

City of Muscatine

Automated Traffic Enforcement

Report

The following report has been created in response to a public records request of the Iowa Department of Transportation Primary Highway System ATE guidelines, for the 2016 calendar year.

Background

In 2010, the City of Muscatine awarded the contract for our Automated Traffic Enforcement (ATE) initiative to Gatso USA. Through accident data as well as speed and red light violation surveys we decided that eight (8) approaches at five intersections would receive the equipment. The system was set up to monitor red light violations as well as speed violations at all five (5) intersections. The intersections selected for the ATE equipment were:

Washington St at Park Ave (north and south approaches)

Cleveland St at Park Ave (north and south approaches)

Cedar St at Houser St (east and west approaches)

University Dr at US Hwy 61 (westbound approach)

Mulberry Ave at US Hwy 61 (westbound approach)

The ATE equipment was built and installed by Gatso USA at no cost to the City of Muscatine. The City and Gatso USA submitted engineered construction plans and worked closely with the Iowa Department of Transportation to ensure that the entire construction and sign placements were completed to their requirements. Winter weather delayed the construction process during December and January. Each intersection has speed limit signs and red light signs that clearly advise that photo enforcement equipment is used at those intersections. In addition to those signs, the City elected to put up “traffic laws photo enforced” signs on every corporate limit signs posts on roadways entering Muscatine.

The City developed with Gatso Business Rules. These rules set in writing how all different kinds of violation events should be handled by Gatso. Some examples were: what if an emergency vehicle commits a violation without their flashing lights turned on, and what if a city vehicle commits a violation. The camera/radar system detects violators and passes the violation information to a Gatso employee who applies the Business Rules and verifies that a violation appears to have occurred and then they create a violation package that includes location information, violation information and vehicle information. This event package is

then sent to our department for review. A police officer who attended an organized training class on the system reviews the data and determines if a violation of the city ordinance has actually occurred and if the violation, location and vehicle information matches what is viewed in the photos and video. If everything matches up and a violation has actually occurred then the officer will issue a citation. The officers approval is transmitted back to Gatso who then prints and mails the paper violation.

The ATE equipment not only detects and documents red light and speed violations but also has other capabilities. The system can be set for license plate recognition for Amber Alerts or other major crimes that occur close to these intersections. The video that the system archives has been used multiple times as evidence in court for citation issued due to traffic crashes in the area of the ATE equipment. The system also provides a live video view. This feature allows a city-authorized person to look through the camera at the intersection whenever they may need to.

In 2016 the department utilized the video and license plate recognition functions of the ATE system on multiple occasions. Three times we had stolen vehicles that occurred while administrative staff were at work and we were able to switch the system over to LPR status in an attempt to locate the stolen vehicle. The archived video was used as part of investigations of stolen vehicles and drive by shootings. We had a stolen vehicle that was taken during overnight hours that was tracked using the archived video. Likewise, the video from the ATE system was instrumental in one of our drive by shootings this past year. We were able to use it to identify a vehicle, track it through town and it helped lead to search warrants and the arrest of a suspect in that case.

The paper citation the citizen received at their home contains color images of the violation and their license plate. Also contained are easy to read instructions explaining why they received the citations and how to pay it or request an administrative review. The paper citation also contains information on a website where the citizen can view the still photos printed on the paper citations and also a video of the violation. There is also information about paying the citation on-line or requesting an administrative review.

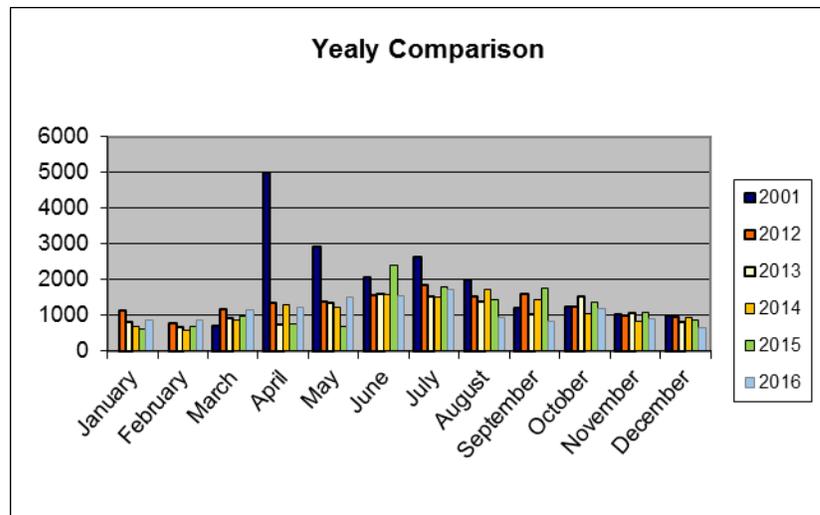
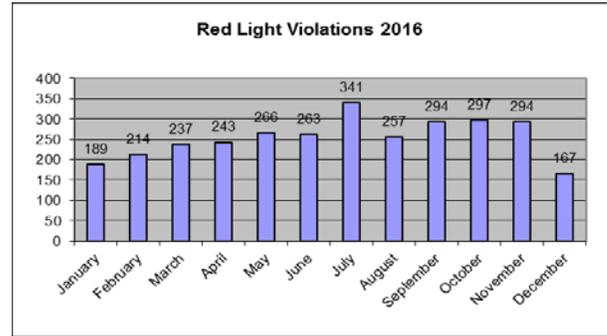
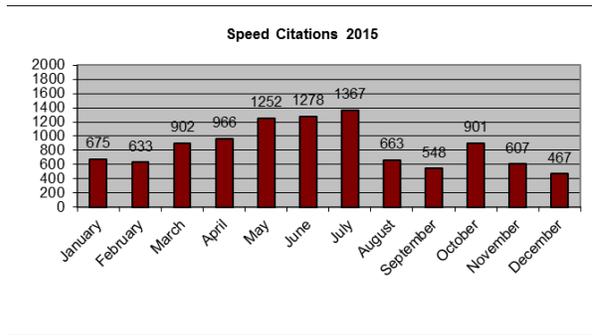
Prior to the implementation of the ATE equipment, public hearings and meetings were held during City Council meetings for at least a year prior to implementation, posters were put up at many locations across the city, informational pamphlets were distributed to the public and information was disseminated via email and the internet.

On March 11, 2011, the Automated Traffic Enforcement equipment was activated at the intersection of Cedar St and Houser St. On March 18, 2011, the Automated

Traffic Enforcement equipment was activated at the intersections of US Hwy 61 and Mulberry Ave, US Hwy 61 and University Ave and Park Ave and Cleveland St. Because of property questions and construction delays, the intersection of Washington St and Park Ave wasn't active until May 21, 2011. Each intersection had a warning period of 30 days.

Current Citation and Crash Statistics

2016 was the fifth full calendar year with all of the intersections active and recording violations. During 2016 there were a total of 13,322 citations issued. 3,062 citations were issued for red light violations and 10,259 speed citations were issued for speed violations. Comparing this data to the violations issued in 2015, there was an 8% (1,125) reduction in citations issued for calendar year 2016. An increase of 239 (8%) red light violations was experienced in 2016. However, speed violations decreased by 1,365 (12%) violations compared to 2015.



During administrative reviews (contested violations) we continue to routinely hear that vehicle owners and drivers are still under the impression that automated traffic enforcement has been ruled illegal by the Iowa DOT. Particularly the approach at Hwy 61 and University Ave.

During the initial project planning stages the City decided to set up ATE equipment on one west bound approach each at the intersections of US Hwy 61/Mulberry Ave and US Hwy 61/University Dr. The primary reason for the University/US 61 approach was speed enforcement and accident reduction as well as speed reduction at Mulberry/US 61 approach. It is a critical safety issue to the citizens of Muscatine to slow drivers down as they enter this business district and the new business district in the area of US 61/Mulberry Ave.

US Hwy 61/University is a main corridor to the City's east end business district with plans for expanded commercial businesses. The speed leading up to University is 45 mph. During initial planning stages for this intersection we had lengthy discussions with Iowa DOT engineers regarding the appropriate speed for the business district and sign placement. The city asked that the 45 mph speed limit sign be moved as close to the city limits sign as possible to give drivers as much chance to slow from 55 mph to the 45 mph zone. The Iowa DOT established where the 45 mph speed transition was going to be placed and erected the signs. Since the Iowa DOT Director created the new rule that speed zones aren't enforceable within 1000 feet of a speed transition area we have asked at least twice that the signs be moved to at least 1000 feet before this intersection.

Speed citations at this intersection have reduced dramatically. In 2011 (8 months active period) University/US 61 approach issued 12,851 speed violations. In 2012 that number dropped to 8,992 violations and, in 2015, the number of violations dropped again to 7,554 speed violations. It is interesting to note that for 2016 there was a decrease of 1,566 violations at that one approach with speed violations constituting a 99% of this decrease (5,999 speed violations for 2016). Since we started this program there has been a 53% decrease in speed and red light violations for this west bound approach.

New for 2016 was the introduction of mobile speed enforcement to Muscatine. At a City Council meeting in the spring we discussed the ATE program with the City Council and the Mayor. City Council and the Mayor approved of the expansion of the ATE speed enforcement program. In July and August the department did some testing with various equipment and decided on the Chevy Sonic. On the first day we used the Chevy Sonic for testing there would have been 362 violations on Bidwell Rd in the first 15 hours. In mid-November the Sonic was first deployed for speed enforcement. The tentative locations are posted on the City's website and Facebook page. We received twelve (12) requests for the Chevy Sonic from citizens even before the unit was deployed for the first time. In the 1.5 months the Sonic was active there were 112 violations generated. All of the locations the Chevy Sonic have been deployed have been on city streets not under any control of the Iowa DOT.

Since 2011 we have seen a reduction in crashes at each intersection where ATE equipment is operating in comparison to pre-ATE implementation. The chart below lists crashes since 2010 at the intersections where ATE equipment is installed.

Year	Total	PI	PD
2010	34	9	25
2011	28	9	19
2012	26	6	20
2013	19	4	15
2014	25	2	23
2015	19	2	17
2016	28	4	24

For calendar year 2016 we saw an increase in the crash rate of 30% from 2015. This is still a reduction from the pre-ATE era. The injury crashes remained very low with only 4 PI crashes at these intersections!

The department continues to conduct calibration compliance checks for each radar head for the through lanes where the ATE equipment is set up. These checks are conducted by department officers in patrol cars equipped with speed measuring equipment.

In January 2017 we found out that there was a three-month period that the yellow timing at Park Ave and Cleveland St was wrong. We found out that in September Muscatine Power and Water (MPW) had a controller failure. A new controller was installed by MPW personnel but the yellow time was set incorrectly to a pre-ATE installation setting. In December the controller was again replaced. However, this time the yellow time was correctly set at the 4.3 seconds specified by MPW following the speed increase in 2011. The minimum timing for the intersection is 3.5 seconds per IDOT permits. Following an extensive review of violation data from the period of incorrect yellow time we found 1,149 paid citations needed to be refunded and 1,028 unpaid citations were cancelled. This is the first issue we have had with MPW conducting maintenance and the yellow timing has been not reset correctly. This was not an issue relating to any conduct or services from Gatso USA nor the Police Department.

Are the traffic cameras having any effect on the driving habits of area drivers? After looking at the statistics for citations and crashes for the time the ATE systems have been installed and running we believe it is clear that they are. We continue to have less crashes at these intersections then the year prior to implementation. University and Hwy 61 has continued to see reductions in speed violations. This is what was targeted for this approach. 2011 saw 12,857 speed violations where in 2016 there were only 5,999 speed violations. This is the same

approach the IDOT has been trying to force the City to deactivate for years. Even though we saw an increase in red light violations this year we are still had 8% fewer violations this year than last year and a 33% reduction compared to the first year of this program. As a reminder, the ATE systems were not activated for the full year in 2011.

University Dr at US Hwy 61

Year	Number of Crashes	Crash Types	RL Violations Issued	Speed Violations Issued
2009	5	PI - 1 PD - 4	NA	NA
2010	5	PI - 1 PD - 4	NA	NA
2011	7	PI - 4 PD - 3	83	12851
2012	6	PI - 1 PD - 5	126	8992
2013	5	PI - 1 PD - 4	102	7638
2014	5	PI - 1 PD - 4	124	8018
2015	4	PI - 1 PD - 3	148	7554
2016	7	PI - 1 PD - 6	137	5999

8 month period

Mulberry Ave at US Hwy 61

Year	Number of Crashes	Crash Types	RL Violations Issued	Speed Violations Issued
2009	5	PI - 0 PD - 5	NA	NA
2010	10	PI - 4 PD - 6	NA	NA
2011	10	PI - 3 PD - 7	214	2600
2012	8	PI - 4 PD - 4	192	1551
2013	4	PI - 1 PD - 3	227	868
2014	3	PI - 0 PD - 3	168	1086
2015	4	PI - 0 PD - 4	239	1332
2016	6	PI - 0 PD - 6	340	1621

8 month period

Cleveland and Park Ave (Business Hwy 61)

Year	Number of Crashes	Crash Types	RL Violations Issued	Speed Violations Issued
2009	8	PI - 1 PD - 7	NA	NA
2010	5	PI - 2 PD - 3	NA	NA
2011	6	PI - 0 PD - 6	812	1904
2012	4	PI - 0 PD - 4	1102	1709
2013	5	PI - 2 PD - 3	824	1582
2014	8	PI - 0 PD - 8	994	1872
2015	2	PI - 0 PD - 2	971	2086
2016	6	PI - 2 PD - 4	1237	1917

8 month period

Washington and Park Ave (Business Hwy 61)

Year	Number of Crashes	Crash Types	RL Violations Issued	Speed Violations Issued
2009	10	PI - 4 PD - 6	NA	NA
2010	5	PI - 1 PD - 4	NA	NA
2011	3	PI - 1 PD - 2	305	336
2012	3	PI - 1 PD - 2	763	422
2013	4	PI - 0 PD - 4	681	589
2014	3	PI - 1 PD - 2	723	425
2015	4	PI - 0 PD - 4	782	626

7 month period

Cedar St at Houser St

Year	Number of Crashes	Crash Types	RL Violations Issued	Speed Violations Issued	
2009	6	PI - 2 PD - 4	NA	NA	
2010	9	PI - 1 PD - 8	NA	NA	
2011	2	PI - 1 PD - 1	513	131	8 month period
2012	5	PI - 0 PD - 5	493	112	
2013	1	PI - 0 PD - 1	713	145	
2014	6	PI - 0 PD - 6	231	35	
2015	2	PI - 0 PD - 2	799	93	
2016	5	PI - 1 PD - 4	466	80	