



## Speed Limit and Safety Nexus Studies for Automated Enforcement Locations in the District of Columbia 3800-4000 Block Reno Road NW

Study	Area	and Loo	cation		
District	PSA	Ward	ANC	Phase	Description
2	203	3	3C	Proposed	3800 to 4000 Reno Road Northwest Northbound
	KEY: Existing Propos Bus Sto Metro 3 Hiker/E School Other F	Camera ed Camera p Station Biker Trail Pedestrian Gen	erator	Site 169	

This *proposed* speed camera will be located in Ward 3 between blocks 3800 and 4000 of Reno Road Northwest in the northbound direction. Reno Road runs between 41<sup>st</sup> Street Northwest to the North and Quebec Street Northwest to the south, where it becomes 34<sup>th</sup> Street Northwest. The posted speed limit is 25 MPH.



District Department of Transportation 55 M Street, SE, Suite 400

Washington, DC 20003





### Field Assessment Summary

Reno Road is assumed to run in the north-south direction, and is classified as a minor arterial. Reno Road has one travel lane in each direction. This site has the following characteristics:

- This site is located in a residential area with houses and driveways and sidewalks on both sides of the • street.
- The road has good pavement conditions with curb and gutter.
- There are two schools near this site: Hearst Elementary school and Sidwell Friends School.
- The Melvin C Hazen Trail begins at the south end of this block and continues south.



Facing North







# Speed Data Analysis

Posted Speed Limit (MPH)	25
Mean Speed (MPH)	27
85th Percentile Speed (MPH)	34
10 MPH Pace Speed	26-35
ADT	7,306

Both the Mean Speed and 85<sup>th</sup> Percentile Speed are higher than the posted speed limit at this site. The 85<sup>th</sup> percentile speed is much higher (9 MPH) than the posted speed limit.

## Crash Data Analysis

Between January 1, 2010 and December 31, 2012 there were a total of nine crashes at this location. A breakdown of collisions by type can be found in the chart on the next page. The most common type of crash at this location was Rear End (5 crashes).





Severity			Weather			Surface	condit	ion	Light Condition		
Total	9										
Fatal	0	0.0%	Clear	6	66.7%	Dry	3	33.3%	Day	7	77.8%
Injury	5	55.6%	Rain	2	22.2%	Wet	3	33.3%	Night	2	22.2%
Bicycle	0	0.0%	Snow	0	0.0%	Snow/Ice	0	0.0%			
Pedestrian	0	0.0%									



The most common type of crash at this location was rear end collisions. 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"<sup>1</sup> as two errors leading to rear-end crashes. These errors can be decreased with a decrease in travel speed.

### 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 85th percentile speed is much higher than the posted speed limit at this location.
- 2. Crash Data There was an elevated number of speed-related crashes as this location, including rear end collisions, as well as five injury-related crashes.

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





- 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 driveways along the north and south sides of the street.
  - b. There are two schools: Hearst Elementary School and Sidwell Friends School in the area.
  - c. There are multiple bus stops in the area which generate pedestrian activity.
  - d. Melvin C Hazen Trail begins 200 feet to the south of this site which generates pedestrian and bicycle activity.

Due to the speed data analysis, 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

### 3800 to 4000 Reno Road NW NB Speed

NB															
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/07/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
08:00	59	41	69	102	80	16	0	0	0	0	0	0	0	0	367
09:00	55	55	87	146	115	38	0	0	0	0	0	0	0	0	496
10:00	13	25	45	102	138	39	3	0	0	0	0	0	0	0	365
11:00	9	9	37	145	135	32	2	0	0	0	0	0	0	0	369
12 PM	1	6	25	133	134	33	4	0	0	0	0	0	0	0	336
13:00	22	21	56	170	146	35	1	0	0	0	0	0	0	0	451
14:00	8	9	47	130	118	33	2	0	0	0	0	0	0	0	347
15:00	12	21	67	132	156	56	7	0	0	0	0	0	0	0	451
16:00	40	34	87	200	159	28	3	1	0	0	0	0	0	0	552
17:00	33	30	81	185	205	42	3	0	0	0	0	0	0	0	579
18:00	81	83	114	192	148	22	0	0	0	0	0	0	0	0	640
19:00	31	52	109	240	142	22	2	1	0	0	0	0	0	0	599
20:00	24	35	50	197	236	37	0	0	0	0	0	0	0	0	579
21:00	0	0	6	60	181	61	4	0	0	0	0	0	0	0	312
22:00	0	0	9	70	177	59	6	0	0	0	0	0	0	0	321
23:00	0	0	7	49	138	54	1	0	0	0	0	0	0	0	249
Total	388	421	896	2253	2408	607	38	2	0	0	0	0	0	0	7013

## SAMMAT ENGINEERING SERVICES, LLC

#### 1515 RISING RIDGE ROAD MOUNT AIRY, MD 21771

### www.sammateng.com

### 3800 to 4000 Reno Road NW NB Speed

69.5%

Number of Vehicles > 25 MPH : Percent of Vehicles > 25 MPH :

NB															
Start	1	16	21	26	31	36	41	46	51	56	61	66	71	76	
Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/08/13	0	0	1	10	42	34	7	1	0	0	0	0	0	0	95
01:00	0	0	0	5	9	14	4	0	1	0	0	0	0	0	33
02:00	0	0	0	1	10	11	3	0	0	0	0	0	0	0	25
03:00	0	0	0	0	8	8	2	0	0	0	0	0	0	0	18
04:00	0	1	0	1	2	5	2	1	0	0	0	0	0	0	12
05:00	0	0	0	2	3	6	1	0	0	0	0	0	0	0	12
06:00	0	0	0	4	17	8	7	0	1	0	0	0	0	0	37
07:00	0	0	0	16	36	22	3	0	0	0	0	0	0	0	77
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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	0	1	1	39	127	108	29	2	2	0	0	0	0	0	309
										-					
Grand	200	422	907	2202	2525	715	67	1	2	0	٥	٥	0	0	7200
Total	300	422	091	2292	2000	715	07	4	2	0	0	0	0	0	1322
				- ···											
			15th F	Percentile :		18 MPH									
			SUIN F												
			0546												
			9501 F	Percentile :		37 MPH									
State		Me	an Sneed(			27 MPH									
Oldis		11	MPH Pa	ce Sneed :	26-3	35 MPH									
			Numbe	er in Pace	20 .	4146									
			Percer	nt in Pace :		56.6%									
		Number of	Vehicles >	25 MPH :		5085									

## SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD MOUNT AIRY, MD 21771

### www.sammateng.com

### 3800 to 4000 Reno Road NW NB Volume

Start	Thu	07-Nov-13	Fri	08-Nov-13	Sat	09-Nov-13	Dail	y Average
Time	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	74	26	*	*	*	26	74
12:15	*	79	28	*	*	*	28	79
12:30	*	82	26	*	*	*	26	82
12:45	*	101	15	*	*	*	15	101
01:00	*	109	13	*	*	*	13	109
01:15	*	115	9	*	*	*	9	115
01:30	*	125	8	*	*	*	8	125
01:45	*	102	3	*	*	*	3	102
02:00	*	72	7	*	*	*	7	72
02:15	*	84	4	*	*	*	4	84
02:30	*	90	6	*	*	*	6	90
02:45	*	101	8	*	*	*	8	101
03:00	*	120	8	*	*	*	8	120
03:15	*	92	5	*	*	*	5	92
03:30	*	113	2	*	*	*	2	113
03:45	*	126	3	*	*	*	3	126
04:00	*	116	4	*	*	*	4	116
04:15	*	138	5	*	*	*	5	138
04:30	*	139	1	*	*	*	1	139
04:45	*	159	2	*	*	*	2	159
05:00	*	164	1	*	*	*	1	164
05:15	*	145	1	*	*	*	1	145
05:30	~ +	124	6	^ _	* *	*	6	124
05:45	• •	146	4	^ +	*	*	4	146
06:00		1/1	6				6	1/1
06:15		159	8		*		8	159
06:30	÷	151	9	^ +	* *	*	9	151
06:45		159	14		*	*	14	159
07:00	*	100	19	*	*	*	19	100
07.15	*	100	21	*	*	*	21	133
07.30	*	145	23	*	*	*	23	145
07.45	33	100	14	*	*	*	14	100
08.00	70	152	*	*	*	*	70	152
00.10	107	136	*	*	*	*	107	132
08:45	127	11/	*	*	*	*	127	130
00.45	124	80	*	*	*	*	120	80
09:00	129	73	*	*	*	*	124	73
00.10	133	80	*	*	*	*	133	80
09:45	110	79	*	*	*	*	110	79
10.00	116	102	*	*	*	*	110	102
10:15	99	71	*	*	*	*	99	71
10:10	65	58	*	*	*	*	65	58
10:45	85	90	*	*	*	*	85	90
11.00	76	81	*	*	*	*	76	81
11:15	93	62	*	*	*	*	93	62
11:30	98	58	*	*	*	*	98	58
11:45	102	48	*	*	*	*	102	48
Total	1597	5416	309	0	0	0	1889	5416
Combined				-	Ŭ	~ ^		005
Total	70	113	3	909		U	7	305
Peak	08:45	06:00	12:00				08:45	06:00
Vol.	514	640	95				514	640
P.H.F.	0.966	0.936	0.848				0.966	0.936
ADT		ADT 7,306	AADT 7,30	)6				

### DC Department of Transportation - Traffic Accident Reporting and Analysis System

# Accident Summary Report (R-8)

Corridor: RENO RD,N	W From UP	TON ST,NW	/ TO RODMAN S	T,NW				
Time Period Covered: Fro	om 01/01/201	10 To 12/31	2012 Prepar	ed By:	Rahul Jain	Prepared Da	ate:	9/15/2013
Total Number of Accident:		9	Collision Type	#ACC	> %	Collision Type	#AC	C %
Total Number of Fatalities:		0	Right Angle:	1	11.1%	Fixed Object:	0	0.0%
Total Number of Injuries:		12	Left Turn:	0	0.0%	Ran Off Road:	1	11.1%
Total Number of Disabling Inj	juries:	0	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of NonDisablin	g Injuries:	0	Rear End:	5	55.6%	Backing:	0	0.0%
Total Number of Pedestrians	Involved:	0	Side Swiped:	1	11.1%	Non Collision:	0	0.0%
Total Number of Bicycles Inv	olved:	0	Head On:	0	0.0%	Under/Over Ride	: 0	0.0%
Total Number of Motorcycles	Involved:	0	Parked:	0	0.0%	Unspecified:	1	11.1%
Time of Day	#ACC	%			Day o fweek	#AC	c	%
07:30 ~ 09:30:	2	22.2%			Sunday:	0		0.0%
09:30 ~ 11:30:	2	22.2%			Monday:	0		0.0%
11:30 ~ 13:30:	0	0.0%			Tuesday:	0		0.0%
13:30 ~ 16:00:	2	22.2%			Wednesday:	2		22.2%
16:00 ~18:30:	2	22.2%			Thursday:	2		22.2%
18:30 ~ 07:30:	1	11.1%			Friday:	4		44.4%
Unspecified:	0	0.0%			Saturday:	1		11.1%
Weather Condition	#ACC	%			Surface Conditio	n #AC	c	%
Clear:	6	66.7%			Dry:	3		33.3%
Rain:	2	22.2%			Wet:	3		33.3%
Snow:	0	0.0%			Snow/Ice:	0		0.0%
Sleet/Hail:	0	0.0%			Slush:	1		11.1%
Fog/Mist:	0	0.0%			Water/Sand:	0		0.0%
Crosswind/Blowing Sand:	0	0.0%			Repairing:	1		11.1%
Unspecified:	1	11.1%			Unspecified:	1		11.1%
Type of Vehicle	#VEH	%			Accident Severit	у Туре #АС	c	%
Passenger Car:	16	84.2%			Fatal Collision:	0		0.0%
Bus:	0	0.0%			Injury Collision:	5		55.6%
Truck:	0	0.0%			PDO Collision:	4		44.4%
Taxi:	1	5.3%						
Minivan:	0	0.0%			Light Condition	#A0	C	%
Police/Emergency Vehicle:	1	5.3%			Daylight:	/		//.8%
Motorcycle/Moped:	0	0.0%			Dawn/Dusk:	0		0.0%
Bicycle:	0	0.0%			Dark(Lighted):	2		22.2%
Fixed Object:	0	0.0%			Dark(Not Lighted)	. 0		0.0%
Unspecified:	1	5.3%			Dark(Unknown Lig	ghting): 0		0.0%
					Unspecified:	0		0.0%
Contributing Factor	#VEH	%			Pedestrian Actio	ns #AC	cc	%
Driver: Speed:	1	5.3%			In Crosswalk with	Signal: 0		0.0%
Driver: Alcohol/Drug:	0	0.0%			In Crosswalk agai	nst Signal: 0		0.0%
Driver: Electronic Device:	0	0.0%			In Crosswalk no S	ignal: 0		0.0%
Driver: Others:	1	5.3%			In Unmarked Cros	swalk: 0		0.0%
Vehicle:	0	0.0%			Not in Crosswalk:	0		0.0%
Roadway:	0	0.0%			From Between Pa	rked Cars: 0		0.0%
Unspecified:	17	89.5%			Unspecified:	0		0.0%

2 Records are not approved as of 9/15/2013 9:23:19 PM