

Fatal and Serious Injury Motor Vehicle Crashes:

Commercial Vehicle Crashes

On Minnesota roadways, there were 824 crashes involving a commercial motor vehicle resulting in fatality or serious injury between 2019 and 2023. This is an average of 165 crashes per year and accounted for 9% of all the fatal and serious injury crashes in this period.

Commercial Vehicles are a Strategic Focus Area. The strategic focus areas are emerging priorities. They are rising in importance due to factors such as changes in prevalence, public/stakeholder perception, and demographics. Strategies and tactics are available in the 2020-2024 Strategic Highway Safety Plan. (www.mndot.gov/trafficeng/safety/shsp/index.html)

Focus Area definitions are published in the SHSP Technical Report. (www.mndot.gov/trafficeng/safety/shsp/technical-report.pdf)

Distribution of Commercial Vehicle Crashes by Roadway Jurisdiction

	Rural		Urban		Total	
Trunk Highway	174	38%	72	16%	246	54%
County	91	20%	42	9%	133	29%
City	4	1%	42	9%	46	10%
Township	13	3%	0	0%	13	3%
Other	1	0%	4	1%	14	3%
Total	283	63%	160	35%	452	100%

Crashes involving a commercial motor vehicle occur most frequently on the state system.

Rural is defined as a population less than 5,000, per Crash Facts; crashes that are not geolocated are included in total but not rural/urban columns.

Distribution of Commercial Vehicle Crashes by TZD Region

	Rural		Urban		Total	
Northeast	27	68%	11	28%	40	100%
Northwest	16	76%	2	10%	21	100%
East Central	50	74%	17	25%	68	100%
West Central	29	85%	5	15%	34	100%
Southeast	49	80%	12	20%	61	100%
South Central	39	95%	2	5%	41	100%
Southwest	39	89%	5	11%	44	100%
Metro	34	24%	106	74%	143	100%
Total	283	63%	160	35%	452	100%

Crashes involving a commercial motor vehicle occur most frequently in rural areas.

68% of these crashes occurred in Greater Minnesota.

Rural is defined as a population less than 5,000, per Crash Facts; crashes that are not geolocated are included in total but not rural/urban columns.

Light Conditions

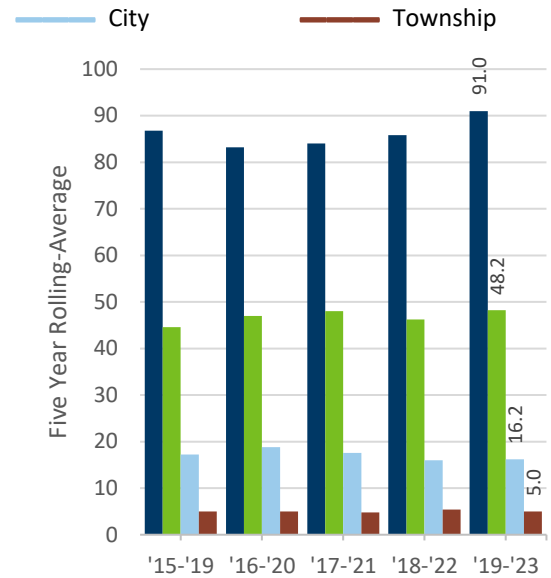
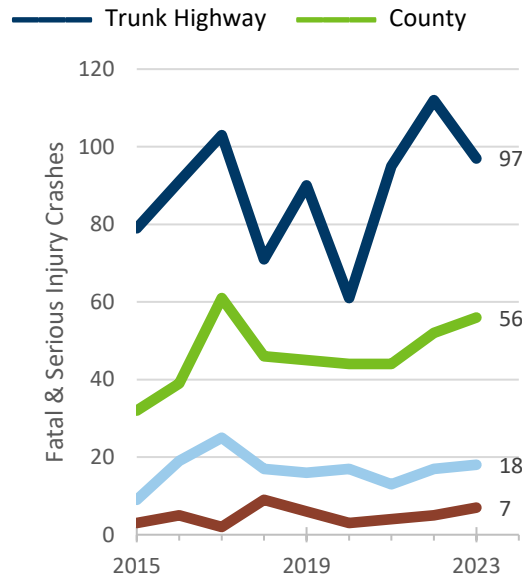
	Focus Area	All KA
Daylight	74.8%	59.7%
Sunrise/Sunset	3.6%	6.2%
Night/Dark	19.7%	33.6%
Street Lights On	8.1%	18.7%
Street Lights Off	0.5%	0.9%
Unknown/No Lighting	11.0%	14.0%
Other/Unknown	1.9%	0.5%

Roadway Conditions

	Focus Area	All KA
Dry	72.3%	78.3%
Wet	11.7%	8.8%
Snow/Slush/Ice	12.7%	8.8%
Other	3.3%	4.1%

Trends in Commercial Vehicle Crashes

Statewide, the percent of all fatal and serious injury crashes involving a commercial motor vehicle is decreasing.



NOTE: In 2016, Minnesota modified the injury severity definitions to align with Federal Standards. This change resulted in an 80% increase in reported serious injury crashes.

Interaction with other Strategic Highway Safety Plan focus areas

Focus Area	Commercial Vehicle Crashes		All K+A Crash Types		Difference	Rank*
Older Driver	232	28.2%	1,771	18.9%	+ 9.2%	↑ #1
Head-on	158	19.2%	1,057	11.3%	+ 7.9%	↑ #2
Work Zone	49	5.9%	197	2.1%	+ 3.8%	↑ #3
Intersection	426	51.7%	4,575	48.8%	+ 2.9%	↑ #4
Unbelted Occupant	141	17.1%	1,346	14.4%	+ 2.7%	↑ #5
Inattentive Driver	85	10.3%	735	7.8%	+ 2.5%	—
Train	1	0.1%	18	0.2%	- 0.1%	—
Bicyclist	15	1.8%	364	3.9%	- 2.1%	—
Speed	152	18.4%	2,154	23.0%	- 4.6%	↓
Pedestrian	52	6.3%	1,037	11.1%	- 4.8%	↓
Younger Driver	86	10.4%	1,495	16.0%	- 5.5%	↓
Unlicensed Driver	104	12.6%	1,918	20.5%	- 7.9%	↓
Impaired User	140	17.0%	2,616	27.9%	- 10.9%	↓
Motorcycle	28	3.4%	1,572	16.8%	- 13.4%	↓
Single Veh. Run-off-road	83	10.1%	2,980	31.8%	- 21.7%	↓
Commercial Vehicle	824	100.0%	824	8.8%	N/A	N/A

* Rankings shows areas with greatest overrepresentation compared to all fatal and serious injury crashes.

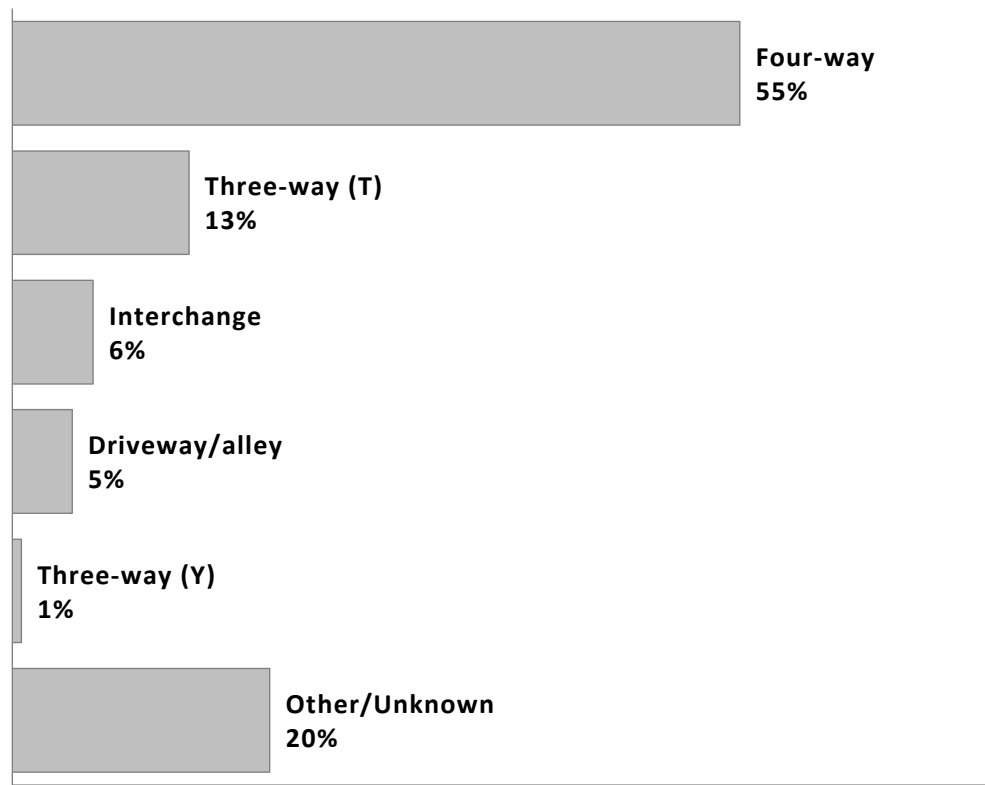
Compared to all fatal and serious injury crashes, the Older Driver, Head-on, Work Zone, Intersection, Unbelted Occupant and Inattentive Driver focus areas are over-represented in crashes involving a commercial motor vehicle. These focus areas may present unique challenges and opportunities for reducing Commercial Vehicle Crashes in Minnesota.

Seasonality of Commercial Vehicle Crashes

	3 AM to 6 AM	6 AM to 9 AM	9 AM to 12 PM	12 PM to 3 PM	3 PM to 6 PM	6 PM to 9 PM	9 PM to 12 AM	12 AM to 3 AM	Σ
January	0.7%	2.2%	1.3%	1.0%	0.4%	0.5%	0.0%	0.4%	7%
February	0.5%	1.6%	1.5%	1.2%	1.3%	0.7%	0.0%	0.5%	7%
March	0.6%	1.2%	1.9%	1.7%	1.0%	0.2%	0.2%	0.2%	7%
April	0.2%	1.5%	2.4%	1.1%	1.7%	0.5%	0.5%	0.6%	9%
May	0.2%	1.0%	1.2%	1.1%	2.1%	0.4%	0.4%	0.0%	6%
June	0.6%	1.9%	1.9%	2.2%	1.9%	1.0%	0.1%	0.4%	10%
July	0.5%	1.5%	1.8%	2.2%	1.5%	0.8%	0.6%	0.1%	9%
August	0.6%	1.6%	1.1%	2.8%	1.6%	0.6%	0.5%	0.1%	9%
September	0.6%	2.2%	1.5%	3.2%	1.7%	1.0%	0.4%	0.4%	11%
October	0.6%	2.4%	2.2%	1.9%	2.1%	1.0%	0.6%	0.1%	11%
November	0.1%	1.1%	1.9%	1.7%	1.8%	1.2%	0.5%	0.2%	9%
December	0.4%	0.8%	1.6%	1.3%	1.0%	0.4%	0.2%	0.1%	6%
Σ	6%	19%	20%	21%	18%	8%	4%	3%	100%

A fatal or serious injury crash involving a commercial motor vehicle occurred approximately every 2 days. These crashes are more prevalent in the summer and autumn & during the afternoon and evening hours; this analysis does not control for existing traffic patterns.

Top Five Intersection Types (where intersection/interchange related)



About 1 in 2 fatal and serious injury crashes involving a commercial motor vehicle (53%) were intersection or interchange related.