



District Department of Transportation

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

5000-5200 Blocks Wisconsin Avenue NW

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
2	202	3	3E	Proposed	5000-5200 Blocks Wisconsin Avenue Northwest



The *proposed* speed camera will be located in Ward 3 between the 5000 and 5200 blocks of Wisconsin Avenue Northwest. Wisconsin Avenue Northwest runs from Western Avenue Northwest in the northwest to Water Street Northwest in the south. The posted speed limit is 30 MPH.

W3 - 316





District Department of Transportation

5000-5200 Blocks Wisconsin Avenue NW

Field Assessment Summary

Wisconsin Avenue is assumed to run in a north-south direction and is classified as a principal arterial. Wisconsin Avenue has three travel lanes in both directions. This site has the following characteristics:

- This site is located in a residential and commercial area with apartments and businesses on both sides of the roadway.
- There is sidewalk on both sides of the roadway.
- There are pedestrian crosswalks to cross Wisconsin Avenue at all surrounding intersections.
- There are several bus stops in the area that generate pedestrian activity.



Looking Northbound

W3 - 317



District Department of Transportation

5000-5200 Blocks Wisconsin Avenue NW



Looking Southbound

Speed Data Analysis

Direction	Southeast	Northwest
Posted Speed Limit (MPH)	30	30
Mean Speed (MPH)	17	17
85th Percentile Speed (MPH)	25	24
10 MPH Pace Speed (MPH)	18-27	16-25
Sample Size	8,159	8,772
ADT	16,931	

The mean speed is lower than the posted speed limit by 13 MPH in both directions. The 85th percentile speed is lower than the posted speed by 5 MPH in the SE direction and 6 MPH in the NW direction 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 69 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 (18 crashes), Right Angle (13 crashes) and Side Swiped (11 crashes). The other collision types had five crashes or less. The crash data shows one (1) collision where vehicular speeding was a contributing factor. Furthermore, the site experienced a high frequency (34 crashes) of injury-related crashes.

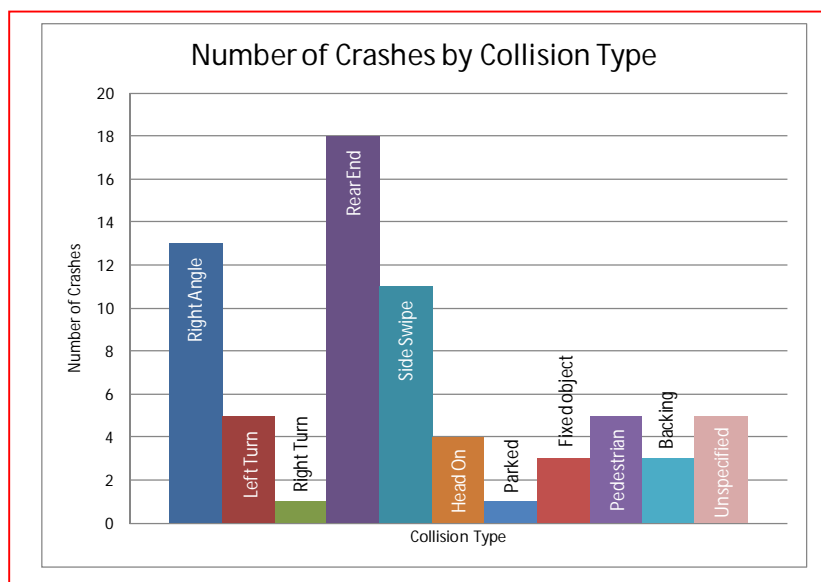
W3 - 318



District Department of Transportation

5000-5200 Blocks Wisconsin Avenue NW

Severity			Weather			Surface condition			Light Condition		
Total	69										
Fatal	0	0.0%	Clear	56	81.2%	Dry	59	85.5%	Day	51	73.9%
Injury	34	49.3%	Rain	7	10.1%	Wet	8	11.6%	Night	15	21.7%
Taxi	11	15.9%	Snow	0	0.0%	Snow/Ice	0	0.0%			
Bus	3	4.3%									



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 Wisconsin Avenue 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

5000-5200 Blocks Wisconsin Avenue NW

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 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, right angle, and side swipe collisions, as well as a high frequency (34 crashes) of injury-related crashes. The Wisconsin Avenue 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 site is located in a residential and commercial area with apartments and businesses on both sides of the roadway.
 - b. There is sidewalk on both sides of the roadway.

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, and pedestrian generators, there is a nexus between traffic safety and the speed camera at this location.

W3 - 320

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

5000-5200 block of Wisconsin Ave NW Speed

NWB

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
11/06/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	2	4	10	6	1	0	0	0	0	0	0	0	0	0	23
03:00	1	4	12	10	2	0	0	0	0	0	0	0	0	0	29
04:00	0	2	30	18	3	0	0	0	0	0	0	0	0	0	53
05:00	8	6	82	70	8	0	0	0	0	0	0	0	0	0	174
06:00	85	78	191	119	12	0	0	0	0	0	0	0	0	0	485
07:00	88	101	319	188	25	1	0	0	0	0	0	0	0	0	722
08:00	96	111	217	93	3	0	0	0	0	0	0	0	0	0	520
09:00	98	112	238	69	9	1	0	0	0	0	0	0	0	0	527
10:00	103	142	206	70	3	0	0	0	0	0	0	0	0	0	524
11:00	175	170	157	43	2	0	0	0	0	0	0	0	0	0	547
12 PM	347	64	92	20	3	0	0	0	0	0	0	0	0	0	526
13:00	224	87	96	11	0	0	0	0	0	0	0	0	0	0	418
14:00	136	169	161	30	1	0	0	0	0	0	0	0	0	0	497
15:00	120	216	159	31	3	0	0	0	0	0	0	0	0	0	529
16:00	217	110	73	21	1	0	0	0	0	0	0	0	0	0	422
17:00	158	173	147	20	0	0	0	0	0	0	0	0	0	0	498
18:00	168	149	118	15	2	0	0	0	0	0	0	0	0	0	452
19:00	170	102	153	23	1	0	0	0	0	0	0	0	0	0	449
20:00	49	105	203	52	5	0	0	0	0	0	0	0	0	0	414
21:00	41	111	173	63	5	0	0	0	0	0	0	0	0	0	393
22:00	17	37	125	58	6	1	0	0	0	0	0	0	0	0	244
23:00	4	16	73	64	7	0	0	0	0	0	0	0	0	0	164
Total	2307	2069	3035	1094	102	3	0	0	0	0	0	0	0	0	8610

SAMMAT ENGINEERING SERVICES, LLC

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MOUNT AIRY, MD 21771

www.sammateng.com

5000-5200 block of Wisconsin Ave NW Speed

NWB

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
11/07/13	4	4	44	27	7	0	1	0	0	0	0	0	0	0	87
01:00	0	6	22	21	2	0	1	0	0	0	0	0	0	0	52
02:00	3	2	10	7	1	0	0	0	0	0	0	0	0	0	23
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	12	76	55	10	0	2	0	0	0	0	0	0	0	162
Grand Total	2314	2081	3111	1149	112	3	2	0	0	0	0	0	0	0	8772

15th Percentile : 7 MPH
50th Percentile : 16 MPH
85th Percentile : 24 MPH
95th Percentile : 27 MPH

Stats
Mean Speed(Average) : 17 MPH
10 MPH Pace Speed : 16-25 MPH
Number in Pace : 3738
Percent in Pace : 42.6%
Number of Vehicles > 30 MPH : 182
Percent of Vehicles > 30 MPH : 2.1%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

5000-5200 block of Wisconsin Ave NW Speed

SEB

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
11/06/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	2	3	4	11	2	1	0	0	0	0	0	0	0	0	23
03:00	1	4	12	10	3	0	0	0	0	0	0	0	0	0	30
04:00	1	3	11	16	8	2	0	0	0	0	0	0	0	0	41
05:00	47	1	27	40	17	1	0	0	0	0	0	0	0	0	133
06:00	324	0	17	3	2	1	0	0	0	0	0	0	0	0	347
07:00	81	36	153	98	27	6	0	0	0	0	0	0	0	0	401
08:00	152	64	122	61	8	3	0	1	0	0	0	0	0	0	411
09:00	102	89	167	83	27	2	0	0	0	0	0	0	0	0	470
10:00	102	135	149	74	13	4	0	0	0	0	0	0	0	0	477
11:00	104	99	156	58	15	1	0	0	0	0	0	0	0	0	433
12 PM	90	141	156	55	6	1	0	0	0	0	0	0	0	0	449
13:00	157	82	122	34	4	0	0	0	0	0	0	0	0	0	399
14:00	132	117	179	88	17	0	0	0	0	0	0	0	0	0	533
15:00	138	98	197	110	20	2	0	0	0	0	0	0	0	0	565
16:00	171	122	160	74	12	2	0	0	0	0	0	0	0	0	541
17:00	163	137	189	69	13	0	0	0	0	0	0	0	0	0	571
18:00	183	94	83	37	10	0	0	0	0	0	0	0	0	0	407
19:00	76	78	180	81	7	3	0	0	0	0	0	0	0	0	425
20:00	48	79	181	82	13	0	0	0	0	0	0	0	0	0	403
21:00	33	73	181	96	14	2	0	0	0	0	0	0	0	0	399
22:00	14	39	157	112	20	1	2	0	0	0	0	0	0	0	345
23:00	8	14	66	72	15	0	0	0	0	0	0	0	0	0	175
Total	2129	1508	2669	1364	273	32	2	1	0	0	0	0	0	0	7978

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SEB

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
11/07/13	4	14	31	39	13	1	0	0	0	0	0	0	0	0	102
01:00	0	3	19	28	6	0	0	0	0	0	0	0	0	0	56
02:00	1	1	8	11	2	0	0	0	0	0	0	0	0	0	23
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	5	18	58	78	21	1	0	0	0	0	0	0	0	0	181
Grand Total	2134	1526	2727	1442	294	33	2	1	0	0	0	0	0	0	8159

15th Percentile : 7 MPH
50th Percentile : 17 MPH
85th Percentile : 25 MPH
95th Percentile : 29 MPH

Stats
Mean Speed(Average) : 17 MPH
10 MPH Pace Speed : 18-27 MPH
Number in Pace : 3239
Percent in Pace : 39.7%
Number of Vehicles > 30 MPH : 359
Percent of Vehicles > 30 MPH : 4.4%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammatteng.com

5000-5200 block of Wisconsin Ave NW Volume

Start Time	06-Nov-13 Wed	NWB		SEB		Combined		07-Nov- Thu	NWB		SEB		Combined	
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00		*	141	*	129	*	270		28	*	34	*	62	*
12:15		*	138	*	113	*	251		25	*	29	*	54	*
12:30		*	122	*	109	*	231		21	*	23	*	44	*
12:45		*	125	*	98	*	223		13	*	16	*	29	*
01:00		*	119	*	95	*	214		16	*	10	*	26	*
01:15		*	129	*	73	*	202		13	*	23	*	36	*
01:30		*	112	*	102	*	214		14	*	13	*	27	*
01:45		*	58	*	129	*	187		9	*	10	*	19	*
02:00		*	111	*	125	*	236		19	*	10	*	29	*
02:15		*	117	*	134	*	251		4	*	13	*	17	*
02:30		13	141	14	141	27	282		*	*	*	*	*	*
02:45		10	128	9	133	19	261		*	*	*	*	*	*
03:00		9	134	9	149	18	283		*	*	*	*	*	*
03:15		7	144	8	123	15	267		*	*	*	*	*	*
03:30		7	124	8	146	15	270		*	*	*	*	*	*
03:45		6	127	5	147	11	274		*	*	*	*	*	*
04:00		5	110	7	151	12	261		*	*	*	*	*	*
04:15		12	125	6	143	18	268		*	*	*	*	*	*
04:30		15	118	6	131	21	249		*	*	*	*	*	*
04:45		21	69	22	116	43	185		*	*	*	*	*	*
05:00		20	120	20	121	40	241		*	*	*	*	*	*
05:15		32	151	26	156	58	307		*	*	*	*	*	*
05:30		47	112	30	131	77	243		*	*	*	*	*	*
05:45		75	115	57	163	132	278		*	*	*	*	*	*
06:00		99	110	65	73	164	183		*	*	*	*	*	*
06:15		113	103	83	80	196	183		*	*	*	*	*	*
06:30		120	100	111	125	231	225		*	*	*	*	*	*
06:45		153	139	88	129	241	268		*	*	*	*	*	*
07:00		183	122	77	119	260	241		*	*	*	*	*	*
07:15		177	105	107	71	284	176		*	*	*	*	*	*
07:30		194	120	92	131	286	251		*	*	*	*	*	*
07:45		168	102	125	104	293	206		*	*	*	*	*	*
08:00		138	114	104	96	242	210		*	*	*	*	*	*
08:15		143	95	104	106	247	201		*	*	*	*	*	*
08:30		107	112	98	102	205	214		*	*	*	*	*	*
08:45		132	93	105	99	237	192		*	*	*	*	*	*
09:00		126	118	128	95	254	213		*	*	*	*	*	*
09:15		136	106	116	124	252	230		*	*	*	*	*	*
09:30		142	77	120	102	262	179		*	*	*	*	*	*
09:45		123	92	106	78	229	170		*	*	*	*	*	*
10:00		130	68	131	95	261	163		*	*	*	*	*	*
10:15		133	65	115	95	248	160		*	*	*	*	*	*
10:30		116	64	109	82	225	146		*	*	*	*	*	*
10:45		145	47	122	73	267	120		*	*	*	*	*	*
11:00		142	59	119	56	261	115		*	*	*	*	*	*
11:15		123	38	106	52	229	90		*	*	*	*	*	*
11:30		136	39	106	35	242	74		*	*	*	*	*	*
11:45		146	28	102	32	248	60		*	*	*	*	*	*
Total		3604	5006	2766	5212	6370	10218		162	0	181	0	343	0
Day Total		8610		7978		16588			162		181		343	
% Total		21.7%	30.2%	16.7%	31.4%				47.2%	0.0%	52.8%	0.0%		
Peak		07:00	02:30	10:00	03:30	07:00	03:00		12:00		12:00		12:00	
Vol.		722	547	477	587	1123	1094		87		102		189	
P.H.F.		0.930	0.950	0.910	0.972	0.958	0.966		0.777		0.750		0.762	
ADT		ADT 16,931		AADT 16,931										

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: WISCONSIN AVE,NW From INGOMAR ST,NW TO FESSENDEN ST,NW

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

Prepared By: Rahul Jain

Prepared Date: 9/15/2013

Total Number of Accident:	69	Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	0	Right Angle:	13	18.8%	Fixed Object:	3	4.3%
Total Number of Injuries:	45	Left Turn:	5	7.2%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	3	Right Turn:	1	1.4%	Ped. Involved:	5	7.2%
Total Number of NonDisabling Injuries:	7	Rear End:	18	26.1%	Backing:	3	4.3%
Total Number of Pedestrians Involved:	5	Side Swiped:	11	15.9%	Non Collision:	0	0.0%
Total Number of Bicycles Involved:	2	Head On:	4	5.8%	Under/Over Ride:	0	0.0%
Total Number of Motorcycles Involved:	1	Parked:	1	1.4%	Unspecified:	5	7.2%

Time of Day	#ACC	%	Day of week	#ACC	%
07:30 ~ 09:30:	7	10.1%	Sunday:	2	2.9%
09:30 ~ 11:30:	8	11.6%	Monday:	10	14.5%
11:30 ~ 13:30:	16	23.2%	Tuesday:	7	10.1%
13:30 ~ 16:00:	8	11.6%	Wednesday:	18	26.1%
16:00 ~ 18:30:	11	15.9%	Thursday:	8	11.6%
18:30 ~ 07:30:	19	27.5%	Friday:	15	21.7%
Unspecified:	0	0.0%	Saturday:	9	13.0%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	56	81.2%	Dry:	59	85.5%
Rain:	7	10.1%	Wet:	8	11.6%
Snow:	0	0.0%	Snow/Ice:	0	0.0%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	1	1.4%	Water/Sand:	1	1.4%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	0	0.0%
Unspecified:	5	7.2%	Unspecified:	1	1.4%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	101	75.4%	Fatal Collision:	0	0.0%
Bus:	3	2.2%	Injury Collision:	34	49.3%
Truck:	12	9.0%	PDO Collision:	35	50.7%
Taxi:	11	8.2%	Light Condition	#ACC	%
Minivan:	0	0.0%	Daylight:	51	73.9%
Police/Emergency Vehicle:	1	0.7%	Dawn/Dusk:	1	1.4%
Motorcycle/Moped:	1	0.7%	Dark(Lighted):	14	20.3%
Bicycle:	2	1.5%	Dark(Not Lighted):	1	1.4%
Fixed Object:	0	0.0%	Dark(Unknown Lighting):	0	0.0%
Unspecified:	3	2.2%	Unspecified:	2	2.9%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	1	0.7%	In Crosswalk with Signal:	2	40.0%
Driver: Alcohol/Drug:	1	0.7%	In Crosswalk against Signal:	0	0.0%
Driver: Electronic Device:	0	0.0%	In Crosswalk no Signal:	1	20.0%
Driver: Others:	32	23.9%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	5	3.7%	From Between Parked Cars:	1	20.0%
Unspecified:	95	70.9%	Unspecified:	1	20.0%

43 Records are not approved as of 9/15/2013 9:18:47 PM