



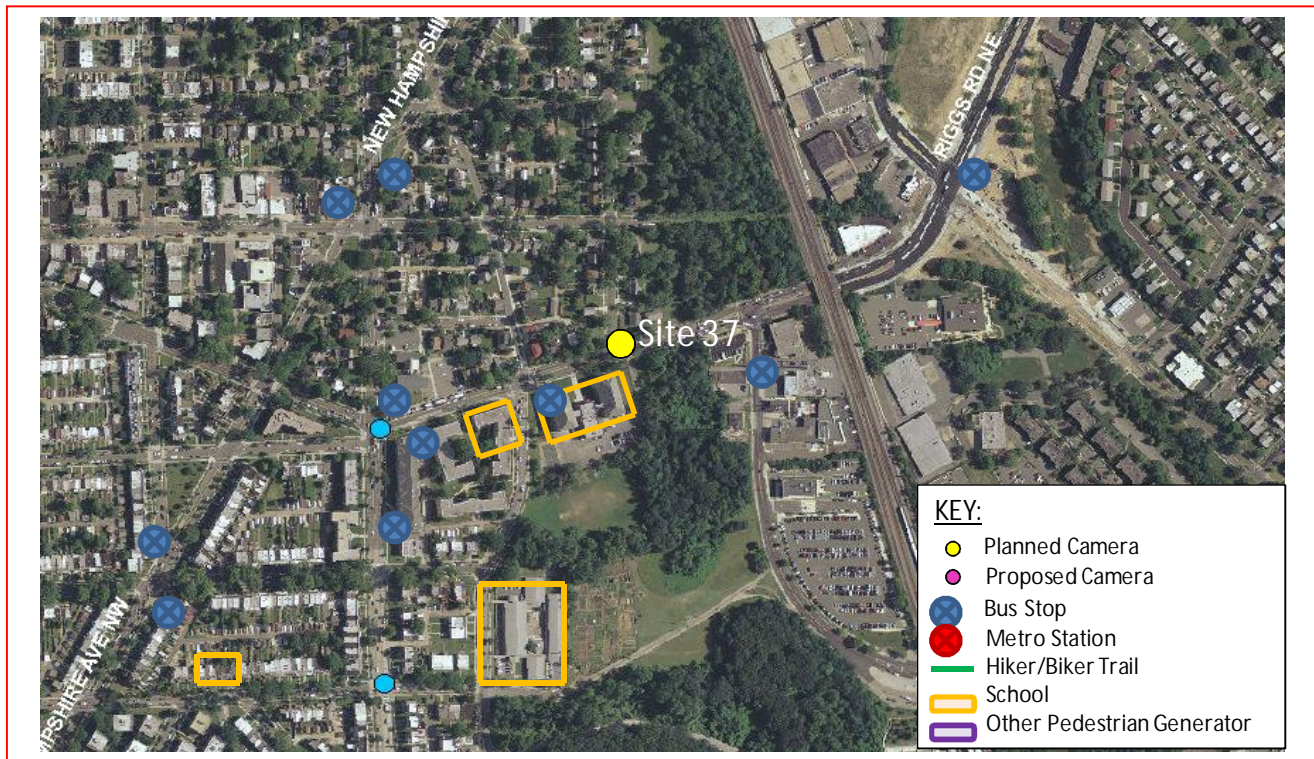
District Department of Transportation

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

100 Block Riggs Road NE

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
4	406	4	4B	Planned	100 Block Riggs Road Northeast Eastbound



The *planned* speed camera will be located in Ward 4 at the 100 block of Riggs Road Northeast in the eastbound direction. Riggs Road runs between Eastern Avenue Northeast to the northeast and North Capitol Street Northeast to the southwest. The posted speed limit is 25 MPH.

W4 - 150





District Department of Transportation

100 Block Riggs Road NE

Field Assessment Summary

Riggs Road is assumed to run in a northeast-southwest direction, and is classified as a principal arterial. Riggs Road has two travel lanes in each direction with an eastbound right turn lane at 1st Place Northeast. This site has the following characteristics:

- This site is located in a residential area with houses, apartments, and driveways on both sides.
- There is curb and gutter on both sides of the street.
- There are four schools in this area: Dorothy I. Height Community Academy Public Charter School; Community Academy Public Charter School Addison and Helen Rand Campus; Mamie D. Lee School; and Keane Elementary School.
- There is a bus stop on the west side of the street prior to the intersection with North Capitol Street, and there are several other bus stops in the area.



Looking Eastbound

W4 - 151



District Department of Transportation

100 Block Riggs Road NE



Looking Westbound

Speed Data Analysis

Posted Speed Limit (MPH)	25
Mean Speed (MPH)	20
85th Percentile Speed (MPH)	25
10 MPH Pace Speed	17-26
Sample Size	14,278
ADT	14,992

The mean speed is 5 MPH lower than the posted speed limit and the 85th percentile speed is the same as the posted speed limit at this location.

Crash Data Analysis

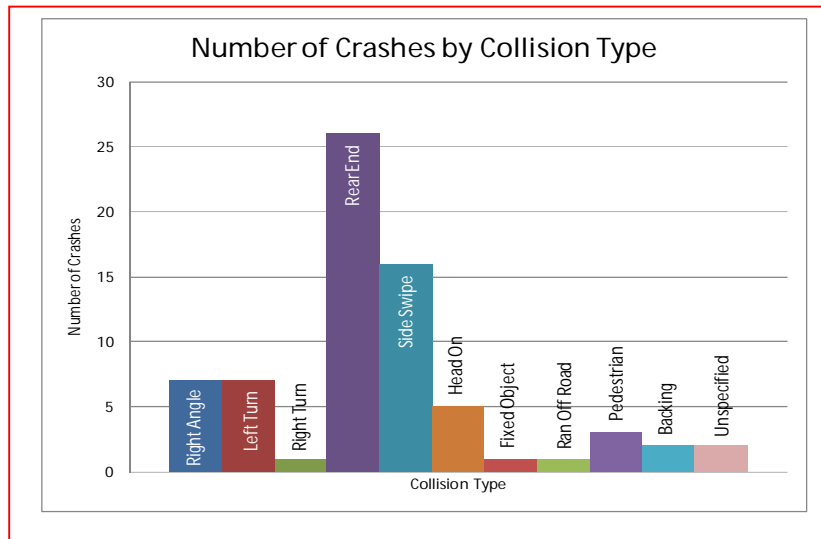
From the Accident Summary Report provided for the dates between January 1, 2010 and December 31, 2012, there were a total of 71 crashes at this location. A breakdown of number of crashes by collision type can be found in the chart on the next page.



100 Block Riggs Road NE

Severity			Weather			Surface condition			Light Condition		
Total	71										
Fatal	0	0.0%	Clear	60	84.5%	Dry	51	71.8%	Day	45	63.4%
Injury	30	42.3%	Rain	8	11.3%	Wet	12	16.9%	Night	24	33.8%
Truck	16	22.5%	Snow	1	1.4%	Repairing	5	7.0%			
Bus	7	9.9%									

The most common type of crashes at this location were Rear End (26 crashes), Side Swipe (16 crashes), Right Angle (7 crashes), and Left Turn (7 crashes). The other collision types had less than five crashes or less each.



There was an elevated number of speed related crashes at this location, including rear end and side swipe 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”¹ as two errors leading to rear-end and sideswipe crashes. Both of these errors can be decreased with a decrease in travel speed.

This speed camera is located approximately 1000 feet east of the intersection of North Capitol Street NE and Riggs Road NE, which is ranked number 7 of the top five percent high hazard intersections in the District of Columbia for 2012. the rankings are based on the number of injury collisions.² The North Capitol Street NE -

¹ AASHTO Highway Safety Manual, 1st Edition, 2010; Volume 1, page 2-13

² DDOT, 2012 Top 5% High Hazard Intersections List



District Department of Transportation

100 Block Riggs Road NE

Riggs Road NE intersection has been ranked in the District's top 35 intersections for highest number of crash frequencies from 2008-2010 and 2009-2011³.

Safety Nexus

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

1. Speed Data – The speed data analysis shows travel speeds equal to or lower than the posted speed limit.
2. Crash Data – There was an elevated number of speed related crashes at this location, including rear end and side swipe collisions. There was a high frequency (30 crashes) of injury-related crashes at this location. The site is located in close proximity to one of the top five percent high hazard intersections in the District.
3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
 - a. The site is located in a residential area with driveways on both sides of the street.
 - b. There are four schools in this area: Dorothy I. Height Community Academy Public Charter School; Community Academy Public Charter School Addison and Helen Rand Campus; Mamie D. Lee School; and Keane Elementary School.
 - c. There are multiple bus stops in the area which generate pedestrian activity.

Although the speed data analysis showed the mean and 85th percentile speeds to be lower than the posted speed limit, the crash data analysis revealed several safety factors. Thus, due to the elevated number of speed-related and injury-related crashes, and the specific site characteristics of a residential area and the nearby pedestrian generators, there is a nexus between traffic safety and the speed camera at this location.

³ DDOT, *TRAFFIC SAFETY STATISTICS REPORT FOR THE DISTRICT OF COLUMBIA (2009-2011)*, pg. 93.

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

100 block of Riggs Rd NE EB Speed

EB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/09/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	7	19	78	47	10	0	0	0	0	0	0	0	0	0	161
03:00	9	28	126	65	7	1	0	0	0	0	0	0	0	0	236
04:00	8	18	67	37	3	0	0	0	0	0	0	0	0	0	133
05:00	8	17	77	45	6	3	0	0	0	0	0	0	0	0	156
06:00	10	35	116	87	9	5	0	0	0	0	0	0	0	0	262
07:00	29	104	257	104	9	3	0	0	0	0	0	0	0	0	506
08:00	41	151	309	105	15	1	0	0	0	0	0	0	0	0	622
09:00	52	194	370	100	7	0	0	0	0	0	0	0	0	0	723
10:00	70	194	367	127	17	2	0	0	0	0	0	0	0	0	777
11:00	98	222	399	116	14	2	0	0	0	0	0	0	0	0	851
12 PM	160	209	398	112	17	0	0	0	0	0	0	0	0	0	896
13:00	106	271	453	124	14	2	1	0	0	0	0	0	0	0	971
14:00	84	281	455	120	13	2	0	0	2	0	0	0	0	0	957
15:00	92	270	461	113	11	1	0	0	0	0	0	0	0	0	948
16:00	129	312	432	97	13	0	0	0	0	0	0	0	0	0	983
17:00	121	366	465	80	3	0	0	0	0	0	0	0	0	0	1035
18:00	76	309	445	76	8	0	0	0	0	0	0	0	0	0	914
19:00	37	187	498	60	7	2	0	0	0	0	0	0	0	0	791
20:00	31	128	419	99	11	0	0	0	0	0	0	0	0	0	688
21:00	22	117	341	100	11	3	1	0	0	0	0	0	0	0	595
22:00	22	85	335	101	5	2	0	0	0	0	0	0	0	0	550
23:00	16	83	299	113	11	0	1	0	0	0	0	0	0	0	523
Total	1228	3600	7167	2028	221	29	3	0	2	0	0	0	0	0	14278

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammatteng.com

100 block of Riggs Rd NE EB Speed

EB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/10/13	14	39	248	95	12	1	0	0	0	0	0	0	0	0	409
01:00	8	29	128	74	14	0	0	0	0	0	0	0	0	0	253
02:00	2	6	23	13	5	3	0	0	0	0	0	0	0	0	52
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	24	74	399	182	31	4	0	0	0	0	0	0	0	0	714
Grand Total	1252	3674	7566	2210	252	33	3	0	2	0	0	0	0	0	14992

15th Percentile : 12 MPH
 50th Percentile : 20 MPH
 85th Percentile : 25 MPH
 95th Percentile : 28 MPH

Stats
 Mean Speed(Average) : 20 MPH
 10 MPH Pace Speed : 17-26 MPH
 Number in Pace : 8984
 Percent in Pace : 59.9%
 Number of Vehicles > 25 MPH : 2642
 Percent of Vehicles > 25 MPH : 17.6%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

100 block of Riggs Rd NE EB Volume

Start Time	09-Nov-13		10-Nov-13		11-Nov-13		Daily Average	
	Sat A.M.	P.M.	Sun A.M.	P.M.	Mon A.M.	P.M.	A.M.	P.M.
12:00	*	199	112	*	*	*	112	199
12:15	*	249	113	*	*	*	113	249
12:30	*	245	106	*	*	*	106	245
12:45	*	203	78	*	*	*	78	203
01:00	*	254	62	*	*	*	62	254
01:15	*	209	81	*	*	*	81	209
01:30	*	264	58	*	*	*	58	264
01:45	*	244	52	*	*	*	52	244
02:00	*	240	52	*	*	*	52	240
02:15	59	226	*	*	*	*	59	226
02:30	47	234	*	*	*	*	47	234
02:45	55	257	*	*	*	*	55	257
03:00	62	230	*	*	*	*	62	230
03:15	75	256	*	*	*	*	75	256
03:30	57	222	*	*	*	*	57	222
03:45	42	240	*	*	*	*	42	240
04:00	38	220	*	*	*	*	38	220
04:15	38	237	*	*	*	*	38	237
04:30	34	252	*	*	*	*	34	252
04:45	23	274	*	*	*	*	23	274
05:00	31	253	*	*	*	*	31	253
05:15	42	264	*	*	*	*	42	264
05:30	33	254	*	*	*	*	33	254
05:45	50	264	*	*	*	*	50	264
06:00	56	252	*	*	*	*	56	252
06:15	55	217	*	*	*	*	55	217
06:30	71	229	*	*	*	*	71	229
06:45	80	216	*	*	*	*	80	216
07:00	105	186	*	*	*	*	105	186
07:15	121	206	*	*	*	*	121	206
07:30	130	221	*	*	*	*	130	221
07:45	150	178	*	*	*	*	150	178
08:00	144	174	*	*	*	*	144	174
08:15	146	164	*	*	*	*	146	164
08:30	178	196	*	*	*	*	178	196
08:45	154	154	*	*	*	*	154	154
09:00	190	118	*	*	*	*	190	118
09:15	168	158	*	*	*	*	168	158
09:30	160	168	*	*	*	*	160	168
09:45	205	151	*	*	*	*	205	151
10:00	177	133	*	*	*	*	177	133
10:15	208	140	*	*	*	*	208	140
10:30	184	133	*	*	*	*	184	133
10:45	208	144	*	*	*	*	208	144
11:00	190	127	*	*	*	*	190	127
11:15	191	138	*	*	*	*	191	138
11:30	250	147	*	*	*	*	250	147
11:45	220	111	*	*	*	*	220	111
Total	4427	9851	714	0	0	0	5141	9851
Combined Total	14278		714		0		14992	
Peak	11:00	04:45	12:00				11:00	04:45
Vol.	851	1045	409				851	1045
P.H.F.	0.851	0.953	0.905				0.851	0.953
ADT	ADT 14,992		AADT 14,992					

Accident Summary Report (R-8)

Corridor: RIGGS RD,NE From FIRST ST,NE TO SOUTH DAKOTA AVE,NE
Time Period Covered: From 01/01/2010 To 12/31/2012 **Prepared By:** Rahul Jain **Prepared Date:** 10/27/2012

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	71	Right Angle:	7	9.9%	Fixed Object:	1	1.4%
Total Number of Fatalities:	0	Left Turn:	7	9.9%	Ran Off Road:	1	1.4%
Total Number of Injuries:	45	Right Turn:	1	1.4%	Ped. Involved:	3	4.2%
Total Number of Disabling Injuries:	1	Rear End:	26	36.6%	Backing:	2	2.8%
Total Number of NonDisabling Injuries:	1	Side Swiped:	16	22.5%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	2	Head On:	5	7.0%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	0	Parked:	0	0.0%	Unspecified:	2	2.8%
Total Number of Motorcycles Involved:	2						

Time of Day	#ACC	%	Day of week	#ACC	%
07:30 ~ 09:30:	19	26.8%	Sunday:	5	7.0%
09:30 ~ 11:30:	5	7.0%	Monday:	8	11.3%
11:30 ~ 13:30:	4	5.6%	Tuesday:	13	18.3%
13:30 ~ 16:00:	7	9.9%	Wednesday:	12	16.9%
16:00 ~ 18:30:	13	18.3%	Thursday:	12	16.9%
18:30 ~ 07:30:	23	32.4%	Friday:	10	14.1%
Unspecified:	0	0.0%	Saturday:	11	15.5%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	60	84.5%	Dry:	51	71.8%
Rain:	8	11.3%	Wet:	12	16.9%
Snow:	1	1.4%	Snow/Ice:	1	1.4%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	1	1.4%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	5	7.0%
Unspecified:	1	1.4%	Unspecified:	2	2.8%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	100	71.4%	Fatal Collision:	0	0.0%
Bus:	7	5.0%	Injury Collision:	30	42.3%
Truck:	16	11.4%	PDO Collision:	41	57.7%
Taxi:	6	4.3%			
Minivan:	0	0.0%	Light Condition	#ACC	%
Police/Emergency Vehicle:	0	0.0%	Daylight:	45	63.4%
Motorcycle/Moped:	2	1.4%	Dawn/Dusk:	0	0.0%
Bicycle:	0	0.0%	Dark(Lighted):	24	33.8%
Fixed Object:	0	0.0%	Dark(Not Lighted):	0	0.0%
Unspecified:	9	6.4%	Dark(Unknown Lighting):	0	0.0%
			Unspecified:	2	2.8%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	2	1.4%	In Crosswalk with Signal:	1	50.0%
Driver: Alcohol/Drug:	1	0.7%	In Crosswalk against Signal:	0	0.0%
Driver: Electronic Device:	1	0.7%	In Crosswalk no Signal:	1	50.0%
Driver: Others:	37	26.4%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	1	0.7%	From Between Parked Cars:	0	0.0%
Unspecified:	98	70.0%	Unspecified:	0	0.0%

44 Records are not approved as of 10/27/2013 4:02:50 PM