



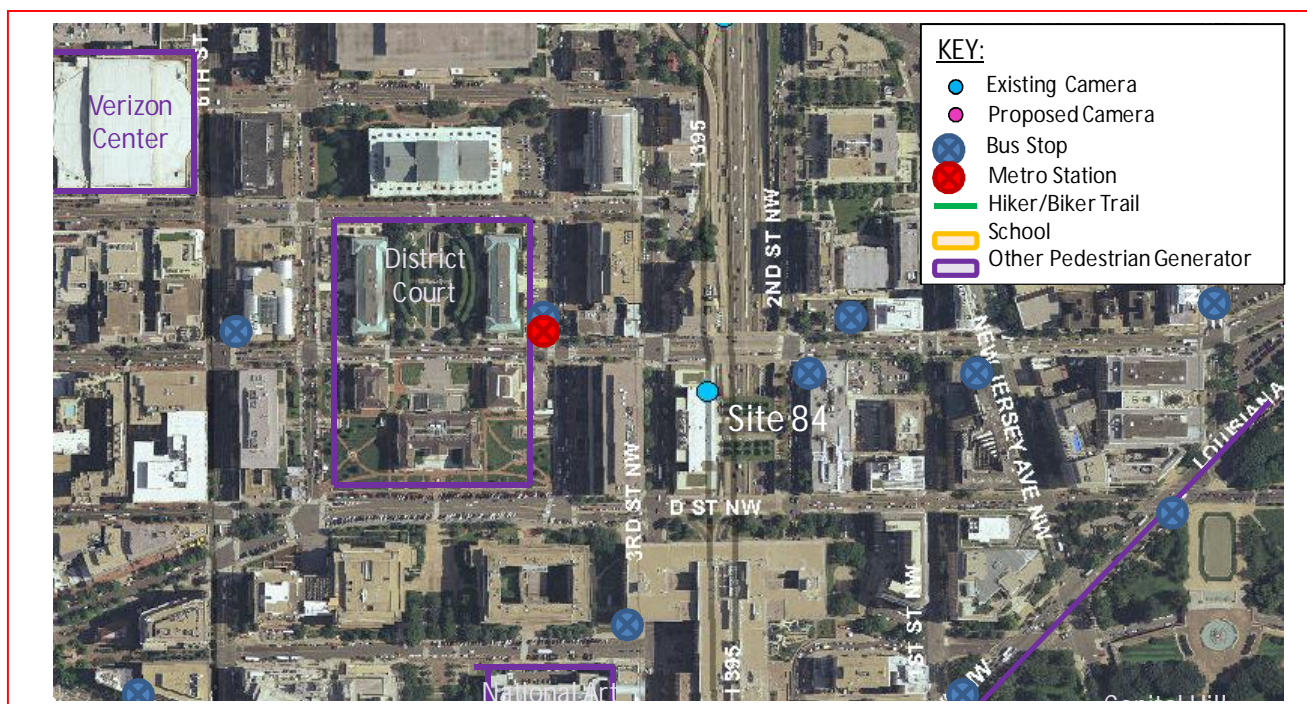
District Department of Transportation

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

3rd Street Tunnel NW at 3rd Street Exit

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
1	10/103	6	6C	Existing	3 rd Street Tunnel Northwest Southbound at 3 rd Street Exit



The existing speed camera is located in Ward 6 at the 3rd St Tunnel Northwest in the southbound direction at the 3rd Street Exit. Third Street Tunnel runs between New York Avenue Northwest to the north and I-695 to the south. The posted speed limit is 45 MPH. This speed camera was installed on June 1, 2005.

W6 - 154





District Department of Transportation

3rd Street Tunnel NW at 3rd Street Exit

Field Assessment Summary

The 3rd Street Tunnel, also known as I-395, is assumed to run in a north-south direction, and is classified as a Interstate. The 3rd Street tunnel has two travel lanes in each direction. This site has the following characteristics:

- There are several bus stops in the area that generate pedestrian activity.
- This site is close to the Verizon Center and the District Court, both of which generate large amounts of pedestrian activity.
- The pavement is in good condition and there is curb and gutter with drainage inlets.
- There is a median concrete barrier.



Northbound



District Department of Transportation

3rd Street Tunnel NW at 3rd Street Exit



Southbound

Speed Data Analysis

Posted Speed Limit (MPH)	45
Mean Speed (MPH)	32
85th Percentile Speed (MPH)	39
10 MPH Pace Speed (MPH)	31-40
ADT	26,643

The mean speed is lower than the posted speed limit by 13 MPH and the 85th percentile speed is lower than the posted speed by 6 MPH at this location.

Crash Data Analysis

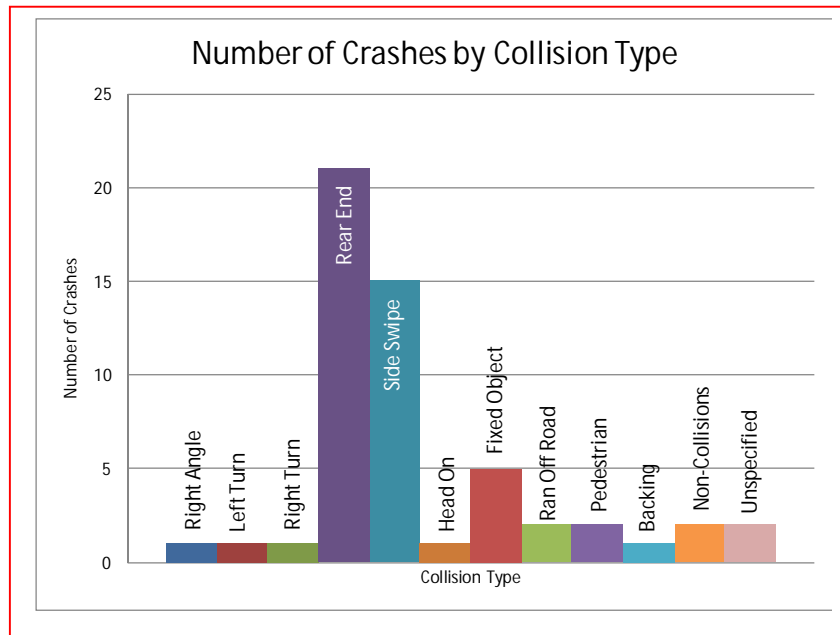
From the Accident Summary Report provided for the dates between January 1, 2010 and December 31, 2012 there were a total of 66 crashes at this location. A breakdown of number of crashes by collision type can be found in the chart on the next page. The most common types of crashes at this location were Rear End (29 crashes) and Side Swipe (17 crashes). Furthermore, this site experienced a high frequency (25 crashes) of injury-related crashes.



District Department of Transportation

3rd Street Tunnel NW at 3rd Street Exit

Severity			Weather			Surface Condition			Light Condition		
Total	66										
Fatal	0	0.0%	Clear	55	83.3%	Dry	53	80.3%	Day	38	57.6%
Injury	25	37.9%	Rain	7	10.6%	Wet	9	13.6%	Night	24	36.4%
Truck	13	19.7%	Snow	2	3.0%	Snow/Ice	1	1.5%			
Taxi	6	9.1%									



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.

The speed camera was installed on 06-01-2005. There were no accidents prior to installation of the speed camera, and no accidents after the installation of the speed camera.

Safety Nexus

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



District Department of Transportation

3rd Street Tunnel NW at 3rd Street Exit

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

1. Speed Data – The 85th percentile speeds are lower than the posted speed limit at this location.
2. Crash Data – There were an elevated number of speed-related crashes at this location, including rear end and side swipe crashes, as well as a high frequency (25 crashes) of injury-related crashes.
3. Field Assessment –The following site characteristics suggest a need for a safer travel environment:
 - a) There are several bus stops in the area which may generate pedestrian activity above the freeway.

Although the mean speed and 85th percentile speeds were lower than the posted speed limit, the crash data analysis revealed an elevated number of crashes at this location. Thus, due to the elevated number speed-related and injury-related crashes, 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

3rd St Tunnel NW SB at 3rd St Exit Speed

SB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
12/04/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	1	0	0	5	47	76	49	16	0	0	0	0	1	0	195
03:00	1	0	0	4	32	83	45	1	2	0	0	0	0	0	168
04:00	3	0	1	5	57	147	76	13	1	0	0	0	0	0	303
05:00	21	0	0	16	179	372	145	23	2	0	0	0	0	0	758
06:00	42	0	1	68	497	614	200	19	0	0	0	0	0	0	1441
07:00	81	0	2	58	591	716	240	27	1	0	0	0	0	0	1716
08:00	73	0	0	65	553	830	236	19	3	0	0	0	0	0	1779
09:00	70	0	4	71	568	579	184	24	0	0	0	0	0	0	1500
10:00	51	1	17	96	537	480	133	12	3	1	0	0	0	0	1331
11:00	65	2	3	113	473	466	151	18	2	0	0	0	0	0	1293
12 PM	48	0	6	108	538	486	122	17	2	0	0	0	0	0	1327
13:00	66	0	10	120	620	443	96	13	1	0	0	0	0	0	1369
14:00	77	0	23	140	625	537	138	16	2	0	0	0	0	0	1558
15:00	69	0	7	142	725	569	139	21	1	0	0	0	0	0	1673
16:00	69	0	12	144	873	549	118	18	1	0	0	0	0	0	1784
17:00	548	16	27	73	159	85	26	0	0	0	0	0	0	0	934
18:00	703	64	10	1	3	0	0	0	0	0	0	0	0	0	781
19:00	67	1	24	199	679	433	91	6	0	1	0	0	0	0	1501
20:00	39	0	7	82	493	542	130	19	1	0	0	0	0	0	1313
21:00	43	0	9	77	478	562	146	25	5	0	0	0	0	0	1345
22:00	26	0	0	36	328	442	160	28	2	0	0	0	0	0	1022
23:00	9	0	0	22	237	384	159	29	1	0	0	0	0	0	841
Total	2172	84	163	1645	9292	9395	2784	364	30	2	0	0	1	0	25932

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

3rd St Tunnel NW SB at 3rd St Exit Speed

SB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
12/05/13	2	0	1	8	107	205	109	16	4	0	0	0	0	0	452
01:00	6	0	0	7	50	109	65	18	4	0	0	0	0	0	259
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	8	0	1	15	157	314	174	34	8	0	0	0	0	0	711
Grand Total	2180	84	164	1660	9449	9709	2958	398	38	2	0	0	1	0	26643

15th Percentile : 24 MPH
 50th Percentile : 34 MPH
 85th Percentile : 39 MPH
 95th Percentile : 43 MPH

Stats
 Mean Speed(Average) : 32 MPH
 10 MPH Pace Speed : 31-40 MPH
 Number in Pace : 16319
 Percent in Pace : 61.3%
 Number of Vehicles > 45 MPH : 699
 Percent of Vehicles > 45 MPH : 2.6%

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MOUNT AIRY, MD 21771

www.sammateng.com

3rd St Tunnel NW SB at 3rd St Exit Volume

Start Time	04-Dec-13		05-Dec-13		06-Dec-13		Daily Average	
	Wed A.M.	P.M.	Thu A.M.	P.M.	Fri A.M.	P.M.	A.M.	P.M.
12:00	*	311	165	*	*	*	165	311
12:15	*	342	138	*	*	*	138	342
12:30	*	344	80	*	*	*	80	344
12:45	*	330	69	*	*	*	69	330
01:00	*	310	94	*	*	*	94	310
01:15	*	348	73	*	*	*	73	348
01:30	*	339	40	*	*	*	40	339
01:45	*	372	52	*	*	*	52	372
02:00	60	383	*	*	*	*	60	383
02:15	63	382	*	*	*	*	63	382
02:30	32	397	*	*	*	*	32	397
02:45	40	396	*	*	*	*	40	396
03:00	33	394	*	*	*	*	33	394
03:15	36	410	*	*	*	*	36	410
03:30	40	400	*	*	*	*	40	400
03:45	59	469	*	*	*	*	59	469
04:00	58	431	*	*	*	*	58	431
04:15	56	469	*	*	*	*	56	469
04:30	81	446	*	*	*	*	81	446
04:45	108	438	*	*	*	*	108	438
05:00	127	405	*	*	*	*	127	405
05:15	182	196	*	*	*	*	182	196
05:30	195	169	*	*	*	*	195	169
05:45	254	164	*	*	*	*	254	164
06:00	290	180	*	*	*	*	290	180
06:15	346	194	*	*	*	*	346	194
06:30	376	181	*	*	*	*	376	181
06:45	429	226	*	*	*	*	429	226
07:00	414	343	*	*	*	*	414	343
07:15	432	429	*	*	*	*	432	429
07:30	428	381	*	*	*	*	428	381
07:45	442	348	*	*	*	*	442	348
08:00	448	345	*	*	*	*	448	345
08:15	462	352	*	*	*	*	462	352
08:30	414	337	*	*	*	*	414	337
08:45	455	279	*	*	*	*	455	279
09:00	439	318	*	*	*	*	439	318
09:15	389	374	*	*	*	*	389	374
09:30	347	343	*	*	*	*	347	343
09:45	325	310	*	*	*	*	325	310
10:00	325	288	*	*	*	*	325	288
10:15	334	278	*	*	*	*	334	278
10:30	330	239	*	*	*	*	330	239
10:45	342	217	*	*	*	*	342	217
11:00	324	249	*	*	*	*	324	249
11:15	323	194	*	*	*	*	323	194
11:30	307	207	*	*	*	*	307	207
11:45	339	191	*	*	*	*	339	191
Total	10484	15448	711	0	0	0	11195	15448
Combined Total	25932		711		0		26643	
Peak	07:30	03:45	12:00				07:30	03:45
Vol.	1780	1815	452				1780	1815
P.H.F.	0.963	0.967	0.685				0.963	0.967
ADT	ADT 26,643		AADT 26,643					

Accident Summary Report (R-8)

Corridor: INTERSTATE 395,BN From FOURTH ST,NW TO INTERSTATE 695 INTERSTATE,BN

Time Period Covered: From 01/01/2010 To 12/31/2012 **Prepared By:** admin TARAS **Prepared Date:** 1/2/2014

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	66	Right Angle:	1	1.5%	Fixed Object:	5	7.6%
Total Number of Fatalities:	0	Left Turn:	1	1.5%	Ran Off Road:	2	3.0%
Total Number of Injuries:	40	Right Turn:	1	1.5%	Ped. Involved:	2	3.0%
Total Number of Disabling Injuries:	1	Rear End:	29	43.9%	Backing:	1	1.5%
Total Number of NonDisabling Injuries:	5	Side Swiped:	17	25.8%	Non Collision:	2	3.0%
Total Number of Pedestrians Involved:	4	Head On:	3	4.5%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	1	Parked:	0	0.0%	Unspecified:	2	3.0%
Total Number of Motorcycles Involved:	1						

Time of Day	#ACC	%	Day of week	#ACC	%
07:30 ~ 09:30:	6	9.1%	Sunday:	10	15.2%
09:30 ~ 11:30:	7	10.6%	Monday:	9	13.6%
11:30 ~ 13:30:	13	19.7%	Tuesday:	9	13.6%
13:30 ~ 16:00:	8	12.1%	Wednesday:	9	13.6%
16:00 ~ 18:30:	8	12.1%	Thursday:	9	13.6%
18:30 ~ 07:30:	24	36.4%	Friday:	11	16.7%
Unspecified:	0	0.0%	Saturday:	9	13.6%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	55	83.3%	Dry:	53	80.3%
Rain:	7	10.6%	Wet:	9	13.6%
Snow:	2	3.0%	Snow/Ice:	1	1.5%
Sleet/Hail:	1	1.5%	Slush:	2	3.0%
Fog/Mist:	0	0.0%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	1	1.5%
Unspecified:	1	1.5%	Unspecified:	0	0.0%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	101	78.3%	Fatal Collision:	0	0.0%
Bus:	6	4.7%	Injury Collision:	25	37.9%
Truck:	13	10.1%	PDO Collision:	41	62.1%
Taxi:	6	4.7%			
Minivan:	0	0.0%	Light Condition	#ACC	%
Police/Emergency Vehicle:	1	0.8%	Daylight:	38	57.6%
Motorcycle/Moped:	1	0.8%	Dawn/Dusk:	2	3.0%
Bicycle:	1	0.8%	Dark(Lighted):	23	34.8%
Fixed Object:	0	0.0%	Dark(Not Lighted):	1	1.5%
Unspecified:	0	0.0%	Dark(Unknown Lighting):	0	0.0%
			Unspecified:	2	3.0%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	0	0.0%	In Crosswalk with Signal:	0	0.0%
Driver: Alcohol/Drug:	0	0.0%	In Crosswalk against Signal:	0	0.0%
Driver: Electronic Device:	0	0.0%	In Crosswalk no Signal:	0	0.0%
Driver: Others:	26	20.2%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	1	0.8%	Not in Crosswalk:	0	0.0%
Roadway:	1	0.8%	From Between Parked Cars:	1	50.0%
Unspecified:	101	78.3%	Unspecified:	1	50.0%

Year	Accidents	Fatalities	Injuries	Disabling Injuries	Pedestrians	Bicycles	Motorcycles
2010	44	0	26	4	4	1	0
2011	16	0	10	1	0	0	1
2012	6	0	4	0	0	0	0

38 Records are not approved as of 1/2/2014 3:43:53 PM