

Vision Zero Austin: UTC Update



November 1, 2022



Years of Life Lost

2,862

(Through 10/21/2022)



* There were 7 fatalities of unknown age

Vision Zero / Safe Systems Approach

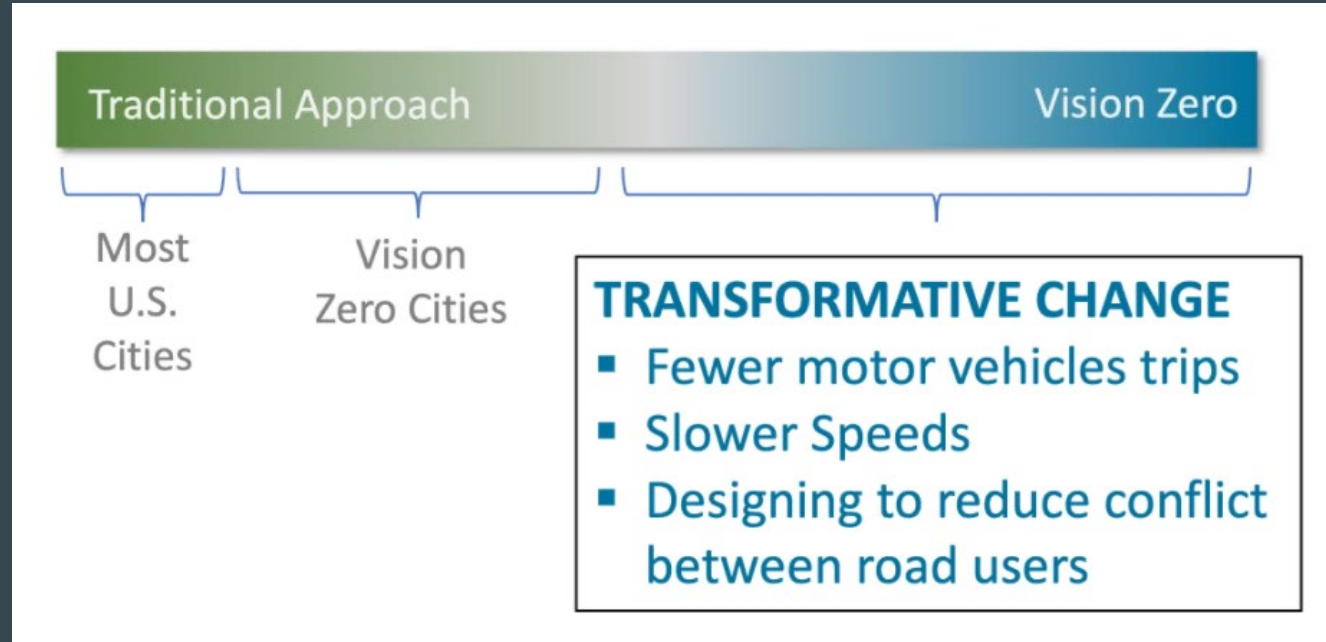


- An ethical approach to safety and mobility - fatalities and serious injuries should not be acceptable
- Human body is vulnerable
- Humans make mistakes
- Separate users in space and time
- Cannot predict where next severe crash happens; we can predict based on conditions where it is likely to occur

Vision Zero / Safe Systems Approach



Vision Zero / Safe Systems Approach



Source: Vision Zero Network

Austin Data and Trends

By Mode

Fatal Crashes (2022, Jan through Oct*)

Mode	2022*	%	2021	%
Pedestrians	35	41.7%	30	34.1%
Bicyclists	1	1.2%	3	3.4%
Motorcyclist	17	20.2%	13	14.8%
Motorist	31	36.9%	42	47.7%
	84		88	

* Data through 10/21/2022

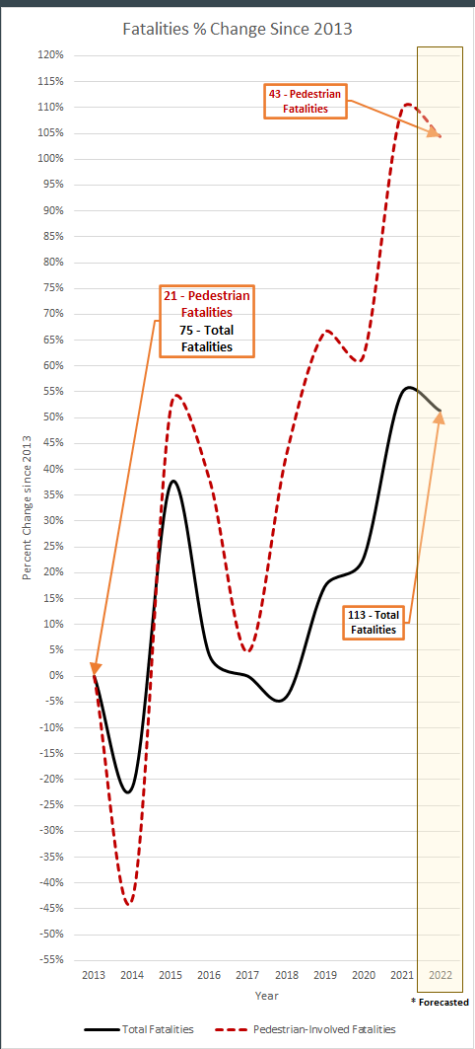
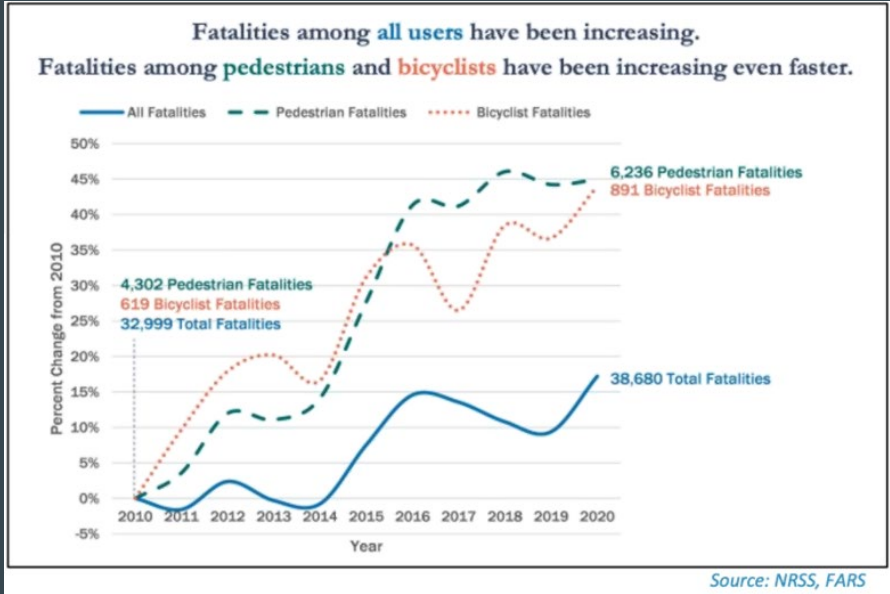
Serious Injury Crashes (2022, Jan through Oct*)

Mode	2022*	%	2021	%
Pedestrians	64	16.6%	60	16.0%
Bicyclists	25	6.5%	24	6.4%
Motorcyclist	70	18.2%	54	14.4%
Motorist	226	58.7%	236	63.1%
	385		374	

Data disclaimer: Data accessed on 10/26/2022. There may be additional reports filed or changes which may impact these numbers before they are final.

Austin Data and Trends

National data (2010-2020)



Austin data (2013-2022)



Austin Data and Trends

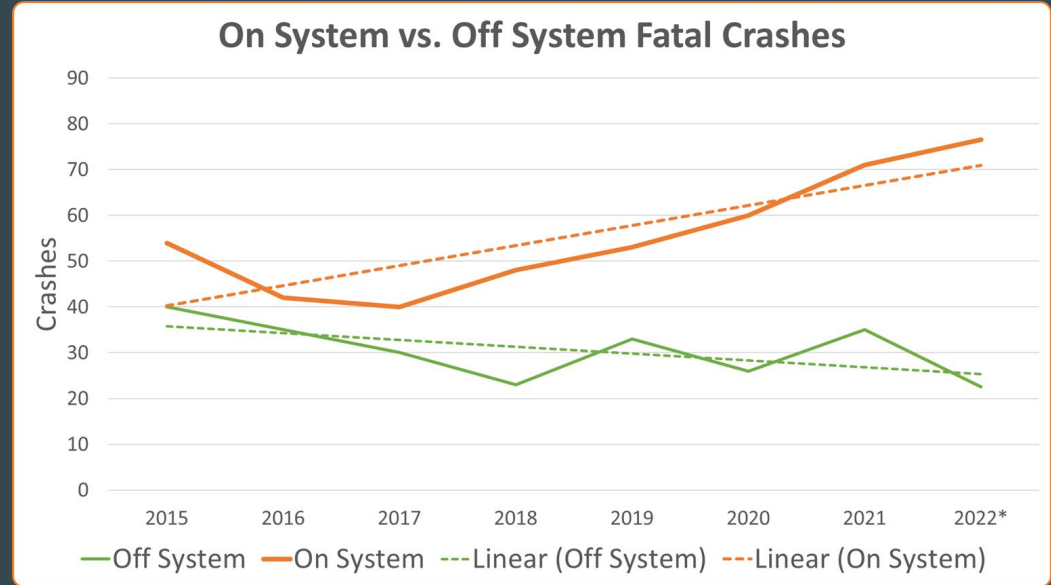
Additional Fatal Crash Analysis

Year over Year

Year	Off-System Fatal Crash %	On-System Fatal Crash %
2018	33.90%	66.10%
2019	34.29%	65.71%
2020	30.14%	69.86%
2021	30.68%	69.32%
2022*	22.62%	77.38%
	29.56%	70.44%

* 2022 is projected

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Austin Data and Trends

Key Takeaways: Comparing 2022 YTD to 2021

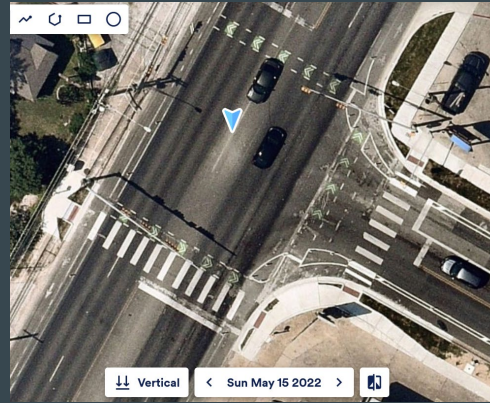
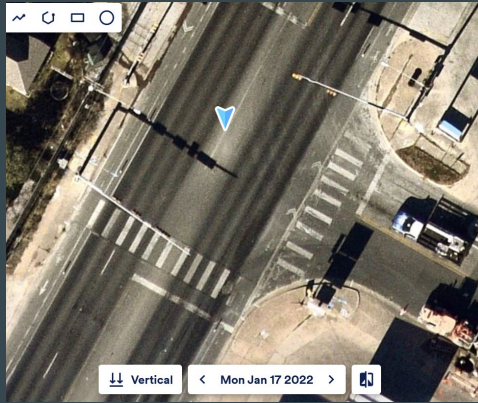
1. Combined, the total of fatal and suspected serious injury crashes are **up ~2% in 2022 compared to 2021**
 - Fatal crashes are **down ~5% compared to last year**; suspected serious injury crashes are **up ~3%**; Total reportable crashes citywide are **up ~2%**.
2. Evening and early morning hours (8PM - 4AM) account for 45 out of the 84 fatal crashes. (33% of day, **~54%** of fatal crashes)
3. Increasing percentage of fatal crashes on on-system roadways
4. Pedestrian fatalities exceeding motorist fatalities

Engineering

Bond projects

1. Intersection safety:

- a. 4 projects completed this year
- b. 2 projects in construction
- c. 2 projects to begin construction in next few months
- d. 5 projects in detailed design
- e. 20+ locations in scoping/awaiting approvals from TxDOT to move forward



Engineering

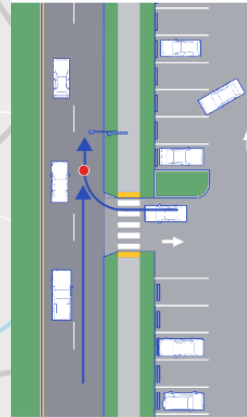
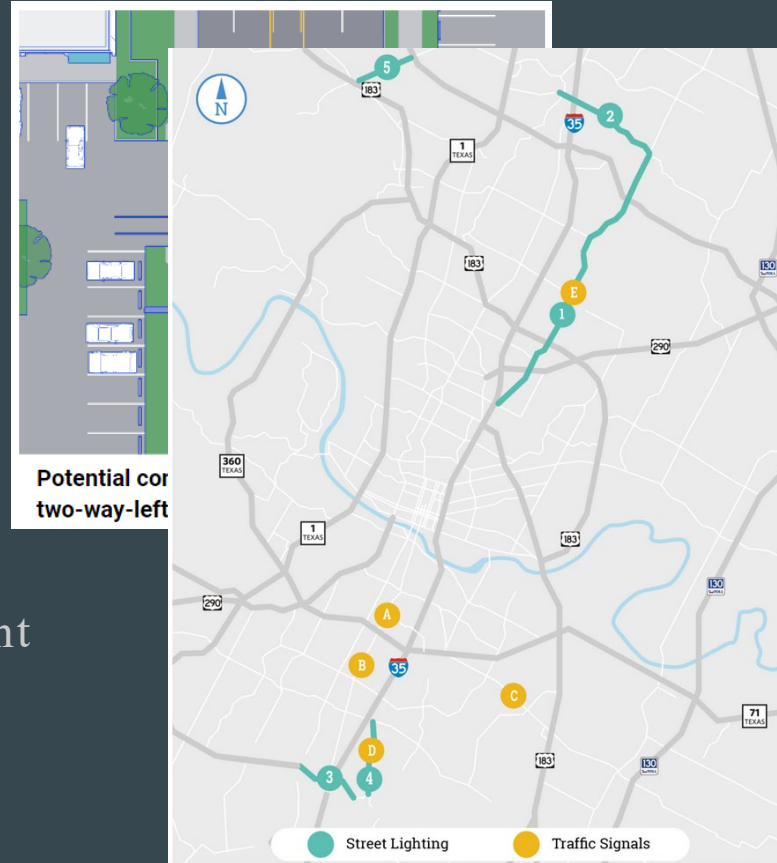
Bond projects

2. Systemic safety

- a. Curves
- b. Access Management (with new standardized approach)
- c. Signal guidelines for left turn movements

3. Highway Safety Improvement Program

- a. 5 safety lighting projects
- b. 5 traffic signal projects



four-lane street with a

Evaluation: Major Intersection Safety

- Funding: 2015 budget; '16/'18/'20 Bonds
- 19 major intersection projects completed
 - 13 with 1+ year of "after" data

Location	Completion date
IH-35 and Martin Luther King, Jr. Blvd	November 2016
US 183 and Cameron Rd. (NE & EB)	December 2016
N. Lamar Blvd.- Rutland Dr. to Rundberg Ln.	June 2017
N. Lamar Blvd. and Parmer Ln.	July 2017
S. Pleasant Valley Rd. and Elmont Dr.	June 2018
S. Congress Ave. and Oltorf St.	July 2018
45th St. and Red River St.	October 2018
Slaughter Ln. and Menchaca Rd.	January 2019
Slaughter Ln. and Cullen Ln.	January 2019
IH-35 and Braker Ln.	July 2019
Slaughter Ln. and S. 1 st St.	October 2019
N. Lamar Blvd. and Payton Gin Rd.	January 2021
Lakeline Blvd. and US 183	April 2021
N. Lamar Blvd. and Morrow St.	July 2021
N. Lamar Blvd. and St Johns Ave.	August 2021
Braker Ln. and Stonelake Blvd.	September 2021
Oltorf St. and Parker Ln.	October 2021
Rundberg Ln. and IH-35	January 2022
Cameron Rd. and Ferguson Ln.	May 2022

Crash reductions seen at Austin's major intersection safety locations



Summary

New analysis shows that intersections that received engineering treatments as part of Vision Zero's Transportation Safety Improvement Program since the program formed in 2016 have seen a substantial reduction in crashes following project implementation. This includes a 31% reduction in the annual number of serious injury or fatal crashes across these locations. Vision Zero is utilizing the results from this analysis to help inform future intersection safety improvements to most effectively reduce injuries at Austin's top crash intersections.

Problem Statement

Between 2017 and 2021 approximately 30% of crashes and 37% of serious injury or fatal crashes occurred at signalized intersections in Austin. The concentration of potential conflicts between road users, and thus crashes, at major intersections presents an opportunity to significantly reduce injuries at individual locations by focusing engineering countermeasures on documented crash patterns and risks.

The Solution

In response to the rising number of people injured or killed in traffic crashes in Austin, City Council allocated \$3.8 million in the 2016 City budget for safety improvements at five of Austin's top crash intersections. That same year, Austin voters approved \$15 million for Vision Zero intersection safety projects as part of the 2016 Mobility Bond. Voters also approved funding for safety investments in Bond referendums in 2018 and 2020.

Austin Transportation Department (ATD) staff developed a methodology to prioritize locations to study for potential safety treatments based on historical crash frequency, crash severity, and prevalence of specific crash patterns that can be addressed through proven safety countermeasures. The methodology has evolved over time and now gives additional weight to locations with more crashes involving pedestrians or bicyclists as well as intersections located in historically underserved communities¹.

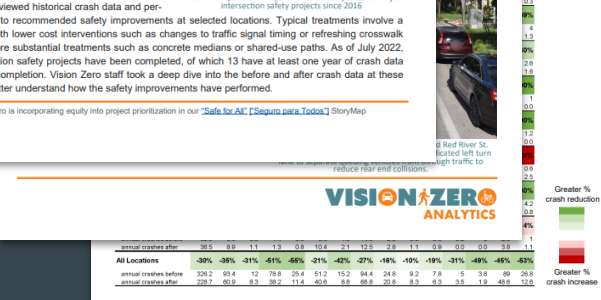
ATD engineers reviewed historical crash data and performed site visits to recommended safety improvements at selected locations. Typical treatments involve a combination of both lower cost interventions such as changes to traffic signal timing or refreshing crosswalk markings, and more substantial treatments such as concrete medians or shared-use paths. As of July 2022, 19 major intersection safety projects have been completed, of which 13 have at least one year of crash data following project completion. Vision Zero staff took a deep dive into the before and after crash data at these 13 locations to better understand how the safety improvements have performed.

¹Learn how Vision Zero is incorporating equity into project prioritization in our "Safe for All" [Seguro para Todos] StoryMap

Table 1. Completed intersection safety projects

Location	Completion date
IH-35 and Martin Luther King, Jr. Blvd	November 2016
US 183 and Cameron Rd. (NE & EB)	December 2016
N. Lamar Blvd.- Rutland Dr. to Rundberg Ln.	June 2017
N. Lamar Blvd. and Parmer Ln.	July 2017
S. Pleasant Valley Rd. and Elmont Dr.	June 2018
S. Congress Ave. and Oltorf St.	July 2018
45th St. and Red River St.	October 2018
Slaughter Ln. and Menchaca Rd.	January 2019
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N. Lamar Blvd. and St Johns Ave.	August 2021
Braker Ln. and Stonelake Blvd.	September 2021
Oltorf St. and Parker Ln.	October 2021
Rundberg Ln. and IH-35	January 2022
Cameron Rd. and Ferguson Ln.	May 2022

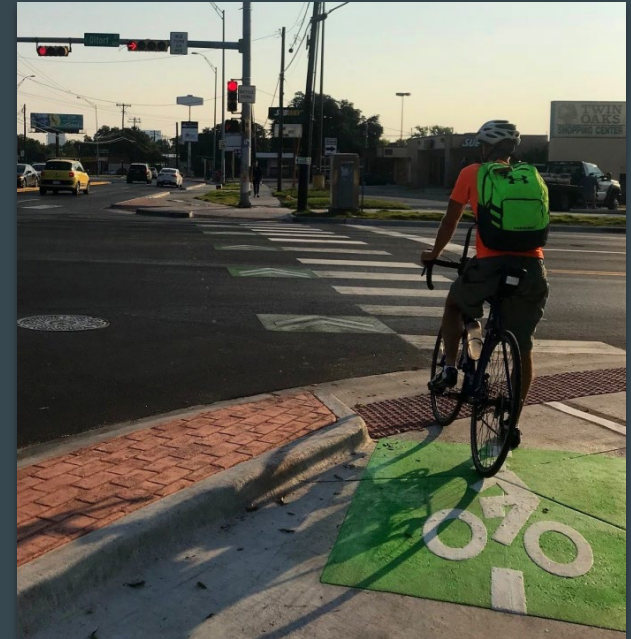
Austin Transportation Department has completed 19 major intersection safety projects since 2016.



Evaluation: Major Intersection Safety

Results

- **30% reduction in the crashes** per year following project completion at the 13 study intersections (going from 326 crashes/year to 229 crashes/year)
- **31% reduction in serious injury or fatal crashes** (going from 12.0 to 8.3 per year).
- Over the same time period, combined annual crashes among a citywide control group decreased only 4% and serious injury or fatal crashes *increased 8%*



S. Congress & Oltorf St. (2018)

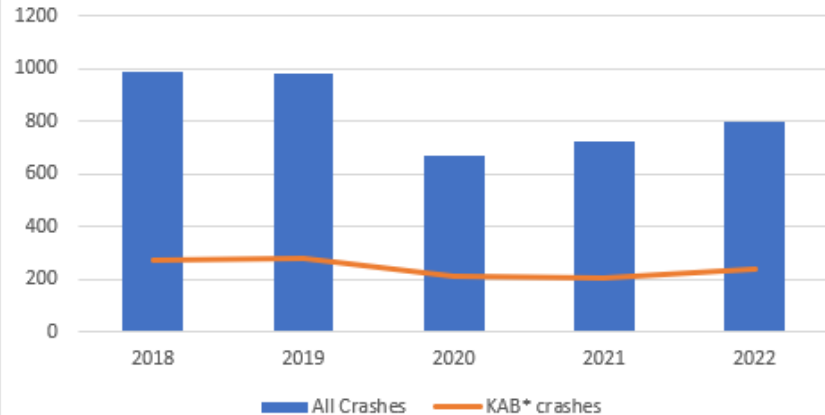
Evaluation: Left Turns at Signals

Safety Culture Policy 1

Prioritize the protection of human life over all else in the planning, design, and operation of Austin's transportation network

Recognize the safe limits of the human body and use that as the guiding tool when making safety decisions

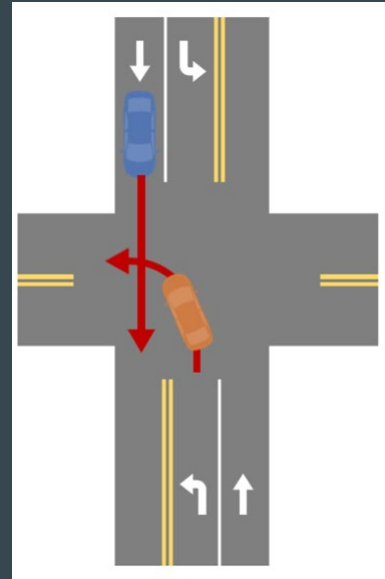
OD-OSOL Crashes



* KAB: Killed, Seriously Injury, Minor Injury

* 2022 projected with data as of October 1, 2022

Opposite Direction-One Straight, One Left crashes at signalized intersections



Policy: Evaluating Right Turns on Red (RTORs)

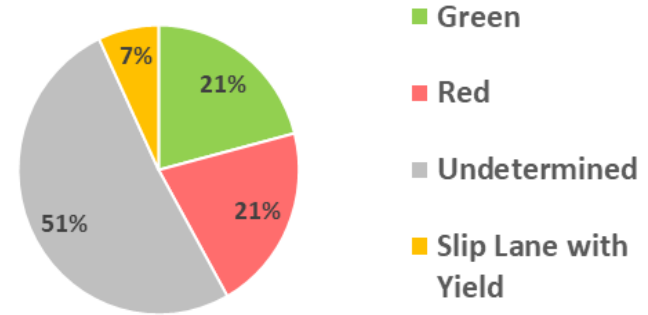
- RTORs used to be illegal in the U.S. prior to 1970s
 - Still prohibited in NYC and Montreal
 - New restrictions in DC and Ann Arbor
- Right turn, pedestrian-related crashes at signalized intersections totaled 2.8% of injury and fatal crashes (KABs) involving pedestrians (43 out of 1,513 crashes) from 2017 to 2021 in Austin.



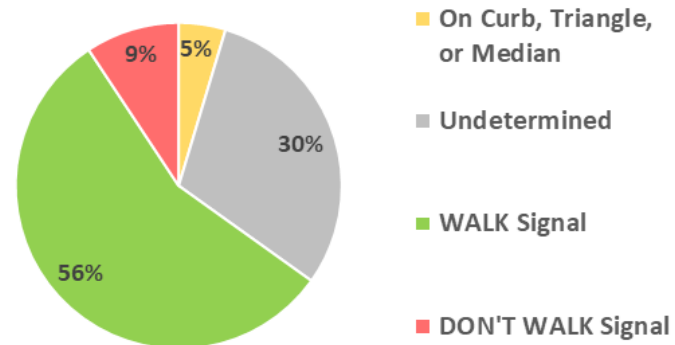
Policy: Evaluating Right Turns on Red (RTORs)

- Per crash report narratives for relevant crashes (43 KABs) in Austin:
 - Red and green lights were equally represented - when noted.
 - Pedestrians had the right of way at least 56% of the time.
 - 16% of KABs happened downtown (7/43).
 - Reports showed 5 serious injuries and 1 fatality.

Signal Status for Right Turn, Pedestrian Crashes



Pedestrian Signal Status for Right Turn, Pedestrian Crashes



Policy: Evaluating Right Turns on Red (RTORs)

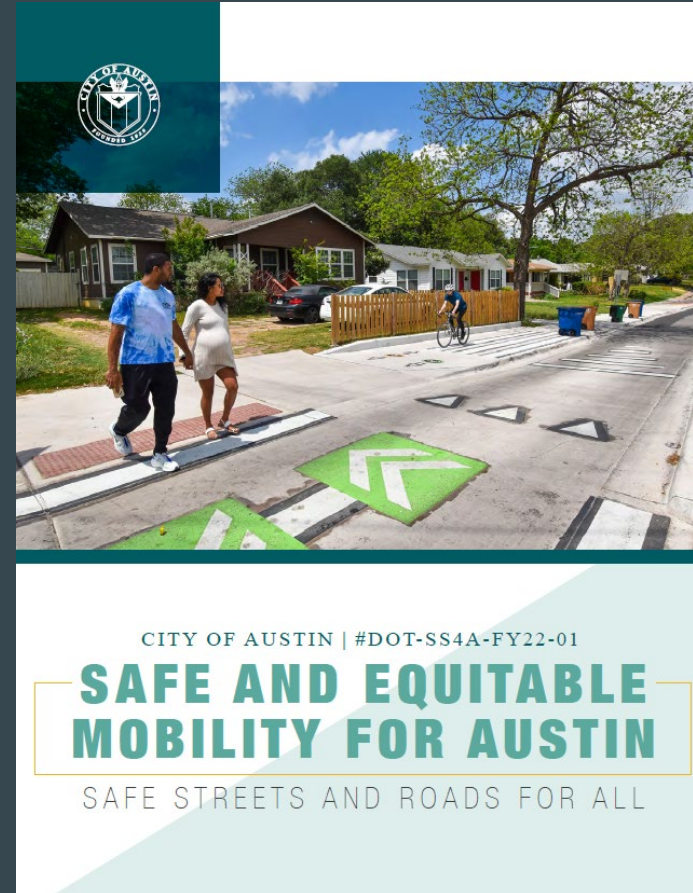
Additional research reveals that:

- RTORs contribute <1%–3% of all pedestrian related crashes (nationally).
- In D.C., No Turn On Red signs decreased failure-to-yield to pedestrians by 92% on red lights and 59% on green lights in 100 location pilot.
- Compliance in Florida with NTOR signs has been 59%–70%.

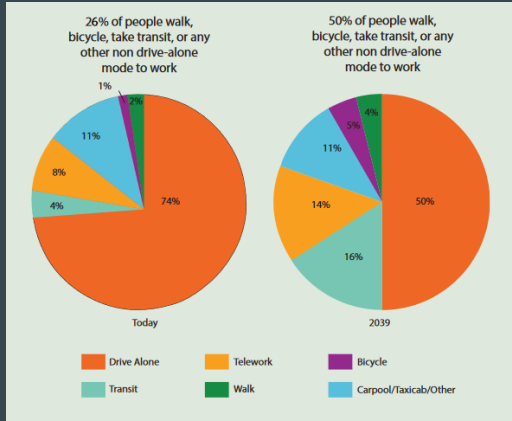


Funding: Safe Streets for All - Federal Grant

- Aiming for \$28M of project costs
 - 20% would be local match primarily through local bond dollars
- Grant has strong focus on reducing traffic-related fatalities and serious injuries with proven safety countermeasures, equity, ability to deliver within 5 years

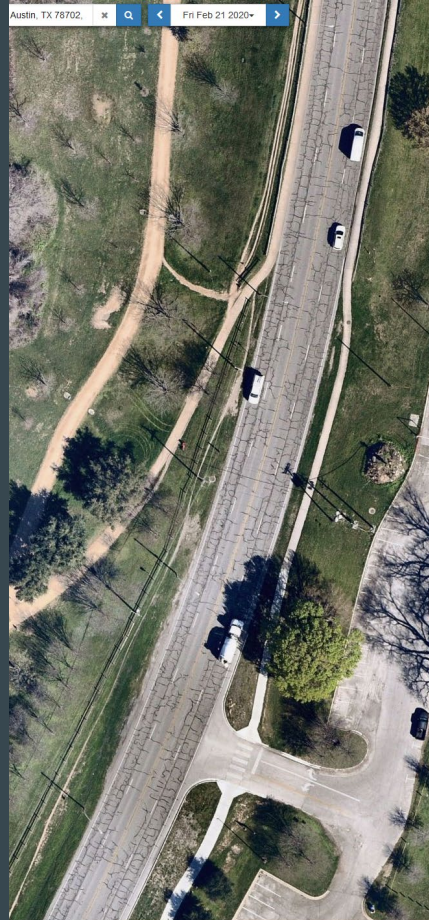


Achieving Our Policy Goals

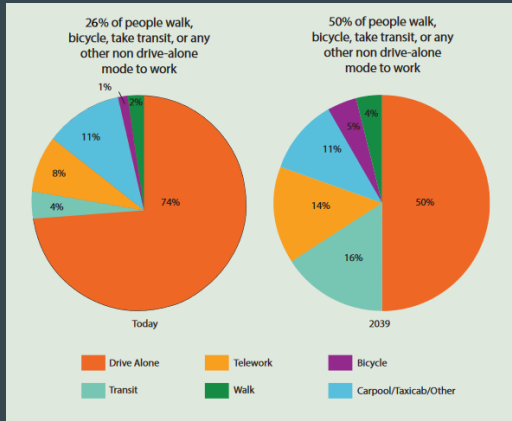


Removing excess
capacity / geometric
changes for safer roads
for all users

S. Pleasant Valley
and Krieg Fields



Achieving Our Policy Goals



Roundabouts! They work...

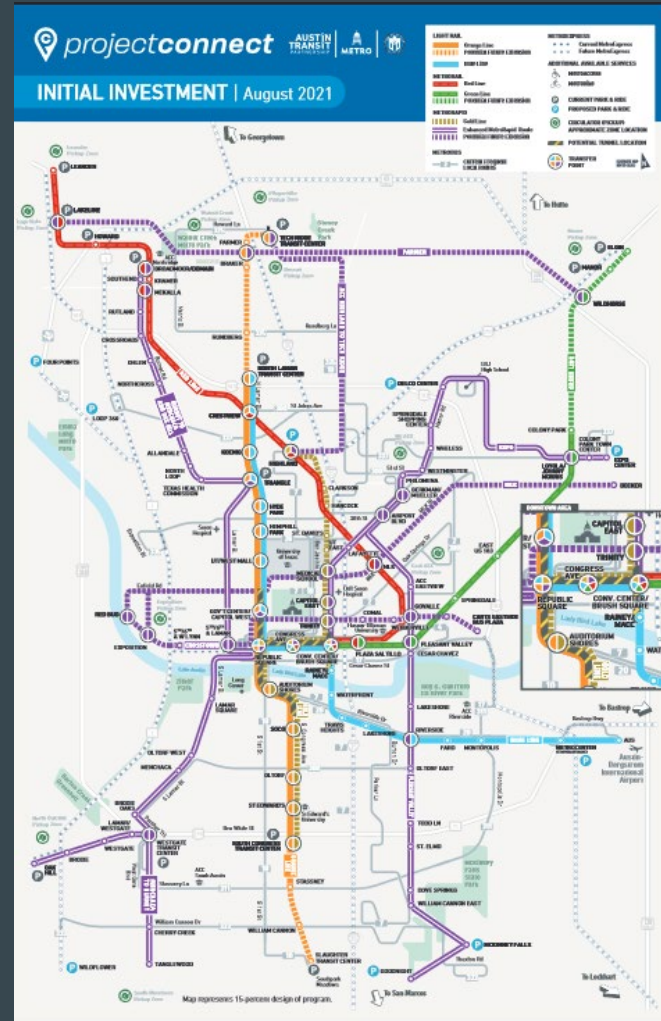
- Against severe crashes - 78% reduction per FHWA when transitioning from signal to roundabout
- 24/7, without regular staff and maintenance needs
- Can help overall throughput too!



Todd Lane and St. Elmo

Achieving Our Policy Goals

- Scale up Austin's Vision Zero and mobility bond projects and initiatives
 - Safer roadway designs
 - Transportation lighting for all modes
 - Narrowly-focused traffic safety enforcement
- Implementation of Project Connect
- Collaboration with TxDOT
- State and local legislative changes
 - Land use
 - Enforcement/prosecution



Comments, questions, thoughts?

