

# Road Services Division 2023 Collision Data Report



**King County**

Department of Local Services  
**Road Services Division**  
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## INTRODUCTION

The King County Department of Local Services is pleased to present the 2023 Collision Data Report. This report is prepared by the Road and Traffic Engineering unit of the Engineering Services section of the Road Services Division.

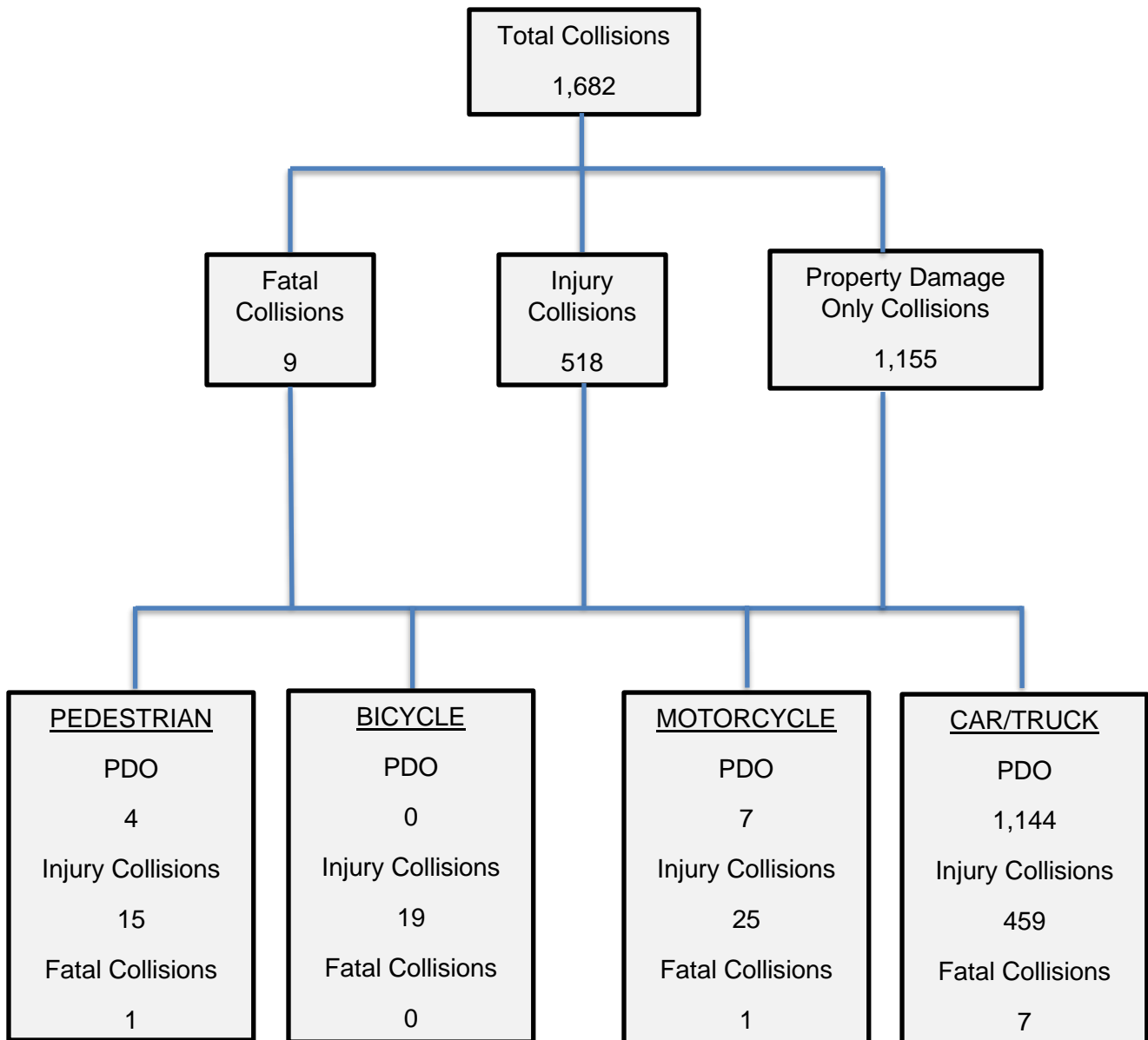
This report was prepared to provide collision and safety information to elected officials and King County staff.

The collision information provided in this report comes from the Washington State Department of Transportation (WSDOT) Collision Location Access Software (CLAS) database as of June 2024. This report covers only those collisions that occurred on a county-maintained roadway within unincorporated King County for which a State of Washington Police Traffic Collision Report was filed.

Other information used in this report is courtesy of the State of Washington's Office of Financial Management, the County Road Administration Board (CRAB), the Washington State Department of Transportation, the King County Executive's Office, the Road Services Division's Engineering Services Section and Strategic Business and Operations Section.

# 1.0 EXECUTIVE SUMMARY

During 2023, a total of 1,682 collisions were reported on King County maintained roadways. This included 9 fatal, 518 injury, and 1,155 property damage only collisions. The total economic cost of these collisions is estimated at \$50.7 million.



## 1.1 Six Year Trends

Since 2018, population and maintained road miles in unincorporated King County has remained steady. The population increased slightly from 247,200 to 249,060 (0.75 percent), while the number of maintained roadway miles remained the same. The number of collisions however, decreased by 20 percent from 2,101 to 1,682. This reduction in crash activity is at least partially related to a decrease in traffic region-wide beginning in March 2020 as a result of the Covid-19 pandemic. The population continues to increase within the Seattle Metropolitan region, which includes Snohomish, King, and Pierce counties. According to Washington State’s Office of Financial Management, the Seattle Metropolitan area has added over 273,000 new residents since 2018. As traffic patterns return to normal, the number of crashes and amount of daily congestion are increasing throughout the region.

While the number of total collisions rose slightly from 2022 to 2023, the proportions of severity has remained similar. Fatal collisions decreased, now making up less than one percent of the total, approximately one-third were injury collisions, and the remaining two-thirds were property damage only collisions.

Nearly two-thirds of the 2023 collisions were either fixed object (28%), rear-end (19%) or entering an intersection at an angle (18%). Nearly two-thirds of the fixed object crashes involved striking a roadway ditch, utility pole, tree, fence, or guardrail. There was a total of five fatalities involving fixed objects, comprising 56 percent of all fatalities.

Pedestrian and bicycle collisions made up less than two percent of all collisions. There were 19 crashes involving bicyclists, an increase since 2022, and 20 crashes involving pedestrians, down from 25 in 2022.

The percentage of crashes involving motorists driving under the influence (DUI) increased by 0.6 percent from 2022 to 2023. During 2023, there were a total of 101 DUI involved collisions (6.0%) compared to 85 (5.4%) during 2022. Of the 101 collisions, three were fatal, 38 incurred injuries, and 60 involved property damage only.

**Table 1.1.1  
Number of Collisions  
By Severity**

Year	PDO*	Percentage	Injury	Percentage	Fatal	Percentage	Total
2018	1,333	70.8%	540	28.7%	11	0.6%	1,884
2019	1,243	68.2%	571	31.3%	10	0.5%	1,824
2020	963	68.7%	425	30.3%	14	1.0%	1,402
2021	1,086	68.8%	482	30.5%	12	0.8%	1,580
2022	1,087	68.6%	474	29.9%	23	1.5%	1,584
2023	1,155	68.6%	518	30.8%	9	0.5%	1,682

\*Property Damage Only

1.2 Collision Rates and Road Miles

Table 1.2.1  
Road Miles By  
Federal Functional Classification (FFC)

Federal Functional Class (FFC) Description	FFC	Road Miles	Annual Average Daily Traffic Volume (AADT)	Annual Million Vehicle Miles Traveled (VMT)
Rural Minor Arterial	6	41	5,000	76
Rural Major Collector	7	96	3,100	107
Rural Minor Collector	8	105	1,800	69
Rural Local Access	9	389	700	94
Urban Principal Arterial	14	37	15,400	208
Urban Minor Arterial	16	72	9,400	248
Urban Collector	17	78	3,400	97
Urban Minor Collector	18	20	2,000	15
Urban Local Access	19	630	800	178
<b>Total</b>		<b>1,468</b>		<b>1,091</b>
<b>Overall Weighted Average</b>			<b>2,040</b>	

Note: Average Annual Daily Traffic Volumes were derived using a three-year sampling of traffic count data (2021-2023) and averaging the daily totals.

**Table 1.2.2**  
**Collision Rate per Million Vehicle Miles Traveled**

Year	Total Collision Reports	Annual Average Daily Traffic Volumes (AADT)	Maintained Road Miles	Annual Million Miles Driven	Collision Rate
2018	1,884	1,844	1,466	987	1.91
2019	1,824	2,018	1,466	1,080	1.69
2020	1,402	2,042	1,466	1,093	1.28
2021	1,580	2,080	1,467	1,115	1.42
2022	1,584	2,020	1,468	1,084	1.46
2023	1,682	2,040	1,468	1,091	1.54

**Table 1.2.3**  
**Collision Rate per 100,000 Population**

Year	Population	All Collision Types		Pedestrian		Bicycle	
		# of Collisions	Collisions per 100,000 Population	# of Collisions	Collisions per 100,000 Population	# of Collisions	Collisions per 100,000 Population
2018	247,200	1,884	762.14	21	8.50	13	5.26
2019	248,300	1,824	734.60	27	10.87	14	5.64
2020	249,100	1,402	562.83	24	9.63	18	7.23
2021	247,400	1,580	638.64	22	8.89	13	5.25
2022	248,200	1,584	638.20	25	10.07	13	5.24
2023	249,060	1,682	675.34	20	8.03	19	7.63



## 2.0 COLLISION TRENDS

### 2.1 Fatality Rates and Fatal Collision Rates

Table 2.1.1  
Fatality Rate per 100,000 Population

Year	Population	All Collision Types		Pedestrian		Bicycle	
		# of Fatalities	Fatalities per 100,000 population	# of Fatalities	Fatalities per 100,000 population	# of Fatalities	Fatalities per 100,000 population
2018	247,200	12	4.85	0	0.00	1	0.40
2019	248,300	10	4.03	1	0.40	0	0.00
2020	249,100	14	5.62	4	1.61	0	0.00
2021	247,400	14	5.66	1	0.40	0	0.00
2022	248,200	24	9.67	4	1.61	0	0.00
2023	249,060	10	4.02	1	0.40	0	0.00

Table 2.1.2  
Fatal Collision Rate per 100,000 Population

Year	Population	All Collision Types		Pedestrian		Bicycle	
		# of Fatal Collisions	Fatal Collisions per 100,000 Population	# of Fatal Collisions	Fatal Collisions per 100,000 Population	# of Fatal Collisions	Fatal Collisions per 100,000 Population
2018	247,200	11	4.45	0	0.00	1	0.40
2019	248,300	10	4.03	1	0.40	0	0.00
2020	249,100	14	5.62	4	1.61	0	0.00
2021	247,400	12	4.85	1	0.40	0	0.00
2022	248,200	23	9.27	4	1.61	0	0.00
2023	249,060	9	3.61	1	0.40	0	0.00

Table 2.1.3  
Fatality Rate per  
100 Million Vehicle Miles Traveled

Year	Number of Fatalities	Maintained Road Miles	Annual 100 Million Miles Traveled	Fatality Rate per 100 Million Miles Traveled
2018	12	1,466	9.87	1.22
2019	10	1,466	10.80	0.93
2020	14	1,466	10.93	1.28
2021	14	1,467	11.15	1.26
2022	24	1,468	10.84	2.21
2023	10	1,468	10.91	0.92

Table 2.1.4  
Fatal Collision Rate per  
100 Million Vehicle Miles Traveled

Year	Number of Fatal Collisions	Maintained Road Miles	Annual 100 Million Miles Traveled	Fatal Collision Rate per 100 Million Miles Traveled
2018	11	1,466	9.87	1.11
2019	10	1,466	10.80	0.93
2020	14	1,466	10.93	1.28
2021	12	1,467	11.15	1.08
2022	23	1,468	10.84	2.12
2023	9	1,468	10.91	0.82

## 2.2 US, State, and Unincorporated King County Collision, Fatal Collision and Fatality Rates

Table 2.2.1  
US, State, and Unincorporated King County Collision Rates  
per 100,000 Population

Year	Unincorporated King County			Washington State			United States		
	Population	Collisions	Collisions per 100,000 Population	Population	Collisions	Collisions per 100,000 Population	Population	Collisions	Collisions per 100,000 Population
2018	247,200	1,884	762	7,427,500	115,994	1,562	327,167,000	6,734,000	2,058
2019	248,300	1,824	735	7,546,400	111,585	1,479	328,240,000	6,756,000	2,058
2020	249,100	1,402	563	7,656,200	86,274	1,126	329,484,000	5,251,000	1,594
2021	247,400	1,580	639	7,767,000	103,289	1,330	331,894,000	6,103,000	1,839
2022	248,200	1,584	638	7,864,400	103,296	1,313	333,271,000	5,930,000	1,779
2023	249,060	1,682	675	7,951,200	104,472	1,314	334,915,000	Not Available	Not Available

Table 2.2.2  
US, State, and Unincorporated King County Fatal Collision and  
Fatality Rates per 100,000 Population

Year	Unincorporated King County			Washington State			United States		
	Population	Fatal Collisions per 100,000 Population	Fatalities per 100,000 Population	Population	Fatal Collisions per 100,000 Population	Fatalities per 100,000 Population	Population	Fatal Collisions per 100,000 population	Fatalities per 100,000 population
2018	247,200	4.45	4.85	7,427,500	6.65	7.35	327,167,000	10.29	11.17
2019	248,300	4.03	4.03	7,546,400	6.63	6.96	328,240,000	10.13	11.00
2020	249,100	5.62	5.62	7,656,200	6.82	7.26	329,484,000	10.85	11.78
2021	247,400	4.85	5.66	7,767,000	7.67	8.54	331,894,000	11.89	12.9
2022	248,200	9.27	9.67	7,864,400	8.77	9.31	333,271,000	11.77	12.76
2023	249,060	3.62	4.02	7,951,200	9.13	10.10	334,915,000	Not Available	Not Available

Source: Washington State Department of Transportation and the National Highway Traffic Safety Administration

**Table 2.2.3**  
**US, State, and Unincorporated King County**  
**Collision Rates per Million Vehicle Miles Traveled (VMT)**

Year	Unincorporated King County			Washington State			United States		
	Million VMT	Collisions	Collisions per Million VMT	Million VMT	Collisions	Collisions per Million VMT	100 Million VMT	Collisions	Collisions per Million VMT
2018	987	1,884	1.91	62,367	115,994	1.86	32,255	6,734,000	2.09
2019	1,080	1,824	1.69	62,537	111,585	1.78	32,691	6,756,000	2.07
2020	1,093	1,402	1.28	53,512	86,274	1.61	28,297	5,251,000	1.86
2021	1,115	1,580	1.42	57,797	103,289	1.79	31,324	6,103,000	1.95
2022	1,084	1,584	1.46	58,483	103,296	1.77	31,962	5,930,000	1.86
2023	1,091	1,682	1.54	59,804	104,472	1.75	32,637	Not Available	Not Available

**Table 2.2.4**  
**US, State, and Unincorporated King County Fatal Collision**  
**and Fatality Rates per 100 Million Vehicle Miles Traveled (VMT)**

Year	Unincorporated King County			Washington State			United States		
	100 Million VMT	Fatal Collision Rate per 100 Million VMT	Fatality Rate per 100 Million VMT	100 Million VMT	Fatal Collision Rate per 100 Million VMT	Fatality Rate per 100 Million VMT	100 Million VMT	Fatal Collision Rate per 100 Million VMT	Fatality Rate per 100 Million VMT
2018	9.87	1.11	1.22	624	0.79	0.88	32,255	1.03	1.12
2019	10.80	0.93	0.93	625	0.83	0.87	32,691	1.02	1.10
2020	10.93	1.28	1.28	535	1.00	1.06	28,297	1.26	1.37
2021	11.15	1.08	1.26	578	1.03	1.15	31,324	1.26	1.37
2022	10.84	2.12	2.21	584	1.12	1.24	31,962	1.23	1.33
2023	10.91	0.82	0.92	598	1.21	1.34	32,637	Not Available	Not Available

Source: Washington State Department of Transportation, National Highway Traffic Safety Administration, and Federal Highway Administration

## 2.3 Urban versus Rural Roads - Fatal Collision and Fatality Rates

**Table 2.3.5**  
**Urban versus Rural Roads in Unincorporated King County**  
**Fatal Collision and Fatality Rates per 100,000 Population**

Year	Urban Roads in Unincorporated King County					Rural Roads in Unincorporated King County				
	Population	# of Fatal Collisions	# of Fatalities	Fatal Collisions per 100,000 Population	Fatalities per 100,000 Population	Population	# of Fatal Collisions	# of Fatalities	Fatal Collisions per 100,000 Population	Fatalities per 100,000 Population
2018	120,500	7	8	5.81	6.64	126,700	4	4	3.16	3.16
2019	121,000	6	6	4.96	4.96	127,300	4	4	3.14	3.14
2020	121,400	10	10	8.24	8.24	127,700	4	4	3.13	3.13
2021	120,600	5	5	4.15	4.15	126,800	7	9	5.52	7.10
2022	121,000	19	20	15.7	16.5	127,200	4	4	3.14	3.14
2023	121,400	7	7	5.77	5.77	127,660	2	3	1.57	2.35

**Table 2.3.6**  
**Urban versus Rural Roads in Unincorporated King County**  
**Fatal Collision Rates per 100 Million Vehicle Miles Traveled (VMT)**

Year	Fatal Collisions			Maintained Road Miles			Annual 100 Million VMT			Fatal Collision Rate per 100 Million VMT		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2018	7	4	11	836	630	1,466	7.24	2.63	9.87	0.97	1.52	1.11
2019	6	4	10	835	631	1,466	7.81	2.99	10.80	0.77	1.34	0.93
2020	10	4	14	836	630	1,466	7.69	3.24	10.93	1.30	1.23	1.28
2021	5	7	12	837	630	1,467	7.94	3.21	11.15	0.63	2.18	1.08
2022	19	4	23	837	631	1,468	7.64	3.20	10.84	2.49	1.25	2.12
2023	7	2	9	837	631	1,468	7.45	3.46	10.91	0.94	0.58	0.82

**Table 2.3.7**  
**Urban versus Rural Roads in Unincorporated King County**  
**Fatality Rates per 100 Million Vehicle Miles Traveled (VMT)**

Year	Fatalities			Maintained Road Miles			Annual 100 Million VMT			Fatalities per 100 Million VMT		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2018	8	4	12	836	630	1,466	7.24	2.63	9.87	1.10	1.52	1.22
2019	6	4	10	835	631	1,466	7.81	2.99	10.80	0.77	1.34	0.93
2020	10	4	14	836	630	1,466	7.69	3.24	10.93	1.30	1.23	1.28
2021	5	9	14	837	630	1,467	7.94	3.21	11.15	0.63	2.80	1.26
2022	20	4	24	837	631	1,468	7.64	3.20	10.84	2.62	1.25	2.21
2023	7	3	10	837	631	1,468	7.45	3.46	10.91	0.94	0.87	0.92

**Table 2.3.8**  
**Urban versus Rural Collision Rates**  
**Per Million Vehicle Miles Traveled (VMT)**

Year	Number of Collisions			Maintained Road Miles			Annual Million VMT			Collisions per Million VMT		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2018	1,514	370	1,884	836	630	1,466	724	263	987	2.09	1.41	1.91
2019	1,485	339	1,824	835	631	1,466	781	299	1,080	1.90	1.13	1.69
2020	1,094	308	1,402	836	630	1,466	769	324	1,093	1.42	0.95	1.28
2021	1,243	337	1,580	837	630	1,467	794	321	1,115	1.57	1.05	1.42
2022	1,256	328	1,584	837	631	1,468	764	320	1,084	1.64	1.02	1.46
2023	1,351	331	1,682	837	631	1,468	745	346	1,091	1.61	0.96	1.54

## 2.4 Collisions by Road Classification

Table 2.4.9  
Collisions by King County Road Classification

Year	Principal Arterial	Minor Arterial	Collector	Local Access	Total
2018	475	586	437	386	1,884
2019	481	519	433	391	1,824
2020	334	380	376	312	1,402
2021	414	485	371	310	1,580
2022	396	447	407	334	1,584
2023	397	543	419	323	1,682

Table 2.4.2  
Collisions by Federal Functional Classification

	Federal Functional Classification									Total
	Rural				Urban					
	Minor Arterial	Major Collector	Minor Collector	Local Access	Principal Arterial	Minor Arterial	Major Collector	Minor Collector	Local Access	
Year	6	7	8	9	14	16	17	18	19	
2018	86	125	88	71	475	500	202	22	315	1,884
2019	84	122	78	55	481	435	214	19	336	1,824
2020	69	101	83	55	334	311	172	20	257	1,402
2021	96	122	69	50	414	389	170	10	260	1,580
2022	79	113	76	58	396	367	197	21	275	1,584
2023	90	119	80	42	397	453	203	17	281	1,682

## 3.0 COLLISION TYPES

### 3.1 Collision Type and Severity

Table 3.1.1  
Collisions by Collision Type

Collision Type	2018	2019	2020	2021	2022	2023
Fixed Object	548	473	459	476	453	469
Rear - End	388	377	202	289	252	316
Entering at Angle	348	364	244	294	295	304
Left Turn	120	118	87	102	114	121
Hit Parked Car	142	148	128	136	148	115
Sideswipe	126	105	90	97	121	114
Head On	24	35	22	21	28	40
Animal	32	23	24	20	33	39
Vehicle Overturned	29	24	26	25	22	32
Pedestrian	21	27	24	20	25	20
Right Turn	16	25	14	11	11	20
U-Turn	29	19	20	12	20	20
Bicycle	13	14	18	13	13	19
Other Object	10	15	22	21	12	15
Leaving Parked Position	9	16	3	5	6	14
Backing	13	17	5	10	14	11
Other	15	14	9	16	11	10
Non-Collision	1	10	5	12	6	3
<b>Totals</b>	<b>1,884</b>	<b>1,824</b>	<b>1,402</b>	<b>1,580</b>	<b>1,584</b>	<b>1,682</b>



Table 3.1.2  
Fatal Collisions by Collision Type

Collision Type	2018	2019	2020	2021	2022	2023
Fixed object	4	4	3	6	9	5
Head on	1	2	2	0	3	3
Pedestrian	0	1	4	1	4	1
Bicycle	1	0	0	0	0	0
Entering at angle	2	1	0	0	0	0
Hit Parked Car	0	0	0	0	0	0
Left Turn	0	1	0	0	4	0
Non-Collision	0	0	0	1	0	0
Other	1	0	3	0	0	0
Rear - end	1	0	1	1	0	0
Right Turn	1	0	0	0	0	0
Sideswipe	0	0	0	3	1	0
Vehicle overturned	0	1	1	0	2	0
<b>Totals</b>	<b>11</b>	<b>10</b>	<b>14</b>	<b>12</b>	<b>23</b>	<b>9</b>

**Table 3.1.3**  
**2023 Collisions by Collision Type and Severity**

Collision Type	PDO	Injury	Fatal	Total	Percentage
Fixed object	342	122	5	469	27.9%
Rear - end	219	97	0	316	18.8%
Entering at angle	189	115	0	304	18.1%
Left turn	68	53	0	121	7.2%
Hit Parked Car	106	9	0	115	6.8%
Sideswipe	88	26	0	114	6.8%
Head on	17	20	3	40	2.4%
Animal	37	2	0	39	2.3%
Vehicle overturned	9	23	0	32	1.9%
Pedestrian	4	15	1	20	1.2%
Right Turn	17	3	0	20	1.2%
U-Turn	14	6	0	20	1.2%
Bicycle	0	19	0	19	1.1%
Other Object	13	2	0	15	0.9%
Leaving Parked Position	12	2	0	14	0.8%
Backing	9	2	0	11	0.7%
Other	9	1	0	10	0.6%
Non-Collision	2	1	0	3	0.2%
<b>Total</b>	<b>1,155</b>	<b>518</b>	<b>9</b>	<b>1,682</b>	<b>100%</b>

Table 3.1.4  
2023 Fixed Object Collisions  
By First Object Struck and Severity

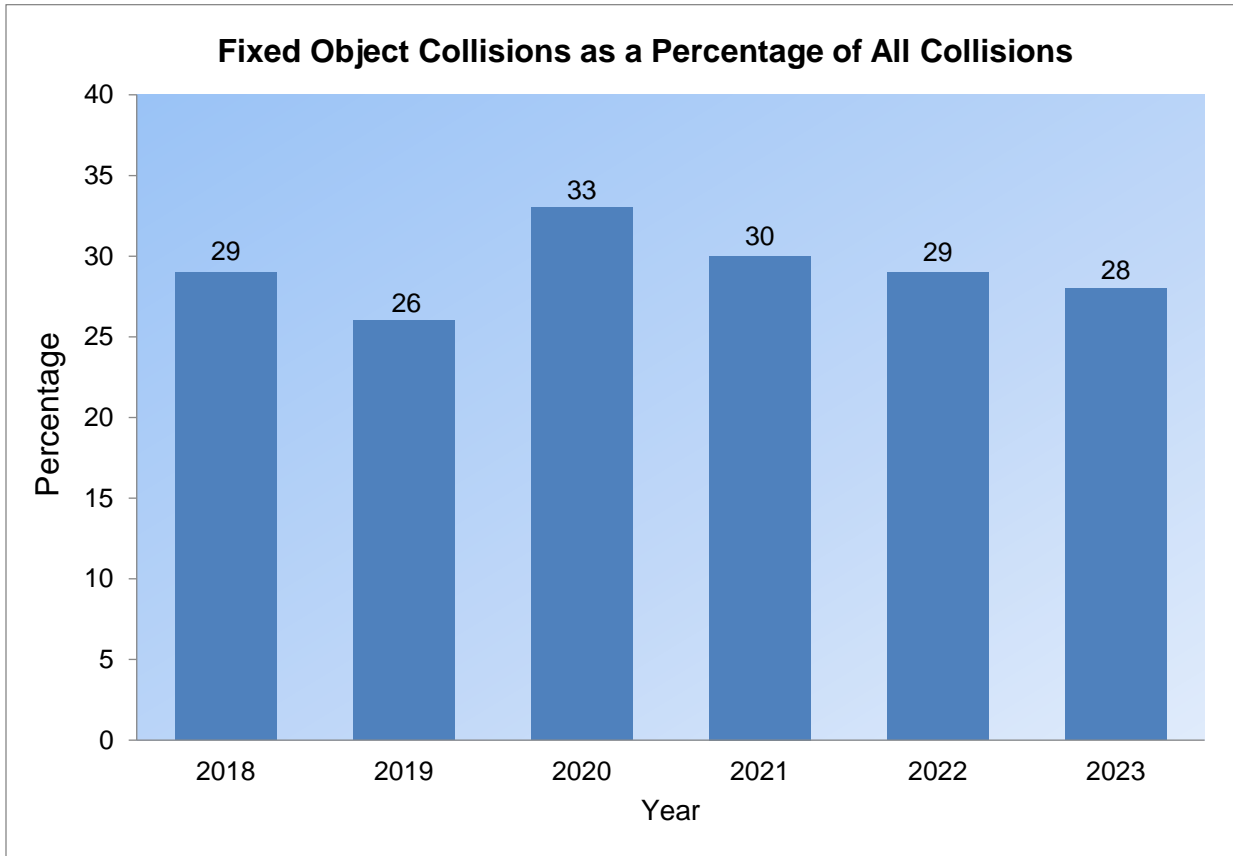
Object Struck	PDO	Injury	Fatality	Total	% of Total
Boulder (stationary)	2	4	0	6	1.3%
Bridge Abutment	1	0	0	1	0.2%
Building	3	1	0	4	0.9%
Concrete Barrier/Jersey Barrier	1	0	0	1	0.2%
Culvert and/or Other Appurtenance in Ditch	8	1	0	9	1.9%
Earth Bank or Ledge	17	4	0	21	4.5%
Fence	54	17	0	71	15.2%
Fire Hydrant	1	3	0	4	0.9%
Guardrail	19	7	0	26	5.6%
Guidepost	2	0	0	2	0.4%
Into River, Lake, Swamp, etc.	1	0	0	1	0.2%
Linear Curb	6	2	0	8	1.7%
Mailbox	25	3	0	28	6.0%
Metal Sign Post	9	4	0	13	2.8%
Over Embankment - No Guardrail Present	9	2	0	11	2.4%
Railroad Tracks	1	1	0	2	0.4%
Retaining Wall (concrete, rock, brick, etc.)	6	0	0	6	1.3%
Roadway Ditch	69	15	1	85	18.2%
Rock Bank or Ledge	2	0	0	2	0.4%
Signal Pole	1	0	0	1	0.2%
Street Light Pole or Base	7	2	0	9	1.9%
Traffic Island	6	4	0	10	2.1%
Tree or Stump (stationary)	28	24	3	55	11.8%
Underside of Bridge	2	1	0	3	0.6%
Utility Pole or Box	48	22	1	71	15.2%
Wood Sign Post	14	5	0	19	4.1%
<b>Total</b>	<b>342</b>	<b>122</b>	<b>5</b>	<b>469</b>	

### 3.2 Fixed Object Collisions

Table 3.2.10  
Collision Rate per Million Vehicle Miles Traveled (VMT) for  
Collisions Involving Fixed Objects

Year	Total Number of Fixed Object Collisions			Maintained Road Miles			Annual Million VMT			Collision Rate for Fixed Object Collisions per Million VMT		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2018	361	187	548	836	630	1,466	724	263	987	0.50	0.71	0.56
2019	313	160	473	835	631	1,466	781	299	1,080	0.40	0.54	0.44
2020	306	153	459	836	630	1,466	769	324	1,093	0.40	0.47	0.42
2021	308	168	476	837	630	1,467	794	321	1,115	0.39	0.52	0.43
2022	296	156	453	837	631	1,468	764	320	1,084	0.39	0.49	0.42
2023	338	131	469	837	631	1,468	745	346	1,091	0.45	0.38	0.43

Figure 3.2.1  
Collisions Involving Fixed Objects as a  
Percentage of All Collisions



### 3.3 Pedestrian Involved Collisions

**Table 3.3.1  
Pedestrian Involved Collisions by Severity**

Year	Property Damage Only	Injury	Fatality	Total
2018	0	21	0	21
2019	2	24	1	27
2020	2	18	4	24
2021	1	18	1	20
2022	1	20	4	25
2023	4	15	1	20

**Table 3.3.2  
Pedestrian Involved Collisions by Facility Used**

Year	Marked Crosswalk	Unmarked Crosswalk	In Roadway	Shoulder	Sidewalk	Other	Total
2018	11	0	6	2	2	0	21
2019	9	3	8	3	0	4	27
2020	11	1	8	2	1	1	24
2021	6	2	6	3	1	2	20
2022	9	0	10	5	1	0	25
2023	7	1	9	1	1	1	20

**Table 3.3.3  
Pedestrian Involved Collisions  
By Driver First Contributing Circumstance**

Contributing Circumstance	2018	2019	2020	2021	2022	2023
None	2	10	8	4	7	7
Other	5	8	3	4	3	5
Unknown Driver Distraction	2	0	4	2	4	3
Did Not Grant ROW to Pedestrian	8	4	7	6	5	2
Driver Distractions Outside Vehicle	0	0	0	0	1	1
Exceeding Reasonable Safe Speed	0	0	0	0	1	1
Distracted by Other Occupant	0	0	1	0	0	1
Operating Recklessly or Aggressively	0	0	0	0	2	0
Apparently Asleep or Fatigued	0	0	0	0	1	0
Disregard Traffic Sign and Signals	0	0	0	0	1	0
Driver Operating Handheld Telecommunication or Other Electronic Devices	0	1	0	0	0	0
Improper Passing	0	0	0	1	0	0
Inattention	4	3	0	0	0	0
On Wrong Side of Road	0	0	0	1	0	0
Operating Defective Equipment	0	0	0	1	0	0
Under Influence of Alcohol	0	1	1	1	0	0
<b>Total</b>	<b>21</b>	<b>27</b>	<b>24</b>	<b>20</b>	<b>25</b>	<b>20</b>

**Table 3.3.4**  
**Age of Pedestrians Involved in Collisions**

Age Range	2018	2019	2020	2021	2022	2023
Unknown	0	0	0	1	0	2
0-5	0	0	2	1	0	1
6-10	2	1	0	1	0	4
11-15	1	3	1	0	2	1
16-20	6	1	3	3	1	1
21-25	3	3	2	0	0	0
26-30	1	2	3	0	3	1
31-35	1	2	3	3	5	3
36-40	1	3	3	1	1	1
41-45	2	2	1	2	2	0
46-50	3	2	1	1	4	3
51-55	1	3	1	2	2	2
56-60	0	3	1	2	1	0
61-65	0	0	0	0	0	0
66-70	0	1	1	1	0	0
71-75	0	0	1	1	2	1
76-80	0	0	1	1	2	0
81-85	0	1	0	0	0	0
86+	0	0	0	0	0	0
<b>Total</b>	<b>21</b>	<b>27</b>	<b>24</b>	<b>20</b>	<b>25</b>	<b>20</b>

**Table 3.3.5**  
**Gender of Pedestrians Involved in Collisions**

Year	Unknown/X	Female	Male	Total
2018	0	12	9	21
2019	0	11	16	27
2020	0	11	13	24
2021	0	10	10	20
2022	0	10	15	25
2023	1	8	11	20



### 3.4 Bicycle Involved Collisions

Table 3.4.11  
Bicycle Involved Collisions by Severity

Year	Property Damage Only	Injury	Fatality	Total
2018	1	11	1	13
2019	4	10	0	14
2020	1	17	0	18
2021	0	13	0	13
2022	1	12	0	13
2023	0	19	0	19

Table 3.4.2  
2023 Bicycle Involved Collisions by First Contributing Circumstance and Severity

First Contributing Circumstance	Property Damage Only	Injury	Fatality	Total
None / Driver Not Distracted	0	13	0	13
Unknown Distraction	0	2	0	2
Did Not Grant ROW to Pedalcyclist	0	1	0	1
Exceeding Reasonably Safe Speed	0	1	0	1
Other Contributing Circumstance Not Listed	0	1	0	1
<b>Total</b>	<b>0</b>	<b>19</b>	<b>0</b>	<b>19</b>

### 3.5 Motorcycle Involved Collisions

Table 3.5.1  
Motorcycle Involved Collisions  
By Severity

Year	Property Damage Only	Injury	Fatality	Total
2018	4	35	3	42
2019	9	38	3	50
2020	5	25	2	32
2021	6	26	5	37
2022	6	24	6	36
2023	7	25	1	33

Table 3.5.2  
2023 Motorcycle Involved Collisions  
By First Contributing Circumstance

First Contributing Circumstance	PDO	Injury	Fatality	Total
Inattention / Driver Distraction	0	8	1	9
Improper Turn/Merge	1	4	0	5
None	0	5	0	5
Exceeding Reasonably Safe Speed or Stated Speed Limit	0	3	0	3
Improper Passing	1	2	0	3
Did Not Grant R/W to Vehicle	1	1	0	2
Operating Recklessly or Aggressively	1	1	0	2
Disregard Traffic Sign & Signals	1	0	0	1
Follow Too Closely	0	1	0	1
Operating Defective Equipment	1	0	0	1
Other Contributing Circumstance	1	0	0	1
<b>Total</b>	<b>7</b>	<b>25</b>	<b>1</b>	<b>33</b>

## 4.0 OTHER COLLISION INFORMATION

### 4.1 Estimated Economic Costs

Table 4.1.1  
Estimated Economic Costs of Collision Activity

Severity	2023 Collisions	Estimated Economic Costs
Property Damage Only	1,155	\$8,200,500
Possible Injury	203	\$5,278,000
Evident Injury (Suspected Minor Injury)	255	\$10,710,000
Disabling/Serious Injury (Suspected Serious Injury)	60	\$9,720,000
Fatal	9	\$16,821,000
Total	1,682	\$50,729,500

**The following estimated costs per collision are used in this calculation:**

*Property Damage Only (no injury observed)-\$7,100; Possible Injury-\$26,000; Evident Injury-\$42,000; Disabling/Serious Injury-\$162,000; Fatality-\$1,869,000  
(National Safety Council Guide to Calculating Costs of Motor-Vehicle Injuries, 2022)*

## 4.2 Month, Day of Week, and Time of Day

Figure 4.2.1  
2023 Collisions by Month

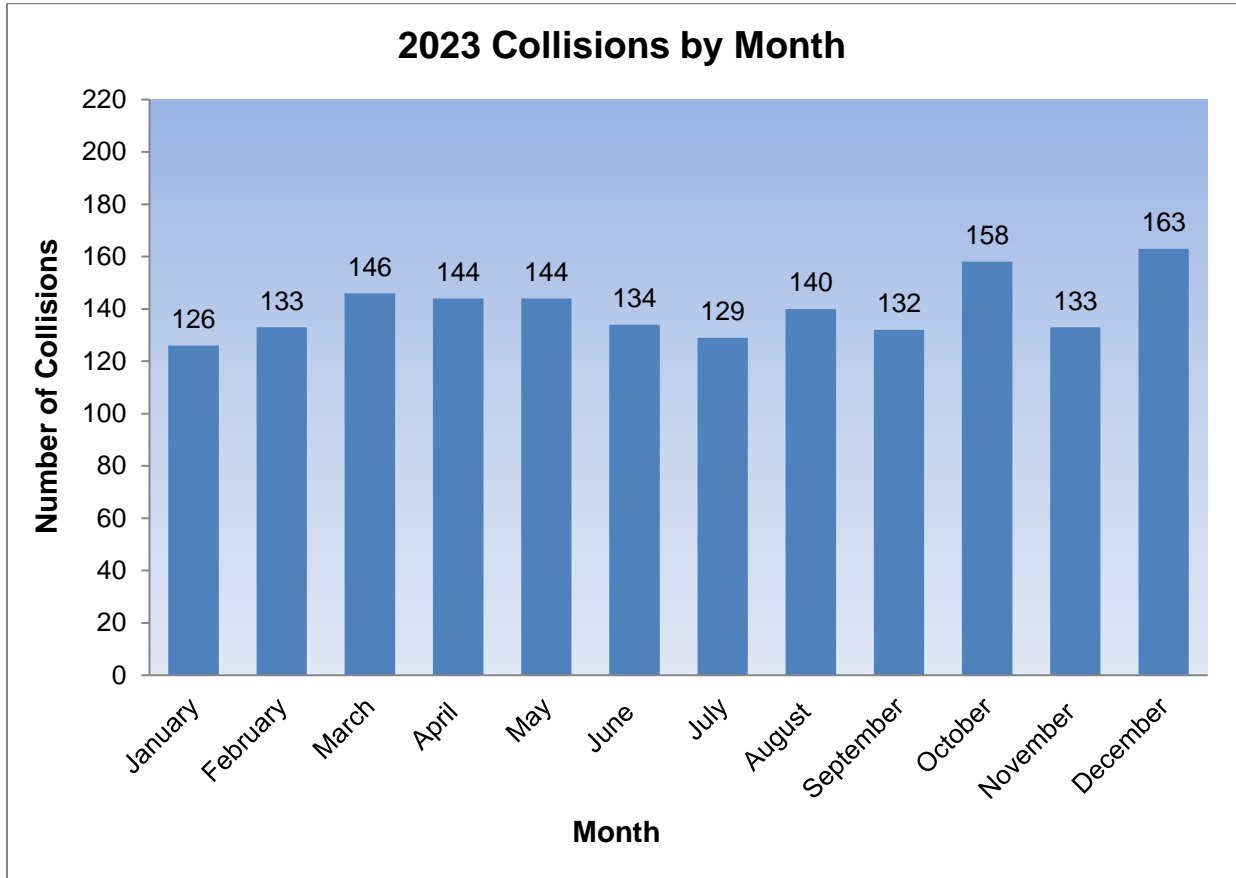


Figure 4.2.2  
2023 Collisions by Day of Week

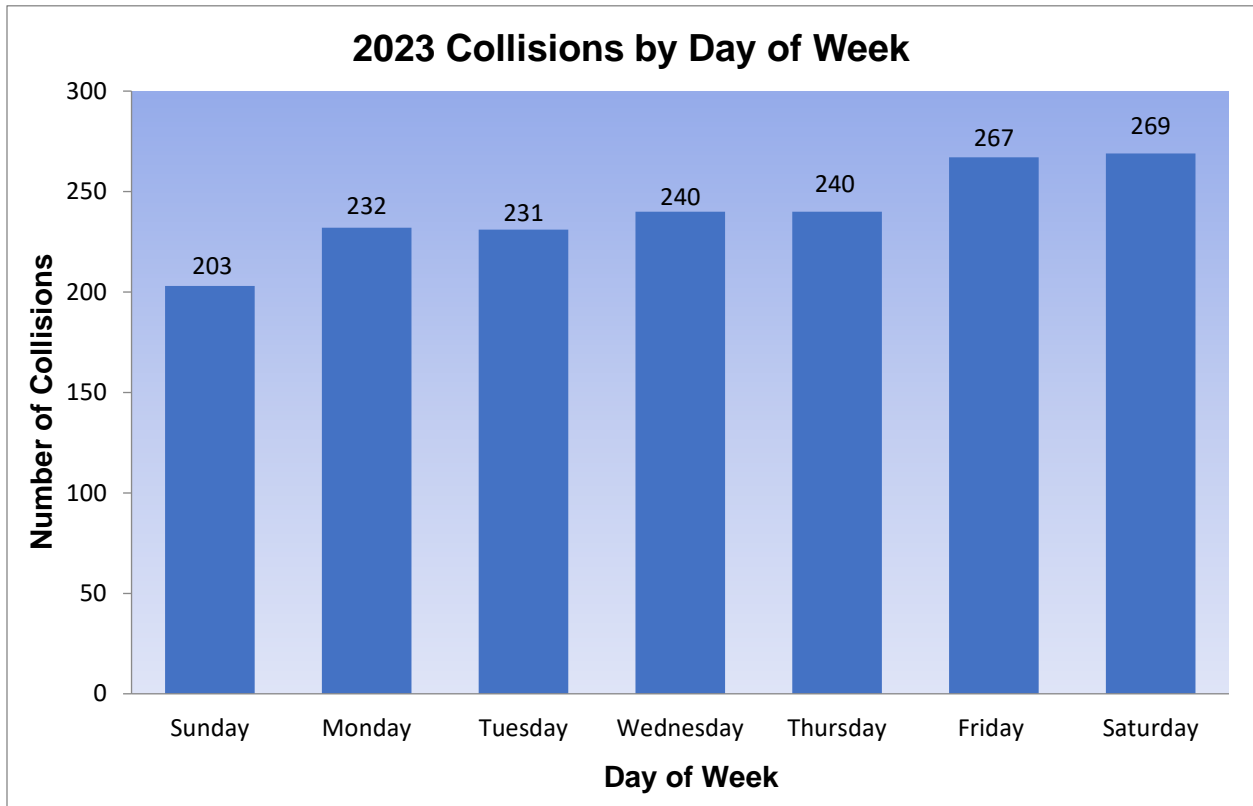


Figure 4.2.3  
2023 Weekday Collisions  
By Time of Day

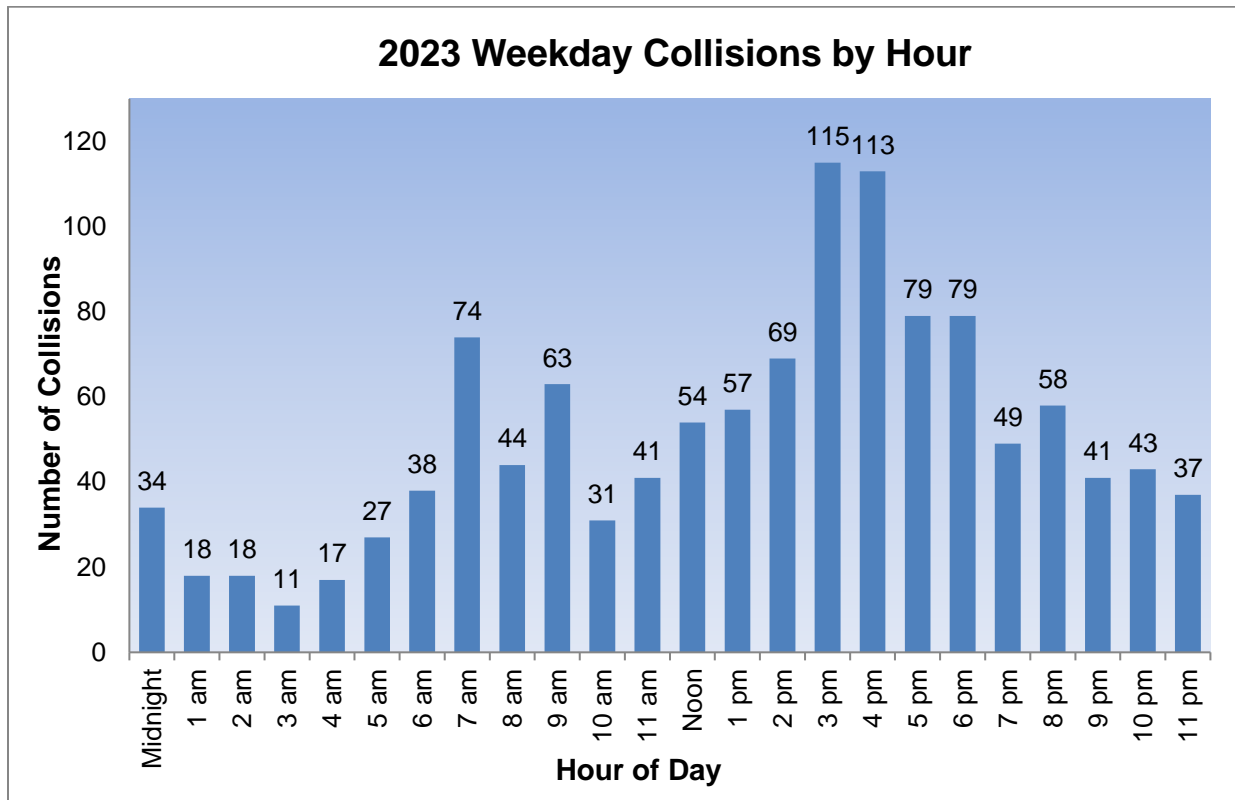
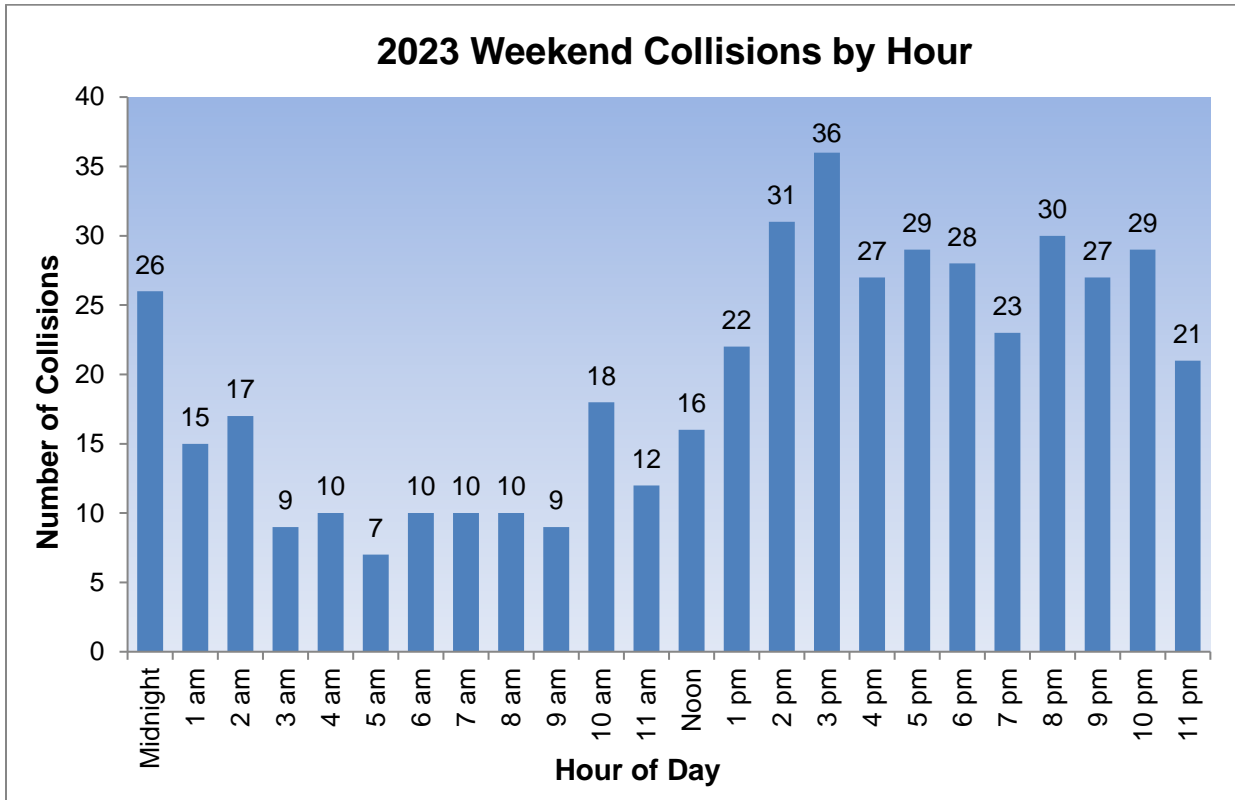
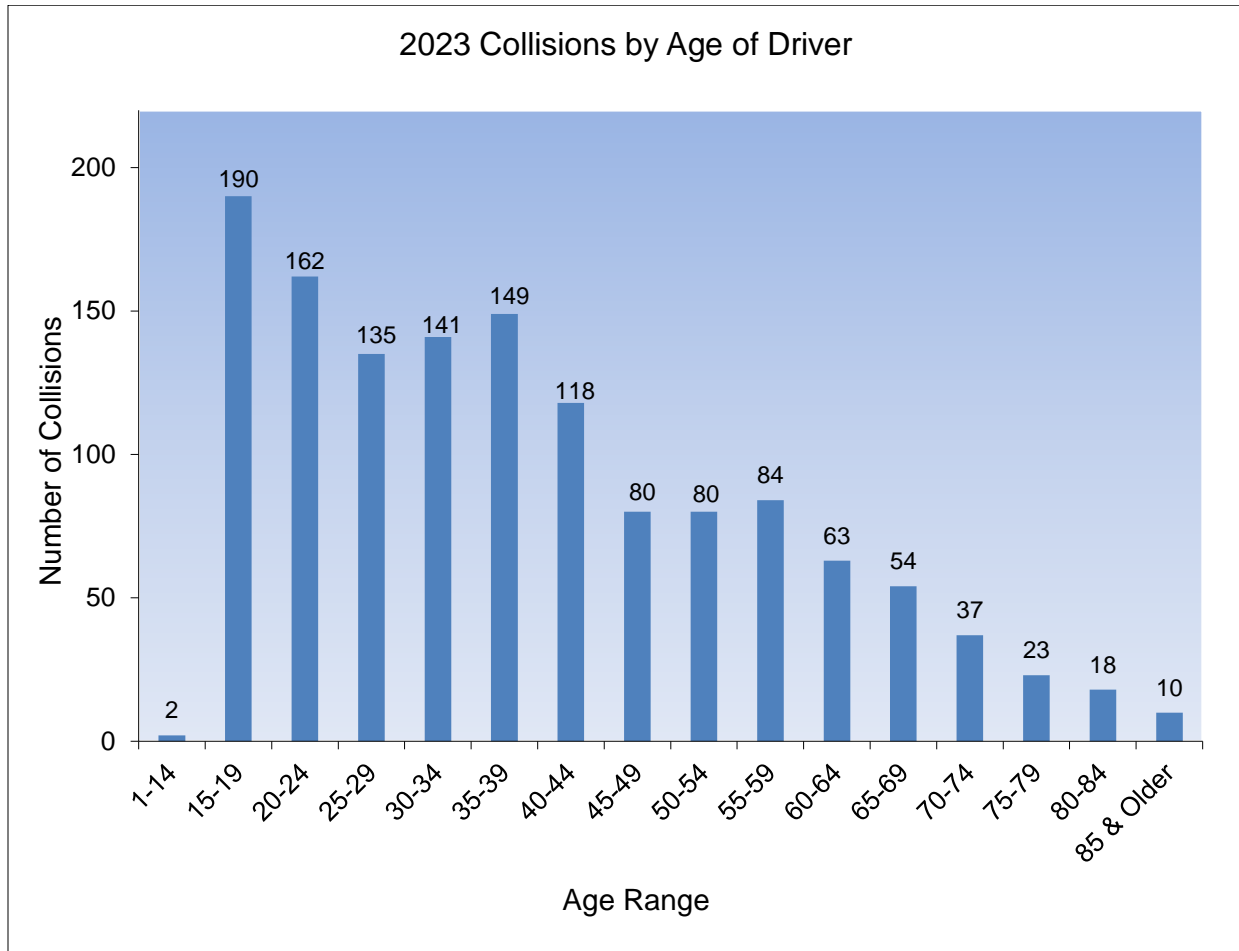


Figure 4.2.4  
2023 Weekend Collisions  
By Time of Day



### 4.3 Demographics

Figure 4.3.1  
2023 Collisions by Age of Driver



Note: 336 collision reports did not contain driver age information



## 4.4 Contributing Circumstances

Table 4.4.1  
First Contributing Circumstance  
For Drivers between ages 15 to 25 for 2023

First Contributing Circumstance	Age 15	Age 16	Age 17	Age 18	Age 19	Age 20	Age 21	Age 22	Age 23	Age 24	Age 25	Total
Excessive Speed	2	10	9	14	7	6	9	5	4	6	2	74
Driver Distraction	1	11	10	9	6	6	5	5	3	3	6	65
None	0	3	6	3	7	3	6	9	8	1	8	54
Did Not Grant ROW to Vehicle	2	6	5	2	3	2	5	5	1	5	6	42
Follow Too Closely	0	4	3	5	6	4	2	2	4	3	3	36
Improper Turn/Merge	0	5	3	4	2	4	1	2	0	3	2	26
Other	0	1	0	6	1	3	0	3	0	0	3	17
Under Influence of Alcohol or Drugs	1	0	1	2	4	4	0	2	4	2	2	22
Apparently Asleep/Fatigued/Ill	0	1	0	0	1	3	1	0	3	0	1	10
Overcorrecting/Oversteering	1	0	0	3	2	2	0	1	0	0	1	10
Operating Handheld Cell Phone or Other Electronic Devices	0	1	2	1	1	3	0	0	0	0	0	8
Disregard Traffic Signs and Signals	0	1	0	1	1	0	0	0	1	2	1	7
Operating Defective Equipment	0	0	0	2	1	2	1	1	0	0	0	7
Operating Recklessly or Aggressively	1	0	0	2	0	0	1	0	0	0	0	4
Improper U-Turn	0	0	0	1	0	1	0	0	0	0	1	3
Improper Passing	0	1	1	1	0	0	0	0	0	0	0	3
<b>Totals</b>	<b>8</b>	<b>44</b>	<b>40</b>	<b>56</b>	<b>42</b>	<b>43</b>	<b>31</b>	<b>35</b>	<b>28</b>	<b>25</b>	<b>36</b>	<b>388</b>

**Table 4.4.2**  
**2023 Collisions by First Contributing Circumstance**

First Contributing Circumstance	Fatality	Injury	PDO	Total
Inattention/Driver Distraction	1	95	220	316
None	1	70	181	252
Other	3	47	200	250
Excessive Speed	0	71	104	175
Did Not Grant ROW to Vehicle	0	56	119	175
Follow Too Closely	0	32	76	108
Under Influence of Alcohol/Drugs	3	37	64	104
Improper Turn/Merge	0	37	61	98
Apparently Asleep/Fatigued/Ill	0	20	33	53
Disregard Traffic Sign and Signals	0	15	14	29
Operating Defective Equipment	0	10	13	23
Overcorrecting/Oversteering	0	2	21	23
Driver Operating Cell Phone/ Other Electronic Device	0	8	8	16
Improper Passing	0	2	11	13
Improper U-Turn	0	6	12	18
Operating Recklessly or Aggressively	1	6	11	18
Did Not Grant ROW to Non-Motorist	0	2	2	4
Improper Backing	0	0	7	7

## 4.5 Impairment

Table 4.5.1  
Collisions Involving  
Drivers Under the Influence (DUI)

Year	Fatal	% of all Fatal Collisions	Injury	% of All Injury Collisions	Property Damage Only	% of all PDO Collisions	Total DUI Collisions	% of all Collisions
2018	2	18.2%	46	8.5%	87	6.5%	135	7.2%
2019	0	0.0%	52	9.1%	70	5.6%	122	6.7%
2020	2	14.3%	28	6.6%	45	4.7%	75	5.3%
2021	1	8.3%	26	5.4%	42	3.9%	69	4.4%
2022	0	0.0%	22	4.6%	63	5.8%	85	5.4%
2023	3	33.3%	38	7.3%	60	5.2%	101	6.0%

Figure 4.5.1  
2023 Weekend Collisions for  
Drivers under the Influence  
By Time of Day

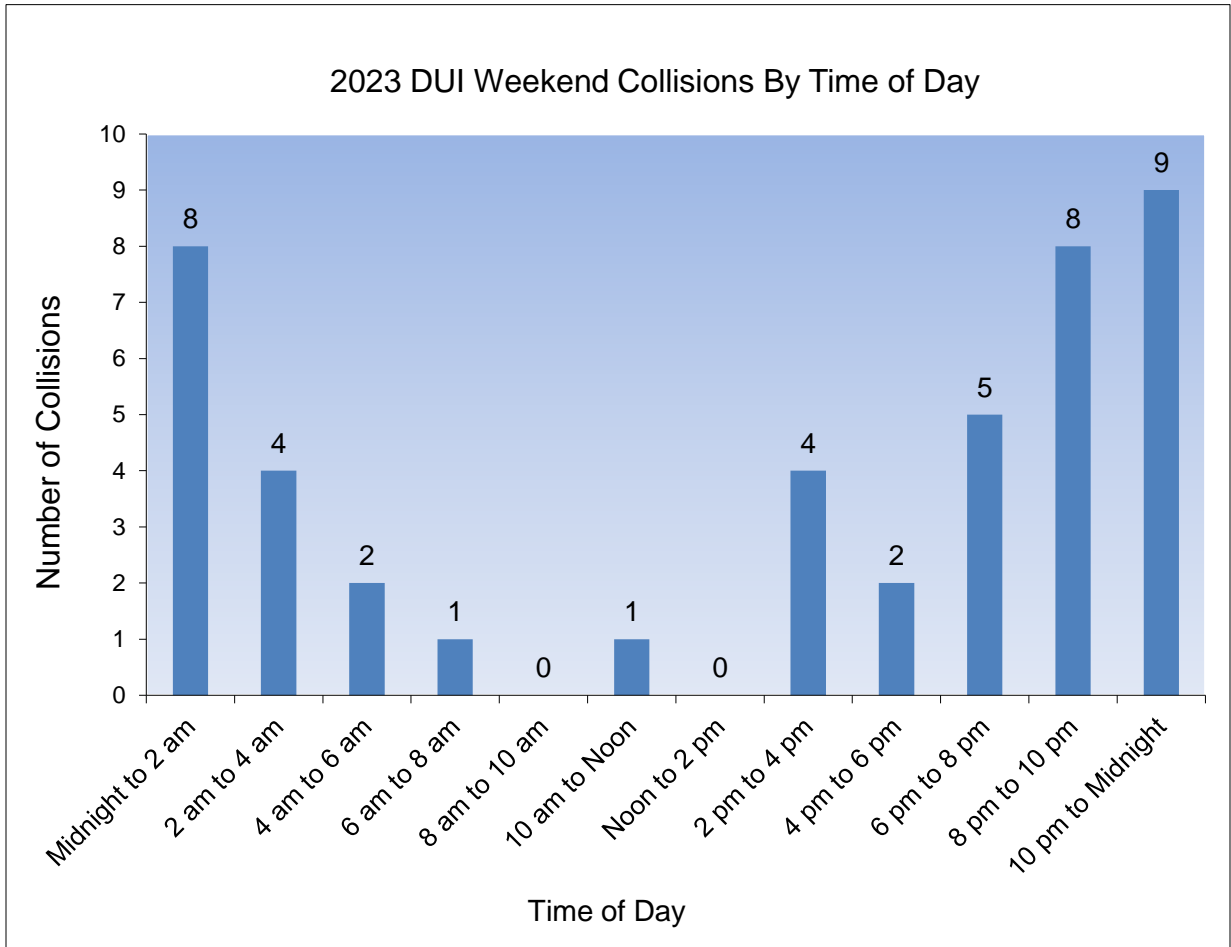
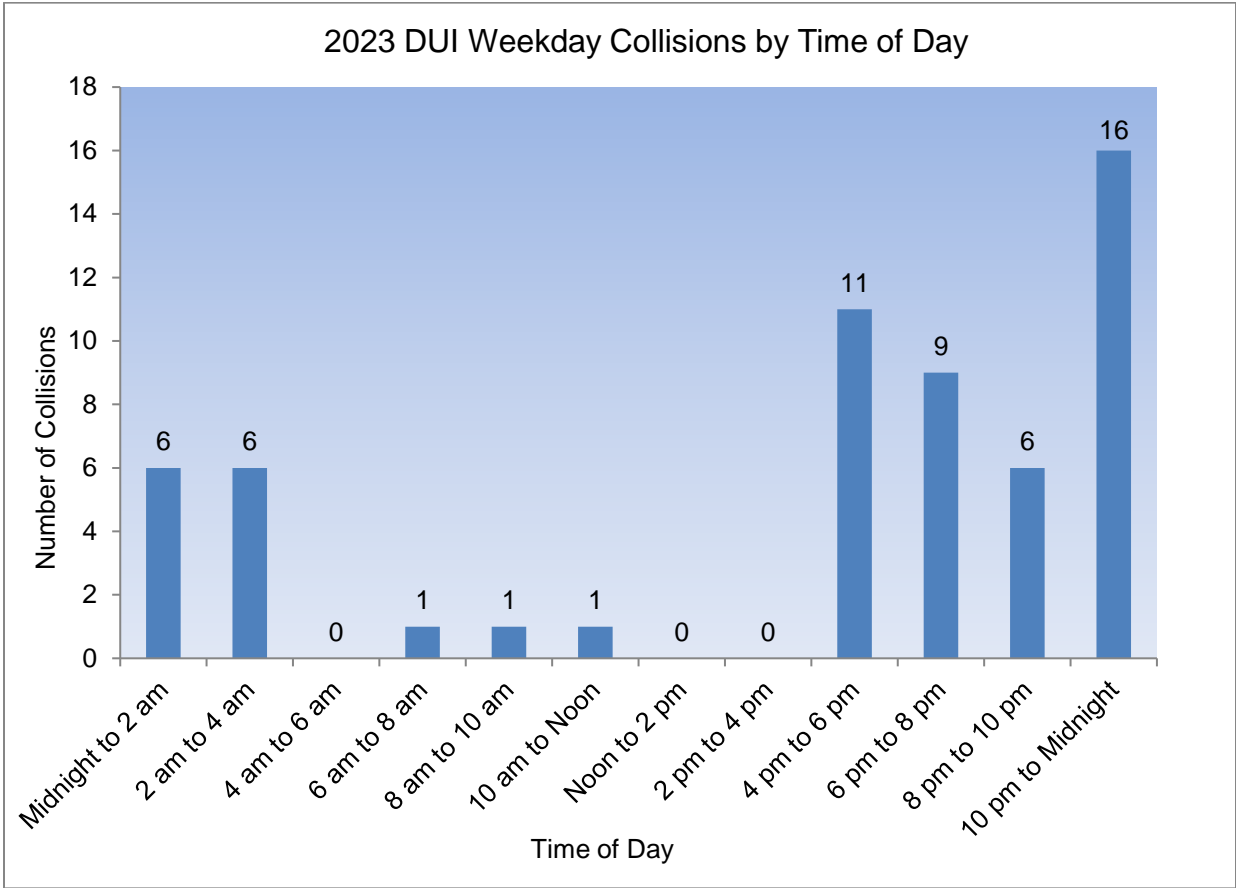


Figure 4.5.2  
2023 Weekday Collisions for  
Drivers under the Influence  
By Time of Day



## 4.6 Speed

Table 4.6.12  
Collisions involving Speeding as First Contributing Circumstance

Year	Fatal	% of all Fatal Collisions	Injury	% of all Injury Collisions	PDO	% of all Property Damage Only Collisions	Total	% of all Collisions
2018	1	9%	64	12%	124	9%	189	10%
2019	3	30%	55	10%	93	7%	151	8%
2020	5	36%	58	14%	103	11%	166	12%
2021	6	50%	62	13%	88	8%	156	10%
2022	5	22%	59	12%	109	10%	173	11%
2023	0	0%	71	14%	104	9%	175	10%

## 4.7 Lighting Conditions

Table 4.7.13  
2023 Collisions By  
Lighting Condition

Lighting Condition	Property Damage Only	Injury	Fatal	Total
Dark-No Street Lights	167	62	5	234
Dark-Street Lights Off	7	1	0	8
Dark-Street Lights On	252	99	0	351
Dark-Unknown Lighting	21	4	1	26
Dawn	28	10	0	38
Daylight	611	322	3	936
Dusk	48	20	0	68
Unknown	21	0	0	21
Totals	1,155	518	9	1,682

# APPENDIXES

## Appendix A – Data Sources

### **Collision Data**

Collision information is from the Washington State Department of Transportation's (WSDOT) Crash Data and Reporting Branch of the Transportation Data, GIS & Modeling Office (TDGMO). The Crash Data and Reporting Branch is responsible for updating and maintaining all electronic collision records in Washington State. Vehicular collisions which sustain more than \$1,000 in property damage, or involve an injury or a death, are required to be reported to the Washington State Patrol by a Police Traffic Collision Report. The Washington State Patrol provides copies of the Police Traffic Collision Report to WSDOT.

Injuries are classified based on conditions present at the time of the collision except in the case of fatalities. An injury resulting in a death, within 30 days of the collision, is classified as a fatal injury.

### **Population Data and King County Land Area**

King County's population figure is from the Washington State Office of Financial Management. King County's land area figure is from King County's Office of Policy and Regional Planning.

### **King County Maintained Roadway Figures**

King County's maintained roadway mile figures are from King County Road Services Strategic Business and Operations Section (SBOS).

### **Traffic Count Data**

The traffic count information used in this report was provided by King County's Road and Traffic Engineering Unit.

### **Estimated Cost of Collisions**

The economic costs of collisions values used in this report are from the National Safety Council.



## Appendix B - Formulas used in Report

### Collision Rate per Million Vehicle Miles Traveled

$R = (\text{Collisions} * 10^6) / (\text{AADT} * 365 * L)$ , where

Rate = Accident rate for collisions per million vehicle miles (acc/mvm)

Collisions = Total number of collisions in one-year period

AADT = Annual Average Daily Traffic volume, and

L = Length of study section in miles

### Collision Rate per 100,000 Population

Rate = Collisions \* 100,000 / Unincorporated Population

Collisions = Total number of collisions in a one-year period

### Economic Cost of Collisions

The economic cost of collisions was calculated as follows:

Cost =  $\$7,100 * \text{PDO} + \$26,000 * \text{P} + \$42,000 * \text{E} + \$162,000 * \text{D} + \$1,869,000 * \text{F}$ ,  
where

PDO – Total Number of Property Damage Collisions (\$7,1700/collision)

P – Total Number of Possible Injury Collisions (\$26,000/collision)

E – Total Number of Evident Injury Collisions (\$42,000/collision)

D – Total Number of Disabling/Serious Injury Collisions (\$162,000/collision)

F – Total Number of Fatal Collisions (\$1,869,000/collision)