

2020 ST. LOUIS CITY CRASH REPORT

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INTRODUCTION

2020 was a year of change for many of us in St. Louis. Many of us changed the way we worked, how we interacted with others, and how we interacted with the places we love. Some of us transitioned to working from home, while essential workers continued to commute to work to provide the region with the essential functions we all rely on.

2020 also changed the landscape for walking and biking in St. Louis. Firsthand, we saw people getting outside to walk and bike at rates like no other. Recreation and the need for public spaces became a top priority in 2020 and it was reflected in many ways. The roads in our parks opened up for people and closed for car traffic in order to allow proper social distancing. We saw bike sales go through the roof, with bike orders being backed up for months due to people buying bikes for the first time. We also saw less cars on our streets. During the first few months of the COVID-19 stay-at-home orders, streets that were once filled with vehicles and people became empty overnight.

5,672

PEOPLE WERE INJURED OR KILLED BY TRAFFIC VIOLENCE WHILE WALKING, BIKING, AND DRIVING IN ST. LOUIS CITY IN 2020

As advocates for better walking and biking, Trailnet wanted to investigate and report what changes we saw on our streets in 2020 and how they differed from 2019. This report focuses on the data and characteristics of one year of crashes in St. Louis City. However, it is vital to remember that each data point reflects a crash that damaged or destroyed the life or lives of the people involved. Likewise, while we use terms such as “pedestrian fatalities” or “car crashes” it is equally important to remember that each crash represents an interaction of people: people driving, people walking or people riding a bike. Trailnet’s work is grounded in making streets safer for everyone, and centering this conversation around the humanity of the people affected by traffic violence is central to our work.

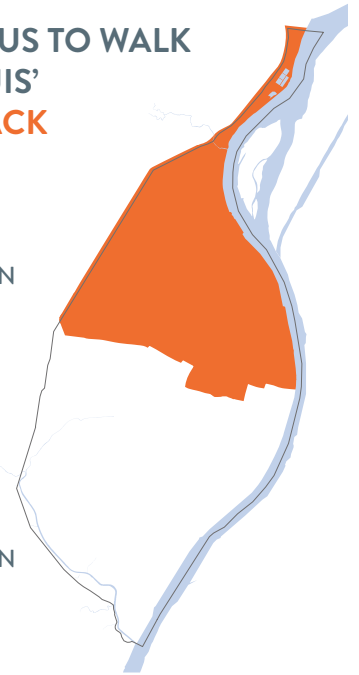
This report will touch on a number of different factors, all of which play a crucial part in the safety for people walking, biking, and driving on our streets. We hope you find this report enlightening and impactful, and we welcome feedback and conversations on the findings presented.

IT IS MORE DANGEROUS TO WALK AND DRIVE IN ST. LOUIS’ PREDOMINANTLY BLACK NEIGHBORHOODS.

74% OF ALL PEDESTRIAN FATALITIES

64% OF ALL FATAL CAR CRASHES

47% OF ALL PEDESTRIAN CRASHES



73%

OF PEDESTRIAN CRASHES HAPPEN ON STREETS WITH A POSTED SPEED LIMIT AT OR GREATER THAN 30 MPH

79%

OF PEDESTRIAN FATALITIES OCCUR ON PRINCIPAL AND MINOR ARTERIAL ROADWAYS AND INTERSTATES

62%

OF BIKE CRASHES OCCUR AT INTERSECTIONS

37%

OF ALL PEDESTRIAN CRASHES OCCUR ON JUST 6 ROADS (GRAND, KINGSHIGHWAY, NATURAL BRIDGE, UNION, FLORISSANT, AND PAGE)

METHODOLOGY

For this report Trailnet looked at bicycle, pedestrian, and vehicular crashes occurring on roads within the City of St. Louis boundary in the year 2020. We pulled data from the Missouri Statewide Traffic Accident Records System (STARS), which is managed by the Missouri State Highway Patrol. This data allows people to see when and where different types of crashes occurred. We compared several roadway characteristics that contribute to a roadway's functionality. Those characteristics include: lighting condition (Source: Missouri State Highway Patrol), roadway functional classification (Source: East-West Gateway Council of Government), posted speed limit (Source: City of St. Louis), and location type (intersection or mid-block).

There are several important factors that Trailnet took into consideration when assembling this report. It must be noted that some of these crashes may be subject to change depending on numerous factors. For example, personal injury crashes may change to fatal crashes if the injuries suffered from the crash lead to the death of a person later in the year. Also, all of the numbers and percentages you see in the report are the number of people affected by a crash, not the number of crashes that were reported. For clarification, there were 3,389 reports of fatal or personal injury vehicle crashes in 2020, but the number of people affected in those crashes was 5,397.

Trailnet also wanted to note that crashes of all varieties are severely underreported, especially crashes where no one involved is injured. It is important to know that the crashes in the report are only ones that were reported and documented by a law enforcement body and available to the public. Likewise, additional relevant information such as the cause of a crash is not contained in the STARS database. Additional research could assess how contributing factors such as distracted driving, speeding, or driver impairment may have affected crashes across the city. The newly released Show Me Zero report from the Missouri Department of Transportation will also help assess these trends statewide.

Lastly, there is terminology in the report that may need further clarification, mainly surrounding the functional classifications for roadways. *Functional classification* is essentially the characteristics assigned to a roadway such as connectivity, mobility, accessibility, vehicle miles

traveled, average annual daily traffic, and abutting land use to describe how travel is channelized and to determine eligibility for federally funded roadway projects. Below is a brief explanation for each of the roadway classifications mentioned in this report.

Local - Roads that provide access to homes and other land uses. They are typically lower in speed limit (usually 25 MPH or lower), number of vehicles, and number of lanes. Neighborhood roads are considered local roads. Parking lots are also included in this category.

Collector Road - Collector roads connect local roads to minor and principal arterials and interstates. These roadways typically have higher speed limits (25 mph or 30 mph), and have more vehicles and more lanes than local roads. Examples of collector roads include: St. Louis Avenue, Magnolia Ave, Sarah Street, as well as many of the streets in downtown St. Louis. Note: Minor and major collectors have been combined for this report.

Minor Arterials - Minor arterials link collector roads to principal arterials and interstates. Minor arterials typically have speed limits around 30 - 35 MPH, have higher traffic volumes than collector roads, and have more travel lanes (most minor arterials have 3 to 4 travel lanes). Examples include: Manchester Ave, Chouteau Ave, Arsenal Street, Martin Luther King Blvd, and Delmar Blvd.

Principal Arterials - Principal arterials link collector roads to minor arterials and interstates. Principal arterials have speed limits that range from 30 to 45 MPH, have high traffic volumes, and many travel lanes (some up to 5 or 6 lanes). Examples include: Kingshighway Blvd, Forest Park Parkway, Natural Bridge Ave, and Gravois Avenue.

Interstates - Interstates are the highest classification and are designed and constructed with long-distance travel in mind. They have the highest posted speed limits, the most travel lanes, and the highest number of vehicles on a daily average. Interstates include: I-70, I-64, I-44, and I-55.

2020 CRASH STATISTICS AT-A-GLANCE

PEOPLE WALKING REPORTED CRASHES:

242
(-53)

PEOPLE
KILLED

19
(+4)



PEOPLE
INJURED

205
(-58)

DAMAGED
PROPERTY

18
(+1)

(CHANGE FROM 2019)

2019 STATISTICS

PEOPLE
KILLED

15

PEOPLE
INJURED

263

DAMAGED
PROPERTY

17

REPORTED
CRASHES

295

PEOPLE BIKING REPORTED CRASHES:

62
(+3)

PEOPLE
KILLED

0
(+0)



PEOPLE
INJURED

51
(+1)

DAMAGED
PROPERTY

11
(+2)

2019 STATISTICS

PEOPLE
KILLED

0

PEOPLE
INJURED

50

DAMAGED
PROPERTY

9

REPORTED
CRASHES

59

PEOPLE DRIVING REPORTED FATALITIES:

61
(+16)



PEOPLE
INJURED

5336
(-945)

TOTAL INJURY/
FATAL CRASHES

5397
(+16)

2019 STATISTICS

PEOPLE
INJURED

6281

PEOPLE
KILLED

45

TOTAL
CRASHES

6326

2020 was an unprecedented year for traffic violence in the City of St. Louis. 80 people died last year because of traffic violence, the highest total in a ten-year period (2010 to 2020). While total crashes were down in 2020, the number of fatalities since 2010 are steadily rising for all modes of transportation.

2020 MOST DANGEROUS CORRIDORS

GRAND AVE

PRINCIPAL & MINOR
ARTERIAL

LENGTH 8.8 mi
POSTED SPEED 25, 30, 35
BIKE FACILITIES PARTIAL

TOTALS

10%
OF ALL
PEDESTRIAN
CRASHES IN
2020



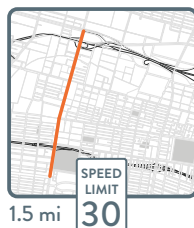
HIGHEST CRASH DENSITIES



10/24

CRASHES ON GRAND
OCCURRED
BETWEEN **DELMAR**
AND **NATURAL**
BRIDGE

10%
OF ALL
BICYCLE
CRASHES IN
2020



4/6

CRASHES ON GRAND
OCCURRED
BETWEEN **FLAD** AND
FOREST PARK
PARKWAY

UNION BLVD

MINOR ARTERIAL

LENGTH 4.1 mi
POSTED SPEED 30, 35
BIKE FACILITIES PARTIAL

TOTALS

5%
OF ALL
PEDESTRIAN
CRASHES IN
2020



HIGHEST CRASH DENSITIES



11/13

CRASHES ON UNION
OCCURRED
BETWEEN **PAGE** AND
NATURAL BRIDGE

21% (4/19)

OF ALL PEDESTRIAN
FATALITIES OCCURRED
ON UNION BETWEEN
PAGE AND **NATURAL**
BRIDGE

OTHER DANGEROUS CORRIDORS

KINGSHIGHWAY, NATURAL BRIDGE, N.
FLORISSANT, BROADWAY, AND FOREST
PARK AVE

When implementing potential street safety improvements, high crash corridors like Grand, Union, and other dangerous arterial streets should be prioritized. These roads are often the most dangerous for people walking and biking due to the high vehicle speeds and traffic volumes on these roadways.

PEOPLE WALKING REPORTED CRASHES:

242
(-53)

PEOPLE
KILLED

19

(+4)



PEOPLE
INJURED

205

(-58)

DAMAGED
PROPERTY

18

(+1)

2019 STATISTICS

PEOPLE
KILLED

15

PEOPLE
INJURED

263

DAMAGED
PROPERTY

17

REPORTED
CRASHES

295

TOP CRASH CORRIDORS

GRAND AVE

10%

KINGSHIGHWAY BLVD

9%

NATURAL BRIDGE AVE

5%

UNION BLVD

5%

FLORISSANT AVE

4%

PAGE BLVD

3%

ALL OF THESE STREETS ARE CLASSIFIED
AS **ARTERIALS** WITH POSTED SPEED
LIMITS OF:

SPEED
LIMIT
30

SPEED
LIMIT
35

37%

OF ALL
PEDESTRIAN
CRASHES
OCCURRED
ON THESE
STREETS

POSTED SPEED LIMITS

35+ MPH

43%

30 MPH

30%

25- MPH

27%

PERCENT OF PEDESTRIAN CRASHES PER
POSTED ROADWAY SPEED LIMIT

ROADWAY CLASSIFICATION

ARTERIAL

63%

LOCAL

20%

COLLECTOR

12%

INTERSTATE

5%

PRINCIPAL

MINOR

PERCENT OF PEDESTRIAN CRASHES PER
ROADWAY FUNCTIONAL CLASSIFICATION

LIGHTING CONDITIONS

DAYLIGHT

49%

DARK-LIT

47%

DARK-UNLIT

4%

PERCENT OF PEDESTRIAN CRASHES IN
DIFFERENT LIGHTING CONDITIONS

LOCATION ON ROADWAY

INTER-
SECTION

41%

MID-BLOCK

59%

PERCENT OF PEDESTRIAN CRASHES AT
INTERSECTIONS AND MID-BLOCK

PEOPLE BIKING REPORTED CRASHES:

62
(+3)

PEOPLE
KILLED

0
(+0)



PEOPLE
INJURED

51
(+1)

DAMAGED
PROPERTY

11
(+2)

2019 STATISTICS

PEOPLE
KILLED

0

PEOPLE
INJURED

50

DAMAGED
PROPERTY

9

REPORTED
CRASHES

59

TOP CRASH CORRIDORS

GRAND AVE

10%

FOREST PARK AVE

7%

KINGSHIGHWAY BLVD

5%

BROADWAY BLVD

5%

MANCHESTER AVE

5%

EUCLID AVE

3%

NEWSTEAD AVE

3%

VANDEVENTER AVE

3%

TOWER GROVE AVE

3%

44%
OF ALL BIKE
CRASHES
OCCURRED
ON THESE
STREETS

POSTED SPEED LIMITS

35+ MPH

29%

30 MPH

38%

25 MPH

33%

PERCENT OF BICYCLE CRASHES PER
POSTED ROADWAY SPEED LIMIT

ROADWAY CLASSIFICATION

ARTERIAL

55%

COLLECTOR

26%

LOCAL

19%

PERCENT OF BICYCLE CRASHES PER
ROADWAY FUNCTIONAL CLASSIFICATION

LIGHTING CONDITIONS

DAYLIGHT

77%

DARK-LIT

21%

DARK-UNLIT

2%

PERCENT OF BICYCLE CRASHES IN
DIFFERENT LIGHTING CONDITIONS

LOCATION ON ROADWAY

INTER-
SECTION

63%

MID-BLOCK

37%

PERCENT OF BICYCLE CRASHES AT
INTERSECTIONS AND MID-BLOCK

PEOPLE DRIVING REPORTED FATALITIES:

61
(+16)



PEOPLE
INJURED

5336
(-945)

TOTAL INJURY/
FATAL CRASHES

5397
(+16)

2019 STATISTICS

PEOPLE
INJURED

6281

PEOPLE
KILLED

45

TOTAL
CRASHES

6326

TOP CRASH CORRIDORS

RIVERVIEW DR

12%

70

12%

BROADWAY BLVD

10%

NATURAL BRIDGE AVE

8%

THESE ROADWAYS ARE CLASSIFIED AS
PRINCIPAL ARTERIALS AND AN
INTERSTATE WITH POSTED SPEED LIMITS
OF:

SPEED
LIMIT
30

SPEED
LIMIT
35

SPEED
LIMIT
55

41%

OF ALL
DRIVING
FATALITIES
OCCURRED
ON THESE
ROADWAYS

POSTED SPEED LIMITS

35+ MPH

70%

30 MPH

20%

25- MPH

10%

PERCENT OF CAR CRASH FATALITIES PER
POSTED ROADWAY SPEED LIMIT

ROADWAY CLASSIFICATION

ARTERIAL

67%

INTERSTATE

23%

LOCAL

7%

COLLECTOR

3%

PRINCIPAL

MINOR

PERCENT OF CAR CRASH FATALITIES
CRASHES PER ROADWAY CLASSIFICATION

LIGHTING CONDITIONS

DAYLIGHT

36%

DARK-LIT

60%

DARK-UNLIT

4%

PERCENT OF CAR CRASH FATALITIES IN
DIFFERENT LIGHTING CONDITIONS

LOCATION ON ROADWAY

INTER-
SECTION

23%

MID-BLOCK

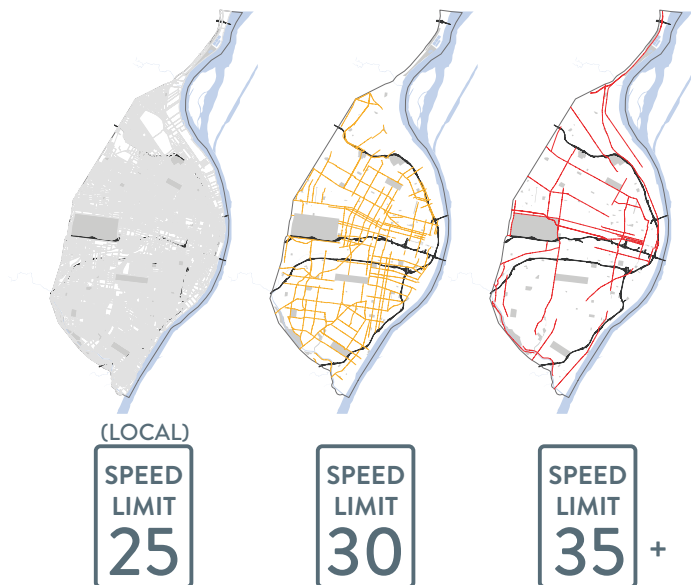
77%

PERCENT OF CAR CRASH FATALITIES AT
INTERSECTIONS AND MID-BLOCK

SOLUTIONS

At Trailnet, our goal is to make the St. Louis region a better place to walk, bike, and use transit for people of all ages and abilities. In our work we recognize that there is not a silver bullet approach to decreasing traffic violence. Communities and decision makers need to take a multifaceted approach, looking at all the solutions presented to them and determining what works best at the neighborhood or city-wide level. Trailnet has compiled a few noteworthy solutions that we believe would drastically help decrease traffic violence locally (and state-wide) and would also make the experience to walk and bike more enjoyable for people of all ages and abilities. These solutions will take widespread support and are not quick fixes that will solve our issues in a matter of months, but complex processes that require coordination and collaboration across communities, sectors and levels of government.

LOWERING POSTED SPEED LIMITS



Speed is one of the biggest contributing factors to bike, pedestrian and car crashes. In St. Louis City, 73% of pedestrian crashes occurred on streets with a posted speed limit greater than 30 miles per hours. Of the 19 pedestrian deaths in 2020, 15 occurred on streets with a posted speed limit of 30 or 35 miles per hour (79%). And it's a similar percentage for car fatalities, with 76% of total car fatalities occurring on streets with a posted speed limit of 35 miles per hour or more. Speed impacts traffic crashes in various ways: drivers traveling at a higher speed have a narrower field of vision, have a longer braking distance, and have to travel further before they can react to changes in the roadway. Crashes at higher speeds are

also more likely to be more forceful and thus more likely to result in a fatality¹.

By reevaluating the posted speed limits on all of our regional roads with the intention to lower the speed limit can significantly affect the safety for people using the roadway. The National Association of Transportation Officials (NACTO) has developed a guide titled “City Limits: Setting Safe Speeds on Urban Streets” that is designed to help communities and decision makers through the process of lowering speed limits on streets. The document provides guidance on setting default speed limits on many streets at once, designating slow zones in sensitive areas (like schools, business districts, etc.), and setting corridor speed limits on major streets. NACTO provides numerous tools, including a safe speed checklist which is designed to analyze activity levels and potential conflict points in order to determine a safe speed for a roadway. Lowering posted speed limits is a necessary step to decrease traffic violence, however this strategy does not ensure complete compliance from drivers. Lowering speed limits are successful when implemented in conjunction with built environment/infrastructure changes, such as the ones mentioned further in this report. Trailnet recommends drastic changes to lower speed limits combined with walking and biking infrastructure improvements, along with reevaluation of how speed limits are designated.

PEDESTRIAN SAFETY ENHANCEMENTS



HAWK Signal on N. Kirkwood Road

From the report, it is evident that streets (with multiple lanes, high vehicle traffic, and high speeds - Natural Bridge, Page, Grand, Kingshighway) are some of the most dangerous for people walking. Increasing the investment and implementation of pedestrian enhancements (in conjunction with lower posted speed limits) on these

roads can improve pedestrian safety by shortening crossing distances, increasing pedestrian visibility, and decreasing conflict points between people walking and people driving. Pedestrian enhancements like mid-block crosswalks, pedestrian refuge islands, rectangular rapid-flashing beacons, leading pedestrian intervals, and high-visibility crosswalks can all improve safety for people walking and biking along these roads.

Since many of these roads are operated by the Missouri Department of Transportation, coordination between the City of St. Louis and the residents that neighbor those streets is vital for any pedestrian safety enhancement to move toward implementation.

NEIGHBORHOOD TRAFFIC CALMING



Pedestrian Refuge Island on Forest Park Ave

Greater investment and installation of traffic calming infrastructure can also drastically improve walking and biking safety, thus reducing the amount of traffic crashes. Traffic calming uses physical infrastructure (speed humps, traffic circles, lane narrowing, etc.) to combat speeding and other unsafe driver behavior. At a neighborhood level, traffic calming solutions like speed humps, neighborhood traffic circles, corner bump outs (with pots, rocks, boxes, bollards, etc.) and raised crosswalks can decrease speeding between blocks, decrease turning speeds, and narrow driving lanes. These improvements also help create a more comfortable and accepting environment to walk and bike in neighborhoods.

Widespread implementation of these traffic calming enhancements (in conjunction with lower posted speed limits) can create a continuous network of “calm streets” that are more comfortable and safe to use for people walking and biking of all ages and abilities. It is also important that residents are aware of these solutions

and the implementation process so they can advocate for traffic calming infrastructure to their local elected official(s).



Mid-Block Crosswalk on Olive Blvd

DISTRACTED DRIVING LEGISLATION

It's well documented that cell phone use while driving has negatively impacted roadway safety. From a 2020 ZenDrive study of over 86,000 traffic crashes, it was found that 57% of those crashes involved phone use before the crash occurred, with 17% of the total crashes involving cell phone use within 5 seconds or less before the crash occurred². In the United States, 48 states (including all US territories) have texting and driving bans; this unfortunately does not include the State of Missouri. Missouri has a ban on texting while driving for people under the age of 21³. This needs to change.

Lawmakers need to write and pass effective distracted driving legislation immediately. The State of Missouri is behind the times when it comes to decreasing distracted driving. The lack of legislation is unacceptable and Missourians are paying for it with their lives.

PROTECTED BIKE INFRASTRUCTURE

Reallocating road space into protected bike lanes is becoming common practice for many cities across the world to ensure safer biking conditions. At the moment, the City of St. Louis has one mile of protected on-street bicycle infrastructure on Chestnut Street in downtown St. Louis. Future protected bike lane projects (Tower Grove Connector, Tucker Blvd Cycle Track, etc.) will be implemented to expand the network, but more protected infrastructure for biking could greatly improve bicycle

safety. Numerous studies on protected bike lanes show that providing a physical barrier from moving and parked cars improves bicycle safety. A 2010 study saw protected bikeways had a 28% lower injury rate when compared to streets without biking infrastructure. The same study also saw 2.5 times as many people using protected infrastructure, compared to the streets without bicycle infrastructure⁴. In New York City, a parking protected bike lane saw a 190% increase in ridership, with 32% of that ridership being people under the age of 12. A similar parking protected bike lane in New York City saw a 56% reduction in injuries across all modes, including a 57% reduction in injuries to people on bikes⁵.



Protected bike lane on Chestnut St. in downtown St. Louis

A high-level of planning and consideration should be taken into account when implementing bike lanes. Numerous planning efforts, like Trailnet's Connecting St. Louis, the Downtown St. Louis Transportation Study, and other efforts have highlighted several corridors across the city (St. Louis Avenue, Broadway, 20th Street etc.) as possible protected bike lane connections. Other streets with similar levels of connectivity to schools, grocery stores, high transit use, businesses, and health care should be considered for protected bike lanes and additional protected infrastructure.

ROADWAY USER EDUCATION

The State of Missouri also lacks in terms of mandatory driver education. While many schools and districts offer it, driver's education is not required by the Missouri Department of Elementary and Secondary Education to obtain a driver's license. The State of Missouri must shift to a mandatory driver's education platform that requires all new drivers to complete a driver's education course

before they are granted a full drivers license, intermediate license, or any special driving license.

Within the driver education courses there must be a focus on safe driving and vulnerable roadway users (people on bikes, people walking, people with mobility issues, etc). New drivers should be educated on the proper way to interact with people biking on the road, what different types of pedestrian signage and signals mean for people driving, and the danger a vehicle presents to someone walking or biking. Education is a crucial preventative strategy for reducing traffic violence on our streets and it should be mandatory for all new drivers, which should also include transit operators, drivers of police & emergency vehicles, delivery vehicles, taxis, and school buses.

PLANNING AND IMPLEMENTATION

Implementing the solutions mentioned in this report is not a quick and simple task. All of the mentioned solutions must be planned and implemented with immense consideration and coordination between residents, elected officials, and other stakeholders. While numerous factors are considered during the planning process, equity must be at the forefront of these decisions.

Inequity in the City of St. Louis is prevalent in the geography of traffic crashes and fatalities. The top three most dangerous corridors for walking in St. Louis are in areas where over 90% of the residents identify as a Black⁶. This issue is not specific to St. Louis - a 2019 report by Smart Growth America found that drivers strike and kill people of color (especially Black and Indigenous people) at higher rates than white people nationwide⁷. These areas and corridors must be prioritized. Government agencies must increase public and neighborhood-level engagement to properly plan, identify, and implement solutions that look to decrease traffic violence affecting communities of color.

Decision makers, planning organizations, and governmental agencies need to include the voices of residents throughout the planning process. Governmental agencies and other organizations need to rethink how they plan, invest in, and engage communities of color. The voices of Black, Indigenous, and people of color need to be heard in planning conversations, their time and efforts should be compensated, and their voices must be amplified if any progress for an equitable transportation network is to be made.

ABOUT TRAILNET

Trailnet is a 501c3 nonprofit based in St. Louis, Missouri, and is the region's voice for better biking and walking. Trailnet's mission is to lead in fostering healthy, active, and vibrant communities where walking, bicycling, and the use of public transit are a way of life. Trailnet's work integrates public policy, urban planning, public health, and community organizing into strategic initiatives that enhance the quality of life for all, regardless of their race, zip code, age, or ability.

If you have any question or comments on this report, please reach out to Trailnet at planning@trailnet.org

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SOURCES

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Trailnet's raw data can be found here: <https://docs.google.com/spreadsheets/d/1sWkn1hDMOfWfzs1N3MoRjzvQvrccDO5UDCAnskPuPQk/edit?usp=sharing>

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