VILLAGE OF BEDFORD PARK ILLINOIS



2023 Automated Red-Light Traffic Law-Enforcement System 3-Year Statistical Analysis



Village of Bedford Park Red Light Running (RLR) Statistical Analysis Report





BEDFORD PARK POLICE DEPARTMENT

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Tom Hansen Chief of Police

November 6, 2023

Illinois Department of Transportation Traffic Operations Bureau Chief 201 W. Center Court Schaumburg, IL 60196

Dear Sir or Madam,

This report is a summary and analysis of the Village of Bedford Park's automated traffic law enforcement system. The statistical analysis is based upon the best available Illinois Department of Transportation (IDOT) motor vehicle crash data.

Automated traffic law enforcement systems were installed at the following locations in 2008 and 2010:

- Route 50 (Cicero Avenue) at the intersection of 73rd Street (Southbound only with Right Turn) *2010*
- Route 50 (Cicero Avenue) at intersection with State Road (Southbound only with Right Turn) *2010*
- 65th Street at the intersection of Lavergne Avenue (Westbound only) *2008*
- 65th Street at the intersection of Lavergne Avenue (Eastbound with Right Turn) *2008*

The overall goal of the program is to improve motor vehicle traffic safety by improving motorists' compliance with motor vehicle traffic laws.

Manufacturer and Contractor:

- Verra Mobility (formerly ATS American Traffic Solutions) 1150 N. Alma School Road Mesa, AZ 85201
- Meade Electric (Contractor)
 625 Willowbrook Center Parkway
 Willowbrook, IL 60527

Village of Bedford Park Red Light Running (RLR) Statistical Analysis Report



The 1.2 mile stretch of Route 50/Cicero Avenue that runs through the Village of Bedford Park is 2 miles away from Chicago's Midway Airport. The high vehicular traffic counts on this stretch of Cicero Avenue create daily traffic back-ups, often frustrating motorists which can lead to noncompliance with traffic laws. A single traffic stop conducted by a Police Officer on Cicero Avenue only adds to the traffic congestion. Regular enforcement of traffic laws, including red light violations, during peak travel times on southbound Cicero Avenue is often not practical. If the Police Department were to routinely enforce traffic laws during peak periods, southbound Cicero Avenue could potentially back up all the way to Midway Airport, having an adverse impact on travelers leaving the airport. Police Officers must choose between enforcing traffic safety laws and inconveniencing the motoring public. An automated traffic enforcement system is a practical solution to this problem.

The intersection of 65th Street and Lavergne Avenue within the Village of Bedford Park is a unique intersection. At this intersection, Lavergne Avenue north and south of 65th Street is offset by .2 miles (over 1000 feet). This unique roadway feature requires three sets of traffic control devices on 65th Street to coordinate traffic through the intersection. As you can see in the aerial photo below, westbound 65th street requires motorists to stop at a red light at the first intersection of Lavergne Avenue, only 1000 feet before another traffic control device stops traffic at the second intersection of Lavergne Avenue. RLR cameras often show motorists proceeding through this first set of red traffic control devices when traveling westbound, believing they do not have to stop for another 1000 feet at the next traffic control device, and thus causing a traffic safety issue. Police Officers have no place to park and observe this portion of the intersection to effectively enforce red light violations. Once again, an automated traffic enforcement system is a practical solution at this intersection.





Illinois Department of Transportation / Safety Engineering Policy

The Illinois Department of Transportation's Safety Engineering Policy Memorandum (Safety 2-13) requires that an evaluation report be prepared by the Permit Applicant one year after the installation and then every three years thereafter. The evaluation report shall include the following:

- Intersection location(s);
- Date of implementation;
- RLR Camera System manufacturer and contractor name;
- Crash data <u>specific</u> to RLR location(s) for the three (3) year period prior to and for the period post RLR Camera installation;
- An analysis of the crash data, including a summary of any increase in crash types;
- Signal timing and other settings before and after RLR Camera installation;
- Traffic volumes before and after RLR Camera System installation;
- Recommendations to further reduce red light violations and severe crashes and to improve the operations of the intersection(s); and,
- Summary of adjudication experience and results.





Route 50 (Cicero Avenue) at intersection of 73rd Street (Southbound Approach)



Route 50 (Cicero Avenue) at intersection of State Road (Southbound Approach)





65th Street at intersection of Lavergne Avenue (Westbound Approach)



65th Street at intersection of Lavergne Avenue (Eastbound Approach)





Average Daily Traffic

The following data was obtained from the Illinois Department of Transportation's website <u>www.gettingaroundillinois.com</u>.

Route 50 (Cicero Avenue) at intersection of 73rd Street (Southbound) *installed in 2010

- 62,300 (2009) *pre RLR Camera installation
- **43,700 (2011)**
- 46,400 (2013)
- 45,100 (2015)
- 46,300 (2017)
- 43,900 (2019)
- **57,000 (2022)**





Average Daily Traffic (Continued)

The following data was obtained from the Illinois Department of Transportation's website <u>www.gettingaroundillinois.com</u>.

Route 50 (Cicero Avenue) at intersection of State Road (Southbound) *installed in 2010

- 62,300 (2009) *pre RLR Camera installation
- 43,700 (2011)
- **46,400 (2013)**
- **4**5,100 (2015)
- **46,300 (2017)**
- 43,800 (2019)
- **57,000 (2022)**





Average Daily Traffic (Continued)

The following data was obtained from the Illinois Department of Transportation's website <u>www.gettingaroundillinois.com</u>.

65th Street at intersection with Lavergne Avenue (Westbound) *installed in 2008

- 17,300 (2006) *pre RLR Camera installation
- 12,900 (2014)
- 14,100 (2018)
- 16,000 (2022)





Average Daily Traffic (Continued)

The following data was obtained from the Illinois Department of Transportation's website <u>www.gettingaroundillinois.com</u>.

65th Street at intersection with Lavergne Avenue (Eastbound) *installed in 2008

- 17,300 (2006) *pre RLR Camera installation
- 12,900 (2014)
- 14,100 (2018)
- 16,000 (2022)



Signal Timing

There were no signal timing changes after the automated red-light camera enforcement systems were installed.



The following pages contain crash history and analysis reports based on traffic crash data for each intersection as provided by the **Illinois Department of Transportation (IDOT)**. These reports do <u>NOT</u> reflect or include any traffic crash data that is maintained within the Bedford Park Police Department's Records-Management-System (RMS).

Illinois Department of Transportation (IDOT) Disclaimer

The motor vehicle crash data referenced herein was provided by the Illinois Department of Transportation. Any conclusions drawn from analysis of the aforementioned data are the sole responsibility of the data recipient(s). Additionally, for coding years 2015 to present, the Bureau of Data Collection uses the exact latitude/longitude supplied by the investigating law enforcement agency to locate crashes. Therefore, location data may vary in prior years since the data prior to 2015 was physically located by bureau personnel. Given the subjective nature of the reporting process, the modifications in the incident locating protocols and the changes to the crash reporting thresholds effective 2009, the Village of Bedford Park acknowledges the potential for discrepancies in the final conclusions drawn.

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SUMMARY OF TURNING, ANGLE, and REAR END CRASHES (2005)

SUMMARY OF TURNING, ANGLE, and REAR END CRASHES (2006)







SUMMARY OF TURNING, ANGLE, and REAR END CRASHES (2007)

SUMMARY OF TURNING, ANGLE, and REAR END CRASHES (2008)







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SUMMARY OF TURNING, ANGLE, and REAR END CRASHES (2018)







SUMMARY OF TURNING, ANGLE, and REAR END CRASHES (2019)

SUMMARY OF TURNING, ANGLE, and REAR END CRASHES (2020)







SUMMARY OF TURNING, ANGLE, and REAR END CRASHES (2021)

SUMMARY OF TURNING, ANGLE, and REAR END CRASHES (2022)





Total Crash Trends: (IDOT traffic crash data)



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Crash History and Analysis: (65th Street & Lavergne Ave.) (IDOT traffic crash data)

		-	Crashes (6	55th and La	vergne Ave	enue) All Ap	proaches		
	Rear-End	% of Total)	Angle (%	of Total)	Turning (%	% of Total)	Other (%	of Total)	Total
2005	3	42.9%	1	14.3%	0	0.0%	3	42.9%	7
2006	2	28.6%	2	28.6%	2	28.6%	1	14.3%	7
2007	2	66.7%	0	0.0%	1	33.3%	0	0.0%	3
Total	7	41.2%	3	17.6%	3	17.6%	4	23.5%	17
2005-2007 Average	2	3	1	.0	1	.0	1	.3	5.7
			RLR Camera	Installatio	n (July 2008	8)		-	
2008	5	100.0%	0	0.0%	0	0.0%	0	0.0%	5.0
2009	2	100.0%	0	0.0%	0	0.0%	0	0.0%	2
2010	3	60.0%	0	0.0%	1	20.0%	1	20.0%	5
2011	4	100.0%	0	0.0%	0	0.0%	0	0.0%	4
2012	4	80.0%	0	0.0%	0	0.0%	1	20.0%	5
2013	6	100.0%	0	0.0%	0	0.0%	0	0.0%	6
2014	4	100.0%	0	0.0%	0	0.0%	0	0.0%	4
2015	7	87.5%	0	0.0%	0	0.0%	1	12.5%	8
2016	4	66.7%	0	0.0%	1	16.7%	1	16.7%	6
2017	5	100.0%	0	0.0%	0	0.0%	0	0.0%	5
2018	4	80.0%	0	0.0%	1	20.0%	0	0.0%	5
2019	2	66.7%	0	0.0%	0	0.0%	1	33.3%	3
2020	0	0.0%	0	0.0%	0	0.0%	0	0.0%	0
2021	0	0.0%	0	0.0%	2	100.0%	0	0.0%	2
2022	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0	#DIV/0!	0
Total	45	81.8%	0	0.0%	5	9.1%	5	9.1%	55
2009-2022 Average	3	.2	0	.0	0	.4	0	.4	3.9



Crash History and Analysis: (Cicero Ave. & 73rd Street) (IDOT traffic crash data)

			C	Crashes (Cico	ero Ave. &	73rd Street)		
	Rear-End (% of Total)	Angle (%	of Total)	Turning (%	% of Total)	Other (%	of Total)	Total
2007	5	41.7%	2	16.7%	5	41.7%	0	0.0%	12
2008	1	14.3%	2	28.6%	3	42.9%	1	14.3%	7
2009	3	30.0%	0	0.0%	4	40.0%	3	30.0%	10
Total	9	31.0%	4	13.8%	12	41.4%	4	13.8%	29
2007-2009 Average	3	.0	1	.3	4	.0	1	.3	9.7
			RLR Came	era Installat	ion (2010)			1	
2010	1	16.7%	0	0.0%	5	83.3%	0	0.0%	6.0
2011	1	25.0%	0	0.0%	3	75.0%	0	0.0%	4
2012	5	55.6%	0	0.0%	4	44.4%	0	0.0%	9
2013	3	42.9%	1	14.3%	2	28.6%	1	14.3%	7
2014	4	100.0%	0	0.0%	0	0.0%	0	0.0%	4
2015	6	75.0%	0	0.0%	2	25.0%	0	0.0%	8
2016	4	33.3%	0	0.0%	6	50.0%	2	16.7%	12
2017	4	44.4%	1	11.1%	2	22.2%	2	22.2%	9
2018	5	55.6%	1	11.1%	2	22.2%	1	11.1%	9
2019	3	33.3%	0	0.0%	6	66.7%	0	0.0%	9
2020	5	55.6%	0	0.0%	3	33.3%	1	11.1%	9
2021	4	30.8%	1	7.7%	5	38.5%	3	23.1%	13
2022	3	33.3%	0	0.0%	4	44.4%	2	22.2%	9
Total	47	46.1%	4	3.9%	39	38.2%	12	11.8%	102
2011-2022 Average	3	.9	0	.3	3	.3	1	.0	8.5



Crash History and Analysis: (Cicero Ave. & State Road) (IDOT traffic crash data)

				Crashes (Cic	ero Ave. &	State Road)	-	
	Rear-End (% of Total)	Angle (%	of Total)	Turning (9	% of Total)	Other (%	of Total)	Total
2007	0	0.0%	0	0.0%	3	60.0%	2	40.0%	5
2008	6	35.3%	1	5.9%	8	47.1%	2	11.8%	17
2009	4	30.8%	0	0.0%	7	53.8%	2	15.4%	13
Total	10	28.6%	1	2.9%	18	51.4%	6	17.1%	35
2007-2009 Average	3	.3	0	.3	6	.0	2	.0	11.7
		_	RLR Came	era Installat	ion (2010)			_	
2010	11	50.0%	1	4.5%	9	40.9%	1	4.5%	22.0
2011	7	35.0%	0	0.0%	10	50.0%	3	15.0%	20
2012	9	69.2%	1	7.7%	2	15.4%	1	7.7%	13
2013	13	68.4%	0	0.0%	4	21.1%	2	10.5%	19
2014	7	41.2%	0	0.0%	8	47.1%	2	11.8%	17
2015	10	45.5%	1	4.5%	8	36.4%	3	13.6%	22
2016	10	52.6%	0	0.0%	9	47.4%	0	0.0%	19
2017	13	61.9%	0	0.0%	6	28.6%	2	9.5%	21
2018	10	52.6%	0	0.0%	8	42.1%	1	5.3%	19
2019	24	80.0%	0	0.0%	6	20.0%	0	0.0%	30
2020	12	44.4%	0	0.0%	10	37.0%	5	18.5%	27
2021	12	38.7%	0	0.0%	12	38.7%	7	22.6%	31
2022	17	58.6%	0	0.0%	10	34.5%	2	6.9%	29
Total	144	53.9%	2	0.7%	93	34.8%	28	10.5%	267
2011-2022 Average	12	2.0	0	.2	7	.8	2	.3	22.3



Crash History and Analysis: (Cicero Ave. & State Road) (Alternate Analysis)

While analyzing and comparing traffic crash data, as provided by the Illinois Department of Transportation (IDOT), with that of the traffic crash data that is maintained within the Bedford Park Police Department's Records-Management-System (RMS), it has been determined that discrepancies do exist.

An extensive comparison of traffic crash data was completed using IDOT traffic crash data, the traffic crash data maintained within the Bedford Park Police Department's Records-Management-System (RMS), and the traffic crash data maintained in the Lexis Nexis electronic (e-Crash) database, which is where every Bedford Park Police Department electronic crash report has been completed and stored since January 1st, 2015.

The following alternate crash history and analysis is based on a comprehensive review of this traffic crash data comparison. It includes an integration of data from both the Illinois Department of Transportation as well as the Bedford Park Police Department's records to create a more accurate analysis of crash data as it relates to the red-light camera enforcement systems in Bedford Park.

	Crashes (Cicero Avenue & State Road)
	Total
2007	43
2008	37
2009	23
Total	103
2007-2009 Average	34.3

	RLR Camera Installation (2010)
	Total
2010	34

2011	36
2012	28
2013	35
2014	24
2015	28
2016	24
2017	32
2018	30
2019	38
2020	38
2021	42
2022	39
Total	394
2011-2022 Average	32.8



Crash History and Analysis: (Cicero Ave. & 73rd Street) (Alternate Analysis)

	Crashes (Cicero Avenue & 73rd Street)
	Total
2007	21
2008	35
2009	36
Total	92
2007-2009 Average	30.7

	RLR Camera Installation (2010)
	Total
2010	40

2020	15
2021	21
2022	15
Total	51
2020-2022 Average	17.0

Crash History and Analysis: (65th & Lavergne – All Approaches) (Alternate Analysis)

	Crashes (65th Street & Lavergne - All Approaches)
	Total
2005	7
2006	5
2007	5
Total	17
2005-2007 Average	5.7

	RLR Camera Installation (2008)
	Total
2010	8

2020	0
2021	5
2022	0
Total	5
2020-2022 Average	1.7



Adjudication Experience (Hearing)

RLR camera violations are contested and adjudicated through an administrative hearing conducted each month. Adjudication data for the Village's Automated Enforcement Program is shown below.

Village of Bedford Park Adjudication for Automated					
Photo Enforcement Program (<i>Hearing</i>)					
Year	Not Liable	Liable	Total Hearings		
2008	1	17	18		
2009	29	62	91		
2010	50	156	206		
2011	88	208	296		
2012	48	148	196		
2013	53	139	192		
2014	25	113	138		
2015	46	126	172		
2016	19	111	130		
2017	18	103	130		
2018	28	127	156		
2019	23	97	122		
2020	16	107	123		
2021	30	75 106			
2022	36	86 126			
TOTAL:	510	1675	2202		



Adjudication Experience (Review)

RLR camera violations are contested and adjudicated through an administrative hearing conducted each month. Adjudication data for the Village's Automated Enforcement Program is shown below.

Village of Bedford Park Adjudication for Automated Photo					
Enforcement Program (<i>Review</i>)					
Year	Not Liable	Not Adjudicated	Liable	Total Review	
2008	0	0	0	0	
2009	0	0	0	0	
2010	0	0	0	0	
2011	0	0	0	0	
2012	0	0	0	0	
2013	1	0	5	6	
2014	0	3	6	9	
2015	0	5	8	13	
2016	1	10	28	39	
2017	3	0	37	40	
2018	9	8	26	43	
2019	3	6	18	27	
2020	4	5	24	33	
2021	4	0	15	19	
2022	10	3	18	31	
TOTAL:	35	40	185	260	



Summary and Recommendation

Based on motor vehicle crash data provided by the Illinois Department of Transportation as well as motor vehicle crash data provided by Bedford Park Police Department records, and since the implementation of the automated red-light traffic enforcement systems within the Village of Bedford Park, the average annual number of traffic crash occurrences is down at both the 65th Street and Lavergne Avenue intersections as well as the 73rd Street and Cicero Avenue intersection. This is shown in both crash history and analysis models.

The crash history and analysis model using *only* IDOT traffic crash data indicates that the average annual number of traffic crash occurrences has increased at the State Road and Cicero Avenue intersection since the implementation of the enforcement system. *However*, the more extensive crash history and analysis model completed for this intersection using traffic crash data from both the Illinois Department of Transportation as well as Bedford Park Police Department records indicates a <u>decrease</u> in the average annual number of traffic crash occurrences at this intersection.

Distracted driving poses a danger to all who travel our roadways, including vehicle occupants, pedestrians, and pedal cyclists. The U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) defines distracted driving as a specific type of driver inattention that occurs when drivers divert attention from the driving task to focus on some other activity. Common activities which may distract a driver include:

- Cell phone usage
- Texting
- Eating
- Talking to passengers
- Adjusting radio and/or climate controls
- Adjusting other vehicle controls

In a 2023 research publication, the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) determined that 3,522 people were killed in 2021 as a result of motor vehicle crashes involving distracted drivers. It is also estimated that 362,415 people were injured in these crashes. There were also 644 nonoccupants (pedestrians, pedal cyclists, and others) killed in distracted-affected traffic crashes in 2021.

The National Highway Traffic Safety Administration (NHTSA) estimates that about 40% of vehicle collisions in America occur at intersections. The presence of red-light camera enforcement systems serves as a tool to keep drivers vigilant at busy intersections.

Due to the high volume of vehicular traffic congestion on Cicero Avenue, the red-light camera enforcement system remains the most feasible manner to enforce red light compliance in an effort to increase traffic safety at intersections. Police Officers attempting to stop drivers who violate traffic laws would likely create worse traffic conditions than those currently experienced. For these reasons, it is recommended to keep the automated red-light camera enforcement program in operation.