



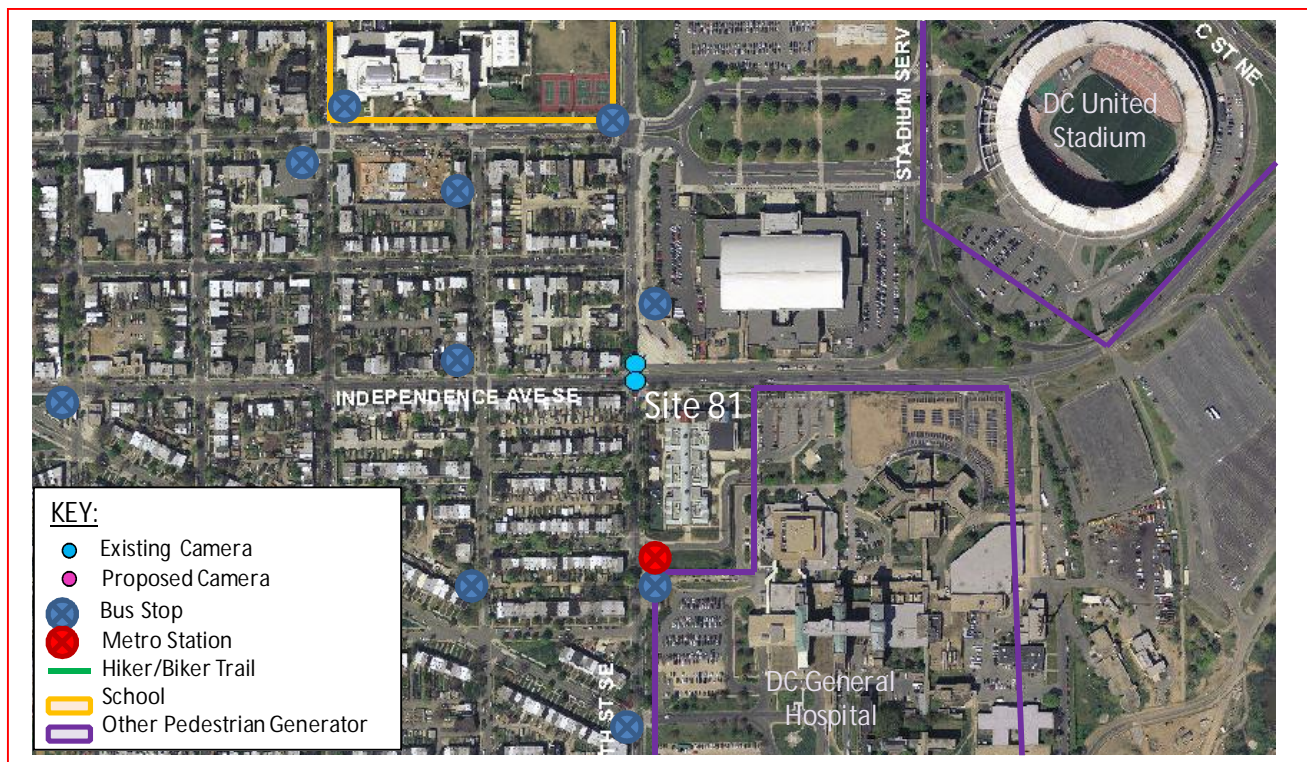
District Department of Transportation

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

200 Block 19th Street SE

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
1	108	6	6B	Existing	200 Block 19 th Street Southeast Northbound



This existing speed camera location is located in Ward 6 on the 200 block of 19th Street Southeast in the northbound direction. 19th Street runs between just north of M Street Northeast to the north and E Street Southeast to the south. The posted speed limit is 25 MPH. This speed camera was installed on October 2011.

W6 - 118





District Department of Transportation

200 Block 19th Street SE

Field Assessment Summary

19th Street is assumed to run in the north-south direction, and is classified as a collector. 19th Street has three travel lanes northbound. This site has the following characteristics

- This is a residential area with apartments, houses, and driveways.
- There is one school in the area: St Coletta of Greater Washington.
- RFK Stadium is also in the area.
- The Stadium-Armory Metro Station is nearby.
- There is sidewalk on both sides of the street and there are crosswalks at Burke Street and Bay Street.
- The pavement is in good condition and the drainage type is curb and gutter with drainage inlets.
- There are rumble strips on the roadway in front of the metro station and there is on-street parking on the west side of the street.



Looking Northbound



District Department of Transportation

200 Block 19th Street SE



Looking Southbound

Speed Data Analysis

Posted Speed Limit (MPH)	25
Mean Speed (MPH)	12
85th Percentile Speed (MPH)	18
10 MPH Pace Speed (MPH)	6-15
ADT	4,591

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 7 MPH at this location.

Crash Data Analysis

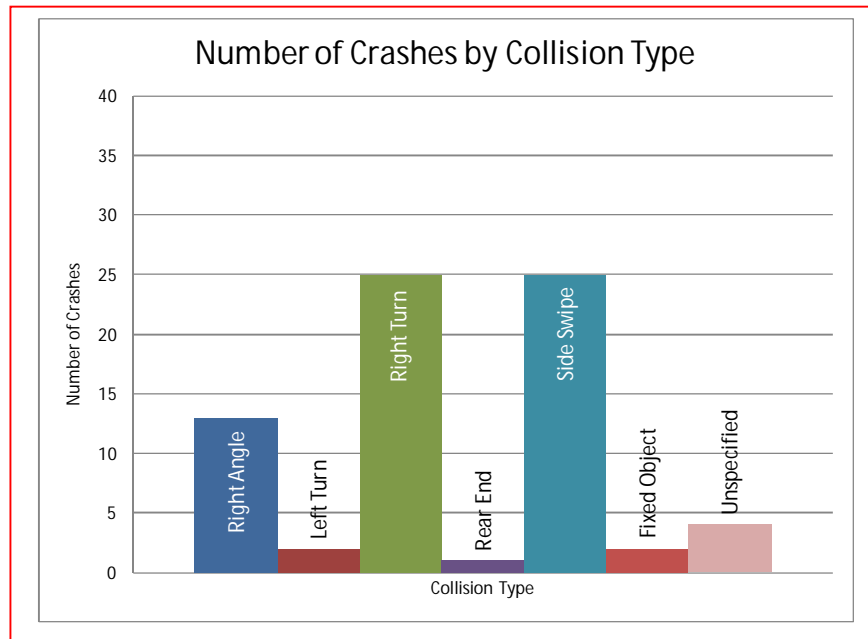
From the Accident Summary Report provided for the dates between January 1, 2010 and December 31, 2012, there were a total of 72 crashes at this location. A breakdown of collision type can be found in the chart on the next page. The most common types of collision at this location were Right Turn (25 crashes), Side Swipe (25 crashes), and Right Angle (13 crashes). The other collision types had four crashes or less each. Furthermore, this location experienced a high frequency (16 crashes) of injury-related crashes.



District Department of Transportation

200 Block 19th Street SE

Severity			Weather			Surface condition			Light Condition		
Total	72										
Fatal	0	0.0%	Clear	64	88.9%	Dry	64	88.9%	Day	58	80.6%
Injury	16	22.2%	Rain	6	8.3%	Wet	7	9.7%	Night	12	16.7%
Truck	16	22.2%	Snow	1	1.4%	Snow/Ice	1	1.4%			
Bus	14	19.4%									



There was an elevated number of speed related crashes at this location, including side swipe crashes. The 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 sideswipe crashes. Both of these errors can be decreased with a decrease in travel speed.

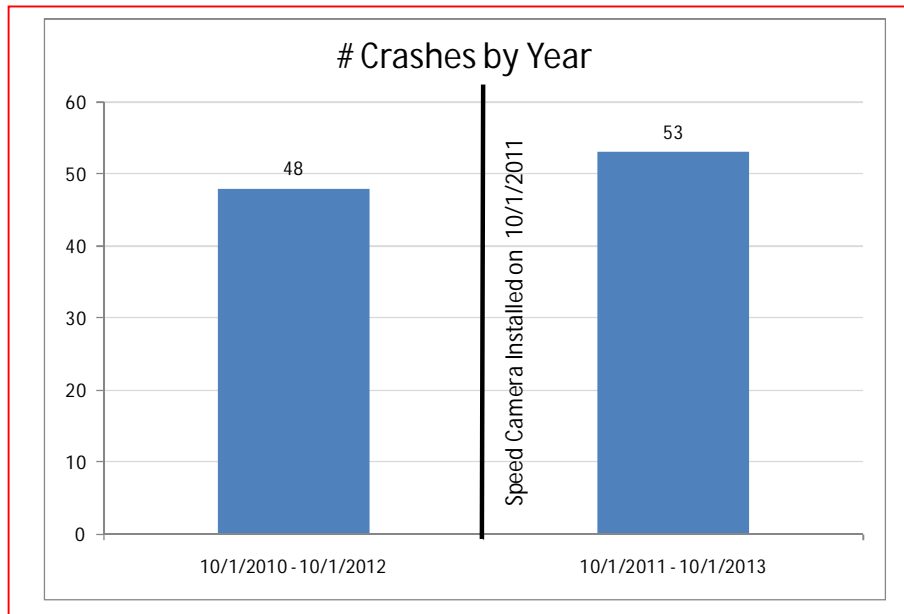
The speed camera was installed on 10-1-2011. The graph on the next page shows the number of crashes in the two years prior to the speed camera’s installation (48 crashes) and the two years after the speed camera’s installation (53 crashes). There was an increase in the number of crashes after the installation of the camera.

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



District Department of Transportation

200 Block 19th Street SE



Safety Nexus

This site presents the following safety considerations which may support the 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 was an elevated number of speed related crashes at this location, including side swipe collisions, as well as a high frequency (16 crashes) of injury-related crashes.
3. Field Assessment – The following site characteristics suggest a need for a safer travel environment:
 - a. This is a residential area with apartments, houses, and driveways.
 - b. There is one school in the area: St Coletta of Greater Washington.
 - c. RFK Stadium is in the area, which generates pedestrian and bicycle activity.
 - d. There are several bus stops and one Metrorail station in the area which generate pedestrian activity.
 - e. There is on-street parking on the west side of the street.

Although the crash data does not show an improvement in the area since the installation of the speed camera, and 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, 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.

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SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

200 block of 19th St SE NB Speed

NB

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
11/17/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
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	10	17	2	0	0	0	0	0	0	0	0	0	0	0	29
22:00	31	41	7	3	0	0	0	0	0	0	0	0	0	0	82
23:00	18	31	9	1	0	0	0	0	0	0	0	0	0	0	59
Total	59	89	18	4	0	0	0	0	0	0	0	0	0	0	170

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

200 block of 19th St SE NB Speed

NB

Start Time	15	20	25	30	35	40	45	50	55	60	65	70	75	999	Total
11/18/13	21	18	4	0	0	0	0	0	0	0	0	0	0	0	43
01:00	8	10	2	0	0	0	0	0	0	0	0	0	0	0	20
02:00	4	9	4	0	0	0	0	0	0	0	0	0	0	0	17
03:00	7	10	0	0	0	0	0	0	0	0	0	0	0	0	17
04:00	12	13	4	1	0	0	0	0	0	0	0	0	0	0	30
05:00	36	54	22	0	0	0	0	0	0	0	0	0	0	0	112
06:00	96	115	22	3	1	0	0	0	0	0	0	0	0	0	237
07:00	223	141	17	1	0	0	0	0	0	0	0	0	0	0	382
08:00	223	149	15	1	0	0	0	0	0	0	0	0	0	0	388
09:00	125	121	15	3	0	0	0	0	0	0	0	0	0	0	264
10:00	99	96	13	1	0	0	0	0	0	0	0	0	0	0	209
11:00	104	100	7	3	0	0	0	0	0	0	0	0	0	0	214
12 PM	113	117	13	1	0	0	0	0	0	0	0	0	0	0	244
13:00	138	105	16	0	0	0	0	0	0	0	0	0	0	0	259
14:00	59	107	85	24	5	0	0	0	0	0	0	0	0	0	280
15:00	69	59	85	61	33	27	15	13	8	4	4	2	1	4	385
16:00	278	5	7	7	2	3	4	6	5	4	3	4	1	19	348
17:00	308	4	3	2	1	0	0	1	0	0	0	1	0	0	320
18:00	254	2	2	2	0	0	0	0	0	0	0	0	0	0	260
19:00	159	2	1	1	1	0	0	0	0	0	0	0	0	0	164
20:00	128	3	0	0	0	0	0	0	0	0	0	0	0	0	131
21:00	85	11	1	0	0	0	0	0	0	0	0	0	0	0	97
22:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
23:00	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
Total	2549	1251	338	111	43	30	19	20	13	8	7	7	2	23	4421
Grand Total	2608	1340	356	115	43	30	19	20	13	8	7	7	2	23	4591

15th Percentile : 5 MPH
 50th Percentile : 10 MPH
 85th Percentile : 18 MPH
 95th Percentile : 23 MPH

Stats
 Mean Speed(Average) : 12 MPH
 10 MPH Pace Speed : 6-15 MPH
 Number in Pace : 2689
 Percent in Pace : 58.9%
 Number of Vehicles > 25 MPH : 182
 Percent of Vehicles > 25 MPH : 4.0%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

200 block of 19th St SE NB Volume

Start Time	Sun	17-Nov-13	Mon	18-Nov-13	Tue	19-Nov-13	Daily Average	
	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.
12:00	*	*	16	65	*	*	16	65
12:15	*	*	10	53	*	*	10	53
12:30	*	*	10	68	*	*	10	68
12:45	*	*	7	58	*	*	7	58
01:00	*	*	8	72	*	*	8	72
01:15	*	*	4	69	*	*	4	69
01:30	*	*	5	65	*	*	5	65
01:45	*	*	3	53	*	*	3	53
02:00	*	*	4	77	*	*	4	77
02:15	*	*	8	50	*	*	8	50
02:30	*	*	2	73	*	*	2	73
02:45	*	*	3	80	*	*	3	80
03:00	*	*	0	85	*	*	0	85
03:15	*	*	3	106	*	*	3	106
03:30	*	*	3	92	*	*	3	92
03:45	*	*	11	102	*	*	11	102
04:00	*	*	5	90	*	*	5	90
04:15	*	*	6	82	*	*	6	82
04:30	*	*	12	88	*	*	12	88
04:45	*	*	7	88	*	*	7	88
05:00	*	*	16	90	*	*	16	90
05:15	*	*	27	77	*	*	27	77
05:30	*	*	31	81	*	*	31	81
05:45	*	*	38	72	*	*	38	72
06:00	*	*	51	88	*	*	51	88
06:15	*	*	42	70	*	*	42	70
06:30	*	*	68	53	*	*	68	53
06:45	*	*	76	49	*	*	76	49
07:00	*	*	79	38	*	*	79	38
07:15	*	*	95	44	*	*	95	44
07:30	*	*	104	41	*	*	104	41
07:45	*	*	104	41	*	*	104	41
08:00	*	*	121	36	*	*	121	36
08:15	*	*	112	29	*	*	112	29
08:30	*	*	84	39	*	*	84	39
08:45	*	*	71	27	*	*	71	27
09:00	*	*	80	32	*	*	80	32
09:15	*	*	58	32	*	*	58	32
09:30	*	*	71	33	*	*	71	33
09:45	*	29	55	*	*	*	55	29
10:00	*	31	49	*	*	*	49	31
10:15	*	19	58	*	*	*	58	19
10:30	*	13	47	*	*	*	47	13
10:45	*	19	55	*	*	*	55	19
11:00	*	17	50	*	*	*	50	17
11:15	*	16	40	*	*	*	40	16
11:30	*	14	58	*	*	*	58	14
11:45	*	12	66	*	*	*	66	12
Total	0	170	1933	2488	0	0	1933	2658
Combined Total	170		4421		0		4591	
Peak	09:45		07:30	03:15			07:30	03:15
Vol.	92		441	390			441	390
P.H.F.	0.742		0.911	0.920			0.911	0.920
ADT	ADT 4,591		AADT 4,591					

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: 19TH ST,NE,SE From A ST,SE TO BAY ST,SE

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

Prepared By: Rahul Jain

Prepared Date: 9/15/2013

Total Number of Accident:	72	Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	0	Right Angle:	13	18.1%	Fixed Object:	2	2.8%
Total Number of Injuries:	20	Left Turn:	2	2.8%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	0	Right Turn:	25	34.7%	Ped. Involved:	0	0.0%
Total Number of NonDisabling Injuries:	1	Rear End:	1	1.4%	Backing:	0	0.0%
Total Number of Pedestrians Involved:	0	Side Swiped:	25	34.7%	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:	4	5.6%
Time of Day				#ACC	%	Day of week	
07:30 ~ 09:30:				5	6.9%	Sunday:	
09:30 ~ 11:30:				3	4.2%	Monday:	
11:30 ~ 13:30:				8	11.1%	Tuesday:	
13:30 ~ 16:00:				15	20.8%	Wednesday:	
16:00 ~ 18:30:				28	38.9%	Thursday:	
18:30 ~ 07:30:				13	18.1%	Friday:	
Unspecified:				0	0.0%	Saturday:	
Weather Condition				#ACC	%	Surface Condition	
Clear:				64	88.9%	Dry:	
Rain:				6	8.3%	Wet:	
Snow:				1	1.4%	Snow/Ice:	
Sleet/Hail:				0	0.0%	Slush:	
Fog/Mist:				0	0.0%	Water/Sand:	
Crosswind/Blowing Sand:				0	0.0%	Repairing:	
Unspecified:				1	1.4%	Unspecified:	
Type of Vehicle				#VEH	%	Accident Severity Type	
Passenger Car:				95	67.4%	Fatal Collision:	
Bus:				14	9.9%	Injury Collision:	
Truck:				16	11.3%	PDO Collision:	
Taxi:				4	2.8%		
Minivan:				0	0.0%	Light Condition	
Police/Emergency Vehicle:				0	0.0%	Daylight:	
Motorcycle/Moped:				0	0.0%	Dawn/Dusk:	
Bicycle:				0	0.0%	Dark(Lighted):	
Fixed Object:				0	0.0%	Dark(Not Lighted):	
Unspecified:				12	8.5%	Dark(Unknown Lighting):	
						Unspecified:	
Contributing Factor				#VEH	%	Pedestrian Actions	
Driver: Speed:				2	1.4%	In Crosswalk with Signal:	
Driver: Alcohol/Drug:				1	0.7%	In Crosswalk against Signal:	
Driver: Electronic Device:				1	0.7%	In Crosswalk no Signal:	
Driver: Others:				21	14.9%	In Unmarked Crosswalk:	
Vehicle:				0	0.0%	Not in Crosswalk:	
Roadway:				0	0.0%	From Between Parked Cars:	
Unspecified:				116	82.3%	Unspecified:	

44 Records are not approved as of 9/15/2013 11:23:32 AM

Accident Summary Report (R-8)

Corridor: 19TH ST,NE,SE From A ST,SE TO BAY ST,SE

Time Period Covered: From 10/01/2009 To 10/01/2011

Prepared By: Rahul Jain

Prepared Date: 12/31/2011

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	48	Right Angle:	8	16.7%	Fixed Object:	2	4.2%
Total Number of Fatalities:	0	Left Turn:	1	2.1%	Ran Off Road:	0	0.0%
Total Number of Injuries:	11	Right Turn:	13	27.1%	Ped. Involved:	0	0.0%
Total Number of Disabling Injuries:	0	Rear End:	2	4.2%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	1	Side Swiped:	20	41.7%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	0	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	0	Parked:	0	0.0%	Unspecified:	2	4.2%
Total Number of Motorcycles Involved:	0						

Time of Day	#ACC	%
07:30 ~ 09:30:	5	10.4%
09:30 ~ 11:30:	3	6.3%
11:30 ~ 13:30:	5	10.4%
13:30 ~ 16:00:	11	22.9%
16:00 ~ 18:30:	15	31.3%
18:30 ~ 07:30:	9	18.8%
Unspecified:	0	0.0%

Day of week	#ACC	%
Sunday:	0	0.0%
Monday:	6	12.5%
Tuesday:	8	16.7%
Wednesday:	13	27.1%
Thursday:	9	18.8%
Friday:	9	18.8%
Saturday:	3	6.3%

Weather Condition	#ACC	%
Clear:	41	85.4%
Rain:	3	6.3%
Snow:	2	4.2%
Sleet/Hail:	1	2.1%
Fog/Mist:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%
Unspecified:	1	2.1%

Surface Condition	#ACC	%
Dry:	42	87.5%
Wet:	4	8.3%
Snow/Ice:	2	4.2%
Slush:	0	0.0%
Water/Sand:	0	0.0%
Repairing:	0	0.0%
Unspecified:	0	0.0%

Type of Vehicle	#VEH	%
Passenger Car:	66	74.2%
Bus:	8	9.0%
Truck:	8	9.0%
Taxi:	3	3.4%
Minivan:	0	0.0%
Police/Emergency Vehicle:	1	1.1%
Motorcycle/Moped:	0	0.0%
Bicycle:	0	0.0%
Fixed Object:	0	0.0%
Unspecified:	3	3.4%

Accident Severity Type	#ACC	%
Fatal Collision:	0	0.0%
Injury Collision:	8	16.7%
PDO Collision:	40	83.3%

Light Condition	#ACC	%
Daylight:	37	77.1%
Dawn/Dusk:	1	2.1%
Dark(Lighted):	10	20.8%
Dark(Not Lighted):	0	0.0%
Dark(Unknown Lighting):	0	0.0%
Unspecified:	0	0.0%

Contributing Factor	#VEH	%
Driver: Speed:	2	2.2%
Driver: Alcohol/Drug:	1	1.1%
Driver: Electronic Device:	1	1.1%
Driver: Others:	10	11.2%
Vehicle:	0	0.0%
Roadway:	0	0.0%
Unspecified:	75	84.3%

Pedestrian Actions	#ACC	%
In Crosswalk with Signal:	0	0.0%
In Crosswalk against Signal:	0	0.0%
In Crosswalk no Signal:	0	0.0%
In Unmarked Crosswalk:	0	0.0%
Not in Crosswalk:	0	0.0%
From Between Parked Cars:	0	0.0%
Unspecified:	0	0.0%

20 Records are not approved as of 12/31/2013 5:44:34 PM

Accident Summary Report (R-8)

Corridor: 19TH ST,NE,SE From A ST,SE TO BAY ST,SE

Time Period Covered: From 10/01/2011 To 10/01/2013

Prepared By: Rahul Jain

Prepared Date: 11/18/2013

		Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Accident:	53	Right Angle:	10	18.9%	Fixed Object:	0	0.0%
Total Number of Fatalities:	0	Left Turn:	2	3.8%	Ran Off Road:	0	0.0%
Total Number of Injuries:	13	Right Turn:	17	32.1%	Ped. Involved:	1	1.9%
Total Number of Disabling Injuries:	0	Rear End:	1	1.9%	Backing:	0	0.0%
Total Number of NonDisabling Injuries:	1	Side Swiped:	17	32.1%	Non Collision:	0	0.0%
Total Number of Pedestrians Involved:	1	Head On:	0	0.0%	Under/Over Ride:	0	0.0%
Total Number of Bicycles Involved:	0	Parked:	0	0.0%	Unspecified:	5	9.4%
Total Number of Motorcycles Involved:	0						

Time of Day	#ACC	%	Day of week	#ACC	%
07:30 ~ 09:30:	4	7.5%	Sunday:	2	3.8%
09:30 ~ 11:30:	0	0.0%	Monday:	5	9.4%
11:30 ~ 13:30:	5	9.4%	Tuesday:	17	32.1%
13:30 ~ 16:00:	11	20.8%	Wednesday:	7	13.2%
16:00 ~ 18:30:	21	39.6%	Thursday:	7	13.2%
18:30 ~ 07:30:	12	22.6%	Friday:	9	17.0%
Unspecified:	0	0.0%	Saturday:	6	11.3%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	44	83.0%	Dry:	43	81.1%
Rain:	6	11.3%	Wet:	9	17.0%
Snow:	0	0.0%	Snow/Ice:	0	0.0%
Sleet/Hail:	0	0.0%	Slush:	0	0.0%
Fog/Mist:	2	3.8%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	0	0.0%
Unspecified:	1	1.9%	Unspecified:	1	1.9%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	71	67.6%	Fatal Collision:	0	0.0%
Bus:	14	13.3%	Injury Collision:	12	22.6%
Truck:	10	9.5%	PDO Collision:	41	77.4%
Taxi:	3	2.9%			
Minivan:	0	0.0%	Light Condition	#ACC	%
Police/Emergency Vehicle:	1	1.0%	Daylight:	42	79.2%
Motorcycle/Moped:	0	0.0%	Dawn/Dusk:	2	3.8%
Bicycle:	0	0.0%	Dark(Lighted):	8	15.1%
Fixed Object:	0	0.0%	Dark(Not Lighted):	0	0.0%
Unspecified:	6	5.7%	Dark(Unknown Lighting):	0	0.0%
			Unspecified:	1	1.9%

Contributing Factor	#VEH	%	Pedestrian Actions	#ACC	%
Driver: Speed:	0	0.0%	In Crosswalk with Signal:	1	100.0%
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:	23	21.9%	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:	82	78.1%	Unspecified:	0	0.0%

30 Records are not approved as of 11/18/2013 2:52:31 PM