DRAFT REPORT

COMMERCIAL MOTOR VEHICLES CRASH STATISTICS REPORT FOR THE DISTRICT OF COLUMBIA (2011-2013)

Prepared for:

District Department of Transportation

Prepared by:

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10. Abstract

This report is aimed at identifying safety issues and to address commercial motor vehicle (CMV) crash problems at locations in the District of Columbia. The report presents detailed statistics and analysis of traffic crashes in the City for the three-year duration from 2011 through 2013 and provides summarized information on the various causes and consequences of all types of traffic crashes.

The statistics of CMV crashes presented in this report focuses on location, severity type, vehicle type, crash type, time of the crashes, and various external conditions. The high-hazard locations with high CMV crash frequency and/or severity in the District of Columbia were also presented. The crash summaries presented in this report can be used to identify safety problems, develop performance measures, and support the development and evaluation of highway and vehicle safety countermeasures related to CMVs.

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Commercial Motor Vehicles Traffic Crashes Summary

Quick Facts	2011			2012			2013		
	Truck	Bus	CMV	Truck	Bus	CMV	Truck	Bus	CMV
Total crashes	1175	1729	2799	1220	1917	3007	1208	2049	3126
Fatal Crashes	4	1	5	1	1	2	5	1	6
Injury Crashes	220	238	446	148	248	388	176	257	422
PDO Crashes	951	1490	2348	1071	1668	2617	1027	1791	2698
Fatalities	4	1	5	1	1	2	5	1	6
Non-Fatal Injuries	322	492	775	207	496	689	247	498	725
Total Vehicles Involved	2324	3429	5545	2406	3814	5955	2448	4075	6251
Total Persons Involved	2623	4934	7240	2738	5868	8214	2825	6184	8647
Total Pedestrians Involved	22	23	45	21	33	54	16	38	53

* CMV-involved crashes means commercial truck(s) and/or bus(es) were involved in the traffic crash.
* Since May 2008, the commercial vehicles option was included as a special field in the new traffic crash reports (PD10 form). Prior to May 2008, both government and private trucks were not classified separately.

CHAPTER 1 – INTRODUCTION

The Federal Motor Carrier Safety Administration (FMCSA) defines Commercial Motor Vehicles (CMVs) as:

- Any truck that has a gross vehicle weight rating (GVWR) of more than 10,000 pounds or a gross combination weight rating (GCWR) of more than 10,000 pounds used on public highways
- Any motor vehicle with seating to transport nine (9) or more people, including the driver's seat
- Any motor vehicle displaying a hazardous materials' placard (regardless of weight)

Crashes involving CMVs (such as truck or buses) which result in a fatality, injury or a tow-away are reportable to FMCSA. This report focuses on crashes involving CMVs in the District. On average, CMV consists of up to 15% of the traffic volume in Washington DC. Based on a prior study (*2008 DC Pedestrian Master Plan*), trucks and buses respectively comprise of approximately 5% and 10% of the total traffic in DC.

The most significant effect of CMV crashes is the resulting severity of injury sustained if any. In order to mitigate CMV crashes, it is important to understand the underlying reasons for CMV crash occurrences. The focus of this report is to disseminate CMV-involved crash information and to provide related agencies with CMV crash data. Also, the summaries presented in this report can be used to identify potential traffic accident risks associated with CMVs in the City. For instance, preventive strategies such as dedicated truck or bus routes and truck restrictions can be implemented to further improve the existing traffic circulation conditions. Furthermore, truck congestion issues can be alleviated by enhancing the level of safety and mobility based on the trends presented in this report.

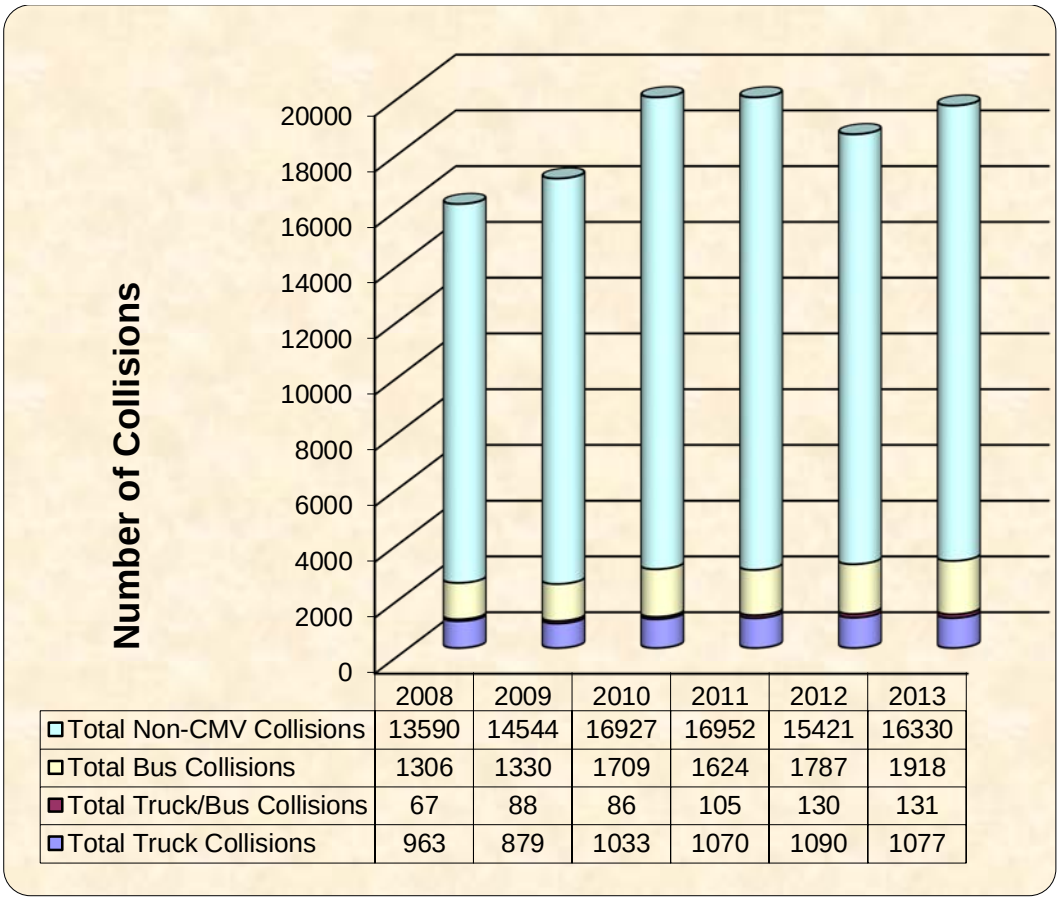
The crash statistics presented in this report are based on data obtained from the DC Metropolitan Police Department through their electronic Traffic Crash Report (PD-10) forms. The crash data was extracted from DDOT's servers using the Traffic Accident Reporting and Analysis System (TARAS) database. TARAS is an Oracle database application that can be used to run queries to obtain pertinent data.

This report is organized in 4 Chapters. Chapter 1 (this Chapter) presents the introduction while Chapter 2 presents the frequencies of all CMV-related crashes extracted from the TARAS database. Chapter 3 provides a list of crash characteristics associated with CMVs. The final chapter of this report provides a ranking of high-frequency crash intersections and corridors associated with CMVs. Additional CMV-related crash data are presented in the Appendix.

CHAPTER 2 GENERAL INFORMATION

2.1. CMV Traffic Crash Trend

Presented in Figure 2.1 is the summary of crash statistics for CMVs and non-CMVs from 2008 to 2013. From the figure, the overall crash frequency for all vehicle types fluctuates from year to year. The total number of CMV crashes showed a general upward trend. Similarly, the total number of non-CMV, truck and bus, and truck crashes showed an increasing trend. In contrast, the total number of truck/bus collisions from 2008 to 2013 showed a decrease.



	2008	2009	2010	2011	2012	2013
Total Non-CMV Collisions	13590	14544	16927	16952	15421	16330
Total Bus Collisions	1306	1330	1709	1624	1787	1918
Total Truck/Bus Collisions	67	88	86	105	130	131
Total Truck Collisions	963	879	1033	1070	1090	1077

Figure 2.1: CMV Traffic Crash Trend from 2008 through 2013

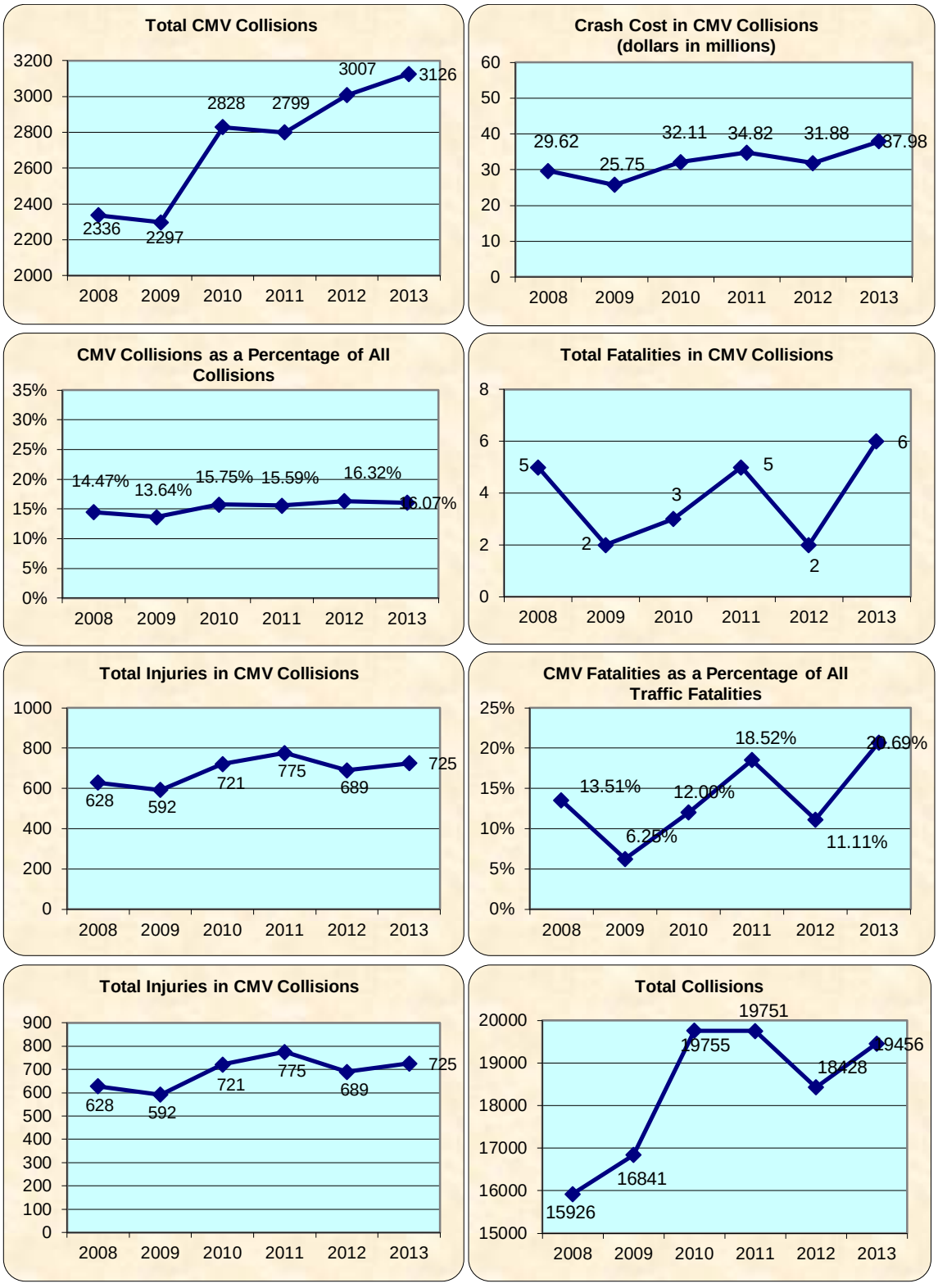


Figure 2.2: Trend of CMV Crashes from 2008 through 2013

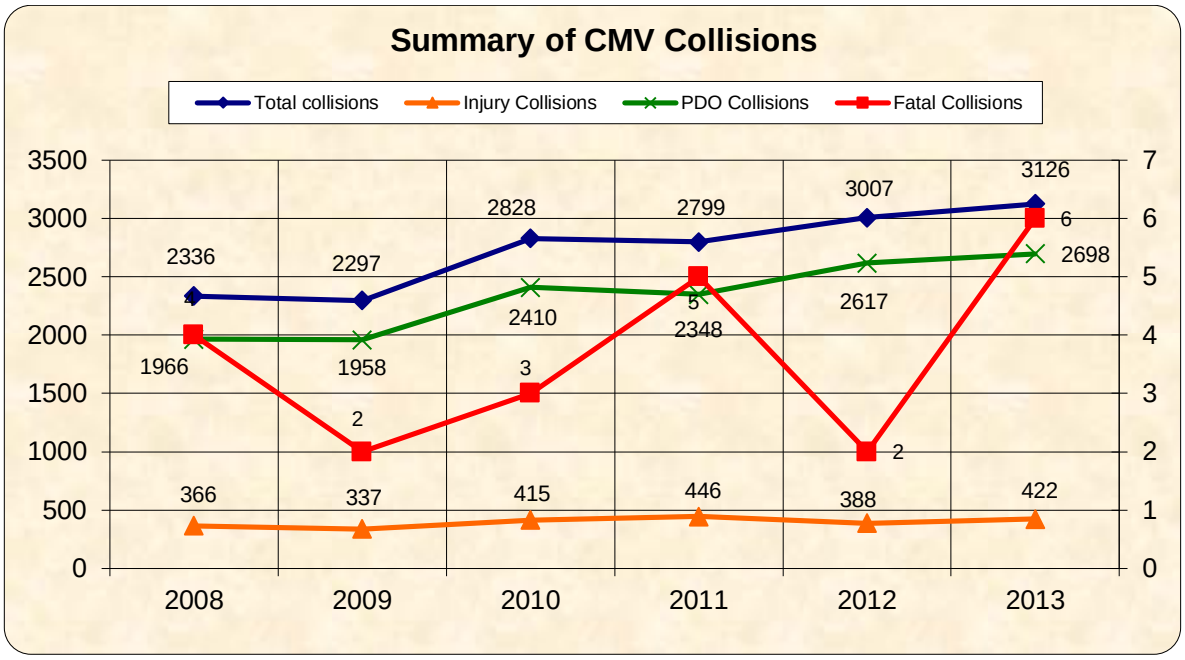


Figure 2.3: Summary of CMV-Related Crashes from 2008 through 2013

2.2. Top Primary Contributing Factors

Commercial motor vehicle crashes are generally more severe than other motor vehicle crashes. It is, therefore, important to understand the underlying reasons and factors that contribute to crashes involving CMVs. Ten primary contributing factors for all CMV crashes in 2013 were analyzed to provide an insight into the most significant causes of CMV crashes. The summary is presented in Figure 2.4.

The summary of CMV crashes which resulted in injuries is also presented in Figure 2.5. “Driver inattention” and “changing lane without caution” emerged as the top two primary contributing factors, while “following too closely” was found to be third highest contributing factor to CMV crashes which resulted in injuries in 2013.

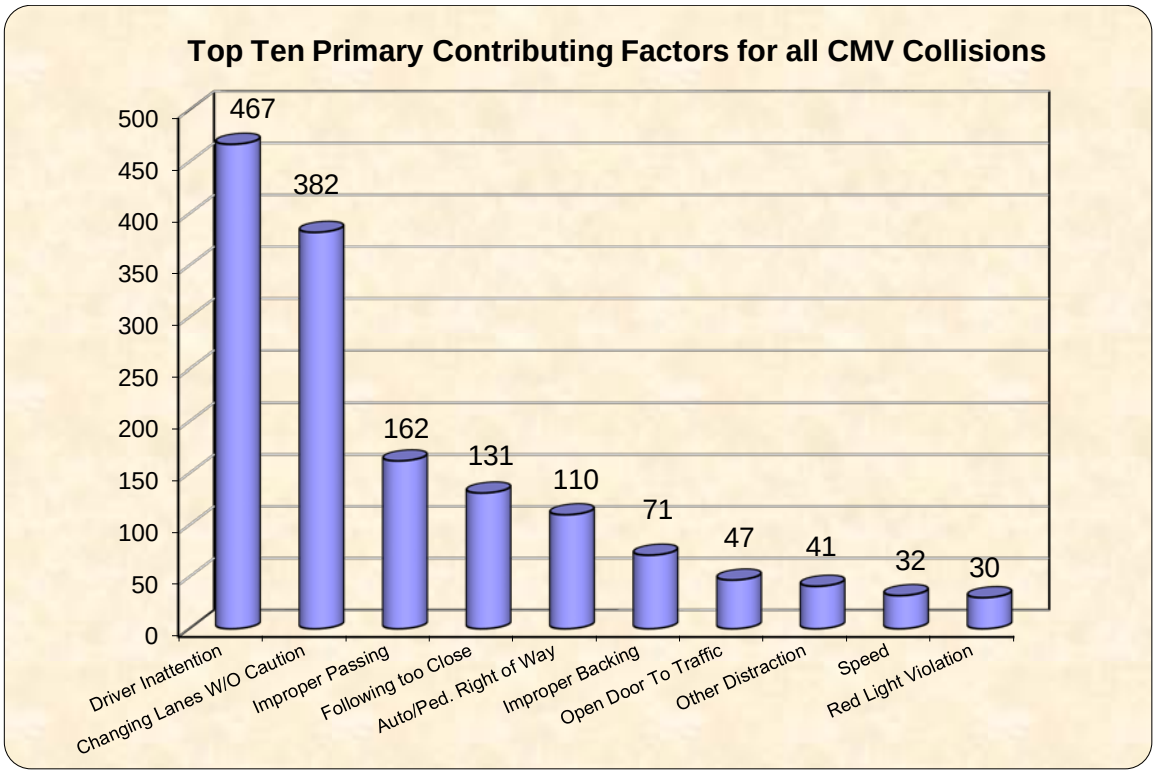


Figure 2.4: Top Ten Primary Contributing Factors for all CMV Crashes in 2013

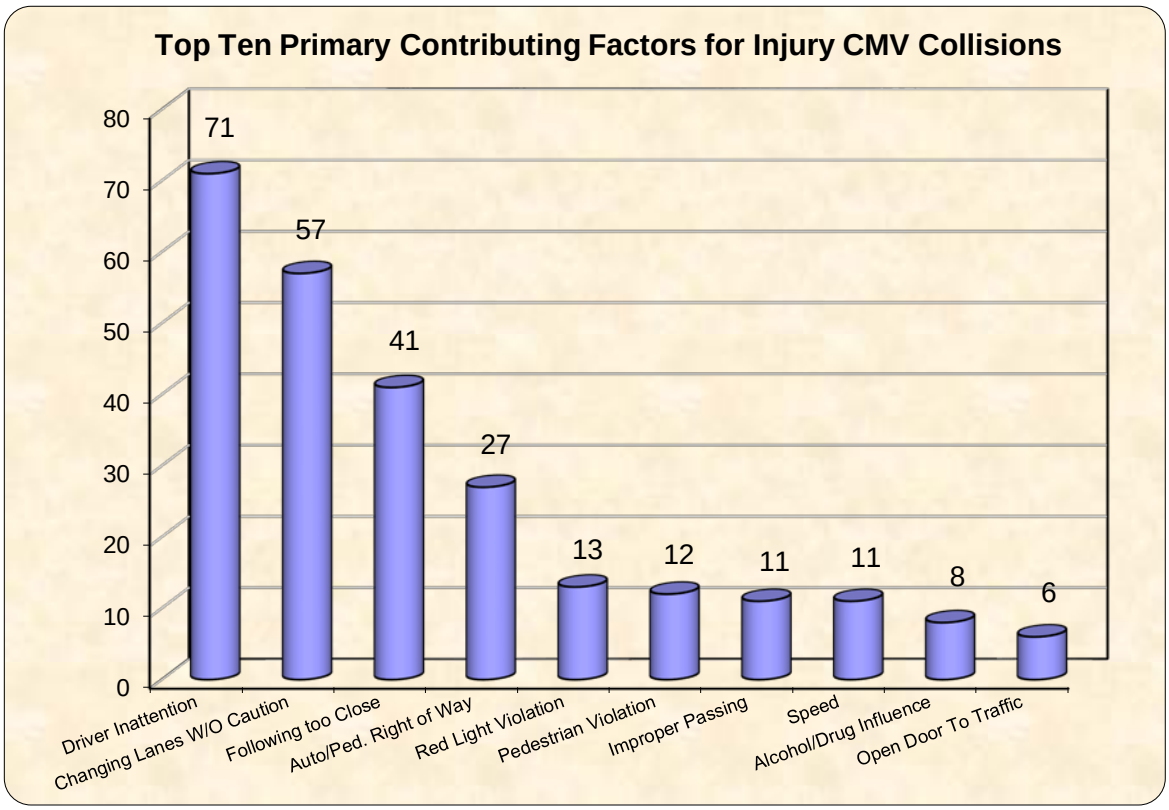


Figure 2.5: Top Ten Primary Contributing Factors for Injury CMV Crashes in 2013

CHAPTER 3 CMV CRASH CHARACTERISTICS

3.1 Drivers

3.1.1 Age and Sex of CMV Drivers Involved in CMV Traffic Crashes

As shown in Table 3.1, CMV drivers aged between 36 and 45 were recorded to be the highest group to be involved in CMV-related crashes for both genders. Drivers whose gender was not recorded or unknown were included in the total. The summaries of injury and non-injury are also presented in Table 3.2 and in Figures 3.1, 3.2 and 3.3.

Table 3.1: Overall and Fatal CMV Drivers by Age Group and Gender

Total CMV Drivers				
Age	**Female**	**Male**	**Unknown**	**Total**
16 to 25	42	79	1	122
26 to 35	164	377	0	541
36 to 45	167	549	2	718
46 to 55	111	485	0	596
56 to 65	51	300	0	351
66 to 75	9	52	0	61
76 to 85	0	7	0	7
86 & older	0	1	0	1
Unknown	145	543	336	1,024
Total	689	2,393	339	3,421

Fatal CMV Drivers				
Age	**Female**	**Male**	**Unknown**	**Total**
16 to 25	0	0	0	0
26 to 35	0	0	0	0
36 to 45	0	0	0	0
46 to 55	0	0	0	0
56 to 65	0	0	0	0
66 to 75	0	1	0	1
76 to 85	0	0	0	0
86 & older	0	0	0	0
Unknown	0	0	0	0
Total	0	1	0	1

Table 3.2: Injury and Non-Injury CMV Drivers by Age Group and Gender

Injury CMV Drivers				
Age	**Female**	**Male**	**Unknown**	**Total**
16 to 25	1	2	0	3
26 to 35	3	7	0	10
36 to 45	13	14	0	27
46 to 55	5	13	0	18
56 to 65	2	8	0	10
66 to 75	0	1	0	1
76 to 85	0	1	0	1
86 & older	0	0	0	0
Unknown	8	9	1	18
Total	32	55	1	88

Non-Injury CMV Drivers				
Age	**Female**	**Male**	**Unknown**	**Total**
16 to 25	41	75	0	116
26 to 35	150	358	0	508
36 to 45	149	505	0	654
46 to 55	103	452	0	555
56 to 65	48	276	0	324
66 to 75	9	50	0	59
76 to 85	0	6	0	6
86 & older	0	1	0	1
Unknown	111	452	34	597
Total	611	2,175	34	2,820

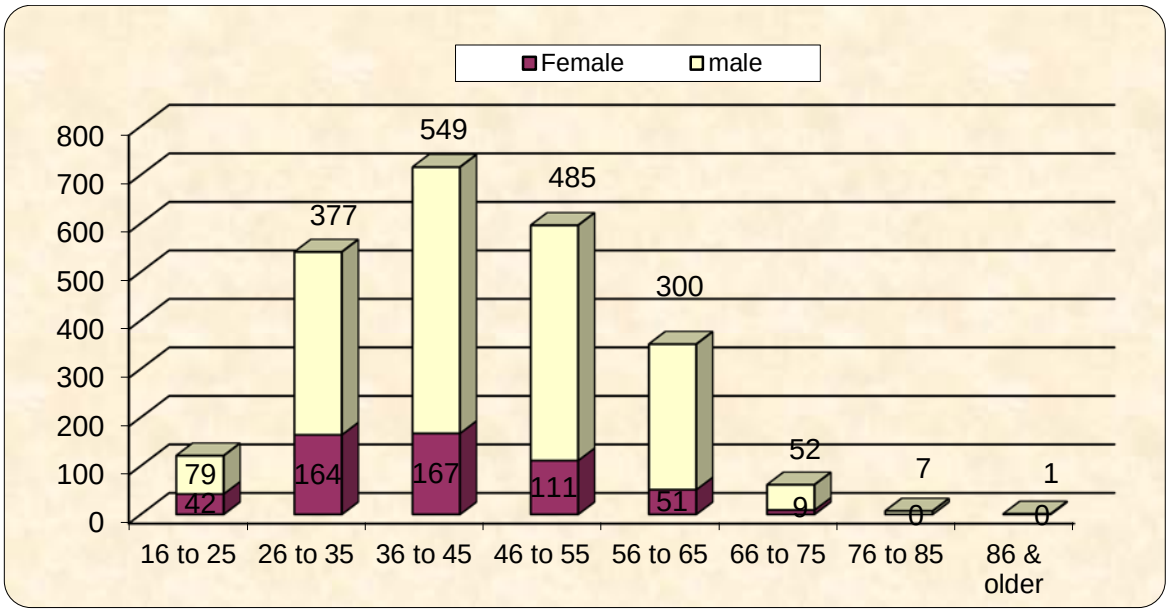


Figure 3.1: Age and Sex of CMV Drivers in CMV Traffic Crashes in 2013

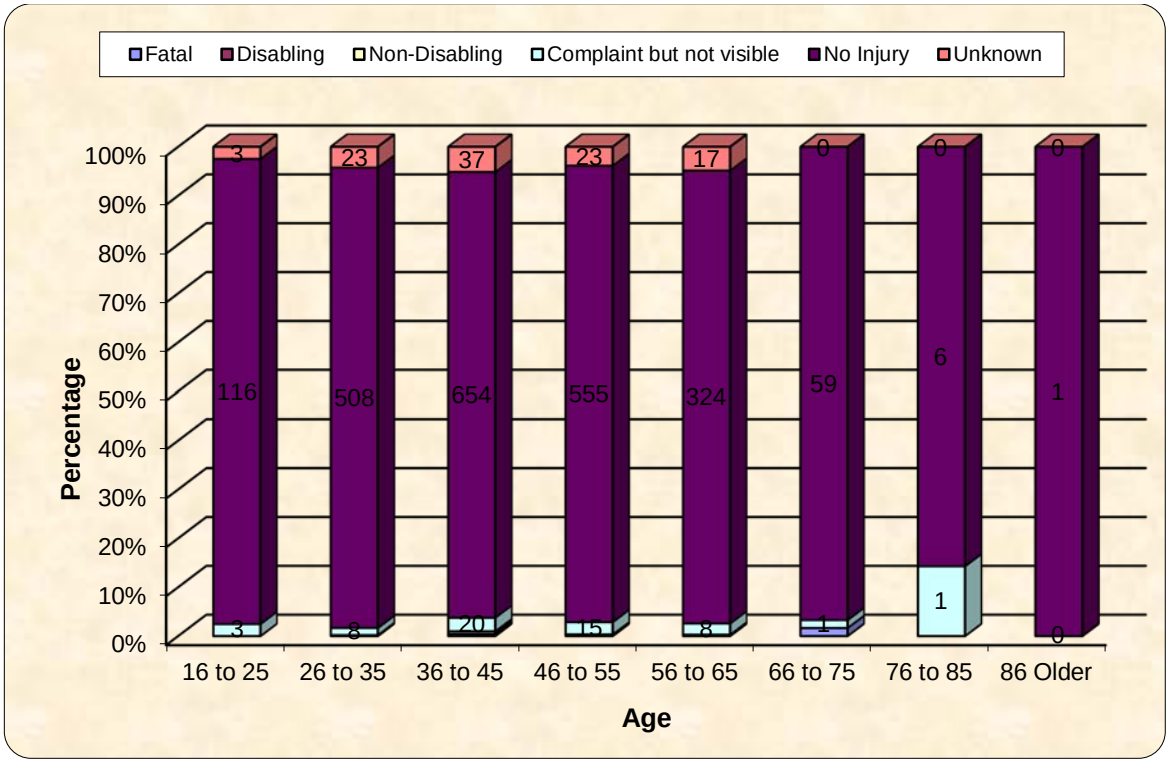


Figure 3.2: Summary of Injury Severity by Age Group of CMV Drivers in 2013

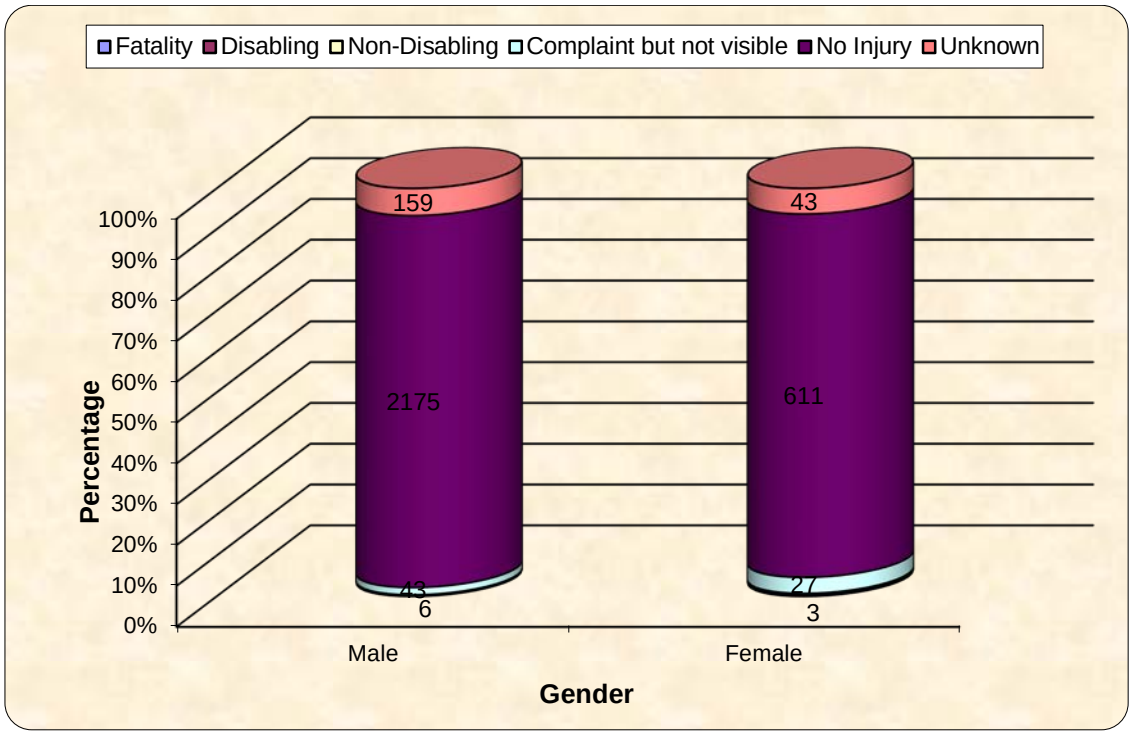


Figure 3.3: Summary of Injury Severity by Gender of CMV Drivers

3.1.2 Age and Sex of Non-CMV Drivers in CMV Traffic Crashes

For the non-CMV drivers involved in CMV-related crashes, a similar trend was observed in the categories of PDO and total crashes, i.e., age groups of 26 to 35 female drivers and 36 to 45 male drivers were the highest (See Tables 3.3 and 3.4; Figures 3.4 through 3.6). For crashes resulting injuries for non-CMV drivers (Table 3.4), the age group of 26-35 was found to be highest for both genders.

Table 3.3: Overall and Fatal Non-CMV Drivers by Age Group and Gender

Total Non-CMV Drivers				
Age	**Female**	**Male**	**Unknown**	**Total**
16 to 25	141	175	1	317
26 to 35	389	584	0	973
36 to 45	318	761	2	1,081
46 to 55	243	705	1	949
56 to 65	139	458	0	597
66 to 75	50	116	0	166
76 to 85	13	33	0	46
86 & older	7	6	0	13
Unknown	365	880	864	2,109
Total	1,665	3,718	868	6,251

Fatal Non-CMV Drivers				
Age	**Female**	**Male**	**Unknown**	**Total**
16 to 25	1	0	0	1
26 to 35	0	0	0	0
36 to 45	0	0	0	0
46 to 55	0	0	0	0
56 to 65	0	0	0	0
66 to 75	0	1	0	1
76 to 85	0	0	0	0
86 & older	0	0	0	0
Unknown	0	0	0	0
Total	1	1	0	2

Table 3.4: Injury and Non-Injury Non-CMV Drivers by Age Group and Gender

Injury Non-CMV Drivers				
Age	**Female**	**Male**	**Unknown**	**Total**
16 to 25	11	10	0	21
26 to 35	25	20	0	45
36 to 45	32	31	0	63
46 to 55	17	27	0	44
56 to 65	12	20	0	32
66 to 75	5	6	0	11
76 to 85	1	2	0	3
86 & older	0	0	0	0
Unknown	29	42	1	72
Total	132	158	1	291

Non-Injury Non-CMV Drivers				
Age	**Female**	**Male**	**Unknown**	**Total**
16 to 25	121	155	0	276
26 to 35	342	534	0	876
36 to 45	274	688	0	962
46 to 55	215	654	1	870
56 to 65	123	408	0	531
66 to 75	45	107	0	152
76 to 85	11	31	0	42
86 & older	6	6	0	12
Unknown	262	684	48	994
Total	1,399	3,267	49	4,715

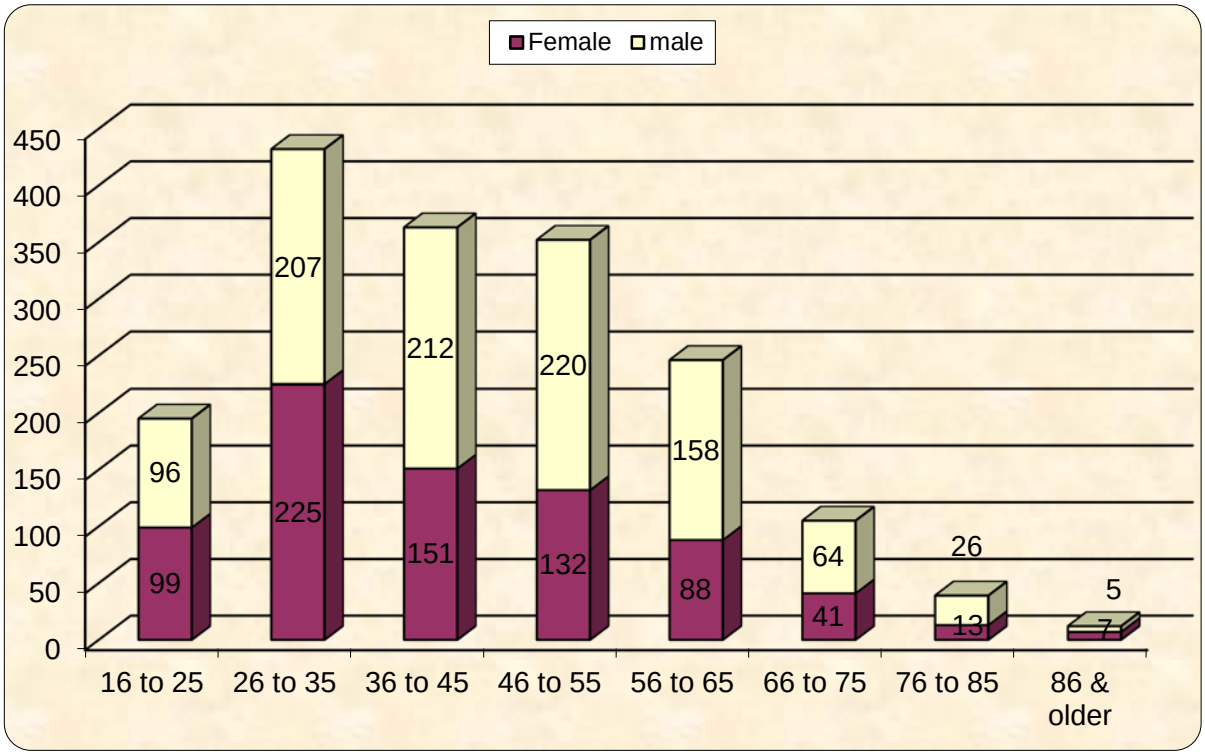


Figure 3.4: Age and Gender of Non-CMV Drivers in CMV Traffic Crashes in 2013

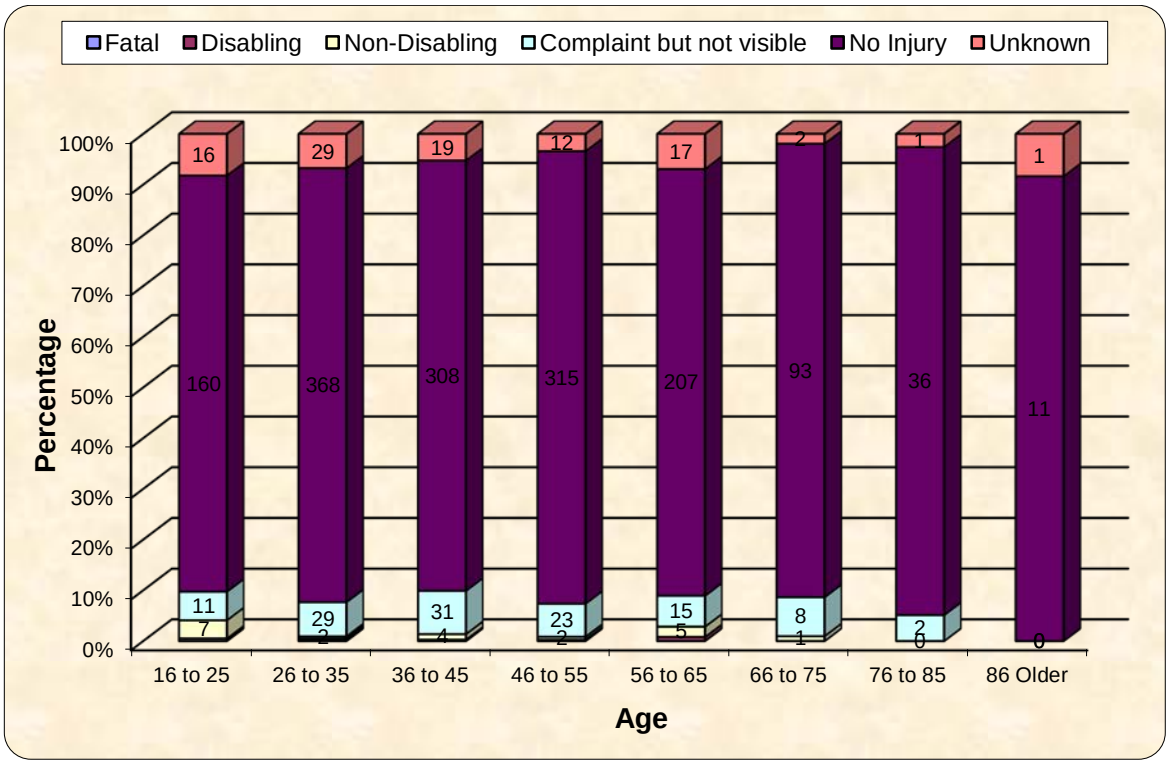


Figure 3.5: Injury Severity for Non-CMV Drivers in CMV Crashes by Age Group in 2013

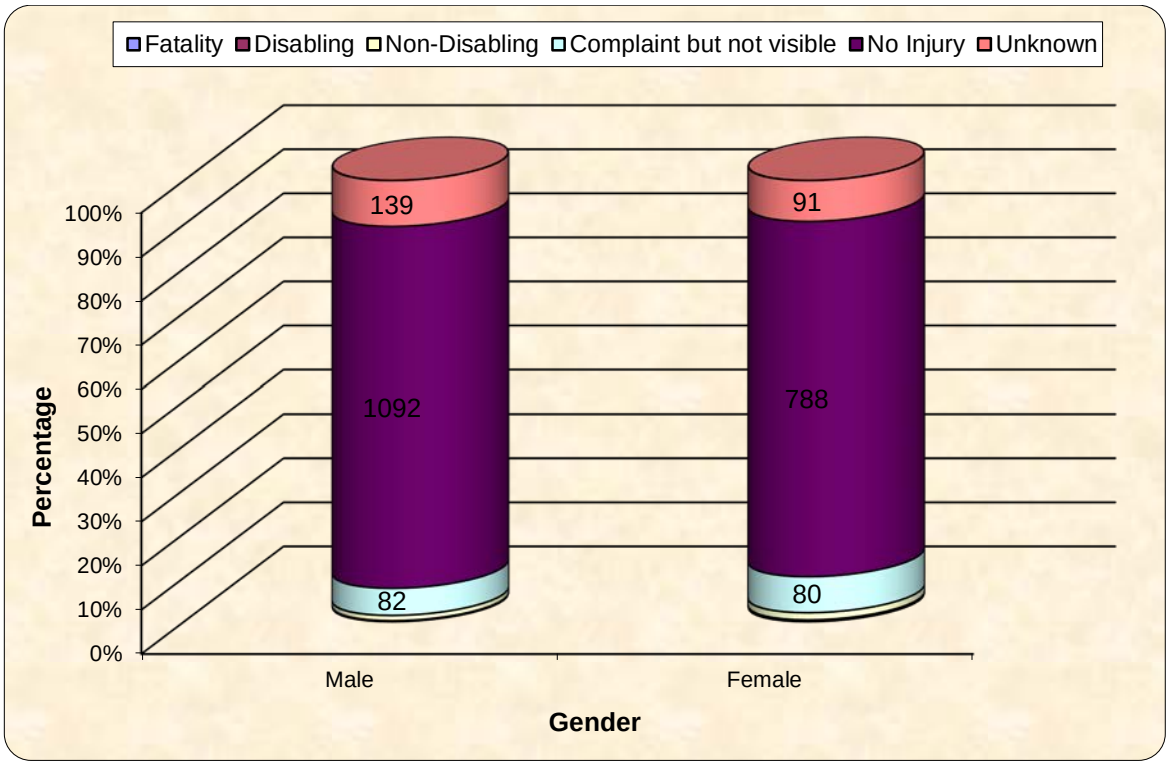


Figure 3.6: Injury Severity for Non-CMV Drivers in CMV Crashes by Gender in 2013

3.1.3 State Registration of CMVs and Drivers in CMV Crashes

Figure 3.7 presents the summary of commercial vehicle registration and state registration of drivers involved in CMV crashes. The results show that the majority of the CMV crashes in the District were related to registrants from Washington DC and Maryland which represents approximately 74% and 73% of the crashes observed in both of these categories respectively.

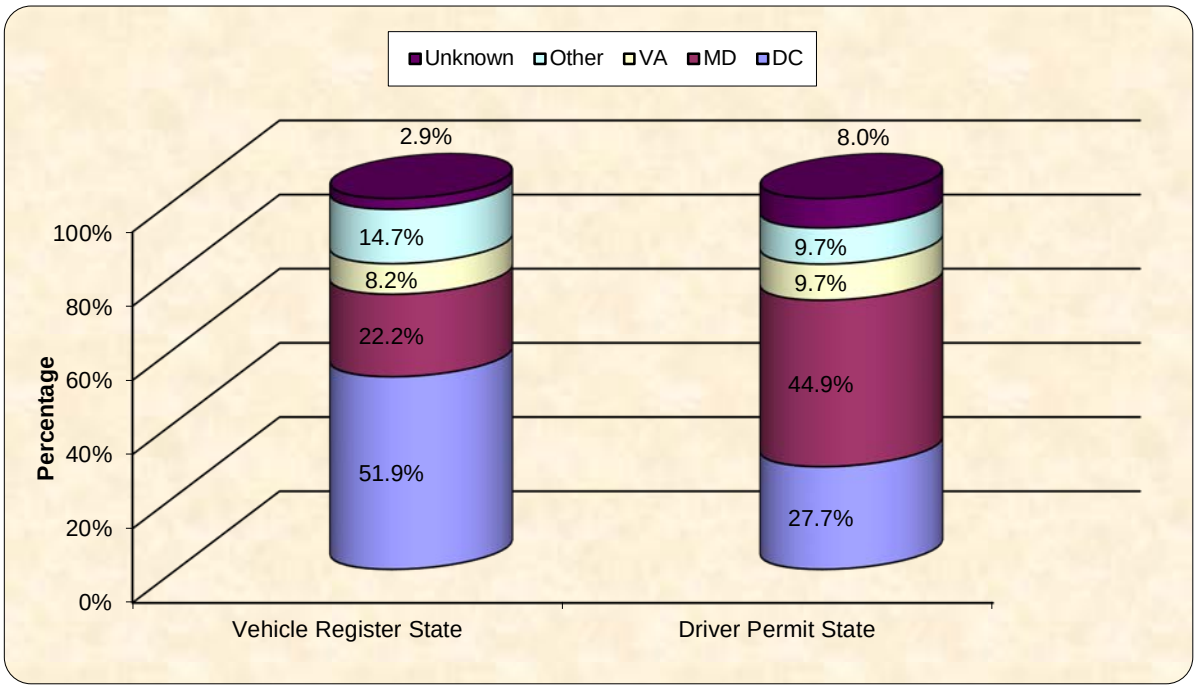


Figure 3.7: CMV Crashes by Vehicle Registration State and Driver Permits in 2013

3.2 Time of Crashes

3.2.1 CMV Crashes by Time of Day

Table 3.5 shows the overall CMV crashes by hour of the day and by injury severity. From the table, the highest number of CMV crashes were reported in the 8th hour of the day (i.e., 8 A.M.) followed by the 9th hour of the day (9 A.M.). The CMV crashes that occurred during this 2-hour window represents approximately 18% of the total CMV crashes in 2013. However, the most reported CMV-related injuries occurred during the 13th hour of the day. The results are also presented in Figures 3.8 and 3.9.

Table 3.5 Overall CMV Crashes by Hour and Injury Severity

Hour	Crashes	Fatalities	Injuries
00	31	0	7
01	16	0	6
02	25	0	5
03	14	0	7
04	10	0	2
05	19	0	2
06	86	0	27
07	210	0	51
08	311	0	77
09	264	0	69
10	220	2	56
11	176	0	40
12	209	0	47
13	175	0	90
14	183	2	26
15	243	0	48
16	238	0	81
17	230	0	25
18	176	1	16
19	104	0	13
20	55	0	9
21	53	0	8
22	41	0	9
23	37	1	4
Total	**3,126**	**6**	**725**

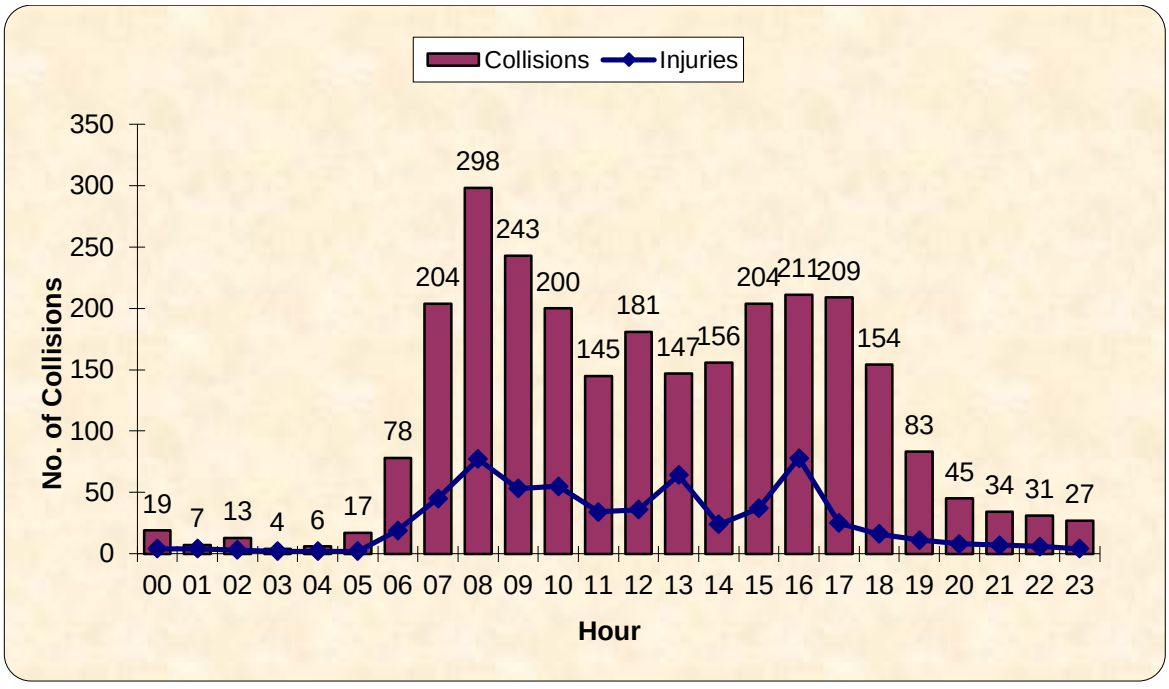


Figure 3.8 Weekday CMV Crashes by Hour of Day in 2013

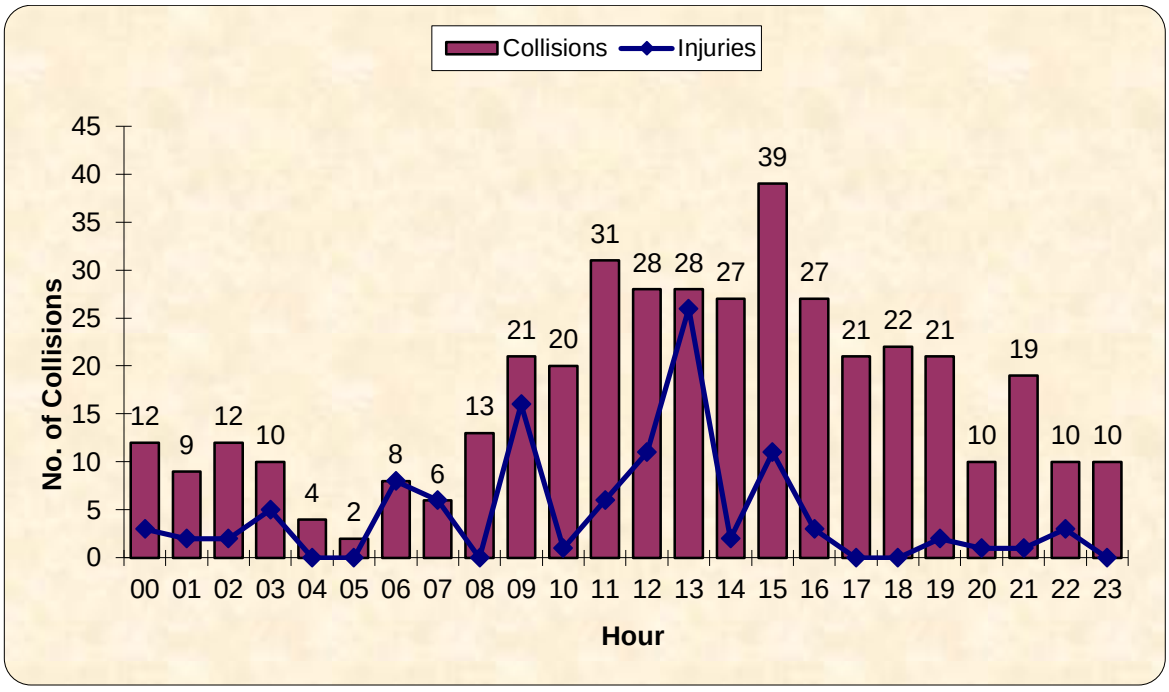


Figure 3.9: Weekend CMV Crashes by Hour of Day in 2013

Figure 3.10 shows the frequency of truck crashes by hour of the day for weekdays. The peak crash frequencies occur from 7 - 9 A.M. and 3 - 6 P.M.

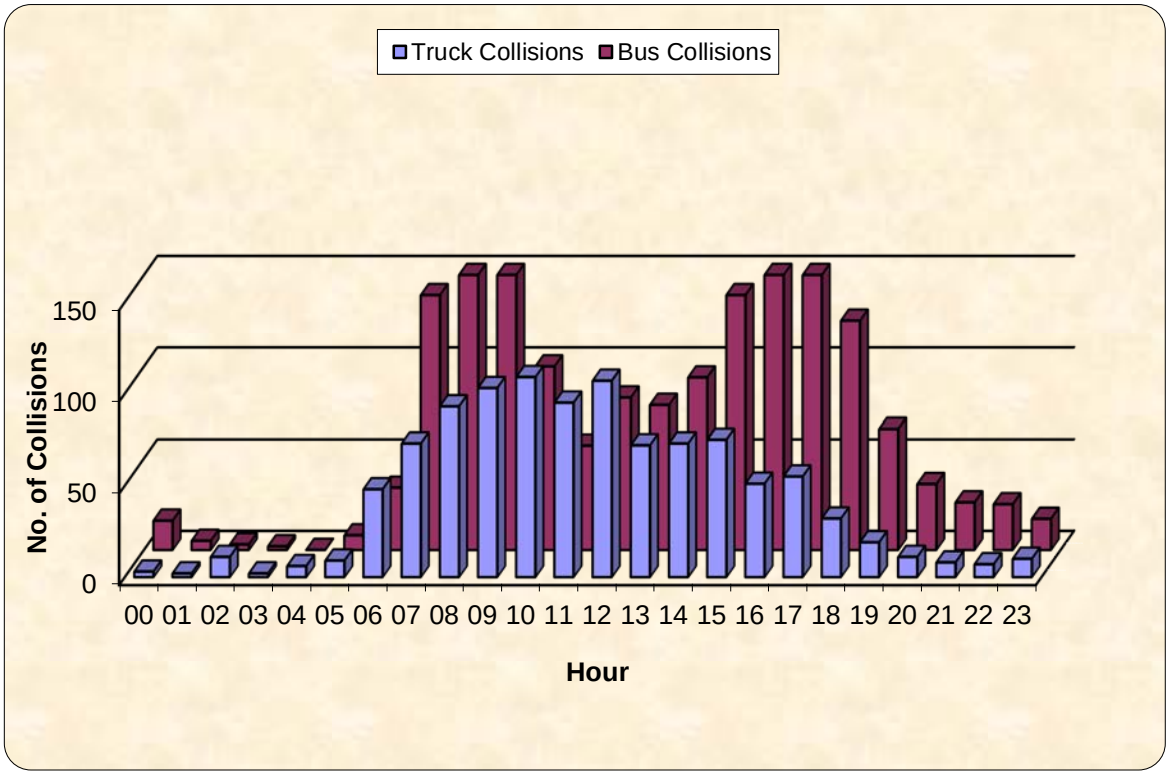


Figure 3.10: Weekday CMV Crashes by Hour of Day in 2013

The crash frequency for buses was observed to be randomly distributed, with the higher frequencies observed from 7 A.M. to 9 A.M. and from 3 P.M. to 6 P.M.

For CMV crashes that occurred over weekends, the frequencies for both trucks and busses were observed to be randomly distributed, as shown in Figure 3.11. The highest frequency of crashes for trucks and buses were observed between 10 A.M. and 6 P.M.

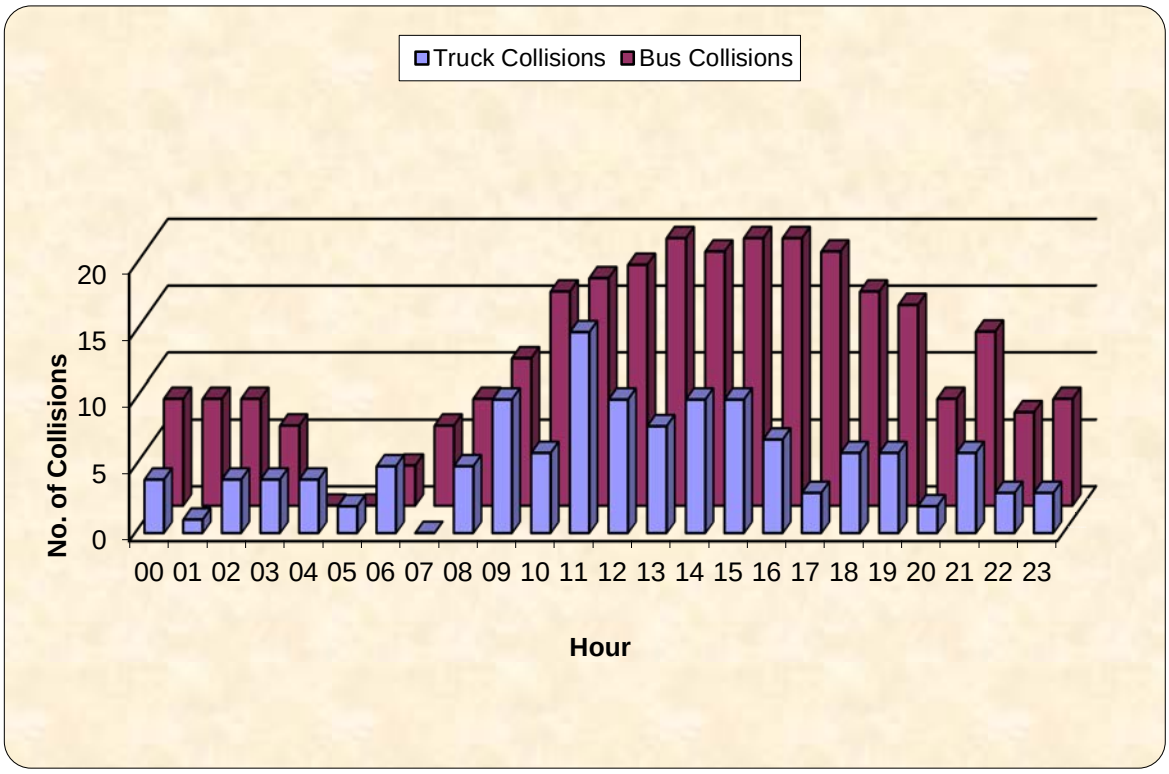


Figure 3.11 Weekend CMV Crashes by Hour of Day in 2013

3.2.2 CMV Crashes by Day of Week

As shown in Table 3.6 and Figure 3.12, the number of crashes that occurred over weekends was found to be considerably lower than those occurring on weekdays. The highest CMV crashes in 2013 occurred on Thursday resulting in 2 fatalities and 140 injuries.

Table 3.6: CMV Crashes by Day of Week in 2013

Weekday	Crashes	Fatalities	Injuries
Sunday	170	0	33
Monday	465	2	93
Tuesday	566	1	141
Wednesday	538	0	105
Thursday	581	2	140
Friday	566	1	137
Saturday	240	0	76

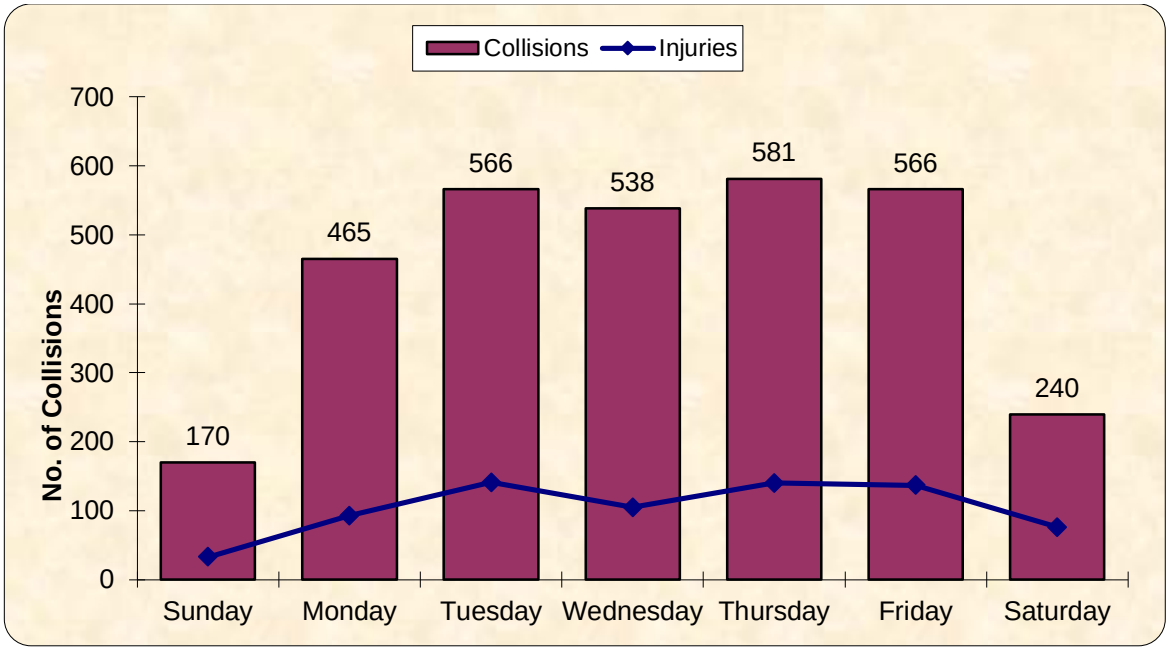


Figure 3.12: CMV Crashes by Day of Week in 2013

3.2.3 CMV Crashes by Month of Year

Table 3.7 and Figure 3.13 show the frequency of CMV crashes by month. As shown in the table and illustration, the highest number of crashes occurred in May 2013with the lowest occurring in August of the same year. The monthly average crashes were 261.

Table 3.7: CMV Crashes by Month in 2013

Month	Crashes	Fatalities	Injuries
1	243	0	37
2	213	0	47
3	279	0	88
4	302	1	114
5	341	1	54
6	246	1	74
7	282	1	48
8	208	0	43
9	265	0	75
10	258	0	70
11	258	2	35
12	231	0	40
Total	3,126	6	725

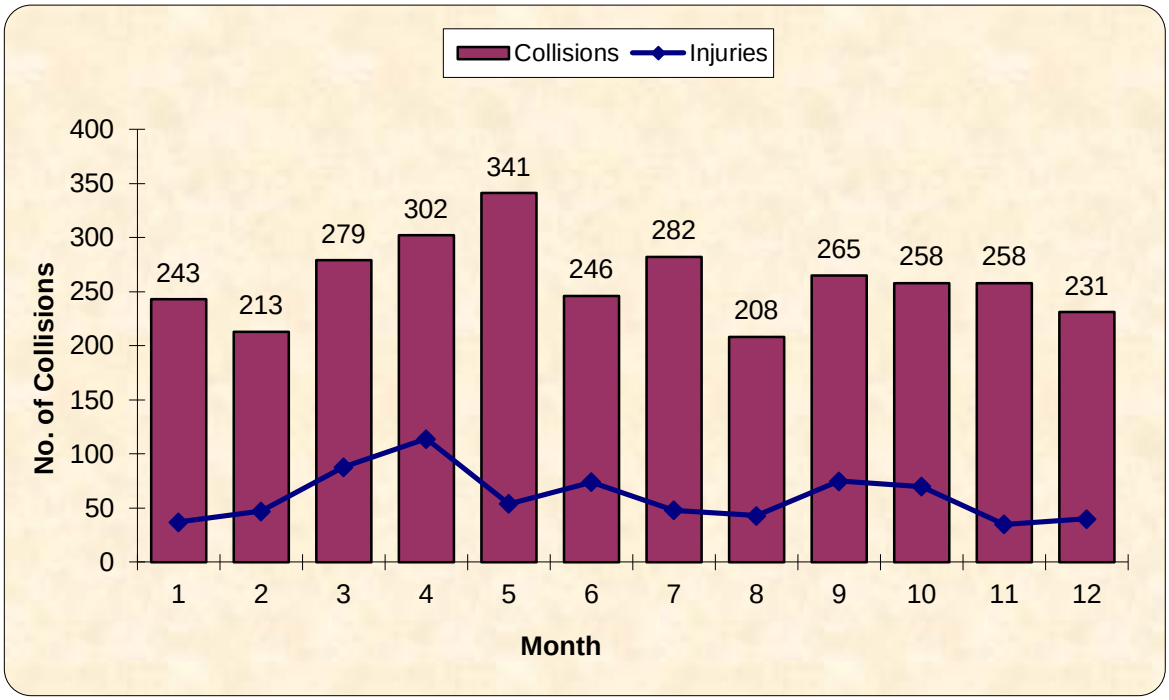


Figure 3.13 CMV Crashes by Month in 2013

3.3 Location

3.3.1 CMV Crashes by Quadrant

Based on the results presented in Table 3.8, it can be observed that Northwest quadrant recorded the highest number (1,692 or 54%) of reported CMV

crashes and associated injuries. This could be attributed to the fact that the NW quadrant is the largest in the District and contains the business district.

Table 3.8: CMV Crashes by Quadrant in 2013

Quadrant	Crashes	Fatalities	Injuries
NW	1692	2	249
NE	637	1	167
SE	464	1	184
SW	90	0	10
Border	194	2	82
Unknown	49	0	33
Total	**3,126**	**6**	**725**

*Note: NW=Northwest, NE=Northeast, SE=Southeast, SW=Southwest

3.3.2 CMV Crashes by Ward

Washington DC is divided into eight (8) wards and each of which consists of various designated neighborhoods. The results of the CMV crashes by Ward presented in Figure 3.14 shows that Ward 2 recorded the highest number of crashes in 2013 followed by Ward 6.

Table 3.9: CMV Crashes by Ward in 2013

Ward	Crashes	Fatalities	Injuries
Unknown	297	0	112
1	211	0	41
2	909	0	81
3	141	1	36
4	160	0	38
5	350	0	110
6	437	3	73
7	169	2	84
8	184	0	81
Border	268	0	69
Total	**3,126**	**6**	**725**

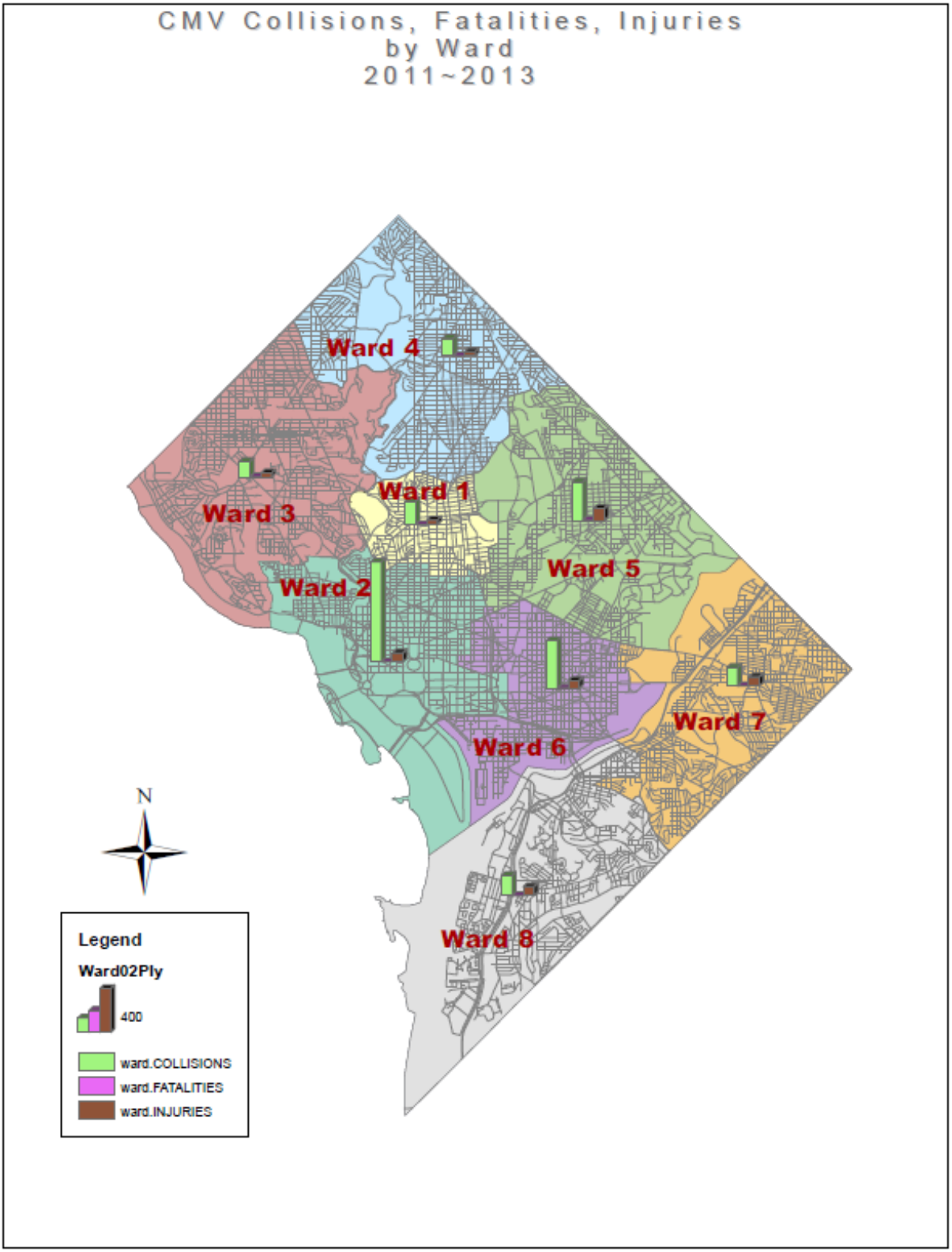


Figure 3.14: CMV Crashes, Fatalities and Injuries by Ward for 2011-2013

3.3.3 CMV Crashes by Advisory Neighborhood Commission

Washington DC consists of 37 Advisory Neighborhood Commissions (ANC). The summary of the data presented in Table 3.10 shows that the ANC borders, 2B (Dupont Circle) and 2F (Logan Circle) were the areas with highest reported CMV crashes in 2011. This is also illustrated in Figure 3.15.

Table 3.10: Overall CMV Crashes by ANC, Fatality, and Injury in 2013

ANC	Description	Total Crash	Fatality	Injury
Unk.	Unknown	297	0	112
1A	Columbia Heights, Pleasant Plains	65	0	14
1B	Cardozo, Howard University, LeDroit Park, Shaw	84	0	16
1C	Adams Morgan, Kalorama Heights, Lanier Heights, Western U Street	24	0	2
1D	Mount Pleasant	8	0	6
2A	Foggy Bottom, West End	137	0	13
2B	Dupont Circle	183	0	11
2C	Blagden Alley, Chinatown, Logan Circle, Mount Vernon Square, Shaw	99	0	11
2D	Kalorama, Sheridan	11	0	2
2E	Burleith, Georgetown, Hillandale	125	0	13
2F	Logan Circle	178	0	21
3B	Cathedral Heights, Glover Park	6	0	0
3C	Cathedral Heights, Cleveland Park, Massachusetts Heights, McLean Gardens, Woodley Park	54	1	21
3D	American University, Foxhall, Kent, The Palisades, Spring Valley, Wesley Heights	17	0	7
3E	American University Park, Friendship Heights, Tenleytown	17	0	1
3F	Forest Hills, North Cleveland Park, Tenleytown	28	0	4
3G	Chevy Chase	18	0	4
4A	Brightwood, Colonial Village, Crestwood, Shepherd Park, Sixteenth Street Heights	16	0	3
4B	Brightwood, Lamond-Riggs, Manor Park, Riggs Park, South Manor Park, Takoma	40	0	10
4C	Columbia Heights, Crestwood, Petworth, Sixteenth Street Heights	36	0	7
4D	Petworth	12	0	1
5A	Brookland, Fort Lincoln, Michigan Park, North Michigan Park, University Heights, Woodridge	66	0	34
5B	Arboretum, Brentwood, Brookland, Carver, Langdon, Langston, Ivy City, Trinidad	153	0	32
5C	Bloomingdale, Eckington, Edgewood	101	0	37
6A	North Lincoln Park, Rosedale, Stanton Park	54	0	11
6B	Barney Circle, Capitol Hill, Eastern Market	117	1	17
6C	Near Northeast, Penn Quarter, Union Station	177	1	31
6D	Carrollsburg, Fort McNair, Navy Yard, Near Southwest/Southeast, Waterfront	77	1	6
7A	Fort Dupont, Greenway, River Terrace	18	0	24
7B	Fairfax Village, Hillcrest, Penn Branch, Randle Highlands	17	0	0
7C	Burrville, Deanwood, Grant Park, Lincoln Heights	18	0	11
7D	Eastland Gardens, Kenilworth, Kingman Park, Mayfair	48	1	20
7E	Benning Heights, Capitol View, Fort Davis, Marshall Heights	14	0	6
8A	Anacostia, Fairlawn, Fort Stanton, Hillsdale	49	0	17
8B	Garfield Heights, Knox Hill, Shipley Terrace	31	0	6
8C	Barry Farms, Bolling Air Force Base, Congress Heights, St. Elizabeths Hospital	62	0	27
8D	Bellevue, Far Southwest	20	0	10
8E	Congress Heights, Valley Green, Washington Highlands	14	0	11
Brd.	Border between ANCs	635	1	146
Total		**3,126**	**6**	**725**

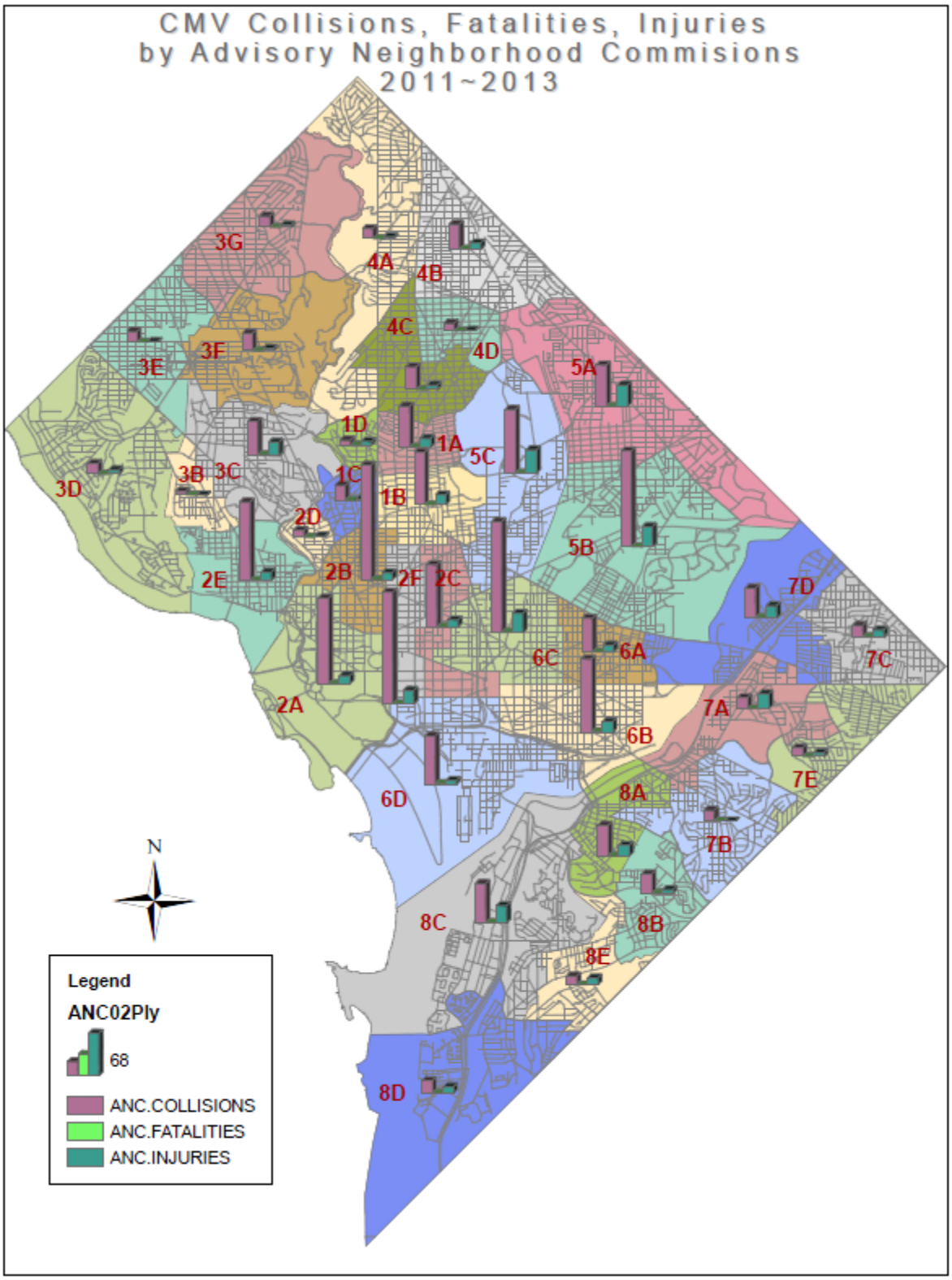


Figure 3.15: CMV Crashes, Fatalities and Injuries by Advisory Neighborhood Commissions (ANC)

3.3.4 CMV Crashes by Police District

The traffic crash reports (PD-10 forms) provided by the DC Metropolitan Police Departments are subdivided into 7 Police Districts. Each crash that occurred within a Police District (PD) was attended to and reported by that district, the summary of which is presented in Table 3.11. From the table and illustration in Figure 3.16, District 1 recorded the highest (840 crashes) CMV crashes in 2013 followed by District 2 (772 crashes).

Table 3.11: CMV Crashes by Police District in 2013

PD	Crashes	Fatalities	Injuries
Unknown	19	0	0
1	840	3	141
2	772	1	90
3	314	0	59
4	297	0	67
5	406	0	130
6	236	2	108
7	241	0	130
Total	**3,125**	**6**	**725**

3.3.5 CMV Crashes by Construction Zone

Crashes in construction zones have been noted to be on the rise in recent years. Table 3.12 and Figure 3.17 show the frequency and proportions of construction versus non-construction zone crashes involving CMVs. From the illustration, a total of 17 construction zone crashes were observed in 2013 that resulted in 28 injuries.

Table 3.12: CMV Crashes by Construction Zone in 2013

Construction Zone	Fatal Crashes	Injury Crashes	PDO Crashes	Fatalities	Injuries
Construction Zone	0	17	167	0	28
Non-construction Zone	6	405	2,531	6	697
Total	6	422	2,698	6	725

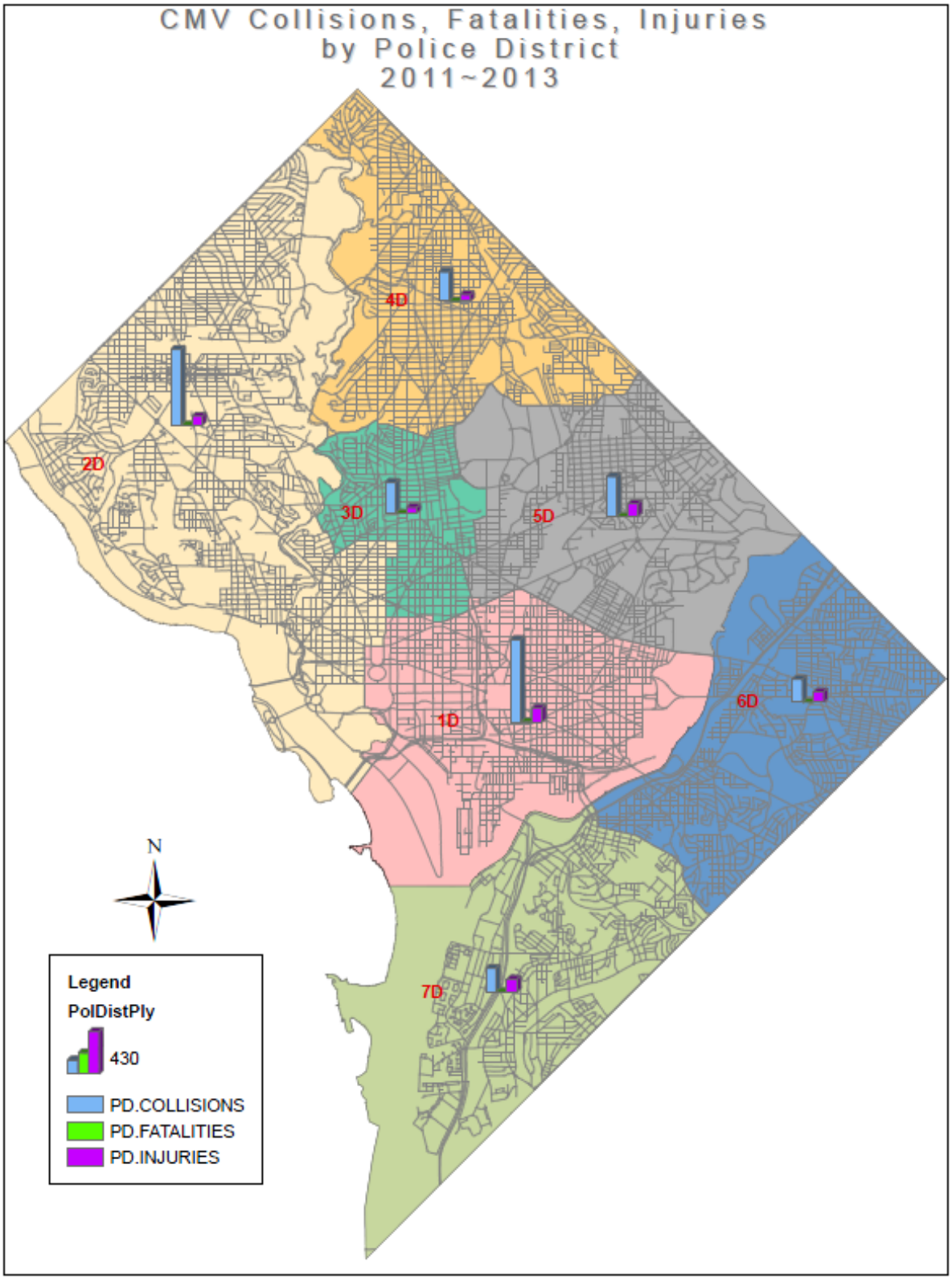


Figure 3.16: CMV Crashes, Fatalities and Injuries by Police District

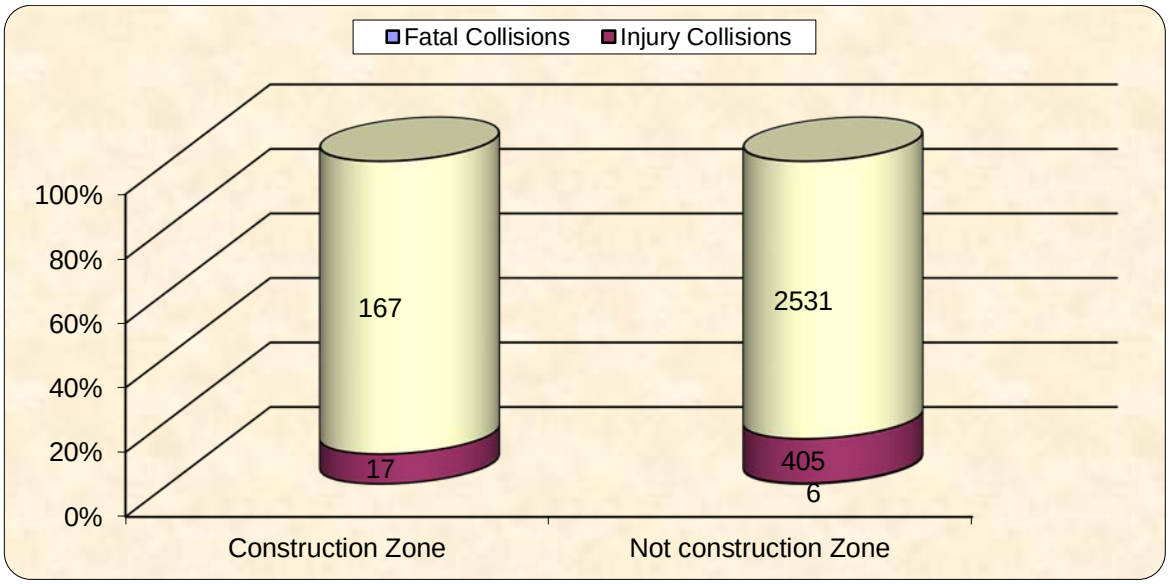


Figure 3.17: CMV Crashes by Construction Zone in 2013

3.3.6 CMV Crashes by Freeways

Table 3.13 presents the summary of the frequency of CMV crashes on freeways, where vehicular speeds are typically 50 mph or above. From the results, Interstate 295, DC 295 – Anacostia Freeway and I-395 were the top three freeways with the most CMV crashes in 2013.

Table 3.13: CMV Crashes by Freeways in 2013

Freeway/Bridge	Crashes	Fatalities	Injuries
DC295-Anacostia Freeway	21	0	17
I-295	26	0	22
I-395 Tunnel	5	0	0
I-395 (other than Tunnel)	18	0	12
I-66	7	0	0
I-695	6	0	1
E St Expwy	1	0	0
Total	**84**	**0**	**52**

3.3.7 CMV Crashes by On-Street Location

In order to mitigate the severity of a crash, it is essential to identify and compare intersection-related and non-intersection related crashes. Based on the results presented in Table 3.14 and Figure 3.18, approximately 44% CMV crashes typically occurred at or within 100 feet of intersections which resulted in 1 fatality.

Table 3.14: CMV Crashes by Location Type in 2013

On Street	Fatal Crashes	Injury Crashes	PDO Crashes	Total
At Intersection	3	156	738	897
Within 100' of Intersection	1	148	1,210	1,359
Not at Intersection	2	101	656	759
Private Property	0	2	25	27
Other	0	4	19	23
Unknown	0	11	50	61
Total	**6**	**422**	**2,698**	**3,126**

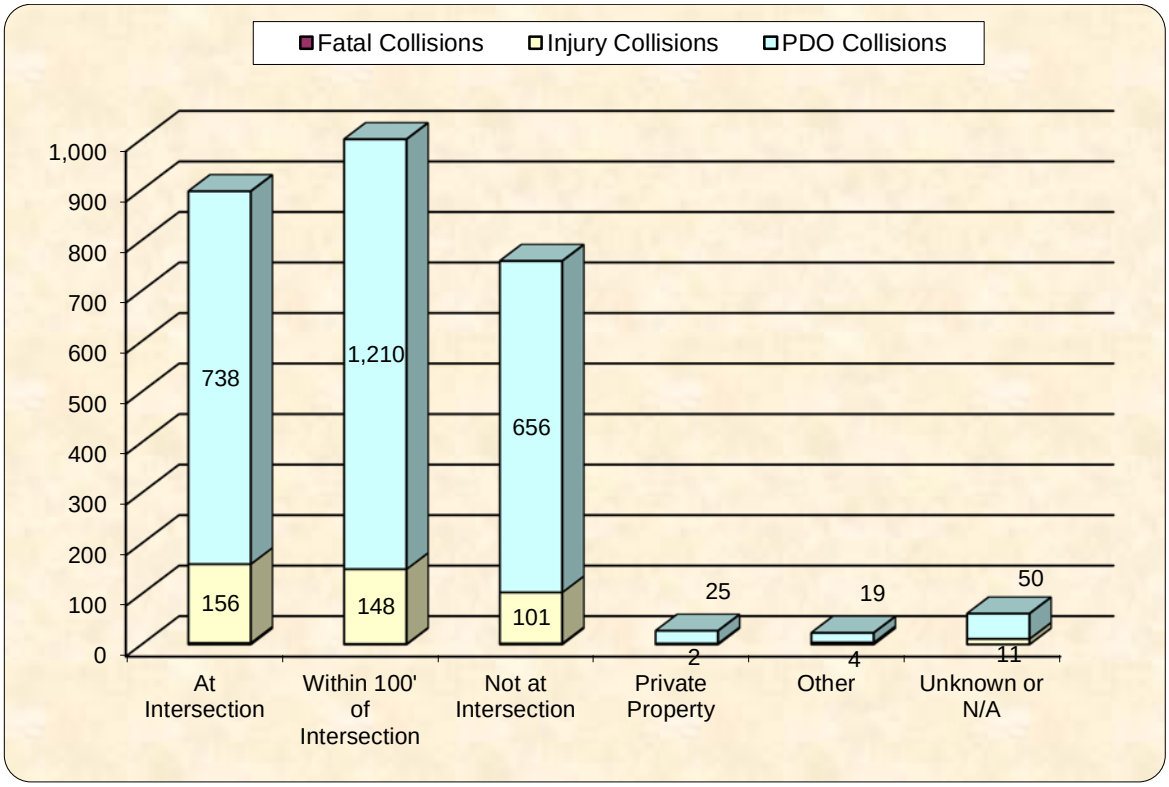


Figure 3.18: CMV Crashes by On-Street Location in 2013

3.4 Crash Classification

3.4.1 Crash Severity Type

Crash classification continues to be an important severity indicator that helps government agencies and local authorities to examine the traffic safety issues at particular intersections or corridors. The summary of crash severity of CMVs by type for 2009 through 2013 is presented in Table 3.15 and Figure 3.19. From the results, CMV crashes which resulted in PDO was approximately 86% of the total crashes in 2013.The overall crashes of CMVs in the year 2013 are presented in Figure 3.20.

Table 3.15: Overall CMV Crashes by Injury Severity (from 2009 through 2013)

Year	2009	2010	2011	2012	2013
Fatal Crashes	2	3	5	2	6
Injury Crashes	337	415	446	388	422
PDO Crashes	1,958	2,410	2,348	2,617	2,698
Total	**2,297**	**2,828**	**2,799**	**3,007**	**3,126**

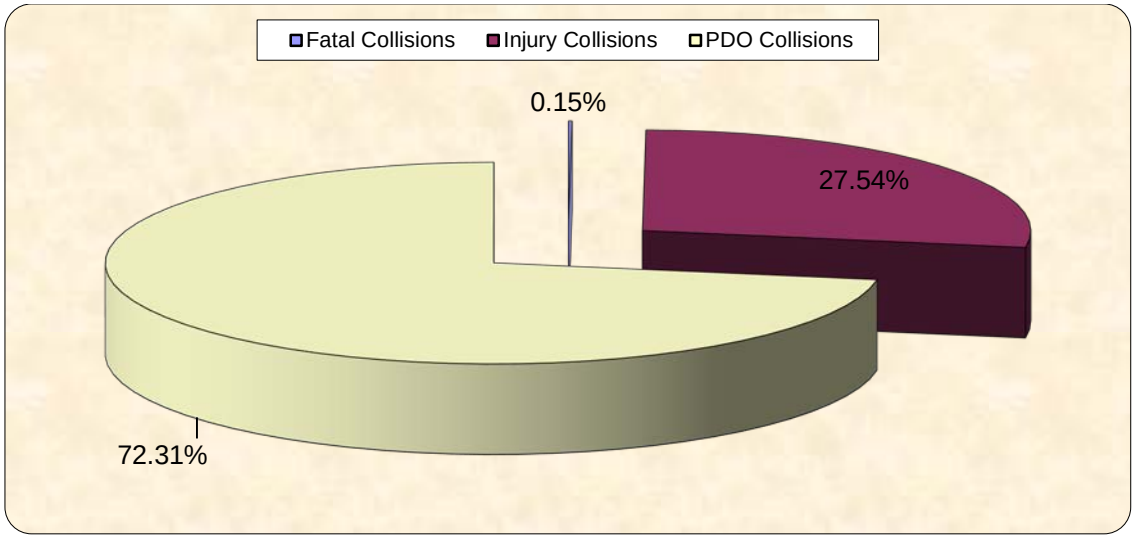


Figure 3.19: Total Motor Vehicle Crashes in 2013 by Severity Type

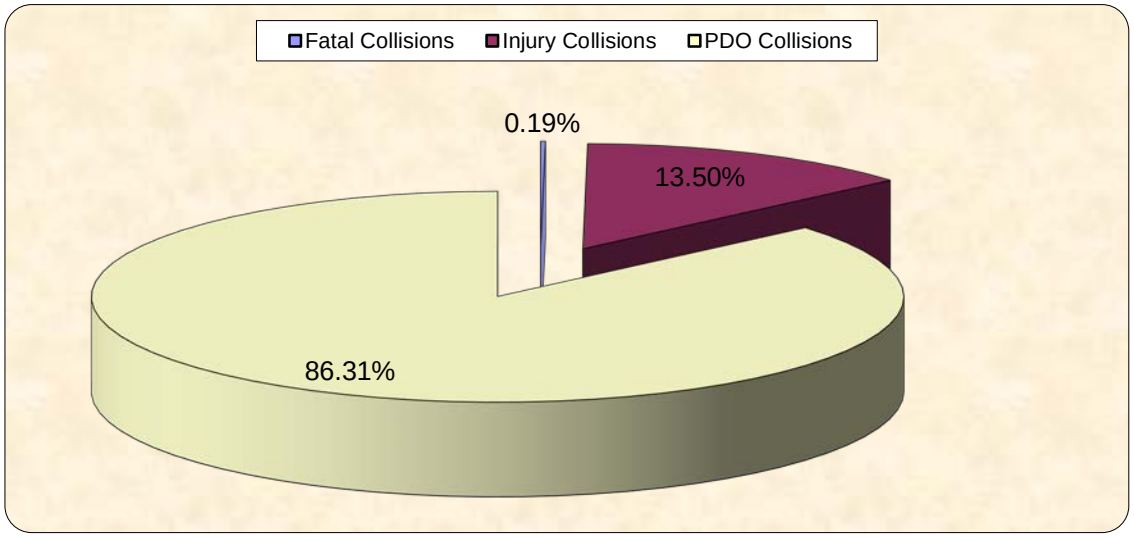


Figure 3.20: Overall CMV Crashes in 2013 by Severity Type

As shown in Figure 3.21, the total number of CMV crashes for fatal, injury and PDO crashes varies from year to year.

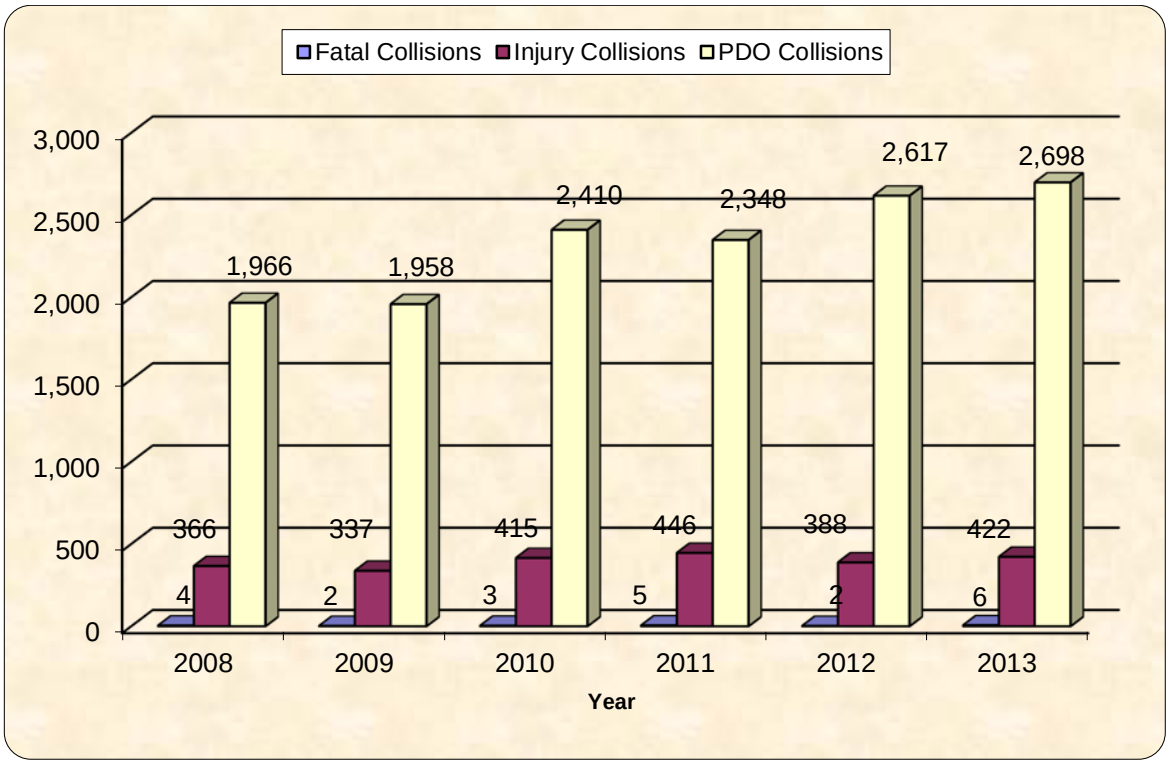


Figure 3.21: Overall CMV Crashes by Injury Severity

3.4.2 Type of Crash

In Table 3.16 and Figure 3.22, the summary of CMV crashes from 2011 through 2013 shows an increase in side swiped crashes. The most frequently reported crash types were side swipe followed by rear-end and parked vehicle crashes.

Table 3.16: CMV Crash Type by Injury Severity

Types	2011	2012	2013
Side Swiped	1427	1537	1631
Rear End	345	339	366
Parked Vehicle	217	228	241
Right Angle	163	171	190
Left Turn Hit Vehicle.	134	136	120
Fixed Object	121	137	134
Right Turn Hit Vehicle	78	85	89
Other	72	90	76
Backing Hit Parked Vehicle	63	53	52
Straight Hit Pedestrian	57	66	74
Head On	24	27	22
Backing Hit Moving Vehicle	18	11	12
Left Turn Hit Pedestrian	11	11	10
Ran Off Roadway	9	10	13
Backing Hit Stopped Vehicle	7	5	6
Right Turn Hit Pedestrian	6	5	3
Non-Collision Accident	2	4	3
Backing Hit Pedestrian	2	2	8
Override	0	0	0
Unknown	43	90	76
Total	**2,799**	**3,007**	**3,126**

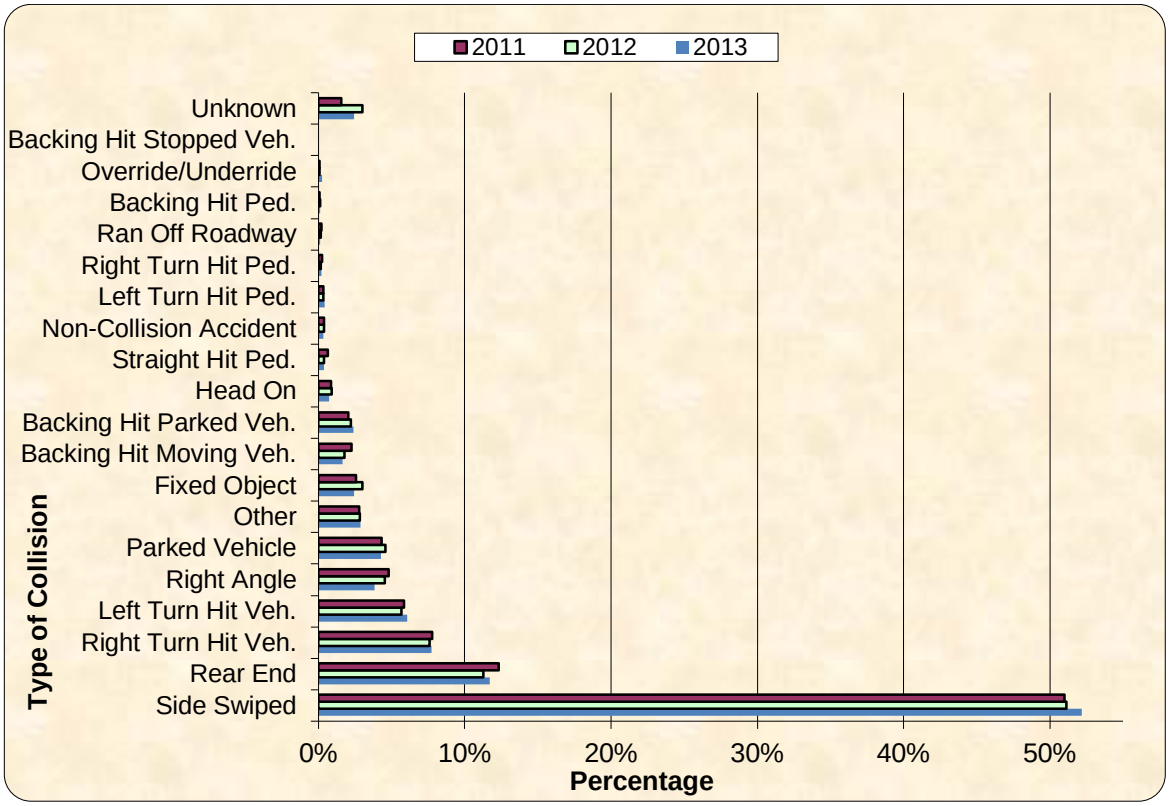


Figure 3.22: Distribution of CMV Crashes by Crash Type

3.4.3 Hit and Run Crashes

In Figure 3.23, the frequency and percentage of "hit and run" crashes for CMV from 2008 to 2013 showed a general increasing trend, with the lowest frequency observed in 2009.

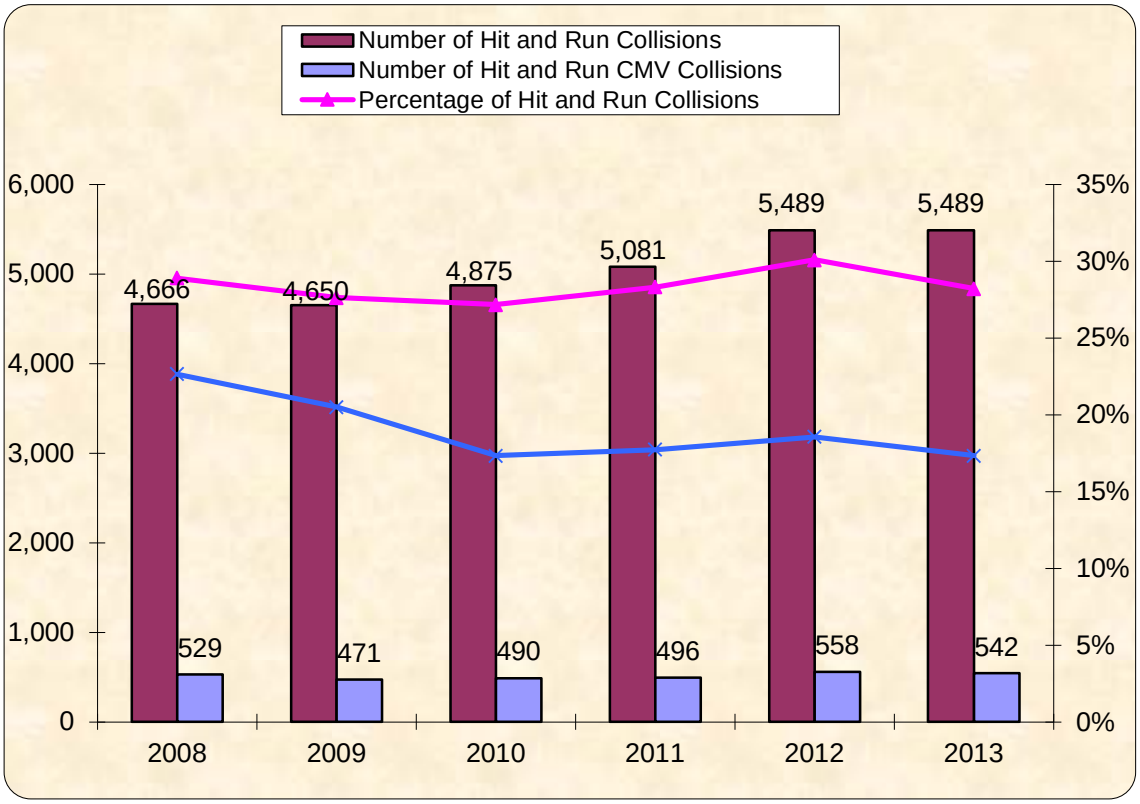


Figure 3.23: Overall Number and Percentage of Hit and Run CMV Crashes from 2008 through 2013

3.4.4 Crashes Involving Pedestrians

The District of Columbia is a pedestrian-friendly city, and such, crashes involving pedestrians are critical to safety engineers and law-makers. With over 50% of the workers in the District either commuting by public transportation or walking to work, it is essential to understand the causes and severity of pedestrian involved crashes in DC. The summary of CMV crashes involving pedestrians is presented graphically in Figure 3.24. Based on the results presented in the figure, a general upward trend was observed for crashes involving pedestrians from 2008 through 2013. Also, the total CMV number of CMV-related crashes involving pedestrians showed a modest decrease in 2013. The distribution of CMV crashes involving pedestrians in the District is presented in Figure 3.25.

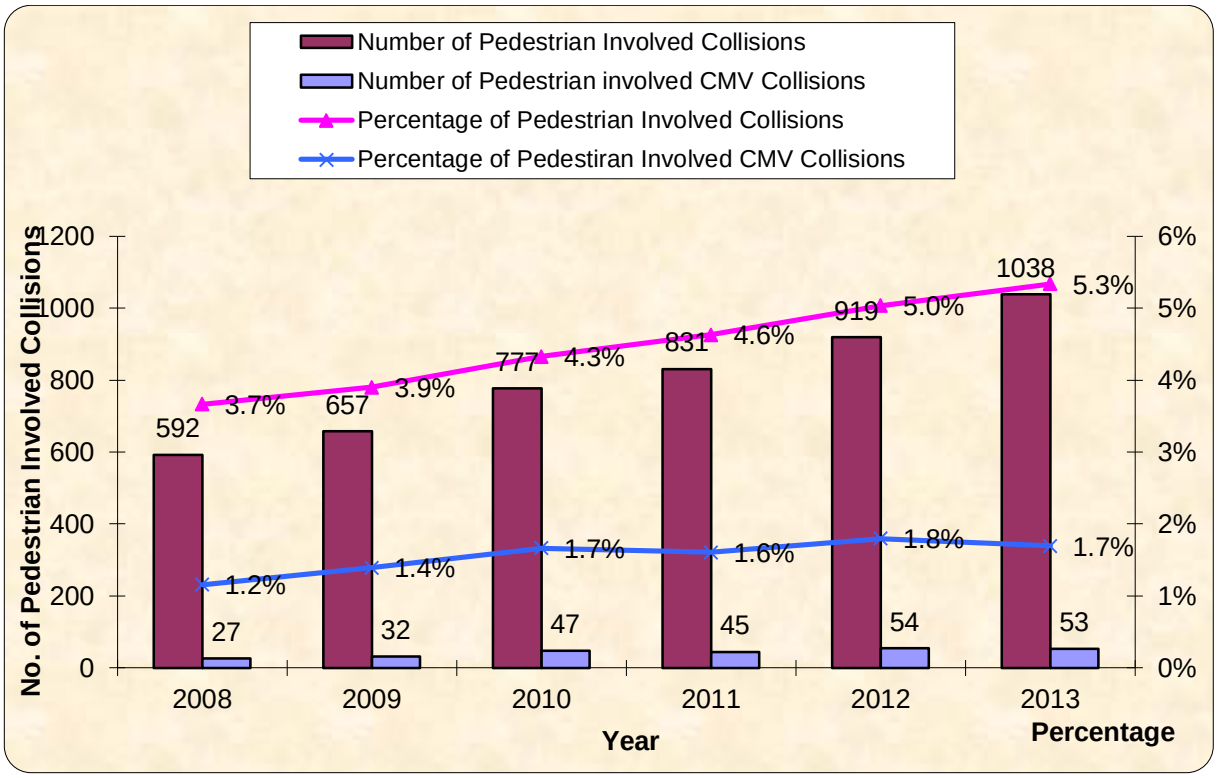


Figure 3.24: Overall Number and Percentage of Pedestrian Involved CMV Crashes from 2008 through 2013

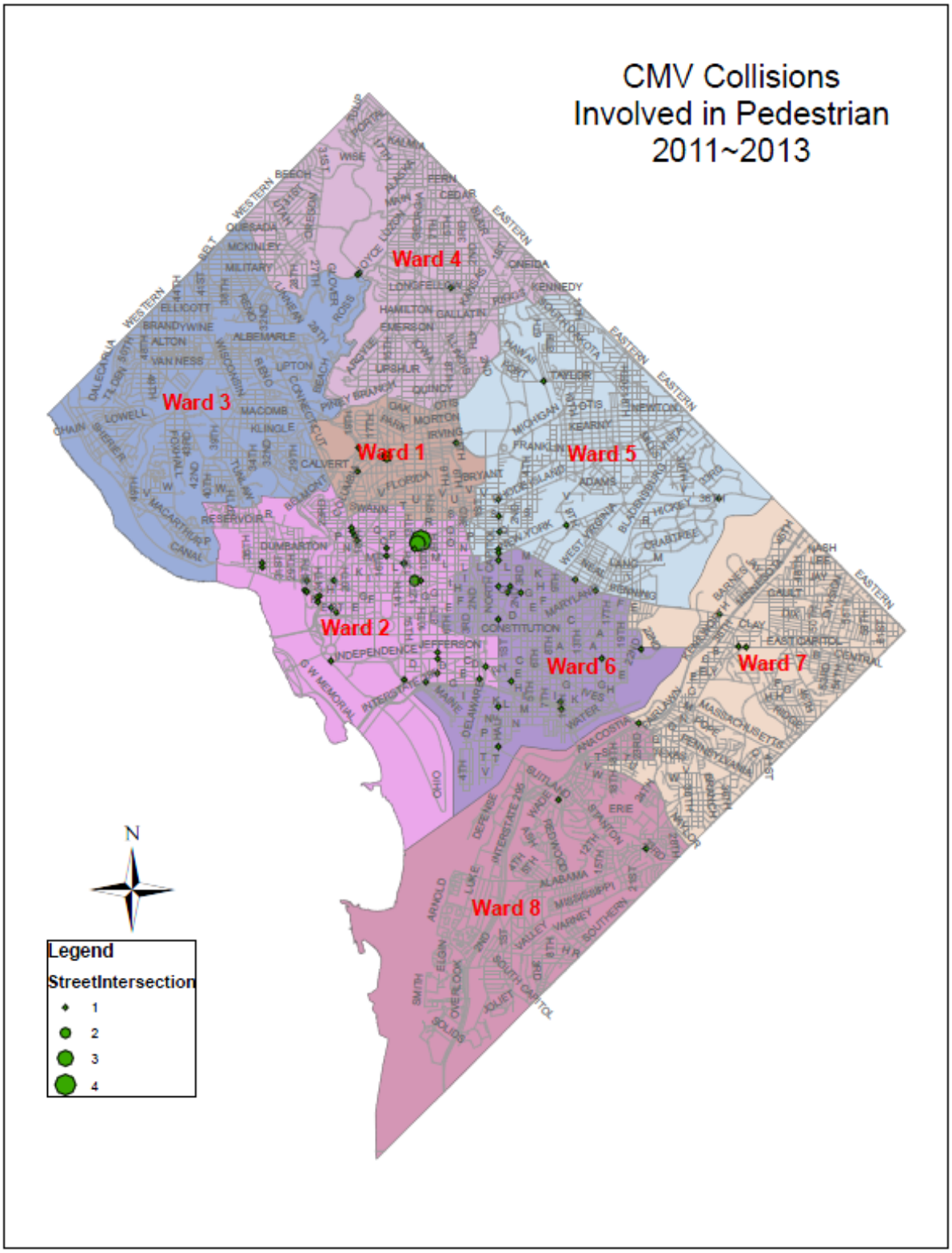


Figure 3.25: Pedestrian Involved CMV Crashes from 2011-2013

3.4.5 Crash by CMV Classifications

With the introduction of the new PD-10 form, CMV crashes were further classified into specific groups to separate major CMVs by the severity of the crash. As shown in Table 3.17 and Figure 3.26, buses with 15 seats or more (1,565), unknown heavy trucks (484) and truck/trailers (322) were the top three CMV classifications which were reported to be involved in crashes in 2013.

Table 3.17: CMV Classification by Injury Severity in 2013

Vehicle Type	Fatality Crashes	Injury Crashes	PDO Crashes	Total
Unknown Heavy Truck	1	65	418	484
Light Truck	0	16	37	53
Bus (School)	0	35	119	154
Bus (Seats 9-15)	0	70	375	445
Bus (seats >15)	2	162	1,401	1,565
Single-Unit Truck (2 axles)	3	28	202	233
Single-Unit Truck (>2 axles)	1	17	54	72
Truck/Trailer	0	37	285	322
Truck/Tractor (Bobtail)	0	2	17	19
Tractor/Semitrailer	0	14	55	69
Tractor/Double	0	3	2	5
Total	**7**	**449**	**2,965**	**3,421**

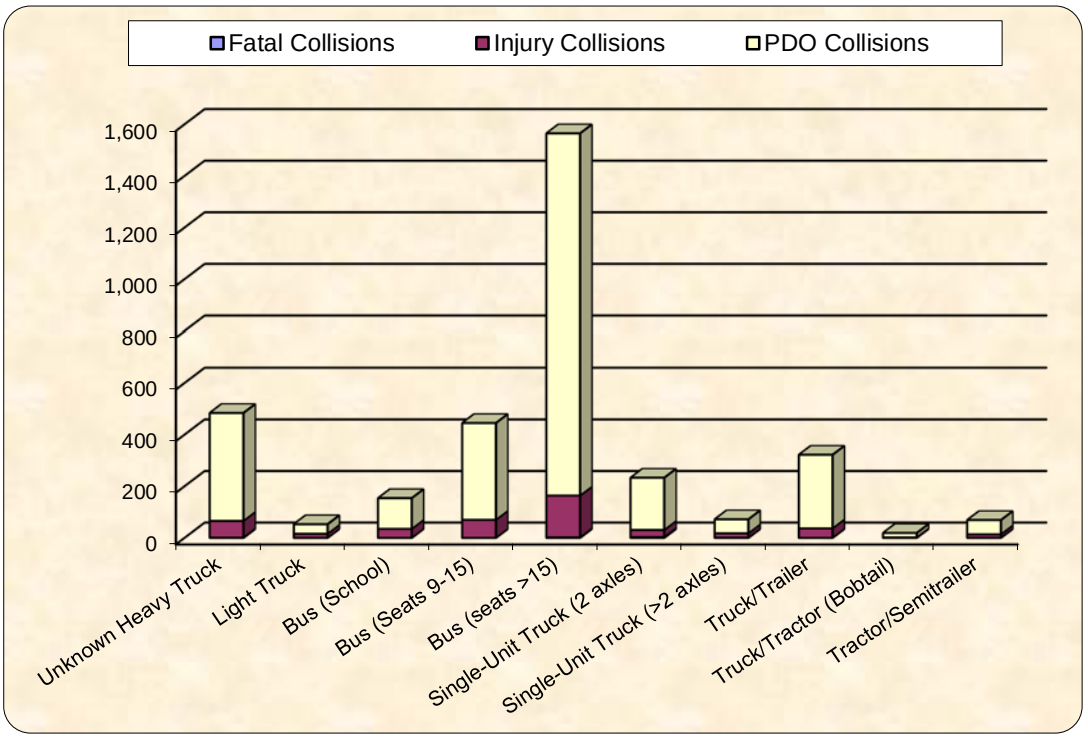


Figure 3.26: CMV Crashes by Vehicle Type in 2013

3.5 Environment

3.5.1 CMV Crashes by Roadway Type

Crashes may be influenced by the roadway classification that may dictate the extent and severity of CMV crashes. The summary of CMV crashes by roadway is classification presented in Table 3.18 and graphically in Figures 3.27 and 3.28. From the results, it can be determined that the majority of the total reported CMV crashes (898 or approximately 32%) occurred on principal arterials.

Table 3.18: CMV Crashes by Road Functional Classification

Road Condition	CMV Crashes	Fatal Crashes	Injury Crashes	PDO Crashes	Fatalities	Injuries
Principal Arterial	937	1	111	825	1	181
Minor Arterial	936	1	133	802	1	258
Local	705	4	82	619	4	126
Collector	425	0	63	362	0	99
Interstate	92	0	27	65	0	52
Unknown	28	0	6	22	0	9
Other Freeway and Expressway	3	0	0	3	0	0
Total	**3,126**	**6**	**422**	**2,698**	**6**	**725**

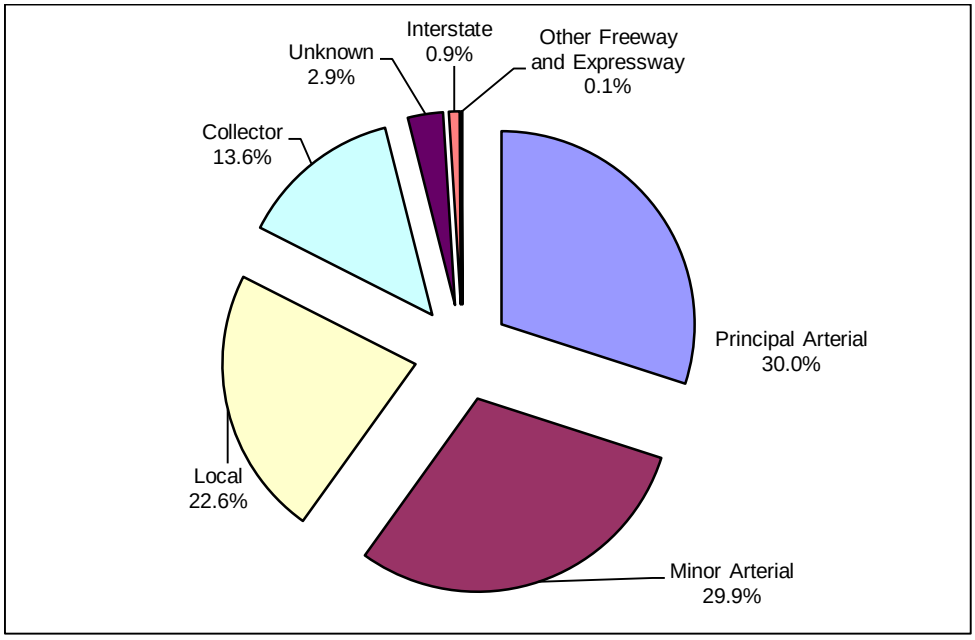


Figure 3.27: Number of CMV Crashes by Road Classification

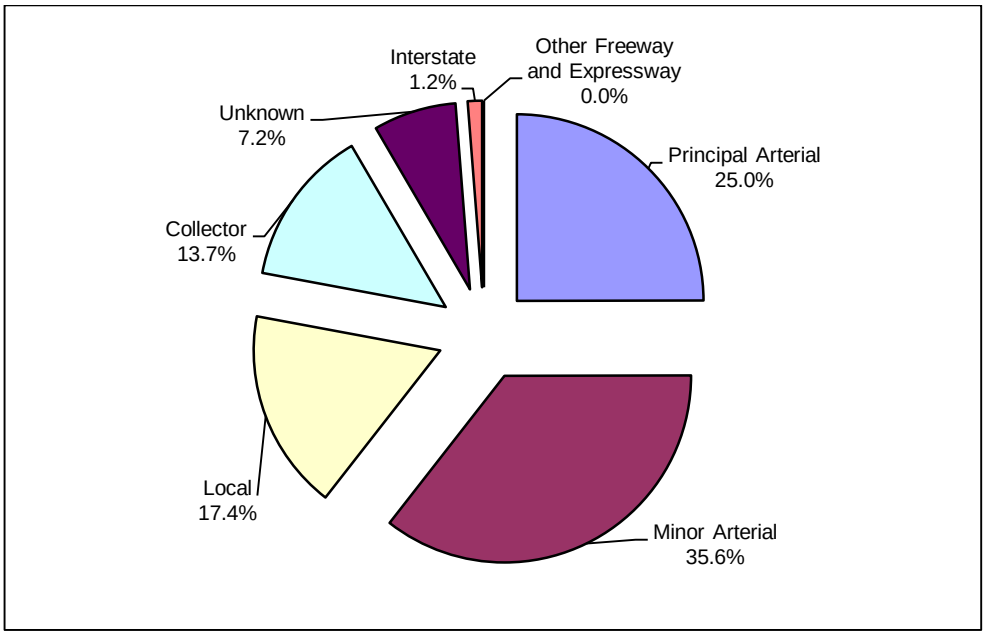


Figure 3.28: Injuries by Road Functional Classification

3.5.2 CMV Crashes by Roadway Conditions

Table 3.19 and Figure 3.29 show the distribution of road conditions related to CMV crashes by severity type. The majority of the CMV crashes occurred on dry roadways that comprise of about 84% (or 2,622) of the total CMV crashes in 2013. CMV crashes that occurred under wet pavement conditions were observed to be second highest (354) which represents (approximately 11%) of the total reported CMV crashes.

Table 3.19: CMV Crashes by Roadway Conditions in 2013

Road Condition	CMV Crashes	Fatal Crashes	Injury Crashes	PDO Crashes	Fatalities	Injuries
Dry	2,622	5	346	2,271	5	594
Ice	3	0	0	3	0	0
Other	4	0	0	4	0	0
Repairing	14	0	2	12	0	2
Sand	2	0	0	2	0	0
Slush	1	0	0	1	0	0
Snow	14	0	4	10	0	5
Standing Water	1	0	0	1	0	0
Wet	354	1	56	297	1	91
Unknown	111	0	14	97	0	33
Total	**3,126**	**6**	**422**	**2,698**	**6**	**725**

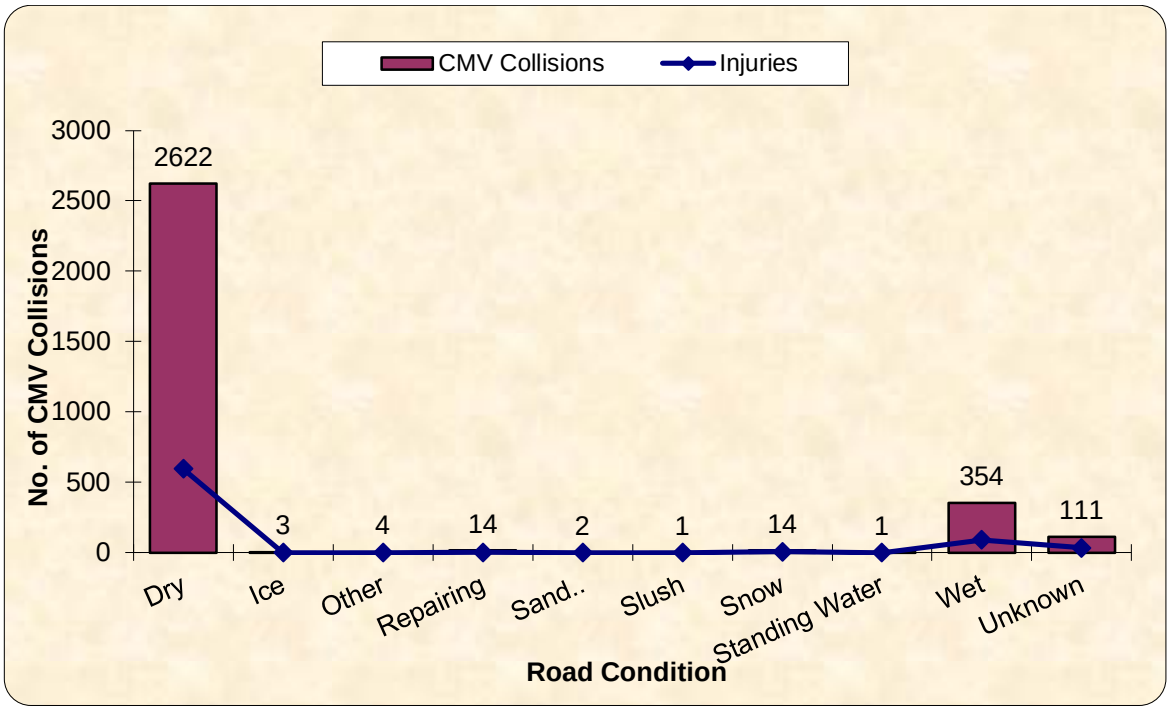


Figure 3.29: Number of CMV Crashes by Road Condition in 2013

3.5.3 CMV Crashes by Road Surface

Road surface type is another variable which is reported on the traffic crash report form (PD-10). A summary of the CMV crashes in 2013 by road surface type is presented in Table 3.20 and Figure 3.30. The results show that 2,798 (or approximately 90%) of the total CMV crashes occurred on asphalt roadways. This is followed by crashes on concrete surface which constitutes approximately 6% (or 188) of the total reported CMV crashes.

Table 3.20: CMV Crashes by Road Surface in 2013

Road Surface	CMV Crashes	Fatal Crashes	Injury Crashes	PDO Crashes	Fatalities	Injuries
Asphalt	2,798	6	377	2,415	6	614
Brick	7	0	0	7	0	0
Concrete	188	0	24	164	0	47
Gravel	3	0	1	2	0	1
Other	7	0	2	5	0	23
Unknown	123	0	18	105	0	40
Total	**3,126**	**6**	**422**	**2,698**	**6**	**725**

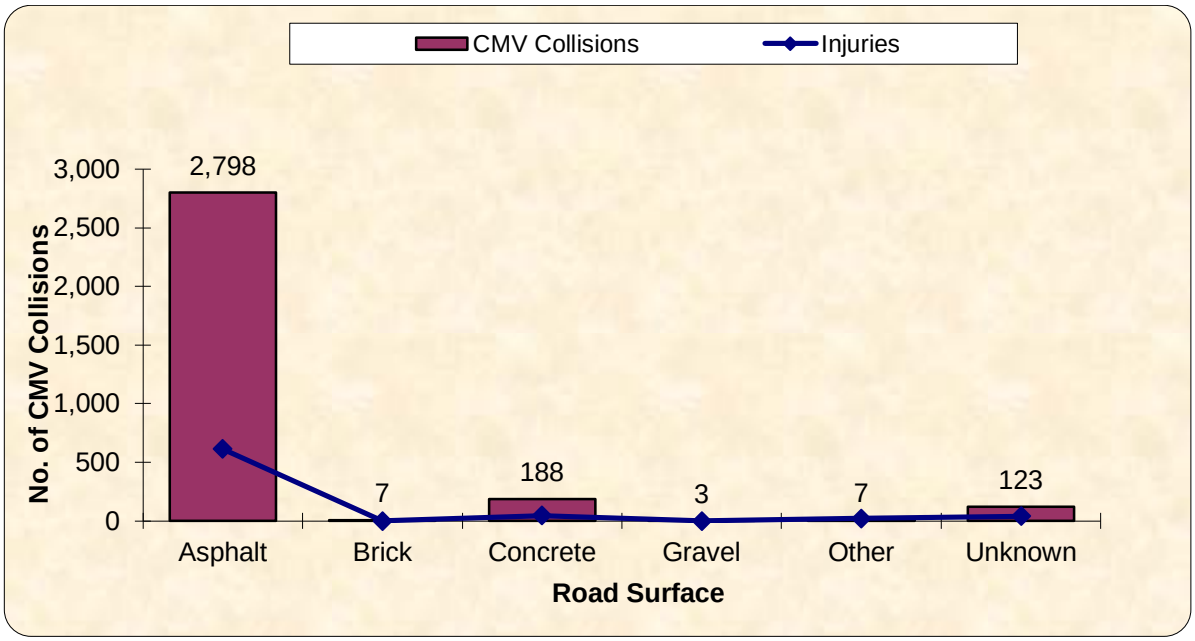


Figure 3.30: Number of CMV Crashes by Road Surface in 2013

3.5.4 CMV Crashes by Weather Conditions

Adverse weather conditions are generally one of the causes of crashes including those involved with CMVs. Table 3.21 and Figure 3.31 show the distribution of weather conditions that were attributed to CMV crashes and by crash severity. From the results, the majority of the CMV crashes occurred under clear weather conditions. These CMV crashes comprise of approximately 84% (or 2,605) of the total CMV crashes in 2013. This is followed by CMV crashes which occurred during rainy conditions, which represents approximately 9% (or 274) of the total CMV crashes.

Table 3.21: CMV Crashes by Weather Conditions in 2013

Weather	CMV Crashes	Fatal Crashes	Injury Crashes	PDO Crashes	Fatalities	Injuries
Clear	2,605	5	342	2,258	5	590
Fog/Mist	35	0	0	35	0	0
Other	28	0	5	23	0	8
Rain	274	1	50	223	1	79
Severe Crosswind	20	0	2	18	0	2
Sleet/Hail	2	0	1	1	0	2
Snow	28	0	6	22	0	7
Unknown	134	0	16	118	0	37
Total	**3,126**	**6**	**422**	**2,698**	**6**	**725**

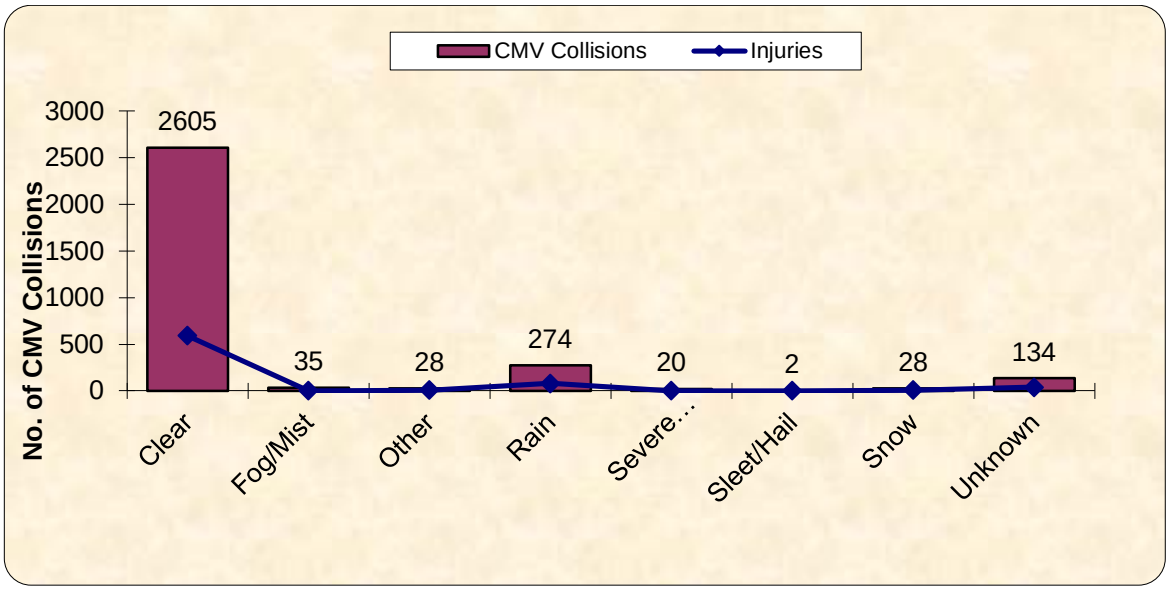


Figure 3.31: Number of CMV Crashes by Weather in 2013

3.5.5 CMV Crashes by Lighting Conditions

Lighting conditions at a crash location is another important factor that may be used to determine the causes and severity of CMV crashes. A summary of crashes by street lighting condition is presented in Table 3.22 and graphically in Figure 3.32. The results show that the majority of the CMV crashes occurred during daylight conditions. These CMV crashes consist of approximately 79% (or 2,478) of the total reported CMV crashes in 2013. The second most frequently reported CMV crashes in this category was under dark conditions, which represents 446 (or approximately 14%) of the total reported CMV crashes at intersections or corridors.

Table 3.22: CMV Crashes by Lighting Conditions in 2013

Light Condition	CMV Crashes	Fatal Crashes	Injury Crashes	PDO Crashes	Fatalities	Injuries
Daylight	2,478	4	342	2,132	4	595
Dark (Lighted)	446	2	56	388	2	83
Dusk	49	0	4	45	0	5
Dawn	22	0	5	17	0	6
Dark (Not Lighted)	12	0	3	9	0	4
Dark (Unknown Lighting)	8	0	0	8	0	0
Other	3	0	0	3	0	0
Unknown	108	0	12	96	0	32
Total	3,126	6	422	2,698	6	725

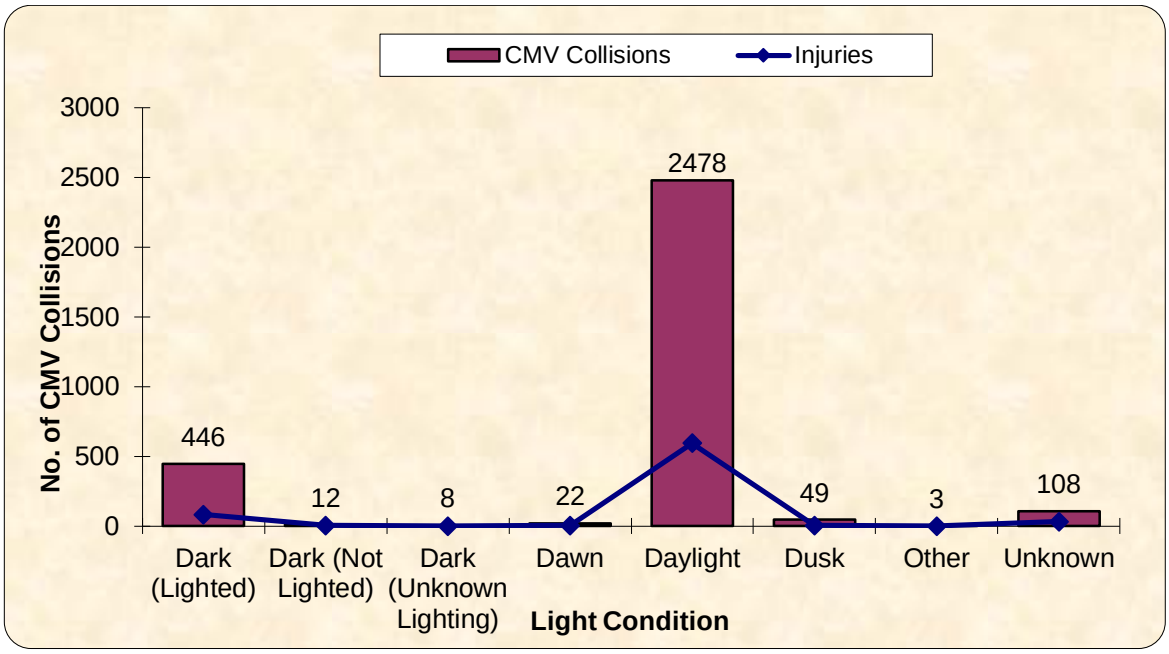


Figure 3.32: Number of CMV Crashes by Light Condition in 2013

3.5.6 CMV Crashes by Traffic Conditions

The current traffic condition is a new data field that was included on the new traffic crash reports (PD-10 forms) to obtain the traffic volume conditions at the time of crash. This information, however, is recorded based on a police officer's observation and discretion. This is summarized in Table 3.23 and Figure 3.33. Approximately 39% (1,224) of the total CMV crashes occurred during medium traffic conditions with about 26% of the CMV crashes (814) recorded during heavy traffic conditions in 2013.

Table 3.23: CMV Crashes by Traffic Conditions in 2013

Traffic Condition	CMV Crashes	Fatal Crashes	Injury Crashes	PDO Crashes	Fatalities	Injuries
Heavy	814	1	110	703	1	169
Light	631	1	94	536	1	178
Medium	1,224	4	167	1053	4	280
Other	15	0	1	14	0	1
Unknown	442	0	50	392	0	97
Total	**3,126**	**6**	**422**	**2698**	**6**	**725**

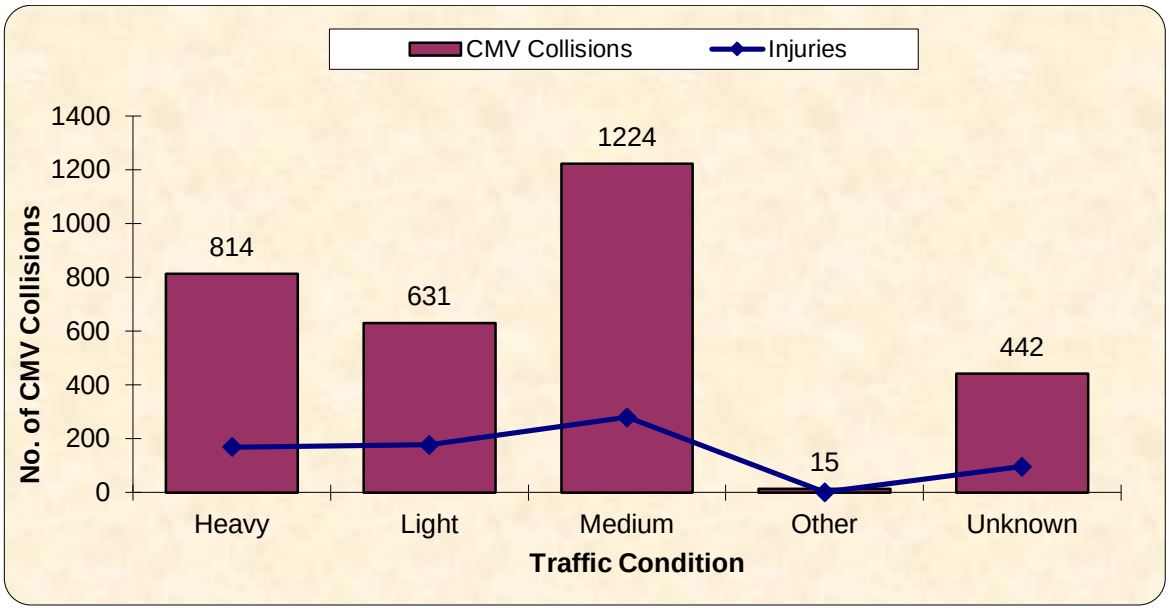


Figure 3.33: Number of CMV Crashes by Traffic Condition in 2013

3.6 Contributing Circumstances

3.6.1 CMV Crashes by Crash Contributing Factors

Table 3.24 shows all reported contributing factors for CMV crashes in DC in 2013. As shown in this table, “no violation” and “other” contributing circumstances were found to be the top two most frequently reported factors related to the crash. Detailed information regarding the causes of these factors were however not provided in the reports. Other contributing factors included “driver inattention”, “changing lane(s) without caution” and “following too closely”.

Table 3.24: CMV Crashes by Crash Contributing Factors in 2013

Contributing Circumstances	Crashes	Fatal Crashes	Injury Crashes
No Violation	2,943	6	426
Other	954	0	98
Unknown	807	3	77
Driver Inattention	467	1	71
Following too Close	382	0	57
Changing Lanes W/O Caution	162	0	11
Auto/Ped. Right of Way	131	0	41
Red Light Violation	110	2	27
Speed	71	0	5
Improper Passing	47	0	6
Pedestrian Violation	41	0	6
Improper Backing	32	1	11
Other Distraction	30	0	13
Stop Sign	15	0	12
Open Door To Traffic	14	1	8
Driver Vision Obstructed	14	0	2
Wrong Way/Side of Street	13	0	4
Alcohol/Drug Influence	11	0	0
Yield Sign	10	0	6
Flashing/Directional Light	7	0	3
Road Defects	3	0	0
Defective Brakes, Lights, etc.	1	0	0
Fail to Set Parking Brake	1	0	0
Right Turn on Red	0	0	0
Cell Phone/Other Electronic Device	2943	6	426

3.6.2 CMV Crashes by Restraint Use (Seatbelts or Airbags)

Restraint device usage has a significant influence on injury severity from a crash. From the summary results presented in Table 3.25, it was found that 3,233 (or approximately 37%) of drivers or passengers involved in a CMV crash used their seat belts fastened. Overall, approximately 6.0% of drivers or passengers had seat belts “not installed” or “fastened”. The results are also presented graphically in Figure 3.34.

Table 3.25: CMV Crashes by Seat Belt Use in 2013

Seat Belt	Fatal	Disabling	Non-Disabling	Complaint but not visible	Injury	Other	Unknown	Total
Belt Failed	0	0	0	2	34	0	1	37
Fastened	0	5	35	189	2,882	3	119	3,233
Helmet	1	0	2	5	9	1	10	28
Not Fastened	1	1	2	20	116	0	9	149
Not Installed	0	1	5	69	259	2	31	367
Child Restraint	0	0	0	3	61	0	8	72
Other	0	1	0	6	13	4	5	29
Use Unknown	4	19	55	256	3,490	9	899	4,732
Total	**6**	**27**	**99**	**550**	**6,864**	**19**	**1,082**	**8,647**

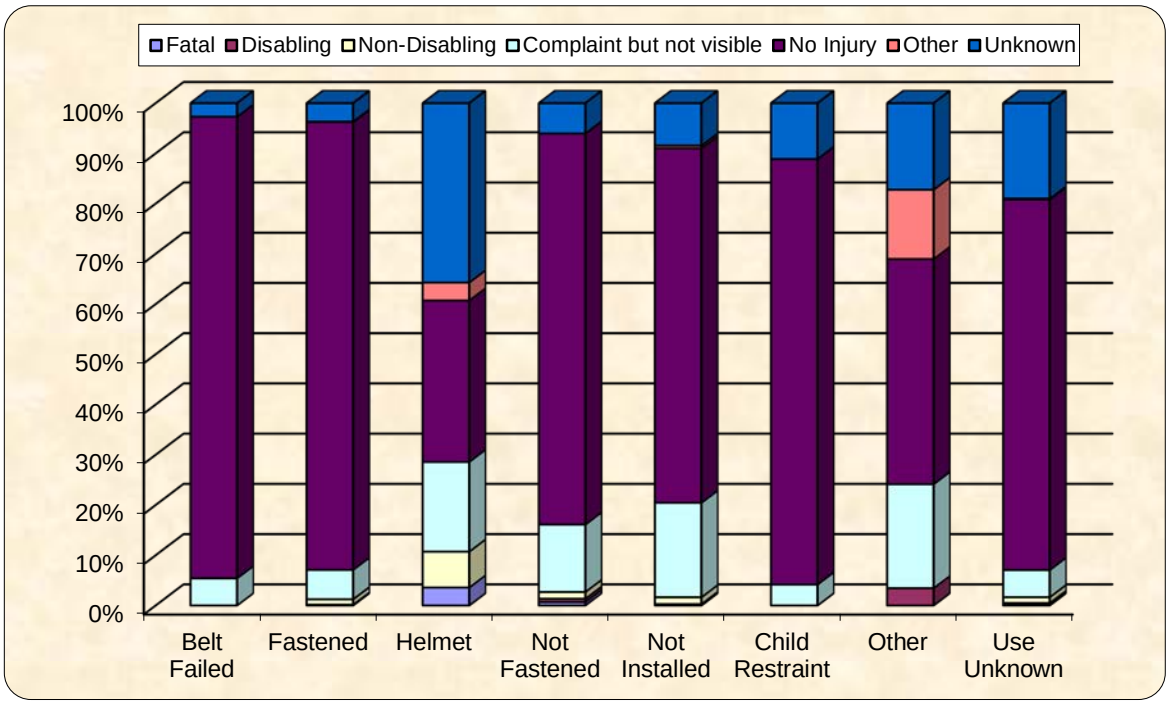


Figure 3.34: Percentage of CMV Crashes by Seat Belt Usage in 2013

Vehicle air bag is another important safety restraint device that can be used to examine the cause of CMV crash severity. From the results presented in Table 3.26 and Figure 3.35, it can be observed that approximately 38% (or 3,285) of drivers or front passengers involved in CMV crashes were confirmed as having the airbags installed. Overall, the results also shows that only 163 (or approximately 2%) of crashes were reported as air bag failed.

Table 3.26: CMV Crashes by Motor Vehicle Airbag Use

Driver/Passenger Front Air Bag	Fatal	Disabling	Non-Disabling	Complaint but not visible	Injury	Other	Unknown	Total
Airbag Deployed	0	4	13	16	49	3	13	98
Airbag Failed	0	3	1	19	127	0	13	163
Airbag Installed	0	0	25	154	2,976	3	127	3,285
Side-Impact Airbags	1	1	1	4	6	0	1	14
Other	0	0	0	1	18	1	15	35
Use Unknown	5	19	59	356	3,688	12	913	5,052
Total	**6**	**27**	**99**	**550**	**6,864**	**19**	**1,082**	**8,647**

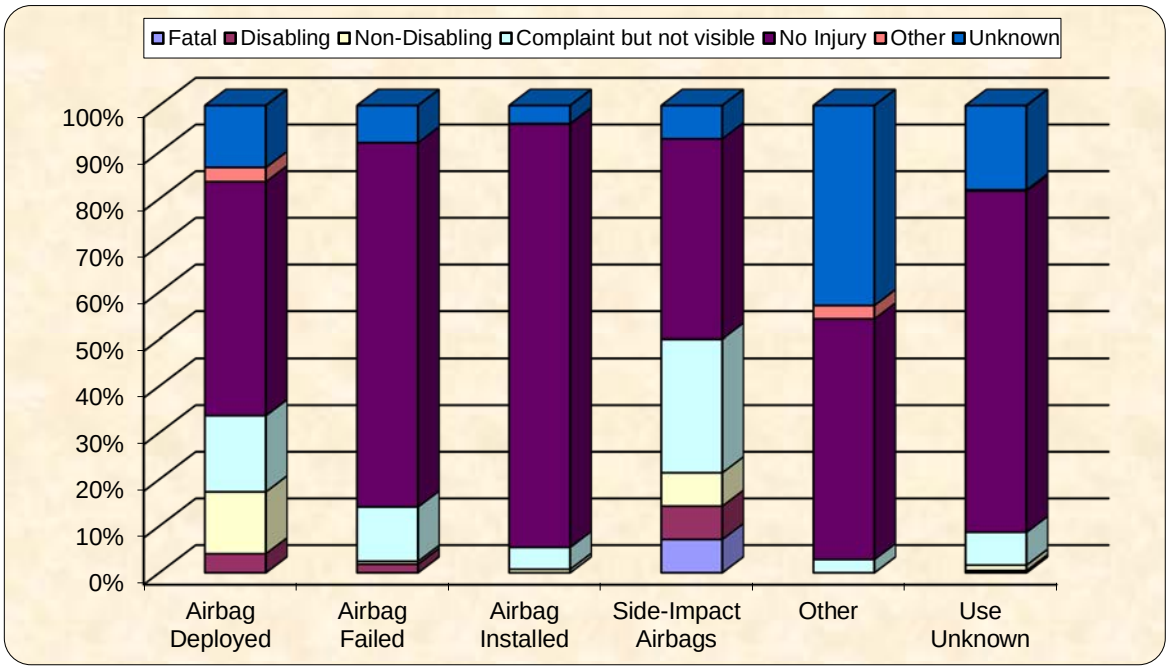


Figure 3.35: Percentage of CMV Crashes by Airbag Usage in 2013

3.6.3 Speeding

Speeding has been noted to be highly correlated to the severity of a crash. The total CMV crashes were distributed into specific groups to identify the correlation between speed and crash type. The summary of the results are presented in Figures 3.36 and 3.37. From the figures, it can be observed that the percentage of speed-related crashes were considerably higher when compared with the overall number of crashes in 2011. In addition, the figure reveals that the injury severity of the CMV crashes (that is, fatality, injury or property damage only), were noticeably higher when compared with the overall number of crashes.

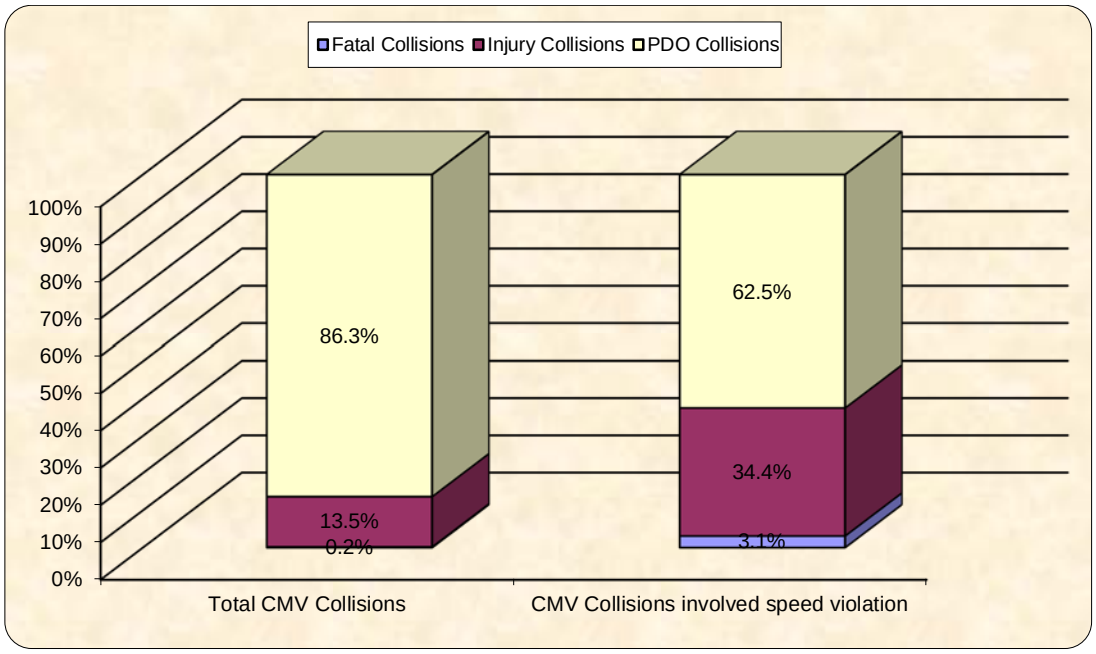


Figure 3.36: Percentage of Total and Speed Involved CMV Crashes in 2013

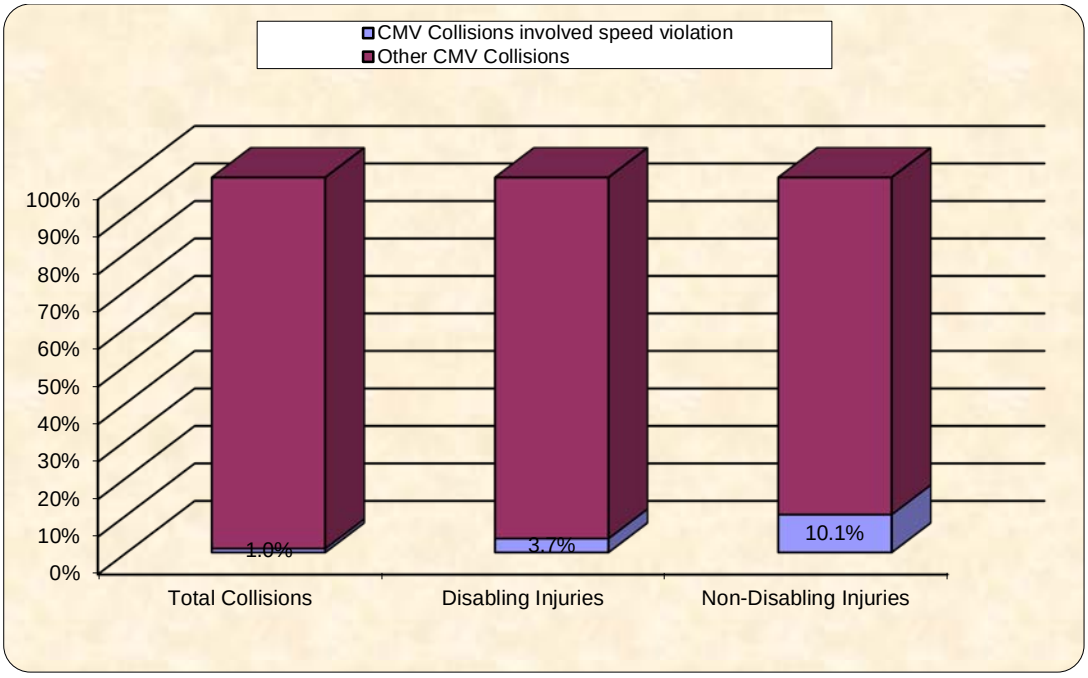


Figure 3.37: Percentage of Total and Speed Involved CMV Crashes by Injury Severity in 2013

3.6.4 CMV Crashes by Sobriety

Alcohol and drug use have been identified as one of the contributory factors leading to crashes. The summary of CMV crashes by sobriety in 2013 is presented in Figure 3.38. The results show that drivers with the ability impaired caused

approximately 67% of the CMV-related crash injuries in 2013. Those who had been drinking caused approximately 50% of PDO crashes.

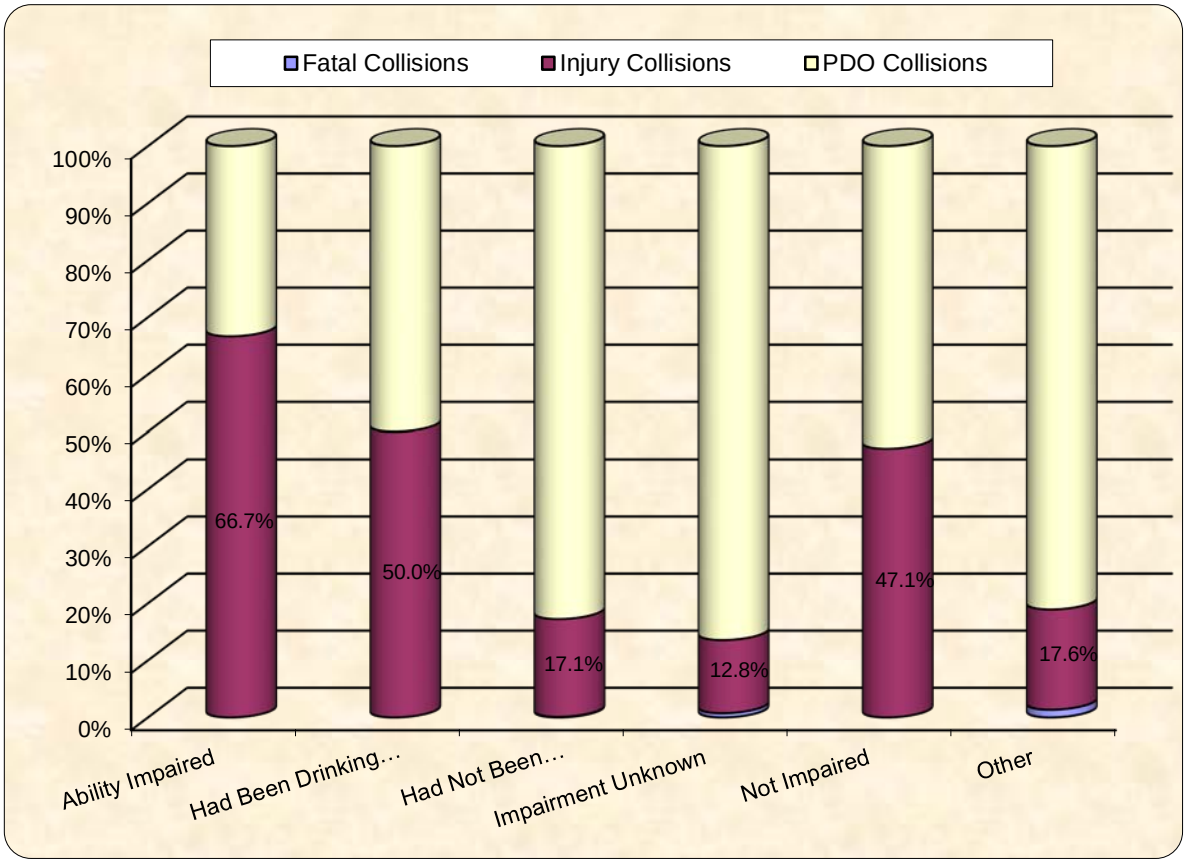


Figure 3.38: Percentage of DUI-Involved CMV Crashes in 2013

3.6.5 Distractions

Driver distraction is one of the causes of most motor vehicle crashes. This section provides a summary of CMV crashes attributed to driver distraction. The summary of driver distraction-related CMV crashes is presented in Table 3.27 and Figure 3.39. The majority of the distraction-related of CMV crashes were listed as unknown or “other”. No fatalities were attributed to driver distractions in 2013 for all CMV crashes.

Table 3.27: CMV Crashes by Driver Distractions in 2013

Distraction	Fatal Crashes	Injury Crashes	PDO Crashes	Total
Cell Phone (hand held)	0	6	13	19
Cell Phone (hands-free)	0	0	6	6
Distracted by Passenger(s)	0	1	10	11
Interacting w/unsecured cargo	0	0	1	1
Using personal communication technologies	0	0	3	3
Other	0	56	151	207

Note: The information of driver or pedestrian distractions is only reported in new PD-10 form since May 2008.

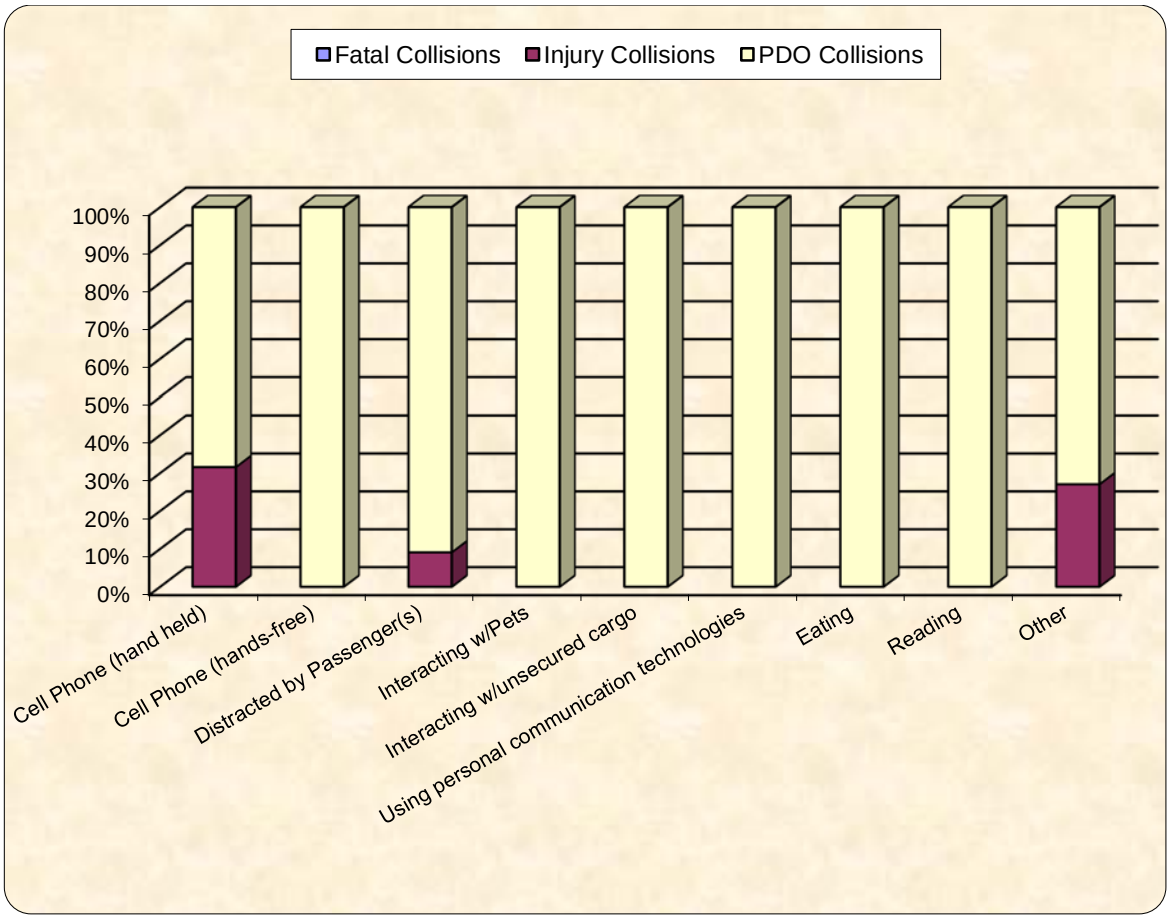


Figure 3.39: Percentage of Distraction Involved CMV Crashes by Injury Severity in 2013

4 IDENTIFICATION OF HIGH FREQUENCY CMV CRASH LOCATIONS

4.1 Top 20 Intersections by Number of CMV Crashes in 2013

Table 4.1: Top 20 Intersections by Number of CMV Crashes in 2013

Intersection Name	Quad	Truck Crashes	Bus Crashes	CMV Crashes	Rank by CMV Crashes
1ST ST AND UNION STATION PLAZA	NE	21	3	21	1
14TH ST AND IRVING ST	NW	19	4	16	2
WISCONSIN AVE AND M ST	NW	19	5	19	2
NEW YORK AVE AND NORTH CAPITOL ST	BN	16	7	11	4
BENNING RD AND EAST CAPITOL ST	BN	15	3	13	4
7TH ST AND H ST	NW	13	1	15	6
11TH ST AND M ST	SE	13	4	11	6
MARTIN LUTHER KING AVE AND HOWARD RD	SE	13	2	12	6
1ST ST AND NEW YORK AVE	NE	12	10	4	9
9TH ST AND MASSACHUSETTS AVE	NW	12	9	3	9
7TH ST AND PENNSYLVANIA AVE	NW	11	2	11	9
MINNESOTA AVE AND BENNING RD	NE	11	4	7	9
6TH ST AND H ST	NW	11	2	10	9
FIRTH STERLING AVE AND HOWARD RD	SE	11	1	11	9
PENNSYLVANIA AVE AND POTOMAC AVE	SE	11	3	9	9
11TH ST AND H ST	NW	11	1	13	9
NEW YORK AVE AND BLADENSBURG RD	NE	11	8	5	9
14TH ST AND CONSTITUTION AVE	NW	11	4	8	9
FLORIDA AVE AND NEW YORK AVE	NE	11	6	5	9
H ST AND NORTH CAPITOL ST	BN	10	0	10	20

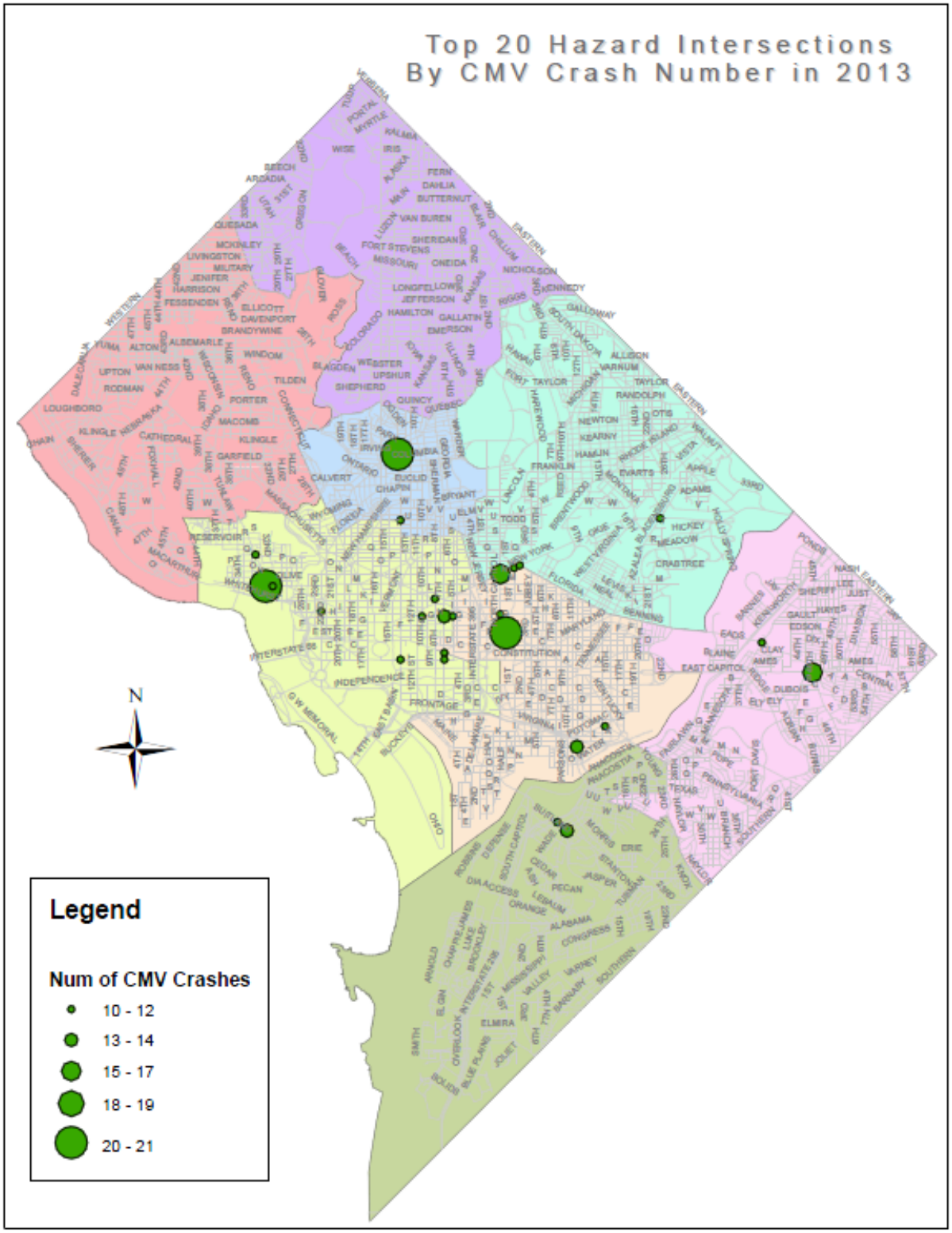


Figure 4.1: Top 20 High Hazard Intersections in 2013

Table 4.2: Top 20 Intersections by Number of CMV Crashes from 2011 through 2013

Intersection Name	Quad	Truck Crashes	Bus Crashes	CMV Crashes	Rank by CMV Crashes
WISCONSIN AVE AND M ST	NW	65	29	52	1
NEW YORK AVE AND NORTH CAPITOL ST	BN	60	27	38	2
7TH ST AND H ST	NW	41	8	38	3
FAIRLAWN AVE AND PENNSYLVANIA AVE	SE	37	27	12	4
MINNESOTA AVE AND BENNING RD	NE	37	11	28	4
7TH ST AND FLORIDA AVE	NW	36	12	29	6
14TH ST AND U ST	NW	36	12	25	6
1ST ST AND UNION STATION PLAZA	NE	36	4	37	6
FLORIDA AVE AND NEW YORK AVE	NE	36	25	13	6
H ST AND NORTH CAPITOL ST	BN	35	6	29	9
14TH ST AND IRVING ST	NW	34	6	30	9
11TH ST AND H ST	NW	33	6	34	12
MINNESOTA AVE AND PENNSYLVANIA AVE	SE	29	10	22	12
NEW YORK AVE AND BLADENSBURG RD	NE	27	22	9	12
14TH ST AND COLUMBIA RD	NW	27	10	19	12
6TH ST AND H ST	NW	27	5	25	12
MARTIN LUTHER KING AVE AND HOWARD RD	SE	26	4	25	17
17TH ST AND I ST	NW	25	6	21	18
PENNSYLVANIA AVE AND POTOMAC AVE	SE	25	6	22	18
CONNECTICUT AVE AND K ST	NW	24	9	18	20

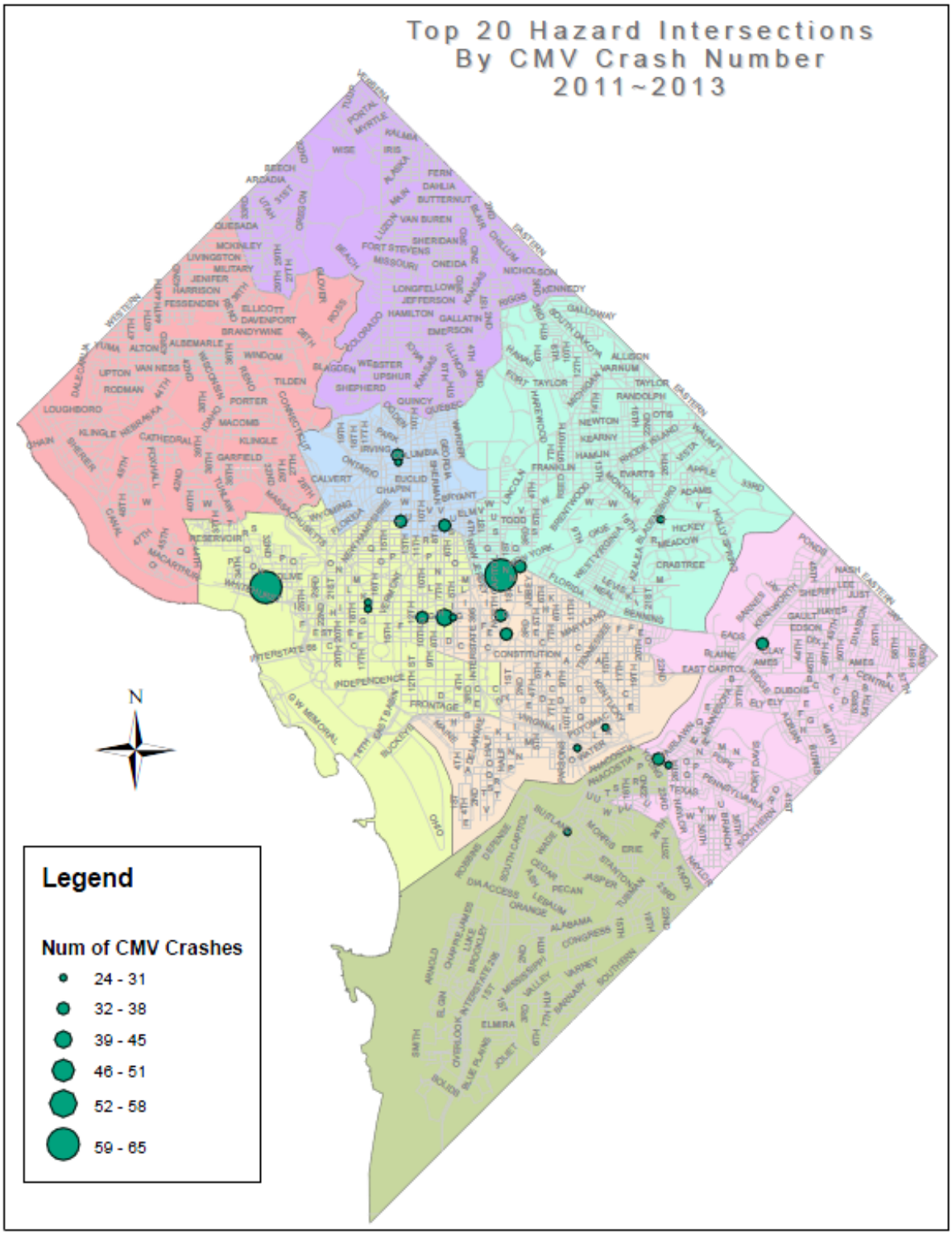


Figure 4.2: Top 20 High Hazard Intersections from 2011 through 2013

4.2 High Frequency CMV Crash Intersection by Crash Type

Table 4.3: Top 20 Hazardous Intersections by Crash Type for CMVS

Type of Crash	Backing	Fixed Object	Head On	Left Turn	Non-Crash	Other	Parked Vehicle	Ran Off Roadway	Rear End	Right Angle	Right Turn	Side Swiped	straight	Override	Underride	Unknown	Total Crash
WISCONSIN AVE AND M ST, NW	3	2	0	5	0	0	0	0	4	0	6	45	0	0	0	0	65
NEW YORK AVE AND NORTH CAPITOL ST, BN	1	0	0	5	0	1	0	0	9	1	3	36	0	0	0	4	60
7TH ST AND H ST, NW	0	1	0	2	0	2	2	0	4	1	0	28	1	0	0	0	41
MINNESOTA AVE AND BENNING RD, NE	1	1	0	2	0	1	0	0	4	1	3	22	1	0	0	1	37
FAIRLAWN AVE AND PENNSYLVANIA AVE, SE	0	1	0	7	0	0	0	0	4	2	1	22	0	0	0	0	37
14TH ST AND U ST, NW	2	1	0	2	0	0	5	0	3	1	4	18	0	0	0	0	36
FLORIDA AVE AND NEW YORK AVE, NE	0	1	0	1	1	0	1	0	8	1	1	22	0	0	0	0	36
1ST ST AND UNION STATION PLAZA, NE	0	0	0	2	0	3	0	0	2	0	0	28	0	1	0	0	36
7TH ST AND FLORIDA AVE, NW	0	1	0	1	0	0	2	0	6	1	6	17	0	0	0	2	36
H ST AND NORTH CAPITOL ST, BN	1	0	0	3	0	2	0	0	2	3	10	14	0	0	0	0	35
14TH ST AND IRVING ST, NW	1	0	0	2	0	1	0	0	4	0	3	22	0	0	0	1	34
11TH ST AND H ST, NW	0	0	0	0	0	1	0	0	3	0	4	25	0	0	0	0	33
MINNESOTA AVE AND PENNSYLVANIA AVE, SE	0	1	1	2	0	0	1	0	3	1	2	18	0	0	0	0	29
NEW YORK AVE AND BLADENSBURG RD, NE	1	0	1	3	0	1	1	0	5	1	2	10	0	0	0	2	27
14TH ST AND COLUMBIA RD, NW	2	0	0	2	0	0	0	0	6	0	3	13	0	0	0	1	27
6TH ST AND H ST, NW	1	0	0	1	0	2	2	0	1	0	3	16	0	0	0	1	27
MARTIN LUTHER KING AVE AND HOWARD RD, SE	0	0	1	3	0	1	0	0	4	1	2	13	0	0	0	1	26
PENNSYLVANIA AVE AND POTOMAC AVE, SE	0	0	0	0	0	0	0	0	1	0	3	20	0	0	0	1	25
17TH ST AND I ST, NW	2	0	0	1	0	1	1	0	2	2	3	12	0	0	0	1	25
CONNECTICUT AVE AND K ST, NW	0	0	0	1	0	2	2	0	0	0	1	17	0	0	0	1	24

4.3 High Frequency CMV Crash Corridors

Table 4.4: Top 14 High Frequency CMV Crash Locations from 2011 through 2013

Corridor	2011			2012			2013		
	Crashes	Fatalities	Injuries	No. of Crashes	Fatalities	Injuries	Crashes	Fatalities	Injuries
PENNSYLVANIA AVE	166	0	23	180	0	27	197	0	21
NEW YORK AVE	124	0	39	132	0	58	125	0	24
WISCONSIN AVE	109	0	13	100	0	15	104	1	5
NORTH CAPITOL ST	111	0	42	104	0	15	89	0	46
GEORGIA AVE	83	0	23	103	0	31	93	0	31
CONNECTICUT AVE	85	0	12	99	0	11	84	0	11
FLORIDA AVE	93	1	38	74	0	32	77	0	23
BENNING RD	46	1	36	65	0	26	74	1	29
SIXTEENTH ST	79	1	14	82	0	8	0	0	0
RHODE ISLAND AVE	48	0	17	36	0	13	60	0	22
CONSTITUTION AVE	36	0	1	52	0	8	44	0	3
BLADENSBURG RD	40	0	19	36	0	4	48	0	12
SOUTHERN AVE	30	0	19	24	0	15	22	0	13
NEW JERSEY AVE	14	0	4	28	0	4	25	0	7

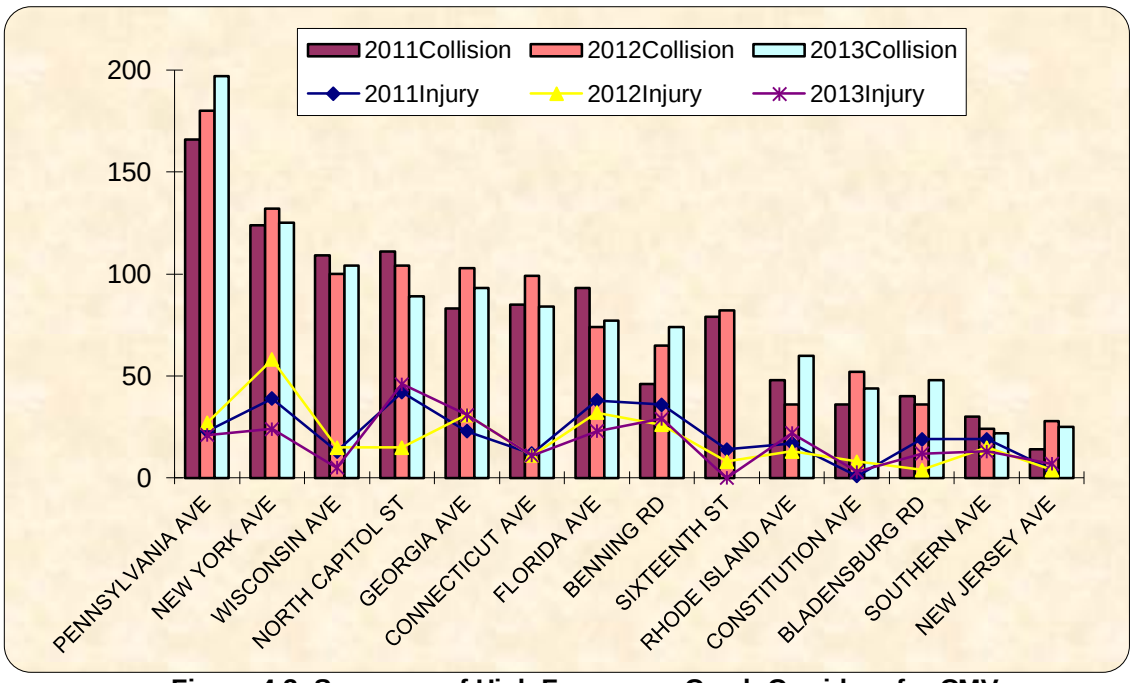


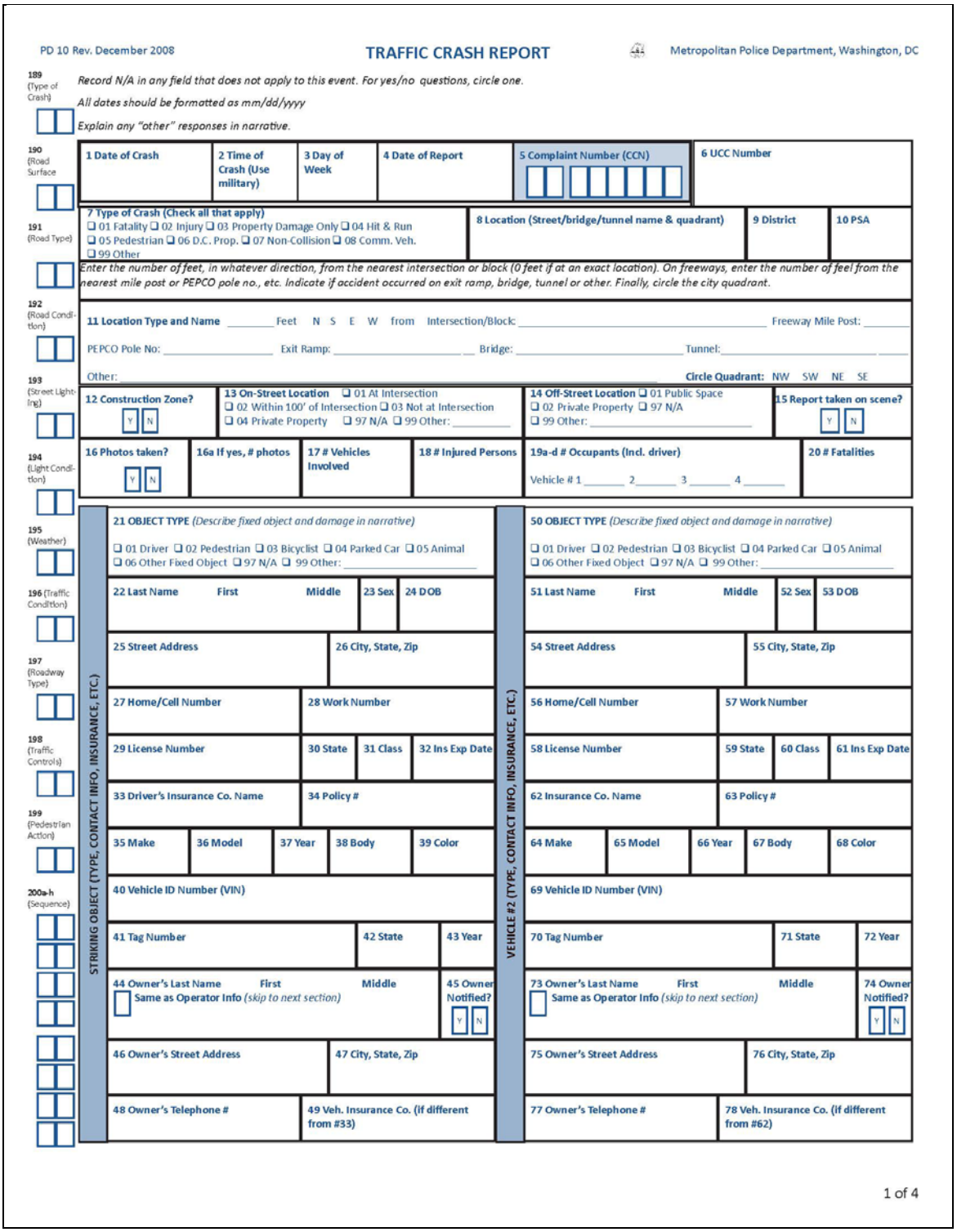
Figure 4.3: Summary of High Frequency Crash Corridors for CMV

Table 4.5: Summary of High Frequency Crash Corridors

Corridor	Length(miles)	No. of Intersection	No. of CMV Crash (2011-2013)	Average CMV Crashes per Mile	Average CMV Crashes per Intersection
PENNSYLVANIA AVE	5.48	89	543	99.09	6.10
NEW YORK AVE	5.08	46	381	75.00	8.28
WISCONSIN AVE	4.87	65	313	64.27	4.82
NORTH CAPITOL ST	3.85	73	304	78.96	4.16
GEORGIA AVE	4.76	65	279	58.61	4.29
CONNECTICUT AVE	5.01	73	268	53.49	3.67
FLORIDA AVE	5.46	80	244	44.69	3.05
BENNING RD	3.39	45	185	54.57	4.11
SIXTEENTH ST	6.39	89	161	25.20	1.81
RHODE ISLAND AVE	4.56	49	144	31.58	2.94
CONSTITUTION AVE	3.9	52	132	33.85	2.54
BLADENSBURG RD	2.65	45	124	46.79	2.76
SOUTHERN AVE	5.4	122	76	14.07	0.62
NEW JERSEY AVE	2.79	38	67	24.01	1.76

5 APPENDICES

5.1 PD-10 Form



PD 10 Rev. December 2008

TRAFFIC CRASH REPORT

Metropolitan Police Department, Washington, DC

189 {Type of Crash}

Record N/A in any field that does not apply to this event. For yes/no questions, circle one.

All dates should be formatted as mm/dd/yyyy

Explain any "other" responses in narrative.

190 {Road Surface}

1 Date of Crash	2 Time of Crash (Use military)	3 Day of Week	4 Date of Report	5 Complaint Number (CCN)	6 UCC Number

191 {Road Type}

7 Type of Crash (Check all that apply)
❑ 01 Fatality ❑ 02 Injury ❑ 03 Property Damage Only ❑ 04 Hit & Run
❑ 05 Pedestrian ❑ 06 D.C. Prop. ❑ 07 Non-Collision ❑ 08 Comm. Veh.
❑ 99 Other

8 Location (Street/bridge/tunnel name & quadrant) | **9 District** | **10 PSA**

Enter the number of feet, in whatever direction, from the nearest intersection or block (0 feet if at an exact location). On freeways, enter the number of feet from the nearest mile post or PEPCO pole no., etc. Indicate if accident occurred on exit ramp, bridge, tunnel or other. Finally, circle the city quadrant.

192 {Road Condition}

11 Location Type and Name _____ Feet N S E W from Intersection/Block: _____ Freeway Mile Post: _____

PEPCO Pole No: _____ Exit Ramp: _____ Bridge: _____ Tunnel: _____

Other: _____ **Circle Quadrant:** NW SW NE SE

193 {Street Lighting}

12 Construction Zone?	13 On-Street Location ❑ 01 At Intersection ❑ 02 Within 100' of Intersection ❑ 03 Not at Intersection ❑ 04 Private Property ❑ 97 N/A ❑ 99 Other:	14 Off-Street Location ❑ 01 Public Space ❑ 02 Private Property ❑ 97 N/A ❑ 99 Other:	15 Report taken on scene?
Y N			Y N

194 {Light Condition}

16 Photos taken?	16a If yes, # photos	17 # Vehicles Involved	18 # Injured Persons	19a-d # Occupants (Incl. driver)	20 # Fatalities
Y N				Vehicle # 1 _____ 2 _____ 3 _____ 4 _____	

195 {Weather}

196 {Traffic Condition}

197 {Roadway Type}

198 {Traffic Controls}

199 {Pedestrian Action}

200a-h {Sequence}

STRIKING OBJECT (TYPE, CONTACT INFO, INSURANCE, ETC.)

21 OBJECT TYPE *(Describe fixed object and damage in narrative)*
❑ 01 Driver ❑ 02 Pedestrian ❑ 03 Bicyclist ❑ 04 Parked Car ❑ 05 Animal
❑ 06 Other Fixed Object ❑ 97 N/A ❑ 99 Other: _____

22 Last Name	First	Middle	23 Sex	24 DOB

25 Street Address	26 City, State, Zip

27 Home/Cell Number	28 Work Number

29 License Number	30 State	31 Class	32 Ins Exp Date

33 Driver's Insurance Co. Name	34 Policy #

35 Make	36 Model	37 Year	38 Body	39 Color

40 Vehicle ID Number (VIN)

41 Tag Number	42 State	43 Year

44 Owner's Last Name First Middle ❑ Same as Operator Info *(skip to next section)*	45 Owner Notified?
	Y N

46 Owner's Street Address	47 City, State, Zip

48 Owner's Telephone #	49 Veh. Insurance Co. (if different from #33)

VEHICLE #2 (TYPE, CONTACT INFO, INSURANCE, ETC.)

50 OBJECT TYPE *(Describe fixed object and damage in narrative)*
❑ 01 Driver ❑ 02 Pedestrian ❑ 03 Bicyclist ❑ 04 Parked Car ❑ 05 Animal
❑ 06 Other Fixed Object ❑ 97 N/A ❑ 99 Other: _____

51 Last Name	First	Middle	52 Sex	53 DOB

54 Street Address	55 City, State, Zip

56 Home/Cell Number	57 Work Number

58 License Number	59 State	60 Class	61 Ins Exp Date

62 Insurance Co. Name	63 Policy #

64 Make	65 Model	66 Year	67 Body	68 Color

69 Vehicle ID Number (VIN)

70 Tag Number	71 State	72 Year

73 Owner's Last Name First Middle ❑ Same as Operator Info *(skip to next section)*	74 Owner Notified?
	Y N

75 Owner's Street Address	76 City, State, Zip

77 Owner's Telephone #	78 Veh. Insurance Co. (if different from #62)

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TRAFFIC CRASH REPORT

Metropolitan Police Department, Washington, DC

200h-p (Sequence)

201a-c (Seat Location Code)

202a-c (Seat Belt Code)

203a-c (Air Bag Code)

204a-c (Ejection Code)

205a-c (Injury Code)

VEHICLE #3 (TYPE, CONTACT INFO, INSURANCE, ETC.)

79 OBJECT TYPE *(Describe fixed object and damage in narrative)*

❑ 01 Driver ❑ 02 Pedestrian ❑ 03 Bicyclist ❑ 04 Parked Car ❑ 05 Animal
❑ 06 Other Fixed Object ❑ 97 N/A ❑ 99 Other: _____

80 Last Name	First	Middle	81 Sex	82 DOB

83 Street Address	84 City, State, Zip

85 Home/Cell Number	86 Work Number

87 License Number	88 State	89 Class	90 Ins Exp Date

91 Driver's Insurance Co. Name	92 Policy #

93 Make	94 Model	95 Year	96 Body	97 Color

98 Vehicle ID Number (VIN)

99 Tag Number	100 State	101 Year

102 Owner's Last Name	First	Middle	103 Owner Notified?
❑ Same as Operator Info *(skip to next section)*			Y N

104 Owner's Street Address	105 City, State, Zip

106 Owner's Telephone #	107 Veh. Insurance Co. (if different from #33)

VEHICLE #4 (TYPE, CONTACT INFO, INSURANCE, ETC.)

108 OBJECT TYPE *(Describe fixed object and damage in narrative)*

❑ 01 Driver ❑ 02 Pedestrian ❑ 03 Bicyclist ❑ 04 Parked Car ❑ 05 Animal
❑ 06 Other Fixed Object ❑ 97 N/A ❑ 99 Other: _____

109 Last Name	First	Middle	110 Sex	111 DOB

112 Street Address	113 City, State, Zip

114 Home/Cell Number	115 Work Number

116 License Number	117 State	118 Class	119 Ins Exp Date

120 Insurance Co. Name	121 Policy #

122 Make	123 Model	124 Year	125 Body	126 Color

127 Vehicle ID Number (VIN)

128 Tag Number	129 State	130 Year

131 Owner's Last Name	First	Middle	132 Owner Notified?
❑ Same as Operator Info *(skip to next section)*			Y N

133 Owner's Street Address	134 City, State, Zip

135 Owner's Telephone #	136 Veh. Insurance Co. (if different from #62)

INVOLVED PERSONS: *In the next section, include all operators, passengers and pedestrians involved even if not injured.*

	137a-c Assoc. w/vehicle #	138a-c Last Name, First Name	139a-c Street Address, City, State, Zip	140a-c Home/Cell/ Work #	141a-c Sex	142a-e Age	143a-c Empl. by DC Govt?	144a-c Taken to Hosp?
1							Y N	Y N
2							Y N	Y N
3							Y N	Y N

INJURED PERSONS

	145a-c Last Name, First Name	146a-c Where Taken (Hospital)	147a-c By Whom (Last Name, First Name)	148a-c Major Crash Notified?	149a-c Teletype Notified?	150a-c Relative Notified? (If Yes, Last & First Name & Relationship)	151a-c Status (Admitted, Released, Unknown)
1				Y N	Y N		
2				Y N	Y N		
3				Y N	Y N		

Non-Involved Witnesses

	152a-c Last Name First Middle	153a-c Street Address, City, State, Zip	154a-c Telephone #
1			
2			
3			

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PD 10 Rev. December 2008

TRAFFIC CRASH REPORT

Metropolitan Police Department, Washington, DC

POLICE ACTION RELATING TO DRIVERS & PEDESTRIANS

	155a-c Arrest/NOI#	156a-c Primary and Secondary Charges (Report must support charges)	157a-c What Traffic Signs Were Present?
1			
2			
3			

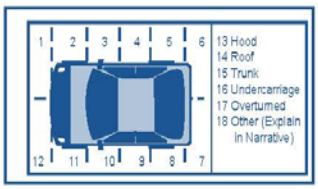
VEHICLE CONDITION

158 STRIKING OBJECT/VEHICLE #1: Direction of Travel and Street Before Crash (must match narrative and diagram)
☐ 01 N/B ☐ 02 E/B ☐ 03 S/B
☐ 04 W/B ☐ 97 N/A
☐ 99 Other_____

159 Vehicle Disabled? Y N

160 Skid Marks
To Impact: _____
After Impact: _____
☐ N/A

161 Circle All Areas With Damage:



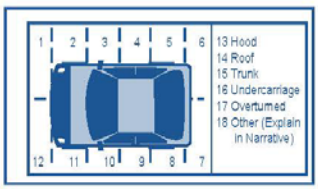
162 Vehicle Was . . .
☐ 01 Left on Scene
☐ 02 Towed By: _____
Towed to: _____
Towing Control #: _____
☐ 03 Driven Away By: _____
☐ 97 N/A ☐ 99 Other

163 VEHICLE #2: Direction of Travel and Street Before Crash (must match narrative and diagram)
☐ 01 N/B ☐ 02 E/B ☐ 03 S/B
☐ 04 W/B ☐ 97 N/A
☐ 99 Other_____

164 Vehicle Disabled? Y N

165 Skid Marks
To Impact: _____
After Impact: _____
☐ N/A

166 Circle All Areas With Damage:



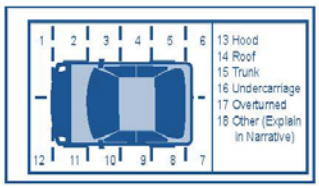
167 Vehicle Was . . .
☐ 01 Left on Scene
☐ 02 Towed By: _____
Towed to: _____
Towing Control #: _____
☐ 03 Driven Away By: _____
☐ 97 N/A ☐ 99 Other

168 VEHICLE #3: Direction of Travel and Street Before Crash (must match narrative and diagram)
☐ 01 N/B ☐ 02 E/B ☐ 03 S/B
☐ 04 W/B ☐ 97 N/A
☐ 99 Other_____

169 Vehicle Disabled? Y N

170 Skid Marks
To Impact: _____
After Impact: _____
☐ N/A

171 Circle All Areas With Damage:



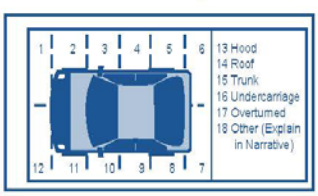
172 Vehicle Was . . .
☐ 01 Left on Scene
☐ 02 Towed By: _____
Towed to: _____
Towing Control #: _____
☐ 03 Driven Away By: _____
☐ 97 N/A ☐ 99 Other

173 VEHICLE #4: Direction of Travel and Street Before Crash (must match narrative and diagram)
☐ 01 N/B ☐ 02 E/B ☐ 03 S/B
☐ 04 W/B ☐ 97 N/A
☐ 99 Other_____

174 Vehicle Disabled? Y N

175 Skid Marks
To Impact: _____
After Impact: _____
☐ N/A

176 Circle All Areas With Damage:



177 Vehicle Was . . .
☐ 01 Left on Scene
☐ 02 Towed By: _____
Towed to: _____
Towing Control #: _____
☐ 03 Driven Away By: _____
☐ 97 N/A ☐ 99 Other

	206a-c Driver/ Pedestrian Condition	207a-c Impairment	208a-c Type of Test Conducted	209a-c Blood/ Alcohol Content
Involved Person #1				
Involved Person #1				
Involved Person #3				

	210a-d Cell Phone/Other Electronic Device Present (Y/N)?	211a-d Driver/ Pedestrian Distraction	212a-d Primary Contributing Circumstances	213a-d Driver Action	214a-d Vehicle Type: Private	215a-d Vehicle Type: Govt	216a-d Vehicle Type: Comm
Vehicle #1							
Vehicle #2							
Vehicle #3							
Vehicle #4							

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PD 10 Rev. December 2008 **TRAFFIC CRASH REPORT** Metropolitan Police Department, Washington, DC

178 Crash Diagram (Not to Scale) (The diagram must correspond to the narrative. If the report is being taken by an officer after the fact, the diagram shall be completed to show the general area in which the crash occurred. Please indicate freeway access ramps, exit ramps and bridges. Indicate type of fixed object(s), direction, posted speed and vehicles by number indicated in spaces above.)

N

179 Detailed Narrative (Give a concise statement, in your own words, of the facts that are not covered in this report, or to clarify any items that are not satisfactorily explained ("other" answers). If statements are taken, use PD 118 (Defendant/Suspect Statement) or PD 119 (Complainant/Witness Statement). If accident occurred in a construction zone, describe type of construction zone. Wherever possible, list the item number of the corresponding section.

☐ *Narrative Continued on PD 10B Supplemental*

This report is used for statistical analysis of vehicular crashes and the prevention thereof. The data given represents the opinion and conclusions of the reporting officer, based on his/her judgement after considering all the facts disclosed through his/her investigation of this crash.

180 Reporting Member's Name/CAD/Badge #	181 Unit	182 Signature	183 Official's Name/CAD/Badge #	184 Official's Unit

185 Official's Signature	186 Reviewer	187 Distribution	188 Date	Complaint Number (CCN)

Use PD 10B Supplemental for Motor Carrier Vehicle Information and additional space.

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PD 10B Rev. June 2007

TRAFFIC CRASH REPORT SUPPLEMENTAL

Metropolitan Police Department, Washington, DC

Complaint Number (CCN)

Record N/A in any field that does not apply to this event. Field numbers mirror those from the PD 10. Explain any "other" responses in narrative.
Record one code for each vehicle.

Private, Government & Commercial Vehicle Information	Vehicle #1	Vehicle #2	Vehicle #3	Vehicle #4
217a-d Bus Type 00 Unknown 01 School 02 Transit 03 Intercity 04 Charter 97 N/A, Not a Bus 99 Other				
218a-d Cargo Body Type 00 Unknown 01 Bus (Seats 9-15, including driver) 02 Bus (seats more than 15, including driver) 03 Van/Enclosed Box 04 Cargo Tank 05 Flatbed 06 Dump 07 Concrete Mixer 08 Auto Transporter 09 Garbage/Refuse 10 Grain, Chips, Gravel 11 Pole 12 Log 13 Intermodal Chassis 14 Vehicle-Towing Another Motor Vehicle 97 N/A 99 Other				
219a-d US DOT #				
220a-d MC #/MX #				
221a-d State #				
222a-d Issuing State				
223a-d Gross Vehicle/Combination Weight Rating 00 Unknown 01 10,000 lbs or less 02 10,001-26,000 lbs 03 Greater than 26,000 lbs 97 N/A				
224a-d Interstate Vehicle Type 00 Unknown 01 Interstate Carrier 02 Intrastate Carrier 03 Not In Commerce: Government (Trucks and Buses) 04 Not In Commerce: Other Truck (over 10,000 lbs) 97 N/A 99 Other				
225a-d Carrier Name				
226a-d Carrier Address (Street # and Name, Quadrant, Apt. #, City, State & Zip)				
227a-d Haz Mat Placard? (yes/no)				
228a-d If Yes, 4-digit Placard Number				
229a-d Haz Mat Class Number 01 Explosives 02 Gases (Compressed, Dissolved or Refrigerated) 03 Flammable Liquid 04 Flammable Solids (Combustible, Water Reactive) 05 Oxidizing Substances (Organic Peroxides) 06 Poisonous (Toxic) and Infectious Substances 07 Radioactive Material 08 Corrosives 09 Miscellaneous Dangerous Goods 97 N/A 99 Other				
230a-d Hazardous Cargo Materials Released? (yes/no)				

SUPPLEMENTAL - p. 2

PD 10B Rev. June 2007

TRAFFIC CRASH REPORT SUPPLEMENTAL

Metropolitan Police Department, Washington, DC

1 Date of Crash	2 Time of Crash	3 Day of Week	4 Date of Report	5 Complaint Number (CCN)

179 Detailed Narrative (cont.) (Give a concise statement, in your own words, of the facts that are not covered in this report, or to clarify any items that are not satisfactorily explained ("other" answers). If statements are taken, use PD 118 (Defendant/Suspect Statement) or PD 119 (Complainant/Witness Statement). If accident occurred in a construction zone, describe type of construction zone. Wherever possible, list the item number of the corresponding section.

SUPPLEMENTAL: p.1

This report is used for statistical analysis of vehicular crashes and the prevention thereof. The data given represents the opinion and conclusions of the reporting officer, based on his/her judgement after considering all the facts disclosed through his/her investigation of this crash.

180 Reporting Member's Name/CAD #	181 Unit	182 Signature	183 Official's Name/CAD #	184 Official's Unit#

185 Official's Signature	186 Reviewer	187 Distribution	188 Date	Complaint Number (CCN)

METROPOLITAN POLICE DEPARTMENT OF THE DISTRICT OF COLUMBIA **PD 10 Coding Sheet (December 2008)**

189 Type of Crash

00 Unknown	05 Side Swiped	10 Left Turn Hit Pedestrian	15 Backing Hit Pedestrian
01 Right Angle	06 Head On	11 Right Turn Hit Pedestrian	16 Non-Collision Accident
02 Left Turn Hit Vehicle	07 Parked Vehicle	12 Straight Hit Pedestrian	17 Underride
03 Right Turn Hit Vehicle	08 Fixed Object	13 Backing Hit Moving Vehicle	18 Override
04 Rear End	09 Ran Off Roadway	14 Backing Hit Parked Vehicle	99 Other

190 Road Surface

00 Unknown	02 Asphalt	04 Gravel	99 Other
01 Concrete	03 Brick	05 Dirt	

191 Road Type (Select all that apply)

01 Straight	04 Grade	07 Ramp	
02 Curve	05 Crest	08 Bridge	
03 Level	06 Underpass	99 Other	

192 Road Condition

00 Unknown	03 Wet	06 Snow	99 Other
01 Repairing	04 Standing Water	07 Ice	
02 Dry	05 Slush	08 Sand, Mud, Dirt, Oil or Gravel	

193 Street Lighting

00 Unknown	02 Street Lights On	98 None	
01 Defective	03 Street Lights Off	99 Other	

194 Light Condition

00 Unknown	03 Dark (Lighted)	05 Dawn	
01 Daylight	04 Dark (Unknown Roadway	06 Dusk	
02 Dark (Not Lighted)	Lighting)	99 Other	

195 Weather

00 Unknown	03 Snow	05 Blowing Sand, Soil, Dirt or	98 Clear/No adverse conditions
01 Fog/Mist	04 Sleet/Hail	Snow	99 Other
02 Rain		06 Severe Crosswind	

196 Traffic Condition

00 Unknown	02 Medium	99 Other	
01 Heavy	03 Light		

197 Roadway Type

00 Unknown	02 Two-Way, Divided Unprotected Median	03 Two way, Divided Positive Median Barrier	99 Other
01 Two-Way, Not Divided		04 One-Way, Not Divided	

198 Traffic Controls

00 Unknown	03 Yield	06 Officer
01 None	04 Stop Sign	07 Restricted Turn
02 Flashing	05 Signal	99 Other

199 Pedestrian Action

00 Unknown	03 In Crosswalk: No Signal	06 In Unmarked Crosswalk
01 With Signal in Crosswalk	04 From Between Parked Cars	97 N/A
02 Against Signal in Crosswalk	05 Not in Crosswalk	99 Other

200a-p Sequence of Vehicle Events (Record no more than 4 per vehicle and describe each in narrative)

00 Unknown	07 Non-Collision: Separation of Units	14 Collision Involving Parked Motor Vehicle	21 Collision Involving Unknown Movable Object
01 Non-Collision: Ran Off Road	08 Non-Collision: Cross Median/Centerline	15 Collision Involving Train	22 Collision: Hit & Run
02 Non-Collision: Jackknife	09 Non-Collision: Equipment Failure (tire, etc.)	16 Collision Involving Pedacycle	23 Collision Involving Moving Motor Vehicle
03 Non-Collision: Overturn (Rollover)	10 Non-Collision: Other	17 Collision Involving Animal	97 Not applicable, no more vehicles or event sequences for this vehicle
04 Non-Collision: Downhill Runaway	11 Non-Collision: Unknown	18 Collision Involving Fixed Object	99 Other
05 Non-Collision: Cargo Loss or Shift	12 Collision Involving Pedestrian	19 Collision Involving Work Zone Maintenance Equip.	
06 Non-Collision: Explosion or Fire	13 Collision Involving Motor Vehicle in Transport	20 Collision Involving Other Movable Object	

201a-c Seat Location Code (Record 1 per person and describe in narrative)

01 Driver	06 Rear Right Seat	11 Bicycle Rider	
02 Front Center Seat	07 SUV/Caravan	97 N/A	
03 Front Passenger Seat	08 Motorcycle/Moped Passenger	99 Other: Skateboard, Tricycle, etc.	
04 Rear Left Seat (behind driver)	09 Bus occupant		
05 Rear Center Seat	10 Pedestrian		

2

202a-c Seat Belt/Safety Code (Record 1 per person and describe in narrative)

00 Use Unknown	03 Belt Failed	06 Improperly Worn	99 Other
01 Not Installed	04 Fastened	07 Helmet	
02 Not Fastened	05 Child Restraint	97 N/A	

203a-c Air Bag Code (Record 1 per person and describe in narrative)

00 Unknown	02 Air Bag Deployed	04 Side-Impact Airbags	99 Other
01 Air Bag Installed	03 Air Bag Failed	97 N/A	

204a-c Ejection Code (Record 1 per person and describe in narrative)

00 Unknown	02 Total	97 N/A
01 Partial	03 None	99 Other

205a-c Injury Code (Record 1 per person and describe in narrative)

00 Unknown	03 Disabling Injury	05 Complaint of Pain, But No	99 Other
01 No Injury	04 Non-Disabling Injury	Visible Injury	
02 Fatal		97 N/A	

206a-c Driver/Pedestrian Condition (Record 1 per person and describe in narrative)

00 Unknown	02 Ill	04 Asleep	99 Other
01 Fatigued	03 Physical Defect	05 Normal	

207a-c Impairment (Record 1 per person and describe in narrative)

00 Impairment Unknown	**Had been drinking and…**	03 …Ability impaired	99 …Other
01 Had not been drinking	02 …Obviously drunk	04 …Ability not impaired	

208a-c Type of Test Conducted (Record 1 per person and describe in narrative)

00 No test Conducted	02 Blood	97 N/A
01 Urine	03 Breath	99 Other

211a-d Driver/Pedestrian Distraction (Record 1 per vehicle and describe in narrative)

00 Unknown	04 Writing	08 Using personal communication	97 N/A
01 Cell phone (hand held)	05 Personal Grooming	technologies	99 Other
02 Cell phone (hands-free)	06 Interacting w/Pets	09 Eating	
03 Reading	07 Interacting w/unsecured cargo	10 Distracted by passenger(s)	

3

212a-d Primary Contributing Circumstance (Record 1 per vehicle and describe in narrative)

00 Unknown	07 Right Turn on Red	14 Defective Brakes, Lights, etc.	21 Cell Phone/Other Electronic Device
01 No Violation	08 Stop Sign	15 Fail to Set Parking Brake	22 Other Distraction
02 Speed	09 Yield Sign	16 Open Door to Traffic	22 Road Defects
03 Driver Inattention	10 Red Light Violation	17 Improper Backing	99 Other
04 Following Too Close	11 Flashing/Directional Light	18 Drug/Alcohol Influence	
05 Improper Passing	12 Automobile/Pedestrian Right of Way	19 Pedestrian Violation	
06 Changing Lanes Without Cautioning	13 Wrong Way/Side of Street	20 Driver Vision Obstructed	

213a-d Driver Action (Record 1 per vehicle and describe in narrative)

00 Unknown	05 Parked	09 Ran Off Road	14 Avoiding
01 Backing	06 Entering/Leaving Parked Position	10 Changing Lanes	97 N/A
02 Turning Right		11 Going Straight	99 Other
03 Turning Left	07 Making "U" Turn	12 Overtaking	
04 Stopped/Standing: Traffic Lane	08 Merging	13 Slowing/Stopping	

214a-d Vehicle Type: Private (Record 1 per vehicle and describe in narrative)

00 Unknown	04 Bicycle	08 Pick-up Truck	99 Other
01 Passenger Auto	05 Segway	09 Recreational Vehicle	
02 Motorcycle	06 SUV	11 Scooter	
03 Moped	07 Minivan	97 N/A	

215a-d Vehicle Type: Government (Record 1 per vehicle and describe in narrative)

00 Unknown	06 SUV	11 Bus (Seats 9-15 people, incl. driver)	15 Unmarked Police Car
01 Passenger Auto	07 Minivan		16 Fire Truck
02 Motorcycle	08 Pick-up Truck	12 (Bus (seats more than 15 people, incl. driver)	17 Other Emergency Vehicle
03 Moped	09 Recreational Vehicle		97 N/A
04 Bicycle	10 Scooter	13 Truck	99 Other
05 Segway		14 Marked Police Car	

216a-d Vehicle Type: Commercial (Record 1 per vehicle and describe in narrative)

00 Unknown Heavy Truck, Unclassified, > 10,000 lb.	03 Bus (Seats 9-15 people, including driver)	06 Single-Unit Truck (3 or more axles)	11 Taxi Cab 15 people, including driver)
01 Passenger Auto (only if vehicle has HM Placard)	04 Bus (seats more than	07 Truck/Trailer	97 N/A
02 Light Truck (only if vehicle has HM Placard)	05 Single-Unit Truck (2 axles, 6 tires)	08 Truck/Tractor (Bobtail)	99 Other
		09 Tractor/Semitrailer	
		10 Tractor/Double	

4