



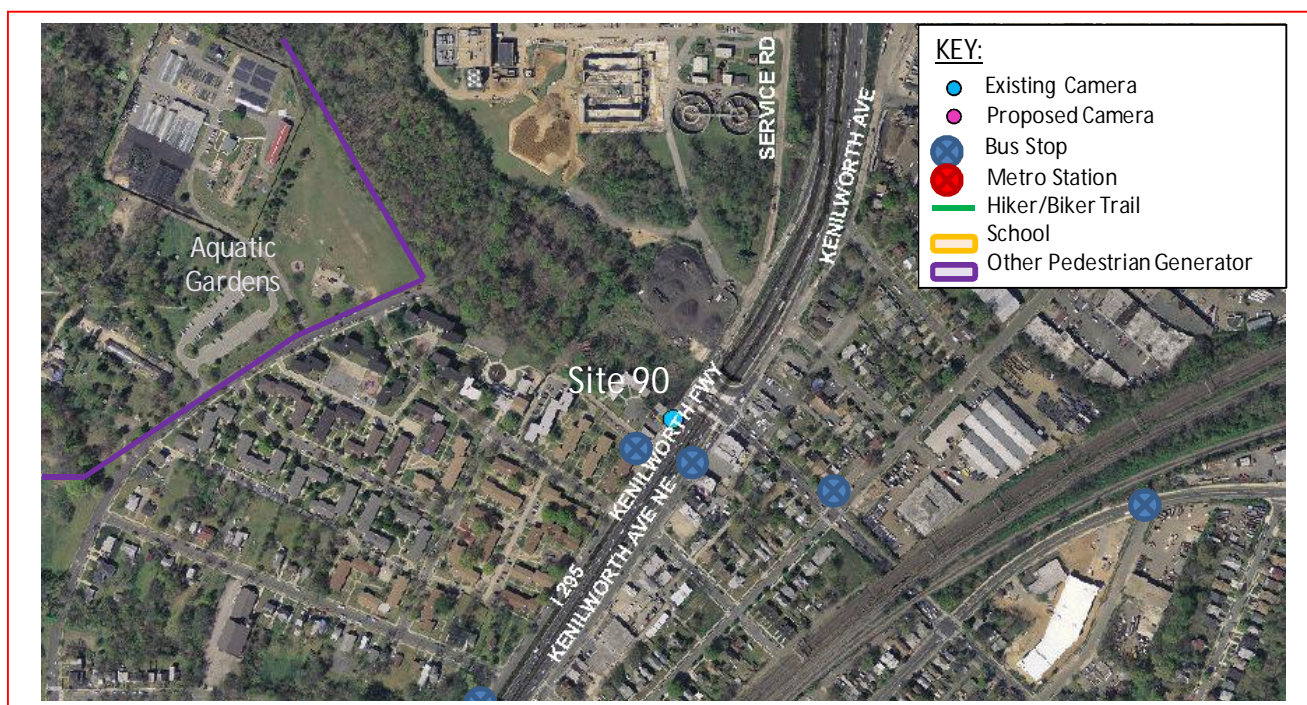
District Department of Transportation

## Speed Limit and Safety Nexus Studies for Automated Enforcement Locations in the District of Columbia

### DC-295 NE 0.1 Mile S/O Eastern Avenue NE S/B

#### Study Area and Location

District	PSA	Ward	ANC	Phase	Description
6	602	7	7C/7D	Existing	DC-295 Northeast 0.1 Miles South of Eastern Avenue Southbound



This existing speed camera is located in Ward 7 on DC 295 Northeast 0.1 miles south of Eastern Avenue Northeast in the southbound direction. DC 295 runs between the Baltimore-Washington Parkway to the north and I-295 to the south. The posted limit is 50 MPH. This speed camera was installed on July 12, 2010.

W7 - 61





District Department of Transportation

## DC-295 NE 0.1 Mile S/O Eastern Avenue NE S/B

### Field Assessment Summary

DC 295 is assumed to run in the north-south direction, and is classified as a freeway. DC 295 has three travel lanes in each direction. This site has the following characteristics:

- There are residential and commercial areas off of the freeway.
- The Minnesota Avenue Metro Station is on the east side of the freeway. The Aquatic Gardens is also in the area.
- There is a concrete barrier with a metal fence separating northbound and southbound traffic.
- There is a pedestrian bridge over DC 295 at Polk Street near the metro station.
- The pavement is in good condition and there is open ditch drainage.



Looking Northbound





District Department of Transportation

## DC-295 NE 0.1 Mile S/O Eastern Avenue NE S/B



Looking Southbound

### Speed Data Analysis

Posted Speed Limit (MPH)	50
Mean Speed (MPH)	51
85th Percentile Speed (MPH)	66
10 MPH Pace Speed (MPH)	56-65
ADT	47,553

The mean speed is higher than the posted speed limit by 1 MPH and the 85<sup>th</sup> percentile speed is higher than the posted speed by 16 MPH at this location.

### Crash Data Analysis

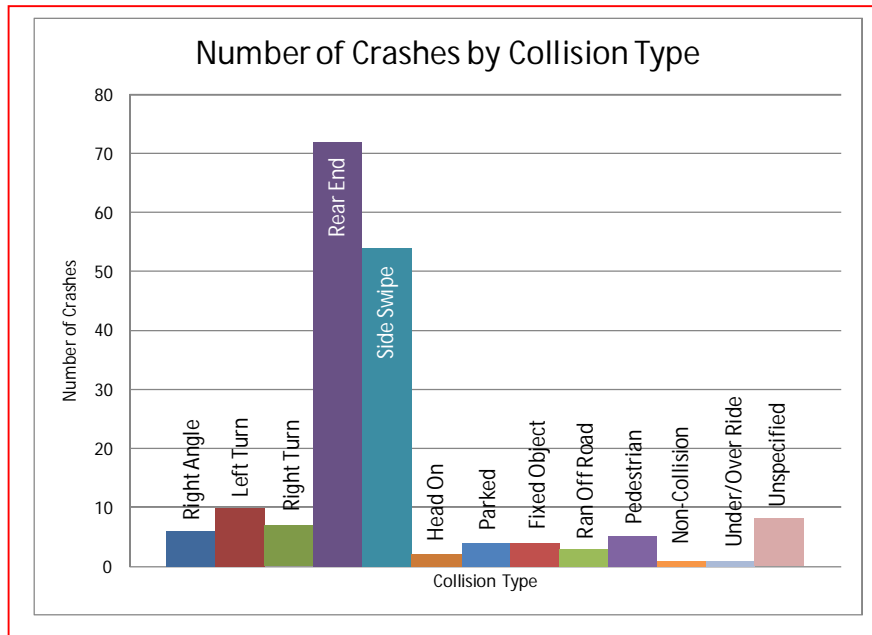
From the Accident Summary Report provided for the dates between January 1, 2010 and December 31, 2012 there were a total of 177 crashes at this location. A breakdown of number of crashes by collision type can be found in the chart on the next page. The most common types of crashes at this location were Rear End (72 crashes) and Side Swipe (54 crashes). Furthermore, this site experienced a high frequency (59 crashes) of injury related crashes.



District Department of Transportation

## DC-295 NE 0.1 Mile S/O Eastern Avenue NE S/B

Severity			Weather			Surface condition			Light Condition		
Total	177										
Fatal	1	0.6%	Clear	151	85.3%	Dry	153	86.4%	Day	109	61.6%
Injury	59	33.3%	Rain	14	7.9%	Wet	16	9.0%	Night	54	30.5%
Truck	31	17.5%	Fog/Mist	2	1.1%	Snow/Ice	2	1.1%			
Bus	11	6.2%									



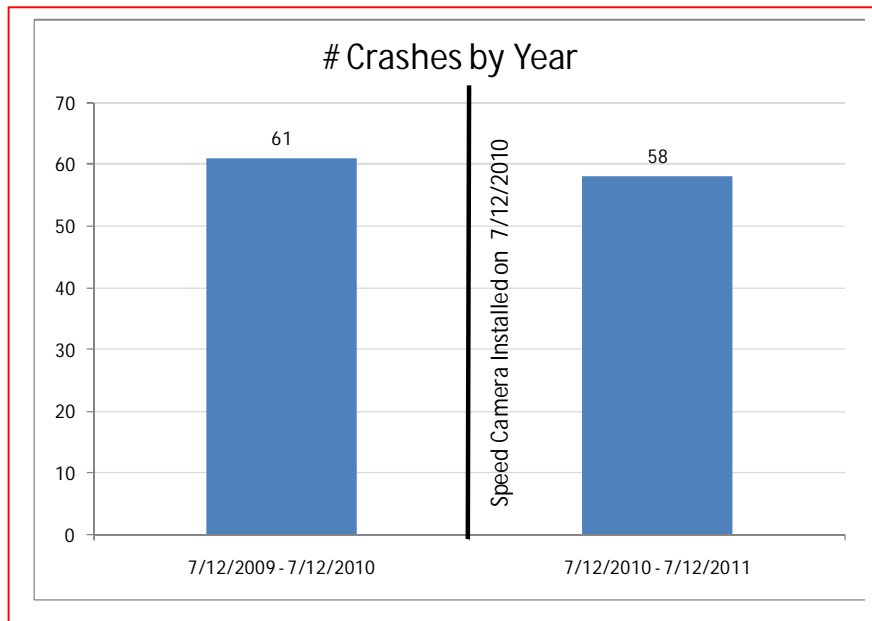
There were an elevated number of speed-related crashes at this location, including rear end and side swipe crashes. The AASHTO Highway Safety Manual lists “assuming the lead driver will go through a green or yellow light, but the lead driver stops” and “changing lanes to avoid a slowing or stopped vehicle”<sup>1</sup> as two errors leading to rear-end and sideswipe crashes. Both of these errors can be decreased with a decrease in travel speed.

The speed camera was installed on 7-125-2010. The graph below shows the number of crashes in the year prior to the speed camera’s installation (61 crashes) and the year after the speed camera’s installation (58 crashes). There was a slight decrease in the number of crashes after the installation of the camera.

<sup>1</sup> AASHTO Highway Safety Manual, 1<sup>st</sup> Edition, 2010; Volume 1, page 2-13



## DC-295 NE 0.1 Mile S/O Eastern Avenue NE S/B



### Safety Nexus

This site presents the following safety considerations which may establish a nexus between safety and the speed camera:

1. Speed Data – The 85<sup>th</sup> percentile speed is much higher than the posted speed limit at this location.
2. Crash Data – There were an elevated number of speed-related crashes at this location, including rear end and side swipe crashes, as well as a high frequency (59 crashes) of injury-related crashes.
3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
  - a. There are residential and commercial areas nearby and a pedestrian bridge.
  - b. The Aquatic Gardens is in the area which generates pedestrian and bicycle activity off of the freeway.

Due to the elevated 85th percentile speeds, the elevated number of speed-related crashes and injury-related crashes, and the specific site characteristics, there is a nexus between traffic safety and the speed camera at this location.

# SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD  
MOUNT AIRY, MD 21771

[www.sammateng.com](http://www.sammateng.com)

## DC295 NE .1 MILE S/O Eastern Avenue SB Speed

SB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
12/02/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	14	0	0	0	0	0	3	18	32	60	89	93	71	67	447
03:00	9	0	0	0	0	0	6	16	28	71	108	82	70	92	482
04:00	35	0	0	0	0	0	2	10	47	124	205	196	197	256	1072
05:00	239	0	0	1	0	0	16	70	274	461	643	582	345	280	2911
06:00	394	21	30	47	47	73	121	229	481	554	362	156	55	37	2607
07:00	392	53	73	50	59	44	58	65	89	71	42	19	4	2	1021
08:00	329	24	45	55	51	75	132	185	259	347	275	204	77	64	2122
09:00	225	0	0	0	0	3	25	106	276	559	643	517	272	194	2820
10:00	213	1	0	0	0	7	22	114	281	586	616	497	247	220	2804
11:00	191	1	0	0	0	8	31	125	250	449	539	487	288	214	2583
12 PM	206	0	0	0	0	5	19	100	248	515	620	470	303	269	2755
13:00	218	0	0	2	1	9	27	109	277	523	590	484	292	211	2743
14:00	263	0	0	1	1	0	30	163	328	672	688	435	230	135	2946
15:00	272	0	0	0	0	3	35	155	422	725	632	461	219	145	3069
16:00	235	0	0	0	0	3	30	147	428	763	672	398	187	110	2973
17:00	222	0	0	4	14	35	161	451	620	634	477	213	77	28	2936
18:00	225	0	0	1	4	24	107	325	619	731	477	221	87	42	2863
19:00	133	0	0	2	3	9	32	102	324	516	517	304	186	111	2239
20:00	88	0	0	0	1	4	24	76	241	449	425	322	177	134	1941
21:00	72	0	0	0	0	4	9	57	160	300	411	331	188	147	1679
22:00	66	0	0	0	0	6	15	49	156	245	330	278	169	178	1492
23:00	34	0	0	0	0	2	7	35	108	180	210	195	135	142	1048
<b>Total</b>	<b>4075</b>	<b>100</b>	<b>148</b>	<b>163</b>	<b>181</b>	<b>314</b>	<b>912</b>	<b>2707</b>	<b>5948</b>	<b>9535</b>	<b>9571</b>	<b>6945</b>	<b>3876</b>	<b>3078</b>	<b>47553</b>
<b>Grand Total</b>	<b>4075</b>	<b>100</b>	<b>148</b>	<b>163</b>	<b>181</b>	<b>314</b>	<b>912</b>	<b>2707</b>	<b>5948</b>	<b>9535</b>	<b>9571</b>	<b>6945</b>	<b>3876</b>	<b>3078</b>	<b>47553</b>

15th Percentile : 14 MPH  
 50th Percentile : 57 MPH  
 85th Percentile : 66 MPH  
 95th Percentile : 70 MPH

Stats  
 Mean Speed(Average) : 51 MPH  
 10 MPH Pace Speed : 56-65 MPH  
 Number in Pace : 17662  
 Percent in Pace : 39.7%  
 Number of Vehicles > 45 MPH : 41660  
 Percent of Vehicles > 45 MPH : 93.7%

# SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD  
MOUNT AIRY, MD 21771

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## DC295 NE .1 MILE S/O Eastern Avenue SB

Start Time	Mon	02-Dec-1	Tue	03-Dec-1	Wed	04-Dec-1	Daily Average		
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	
12:00	*	655	174	*	*	*	174	655	
12:15	*	683	184	*	*	*	184	683	
12:30	*	746	138	*	*	*	138	746	
12:45	*	671	116	*	*	*	116	671	
01:00	*	672	104	*	*	*	104	672	
01:15	*	699	102	*	*	*	102	699	
01:30	135	690	*	*	*	*	135	690	
01:45	131	682	*	*	*	*	131	682	
02:00	126	692	*	*	*	*	126	692	
02:15	130	754	*	*	*	*	130	754	
02:30	114	741	*	*	*	*	114	741	
02:45	77	759	*	*	*	*	77	759	
03:00	98	789	*	*	*	*	98	789	
03:15	106	730	*	*	*	*	106	730	
03:30	131	827	*	*	*	*	131	827	
03:45	147	723	*	*	*	*	147	723	
04:00	148	767	*	*	*	*	148	767	
04:15	213	716	*	*	*	*	213	716	
04:30	328	770	*	*	*	*	328	770	
04:45	383	720	*	*	*	*	383	720	
05:00	507	722	*	*	*	*	507	722	
05:15	680	732	*	*	*	*	680	732	
05:30	844	748	*	*	*	*	844	748	
05:45	880	734	*	*	*	*	880	734	
06:00	895	739	*	*	*	*	895	739	
06:15	849	709	*	*	*	*	849	709	
06:30	633	720	*	*	*	*	633	720	
06:45	230	695	*	*	*	*	230	695	
07:00	138	591	*	*	*	*	138	591	
07:15	155	547	*	*	*	*	155	547	
07:30	509	576	*	*	*	*	509	576	
07:45	219	525	*	*	*	*	219	525	
08:00	187	493	*	*	*	*	187	493	
08:15	492	496	*	*	*	*	492	496	
08:30	719	495	*	*	*	*	719	495	
08:45	724	457	*	*	*	*	724	457	
09:00	677	410	*	*	*	*	677	410	
09:15	689	452	*	*	*	*	689	452	
09:30	711	432	*	*	*	*	711	432	
09:45	743	385	*	*	*	*	743	385	
10:00	726	394	*	*	*	*	726	394	
10:15	713	385	*	*	*	*	713	385	
10:30	692	381	*	*	*	*	692	381	
10:45	673	332	*	*	*	*	673	332	
11:00	625	272	*	*	*	*	625	272	
11:15	652	300	*	*	*	*	652	300	
11:30	639	252	*	*	*	*	639	252	
11:45	667	224	*	*	*	*	667	224	
Total	19135	28684	818	0	0	0	19953	28684	
Combined Total	47819		818		0		48637		
Peak Vol.	05:30 3468	02:45 3105	-	12:00 612	-	-	-	05:30 3468	02:45 3105
P.H.F.	0.969	0.939		0.832				0.969	0.939
ADT	ADT 48,637		AADT 48,637						

DC Department of Transportation - Traffic Accident Reporting and Analysis System

## Accident Summary Report (R-8)

**Corridor:** KENILWORTH AVE,NE From EASTERN AVE,NE TO FBI:DC 295,NE

**Time Period Covered:** From 01/01/2010 To 12/31/2012

**Prepared By:** Rahul Jain

**Prepared Date:** 12/31/2012

		<b>Collision Type</b>	<b>#ACC</b>	<b>%</b>	<b>Collision Type</b>	<b>#ACC</b>	<b>%</b>
Total Number of Accident:	177	Right Angle:	6	3.4%	Fixed Object:	4	2.3%
Total Number of Fatalities:	1	Left Turn:	10	5.6%	Ran Off Road:	3	1.7%
Total Number of Injuries:	95	Right Turn:	7	4.0%	Ped. Involved:	5	2.8%
Total Number of Disabling Injuries:	8	Rear End:	72	40.7%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	26	Side Swiped:	54	30.5%	Non Collision:	1	0.6%
Total Number of Pedestrians Involved:	7	Head On:	2	1.1%	Under/Over Ride:	1	0.6%
Total Number of Bicycles Involved:	0	Parked:	4	2.3%	Unspecified:	8	4.5%
Total Number of Motorcycles Involved:	3						

<b>Time of Day</b>	<b>#ACC</b>	<b>%</b>
07:30 ~ 09:30:	20	11.3%
09:30 ~ 11:30:	9	5.1%
11:30 ~ 13:30:	15	8.5%
13:30 ~ 16:00:	32	18.1%
16:00 ~18:30:	30	16.9%
18:30 ~ 07:30:	71	40.1%
Unspecified:	0	0.0%

<b>Day of week</b>	<b>#ACC</b>	<b>%</b>
Sunday:	15	8.5%
Monday:	23	13.0%
Tuesday:	27	15.3%
Wednesday:	28	15.8%
Thursday:	21	11.9%
Friday:	24	13.6%
Saturday:	39	22.0%

<b>Weather Condition</b>	<b>#ACC</b>	<b>%</b>
Clear:	151	85.3%
Rain:	14	7.9%
Snow:	1	0.6%
Sleet/Hail:	0	0.0%
Fog/Mist:	2	1.1%
Crosswind/Blowing Sand:	2	1.1%
Unspecified:	7	4.0%

<b>Surface Condition</b>	<b>#ACC</b>	<b>%</b>
Dry:	153	86.4%
Wet:	16	9.0%
Snow/Ice:	2	1.1%
Slush:	0	0.0%
Water/Sand:	1	0.6%
Repairing:	1	0.6%
Unspecified:	4	2.3%

<b>Type of Vehicle</b>	<b>#VEH</b>	<b>%</b>
Passenger Car:	266	73.3%
Bus:	11	3.0%
Truck:	31	8.5%
Taxi:	7	1.9%
Minivan:	0	0.0%
Police/Emergency Vehicle:	1	0.3%
Motorcycle/Moped:	4	1.1%
Bicycle:	0	0.0%
Fixed Object:	0	0.0%
Unspecified:	43	11.8%

<b>Accident Severity Type</b>	<b>#ACC</b>	<b>%</b>
Fatal Collision:	1	0.6%
Injury Collision:	59	33.3%
PDO Collision:	117	66.1%

<b>Light Condition</b>	<b>#ACC</b>	<b>%</b>
Daylight:	109	61.6%
Dawn/Dusk:	7	4.0%
Dark(Lighted):	49	27.7%
Dark(Not Lighted):	5	2.8%
Dark(Unknown Lighting):	0	0.0%
Unspecified:	7	4.0%

<b>Contributing Factor</b>	<b>#VEH</b>	<b>%</b>
Driver: Speed:	14	3.9%
Driver: Alcohol/Drug:	6	1.7%
Driver: Electronic Device:	2	0.6%
Driver: Others:	62	17.1%
Vehicle:	1	0.3%
Roadway:	2	0.6%
Unspecified:	276	76.0%

<b>Pedestrian Actions</b>	<b>#ACC</b>	<b>%</b>
In Crosswalk with Signal:	1	16.7%
In Crosswalk against Signal:	0	0.0%
In Crosswalk no Signal:	1	16.7%
In Unmarked Crosswalk:	0	0.0%
Not in Crosswalk:	2	33.3%
From Between Parked Cars:	0	0.0%
Unspecified:	2	33.3%

110 Records are not approved as of 12/31/2013 2:53:56 PM



DC Department of Transportation - Traffic Accident Reporting and Analysis System

## Accident Summary Report (R-8)

**Corridor:** KENILWORTH AVE,NE From EASTERN AVE,NE TO FBI:DC 295,NE

**Time Period Covered:** From 07/12/2009 To 07/12/2010

**Prepared By:** Rahul Jain

**Prepared Date:** 12/31/2010

Total Number of Accident:	61	<b>Collision Type</b>	<b>#ACC</b>	<b>%</b>	<b>Collision Type</b>	<b>#ACC</b>	<b>%</b>
Total Number of Fatalities:	0	Right Angle:	3	4.9%	Fixed Object:	2	3.3%
Total Number of Injuries:	33	Left Turn:	1	1.6%	Ran Off Road:	1	1.6%
Total Number of Disabling Injuries:	1	Right Turn:	1	1.6%	Ped. Involved:	2	3.3%
Total Number of NonDisabling Injuries:	5	Rear End:	27	44.3%	Backing:	3	4.9%
Total Number of Pedestrians Involved:	2	Side Swiped:	16	26.2%	Non Collision:	1	1.6%
Total Number of Bicycles Involved:	0	Head On:	0	0.0%	Under/Over Ride:	1	1.6%
Total Number of Motorcycles Involved:	0	Parked:	1	1.6%	Unspecified:	2	3.3%
<b>Time of Day</b>				<b>Day of week</b>			
	<b>#ACC</b>	<b>%</b>			<b>#ACC</b>	<b>%</b>	
07:30 ~ 09:30:	10	16.4%		Sunday:	4	6.6%	
09:30 ~ 11:30:	4	6.6%		Monday:	11	18.0%	
11:30 ~ 13:30:	5	8.2%		Tuesday:	10	16.4%	
13:30 ~ 16:00:	8	13.1%		Wednesday:	12	19.7%	
16:00 ~ 18:30:	10	16.4%		Thursday:	6	9.8%	
18:30 ~ 07:30:	24	39.3%		Friday:	7	11.5%	
Unspecified:	0	0.0%		Saturday:	11	18.0%	
<b>Weather Condition</b>				<b>Surface Condition</b>			
	<b>#ACC</b>	<b>%</b>			<b>#ACC</b>	<b>%</b>	
Clear:	51	83.6%		Dry:	52	85.2%	
Rain:	5	8.2%		Wet:	6	9.8%	
Snow:	0	0.0%		Snow/Ice:	0	0.0%	
Sleet/Hail:	0	0.0%		Slush:	0	0.0%	
Fog/Mist:	1	1.6%		Water/Sand:	0	0.0%	
Crosswind/Blowing Sand:	1	1.6%		Repairing:	2	3.3%	
Unspecified:	3	4.9%		Unspecified:	1	1.6%	
<b>Type of Vehicle</b>				<b>Accident Severity Type</b>			
	<b>#VEH</b>	<b>%</b>			<b>#ACC</b>	<b>%</b>	
Passenger Car:	94	77.0%		Fatal Collision:	0	0.0%	
Bus:	2	1.6%		Injury Collision:	20	32.8%	
Truck:	16	13.1%		PDO Collision:	41	67.2%	
Taxi:	3	2.5%		<b>Light Condition</b>			
Minivan:	0	0.0%			<b>#ACC</b>	<b>%</b>	
Police/Emergency Vehicle:	2	1.6%		Daylight:	37	60.7%	
Motorcycle/Moped:	0	0.0%		Dawn/Dusk:	1	1.6%	
Bicycle:	0	0.0%		Dark(Lighted):	21	34.4%	
Fixed Object:	0	0.0%		Dark(Not Lighted):	1	1.6%	
Unspecified:	5	4.1%		Dark(Unknown Lighting):	0	0.0%	
				Unspecified:	1	1.6%	
<b>Contributing Factor</b>				<b>Pedestrian Actions</b>			
	<b>#VEH</b>	<b>%</b>			<b>#ACC</b>	<b>%</b>	
Driver: Speed:	5	4.1%		In Crosswalk with Signal:	0	0.0%	
Driver: Alcohol/Drug:	2	1.6%		In Crosswalk against Signal:	0	0.0%	
Driver: Electronic Device:	0	0.0%		In Crosswalk no Signal:	1	50.0%	
Driver: Others:	21	17.2%		In Unmarked Crosswalk:	0	0.0%	
Vehicle:	0	0.0%		Not in Crosswalk:	1	50.0%	
Roadway:	1	0.8%		From Between Parked Cars:	0	0.0%	
Unspecified:	93	76.2%		Unspecified:	0	0.0%	

24 Records are not approved as of 12/31/2013 4:32:28 PM

DC Department of Transportation - Traffic Accident Reporting and Analysis System

## Accident Summary Report (R-8)

**Corridor:** KENILWORTH AVE,NE From EASTERN AVE,NE TO FBI:DC 295,NE

**Time Period Covered:** From 07/12/2010 To 07/12/2011

**Prepared By:** Rahul Jain

**Prepared Date:** 12/31/2011

		<b>Collision Type</b>	<b>#ACC</b>	<b>%</b>	<b>Collision Type</b>	<b>#ACC</b>	<b>%</b>
Total Number of Accident:	58	Right Angle:	2	3.4%	Fixed Object:	3	5.2%
Total Number of Fatalities:	0	Left Turn:	2	3.4%	Ran Off Road:	0	0.0%
Total Number of Injuries:	27	Right Turn:	3	5.2%	Ped. Involved:	2	3.4%
Total Number of Disabling Injuries:	3	Rear End:	22	37.9%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	6	Side Swiped:	21	36.2%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	3	Head On:	1	1.7%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	0	Parked:	1	1.7%	Unspecified:	1	1.7%
Total Number of Motorcycles Involved:	0						

<b>Time of Day</b>	<b>#ACC</b>	<b>%</b>
07:30 ~ 09:30:	9	15.5%
09:30 ~ 11:30:	3	5.2%
11:30 ~ 13:30:	3	5.2%
13:30 ~ 16:00:	11	19.0%
16:00 ~ 18:30:	13	22.4%
18:30 ~ 07:30:	19	32.8%
Unspecified:	0	0.0%

<b>Day of week</b>	<b>#ACC</b>	<b>%</b>
Sunday:	4	6.9%
Monday:	9	15.5%
Tuesday:	7	12.1%
Wednesday:	8	13.8%
Thursday:	10	17.2%
Friday:	9	15.5%
Saturday:	11	19.0%

<b>Weather Condition</b>	<b>#ACC</b>	<b>%</b>
Clear:	53	91.4%
Rain:	2	3.4%
Snow:	1	1.7%
Sleet/Hail:	0	0.0%
Fog/Mist:	1	1.7%
Crosswind/Blowing Sand:	1	1.7%
Unspecified:	0	0.0%

<b>Surface Condition</b>	<b>#ACC</b>	<b>%</b>
Dry:	53	91.4%
Wet:	2	3.4%
Snow/Ice:	2	3.4%
Slush:	0	0.0%
Water/Sand:	1	1.7%
Repairing:	0	0.0%
Unspecified:	0	0.0%

<b>Type of Vehicle</b>	<b>#VEH</b>	<b>%</b>
Passenger Car:	87	71.9%
Bus:	5	4.1%
Truck:	14	11.6%
Taxi:	4	3.3%
Minivan:	0	0.0%
Police/Emergency Vehicle:	1	0.8%
Motorcycle/Moped:	0	0.0%
Bicycle:	0	0.0%
Fixed Object:	0	0.0%
Unspecified:	10	8.3%

<b>Accident Severity Type</b>	<b>#ACC</b>	<b>%</b>
Fatal Collision:	0	0.0%
Injury Collision:	20	34.5%
PDO Collision:	38	65.5%

<b>Light Condition</b>	<b>#ACC</b>	<b>%</b>
Daylight:	38	65.5%
Dawn/Dusk:	2	3.4%
Dark(Lighted):	15	25.9%
Dark(Not Lighted):	2	3.4%
Dark(Unknown Lighting):	0	0.0%
Unspecified:	1	1.7%

<b>Contributing Factor</b>	<b>#VEH</b>	<b>%</b>
Driver: Speed:	4	3.3%
Driver: Alcohol/Drug:	2	1.7%
Driver: Electronic Device:	1	0.8%
Driver: Others:	25	20.7%
Vehicle:	0	0.0%
Roadway:	0	0.0%
Unspecified:	89	73.6%

<b>Pedestrian Actions</b>	<b>#ACC</b>	<b>%</b>
In Crosswalk with Signal:	0	0.0%
In Crosswalk against Signal:	0	0.0%
In Crosswalk no Signal:	1	50.0%
In Unmarked Crosswalk:	0	0.0%
Not in Crosswalk:	1	50.0%
From Between Parked Cars:	0	0.0%
Unspecified:	0	0.0%

35 Records are not approved as of 12/31/2013 4:34:11 PM