



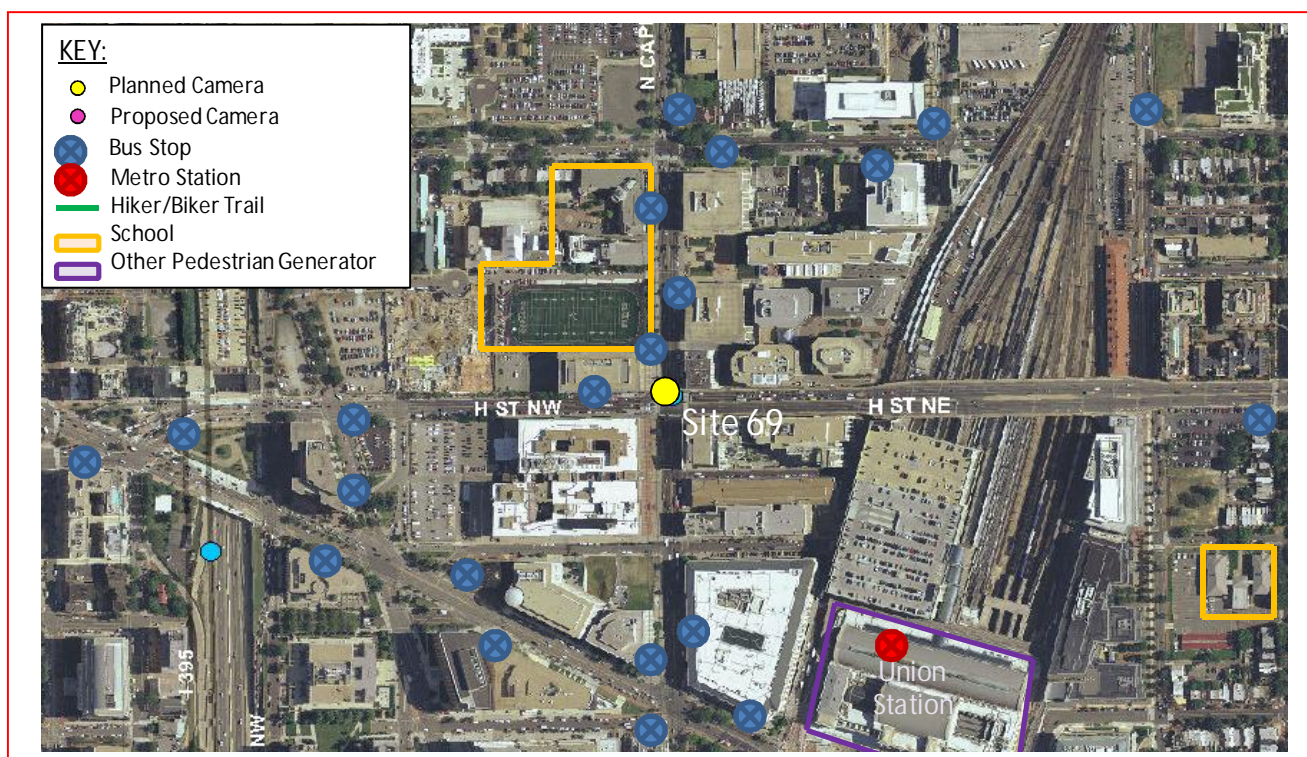
District Department of Transportation

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

North Capitol Street at H Street NW

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
1	103	6	6C	Planned	North Capitol Street Southbound at H Street Northwest



The *planned* speed camera will be located in Ward 6 at the intersection of North Capitol Street and H 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 30 MPH.

W6-163





District Department of Transportation

North Capitol Street at H Street NW

Field Assessment Summary

North Capitol Street is assumed to run in a North-South direction, and is classified as a principal arterial. North Capitol Street has one shared left turn/through lane and one shared through/right turn lane in the northbound direction, and a shared left turn/through lane, one through lane, and a shared through/right turn lane in the southbound direction. H Street Northwest has one shared left turn/through lane, one through lane, and a shared through/right turn lane in both directions. This site has the following characteristics:

- This site is located in a commercial area with retail stores, offices and restaurants in the surrounding area.
- There is sidewalk with curb and gutter and drainage inlets all legs.
- There are brick medians on the North and South legs and concrete median on the East leg.
- There are two schools in this area: Gonzaga College High School, and Logan School.
- There is a traffic signal with crosswalks and pedestrians on all legs.
- Bus stops are located on the north, south and west legs.
- There is on-street parking along the south leg on both sides and the north leg on the east side.
- Westbound and Southbound lefts turns are restricted during 7-9:30am, except for buses. NB left turns are restricted during 4-6:30pm Monday-Friday, except Holidays.



Looking Northbound

W6-164



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North Capitol Street at H Street NW



Looking Southbound

Speed Data Analysis

Posted Speed Limit (MPH)	30
Mean Speed (MPH)	15
85th Percentile Speed (MPH)	23
10 MPH Pace Speed (MPH)	6-15
ADT	11,113

The mean speed is lower than the posted speed limit by 15 MPH and the 85th percentile speed is lower than the posted speed by 7 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 156 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 Side Swipe (45 crashes), Rear End (35 crashes), Left Turn (18 crashes), Right Turn (16 crashes), Pedestrian Involved (14 crashes), and Right Angle (12 crashes). The other collision types had nine crashes or less each. Furthermore, this site experienced a high frequency (55 crashes) of injury-related crashes.

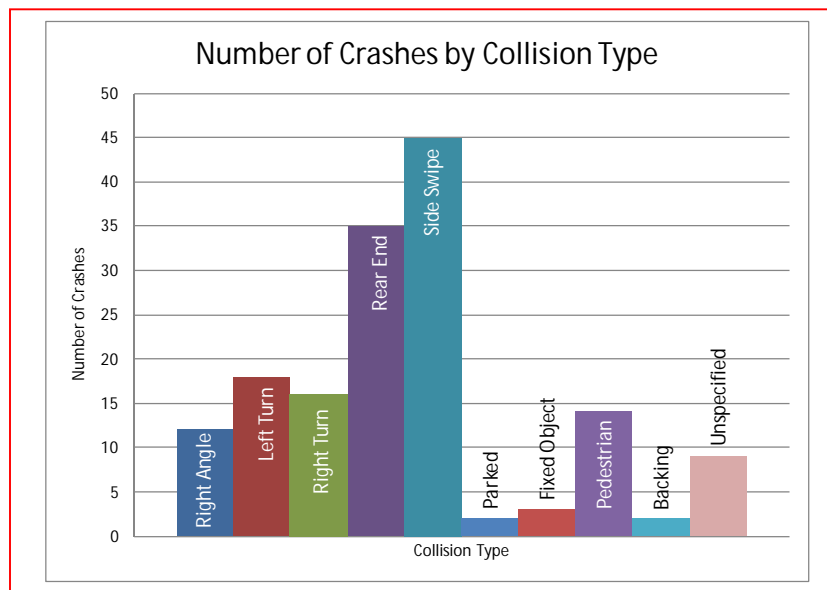
W6-165



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North Capitol Street at H Street NW

Severity			Weather			Surface condition			Light Condition		
Total	156										
Fatal	0	0.0%	Clear	140	89.7%	Dry	138	88.5%	Day	117	75.0%
Injury	55	35.3%	Rain	8	5.1%	Wet	10	6.4%	Night	34	21.8%
Taxi	29	18.6%	Sleet Hail	1	0.6%	Snow/Ice	1	0.6%			
Bus	28	17.9%									



There were an elevated number of speed-related crashes at this location, including rear end and side swipe 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 and sideswipe crashes. Both of these errors can be decreased with a decrease in travel speed. There were also a high number in pedestrian crashes at this location. “A pedestrian hit at 40 mph has an 85 percent chance of being killed; at 30 mph the risk is reduced to 45 percent; at 20 mph the risk is reduced to 5 percent.”²

Safety Nexus

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

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

² AASHTO Highway Safety Manual, 1st Edition, 2010; Volume 1, page 2-14



District Department of Transportation

North Capitol Street at H Street NW

1. Speed Data – The speed data analysis shows travel speeds being 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, as well as a high frequency (55 crashes) of injury-related crashes. There were also a high number in pedestrian crashes at this location.
3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
 - a. This site is located in a commercial area with retail stores, offices and restaurants in the surrounding area.
 - b. There are two schools in this area: Gonzaga College High School, and Logan School.
 - c. There are several 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, due to the elevated number of speed-related crashes, injury-related crashes, and pedestrian-involved crashes, the specific site characteristics, and the proximity of schools to the site, there is a nexus between traffic safety and the speed camera at this location.

W6-167

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

North Capitol St SB at H 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
11/18/13	12	33	66	40	14	1	0	0	0	0	0	0	0	0	166
01:00	4	19	34	29	5	0	0	0	0	0	0	0	0	0	91
02:00	4	25	29	23	7	1	0	0	0	0	0	0	0	0	89
03:00	26	10	14	14	4	0	0	0	0	0	0	0	0	0	68
04:00	57	12	8	6	2	0	0	0	0	0	0	0	0	0	85
05:00	174	25	25	15	10	0	0	0	0	0	0	0	0	0	249
06:00	309	42	67	51	11	3	0	0	0	0	0	0	0	0	483
07:00	424	68	103	49	17	5	0	0	0	0	0	0	0	0	666
08:00	411	65	50	35	4	0	0	0	0	0	0	0	0	0	565
09:00	373	79	69	31	1	0	0	0	0	0	0	0	0	0	553
10:00	381	92	72	18	2	0	0	0	0	0	0	0	0	0	565
11:00	365	60	55	18	2	0	0	0	0	0	0	0	0	0	500
12 PM	328	75	80	33	7	0	0	0	0	0	0	0	0	0	523
13:00	237	154	160	59	13	1	0	0	0	0	0	0	0	0	624
14:00	213	132	179	89	10	2	0	0	0	0	0	0	0	0	625
15:00	216	170	209	97	12	2	0	0	0	0	0	0	0	0	706
16:00	165	173	238	208	33	3	0	0	0	0	0	0	0	0	820
17:00	307	215	201	71	8	1	0	0	0	0	0	0	0	0	803
18:00	208	235	253	81	11	1	0	0	0	0	0	0	0	0	789
19:00	106	130	202	103	12	0	0	0	0	0	0	0	0	0	553
20:00	79	107	164	91	17	1	0	0	0	0	0	0	0	0	459
21:00	73	79	165	99	14	2	0	0	0	0	0	0	0	0	432
22:00	37	84	125	116	22	9	0	0	0	0	0	0	0	0	393
23:00	29	43	119	96	16	3	0	0	0	0	0	0	0	0	306
Total	4538	2127	2687	1472	254	35	0	0	0	0	0	0	0	0	11113
Grand Total	4538	2127	2687	1472	254	35	0	0	0	0	0	0	0	0	11113

15th Percentile : 5 MPH
 50th Percentile : 13 MPH
 85th Percentile : 23 MPH
 95th Percentile : 28 MPH

Stats
 Mean Speed(Average) : 15 MPH
 10 MPH Pace Speed : 6-15 MPH
 Number in Pace : 5192
 Percent in Pace : 46.7%
 Number of Vehicles > 30 MPH : 306
 Percent of Vehicles > 30 MPH : 2.8%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

North Capitol St SB at H St NW Volume

Start Time	18-Nov-13		19-Nov-13		20-Nov-13		Daily Average	
	Mon A.M.	P.M.	Tue A.M.	P.M.	Wed A.M.	P.M.	A.M.	P.M.
12:00	58	114	*	*	*	*	58	114
12:15	52	115	*	*	*	*	52	115
12:30	32	145	*	*	*	*	32	145
12:45	24	149	*	*	*	*	24	149
01:00	17	146	*	*	*	*	17	146
01:15	24	148	*	*	*	*	24	148
01:30	22	166	*	*	*	*	22	166
01:45	28	164	*	*	*	*	28	164
02:00	27	158	*	*	*	*	27	158
02:15	27	156	*	*	*	*	27	156
02:30	20	164	*	*	*	*	20	164
02:45	15	147	*	*	*	*	15	147
03:00	19	191	*	*	*	*	19	191
03:15	13	168	*	*	*	*	13	168
03:30	18	178	*	*	*	*	18	178
03:45	18	169	*	*	*	*	18	169
04:00	13	210	*	*	*	*	13	210
04:15	17	194	*	*	*	*	17	194
04:30	26	201	*	*	*	*	26	201
04:45	29	215	*	*	*	*	29	215
05:00	41	207	*	*	*	*	41	207
05:15	57	201	*	*	*	*	57	201
05:30	73	214	*	*	*	*	73	214
05:45	78	181	*	*	*	*	78	181
06:00	118	215	*	*	*	*	118	215
06:15	108	195	*	*	*	*	108	195
06:30	124	187	*	*	*	*	124	187
06:45	133	192	*	*	*	*	133	192
07:00	172	152	*	*	*	*	172	152
07:15	162	150	*	*	*	*	162	150
07:30	159	113	*	*	*	*	159	113
07:45	173	138	*	*	*	*	173	138
08:00	149	134	*	*	*	*	149	134
08:15	130	109	*	*	*	*	130	109
08:30	150	119	*	*	*	*	150	119
08:45	136	97	*	*	*	*	136	97
09:00	146	113	*	*	*	*	146	113
09:15	129	104	*	*	*	*	129	104
09:30	129	109	*	*	*	*	129	109
09:45	149	106	*	*	*	*	149	106
10:00	143	100	*	*	*	*	143	100
10:15	141	116	*	*	*	*	141	116
10:30	139	87	*	*	*	*	139	87
10:45	142	90	*	*	*	*	142	90
11:00	126	85	*	*	*	*	126	85
11:15	127	103	*	*	*	*	127	103
11:30	129	50	*	*	*	*	129	50
11:45	118	68	*	*	*	*	118	68
Total	4080	7033	0	0	0	0	4080	7033
Combined Total	11113		0		0		11113	
Peak	07:00	04:45					07:00	04:45
Vol.	666	837					666	837
P.H.F.	0.962	0.973					0.962	0.973
ADT	ADT 11,113		AADT 11,113					

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: NORTH CAPITOL ST,BN From K ST,BN TO G PL,BN

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

Prepared By: Rahul Jain

Prepared Date: 10/6/2013

Total Number of Accident:	156	Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	0	Right Angle:	12	7.7%	Fixed Object:	3	1.9%
Total Number of Injuries:	67	Left Turn:	18	11.5%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	1	Right Turn:	16	10.3%	Ped. Involved:	14	9.0%
Total Number of NonDisabling Injuries:	9	Rear End:	35	22.4%	Backing:	2	1.3%
Total Number of Pedestrians Involved:	15	Side Swiped:	45	28.8%	Non Collision:	0	0.0%
Total Number of Bicycles Involved:	8	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Motorcycles Involved:	2	Parked:	2	1.3%	Unspecified:	9	5.8%

Time of Day	#ACC	%
07:30 ~ 09:30:	18	11.5%
09:30 ~ 11:30:	20	12.8%
11:30 ~ 13:30:	21	13.5%
13:30 ~ 16:00:	30	19.2%
16:00 ~18:30:	29	18.6%
18:30 ~ 07:30:	38	24.4%
Unspecified:	0	0.0%

Day o fweek	#ACC	%
Sunday:	14	9.0%
Monday:	18	11.5%
Tuesday:	25	16.0%
Wednesday:	34	21.8%
Thursday:	23	14.7%
Friday:	26	16.7%
Saturday:	16	10.3%

Weather Condition	#ACC	%
Clear:	140	89.7%
Rain:	8	5.1%
Snow:	0	0.0%
Sleet/Hail:	1	0.6%
Fog/Mist:	1	0.6%
Crosswind/Blowing Sand:	0	0.0%
Unspecified:	6	3.8%

Surface Condition	#ACC	%
Dry:	138	88.5%
Wet:	10	6.4%
Snow/Ice:	1	0.6%
Slush:	0	0.0%
Water/Sand:	0	0.0%
Repairing:	1	0.6%
Unspecified:	6	3.8%

Type of Vehicle	#VEH	%
Passenger Car:	199	65.0%
Bus:	28	9.2%
Truck:	18	5.9%
Taxi:	29	9.5%
Minivan:	0	0.0%
Police/Emergency Vehicle:	1	0.3%
Motorcycle/Moped:	2	0.7%
Bicycle:	8	2.6%
Fixed Object:	0	0.0%
Unspecified:	21	6.9%

Accident Severity Type	#ACC	%
Fatal Collision:	0	0.0%
Injury Collision:	55	35.3%
PDO Collision:	101	64.7%

Light Condition	#ACC	%
Daylight:	117	75.0%
Dawn/Dusk:	2	1.3%
Dark(Lighted):	32	20.5%
Dark(Not Lighted):	2	1.3%
Dark(Unknown Lighting):	0	0.0%
Unspecified:	3	1.9%

Contributing Factor	#VEH	%
Driver: Speed:	1	0.3%
Driver: Alcohol/Drug:	0	0.0%
Driver: Electronic Device:	0	0.0%
Driver: Others:	63	20.6%
Vehicle:	0	0.0%
Roadway:	0	0.0%
Unspecified:	242	79.1%

Pedestrian Actions	#ACC	%
In Crosswalk with Signal:	8	53.3%
In Crosswalk against Signal:	0	0.0%
In Crosswalk no Signal:	0	0.0%
In Unmarked Crosswalk:	0	0.0%
Not in Crosswalk:	1	6.7%
From Between Parked Cars:	0	0.0%
Unspecified:	6	40.0%

82 Records are not approved as of 10/6/2013 6:31:50 PM