

Road Services Division 2020 Collision Data Report



King County

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Road Services Division
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INTRODUCTION

The King County Department of Local Services is pleased to present the 2020 Collision Data Report. This report is prepared by the Road and Traffic Engineering unit of the Engineering Services section of the Road Services Division.

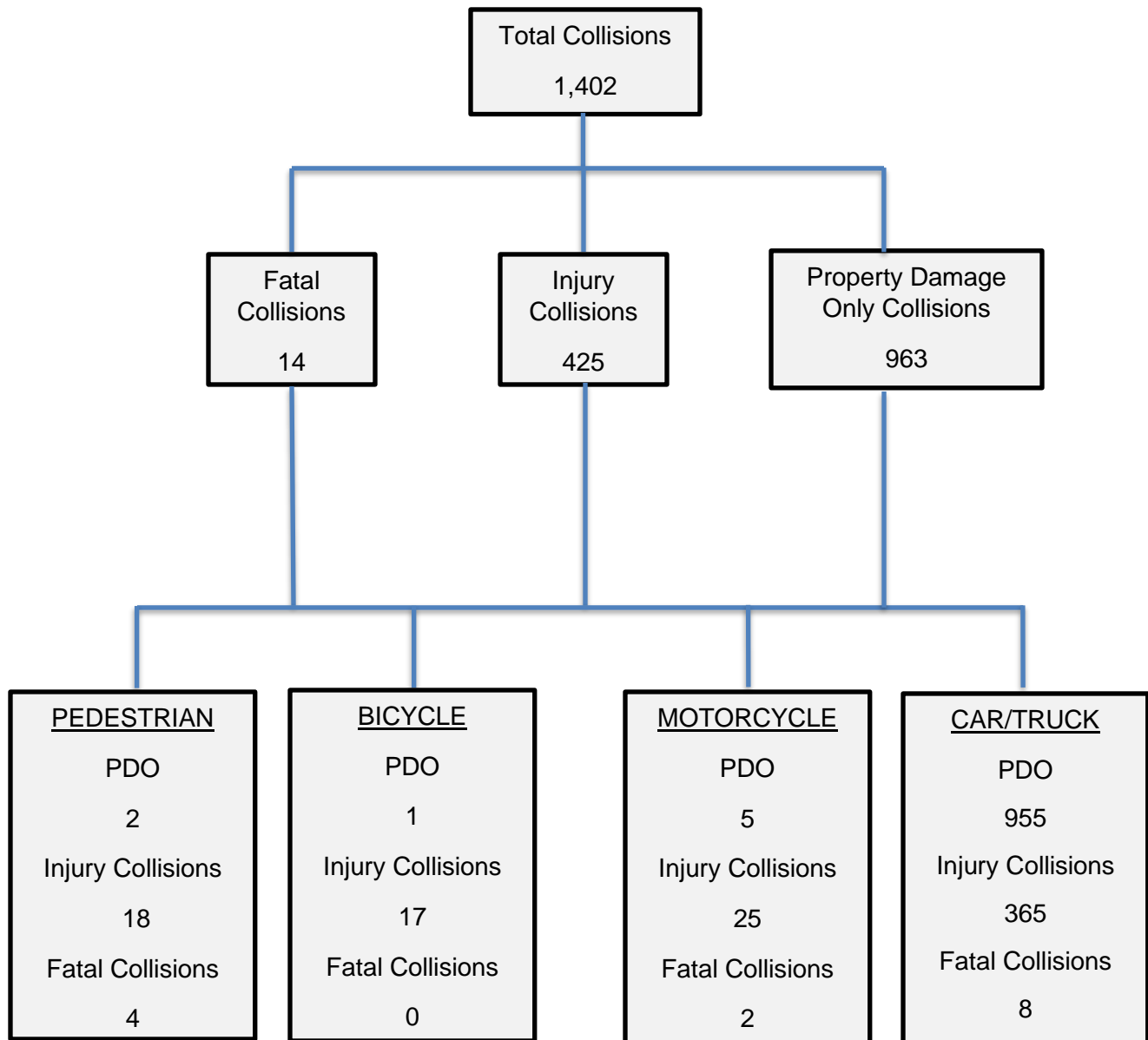
This report was prepared to provide collision and safety information to elected officials and King County staff.

The collision information provided in this report comes from the Washington State Department of Transportation (WSDOT) Collision Location Access Software (CLAS) database as of May 2021. 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 2020, a total of 1,402 collisions were reported on King County maintained roadways. This included 14 fatal, 425 injury, and 963 property damage only collisions. The total economic cost of these collisions is estimated at \$49.6 million.



1.1 Six Year Trends

Since 2015, population and maintained road miles in unincorporated King County has declined. The population decreased from 253,280 to 249,100 (1.7 percent), while the number of maintained roadway miles decreased by only 2 miles. The number of collisions however, decreased by 28 percent from 1,938 to 1,402. This reduction in crash activity is related to a substantial decrease in traffic region-wide beginning in March 2020 as a result of shutdowns due to 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 351,000 new residents since 2015. As traffic patterns return to normal as Covid-19 subsides and the state reopens, the number of crashes and amount of daily congestion are increasing throughout the region.

While the number of total collisions decreased from 2019 to 2020, the proportions of severity has stayed the same. Fatal collisions made 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 2020 collisions were either fixed object (33%), rear-end (14%) or entering an intersection at an angle (17%). Nearly 60 percent of the fixed object crashes involved striking a roadway ditch, utility pole, tree, or fence. There was a total of three fatalities involving fixed objects, comprising 21percent of all fatalities.

Pedestrian and bicycle collisions made up less than three percent of all collisions. There were 18 crashes involving bicyclists, up from 14 in 2019, and 24 total pedestrian involved crashes, down from 27 in 2019.

The percentage of crashes involving motorists driving under the influence (DUI) decreased by 1.4 percent from 2019 to 2020. During 2020, there were a total of 75 DUI involved collisions (5.3%) compared to 122 (6.7%) during 2019. Of the 75 collisions, 2 were fatal, 28 incurred injuries, and 45 involved property damage only.

**Table 1.1.1
Number of Collisions
By Severity**

Year	PDO*	Percentage	Injury	Percentage	Fatal	Percentage	Total
2015	1,309	67.5%	612	31.6%	17	0.9%	1,938
2016	1,340	65.7%	687	33.7%	14	0.7%	2,041
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

*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	5,100	76
Rural Major Collector	7	96	2,700	95
Rural Minor Collector	8	106	1,400	54
Rural Local Access	9	388	700	99
Urban Principal Arterial	14	37	16,000	216
Urban Minor Arterial	16	72	9,800	258
Urban Collector	17	78	3,400	97
Urban Minor Collector	18	20	2,000	15
Urban Local Access	19	628	800	183
Total		1,466		1,093
Overall Weighted Average			2,042	

Note: Average Annual Daily Traffic Volumes were derived using a three-year sampling of traffic count data (2018-2020) 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
2015	1,938	1,842	1,468	987	1.96
2016	2,041	1,931	1,467	1,034	1.97
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

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
2015	253,280	1,938	765.16	33	13.02	21	8.29
2016	245,900	2,041	830.01	37	15.05	18	7.32
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

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
2015	253,280	19	7.50	3	1.18	0	0.00
2016	245,900	15	6.10	2	0.81	2	0.81
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

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
2015	253,280	17	6.71	3	1.18	0	0.00
2016	245,900	14	5.69	2	0.81	2	0.81
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

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
2015	19	1,468	9.87	1.93
2016	15	1,467	10.34	1.45
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

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
2015	17	1,468	9.87	1.72
2016	14	1,467	10.34	1.35
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

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
2015	253,280	1,938	765	7,170,400	117,114	1,633	321,419,000	6,296,000	1,959
2016	245,900	2,041	830	7,183,700	122,374	1,703	323,128,000	6,821,000	2,111
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	Not Available	Not Available

Table 2.2.276567
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
2015	253,280	6.71	7.50	7,170,400	6.95	7.92	321,419,000	10.07	10.92
2016	245,900	5.69	6.10	7,183,700	7.13	7.37	323,128,000	10.66	11.59
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	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
2015	987	1,938	1.96	59,650	117,114	1.96	31,310	6,296,000	2.01
2016	1,034	2,041	1.97	60,851	122,374	2.01	32,180	6,821,000	2.12
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	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
2015	9.87	1.72	1.93	597	0.83	0.95	31,310	1.03	1.12
2016	10.34	1.35	1.45	609	0.84	0.92	32,180	1.07	1.18
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	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
2015	127,500	9	10	7.06	7.84	125,780	8	9	6.36	7.16
2016	119,900	10	11	8.34	9.17	126,000	4	4	3.17	3.17
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

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
2015	9	8	17	836	632	1,468	7.18	2.69	9.87	1.25	2.97	1.72
2016	10	4	14	837	630	1,467	7.54	2.80	10.34	1.33	1.42	1.35
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

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
2015	10	9	19	836	632	1,468	7.18	2.69	9.87	1.39	3.35	1.93
2016	11	4	15	837	630	1,467	7.54	2.80	10.34	1.46	1.42	1.45
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

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
2015	1,548	390	1,938	836	632	1,468	718	269	987	2.16	1.45	1.96
2016	1,616	425	2,041	837	630	1,467	754	280	1,034	2.14	1.52	1.97
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

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
2015	462	626	456	394	1,938
2016	487	602	504	448	2,041
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

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	
2015	106	124	93	67	461	520	216	23	328	1,938
2016	88	159	104	74	487	514	226	15	374	2,041
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

3.0 COLLISION TYPES

3.1 Collision Type and Severity

Table 3.1.1
Collisions by Collision Type

Collision Type	2015	2016	2017	2018	2019	2020
Fixed Object	576	626	618	548	473	459
Entering at Angle	334	358	368	348	364	244
Rear - End	441	426	438	388	377	202
Hit Parked Car	136	151	189	142	148	128
Sideswipe	99	86	116	126	105	90
Left Turn	116	131	117	120	118	87
Vehicle Overturned	31	43	35	29	24	26
Pedestrian	33	37	28	21	27	24
Animal	21	22	21	32	23	24
Head On	20	22	36	24	35	22
Other Object	13	10	18	10	15	22
U-Turn	0	0	23	29	19	20
Bicycle	21	18	18	13	14	18
Right Turn	17	22	27	16	25	14
Other	67	79	19	15	14	9
Backing	0	0	10	13	17	5
Non-Collision	2	1	9	1	10	5
Leaving Parked Position	11	9	11	9	16	3
Totals	1,938	2,041	2,101	1,884	1,824	1,402

Table 3.1.2
Fatal Collisions by Collision Type

Collision Type	2015	2016	2017	2018	2019	2020
Pedestrian	3	2	1	0	1	4
Fixed object	7	4	6	4	4	3
Other	2	0	0	1	0	3
Head on	1	1	0	1	2	2
Rear - end	1	1	0	1	0	1
Vehicle overturned	0	0	0	0	1	1
Bicycle	0	2	0	1	0	0
Entering at angle	2	2	1	2	1	0
Hit Parked Car	0	0	1	0	0	0
Left Turn	0	0	0	0	1	0
Non-Collision	0	0	1	0	0	0
Right Turn	0	0	1	1	0	0
Sideswipe	1	2	0	0	0	0
Totals	17	14	11	11	10	14

Table 3.1.3
2020 Collisions by Collision Type and Severity

Collision Type	PDO	Injury	Fatal	Total	Percentage
Fixed object	331	125	3	459	32.7%
Entering at angle	173	71	0	244	17.4%
Rear - end	130	71	1	202	14.4%
Hit Parked Car	108	20	0	128	9.1%
Sideswipe	69	21	0	90	6.4%
Left turn	54	33	0	87	6.2%
Vehicle overturned	15	10	1	26	1.9%
Pedestrian	2	18	4	24	1.7%
Animal	21	3	0	24	1.7%
Head on	5	15	2	22	1.6%
Other Object	19	3	0	22	1.6%
U-Turn	11	9	0	20	1.4%
Bicycle	1	17	0	18	1.3%
Right Turn	7	7	0	14	1.0%
Other	5	1	3	9	0.6%
Backing	5	0	0	5	0.4%
Non-Collision	4	1	0	5	0.4%
Leaving Parked Position	3	0	0	3	0.2%
Total	963	425	14	1,402	100%

Table 3.1.4
2020 Fixed Object Collisions
By First Object Struck and Severity

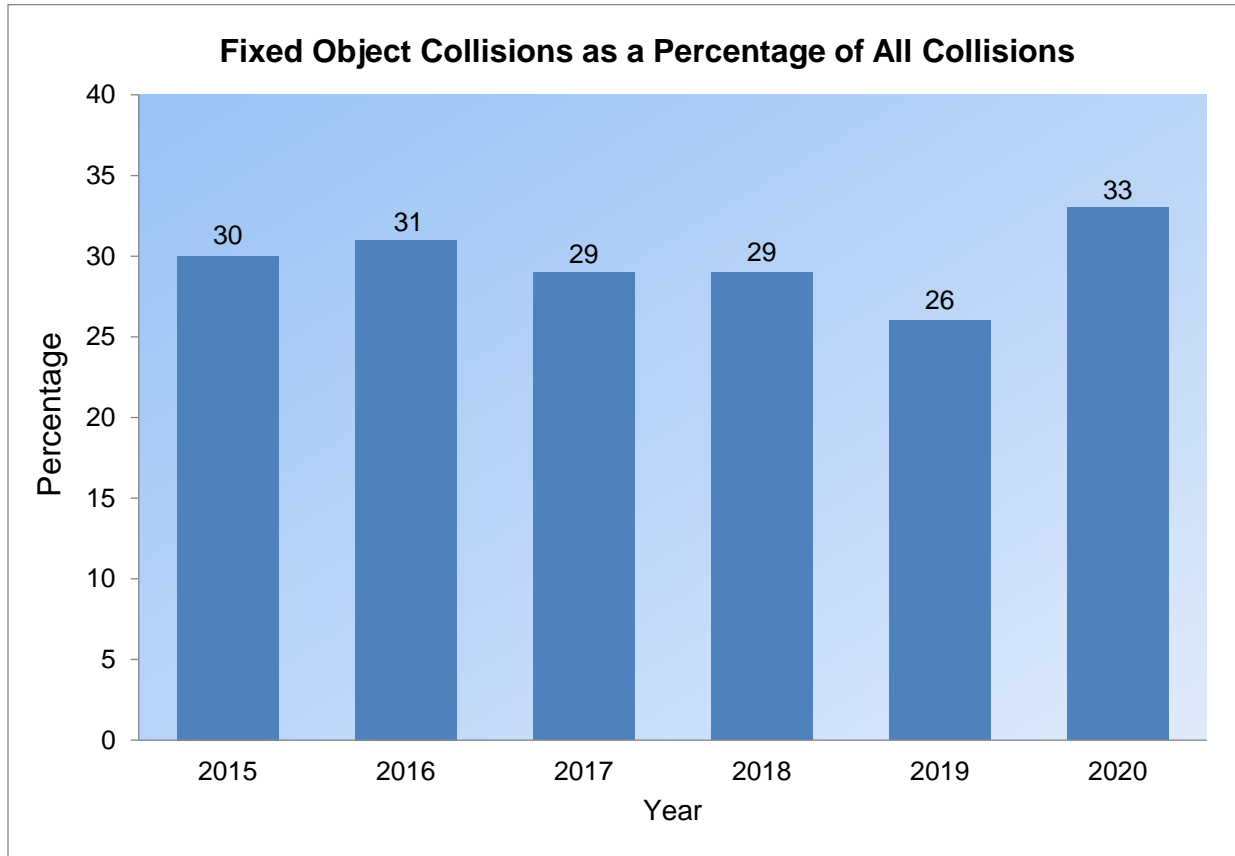
Object Struck	PDO	Injury	Fatality	Total	% of Total
All Other Fixed Objects (On the Road)	1	0	0	1	0.2%
Boulder (stationary)	4	5	0	9	2.0%
Bridge Rail (Face or Leading End)	2	0	0	2	0.4%
Building	1	1	0	2	0.4%
Concrete Barrier/Jersey Barrier	3	0	0	3	0.7%
Culvert and/or Other Appurtenance in Ditch	3	1	0	4	0.9%
Earth Bank or Ledge	11	12	0	23	5.0%
Fence	53	9	0	62	13.5%
Fire Hydrant	8	0	0	8	1.7%
Guardrail - Face	18	10	0	28	6.1%
Guardrail - Leading End	6	3	0	9	2.0%
Guardrail - Through, Over or Under	2	2	0	4	0.9%
Into River, Lake, Swamp, etc.	2	0	0	2	0.4%
Linear Curb	5	1	0	6	1.3%
Mailbox	22	5	0	27	5.9%
Metal Sign Post	6	4	0	10	2.2%
Over Embankment - No Guardrail Present	7	1	0	8	1.7%
Railway Signal Pole	0	1	0	1	0.2%
Retaining Wall (concrete, rock, brick, etc.)	2	2	0	4	0.9%
Roadway Ditch	67	22	2	91	19.8%
Rock Bank or Ledge	1	1	0	2	0.4%
Street Light Pole or Base	2	0	0	2	0.4%
Traffic Island	4	1	0	5	1.1%
Tree or Stump (stationary)	45	20	1	66	14.4%
Underside of Bridge	2	1	0	3	0.7%
Utility Pole or Box	37	18	0	55	12.0%
Wood Sign Post	17	5	0	22	4.8%
Total	331	125	3	459	100%

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
2015	366	210	576	836	632	1,468	718	269	987	0.51	0.78	0.58
2016	399	227	626	837	630	1,467	754	280	1,034	0.53	0.81	0.61
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

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
2015	1	29	3	33
2016	2	33	2	37
2017	2	25	1	28
2018	0	21	0	21
2019	2	24	1	27
2020	2	18	4	24

Table 3.3.2
Pedestrian Involved Collisions by Facility Used

Year	Marked Crosswalk	Unmarked Crosswalk	In Roadway	Shoulder	Sidewalk	Other	Total
2015	10	2	10	5	3	3	33
2016	16	3	14	3	1	0	37
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

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

Contributing Circumstance	2015	2016	2017	2018	2019	2020
None	5	12	7	2	9	8
Fail to Yield Row to Pedestrian	8	8	5	8	4	7
Unknown Driver Distraction	3	2	0	2	0	4
Other	6	4	7	5	8	3
Under Influence of Alcohol	1	1	0	0	1	1
Distracted by Other Occupant	0	0	0	0	0	1
Inattention	4	4	5	4	3	0
Driver Not Distracted	1	1	1	0	1	0
Driver Operating Handheld Telecommunication or Other Electronic Devices	0	0	0	0	1	0
Apparently Asleep	0	1	0	0	0	0
Did Not Grant ROW to Vehicle	0	1	0	0	0	0
Disregard Flagger - Officer	1	0	0	0	0	0
Disregard Yield Sign – Flashing Yellow	0	1	0	0	0	0
Driver Distractions Outside Vehicle	0	1	1	0	0	0
Exceeding Reasonable Safe Speed	2	0	1	0	0	0
Exceeding Stated Speed Limit	1	0	0	0	0	0
Improper Turn	1	0	1	0	0	0
On Wrong Side of Road	0	1	0	0	0	0
Total	33	37	28	21	27	24

Table 3.3.4
Age of Pedestrians Involved in Collisions

Age Range	2015	2016	2017	2018	2019	2020
Unknown	1	0	1	0	0	0
0-5	1	2	0	0	0	2
6-10	1	1	2	2	1	0
11-15	5	6	2	1	3	1
16-20	7	2	3	6	1	3
21-25	1	6	3	3	3	2
26-30	4	3	5	1	2	3
31-35	1	1	0	1	2	3
36-40	1	2	2	1	3	3
41-45	0	0	0	2	2	1
46-50	1	2	1	3	2	1
51-55	3	2	4	1	3	1
56-60	2	2	0	0	3	1
61-65	3	2	2	0	0	0
66-70	0	4	0	0	1	1
71-75	0	2	2	0	0	1
76-80	1	0	0	0	0	1
81-85	1	0	1	0	1	0
86+	0	0	0	0	0	0
Total	33	37	28	21	27	24

Table 3.3.5
Gender of Pedestrians Involved in Collisions

Year	Unknown	Female	Male	Total
2015	1	14	18	33
2016	0	18	19	37
2017	0	9	19	28
2018	0	12	9	21
2019	0	11	16	27
2020	0	11	13	24

3.4 Bicycle Involved Collisions

Table 3.4.11
Bicycle Involved Collisions by Severity

Year	Property Damage Only	Injury	Fatality	Total
2015	3	18	0	21
2016	1	15	2	18
2017	0	18	0	18
2018	1	11	1	13
2019	4	10	0	14
2020	1	17	0	18

Table 3.4.2
2020 Bicycle Involved Collisions by First Contributing Circumstance and Severity

First Contributing Circumstance	Property Damage Only	Injury	Fatality	Total
None / Driver Not Distracted	1	5	0	6
Did Not Grant ROW to Pedalcyclist	0	4	0	4
Not Stated	0	3	0	3
Improper Turn/Merge	0	2	0	2
Improper Passing	0	1	0	1
Unknown Driver Distraction	0	1	0	1
Other	0	1	0	1
Total	1	17	0	18

3.5 Motorcycle Involved Collisions

Table 3.5.1
Motorcycle Involved Collisions
By Severity

Year	Property Damage Only	Injury	Fatality	Total
2015	13	40	4	57
2016	5	36	3	44
2017	11	42	1	54
2018	4	35	3	42
2019	9	38	3	50
2020	5	25	2	32

Table 3.5.2
2020 Motorcycle Involved Collisions
By First Contributing Circumstance

First Contributing Circumstance	PDO	Injury	Fatality	Total
Inattention / Driver Distraction	1	5	1	7
None / Driver Not Distracted	0	4	0	4
Exceeding Reasonably Safe Speed	1	3	0	4
Other	1	2	0	3
Did Not Grant R/W to Vehicle	1	1	0	2
Improper Passing	0	1	1	2
Operating Defective Equipment	0	2	0	2
Overcorrecting / Oversteering	0	2	0	2
Under the Influence of Drugs or Alcohol	1	1	0	2
Disregard Traffic Sign and Signals	0	1	0	1
Disregard Flagger / Officer	0	1	0	1
Improper U-Turn	0	1	0	1
Operating Recklessly or Aggressively	0	1	0	1
Total	5	25	2	32

4.0 OTHER COLLISION INFORMATION

4.1 Estimated Economic Costs

Table 4.1.1
Estimated Economic Costs of Collision Activity

Severity	2020 Collisions	Estimated Economic Costs
Property Damage Only	963	\$12,037,500
Possible Injury	235	\$5,499,000
Evident Injury (Suspected Minor Injury)	150	\$4,275,000
Disabling/Serious Injury (Suspected Serious Injury)	40	\$3,936,000
Fatal	14	\$23,856,000
Total	1,402	\$49,603,500

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

Property Damage Only (no injury observed)-\$12,500; Possible Injury-\$23,400; Evident Injury-\$28,500; Disabling/Serious Injury-\$98,400; Fatality-\$1,704,000
(National Safety Council Guide to Calculating Costs of Motor-Vehicle Injuries, 2019)

4.2 Month, Day of Week, and Time of Day

Figure 4.2.1
2020 Collisions by Month

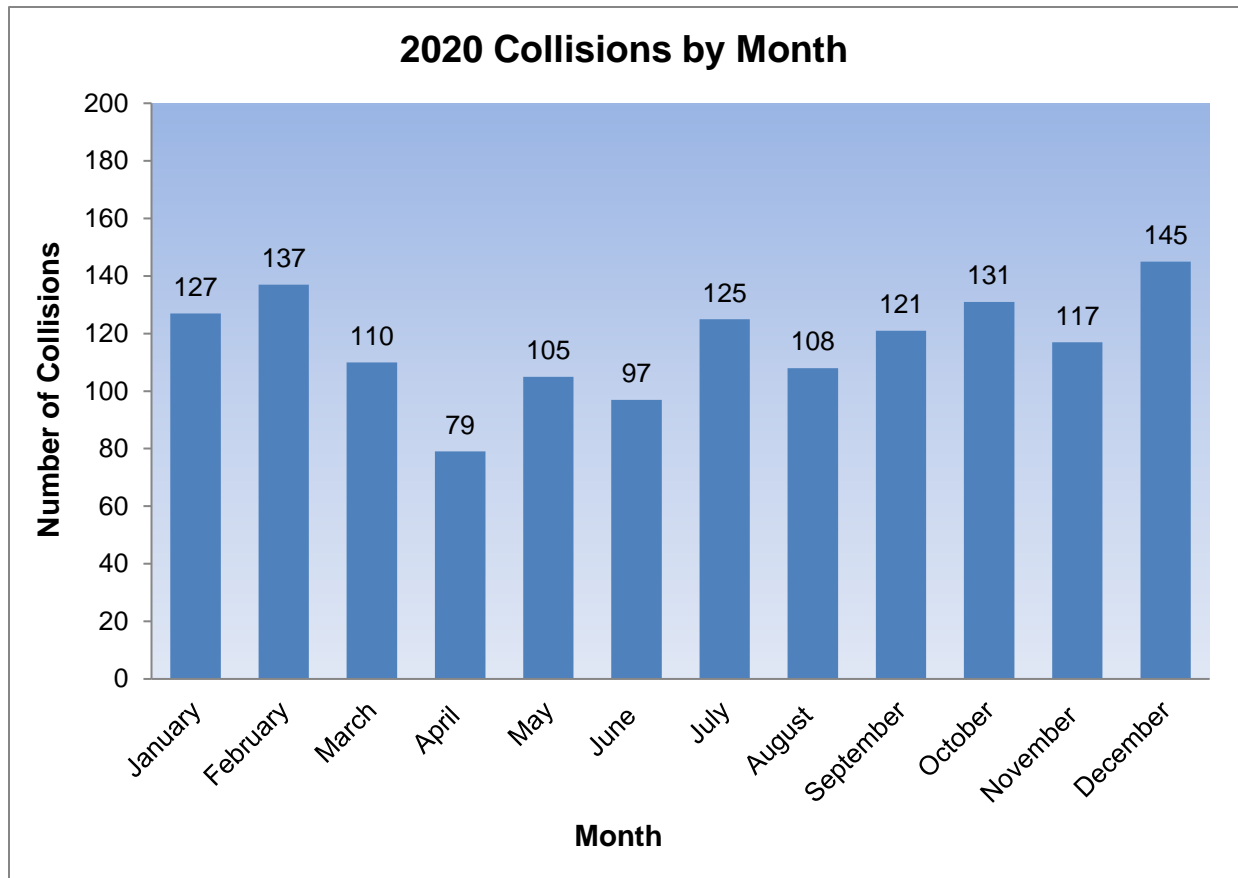


Figure 4.2.2
2020 Collisions by Day of Week

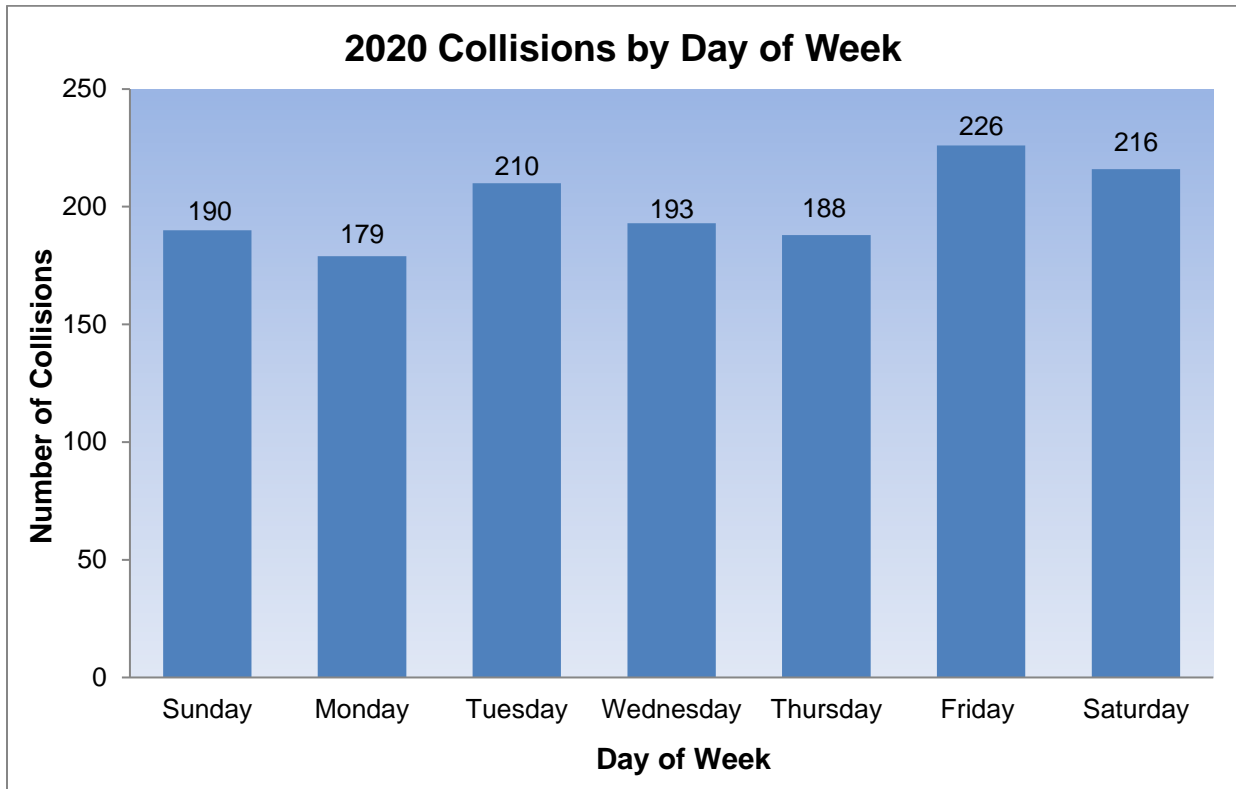


Figure 4.2.3
2020 Weekday Collisions
By Time of Day

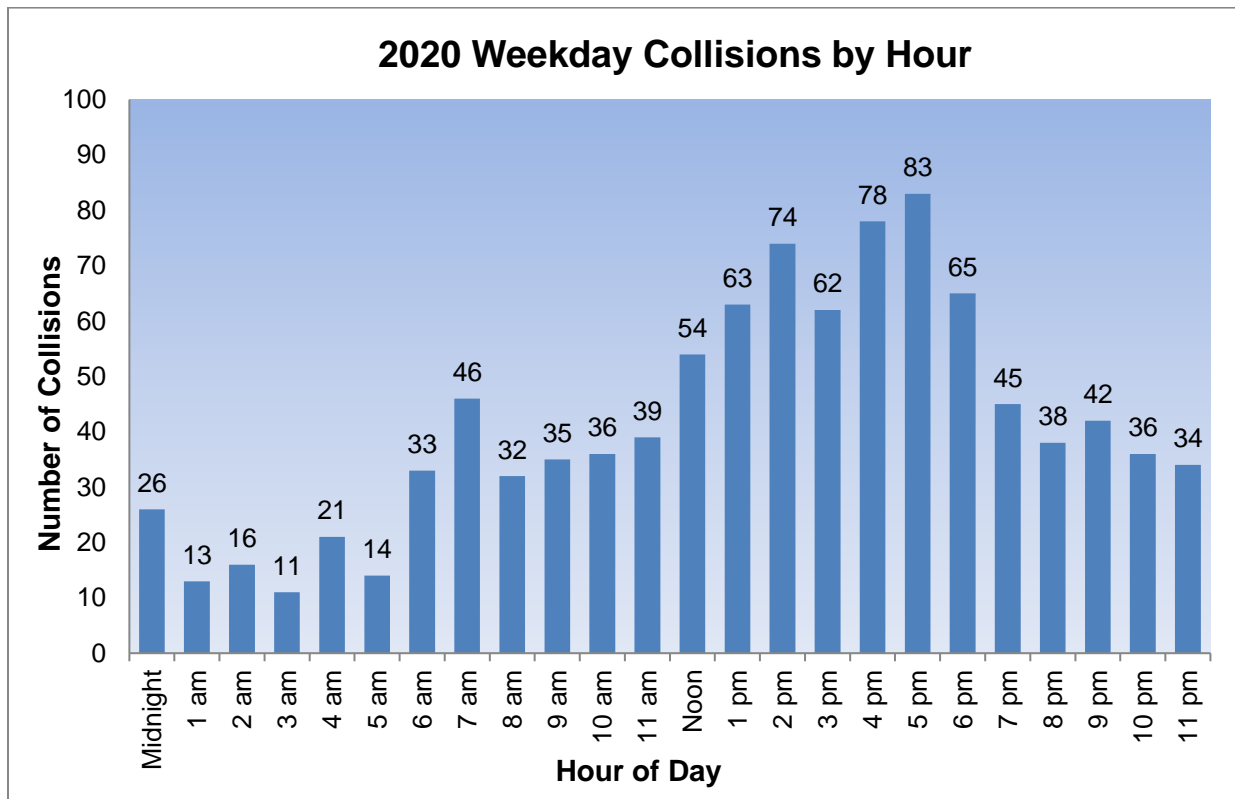
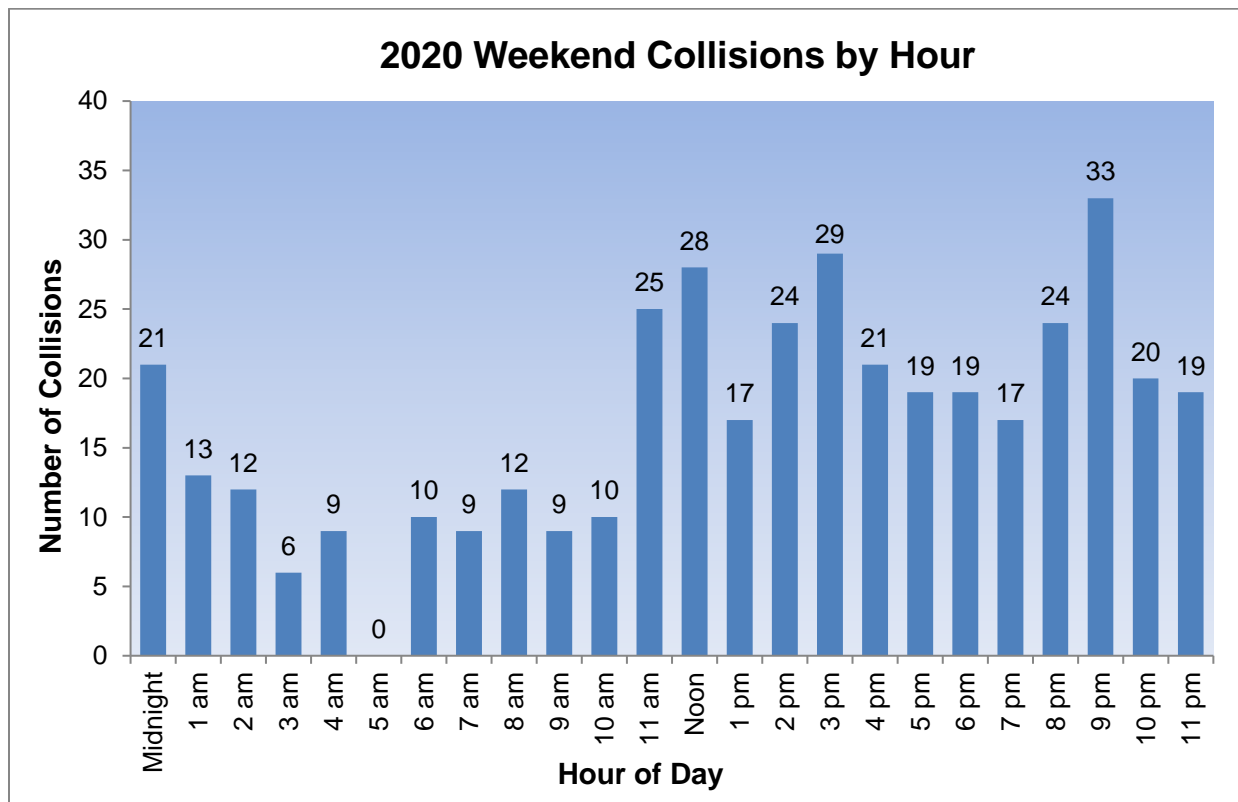
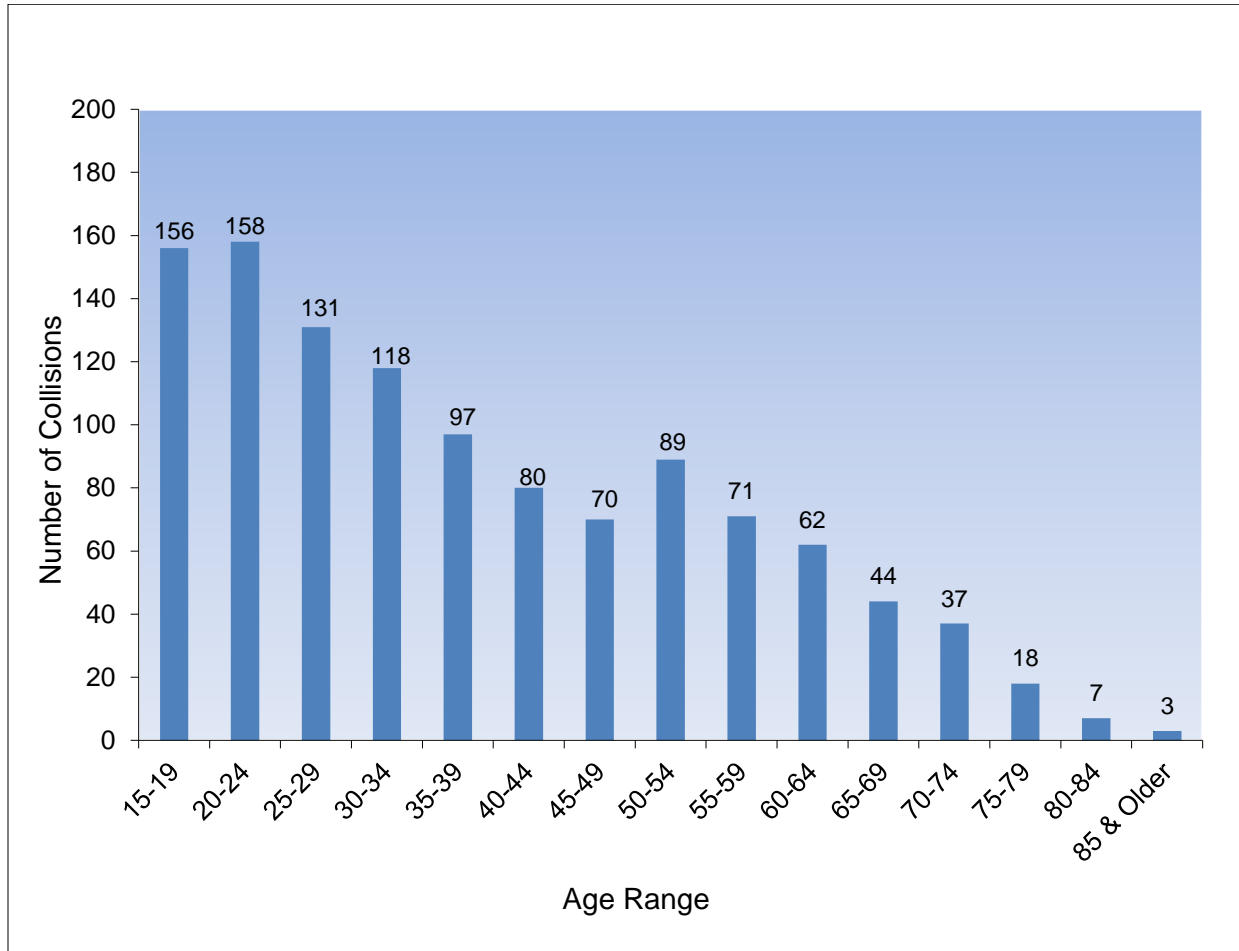


Figure 4.2.4
2020 Weekend Collisions
By Time of Day



4.3 Demographics

Figure 4.3.1
2020 Collisions by Age of Driver



Note: 261 collision reports did not disclose driver age information

4.4 Contributing Circumstances

Table 4.4.1
First Contributing Circumstance
For Drivers between ages 15 to 25 for 2020

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	0	10	10	14	6	7	7	6	10	3	3	76
Inattention/Driver Distraction	1	3	10	6	2	5	5	2	8	4	7	53
None/Driver Not Distracted	1	1	6	9	6	3	6	4	3	3	3	45
Did Not Grant ROW to Vehicle	0	4	3	4	4	4	2	2	4	3	4	34
Follow Too Closely	0	4	2	5	1	3	1	3	1	5	1	26
Under Influence of Alcohol/Drugs	0	0	3	1	5	4	1	1	3	2	1	21
Other	0	0	0	4	0	0	0	4	4	1	2	15
Improper Turn/Merge	1	3	1	0	1	2	1	0	1	1	3	14
Apparently Asleep/Fatigued/Ill	0	1	1	2	1	0	0	3	0	3	1	12
Disregard Traffic Signs and Signals	0	2	2	1	0	2	2	0	3	0	0	12
Operating Defective Equipment	0	0	1	1	1	1	2	0	2	0	2	10
Overcorrecting/Oversteering	1	0	1	1	0	1	1	0	1	1	1	8
Improper Passing	0	1	0	0	0	0	2	0	0	0	0	3
Lost in Thought/Daydreaming	0	0	0	0	1	0	0	1	1	0	0	3
Did Not Grant ROW to Non-Motorist	0	1	0	0	1	0	0	0	0	0	0	2
Improper U-Turn	0	1	0	0	0	1	0	0	0	0	0	2
Operating Recklessly or Aggressively	0	0	0	1	1	0	0	0	0	0	0	2
Operating Handheld Cell Phone	0	0	0	0	0	0	0	0	1	1	0	2
Operating Other Electronic Devices	0	0	1	0	0	0	0	0	0	0	0	1
Eating or Drinking	0	0	1	0	0	0	0	0	0	0	0	1
Improper Backing	0	0	0	0	0	0	0	0	0	0	1	1
Totals	4	31	42	49	30	33	30	26	42	27	29	343

Table 4.4.2
2020 Collisions by First Contributing Circumstance

First Contributing Circumstance	Fatality	Injury	PDO	Total
Inattention/Driver Distraction	1	88	177	266
Other	0	48	170	218
None/Not Stated	3	49	163	215
Excessive Speed	5	58	103	166
Did Not Grant ROW to Vehicle	0	45	87	132
Under Influence of Alcohol/Drugs	2	28	44	74
Follow Too Closely	0	23	50	73
Improper Turn/Merge	0	13	32	45
Apparently Asleep/Fatigued/Ill	0	15	28	43
Disregard Traffic Sign and Signals/Stop Sign - Flashing Red/Flagger - Officer	0	12	21	33
Operating Defective Equipment	0	9	24	33
Overcorrecting/Oversteering	1	4	22	27
Improper U-Turn	0	7	8	15
Improper Passing	1	6	7	14
Did Not Grant ROW to Non-Motorist	1	10	1	12
Driver Operating Handheld Cell Phone/ Other Electronic Device	0	5	5	10
Improper Backing	0	0	10	10
Operating Recklessly or Aggressively/Racing	0	3	6	9
Lost in Thought/Daydreaming	0	2	5	7

4.5 Impairment

Table 4.5.1
Collisions Involving
Drivers Under the Influence (DUI)

Year	Fatal	% of all Fatalities	Injury	% of All Injury	Property Damage Only	% of all PDO	Total DUI Collisions	% of all Collisions
2015	4	23.5%	63	10.0%	72	5.5%	139	7.1%
2016	1	7.1%	67	9.8%	97	7.2%	165	8.1%
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	2.9%	70	3.8%	122	6.7%
2020	2	0.1%	28	2.0%	45	3.2%	75	5.3%

Figure 4.5.1
2020 Weekend Collisions for
Drivers under the Influence
By Time of Day

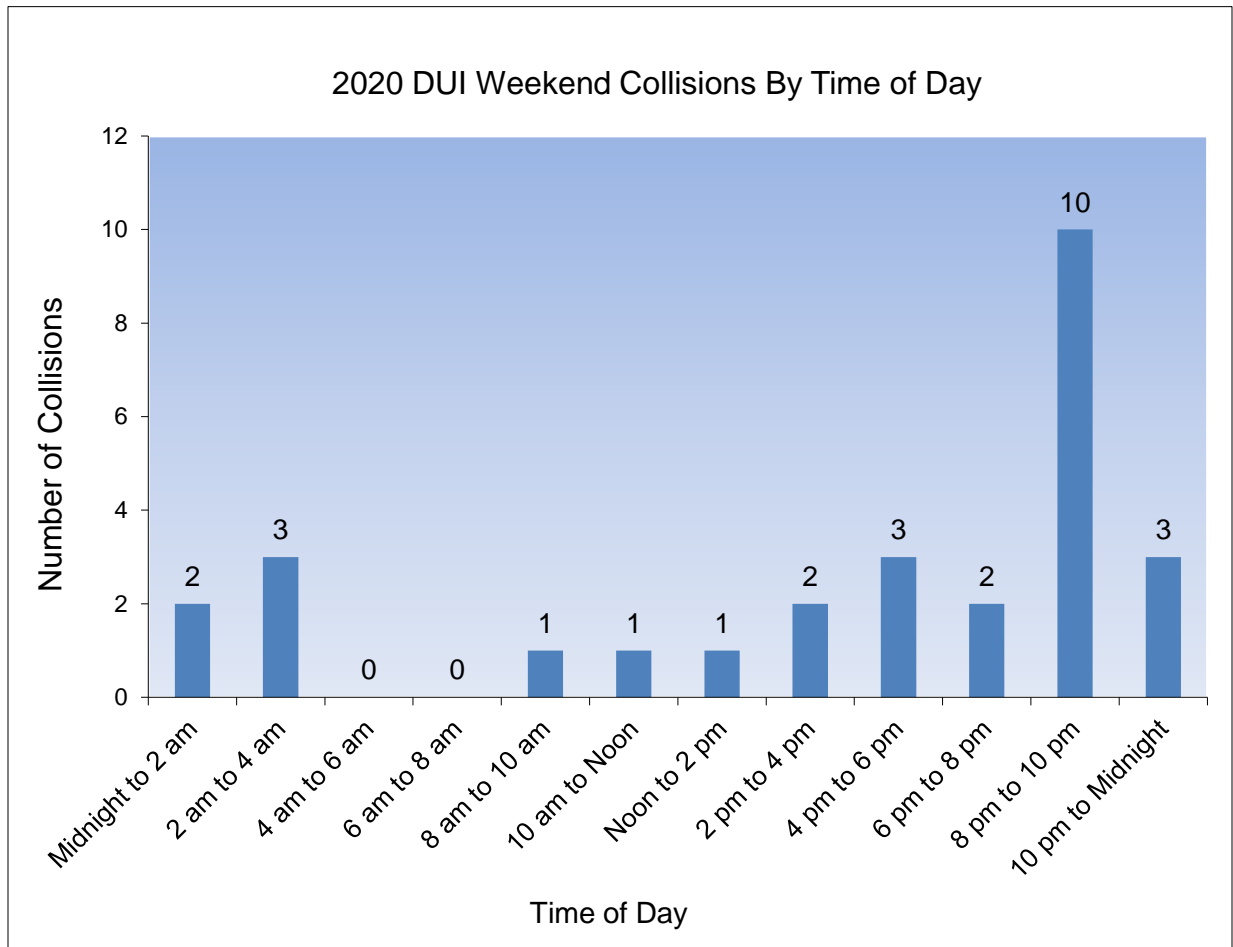
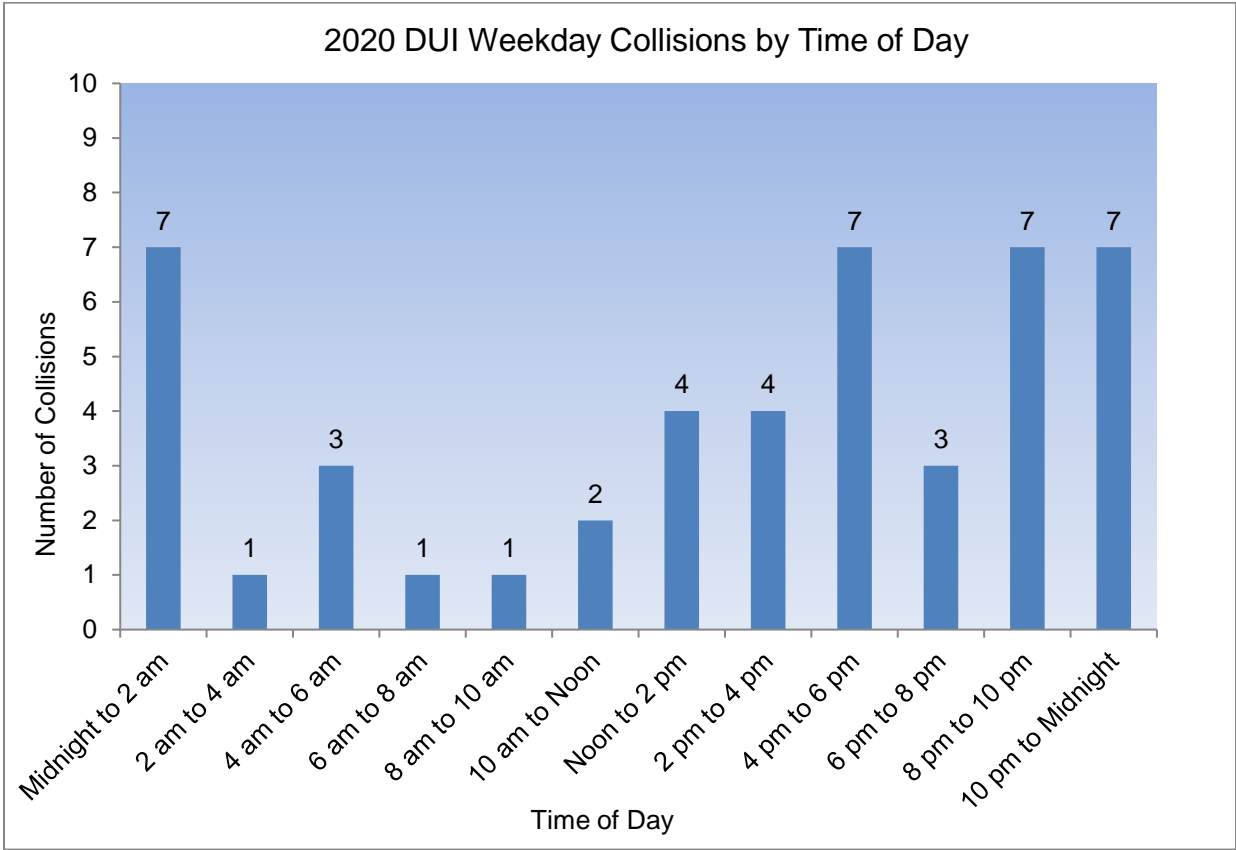


Figure 4.5.2
2020 Weekday Collisions for
Drivers under the Influence
By Time of Day



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
2015	4	24%	84	14%	160	12%	248	13%
2016	3	21%	87	13%	140	10%	230	11%
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%

4.7 Lighting Conditions

Table 4.7.13
2020 Collisions By
Lighting Condition

Lighting Condition	Property Damage Only	Injury	Fatal	Total
Dark-No Street Lights	166	79	4	249
Dark-Street Lights Off	9	1	0	10
Dark-Street Lights On	176	68	4	248
Dark-Unknown Lighting	23	6	0	29
Dawn	19	7	0	26
Daylight	530	241	6	777
Dusk	19	21	0	40
Not Stated	21	2	0	23
Totals	963	425	14	1,402

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 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 = $\$12,200 * \text{PDO} + \$22,800 * \text{P} + \$27,800 * \text{E} + \$96,200 * \text{D} + \$1,659,000 * \text{F}$,
where

PDO – Total Number of Property Damage Collisions (\$12,200/collision)

P – Total Number of Possible Injury Collisions (\$22,800/collision)

E – Total Number of Evident Injury Collisions (\$27,800/collision)

D – Total Number of Disabling/Serious Injury Collisions (\$96,200/collision)

F – Total Number of Fatal Collisions (\$1,659,000/collision)