



District Department of Transportation

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

### Connecticut Avenue NW at Florida Avenue NW

#### Study Area and Location

District	PSA	Ward	ANC	Phase	Description
3	303	1 & 2	1C/2B	Planned	Connecticut Avenue Northwest Southbound at Florida Avenue



This *planned* speed camera is located in Wards 1 & 2 at the intersection of Connecticut Avenue Northwest and Florida Avenue in the southbound direction. Connecticut Avenue runs between Western Avenue Northwest to the north and K Street Northwest to the south. The posted speed limit is 30 MPH.

WO - 26





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## Connecticut Avenue NW at Florida Avenue NW

### Field Assessment Summary

Connecticut Avenue is assumed to run in a north-south direction, and is classified as Principal Arterial. Connecticut Avenue has four through lanes northbound and three through lanes southbound and a right turn lane southbound. Florida Avenue has two travel lanes in each direction. S Street Northwest is also on the east leg of the intersection, south of Florida Avenue and has one lane eastbound. This site has the following characteristics:

- This is a residential and commercial area with apartments and businesses.
- There is one school in the area: City Collegiate Public Charter.
- There is a traffic signal with pedestrian signals and crosswalks on all four legs of the intersection.
- There are concrete medians on the north and south legs and islands in the center of the intersection, the northeast corner, and the southeast corner.
- There is on-street parking on both sides of the south leg.



Looking Northbound



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## Connecticut Avenue NW at Florida Avenue NW



Looking Southbound

### Speed Data Analysis

Posted Speed Limit (MPH)	30
Mean Speed (MPH)	16
85th Percentile Speed (MPH)	22
10 MPH Pace Speed (MPH)	13-22
ADT	12,622

The mean speed is lower than the posted speed limit by 14 MPH and the 85<sup>th</sup> percentile speed is lower than the posted speed by 8 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 113 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 collisions at this location were Side Swipe (32 crashes) and Rear End (24 crashes). Each of the other collision types has 11 crashes or less.

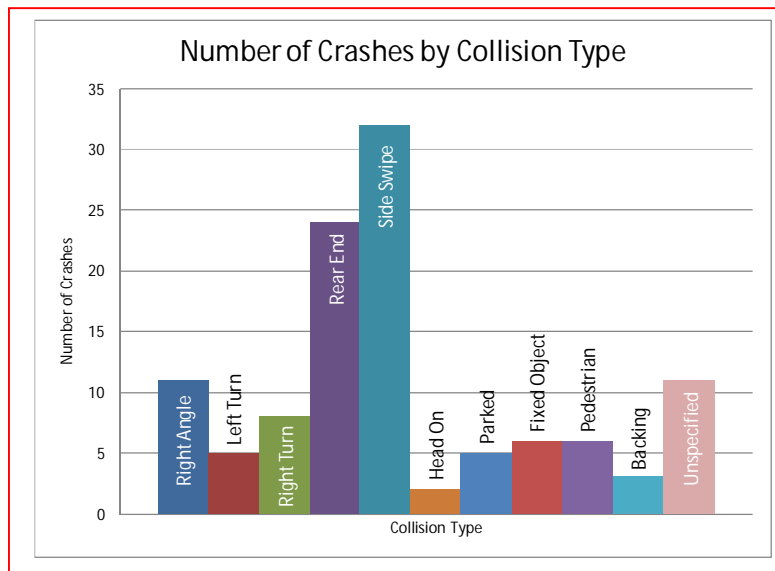




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## Connecticut Avenue NW at Florida Avenue NW

Severity			Weather			Surface condition			Light Condition		
Total	113										
Fatal	0	0.0%	Clear	97	85.8%	Dry	100	88.5%	Day	62	54.9%
Injury	26	23.0%	Rain	7	6.2%	Wet	9	8.0%	Night	47	41.6%
Taxi	37	32.7%	Snow	1	0.9%	Slush	0	0.0%			
Truck	12	10.6%									



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 Florida Avenue Corridor is listed as one of the top ten high frequency crash corridors from 2009 to 2011, according to the report *TRAFFIC SAFETY STATISTICS REPORT FOR THE DISTRICT OF COLUMBIA (2009-2011)*<sup>2</sup>.

### Safety Nexus

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

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

<sup>2</sup> DDOT, *TRAFFIC SAFETY STATISTICS REPORT FOR THE DISTRICT OF COLUMBIA (2009-2011)*, pg. 80.



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## Connecticut Avenue NW at Florida Avenue NW

1. Speed Data – The speed data analysis shows travel speeds being lower than the posted speed limit.
2. Crash Data – There was an elevated number of speed related crashes at this location, including side swipe and rear end collisions. There was a high frequency (26 crashes) of injury-related crashes in the area. The Florida Avenue Corridor is listed as one of the top ten high frequency crash corridors from 2009 to 2011.
3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
  - a. This is a residential and commercial area with apartments and businesses.
  - b. There is one school in the area: City Collegiate Public Charter.
  - c. There are several bus stops in the area which generate pedestrian activity.
  - d. There is on-street parking on both sides of the street on the south leg of the intersection.

Although the speed data analysis showed the mean and 85th percentile speeds to be lower than the posted speed limit, due to the elevated number of speed-related and injury-related crashes, the specific site characteristics, and pedestrian generators, 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)

## Connecticut Ave NW SB at Florida Ave Speed

SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/20/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	2	11	7	2	0	0	0	0	0	0	0	0	0	0	22
04:00	8	22	43	10	2	0	0	0	0	0	0	0	0	0	85
05:00	26	46	95	21	1	0	0	0	0	0	0	0	0	0	189
06:00	58	76	174	48	1	0	0	0	0	0	0	0	0	0	357
07:00	123	214	319	50	3	0	0	0	0	0	0	0	0	0	709
08:00	170	271	417	44	0	0	0	0	0	0	0	0	0	0	902
09:00	180	226	294	39	0	0	0	0	0	0	0	0	0	0	739
10:00	145	340	284	14	1	0	0	0	0	0	0	0	0	0	784
11:00	137	366	257	19	1	0	0	0	0	0	0	0	0	0	780
12 PM	158	389	201	11	0	0	0	0	0	0	0	0	0	0	759
13:00	181	463	122	6	0	0	0	0	0	0	0	0	0	0	772
14:00	109	333	190	13	1	0	0	0	0	0	0	0	0	0	646
15:00	107	304	208	19	1	0	0	0	0	0	0	0	0	0	639
16:00	230	396	144	8	0	0	0	0	0	0	0	0	0	0	778
17:00	187	388	209	6	1	0	0	0	0	0	0	0	0	0	791
18:00	182	380	140	5	0	0	0	0	0	0	0	0	0	0	707
19:00	224	374	98	2	0	0	0	0	0	0	0	0	0	0	698
20:00	123	302	93	3	0	0	0	0	0	0	0	0	0	0	521
21:00	141	309	99	5	0	0	0	0	0	0	0	0	0	0	554
22:00	72	256	147	8	1	0	0	0	0	0	0	0	0	0	484
23:00	43	170	109	8	0	0	0	0	0	0	0	0	0	0	330
Total	2606	5636	3650	341	13	0	0	0	0	0	0	0	0	0	12246

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SB

Start Time	1 15	16 20	21 25	26 30	31 35	36 40	41 45	46 50	51 55	56 60	61 65	66 70	71 75	76 999	Total
11/21/13	9	66	69	6	0	0	0	0	0	0	0	0	0	0	150
01:00	10	50	48	7	0	0	0	0	0	0	0	0	0	0	115
02:00	8	35	32	4	0	0	0	0	0	0	0	0	0	0	79
03:00	12	12	5	3	0	0	0	0	0	0	0	0	0	0	32
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
09:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
10:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
11:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
12 PM	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
13:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
14:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
15:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
16:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
17:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
18:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
19:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
20:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
21:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	39	163	154	20	0	0	0	0	0	0	0	0	0	0	376
Grand Total	2645	5799	3804	361	13	0	0	0	0	0	0	0	0	0	12622

15th Percentile : 8 MPH  
 50th Percentile : 15 MPH  
 85th Percentile : 22 MPH  
 95th Percentile : 24 MPH

Stats  
 Mean Speed(Average) : 16 MPH  
 10 MPH Pace Speed : 13-22 MPH  
 Number in Pace : 7052  
 Percent in Pace : 55.9%  
 Number of Vehicles > 30 MPH : 39  
 Percent of Vehicles > 30 MPH : 0.3%

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## Connecticut Ave NW SB at Florida Ave Volume

Start Time	Wed 20-Nov-13		Thu 21-Nov-13		Fri 22-Nov-13		Daily Average	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	202	45	*	*	*	45	202
12:15	*	191	41	*	*	*	41	191
12:30	*	203	41	*	*	*	41	203
12:45	*	163	23	*	*	*	23	163
01:00	*	203	38	*	*	*	38	203
01:15	*	169	33	*	*	*	33	169
01:30	*	212	19	*	*	*	19	212
01:45	*	188	25	*	*	*	25	188
02:00	*	184	32	*	*	*	32	184
02:15	*	184	19	*	*	*	19	184
02:30	*	137	16	*	*	*	16	137
02:45	*	141	12	*	*	*	12	141
03:00	*	153	13	*	*	*	13	153
03:15	*	165	19	*	*	*	19	165
03:30	10	150	*	*	*	*	10	150
03:45	12	171	*	*	*	*	12	171
04:00	16	204	*	*	*	*	16	204
04:15	17	194	*	*	*	*	17	194
04:30	19	192	*	*	*	*	19	192
04:45	33	188	*	*	*	*	33	188
05:00	27	211	*	*	*	*	27	211
05:15	43	191	*	*	*	*	43	191
05:30	55	209	*	*	*	*	55	209
05:45	64	180	*	*	*	*	64	180
06:00	67	210	*	*	*	*	67	210
06:15	79	156	*	*	*	*	79	156
06:30	95	191	*	*	*	*	95	191
06:45	116	150	*	*	*	*	116	150
07:00	119	225	*	*	*	*	119	225
07:15	171	181	*	*	*	*	171	181
07:30	175	155	*	*	*	*	175	155
07:45	244	137	*	*	*	*	244	137
08:00	227	125	*	*	*	*	227	125
08:15	223	128	*	*	*	*	223	128
08:30	238	155	*	*	*	*	238	155
08:45	214	113	*	*	*	*	214	113
09:00	168	123	*	*	*	*	168	123
09:15	187	156	*	*	*	*	187	156
09:30	208	142	*	*	*	*	208	142
09:45	176	133	*	*	*	*	176	133
10:00	194	150	*	*	*	*	194	150
10:15	175	127	*	*	*	*	175	127
10:30	211	109	*	*	*	*	211	109
10:45	204	98	*	*	*	*	204	98
11:00	211	112	*	*	*	*	211	112
11:15	186	79	*	*	*	*	186	79
11:30	185	79	*	*	*	*	185	79
11:45	198	60	*	*	*	*	198	60
Total	4567	7679	376	0	0	0	4943	7679
Combined Total	12246		376		0		12622	
Peak	07:45	04:45	12:00				07:45	04:45
Vol.	932	799	150				932	799
P.H.F.	0.955	0.947	0.833				0.955	0.947
ADT	ADT 12,622		AADT 12,622					



DC Department of Transportation - Traffic Accident Reporting and Analysis System

## Accident Summary Report (R-8)

**Corridor:** CONNECTICUT AVE,NW From BANCROFT PL,NW TO R ST,NW

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

**Prepared By:** Rahul Jain

**Prepared Date:** 11/25/2012

Total Number of Accident:	113	<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:	11	9.7%	Fixed Object:	6	5.3%	
Total Number of Injuries:	32	Left Turn:	5	4.4%	Ran Off Road:	0	0.0%	
Total Number of Disabling Injuries:	4	Right Turn:	8	7.1%	Ped. Involved:	6	5.3%	
Total Number of NonDisabling Injuries:	6	Rear End:	24	21.2%	Backing:	3	2.7%	
Total Number of Pedestrians Involved:	4	Side Swiped:	32	28.3%	Non Collision:	0	0.0%	
Total Number of Bicycles Involved:	9	Head On:	2	1.8%	Under/Over Ride:	0	0.0%	
Total Number of Motorcycles Involved:	1	Parked:	5	4.4%	Unspecified:	11	9.7%	
<b>Time of Day</b>				<b>#ACC</b>	<b>%</b>	<b>Day of week</b>		
07:30 ~ 09:30:				9	8.0%	Sunday:		
09:30 ~ 11:30:				13	11.5%	Monday:		
11:30 ~ 13:30:				10	8.8%	Tuesday:		
13:30 ~ 16:00:				10	8.8%	Wednesday:		
16:00 ~ 18:30:				19	16.8%	Thursday:		
18:30 ~ 07:30:				52	46.0%	Friday:		
Unspecified:				0	0.0%	Saturday:		
12				10.6%	14		12.4%	
18				15.9%	10		8.8%	
14				12.4%	21		18.6%	
24				21.2%				
<b>Weather Condition</b>				<b>#ACC</b>	<b>%</b>	<b>Surface Condition</b>		
Clear:				97	85.8%	Dry:		
Rain:				7	6.2%	Wet:		
Snow:				1	0.9%	Snow/Ice:		
Sleet/Hail:				0	0.0%	Slush:		
Fog/Mist:				0	0.0%	Water/Sand:		
Crosswind/Blowing Sand:				2	1.8%	Repairing:		
Unspecified:				6	5.3%	Unspecified:		
100				88.5%	9		8.0%	
0				0.0%	0		0.0%	
0				0.0%	0		0.0%	
0				0.0%	0		0.0%	
0				0.0%	0		0.0%	
4				3.5%				
<b>Type of Vehicle</b>				<b>#VEH</b>	<b>%</b>	<b>Accident Severity Type</b>		
Passenger Car:				126	60.6%	Fatal Collision:		
Bus:				11	5.3%	Injury Collision:		
Truck:				12	5.8%	PDO Collision:		
Taxi:				37	17.8%	87		77.0%
Minivan:				0	0.0%	<b>Light Condition</b>		
Police/Emergency Vehicle:				4	1.9%	Daylight:		
Motorcycle/Moped:				1	0.5%	Dawn/Dusk:		
Bicycle:				9	4.3%	Dark(Lighted):		
Fixed Object:				0	0.0%	Dark(Not Lighted):		
Unspecified:				8	3.8%	Dark(Unknown Lighting):		
0				0.0%	0		0.0%	
4				3.5%				
<b>Contributing Factor</b>				<b>#VEH</b>	<b>%</b>	<b>Pedestrian Actions</b>		
Driver: Speed:				3	1.4%	In Crosswalk with Signal:		
Driver: Alcohol/Drug:				0	0.0%	In Crosswalk against Signal:		
Driver: Electronic Device:				2	1.0%	In Crosswalk no Signal:		
Driver: Others:				41	19.7%	In Unmarked Crosswalk:		
Vehicle:				0	0.0%	Not in Crosswalk:		
Roadway:				1	0.5%	From Between Parked Cars:		
Unspecified:				161	77.4%	Unspecified:		
0				0.0%	1		25.0%	
2				50.0%	0		0.0%	
0				0.0%	0		0.0%	
1				25.0%	0		0.0%	
0				0.0%	0		0.0%	
0				0.0%				

70 Records are not approved as of 11/25/2013 4:39:45 PM