



District Department of Transportation

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

Reservoir Road NW between Foxhall and 44th Streets

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
2	205	3	3D	Proposed	Reservoir Rd NW between Foxhall and 44th Sts



The *proposed* speed camera will be located in Ward 3 on Reservoir Rd NW between Foxhall Road and 44th Street and is for the northwest bound traffic. Reservoir Road runs from Canal Road Northwest in the west to Wisconsin Avenue Northwest in the east. The posted speed limit is 25 MPH.

W3 - 562





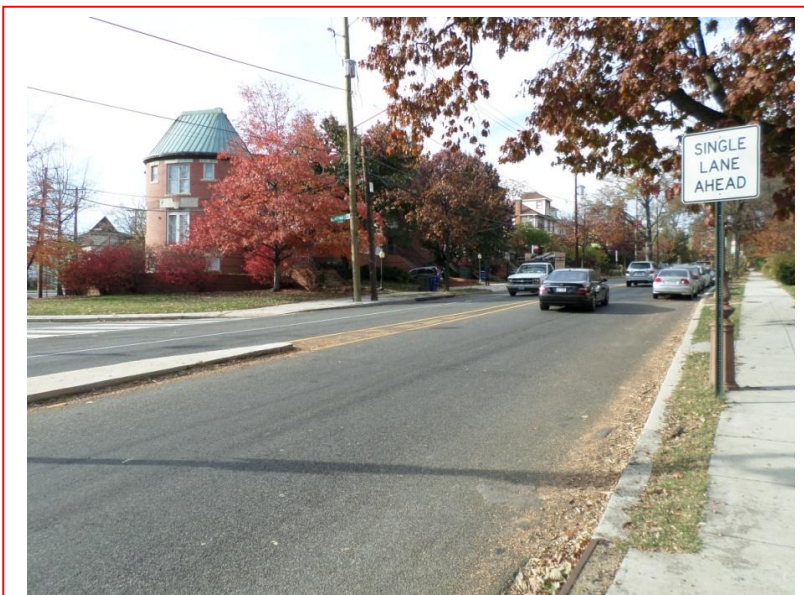
District Department of Transportation

Reservoir Road NW between Foxhall and 44th Streets

Field Assessment Summary

Reservoir Road Northwest is assumed to run in an east-west direction and is classified as a minor arterial. Reservoir Road has two travel lanes in both directions. On-street parking is permitted along Reservoir Road eastbound at certain hours of the day. This site has the following characteristics:

- This site is located in a residential area with houses on both sides of the roadway.
- There is sidewalk on both sides of the roadway and parking permitted along eastbound Reservoir Road.
- The existing pavement is in good condition with curb and gutter drainage features.
- There are two schools in the area: Hardy Middle School and Georgetown University.
- There are several bus stops in the area that generate pedestrian activity.
- Archbold and Foundry Branch Valley parks are near the site and have bike trails that go through them and generate pedestrian and bicycle activity.



Looking Northbound

W3 - 563



District Department of Transportation

Reservoir Road NW between Foxhall and 44th Streets



Looking Southbound

Speed Data Analysis

	Eastbound	Westbound
Posted Speed Limit (MPH)	25	25
Mean Speed (MPH)	19	25
85th Percentile Speed (MPH)	24	40
10 MPH Pace Speed	17-26	4-13
Sample Size	6,784	6,635
ADT	13,419	

The mean speed is 6 MPH lower than the posted speed in the eastbound direction and equal to the posted speed in the westbound direction. The 85th percentile speed is 1 MPH lower than the posted speed in the eastbound direction and 15 MPH higher than the posted speed in the westbound 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 10 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 (4

W3 - 564

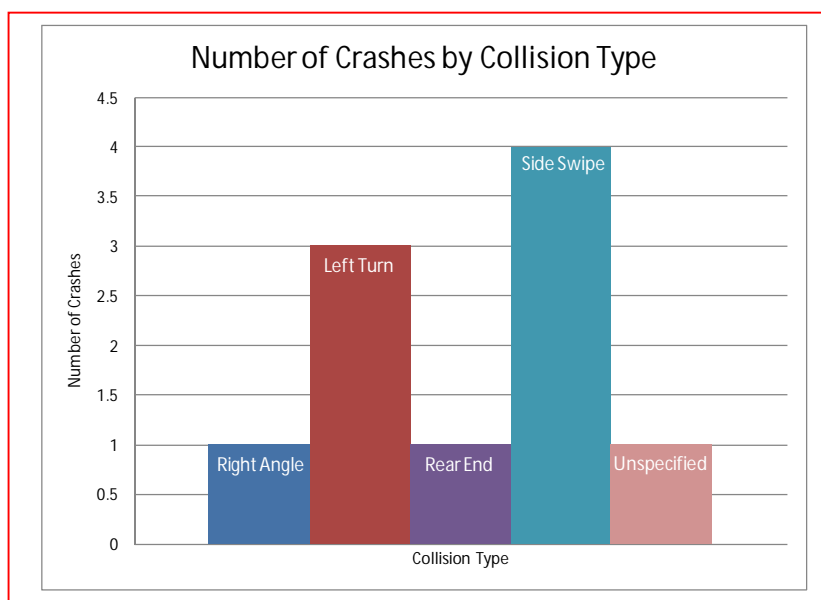


District Department of Transportation

Reservoir Road NW between Foxhall and 44th Streets

crashes), Left Turn (3 crashes) and Right Angle, Rear End and Unspecified with one crash. No other collision types were reported.

Severity			Weather			Surface condition			Light Condition		
Total	10										
Fatal	0	0.0%	Clear	9	90.0%	Dry	10	100.0%	Day	5	50.0%
Injury	1	10.0%	Rain	0	0.0%	Wet	0	0.0%	Night	1	10.0%
Taxi	0	0.0%	Snow	0	0.0%	Snow/Ice	0	0.0%			
Bus	0	0.0%									



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 in the eastbound direction and the 85th percentile speed is much higher than the posted speed limit at this location in the westbound direction.
2. Crash Data – The crash data analysis shows a low number of 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 residential area with houses on both sides of the roadway.
 - b. There are two schools in the area: Hardy Middle School and Georgetown University.

W3 - 565



District Department of Transportation

Reservoir Road NW between Foxhall and 44th Streets

- c. There are bike trails in the area that generate pedestrian and bicycle activity.

Although the crash data analysis showed a low number of crashes at this location, due to the speed data analysis, 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.

W3 - 566

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

Reservoir Rd NW between Foxhall Rd and 44th St Speed

EB

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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	21	136	195	15	0	0	0	0	0	0	0	0	0	0	367
08:00	33	194	142	10	0	0	0	0	0	0	0	0	0	0	379
09:00	229	248	283	17	1	0	0	0	0	0	0	0	0	0	778
10:00	23	95	349	35	1	0	0	0	0	0	0	0	0	0	503
11:00	20	83	261	11	0	0	0	0	0	0	0	0	0	0	375
12 PM	25	97	257	11	0	0	0	0	0	0	0	0	0	0	390
13:00	28	106	265	21	0	0	0	0	0	0	0	0	0	0	420
14:00	21	78	245	24	0	0	0	0	0	0	0	0	0	0	368
15:00	49	84	240	19	1	0	0	0	0	0	0	0	0	0	393
16:00	60	61	161	16	0	0	0	0	0	0	0	0	0	0	298
17:00	81	105	94	4	0	0	0	0	0	0	0	0	0	0	284
18:00	90	147	136	12	0	0	0	0	0	0	0	0	0	0	385
19:00	27	62	181	25	1	0	0	0	0	0	0	0	0	1	297
20:00	8	41	133	15	0	0	0	0	0	0	0	0	0	0	197
21:00	3	30	89	10	0	0	0	0	0	0	0	0	0	0	132
22:00	4	9	83	34	1	0	0	0	0	0	0	0	0	0	131
23:00	2	6	39	7	0	0	0	0	0	0	0	0	0	0	54
Total	724	1582	3153	286	5	0	0	0	0	0	0	0	0	1	5751

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EB

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
11/08/13	0	5	23	3	0	0	0	0	0	0	0	0	0	0	31
01:00	1	3	13	1	0	0	0	0	0	0	0	0	0	0	18
02:00	0	1	5	2	0	0	0	0	0	0	0	0	0	0	8
03:00	0	2	8	6	0	0	0	0	0	0	0	0	0	0	16
04:00	3	2	22	10	0	0	0	0	0	0	0	0	0	0	37
05:00	3	11	82	44	2	0	0	0	0	0	0	0	0	0	142
06:00	10	45	366	82	2	0	0	0	0	0	0	0	0	0	505
07:00	11	54	190	21	0	0	0	0	0	0	0	0	0	0	276
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	28	123	709	169	4	0	0	0	0	0	0	0	0	0	1033
Grand Total	752	1705	3862	455	9	0	0	0	0	0	0	0	0	1	6784

15th Percentile : 10 MPH
50th Percentile : 19 MPH
85th Percentile : 24 MPH
95th Percentile : 26 MPH

Stats
Mean Speed(Average) : 19 MPH
10 MPH Pace Speed : 17-26 MPH
Number in Pace : 4250
Percent in Pace : 62.7%
Number of Vehicles > 25 MPH : 719
Percent of Vehicles > 25 MPH : 10.6%

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Reservoir Rd NW between Foxhall Rd and 44th St Speed

WB

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	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
02:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
03:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
04:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
05:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
06:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
07:00	44	3	11	22	42	33	12	7	3	1	0	0	0	0	178
08:00	411	2	9	6	19	12	11	3	3	0	1	0	0	0	477
09:00	80	3	3	14	29	33	16	8	2	1	0	1	0	0	190
10:00	42	1	10	36	55	66	45	5	7	0	0	0	0	0	267
11:00	38	12	39	89	107	68	26	8	4	2	0	2	0	0	395
12 PM	43	25	50	85	97	55	29	8	3	0	1	0	0	0	396
13:00	31	2	20	55	100	90	43	22	6	1	0	0	0	0	370
14:00	49	8	37	87	85	106	74	21	5	1	0	1	0	0	474
15:00	109	24	72	107	135	84	39	16	9	0	1	0	0	0	596
16:00	143	68	91	132	106	62	23	7	2	1	0	0	1	0	636
17:00	236	77	67	61	54	37	14	2	2	0	0	0	0	0	550
18:00	181	9	20	44	48	24	26	16	5	2	0	0	0	0	375
19:00	40	7	30	58	116	105	72	31	12	3	1	0	0	1	476
20:00	8	1	8	32	87	91	69	22	7	3	0	0	0	0	328
21:00	5	0	5	19	51	50	49	25	11	4	2	0	0	0	221
22:00	3	0	0	8	18	33	40	19	13	3	0	1	0	0	138
23:00	1	0	0	8	24	24	37	21	12	2	2	0	0	0	131
Total	1464	242	472	863	1173	973	625	241	106	24	8	5	1	1	6198

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WB

Start Time	15	16	21	26	31	36	41	46	51	56	61	66	71	76	999	Total
11/08/13	0	0	2	5	8	9	17	9	2	3	2	0	0	0	0	57
01:00	0	1	3	2	8	6	5	0	1	1	0	0	0	0	0	27
02:00	0	0	1	0	4	5	4	1	0	0	0	0	0	0	0	15
03:00	0	0	0	1	2	1	1	1	0	1	0	0	0	0	0	7
04:00	2	0	0	2	2	1	2	0	2	0	0	0	1	0	0	12
05:00	6	1	2	4	5	11	5	6	2	1	1	1	1	0	0	46
06:00	16	0	1	2	11	27	15	7	5	3	0	1	0	0	0	88
07:00	70	0	4	7	30	18	26	17	7	3	2	1	0	0	0	185
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	94	2	13	23	70	78	75	41	19	12	5	3	2	0	0	437
Grand Total	1558	244	485	886	1243	1051	700	282	125	36	13	8	3	1	0	6635

15th Percentile : 7 MPH
50th Percentile : 26 MPH
85th Percentile : 40 MPH
95th Percentile : 46 MPH

Stats
Mean Speed(Average) : 25 MPH
10 MPH Pace Speed : 4-13 MPH
Number in Pace : 1934
Percent in Pace : 29.2%
Number of Vehicles > 25 MPH : 3563
Percent of Vehicles > 25 MPH : 53.7%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

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Reservoir Rd NW between Foxhall Rd and 44th St Volume

Start Time	07-Nov-13 Thu	EB		WB		Combined		08-Nov-13 Fri	EB		WB		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		*	93	*	102	*	195		9	*	23	*	32	*
12:15		*	108	*	96	*	204		7	*	12	*	19	*
12:30		*	94	*	89	*	183		8	*	5	*	13	*
12:45		*	95	*	109	*	204		7	*	17	*	24	*
01:00		*	107	*	92	*	199		4	*	12	*	16	*
01:15		*	96	*	100	*	196		5	*	6	*	11	*
01:30		*	118	*	99	*	217		3	*	5	*	8	*
01:45		*	99	*	79	*	178		6	*	4	*	10	*
02:00		*	83	*	108	*	191		3	*	5	*	8	*
02:15		*	110	*	86	*	196		2	*	3	*	5	*
02:30		*	94	*	144	*	238		1	*	4	*	5	*
02:45		*	81	*	136	*	217		2	*	3	*	5	*
03:00		*	104	*	130	*	234		1	*	4	*	5	*
03:15		*	95	*	145	*	240		6	*	0	*	6	*
03:30		*	108	*	164	*	272		4	*	3	*	7	*
03:45		*	86	*	157	*	243		5	*	0	*	5	*
04:00		*	71	*	149	*	220		5	*	3	*	8	*
04:15		*	88	*	159	*	247		4	*	2	*	6	*
04:30		*	74	*	160	*	234		7	*	2	*	9	*
04:45		*	65	*	168	*	233		21	*	5	*	26	*
05:00		*	75	*	153	*	228		18	*	9	*	27	*
05:15		*	85	*	184	*	269		34	*	4	*	38	*
05:30		*	53	*	141	*	194		37	*	15	*	52	*
05:45		*	71	*	72	*	143		53	*	18	*	71	*
06:00		*	91	*	51	*	142		70	*	16	*	86	*
06:15		*	82	*	72	*	154		130	*	16	*	146	*
06:30		*	97	*	115	*	212		146	*	25	*	171	*
06:45		*	115	*	137	*	252		159	*	31	*	190	*
07:00		*	93	*	134	*	227		133	*	72	*	205	*
07:15		*	79	*	113	*	192		143	*	113	*	256	*
07:30	165	76		91	125	256	201		*	*	*	*	*	*
07:45	202	49		87	104	289	153		*	*	*	*	*	*
08:00	179	60		76	103	255	163		*	*	*	*	*	*
08:15	4	37		161	84	165	121		*	*	*	*	*	*
08:30	0	50		158	74	158	124		*	*	*	*	*	*
08:45	196	50		82	67	278	117		*	*	*	*	*	*
09:00	234	45		39	73	273	118		*	*	*	*	*	*
09:15	213	30		55	51	268	81		*	*	*	*	*	*
09:30	170	29		52	57	222	86		*	*	*	*	*	*
09:45	161	28		44	40	205	68		*	*	*	*	*	*
10:00	136	25		85	50	221	75		*	*	*	*	*	*
10:15	124	36		52	31	176	67		*	*	*	*	*	*
10:30	133	33		58	34	191	67		*	*	*	*	*	*
10:45	110	37		72	23	182	60		*	*	*	*	*	*
11:00	92	24		93	46	185	70		*	*	*	*	*	*
11:15	90	10		84	17	174	27		*	*	*	*	*	*
11:30	86	9		102	46	188	55		*	*	*	*	*	*
11:45	107	11		116	22	223	33		*	*	*	*	*	*
Total		2402	3349	1507	4691	3909	8040		1033	0	437	0	1470	0
Day Total		5751		6198		11949			1033		437		1470	
% Total		20.1%	28.0%	12.6%	39.3%				70.3%	0.0%	29.7%	0.0%		
Peak		08:45	01:00	07:45	04:30	08:45	03:00		06:30		06:30		06:30	
Vol.		813	420	482	665	1041	989		581		241		822	
P.H.F.		0.869	0.890	0.748	0.904	0.936	0.909		0.914		0.533		0.803	

ADT ADT 13,419 AADT 13,419

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: RESERVOIR RD,NW From FOXHALL RD,NW TO FORTY FOURTH 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:	10	Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	0	Right Angle:	1	10.0%	Fixed Object:	1	10.0%
Total Number of Injuries:	2	Left Turn:	3	30.0%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	0	Right Turn:	0	0.0%	Ped. Involved:	0	0.0%
Total Number of NonDisabling Injuries:	0	Rear End:	1	10.0%	Backing:	0	0.0%
Total Number of Pedestrians Involved:	0	Side Swiped:	4	40.0%	Non Collision:	0	0.0%
Total Number of Bicycles Involved:	0	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Motorcycles Involved:	0	Parked:	0	0.0%	Unspecified:	0	0.0%

Time of Day	#ACC	%	Day o fweek	#ACC	%
07:30 ~ 09:30:	0	0.0%	Sunday:	1	10.0%
09:30 ~ 11:30:	0	0.0%	Monday:	1	10.0%
11:30 ~ 13:30:	2	20.0%	Tuesday:	2	20.0%
13:30 ~ 16:00:	1	10.0%	Wednesday:	4	40.0%
16:00 ~18:30:	3	30.0%	Thursday:	1	10.0%
18:30 ~ 07:30:	4	40.0%	Friday:	1	10.0%
Unspecified:	0	0.0%	Saturday:	0	0.0%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	9	90.0%	Dry:	10	100.0%
Rain:	0	0.0%	Wet:	0	0.0%
Snow:	0	0.0%	Snow/Ice:	0	0.0%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	0	0.0%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	1	10.0%	Repairing:	0	0.0%
Unspecified:	0	0.0%	Unspecified:	0	0.0%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	15	78.9%	Fatal Collision:	0	0.0%
Bus:	0	0.0%	Injury Collision:	1	10.0%
Truck:	3	15.8%	PDO Collision:	9	90.0%
Taxi:	0	0.0%			
Minivan:	0	0.0%	Light Condition	#ACC	%
Police/Emergency Vehicle:	0	0.0%	Daylight:	5	50.0%
Motorcycle/Moped:	0	0.0%	Dawn/Dusk:	3	30.0%
Bicycle:	0	0.0%	Dark(Lighted):	1	10.0%
Fixed Object:	0	0.0%	Dark(Not Lighted):	0	0.0%
Unspecified:	1	5.3%	Dark(Unknown Lighting):	0	0.0%
			Unspecified:	1	10.0%

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:	6	31.6%	In Unmarked Crosswalk:	0	0.0%
Vehicle:	0	0.0%	Not in Crosswalk:	0	0.0%
Roadway:	0	0.0%	From Between Parked Cars:	0	0.0%
Unspecified:	13	68.4%	Unspecified:	0	0.0%

8 Records are not approved as of 9/15/2013 10:05:14 PM