



Speed Limit and Safety Nexus Studies for Automated Enforcement Locations in the District of Columbia 1700 Block C Street NE

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
1	108	6	6A	Existing	1700 Block C Street Northeast Westbound



This existing speed camera is located in Ward 6 at the 1700 block of C Street Northeast in the westbound direction. C Street runs between 6th Street Northwest to the east and East Capitol Street Northeast to the west. The posted speed limit is 25 MPH. This speed camera was installed on January 2008.





Field Assessment Summary

C Street Northeast is assumed to run in an East-West direction, and is classified as Minor Arterial. C Street has two travel lanes in each direction and a left turn lane westbound. This site has the following characteristics:

- This is a residential area with houses.
- There are three schools in the area: Eliot-Hine Middle School, Eastern Senior High School, and Options Charter School.
- The road has a grassy median and sidewalk on both sides of the street.
- There are crosswalks at 18th Street and 17th Street. There are also traffic signals and pedestrian signals at 18th Street and 17th Street.
- The drainage type is curb and gutter with drainage inlets and the pavement is in fair condition with transverse pavement markings
- There is on-street parking on both sides of the street and bicycle lanes in both directions between the travel lanes and the street parking.
- There is a bus stop eastbound just after 17th Place.



Looking Eastbound





Speed Data Analysis

Posted Speed Limit (MPH)	25
Mean Speed (MPH)	24
85th Percentile Speed (MPH)	30
10 MPH Pace Speed	22-31
ADT	6,782

The mean speed is 1 MPH lower than the posted speed limit, and the 85th percentile speed is 5 MPH above the posted speed limit.

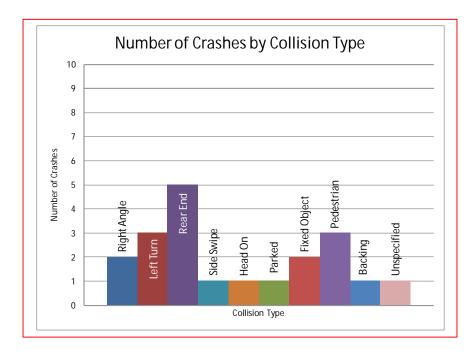
Crash Data Analysis

From the Accident Summary Report provided for the dates between January 1, 2010 and December 31, 2012, there were a total of 20 crashes at this location. A breakdown of collision type can be found in the chart on the next page. The most common type of collision at this location was Rear End (5 crashes). The other collision types had three crashes or less each. Furthermore, this site experienced a high frequency (10 crashes) of injury-related crashes.



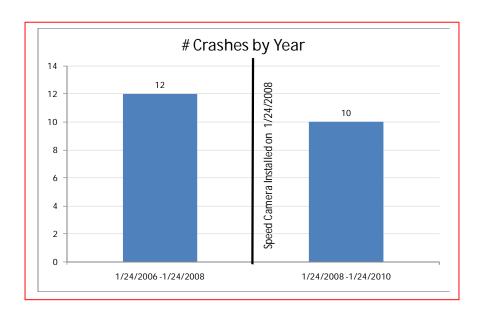
	1	700	Block	C	Street	NE
--	---	-----	-------	---	--------	----

Sev	Severity Weather				Surface	conditi	on	Light Condition			
Total	20										
Fatal	0	0.0%	Clear	14	70.0%	Dry	15	75.0%	Day	12	60.0%
Injury	10	50.0%	Rain	3	15.0%	Wet	4	20.0%	Night	8	40.0%
Truck	2	10.0%	Snow	1	5.0%	Snow/Ice	1	5.0%			
Bicycle	2	10.0%									



The camera was installed on 1-24-2008. The graph on the next page shows the number of crashes in the two years prior to the speed camera's installation (12 crashes) and the two years after the speed camera's installation (10 crashes). There was a decrease in the number of crashes after the installation of the camera.





Safety Nexus

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

- 1. Speed Data The 85th percentile speed is higher than the posted speed limit at this location.
- 2. Crash Data This location experienced a high frequency (10 crashes) of injury related crashes. There was a decrease in the number of crashes after the installation of the camera.
- 3. Field Assessment The following site characteristics suggest a need for a safer travel environment:
 - a. This site is located in a residential area with houses.
 - b. There are three schools in the area: Eliot-Hine Middle School, Eastern Senior High School, and Options Charter School.
 - c. There are several bus stops that generate pedestrian activity.
 - d. There are bicycle lanes in both directions on this road.
 - e. There is on-street parking in this area.

Due to the speed data analysis, the elevated number of injury-related crashes, the specific site characteristics, the proximity of schools to the site, and other 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

1700 block of C St NE WB Speed

WB															
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/15/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	13	17	58	64	12	0	1	0	0	0	0	0	0	0	165
Total	13	17	58	64	12	0	1	0	0	0	0	0	0	0	165

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD MOUNT AIRY, MD 21771

www.sammateng.com

1700 block of C St NE WB Speed

WB															
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/16/13	13	4	37	32	16	2	0	0	0	0	0	0	0	0	104
01:00	9	6	18	14	10	1	0	0	0	0	0	0	0	0	58
02:00	4	5	13	22	7	0	0	0	0	0	0	0	0	0	51
03:00	3	4	14	17	4	0	0	0	0	0	0	0	0	0	42
04:00	3	4	15	11	13	2	0	0	0	0	0	0	0	0	48
05:00	2	1	28	52	34	7	1	0	0	0	0	0	0	0	125
06:00	10	5	33	79	59	12	1	0	0	0	0	0	0	0	199
07:00	29	16	49	111	58	9	5	1	0	0	0	0	0	0	278
08:00	53	16	74	143	47	15	1	0	0	0	0	0	0	0	349
09:00	54	31	78	169	65	14	0	1	0	0	0	0	0	0	412
10:00	43	15	88	189	80	18	1	0	0	0	0	0	0	0	434
11:00	37	35	112	201	53	8	0	0	0	0	0	0	0	0	446
12 PM	40	27	85	185	59	9	2	0	0	0	0	0	0	0	407
13:00	45	21	142	165	77	11	4	0	0	0	0	0	0	0	465
14:00	38	29	135	169	82	13	1	0	0	0	0	0	0	0	467
15:00	31	13	108	202	83	14	0	0	0	0	0	0	0	0	451
16:00	15	24	110	169	73	13	1	1	0	0	0	0	0	0	406
17:00	35	33	125	166	59	12	2	1	0	0	0	0	0	0	433
18:00	49	50	172	138	40	6	1	0	0	0	0	0	0	0	456
19:00	40	40	75	123	30	3	0	0	0	0	0	0	0	0	311
20:00	23	27	66	102	35	2	0	0	0	0	0	0	0	0	255
21:00	21	24	46	77	43	3	0	0	0	0	0	0	0	0	214
22:00	17	19	45	91	28	5	1	0	0	0	0	0	0	0	206
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	614	449	1668	2627	1055	179	21	4	0	0	0	0	0	0	6617
Grand Total	627	466	1726	2691	1067	179	22	4	0	0	0	0	0	0	6782

 15th Percentile:
 12 MPH

 50th Percentile:
 25 MPH

 85th Percentile:
 30 MPH

 95th Percentile:
 34 MPH

 Stats
 Mean Speed(Average) :
 24 MPH

 10 MPH Pace Speed :
 22-31 MPH

 Number in Pace :
 3762

 Number in Pace :
 3762

 Percent in Pace :
 55.5%

 Number of Vehicles > 25 MPH :
 3471

 Percent of Vehicles > 25 MPH :
 51.2%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD MOUNT AIRY, MD 21771

www.sammateng.com

1700 block of C St NE WB Volume

Start	Fri	15-Nov-13	Sat	16-Nov-13	Sun	17-Nov-13	Daily Av	/erage
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	32	105	*	*	32	105
12:15	*	*	22	112	*	*	22	112
12:30	*	*	23 27	104	*	*	23 27	104
12:45	*	*	27	86	*	*	27	86
01:00	*	*	13	139	*	*	13	139
01:15	*	*	12	95	*	*	12	95
01:30	*	*	14	120	*	*	14	120
01:45	*	*	19	111	*	*	14 19	111
02:00	*	*	9	111	*	*	9	111
02:15	*	*	20	128	*	*	20	128
02:30	*	*	14	114	*	*	14	114
02:45	*	*	8	114	*	*	8	114
03:00	*	*	10	120	*	*	8 10	120
03:15	*	*	11	107	*	*	11	107
03:30	*	*	11	120	*	*	11	120
03:45	*	*	10	104	*	*	10	104
04:00	*	*	6	93	*	*	6	93
04:00	*	*	11	102	*	*	6 11	102
04:13	*	*		109	*	*	13	102
04:45	*	*	13 18	102	*	*	18	109
05:00	*	*	17	110	*	*	17	1102
	*	*	17		*	*	17	
05:15	*	*	27	120	*	*	27	120
05:30	*	*	37	91	*	*	37	91
05:45	*	*	44	112	*	*	44	112
06:00	*	*	48	116	*	*	48	116
06:15	*	*	38	118	*	*	38	118
06:30	*	*	54 59	117	*	*	54	117
06:45		*	59	105			59	105
07:00	*	*	45 65	96	*	*	45	96
07:15			65	72			65	72
07:30	*	*	82	79	*	*	82	79
07:45	*	*	86	64	*	*	86	64
08:00	*	*	94	60	*	*	94	60
08:15	*	*	74	63	*	*	74	63
08:30	*	*	86	56	*	*	86	56
08:45	*	*	95	76	*	*	95	76
09:00	*	*	106	68	*	*	106	68
09:15	*	*	100	40	*	*	100	40
09:30	*	*	107	48	*	*	107	48
09:45	*	*	99	58	*	*	99	58
10:00	*	*	106	48	*	*	106	48
10:15	*	*	104	57	*	*	104	57
10:30	*	*	116	47	*	*	116	47
10:45	*	*	108	54	*	*	108	54
11:00	*	53	113	*	*	*	113	53
11:15	*	42	101	*	*	*	101	42
11:30	*	31	114	*	*	*	114	31
11:45	*	39	118	*	*	*	118	39
Total	0	165	2546	4071	0	0	2546	4236
Combined								
Total	10	65	66	17	0		6782	
Peak		11:00	11:00	02:15			11:00	02:15
Vol.		165	446	476			446	476
P.H.F.		0.778	0.945	0.930			0.945	0.930
ADT		ADT 6,782	AADT 6,782				0.070	0.550
ADT		AD1 0,/82	AADI 0,/82	•				

Accident Summary Report (R-8)

Time Period Covered:	From 01/01/20	10 To 12/31	/2012 Pre j	pared By:	Rahul Jain	Prepared Da	te: 9	/15/201
Total Number of Accident:		20	Collision Ty	pe #ACC	%	Collision Type	#ACC	o,
Total Number of Fatalities:		0	Right Angle:	2	10.0%	Fixed Object:	2	10.09
Total Number of Injuries:		11	Left Turn:	3	15.0%	Ran Off Road:	0	0.09
Total Number of Disabling	Injuries:	1	Right Turn:	0	0.0%	Ped. Involved:	3	15.0%
Total Number of NonDisab	•	2	Rear End:	5	25.0%	Backing:	1	5.0%
Total Number of Pedestria		2	Side Swiped	: 1		Non Collision:	0	0.0%
Total Number of Bicycles In	nvolved:	2	Head On:	1	5.0%	Jnder/Over Ride:	0	0.0%
Total Number of Motorcycle		0	Parked:	1		Inspecified:	1	5.0%
Time of Day	#ACC	<u>-</u> %			Day o fweek	#AC	С	9,
07:30 ~ 09:30:	1	5.0%			Sunday:	2		10.0%
09:30 ~ 11:30:	3	15.0%			Monday:	2		10.0%
11:30 ~ 13:30:	0	0.0%			Tuesday:	3		15.0%
13:30 ~ 16:00:	3	15.0%			Wednesday:	3		15.0%
16:00 ~18:30:	1	5.0%			Thursday:	3		15.0%
18:30 ~ 07:30:	12	60.0%			Friday:	4		20.0%
Unspecified:	0	0.0%			Saturday:	3		15.0%
Weather Condition	#ACC	%			Surface Condition	#AC	c	9/
Clear:	14	70.0%			Dry:	15		75.0%
Rain:	3	15.0%			Wet:	4		20.0%
Snow:	1	5.0%			Snow/Ice:	1		5.0%
Sleet/Hail:	0	0.0%			Slush:	0		0.0%
Fog/Mist:	1	5.0%			Water/Sand:	0		0.0%
Crosswind/Blowing Sand:	0	0.0%			Repairing:	0		0.0%
Unspecified:	1	5.0%			Unspecified:	0		0.0%
Type of Vehicle	#VEH	%			Accident Severity	Type #AC	С	9/
Passenger Car:	26	76.5%			Fatal Collision:	0		0.0%
Bus:	0	0.0%			Injury Collision:	10		50.0%
Truck:	2	5.9%			PDO Collision:	10		50.0%
Taxi:	1	2.9%						
Minivan:	0	0.0%			Light Condition	#AC	С	9/
Police/Emergency Vehicle:	0	0.0%			Daylight:	12		60.0%
Motorcycle/Moped:	0	0.0%			Dawn/Dusk:	0		0.0%
Bicycle:	2	5.9%			Dark(Lighted):	8		40.0%
Fixed Object:	0	0.0%			Dark(Not Lighted):	0		0.0%
Unspecified:	3	8.8%			Dark(Unknown Ligh	ting): 0		0.0%
споресписа.	Ü	0.070			Unspecified:	0		0.0%
Contributing Factor	#VEH	%			Pedestrian Actions	s #AC	С	9
Driver: Speed:	2	5.9%			In Crosswalk with S	ignal: 0		0.0%
Driver: Alcohol/Drug:	0	0.0%			In Crosswalk agains	st Signal: 0		0.0%
Driver: Electronic Device:	0	0.0%			In Crosswalk no Sig	nal: 0		0.0%
Driver: Others:	7	20.6%			In Unmarked Cross	walk: 0		0.0%
Vehicle:	0	0.0%			Not in Crosswalk:	1		50.0%
Roadway:	0	0.0%			From Between Park	ed Cars: 0		0.0%
Unspecified:	25	73.5%			Unspecified:	1		50.0%

¹² Records are not approved as of 9/15/2013 11:14:06 AM

Accident Summary Report (R-8)

	rom 01/23/20		NE TO SIXTEENT //2008 Prepare		Rahul Jain	Prepared Da	ite: 1	1/19/20
Total Number of Accident:		12	Collision Type	#ACC	%	Collision Type	#ACC	9
Total Number of Fatalities:		0	Right Angle:	0	0.0%	Fixed Object:	0	0.0%
Total Number of Injuries:		6	Left Turn:	2	16.7%	Ran Off Road:	0	0.0%
Total Number of Disabling I	njuries:	0	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of NonDisabl	ing Injuries:	2	Rear End:	3	25.0%	Backing:	0	0.0%
Total Number of Pedestrian		0	Side Swiped:	5	41.7%	Non Collision:	0	0.0%
Total Number of Bicycles In	volved:	0	Head On:	0	0.0%	Under/Over Ride	0	0.0%
Total Number of Motorcycle	es Involved:	0	Parked:	0	0.0%	Unspecified:	2	16.7%
Time of Day	#ACC	%			Day o fweek	#AC	C C	9/
07:30 ~ 09:30:	0	0.0%			Sunday:	1		8.3%
09:30 ~ 11:30:	3	25.0%			Monday:	2		16.7%
11:30 ~ 13:30:	1	8.3%			Tuesday:	2		16.7%
13:30 ~ 16:00:	3	25.0%			Wednesday:	2		16.7%
16:00 ~18:30:	2	16.7%			Thursday:	2		16.7%
18:30 ~ 07:30:	3	25.0%			Friday:	2		16.7%
Unspecified:	0	0.0%			Saturday:	1		8.3%
Weather Condition	#ACC	%			Surface Condition	#AC	:C	%
Clear:	10	83.3%			Dry:	10		83.3%
Rain:	0	0.0%			Wet:	1		8.3%
Snow:	1	8.3%			Snow/Ice:	1		8.3%
Sleet/Hail:	0	0.0%			Slush:	0		0.0%
Fog/Mist:	0	0.0%			Water/Sand:	0		0.0%
Crosswind/Blowing Sand:	0	0.0%			Repairing:	0		0.0%
Unspecified:	1	8.3%			Unspecified:	0		0.0%
Type of Vehicle	#VEH	%			Accident Severity	Type #AC	:C	%
Passenger Car:	19	76.0%			Fatal Collision:	0		0.0%
Bus:	1	4.0%			Injury Collision:	5		41.7%
Truck:	2	8.0%			PDO Collision:	7		58.3%
Taxi:	0	0.0%						
Minivan:	0	0.0%			Light Condition	#AC	C	%
Police/Emergency Vehicle:	1	4.0%			Daylight:	8		66.7%
Motorcycle/Moped:	0	0.0%			Dawn/Dusk:	1		8.3%
Bicycle:	0	0.0%			Dark(Lighted):	0		0.0%
Fixed Object:	0	0.0%			Dark(Not Lighted):	0		0.0%
Unspecified:	2	8.0%			Dark(Unknown Ligh	nting): 3		25.0%
					Unspecified:	0		0.0%
Contributing Factor	#VEH	%			Pedestrian Action	s #AC	C	%
Driver: Speed:	0	0.0%	I		In Crosswalk with S	ignal: 0		0.0%
Driver: Alcohol/Drug:	0	0.0%			In Crosswalk again	-		0.0%
Driver: Electronic Device:	0	0.0%			In Crosswalk no Sig	gnal: 0		0.0%
Driver: Others:	8	32.0%			In Unmarked Cross	walk: 0		0.0%
Vehicle:	0	0.0%			Not in Crosswalk:	0		0.0%
Roadway:	0	0.0%			From Between Parl	ked Cars: 0		0.0%
Unspecified:	17	68.0%			Unspecified:	0		0.0%

¹² Records are not approved as of 11/19/2013 3:12:10 PM

Accident Summary Report (R-8)

	rom 01/24/20		NE TO SIXTEEN ⁻ /2010 Prepar		Rahul Jain	Prepared Da	ite: 1	1/19/20
Total Number of Accident:		10	Collision Type	#ACC	%	Collision Type	#ACC	9,
Total Number of Fatalities:		0	Right Angle:	2		Fixed Object:	1	10.0%
Total Number of Injuries:		2	Left Turn:	1	10.0%	Ran Off Road:	0	0.0%
Total Number of Disabling I	njuries:	0	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of NonDisabl	ing Injuries:	1	Rear End:	4	40.0%	Backing:	0	0.0%
Total Number of Pedestrian		0	Side Swiped:	2	20.0%	Non Collision:	0	0.0%
Total Number of Bicycles In	volved:	0	Head On:	0	0.0%	Under/Over Ride	: 0	0.0%
Total Number of Motorcycle	es Involved:	0	Parked:	0	0.0%	Unspecified:	0	0.0%
Time of Day	#ACC				Day o fweek	#AC	c	9/
07:30 ~ 09:30:	3	30.0%			Sunday:	0		0.0%
09:30 ~ 11:30:	0	0.0%			Monday:	2		20.0%
11:30 ~ 13:30:	2	20.0%			Tuesday:	2		20.0%
13:30 ~ 16:00:	0	0.0%			Wednesday:	4		40.0%
16:00 ~18:30:	0	0.0%			Thursday:	1		10.0%
18:30 ~ 07:30:	5	50.0%			Friday:	1		10.0%
Unspecified:	0	0.0%			Saturday:	0		0.0%
Weather Condition	#ACC	%			Surface Condition	n #AC	:C	%
Clear:	9	90.0%			Dry:	8		80.0%
Rain:	1	10.0%			Wet:	2		20.0%
Snow:	0	0.0%			Snow/Ice:	0		0.0%
Sleet/Hail:	0	0.0%			Slush:	0		0.0%
Fog/Mist:	0	0.0%			Water/Sand:	0		0.0%
Crosswind/Blowing Sand:	0	0.0%			Repairing:	0		0.0%
Unspecified:	0	0.0%			Unspecified:	0		0.0%
Type of Vehicle	#VEH	%			Accident Severity	Type #AC	c	%
Passenger Car:	14	66.7%			Fatal Collision:	0		0.0%
Bus:	2	9.5%			Injury Collision:	2		20.0%
Truck:	0	0.0%			PDO Collision:	8		80.0%
Taxi:	0	0.0%						
Minivan:	0	0.0%			Light Condition	#AC	C	%
Police/Emergency Vehicle:	1	4.8%			Daylight:	10		100.0%
Motorcycle/Moped:	0	0.0%			Dawn/Dusk:	0		0.0%
Bicycle:	0	0.0%			Dark(Lighted):	0		0.0%
Fixed Object:	0	0.0%			Dark(Not Lighted):	0		0.0%
Unspecified:	4	19.0%			Dark(Unknown Ligh	nting): 0		0.0%
	·	101070			Unspecified:	0		0.0%
Contributing Factor	#VEH	%			Pedestrian Action	s #AC	:C	%
Driver: Speed:	0	0.0%			In Crosswalk with S	Signal: 0		0.0%
Driver: Alcohol/Drug:	0	0.0%			In Crosswalk again	st Signal: 0		0.0%
Driver: Electronic Device:	0	0.0%			In Crosswalk no Sig	gnal: 0		0.0%
Driver: Others:	2	9.5%			In Unmarked Cross	swalk: 0		0.0%
Vehicle:	1	4.8%			Not in Crosswalk:	0		0.0%
Roadway:	0	0.0%			From Between Par	ked Cars: 0		0.0%
Unspecified:	18	85.7%			Unspecified:	0		0.0%