



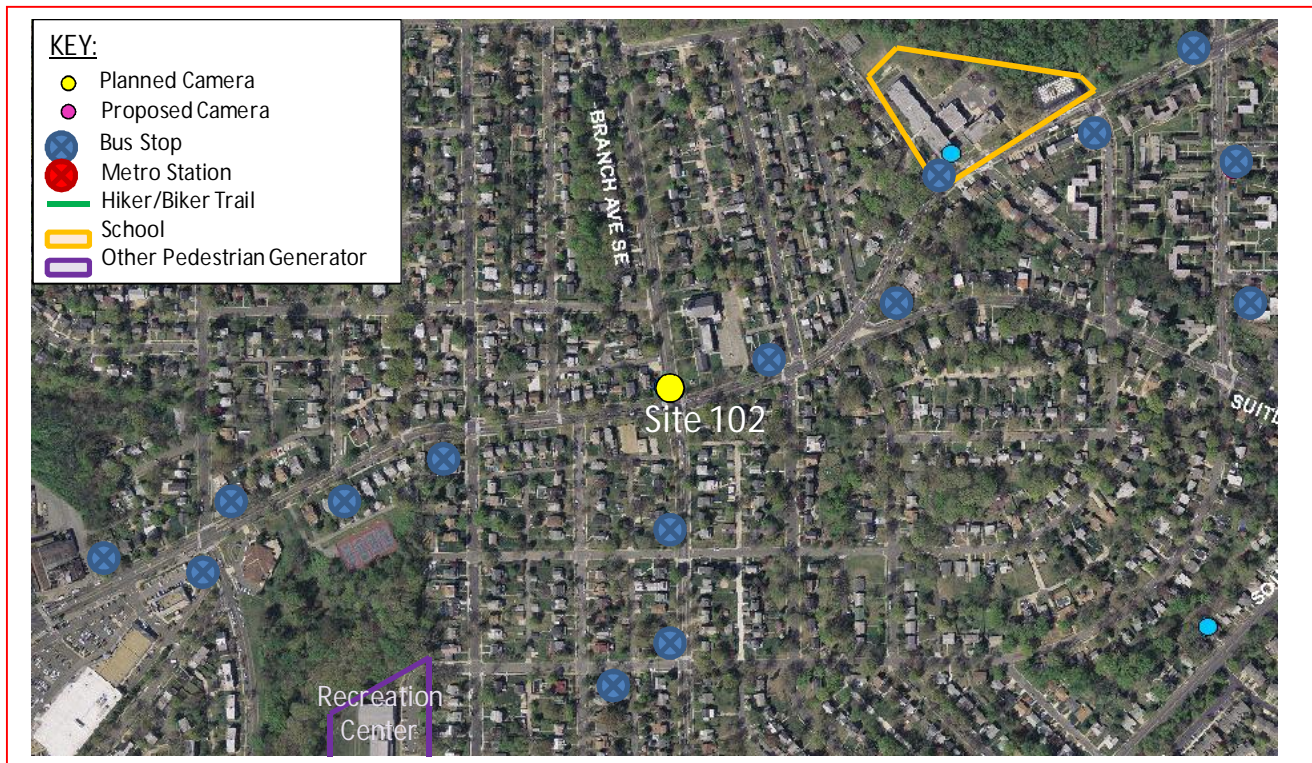
District Department of Transportation

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

Branch Avenue at Alabama Avenue SE

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
6	606	7	7B	Planned	Branch Avenue Northbound at Alabama Avenue Southeast



This *planned* speed camera will be located in Ward 7 at the intersection of Branch Avenue and Alabama Avenue Southeast in the northbound direction. Branch Avenue runs between Randle Circle Southeast to the north and Marlow Heights, Maryland to the south. The posted speed limit is 25 MPH.

W7 - 301





District Department of Transportation

Branch Avenue at Alabama Avenue SE

Field Assessment Summary

Branch Avenue is assumed to run in a north-south direction, and is classified as a principal arterial. Branch Avenue has one through and right lane and one left turn lane northbound and one through and left lane and one right turn lane southbound. Alabama Avenue has one through and right lane and one through and left lane in each direction. This site has the following characteristics:

- This is a residential area with houses and driveways.
- There is one school in the area: Anne Beers Elementary School.
- Hillcrest Recreation Center is in the area as well.
- There is sidewalk on both sides of all four legs and crosswalks on all four legs of the intersection.
- The intersection has a traffic signal and pedestrian signals.
- There are four bus stops, one at each approach of the intersection.



Looking Northbound

W7 - 302



District Department of Transportation

Branch Avenue at Alabama Avenue SE



Looking Southbound

Speed Data Analysis

Posted Speed Limit (MPH)	25
Mean Speed (MPH)	22
85th Percentile Speed (MPH)	30
10 MPH Pace Speed	21-30 MPH
ADT	8,483

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

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 48 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 collision at this location were Rear End (24 crashes), Side Swipe (7 crashes) and Right Angle (6 crashes). The other collision types had three crashes or less each. Furthermore, this site experienced a high frequency (27 crashes) of injury-related crashes.

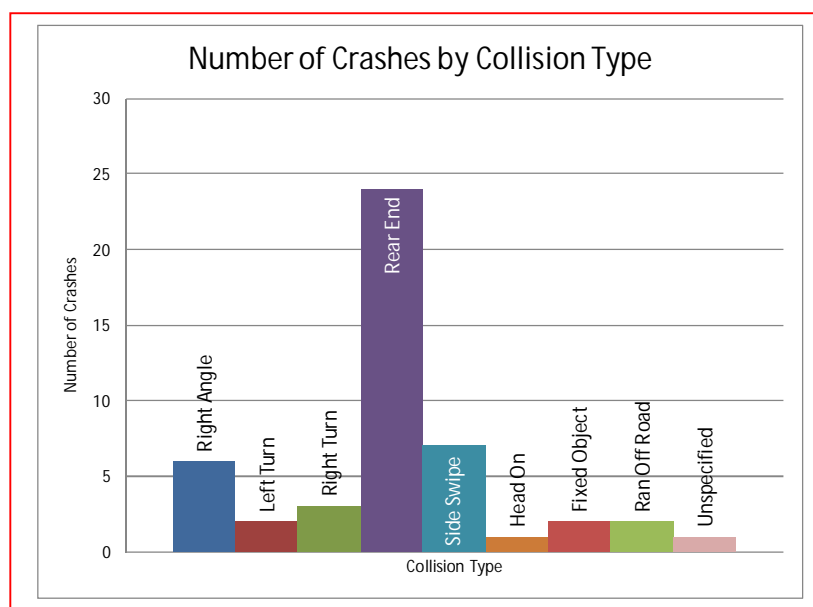
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District Department of Transportation

Branch Avenue at Alabama Avenue SE

Severity			Weather			Surface condition			Light Condition		
Total	48										
Fatal	0	0.0%	Clear	43	89.6%	Dry	40	83.3%	Day	33	68.8%
Injury	27	56.3%	Rain	3	6.3%	Wet	4	8.3%	Night	12	25.0%
Truck	4	8.3%	Snow	1	2.1%	Snow/Ice	1	2.1%			
Taxi	2	4.2%									



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. Both of these errors can be reduced with a decrease in travel speed.¹

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 85th percentile speed is higher than the posted speed limit at this location.
2. Crash Data – There was an elevated number of speed-related crashes at this location, including Rear End collisions, as well as a high frequency (27 crashes) of injury-related crashes.

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



District Department of Transportation

Branch Avenue at Alabama Avenue SE

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 and driveways.
 - b. There is one school in the area: Anne Beers Elementary School.
 - c. Hillcrest Recreation Center is in the area which generates pedestrian and bicycle activity.
 - d. There are several bus stops in the area which generate pedestrian activity.

Due to the speed data analysis, the elevated number of speed-related crashes 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.

W7 - 305

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

Branch Ave NB at Alabama Ave SE Speed

NB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	999	Total
11/20/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	9	1	1	1	2	1	2	1	0	0	0	0	0	0	0	18
05:00	1	0	4	12	9	6	0	0	0	0	0	0	0	0	0	32
06:00	1	0	3	25	30	10	0	0	0	1	0	0	0	0	0	70
07:00	8	21	46	66	52	16	3	1	0	0	0	0	0	0	0	213
08:00	132	116	184	111	53	11	2	1	0	0	0	0	0	0	0	610
09:00	215	238	226	62	6	0	0	0	0	0	0	0	0	0	0	747
10:00	240	252	193	27	0	0	0	0	0	0	0	0	0	0	0	712
11:00	188	196	206	74	18	3	0	0	0	0	0	0	0	0	0	685
12 PM	38	46	142	166	69	14	6	0	0	0	0	0	0	0	0	481
13:00	5	22	115	145	92	15	2	0	0	0	0	0	0	0	0	396
14:00	41	27	89	150	64	17	2	1	0	0	0	0	0	0	0	391
15:00	33	32	126	166	63	10	6	0	0	0	0	0	0	0	0	436
16:00	38	36	93	151	66	16	1	1	0	0	0	0	0	0	0	402
17:00	22	47	145	168	50	17	2	0	0	0	0	0	0	0	0	451
18:00	15	42	89	147	77	17	2	0	0	0	0	0	0	0	0	389
19:00	27	60	124	143	67	12	1	0	0	0	0	0	0	0	0	434
20:00	31	62	160	164	31	2	0	0	0	0	0	0	0	0	0	450
21:00	19	36	136	138	55	17	2	0	0	0	0	0	0	0	0	403
22:00	4	5	93	133	48	8	2	1	0	0	0	0	0	0	0	294
23:00	3	24	93	132	47	11	2	0	0	0	0	0	0	0	0	312
Total	1070	1263	2268	2181	899	203	35	6	0	1	0	0	0	0	0	7926

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

Branch Ave NB at Alabama Ave SE Speed

NB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	Total
11/21/13	0	7	67	85	48	14	0	0	0	0	0	0	0	0	221
01:00	1	1	33	65	48	16	4	0	0	0	0	0	0	0	168
02:00	1	3	11	50	28	8	2	0	0	0	0	0	0	0	103
03:00	0	1	11	11	16	7	0	0	0	0	0	0	0	0	46
04:00	0	0	8	6	4	0	1	0	0	0	0	0	0	0	19
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	2	12	130	217	144	45	7	0	0	0	0	0	0	0	557
Grand Total	1072	1275	2398	2398	1043	248	42	6	0	1	0	0	0	0	8483

15th Percentile : 10 MPH
50th Percentile : 22 MPH
85th Percentile : 30 MPH
95th Percentile : 34 MPH

Stats
Mean Speed(Average) : 22 MPH
10 MPH Pace Speed : 21-30 MPH
Number in Pace : 3825
Percent in Pace : 45.1%
Number of Vehicles > 25 MPH : 3178
Percent of Vehicles > 25 MPH : 37.5%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

Branch Ave NB at Alabama Ave SE Volume

Start Time	Wed A.M.	20-Nov-13 P.M.	Thu A.M.	21-Nov-13 P.M.	Fri A.M.	22-Nov-13 P.M.	Daily Average	
							A.M.	P.M.
12:00	*	146	66	*	*	*	66	146
12:15	*	116	50	*	*	*	50	116
12:30	*	117	50	*	*	*	50	117
12:45	*	102	55	*	*	*	55	102
01:00	*	94	57	*	*	*	57	94
01:15	*	92	37	*	*	*	37	92
01:30	*	112	45	*	*	*	45	112
01:45	*	98	29	*	*	*	29	98
02:00	*	95	40	*	*	*	40	95
02:15	*	85	24	*	*	*	24	85
02:30	*	106	17	*	*	*	17	106
02:45	*	105	22	*	*	*	22	105
03:00	*	119	11	*	*	*	11	119
03:15	*	99	14	*	*	*	14	99
03:30	*	109	12	*	*	*	12	109
03:45	*	109	9	*	*	*	9	109
04:00	*	107	10	*	*	*	10	107
04:15	*	97	9	*	*	*	9	97
04:30	15	105	*	*	*	*	15	105
04:45	3	93	*	*	*	*	3	93
05:00	11	109	*	*	*	*	11	109
05:15	7	121	*	*	*	*	7	121
05:30	9	107	*	*	*	*	9	107
05:45	5	114	*	*	*	*	5	114
06:00	13	105	*	*	*	*	13	105
06:15	16	88	*	*	*	*	16	88
06:30	16	94	*	*	*	*	16	94
06:45	25	102	*	*	*	*	25	102
07:00	26	116	*	*	*	*	26	116
07:15	42	103	*	*	*	*	42	103
07:30	54	93	*	*	*	*	54	93
07:45	91	122	*	*	*	*	91	122
08:00	103	118	*	*	*	*	103	118
08:15	151	118	*	*	*	*	151	118
08:30	169	108	*	*	*	*	169	108
08:45	187	106	*	*	*	*	187	106
09:00	178	120	*	*	*	*	178	120
09:15	186	109	*	*	*	*	186	109
09:30	187	90	*	*	*	*	187	90
09:45	196	84	*	*	*	*	196	84
10:00	176	82	*	*	*	*	176	82
10:15	180	62	*	*	*	*	180	62
10:30	189	76	*	*	*	*	189	76
10:45	167	74	*	*	*	*	167	74
11:00	195	83	*	*	*	*	195	83
11:15	171	73	*	*	*	*	171	73
11:30	160	81	*	*	*	*	160	81
11:45	159	75	*	*	*	*	159	75
Total	3087	4839	557	0	0	0	3644	4839
Combined Total	7926		557		0		8483	
Peak	09:00	12:00	12:00				09:00	12:00
Vol.	747	481	221				747	481
P.H.F.	0.953	0.824	0.837				0.953	0.824
ADT	ADT 8,483		AADT 8,483					

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: BRANCH AVE,SE From W ST,SE TO BANGOR ST,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:	48	Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	0	Right Angle:	6	12.5%	Fixed Object:	2	4.2%
Total Number of Injuries:	45	Left Turn:	2	4.2%	Ran Off Road:	2	4.2%
Total Number of Disabling Injuries:	1	Right Turn:	3	6.3%	Ped. Involved:	0	0.0%
Total Number of NonDisabling Injuries:	4	Rear End:	24	50.0%	Backing:	0	0.0%
Total Number of Pedestrians Involved:	0	Side Swiped:	7	14.6%	Non Collision:	0	0.0%
Total Number of Bicycles Involved:	0	Head On:	1	2.1%	Under/Over Ride:	0	0.0%
Total Number of Motorcycles Involved:	0	Parked:	0	0.0%	Unspecified:	1	2.1%

Time of Day	#ACC	%	Day o fweek	#ACC	%
07:30 ~ 09:30:	6	12.5%	Sunday:	4	8.3%
09:30 ~ 11:30:	5	10.4%	Monday:	5	10.4%
11:30 ~ 13:30:	8	16.7%	Tuesday:	9	18.8%
13:30 ~ 16:00:	7	14.6%	Wednesday:	4	8.3%
16:00 ~18:30:	8	16.7%	Thursday:	11	22.9%
18:30 ~ 07:30:	14	29.2%	Friday:	7	14.6%
Unspecified:	0	0.0%	Saturday:	8	16.7%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	43	89.6%	Dry:	40	83.3%
Rain:	3	6.3%	Wet:	4	8.3%
Snow:	1	2.1%	Snow/Ice:	1	2.1%
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:	1	2.1%
Unspecified:	1	2.1%	Unspecified:	2	4.2%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	77	81.1%	Fatal Collision:	0	0.0%
Bus:	1	1.1%	Injury Collision:	27	56.3%
Truck:	4	4.2%	PDO Collision:	21	43.8%
Taxi:	2	2.1%	Light Condition	#ACC	%
Minivan:	0	0.0%	Daylight:	33	68.8%
Police/Emergency Vehicle:	2	2.1%	Dawn/Dusk:	1	2.1%
Motorcycle/Moped:	0	0.0%	Dark(Lighted):	12	25.0%
Bicycle:	0	0.0%	Dark(Not Lighted):	0	0.0%
Fixed Object:	0	0.0%	Dark(Unknown Lighting):	0	0.0%
Unspecified:	9	9.5%	Unspecified:	2	4.2%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	4	4.2%	In Crosswalk with Signal:	0	0.0%
Driver: Alcohol/Drug:	1	1.1%	In Crosswalk against Signal:	0	0.0%
Driver: Electronic Device:	1	1.1%	In Crosswalk no Signal:	0	0.0%
Driver: Others:	19	20.0%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	0	0.0%	From Between Parked Cars:	0	0.0%
Unspecified:	70	73.7%	Unspecified:	0	0.0%

30 Records are not approved as of 10/6/2013 7:24:56 PM