



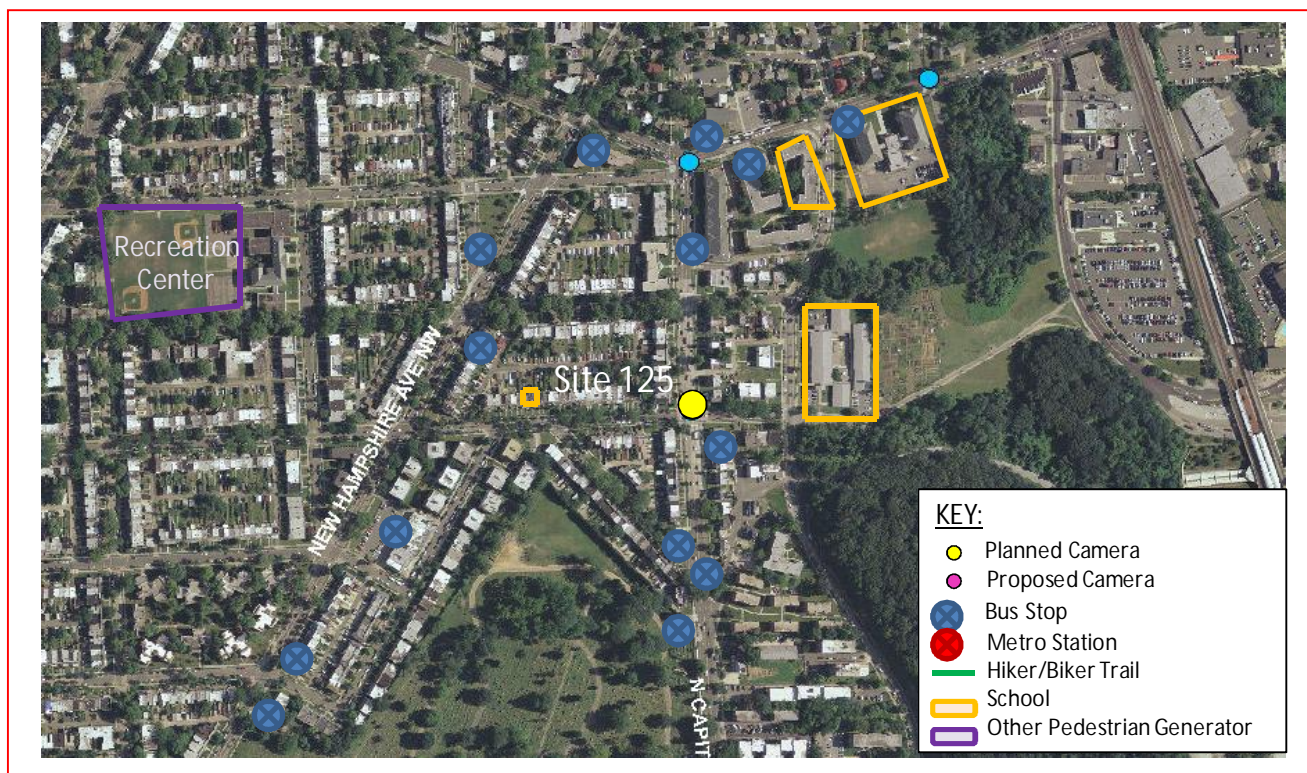
District Department of Transportation

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

North Capitol Street at Gallatin Street NW

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
4	405	4 & 5	4D/5A	Planned	North Capitol Street Southbound at Gallatin Street Northwest



This *planned* speed camera is located in Wards 4 & 5 at the intersection of North Capitol Street and Gallatin Street Northwest in the southbound direction. North Capitol Street runs between Eastern Avenue Northwest to the north and D Street Northeast to the south. The posted speed limit is 35 MPH.

WO - 35





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North Capitol Street at Gallatin Street NW

Field Assessment Summary

North Capitol Street is assumed to run in a north-south direction, and is classified as Principal Arterial. North Capitol Street has one through lane and one through and left lane northbound and one through lane and one through and right lane southbound. Gallatin Street has one lane westbound. This site has the following characteristics:

- This is a residential area with houses. Rudolph Playground is in the area.
- There are three schools in the area: Mamie D. Lee School, Community Academy Public Charter School, and Keene Elementary School.
- The intersection has a traffic signal with pedestrian signals and crosswalks on all four legs.
- There is sidewalk on both sides of all four legs.
- There is on-street parking on both sides of the east and west legs and restricted parking on the east side of the south leg.
- There is a westbound bike lane on the north side of the east and west legs of the intersection.
- There is a bus stop on the east side of the south leg.



Looking Northbound



District Department of Transportation

North Capitol Street at Gallatin Street NW



Looking Southbound

Speed Data Analysis

Posted Speed Limit (MPH)	35
Mean Speed (MPH)	16
85th Percentile Speed (MPH)	23
10 MPH Pace Speed (MPH)	16-25
ADT	14,286

The mean speed is lower than the posted speed limit by 19 MPH and the 85th percentile speed is lower than the posted speed by 12 MPH at this location.

Crash Data Analysis

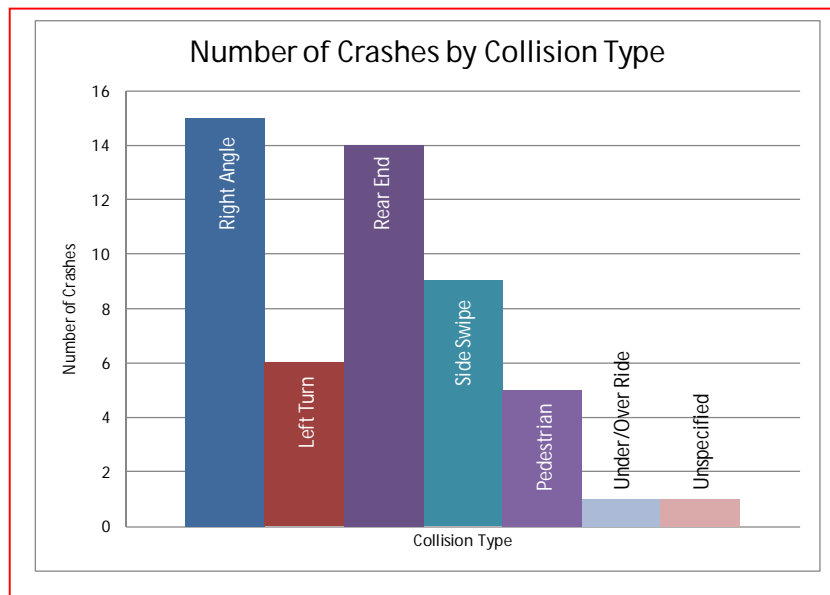
From the Accident Summary Report provided for the dates between January 1, 2010 and December 31, 2012, there were a total of 51 crashes at this location. A breakdown of number of crashes by collision type can be found in the chart on the next page. The most common types of collisions at this location were Right Angle (15 crashes), Rear End (14 crashes), and Sideswipe (9 crashes). Each of the other collision type has 6 crashes or less. Furthermore, this site experienced a high frequency (22 crashes) of injury-related crashes.



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North Capitol Street at Gallatin Street NW

Severity			Weather			Surface condition			Light Condition		
Total	51										
Fatal	0	0.0%	Clear	42	82.4%	Dry	41	80.4%	Day	39	76.5%
Injury	22	43.1%	Rain	5	9.8%	Wet	7	13.7%	Night	6	11.8%
Truck	5	9.8%	Fog/Mist	0	0.0%	Slush	0	0.0%			
Bus	5	9.8%									



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

The North Capitol Street 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)*².

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

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



District Department of Transportation

North Capitol Street at Gallatin Street NW

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 high frequency (22 crashes) of injury related crashes. The North Capitol Street 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 area with houses.
 - b. There are three schools in the area: Mamie D. Lee School, Community Academy Public Charter School, and Keene Elementary School.
 - c. Rudolph Playground is in the area which generates pedestrian and bicycle activity.
 - d. There are multiple bus stops in the area which generate pedestrian activity.
 - e. There is on-street parking on both sides of the east and west legs and restricted parking on the east side of the south leg.

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 crashes and 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

North Capitol St SB at Gallatin St NW 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
11/19/13	17	33	107	27	0	0	0	0	0	0	0	0	0	0	184
01:00	7	19	94	23	0	0	0	0	0	0	0	0	0	0	143
02:00	7	16	73	14	0	0	0	0	0	0	0	0	0	0	110
03:00	8	11	62	8	1	0	0	0	0	0	0	0	0	0	90
04:00	9	9	69	26	0	0	0	0	0	0	0	0	0	0	113
05:00	27	21	149	57	5	0	0	0	0	0	0	0	0	0	259
06:00	78	62	245	55	2	0	0	0	0	0	0	0	0	0	442
07:00	224	214	193	26	1	0	0	0	0	0	0	0	0	0	658
08:00	289	178	159	23	0	0	0	0	0	0	0	0	0	0	649
09:00	108	114	277	38	1	0	0	0	0	0	0	0	0	0	538
10:00	107	130	336	50	0	0	0	0	0	0	0	0	0	0	623
11:00	108	124	413	44	1	0	0	0	0	0	0	0	0	0	690
12 PM	113	180	435	57	1	0	0	0	0	0	0	0	0	0	786
13:00	97	172	492	67	0	0	0	0	0	0	0	0	0	0	828
14:00	156	320	479	44	2	0	0	0	0	0	0	0	0	0	1001
15:00	373	338	252	17	0	0	0	0	0	0	0	0	0	0	980
16:00	609	217	75	1	0	0	0	0	0	0	0	0	0	0	902
17:00	680	110	18	2	0	0	0	0	0	0	0	0	0	0	810
18:00	594	226	91	6	0	0	0	0	0	0	0	0	0	0	917
19:00	161	305	420	23	0	0	0	0	0	0	0	0	0	0	909
20:00	80	200	426	49	0	0	0	0	0	0	0	0	0	0	755
21:00	81	205	374	33	0	0	0	0	0	0	0	0	0	0	693
22:00	92	180	313	44	2	0	0	0	0	0	0	0	0	0	631
23:00	49	110	290	54	1	0	0	0	0	0	0	0	0	0	504
Total	4074	3494	5842	788	17	0	0	0	0	0	0	0	0	0	14215

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North Capitol St SB at Gallatin St NW 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	7	9	51	4	0	0	0	0	0	0	0	0	0	0	71
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	7	9	51	4	0	0	0	0	0	0	0	0	0	0	71
Grand Total	4081	3503	5893	792	17	0	0	0	0	0	0	0	0	0	14286

15th Percentile : 7 MPH
 50th Percentile : 15 MPH
 85th Percentile : 23 MPH
 95th Percentile : 25 MPH

Stats
 Mean Speed(Average) : 16 MPH
 10 MPH Pace Speed : 16-25 MPH
 Number in Pace : 6527
 Percent in Pace : 45.7%
 Number of Vehicles > 35 MPH : 2
 Percent of Vehicles > 35 MPH : 0.0%

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www.sammateng.com

North Capitol St SB at Gallatin St NW Volume

Start Time	Tue 19-Nov-13		Wed 20-Nov-13		Thu 21-Nov-13		Daily Average	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	166	71	*	*	*	71	166
12:15	83	197	*	*	*	*	83	197
12:30	60	203	*	*	*	*	60	203
12:45	41	220	*	*	*	*	41	220
01:00	36	199	*	*	*	*	36	199
01:15	43	214	*	*	*	*	43	214
01:30	27	213	*	*	*	*	27	213
01:45	37	202	*	*	*	*	37	202
02:00	36	237	*	*	*	*	36	237
02:15	36	234	*	*	*	*	36	234
02:30	21	265	*	*	*	*	21	265
02:45	17	265	*	*	*	*	17	265
03:00	31	254	*	*	*	*	31	254
03:15	15	243	*	*	*	*	15	243
03:30	20	251	*	*	*	*	20	251
03:45	24	232	*	*	*	*	24	232
04:00	19	256	*	*	*	*	19	256
04:15	25	235	*	*	*	*	25	235
04:30	24	229	*	*	*	*	24	229
04:45	45	182	*	*	*	*	45	182
05:00	55	209	*	*	*	*	55	209
05:15	56	184	*	*	*	*	56	184
05:30	66	197	*	*	*	*	66	197
05:45	82	220	*	*	*	*	82	220
06:00	82	231	*	*	*	*	82	231
06:15	109	193	*	*	*	*	109	193
06:30	115	208	*	*	*	*	115	208
06:45	136	285	*	*	*	*	136	285
07:00	150	254	*	*	*	*	150	254
07:15	151	197	*	*	*	*	151	197
07:30	166	253	*	*	*	*	166	253
07:45	191	205	*	*	*	*	191	205
08:00	156	155	*	*	*	*	156	155
08:15	155	201	*	*	*	*	155	201
08:30	177	185	*	*	*	*	177	185
08:45	161	214	*	*	*	*	161	214
09:00	137	205	*	*	*	*	137	205
09:15	147	168	*	*	*	*	147	168
09:30	123	154	*	*	*	*	123	154
09:45	131	166	*	*	*	*	131	166
10:00	157	179	*	*	*	*	157	179
10:15	157	186	*	*	*	*	157	186
10:30	165	145	*	*	*	*	165	145
10:45	144	121	*	*	*	*	144	121
11:00	158	138	*	*	*	*	158	138
11:15	145	128	*	*	*	*	145	128
11:30	200	141	*	*	*	*	200	141
11:45	187	97	*	*	*	*	187	97
Total	4499	9716	71	0	0	0	4570	9716
Combined Total	14215		71		0		14286	
Peak	11:00	02:30					11:00	02:30
Vol.	690	1027					690	1027
P.H.F.	0.863	0.969					0.863	0.969
ADT	ADT 14,286		AADT 14,286					

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: NORTH CAPITOL ST,BN From HAMILTON ST,BN TO FARRAGUT PL,BN

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

Prepared By: Rahul Jain

Prepared Date: 10/8/2013

Total Number of Accident:	51	Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	0	Right Angle:	15	29.4%	Fixed Object:	0	0.0%
Total Number of Injuries:	27	Left Turn:	6	11.8%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	0	Right Turn:	0	0.0%	Ped. Involved:	5	9.8%
Total Number of NonDisabling Injuries:	4	Rear End:	14	27.5%	Backing:	0	0.0%
Total Number of Pedestrians Involved:	5	Side Swiped:	9	17.6%	Non Collision:	0	0.0%
Total Number of Bicycles Involved:	0	Head On:	0	0.0%	Under/Over Ride:	1	2.0%
Total Number of Motorcycles Involved:	0	Parked:	0	0.0%	Unspecified:	1	2.0%
Time of Day				#ACC	%	Day o fweek	
07:30 ~ 09:30:				6	11.8%	Sunday:	
09:30 ~ 11:30:				3	5.9%	Monday:	
11:30 ~ 13:30:				5	9.8%	Tuesday:	
13:30 ~ 16:00:				15	29.4%	Wednesday:	
16:00 ~18:30:				12	23.5%	Thursday:	
18:30 ~ 07:30:				10	19.6%	Friday:	
Unspecified:				0	0.0%	Saturday:	
Weather Condition				#ACC	%	Surface Condition	
Clear:				42	82.4%	Dry:	
Rain:				5	9.8%	Wet:	
Snow:				0	0.0%	Snow/Ice:	
Sleet/Hail:				0	0.0%	Slush:	
Fog/Mist:				0	0.0%	Water/Sand:	
Crosswind/Blowing Sand:				0	0.0%	Repairing:	
Unspecified:				4	7.8%	Unspecified:	
Type of Vehicle				#VEH	%	Accident Severity Type	
Passenger Car:				78	78.0%	Fatal Collision:	
Bus:				5	5.0%	Injury Collision:	
Truck:				5	5.0%	PDO Collision:	
Taxi:				4	4.0%		
Minivan:				0	0.0%	Light Condition	
Police/Emergency Vehicle:				1	1.0%	Daylight:	
Motorcycle/Moped:				0	0.0%	Dawn/Dusk:	
Bicycle:				0	0.0%	Dark(Lighted):	
Fixed Object:				0	0.0%	Dark(Not Lighted):	
Unspecified:				7	7.0%	Dark(Unknown Lighting):	
						Unspecified:	
Contributing Factor				#VEH	%	Pedestrian Actions	
Driver: Speed:				1	1.0%	In Crosswalk with Signal:	
Driver: Alcohol/Drug:				1	1.0%	In Crosswalk against Signal:	
Driver: Electronic Device:				0	0.0%	In Crosswalk no Signal:	
Driver: Others:				29	29.0%	In Unmarked Crosswalk:	
Vehicle:				0	0.0%	Not in Crosswalk:	
Roadway:				0	0.0%	From Between Parked Cars:	
Unspecified:				69	69.0%	Unspecified:	

30 Records are not approved as of 10/8/2013 3:15:01 PM