2004
SOUTH CAROLINA

COMMERCIAL MOTOR VEHICLE TRAFFIC COLLISION FACT BOOK

This publication was produced by the South Carolina Department of Public Safety's State Transport Police, with support from the Office of Highway Safety.

KEY DEFINITIONS

Bus - A motor vehicle designed to transport sixteen (16) or more persons, including the driver.

Collision - Throughout this publication the terms collision and traffic collision are equivalent to the term motor vehicle traffic collision as defined below.

CMV – Commercial Motor Vehicle: A vehicle whose GVWR of the power unit equals 10,001 pounds or greater OR a vehicle displaying a hazardous material placard OR a passenger vehicle that is designed to carry 16 or more persons, including the driver OR a motor vehicle that is designed to carry 9 or more passengers for compensation.

CMV Collisions - A collision involving a CMV in which there are fatal injuries OR persons transported for medical care OR a vehicle is towed from the scene due to disabling damage or is provided assistance.

Disabling Damage – Damage which precludes departure of a motor vehicle from the scene of the collision in its usual manner in daylight after simple repairs.

1. Inclusions: Damage to motor vehicles that could have been driven, but would have been further damaged if so driven.
2. Exclusions:
   i. Damage that can be remedied temporarily at the scene of the collision without special tools or parts.
   ii. Tire disablement without other damage even if no spare tire is available.
   iii. Headlamp or taillight damage.
   iv. Damage to turn signals, horn, or windshield wipers that make them inoperative.

Driver – An occupant who is in actual physical control of a transport vehicle, or for an out-of-control vehicle, an occupant who was in control until control was lost.

Economic Loss - All figures reported are rounded to the nearest $100. Based on the 2002 National Safety Council's Formula which applies with the following factors:

Each fatality	$1,120,000
Each incapacitating injury	$ 55,500
Each non-incapacitating injury	$ 18,200
Each possible injury	$ 10,300
Each *PDO accident	$ 8,200

Fatal Traffic Collision - Any traffic collision that results in the death of at least one occupant or pedestrian as a direct result of injuries sustained in the collision within 30 days of the collision date.

First Harmful Event - The first event in a traffic collision to result in injury or property damage.

Hazardous Material – A substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety and property when transported in commerce and which has been so designated.

HP – Highway Patrol.

Incapacitating Injury - Any injury, other than a fatal injury, which prevents the injured person from walking, driving or normally continuing the activities he/she was capable of performing before the injury occurred.

Manner of Collision - The identification in a crash of how the motor vehicle(s) initially came together in a traffic collision.

*PDO = Property Damage Only

KEY DEFINITIONS

Motor Vehicle - Any motorized (mechanically or electrically powered) road vehicle not operated on rails, excluding mopeds, minibikes and other vehicles not subject to motor vehicle licensing regulations. These include: automobiles, trucks, buses, vans and motorcycles.

Most Harmful Event - The event for an individual unit involved in a traffic collision that results in the most severe injury or property damage.

Motor Vehicle Traffic Collision - A transport collision that involves at least one motor vehicle in transport, in which the unstabilized situation originates on a trafficway or at least one harmful event occurs on a trafficway. This definition excludes any collision on a private way.

Non-Incapacitating Injury - Any injury, other than a fatal injury or incapacitating injury, which is evident to observers at the scene of the collision in which the injury occurred.

Occupant - Any person who is part of a transport vehicle (automobile, bicycle, etc.)

Passenger - Any occupant of a vehicle other than its driver.

PDO - An abbreviation for property damage only. A PDO collision is one with some property damage but no injuries or fatalities.

Pedestrian - Any person who is not an occupant as defined above. Includes persons on foot, roller skates, and skateboards.

Possible Injury - Any injury that is reported or claimed which is not a fatal injury, incapacitating injury or non-incapacitating injury.

Primary Contributing Factor - Refers to the primary contributing factor of the traffic collision. This is the presumptive factor that created the collision situation.

Road - The part of a trafficway that includes both the roadway and any shoulder alongside the roadway.

Rural Area - Any area which is not within a defined urban area.

STP- State Transport Police.

Traffic Collision - Used in this publication interchangeably with Motor Vehicle Traffic Collision.

Traffic Unit (Unit) - Any motorized road vehicle (includes vehicles that do and do not qualify as motor vehicles in the above definition), pedestrians, animal drawn vehicle and animals with human riders.

Trafficway - Any land way open to the public as a matter of right or custom for moving persons or property from one place to another.

Unit - Used interchangeably with traffic unit (see definition above).

Source for most definitions: Manual on Classifications of Motor Vehicle Traffic Collisions, Fifth Edition, published by the National Safety Council. The definition for disabling damage comes from the Federal Motor Carrier Safety Regulations Handbook.

Part I - General Information

The following pages contain descriptive statistics regarding collisions involving commercial motor vehicles (CMV's) in South Carolina for the year 2004. This includes applicable information regarding drivers, occupants, vehicles, and any other information necessary to obtain a better assessment of the safety of our roadways.

The number of CMV involved collisions has decreased from 3,165 in 2003 to 3,147 in 2004. This equates to a 0.6% decrease over this time period. Accompanying these collisions are immense personal and financial losses. While CMV collisions only accounted for 2.9% of the total collisions in South Carolina in 2004, they made up 11% of the total fatalities on our roadways. Total fatalities in CMV involved collisions have increased from 102 in 2003 to 115 in 2004, a 12.7% increase.

Fatalities are the most severe consequence of motor vehicle collisions, but even in non-fatal collisions, the cost in human suffering can be severe. Injuries sustained in CMV involved collisions have decreased from 2,468 in 2003 to 2,425 in 2004, a 1.7% decrease.

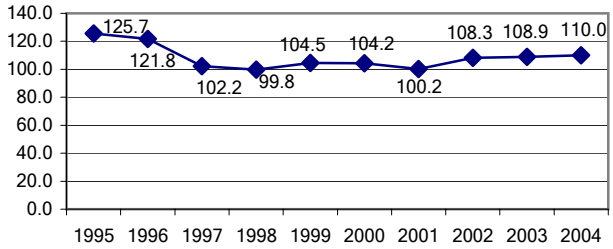
CMV involved collisions are responsible for hundreds of millions of dollars in economic losses to South Carolina each year. Economic losses as estimated in this publication include property damage, medical costs and lost productivity, but do not include intangible costs such as grief and suffering. In 2004, $185 million dollars in estimated losses were incurred in CMV collisions. This was an 8.0% increase from 2003. Yet, this also means that CMV collisions made up 7.1% of the total economic loss that occurred on South Carolina roadways in 2004.

All collision statistics included in this publication are based on data obtained via the Uniform Traffic Collision Report (Form TR-310) and the Supplemental Bus and Truck Collision Report from investigating officers. By law, any collision that results in at least $1,000 in total property damage, or results in injury or death and occurs on a public highway must be reported to the South Carolina Department of Public Safety on the appropriate form. If these collisions occur on private property or are reported on any form other than the TR-310, they are excluded. In order for a vehicle to be defined as a "Commercial Motor Vehicle" it must meet the SAFETYNET threshold explained on page 1. **Only collisions involving at least one CMV are included in this publication, unless otherwise noted.**

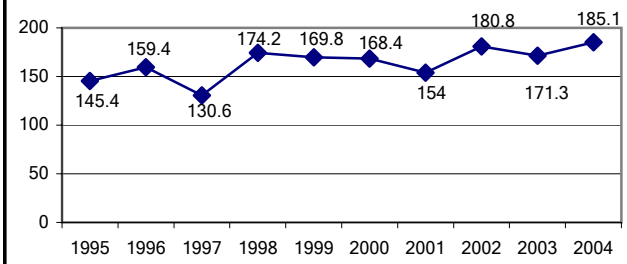
The statistics contained in the South Carolina Commercial Vehicle Traffic Collision Fact Book are based on the latest available information at the time that they were compiled. Due to the complex nature of the data, occasionally new information is received after the publication cut-off date. It is therefore possible that some discrepancies may exist between the data published here and other sources.

Note: More data is being captured due to edit checks implemented in the data entry process in 2002.

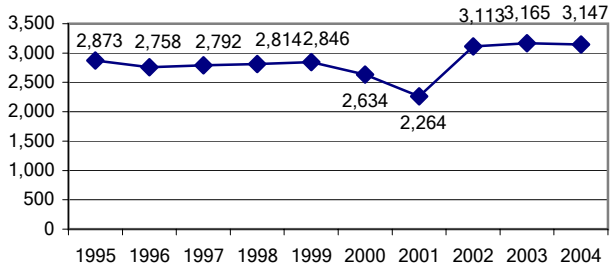
TOTAL TRAFFIC COLLISIONS
(Thousands of Collisions)



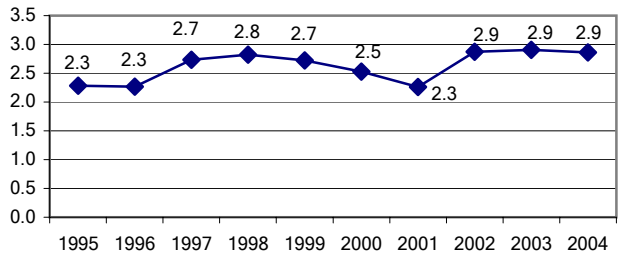
ECONOMIC LOSS IN CMV COLLISIONS
(Millions of Dollars)



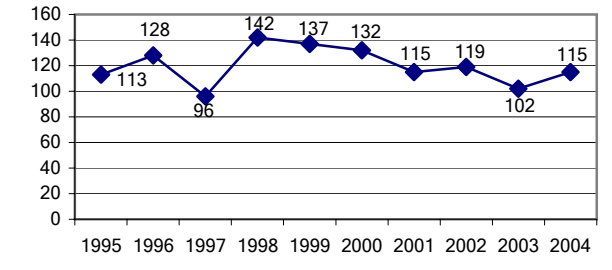
TOTAL COMMERCIAL MOTOR VEHICLE COLLISIONS



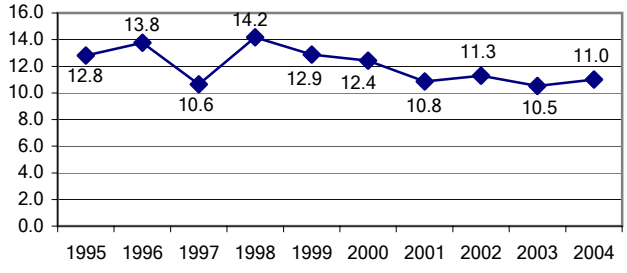
CMV COLLISIONS AS A PERCENT OF ALL COLLISIONS



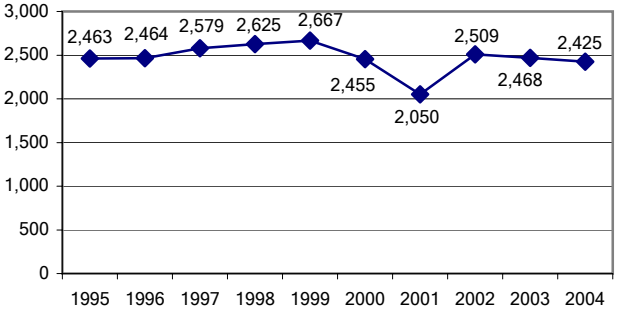
TOTAL FATALITIES IN CMV COLLISIONS



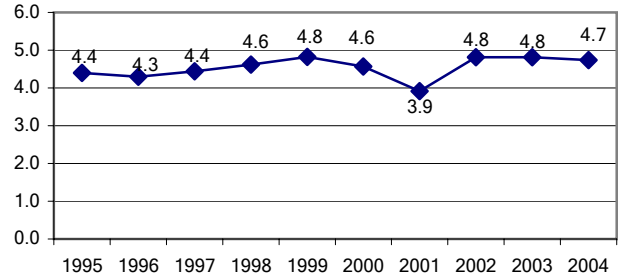
CMV FATALITIES AS A PERCENT OF ALL TRAFFIC FATALITIES



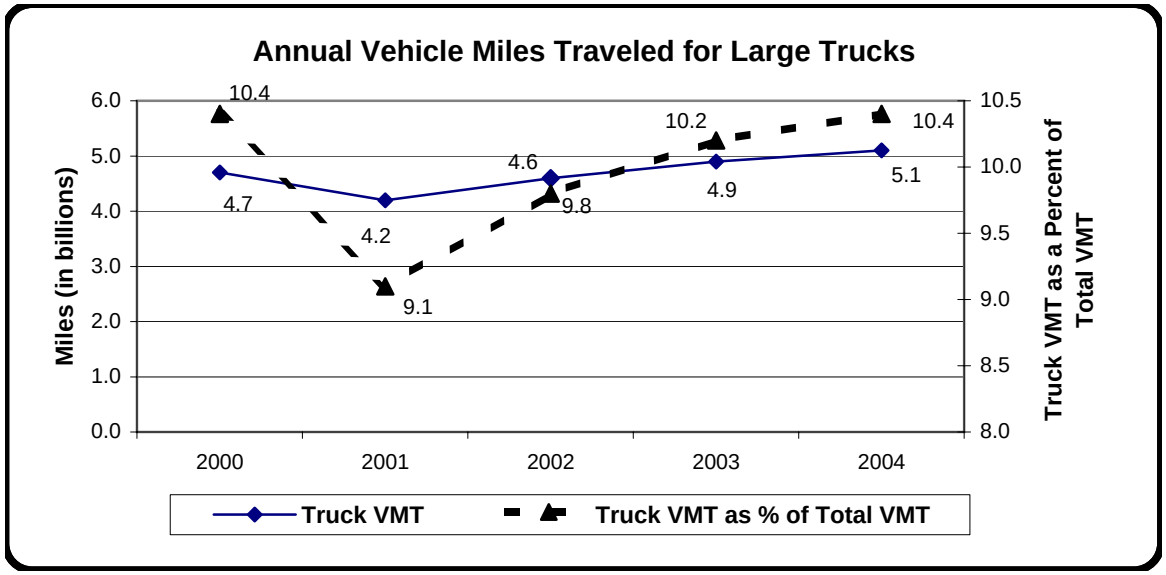
TOTAL INJURIES IN CMV COLLISIONS



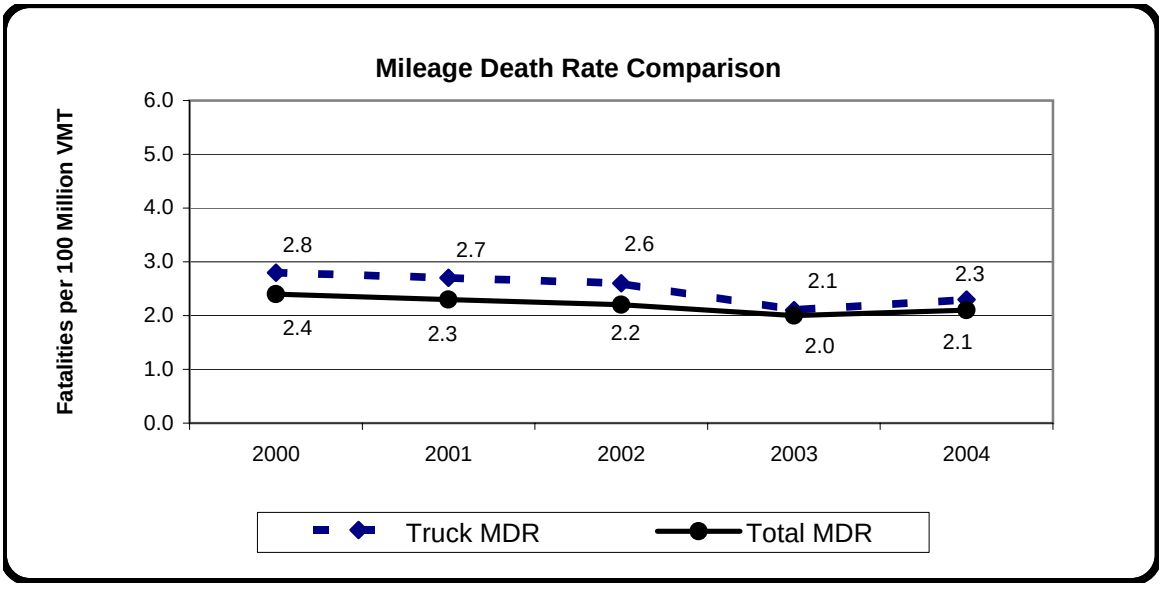
CMV INJURIES AS A PERCENT OF ALL TRAFFIC INJURIES



VEHICLE MILES TRAVELED (VMT)



Mileage Death Rate (MDR) is the number of fatalities per 100 million Vehicle Mile Traveled (VMT) "Total MDR" is the MDR for all motor vehicles. "Truck MDR" is the MDR for trucks. Truck Vehicle Miles Traveled (VMT) is estimated by the South Carolina Department of Transportation.* Truck MDR is computed using fatalities in CMV collisions and VMT for trucks.



* Source: South Carolina Department of Transportation estimates Truck VMT.

SOUTH CAROLINA CMV ECONOMIC LOSS STATISTICAL CLOCK 2004

TOTAL ECONOMIC LOSS
$185,072,100

FATALITIES
$128,800,000

INCAPACITATING INJURY
$15,762,000

POSSIBLE INJURY
$14,595,100

PROPERTY DAMAGE ONLY
$12,701,800

NON-INCAPACITATING INJURY
$13,213,200

A loss of $245.05 per minute

A loss of $24.17 per minute

A loss of $29.99 per minute

A loss of $25.14 per minute

A loss of $27.77 per minute

PRIMARY CONTRIBUTING FACTOR

(Pages 8, 9)

Some action (or inaction) by one or more of the drivers was cited as the Primary Contributing Factor in 2,842 of the 3,147 reported CMV traffic collisions in 2004. This accounted for 90% of all primary contributing factors of crashes. "Too fast for conditions" was the greatest of these, accounting for 30.4% of CMV collisions. Vehicle factors accounted for the next largest category of collision causes with 178 or 5.7% of the total. "Tires/Wheels", "Brakes", and "Other" were the contributing factors in which most of the collisions in this category were attributed to. CMV's seem to have a greater propensity to have vehicle malfunctions as collision factors than do passenger vehicles. For fatal collisions in 2004, some type of driver error was considered the probable cause in 89 of the 102 fatal collisions, accounting for 87.3% of all collisions in which someone was killed. This percentage is lower than the percentage for all South Carolina fatal traffic collisions (90.3% driver error).

When dealing with these collisions, it becomes necessary to know which vehicle caused the collision. In two vehicle collisions between a CMV and a Non-CMV, the Non-CMV driver was cited as the only contributor to the crashes in 1,051 of 2,073 collisions, or 51% of the time. The CMV driver was cited as the only contributor in 880 of the 2,073 collisions, or 42% of the time. Non-CMV drivers were the only contributors in 71% of all fatal crashes and 48.9% of injury collisions. CMV drivers were the only contributors in 22% of fatal collisions and 44% of injury collisions.

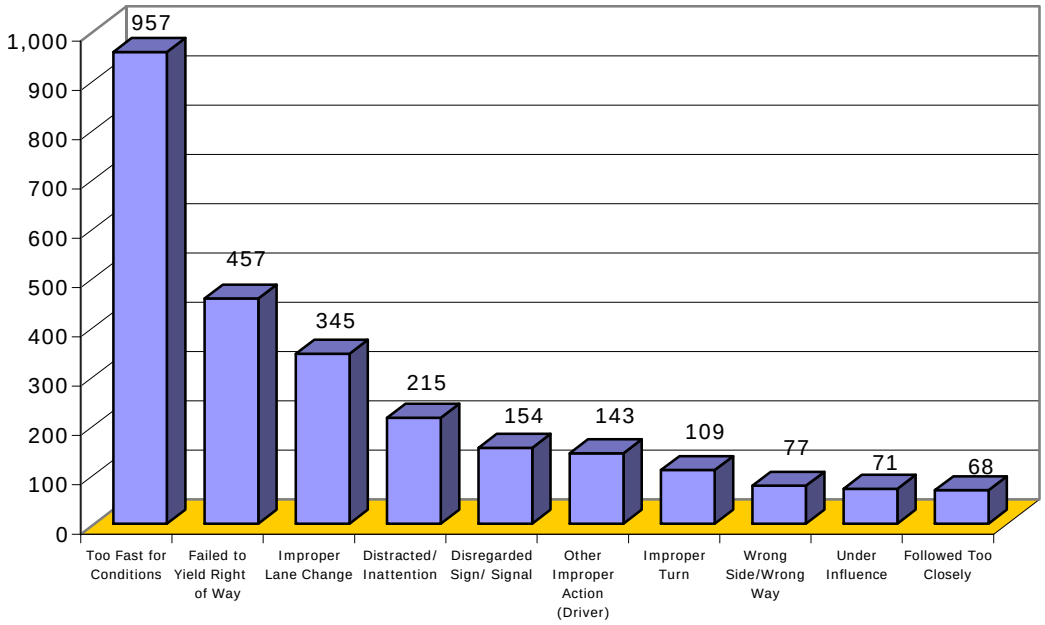
FIRST HARMFUL EVENT

(Pages 10, 11)

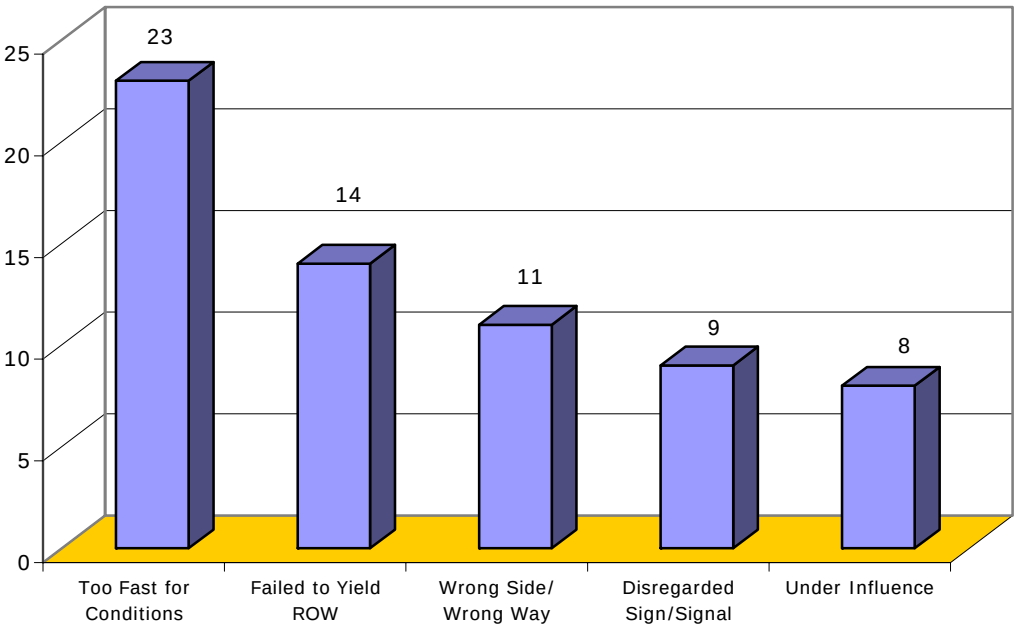
The first harmful event (FHE) in a traffic collision is defined by the National Safety Council as the first occurrence of injury or damage in a collision. In 2004, the FHE in 2,185 of the 3,147 (69%) reported CMV traffic collisions involved some type of collision where the FHE was a collision with a motor vehicle in transport. The second most common FHE was "Overturn" accounting for 207of 3,147 crashes, or 6.6% of the total. The third most frequent FHE was a collision with a stopped vehicle with 169 collisions (5.4%). Combined, these three accounted for more than 80% of all reported CMV collisions.

Collisions with a motor vehicle in transport (67.6%) and collisions with a pedestrian (8.8%) were identified as the top two FHE's in fatal crashes. Collisions with a stopped vehicle, collisions with a parked vehicle and collisions with a tree tied for the third highest FHE's in fatal crashes, with 3 collisions each (2.9%).

TOP TEN PRIMARY CONTRIBUTING FACTORS FOR ALL CMV COLLISIONS



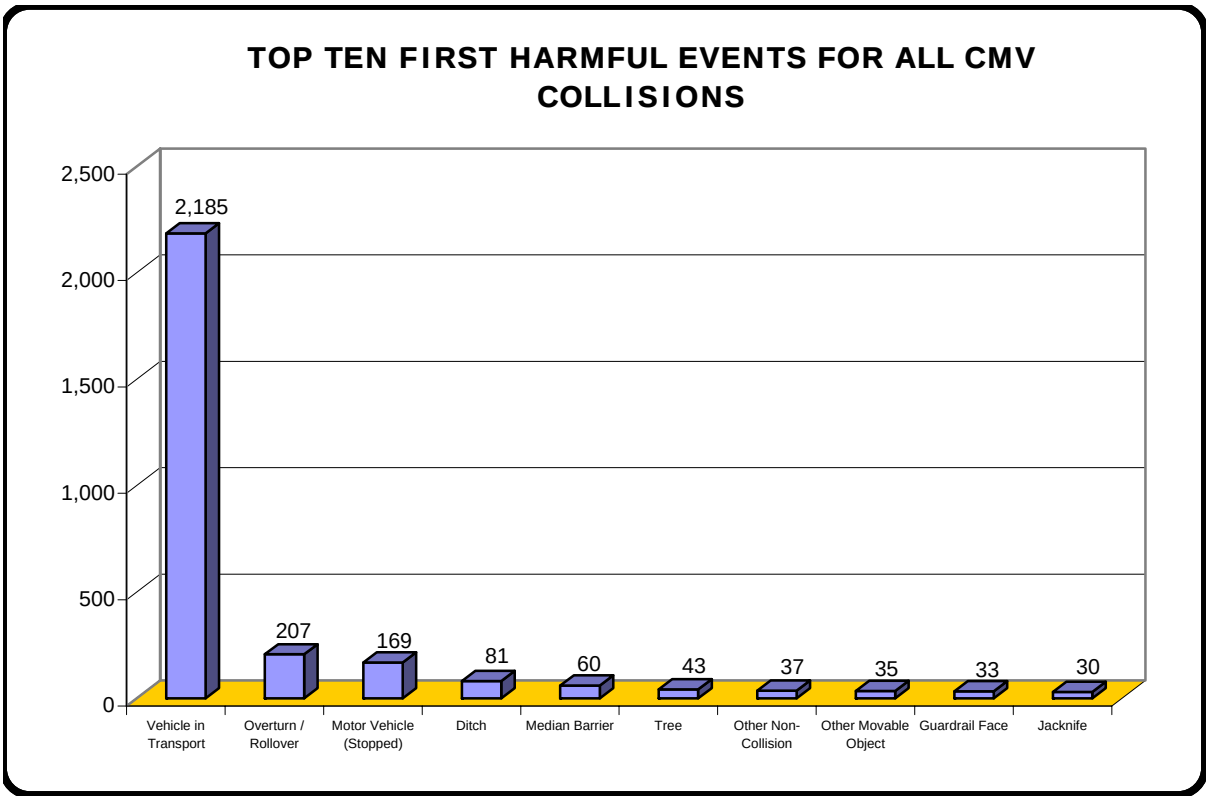
TOP FIVE PRIMARY CONTRIBUTING FACTORS FOR FATAL CMV COLLISIONS

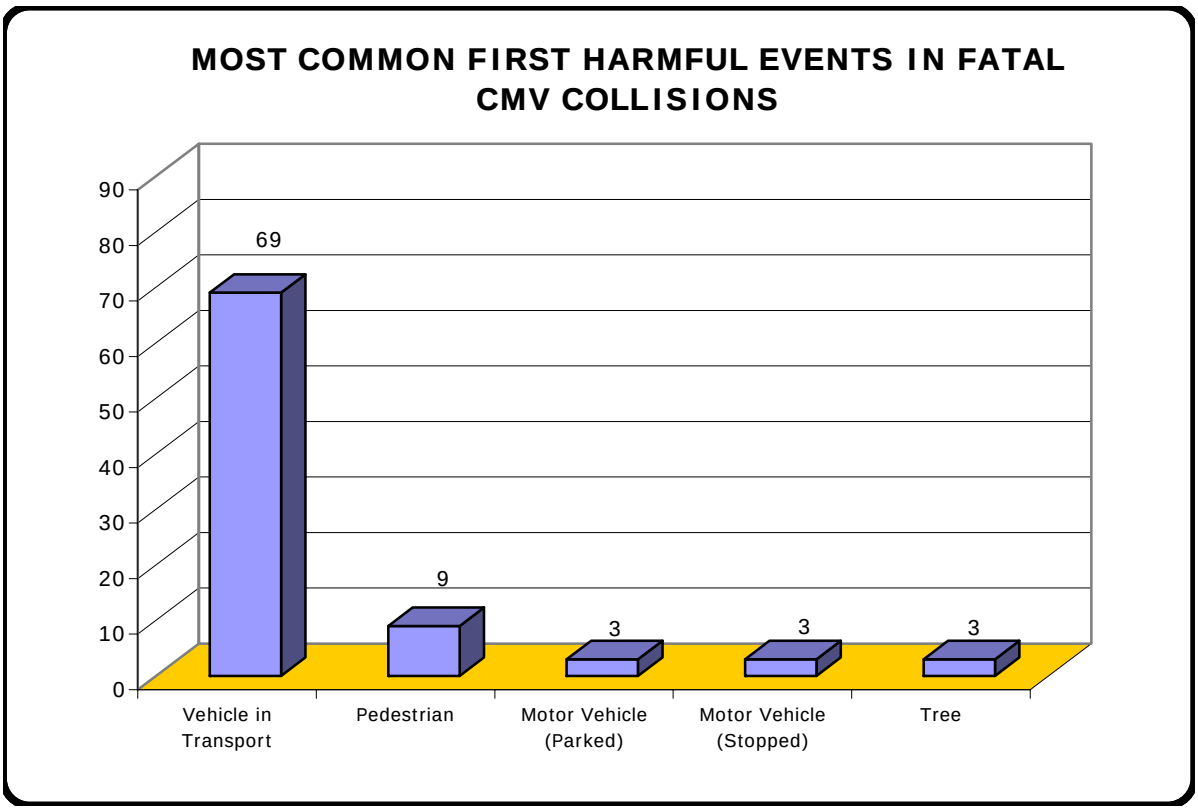


TRAFFIC COLLISIONS BY PRIMARY CONTRIBUTING FACTORS

PRIMARY CONTRIBUTING FACTORS	COLLISION TYPE				PERSONS	
	Fatal	Injury	PDO*	Total	Killed	Injured
DRIVER FACTORS						
Disregarded Signs/Signals	9	93	52	154	9	148
Distracted/Inattention	4	105	106	215	4	159
Too Fast for Conditions	23	456	478	957	25	693
Exceeded Speed Limit	3	11	7	21	3	15
Failed to Yield Right-of-Way	14	269	174	457	16	462
Ran Off Road	5	9	16	30	6	14
Fatiqued/Asleep	1	19	14	34	1	26
Followed Too Closely	0	32	36	68	0	66
Improper Turn	0	47	62	109	0	70
Medical Related	1	17	6	24	1	25
Aggressive Driving	1	13	7	21	1	19
Over-correcting/Over-steering	0	3	10	13	0	4
Swerving to Avoiding Object	0	8	12	20	0	9
Wrong Side or Wrong Way	11	32	34	77	13	73
Under the Influence	8	34	29	71	9	66
Improper Lane Usage/Change	1	143	201	345	1	212
Vision Obscured (within unit)	0	7	4	11	0	15
Cell Phone	0	3	1	4	0	3
Other Improper Action (Driver)	1	60	82	143	1	95
Unknown	7	38	23	68	12	123
SUBTOTAL	**89**	**1,399**	**1,354**	**2,842**	**102**	**2,297**
ROADWAY FACTORS						
Debris	0	1	7	8	0	1
Non-Highway Work	0	0	0	0	0	0
Obstruction In Road	0	5	8	13	0	6
Road Surface Condition (i.e., Wet)	0	2	11	13	0	3
Rut, Hole, Bump	0	1	1	2	0	2
Shoulders (None, Low, Soft, High)	0	0	0	0	0	0
Traffic Control Device (i.e., Missing)	0	0	0	0	0	0
Work Zone (Constr./Maint./Utility)	0	0	1	1	0	0
Worn Travel-Polished Surface	0	0	0	0	0	0
Curve in Roadway	0	0	0	0	0	0
Other	1	2	3	6	1	2
Unknown	0	0	0	0	0	0
SUBTOTAL	**1**	**11**	**31**	**43**	**1**	**14**
NON-MOTORIST FACTORS						
Inattentive	1	3	0	4	1	3
Lying and/or Illegally in Roadway	2	3	0	5	2	4
Not Visible (Dark Clothing)	0	0	0	0	0	0
Darting	1	0	0	1	1	0
Wrong Side of Road	1	0	0	1	1	0
Improper Crossing	1	3	0	4	1	4
Failure To Yield Right of Way	0	0	0	0	0	0
Disregarded Sign/Signal	0	2	0	2	0	2
Under Influence	0	1	0	1	0	1
Other	1	2	4	7	1	3
Unknown	0	0	0	0	0	0
SUBTOTAL	**7**	**14**	**4**	**25**	**7**	**17**
ENVIRONMENTAL FACTORS						
Animal in Road	0	10	13	23	0	11
Glare	0	2	1	3	0	5
Obstruction	0	0	2	2	0	0
Weather Condition	0	5	22	27	0	8
Other	0	1	3	4	0	1
Unknown	0	0	0	0	0	0
SUBTOTAL	**0**	**18**	**41**	**59**	**0**	**25**
VEHICLE DEFECT FACTORS						
Brakes	1	17	15	33	1	25
Steering	0	3	7	10	0	3
Power Plant	0	0	4	4	0	0
Tires/Wheel	4	14	37	55	4	19
Lights	0	4	0	4	0	6
Signals	0	0	1	1	0	0
Windows/Shield	0	1	0	1	0	1
Restraint Systems	0	0	0	0	0	0
Truck Coupling	0	1	7	8	0	2
Cargo	0	9	12	21	0	11
Fuel System	0	0	4	4	0	0
Other	0	3	28	31	0	3
Unknown	0	2	4	6	0	2
SUBTOTAL	**5**	**54**	**119**	**178**	**5**	**72**
OTHER CAUSES	0	0	0	0	0	0
TOTALS	**102**	**1,496**	**1,549**	**3,147**	**115**	**2,425**

*Property Damage Only


TOP TEN FIRST HARMFUL EVENTS FOR ALL CMV COLLISIONS
2,500
2,000
1,500
1,000
500
0
2,185
207
169
81
60
43
37
35
33
30
Vehicle in Transport
Overturn / Rollover
Motor Vehicle (Stopped)
Ditch
Median Barrier
Tree
Other Non-Collision
Other Movable Object
Guardrail Face
Jacknife


MOST COMMON FIRST HARMFUL EVENTS IN FATAL CMV COLLISIONS
90
80
70
60
50
40
30
20
10
0
69
9
3
3
3
Vehicle in Transport
Pedestrian
Motor Vehicle (Parked)
Motor Vehicle (Stopped)
Tree

TRAFFIC COLLISIONS BY FIRST HARMFUL EVENT

FIRST HARMFUL EVENT (FHE)	COLLISION TYPE			TOTAL	PERSONS	
	FATAL	INJURY	PDO*		KILLED	INJURED
NON-COLLISION						
CARGO / EQUIP LOSS OR SHIFT	0	10	16	26	0	10
CROSS MEDIAN / CENTER LINE	2	2	3	7	2	3
DOWNHILL RUNAWAY	0	0	1	1	0	0
EQUIPMENT FAILURE	0	2	14	16	0	4
OVERTURN / ROLLOVER	1	101	105	207	1	115
SPILL (2 WHEEL VEHICLE)	0	0	1	1	0	0
FIRE/EXPLOSION	0	1	0	1	0	1
IMMERSION	0	0	1	1	0	0
JACK-KNIFE	0	5	25	30	0	8
RAN OFF ROAD LEFT	0	0	0	0	0	0
RAN OFF ROAD RIGHT	0	0	0	0	0	0
SEPARATION OF UNITS	0	0	4	4	0	0
OTHER NON-COLLISION	0	16	21	37	0	18
UNKNOWN NON-COLLISION	0	3	3	6	0	5
SUBTOTAL	**3**	**140**	**194**	**337**	**3**	**164**
OBJECT NOT FIXED						
PEDESTRIAN	9	6	0	15	9	7
PEDALCYCLIST	2	4	0	6	2	5
RAILWAY TRAIN	0	0	0	0	0	0
ANIMAL (DEER ONLY)	0	1	1	2	0	1
ANIMAL (ALL OTHERS)	0	3	4	7	0	3
VEHICLE (PARKED)	3	9	12	24	4	17
VEHICLE (STOPPED)	3	96	70	169	5	199
VEHICLE (IN TRANSPORT)	69	1,102	1,014	2,185	76	1,810
VEHICLE (OTHER ROADWAY)	1	9	10	20	2	14
WORK ZONE MAINT. EQUIPMENT	0	0	1	1	0	0
OTHER OBJECT NON-FIXED	1	6	28	35	1	7
UNKNOWN MOVABLE OBJECTS	0	2	2	4	0	2
SUBTOTAL	**88**	**1,238**	**1,142**	**2,468**	**99**	**2,065**
FIXED OBJECT						
HIGHWAY GUARDRAIL END	0	3	6	9	0	3
HIGHWAY GUARDRAIL FACE	2	13	18	33	2	17
CRASH CUSHION	0	0	1	1	0	0
UTILITY POLE	0	8	9	17	0	8
TREE	3	21	19	43	3	38
HIGHWAY TRAFFIC SIGN POST	0	4	7	11	0	12
OTHER (POST, POLE, SUPPORT, ETC.)	0	1	7	8	0	1
OTHER (WALL, BLDG, TUNNEL, ETC.)	0	2	2	4	0	2
CULVERT	0	2	5	7	0	3
CURBING	0	2	2	4	0	2
MEDIAN BARRIER	2	17	41	60	2	20
FENCE	0	2	5	7	0	7
DITCH	2	22	57	81	4	55
OVERHEAD STRUCT/UNDERPASS	0	2	5	7	0	2
EMBANKMENT	0	11	9	20	0	12
BRIDGE/PIER/ABUTMENT	1	1	1	3	1	3
BRIDGE PARAPET END	0	0	0	0	0	0
BRIDGE RAIL	0	2	4	6	0	2
OTHER FIXED OBJECTS	1	4	13	18	1	8
UNKNOWN FIXED OBJECT	0	1	2	3	0	1
SUBTOTAL	**11**	**118**	**213**	**342**	**13**	**196**
YEAR TOTALS	**102**	**1,496**	**1,549**	**3,147**	**115**	**2,425**

*Property Damage Only

CMV COLLISIONS WITH OTHER MOTOR VEHICLES

As shown below, 66% of CMV crashes involved two vehicles, a CMV and a non-CMV. 77% of the fatal collisions in commercial motor vehicle collisions were the result of a CMV versus a non-CMV collision. Over 10% of fatal collisions in South Carolina involved a commercial motor vehicle. More than 10% of all traffic fatalities resulted from a CMV crash. However, commercial vehicles were involved in only 2.9% of all collisions. Of those drivers who contributed to the cause of a fatal two-vehicle collision, 70.9% were non-CMV drivers. Nevertheless, non-CMV drivers made up only 50.7% of contributing drivers in all CMV collisions involving two vehicles.

DRIVERS IN CMV COLLISIONS WHO CONTRIBUTED TO COLLISION

CONTRIBUTED TO COLLISION	COLLISION TYPE					
	FATAL	% FATAL	INJURY	PDO*	TOTAL	% OF TOTAL
CMV	17	21.5	444	419	880	42.5
NON-CMV	56	70.9	493	502	1,051	50.7
BOTH	4	5.1	30	34	68	3.3
NEITHER	2	2.5	41	31	74	3.6
TOTALS	**79**	**100.0**	**1,008**	**986**	**2,073**	**100.0**

*Property Damage Only

This table counts only **two-vehicle collisions between a CMV and a Non-CMV .

CARRIER TYPES IN CMV COLLISIONS

About 32% of CMV collisions involved intrastate carriers. But, almost 80% of fatal CMV collisions involved interstate carriers. Additionally, 77% of fatalities from CMV collisions involved interstate carriers.

CMV COLLISIONS BY CARRIER TYPE

CARRIER TYPE	COLLISION TYPE			TOTAL	PERSONS	
	FATAL	INJURY	PDO*		KILLED	INJURED
INTERSTATE	81	956	1,088	2,125	89	1,447
INTRASTATE	21	540	461	1,022	26	978
TOTALS	**102**	**1,496**	**1,549**	**3,147**	**115**	**2,425**

*Property Damage Only

Part II - Collision Characteristics

There are many characteristics associated with CMV collisions. Patterns in these characteristics can provide insight into the cause of collisions and may ultimately lead to effective countermeasures for reducing the number of collisions that occur and minimizing the severity of those that will still occur. The data provided on the following pages may raise interesting questions for those interested in highway safety. These questions may in turn lead to research, which addresses a particular collision characteristic. Here are some examples of CMV collision characteristics for 2004:

A. Driver

- Males make up the vast majority of CMV drivers in collisions, likely mirroring the population of CMV drivers.
- Female drivers were involved in 41.7% of all traffic collisions in S.C. in 2004, yet they made up 6.5% of CMV drivers involved in CMV collisions.

B. Time

- The months of February and December had the most fatal collisions (13), followed by July and October (10).
- CMV collisions are much more likely to occur during the week (Monday -Friday) as opposed to the weekend. More fatal CMV collisions occurred on Friday (24) and Wednesday (21).
- 78% of all CMV collisions occurred between the hours of 6 am and 6 pm.

C. Location

- More fatal CMV collisions occurred on Interstates than any other route category.
- Greenville (270) and Richland (237) had more CMV collisions than any other county. Charleston had the most fatal collisions (9).

D. Environment

- The vast majority of CMV collisions occurred during the day in clear weather, and on dry, straight, and level roads.

E. Vehicles

- 58% of CMV's involved in collisions consisted of tractors with semi-trailers.
- Less than 2.2% of CMV's involved in all CMV collisions were carrying hazardous materials.

This is a truck crash that happened near Santee in September 2004. Three tractor-trailers collided and caught fire. All three drivers escaped without serious injuries.

A. The Driver

Numerous decisions are required of drivers in the operation of a commercial motor vehicle. All too often, poor judgement, inattention, carelessness or even deliberate intent on the part of a driver results in a dangerous driving decision, which leads to a traffic collision. The primary contributing factor in over 90% of all reported traffic crashes was driver-related in 2004. Driver violations reported during FY 2003, FY 2004, and FY 2005 (FY is from July 1 through June 30) are as follows:

Summary of Serious Traffic Enforcement Violations

	Violation	FY 2003	FY 2004	FY 2005
1.	Speeding (>10 MPH over Speed Limit)	3,655	2,643	3,376
2.	Failure to Obey Traffic Control Device	332	279	425
3.	Use/Under Influence of Alcohol	97	94	81
4.	Driver Uses/Is in Possession of Drugs	110	110	105
5.	Improper Lane Change	74	66	81
6.	Following Too Closely	99	93	86
7.	Failure to Yield Right of Way	39	9	16
8.	Improper Turns	16	11	22
9.	Improper Passing	9	9	13
10.	Reckless Driving	3	0	3
	Total	**4,434**	**3,314**	**4,208**

Enumerated on the following pages are the numbers of drivers involved in CMV collisions by age and sex. Approximately 91% of CMV drivers involved in total CMV collisions were male; about 95% of CMV drivers involved in fatal CMV collisions were male. Only 6.5% of CMV drivers involved in CMV collisions were females. However, in the non-CMV drivers who were involved in CMV collisions, about 57% were male and 42% were female. Additionally, nearly 73% of the non-CMV drivers involved in fatal CMV collisions were male. About 27% were female (non-CMV drivers involved in fatal CMV collisions).

AGE AND SEX OF CMV DRIVERS INVOLVED IN CMV TRAFFIC COLLISIONS

TOTAL COLLISIONS

AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	0	1	0	1
15 to 24	9	139	0	148
25 to 34	31	633	0	664
35 to 44	76	835	0	911
45 to 54	66	749	0	815
55 to 64	27	465	0	492
65 to 74	2	137	0	139
75 to 84	0	8	0	8
85 & OLDER	0	0	0	0
UNKNOWN	0	5	82	87
TOTALS**	**211**	**2,972**	**82**	**3,265**

FATAL COLLISIONS

AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	0	0	0	0
15 to 24	0	8	0	8
25 to 34	3	23	0	26
35 to 44	1	22	0	23
45 to 54	0	21	0	21
55 to 64	0	17	0	17
65 to 74	0	4	0	4
75 to 84	0	1	0	1
85 & OLDER	0	0	0	0
UNKNOWN	0	0	1	1
TOTALS**	**4**	**96**	**1**	**101**

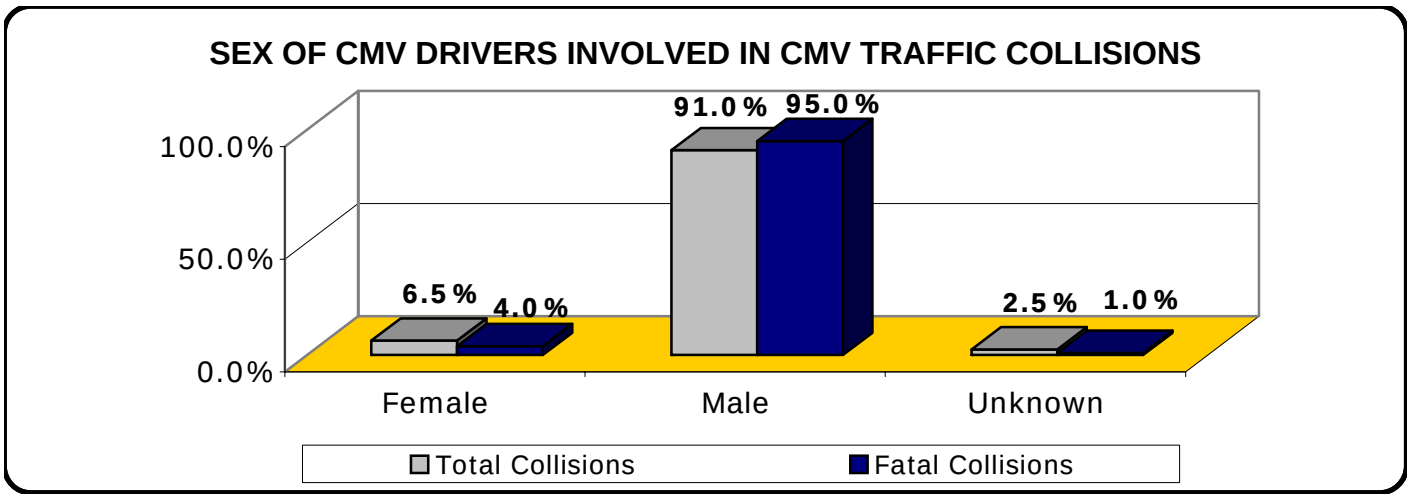
INJURY COLLISIONS

AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	0	0	0	0
15 to 24	6	69	0	75
25 to 34	21	317	0	338
35 to 44	45	392	0	437
45 to 54	34	333	0	367
55 to 64	16	205	0	221
65 to 74	0	72	0	72
75 to 84	0	4	0	4
85 & OLDER	0	0	0	0
UNKNOWN	0	2	31	33
TOTALS**	**122**	**1,394**	**31**	**1,547**

PROPERTY DAMAGE ONLY COLLISIONS

AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	0	1	0	1
15 to 24	3	62	0	65
25 to 34	7	293	0	300
35 to 44	30	421	0	451
45 to 54	32	395	0	427
55 to 64	11	243	0	254
65 to 74	2	61	0	63
75 to 84	0	3	0	3
85 & OLDER	0	0	0	0
UNKNOWN	0	3	50	53
TOTALS**	**85**	**1,482**	**50**	**1,617**

**Includes drivers whose age and sex were not recorded on the report, hit and run collisions for which driver information was not available and also includes parked cars with no drivers.



AGE AND SEX OF NON-CMV DRIVERS INVOLVED IN CMV TRAFFIC COLLISIONS

TOTAL COLLISIONS				
AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	1	5	0	6
15 to 24	271	336	0	607
25 to 34	248	341	0	589
35 to 44	218	310	0	528
45 to 54	207	271	0	478
55 to 64	121	170	0	291
65 to 74	69	107	0	176
75 to 84	50	62	0	112
85 & OLDER	1	12	0	13
UNKNOWN	4	11	48	63
TOTALS**	**1,190**	**1,625**	**48**	**2,863**

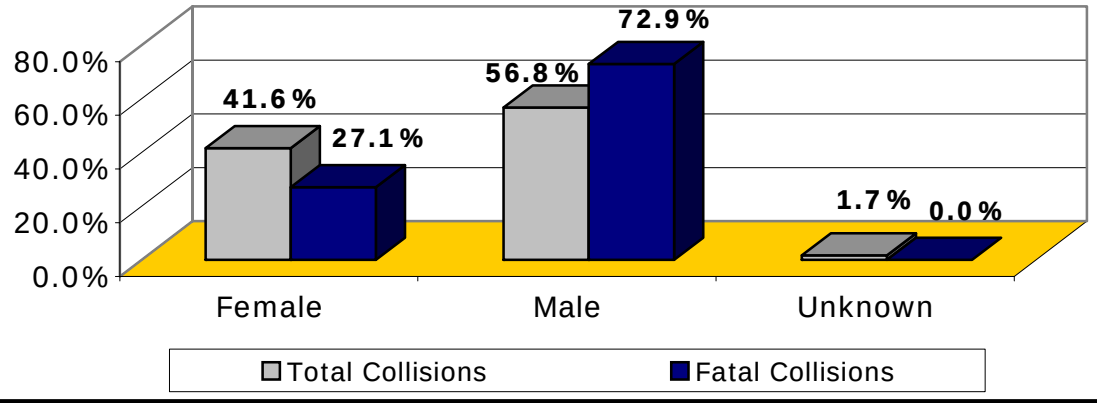
FATAL COLLISIONS				
AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	0	0	0	0
15 to 24	3	7	0	10
25 to 34	5	11	0	16
35 to 44	3	12	0	15
45 to 54	5	14	0	19
55 to 64	3	12	0	15
65 to 74	3	2	0	5
75 to 84	1	4	0	5
85 & OLDER	0	0	0	0
UNKNOWN	0	0	0	0
TOTALS**	**23**	**62**	**0**	**85**

INJURY COLLISIONS				
AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	1	3	0	4
15 to 24	147	163	0	310
25 to 34	139	173	0	312
35 to 44	142	152	0	294
45 to 54	122	124	0	246
55 to 64	68	82	0	150
65 to 74	36	55	0	91
75 to 84	31	33	0	64
85 & OLDER	0	8	0	8
UNKNOWN	0	5	19	24
TOTALS**	**686**	**798**	**19**	**1,503**

PROPERTY DAMAGE ONLY COLLISIONS				
AGE	FEMALE	MALE	UNKNOWN	TOTAL
UNDER 15	0	2	0	2
15 to 24	121	166	0	287
25 to 34	104	157	0	261
35 to 44	73	146	0	219
45 to 54	80	133	0	213
55 to 64	50	76	0	126
65 to 74	30	50	0	80
75 to 84	18	25	0	43
85 & OLDER	1	4	0	5
UNKNOWN	4	6	29	39
TOTALS**	**481**	**765**	**29**	**1,275**

**Includes drivers whose age and sex were not recorded on the report, hit and run collisions for which driver information was not available and also includes parked cars with no drivers.

SEX OF NON-CMV DRIVERS INVOLVED IN CMV TRAFFIC COLLISIONS

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Star Trans, Inc.
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B. Time

The frequency of traffic collisions is affected by the settings of the clock and calendar. The concentration of traffic, for example, is heavier at certain times of the day, days of the week and month. Driver attitudes, vision and behavior are influenced by time factors. In addition, weather may be influenced by time of year. On the following pages, statistics are presented which indicate observable time variables. Some of the important observations in the 2004 data are as follows:

- More CMV collisions were reported between the hours of 12 PM and 6 PM. Fatal collisions occurred more frequently in the daytime hours between 6:00 AM and 12:00 PM. Approximately 41% of all fatal collisions occurred during this six-hour period.

- More CMV crashes were reported on Monday than any other day of the week. There were 616 collisions during 2004, accounting for more than 19% of the total. The fewest number of CMV traffic collisions were reported on Sundays with 147, or 5%.

- More CMV fatal collisions occurred in the months of February and December (13) than any other months of the year. The fewest number of CMV fatal collisions occurred within the month of September (3).

- More CMV crashes took place during the 3:00 PM hour. About 8% of CMV crashes were reported during this hour in 2004. In 2004, the least number of collisions took place during the 2:00 AM and 11:00 PM hours; there were 33 collisions each reported during those hours of the day in 2004.

- CMV fatal collisions happened most often on Fridays (24). The least deadliest day for CMV fatal collisions was on Saturday and Sunday (6) in 2004.

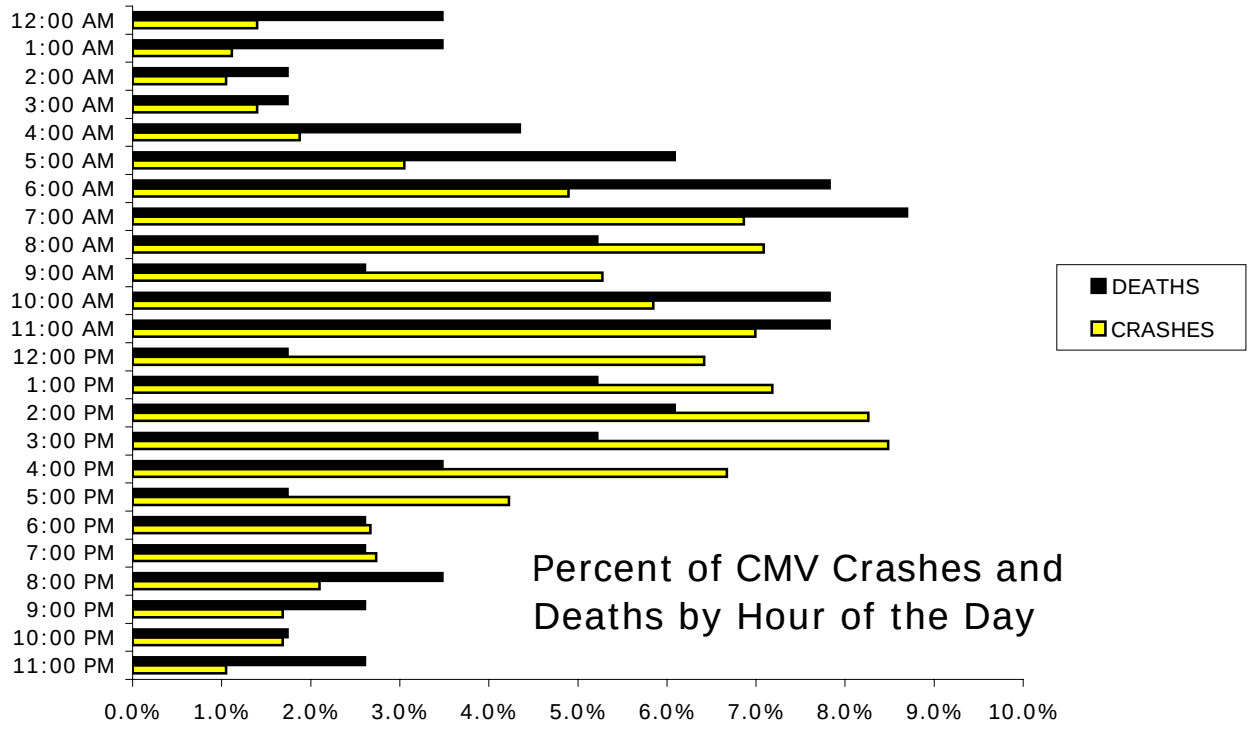
- In 2004, there were more traffic collisions involving CMV's in January than any other month. There were 302 reported collisions involving a CMV in January in 2004. This was an increase in collisions in January from the previous year. In 2003, there were 261 reported collisions involving a CMV. This is equivalent to a 16% increase over a one-year period.

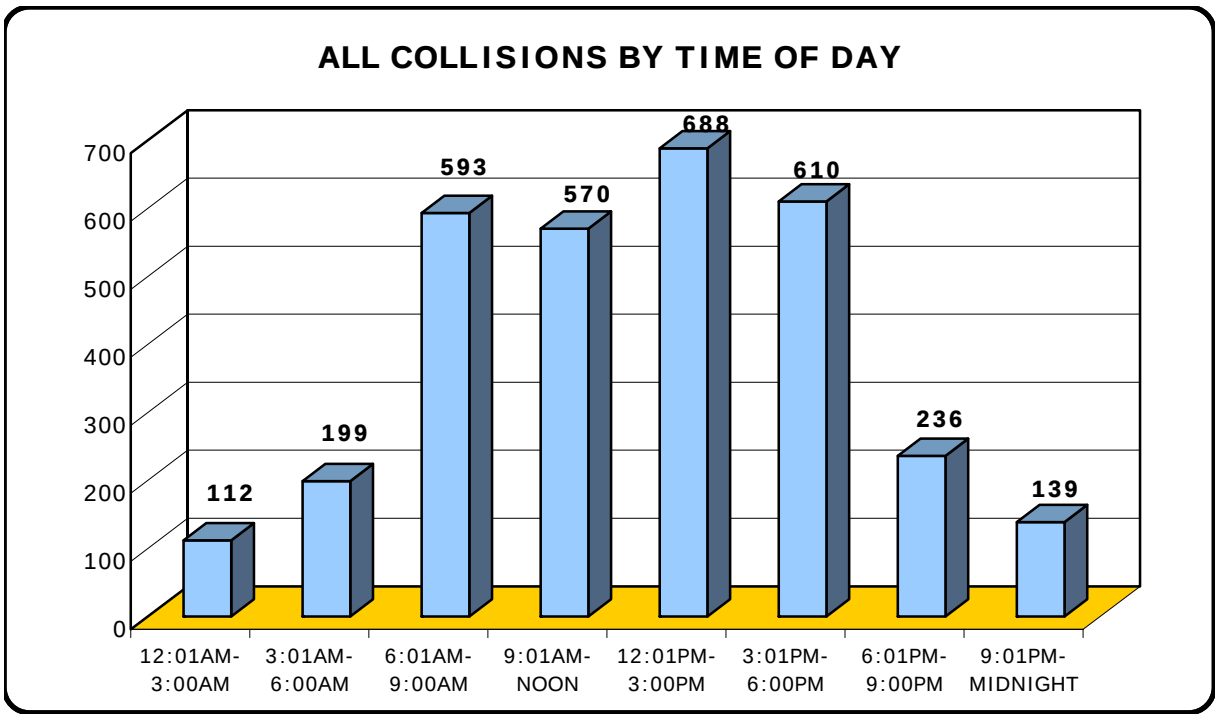
CMV Collisions by Hour of the Day

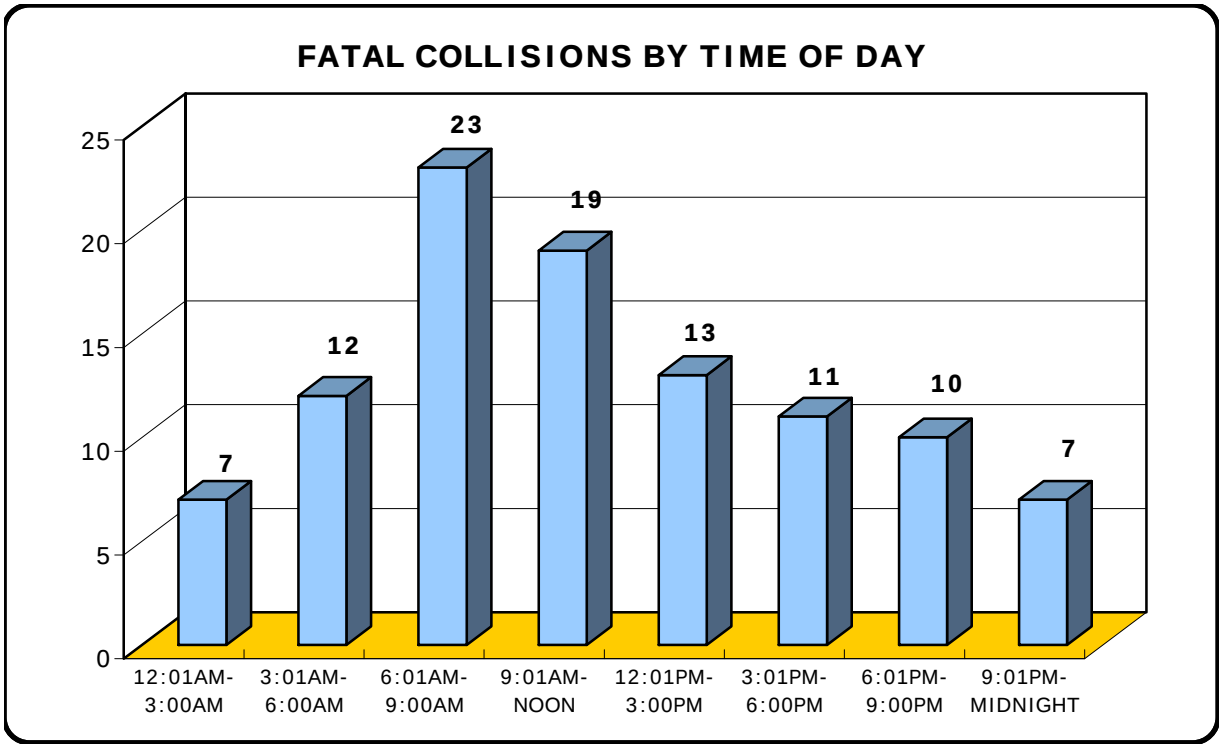
HOUR	CRASHES	DEATHS
12:00 AM	44	4
1:00 AM	35	4
2:00 AM	33	2
3:00 AM	44	2
4:00 AM	59	5
5:00 AM	96	7
6:00 AM	154	9
7:00 AM	216	10
8:00 AM	223	6
9:00 AM	166	3
10:00 AM	184	9
11:00 AM	220	9
12:00 PM	202	2
1:00 PM	226	6
2:00 PM	260	7
3:00 PM	267	6
4:00 PM	210	4
5:00 PM	133	2
6:00 PM	84	3
7:00 PM	86	3
8:00 PM	66	4
9:00 PM	53	3
10:00 PM	53	2
11:00 PM	33	3
TOTAL	**3,147**	**115**

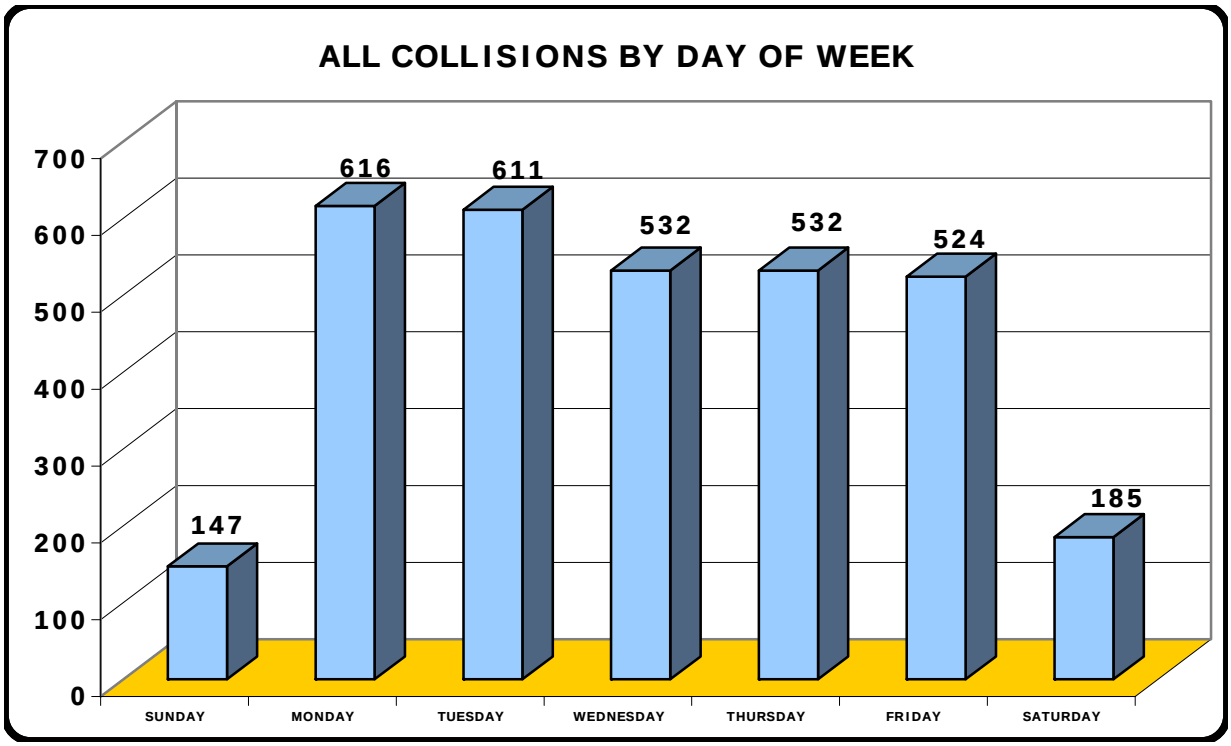
Some hours of the day are more dangerous than others with regard to CMV crashes and deaths. Not surprisingly, commercial vehicle crashes and deaths were higher during peak traffic time. Some hours of the day experience a low percentage of crashes, but they are much more deadly. For example, only 3% of CMV crashes in 2004 occurred in the 5:00 AM hour, but 6% of all deaths - double the percentage - occurred then!

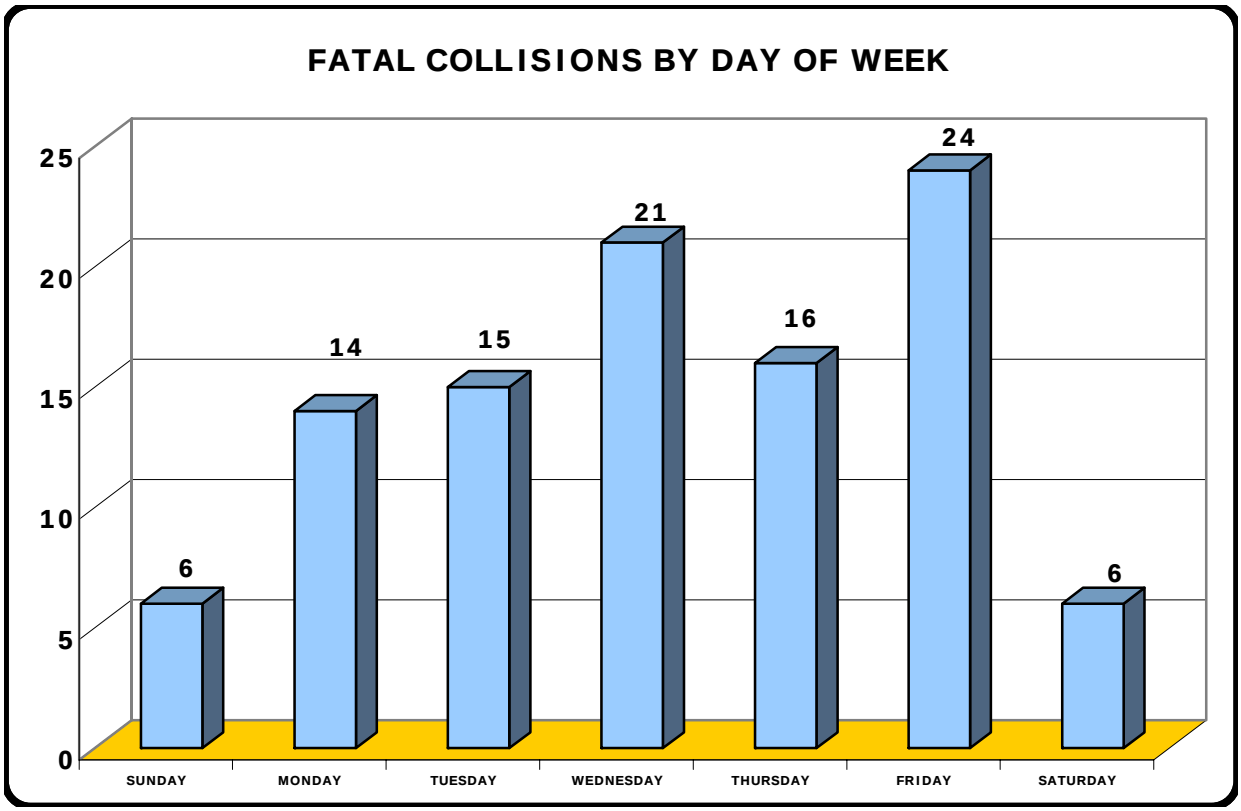
Almost 8% of CMV crashes occurred during the 3:00 PM hour. Only 3% of crashes occurred during the 7:00 PM hour.
The 7:00 AM hour proved to be the deadliest hour in 2004 for collisions involving CMV's, with 10 deaths recorded for this hour! Below is a graph of the percent of crashes and deaths by the hours of the day.

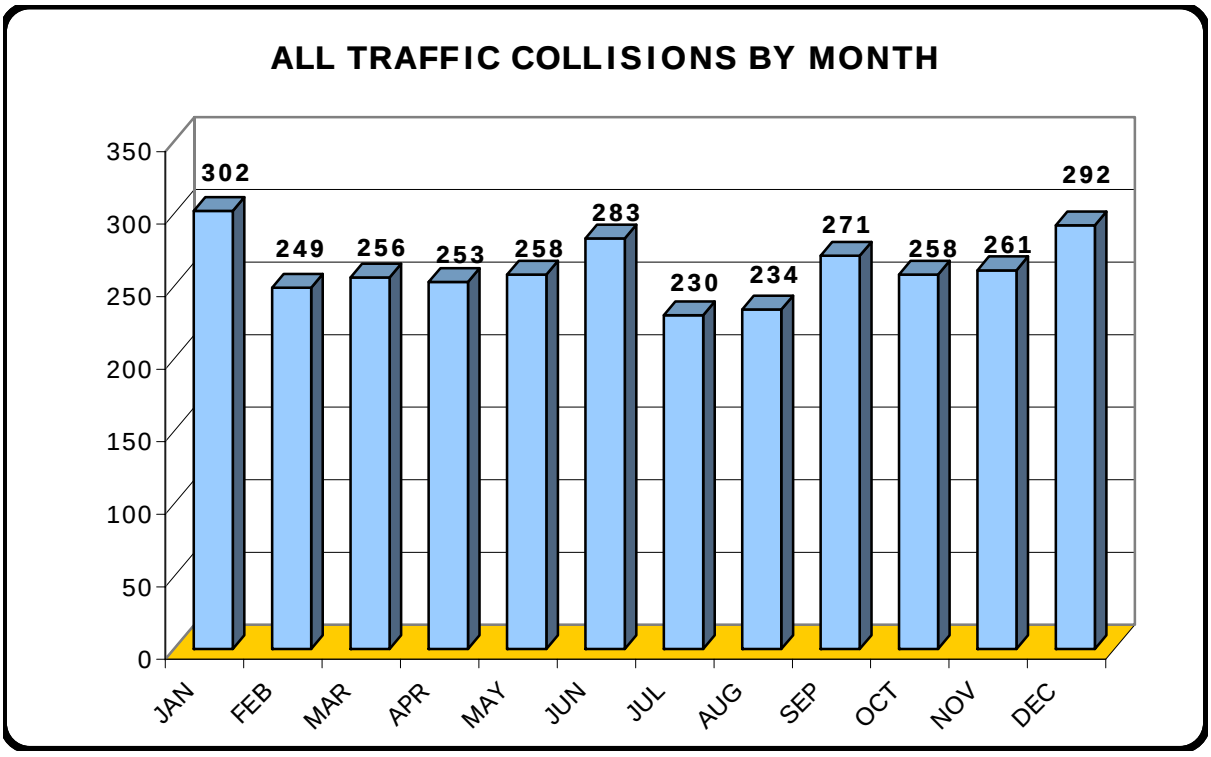


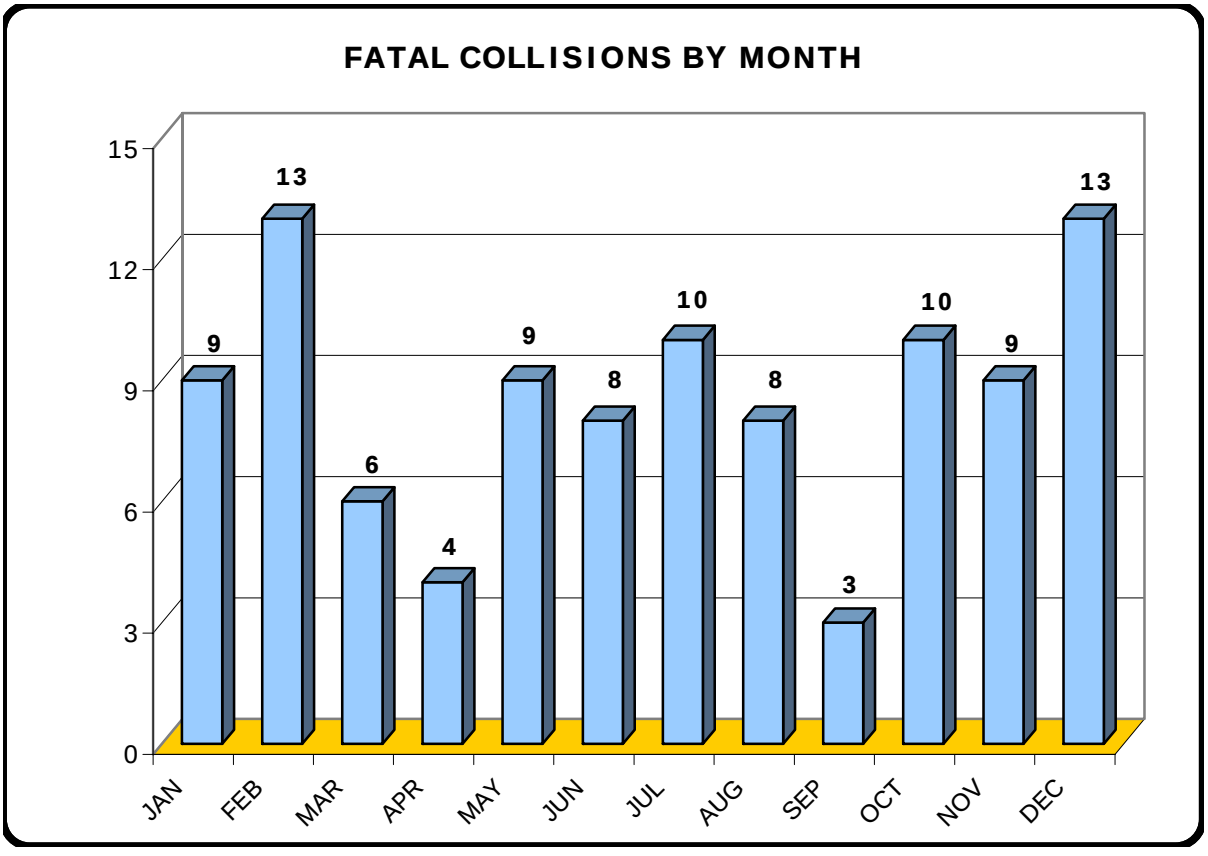

ALL COLLISIONS BY TIME OF DAY
700
600
500
400
300
200
100
0
112
199
593
570
688
610
236
139
12:01AM-3:00AM
3:01AM-6:00AM
6:01AM-9:00AM
9:01AM-NOON
12:01PM-3:00PM
3:01PM-6:00PM
6:01PM-9:00PM
9:01PM-MIDNIGHT


FATAL COLLISIONS BY TIME OF DAY
25
20
15
10
5
0
7
12
23
19
13
11
10
7
12:01AM-3:00AM
3:01AM-6:00AM
6:01AM-9:00AM
9:01AM-NOON
12:01PM-3:00PM
3:01PM-6:00PM
6:01PM-9:00PM
9:01PM-MIDNIGHT


ALL COLLISIONS BY DAY OF WEEK
700
600
500
400
300
200
100
0
147
616
611
532
532
524
185
SUNDAY
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
SATURDAY


FATAL COLLISIONS BY DAY OF WEEK
25
20
15
10
5
0
6
14
15
21
16
24
6
SUNDAY
MONDAY
TUESDAY
WEDNESDAY
THURSDAY
FRIDAY
SATURDAY


ALL TRAFFIC COLLISIONS BY MONTH
350
300
250
200
150
100
50
0
302
249
256
253
258
283
230
234
271
258
261
292
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC


FATAL COLLISIONS BY MONTH
15
12
9
6
3
0
9
13
6
4
9
8
10
8
3
10
9
13
JAN
FEB
MAR
APR
MAY
JUN
JUL
AUG
SEP
OCT
NOV
DEC