Road Services Division
2022 Collision Data Report

King County

Department of Local Services
Road Services Division
Engineering Services Section

JoAnn Kosai-Eng, P.E.
County Road Engineer

Engineering Services Section

Rose LeSmith, P.E.
Engineering Services Section Manager

Wally Archuleta, P.E.
County Traffic Engineer

Teresa Lee
Senior Database Specialist

Department of Local Services
Road Services Division
Engineering Services Section
King Street Center, KSC-LS-0315
201 South Jackson Street
Seattle, WA 98104

Table of Contents

INTRODUCTION

The King County Department of Local Services is pleased to present the 2022 Collision Data Report. This report is prepared by the Road and Traffic Engineering unit of the Engineering Services section of the Road Services Division.

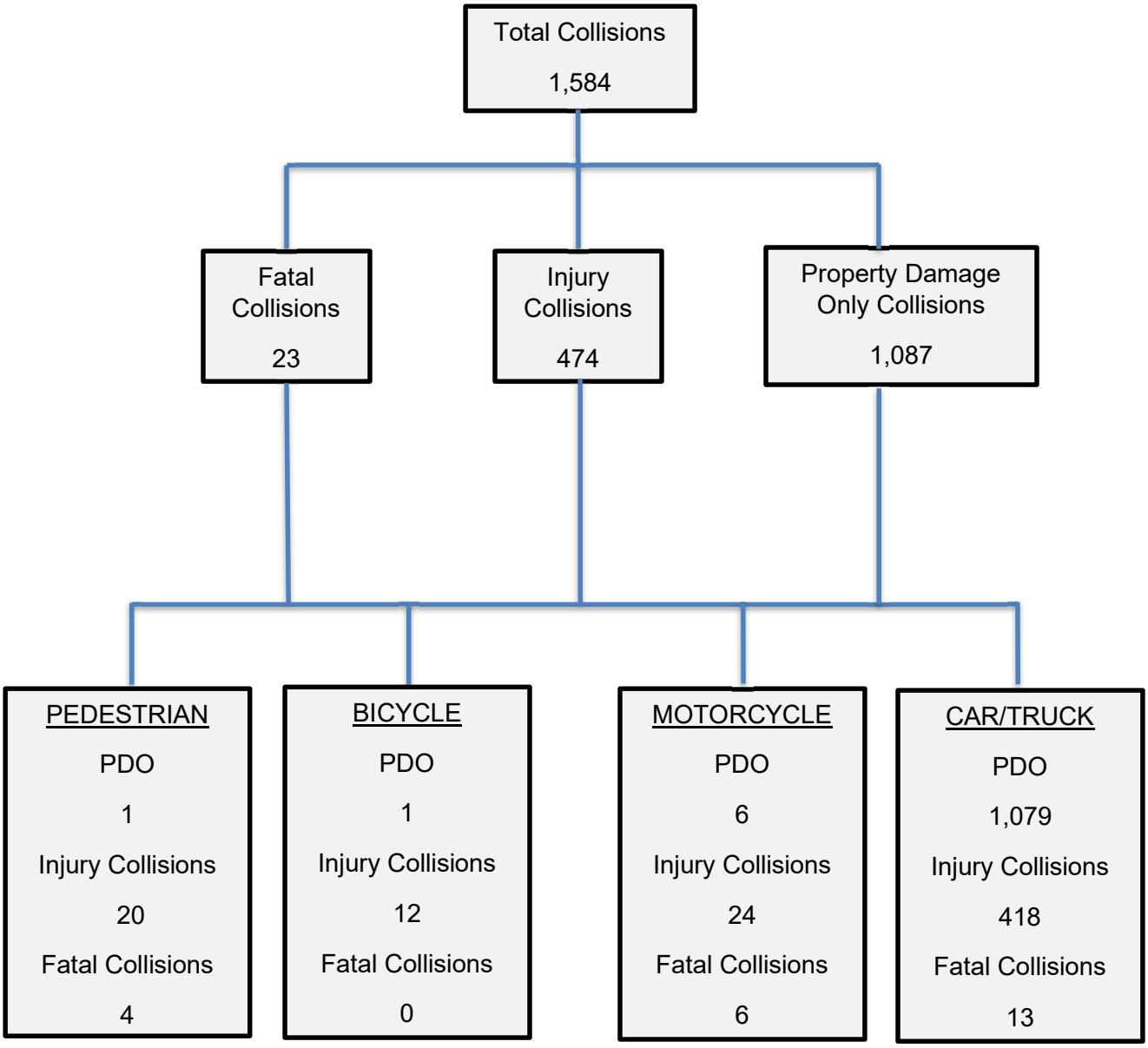
This report was prepared to provide collision and safety information to elected officials and King County staff.

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 2023. 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 2022, a total of 1,584 collisions were reported on King County maintained roadways. This included 23 fatal, 474 injury, and 1,087 property damage only collisions. The total economic cost of these collisions is estimated at $63.2 million.



1.1 Six Year Trends

Since 2017, population and maintained road miles in unincorporated King County has remained steady. The population increased from 247,000 to 248,200 (0.5 percent), while the number of maintained roadway miles remained the same. The number of collisions however, decreased by 23 percent from 2,101 to 1,584. 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 284,000 new residents since 2017. 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 is nearly the same from 2021 to 2022, the proportions of severity has remained similar. Fatal collisions have increased, now making up over 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 2022 collisions were either fixed object (29%), rear-end (16%) or entering an intersection at an angle (19%). Nearly two-thirds of the fixed object crashes involved striking a roadway ditch, utility pole, tree, fence, or guardrail. There were a total of nine fatalities involving fixed objects, comprising 39 percent of all fatalities.

Pedestrian and bicycle collisions made up less than two percent of all collisions. There were 13 crashes involving bicyclists, the same as in 2021, and 25 crashes involving pedestrians, up from 20 in 2021.

The percentage of crashes involving motorists driving under the influence (DUI) increased by one percent from 2021 to 2022. During 2022, there were a total of 85 DUI involved collisions (5.4%) compared to 69 (4.4%) during 2021. Of the 85 collisions, none were fatal, 22 incurred injuries, and 63 involved property damage only.

Table 1.1.1
Number of Collisions
By Severity

Year	PDO*	Percentage	Injury	Percentage	Fatal	Percentage	Total
2017	1,445	68.8%	645	30.7%	11	0.5%	2,101
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

*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	5,600	84
Rural Major Collector	7	96	2,900	102
Rural Minor Collector	8	105	1,300	50
Rural Local Access	9	389	600	85
Urban Principal Arterial	14	37	15,800	213
Urban Minor Arterial	16	72	9,700	255
Urban Collector	17	78	3,400	97
Urban Minor Collector	18	20	2,000	15
Urban Local Access	19	630	800	184
Total		**1,468**		**1,084**
Overall Weighted Average			**2,020**	

Note: Average Annual Daily Traffic Volumes were derived using a four-year sampling of traffic count data (2019-2022) and averaging the daily totals. A four-year sampling was used rather than the three-year sampling used previously due to limited data collected during the peak pandemic years of 2020 and 2021.

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
2017	2,101	1,874	1,466	1,003	2.09
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

Table 1.2.3
Collision Rate per 100,000 Population

		All Collision Types		Pedestrian		Bicycle	
Year	Population	# of Collisions	Collisions per 100,000 Population	# of Collisions	Collisions per 100,000 Population	# of Collisions	Collisions per 100,000 Population
2017	247,000	2,101	850.61	28	11.34	18	7.29
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

2.0 COLLISION TRENDS

2.1 Fatality Rates and Fatal Collision Rates

Table 2.1.1
Fatality Rate per 100,000 Population

		All Collision Types		Pedestrian		Bicycle	
Year	Population	# of Fatalities	Fatalities per 100,000 population	# of Fatalities	Fatalities per 100,000 population	# of Fatalities	Fatalities per 100,000 population
2017	247,000	11	4.45	1	0.40	0	0.00
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

Table 2.1.2
Fatal Collision Rate per 100,000 Population

		All Collision Types		Pedestrian		Bicycle	
Year	Population	# 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
2017	247,000	11	4.45	1	0.40	0	0.00
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

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
2017	11	1,466	10.03	1.10
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

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
2017	11	1,466	10.03	1.10
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

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

	Unincorporated King County			Washington State			United States		
Year	Population	Collisions	Collisions per 100,000 Population	Population	Collisions	Collisions per 100,000 Population	Population	Collisions	Collisions per 100,000 Population
2017	247,000	2,101	851	7,310,300	121,051	1,656	325,720,000	6,452,000	1,981
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	Not Available	Not Available

Table 2.2.276567
US, State, and Unincorporated King County Fatal Collision and Fatality Rates per 100,000 Population

	Unincorporated King County			Washington State			United States		
Year	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
2017	247,000	4.45	4.45	7,310,300	7.28	7.69	325,720,000	10.51	11.40
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	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)

	Unincorporated King County			Washington State			United States		
Year	Million VMT	Collisions	Collisions per Million VMT	Million VMT	Collisions	Collisions per Million VMT	100 Million VMT	Collisions	Collisions per Million VMT
2017	1,003	2,101	2.09	61,420	121,051	1.97	32,090	6,452,000	2.01
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	31,694	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)

	Unincorporated King County			Washington State			United States		
Year	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
2017	10.03	1.10	1.10	614	0.87	0.92	32,090	1.07	1.16
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	31,694	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

	Urban Roads in Unincorporated King County					Rural Roads in Unincorporated King County				
Year	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
2017	120,400	6	6	4.99	4.99	126,600	5	5	3.95	3.95
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

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

	Fatal Collisions			Maintained Road Miles			Annual 100 Million VMT			Fatal Collision Rate per 100 Million VMT		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2017	6	5	11	836	630	1,466	7.43	2.60	10.03	0.81	1.92	1.10
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

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

	Fatalities			Maintained Road Miles			Annual 100 Million VMT			Fatalities per 100 Million VMT		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2017	6	5	11	836	630	1,466	7.43	2.60	10.03	0.81	1.92	1.10
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

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

	Number of Collisions			Maintained Road Miles			Annual Million VMT			Collisions per Million VMT		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2017	1,672	429	2,101	836	630	1,466	743	260	1,003	2.25	1.65	2.09
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

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
2017	502	620	516	463	2,101
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

Table 2.4.2
Collisions by Federal Functional Classification

	Federal Functional Classification									
	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	Total
2017	104	145	99	81	502	516	243	29	382	2,101
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	395	367	197	21	275	1,584

3.0 COLLISION TYPES

3.1 Collision Type and Severity

Table 3.1.1
Collisions by Collision Type

Collision Type	2017	2018	2019	2020	2021	2022
Fixed Object	618	548	473	459	476	453
Entering at Angle	368	348	364	244	294	295
Rear - End	438	388	377	202	289	252
Hit Parked Car	189	142	148	128	136	148
Sideswipe	116	126	105	90	97	121
Left Turn	117	120	118	87	102	114
Animal	21	32	23	24	20	33
Head On	36	24	35	22	21	28
Pedestrian	28	21	27	24	20	25
Vehicle Overturned	35	29	24	26	25	22
U-Turn	23	29	19	20	12	20
Backing	10	13	17	5	10	14
Bicycle	18	13	14	18	13	13
Other Object	18	10	15	22	21	12
Other	19	15	14	9	16	11
Right Turn	27	16	25	14	11	11
Leaving Parked Position	11	9	16	3	5	6
Non-Collision	9	1	10	5	12	6
Totals	**2,101**	**1,884**	**1,824**	**1,402**	**1,580**	**1,584**

Table 3.1.2
Fatal Collisions by Collision Type

Collision Type	2017	2018	2019	2020	2021	2022
Fixed object	6	4	4	3	6	9
Left Turn	0	0	1	0	0	4
Pedestrian	1	0	1	4	1	4
Head on	0	1	2	2	0	3
Vehicle overturned	0	0	1	1	0	2
Sideswipe	0	0	0	0	3	1
Bicycle	0	1	0	0	0	0
Entering at angle	1	2	1	0	0	0
Hit Parked Car	1	0	0	0	0	0
Non-Collision	1	0	0	0	1	0
Other	0	1	0	3	0	0
Rear - end	0	1	0	1	1	0
Right Turn	1	1	0	0	0	0
Totals	**11**	**11**	**10**	**14**	**12**	**23**

Table 3.1.3
2022 Collisions by Collision Type and Severity

Collision Type	PDO	Injury	Fatal	Total	Percentage
Fixed object	319	125	9	453	28.6%
Entering at angle	197	98	0	295	18.6%
Rear - end	166	86	0	252	15.9%
Hit Parked Car	137	11	0	148	9.3%
Sideswipe	96	24	1	121	7.6%
Left turn	65	45	4	114	7.2%
Animal	26	7	0	33	2.1%
Head on	9	16	3	28	1.8%
Pedestrian	1	20	4	25	1.6%
Vehicle overturned	9	11	2	22	1.4%
U-Turn	12	8	0	20	1.3%
Backing	12	2	0	14	0.9%
Bicycle	1	12	0	13	0.8%
Other Object	9	3	0	12	0.8%
Other	8	3	0	11	0.7%
Right Turn	10	1	0	11	0.7%
Non-Collision	4	2	0	6	0.4%
Leaving Parked Position	6	0	0	6	0.4%
Total	**1,087**	**474**	**23**	**1,584**	**100%**

Table 3.1.4
2022 Fixed Object Collisions
By First Object Struck and Severity

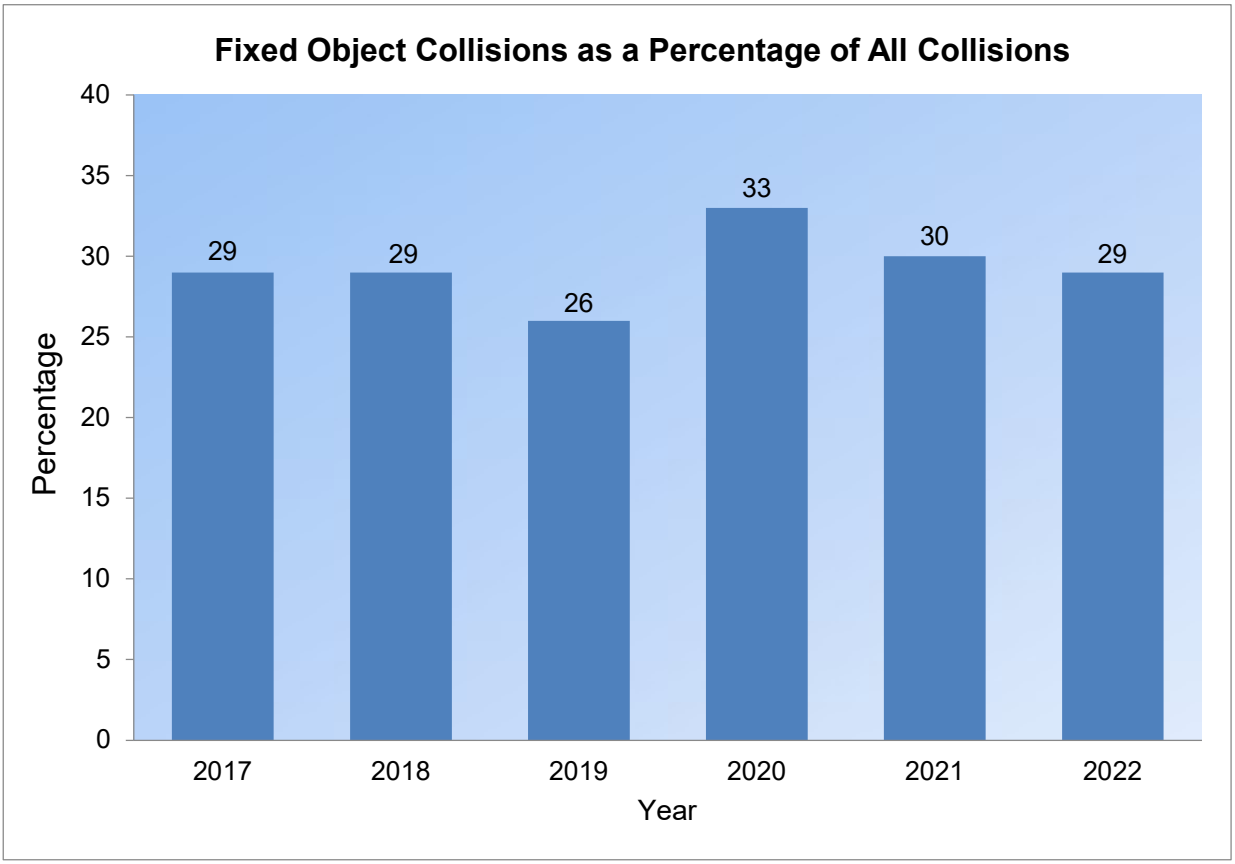
Object Struck	PDO	Injury	Fatality	Total	% of Total
All Other Objects (On the Road)	1	0	0	1	0.2%
Boulder (stationary)	5	1	0	6	1.3%
Bridge Rail	1	1	0	2	0.4%
Building	2	1	0	3	0.7%
Concrete Barrier/Jersey Barrier	4	1	0	5	1.1%
Culvert and/or Other Appurtenance in Ditch	5	4	1	10	2.2%
Earth Bank or Ledge	13	8	0	21	4.6%
Fence	51	6	2	59	13.0%
Fire Hydrant	7	3	0	10	2.2%
Guardrail	23	11	1	35	7.7%
Into River, Lake, Swamp, etc.	1	0	0	1	0.2%
Linear Curb	3	2	0	5	1.1%
Mailbox	24	5	0	29	6.4%
Metal Sign Post	13	1	0	14	3.1%
Over Embankment - No Guardrail Present	7	0	0	7	1.5%
Retaining Wall (concrete, rock, brick, etc.)	6	0	0	6	1.3%
Roadway Ditch	57	27	1	85	18.8%
Signal Pole	2	1	0	3	0.7%
Street Light Pole or Base	0	2	0	2	0.4%
Traffic Island	1	0	0	1	0.2%
Tree or Stump (stationary)	27	26	4	57	12.6%
Underside of Bridge	2	1	0	3	0.7%
Utility Pole or Box	45	19	0	64	14.1%
Wood Sign Post	19	5	0	24	5.3%
Total	**319**	**125**	**9**	**453**	

3.2 Fixed Object Collisions

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

	Total Number of Fixed Object Collisions			Maintained Road Miles			Annual Million VMT			Collision Rate for Fixed Object Collisions per Million VMT		
Year	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
2017	389	229	618	836	630	1,466	743	260	1,003	0.52	0.88	0.62
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

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
2017	2	25	1	28
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

Table 3.3.2
Pedestrian Involved Collisions by Facility Used

Year	Marked Crosswalk	Unmarked Crosswalk	In Roadway	Shoulder	Sidewalk	Other	Total
2017	10	4	12	1	0	1	28
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

Table 3.3.3
Pedestrian Involved Collisions
By Driver First Contributing Circumstance

Contributing Circumstance	2017	2018	2019	2020	2021	2022
None	8	2	10	8	4	7
Did Not Grant ROW to Pedestrian	5	8	4	7	6	5
Unknown Driver Distraction	0	2	0	4	2	4
Other	7	5	8	3	4	3
Operating Recklessly or Aggressively	0	0	0	0	0	2
Apparently Asleep or Fatigued	0	0	0	0	0	1
Disregard Traffic Sign and Signals	0	0	0	0	0	1
Driver Distractions Outside Vehicle	1	0	0	0	0	1
Exceeding Reasonable Safe Speed	1	0	0	0	0	1
Distracted by Other Occupant	0	0	0	1	0	0
Driver Operating Handheld Telecommunication or Other Electronic Devices	0	0	1	0	0	0
Improper Passing	0	0	0	0	1	0
Improper Turn	1	0	0	0	0	0
Inattention	5	4	3	0	0	0
On Wrong Side of Road	0	0	0	0	1	0
Operating Defective Equipment	0	0	0	0	1	0
Under Influence of Alcohol	0	0	1	1	1	0
Total	**28**	**21**	**27**	**24**	**20**	**25**

Table 3.3.4
Age of Pedestrians Involved in Collisions

Age Range	2017	2018	2019	2020	2021	2022
Unknown	1	0	0	0	1	0
0-5	0	0	0	2	1	0
6-10	2	2	1	0	1	0
11-15	2	1	3	1	0	2
16-20	3	6	1	3	3	1
21-25	3	3	3	2	0	0
26-30	5	1	2	3	0	3
31-35	0	1	2	3	3	5
36-40	2	1	3	3	1	1
41-45	0	2	2	1	2	2
46-50	1	3	2	1	1	4
51-55	4	1	3	1	2	2
56-60	0	0	3	1	2	1
61-65	2	0	0	0	0	0
66-70	0	0	1	1	1	0
71-75	2	0	0	1	1	2
76-80	0	0	0	1	1	2
81-85	1	0	1	0	0	0
86+	0	0	0	0	0	0
Total	**28**	**21**	**27**	**24**	**20**	**25**

Table 3.3.5
Gender of Pedestrians Involved in Collisions

Year	Unknown/X	Female	Male	Total
2017	0	9	19	28
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

3.4 Bicycle Involved Collisions

Table 3.4.11
Bicycle Involved Collisions by Severity

Year	Property Damage Only	Injury	Fatality	Total
2017	0	18	0	18
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

Table 3.4.2
2022 Bicycle Involved Collisions by First Contributing Circumstance and Severity

First Contributing Circumstance	Property Damage Only	Injury	Fatality	Total
None / Driver Not Distracted	0	6	0	6
Did Not Grant ROW to Pedalcyclist	1	2	0	3
Did Not Grant ROW to Vehicle	0	1	0	1
Disregard Traffic Sign and Signals	0	1	0	1
Improper Turn/Merge	0	1	0	1
Unknown Distraction	0	1	0	1
Total	**1**	**12**	**0**	**13**

3.5 Motorcycle Involved Collisions

Table 3.5.1
Motorcycle Involved Collisions
By Severity

Year	Property Damage Only	Injury	Fatality	Total
2017	11	42	1	54
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

Table 3.5.2
2022 Motorcycle Involved Collisions
By First Contributing Circumstance

First Contributing Circumstance	PDO	Injury	Fatality	Total
Exceeding Reasonably Safe Speed or Stated Speed Limit	1	5	3	9
None	1	6	0	7
Did Not Grant R/W to Vehicle	1	4	0	5
Other	2	3	0	5
Inattention / Driver Distraction	0	3	0	3
Improper Turn/Merge	0	1	1	2
Operating Recklessly or Aggressively	0	0	2	2
Follow Too Closely	0	1	0	1
Improper Passing	1	0	0	1
Operating Defective Equipment	0	1	0	1
Total	**6**	**24**	**6**	**36**

4.0 OTHER COLLISION INFORMATION

4.1 Estimated Economic Costs

Table 4.1.1
Estimated Economic Costs of Collision Activity

Severity	2022 Collisions	Estimated Economic Costs
Property Damage Only	1,087	$7.282,900
Possible Injury	205	$4,920,000
Evident Injury (Suspected Minor Injury)	229	$6,686,800
Disabling/Serious Injury (Suspected Serious Injury)	40	$4,040,000
Fatal	23	$40,250,000
Total	1,584	$63,179,700

The following estimated costs per collision are used in this calculation:
Property Damage Only (no injury observed)-$6,700; Possible Injury-$24,000; Evident Injury-$40,000; Disabling/Serious Injury-$155,000; Fatality-$1,778,000
(National Safety Council Guide to Calculating Costs of Motor-Vehicle Injuries, 2021)

4.2 Month, Day of Week, and Time of Day

Figure 4.2.1
2022 Collisions by Month

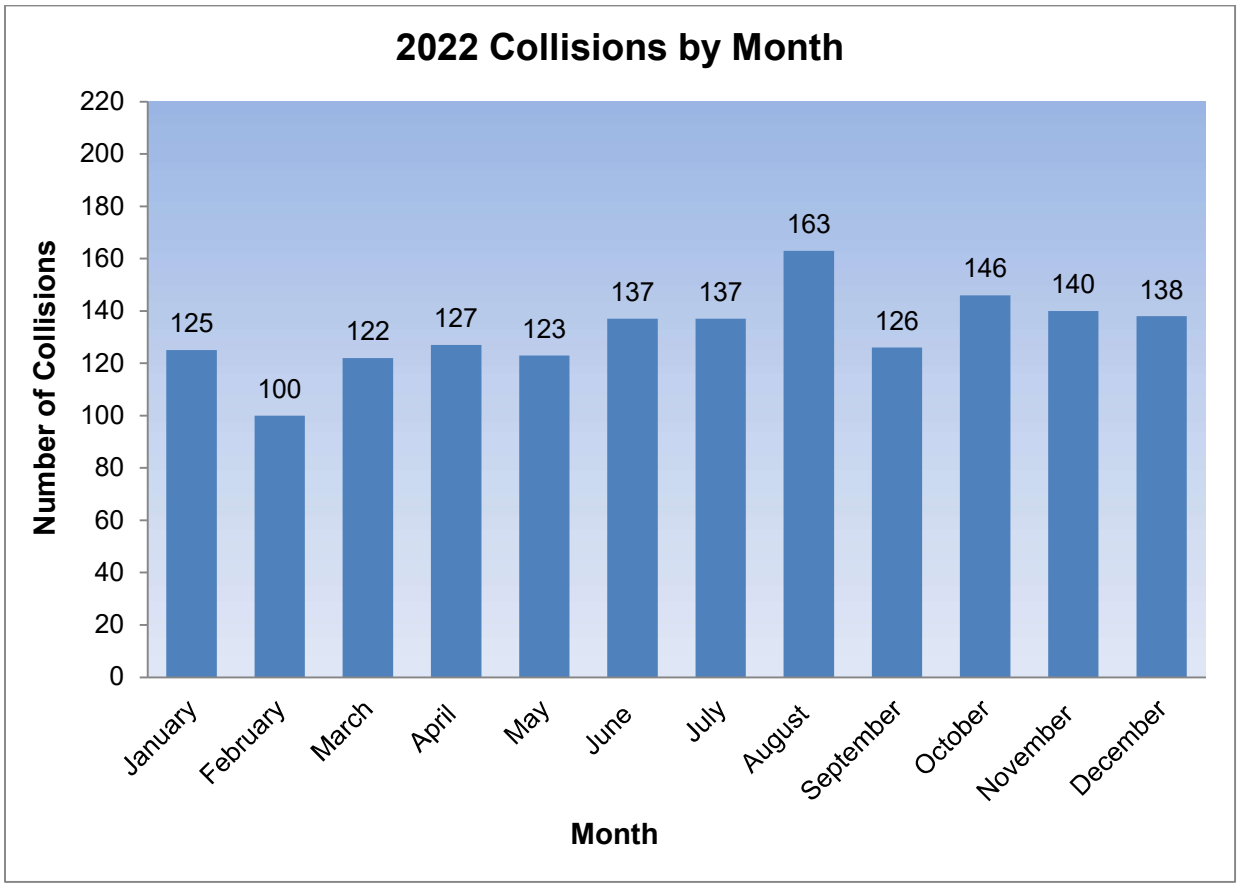


Figure 4.2.2
2022 Collisions by Day of Week

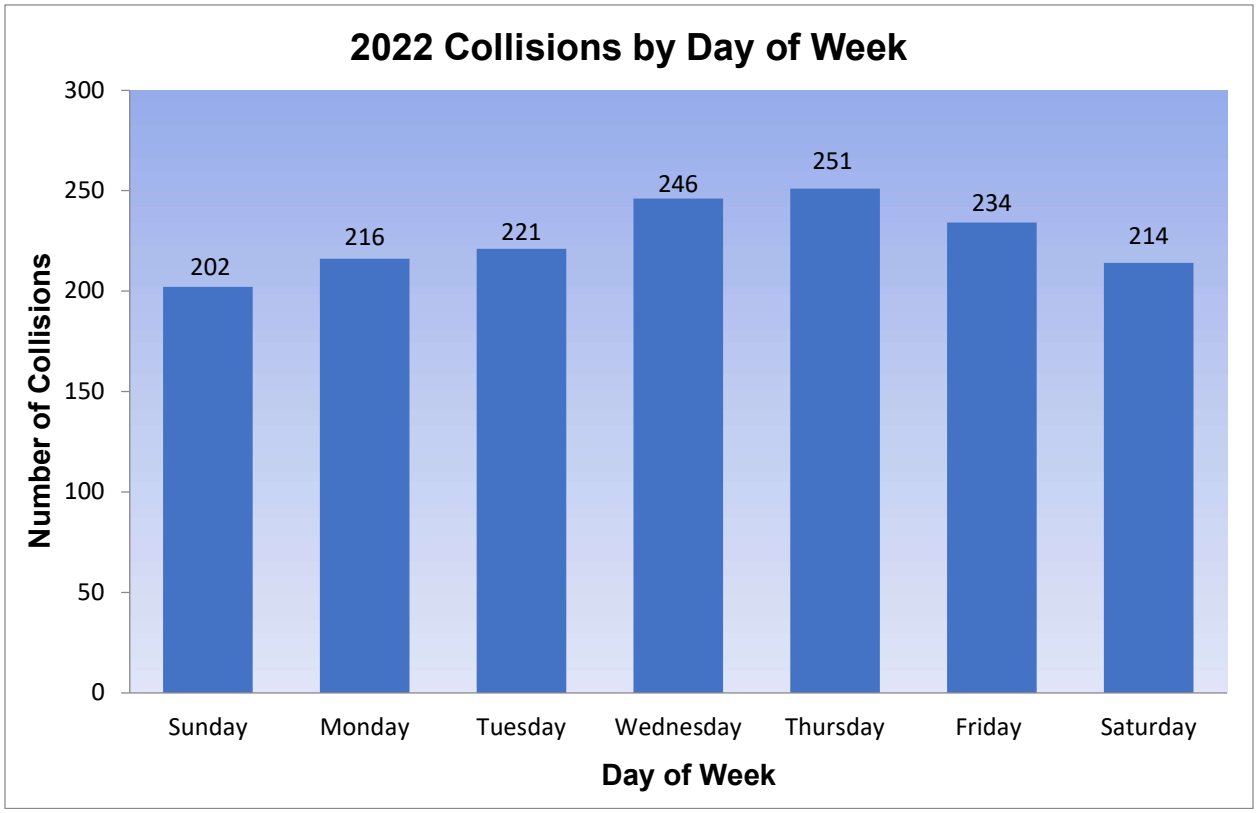


Figure 4.2.3
2022 Weekday Collisions
By Time of Day

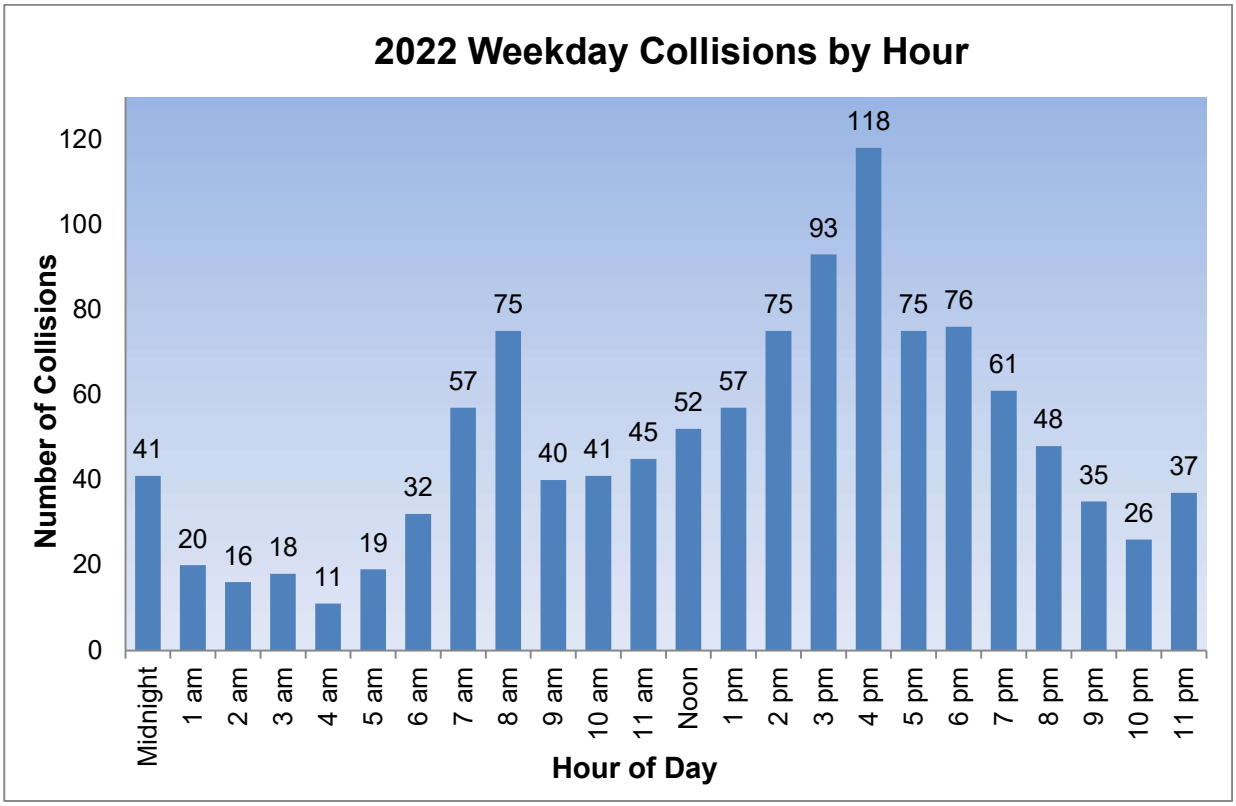
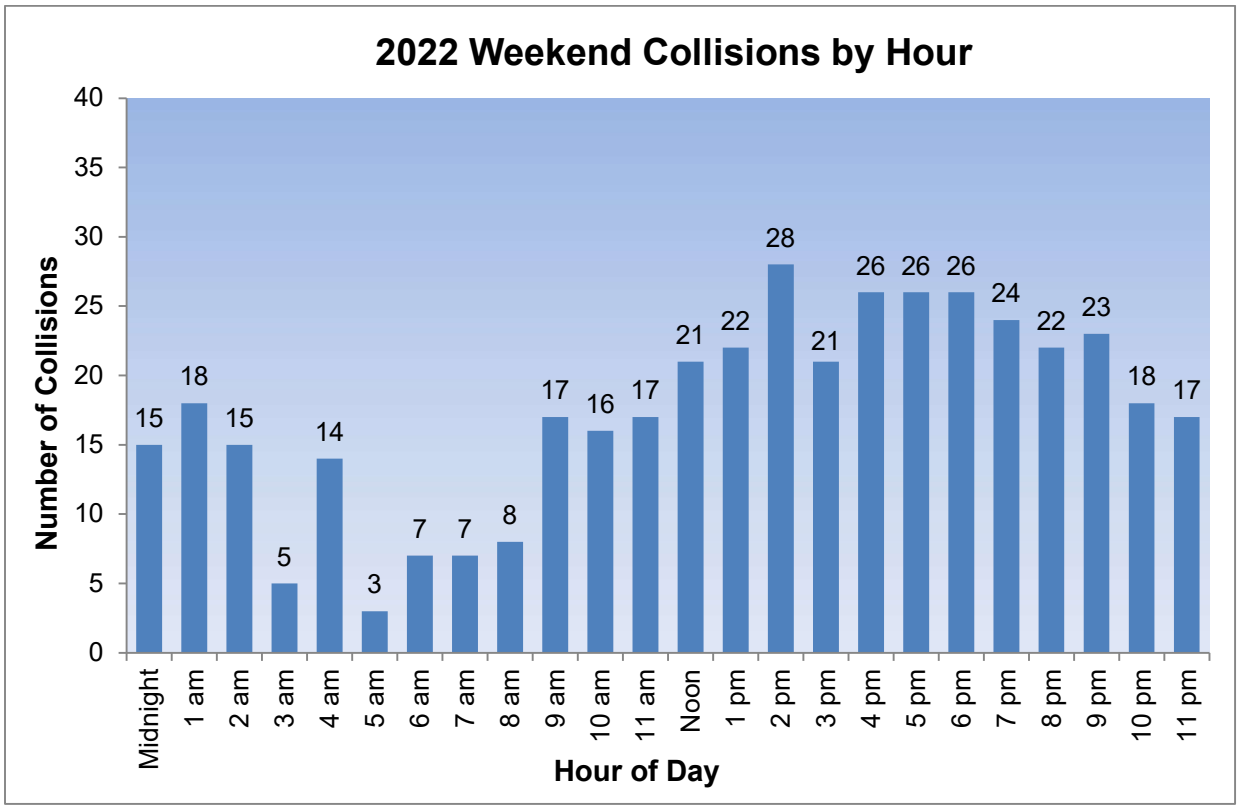
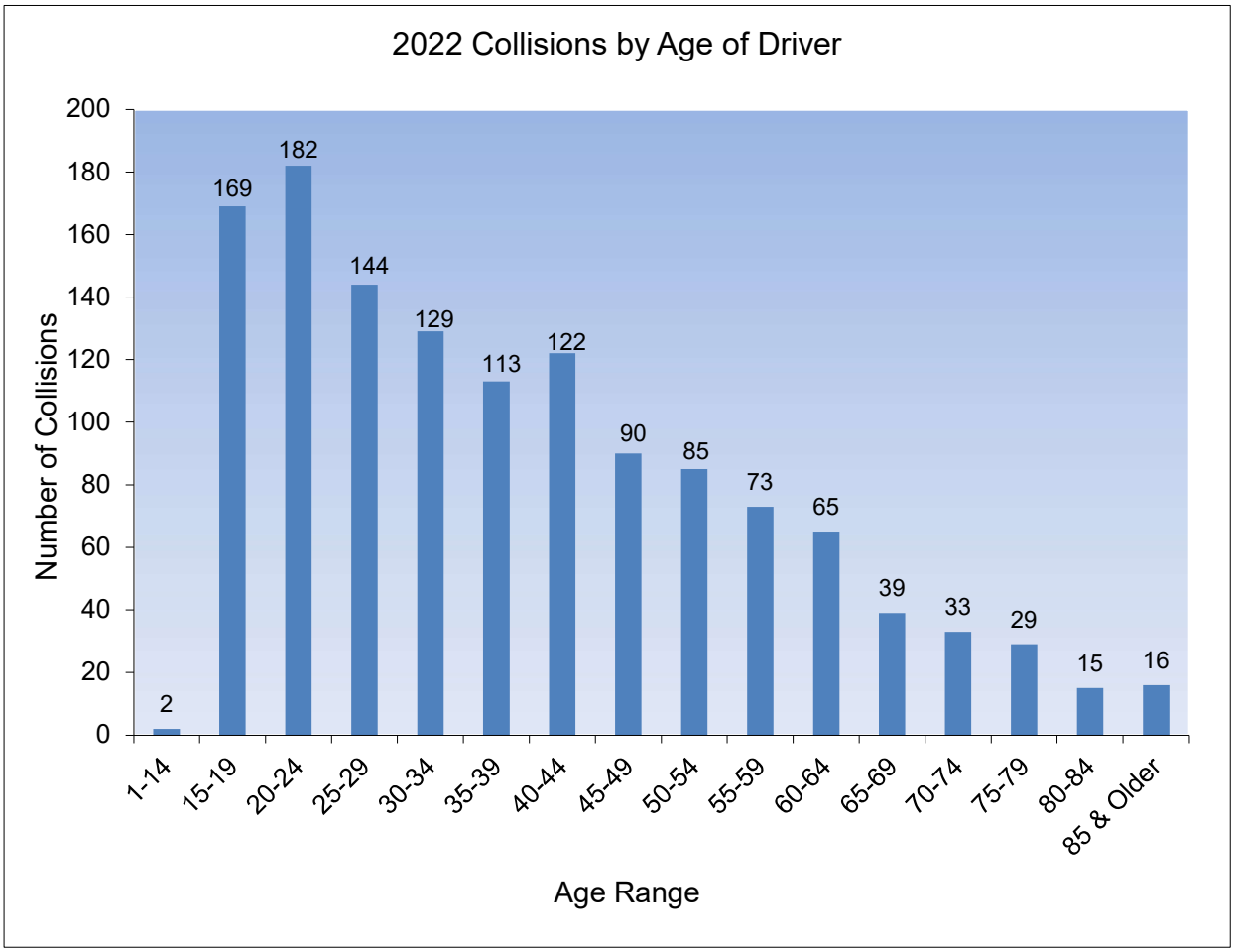


Figure 4.2.4
2022 Weekend Collisions
By Time of Day



4.3 Demographics

Figure 4.3.1
2022 Collisions by Age of Driver



Note: 278 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 2022

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	4	13	11	8	8	7	9	5	6	7	80
Driver Distraction	0	10	10	5	5	9	6	6	6	8	8	73
None	1	4	6	8	5	9	11	3	3	8	5	63
Did Not Grant ROW to Vehicle	1	2	5	2	6	1	4	8	6	2	5	42
Follow Too Closely	0	7	2	6	3	1	2	1	4	7	3	36
Improper Turn/Merge	0	2	5	0	4	3	0	2	0	2	0	18
Other	0	1	3	3	2	3	1	1	1	0	2	17
Apparently Asleep/Fatigued/Ill	0	2	1	2	0	1	2	2	1	1	1	13
Under Influence of Alcohol or Drugs	0	0	2	1	0	0	3	2	0	3	2	13
Disregard Traffic Signs and Signals	0	0	0	0	0	2	2	1	0	1	2	8
Operating Defective Equipment	0	0	1	1	2	0	2	1	0	0	0	7
Operating Handheld Cell Phone or Other Electronic Devices	0	0	0	3	1	0	0	0	0	0	1	5
Overcorrecting/ Oversteering	0	2	2	0	0	0	1	0	0	0	0	5
Improper U-Turn	0	0	0	0	1	1	0	0	0	1	0	3
Did Not Grant ROW to Non Motorist	0	0	1	0	0	0	0	0	1	0	0	2
Improper Passing	0	0	0	0	0	1	0	0	0	0	1	2
Operating Recklessly or Aggressively	0	0	0	1	0	0	0	0	0	0	0	1
Totals	**4**	**34**	**51**	**43**	**37**	**39**	**41**	**36**	**27**	**39**	**37**	**388**

Table 4.4.2
2022 Collisions by First Contributing Circumstance

First Contributing Circumstance	Fatality	Injury	PDO	Total
Inattention/Driver Distraction	2	105	199	306
None	0	76	216	292
Other	4	33	170	207
Excessive Speed	5	59	109	173
Did Not Grant ROW to Vehicle	1	51	104	156
Follow Too Closely	0	36	67	103
Under Influence of Alcohol/Drugs	0	21	57	78
Improper Turn/Merge	1	17	48	66
Apparently Asleep/Fatigued/Ill	4	20	26	50
Disregard Traffic Sign and Signals/Flagger - Officer	1	16	18	35
Operating Defective Equipment	0	10	22	32
Overcorrecting/Oversteering	0	9	8	17
Driver Operating Cell Phone/ Other Electronic Device	0	4	10	14
Improper Passing	0	2	12	14
Improper U-Turn	0	7	7	14
Operating Recklessly or Aggressively	5	1	5	11
Did Not Grant ROW to Non-Motorist	0	7	2	9
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
2017	3	27.3%	87	13.5%	91	6.3%	181	8.6%
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%

Figure 4.5.1
2022 Weekend Collisions for
Drivers under the Influence
By Time of Day

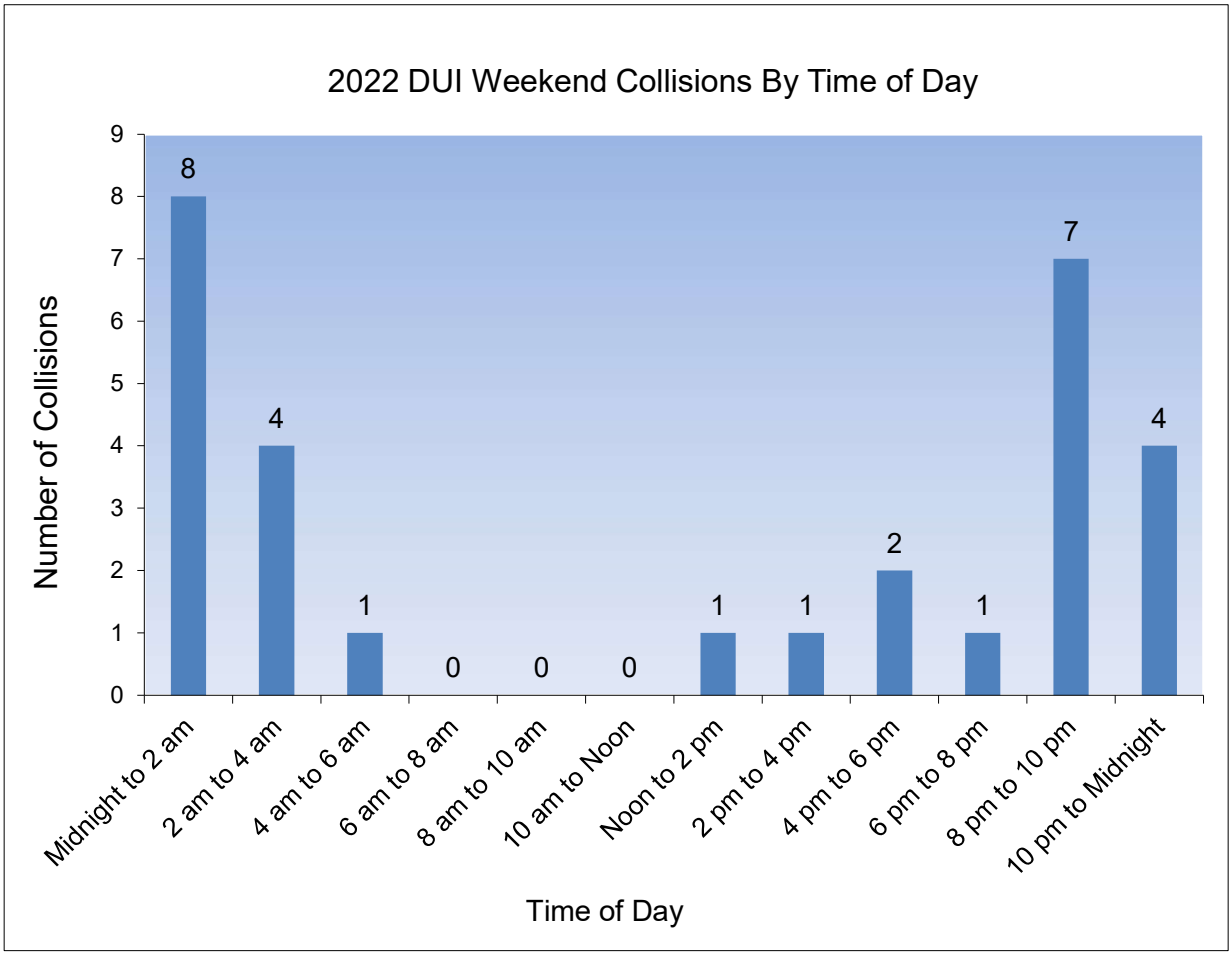
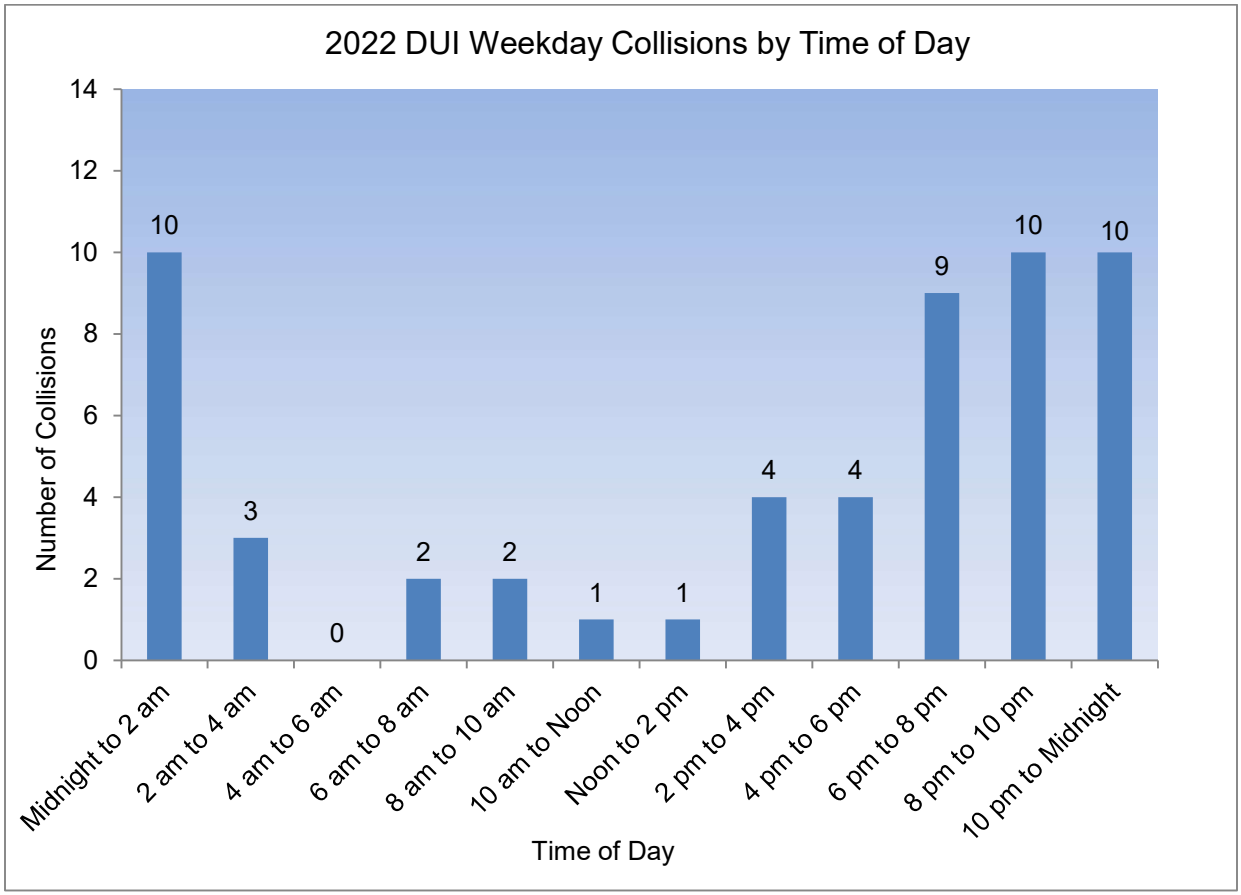


Figure 4.5.2
2022 Weekday Collisions for
Drivers under the Influence
By Time of Day



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
2017	4	36%	81	13%	158	11%	243	12%
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%

4.7 Lighting Conditions

Table 4.7.13
2022 Collisions By
Lighting Condition

Lighting Condition	Property Damage Only	Injury	Fatal	Total
Dark-No Street Lights	133	59	3	195
Dark-Street Lights Off	16	5	0	21
Dark-Street Lights On	189	82	3	274
Dark-Unknown Lighting	23	7	0	30
Dawn	19	5	0	24
Daylight	638	302	14	954
Dusk	36	13	3	52
Unknown	33	1	0	34
Totals	1,087	474	23	1,584

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= (Collisions*10^6) / (AADT*365*L), where

Rate = Accident rate for collisions per million vehicle mile (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 = $6,700*PDO + $24,000*P+$40,000*E+$155,000*D + $1,778,000*F, where

PDO – Total Number of Property Damage Collisions ($6,700/collision)
P – Total Number of Possible Injury Collisions ($24,000/collision)
E – Total Number of Evident Injury Collisions ($40,000/collision)
D – Total Number of Disabling/Serious Injury Collisions ($155,000/collision)
F – Total Number of Fatal Collisions ($1,778,000/collision)