

Street and Intersection Pedestrian Safety Study

City of Columbia, Missouri

January 12, 2026

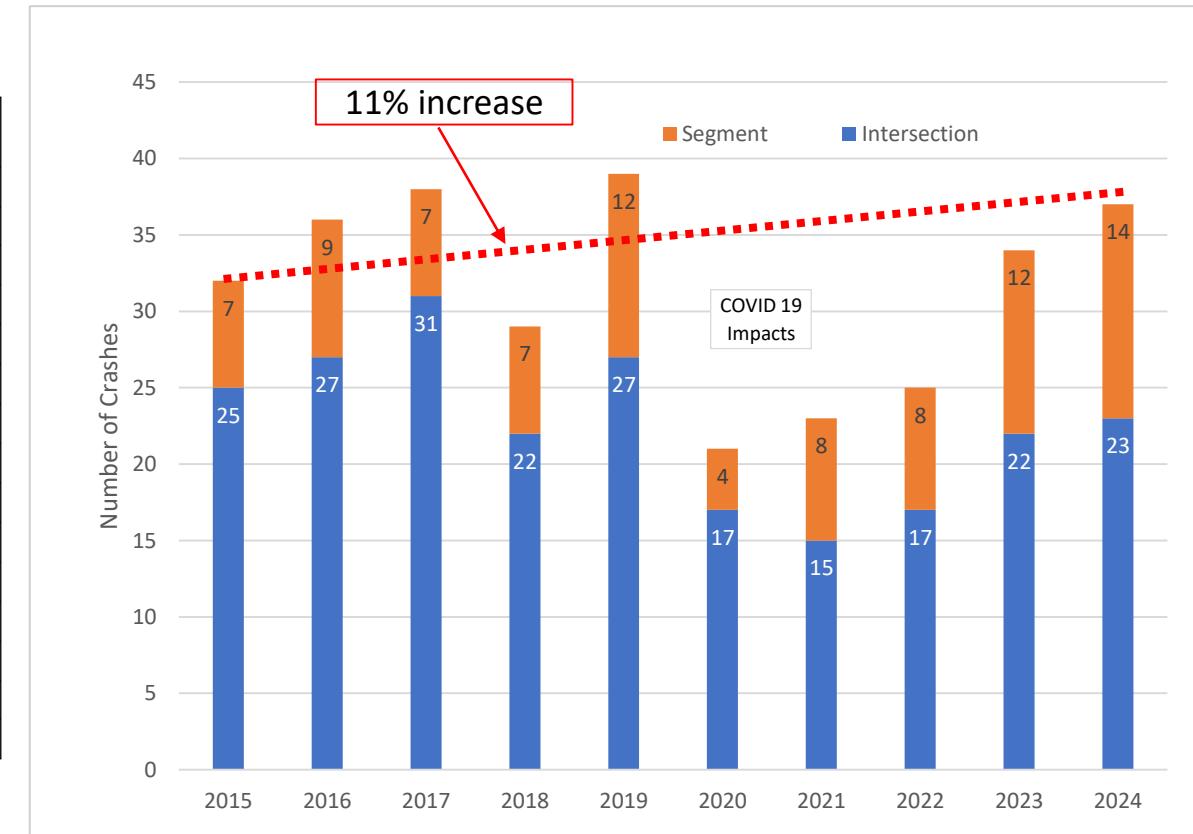


The Pedestrian Safety Problem in Columbia

- 32% of the fatal crashes in Columbia were pedestrians (2019-2023).
- 88% of Pedestrian Fatalities occur during dark conditions (2019-2023).
- Overall, 93.6% of pedestrian crashes resulted in an injury or fatality.
- Overall, 30% of pedestrian crashes at intersections had medians.

Rank	Number of Pedestrian Involved Crashes	Presence of Medians	Location
1	12	Medians	College Avenue and University Avenue
2	6	Medians	College Avenue and Rollins Street
3	5	No Medians	Stadium Boulevard and Monk Drive/Champions Drive
4	4	Medians	Business Loop 70 and Providence Road (MO163)
5	3	Medians	Stadium Boulevard and Worley Street
	3	Medians	E. Broadway and Waugh Street
	3	No Medians	Hospital Drive and Hitt Street
	3	No Medians	S. Providence Road and E. Stewart Road
	3	No Medians	Rollins Street and Virginia Avenue
	3	No Medians	Hospital Drive and Monk Drive
	3	No Medians	E. Broadway and 9 th Street
	3	No Medians	E. Broadway and 10 th Street
	3	No Medians	Trimble Road and Brickton Road
	3	No Medians	S. Providence Road and Locust Street
	3	No Medians	University Avenue and Matthews Street

Top Intersections with Pedestrian Involved Crashes (2015-2024)



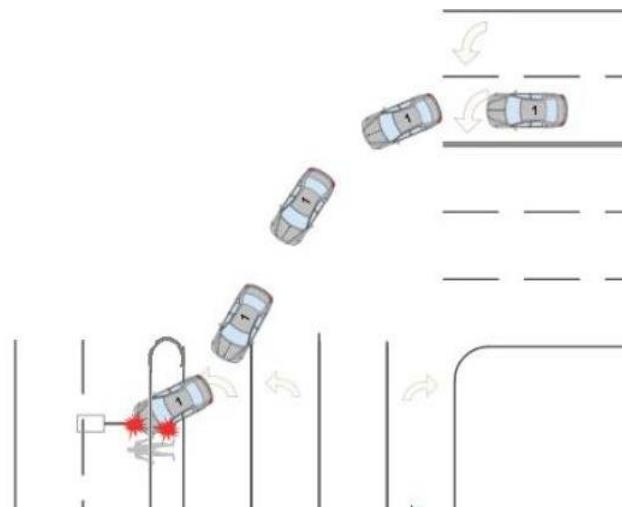
Injury Crashes: Pedestrians in Medians (2015-2024)

- Stadium & Worley (3)
- Stadium & Broadway
- Business Loop & Rangeline
- US 63 Connector & Clark Lane
- Stadium & I-70
- Business Loop & Providence
- College & Broadway

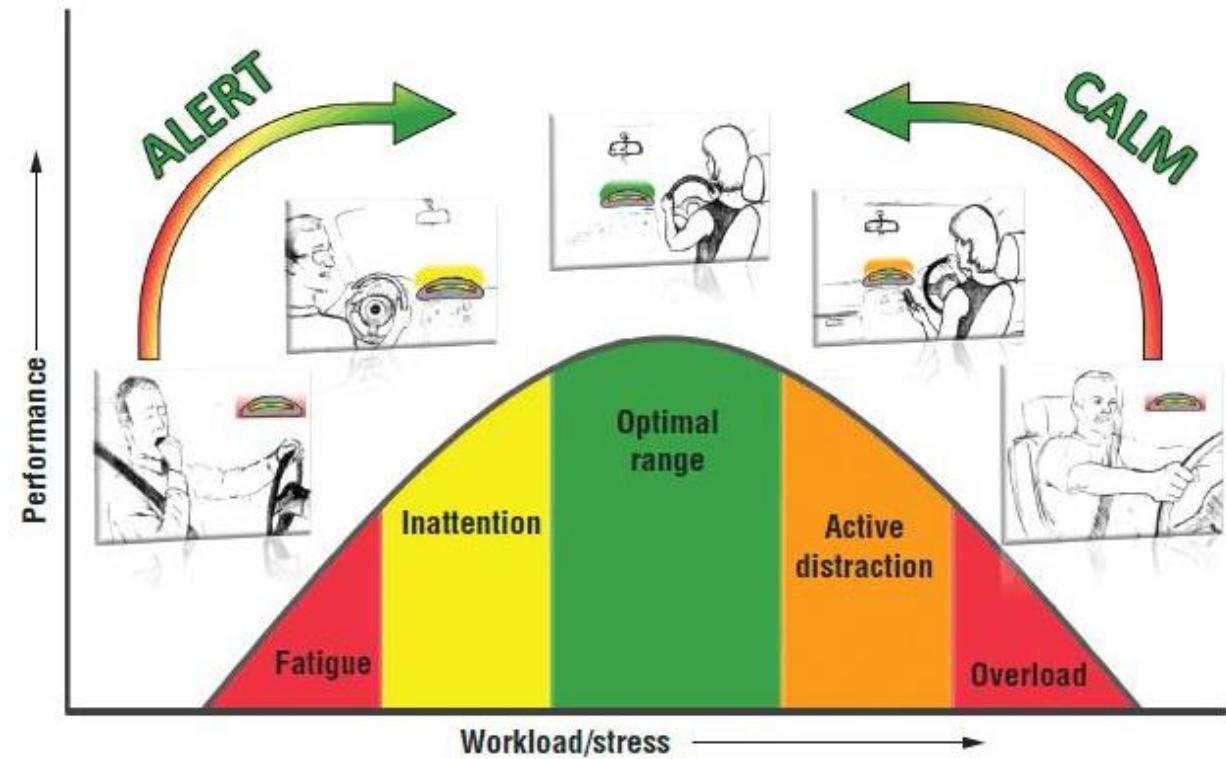
OFFICER STATEMENT:

The crash occurred when vehicle one was traveling Northbound on North Stadium Boulevard and was attempting to make a left hand turn to travel West on West Worley Street. Vehicle one turned short and began traveling in the eastbound lane of West Worley. Driver one then tried to correct her lane of travel by turning vehicle one to the right to enter the westbound lane of travel on West Worley. Vehicle one then traveled over the raised concrete curb style median. As vehicle one traveled over the concrete median it struck a street sign with its front bumper.

Vehicle one also struck pedestrian one with the driver's side of the vehicle which caused its driver's side mirror to fold in. Pedestrian one was walking west on West Worley in the median when he was struck by vehicle one. Initially pedestrian one's injuries appeared to be minor and he did not want medical attention. However, pedestrian one was convinced to be taken to the hospital for his injuries after he was unable to balance or walk on his own without assistance. Pedestrian one was transported via ambulance to the hospital where he was treated for a brain injury and a broken hip.



Pedestrians in Unexpected Context: Expectancy



Yerkes-Dodson Law of performance and stress

Injury Crashes: Pedestrians in Unexpected Context

OFFICER NARRATIVE

VEHICLE 1 WAS IN LANE 1 OF EASTBOUND BROADWAY AT THE INTERSECTION OF BROADWAY AND COLLEGE AVE. VEHICLE 2 WAS IN LANE 2 OF EASTBOUND BROADWAY AT THE INTERSECTION OF BROADWAY AND COLLEGE AVE. VEHICLES 1 AND 2 GOT THE GREEN LIGHT AND BEGAN TO TRAVEL INTO THE INTERSECTION OF BROADWAY AND COLLEGE AVE WHEN VEHICLE 1 BEGAN TO SHIFT INTO LANE 2 OF EASTBOUND BROADWAY. VEHICLE 1 COLLIDED WITH VEHICLE 2 AND CONTINUED DRIFTING RIGHT INTO LANE 1 OF SOUTHBOUND COLLEGE AVE. VEHICLE 2 WAS SPUN AROUND AND ENDED UP IN LANE 1 OF EASTBOUND BROADWAY FACING SOUTH.

DRIVER STATEMENTS

V1 - I WAS TRAVELING EASTBOUND IN LANE 1 OF EASTBOUND BROADWAY, AND LOOKED TO THE LEFT AT A HOMELESS MAN WHO WAS ON THE MEDIAN ACTING UP. VEHICLE 1 STATED THAT THEN THERE WAS SUDDENLY A PRIUS IN FRONT OF ME, I AM NOT SURE WHAT HAPPENED AS I WAS NOT LOOKING AND I DID NOT FEEL THE COLLISION.

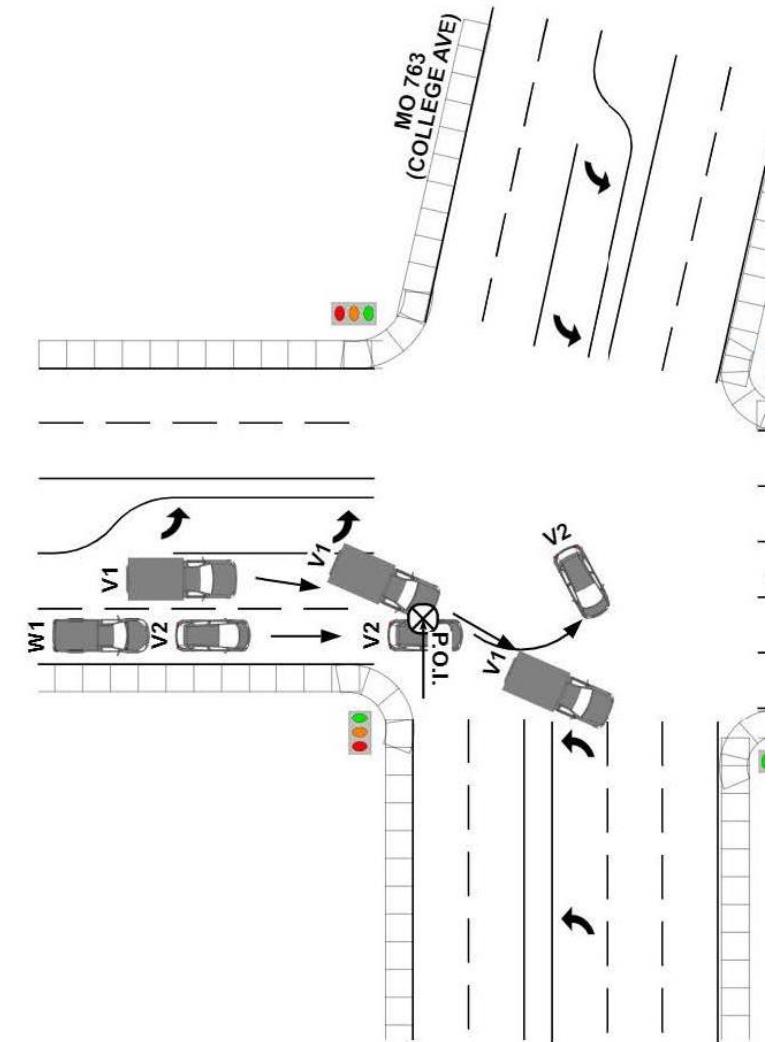
V2 - I WAS TRAVELING EASTBOUND IN LANE 2 OF EASTBOUND BROADWAY WHEN I WAS SUDDENLY STRUCK ON THE DRIVER'S SIDE BY ANOTHER VEHICLE.

WITNESS STATEMENTS

W1 - I WAS TRAVELING EASTBOUND IN LANE 2 OF EASTBOUND BROADWAY BEHIND VEHICLE 2 WHEN I SAW VEHICLE 1 START TURNING RIGHT FROM LANE 1 OF EASTBOUND BROADWAY. VEHICLE 1 STRUCK THE SIDE OF VEHICLE 2, CAUSING IT TO SPIN AROUND IN THE INTERSECTION.

MISC INFORMATION

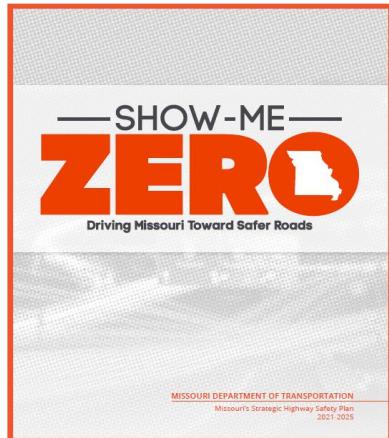
THE PASSENGER OF VEHICLE 2 ENDED UP BEING TRANSPORTED VIA AMBULANCE AND HOSPITALIZED FROM THE COLLISION. THE INJURIES INCLUDED ABDOMINAL INFLAMMATION, FREE FLUID IN ABDOMINAL REGION AS WELL AS HIGH FEVER AND HIGH HEART RATE.



Efforts to Address Pedestrian Safety

Missouri's Strategic Highway Safety Plan: Show Me Zero – Driving Missouri Towards Safer Roads

A plan to reduce fatalities and serious injuries on Missouri roads.



• Organizations with Pedestrian Safety Initiatives

- Federal Highway Administration (FHWA)
- Vision Zero Network
- National Highway Traffic Administration (NHTSA)
- Federal Motor Carrier Safety Administration (FMCSA)
- National Safety Council (NSC)
- Center for Disease Control and Prevention (CDC)
- Missouri Coalition for Roadway Safety
- Missouri Bicycle and Pedestrian Federation
- International Federation of Pedestrians



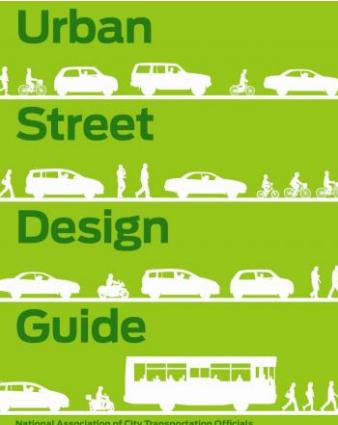
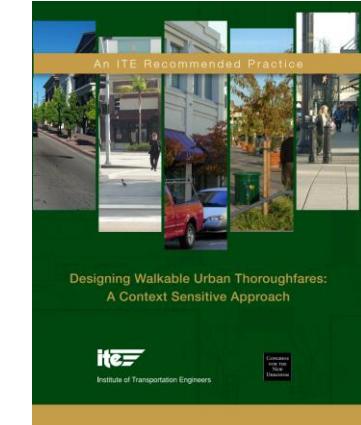
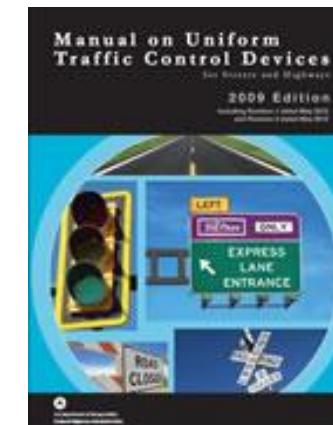
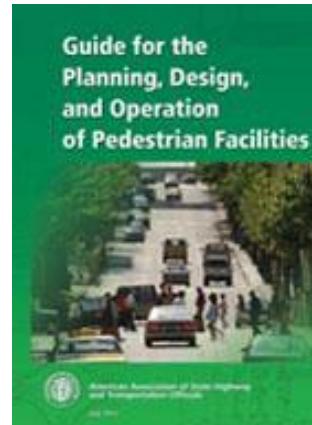
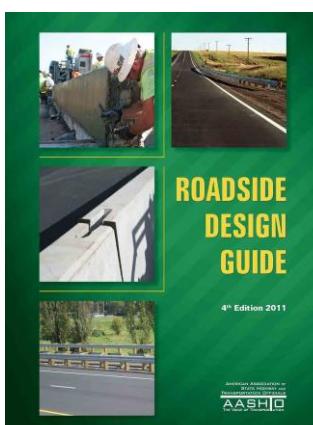
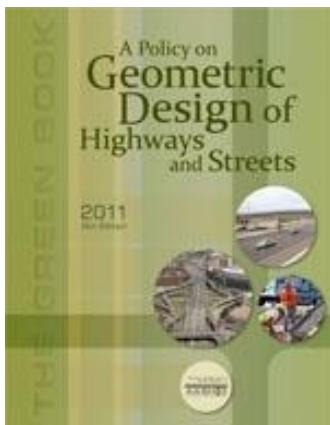
Standards and Guidelines

- **Many Standard Design Resources**

- A Policy on Geometric Design of Highways and Streets (AASHTO Green Book)
- Roadside Design Guide (AASHTO)
- Guide for the Planning, Design, and Operation of Pedestrian Facilities (AASHTO)
- Manual on Uniform Traffic Control Devices (MUTCD – FHWA)
- Americans with Disabilities Act (ADA)
- Designing Walkable Urban Thoroughfare: A Context Sensitive Approach (ITE)
- Urban Street Design Guide (NACTO)

- **Consistency in Design**

- Clarity in the use of pedestrian facilities (help pedestrians know where they should be).
- Set clear expectations for drivers (help drivers know where they should expect to encounter pedestrians).



Columbia Pedestrian Safety Programs

- City follows national design standards and guidelines.
- Permits required for events when pedestrians will be located outside of typical pedestrian facilities.
- Vision Zero (launched 2017) / CoMo to Zero (2025)
- Neighborhood Traffic Management Program



S College Ave between Wilson Ave & Rosemary Ln (HAWK)



Scott Blvd South of Abbington Terrace (RRFB)



RESPECTFULLY SUBMITTED BY CITY MANAGER MIKE MATTHES



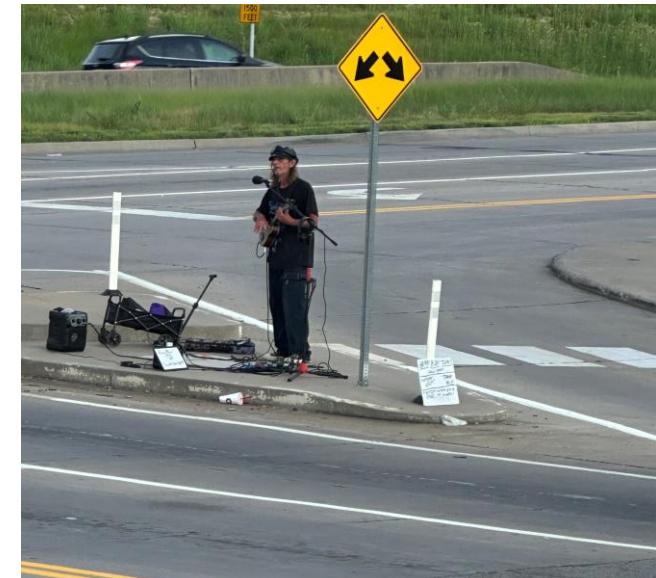
Foundational Recommendation

- To facilitate safety for pedestrians and motorists alike, pedestrians should **only be allowed in the roadway when:**
 - They **remain in designated pedestrian areas** where motorists reasonably expect them to be located (e.g., sidewalks and crosswalks); or
 - There is **temporary traffic control** set up to warn drivers that pedestrians will be present (e.g., maintenance or special events); or
 - Using particular roadways that sustain low traffic volumes and low speeds and are **designated as shared spaces** for both motorists and pedestrians; or
 - They **use temporary pedestrian refuge** as a necessary part of the process of crossing a road. (Someone who cannot get through in one traffic cycle).

Hierarchy of Concern

Conditions that contribute to pedestrian risk.

1. Traffic Speed,
2. Traffic Volume, and
3. Median Width



Hierarchy of Concern - Speed



Pedestrian survival rate by speed

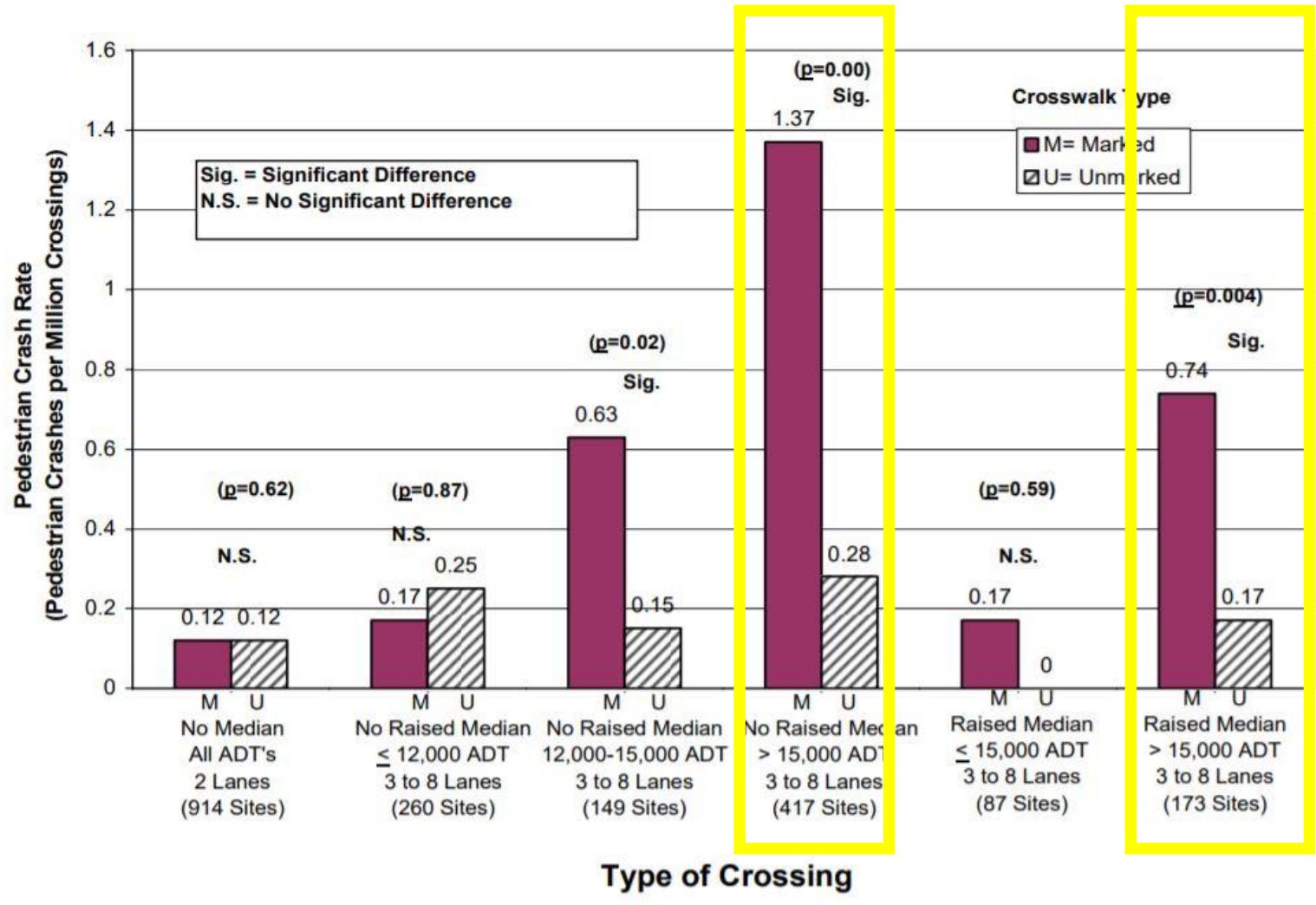


Levels of driver peripheral vision, stopping distance, and crash risk with higher speeds

Hierarchy of Concern - Volume

Volume and Exposure

- Pedestrian crash frequency increases with volume.
- 15,000 VPD threshold



Hierarchy of Concern – Median Width

Lateral Offset

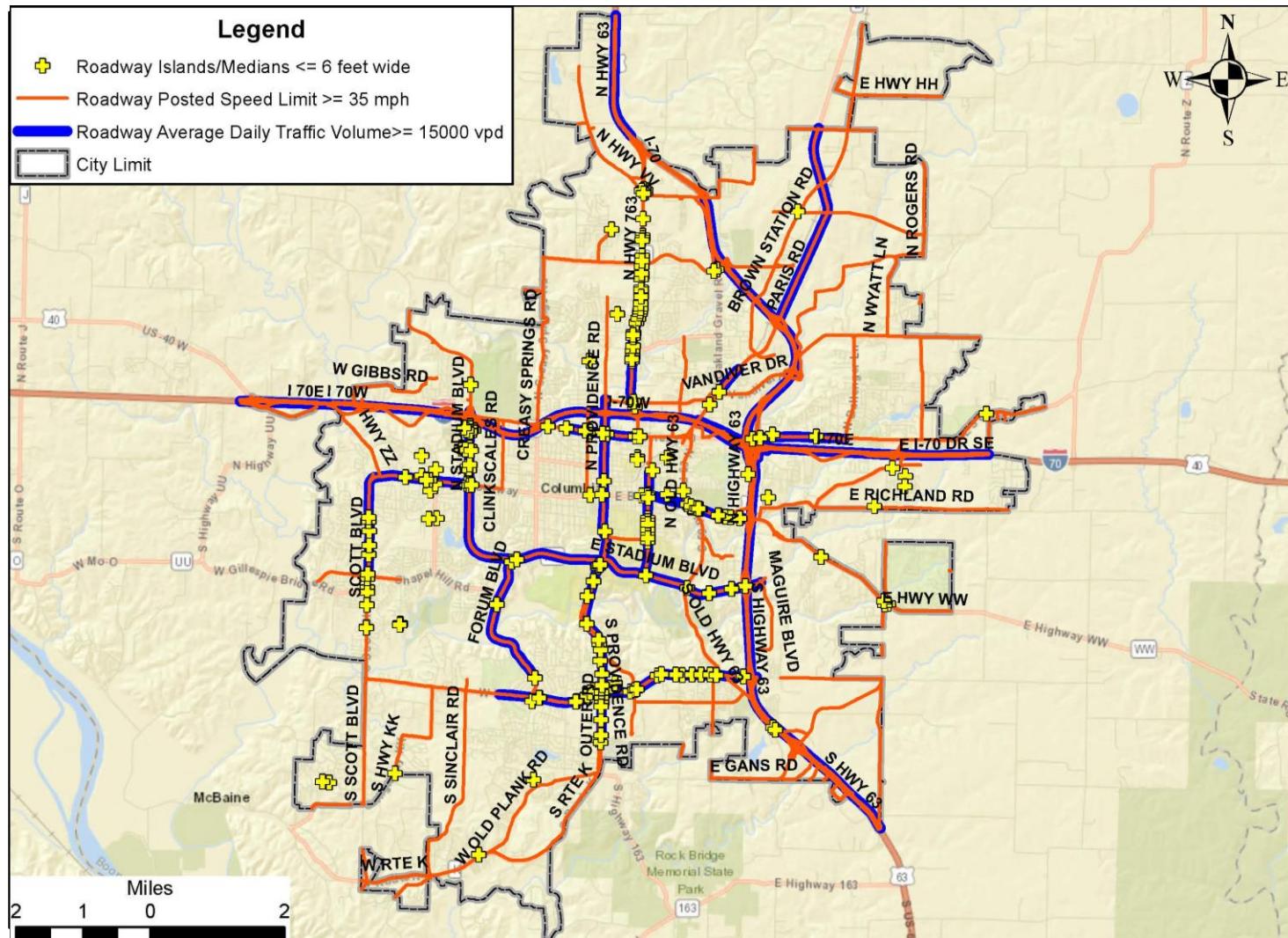
- A minimum of 1.5 feet should be clear from the face of the curb with 3 feet at intersections. (Roadside Design Guide)
- 6-Foot is the minimum protected median width.
 - AASHTO Green Book
 - AASHTO Guide to the Planning, Design, and Operation of Pedestrian Facilities
 - NACTO Urban Street Design Guide



~4 ft Median at Business Loop and Providence

Specific Recommendations

- To enhance pedestrian and motorist safety in Columbia, regulate the use of medians, roadway crossings, and islands for pedestrians at intersections with any of the following characteristics:
 - Speeds on at least one approach of 35 mph or greater, or
 - Average daily traffic volumes on one roadway of 15,000 vehicles per day or greater, or
 - Median widths less than 6-foot wide are present.



Example Peer Cities with Median Ordinances

Peer Cities with Median Ordinances

Springfield, Missouri	35 mph, 15,000 vpd, or less than 6'
Sioux Falls, South Dakota	Roads 30 mph or greater and less than 6'
Abilene, Texas	Specific Locations
Bismarck, North Dakota	All Medians
San Angelo, Texas	Any Median in City

§ 80.009 PEDESTRIAN SAFETY, USE OF MEDIANs.

(a) The city council makes the following findings and adopts the following statement of purposes of this section:

(1) Pedestrian fatalities increased in the United States by 66% from 2011 to 2021 according to the National Highway Traffic Safety Administration.

(2) According to the AAA Foundation for Traffic Safety (2011), the average risk of severe injury for a pedestrian struck by a vehicle reaches 50% at 31 mph and 75% at 39 mph.

(3) A driver traveling at 30 mph who hits a pedestrian has a 45% chance of killing or seriously injuring the individual according to the US Department of Transportation Federal Highway Administration (2021).

(4) The National Association of City Transportation Officials Urban Street Design Guide (2013) states that a median or island should be at least six feet wide where pedestrians are present.

(b) For any intersection listed herein, where the speed limit is 30 miles per hour or higher and lacks pedestrian facilities; and the width of the top surface of the median is less than six feet wide excluding the curb, pedestrians are prohibited from standing, sitting, or staying on a median for any purpose. While not an exhaustive list, this section prohibits, at a minimum, pedestrians from standing, sitting, or staying on a median at the following intersections in the city:

- (1) Marion Rd. at I-90.
- (2) Cliff Ave. at I-90.
- (3) Veterans Pkwy. at I-90.
- (4) Rice St. and Veterans Pkwy.
- (5) Benson Rd. at I-29.
- (6) Maple St. at I-29.
- (7) Algonquin St. and Minnesota Ave.
- (8) Russell St. and Westport Ave.
- (9) Russell St. and Western Ave.
- (10) Russell St. and Prairie Ave.
- (11) Rice St. at I-229.
- (12) Madison St. at I-29.
- (13) Madison St. and Veterans Pkwy.
- (14) 12th St. at I-29.
- (15) 10th St. at I-229.
- (16) 26th St. at I-29.

(c) The previous section does not apply to:

- (1) Public safety employees while performing their official duties.
- (2) Employees or contractors for the city or state or other individuals authorized by the said entities to perform construction or maintenance work on streets or rights-of-way, while performing construction or maintenance work on the street provided that proper street signage is used and streets are blocked off as required by the city.
- (3) Any individual responding to an emergency in the street.

(Ord. 19-24, passed 3-5-2024)

Sioux Falls, South Dakota Ordinance