2018 Pedestrian Collision Summary

City of Phoenix
STREET TRANSPORTATION DEPARTMENT

TRAFFIC SERVICES DIVISION

TRAFFIC SAFETY SECTION

OCTOBER 2020

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Introduction

The 2018 Collision Summary provides a brief analysis of pedestrian collision statistics related to demographics, accident types, and locations. The report also includes collision data from 2014 through 2018 to identify and track pedestrian collision trends that have emerged during the past five years. These statistics provide a strong indication of roadway behaviors that negatively impact pedestrians' safety and helps identify which violations should be prioritized for increased education and enforcement.

The 2018 Pedestrian collision summary includes a reported 717 pedestrian-related collisions resulting in 630 pedestrian injuries and 104 pedestrian fatalities. These pedestrian-related collisions accounted for 2.4 percent of all collisions, 5 percent of all injuries, and 48 percent of all fatalities occurring on City Streets. Although the number of collisions did not increase this year, the number of injuries and fatalities remain at a ten year high. Consistent with previous years, male pedestrians were involved in more collisions at a male to female ratio of 1.6:1. Also, the pedestrian age group with the highest number of collisions were males between the ages of 26 and 35. The majority (56 percent) of collisions occurred at uncontrolled locations.

The findings in this report are used to inform and influence the design of new pedestrian facilities, the redesign of existing roadways, the development of education programs and enforcement campaigns for pedestrians and motorists. In an effort to identify locations and collision trends that may require special attention, this report also identifies intersections and roadway locations with the highest annual pedestrian collisions.

NOTE: Some figures in the 2018 Pedestrian Collision Summary differ from 2018 Traffic Collision Summary due to the detailed analysis of crash reports.

# 2018 Phoenix Pedestrian Collision Facts-at-a-Glance

Important Points to Know About the Pedestrian Collision Summary in 2018:

- Pedestrian collisions are on a six year increasing trend.
- Most pedestrian collisions involve risky behaviors by pedestrians.
- More pedestrians are struck at mid-block crossings than other locations.
- More than half of fatal pedestrian collisions occur at night.
- There is a very small chance for a pedestrian to come out of a collision un-injured.
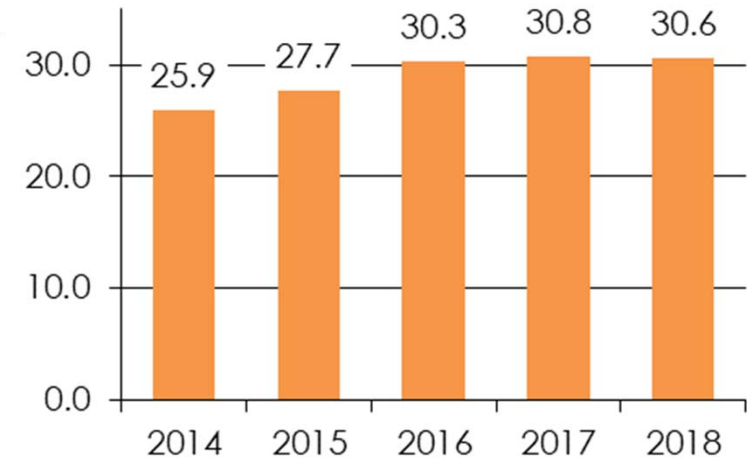
In 2018,

- Pedestrian collisions accounted for 2% of all collisions, but 48% of all pedestrian fatalities on city streets.
- There was a 13% increase in pedestrian fatalities compared to 2017.
- 37 school-age pedestrians (5 to 17 years old) were hit during school hours (Monday – Friday, 7 AM – 4 PM).
- 55% of all pedestrians were struck at night/twilight, but 87% of all pedestrian fatalities occurred at night/twilight.
- Pedestrian collisions occurred most frequently between 5 PM and 8 PM.
- Friday had the highest percentage (17%) of all pedestrian collisions.
- There were 114 pedestrian-related collisions involving alcohol or drugs, a 12% decrease from 2017; of those, 96 involved a pedestrian under the influence, 15 involved a motorist under the influence, and in 3 both pedestrian and motorist were under the influence. (These statistics exclude any hit and run motorists who may also have been under the influence.)
- 35% of all pedestrian collisions occurred at traffic signal-controlled intersections.
- January had the highest number of pedestrian collisions at a total of 86.
- April had the highest number of fatalities at a total of 14.
- 53% of pedestrian related collisions were due to violations by only the pedestrians.
- 23% of pedestrian related collisions involved hit and runs.

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Five-Year Trend of Pedestrian-Involved Collisions, Injuries, and Fatalities
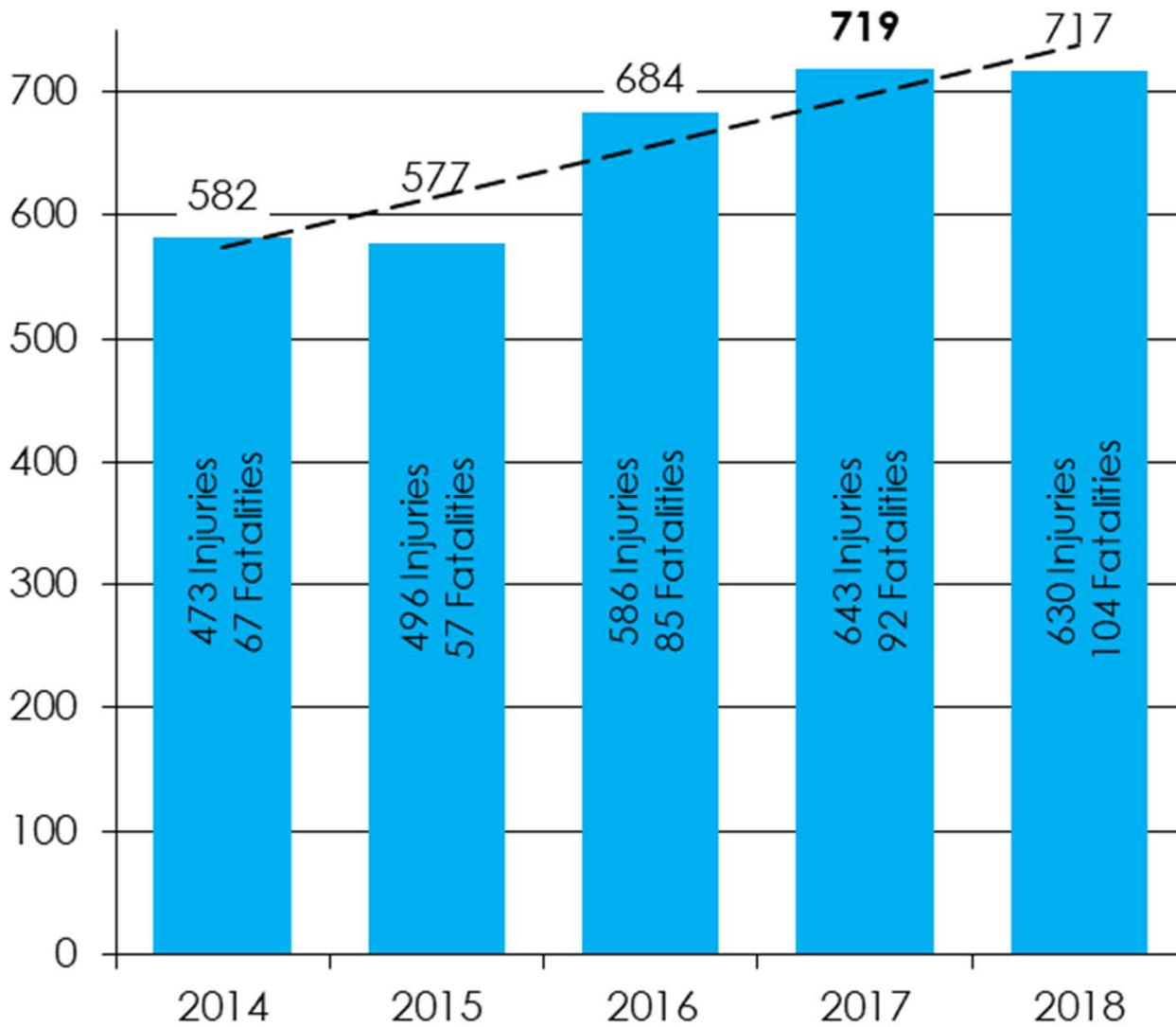
All Crashes Five Year Trend (in thousands)

Key Note:
The 10 year average is 578 collisions.

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Age and Gender of Pedestrians in Collisions

	Under 18	18 and Older	Unknown	Total
Male	70	380	8	458
Female	54	227	4	285
Total	124	607	12	743

Pedestrian
Male : Female
1.6 : 1

Key Note:
Children (below 18 years of age) account for **17%** of all pedestrian collision victims

Note: There was one pedestrian with unknown age and gender

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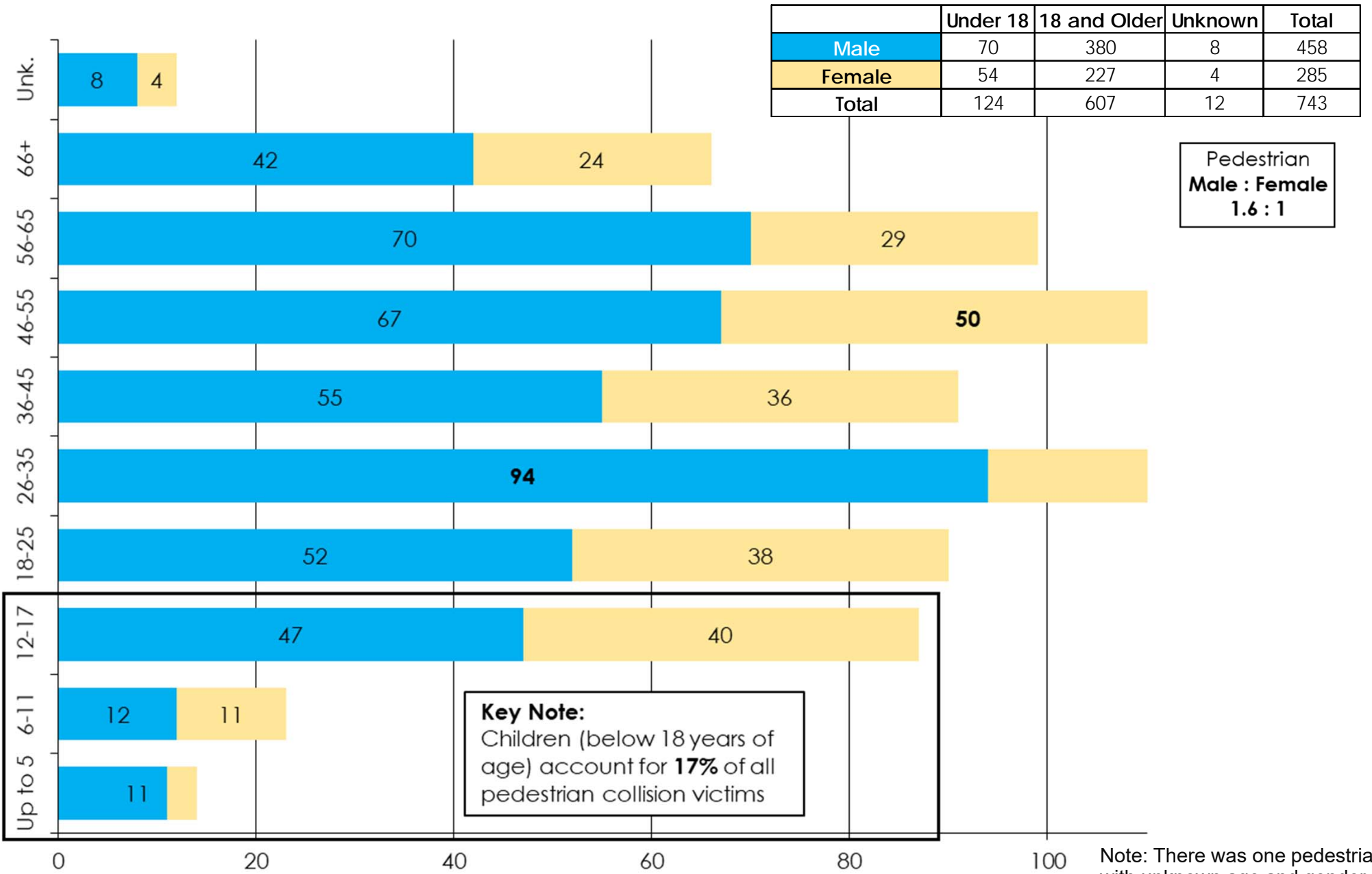
Age and Gender of Drivers in Pedestrian Collisions

Legend: Male | Female | Unknown
Note: There were 165 hit and run collisions

Driver
Male : Female
1.6 : 1

Chart data by age group (Male, Female, Unknown):
- Unk.: 22, 5, 128
- 66+: 36, 22
- 56-65: 55, 34
- 46-55: 54, 32
- 36-45: 47, 36
- 26-35: 67, 50
- 18-25: 72, 48
- 12-17: 7, 2

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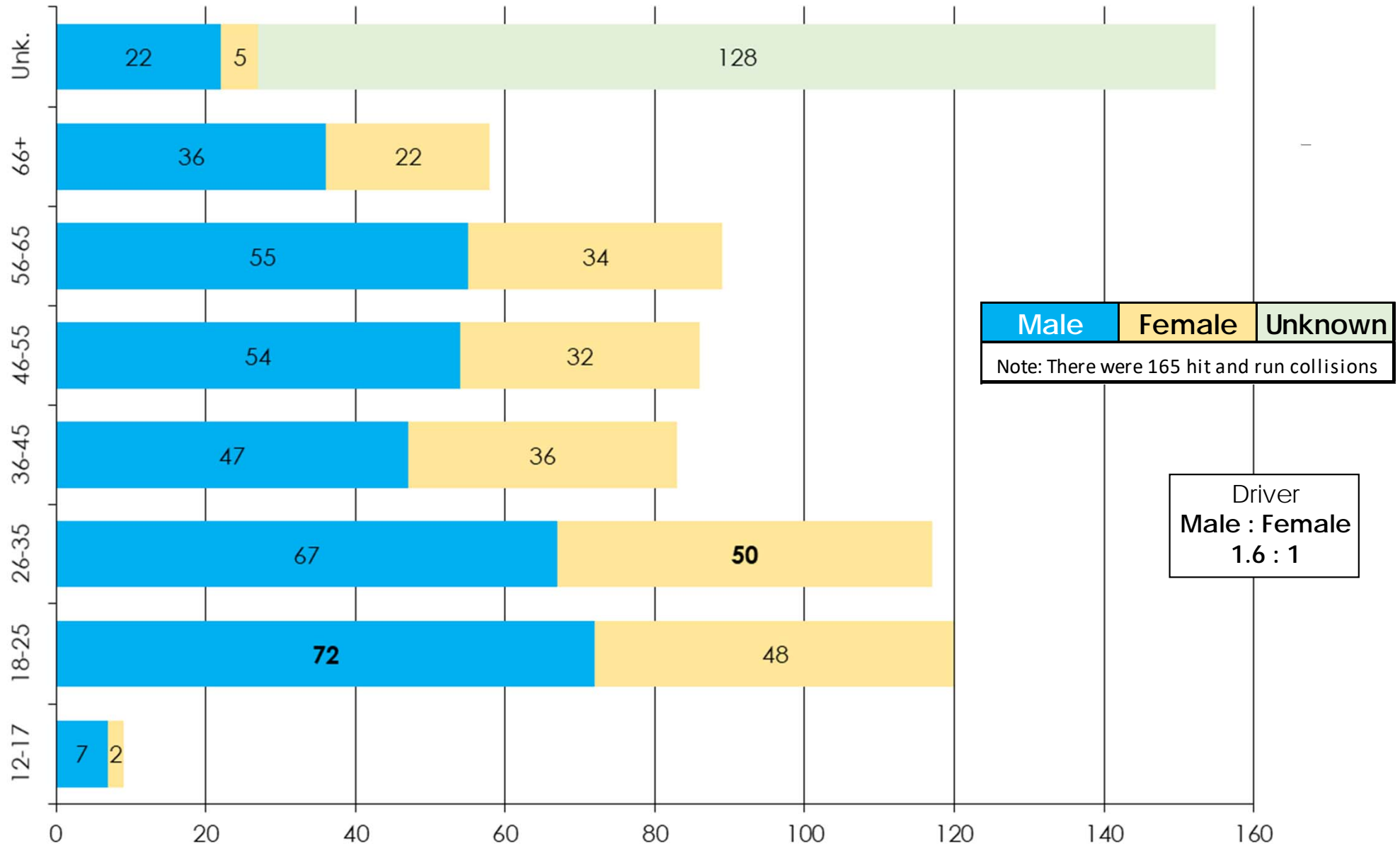
Traffic Signal at North 1st and East Taylor Streets features a "pedestrian scramble" allowing all pedestrian movements to proceed simultaneously.

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Pedestrian-Involved Collisions by Light Conditions

Citywide All Collisions

Night / Day

72% — 150 Fatal Collisions — 57 Injury Collisions — 28%

28% — 2,369 Injury Collisions — 6,044 Injury Collisions — 72%

30% — 398 Total Collisions — 319 Total Collisions — 70%

60% 40% 20% 0% 20% 40% 60%

Night / **Day**

87% — 90 Fatal Collisions — 13 Fatal Collisions — 13%

50% — 306 Injury Collisions — 300 Injury Collisions — 50%

55% — 398 Total Collisions — 319 Total Collisions — 45%

80% 60% 40% 20% 0% 20% 40%

Keynote:
Pedestrians are the highest percentages for night collisions

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Pedestrian-Involved Collisions by Injury Severity

1-None, 1%

5-Fatal, 14%

2-Possible, 22%

4-Serious, 22%

3-Minor, 41%
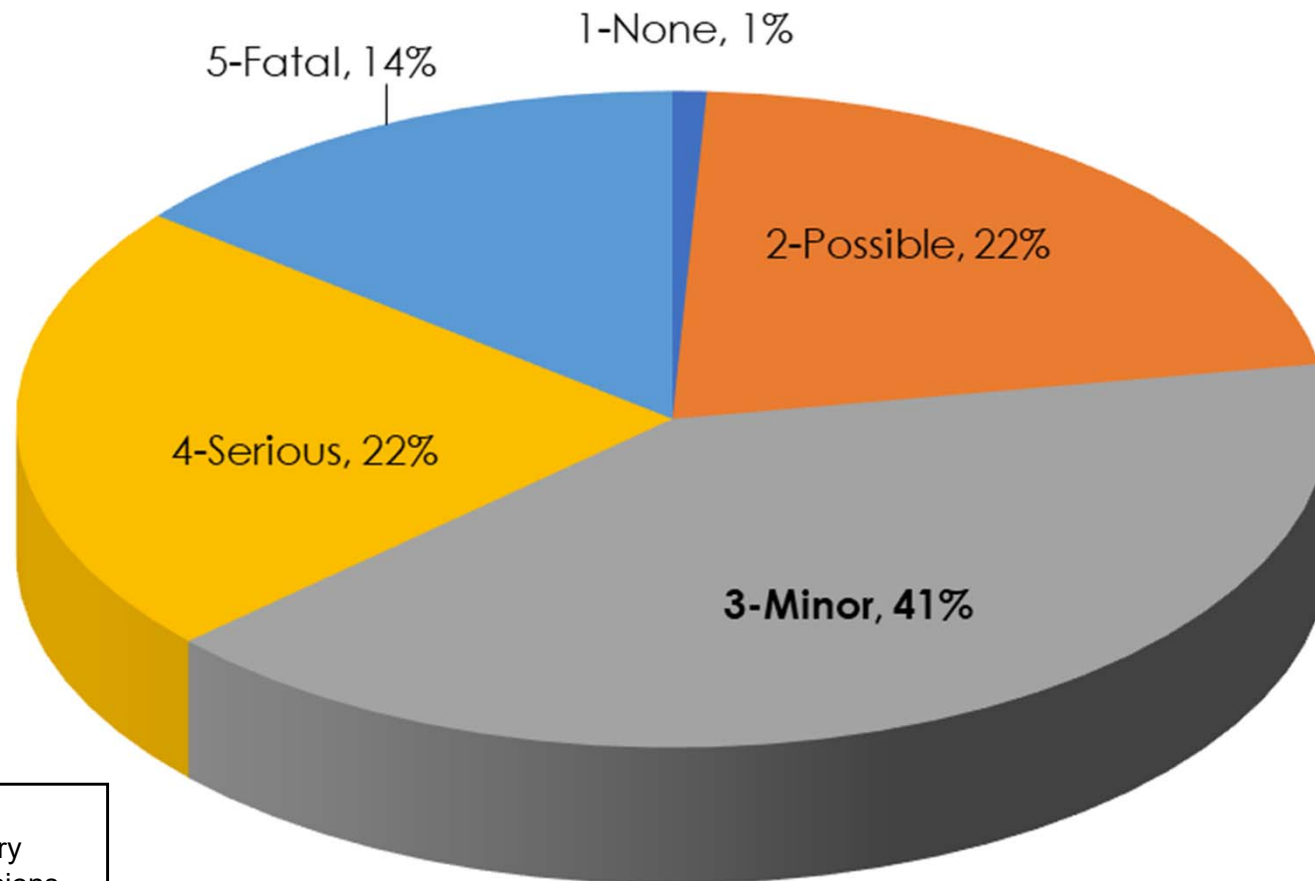
Keynote:
There were 161 serious injury collisions and 103 fatal collisions, accounting for 36% of all Pedestrian collisions.

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Pedestrian signal (HAWK) at the Whittier Elementary School
(16th Street and Palm Lane)

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Pedestrians in Collisions by Time of Day and Age Group

Keynote: Between 6 PM and 9 PM there were a total of 41 pedestrian fatalities, or 39% of all pedestrian fatalities
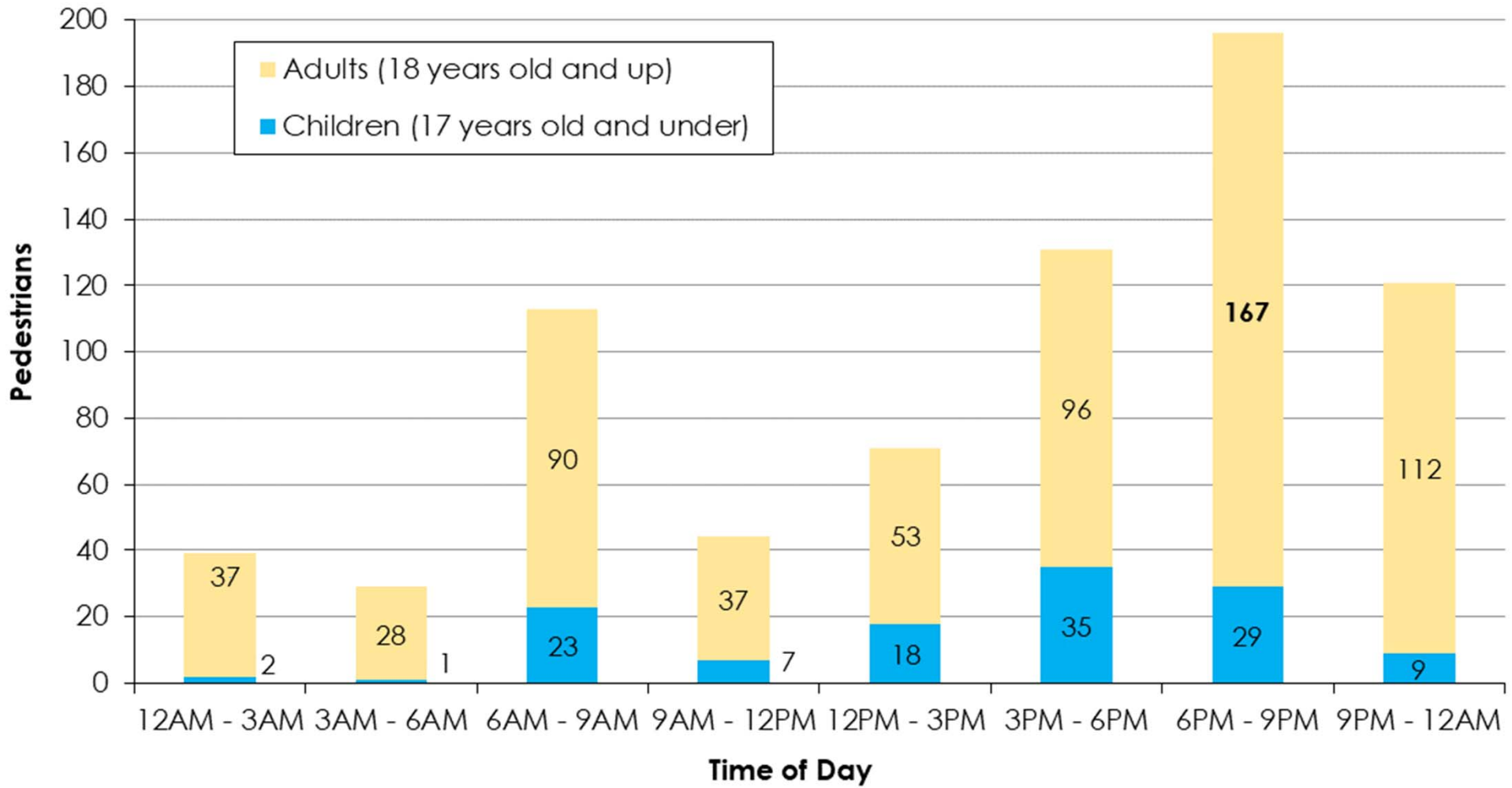
Pedestrian-Involved Collisions by Day of Week

Pedestrian-Involved Collisions by Month
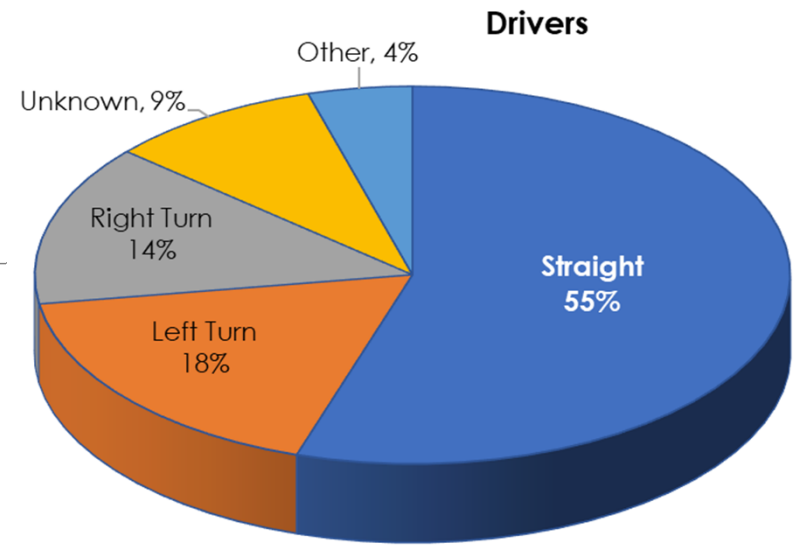
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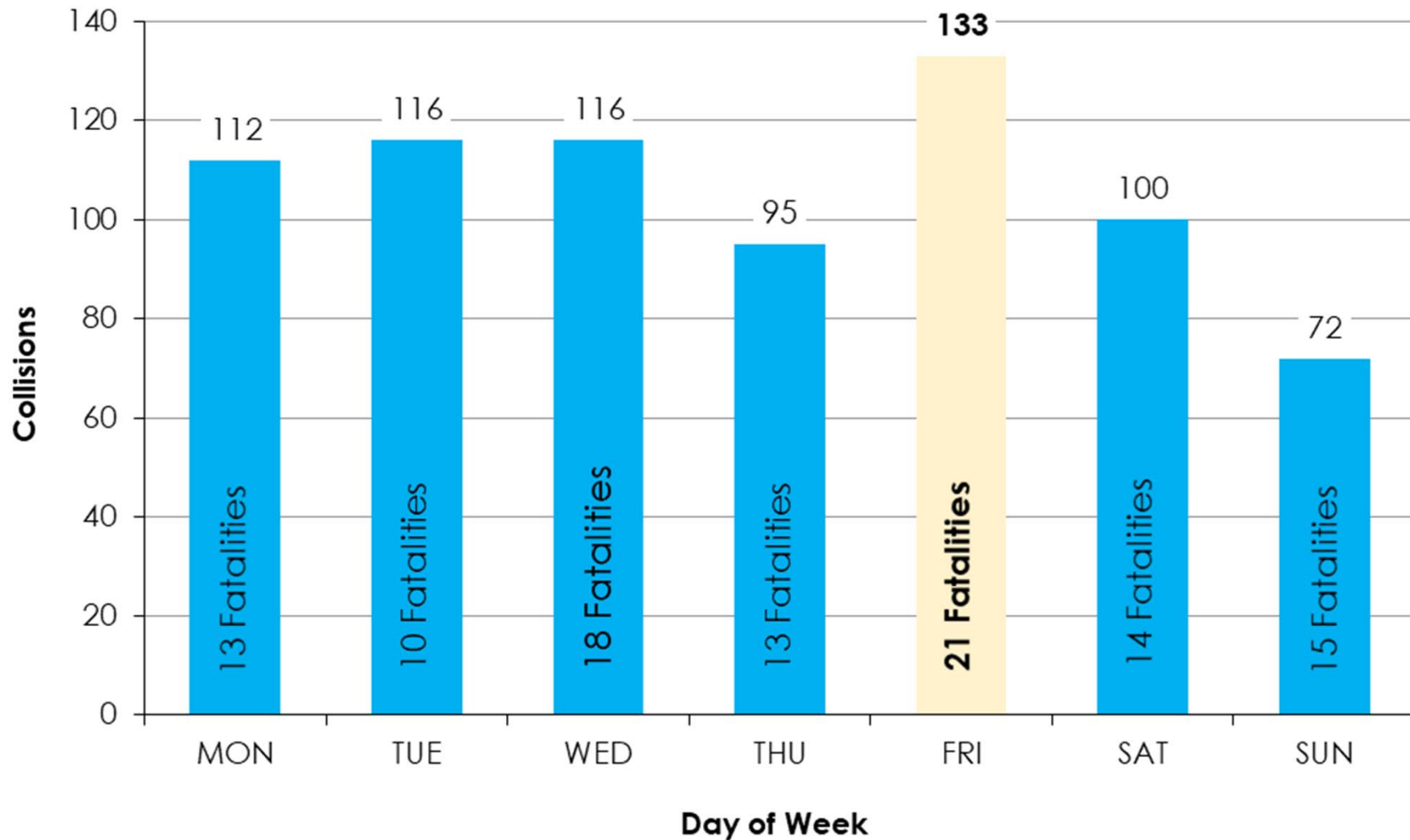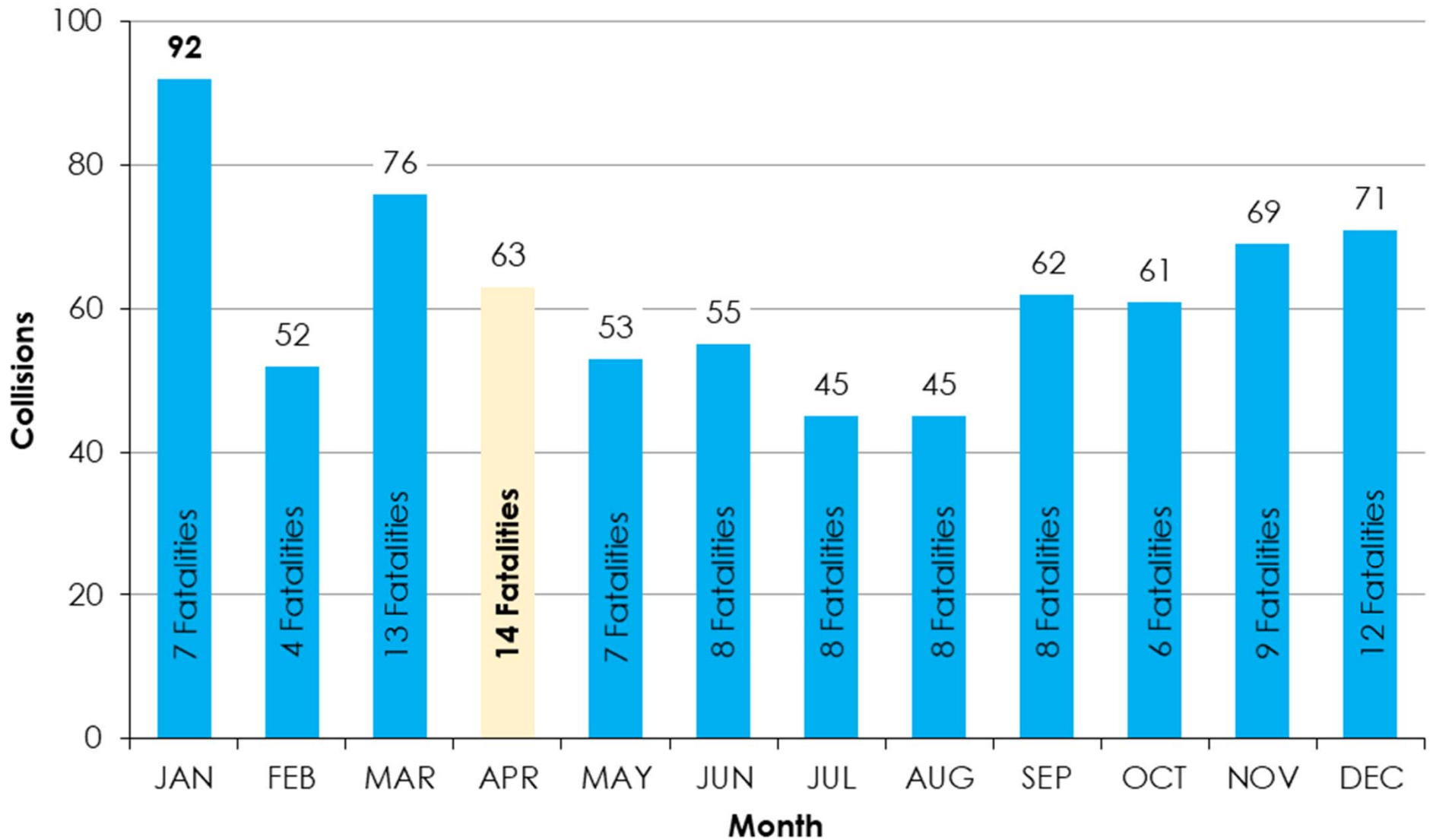
Pedestrian Flashing Beacon (PFB) installation and testing for St. Joseph's hospital crossing on North 3rd Avenue at West Merrill Street

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Actions of Pedestrians and Drivers

Pedestrians

Walking Against Traffic, 4%
Unknown, 6%
Walking With Traffic, 6%
Other, 11%
Crossing Road 73%

Drivers

Other, 4%
Unknown, 9%
Right Turn 14%
Left Turn 18%
Straight 55%
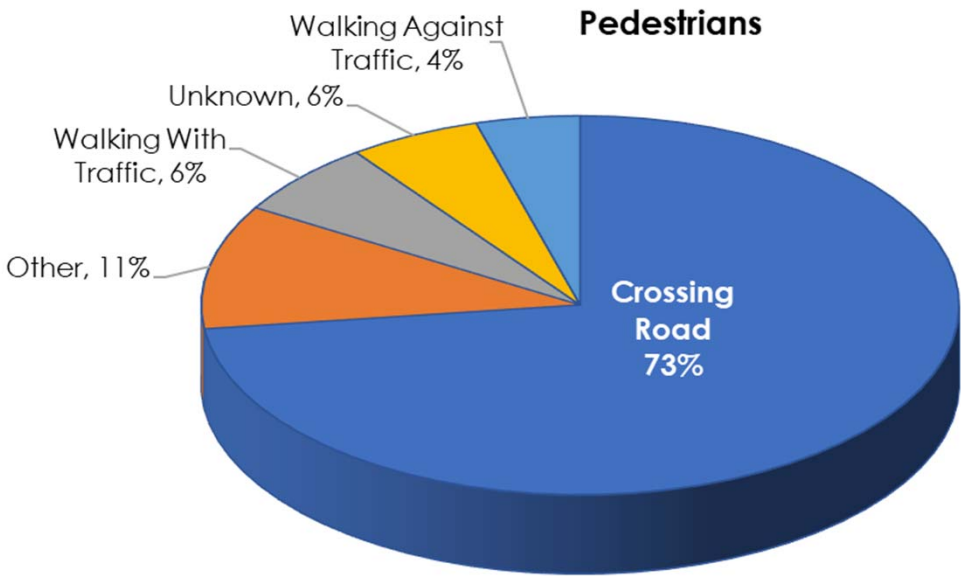
Behavior/Violations of Pedestrians and Drivers

Pedestrians

Failed to Yield, 6%
Disregarded Signal, 6%
Other 6%
Unknown 11%
None 37%
Did Not Use Xwalk, 34%

Drivers

Disregarded Signal, 2%
Other, 4%
Speed Too Fast, 6%
Unknown 19%
None 47%
Failed to Yield, 22%
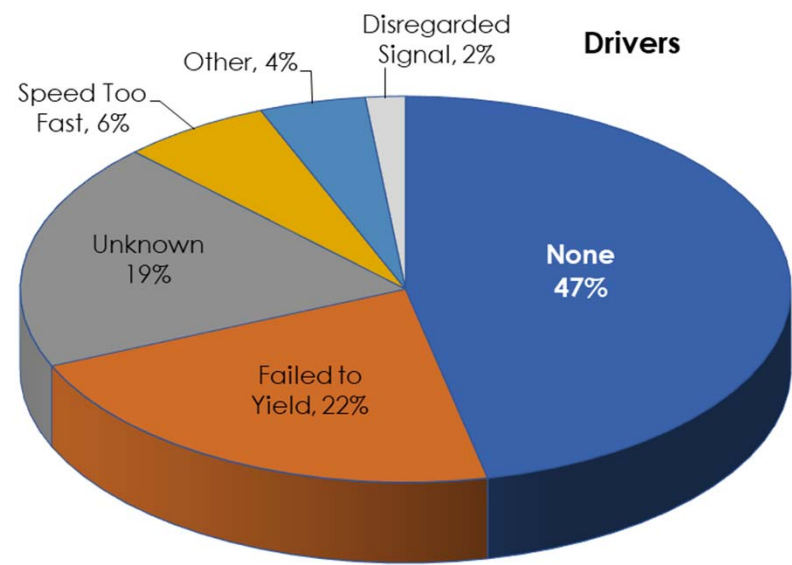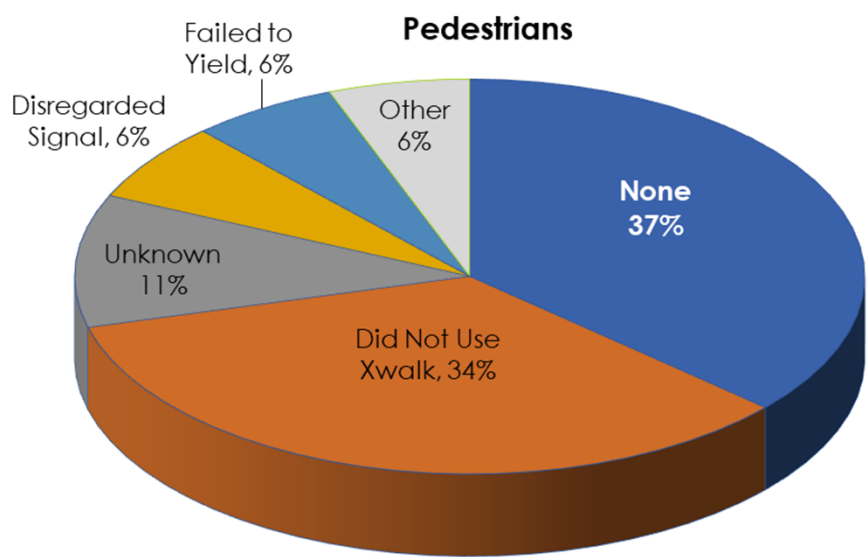
Impairment of Pedestrians and Drivers

No Influence
87%

Under Influence
13%

Pedestrians

No Influence
97%

Under Influence
3%

Drivers

99
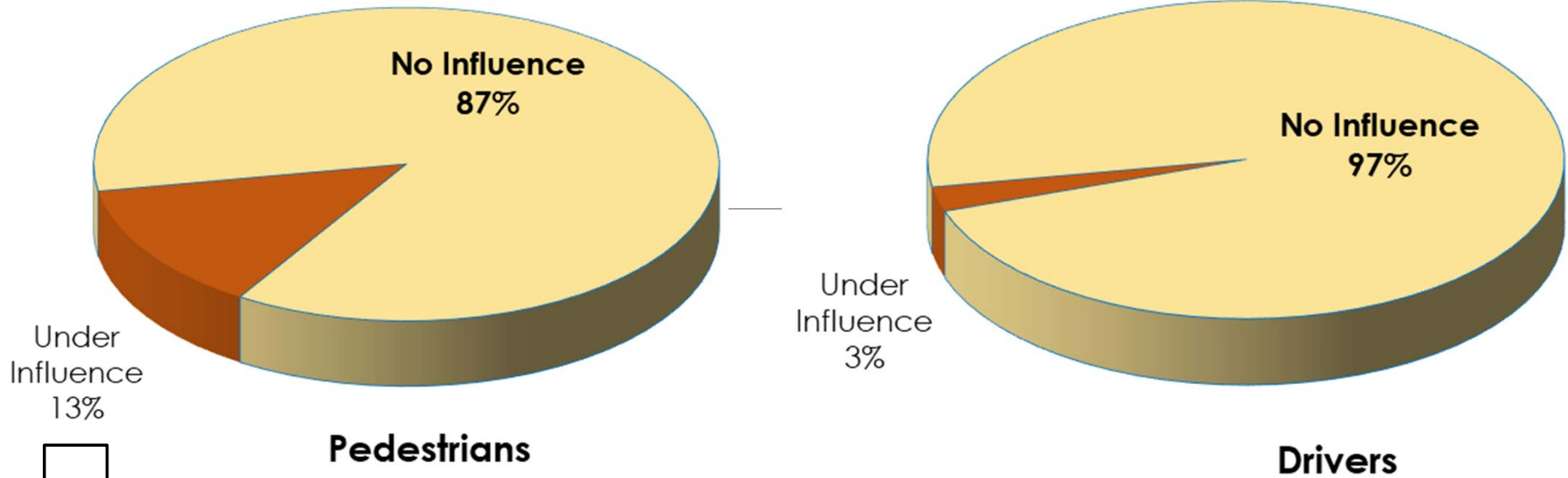
Injury Severity of Pedestrians under the Influence

Minor, 21%

Serious, 12%

Possible, 8%
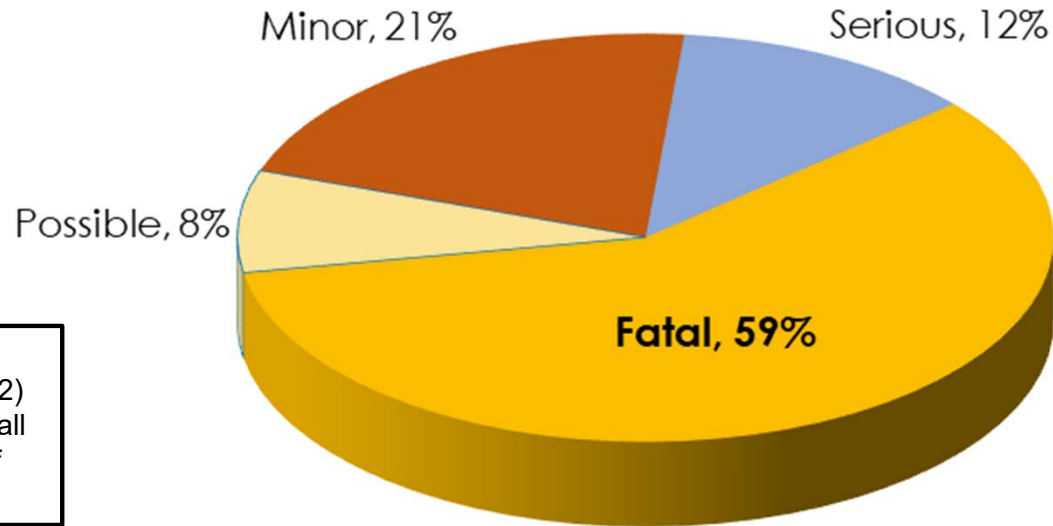
Fatal, 59%

Under the Influence
Male:Female
4.8:1

Keynote:
Fatal (58) and seriously injured (12) pedestrians combined for 71% of all pedestrians under the influence of drugs or alcohol.

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Five Year Trend of Drugs or Alcohol Use In Pedestrian-Involved Collisions

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Pedestrian-Involved Collisions by Street Classification

At or Near Intersection (Within 150 feet)

Interchange/Frontage, 3%
Collector-Local, 4%
Collector-Collector, 2%
Local - Local 4%
Arterial - Collector 23%
Arterial - Local 35%
Arterial - Arterial 29%

Intersection Related
75%
of all pedestrian collisions

Collector 4%
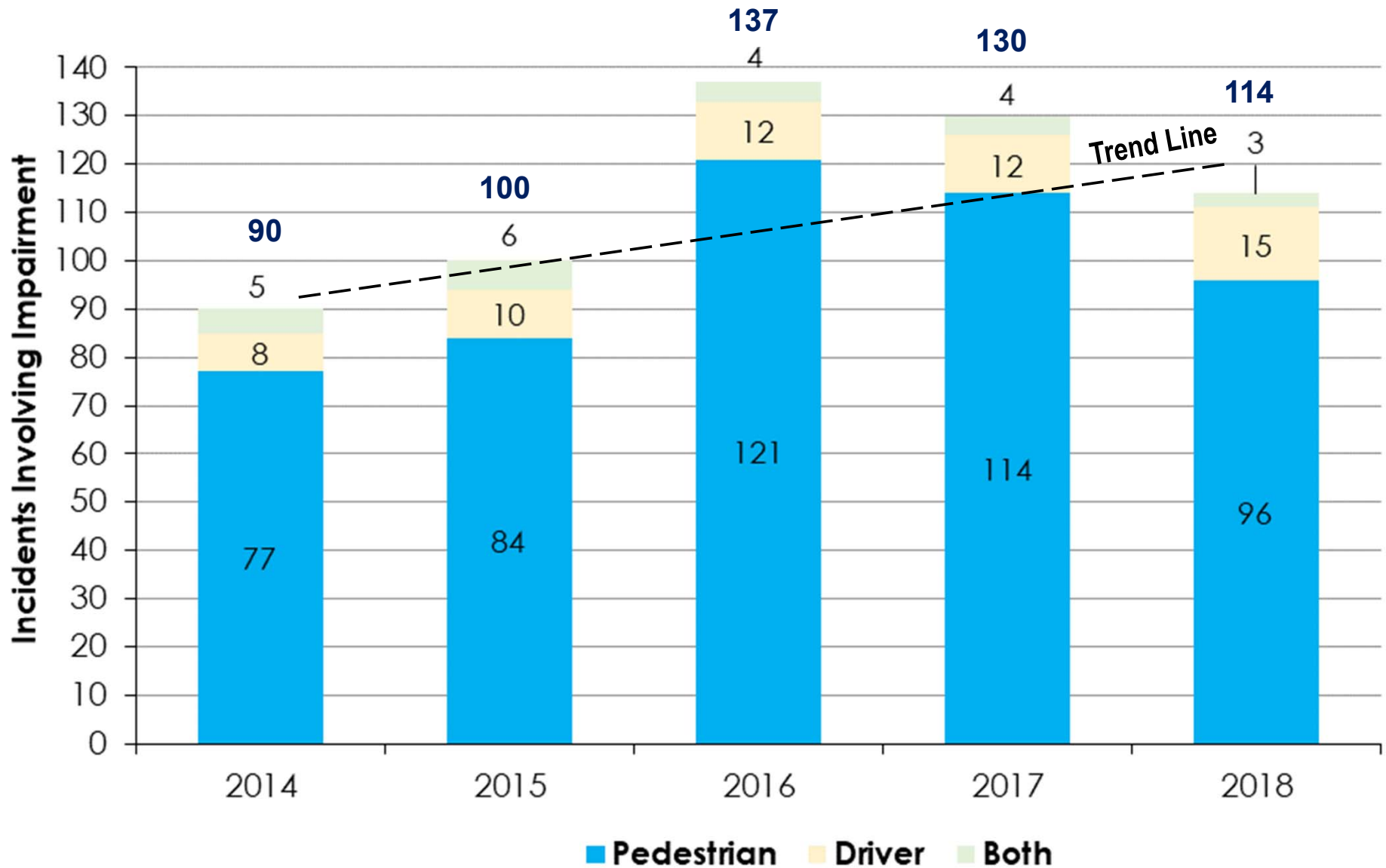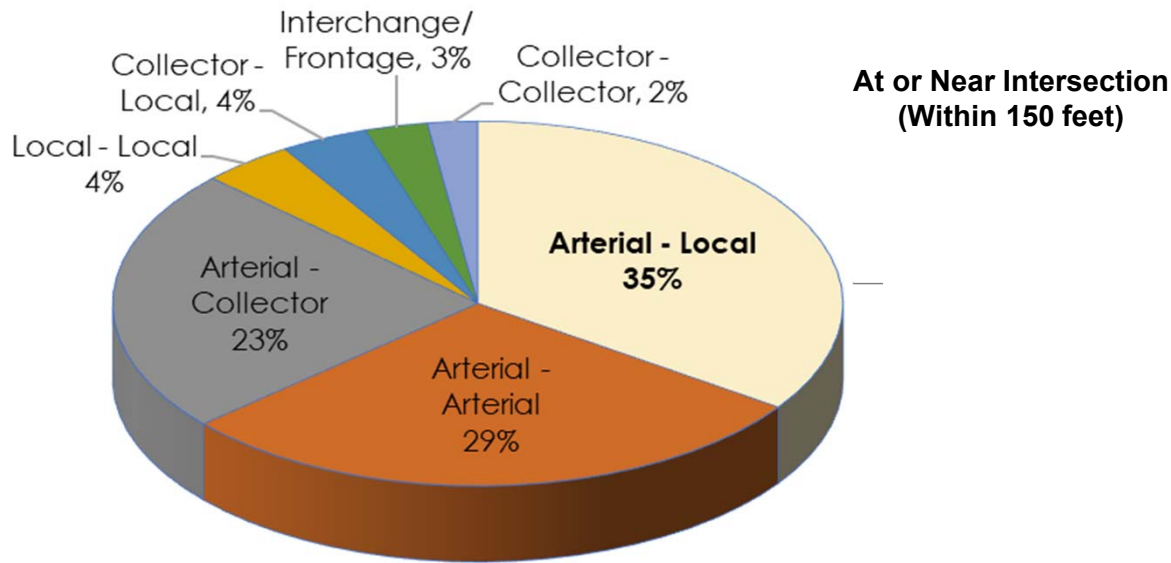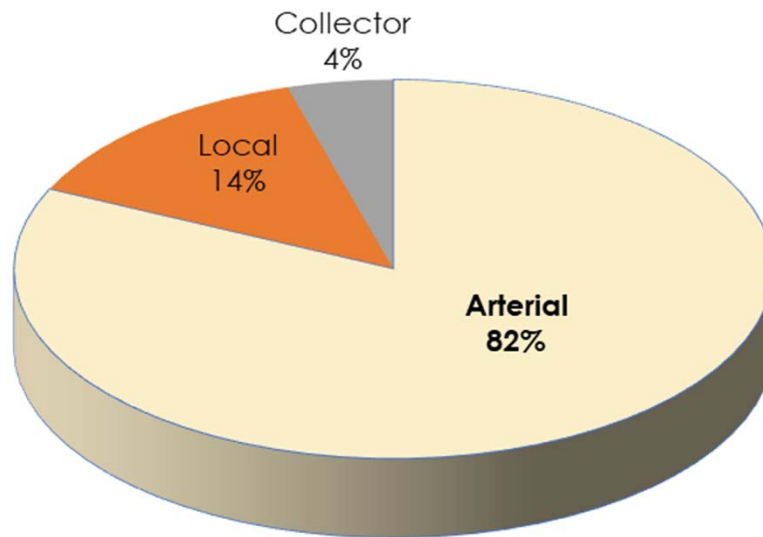Local 14%
Arterial 82%

Away From Intersection (More than 150 feet from intersection)

Non-Intersection Related
25%
of all pedestrian collisions

Street Classification Examples

- Freeways are I-17 (Black Canyon Freeway), I-10, Loop 202, on-ramps, access roads, etc.
- Arterial streets are typically the mile-line streets such as 7th Ave, 16th St, Camelback Rd, and Union Hills Dr as defined on the Phoenix Street Classification Map.
- Collector streets are typically the half-mile-line streets such as 39th Ave, 28th St, Roeser Rd, and Maryland Ave as defined on the Phoenix Street Classification Map. Local streets are typically the neighborhood streets such as 88th Ln, Dromedary Rd, Holly St, 21St St, and Glenn Dr and are not defined as arterial or collector streets.

Pedestrian signal (HAWK) at Raul H. Castro Middle school on North 79th and West Cartwright Avenues

Pedestrian Flashing Beacon (PFB) crosswalk at North 6th and East Fillmore Streets

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Pedestrian-Involved Roadway Collisions

Driveways
Collisions 26
Injury 23
Fatal 2
Percent of Total 4%

Unmarked Crosswalks
38 Collisions
34 Injury
4 Fatal
5% Percent of Total

Mid-Block (7 in Xwalk)
306 Collisions
237 Injury
65 Fatal
43% Percent of Total

Travel Lanes
Collisions 38
Injury 35
Fatal 3
Percent of Total 5%

Within Intersection
23 Collisions
19 Injury
4 Fatal
3% Percent of Total

Intersection Crosswalks
Collisions **249**
Injury **235**
Fatal 13
Percent of Total **35%**

NOTE: There were 37 collisions that occured in other/unknown locations
25 Injury - 12 Fatal

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Pedestrian-Involved Collisions and Traffic Control

Stop Sign Controlled
- 27 Collisions
- 26 Injuries
- 1 Fatalities
- 4% Percent of Total

Hawk/RRFB
- Collisions 5
- Injury 4
- Fatal 1
- Percent of Total 1%

Uncontrolled Locations
- 404 Collisions
- 324 Injuries
- 75 Fatalities
- 56% Percent of Total
- 73% Percent of Total Fatalities

Signalized Intersection
- Collisions 252
- Injury 234
- Fatalities 16
- Percent of Total 35%

NOTE: There were 29 collisions that occured at locations with unknown control.
19 Injury - 10 Fatal

Direction of the Vehicle Impact with Pedestrian

Keynote:
Turning Movements totaled 159 collisions

7

77

13

3

1

241
77 Intersections
16 Unmarked Crosswalks
131 Mid-Block
15 Driveways
2 Travel Lanes

224
Intersections 60
Unmarked Crosswalks 7
Mid-Block 146
Driveways 6
Travel Lanes 5

7

1

29

15

40
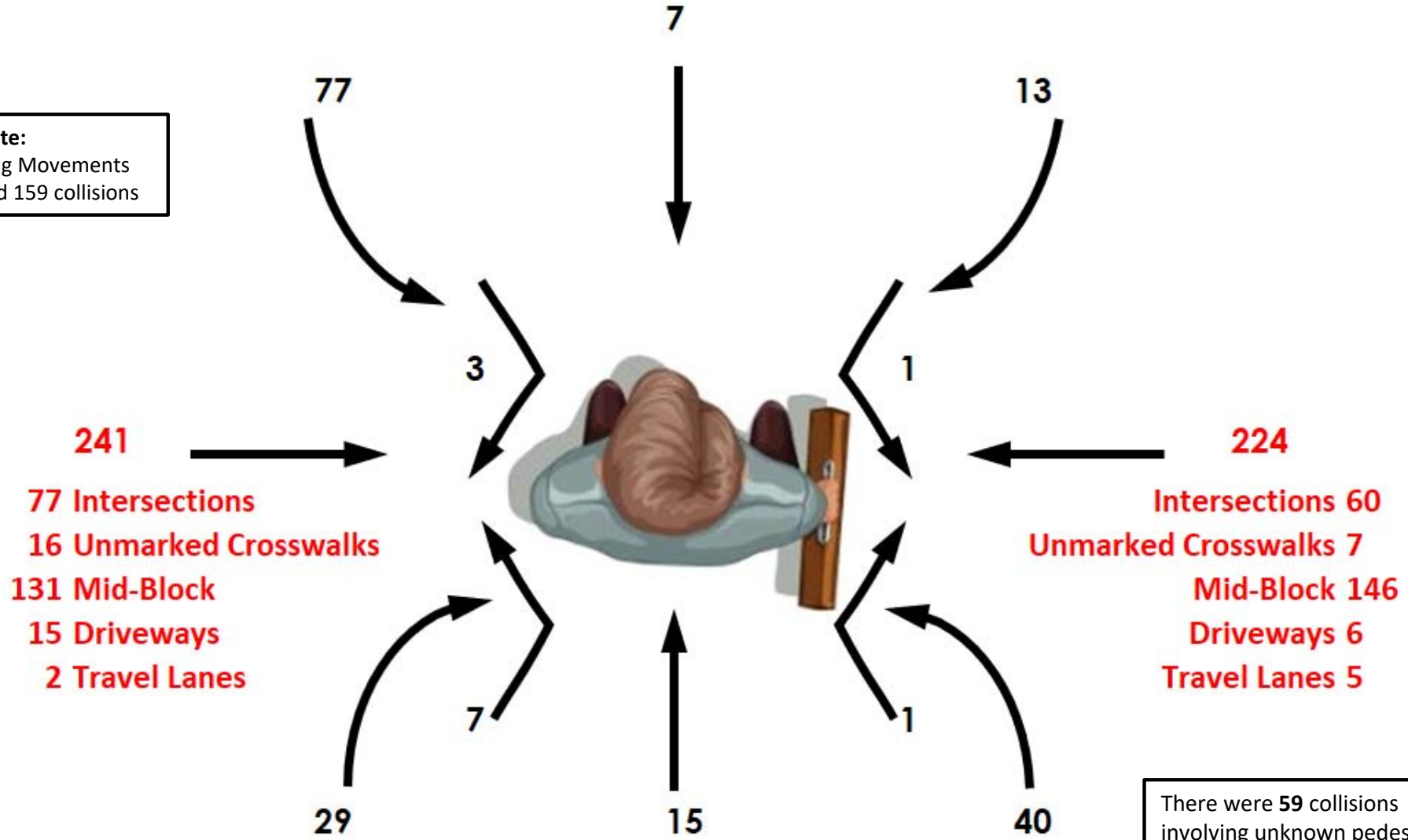
There were **59** collisions involving unknown pedestrian or vehicle directions

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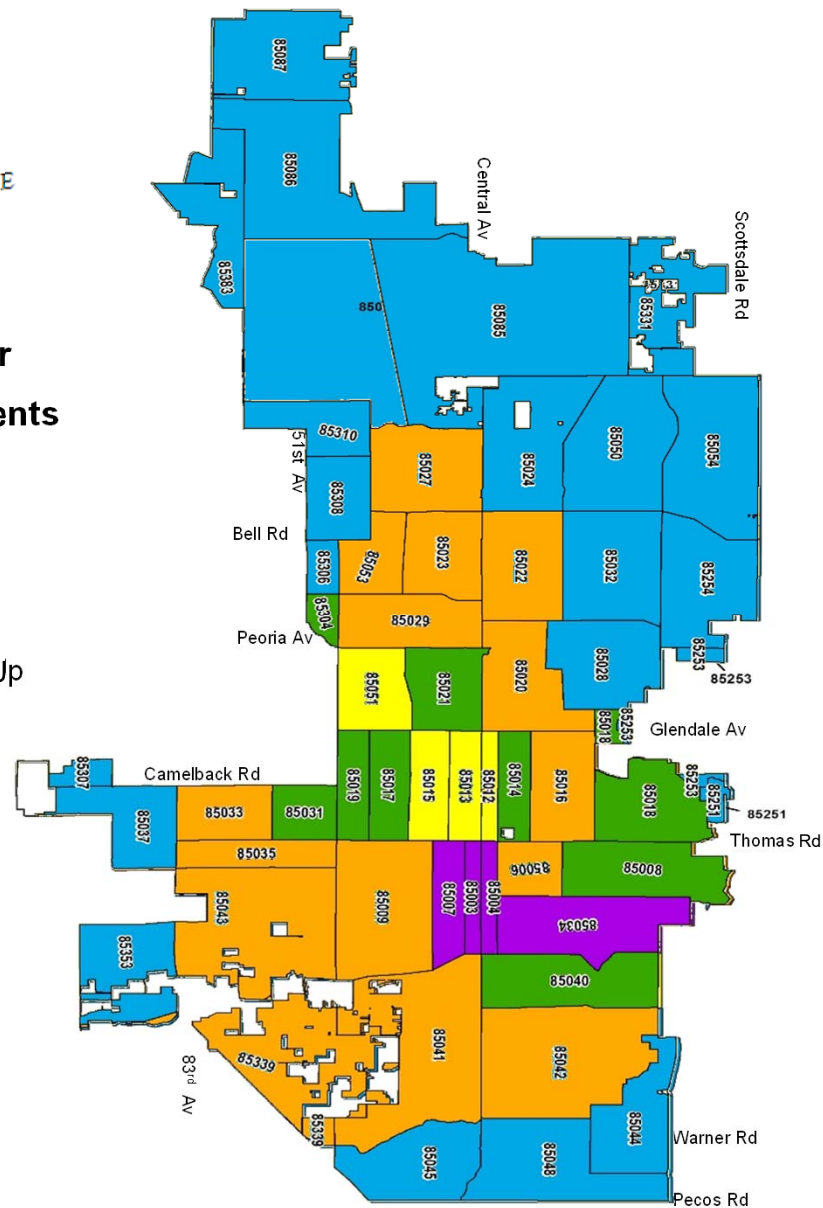
2018 Walk to School Days

Pedestrian-Involved Collisions by Zip Code of Collisions Location and High Pedestrian-Involved Collision Intersections

Intersection	Count
19th Av & Dunlap Av	5
16th St & Thomas Rd	4
43rd Av & Bethany Home Rd	4
36th St & Thomas Rd	3
33rd Av & Northern Av	3
3rd Av & Indian School Rd	3
43rd Av & Clarendon Av	3
23rd Av & Bethany Home Rd	3
32nd St & Oak St	3
35th Av & Van Buren St	3
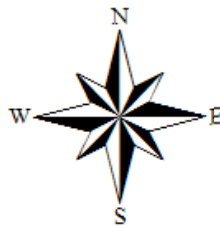
Collisions Per 10,000 Residents

- 0 to 3
- 4 to 6
- 7 to 9
- 10 to 12
- 13 and Up

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Acknowledgements

The 2018 Phoenix Pedestrian Collision Summary documents the collisions involving pedestrians in the City of Phoenix throughout the 2018 calendar year. Collision data utilized for this report were acquired through Phoenix Police records and the database maintained by the Arizona Department of Transportation (ADOT) known as Safety Data Mart (SDM). The 2018 Phoenix Pedestrian Collision Summary was prepared by Subhankar Dey (ASU Intern) with assistance from Traffic Safety Section staff Jacob Martinez (Senior Engineering Technician).

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

Cover photograph: The cover photograph is the community turn-on event for a High-Intensity Activated crossWalK beacon (HAWK) at North 16th Street and East Palm Lane.

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

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