



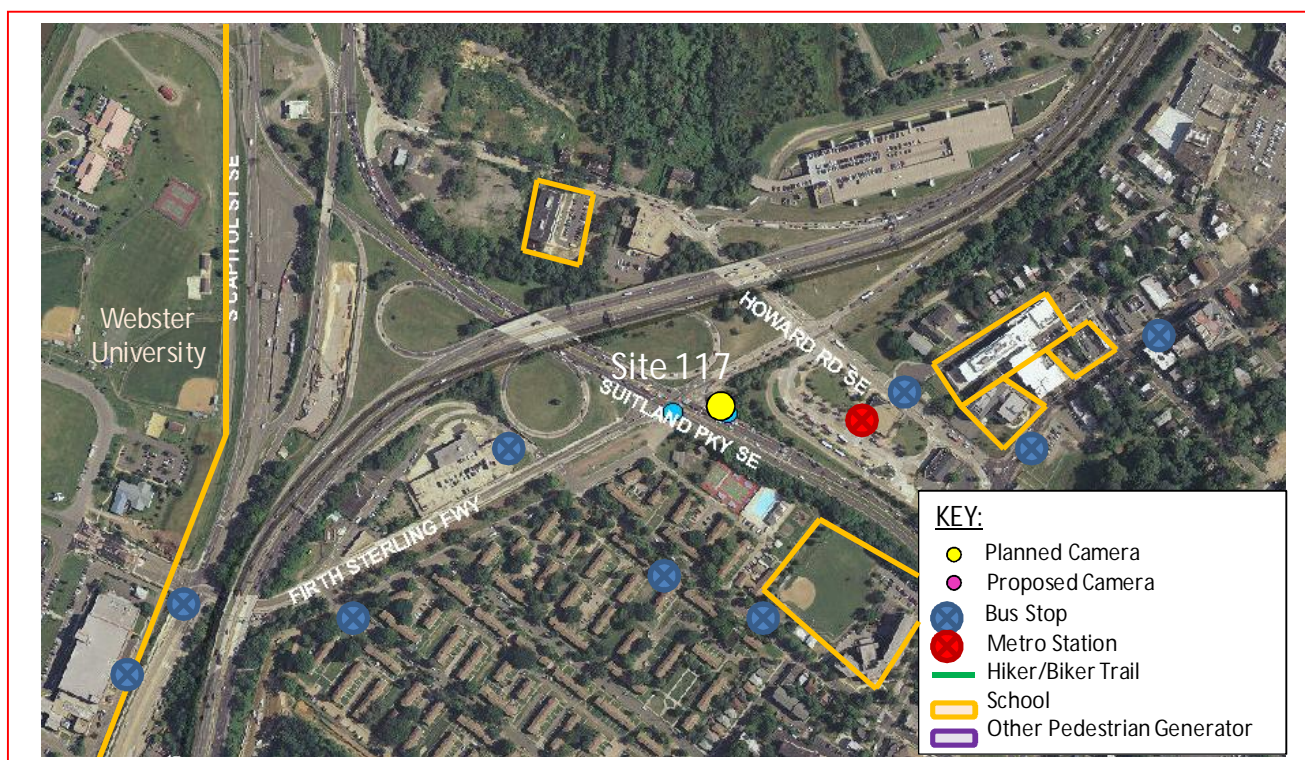
District Department of Transportation

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

### Suitland Parkway at Firth Sterling Road SE

#### Study Area and Location

District	PSA	Ward	ANC	Phase	Description
7	703	8	8C	Planned	Suitland Parkway Eastbound at Firth Sterling Road Southeast



The *planned* speed camera is located in Ward 8 at the intersection of Suitland Parkway and Firth Sterling Road Southeast in the eastbound direction. Suitland Parkway runs between Pennsylvania Avenue to the east and Anacostia Freeway to the west. The posted speed limit is 45 MPH.

W8 - 82





District Department of Transportation

## Suitland Parkway at Firth Sterling Road SE

### Field Assessment Summary

Suitland Parkway is assumed to run in an east-west direction and is classified as a freeway/expressway. Suitland Parkway has two through lanes, a left turn lane, and a right turn lane in each direction. Firth Sterling Road Southeast has a through lane and a right turn lane in the northbound direction and a through and right lane and a left turn lane in the southbound direction. This site has the following characteristics:

- The Anacostia Metrorail Station is located in the northeast corner of the intersection.
- Barry Farm Recreation Center is in the southeast corner of the intersection.
- There are six schools in the area: Webster University, Howard Road Academy, Birney Elementary School, Excel Academy Public Charter School, Savory Elementary School, and Thurgood Marshall Academy Public Charter High School.
- The intersection has a traffic signal with pedestrian signals and a crosswalk on the east leg.
- There is sidewalk on both sides of the south leg.
- There are concrete medians on the east and west legs and islands in the southeast and southwest corners and two islands in the northeast corner.
- The pavement is in poor condition and there is curb and gutter with drainage inlets.



Looking Eastbound



District Department of Transportation

## Suitland Parkway at Firth Sterling Road SE



Looking Westbound

### Speed Data Analysis

Posted Speed Limit (MPH)	45
Mean Speed (MPH)	21
85th Percentile Speed (MPH)	35
10 MPH Pace	4-13
ADT	13,702

The mean speed is 24 MPH slower than the posted speed limit and the 85<sup>th</sup> percentile speed is 10 MPH lower than 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 204 crashes at this location. A summary 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 (85 crashes), Left Turn (35 crashes), Side Swipe (26 crashes) and Right Angle (14 crashes). Furthermore, this site experienced a very high frequency (111 crashes) of injury-related crashes.

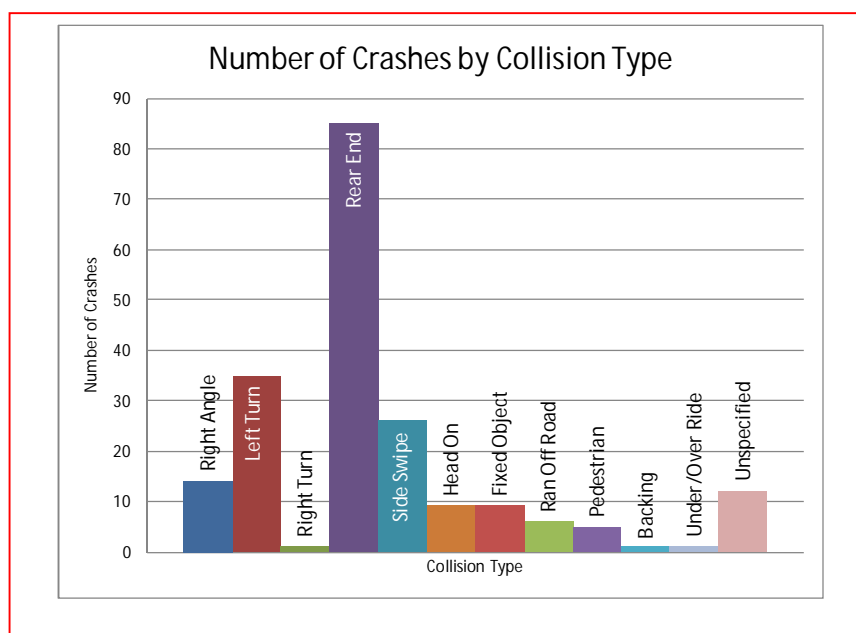




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## Suitland Parkway at Firth Sterling Road SE

Severity			Weather			Surface condition			Light Condition		
Total	204										
Fatal	1	0.5%	Clear	171	83.8%	Dry	165	80.9%	Day	111	54.4%
Injury	111	54.4%	Rain	22	10.8%	Wet	25	12.3%	Night	79	38.7%
Truck	27	13.2%	Snow	3	1.5%	Snow/Ice	4	2.0%			
Police/EMS	8	3.9%									



There were an elevated number of speed-related crashes at this location, including Rear End crashes. The *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” as two errors leading to Rear End crashes.<sup>1</sup> Both of these errors can be reduced with a decrease in travel speed.

The Suitland Parkway at Firth Sterling Road Southeast intersection is listed as one of the Top 20 hazardous intersections from 2009 to 2011, according to the *Traffic Safety Statistics Report for the District of Columbia (2009-2011)*.<sup>2</sup> This site is listed in the Top 5 percent high accident locations in the District from 2010 to 2012.<sup>3</sup>

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

<sup>2</sup> DDOT, *Traffic Safety Statistics Report for the District of Columbia (2009-2011)*, page 70.

<sup>3</sup> DDOT, *Top 5 Percent High Accident Locations*, 2010-2012.



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## Suitland Parkway at Firth Sterling Road SE

### Safety Nexus

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

1. Speed Data – The speed data analysis shows travel speeds being lower than the posted speed limit.
2. Crash Data – There were an elevated number of speed-related crashes at this location, including Rear End crashes, as well as a very high frequency (111 crashes) of injury-related crashes. This intersection is listed as one of the Top 20 hazardous intersections from 2009 to 2011 and is listed in the Top 5 percent high accident locations in the District from 2010 to 2012.
3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
  - a. There are six schools in the area: Webster University, Howard Road Academy, Birney Elementary School, Excel Academy Public Charter School, Savory Elementary School, and Thurgood Marshall Academy Public Charter High School.
  - b. There are several bus stops and one bus station and Metro station which generate pedestrian activity.
  - c. The Berry Farm Recreation Center is in the area which generates pedestrian and bicycle activity.

Although the speed data analysis showed the mean and 85<sup>th</sup> percentile speeds to be lower than the posted speed limit, due to the elevated number of speed-related crashes and injury-related crashes, the designation as a high accident location, 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](http://www.sammateng.com)

## Suitland Pkwy EB at Firth Sterling SE Speed

EB

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
11/24/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	77	0	3	27	149	124	15	3	0	0	0	0	0	0	398
23:00	89	0	1	39	156	138	21	1	0	0	0	0	0	0	445
Total	166	0	4	66	305	262	36	4	0	0	0	0	0	0	843

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## Suitland Pkwy EB at Firth Sterling SE Speed

EB

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
11/25/13	58	0	2	16	72	126	19	2	0	0	0	0	0	0	295
01:00	26	0	2	11	31	49	10	1	0	0	0	0	0	0	130
02:00	14	0	2	8	32	25	6	0	0	0	0	0	0	0	87
03:00	11	0	0	5	25	16	8	0	0	0	0	0	0	0	65
04:00	30	0	0	2	30	40	10	3	1	0	0	0	0	0	116
05:00	63	0	0	17	109	97	13	1	0	0	0	0	0	0	300
06:00	119	0	1	32	200	172	26	0	0	0	0	0	0	0	550
07:00	142	1	5	70	322	187	23	2	0	0	0	0	0	0	752
08:00	140	1	9	68	264	227	34	3	0	0	0	0	0	0	746
09:00	153	0	4	39	274	185	22	1	0	0	0	0	0	0	678
10:00	186	1	1	45	282	198	19	1	0	0	0	0	0	0	733
11:00	205	0	7	89	323	192	31	1	0	0	0	0	0	0	848
12 PM	254	0	5	83	406	218	16	2	0	0	0	0	0	0	984
13:00	240	10	31	163	405	183	14	1	0	0	0	0	0	0	1047
14:00	404	90	87	58	57	16	1	0	0	0	0	0	0	0	713
15:00	372	93	170	163	113	35	2	0	0	0	0	0	0	0	948
16:00	424	60	24	5	0	0	0	0	0	0	0	0	0	0	513
17:00	390	121	43	11	4	0	0	0	0	0	0	0	0	0	569
18:00	432	68	11	2	0	0	0	0	0	0	0	0	0	0	513
19:00	343	85	73	78	143	43	2	0	0	0	0	0	0	0	767
20:00	193	2	16	128	339	139	9	0	0	0	0	0	0	0	826
21:00	168	0	5	58	260	170	16	2	0	0	0	0	0	0	679
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	4367	532	498	1151	3691	2318	281	20	1	0	0	0	0	0	12859
Grand Total	4533	532	502	1217	3996	2580	317	24	1	0	0	0	0	0	13702

15th Percentile : 6 MPH  
50th Percentile : 18 MPH  
85th Percentile : 35 MPH  
95th Percentile : 39 MPH

Stats  
Mean Speed(Average) : 21 MPH  
10 MPH Pace Speed : 4-13 MPH  
Number in Pace : 5243  
Percent in Pace : 38.3%  
Number of Vehicles > 45 MPH : 47  
Percent of Vehicles > 45 MPH : 0.3%

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## Suitland Pkwy EB at Firth Sterling SE Volume

Start Time	Sun A.M.	24-Nov-13 P.M.	Mon A.M.	25-Nov-13 P.M.	Tue A.M.	26-Nov-13 P.M.	Daily Average	
							A.M.	P.M.
12:00	*	*	106	236	*	*	106	236
12:15	*	*	69	241	*	*	69	241
12:30	*	*	58	246	*	*	58	246
12:45	*	*	62	261	*	*	62	261
01:00	*	*	45	302	*	*	45	302
01:15	*	*	33	234	*	*	33	234
01:30	*	*	29	240	*	*	29	240
01:45	*	*	23	271	*	*	23	271
02:00	*	*	20	168	*	*	20	168
02:15	*	*	18	127	*	*	18	127
02:30	*	*	29	180	*	*	29	180
02:45	*	*	20	238	*	*	20	238
03:00	*	*	23	175	*	*	23	175
03:15	*	*	21	218	*	*	21	218
03:30	*	*	2	339	*	*	2	339
03:45	*	*	19	216	*	*	19	216
04:00	*	*	25	116	*	*	25	116
04:15	*	*	29	119	*	*	29	119
04:30	*	*	30	161	*	*	30	161
04:45	*	*	32	117	*	*	32	117
05:00	*	*	54	121	*	*	54	121
05:15	*	*	69	195	*	*	69	195
05:30	*	*	85	115	*	*	85	115
05:45	*	*	92	138	*	*	92	138
06:00	*	*	114	100	*	*	114	100
06:15	*	*	147	142	*	*	147	142
06:30	*	*	130	137	*	*	130	137
06:45	*	*	159	134	*	*	159	134
07:00	*	*	186	121	*	*	186	121
07:15	*	*	175	156	*	*	175	156
07:30	*	*	205	236	*	*	205	236
07:45	*	*	186	254	*	*	186	254
08:00	*	*	210	198	*	*	210	198
08:15	*	*	177	234	*	*	177	234
08:30	*	*	190	203	*	*	190	203
08:45	*	*	169	191	*	*	169	191
09:00	*	*	168	175	*	*	168	175
09:15	*	*	187	178	*	*	187	178
09:30	*	*	153	160	*	*	153	160
09:45	*	*	170	166	*	*	170	166
10:00	*	114	173	*	*	*	173	114
10:15	*	100	181	*	*	*	181	100
10:30	*	97	209	*	*	*	209	97
10:45	*	87	170	*	*	*	170	87
11:00	*	122	196	*	*	*	196	122
11:15	*	127	217	*	*	*	217	127
11:30	*	107	217	*	*	*	217	107
11:45	*	89	218	*	*	*	218	89
Total	0	843	5300	7559	0	0	5300	8402
Combined Total	843		12859		0		13702	
Peak		11:00	11:00	00:15			11:00	00:15
Vol.		445	848	1050			848	1050
P.H.F.		0.876	0.972	0.869			0.972	0.869
ADT		ADT 13,702	AADT 13,702					



DC Department of Transportation - Traffic Accident Reporting and Analysis System

## Accident Summary Report (R-8)

**Corridor:** SUITLAND PKWY,SE From FIRTH STERLING AVE,SE TO STANTON RD,SE

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

**Prepared By:** Rahul Jain

**Prepared Date:** 10/6/2013

Total Number of Accident:	204	<b>Collision Type</b>	<b>#ACC</b>	<b>%</b>	<b>Collision Type</b>	<b>#ACC</b>	<b>%</b>
Total Number of Fatalities:	1	Right Angle:	14	6.9%	Fixed Object:	9	4.4%
Total Number of Injuries:	192	Left Turn:	35	17.2%	Ran Off Road:	6	2.9%
Total Number of Disabling Injuries:	8	Right Turn:	1	0.5%	Ped. Involved:	5	2.5%
Total Number of NonDisabling Injuries:	34	Rear End:	85	41.7%	Backing:	1	0.5%
Total Number of Pedestrians Involved:	4	Side Swiped:	26	12.7%	Non Collision:	0	0.0%
Total Number of Bicycles Involved:	1	Head On:	9	4.4%	Under/Over Ride:	1	0.5%
Total Number of Motorcycles Involved:	4	Parked:	0	0.0%	Unspecified:	12	5.9%

<b>Time of Day</b>	<b>#ACC</b>	<b>%</b>	<b>Day o fweek</b>	<b>#ACC</b>	<b>%</b>
07:30 ~ 09:30:	17	8.3%	Sunday:	25	12.3%
09:30 ~ 11:30:	12	5.9%	Monday:	31	15.2%
11:30 ~ 13:30:	11	5.4%	Tuesday:	36	17.6%
13:30 ~ 16:00:	36	17.6%	Wednesday:	26	12.7%
16:00 ~18:30:	26	12.7%	Thursday:	32	15.7%
18:30 ~ 07:30:	102	50.0%	Friday:	35	17.2%
Unspecified:	0	0.0%	Saturday:	19	9.3%

<b>Weather Condition</b>	<b>#ACC</b>	<b>%</b>	<b>Surface Condition</b>	<b>#ACC</b>	<b>%</b>
Clear:	171	83.8%	Dry:	165	80.9%
Rain:	22	10.8%	Wet:	25	12.3%
Snow:	3	1.5%	Snow/Ice:	4	2.0%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	1	0.5%	Water/Sand:	2	1.0%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	1	0.5%
Unspecified:	7	3.4%	Unspecified:	7	3.4%

<b>Type of Vehicle</b>	<b>#VEH</b>	<b>%</b>	<b>Accident Severity Type</b>	<b>#ACC</b>	<b>%</b>
Passenger Car:	343	82.5%	Fatal Collision:	1	0.5%
Bus:	5	1.2%	Injury Collision:	111	54.4%
Truck:	27	6.5%	PDO Collision:	92	45.1%
Taxi:	6	1.4%	<b>Light Condition</b>	<b>#ACC</b>	<b>%</b>
Minivan:	0	0.0%	Daylight:	111	54.4%
Police/Emergency Vehicle:	8	1.9%	Dawn/Dusk:	9	4.4%
Motorcycle/Moped:	6	1.4%	Dark(Lighted):	63	30.9%
Bicycle:	1	0.2%	Dark(Not Lighted):	16	7.8%
Fixed Object:	0	0.0%	Dark(Unknown Lighting):	0	0.0%
Unspecified:	20	4.8%	Unspecified:	5	2.5%

<b>Contributing Factor</b>	<b>#VEH</b>	<b>%</b>	<b>Pedestrian Actions</b>	<b>#ACC</b>	<b>%</b>
Driver: Speed:	21	5.0%	In Crosswalk with Signal:	1	25.0%
Driver: Alcohol/Drug:	6	1.4%	In Crosswalk against Signal:	1	25.0%
Driver: Electronic Device:	1	0.2%	In Crosswalk no Signal:	0	0.0%
Driver: Others:	71	17.1%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	2	0.5%	Not in Crosswalk:	2	50.0%
Roadway:	3	0.7%	From Between Parked Cars:	0	0.0%
Unspecified:	312	75.0%	Unspecified:	0	0.0%

128 Records are not approved as of 10/6/2013 8:02:08 PM