Memorandum

CITY OF DALLAS

DATE September 27, 2019

TO Honorable Mayor and Members of the City Council

SUBJECT **Vision Zero: Traffic Safety Strategy**

On Wednesday, October 2, 2019, the City Council will be briefed on Vision Zero, an internationally recognized strategy to eliminate traffic fatalities and severe injuries relating to automobile users, pedestrians, and bicyclists. The briefing materials are attached for your review.

Please feel free to contact me if you have any questions or need additional information.

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

[Attachment]

c: T.C. Broadnax, City Manager
    Chris Caso, City Attorney (Interim)
    Mark Swann, City Auditor
    Bilierae Johnson, City Secretary
    Preston Robinson, Administrative Judge
    Kimberly Bizor Tolbert, Chief of Staff to the City Manager
    Majed A. Al-Ghafry, Assistant 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
    Liz Cedillo-Pereira, Chief of Equity and Inclusion
    Directors and Assistant Directors

Vision Zero: Traffic Safety Strategy

City Council Briefing

October 2, 2019

Michael Rogers, Director
Department of Transportation

Overview

- What is Vision Zero?
- Vision Zero Approach
- Traffic safety in Dallas
- National Vision Zero Network
- Path for Dallas to become Vision Zero City
- Vision Zero Action Plan
- Proposed Future Actions and Next Steps

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What is Vision Zero?

- An internationally recognized strategy to eliminate traffic fatalities and severe injuries relating to automobile users, pedestrians and bicyclists.

- Based on the belief that **no loss of life is acceptable** and that all traffic fatalities and severe injuries are preventable

- Encourages urban design that makes streets as easy as possible to navigate for all roadway users of all physical abilities

- Promotes safe and equitable mobility for all users, such that movement around the transportation network can be done by road users of all walks of life.

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Why Vision Zero is Important

In 2017…

On average, over **100 people died** in traffic crashes everyday in the United States. There were **37,133** total traffic fatalities, and **5,977** were pedestrians.

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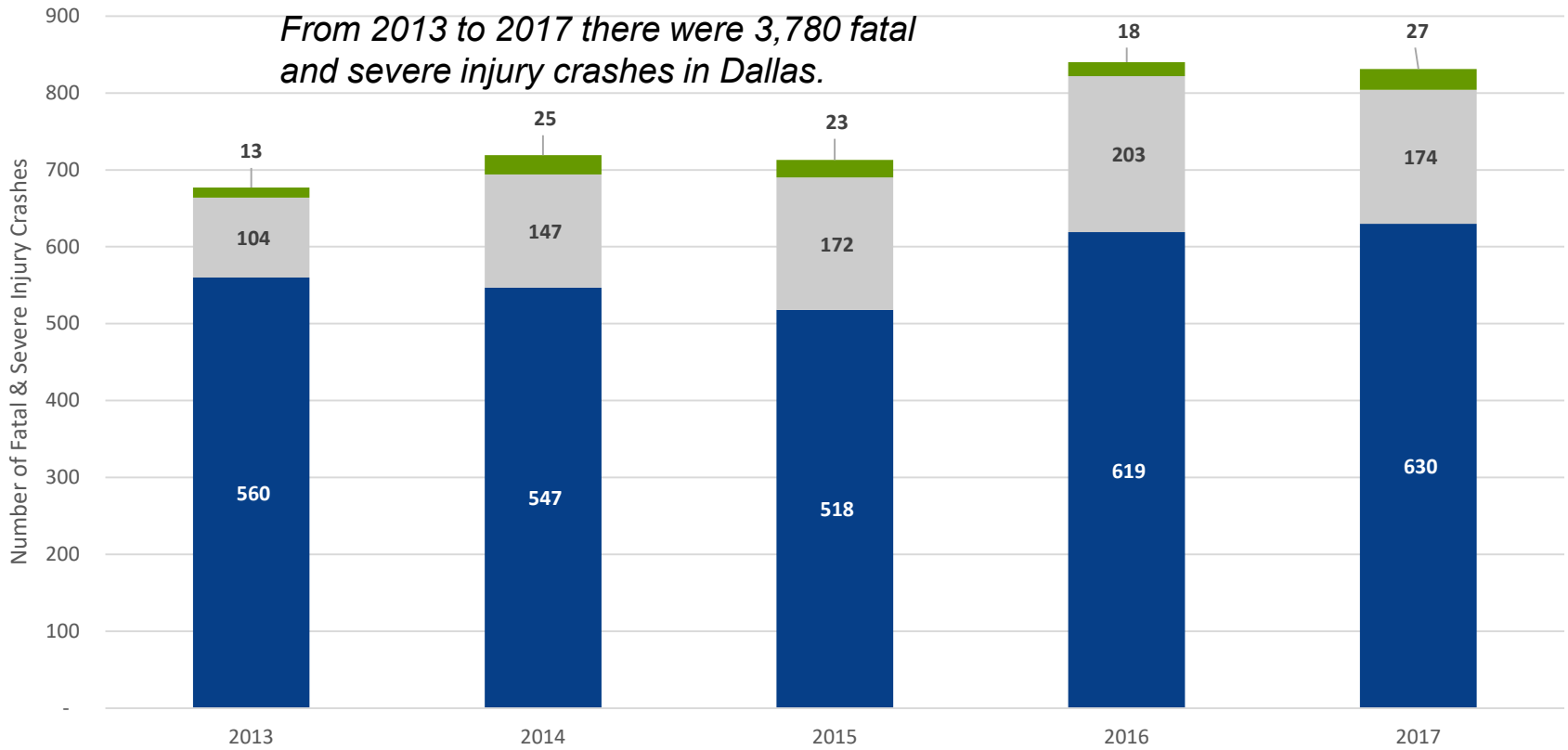
Vision Zero Approach

- There is shared responsibility among roadway users, designers, and policy makers to ensure that the transportation system is safe.

- Human error is inevitable but should not result in fatalities or severe injuries.

- System designers and policy makers should improve the system to account for human error and reduce the likelihood of fatalities and severe injuries.

Source: Vision Zero Network

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Traffic Safety in Dallas: Fatal and Severe Injury Crashes

From 2013 to 2017 there were 3,780 fatal and severe injury crashes in Dallas.

Year	Bicycle	Pedestrian	Vehicle*
2013	13	104	560
2014	25	147	547
2015	23	172	518
2016	18	203	619
2017	27	174	630

Number of Fatal & Severe Injury Crashes

* Indicates solely Vehicular involvement ■ Vehicle* ■ Pedestrian ■ Bicycle

Crash data source: TxDOT (2013-2017)

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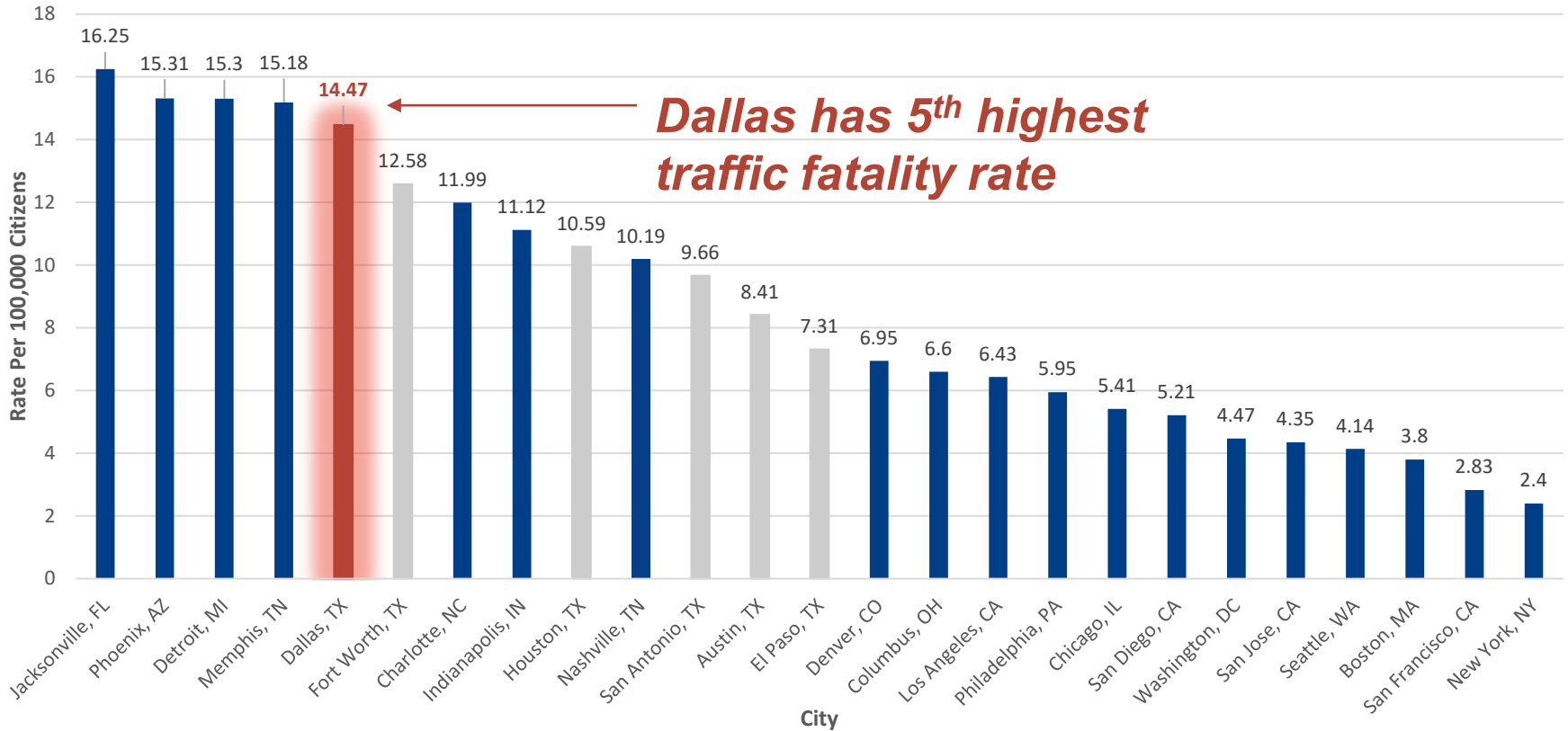# Traffic Safety in Dallas: Traffic Fatalities and Severe Injuries

- Dallas has the fifth highest traffic and pedestrian traffic fatality rates amongst 25 largest U.S. cities and the highest rates amongst Texas' largest six cities, including Houston, Austin, San Antonio, El Paso, and Fort worth. (National Highway Traffic Administration, 2017)

- On average, over 2 people died in traffic crashes every week on Dallas city streets in 2017.

- Fatalities included **46** pedestrians and **one** bicyclist.

- The Federal Highway Administration designated Dallas as a "Focus City" for pedestrian safety, in part due to having the 5th highest pedestrian fatality rate in the nation among large cities.

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Traffic Safety in Dallas: Comparison to Top 25 Largest U.S. Cities

Traffic Fatality Rates of 25 Largest U.S. Cities
(Per 100,000 Population)

Dallas has 5th highest traffic fatality rate

Rate Per 100,000 Citizens

City	Rate
Jacksonville, FL	16.25
Phoenix, AZ	15.31
Detroit, MI	15.3
Memphis, TN	15.18
Dallas, TX	14.47
Fort Worth, TX	12.58
Charlotte, NC	11.99
Indianapolis, IN	11.12
Houston, TX	10.59
Nashville, TN	10.19
San Antonio, TX	9.66
Austin, TX	8.41
El Paso, TX	7.31
Denver, CO	6.95
Columbus, OH	6.6
Los Angeles, CA	6.43
Philadelphia, PA	5.95
Chicago, IL	5.41
San Diego, CA	5.21
Washington, DC	4.47
San Jose, CA	4.35
Seattle, WA	4.14
Boston, MA	3.8
San Francisco, CA	2.83
New York, NY	2.4

Source: National Highway Traffic Safety Administration (NHTSA), 2017

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Traffic Safety in Dallas: Comparison to Top 25 Largest U.S. Cities

Pedestrian Fatality Rates of 25 Largest U.S. Cities
(Per 100,000 Population)

Dallas has 5th highest pedestrian traffic fatality rate

Rate Per 100,000 Citizens

City	Rate
Phoenix, AZ	6.03
Memphis, TN	5.67
Jacksonville, FL	4.26
Detroit, MI	4.16
Dallas, TX	3.88
Fort Worth, TX	3.66
Nashville, TN	3.6
Houston, TX	3.16
Charlotte, NC	3.14
Indianapolis, IN	3.13
San Antonio, TX	2.98
Los Angeles, CA	2.9
Austin, TX	2.42
El Paso, TX	2.34
Philadelphia, PA	2.34
San Diego, CA	2.18
Denver, CO	1.84
Columbus, OH	1.71
San Francisco, CA	1.7
Seattle, WA	1.66
Boston, MA	1.61
Washington, DC	1.59
Chicago, IL	1.51
San Jose, CA	1.26
New York, NY	1.1

Source: National Highway Traffic Safety Administration (NHTSA), 2017

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Traffic Safety in Dallas: Fatal and Severe Injury Traffic Crashes

35% of all fatal and severe injury crashes occurred within the City's Priority Improvement Zones
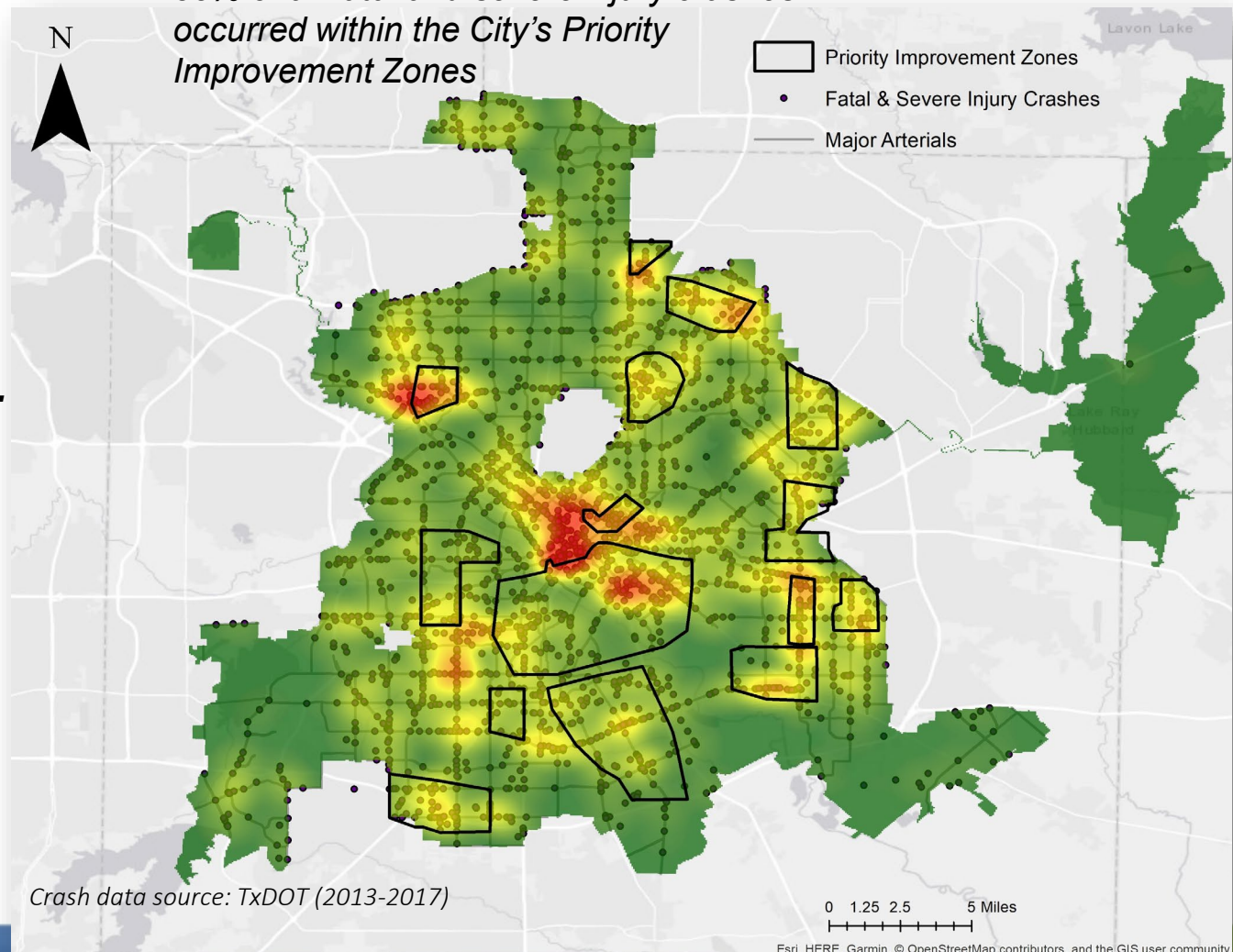
Additional demographic and statistical data can be found in the attached Appendix.

Crash data source: TxDOT (2013-2017)

National Vision Zero Network

- Non-profit organization focused on advancing Vision Zero in the United States

- Recognizes over 40 cities as Vision Zero communities based on their formal commitment and significant actions to advance Vision Zero principles

- Provides resources and peer-to-peer learning opportunities for communities engaged in Vision Zero such as Dallas

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National Vision Zero Network: Vision Zero Cities

Source: Vision Zero Network

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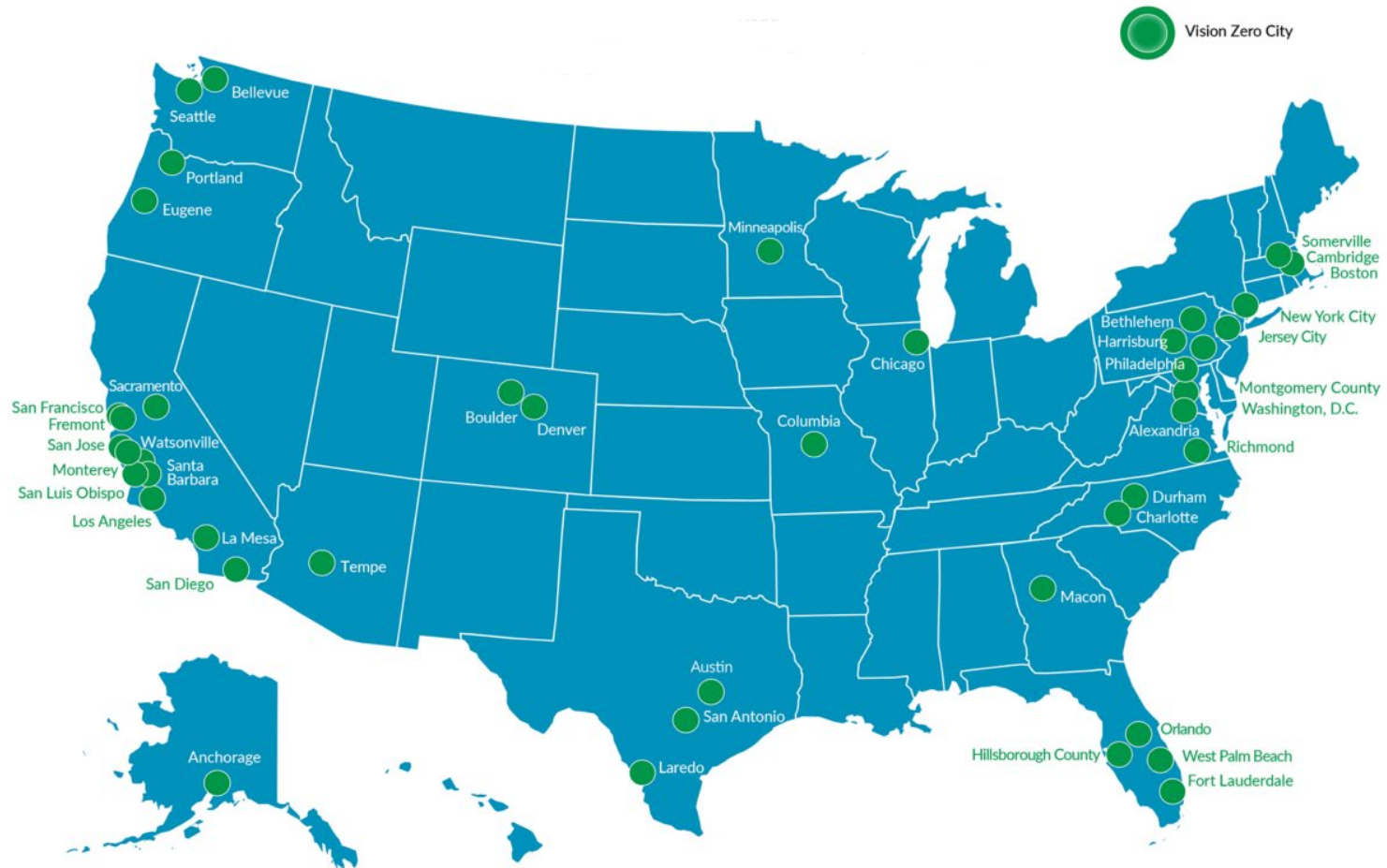
Path for Dallas to become a Vision Zero City

- Committing to Vision Zero and setting a clear goal of eliminating traffic deaths and severe injuries among all road users within a specific timeframe

- Committing to development of a **Vision Zero Action Plan** within a specified timeframe and focusing on being data driven, equitable, and including community input

- Formation of a Vision Zero Task Force that will collaborate with City Departments on development of a Vision Zero Action Plan

- Key City departments will need to be actively engaged in the process of developing the Vision Zero plan development, implementation, and evaluation

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Vision Zero Action Plan

- A foundational document that establishes the strategies that Dallas will employ to achieve the goal of zero traffic fatalities and a 50% reduction in severe injuries by 2030.

- This document can be produced internally for minimal cost using existing city staff and resource.

- Example of Vision Zero Action Plan strategy :
  - Prioritize Roadway Design:
    1. Implement Complete Streets policy (Council adopted in 2016)
    2. Identify intersections, corridors, and areas where crashes are likely to occur using predictive analytics
    3. Target capital investments in areas where there is a high frequency of fatal and severe injury crashes (Identify High-Injury Network)
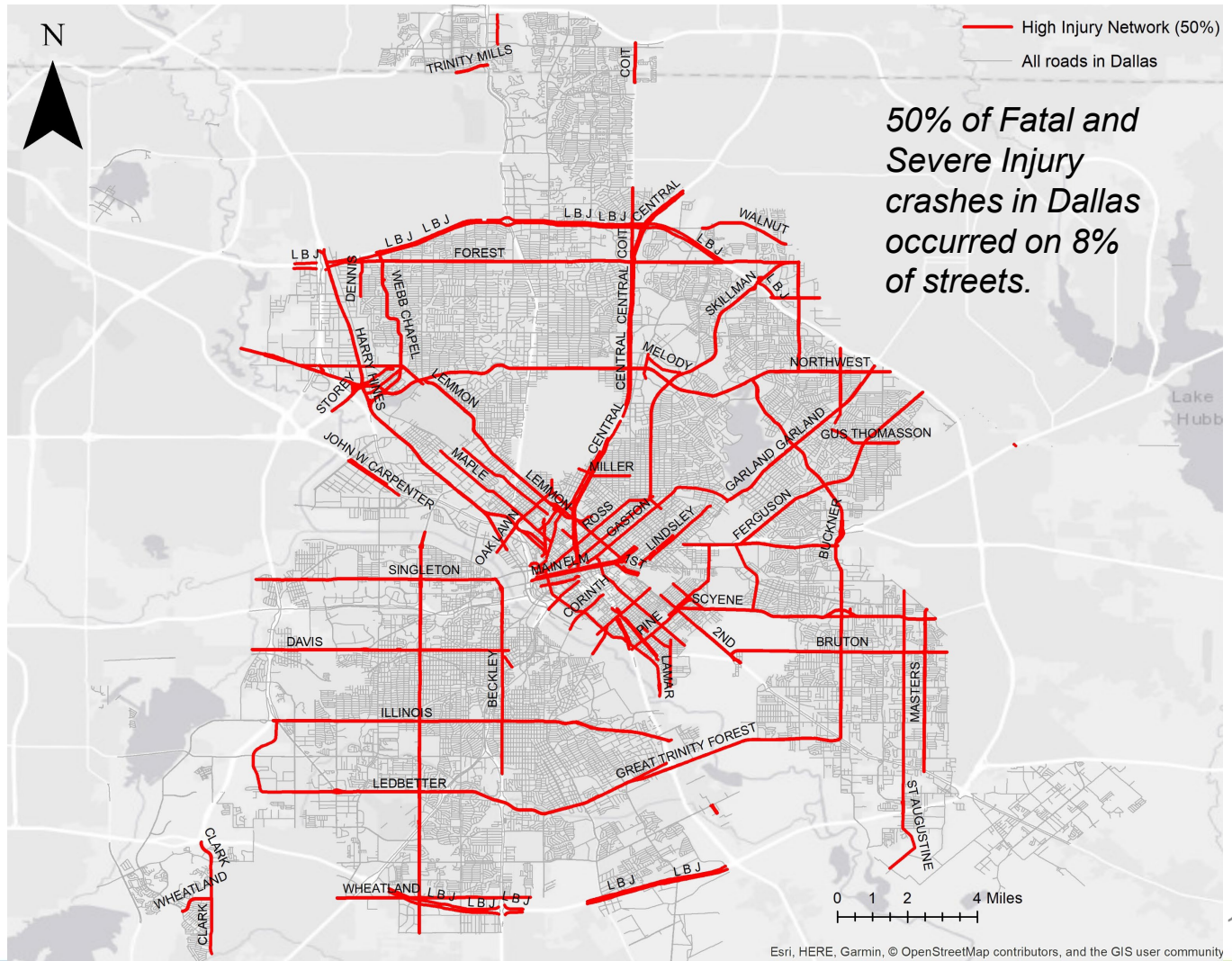
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High Injury Network

- The High Injury Network (HIN) reflects streets that have the highest frequency of traffic fatalities and severe injuries.

- HIN is central for identifying geographic areas to target for Vision Zero Action Plan efforts

- A High Injury Network can help identify
  - Areas where further engineering analysis is needed
  - Where infrastructure improvements can be targeted
  - Areas where safety education is needed
  - Potential police enforcement areas

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Vision Zero Action Plan:

*City has already identified #2 of the Action Plan with the creation of the **High Injury Network***

50% of Fatal and Severe Injury crashes in Dallas occurred on 8% of streets.

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Proposed Future Actions and Next Steps

City Council adopts a resolution that:

1) Commits the City to a Vision Zero goal of zero traffic fatalities and a 50 percent reduction in severe injuries by 2030.

2) Directs the City Manager to develop a Vision Zero Action Plan by December 2021.

3) The City Manager will create a Vision Zero Task Force that will collaborate with City Departments on development of a Vision Zero Action Plan.

4) The City Manager will direct key City Departments to participate in Vision Zero Action Plan development, implementation, and evaluation.

City staff will be the primary resource for the development of the Vision Zero Action Plan, with potential supplemental studies funded through grants at an estimated cost of $50,000.

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Traffic Speed and Pedestrian Vulnerability

HIT BY A VEHICLE TRAVELING AT:
20 MPH
9 out of 10 pedestrians survive

HIT BY A VEHICLE TRAVELING AT:
30 MPH
5 out of 10 pedestrians survive

HIT BY A VEHICLE TRAVELING AT:
40 MPH
Only 1 out of 10 pedestrians survives
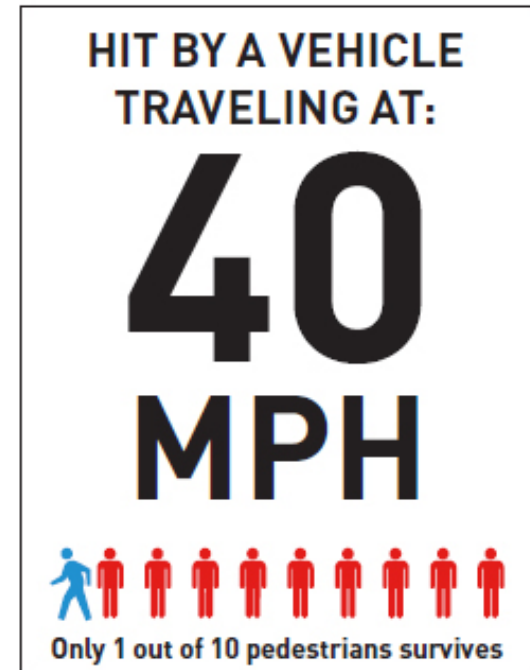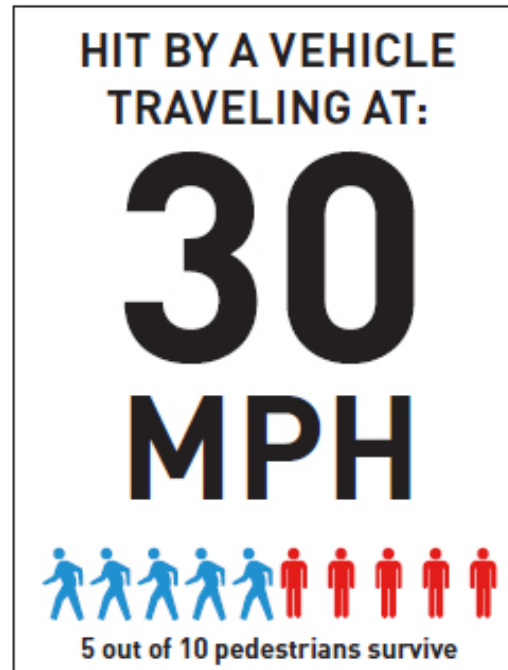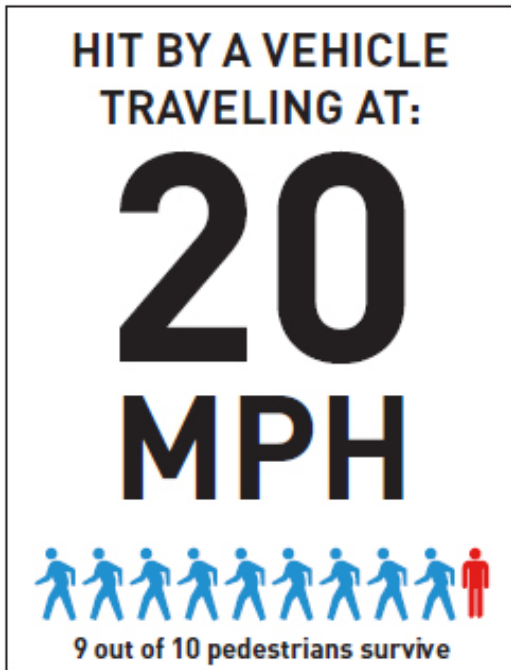
Source: Seattle Department of Transportation

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Pedestrian Vulnerability

Percent of traffic crashes that resulted in Fatality or Severe Injury

Bar chart:
- Pedestrian: 27%
- Bicyclist: 16%
- Vehicle Alone: 3%
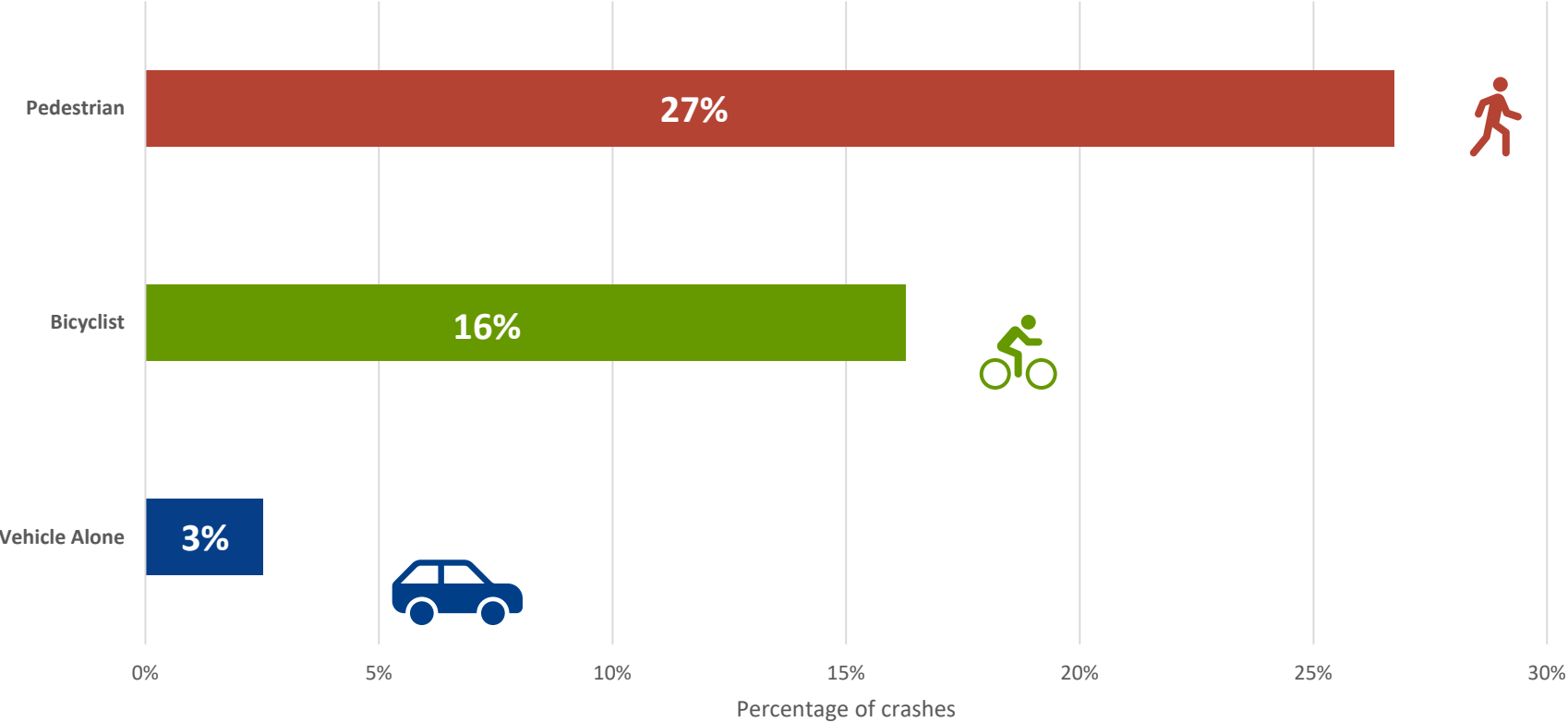
Percentage of crashes

Crash data source: TxDOT (2013-2017)

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Intersection Crashes

86% of crashes occurred at/around intersections

Bar chart data:
- Intersection-related crashes: 101,522
- Non-intersection-related crashes: 16,087
- All Crashes: 117,609

X-axis: Number of Crashes (-, 20,000, 40,000, 60,000, 80,000, 100,000, 120,000, 140,000)

Crash data source: TxDOT (2013-2017)

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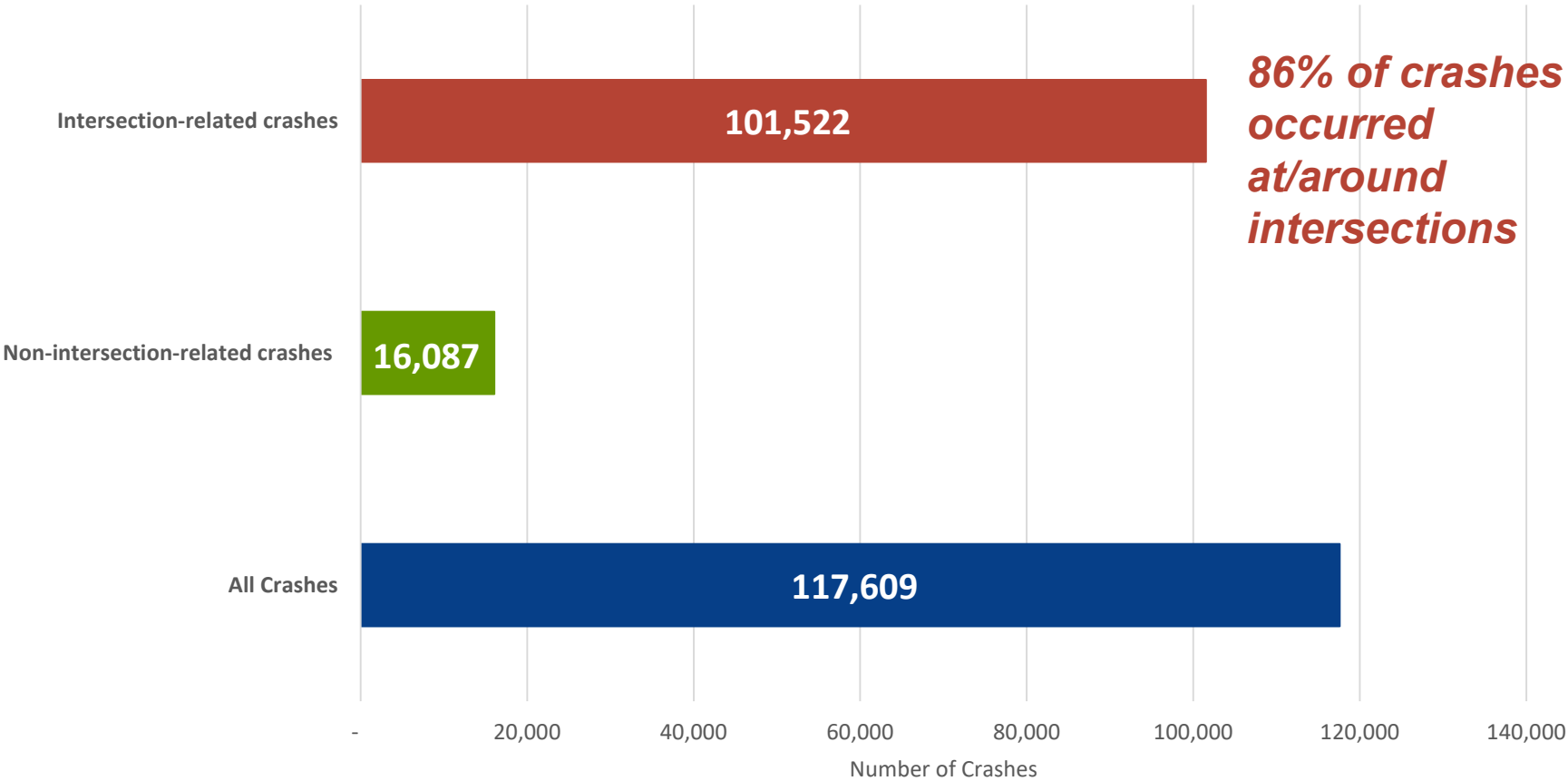
Fatal and Severe Injury Crashes by Race and Ethnicity

*Blacks/African Americans and Hispanics/Latinos are represented in nearly **70%** of traffic-related fatal and severe injuries*

Legend: ■ Percent of Fatalities & Severe Injuries ■ Percent of Population
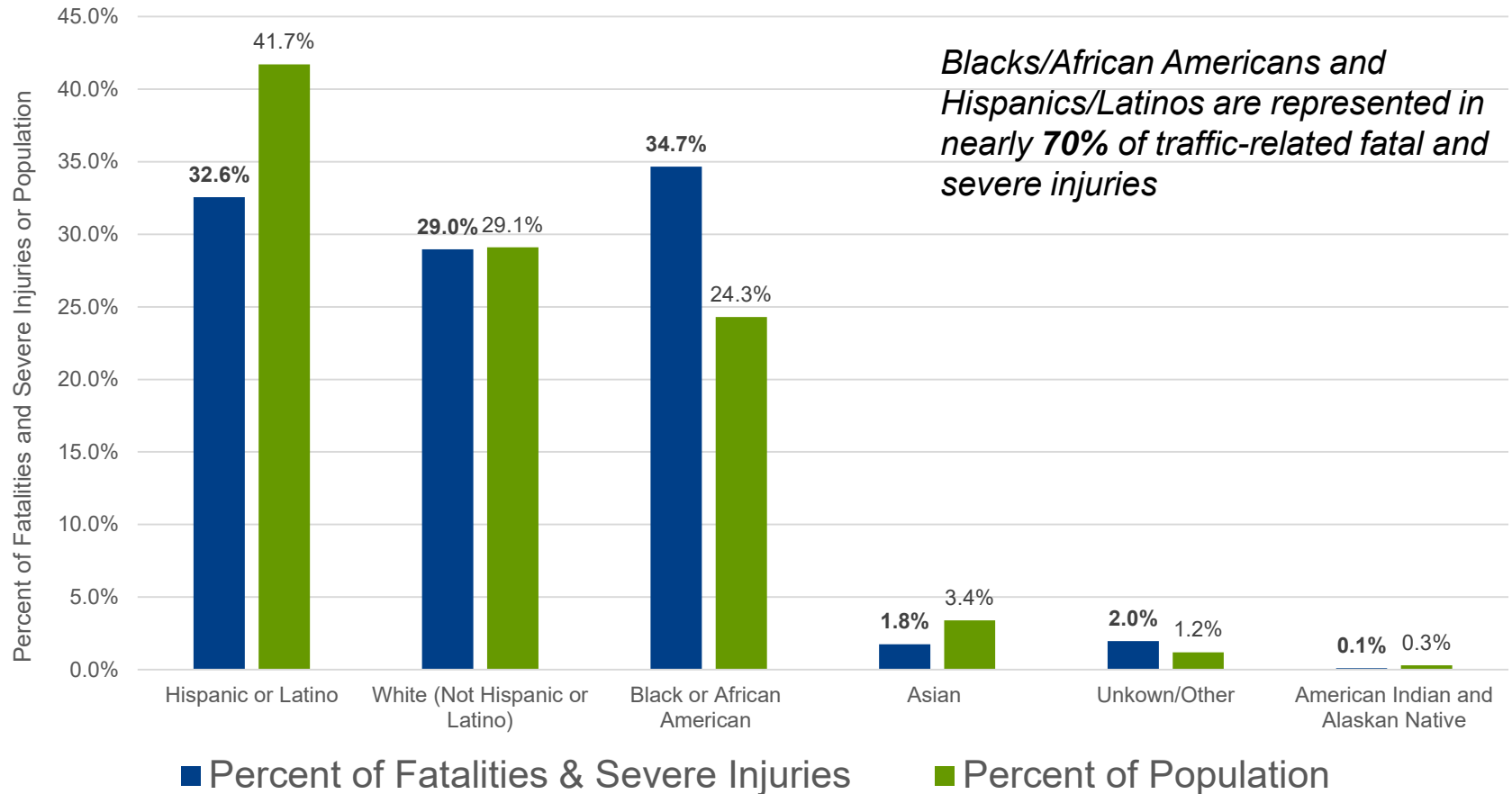
Crash data source: TxDOT (2013-2017); Demographic Source: U.S. Census Bureau

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Traffic Fatalities and Severe Injury crashes by age

*Those aged **18-24** experience the most out-sized disproportionality of fatal and severe injury crashes in the city.*

■ Percent of Fatal & Severe Injury Crashes   ■ Percent of Population

Demographic Source: U.S. Census Bureau

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