



*A Study of **Red Light** Cameras in  
Kansas City, MO*

Prepared by the Special Operations Division

## Executive Summary

This paper will analyze the crash data for the 29 red light cameras located in 17 intersections in Kansas City, MO. The first camera went online at 39<sup>th</sup> and Southwest Trafficway on January 21, 2009 and the last camera came online at I-435 and Wornall on July 31, 2009. The data collection for this project involved writing a computer program to generate the case report numbers for each intersection, printing the reports from two different report systems, reading each report to extract the data and then collating the data. There were more than 2500 reports dating back to one year prior to the first camera activation. This paper will examine the crashes in one-year increments based on when the camera came online. It will examine one year prior to activation and two years after activation.

The results of the study are very interesting. Accidents went up at some locations and down in others without any real clear patterns. The largest increase was at 59<sup>th</sup> and 71 Highway which saw an increase of 31 accidents in the second year after activation as compared to the year prior to activation. The largest decrease was at 39<sup>th</sup> and Main which saw a decrease of 14 accidents in the second year after activation. Rear end crashes at the red light camera approaches to the intersection, a common fear of installing red light cameras, followed a similar pattern. The largest numerical decrease was at 55<sup>th</sup> and 71 Highway which tallied 18 fewer rear end collisions in the first year after activation. The largest increase was recorded at Highway 152 and Flintlock with an increase of 48 rear end accidents in the 2<sup>nd</sup> year of activity. The intersection with the most violations issued is 55<sup>th</sup> and 71 Highway with 34,361, or 17,180 per camera. As one of the most travelled intersections in the city, this is not unexpected. The lowest total was 19<sup>th</sup> and Walnut with 829 violations.

The most common type of accident is a rear end collision totaling 788 (56%) for all intersections for the 3 year period. Highway 152 and Flintlock had the most rear end collisions with 130 and 19<sup>th</sup> and Walnut was the lowest with 1. The "Other" category includes side swipes, head on, fixed object, animals, etc.

## Introduction

The Special Operations Division was tasked with doing an analysis of the accidents at the 17 red light camera locations throughout Kansas City, Missouri. The analysis will look at each intersection individually and analyze various factors involved in the accidents. We are going to focus on the data we gathered from the accident reports and the trend for the time period of one year before the cameras were installed and annually thereafter.

### Method of data collection

The method for collecting the data is more in-depth than has ever been done. The Computer Services Unit of the police department created a computer program that generated all the case report numbers for each intersection for the time period used for each intersection. Since not all of the intersections came online at the same time, we will use a different starting point for each location. Using a time period one year prior to activation creates the starting point for the analysis. The starting date will be used to define the annual time period for each intersection. Once the case report numbers were gathered, the SOD staff looked up and printed out each accident report. Prior analysis used only the case numbers and did not look at each report. The problem with this limited analysis is that it does not give an accurate view of what is occurring at the intersection. For example, many of the accidents at 23<sup>rd</sup> and I-435 actually took place on I-435, an area that does not have any traffic control and is not affected by the red light camera. For our analysis we are only going to report accidents that occur in the intersection with the camera. We also found in some report numbers the accidents occurred at such a distance from the intersection that the traffic control and camera had no role in the accident. Finally, we discovered that many of the case numbers have no reports with them or the report number is not for an accident. The SOD staff reviewed more than 2500 reports to gather the data. These reviews involved looking at the actual report and gathering the data. While this was very time consuming there just simply isn't any other way to gather the data for a project like this. Their work on this project is to be commended. Finally, each location will give the number of accidents where the camera was involved. To determine camera involvement, one of the vehicles involved in the accident would be traveling the direction on the roadway that is covered by the camera. For example, if the camera covers the eastbound approach to the intersection, if the eastbound driver is involved, we counted that as the camera being involved. We believe this will provide an accurate picture of the effectiveness of the camera placement at the intersection.

## Format

This report will discuss each intersection individually with data and analysis provided for each intersection. Since each intersection is unique we believe it is most effective to analyze them individually. A summary of all the intersections will be included following the individual intersections.

<b>Intersection</b>	<b>Approaches Covered by Camera</b>	<b>Date Camera Activated</b>
39 <sup>th</sup> and Southwest Tfwy	WB, NB, SB	January 21, 2009
19 <sup>th</sup> and Walnut	EB	May 4, 2009
27 <sup>th</sup> and Southwest Tfwy	NB	May 4, 2009
39 <sup>th</sup> and Main	EB	May 4, 2009
63 <sup>rd</sup> and Prospect	EB	May 4, 2009
79 <sup>th</sup> and Wornall	NB	May 4, 2009
55 <sup>th</sup> and 71 Hwy	NB, SB	May 22, 2009
59 <sup>th</sup> and 71 Hwy	NB, SB, WB	May 22, 2009
Gregory and 71 Hwy	EB, WB	May 22, 2009
Vivion and N. Oak	SB, WB	June 1, 2009
Winner Rd and I-435	WB	June 1, 2009
23 <sup>rd</sup> and I-435	EB, WB	June 1, 2009
NW 68 <sup>th</sup> and 169	WB	June 1, 2009
Red Bridge and 71 Hwy	SB (off ramp), EB	July 17, 2009
HWY 152 and N. Flintlock	EB, WB, SB	July 24, 2009
Bannister and 71 Hwy	EB	July 24, 2009
I-435 and Wornall	EB, WB	July 31, 2009

These are the 17 locations where the red light cameras photograph intersections. The first street listed is the east/west street and the second street is the north/south street. To determine which approach is monitored by the cameras simply refer to the second column. For example, at 39<sup>th</sup> and Southwest Trafficway, the westbound traffic on 39<sup>th</sup> street is monitored as well as the north and southbound traffic on Southwest Trafficway. We do not have any analysis information regarding the placement of the cameras at the intersections so we will not provide any analysis of the location of the camera's at each intersection.

We counted only the accidents that occurred in the intersections. In many instances when we ran the intersection for case numbers we would get accidents that happened away from the intersection or in the case of the Interstate Highway, accidents that happened on the highway. We counted the red light camera (RLC) as being involved if one of the vehicles involved in the accident entered the intersection from the approach covered by the camera. We also counted the number of rear-end collisions at all approaches monitored by the camera.

In the "before camera activation," we counted the approach that would be monitored after the activation. This was done to see what effect the cameras would have on this type of collision.



\*updated January 24, 2012

## 39<sup>th</sup> and Southwest Trafficway

**Date Online:** January 21, 2009

**Approaches Covered by camera:** WB, NB, and SB

### Description of the Intersection

This was the first camera that went online. The roadway is heavily travelled with commuters in and out of downtown each day. Thirty-ninth Street is a main thoroughfare for traveling east and west through midtown. It is a narrow four lane roadway with parking on the curbs that reduce the roadway to two lanes at some locations. Southwest Trafficway is a boulevard style roadway with three north and southbound lanes. Parking is permitted on the curb restricting the roadway to two travel lanes in each direction where there are parked cars.

### Findings before Activation

(January 21, 2008 to January 20, 2009)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
23	19	4	0	6	10	7	20	9

### Findings after Activation

(January 21, 2009 to January 19, 2010)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
21	19	2	0	9	5	7	14	5

### Findings after Activation

(January 21, 2010 to January 20, 2011)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
27	22	5	0	8	10	9	24	8

\*updated January 24, 2012

## 19<sup>th</sup> and Walnut

Date Online: May 4, 2009

Approaches Covered by camera: EB

### Description of the Intersection

This intersection is located in the downtown area and is a lightly travelled intersection. East 19<sup>th</sup> street is a narrow four lane city street and Walnut is a one-way street for northbound traffic. Walnut has three lanes with a dedicated right turn lane at the intersection.

### Findings before Activation

(May 4, 2008 to May 3, 2009)

Total	Crash Type			Crash Classification		Camera Involved	Rear End at RLC approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End		
4	3	1	0	2	0	2	4

### Findings after Activation

May 4, 2009 to May 3, 2010

Total	Crash Type			Crash Classification		Camera Involved	Rear End at RLC approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End		
3	1	2	0	1	0	2	3

### Findings after Activation

May 4, 2010 to May 3, 2011

Total	Crash Type			Crash Classification		Camera Involved	Rear End at RLC approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End		
5	3	2	0	2	1	2	3

## 27th and Southwest Trafficway

Date Online: May 4, 2009

Approaches covered by camera: NB

### Description of the Intersection

This intersection is the most northern point of Southwest Trafficway with northbound traffic entering I-35 northbound. Twenty-seventh street is a lightly travelled east west street with two lanes in each direction.

### Findings before Activation

(May 4, 2008 to May 3, 2009)

Total	Crash Type	Crash Classification			Camera Involved			
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach	
17	12	5	0	4	12	1	10	9

### Findings after Activation

(May 4, 2009 to May 3, 2010)

Total	Crash Type	Crash Classification			Camera Involved			
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach	
9	5	4	0	3	4	2	5	4

### Findings after Activation

(May 4, 2010 to May 3, 2011)

Total	Crash Type	Crash Classification			Camera Involved			
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach	
17	11	6	0	7	8	2	9	5

\*updated January 24, 2012



## Thirty-Ninth and Main

**Date Online:** May 4, 2009

**Approaches covered by camera:** EB

### Description

Thirty-ninth and Main is a very busy mid-town intersection with multiple lanes in all directions. Parking is permitted in all directions on 39th and on Main.

#### Findings before Activation

(May 4, 2008 to May 3, 2009)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
34	26	8	0	9	13	12	10	4

#### Findings after Activation

(May 4, 2009 to May 3, 2010)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
27	22	5	0	6	5	16	5	0

#### Findings after Activation

(May 4, 2010 to May 3, 2011)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
20	17	3	0	4	8	8	8	4

## Sixty-Third and Prospect

Date Online: May 4, 2009

Approaches covered by camera: EB

### Description

Sixty-third and Prospect is a very busy south Kansas City intersection. It is just west of 71 Highway. Both streets serve as main thoroughfares with multiple lanes in each direction, including left turn lanes.

### Findings before Activation

(May 4, 2008 to May 3, 2009)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
24	17	7	0	5	11	8	9	5

### Findings after Activation

(May 4, 2009 to May 3, 2010)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
22	18	4	0	7	8	7	13	6

### Findings after Activation

(May 4, 2010 to May 3, 2011)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
26	19	7	0	10	12	4	12	6

## Seventy-Ninth and Wornall

**Date Online:** May 4, 2009

**Approaches covered by camera:** NB

### Description

Seventy-Ninth and Wornall is a south Kansas City location. Wornall road is a heavily travelled north/south street that is a narrow road with two travel lanes for each direction. Seventy-ninth Street is a lightly travelled street.

#### Findings before Activation

(May 4, 2008 to May 3, 2009)

Total	Crash Type				Crash Classification		Camera Involved	Rear End at RLC Approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		
13	10	3	0	4	3	6	5	0

#### Findings after Activation

(May 4, 2009 to May 3, 2010)

Total	Crash Type				Crash Classification		Camera Involved	Rear End at RLC Approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		
16	10	6	0	7	4	5	10	3

#### Findings after Activation

(May 4, 2010 to May 3, 2011)

Total	Crash Type				Crash Classification		Camera Involved	Rear End at RLC Approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		
16	12	4	0	3	8	5	7	4

## Fifty-Fifth and 71 Highway

**Date Online:** May 22, 2009

**Approaches covered by camera:** NB, SB

### Description

Fifty-Fifth and 71 Highway is a very busy intersection. Fifty-Fifth is a large east/west road with multiple lanes including left turn lanes. Seventy-One Highway is a large roadway with multiple lanes and its north/south lanes are divided by a large green space. This creates two intersections for this intersection, each controlled in all directions by a traffic signal. Additionally, southbound 71 Highway transitions from a divided, limited access highway just north of this intersection.

#### Findings before Activation

(May 22, 2008 to May 21, 2009)

Total	Crash Type				Crash Classification	Camera Involved		
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach	
47	40	7	0	10	23	14	44	20

#### Findings after Activation

(May 22, 2009 to May 21, 2010)

Total	Crash Type				Crash Classification	Camera Involved		
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach	
43	34	9	0	8	21	14	40	18

#### Findings after Activation

(May 22, 2010 to May 21, 2011)

Total	Crash Type				Crash Classification	Camera Involved		
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach	
64	42	22	0	8	49	7	60	43

## Fifty-Ninth and 71 Highway

**Date Online:** May 22, 2009

**Approaches covered by cameras:** NB, SB, WB

### Description

This intersection is the same as fifty-fifth and 71 Highway.

#### Findings before Activation

(May 22, 2008 to May 21, 2009)

Total	Crash Type				Crash Classification		Camera Involved	Rear End at RLC Approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		
29	22	7	0	5	17	7	26	17

#### Findings after Activation

(May 22, 2009 to May 21, 2010)

Total	Crash Type				Crash Classification		Camera Involved	Rear End at RLC Approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		
41	33	8	0	2	28	11	40	28

#### Findings after Activation

(May 22, 2010 to May 21, 2011)

Total	Crash Type				Crash Classification		Camera Involved	Rear End at RLC Approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		
60	46	14	0	9	43	8	58	43

## Gregory and 71 Highway

**Date online:** May 22, 2009

**Approaches covered by camera:** EB, WB

### Description

This intersection is laid out similarly to the intersections above and has similar characteristics. One unique aspect is the northbound traffic on 71 Highway transitions from a divided, limited access highway to the boulevard style at Gregory.

### Findings before Activation

(May 22, 2008 to May 21, 2009)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
47	36	11	0	12	30	5	10	1

### Findings after Activation

(May 22, 2009 to May 21, 2010)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
50	35	15	0	7	28	15	7	2

### Findings after Activation

(May 22, 2010 to May 21, 2011)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
69	57	12	0	11	44	14	18	4

\*updated January 24, 2012

## Vivion and North Oak

**Date online:** June 1, 2009

**Approaches covered by camera:** SB, WB

### Description

This intersection is a heavily travelled roadway with multiple lanes in all directions. It is located in Kansas City, north.

#### Findings before Activation

(June 1, 2008 to May 31, 2009)

Total	Crash Type	Crash Classification			Camera Involved		
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach
41	32	9	0	14	23	4	14

#### Findings after Activation

(June 1, 2009 to May 31, 2010)

Total	Crash Type	Crash Classification			Camera Involved		
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach
47	36	11	0	13	23	11	25

#### Findings after Activation

(June 1, 2010 to May 31, 2011)

Total	Crash Type	Crash Classification			Camera Involved		
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach
41	30	10	1	6	24	11	21

\*updated January 24, 2012

## Winner and I-435

**Date online:** June 1, 2009

**Approaches covered by camera:** WB

### Description

Winner Road is a moderately travelled east/west road with multiple lanes including left turn lanes. The camera monitor's westbound Winner road. This is one of the intersections we had to look at each report to determine if it occurred at the intersection. In the period before activation, there were 49 accident reports using this intersection but only 11 were not on the interstate.

#### Findings before Activation

(June 1, 2008 to May 31, 2009)

Total	Crash Type				Crash Classification		Camera Involved	Rear End at RLC Approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		
11	9	2	0	3	7	1	6	5

#### Findings after Activation

(June 1, 2009 to May 31, 2010)

Total	Crash Type				Crash Classification		Camera Involved	Rear End at RLC Approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		
14	12	2	0	5	9	0	11	8

#### Findings after Activation

(June 1, 2010 to May 31, 2011)

Total	Crash Type				Crash Classification		Camera Involved	Rear End at RLC Approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		
16	14	2	0	8	6	2	6	2



## Twenty-third and I-435

**Date online:** June 1, 2009

**Approaches covered by camera:** EB, WB

### Description

This intersection is similar to Winner Road and I-435. Additionally, the same issue came up with total crashes, reporting 84 accidents with only 17 occurring off the interstate.

### Findings before Activation

(June 1, 2008 to May 21, 2009)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
17	15	2	0	0	12	5	11	6

### Findings after Activation

(June 1, 2009 to May 31, 2010)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
18	14	4	0	0	12	6	10	4

### Findings after Activation

(June 1, 2010 to May 31, 2011)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
18	12	6	0	4	10	4	11	3

## Sixty-eighth and 169 Highway

**Date online:** June 1, 2009

**Approach covered by camera:** WB

### Description

Sixty-eighth street is an east west street with multiple lanes at Highway 169 (a divided limited access highway). The camera covers westbound traffic and when it was initially installed there was some confusion regarding the right turn. There was a yield sign for drivers turning right resulting in drivers being ticketed improperly. Once this was discovered, the sign was removed. This location was hand counted to ensure the accidents were at the 68th street intersection and not on the highway.

#### Findings before Activation

(June 1, 2008 to May 31, 2009)

Total	Crash Type	Crash Classification			Camera Involved			
Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach		
13	11	2	0	4	6	3	2	0

#### Findings after Activation

(June 1, 2009 to May 31, 2010)

Total	Crash Type	Crash Classification			Camera Involved			
Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach		
11	9	2	0	3	7	1	2	0

#### Findings after Activation

(June 1, 2010 to May 31, 2011)

Total	Crash Type	Crash Classification			Camera Involved			
Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach		
9	8	1	0	0	6	3	1	0

## Red Bridge and 71 Highway

**Date online:** July 17, 2009

**Approaches covered by camera:** SB (exit ramp), EB

### Description

Red Bridge road is a multi-lane moderately travelled road in south Kansas City. Seventy-one Highway is a divided, limited access highway. This intersection and off ramp was recently renovated by MODOT. This is one of 3 cameras in the city covering an exit ramp. Hand counting of reports was done at this location.

#### Findings before Activation

(July 17, 2008 to July 16, 2009)

Total	Crash Type	Crash Classification			Camera Involved	
Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach
14	12	2	0	4	7	3

#### Findings after Activation

(July 17, 2009 to July 16, 2010)

Total	Crash Type	Crash Classification			Camera Involved	
Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach
10	9	1	0	1	6	3

#### Findings after Activation

(July 17, 2010 to July 16, 2011)

Total	Crash Type	Crash Classification			Camera Involved	
Non-Injury	Injury	Fatal	Right Angle	Rear End	Other	Rear End at RLC Approach
13	9	4	0	1	7	5

\*updated January 24, 2012

## Highway 152 and Flintlock

**Date activated:** July 24, 2009

**Approaches covered by camera:** EB, WB, SB

### Description

This is one of the busiest intersections in the city. Located in Kansas City, North, this intersection is regularly in the top 5 crash locations and is frequently the top location. It is a multi-lane road in all directions and is a major east/west roadway.

### Findings before Activation

(July 24, 2008 to July 23, 2009)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
51	47	4	0	8	35	8	41	29

### Findings after Activation

(July 24, 2009 to July 23, 2010)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
70	51	19	0	13	44	13	62	40

### Findings after Activation

(July 24, 2010 to July 23, 2011)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
67	55	12	0	12	51	4	60	48

## Bannister and 71 Highway

**Date online:** July 24, 2009

**Approach covered by camera:** EB

### Description

Bannister Road is a major east/west thoroughfare and is heavily travelled. Accidents were hand counted to separate them from collisions on I-435.

#### Findings before Activation

(July 24, 2008 to July 23, 2009)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
21	14	7	0	7	9	5	9	4

#### Findings after Activation

(July 24, 2009 to July 23, 2010)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
32	22	10	0	5	19	8	18	9

#### Findings after Activation

(July 24, 2010 to July 23, 2011)

Total		Crash Type			Crash Classification		Camera Involved	
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		Rear End at RLC Approach
27	18	9	0	4	18	5	11	7

## I-435 and Wornall

**Date online:** July 31, 2009

**Approaches covered by camera:** EB, WB

### Description

Wornall is a main north/south thoroughfare and is heavily travelled. The cameras in this location cover the east and westbound exit ramps from I-435. This intersection was hand counted to verify the accident numbers.

#### Findings before Activation

(July 31, 2008 to July 30, 2009)

Total	Crash Type				Crash Classification		Camera Involved	Rear End at RLC Approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		
29	27	2	0	4	17	8	10	6

#### Findings after Activation

(July 31, 2009 to July 30, 2010)

Total	Crash Type				Crash Classification		Camera Involved	Rear End at RLC Approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		
25	20	5	0	5	12	8	13	8

#### Findings after Activation

(July 31, 2010 to July 30, 2011)

Total	Crash Type				Crash Classification		Camera Involved	Rear End at RLC Approach
	Non-Injury	Injury	Fatal	Right Angle	Rear End	Other		
18	12	6	0	1	13	4	7	4

\*updated January 24, 2012

## Summary Tables

This section contains a number of tables formatted from the intersection data.

### Rear End Crashes at red light camera approaches

Location	Before	Red light rear end crashes (% of total crashes)	Year 1	Red light rear end crashes (% of total crashes)	Year 2	Red light rear end crashes (% of total crashes)
	Total Crashes		Total Crashes		Total Crashes	
39th and SW Tfwy	23	9 (39%)	21	5 (24%)#	27	8 (30%)#
19th and Walnut	4	0	3	0	5	0
27th and SW Tfwy	17	9 (53%)	9	4 (44%)#	17	5 (29%)#
39th and Main	34	4 (12%)	27	0 (0%)#	20	4 (20%)*
63rd and Prospect	24	5 (21%)	22	6 (27%)*	26	6 (23%)*
79th and Wornall	13	0	16	3 (19%)*	16	4 (25%)*
55th and 71 Hwy	47	20 (43%)	43	18 (42%)#	64	43 (67%)*
59th and 71 Hwy	29	17 (59%)	41	28 (68%)*	60	43 (72%)*
Gregory and 71 Hwy	47	1 (2%)	50	2 (4%)*	69	4 (6%)*
Vivion and N. Oak	41	6 (15%)	47	11 (23%)*	41	9 (22%)*
Winner Rd. and I-435	11	5 (45%)	14	8 (57%)*	16	2 (13%)#
23rd and I-435	17	6 (35%)	18	4 (22%)#	18	3 (17%)#
68th and 169	13	0	11	0	9	0
Red Bridge and 71 Hwy	14	3 (21%)	10	6 (6%)#	13	5 (38%)*
Hwy 152 and Flintlock	51	29 (57%)	70	40 (57%)	67	48 (72%)*
Bannister and 71 Hwy	21	4 (19%)	32	9 (28%)*	27	7 (26%)*
I-435 and Wornall	29	6 (21%)	25	8 (32%)*	18	4 (22%)*

\*Red indicates up from the year prior to activation

#Green indicates down from the year prior to activation

## Total Crashes before and after activation

Location	Total Crashes				
	Prior to activation	1 year after activation	Diff.	2nd year after activation	Diff.
39th and Southwest Trafficway	23	21	-2	27	4
19th and Walnut	4	3	-1	5	1
27th and Southwest Trafficway	17	9	-8	17	0
39th and Main	34	27	-7	20	-14
63rd and Prospect	24	22	-2	26	2
79th and Wornall	13	16	3	16	3
55th and 71 Highway	47	43	-4	64	17
59th and 71 Highway	29	41	12	60	31
Gregory and 71 Highway	47	50	3	69	22
Vivion and North Oak	41	47	6	41	0
Winner and I-435	11	14	3	16	5
23rd and I-435	17	18	1	18	1
68th and 169	13	11	-2	9	-4
Red Bridge and 71 Highway	14	10	-4	13	-1
Highway 152 and Flintlock	51	70	19	67	16
Bannister and 71 Highway	21	32	11	27	6
I-435 and Wornall	29	25	-4	18	-11
<b>Total</b>	435	459	24	513	89

\*updated January 24, 2012



### Crashes at Red Light Camera Approaches

Location	Crashes at RLC approach				
	Prior to activation	1 year after activation	Diff.	2nd year after activation	Diff.
39th and Southwest Trafficway	20	14	-6	24	4
19th and Walnut	4	3	-1	3	-1
27th and Southwest Trafficway	10	5	-5	9	-1
39th and Main	10	5	-5	8	-2
63rd and Prospect	9	13	4	12	3
79th and Wornall	5	10	5	7	2
55th and 71 Highway	44	40	-4	60	16
59th and 71 Highway	26	40	14	58	32
Gregory and 71 Highway	10	7	-3	18	8
Vivion and North Oak	14	25	11	21	7
Winner and I-435	6	11	5	6	0
23rd and I-435	11	10	-1	11	0
68th and 169	2	2	0	1	-1
Red Bridge and 71 Highway	7	8	1	10	3
Highway 152 and Flintlock	41	62	21	60	19
Bannister and 71 Highway	9	18	9	11	2
I-435 and Wornall	10	13	3	7	-3
<b>Total</b>	<b>238</b>	<b>286</b>	<b>48</b>	<b>326</b>	<b>88</b>

### Tickets Written at each Intersection

Location	# of Cameras	Tickets Issued	
		January 1, 2009 through January 12, 2012	Tickets per camera
39th and Southwest Trafficway	3	28853	9617.7
19th and Walnut	1	829	829.0
27th and Southwest Trafficway	1	4390	4390.0
39th and Main	1	4023	4023.0
63rd and Prospect	1	11222	11222.0
79th and Wornall	1	7186	7186.0
55th and 71 Highway	2	34361	17180.5
59th and 71 Highway	3	16674	5558.0
Gregory and 71 Highway	2	17379	8689.5
Vivion and North Oak	2	5966	2983.0
Winner and I-435	1	8338	8338.0
23rd and I-435	2	7841	3920.5
68th and 169	1	8856	8856.0
Red Bridge and 71 Highway	2	19220	9610.0
Highway 152 and Flintlock	3	10655	3551.7
Bannister and 71 Highway	1	11701	11701.0
I-435 and Wornall	2	6363	3181.5
<b>Total</b>	29	197494	6370.8

## Signal Violations

Location	Signal Violations			
	Before	Year 1	Year 2	Total
39th and Southwest Trafficway	3	1	2	6
19th and Walnut	1	2	0	3
27th and Southwest Trafficway	0	0	0	0
39th and Main	2	1	2	5
63rd and Prospect	2	1	1	4
79th and Wornall	3	1	0	4
55th and 71 Highway	9	0	2	11
59th and 71 Highway	1	0	4	5
Gregory and 71 Highway	6	4	1	11
Vivion and North Oak	7	2	2	11
Winner and I-435	1	0	2	3
23rd and I-435	3	1	2	6
68th and 169	2	0	0	2
Red Bridge and 71 Highway	1	0	2	3
Highway 152 and Flintlock	2	0	3	5
Bannister and 71 Highway	6	2	0	8
I-435 and Wornall	3	3	1	7
<b>Total</b>	52	18	24	94

### Accident Classification

	Before Activation			First Year			2nd Year			Intersection Totals		
	Crash Class			Crash Class			Crash Class			Crash Class		
	Rt. Angle	Rear End	Other	Rt. Angle	Rear End	Other	Rt. Angle	Rear End	Other	Rt. Angle	Rear End	Other
Location												
39th and Southwest Trafficway	6	10	7	9	5	7	8	10	9	23	25	23
19th and Walnut	2	0	2	1	0	2	2	1	2	5	1	6
27th and Southwest Trafficway	4	12	1	3	4	2	7	8	2	14	24	5
39th and Main	9	13	12	6	5	16	4	8	8	19	26	36
63rd and Prospect	5	11	8	7	8	7	10	12	4	22	31	19
79th and Wornall	4	3	6	7	4	5	3	8	5	14	15	16
55th and 71 Highway	10	23	14	8	21	14	8	49	7	26	93	35
59th and 71 Highway	5	17	7	2	28	11	9	43	8	16	88	26
Gregory and 71 Highway	12	30	5	7	28	15	11	44	14	30	102	34
Vivion and North Oak	14	23	4	13	23	11	6	24	11	33	70	26
Winner and I-435	3	7	1	5	9	0	8	6	2	16	22	3
23rd and I-435	0	12	5	0	12	6	4	10	4	4	34	15
68th and 169	4	6	3	3	7	1	0	6	3	7	19	7
Red Bridge and 71 Highway	4	7	3	1	6	3	1	7	5	6	20	11
Highway 152 and Flintlock	8	35	8	13	44	13	12	51	4	33	130	25
Bannister and 71 Highway	7	9	5	5	19	8	4	18	5	16	46	18
I-435 and Wornall	4	17	8	5	12	8	1	13	4	10	42	20
<b>Total</b>	101	235	99	95	235	129	98	318	97	294	788	325

\*updated January 24, 2012