2017 Comprehensive Traffic Collision Summary





TRAFFIC SERVICES DIVISION
NOVEMBER 2018

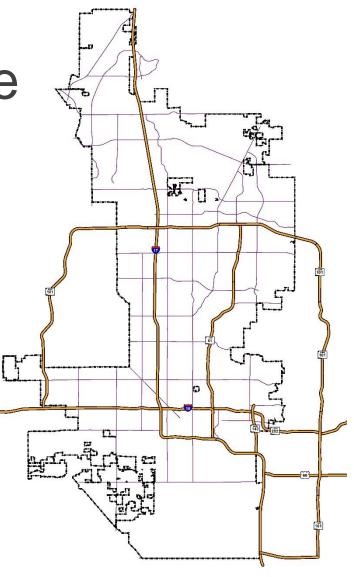
Table of Contents

| ❖ Background | <u>3</u> |
|------------------------------|-----------|
| ❖ Number/Severity of Crashes | <u>4</u> |
| ❖ When Do Collisions Occur? | <u>14</u> |
| ❖ How Do Collisions Occur? | <u>17</u> |
| ❖ Pedestrian Collisions | <u>28</u> |
| ❖ Bicycle Collisions | <u>36</u> |
| ❖ Phoenix Traffic Clock | <u>43</u> |
| ❖ Summary | 44 |

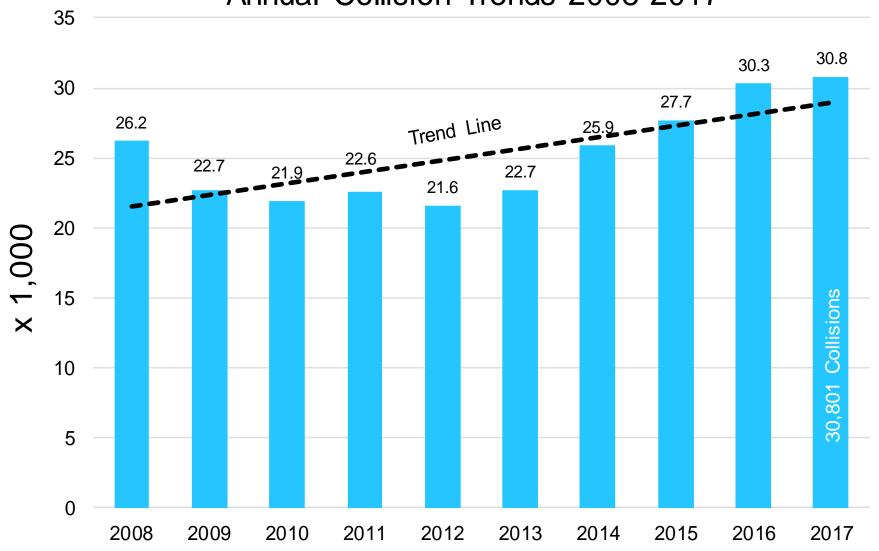
2017 Facts-at-a-Glance

This is a detailed analysis of the raw data from collisions in the City of Phoenix during 2017:

- Total of 30,801 collisions resulting in 14,389 injuries and 207 fatalities.
- Eighty-two percent of all crashes were either rear end, angle, sideswipe or left turn.
- Pedestrian collisions reached a ten year high of 758 incidents with 660 injuries and 92 fatalities.

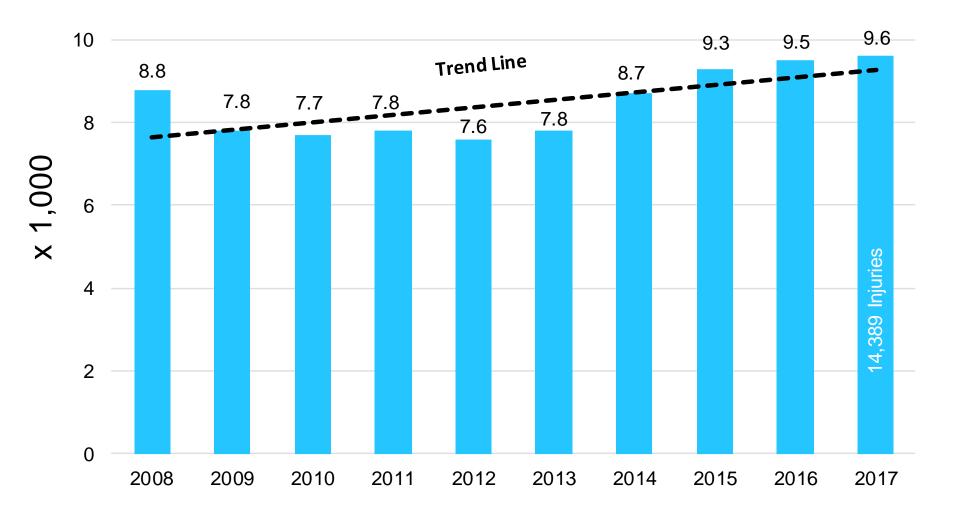


Annual Collision Trends 2008-2017

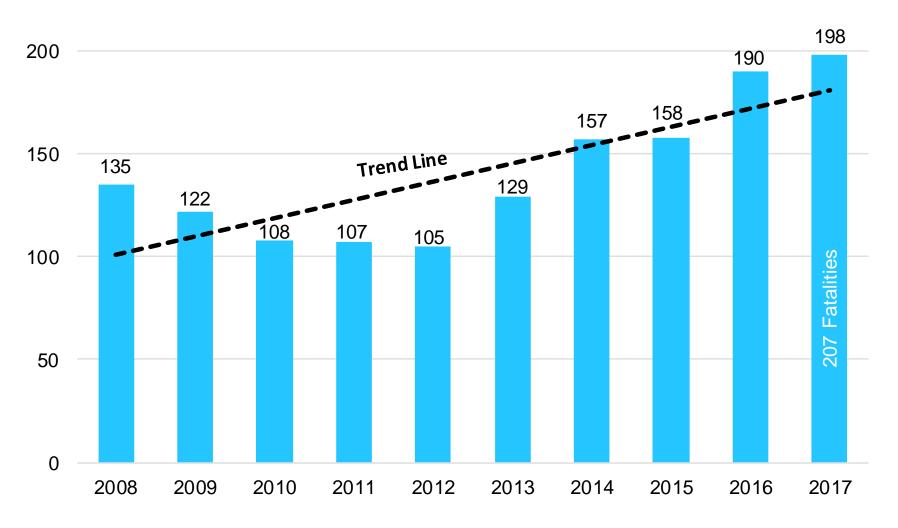


Injury Collision Trends 2008-2017

12

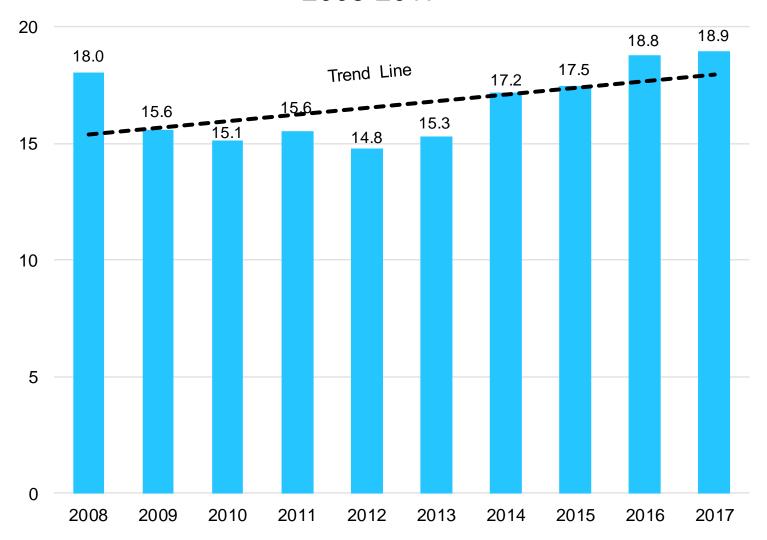


Fatal Collision Trends 2008-2017



Note: Some collisions result in multiple fatalities.

Collision Trends Per Thousand Residents 2008-2017





Pedestrian signal (HAWK) at the Phoenix Hebrew Academy at 515 E. Bethany Home Rd.

Pedestrian signal (HAWK) at the 7th Avenue and Fillmore Street intersection.



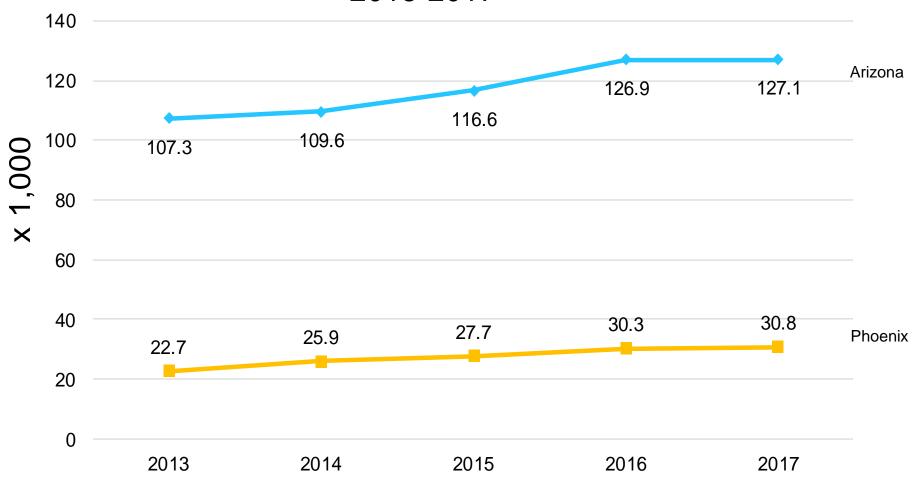


Protected Bike lanes on 15th Avenue from Jefferson to Van Buren Streets

Traffic Signal Flashing Yellow Arrow and Pedestrian timing modifications at 12th Street and Northern Avenue.

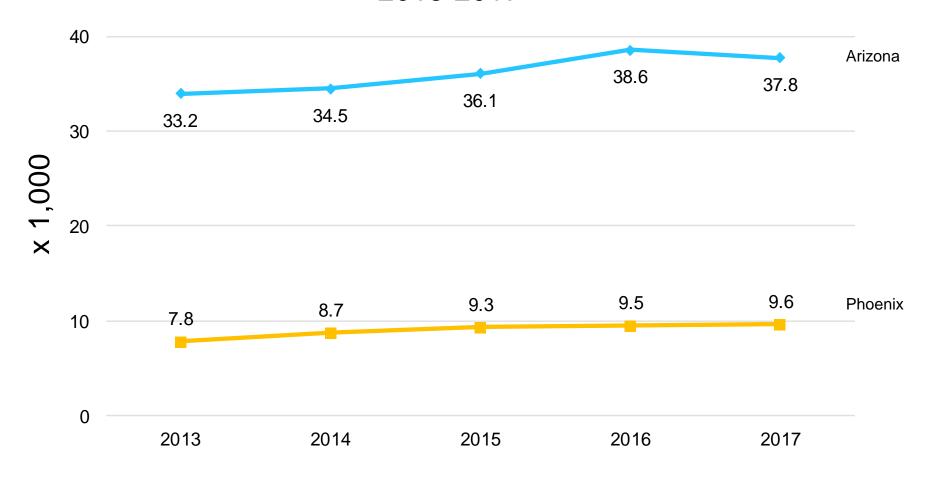


Phoenix vs. Arizona Total Collisions 2013-2017



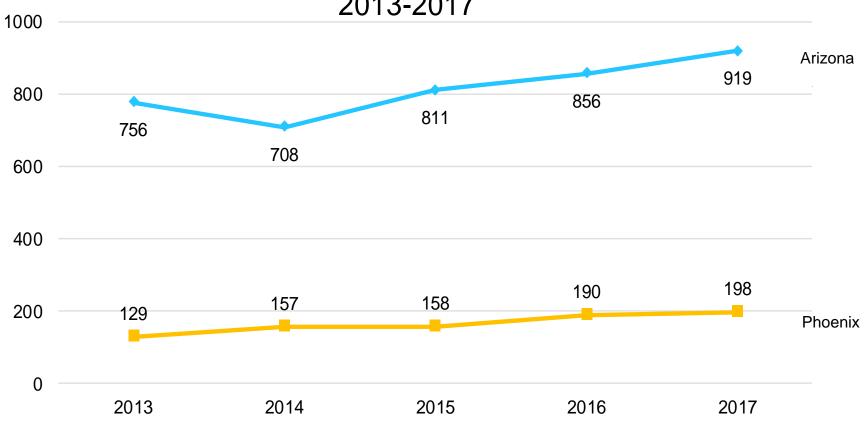
^{*}Arizona data comes from the 2017 Arizona Crash Facts Summary

Phoenix vs. Arizona Total Injury Collisions 2013-2017



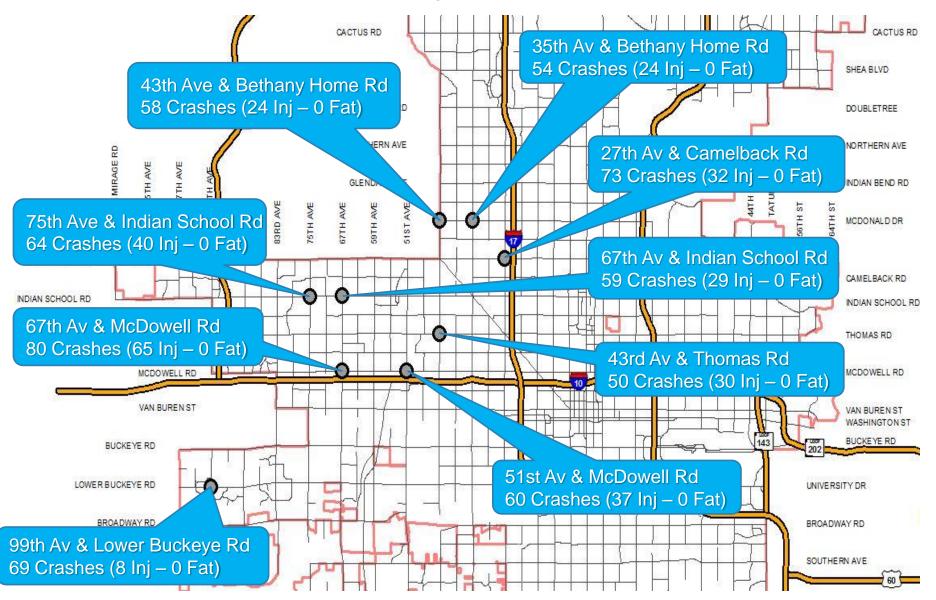
^{*}Arizona data comes from the 2017 Arizona Crash Facts Summary

Phoenix vs. Arizona Total Fatal Collisions 2013-2017



^{*}Arizona data comes from the 2017 Arizona Crash Facts Summary

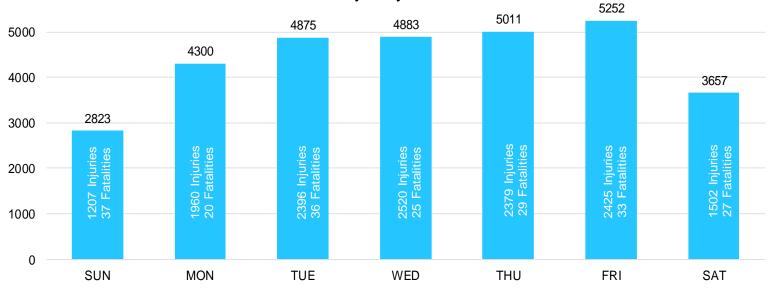
Locations with the Highest Number of Collisions 2017



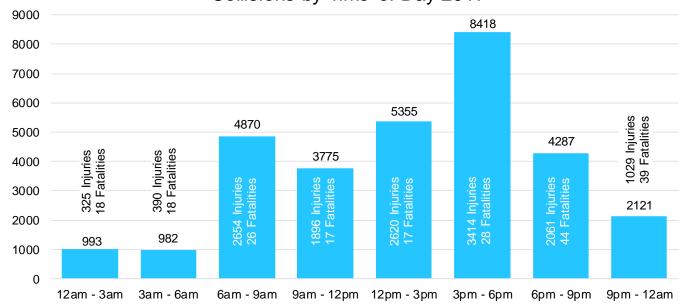
Collisions by Month 2017



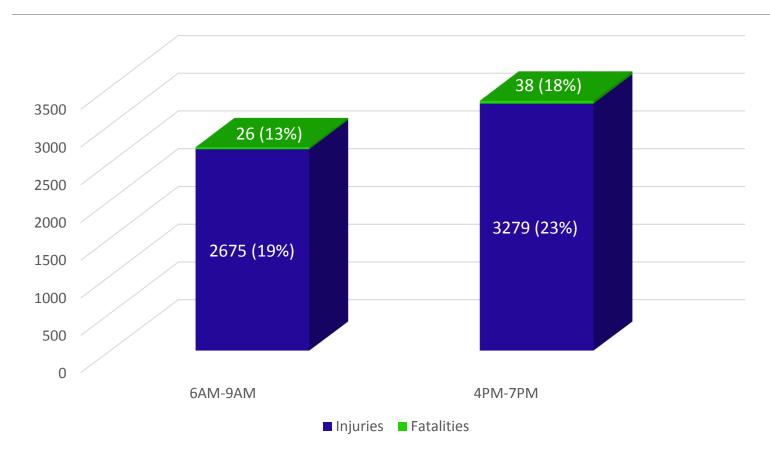
Collisions by Day of Week 2017



Collisions by Time of Day 2017

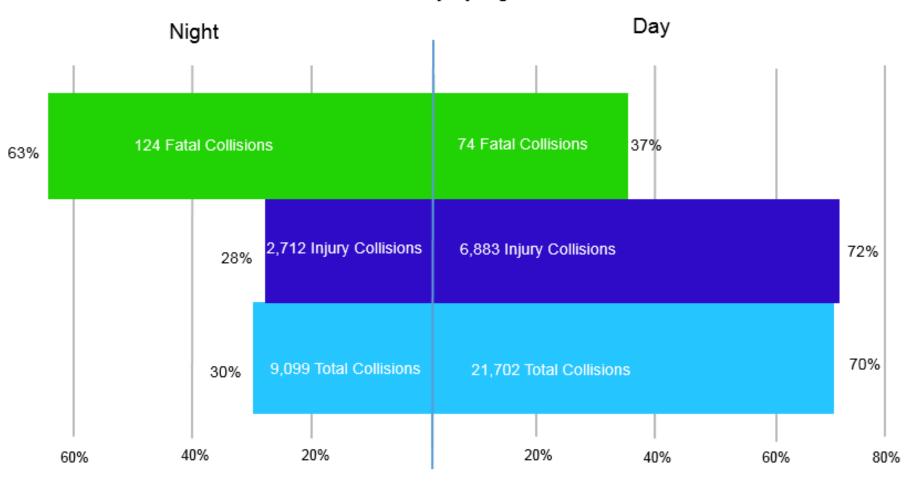


Rush Hour

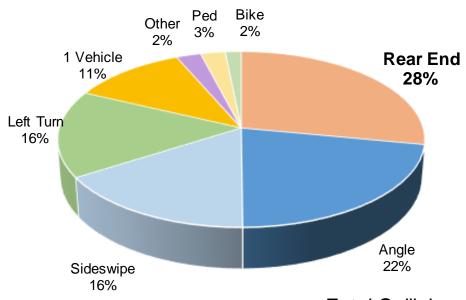


2017 Rush Hour related crashes were 42% of total injuries and 31% of total fatalities

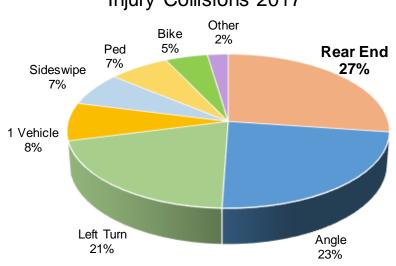
Collision Severity by Light Conditions 2017



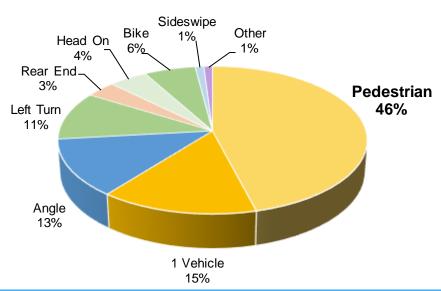
Collision Type - All Collisions 2017



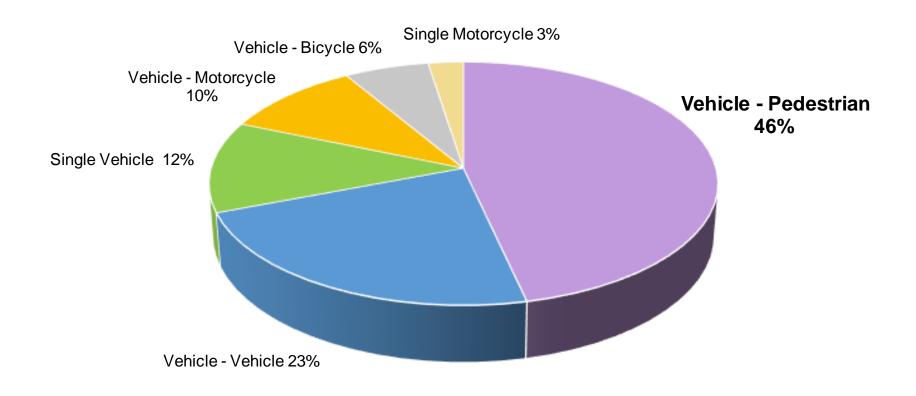
Injury Collisions 2017



Fatal Collisions 2017

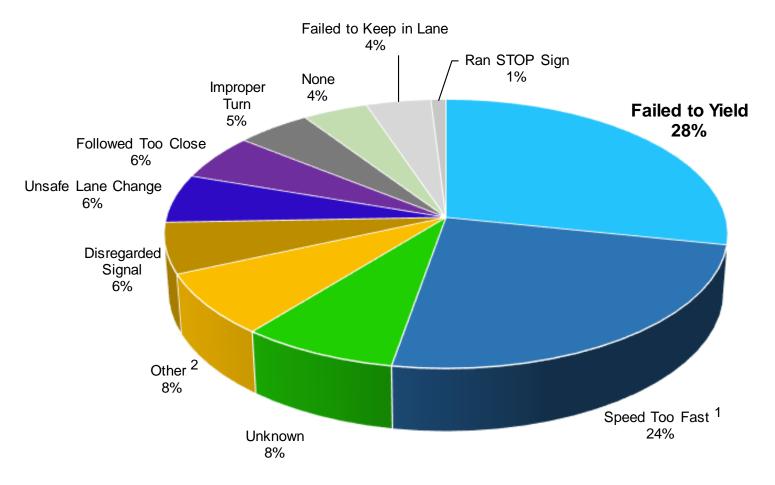


Fatal Collisions by Mode of Transportation 2017



198 Total Fatal Collisions

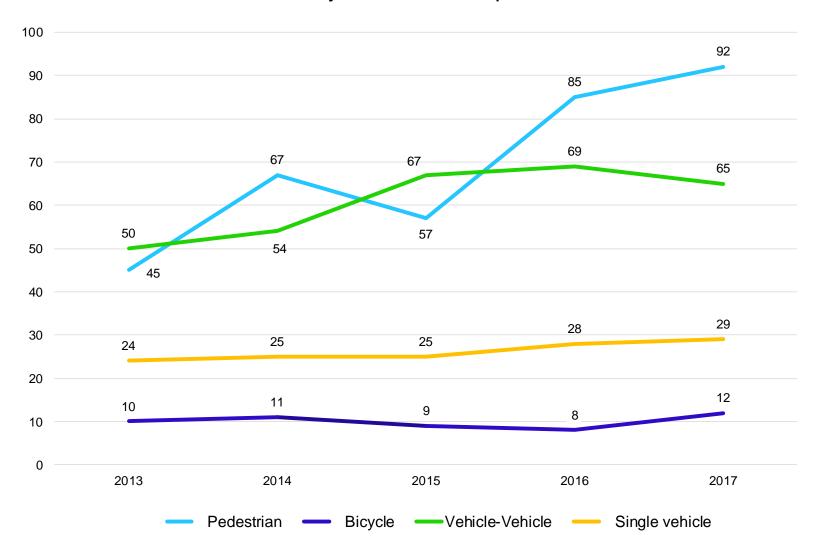
Collisions by Primary Behavior/Violation 2017



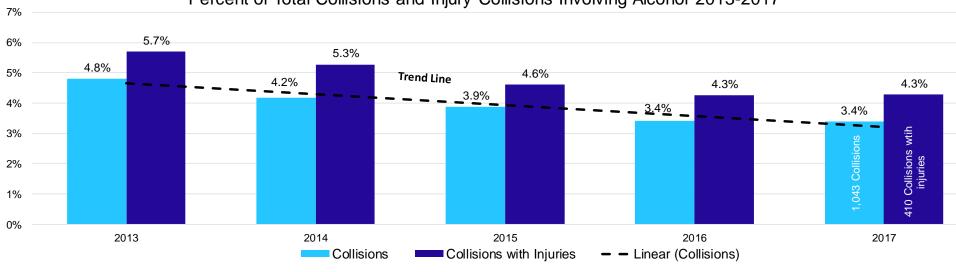
- 1 "Speed Too Fast" does not necessarily mean the person was exceeding the speed limit but rather the person was traveling too fast for the conditions at the time.
- 2 "Unknown" includes leaving the scene, conflicting statements without witnesses, incapacitated persons.
- 3 "Other" includes less common violations such as Unsafe Passing and Operating with Faulty Equipment.
- 4 "None" refers to drivers involved in a crash without committing a violation. These instances are usually the result of uncontrollable forces such as falling objects, debris or animals in the roadway.



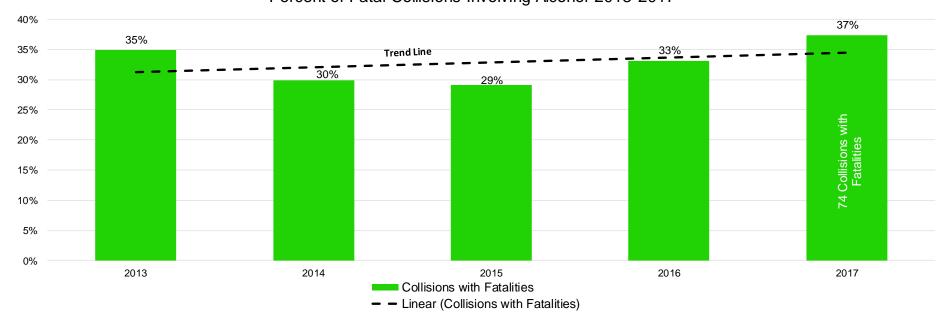
Fatal Collisions by Mode of Transportation 2013-2017



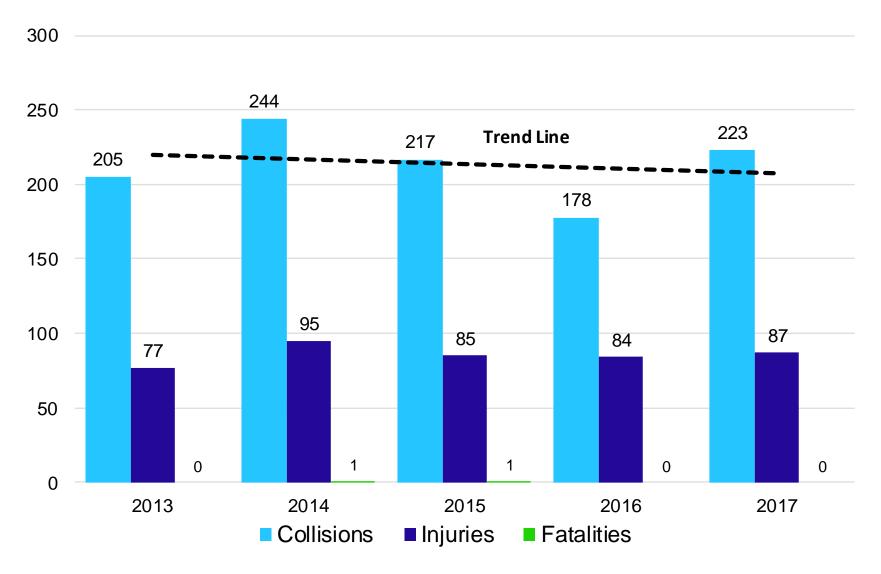
Percent of Total Collisions and Injury Collisions Involving Alcohol 2013-2017



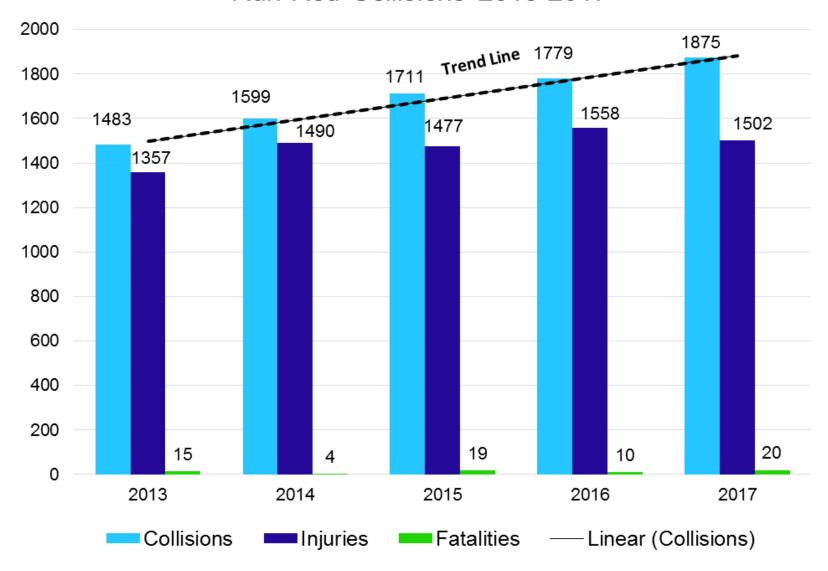
Percent of Fatal Collisions Involving Alcohol 2013-2017



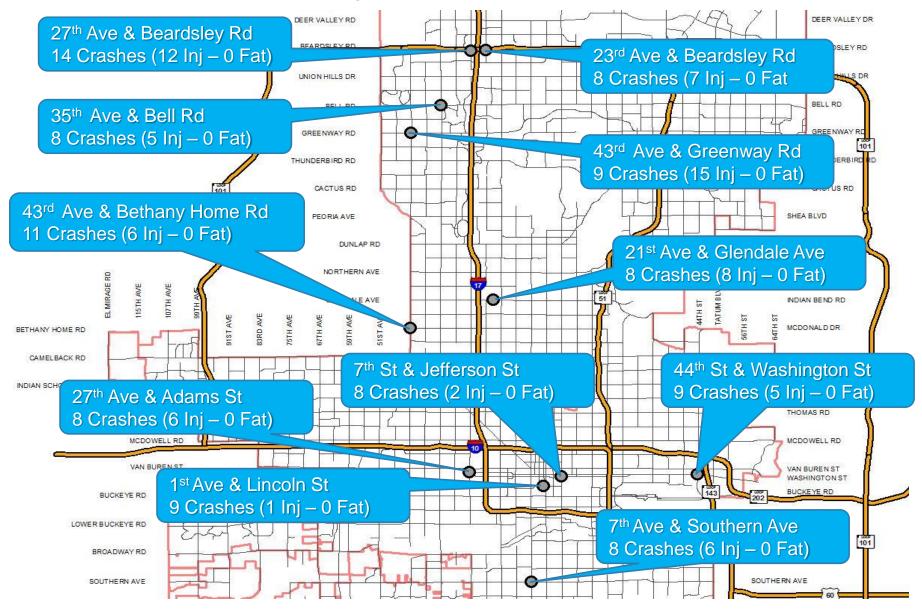
Work Zone Collisions 2013-2017



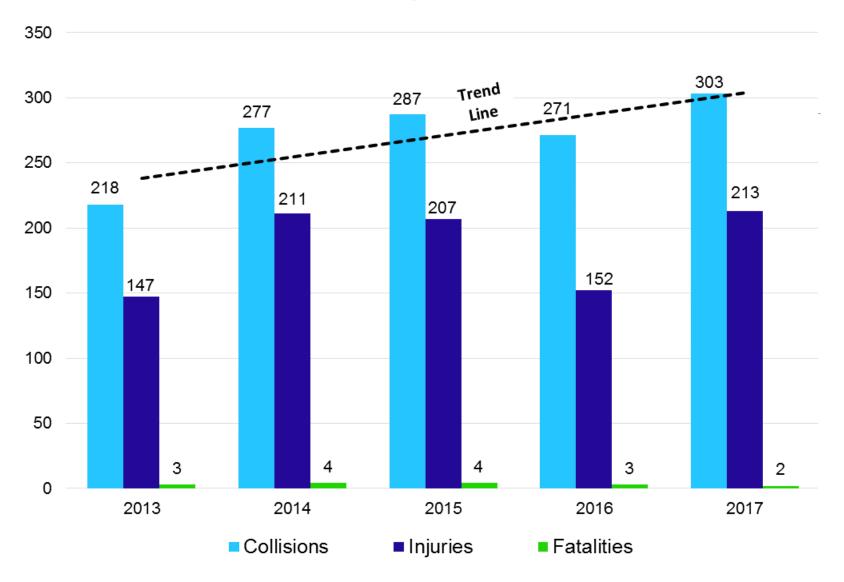
Run-Red Collisions 2013-2017



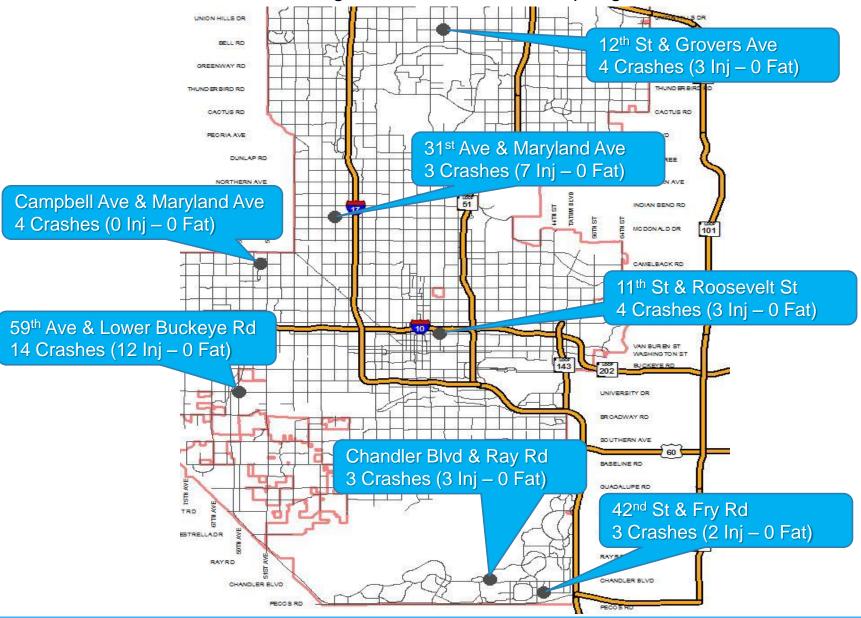
Locations with the Highest Number of Run Red Collisions 2017



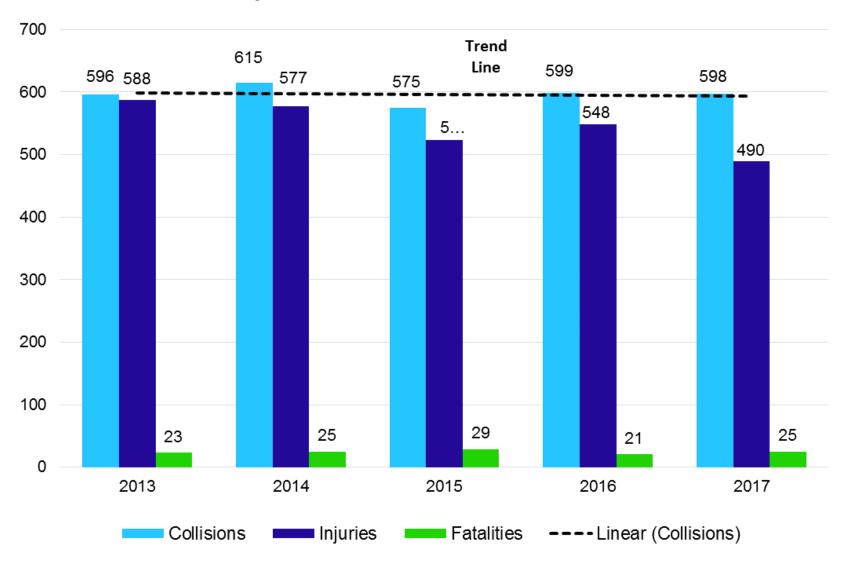
Run STOP Sign Collisions 2013-2017



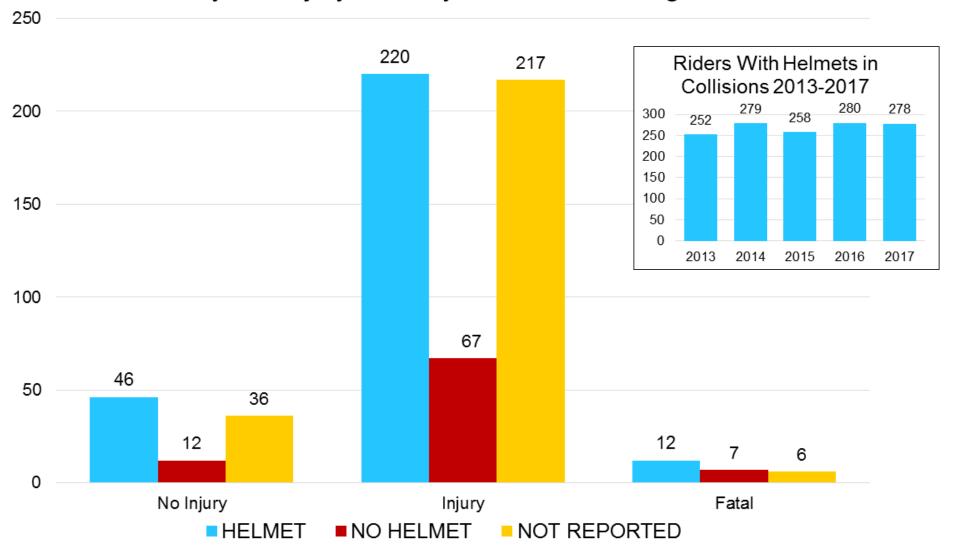
Locations with the Highest Number of Run Stop Sign Collisions 2017



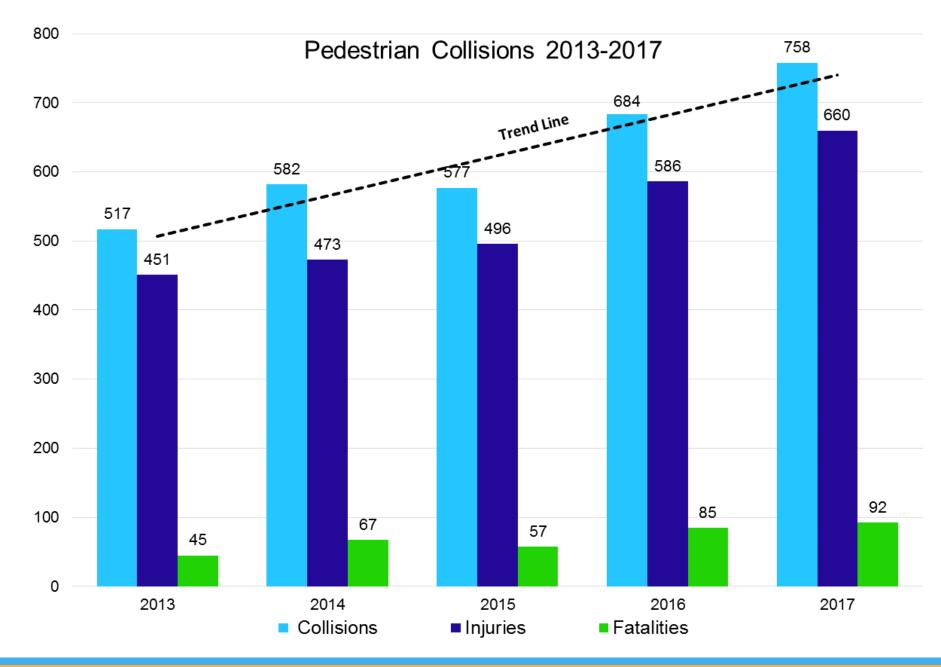
Total Motorcyclist Collisions, Injuries, and Fatalities 2013-2017



Motorcyclist Injury Severity and Helmet Usage 2017



259 motorcyclists were reported without helmet usage



Pedestrian signs replaced and crosswalk restriped at 7th and Turney Avenues intersection.







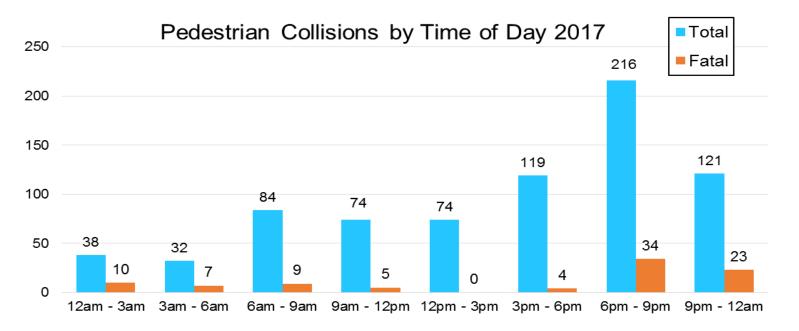
High visibility crosswalks installed along Cambridge Avenue from 16th to 20th Streets per Phoenix Children's Hospital request

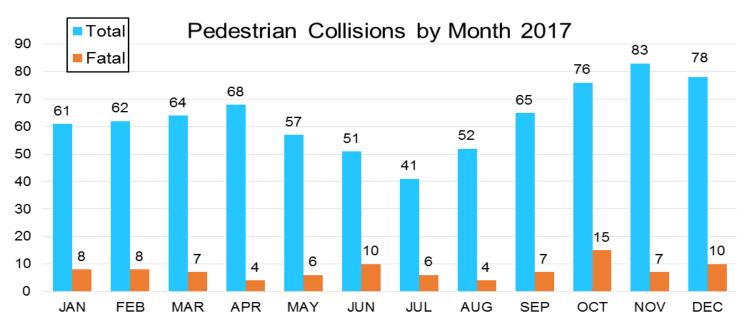


Citywide LED Street Light conversion

Staff began a two year project to convert 90,000 street lights to LED for efficiency and night visibility

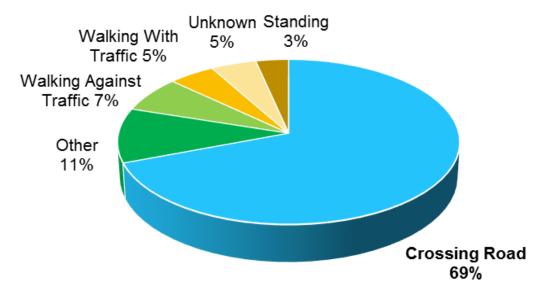




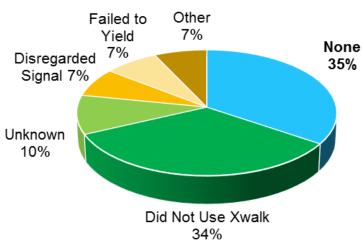


Pedestrian Collisions

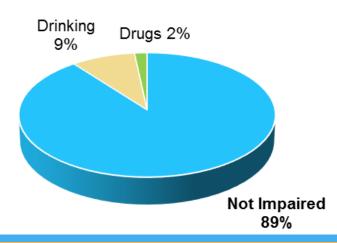
Action of Pedestrian 2017





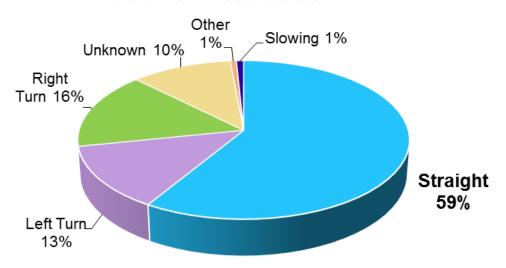


Impairment Condition of Pedestrian 2017



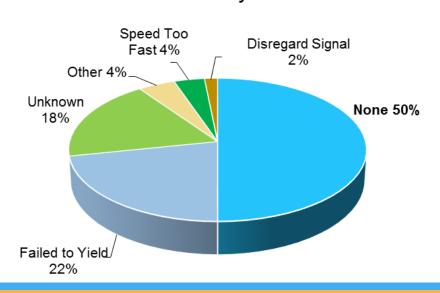
Pedestrian Collisions

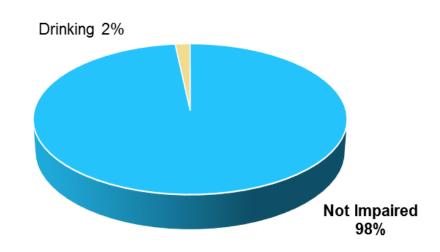
Action of Motorist 2017



Behavior/Violation by Motorist 2017

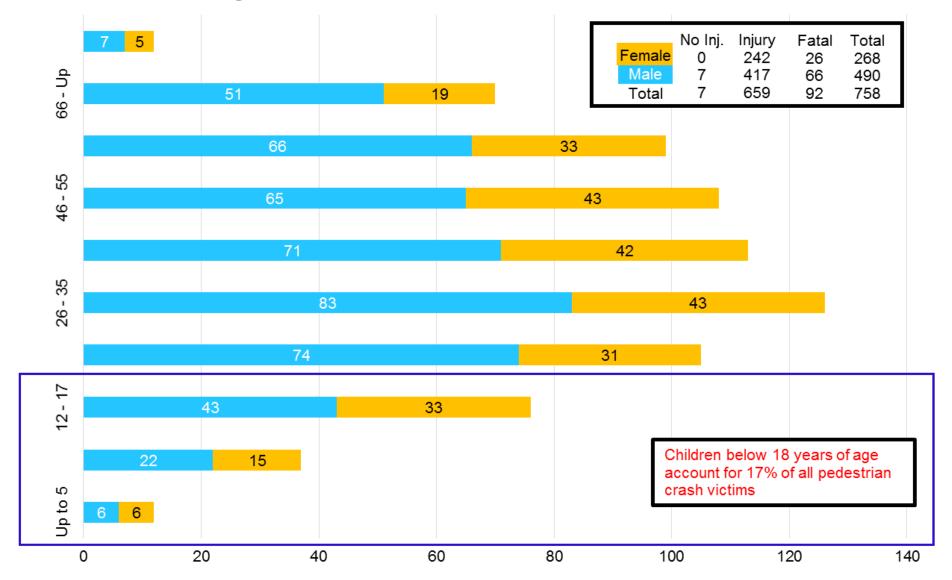
Impairment Condition of Motorist 2017





Pedestrian Collisions

Age and Gender of Pedestrians in Collisions 2017



Traffic Safety education

Staff distributed Traffic Safety education materials at several community events including the Governor's Office of Highway Safety Days at the Arizona State Fair

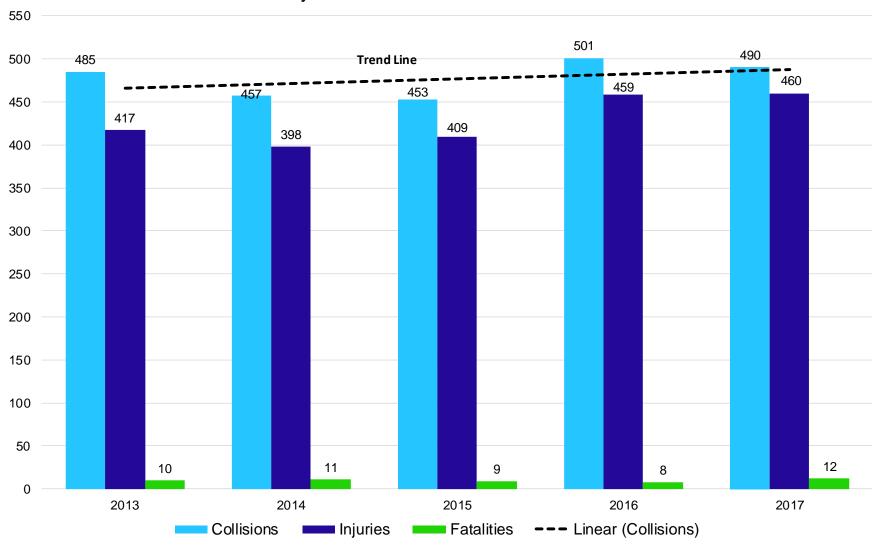




Mercury Mine Community event -School Safety, Police and Fire staff set up and operated a bike rodeo at the Mercury Mine Community event in November 2017



Bicycle Collisions 2013-2017

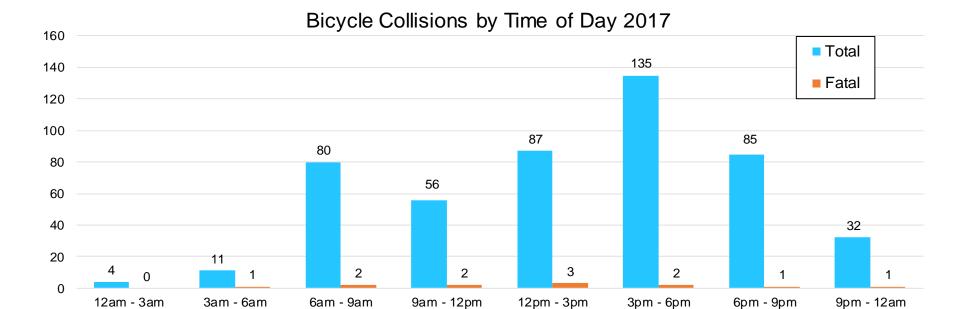


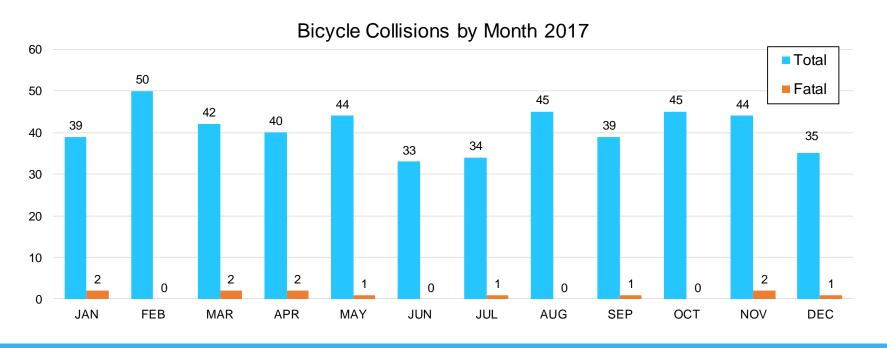
Crews completed a green bike lane demonstration for local TV news





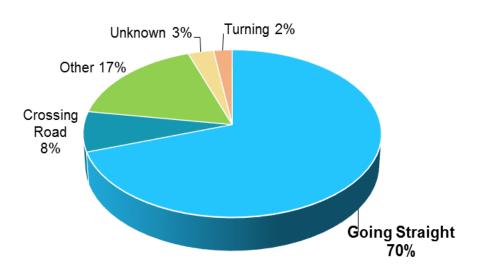
A buffered bike lane was added along 39th Avenue from Pinnacle Peak to Happy Valley Roads



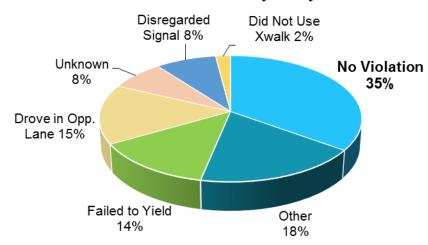


Bicycle Collisions

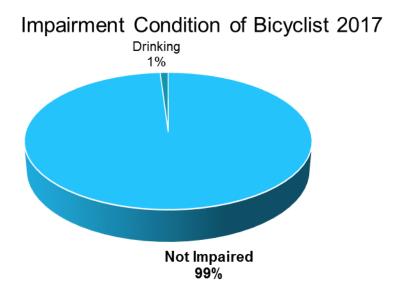
Action of Bicyclist 2017



Behavior/Violation by Bicyclist 2017

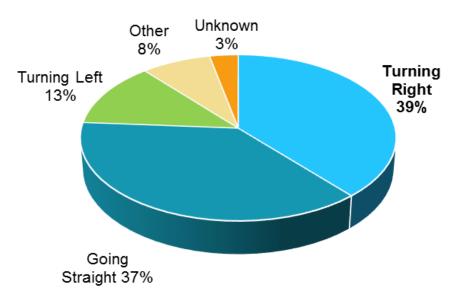


The Other category includes infrequent violations such as speed too fast, and faulty/missing equipment



Bicycle Collisions

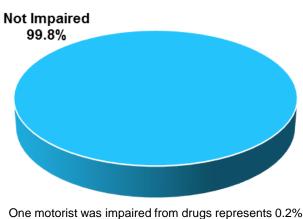
Action of Motorist 2017



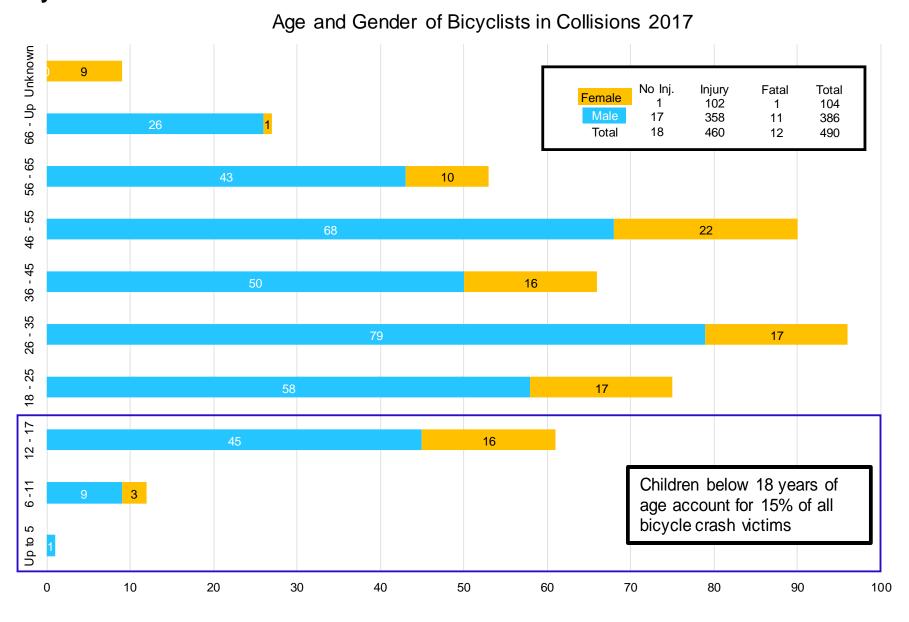
Behavior/Violation by Motorist 2017

Disregard Speed Too Fast Signal 2% 4% Other 6% Unknown 11% No Violation 52% Failed to Yield 25%

Impairment Condition of Motorist 2017



Bicycle Collisions



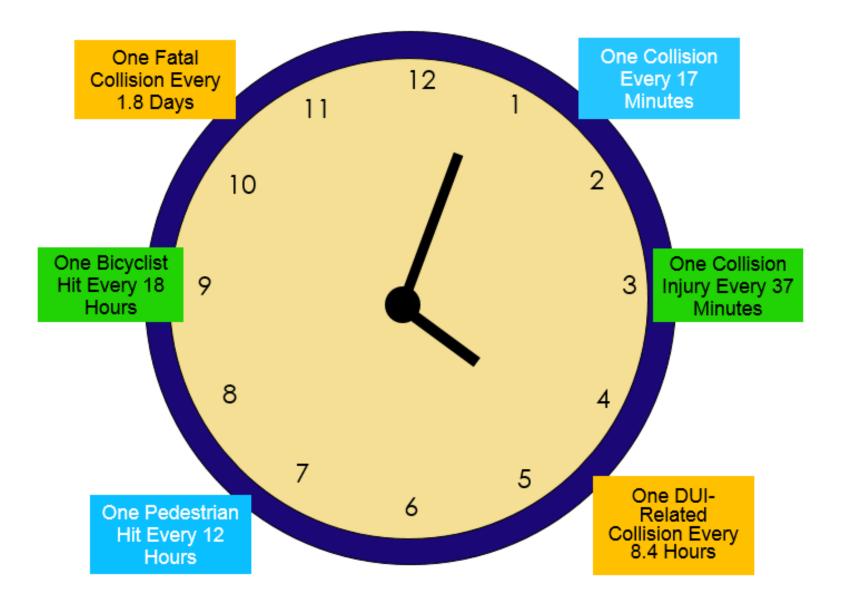
District 8 Community Bike and Safety Events in April 2017. Streets staff worked with Council District 8, Police, Fire, Public Works, NSD and Library staff to provide free bike helmets, operate a bike rodeo and offer free car seat checks.





Mountain Shadows Elementary "Walk to School Day" Event in October 2017. The group at 12th Street / Wahalla Lane. The group started at the greenbelt at 45th Avenue and Julie Drive and walked through the neighborhood until they reached the school.





Summary

- Over two-thirds of all collisions resulted in property damage only.
- Approximately 40 people were injured every day as a result of traffic crashes.
- Thirty-four percent of pedestrian collisions involved the pedestrian not using the crosswalk.
- Bicyclist collisions decreased from 501 in 2016 to 490 in 2017.

Acknowledgements

The 2017 Phoenix Collision Summary documents the collisions in the City of Phoenix throughout the 2017 calendar year. Collision data utilized for this report was acquired through Phoenix Police records and the database maintained by the Arizona Department of Transportation (ADOT) known as Safety Data Mart (SDM). The 2017 Comprehensive Traffic Collision Summary was prepared by Abdulmajeed Alzahrani (ASU Intern) with assistance from Traffic Safety Section staff Richard Russ (Principal Engineering Technician) and Jacob Martinez (Senior Engineering Technician).

The SDM database includes motor vehicle crashes that occurred on public right of way where someone was injured or killed or where property damage exceeded \$1,000.

Cover photograph: The aerial city view cover photograph is courtesy of Ibrahim Alotaibi (ASU Graduate)

This publication can be made available in an alternative format upon request. Contact the Street Transportation Department at 602-262-6284 if you would like any of these services. Our TTY phone number is 711.



Questions?

Please contact Street Transportation Department at 602-262-6284 or TTY 711

