



District Department of Transportation

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

5400 Block MacArthur Boulevard NW

Study Area and Location

District	PSA	Ward	ANC	Phase	Description
2	205	3	3D	Proposed	5400 Block MacArthur Boulevard Northwest Northwest-bound



The *proposed* speed camera will be located in Ward 3 at the 5400 block of MacArthur Boulevard Northwest in the northwest bound direction. MacArthur Boulevard runs parallel to the Potomac River from Maryland in the north to Canal Road Northwest in the south. The posted speed limit is 25 MPH.

W3 - 513





District Department of Transportation

5400 Block MacArthur Boulevard NW

Field Assessment Summary

MacArthur Boulevard is assumed to run in the North-South direction, and is classified as a principal arterial. MacArthur Boulevard is two lanes in each direction. This site has the following characteristics:

- This is a residential and commercial area with houses, apartments, driveways, and some store fronts.
- There are sidewalks with grass buffer on both sides of the street and on-street parking on both sides.
- There is a center grass median with trees and signs.
- The pavement is in very good condition and there are drainage inlets and curb and gutter.
- A bike trail starts 300 feet to the west.
- There are bus stops located at the intersections on either end of block.



Looking North

W3 - 514



District Department of Transportation

5400 Block MacArthur Boulevard NW



Looking South

Speed Data Analysis

Posted Speed Limit (MPH)	25
Mean Speed (MPH)	25
85th Percentile Speed (MPH)	29
10 MPH Pace Speed (MPH)	21-30
ADT	5,187

The mean speed is the same as the posted speed limit and the 85th percentile speed is 4 MPH higher than the posted speed limit.

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 23 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 were Right Angle (6 crashes) and Left Turn (6 crashes).

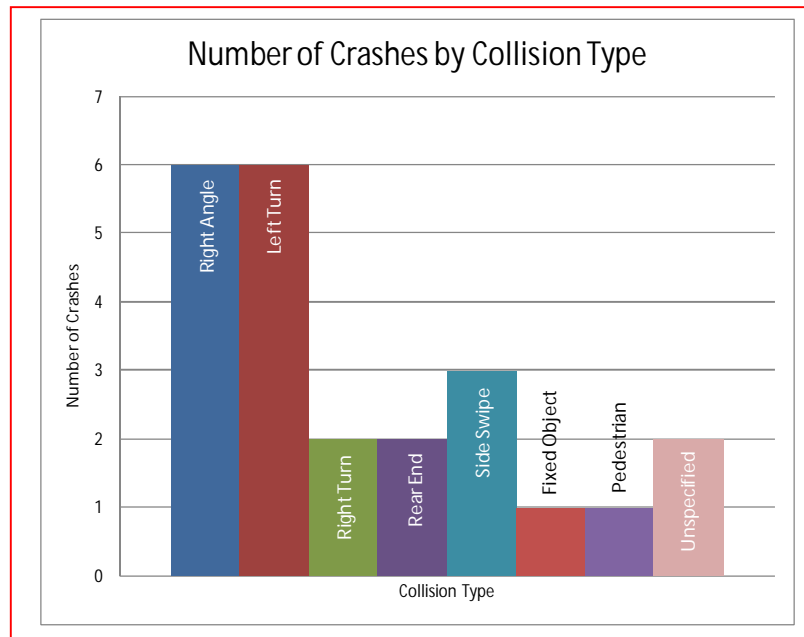
W3 - 515



District Department of Transportation

5400 Block MacArthur Boulevard NW

Severity			Weather			Surface condition			Light Condition		
Total	23										
Fatal	0	0.0%	Clear	18	78.3%	Dry	18	78.3%	Day	18	78.3%
Injury	4	17.4%	Rain	3	13.0%	Wet	3	13.0%	Night	5	21.7%
Taxi	0	0.0%	Snow	2	8.7%	Snow/Ice	1	4.3%			
Bus	0	0.0%									



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 85th percentile speed is higher than the posted speed limit at this location.
2. Crash Data – This site experienced four injury-related crashes.
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.
 - b. There is on-street parking at this location.
 - c. There are multiple bus stops near this location which generate pedestrian activity.
 - d. There is a bike trail which begins 300 feet from this location which generates pedestrian activity.

W3 - 516



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5400 Block MacArthur Boulevard NW

Due to the speed data analysis, the number of 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 - 517

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

5400 block of MacArthur Blvd NW NWB 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
11/09/13	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
01:00	2	3	10	6	2	0	0	0	0	0	0	0	0	0	23
02:00	0	1	6	5	2	0	0	0	0	0	0	0	0	0	14
03:00	1	1	5	3	1	0	0	0	0	0	0	0	0	0	11
04:00	0	0	1	7	0	0	0	0	0	0	0	0	0	0	8
05:00	1	0	14	9	7	0	0	0	0	0	0	0	0	0	31
06:00	2	3	26	41	22	4	1	0	0	0	0	0	0	0	99
07:00	5	8	43	47	18	6	1	0	0	0	0	0	0	0	128
08:00	9	9	63	95	29	2	0	0	1	0	0	0	0	0	208
09:00	5	10	98	134	41	6	1	0	0	0	0	0	0	0	295
10:00	13	28	112	157	41	6	0	1	0	0	0	0	0	0	358
11:00	17	29	156	188	60	10	0	0	0	0	0	0	0	0	460
12 PM	15	17	162	236	86	13	0	0	0	0	0	0	0	0	529
13:00	13	20	157	157	39	6	1	0	0	0	0	0	0	0	393
14:00	10	20	129	165	30	6	0	1	0	0	0	0	0	0	361
15:00	8	18	139	173	37	3	1	0	0	0	0	0	0	0	379
16:00	6	22	200	137	30	4	0	0	0	0	0	0	0	0	399
17:00	8	18	164	139	20	0	0	0	0	0	0	0	0	0	349
18:00	12	27	153	112	19	2	0	0	0	0	0	0	0	0	325
19:00	5	13	105	85	11	0	0	0	0	0	0	0	0	0	219
20:00	3	18	85	44	9	1	0	0	0	0	0	0	0	0	160
21:00	2	12	63	59	11	2	0	0	0	0	0	0	0	0	149
22:00	1	12	74	58	4	1	1	0	0	0	0	0	0	0	151
23:00	0	7	39	44	6	0	0	0	0	0	0	0	0	0	96
Total	138	296	2004	2101	525	72	6	2	1	0	0	0	0	0	5145

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

5400 block of MacArthur Blvd NW NWB 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
11/10/13	0	3	21	15	3	0	0	0	0	0	0	0	0	0	42
01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
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	0	3	21	15	3	0	0	0	0	0	0	0	0	0	42
Grand Total	138	299	2025	2116	528	72	6	2	1	0	0	0	0	0	5187

15th Percentile : 19 MPH
50th Percentile : 24 MPH
85th Percentile : 29 MPH
95th Percentile : 33 MPH

Stats
Mean Speed(Average) : 25 MPH
10 MPH Pace Speed : 21-30 MPH
Number in Pace : 3565
Percent in Pace : 68.7%
Number of Vehicles > 25 MPH : 2585
Percent of Vehicles > 25 MPH : 49.8%

SAMMAT ENGINEERING SERVICES, LLC

1515 RISING RIDGE ROAD
MOUNT AIRY, MD 21771

www.sammateng.com

5400 block of MacArthur Blvd NW NWB Volume

Start Time	Sat A.M.	09-Nov-13 P.M.	Sun A.M.	10-Nov-13 P.M.	Mon A.M.	11-Nov-13 P.M.	Daily Average	
							A.M.	P.M.
12:00	*	129	12	*	*	*	12	129
12:15	*	123	14	*	*	*	14	123
12:30	*	136	10	*	*	*	10	136
12:45	*	141	6	*	*	*	6	141
01:00	3	114	*	*	*	*	3	114
01:15	5	111	*	*	*	*	5	111
01:30	11	76	*	*	*	*	11	76
01:45	4	92	*	*	*	*	4	92
02:00	4	95	*	*	*	*	4	95
02:15	5	83	*	*	*	*	5	83
02:30	4	86	*	*	*	*	4	86
02:45	1	97	*	*	*	*	1	97
03:00	3	103	*	*	*	*	3	103
03:15	3	86	*	*	*	*	3	86
03:30	3	88	*	*	*	*	3	88
03:45	2	102	*	*	*	*	2	102
04:00	2	128	*	*	*	*	2	128
04:15	1	97	*	*	*	*	1	97
04:30	2	80	*	*	*	*	2	80
04:45	3	94	*	*	*	*	3	94
05:00	6	96	*	*	*	*	6	96
05:15	10	96	*	*	*	*	10	96
05:30	8	77	*	*	*	*	8	77
05:45	7	80	*	*	*	*	7	80
06:00	15	79	*	*	*	*	15	79
06:15	26	82	*	*	*	*	26	82
06:30	26	92	*	*	*	*	26	92
06:45	32	72	*	*	*	*	32	72
07:00	21	53	*	*	*	*	21	53
07:15	35	56	*	*	*	*	35	56
07:30	34	57	*	*	*	*	34	57
07:45	38	53	*	*	*	*	38	53
08:00	43	44	*	*	*	*	43	44
08:15	48	32	*	*	*	*	48	32
08:30	61	39	*	*	*	*	61	39
08:45	56	45	*	*	*	*	56	45
09:00	52	34	*	*	*	*	52	34
09:15	68	46	*	*	*	*	68	46
09:30	91	37	*	*	*	*	91	37
09:45	84	32	*	*	*	*	84	32
10:00	87	42	*	*	*	*	87	42
10:15	88	36	*	*	*	*	88	36
10:30	92	30	*	*	*	*	92	30
10:45	91	43	*	*	*	*	91	43
11:00	130	32	*	*	*	*	130	32
11:15	80	25	*	*	*	*	80	25
11:30	117	22	*	*	*	*	117	22
11:45	133	17	*	*	*	*	133	17
Total	1635	3510	42	0	0	0	1677	3510
Combined Total	5145		42		0		5187	
Peak	11:00	12:00	12:00				11:00	12:00
Vol.	460	529	42				460	529
P.H.F.	0.865	0.938	0.750				0.865	0.938
ADT	ADT 5,187		AADT 5,187					

DC Department of Transportation - Traffic Accident Reporting and Analysis System

Accident Summary Report (R-8)

Corridor: MACARTHUR BLVD,NW From CATHEDRAL AVE (SOUTH),NW TO ARIZONA AVE,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:	23	Collision Type	#ACC	%	Collision Type	#ACC	%
Total Number of Fatalities:	0	Right Angle:	6	26.1%	Fixed Object:	1	4.3%
Total Number of Injuries:	5	Left Turn:	6	26.1%	Ran Off Road:	0	0.0%
Total Number of Disabling Injuries:	0	Right Turn:	2	8.7%	Ped. Involved:	1	4.3%
Total Number of NonDisabling Injuries:	2	Rear End:	2	8.7%	Backing:	0	0.0%
Total Number of Pedestrians Involved:	2	Side Swiped:	3	13.0%	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:	2	8.7%

Time of Day	#ACC	%	Day o fweek	#ACC	%
07:30 ~ 09:30:	3	13.0%	Sunday:	2	8.7%
09:30 ~ 11:30:	3	13.0%	Monday:	6	26.1%
11:30 ~ 13:30:	0	0.0%	Tuesday:	5	21.7%
13:30 ~ 16:00:	5	21.7%	Wednesday:	2	8.7%
16:00 ~18:30:	7	30.4%	Thursday:	3	13.0%
18:30 ~ 07:30:	5	21.7%	Friday:	5	21.7%
Unspecified:	0	0.0%	Saturday:	0	0.0%

Weather Condition	#ACC	%	Surface Condition	#ACC	%
Clear:	18	78.3%	Dry:	18	78.3%
Rain:	3	13.0%	Wet:	3	13.0%
Snow:	2	8.7%	Snow/Ice:	1	4.3%
Sleet/Hail:	0	0.0%	Slush:	1	4.3%
Fog/Mist:	0	0.0%	Water/Sand:	0	0.0%
Crosswind/Blowing Sand:	0	0.0%	Repairing:	0	0.0%
Unspecified:	0	0.0%	Unspecified:	0	0.0%

Type of Vehicle	#VEH	%	Accident Severity Type	#ACC	%
Passenger Car:	41	95.3%	Fatal Collision:	0	0.0%
Bus:	0	0.0%	Injury Collision:	4	17.4%
Truck:	2	4.7%	PDO Collision:	19	82.6%
Taxi:	0	0.0%			
Minivan:	0	0.0%	Light Condition	#ACC	%
Police/Emergency Vehicle:	0	0.0%	Daylight:	18	78.3%
Motorcycle/Moped:	0	0.0%	Dawn/Dusk:	0	0.0%
Bicycle:	0	0.0%	Dark(Lighted):	3	13.0%
Fixed Object:	0	0.0%	Dark(Not Lighted):	2	8.7%
Unspecified:	0	0.0%	Dark(Unknown Lighting):	0	0.0%
			Unspecified:	0	0.0%

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:	11	25.6%	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:	32	74.4%	Unspecified:	0	0.0%

17 Records are not approved as of 9/15/2013 9:55:46 PM