



2017

# Annual Crash Report



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City of Mesa

12/10/2018

# **SECTION 1:**

# **FATALITIES**

In 2017, the City of Mesa had 29 fatal crashes with a total of 30 fatalities. The following collection of charts and tables documents fatal crashes of 2017. Descriptions of these tables and charts will be found underneath their respective tables and charts.

For the purposes of this document, “Vehicle 1” is defined as the motorist (or non-motorist) deemed at fault by Mesa Police Department. “Vehicle 2” is defined as the involved motorist (or non-motorist) that was deemed the victim by Mesa Police Department.

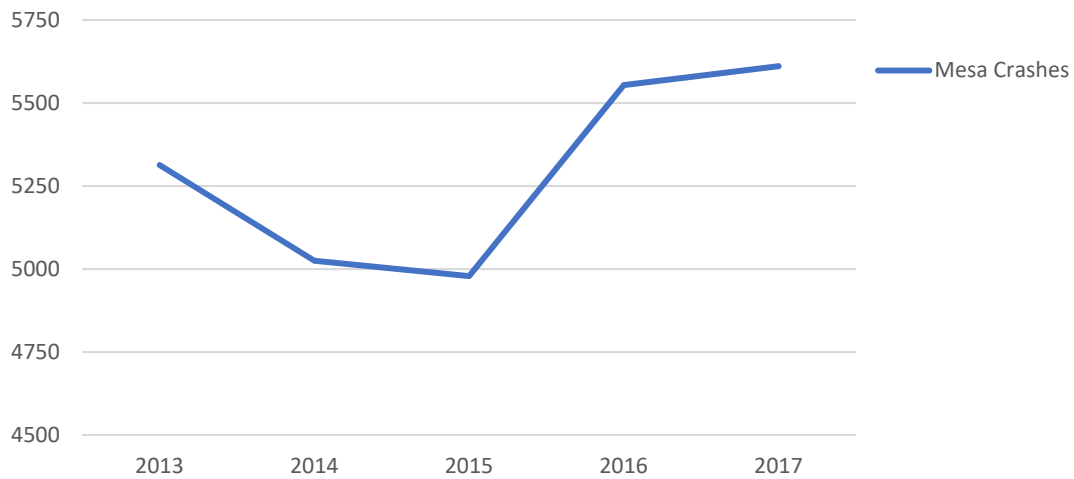
For the purposes of this document, the term “bike” and “pedalcycle” may be used interchangeably. Likewise, the term “bicyclist” and “pedalcyclist” may be used interchangeably.

### Mesa Fatal Crashes by Year

Year	Fatal Crashes	Total Fatalities	Total Crashes	Mesa Population	Fatalities Per 100,000 Population	% Change From Previous Year
2001	31	31	9928	416301	7.4	-
2002	22	23	9155	427923	5.4	-27.8%
2003	30	31	8520	435391	7.1	+32.5%
2004	25	27	9184	443733	6.1	-14.5%
2005	64	67	9205	450948	14.9	+144.2%
2006	47	50	8522	456449	11.0	-26.3%
2007	25	26	7933	460493	5.6	-48.5%
2008	25	26	5908	463829	5.6	-0.7%
2009	19	21	5504	467157	4.5	-19.8%
2010	15	15	5118	440031	3.4	-24.2%
2011	27	29	5178	444685	6.5	+91.3%
2012	24	24	5134	451677	5.3	-18.5%
2013	23	28	5313	457587	6.1	+15.2%
2014	19	20	5025	464704	4.3	-29.7%
2015	15	15	4979	471825	3.2	-26.1%
2016	28	30	5554	475274	6.3	+98.5%
2017	29	30	5611	496401	6.0	-4.3%

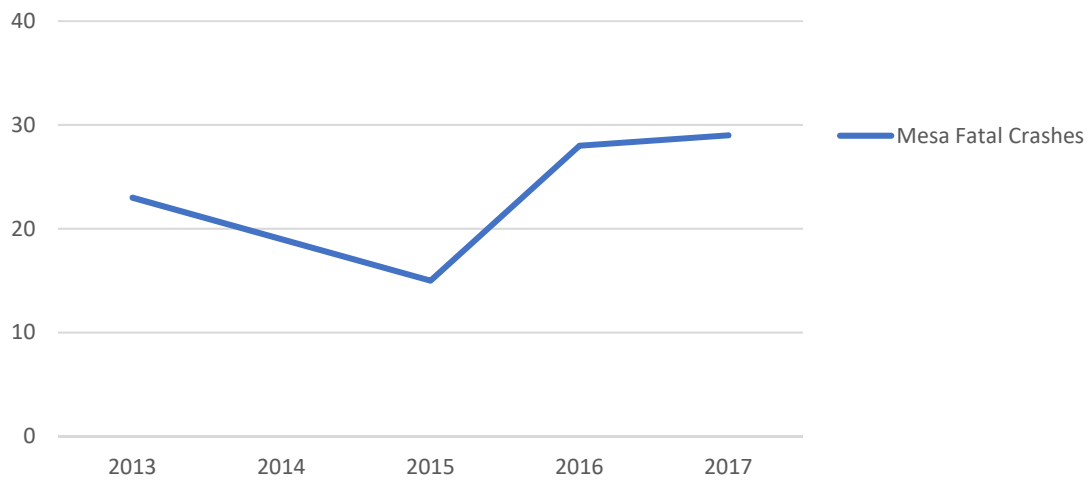
In 2017, 30 people lost their lives in the City of Mesa as a result of a collision with a motor vehicle. This is equivalent to the number of people that died in 2016, although there was a reduction in fatalities per 100,000 population.

### Mesa Total Crashes by Year



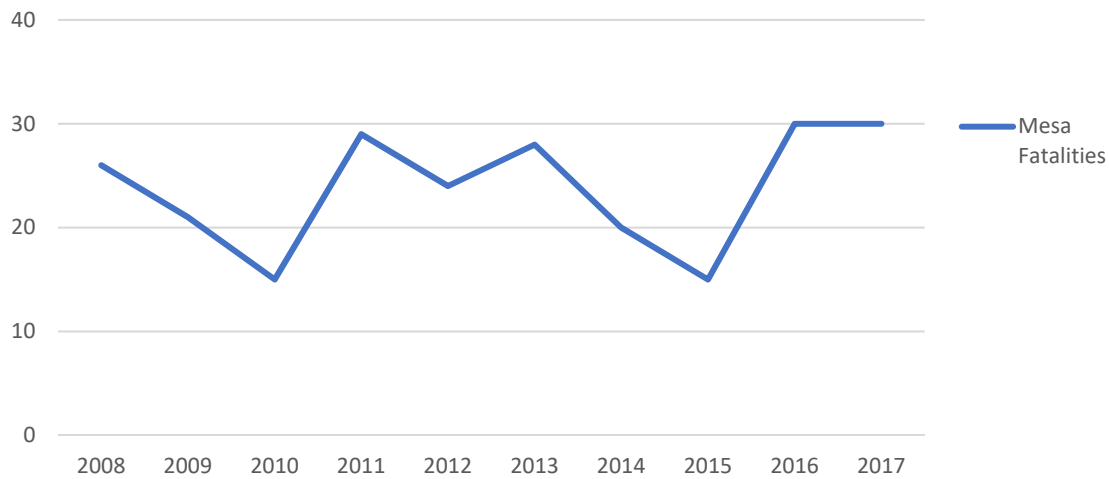
In 2017, City of Mesa **motor vehicle crashes** increased by 57 from the year before; this is a 1% increase from 2016.

### Mesa Fatal Crashes by Year



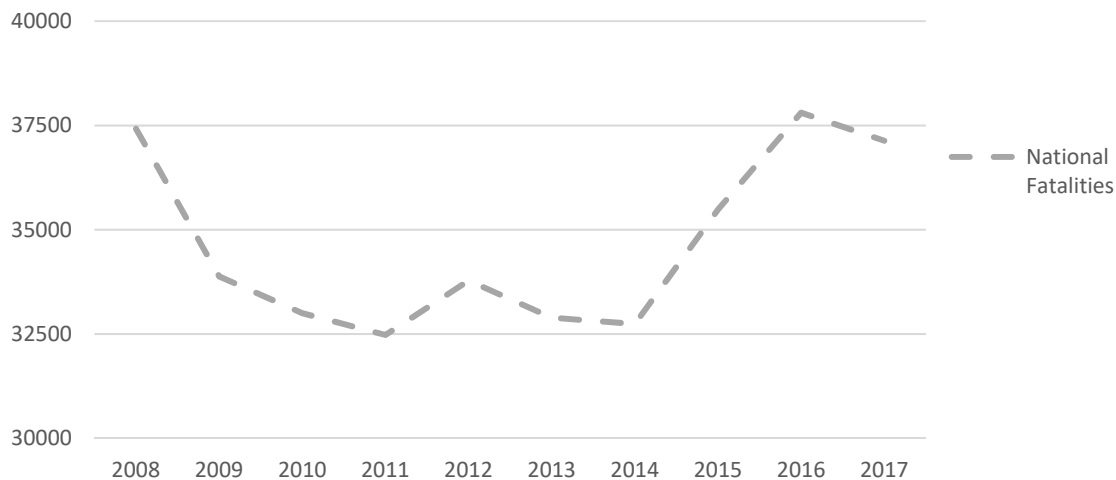
Over the past five years, **fatal crashes** in Mesa have had a general upward trend. From the chart above, the number of fatal crashes over the past five years follows a similar pattern to the total number of crashes within Mesa.

### Mesa Total Fatalities by Year



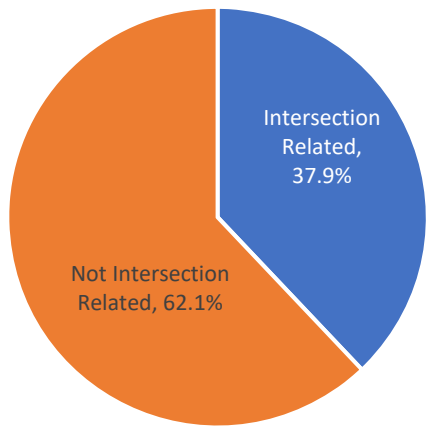
Based on a 10-year average (2008 – 2017), **total fatalities** are trending upward which is consistent with the national average over a 10-year period, as shown below.

### National Total Fatalities by Year



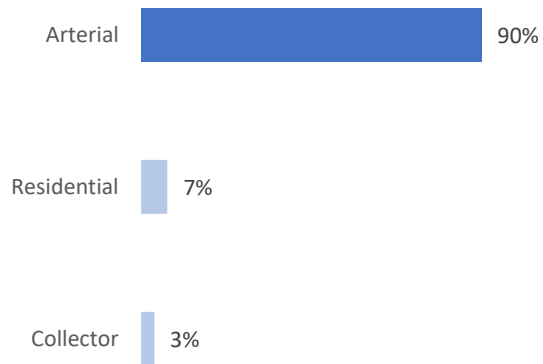
According to the National Highway Traffic Safety Administration (NHTSA) report on fatal crashes, 37,133 people died as a result of a collision with a motor vehicle in 2017. This is a decrease of almost 2% from 2016. Note that this figure represents crashes on all roads within the United States, not just local.

### 2017 Mesa Fatal Crashes: Intersection Relation

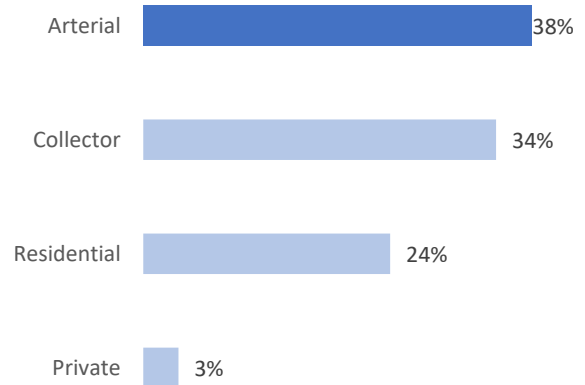


Of the 29 fatal crashes, 11 were **intersection related** and 18 occurred midblock.

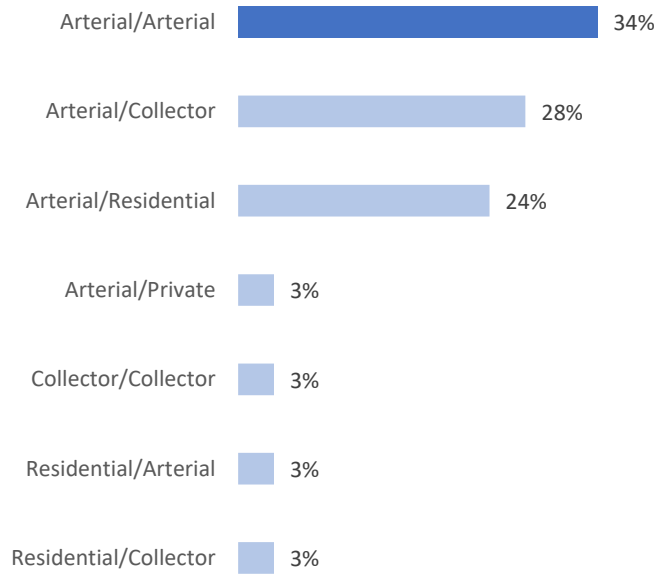
### 2017 Mesa Fatal Crashes: On Street Class



### 2017 Mesa Fatal Crashes: Cross Street Class

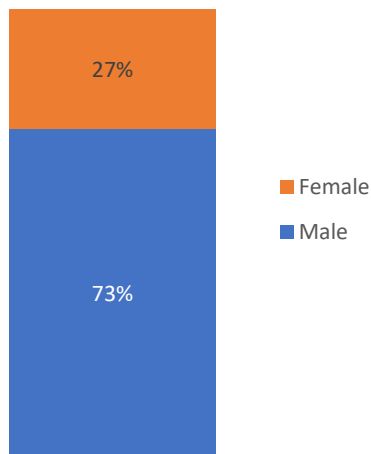


## Mesa 2017 Fatal Crashes: Intersection Class



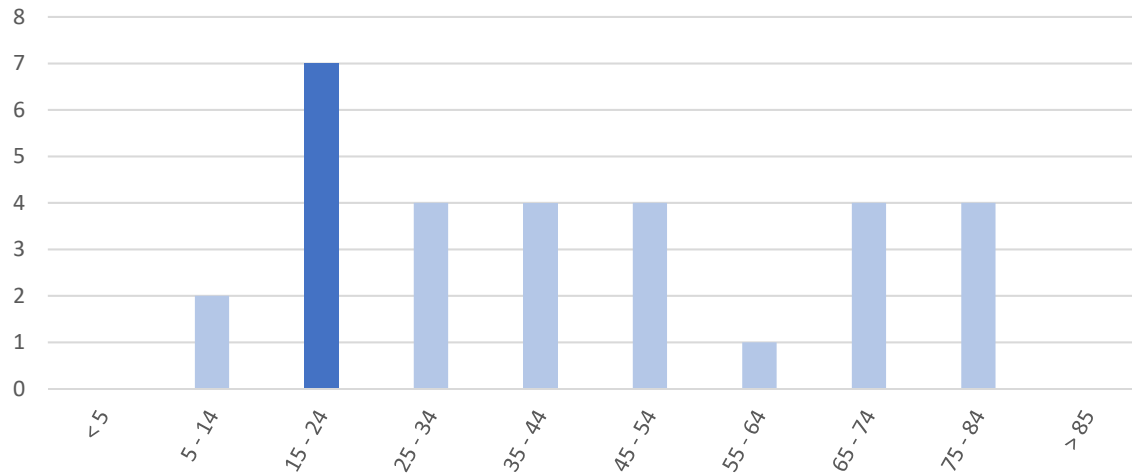
Of the 29 fatal crashes within Mesa in 2017, 26 occurred on an **arterial** roadway.

## 2017 Mesa Fatalies by Gender



Data analysis of 2017 crashes within the City of Mesa found that motor vehicle crash fatalities were higher among **males** than **females**.

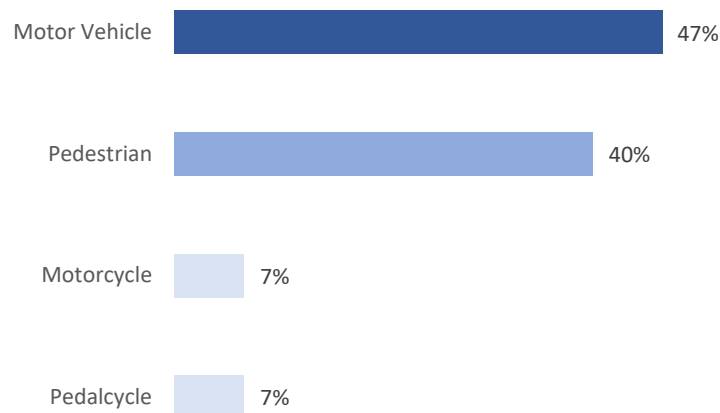
## Mesa 2017 Fatalities by Age



Motor vehicle crash fatalities were higher among people aged **15 to 24** than any other age group in 2017.

It should also be noted that the highest number of fatalities relative to the population within that age group was in people aged 75 to 84. This group makes up just over 5% of the total population, and they contributed to over 13% of the total fatalities within Mesa in 2017.

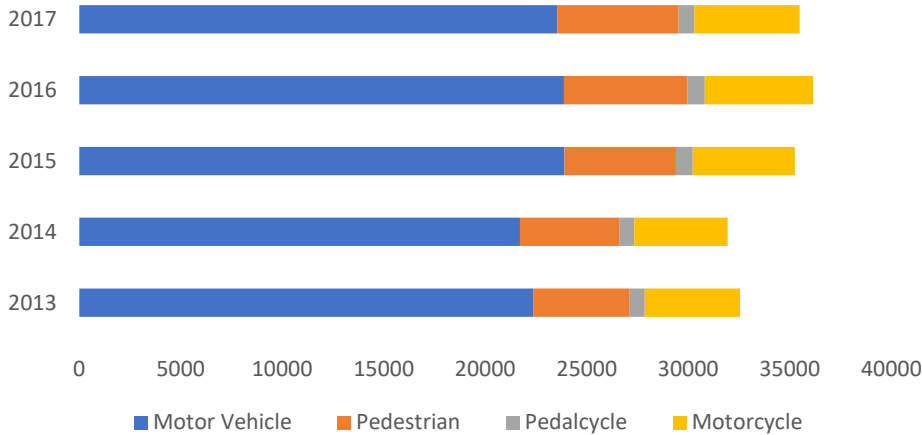
## Mesa 2017 Fatalities: Unit Type



Among the unit types, drivers and passengers of **motor vehicles** were most commonly involved in a fatal crash. **Pedestrians**, considered one of the most vulnerable unit types, showed an increase in fatalities compared to 2016 numbers.

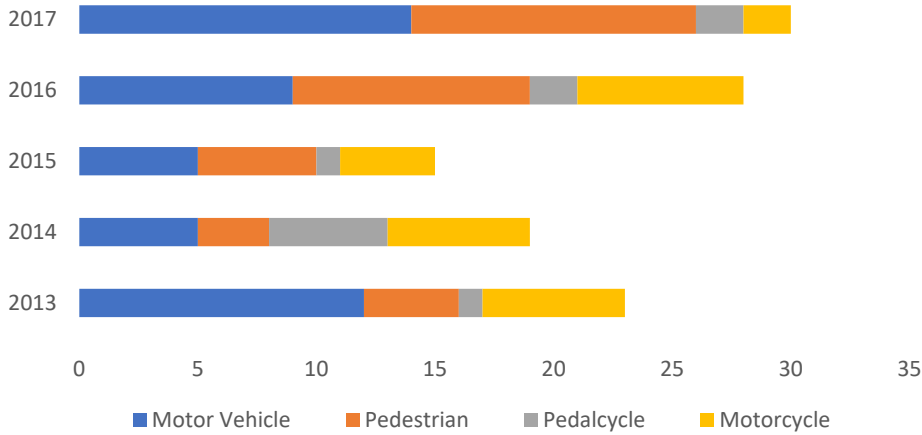


### National Fatalities by Unit Type



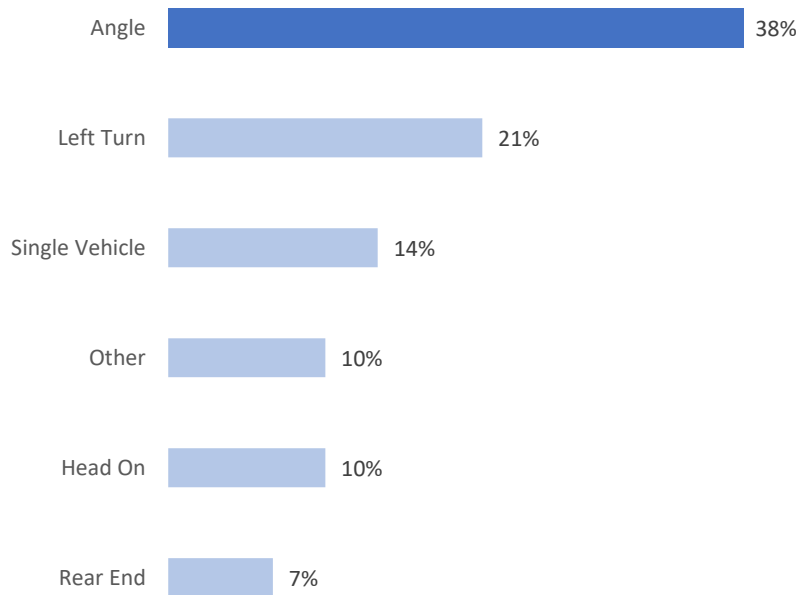
Nationally, fatalities involving **motor vehicles** greatly exceeded those involving other unit types. Collisions involving **pedestrians** made up 14% of all fatalities in 2017.

### Mesa Fatalities by Unit Type



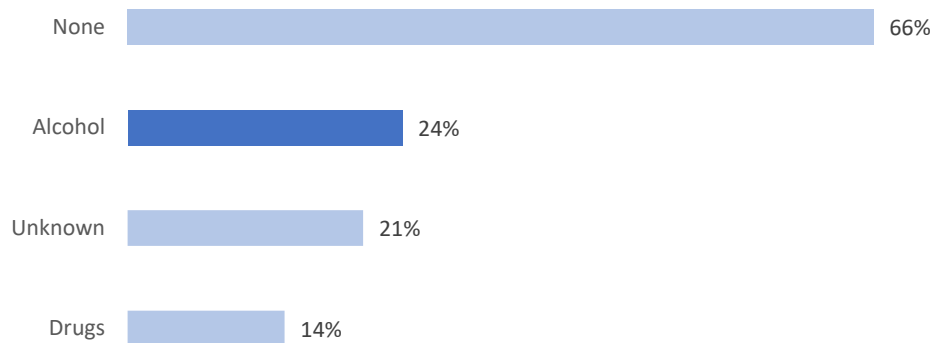
In Mesa, less than half of all fatalities have been due to **motor vehicle** collisions. **Pedestrian** crashes alone made up 40% of all fatalities in 2017.

## Mesa 2017 Fatal Crash Manner



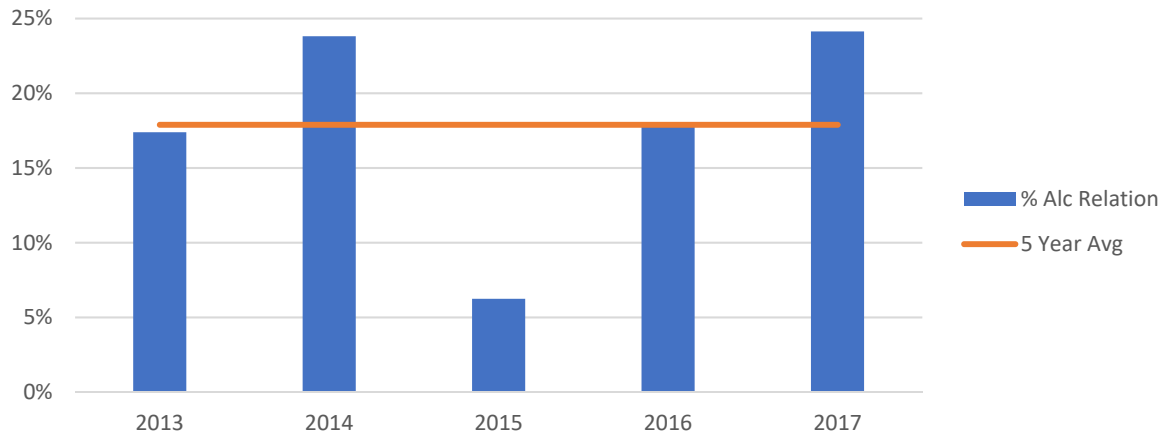
Motor vehicle fatalities within Mesa in 2017 were mostly due to **angle** crashes. Angle and left turn crashes made up more than half of the fatal crash total with 17.

## Mesa 2017 Fatal Crashes: Impairment



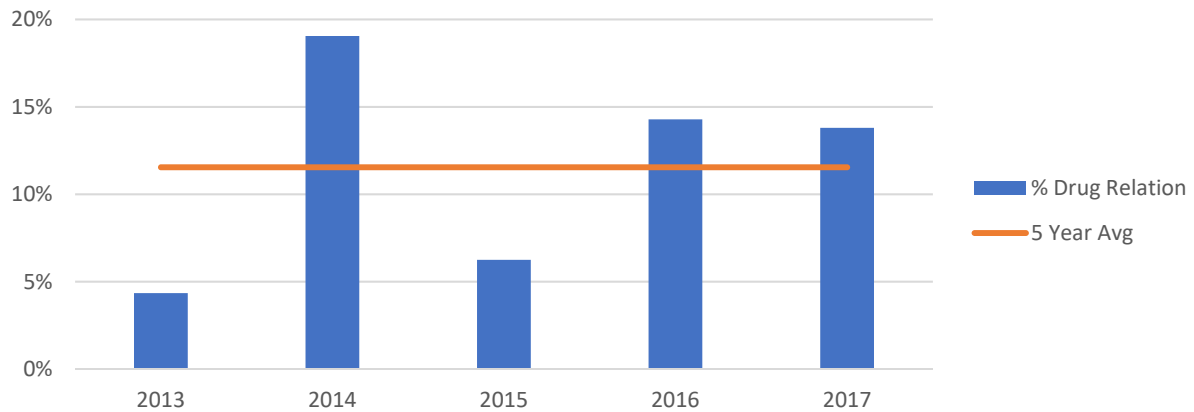
Eleven of the 29 fatal crashes in Mesa involved impairment. **Alcohol** was involved in seven fatal crashes, and drugs were involved in four fatal crashes.

### Mesa 2017 Fatal Crashes: Acohol Involvement



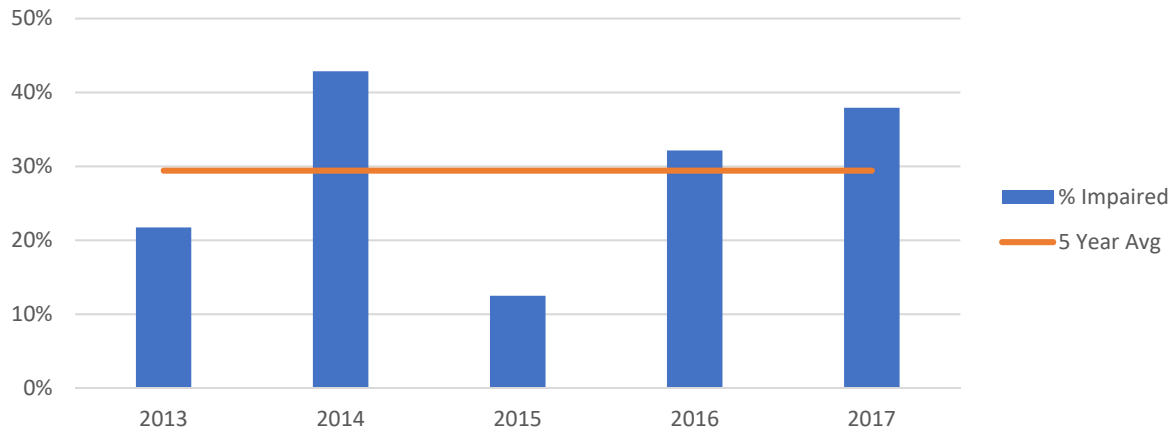
The above chart shows a 5-year trend in alcohol impairment, compared to the **average**, linked to fatal crashes. Over the past five years, an average 18% of fatal collisions involved a person under the influence of alcohol.

### Mesa 2017 Fatal Crashes: Drug Involvement



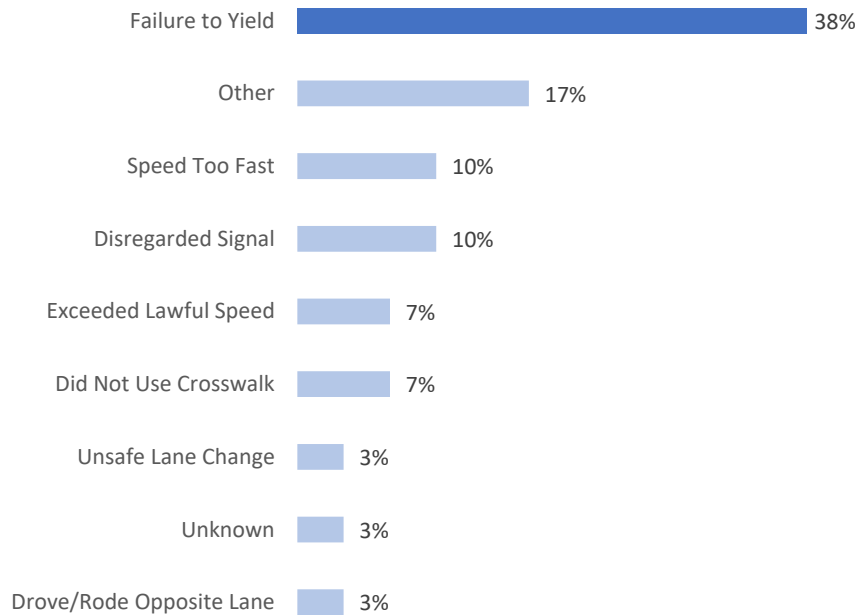
The above chart shows a 5-year trend in drug impairment, compared to the **average**, linked to fatal crashes. Over the past five years, an average 12% of fatal collisions involved a person under the influence of drugs.

## Mesa 2017 Fatal Crashes: Drug & Alcohol Involvement



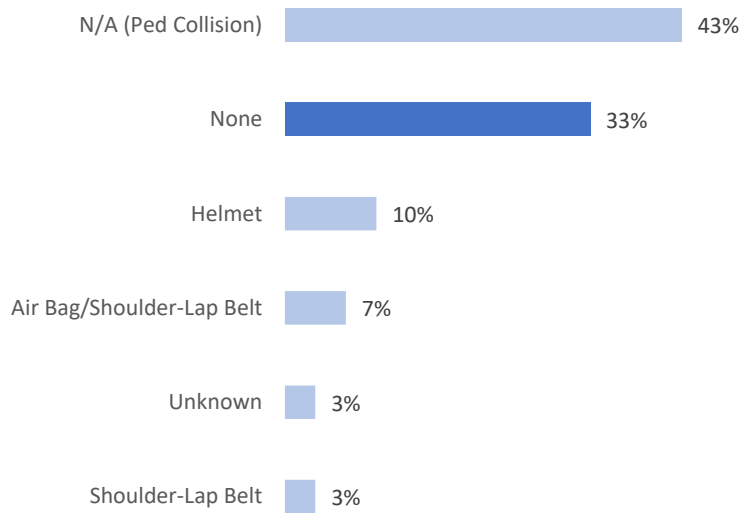
The above chart shows a 5-year trend that combines alcohol and drug impairment, compared to the **average**. Over the past five years, an average 29% of fatal collisions involved a person under the influence of either drugs or alcohol.

## Mesa 2017 Fatal Crashes: Vehicle 1 Violation



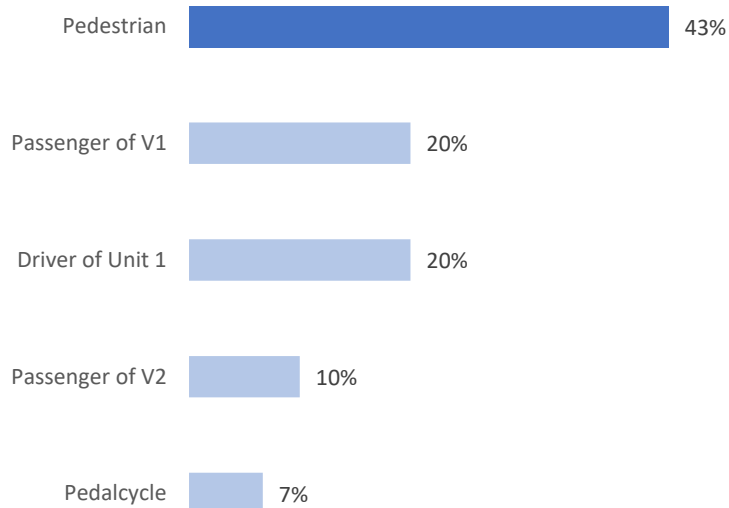
The above chart details the violations made by vehicle 1 leading to fatal crashes within Mesa in 2017. Of the 29 fatal motor vehicle crashes, 11 resulted from a **failure to yield**.

## Mesa 2017 Fatal Unit Safety Device



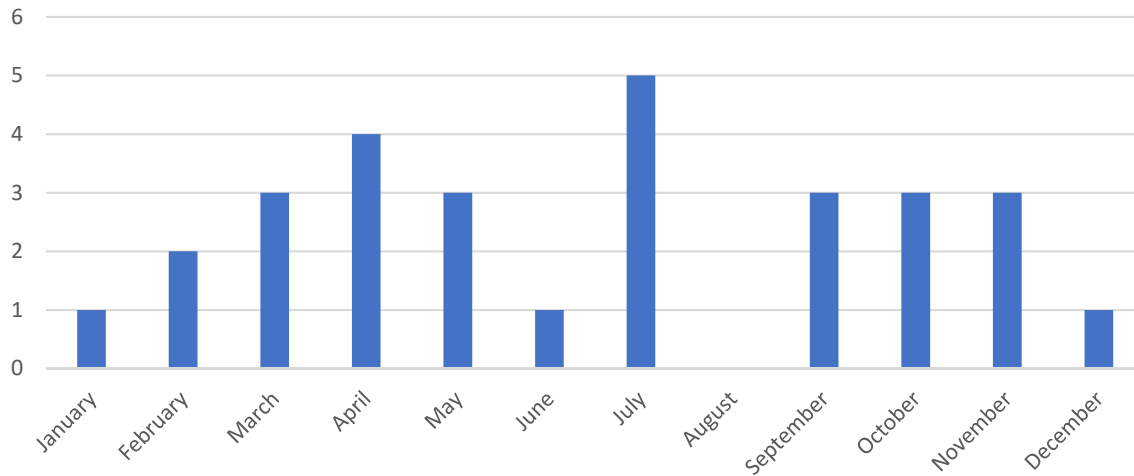
The chart above shows the known and unknown victim safety devices involved in the 30 Mesa fatalities in 2017. 10 involved victims were **not using a safety device**.

## Mesa 2017 Location of Fatal Unit



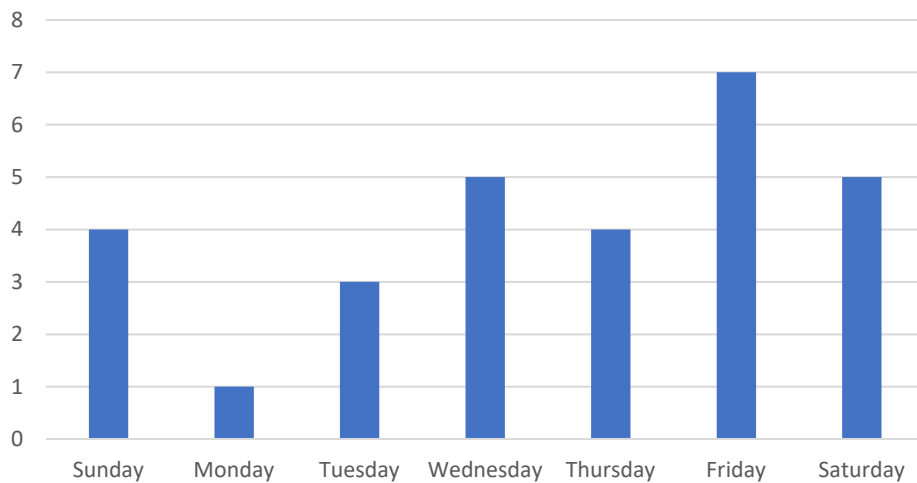
There were 30 fatalities in 2017. Of those 30 fatalities, 15 involved a non-motorist victim (13 **pedestrian collisions** and two pedalcyclist collisions).

### Mesa 2017 Fatal Crashes By Month



The pattern of fatal crashes by month in 2017 showed that fatalities rose during the Spring months, then fell in the Summer. There was a spike in fatalities in July, and the Fall months showed an even distribution.

### Mesa 2017 Fatal Crashes by Day of Week



Many of the fatal crashes within Mesa in 2017 occurred during the end of the week and during the weekend.

## Mesa 2017 Fatal Crashes by Time of Day

Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
12:00 AM - 1:00 AM	0	0	2	0	0	1	0	3
1:00 AM - 2:00 AM	0	0	0	0	0	0	0	0
2:00 AM - 3:00 AM	0	0	0	0	0	0	0	0
3:00 AM - 4:00 AM	0	0	0	0	0	0	0	0
4:00 AM - 5:00 AM	0	0	0	0	1	0	0	1
5:00 AM - 6:00 AM	0	0	0	0	0	0	0	0
6:00 AM - 7:00 AM	0	0	0	1	0	0	0	1
7:00 AM - 8:00 AM	0	0	1	0	0	0	0	1
8:00 AM - 9:00 AM	0	0	0	1	0	0	0	1
9:00 AM - 10:00 AM	0	0	0	1	0	0	0	1
10:00 AM - 11:00 AM	0	0	0	0	0	0	0	0
11:00 AM - 12:00 PM	0	0	0	0	0	0	0	0
12:00 PM - 1:00 PM	1	1	0	0	0	0	1	3
1:00 PM - 2:00 PM	0	0	0	0	0	0	1	1
2:00 PM - 3:00 PM	0	0	0	0	0	0	0	0
3:00 PM - 4:00 PM	1	0	0	0	0	0	0	1
4:00 PM - 5:00 PM	0	0	0	0	0	2	0	2
5:00 PM - 6:00 PM	0	0	0	0	0	0	0	0
6:00 PM - 7:00 PM	0	0	0	1	0	2	2	5
7:00 PM - 8:00 PM	0	0	0	0	1	2	0	3
8:00 PM - 9:00 PM	1	0	0	1	2	0	0	4
9:00 PM - 10:00 PM	1	0	0	0	0	0	0	1
10:00 PM - 11:00 PM	0	0	0	0	0	0	0	0
11:00 PM - 12:00 AM	0	0	0	0	0	0	1	1
Total	4	1	3	5	4	7	5	29

In 2017, the highest concentration of fatal crashes within a three-hour period occurred from 6:00PM to 9:00PM.

### Mesa 5-Year Trend: Fatal Crashes by Time of Day

	2013	2014	2015	2016	2017	5-Year Total	% of Total
12:00 AM - 1:00 AM	0	0	0	0	3	3	2.6%
1:00 AM - 2:00 AM	1	1	0	0	0	2	1.7%
2:00 AM - 3:00 AM	0	0	0	0	0	0	0.0%
3:00 AM - 4:00 AM	0	0	1	0	0	1	0.9%
4:00 AM - 5:00 AM	0	0	0	0	1	1	0.9%
5:00 AM - 6:00 AM	0	2	0	1	0	3	2.6%
6:00 AM - 7:00 AM	0	0	0	1	1	2	1.7%
7:00 AM - 8:00 AM	1	2	0	0	1	4	3.4%
8:00 AM - 9:00 AM	0	0	0	0	1	1	0.9%
9:00 AM - 10:00 AM	2	1	1	0	1	5	4.3%
10:00 AM - 11:00 AM	0	0	3	1	0	4	3.4%
11:00 AM - 12:00 PM	5	1	2	1	0	9	7.7%
12:00 PM - 1:00 PM	0	1	1	0	3	5	4.3%
1:00 PM - 2:00 PM	2	2	0	1	1	6	5.1%
2:00 PM - 3:00 PM	0	3	1	4	0	8	6.8%
3:00 PM - 4:00 PM	0	0	2	2	1	5	4.3%
4:00 PM - 5:00 PM	0	1	0	0	2	3	2.6%
5:00 PM - 6:00 PM	1	1	2	3	0	7	6.0%
6:00 PM - 7:00 PM	3	1	1	0	5	10	8.5%
7:00 PM - 8:00 PM	1	1	0	4	3	9	7.7%
8:00 PM - 9:00 PM	4	0	0	4	4	12	10.3%
9:00 PM - 10:00 PM	1	2	0	4	1	8	6.8%
10:00 PM - 11:00 PM	2	1	1	1	0	5	4.3%
11:00 PM - 12:00 AM	0	1	1	1	1	4	3.4%
Total	23	21	16	28	29	117	

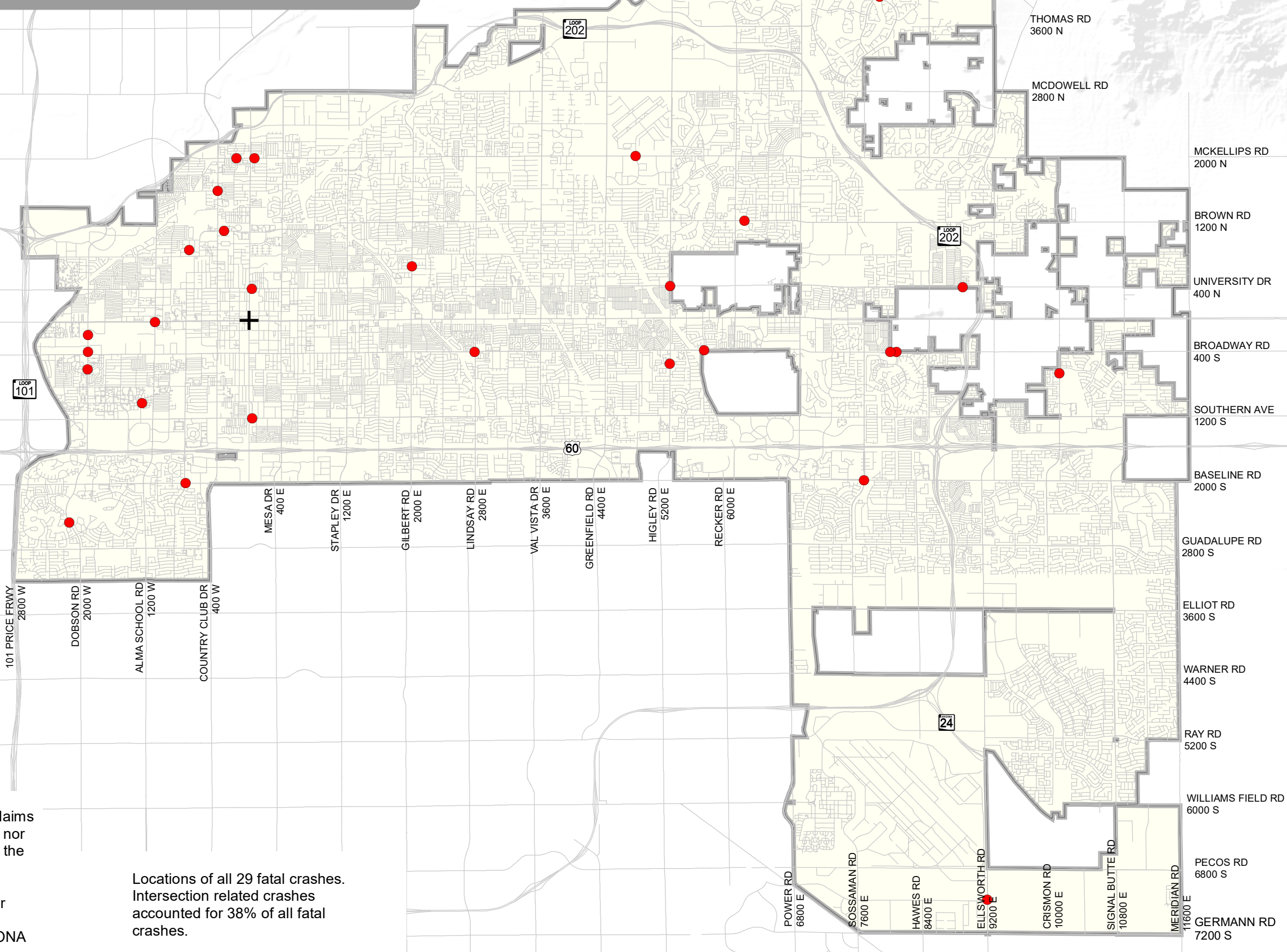
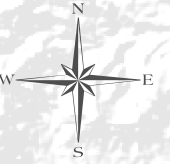
Over a 5-year trend, the peak six-hour period for fatal crashes was between 5:00PM and 11:00PM.





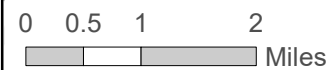
# FATAL CRASH LOCATIONS

## 2017



### Legend

- Fatal Crashes 2017
- + Center of Downtown Mesa
- City of Mesa Boundary



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Locations of all 29 fatal crashes. Intersection related crashes accounted for 38% of all fatal crashes.

# **SECTION 2:**

# **SERIOUS INJURIES**

As of 2014, serious injury crashes are now being measured by the City of Mesa to help determine problematic areas on roadways. This metric is likely to give a clearer view of the behaviors and factors that lead to collisions resulting in serious injuries by significantly increasing the sample size of analyzed crashes, when compared to only analyzing fatal crashes.

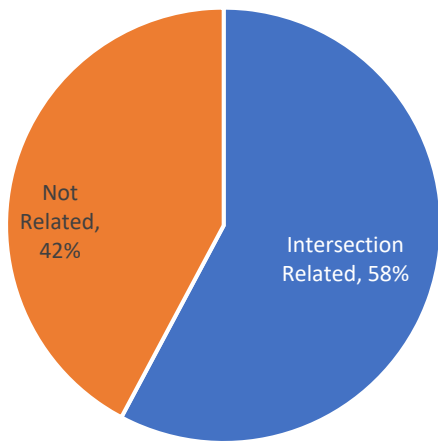
### Mesa Serious Injury Crashes: General View

Year	Serious Injury Crashes	Total Serious Injuries	Total Crashes	Mesa Population	Serious Injuries Per 100,000 Population	% Change From Previous Year
2001			9928	416301		
2002			9155	427923		
2003			8520	435391		
2004			9184	443733		
2005			9205	450948		
2006			8522	456449		
2007			7933	460493		
2008			5908	463829		
2009			5504	467157		
2010		228	5118	440031	52	-
2011		236	5178	444685	53	+2.4%
2012	-	233	5134	451677	52	-2.8%
2013	-	239	5313	457587	52	+1.3%
2014	183	237	5025	464704	51	-2.4%
2015	181	213	4979	471825	45	-11.5%
2016	234	272	5554	475274	57	+26.8%
2017	194	218	5611	496401	44	-23.3%

In 2017, 194 serious injury crashes occurred on Mesa roadways resulting in 218 serious injuries. The percentage of severe injury crashes per 100,000 population, decreased by 23-percent from the previous year.

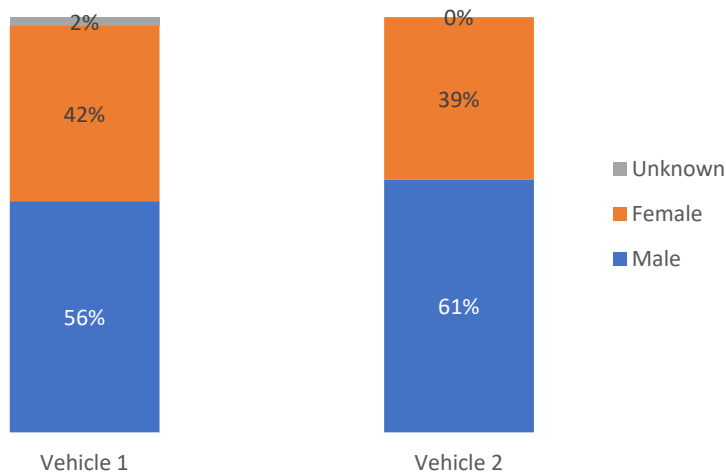
The average number of serious injuries per 100,000 population from 2013 to 2017 was about 50.

## Mesa 2017 Serious Injury Crashes: Intersection Relation



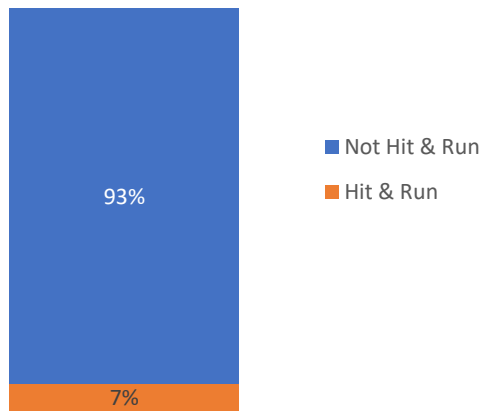
Of the 194 serious injury crashes that happened within Mesa in 2017, 126 were **intersection related**.

## Mesa 2017 Serious Injury Crashes by Gender



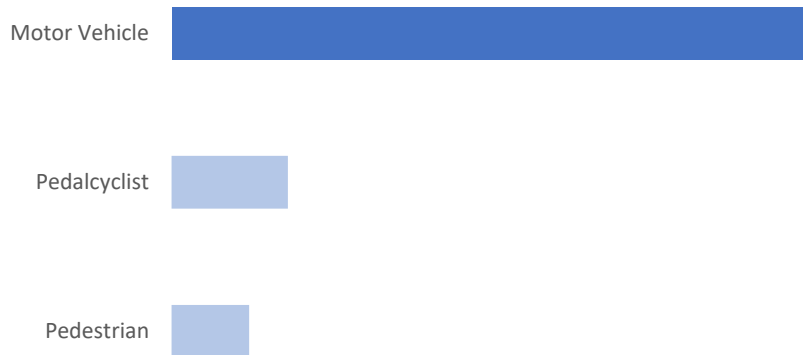
Data analysis of 2017 crashes within the City of Mesa found that motor vehicle serious injury crashes were higher among **males** than **females**. Genders that are **unknown** are typically attributed to hit and run crashes.

## Mesa 2017 Serious Injury Crashes: Hit and Run



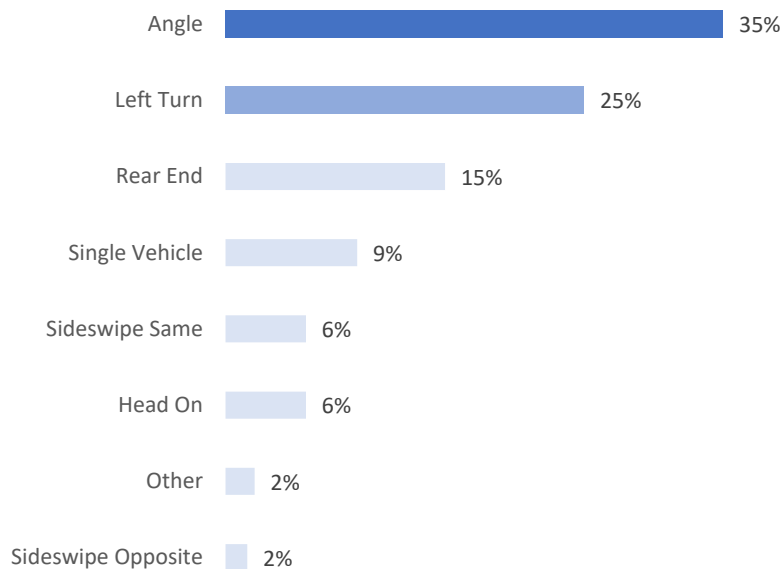
There were 13 serious injury crashes that were classified as **hit and run** in 2017.

## Mesa 2017 Unit Type



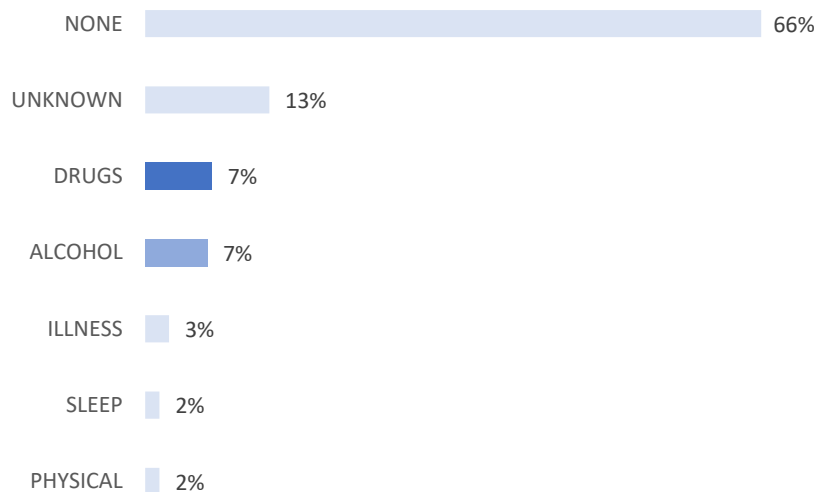
Most of the serious injury crashes that occurred in Mesa in 2017 were **motor vehicle** collisions. This number includes motorcyclists and single vehicle crashes.

## Mesa 2017 Serious Injury Crash Manner



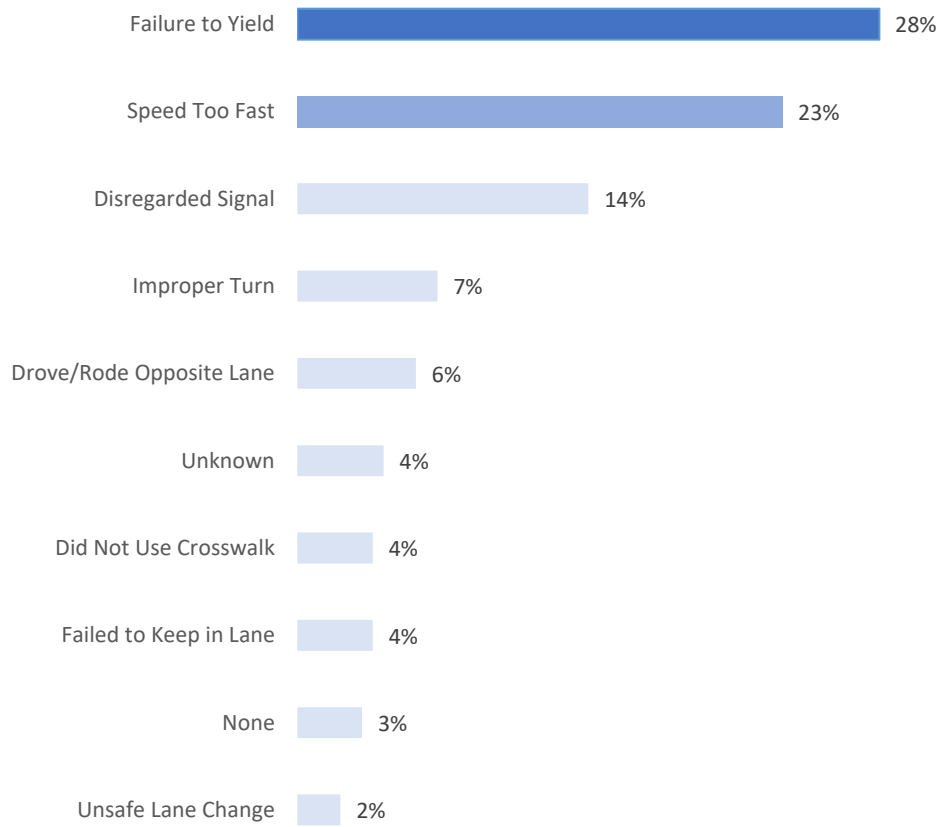
In 2017, the leading crash manners resulting in serious injuries were **angle** and **left turn** crashes. These include pedestrian and pedalcyclist crashes that were determined as such crash manners.

## Mesa 2017 Serious Injury Crashes: Impairment



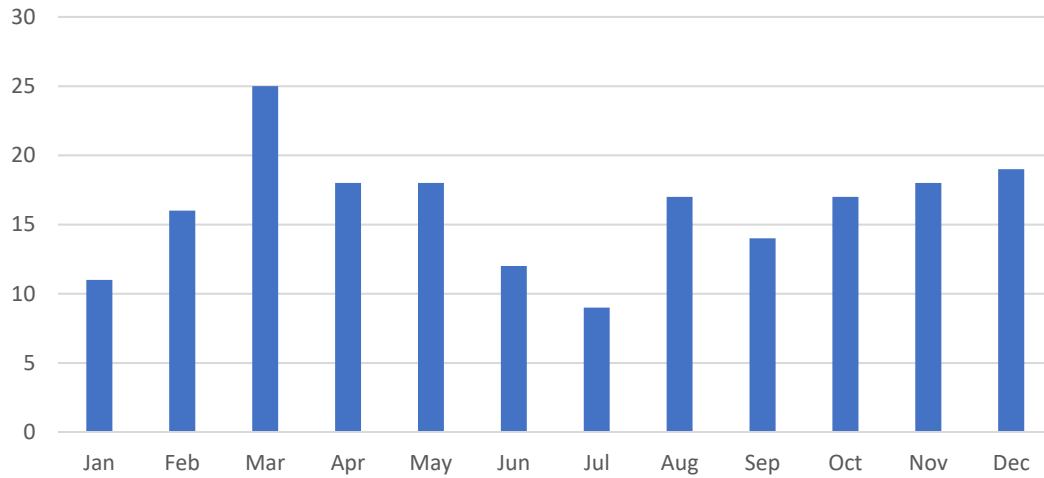
Impairment, including both **drug** and **alcohol** use, was a factor in 27 serious injury crashes in 2017 (14 drug and 13 alcohol incidents).

## Mesa 2017 Serious Injury Crashes: Vehicle 1 Violation



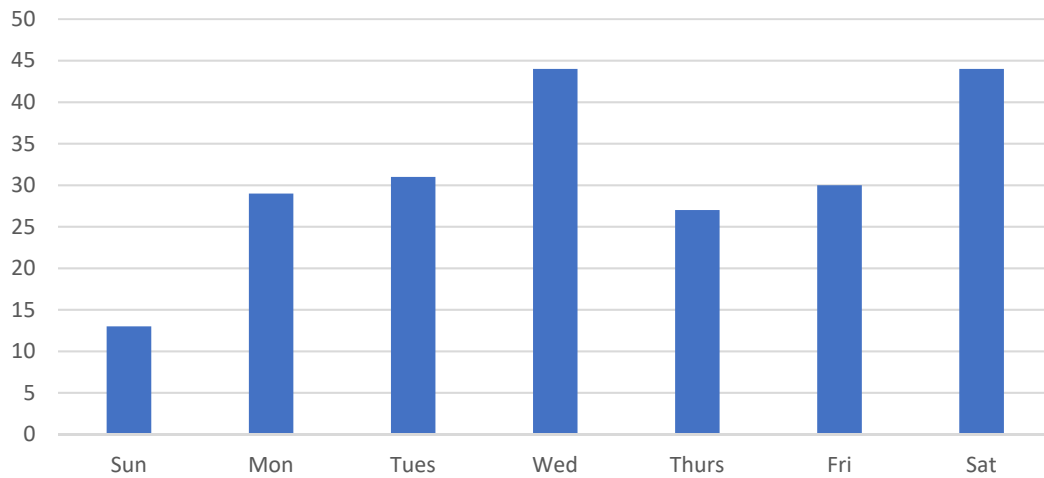
This chart shows a distribution of Mesa vehicle 1 violations in 2017 that resulted in crashes with serious injuries. The most common violation was noted as a **failure to yield**. Another common violation for units labeled as vehicle 1 was **speed too fast for conditions**.

### Mesa 2017 Serious Injury Crashes by Month



Within Mesa in 2017, there was a rise of serious injury crashes during the Spring and Fall seasons.

### Mesa 2017 Serious Injury Crashes by Day of Week



The highest 3-day period for serious injury crashes was Monday, Tuesday, and Wednesday.



## Mesa Serious Injury Crashes by Time and Day of Week

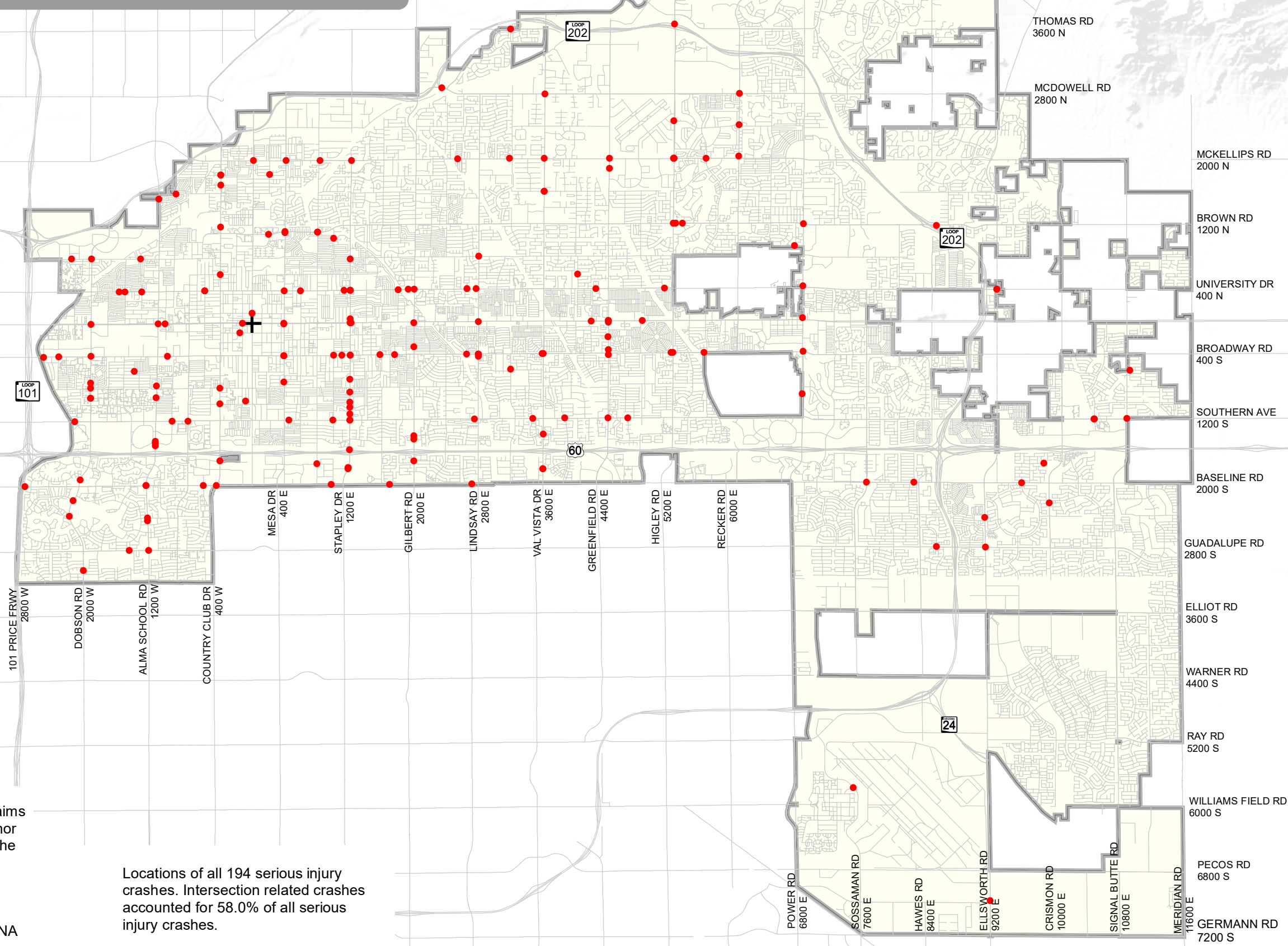
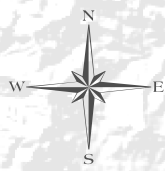
Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
12:00 AM - 1:00 AM	0	0	0	0	0	1	0	1
1:00 AM - 2:00 AM	0	0	0	0	0	0	0	0
2:00 AM - 3:00 AM	0	0	0	0	0	1	0	1
3:00 AM - 4:00 AM	0	0	0	1	1	1	0	3
4:00 AM - 5:00 AM	0	0	0	1	0	0	0	1
5:00 AM - 6:00 AM	1	1	0	0	0	0	0	2
6:00 AM - 7:00 AM	0	1	1	2	0	2	0	6
7:00 AM - 8:00 AM	0	3	2	2	2	2	1	12
8:00 AM - 9:00 AM	0	4	0	1	4	0	0	9
9:00 AM - 10:00 AM	0	3	2	5	2	1	0	13
10:00 AM - 11:00 AM	1	1	0	3	0	0	0	5
11:00 AM - 12:00 PM	0	0	1	1	1	0	3	6
12:00 PM - 1:00 PM	0	3	2	2	3	1	2	13
1:00 PM - 2:00 PM	1	0	6	5	1	0	1	14
2:00 PM - 3:00 PM	2	2	3	2	1	4	1	15
3:00 PM - 4:00 PM	0	3	1	2	4	7	0	17
4:00 PM - 5:00 PM	0	1	5	3	4	2	0	15
5:00 PM - 6:00 PM	1	2	2	3	1	2	2	13
6:00 PM - 7:00 PM	4	3	2	3	0	2	3	17
7:00 PM - 8:00 PM	1	0	3	2	1	1	1	9
8:00 PM - 9:00 PM	1	1	1	3	1	0	5	12
9:00 PM - 10:00 PM	0	0	0	1	1	2	1	5
10:00 PM - 11:00 PM	1	1	0	2	0	1	0	5
11:00 PM - 12:00 AM	0	0	0	0	0	0	0	0
Total	13	29	31	44	27	30	20	194

Data analysis of Mesa crashes in 2017 showed that many of the serious injury collisions occurred in the afternoon during the PM peak periods.



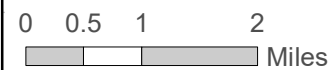
# SERIOUS INJURY CRASH LOCATIONS

## 2017



### Legend

- 2017 Serious Injury Crashes
- + Center of Downtown Mesa
- City of Mesa Boundary



Please note that the City of Mesa makes no claims concerning the accuracy of the data provided, nor assumes any liability resulting from the use of the information herein. The data provided is the property of the City of Mesa and is not to be distributed in any form nor used in any manner not authorized by the City of Mesa in writing. Copyright 1988, 2018. CITY OF MESA, ARIZONA

Locations of all 194 serious injury crashes. Intersection related crashes accounted for 58.0% of all serious injury crashes.

# **SECTION 3:**

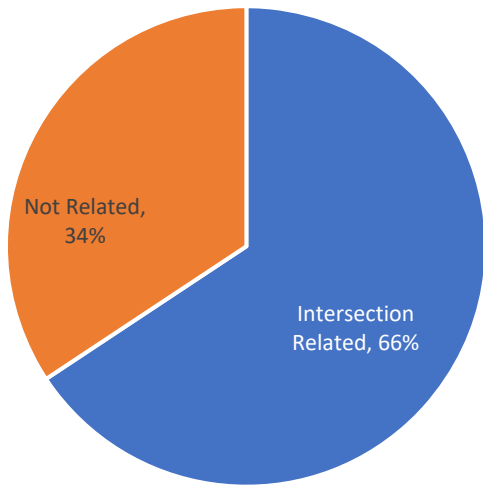
# **BIKE CRASHES**

## Mesa Bicycle Crashes: General View

Year	Bike Crashes	Total Crashes	Bike Crashes % Of Total	Mesa Population	Bike Crashes Per 100,000 Population	% Change From Previous Year
2001	284	9928	2.9%	416301	68.2	-
2002	254	9155	2.8%	427923	59.4	-13.0%
2003	282	8520	3.3%	435391	65	+9.1%
2004	258	9184	2.8%	443733	58	-10.2%
2005	276	9205	3.0%	450948	61	+5.3%
2006	181	8522	2.1%	456449	40	-35.2%
2007	231	7933	2.9%	460493	50	+26.5%
2008	212	5908	3.6%	463829	46	-8.9%
2009	222	5504	4.0%	467157	48	+4.0%
2010	206	5118	4.0%	440031	47	-1.5%
2011	219	5178	4.2%	444685	49	+5.2%
2012	257	5134	5.0%	451677	57	+15.5%
2013	190	5313	3.6%	457587	42	-27.0%
2014	163	5025	3.2%	464704	35	-15.5%
2015	131	4979	2.6%	471825	28	-20.8%
2016	175	5554	3.2%	475274	37	+32.6%
2017	172	5611	3.1%	496401	35	-5.9%

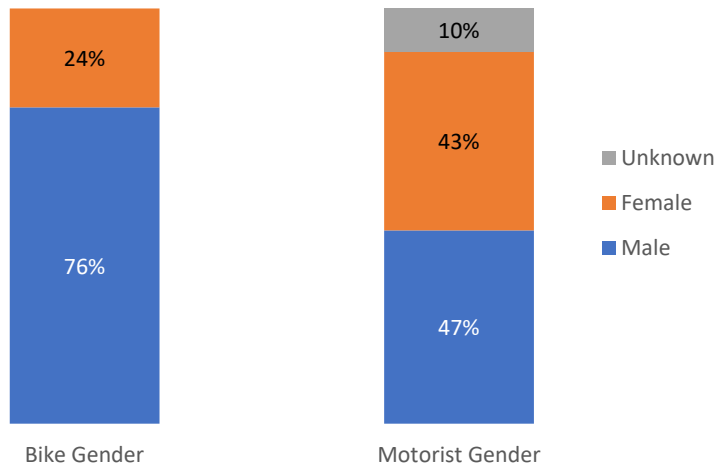
The City of Mesa had 172 bike crashes in 2017 which was about 3% of all Mesa crashes. The number of bike crashes per 100,000 population was just below the 5-year average of about 35 bike crashes per 100,000 population.

### Mesa 2017 Bicycle Crashes: Intersection Relation



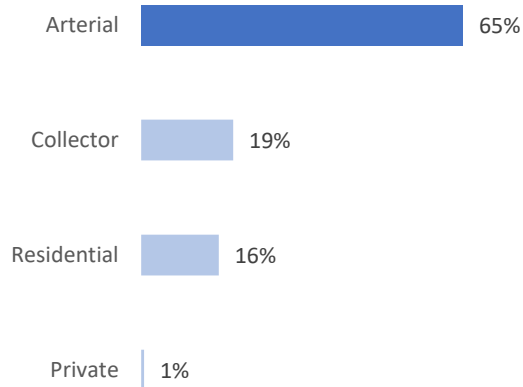
Of the 172 bike crashes in Mesa 2017, 113 were **intersection related**.

### Mesa 2017 Bicycle Crash Gender

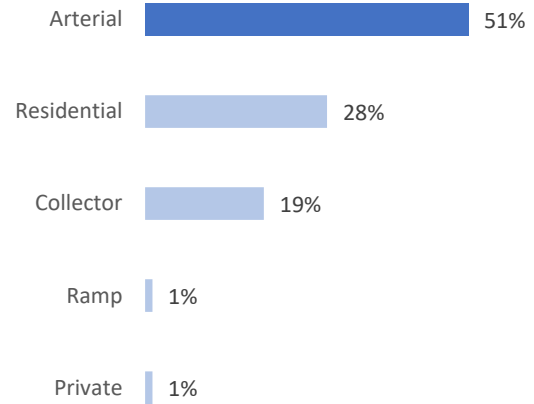


Data analysis of 2017 bicycle crashes showed that most bicyclists that were involved in crashes were **male**. The gender of the motorist involved was a near even split, with males being slightly higher than **females**.

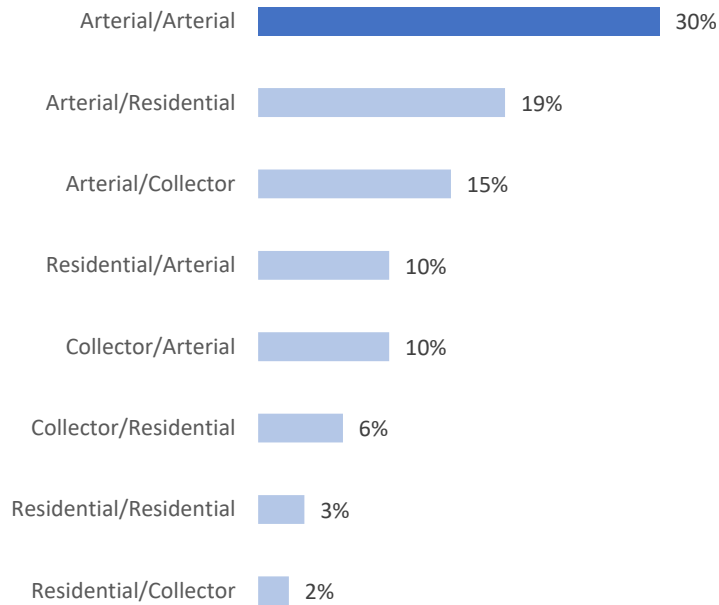
### Mesa 2017 Bicycle Crashes: On Street Classification



### Mesa 2017 Bicycle Crashes: Cross Street Classification

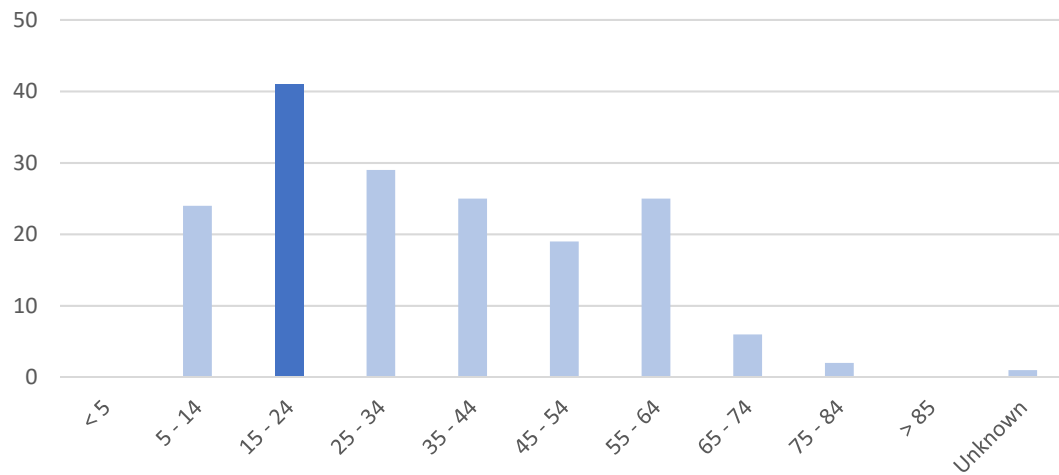


### Mesa 2017 Bicycle Crashes: Intersection Classification



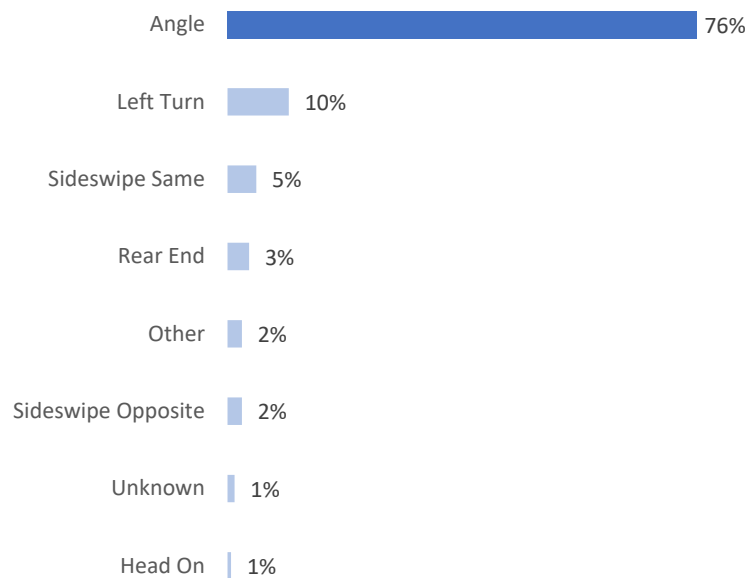
The charts above show the street intersection classifications for Mesa bicycle crashes in 2017. Most of these crashes occurred on, or crossed with, an **arterial** street.

## Mesa 2017 Bicycle Crashes by Age



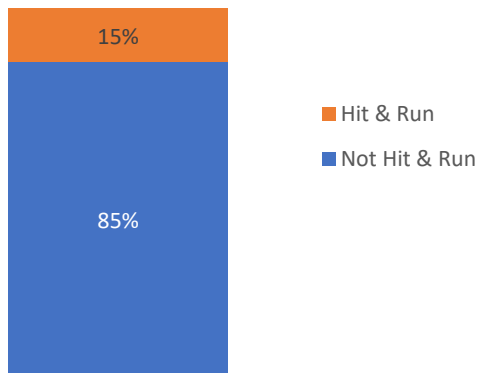
The ages of bicyclists involved in motor vehicle crashes in 2017 were analyzed and broken down into groups. The group with the highest percentage of crashes, with almost 24%, was **between the ages of 15 and 24**.

## Mesa 2017 Bicycle Crash Manner



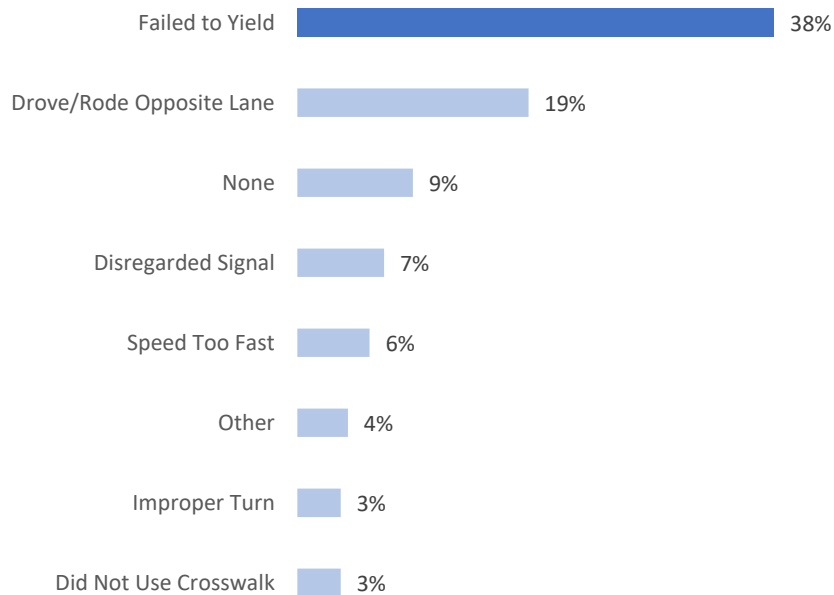
Over three-quarters of the total bicycle crashes were **angle crashes** with 130 incidents. These types of crashes were common at intersections and driveways.

## Mesa 2017 Bicycle Crashes: Hit & Run



Of the 172 bike crashes within Mesa in 2017, 25 were deemed **hit and run** collisions. Compared to the five-year average, hit and run collisions in 2017 were down slightly.

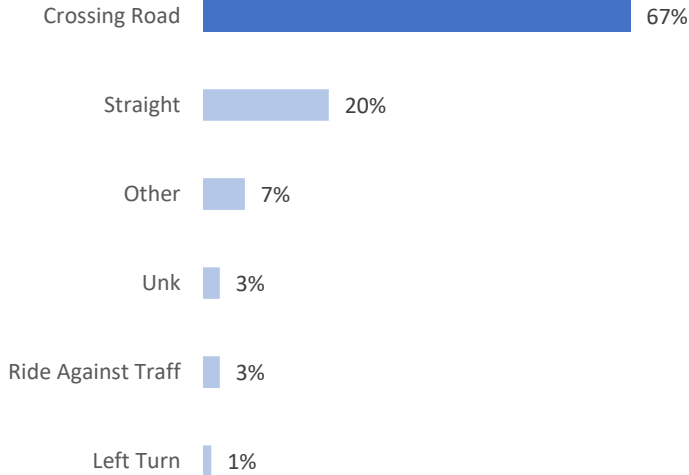
## Meas 2017 Bicycle Crashes: Vehicle 1 Violation



The cited violations of vehicle 1, inclusive of both bicyclists and drivers of motor vehicles, were mostly attributed to a **failure to yield**. In this category, there were 66 crashes.

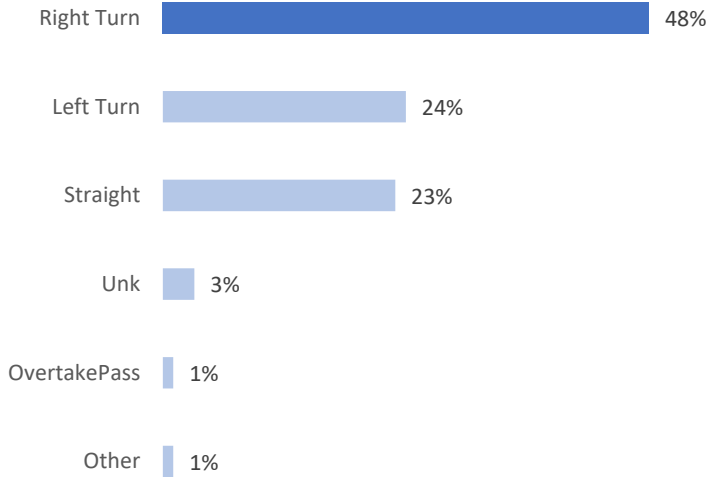


### Mesa 2017 Bicycle Crashes: Bicyclist at Fault Actions



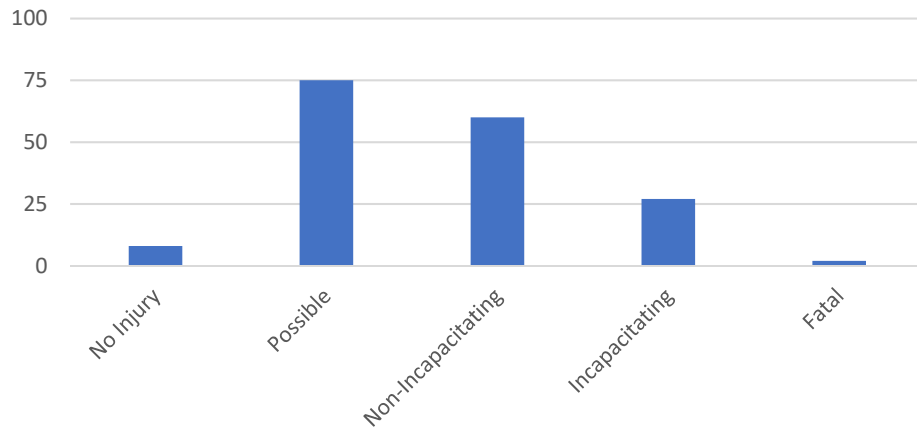
Breaking the violations down by unit, the primary action for bicyclists cited as vehicle 1 was **crossing the road**.

### Mesa 2017 Bicycle Crashes: Motorist at Fault Actions



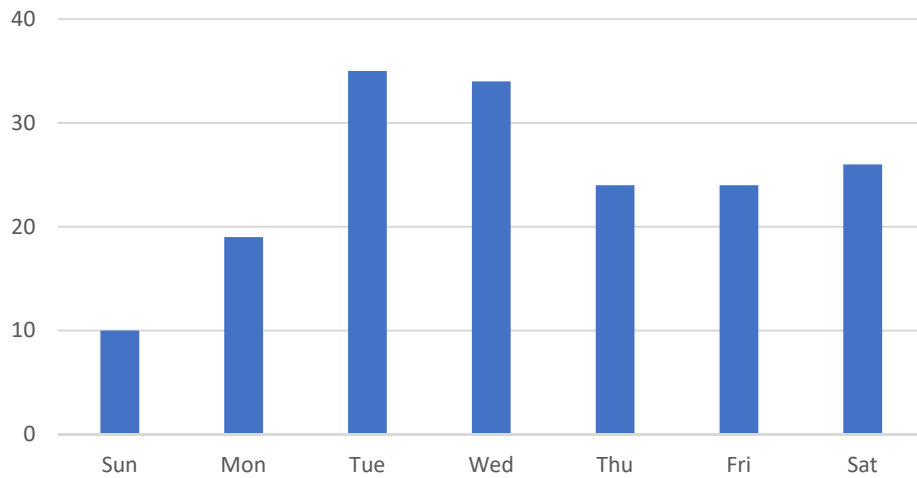
**Right turns** were the most common action of motorists that were cited as vehicle 1 with a total of 46 bicycle-related crashes.

### Mesa 2017 Bicycle Crashes: Injury Severity



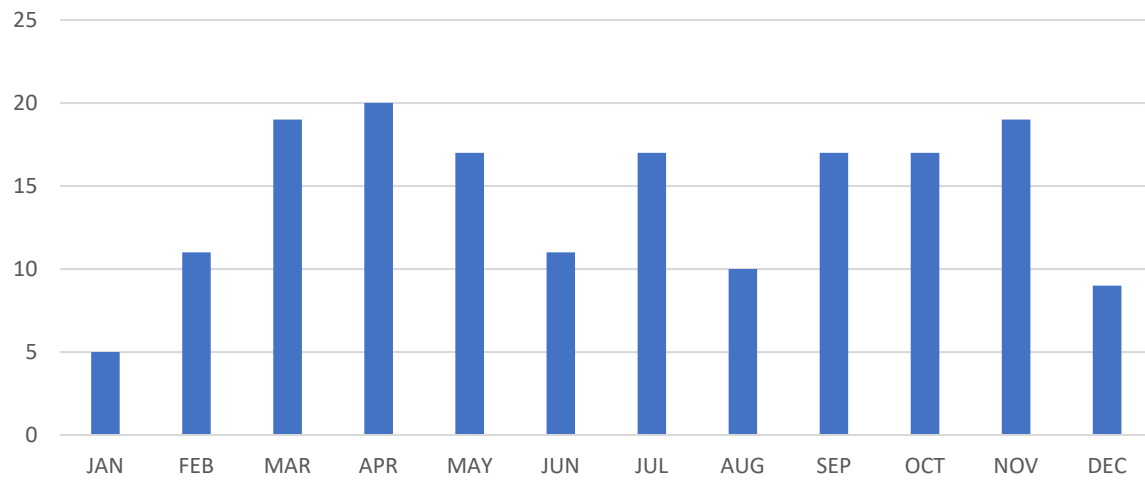
Of the 172 total bicycle crashes within Mesa in 2017, there were 2 fatalities and 27 serious injuries, totalling 17% of all bicycle-related crashes.

### Mesa 2017 Bicycle Crashes by Day of Week



Bicycle crashes were more frequent during the middle of the week when traffic patterns are considered typical.

## Mesa 2017 Bicycle Crashes by Month



Data analysis of bicycle crashes by month revealed the Spring and Fall seasons to have a greater number of incidents.

## Mesa 2017 Bicycle Crashes by Time and Day of Week

Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
12:00 AM - 1:00 AM	0	0	0	0	0	0	0	0
1:00 AM - 2:00 AM	0	0	0	0	0	0	0	0
2:00 AM - 3:00 AM	0	0	0	0	0	0	0	0
3:00 AM - 4:00 AM	0	0	0	0	1	0	0	1
4:00 AM - 5:00 AM	0	0	0	1	0	0	0	1
5:00 AM - 6:00 AM	0	0	1	0	0	0	0	1
6:00 AM - 7:00 AM	0	0	3	5	0	1	0	9
7:00 AM - 8:00 AM	0	1	3	2	0	0	2	8
8:00 AM - 9:00 AM	0	3	3	4	5	3	0	18
9:00 AM - 10:00 AM	2	0	3	0	1	1	2	9
10:00 AM - 11:00 AM	1	1	0	0	0	0	1	3
11:00 AM - 12:00 PM	1	0	2	0	2	1	0	6
12:00 PM - 1:00 PM	0	2	1	3	2	2	4	14
1:00 PM - 2:00 PM	1	1	0	2	0	1	2	7
2:00 PM - 3:00 PM	0	1	2	3	1	4	1	12
3:00 PM - 4:00 PM	1	4	4	5	7	2	3	26
4:00 PM - 5:00 PM	1	2	4	4	1	2	0	14
5:00 PM - 6:00 PM	1	1	1	1	0	1	3	8
6:00 PM - 7:00 PM	1	1	3	2	2	2	3	14
7:00 PM - 8:00 PM	0	1	3	1	1	0	3	9
8:00 PM - 9:00 PM	0	0	0	0	1	0	1	2
9:00 PM - 10:00 PM	0	1	2	0	0	1	0	4
10:00 PM - 11:00 PM	1	0	0	0	0	2	1	4
11:00 PM - 12:00 AM	0	0	0	1	0	1	0	2
Total	10	19	35	34	24	24	26	172

2017 bicycle crashes were most common during Mesa's peak AM and PM hours. The peak AM hour for these crashes was from 8:00AM to 9:00AM, and the peak PM hour was between 3:00PM and 4:00PM.

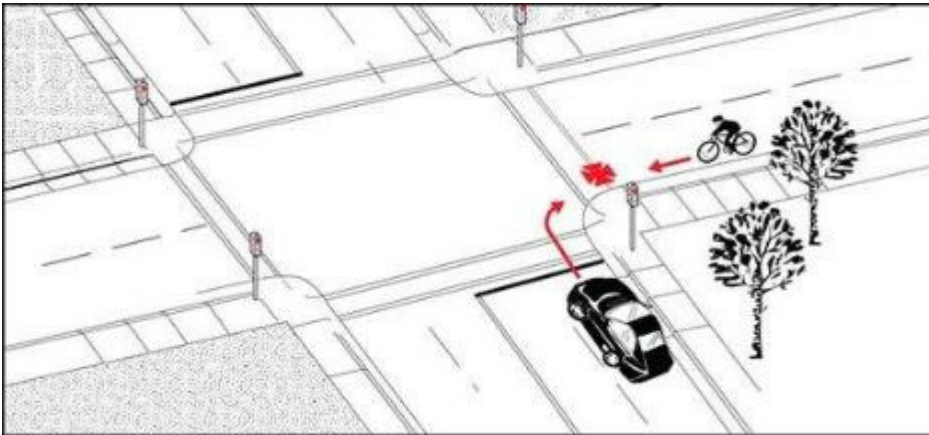
## Mesa 5-Year Trend: Bicycle Crashes by Time of Day

	2013	2014	2015	2016	2017	5-Year Total	% of Total
12:00 AM - 1:00 AM	0	0	0	0	0	0	0.0%
1:00 AM - 2:00 AM	0	0	0	1	0	1	0.1%
2:00 AM - 3:00 AM	0	0	0	0	0	0	0.0%
3:00 AM - 4:00 AM	0	0	0	0	1	1	0.1%
4:00 AM - 5:00 AM	2	1	0	0	1	4	0.5%
5:00 AM - 6:00 AM	1	5	1	4	1	12	1.4%
6:00 AM - 7:00 AM	8	5	5	4	9	31	3.7%
7:00 AM - 8:00 AM	11	8	8	11	8	46	5.5%
8:00 AM - 9:00 AM	12	8	8	15	18	61	7.3%
9:00 AM - 10:00 AM	1	5	10	8	9	33	4.0%
10:00 AM - 11:00 AM	6	6	7	6	3	28	3.4%
11:00 AM - 12:00 PM	15	11	6	8	6	46	5.5%
12:00 PM - 1:00 PM	9	6	7	17	14	53	6.4%
1:00 PM - 2:00 PM	10	5	5	13	7	40	4.8%
2:00 PM - 3:00 PM	18	8	6	15	12	59	7.1%
3:00 PM - 4:00 PM	23	20	17	11	26	97	11.7%
4:00 PM - 5:00 PM	16	26	18	13	14	87	10.5%
5:00 PM - 6:00 PM	14	12	8	12	8	54	6.5%
6:00 PM - 7:00 PM	18	10	7	14	14	63	7.6%
7:00 PM - 8:00 PM	11	13	7	12	9	52	6.3%
8:00 PM - 9:00 PM	6	6	6	6	2	26	3.1%
9:00 PM - 10:00 PM	6	3	3	2	4	18	2.2%
10:00 PM - 11:00 PM	2	3	2	3	4	14	1.7%
11:00 PM - 12:00 AM	1	2	0	0	2	5	0.6%
Total	190	163	131	175	172	831	

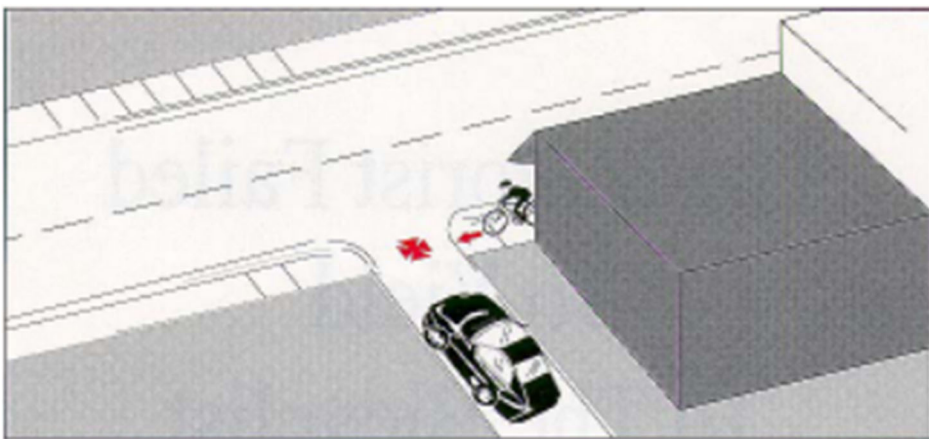
Analyzing the bicycle crash trend over the past five years shows that the peak hour for bicycle-related crashes is from 3:00PM to 4:00PM.

The following is a list of the most common crash types for bicycle-motorist collisions. They are ordered from highest to lowest and show the number of collisions of a certain type followed by the percentage of total crashes. Graphics sourced from Federal Highway Administration, *Bicycle Crash Types: A 1990's Informational Guide*. The most common crash types for bicycle-motorist collisions of 2017 were as follows:

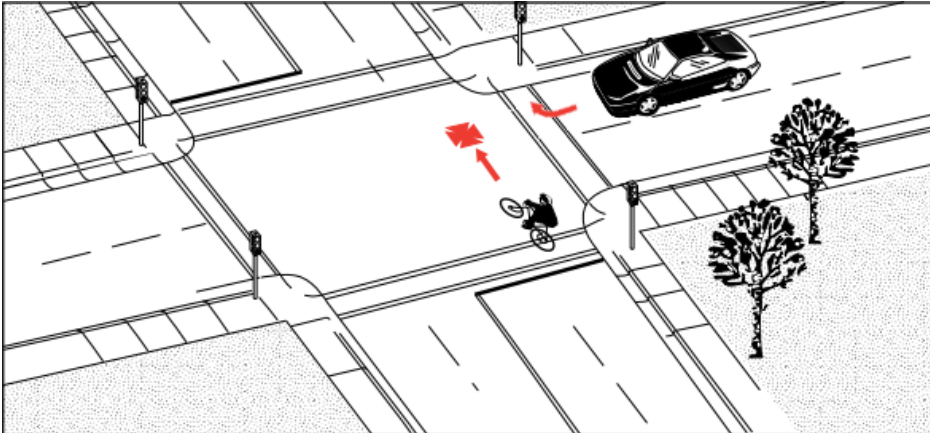
1. **Bike Ride into Intersection** – bicycle traveling against traffic: 52 (30%)



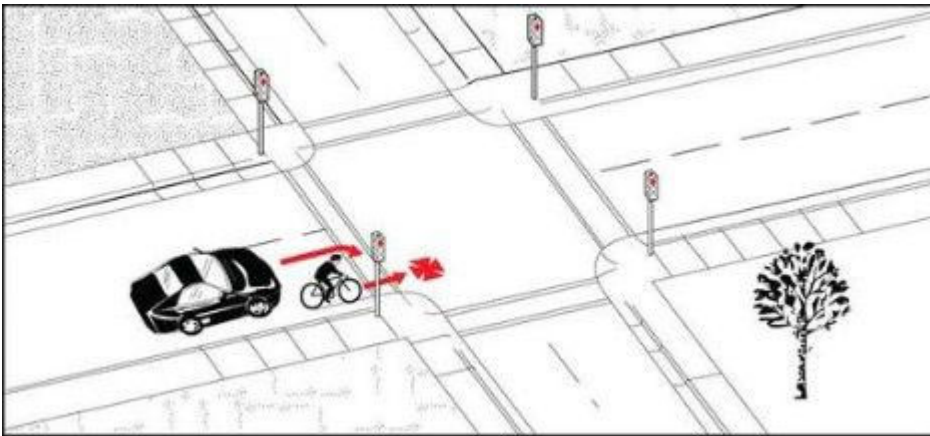
2. **Motorist Drive Out** – driveway or alley: 34 (20%)



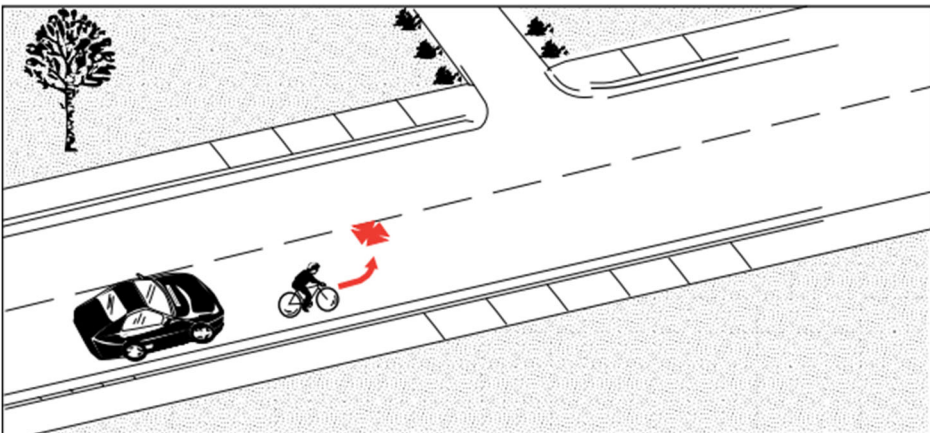
3. Motorist Right Turn – bicycle traveling with traffic: 18 (11%)



4. Motorist Right Hook - bicycle travelling in the same direction: 15 (9%)



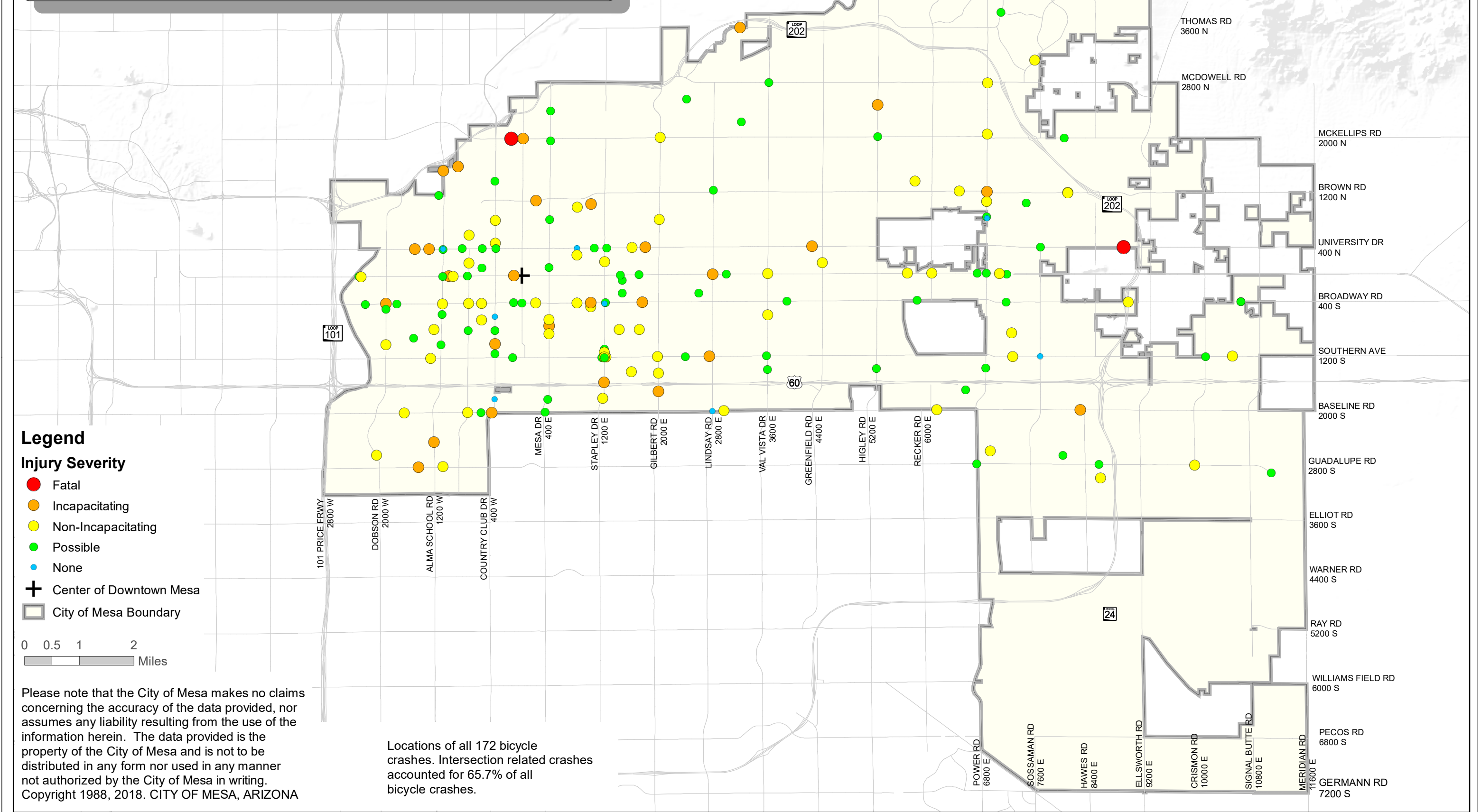
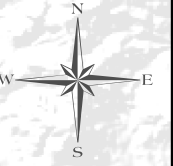
5. Bicyclist Left Turn into Traffic – motorist traveling parallel: 11 (6%)





# BICYCLE CRASH LOCATIONS

## 2017





# **SECTION 4:**

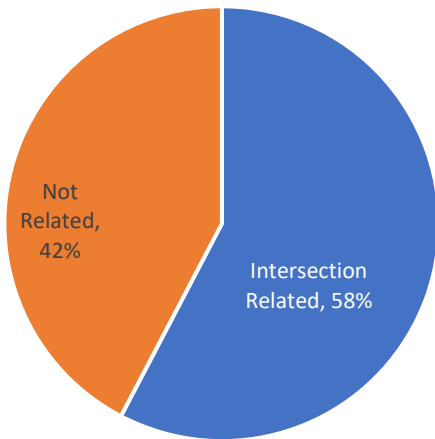
# **PEDESTRIAN CRASHES**

## Mesa 2017 Pedestrian Crashes: General View

Year	Ped Crashes	Total Crashes	Ped Crashes % Of Total	Mesa Population	Ped Crashes Per 100,000 Population	% Change From Previous Year
2001	112	9928	1.13%	416301	27	-
2002	122	9155	1.33%	427923	29	+6.0%
2003	116	8520	1.36%	435391	27	-6.5%
2004	126	9184	1.37%	443733	28	+6.6%
2005	109	9205	1.18%	450948	24	-14.9%
2006	102	8522	1.20%	456449	22	-7.5%
2007	120	7933	1.51%	460493	26	+16.6%
2008	104	5908	1.76%	463829	22	-14.0%
2009	102	5504	1.85%	467157	22	-2.6%
2010	79	5118	1.54%	440031	18	-17.8%
2011	98	5178	1.89%	444685	22	+22.8%
2012	120	5134	2.34%	451677	27	+20.6%
2013	103	5313	1.94%	457587	23	-15.3%
2014	72	5025	1.43%	464704	15	-31.2%
2015	68	4979	1.37%	471825	14	-7.0%
2016	96	5554	1.73%	475274	20	+40.2%
2017	104	5611	1.85%	496401	21	+3.7%

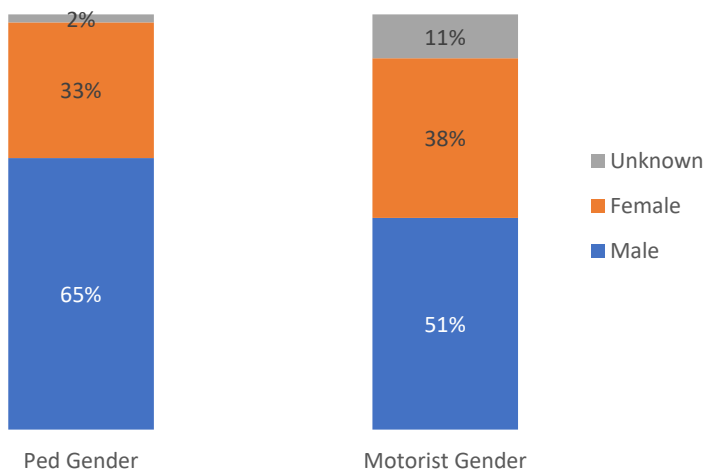
The City of Mesa had 104 pedestrian crashes in 2017, making up 1.9% of all crashes that year. The number of pedestrian crashes per 100,000 people was 12% higher than the five-year average of 19.

## Mesa 2017 Pedestrian Crashes: Intersection Relation



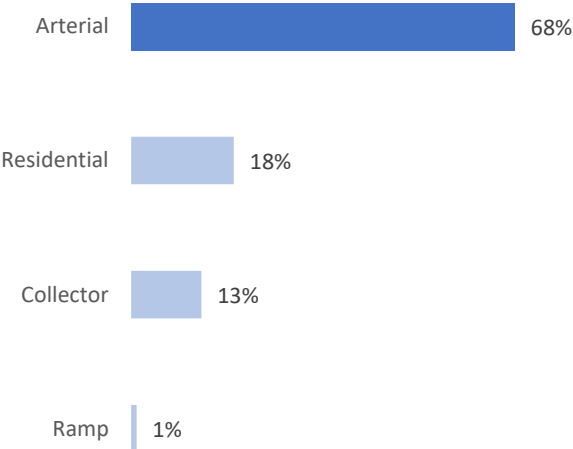
Of the 104 pedestrian crashes, about 60 were **intersection related**.

## Mesa 2017 Pedestrian Crash Gender

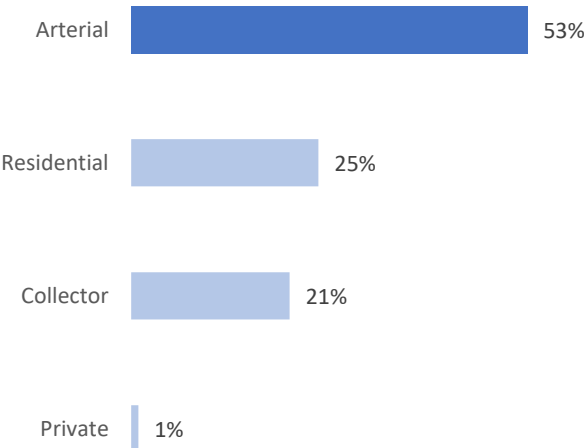


Data analysis of pedestrian crashes in 2017 showed that the persons involved in these collisions were mostly **male**.

### Mesa 2017 Pedestrian Crashes: On Street Classification

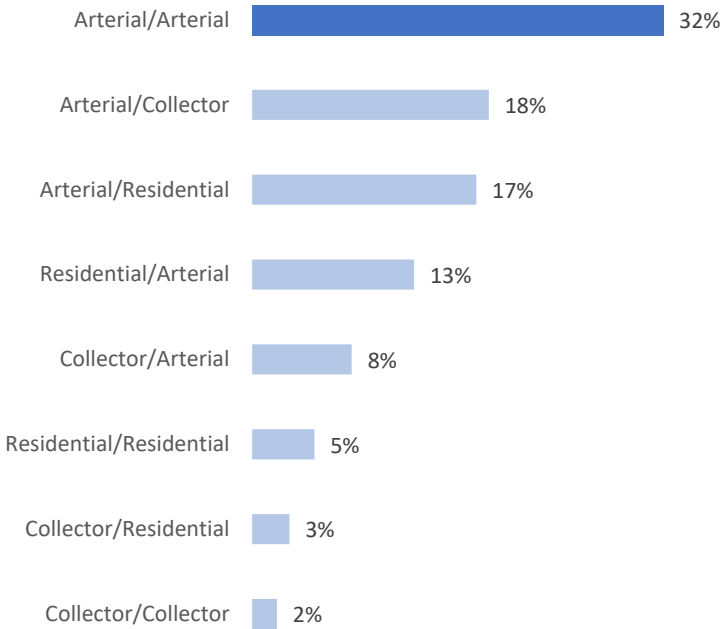


### Mesa 2017 Pedestrian Crashes: Cross Street Classification



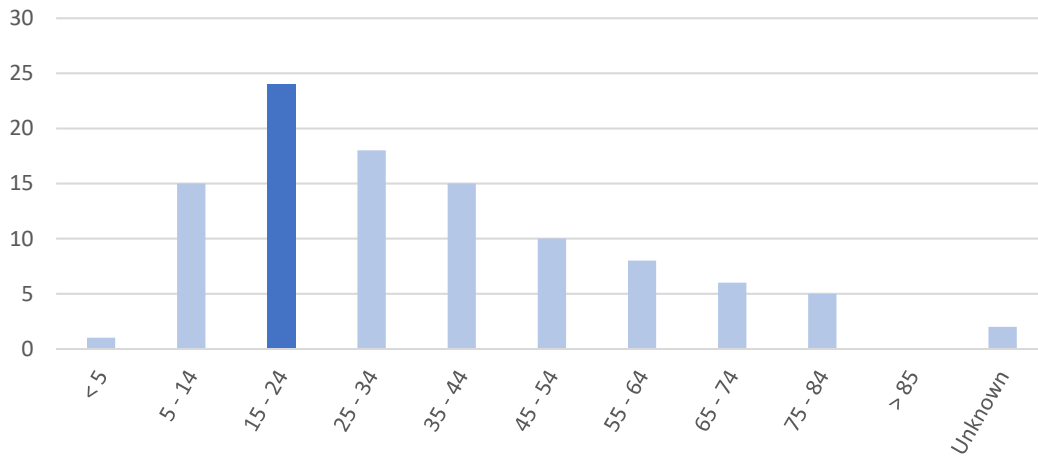
Of the 104 pedestrian crashes within Mesa 2017, 71 occurred along an **arterial** roadway, and the cross street was often an arterial road.

## Mesa 2017 Pedestrian Crashes: Intersection Classification



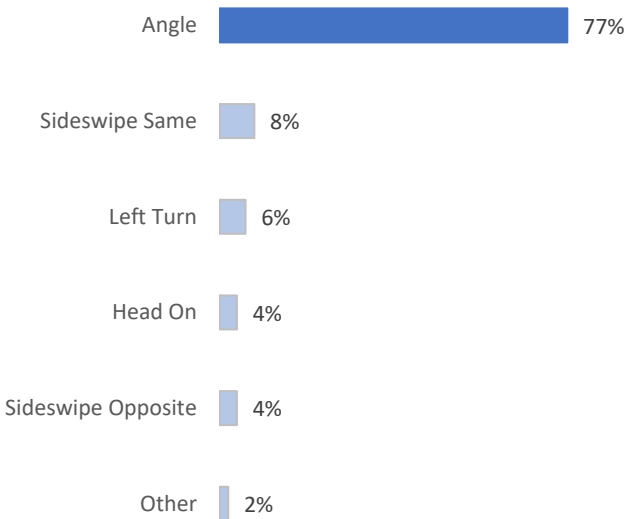
Arterial roads, whether on street or cross street, were involved in 88% of all pedestrian crashes.

## Mesa 2017 Pedestrian Crashes by Age



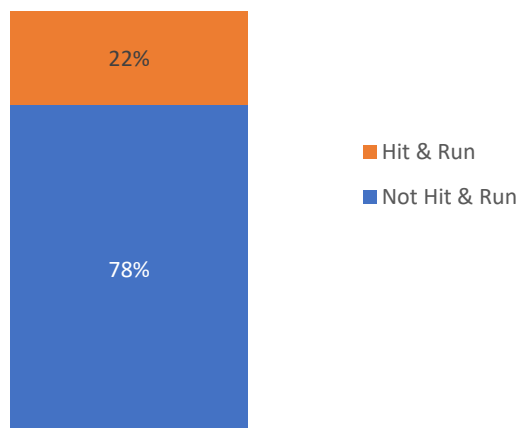
When analyzed by age group, most pedestrian crashes were among people aged **15 to 24 years old**. This group makes up the second-highest percent of the total population at nearly 14% but contributed to over 23% of the total pedestrian crashes.

## Mesa 2017 Pedestrian Crash Manner



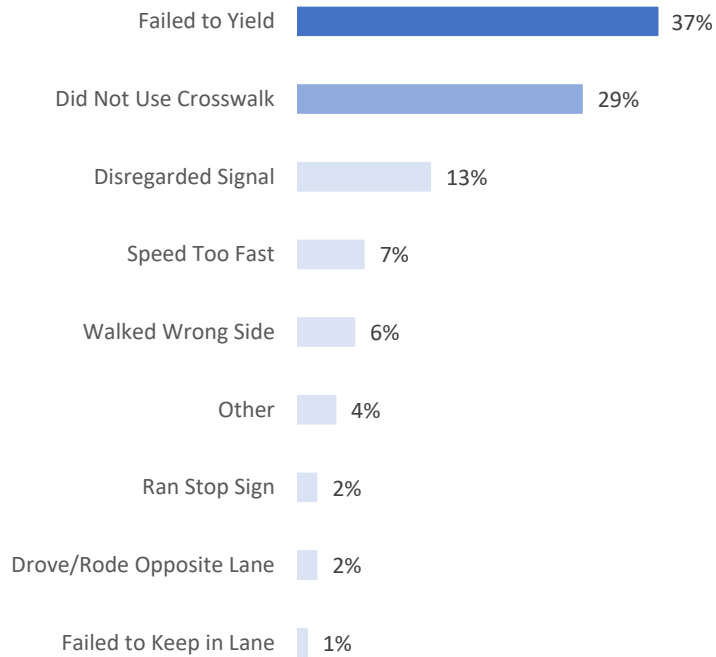
Over three-quarters of all pedestrian crashes were considered **angle crashes** with 80. These types of crashes were common at intersections and midblock.

### Mesa 2017 Pedestrian Crashes: Hit & Run



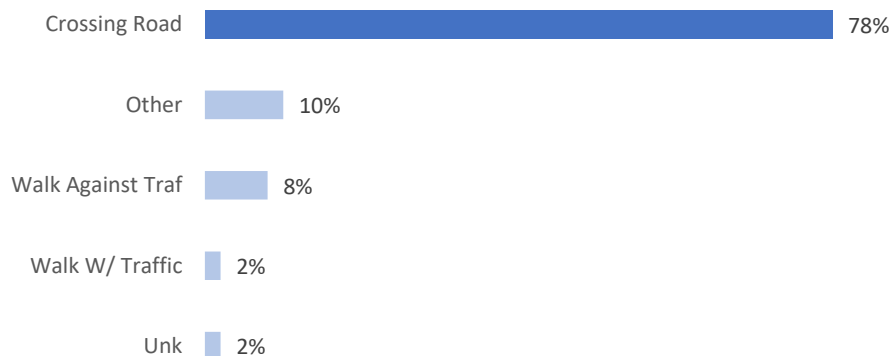
Slightly below the year before, 23 of the 104 pedestrian crashes were deemed **hit and run**.

## Mesa 2017 Pedestrian Crashes: Vehicle 1 Violation



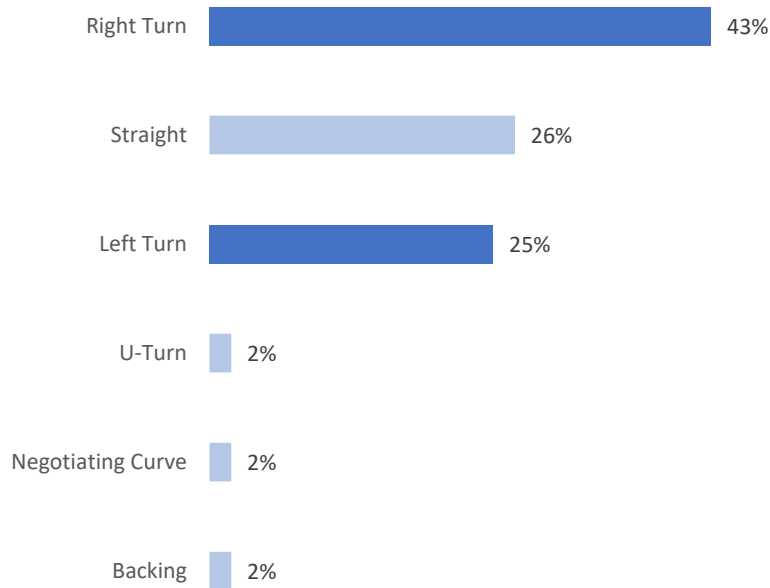
The cited violations of vehicle 1, inclusive of both pedestrians and drivers of motor vehicles, were mostly attributed to a **failure to yield**. In this category, there were 38 crashes. Another 30 crashes were caused when a pedestrian **did not use the crosswalk**.

## Mesa 2017 Pedestrian Crashes: Pedestrian At Fault Actions



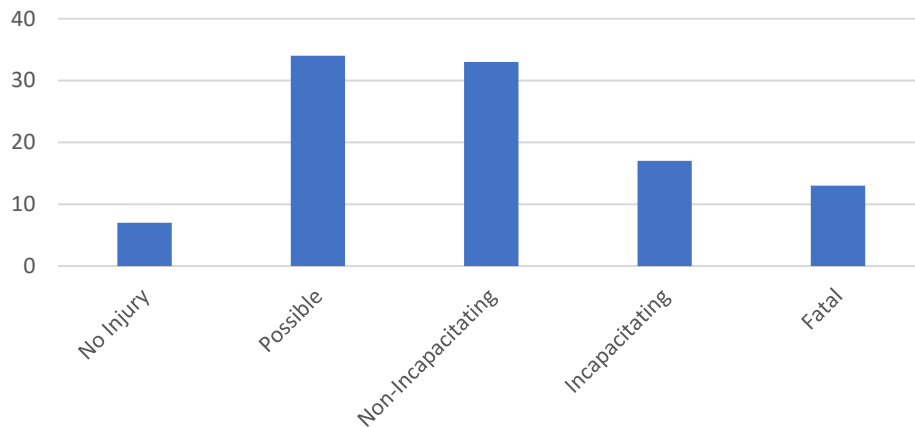
When a pedestrian was at fault, the most common action was **crossing the road**, with 40 cases.

## Mesa 2017 Pedestrian Crashes: Motorist at Fault Actions



When a motorist was at fault, left and right **turning actions** made up over two-thirds of the actions leading up to a crash with a pedestrian.

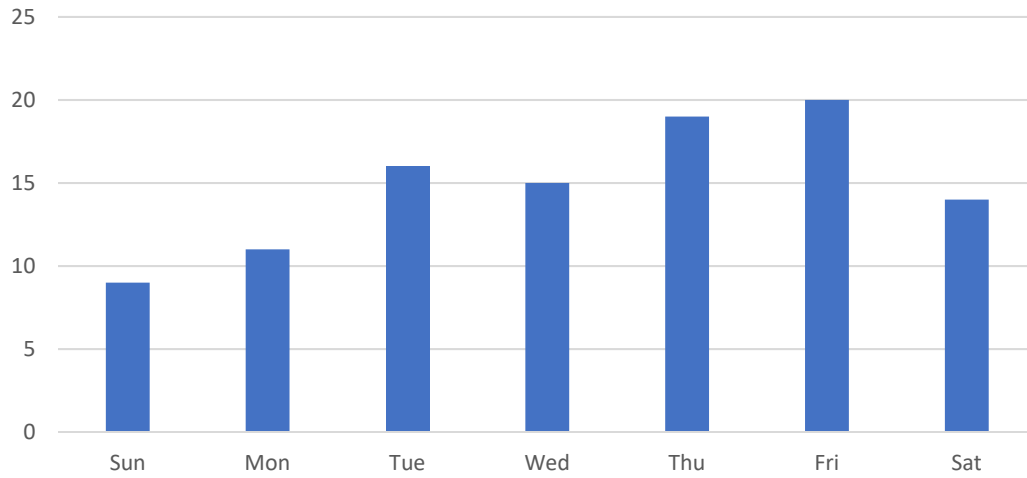
## Mesa 2017 Pedestrian Crashes: Injury Severity



There were 13 fatal pedestrian crashes and 17 serious injuries in 2017, totaling 29% of all pedestrian crashes.

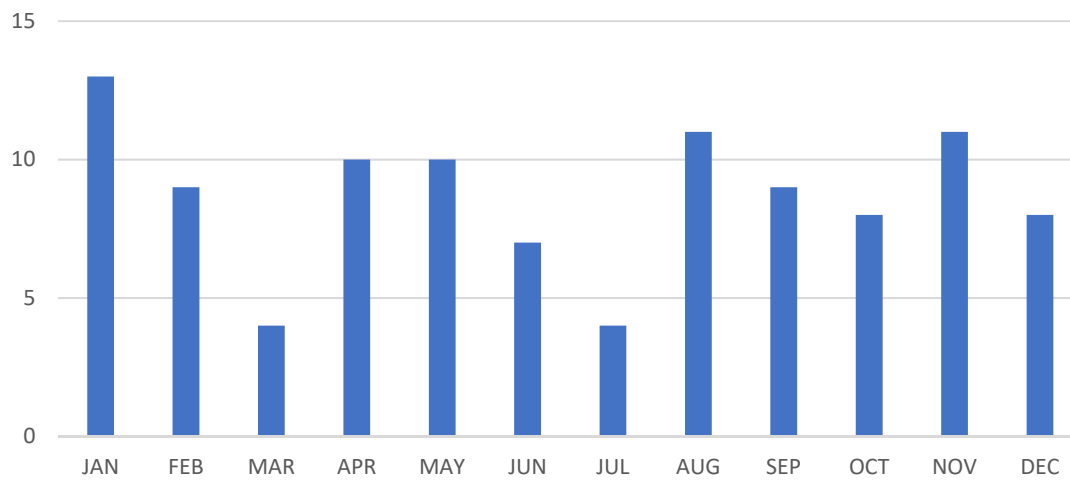


### Mesa 2017 Pedestrian Crashes by Day of Week



Pedestrian crashes occurred more frequently on Wednesdays, Thursdays, and Fridays than any other three-day period.

### Mesa 2017 Pedestrian Crashes by Month



Mesa pedestrian crashes in 2017 were highest in January and fluctuated throughout the year.

## Mesa 2017 Pedestrian Crashes by Time and Day of Week

Time	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
12:00 AM - 1:00 AM	0	0	2	0	0	0	0	2
1:00 AM - 2:00 AM	0	0	0	0	0	0	0	0
2:00 AM - 3:00 AM	0	0	0	0	0	0	0	0
3:00 AM - 4:00 AM	0	0	0	0	0	0	0	0
4:00 AM - 5:00 AM	0	0	0	0	1	0	0	1
5:00 AM - 6:00 AM	0	0	0	0	0	0	0	0
6:00 AM - 7:00 AM	0	0	1	1	0	0	0	2
7:00 AM - 8:00 AM	0	2	0	2	0	1	0	5
8:00 AM - 9:00 AM	1	1	1	0	1	0	0	4
9:00 AM - 10:00 AM	1	0	1	1	1	1	0	5
10:00 AM - 11:00 AM	0	0	0	1	0	1	0	2
11:00 AM - 12:00 PM	0	1	2	0	1	1	1	6
12:00 PM - 1:00 PM	0	0	0	1	2	0	0	3
1:00 PM - 2:00 PM	0	0	0	1	0	2	0	3
2:00 PM - 3:00 PM	2	0	1	1	1	0	1	6
3:00 PM - 4:00 PM	0	1	0	1	2	2	0	6
4:00 PM - 5:00 PM	0	2	2	2	1	1	1	9
5:00 PM - 6:00 PM	0	1	0	0	1	2	1	5
6:00 PM - 7:00 PM	2	1	1	1	0	4	3	12
7:00 PM - 8:00 PM	1	1	4	0	3	3	1	13
8:00 PM - 9:00 PM	1	1	0	2	3	0	1	8
9:00 PM - 10:00 PM	1	0	0	0	2	1	4	8
10:00 PM - 11:00 PM	0	0	0	0	0	1	0	1
11:00 PM - 12:00 AM	0	0	1	1	0	0	1	3
Total	9	11	16	15	19	20	14	104

2017 pedestrian crashes were most common between the evening hours of 6:00pm and 8:00PM.

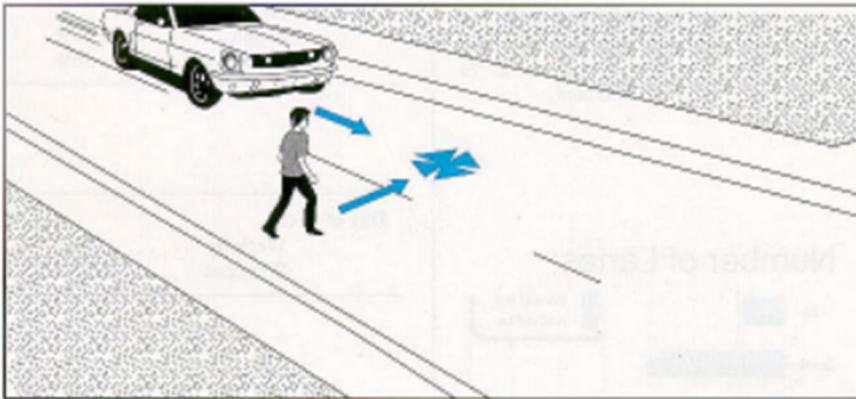
## Mesa 5-Year Trend: Pedestrian Crashes by Time of Day

	2013	2014	2015	2016	2017	5-Year Total	% of Total
12:00 AM - 1:00 AM	0	0	0	3	2	5	1.1%
1:00 AM - 2:00 AM	0	1	0	1	0	2	0.5%
2:00 AM - 3:00 AM	1	0	0	0	0	1	0.2%
3:00 AM - 4:00 AM	0	0	0	0	0	0	0.0%
4:00 AM - 5:00 AM	1	1	0	0	1	3	0.7%
5:00 AM - 6:00 AM	1	2	0	0	0	3	0.7%
6:00 AM - 7:00 AM	3	2	4	3	2	14	3.2%
7:00 AM - 8:00 AM	6	5	6	7	5	29	6.5%
8:00 AM - 9:00 AM	7	3	0	5	4	19	4.3%
9:00 AM - 10:00 AM	7	0	6	5	5	23	5.2%
10:00 AM - 11:00 AM	4	0	1	1	2	8	1.8%
11:00 AM - 12:00 PM	3	4	1	0	6	14	3.2%
12:00 PM - 1:00 PM	6	0	2	3	3	14	3.2%
1:00 PM - 2:00 PM	5	3	1	7	3	19	4.3%
2:00 PM - 3:00 PM	4	5	7	2	6	24	5.4%
3:00 PM - 4:00 PM	6	8	3	6	6	29	6.5%
4:00 PM - 5:00 PM	7	6	5	8	9	35	7.9%
5:00 PM - 6:00 PM	8	9	6	9	5	37	8.4%
6:00 PM - 7:00 PM	8	4	9	8	12	41	9.3%
7:00 PM - 8:00 PM	12	7	3	6	13	41	9.3%
8:00 PM - 9:00 PM	2	6	3	8	8	27	6.1%
9:00 PM - 10:00 PM	6	2	4	7	8	27	6.1%
10:00 PM - 11:00 PM	3	3	5	4	1	16	3.6%
11:00 PM - 12:00 AM	3	1	2	3	3	12	2.7%
Total	103	72	68	96	104	443	

Analyzing the 2017 pedestrian crash trend within Mesa revealed a later peak hour than bicycle crashes. The peak hour was tied between the following two ranges: 6:00PM to 7:00PM and 7:00PM to 8:00PM.

The following is a list of the most common crash types for pedestrian-motorist collisions. They are ordered from highest to lowest and show the number of collisions of a certain type, followed by the percentage of total crashes. Graphics sourced from Federal Highway Administration, *Pedestrian Crash Types: A 1990's Informational Guide*. The most common crash types for pedestrian-motorist collisions of 2017 were as follows:

1. Pedestrian Walk Out Midblock – 31 (30%)



2. Motorist Right Turn – perpendicular pedestrian travel (either direction): 28 (27%)



3. Pedestrian Dash Out – jaywalking or against the light: 14 (13%)



4. Motorist Left Turn – parallel pedestrian travel (either direction): 12 (12%)



5. Unusual Circumstance: 5 (5%)

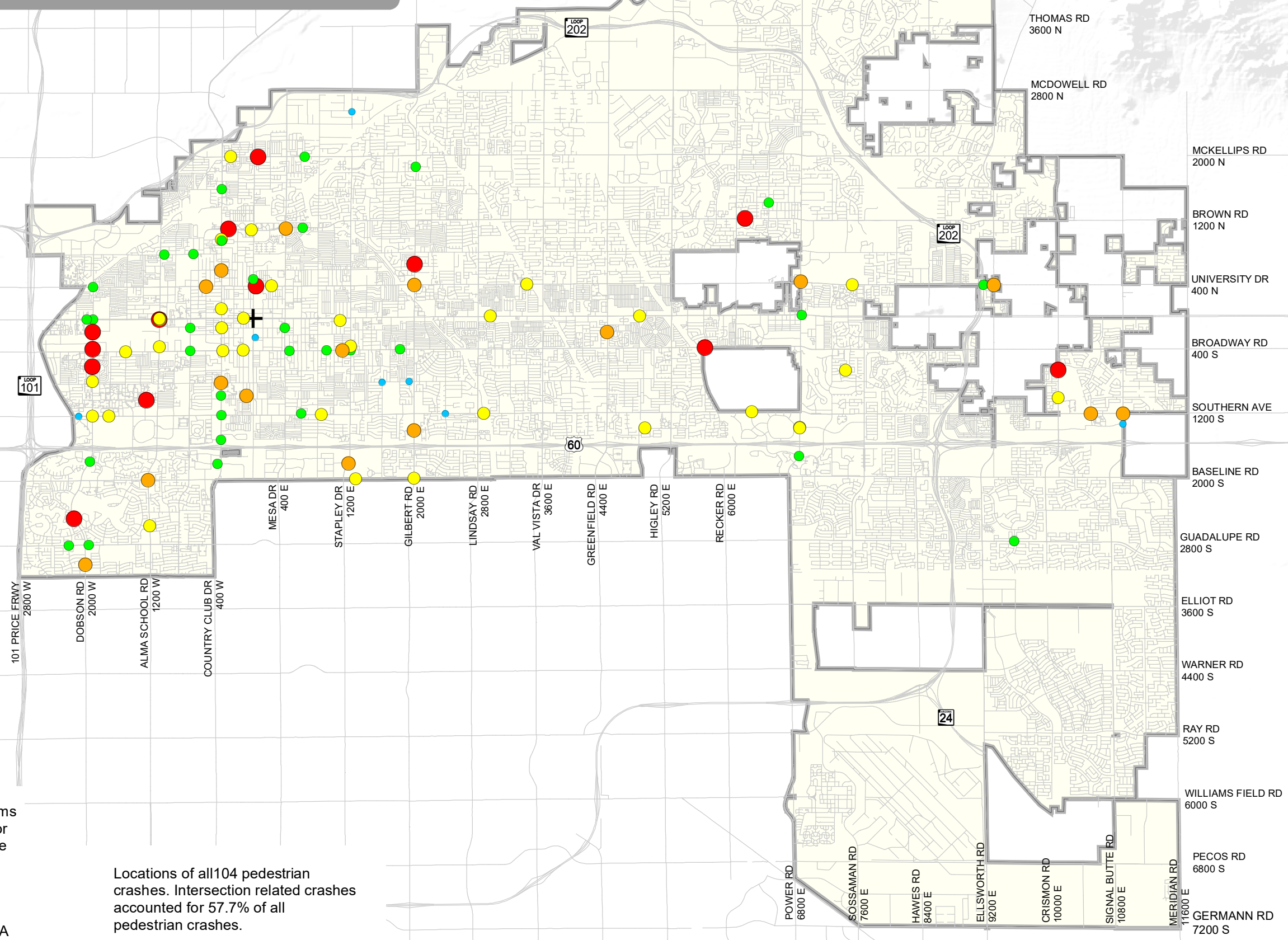
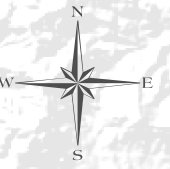
[No Graphic]





# PEDESTRIAN CRASH LOCATIONS

## 2017



**Legend**

**Injury Severity**

- Fatal
- Incapacitating
- Non-Incapacitating
- Possible
- None
- Center of Downtown Mesa
- City of Mesa Boundary



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Locations of all 104 pedestrian crashes. Intersection related crashes accounted for 57.7% of all pedestrian crashes.