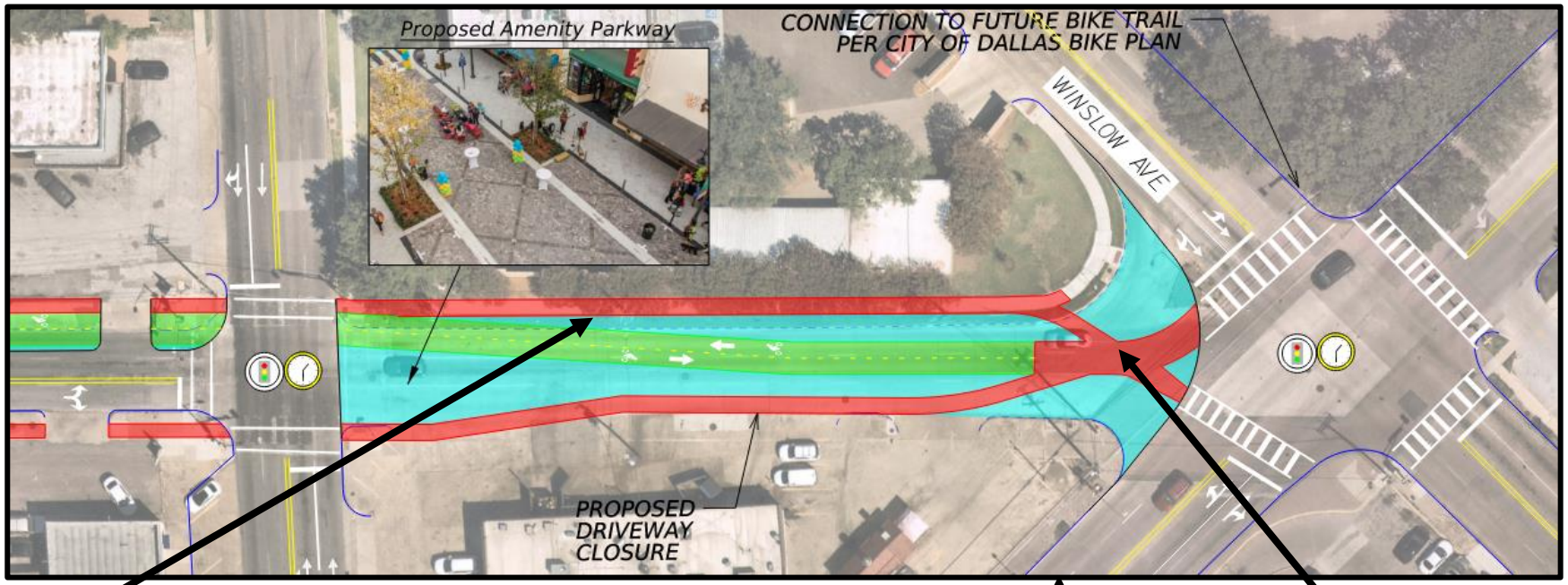




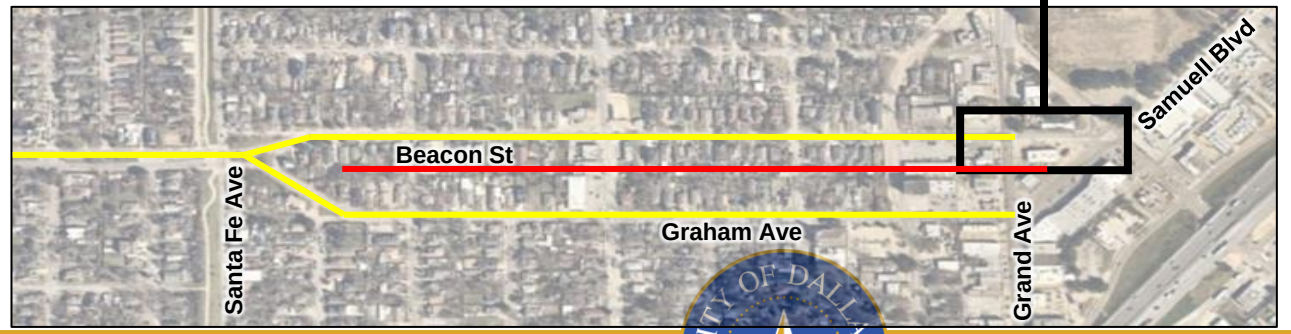
Santa Fe Ave to Gurley Ave



Grand Ave to Winslow Ave
(Beacon Street Closure)



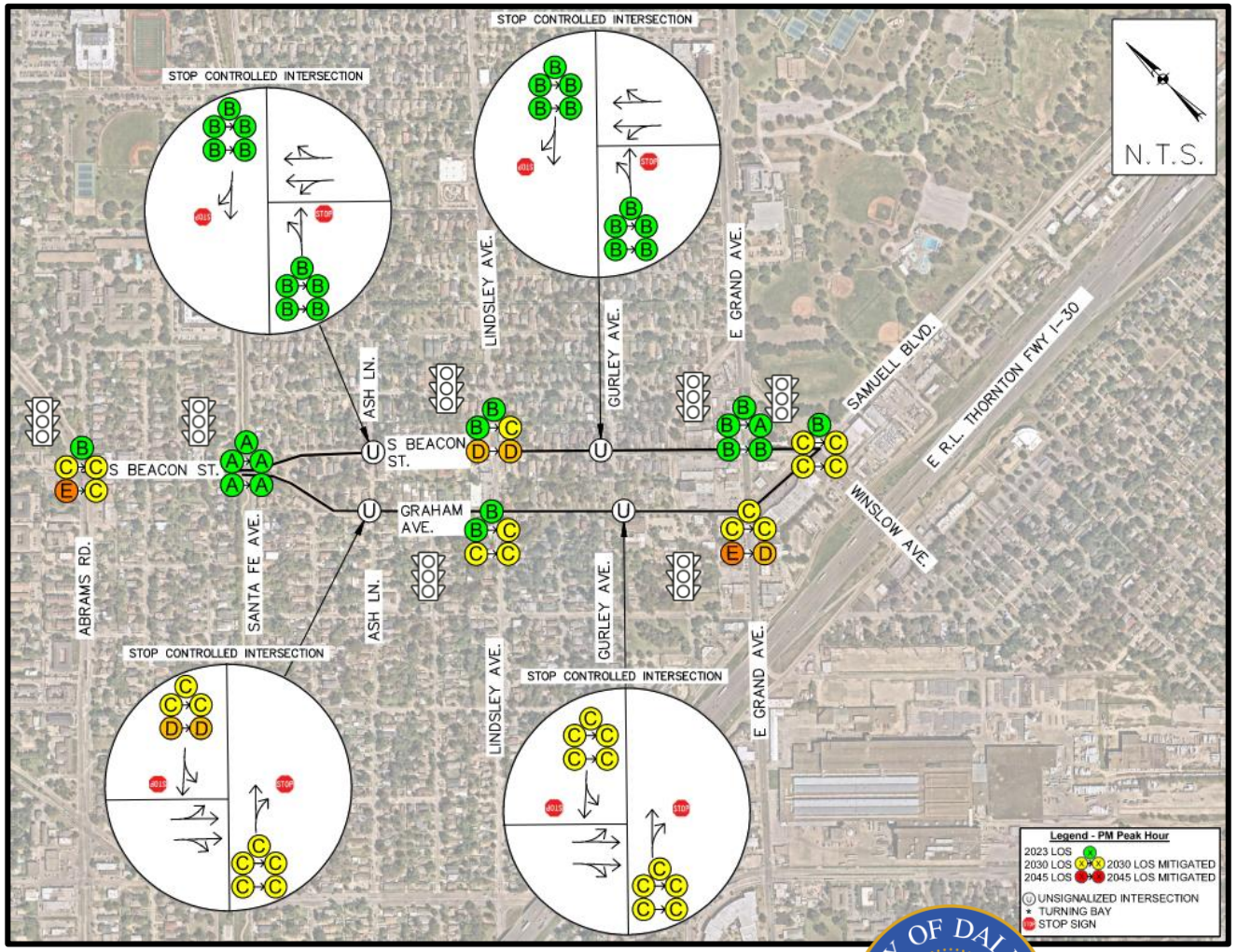
Pedestrian/ bicyclist zone



Road closure between Grand Ave and Winslow Ave

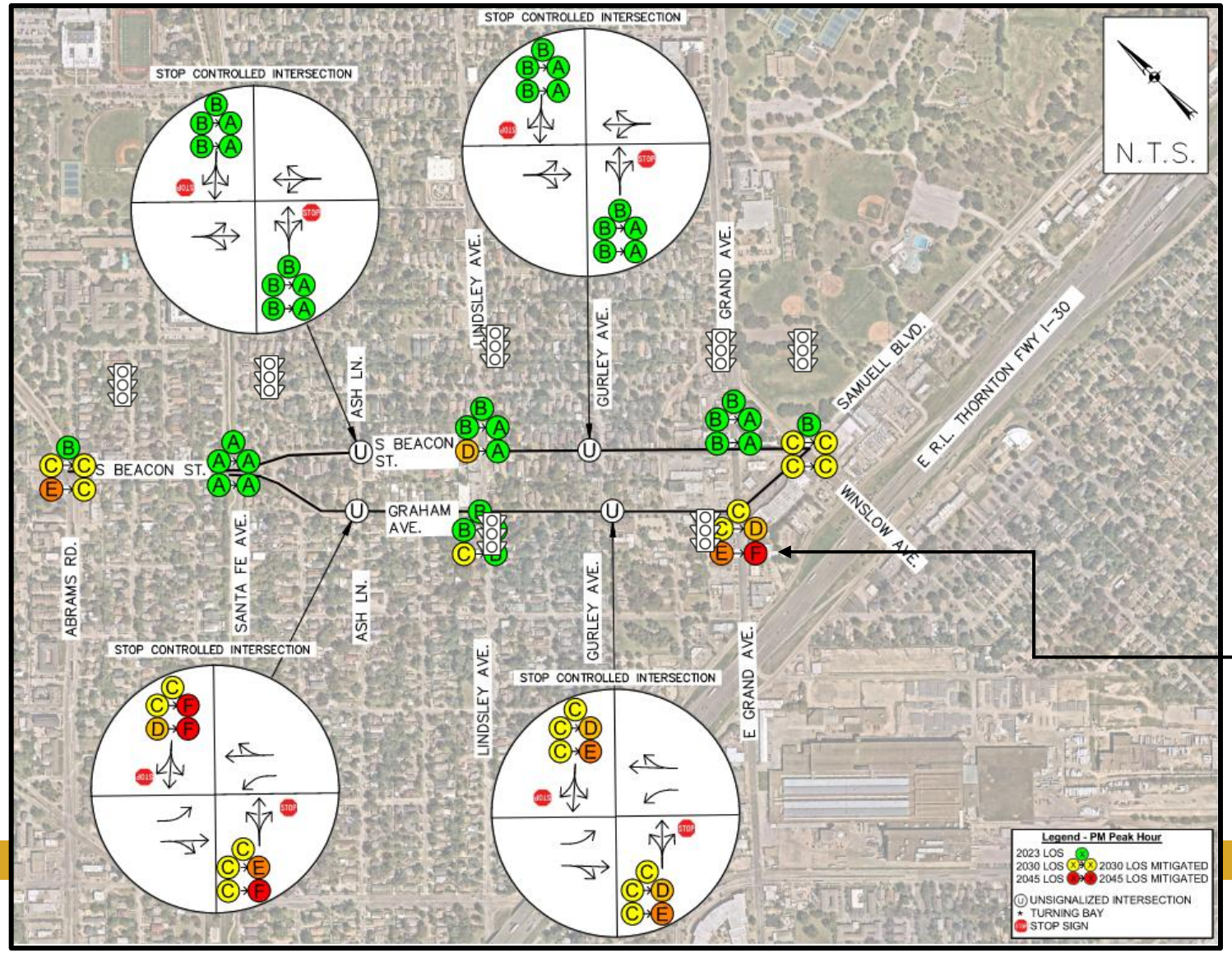
Alternative 2 Traffic Analysis

AM Peak Hour (Alternative 2) Intersection LOS Evaluation

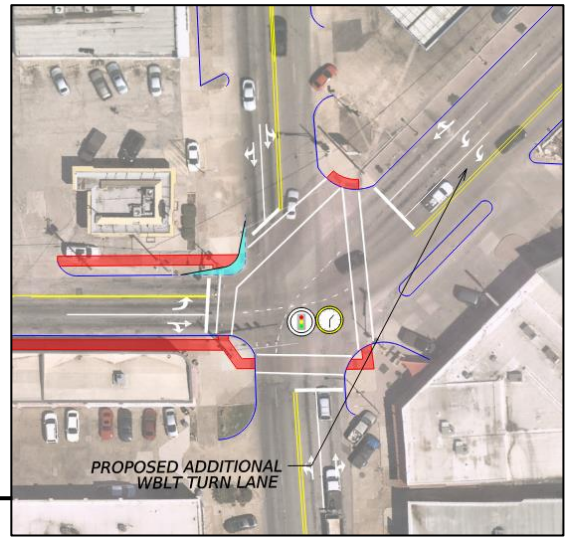


All signalized intersections are projected to operate at **LOS D or better** during the **AM peak hour in 2045** with two-way conversion and signal timing adjustments.

PM Peak Hour (Alternative 2) Intersection LOS Evaluation

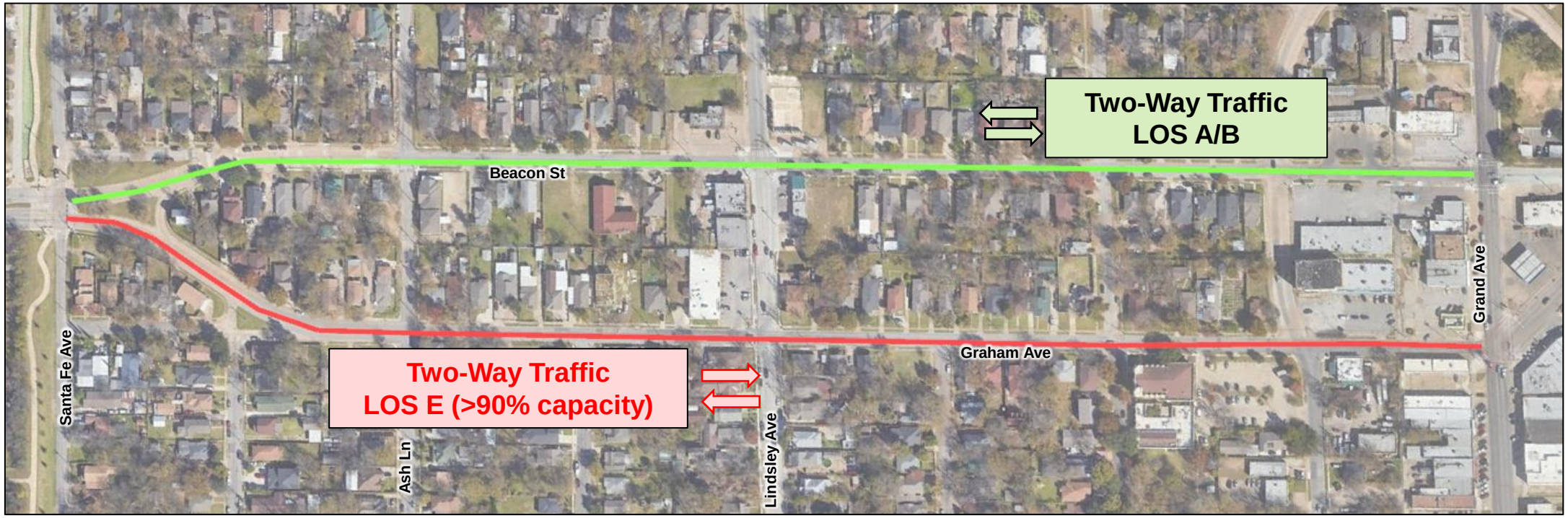


6 out of 7 signalized intersections are projected to operate at **LOS D or better** during the **PM peak hour in 2045 with** two-way conversion and signal timing adjustments.



Two-way conversion changes would lead to a reduction in northbound capacity at Graham Ave and Grand Ave, resulting in **1 ½ minutes of delay** in the 2045 PM peak hour.

Link LOS Analysis - Critical Peak Hour



With the two-way conversion, traffic performs adequately when looking at the overall **Daily Link Analysis**, but higher delays are expected to occur along **Graham Ave** during the **critical peak hours**.

*Results shown for **2030** traffic projections*

✳ Conclusion: **Peak hour travel times** along **Graham Ave** are anticipated to increase with the **two-way conversion, especially at the intersection of** Graham Ave. & Grand Ave.

Alternatives vs. No Build Comparison

Signalized Intersections - 2045 Scenario																
Intersection	AM Peak Hour							PM Peak Hour								
	No Build		Alternative 1		Delay Change* (sec)	Alternative 2		Delay Change* (sec)	No Build		Alternative 1		Delay Change* (sec)	Alternative 2		Delay Change* (sec)
	Delay (s)	LOS	Delay (s)	LOS		Delay (s)	LOS		Delay (s)	LOS	Delay (s)	LOS		Delay (s)	LOS	
Winslow Ave & Samuell & Beacon St	143.2	F	28.4	C	-114.8	24.3	C	-118.9	23.7	C	21.6	C	-2.1	21.4	C	-2.3
E Grand Ave & Beacon	18.5	B	19.6	B	+1.1	2.6	A	-15.9	10.8	B	11.8	B	+1.0	3.8	A	-7.0
Lindsley Ave & Beacon St	28.0	C	28.6	C	+0.6	10.2	B	-17.8	37.5	D	37.5	D	0	9.3	A	-28.2
Santa Fe Ave & Beacon St	8.3	A	8.9	A	+0.6	8.9	A	+0.6	6.9	A	7.3	A	+0.4	7.3	A	+0.4
Abrams Rd & Beacon St	16.1	B	34.4	C	+18.3	32.3	C	+16.2	60.1	E	32.6	C	-27.5	31.9	C	-28.2
E Grand Ave & Samuell & Graham Ave	28.7	C	25.5	C	-3.2	49.2	D	+20.5	69.6	E	37.8	D	-31.8	87.1	F	+17.5
Lindsley & Graham Ave	51.5	D	51.4	D	-0.1	15.7	B	-35.8	23.8	C	24.6	C	+0.8	16.6	B	-8.0

* Delay change is compared to existing No Build scenario.

The **Grand & Graham** intersection expects higher intersection delays with the Alternative 2 improvements compared to Alternative 1

The **Winslow/Samuell & Beacon** intersection expects lower intersection delays with both Alternative 1 and Alternative 2 improvements

Summary of Traffic Analysis

Alternative 1:

- With the proposed lane reductions, both Beacon St and Graham Ave are expected to operate **favorably through 2045**
- **7 out of 7** signalized intersections will operate at **LOS D or better in 2045 during the peak hours**

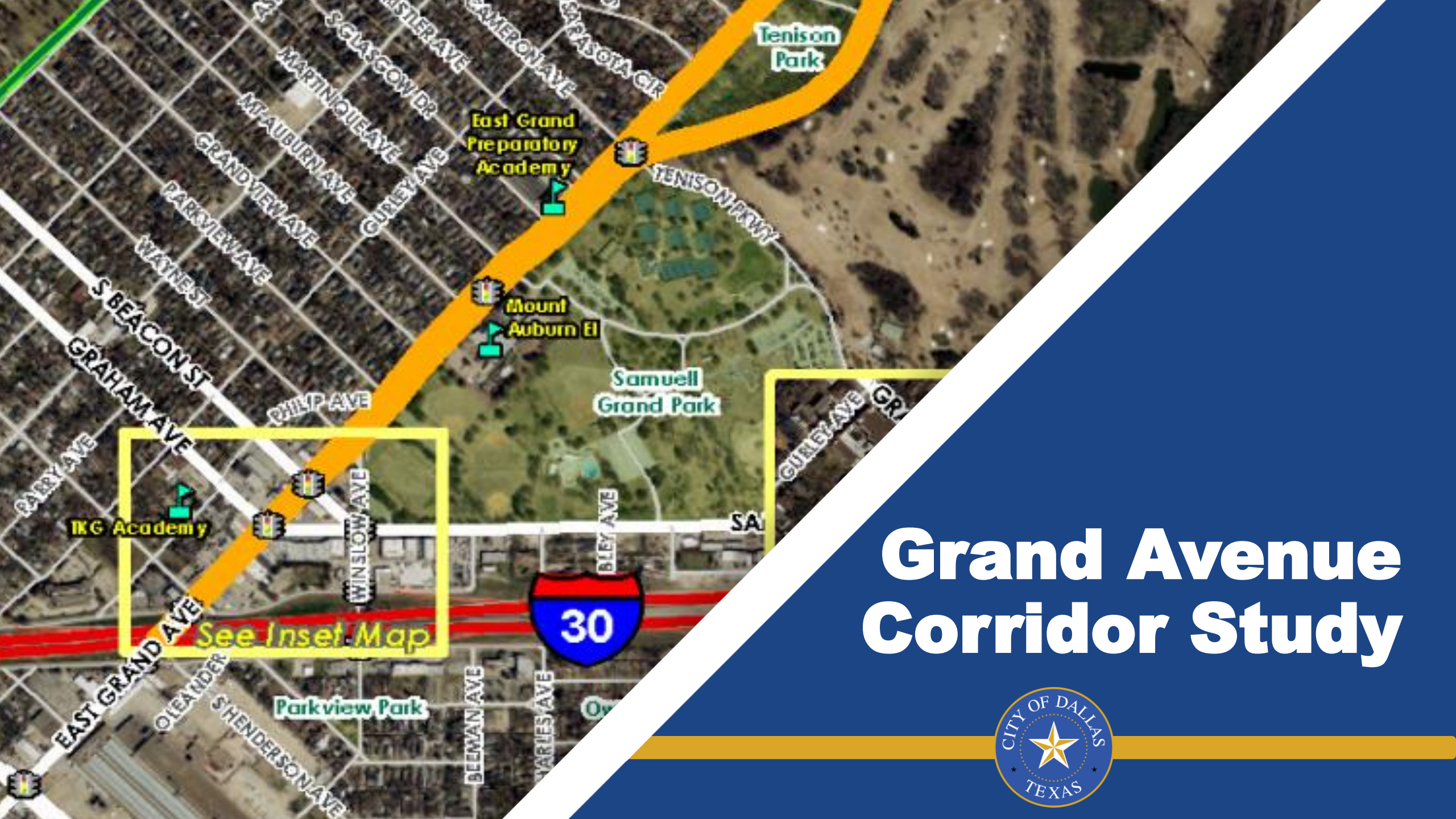
Alternative 2:

- With the proposed two-way conversion, Graham Ave is expected to see higher delays and longer travel times **during the peak hours in 2045**
  - During off-peak hours, capacity is not expected to be an issue
- **6 out of 7** signalized intersections will operate at **LOS D or better in 2045 during the peak hours**
  - **Graham Ave. & Grand Ave.** intersection will operate at **LOS F** in PM peak hour

Alternatives Pros/Cons

S Beacon St / Graham Ave - Alternative Comparison Table

Metric	Alternative 1: Maintain one-way traffic, on-street bike lane in outside travel lane		Alternative 2: Two-way conversion, cycle track on S Beacon St	
Cost	Some Major cost improvements include: - Traffic Signal improvements - Road diets on S Beacon St and Graham Ave - Sidewalk improvements on S Beacon St and Graham Ave		Some Major cost improvements include: - More Traffic Signal improvements - Road diets on S Beacon St and Graham Ave - Raised Cycle Track on S Beacon St - Closure of S Beacon St between Grand and Winslow - Sidewalk improvements on Graham Ave	
Safety	Proposed lane reduction should lead to **traffic calming**.		The proposed two-way conversion should lead to **traffic calming**. There are more connection options, but also **more conflict points**.	
Traffic Operations	Traffic signals are expected to operate at **LOS D or better** in AM and PM peak travel times. **No significant increase in vehicular travel time.**		Traffic signals are expected to operate at **LOS D or better** in AM peak travel times. Peak hour travel times are anticipated to increase. **Only the Graham and Grand Avenue signal would see a change - resulting in a 1.5 minute delay in the 2045 PM peak hour.**	
Level of Comfort for Bicyclists and Pedestrians	**On-street buffered bike lane** provides separation from motor traffic.		Behind the curb **elevated cycle track** provides physical separation, but the number of driveways present a design and use challenge.	
Ease of Access to Homes and Businesses	**The one-way street would keep the same access to businesses as is existing today**. However, having one-way streets could be a restriction on access to certain businesses at the end of the corridor. The proposed bike lanes and improved sidewalks lead to better walkability and access for pedestrians to businesses at the Grand Ave end of the corridor.		Two-way streets typically lead to better circulation and **allow better driver expectancy and also lead to traffic calming.** The proposed cycle track and improved sidewalks lead to better walkability and access for pedestrians to businesses at the end of the corridor.	

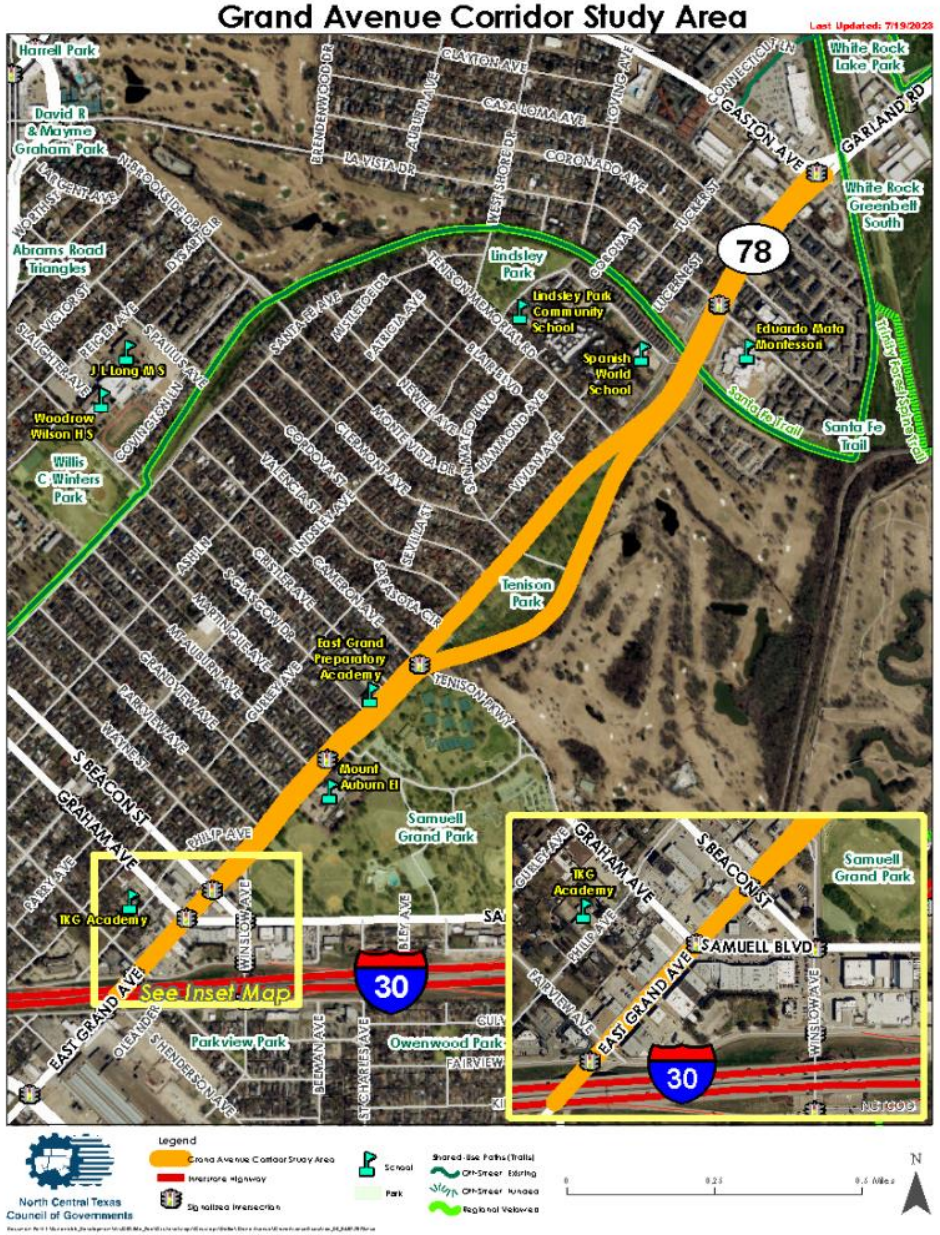


Grand Avenue Corridor Study

CITY OF DALLAS
TEXAS

Summary

- The North Central Texas Council of Governments (NCTCOG) is completing a corridor study to evaluate Grand Ave between Grand Ave/Garland Rd/Gaston Ave to IH 30 near the study area.
- Proposed recommendations to Grand Ave may affect the Beacon/Graham study area.
- More information about this study can be found at: https://publicinput.com/grandavenue

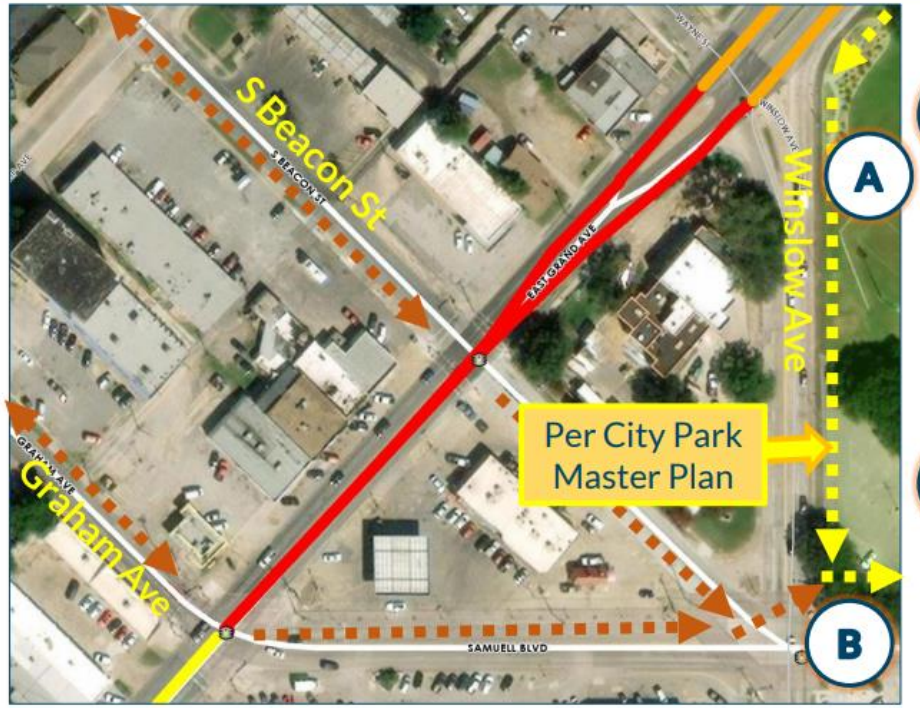


Proposed Bicycle Connections

- Proposed Shared-Use Paths on Winslow/Grand and Samuell Blvd to connect with proposed Beacon/Graham bike facility
- Further study needed to determine connections to Beacon/Graham

Segment 5

From: Wayne Street/Winslow Avenue To: Graham Avenue/Samuell Blvd.



A Construct shared-use path along Winslow Avenue from Grand Avenue to Samuell Blvd. (per City Park Master Plan) to connect with future City of Dallas on-street bike facilities on S. Beacon Street and Graham Avenue.

B Construct shared-use path along Samuell Blvd. from Winslow Avenue to Trinity Forest Spine Trail (per City Park Master Plan).

Image Courtesy of NCTCOG

Phillip Ave Closure Proposal

- One proposed option presented at the public meeting was to close Philip Ave between Wayne St and Grand Ave

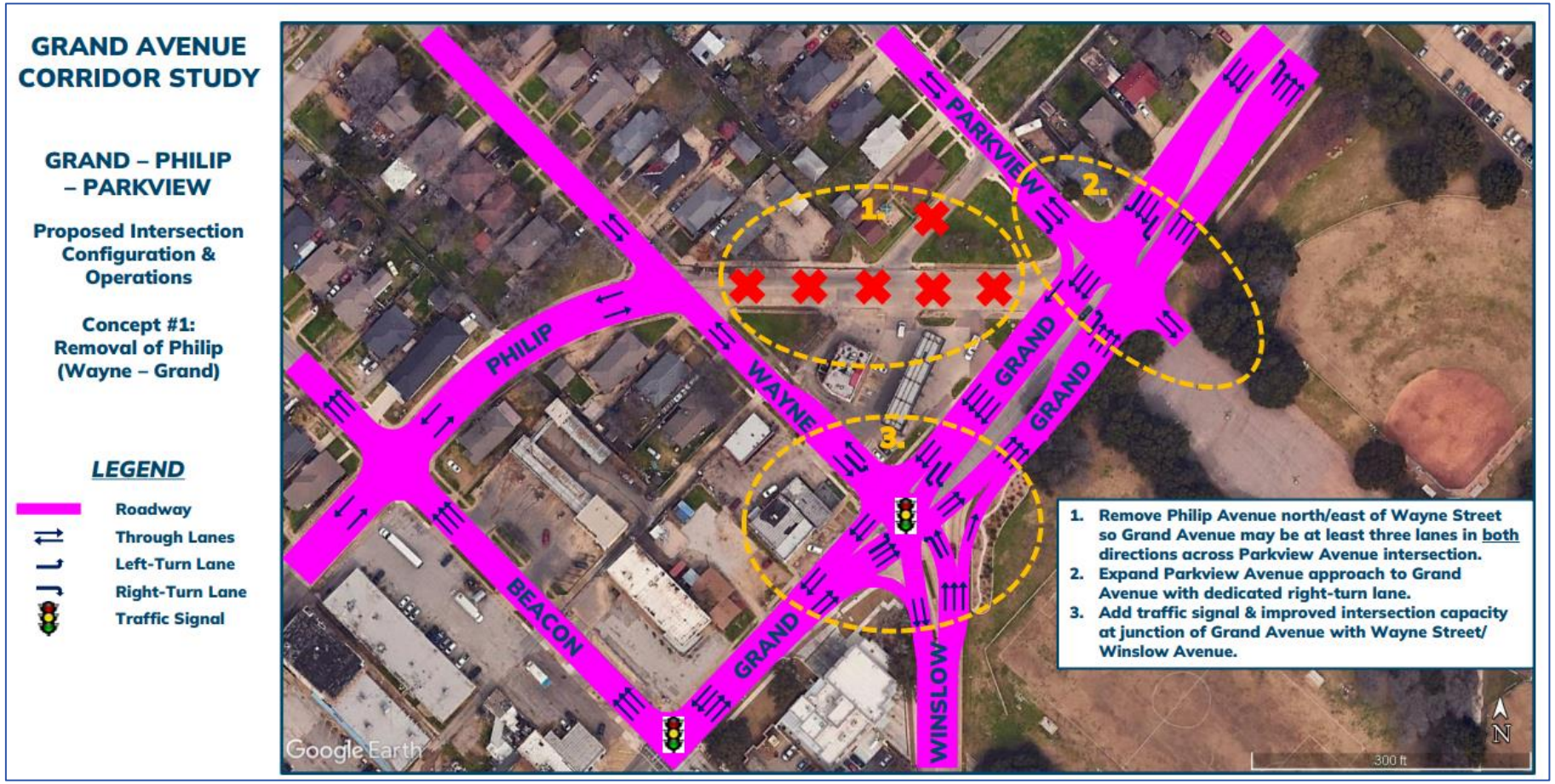


Image Courtesy of NCTCOG

Upcoming Grand Ave Virtual Town Halls

- Virtual Town Hall #1:
  - Thursday, October 26: 5:30 pm to 6:30 pm
- Virtual Town Hall #2:
  - Monday, November 4: 1:00 pm to 2:00 pm
- Registration in advance is required:
  - https://publicinput.com/grandavenue

Next Steps

Q&A and Comments

Comments will be accepted through November 15th. Fill out one of the comment forms or enter your comments using the QR code.

Scan here to visit the project website!

Project Webpage:
http://https://bit.ly/Beacon-Graham