

# **Quad Cities Intersection Crash Study**

**Quad Cities Metropolitan Planning Area (MPA)**

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<sup>3</sup> Vice-Chair, Transportation Policy Committee

<sup>4</sup> The mayors of the cities of Buffalo, Eldridge, LeClaire, Princeton, and Riverdale in the Iowa portion and the cities and villages of Andalusia, Carbon Cliff, Coal Valley, Colona, Hampton, Milan, Oak Grove, Port Byron, Rapids City, and Silvis in the Illinois portion select a representative from their jurisdictions (Iowa and Illinois separately) to represent them on the Policy and Technical Committees.



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<sup>1</sup> The Technical Committee system allows one vote per agency with delegated representative voting permitted in the absence of an agency's listed member. The City of Davenport has three votes.

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<sup>3</sup> Vice-Chair, Transportation Technical Committee.

<sup>4</sup> The mayors of the cities of Buffalo, Eldridge, LeClaire, Princeton, and Riverdale in the Iowa portion and the cities and villages of Andalusia, Carbon Cliff, Coal Valley, Colona, Hampton, Milan, Oak Grove, Port Byron, Rapids City, and Silvis in the Illinois portion select a representative from their jurisdictions (Iowa and Illinois separately) to represent them on the Policy and Technical Committees.

NOTE: Additional membership may include advisory representatives from the Illinois and Iowa Departments of Transportation, planning and research engineers from the Illinois and Iowa Federal Highway Administration, and a community planning representative from the Federal Transit Administration Region VII.



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## **Executive Summary**

The 2010-2011 Quad Cities Intersection Crash Study provides a source of crash information through which state and local officials may examine and respond to changing traffic conditions in their jurisdiction. This report identifies and analyzes hazardous intersections in the Illinois and Iowa Quad City Metropolitan Planning Area (MPA.)

The ten highest ranked intersections in each state were identified and scored through an evaluation process based on accident frequency, severity and rate. Ties in ranking in Iowa Quad Cities locations resulted in thirteen intersections being included in the top list. The twenty-three total locations were further analyzed using crash history and conditions.

The top locations in each area (Iowa and Illinois Quad Cities MPA) were found to be:

### Iowa:

2010

E. Locust St & Iowa St - Davenport

Number of Crashes: 16

Score: 24

2011

Eastern Ave & E. Kimberly Rd - Davenport

Number of Crashes: 18

Score: 22

### Illinois:

2010

John Deere Rd/IL 5 & 38<sup>th</sup> St - Moline

Number of Crashes: 38

Score: 38

2011

John Deere Rd/IL 5 & 38<sup>th</sup> St – Moline

Number of Crashes: 42

Score: 39

The appendices included at the end of this report provide possible crash causes and countermeasures, crash reduction factors associated with countermeasures and typical intersection improvement costs.

## **Introduction**

According to the Iowa Comprehensive Highway Safety Plan, intersections constitute 55% of all urban vehicle crashes nationally.<sup>1</sup> An important aspect to reducing this statistic is identifying problem intersections and creating strategies to increase safety. This report analyzes 2010 and 2011 crash data and identifies the top 10 intersections for crashes in both the Iowa Quad Cities and the Illinois Quad Cities.

The Quad Cities Intersection Crash Study for 2010-2011 is the sixteenth such report prepared by the Bi-State Regional Commission. This year's report provides an analysis for intersections with seven or more crashes per location. The methodology used to rank the intersections in both states uses criteria of frequency, severity and rate. The report gives a detailed analysis of the number and types of crashes at each of the ranked intersections to allow stakeholders to pinpoint problem areas and develop engineering strategies to mitigate hazards, focus on traffic enforcement and/or develop public education strategies to reduce crashes.

Data for the 2010-2011 Intersection Crash Study was provided by the Iowa Department of Transportation (IA DOT), Bureau of Transportation Safety, and the Illinois Department of Transportation (IL DOT), Division of Traffic Safety. The departments of transportation obtain information from police and driver crash reports. Countermeasures for specific crash patterns can be found in Appendix A with corresponding costs and crash reduction factors found in Appendices B and C, respectively.

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<sup>1</sup> Iowa Comprehensive Highway Safety Plan (2006), p.A-8

## **Methodology**

This chapter describes the ranking criteria, the calculation of the criteria value for each intersection, and the assignment of evaluation points for ranking of the top crash locations. Based on total number of crashes that can be analyzed in a timely manner, a cut-off line was established for selection of qualified locations from the complete crash data set. The 2010-2011 crash study includes intersections that had seven (7) or more crashes that year. Note for Illinois crashes from Illinois DOT: the law regarding the crash reporting threshold for Property Damage Only crashes was amended effective January 1, 2009, to the following: When all drivers involved in a crash are insured, the amount of damage to the property of any one person that must be reported increased from \$500 to \$1,500. If any driver does not have insurance, the threshold remains at \$500. (This change in law precludes comparison of 2009 and later Property Damage Only crashes and Total crashes with such crashes for previous years. The change did NOT affect the reporting of injury or fatal crashes.) Note for Iowa crashes: crashes are defined as incidents involving one or more vehicles resulting in a fatality, injury, or, crashes July 1, 1997 – June 30, 2010 property damage valued at \$1,000 or greater and crashes as of July 1, 2010 property damage valued at \$1500 or greater.

There are three criteria used for ranking of the crash locations: Crash Frequency, Crash Severity, and Crash Rate.

For each criterion, a scoring system awards evaluation points to the intersections. Table 3.1 below provides a complete list of criterion ranges and corresponding evaluation points.

Due to differences in reporting and recording of crash data between Iowa and Illinois the crash data between the two states **cannot** be compared.

**Table 1.1**  
**Evaluation Points for Ranking Crash Locations**

<u>Frequency</u>		<u>Severity</u>		<u>Rate<sup>2</sup></u>	
<u>Crashes</u>	<u>Points</u>	<u>Severity</u>	<u>Points</u>	<u>Rate (MEV)</u>	<u>Points</u>
≥ 29	15	≥ 56	15	≥ 3.50	15
27-28	14	53-55	14	3.26-3.49	14
25-26	13	49-52	13	3.01-3.25	13
23-24	12	45-48	12	2.76-3.00	12
21-22	11	41-44	11	2.51-2.75	11
19-20	10	37-40	10	2.26-2.50	10
17-18	9	33-36	9	2.01-2.25	9
15-16	8	29-32	8	1.76-2.00	8
13-14	7	25-28	7	1.51-1.75	7
11-12	6	21-24	6	1.26-1.50	6
9-10	5	17-20	5	1.01-1.25	5
7-8	4	13-16	4	0.76-1.00	4
5-6	3	9-12	3	0.51-0.75	3
3-4	2	5-8	2	0.26-0.50	2
1-2	1	1-4	1	0.01-0.025	1

The ranking criteria are explained as follows:

### **CRASH FREQUENCY**

This is the total number of crashes that occurred at each intersection in the subject year. It is frequently used for comparison in crash analysis. All intersections with seven or more reported crashes in 2010 & 2011 are included in this study.

### **CRASH SEVERITY**

Crashes are classified into three types: Property Damage Only (PDO), Personal Injury Crash and Fatal Crash. A value of 1, 3, or 12, respectively, is assigned to each type of crash. The equation below illustrates the calculation formula:

$$S_i = (N_p \times 1) + (N_i \times 3) + (N_f \times 12)$$

where:

$S_i$  – Total weighted severity value for intersection  $i$ ;

$N_p$  – Number of Property Damage Only Crashes at intersection  $i$ ;

$N_i$  – Number of Personal Injury Crashes at intersection  $i$ ; and

$N_f$  – Number of Fatal Crashes at intersection  $i$ .

---

<sup>2</sup> Crashes per million entering vehicles (MEV)

The total weighted severity value at each intersection is used to obtain the number of severity points found in Table 3.1.

### CRASH RATE

The crash rate for an intersection is defined as the ratio of crash frequency over traffic volume for the subject time period. It is usually expressed in terms of crashes per million entering vehicles (MEV) for an intersection. The following formula is used in this study to calculate the intersection crash rates:

$$R_i = \frac{(C_i)(1,000,000)}{(T)(V_i)}$$

where:

$R_i$  – Crash rate expressed in crashes per million entering vehicles (MEV) for intersection  $i$ ;

$C_p$  – Number of crashes at intersection  $i$  during the subject year;

$T$  – Time period in days (in this case, 365 days); and

$V_i$  – Total of average daily traffic on all approaches entering intersection  $i$ .

### TOTAL SCORE AND RANKING

The values of crash frequency, crash severity and crash rate calculated using the above method were converted to the respective evaluation points using Table 3.1. The sum of the evaluation points is the total score on which the ranking of top intersections was based.



### **Highest Crash Location Analysis**

The method discussed in Chapter 3 is applied here to analyze the intersections that meet the minimum seven crash condition. With the sum of the scores of the three criteria, every intersection analyzed was ranked by state. The highest ranked top ten locations were found using these lists. Tables 2.1, 2.2, 2.3, and 2.4 list these top ranked locations and corresponding scores for Illinois and Iowa, respectively.

**Table 2.1  
Top Ranked Intersections in Iowa Quad Cities – 2010**

<b>Rank</b>	<b>Intersection</b>	<b># of Crashes</b>	<b>Crash Rate</b>	<b>Severity</b>	<b>Score</b>
1	E. Locust St & Iowa St - Davenport	16	2.09	28	24
2	W. Central Park Ave & Marquette St - Davenport	13	1.84	25	22
3	Kimberly Rd & Main St - Davenport	14	1.41	30	21
3	W. Kimberly Rd & Marquette St - Davenport	12	1.18	40	21
5	Elmore Ave & E. 53 <sup>rd</sup> St – Davenport	18	1.12	22	20
6	Utica Ridge Rd & E. 53 <sup>rd</sup> St – Davenport	13	1.11	27	19
6	Welcome Way & 53 <sup>rd</sup> St – Davenport	14	1.23	26	19
8	Harrison St & W. 3 <sup>rd</sup> St – Davenport	12	1.86	14	18
8	Kimberly Rd & Eastern Ave – Davenport	13	.85	25	18
8	Kimberly Rd & Elmore Ave – Davenport	14	.86	26	18
8	W. 35 <sup>th</sup> St & Marquette St – Davenport	10	1.82	20	18
8	W. Locust St & N. Division St & Hickory Grove Rd	13	1.12	21	18

**Table 2.2  
Top Ranked Intersections in Iowa Quad Cities – 2011**

<b>Rank</b>	<b>Intersection</b>	<b># of Crashes</b>	<b>Crash Rate</b>	<b>Severity</b>	<b>Score</b>
1	Eastern Ave & E. Kimberly Rd - Davenport	18	1.19	32	22
2	E. 53 <sup>rd</sup> St & Jersey Ridge Rd - Davenport	16	1.30	20	19
3	Gaines St & W. 3 <sup>rd</sup> St - Davenport	11	1.31	21	18
3	Marquette St & W. 4 <sup>th</sup> St - Davenport	9	1.79	17	18
3	Spring St & E. Kimberly Rd – Davenport	13	1.16	21	18
3	W. Locust St & Harrison St – Davenport	14	1.20	24	18
7	E. 53 <sup>rd</sup> St & Elmore Ave – Davenport	15	0.93	19	17
8	Kimberly Rd & Locust St/Middle Rd – Davenport/Bettendorf	12	1.04	20	16
8	N. Division St & W. 4 <sup>th</sup> St – Davenport	9	1.43	17	16
10	W. Central Park Ave & Marquette St – Davenport	10	1.41	14	15
10	W. Locust St & Main St – Davenport	9	0.99	21	15

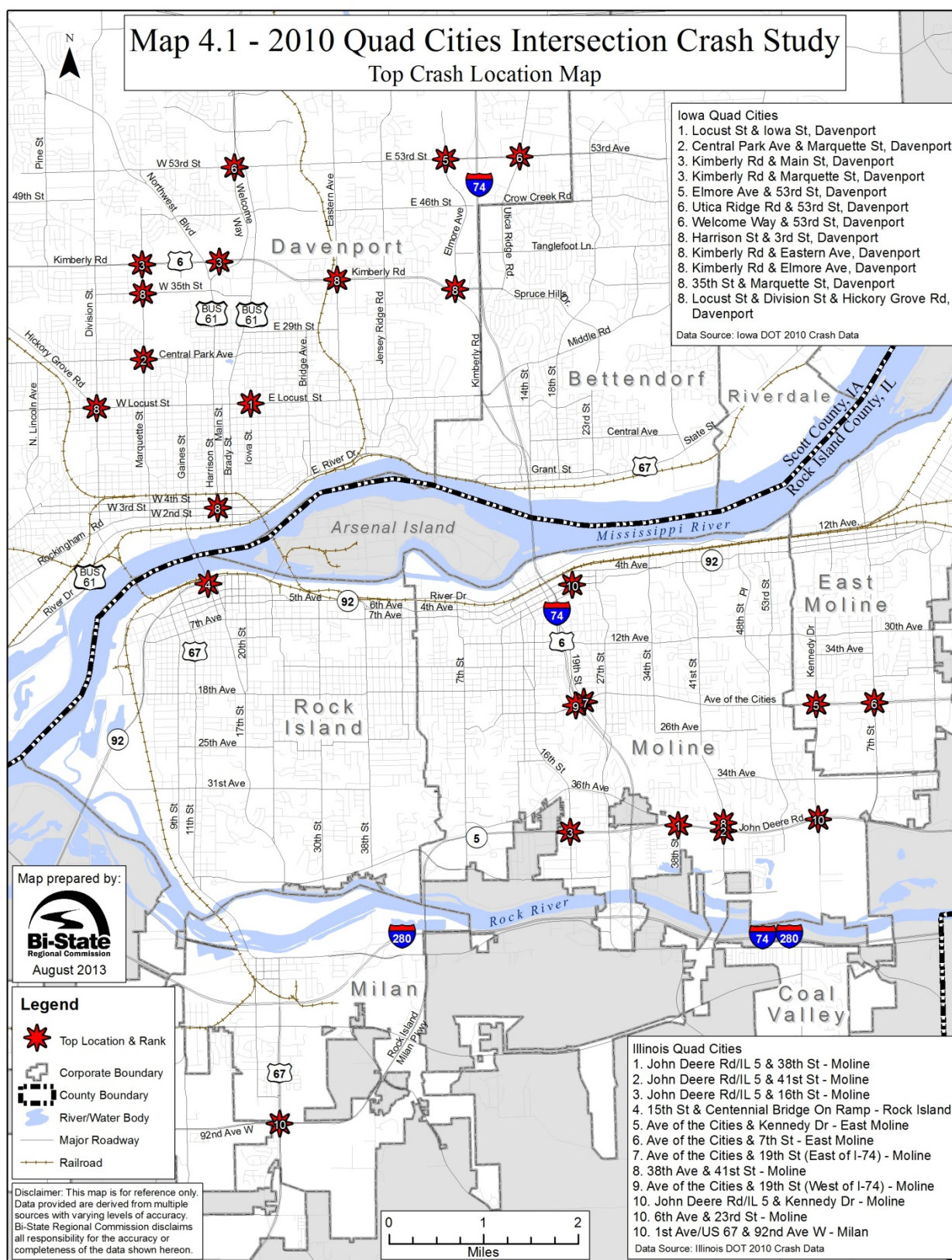
**Table 2.3**  
**Top Ranked Intersections in Illinois Quad Cities - 2010**

<b>Rank</b>	<b>Intersection</b>	<b># of Crashes</b>	<b>Crash Rate</b>	<b>Severity</b>	<b>Score</b>
1	John Deere Rd/IL 5 & 38 <sup>th</sup> St - Moline	38	1.93	64	38
2	John Deere Rd/IL 5 & 41 <sup>st</sup> St- Moline	28	1.55	48	33
3	John Deere Rd/IL 5 & 16 <sup>th</sup> St - Moline	26	1.48	50	32
4	15 <sup>th</sup> St & Centennial Bridge on ramp – Rock Island	24	2.74	24	29
5	Ave of the Cities & Kennedy Dr – East Moline	21	2.06	29	28
6	Avenue of the Cities & 7 <sup>th</sup> St – East Moline	19	1.88	33	27
7	Ave of the Cities & 19 <sup>th</sup> St (East of I-74) - Moline	18	2.21	30	26
8	38 <sup>th</sup> Ave & 41 <sup>st</sup> St - Moline	15	2.53	21	25
9	Ave of the Cities & 19 <sup>th</sup> St (West of I-74) - Moline	16	1.79	30	24
10	John Deere Rd/IL 5 & Kennedy Dr – Moline	18	1.39	32	23
10	6 <sup>th</sup> Ave & 23 <sup>rd</sup> St – Moline	12	2.98	20	23
10	1 <sup>st</sup> Ave/US 67 & 92 <sup>nd</sup> Ave W. - Milan	14	2.08	28	23

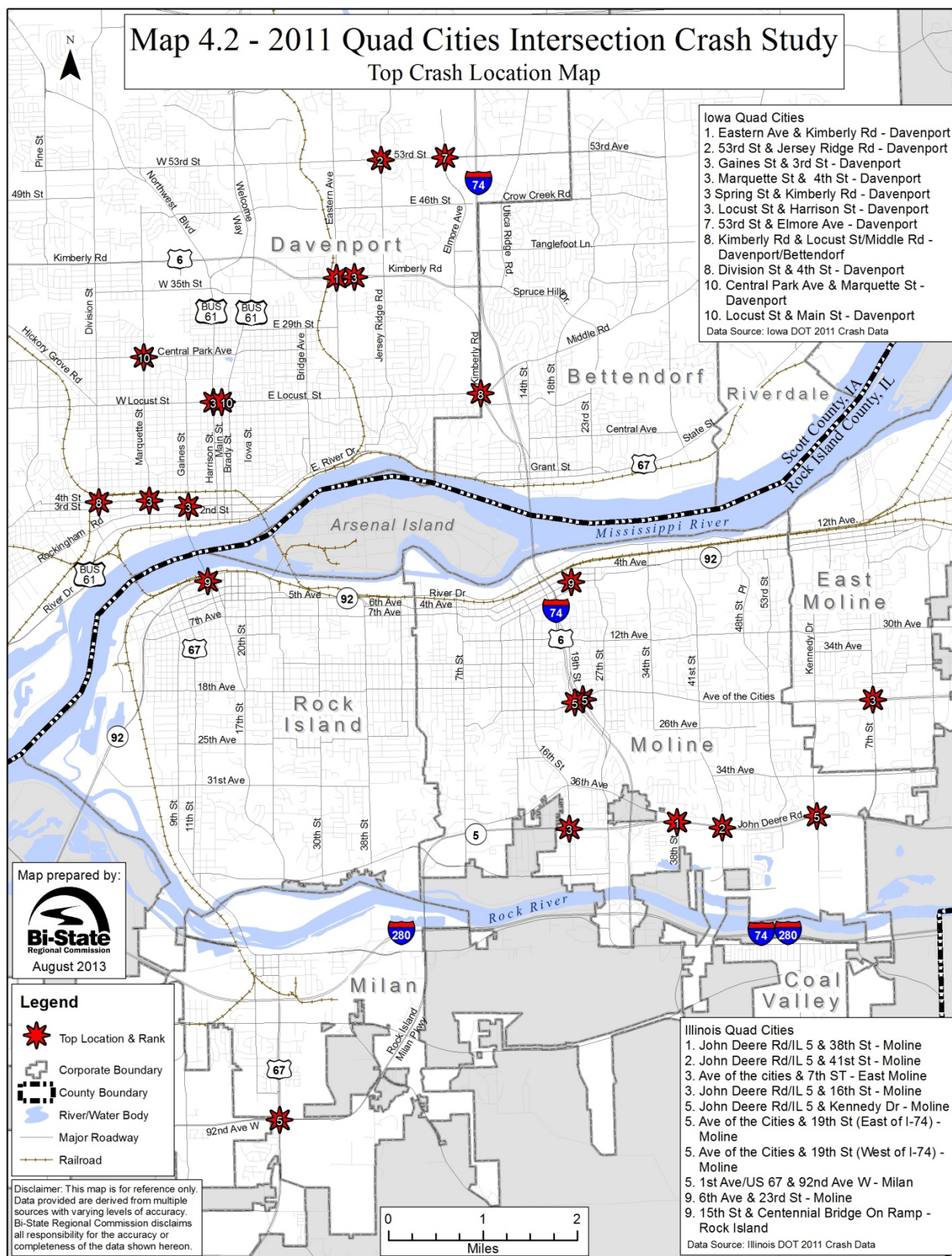
**Table 2.4**  
**Top Ranked Intersections in Illinois Quad Cities - 2011**

<b>Rank</b>	<b>Intersection</b>	<b># of Crashes</b>	<b>Crash Rate</b>	<b>Severity</b>	<b>Score</b>
1	John Deere Rd/IL 5 & 38 <sup>th</sup> St – Moline	42	2.15	72	39
2	John Deere Rd/IL 5 & 41 <sup>st</sup> St- Moline	24	1.31	44	29
3	Ave of the Cities & 7 <sup>th</sup> St – East Moline	18	1.78	32	25
3	John Deere Rd/IL 5 & 16 <sup>th</sup> St- Moline	21	1.17	35	25
5	John Deere Rd/IL 5 & Kennedy Dr - Moline	18	1.44	28	22
5	Avenue of the Cities & 19 <sup>th</sup> St (East of I-74) - Moline	16	1.97	24	22
5	Avenue of the Cities & 19 <sup>th</sup> St (West of I-74) - Moline	15	1.67	27	22
5	1 <sup>st</sup> Ave/US 67 and 92 <sup>nd</sup> Ave W. – Milan	14	2.24	22	22
9	6 <sup>th</sup> Ave & 23 <sup>rd</sup> St – Moline	11	2.73	15	21
9	15 <sup>th</sup> St & Centennial Bridge on ramp – Rock Island	16	1.89	20	21









### **Detailed Analysis of Iowa Quad Cities Top Locations**

In this chapter, top ranked intersections in the Iowa Quad Cities are analyzed individually. Each location analysis includes figures describing frequency of crash type, day of crash, weather, and road conditions. The first part of this chapter reports 2010 data and the second part of this chapter reports 2011 data.

As discussed in Chapter 2, the average crash rate for the top 12 Iowa locations for 2010 is 1.37. In the first part of this chapter, crash rates at each location are compared with this average crash rate. A table comparing each intersection's 2010 performance with 2007 performance is also given. Some intersections ranking in the top ten in 2010 were not ranked in 2007 and are so indicated in that location's comparison table.

The average crash rate for the top 11 Iowa locations for 2011 is 1.25. In the second part of this chapter, crash rates at each location are compared with this average crash rate. A table comparing each intersection's 2011 performance with 2010 performance is also given. Some intersections ranking in the top ten in 2011 were not ranked in 2010 and are so indicated in that location's comparison table.

**CHAPTER 3 – PART 1     2010 IOWA INTERSECTION CRASH DATA****2010 IOWA LOCATION #1- EAST LOCUST ST & IOWA ST - DAVENPORT**

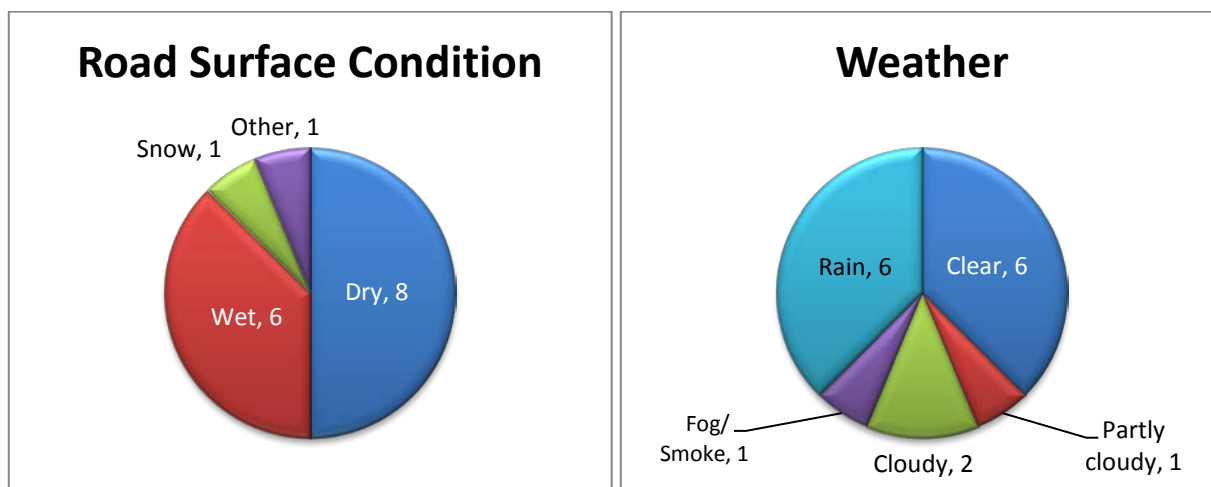
Ranked first, in 2010, with a score of 24, this location experienced 16 crashes in 2010, resulting in 6 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 2.09 crashes per MEV. Angle, oncoming left turn crashes were the predominant crash type. Most crashes occurred during daylight hours in a tie between clear and rain weather conditions. The highest number of crashes were reported on Wednesdays, with no crashes reported on Thursdays.

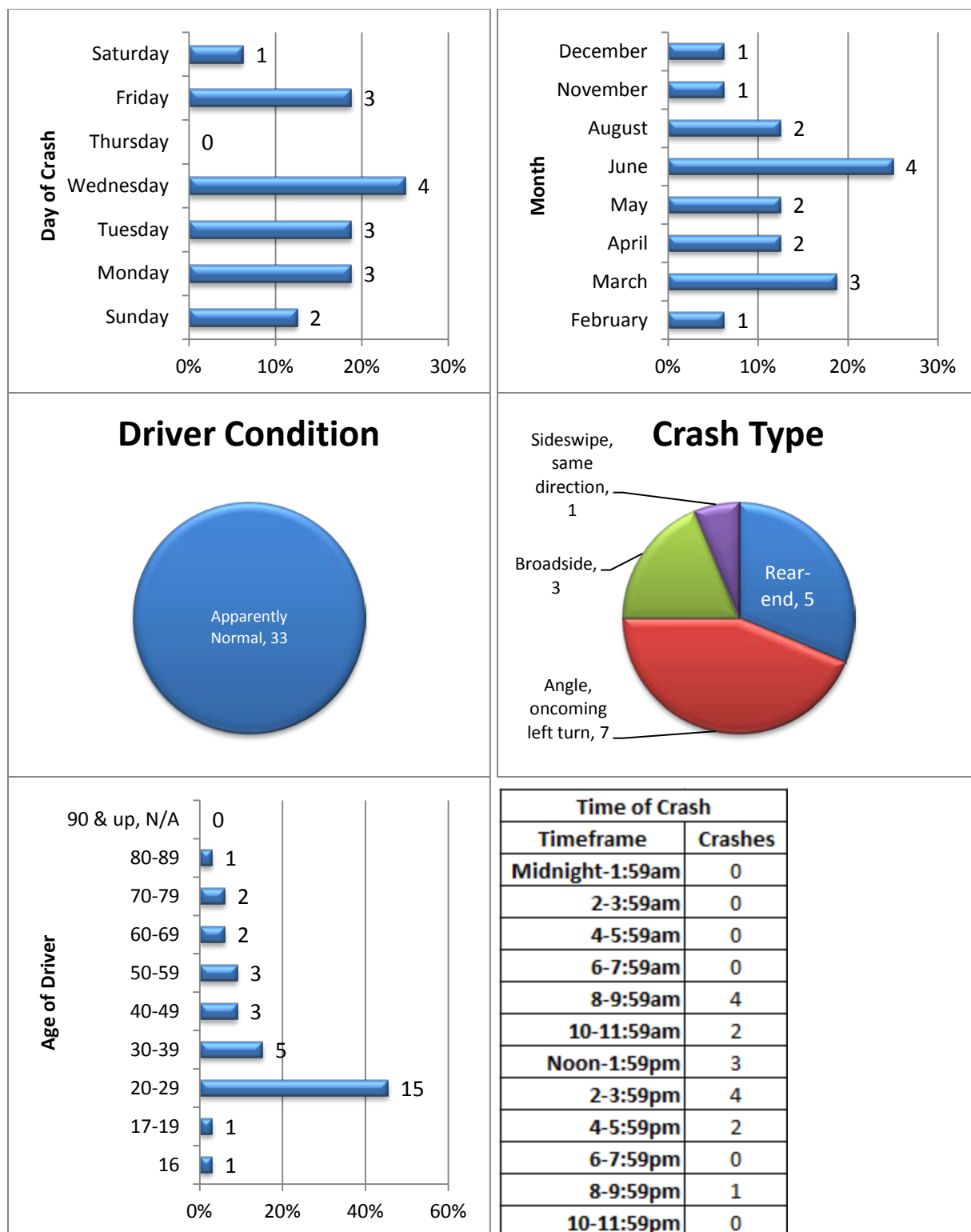
Average daily traffic count for this intersection is 21,000. East Locust Street is a 4 lane minor arterial road. Iowa Street is a 2 lane local road. The posted speed limit is 25 mph at this location along E. Locust Street and along Iowa Street. There are no designated turn lanes from any approach.

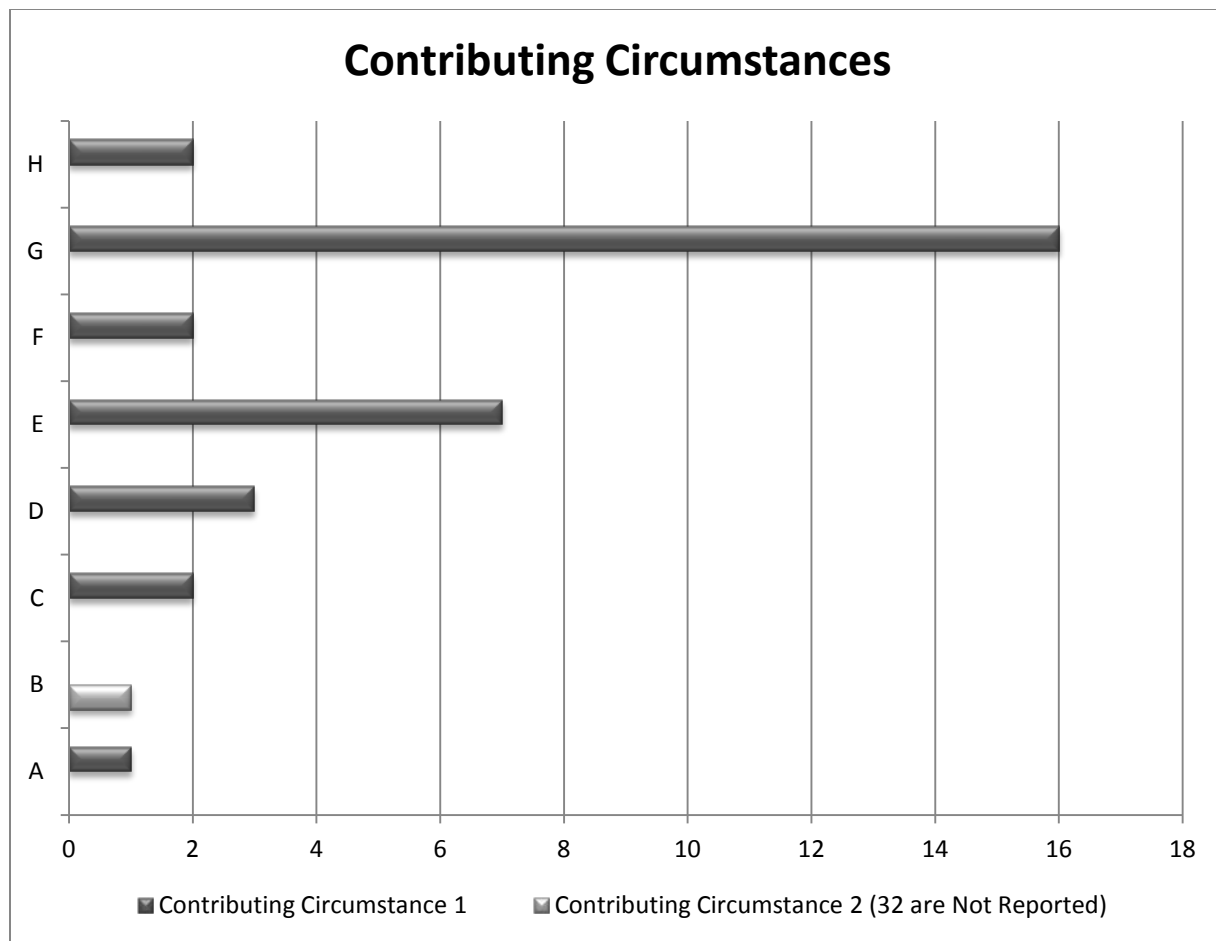
**Table 3.1**  
**East Locust St & Iowa St (Davenport) 2007 & 2010 Comparison**

	<b>2007</b>	<b>2010</b>
<b>Rank</b>	3	1
<b>Total Crashes</b>	15	16
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	5	6
<b>Crash Rate</b>	1.82	2.09
<b>Predominant Crash Type</b>	Turning	Angle, oncoming left turn

**Figure 3.1**  
**East Locust St & Iowa St (Davenport) – Crash Frequency by Various Conditions**







#### Chart Key

- A: Driving too fast for conditions
- B: Lost Control
- C: Made improper turn
- D: Followed too close
- E: FTYROW: Making left turn
- F: Other: Other improper action
- G: Other: No improper action
- H: Unknown



**Map 3.1**  
**2010 Iowa Location #1- E. Locust St & Iowa St (Davenport)**



- |   |  |
|---|--|
| 1. East Bound, Straight, Rear end (3)                   | 6. West Bound, Right Turn, Broadside (1)                     |
| 2. East Bound, Right Turn, Broadside (1)                | 7. West Bound, Slowing/Stopping, Rear end (1)                |
| 3. East Bound, Left Turn, Angle, Oncoming Left Turn (2) | 8. West Bound, Straight, Rear end (1)                        |
| 4. West Bound, Left Turn, Angle, Oncoming Left Turn (5) | 9. West Bound, Changing Lanes, Sideswipe, Same Direction (1) |
| 5. West Bound, Left Turn, Broadside (1)                 |  |

## 2010 IOWA LOCATION #2- WEST CENTRAL PARK AVE & MARQUETTE ST – DAVENPORT

Ranked second, with a score of 22, this location experienced 13 crashes in 2010, resulting in 6 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 1.84 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear, dry conditions. The highest number of crashes occurred on Wednesdays, with crashes reported for all days of the week.

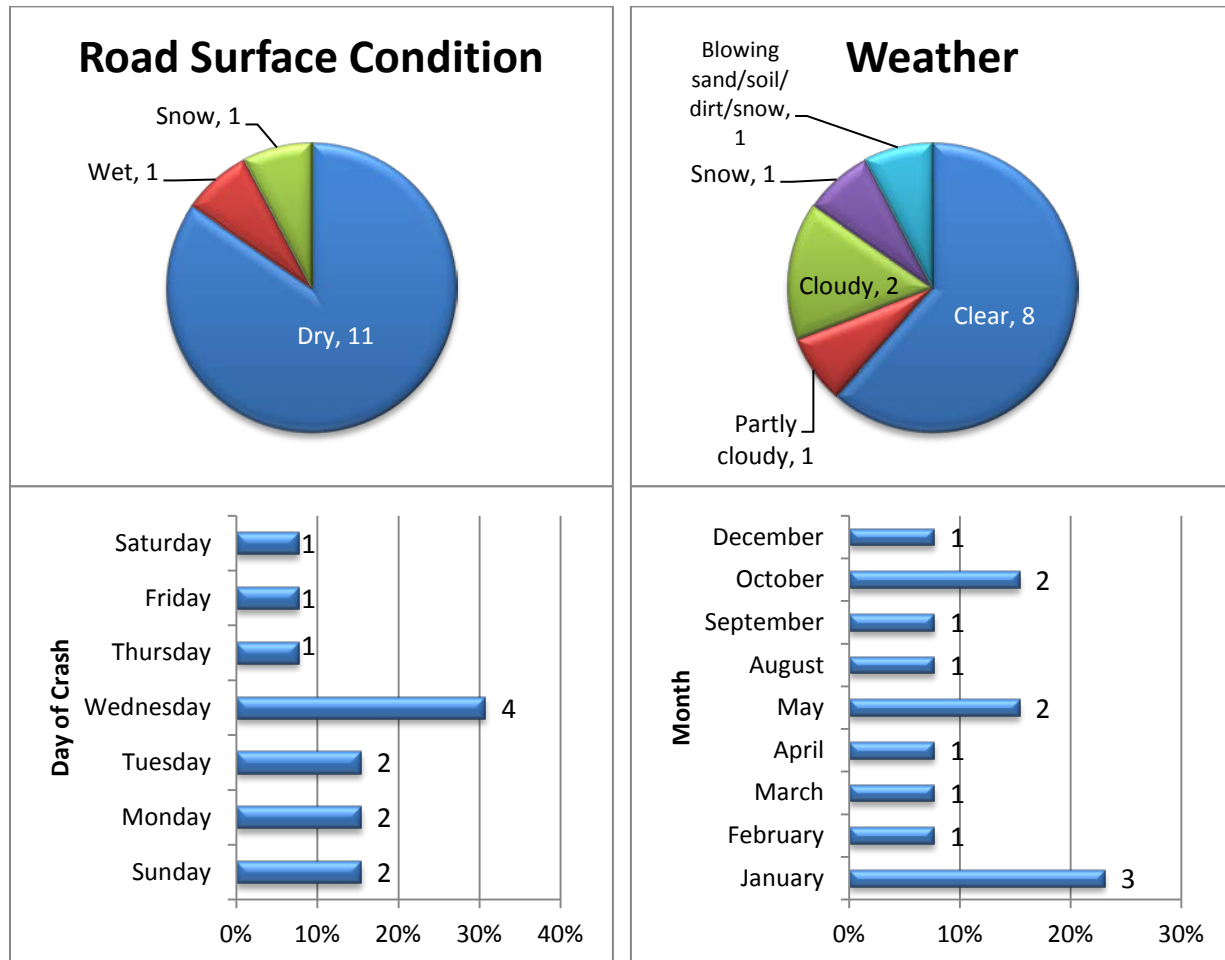
Average daily traffic count for this intersection is 19,400. West Central Park Ave is a 4 lane minor arterial road. Marquette St is a 4 lane collector road north of West Central Park Ave and a 2 lane collector road south of West Central Park Ave. The posted speed limit along West Central Park Ave, in this area, is 30 mph. The posted speed limit is 35 mph along Marquette St in this area. The southbound approach of Marquette St has one left turn lane.

**Table 3.2**  
**West Central Park Ave & Marquette St (Davenport) 2007 & 2010 Comparison**

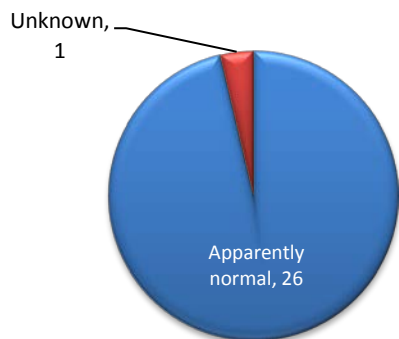
	<b>2007 (<i>not in top ten</i>)</b>	<b>2010</b>
<b>Rank</b>	32	2
<b>Total Crashes</b>	7	13
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	0
<b># of Injury related crashes</b>	<i>Not Ranked</i>	6
<b>Crash Rate</b>	0.85	1.84
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Rear-end



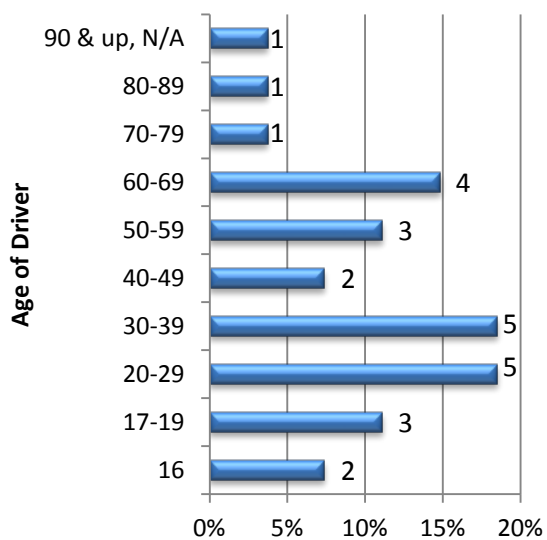
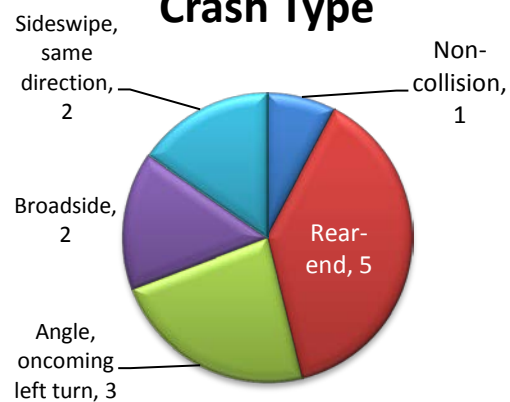
**Figure 3.2**  
**W. Central Park Ave & Marquette St (Davenport) – Crash Frequency by Various Conditions**



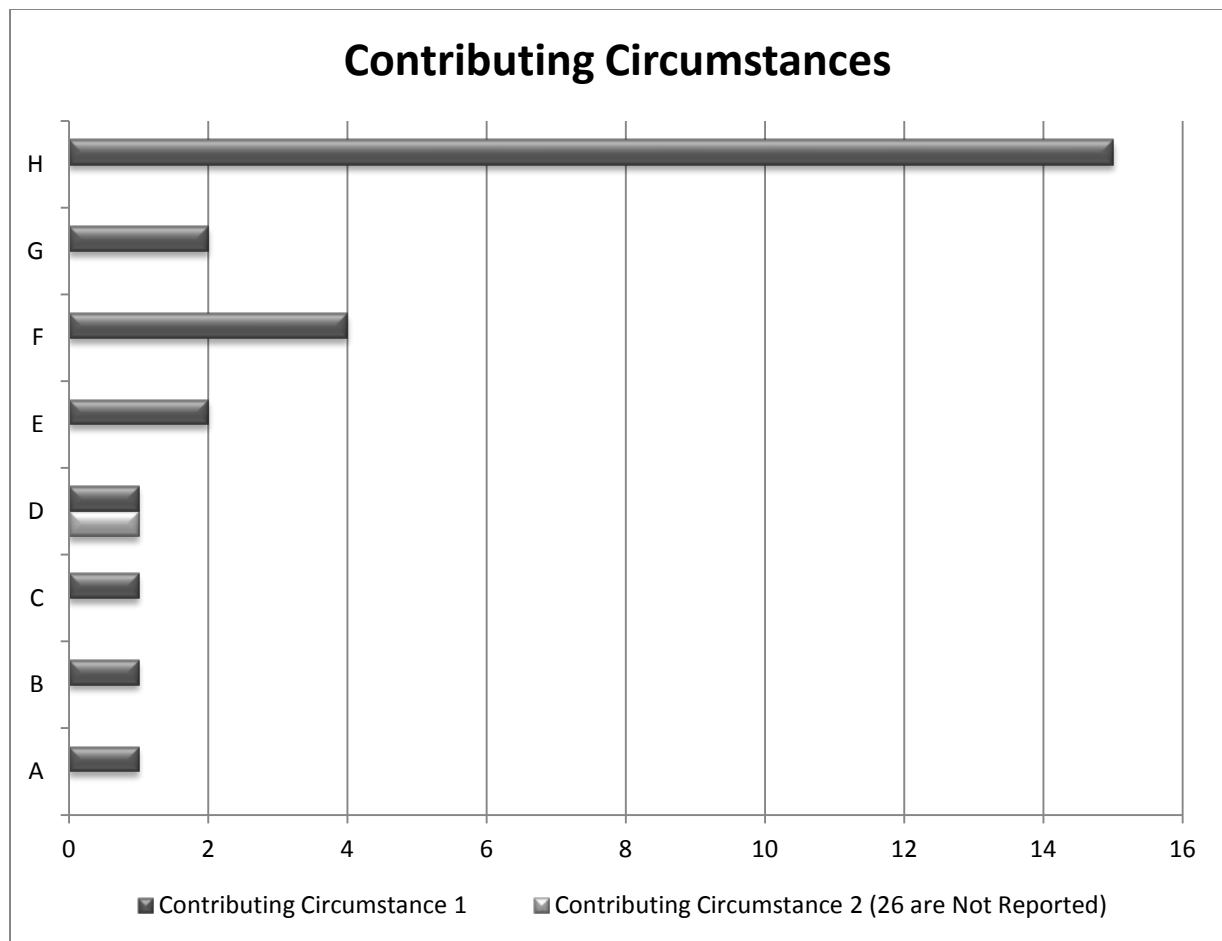
### Driver Condition



### Crash Type



Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	0
6-7:59am	0
8-9:59am	3
10-11:59am	0
Noon-1:59pm	1
2-3:59pm	0
4-5:59pm	6
6-7:59pm	2
8-9:59pm	1
10-11:59pm	0



#### Chart Key

- A: Ran traffic signal
- B: Driving too fast for conditions
- C: Crossed centerline
- D: Lost control
- E: Followed too close
- F: FTYROW: Making left turn
- G: FTYROW: Other
- H: Other: no improper action

**Map 3.2**  
**Iowa Location #2- West Central Park Ave & Marquette St (Davenport)**



- |   |  |
|---|--|
| 1. North Bound, Right Turn, Non-Collision (1)           | 7. East Bound, Changing Lanes, Sideswipe, Same Direction (1) |
| 2. North Bound, Slowing/Stopping, Rear end (1)          | 8. South Bound, Slowing/Stopping, Rear end (1)               |
| 3. North Bound, Straight, Broadside (1)                 | 9. South Bound, Left Turn, Angle, Oncoming Left Turn (1)     |
| 4. North Bound, Left Turn, Angle Oncoming Left Turn (2) | 10. South Bound, Straight, Rear end (1)                      |
| 5. North Bound, Left Turn, Rear end (1)                 | 11. West Bound, Turning Left, Sideswipe, Same Direction (1)  |
| 6. North Bound, Left Turn, Broadside (1)                | 12. West Bound, Changing Lanes, Rear end (1)                 |

### 2010 IOWA LOCATION #3- KIMBERLY RD & MAIN ST – DAVENPORT

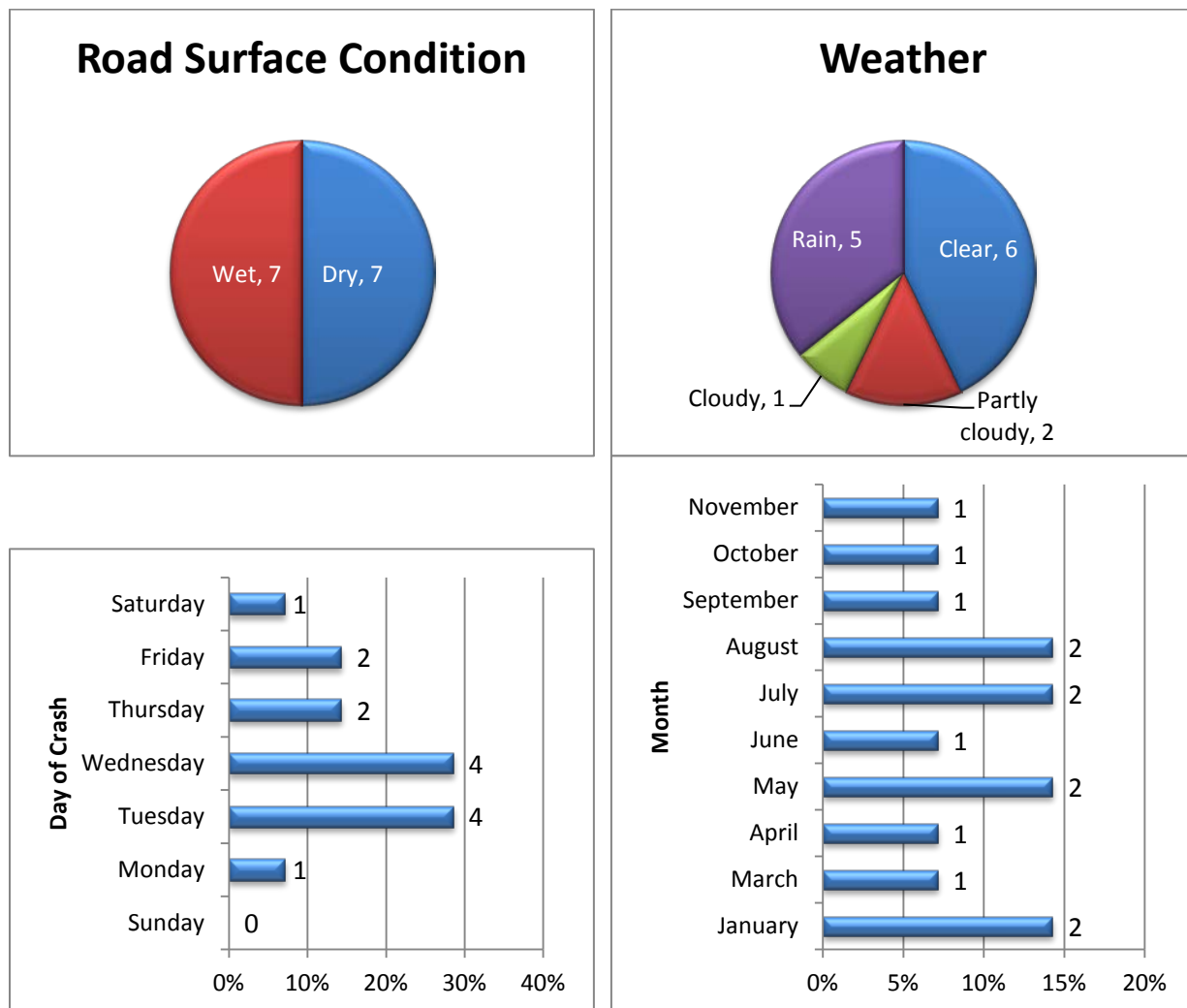
Tied for third, with a score of 21, this location experienced 14 crashes in 2010, resulting in 8 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 1.41 crashes per MEV. Angle, oncoming left turn crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather with a tie between dry and wet surface conditions. The highest number of crashes occurred on Tuesdays and Wednesdays, with no reported crashes on Sundays.

Average daily traffic at this intersection is 27,240. Kimberly Rd is an 8 lane principal arterial road at this location. The posted speed limit along Kimberly Rd is 35 mph. The westbound approach of Kimberly Rd has one left turn lane (with left on green arrow only restriction), two through lanes, and one right turn lane. The eastbound approach of Kimberly Rd has two left turn lanes (with left on green arrow only restriction on detached signal in median), three through lanes (the right most lane also serving as a right turn lane.) Main St is a 4 lane local road. The northbound approach of Main St has 2 lanes that are through or turn, the through lanes to into NorthPark Mall area (the left turn yields to oncoming traffic on green light.) The southbound approach into the intersection is the outlet from the NorthPark Mall area. There is one left turn lane, one left turn/through lane, one through lane, and one right lane (the two left turn lanes yield to oncoming traffic on green light.)

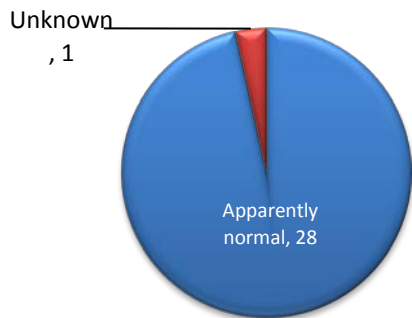
**Table 3.3**  
**Kimberly Rd & Main St (Davenport) 2007 & 2010 Comparison**

	<b>2007</b>	<b>2010</b>
<b>Rank</b>	3	3
<b>Total Crashes</b>	16	14
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	7	8
<b>Crash Rate</b>	1.56	1.41
<b>Predominant Crash Type</b>	Turning	Angle, oncoming left turn

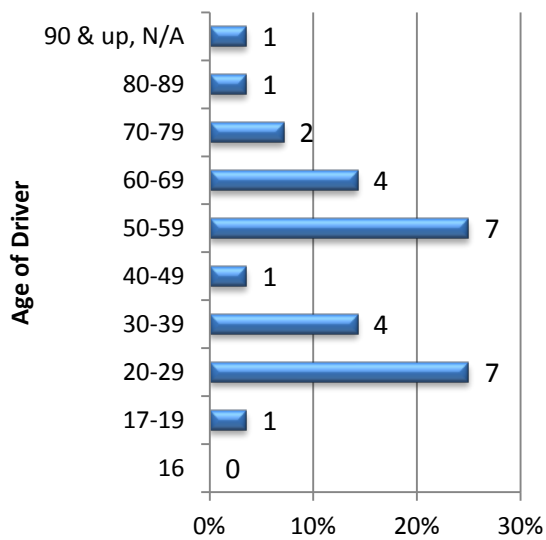
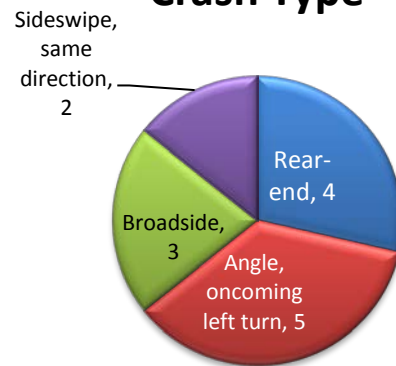
**Figure 3.3**  
**Kimberly Rd & Main St (Davenport) – Crash Frequency by Various Conditions**



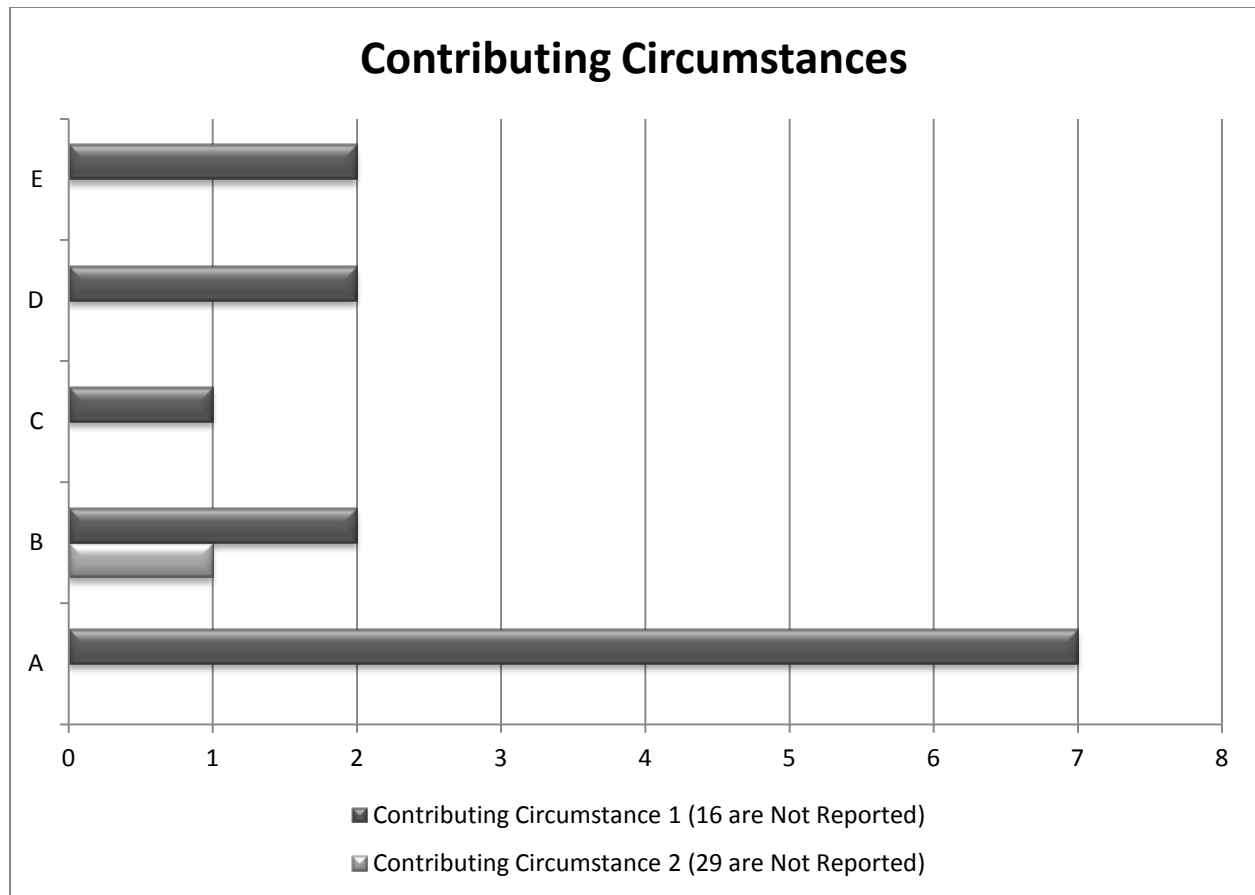
### Driver Condition



### Crash Type



Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	0
6-7:59am	0
8-9:59am	0
10-11:59am	4
Noon-1:59pm	3
2-3:59pm	1
4-5:59pm	1
6-7:59pm	4
8-9:59pm	0
10-11:59pm	0



**Chart Key**

- A: Ran traffic signal
- B: Driving too fast for conditions
- C: Crossed centerline
- D: Followed too close
- E: FTYROW: Making left turn



**Map 3.3**  
**Iowa Location #3- Kimberly Rd & Main St (Davenport)**



- |   |  |
|---|--|
| 1. East Bound, Left Turn, Sideswipe, Same Direction (1)   | 6. South Bound, Left Turn, Angle, Oncoming Left Turn (2) |
| 2. East Bound, Straight, Rear end (1)                     | 7. West Bound, Straight, Angle, Oncoming Left Turn (2)   |
| 3. East Bound, Straight, Broadside (1)                    | 8. West Bound, Straight, Broadside (2)                   |
| 4. East Bound, Straight, Angle, Oncoming Left Turn (1)    | 9. West Bound, Straight, Rear end (1)                    |
| 5. South Bound, Right Turn, Sideswipe, Same Direction (1) | 10. West Bound, Slowing/Stopping, Rear end (2)           |

**2010 IOWA LOCATION #3- KIMBERLY RD & MARQUETTE ST - DAVENPORT**

Tied for third, with a score of 21, this location experienced 12 crashes in 2010, resulting in 2 fatality related crashes with one fatality per fatality related crash and 3 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.18 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear and cloudy (tied) weather conditions and dry road surface conditions. The highest number of crashes occurred on Saturdays with no reported crashes on Mondays.

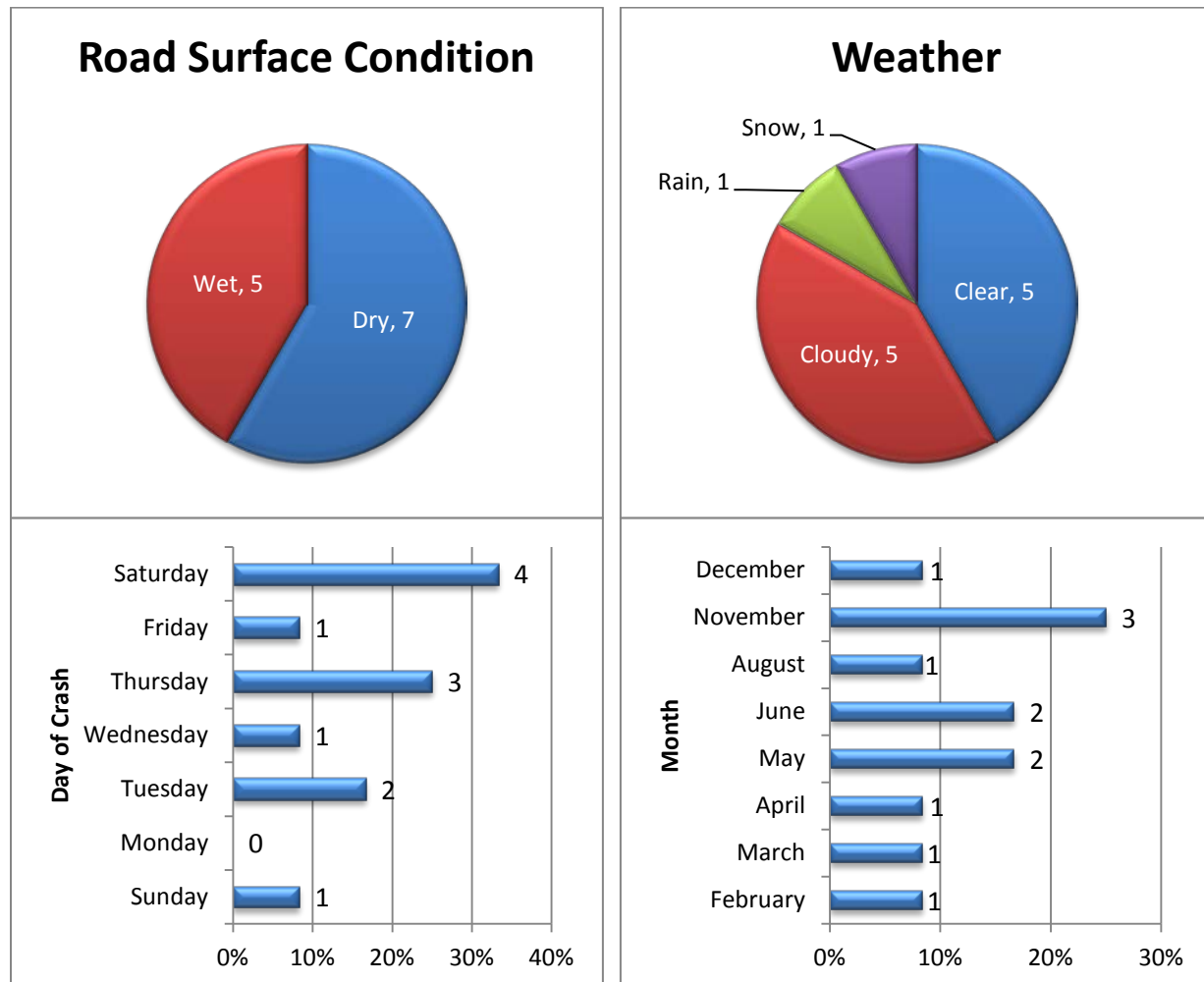
Fatality crashes related to “Ran traffic signal”, one was also related to “exceeded authorized speed”, both were clear weather and dry surfaces, one fatality had a driver “under the influence of alcohol/drugs/medications”, both happened in November. Shoulder and lap belts were used in both fatal crashes.

The average daily traffic for this intersection is 27,800. Marquette St is a 4 lane road, minor arterial to the north of Kimberly Rd and collector to the south of Kimberly Rd. The southbound and northbound approaches of Marquette Rd has one left turn lane, one through lane, and one right turn lane. Kimberly Rd is a principal arterial road with 6 lanes at the intersection. Each approach of Kimberly Rd, eastbound and westbound, has one left turn lane, two through lanes, and one right turn lane. There are turn arrow lights and left turn yield on green light on all approaches. The posted speed limit for all approaches is 35 mph.

**Table 3.4**  
**Kimberly Rd & Marquette St (Davenport) 2007 & 2010 Comparison**

	<b>2007 (<i>not in top ten</i>)</b>	<b>2010</b>
<b>Rank</b>	24	3
<b>Total Crashes</b>	8	12
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	2
<b># of Injury related crashes</b>	<i>Not Ranked</i>	9
<b>Crash Rate</b>	0.80	1.18
<b>Predominant Crash Type</b>	Not Ranked	Rear-end

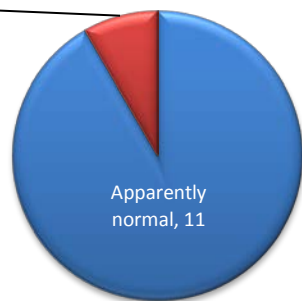
**Figure 3.4**  
**Kimberly Rd & Marquette St (Davenport) – Crash Frequency by Various Conditions**



## Chapter 3

### Driver Condition

Under the influence of alcohol/drugs/medications, 1

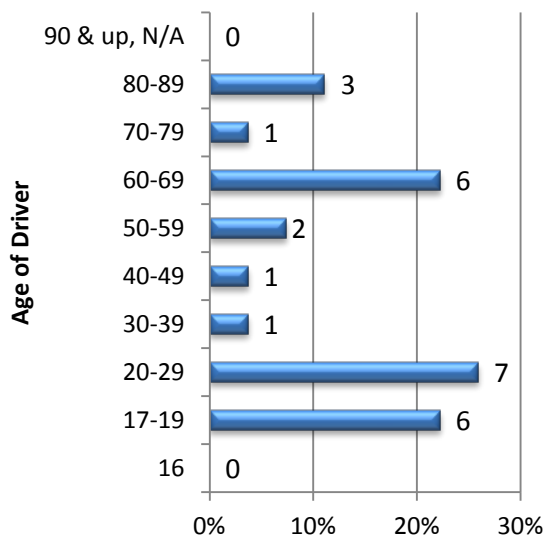
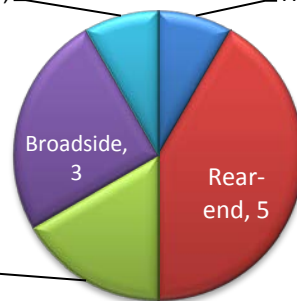


### Crash Type

Sideswipe, same direction, 1

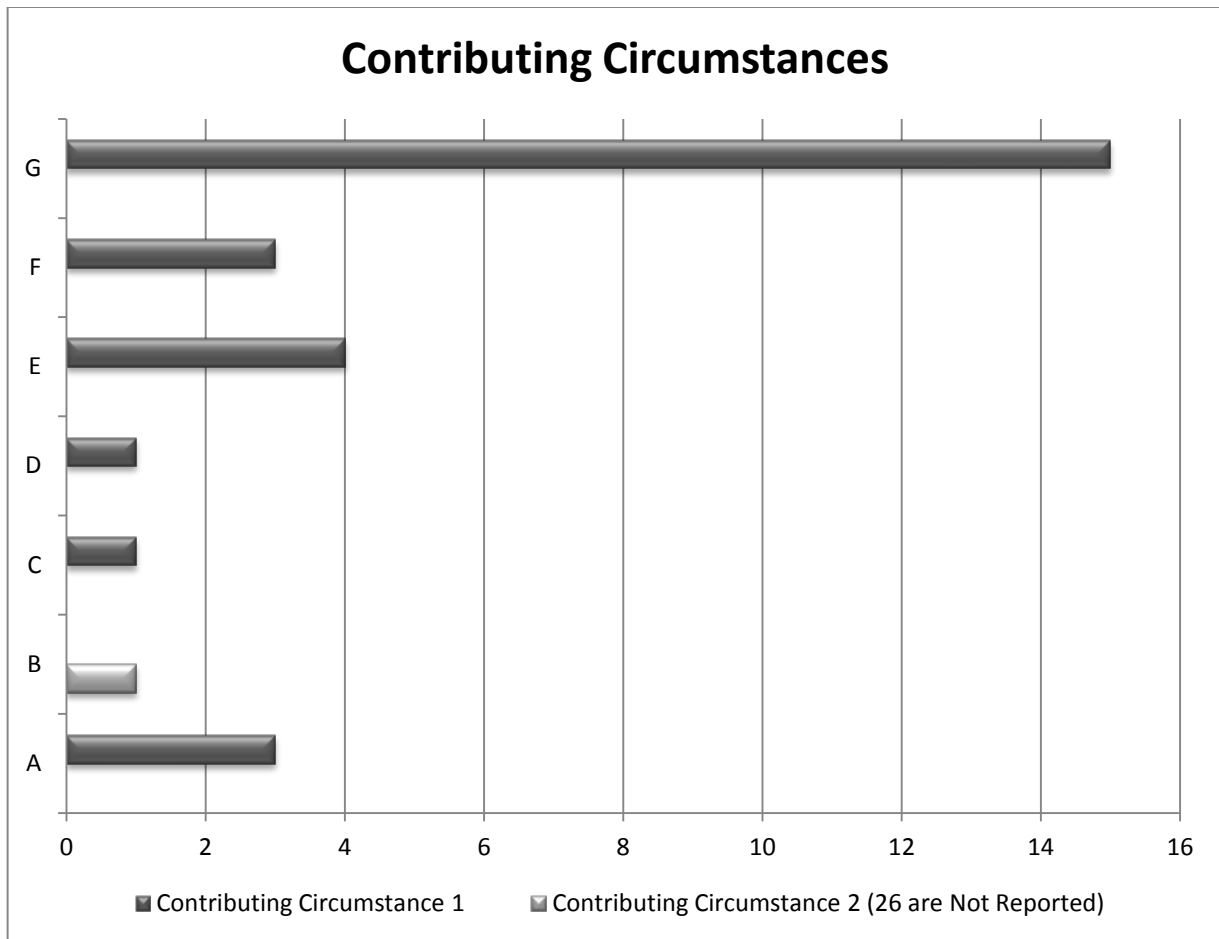
Head-on, 1

Angle, oncoming left turn, 2



### Time of Crash

Timeframe	Crashes
Midnight-1:59am	1
2-3:59am	0
4-5:59am	0
6-7:59am	0
8-9:59am	2
10-11:59am	3
Noon-1:59pm	2
2-3:59pm	2
4-5:59pm	1
6-7:59pm	0
8-9:59pm	0
10-11:59pm	1



#### Chart Key

- A: Ran traffic signal
- B: Exceeded authorized speed
- C: Driving too fast for conditions
- D: Made improper turn
- E: Followed too close
- F: FTYROW: Making left turn
- G: Other: no improper action



**Map 3.4**  
**Iowa Location #3- Kimberly Rd & Marquette St (Davenport)**



- |   |   |
|---|---|
| 1. East Bound, Straight, Broadside (2)                    | 6. South Bound, Straight, Broadside (1)                 |
| 2. East Bound, Straight, Rear end (1)                     | 8. West Bound, Slowing/Stopping, Rear end (1)           |
| 3. East Bound, Right Turn, Sideswipe, Same Directions (1) | 7. West Bound, Left Turn, Rear end (1)                  |
| 4. East Bound, Left Turn, Head on (1)                     | 9. West Bound, Left Turn, Angle, Oncoming Left Turn (2) |
| 5. East Bound, Slowing/Stopping, Rear end (2)             |   |

### 2010 IOWA LOCATION #5 – ELMORE AVE & EAST 53<sup>RD</sup> ST – DAVENPORT

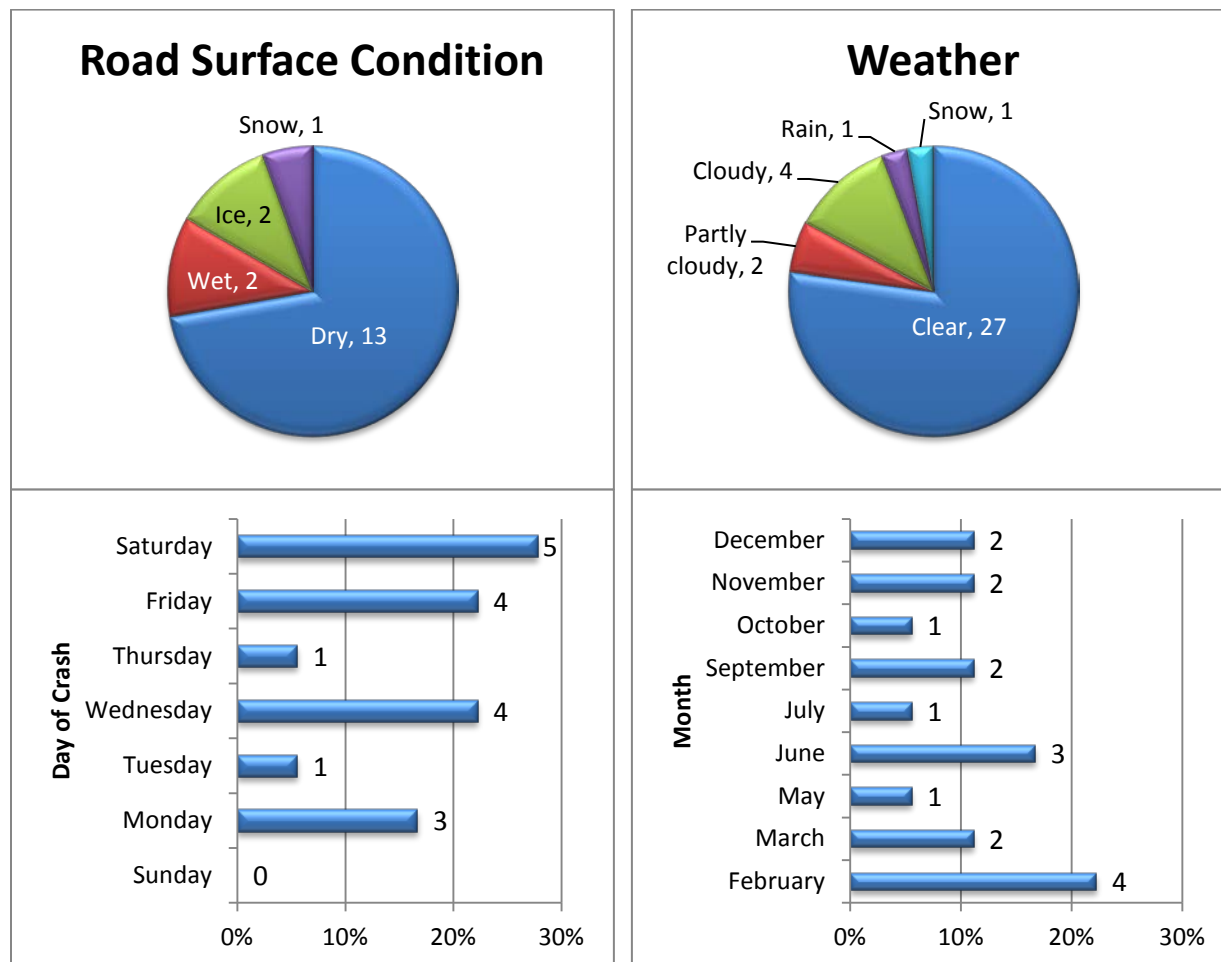
Ranked fifth, with a score of 20, this location experienced 18 crashes in 2010, resulting in 2 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.12 crashes per MEV. Crashes involving following too close were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Saturdays with no reported crashes on Sundays.

The average daily traffic is 44,050 at this intersection. Elmore Ave is local 4 lane road with a posted speed limit of 45 mph. East 53<sup>rd</sup> St is a 7 lane principal arterial roadway with a posted speed limit of 45 mph. East 53<sup>rd</sup> St has, on each eastbound and westbound approach, two left turn lanes, two through lanes, and one right turn lane.

**Table 3.5**  
**Elmore Ave & East 53<sup>rd</sup> St (Davenport) 2007 & 2010 Comparison**

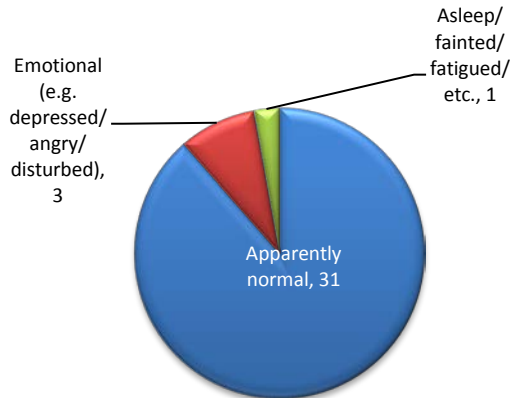
	<b>2007</b> <i>(not in top ten)</i>	<b>2010</b>
<b>Rank</b>	11	5
<b>Total Crashes</b>	14	18
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	0
<b># of Injury related crashes</b>	<i>Not Ranked</i>	2
<b>Crash Rate</b>	0.82	1.12
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Following too close

**Figure 3.5**  
**Elmore Ave & East 53<sup>rd</sup> St (Davenport) – Crash Frequency by Various Conditions**

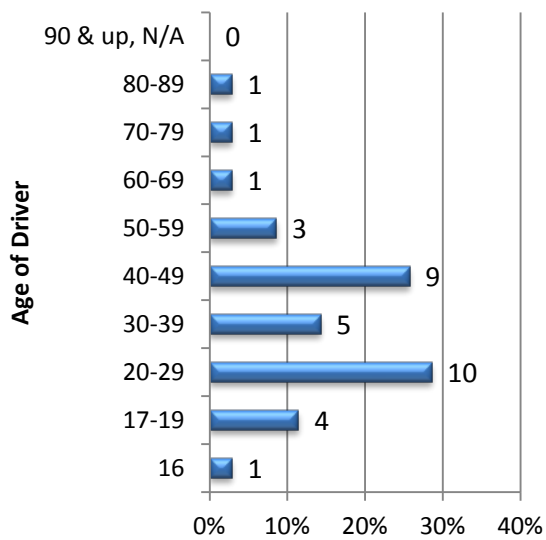
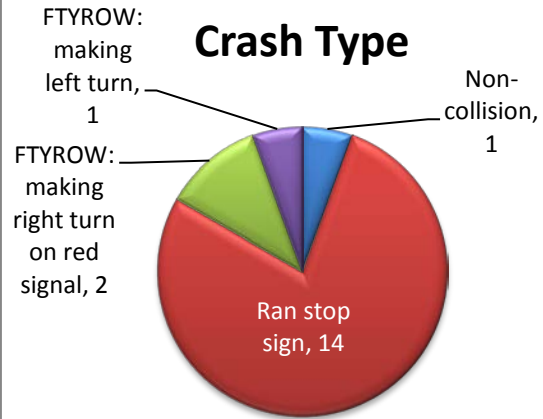




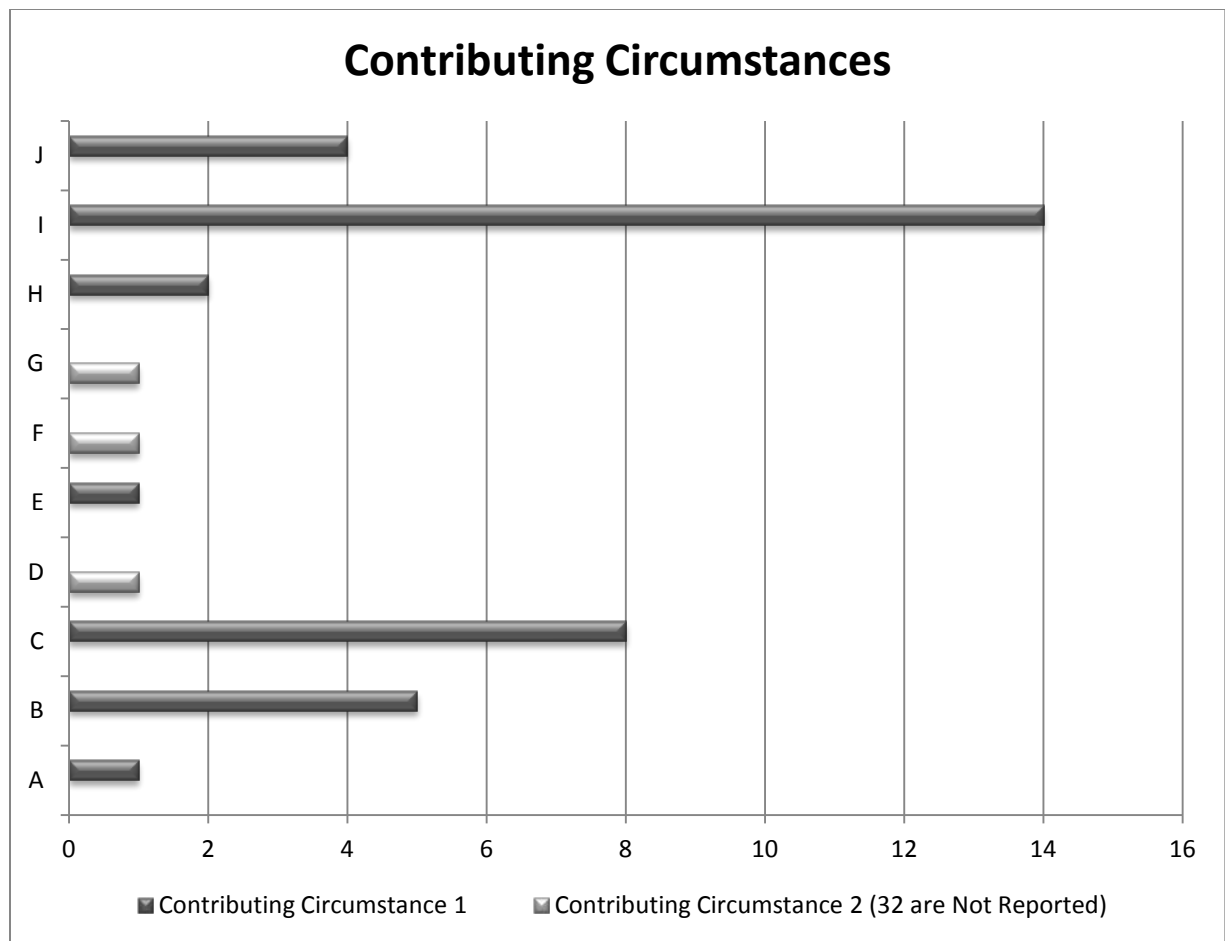
## Driver Condition



## Crash Type



Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	0
6-7:59am	0
8-9:59am	1
10-11:59am	2
Noon-1:59pm	4
2-3:59pm	2
4-5:59pm	4
6-7:59pm	3
8-9:59pm	2
10-11:59pm	0



#### Chart Key

- A: Made improper turn
- B: Lost control
- C: Followed too close
- D: Operating vehicle in an erratic/reckless/careless/negligent/aggressive manner
- E: Swerved to avoid: vehicle/object/non-motorist/or animal in roadway
- F: Inattentive/distracted by: use of phone or other device
- G: Inattentive/distracted by: Fatigued/asleep
- H: Other: Other improper action
- I: Other: No improper action
- J: Unknown

**Map 3.5**  
**Iowa Location #5 - Elmore Ave & East 53<sup>rd</sup> St (Davenport)**



- |  |   |
|--|---|
| 1. North Bound, Right Turn, Non-Collision (1)                | 9. South Bound, Right Turn, Rear end (1)                      |
| 2. North Bound, Stopped for Stop Sign/Signal, Rear end (1)   | 10. South Bound, Slowing/Stopping, Rear end (1)               |
| 3. North Bound, Straight, Rear end (2)                       | 11. West Bound, Right Turn, Rear end (2)                      |
| 5. North Bound, Entering Traffic Lan (Merging), Rear end (1) | 12. West Bound, Straight, Rear end (2)                        |
| 4. North Bound, Right Turn, Rear end (1)                     | 13. West Bound, Changing Lanes, Rear end (1)                  |
| 6. East Bound, Slowing/Stopping, Rear end (1)                | 14. West Bound, Changing Lanes, Sideswipe, Same Direction (1) |
| 7. East Bound, Straight, Rear end (1)                        | * Unknown (1)   |
| 8. South Bound, Left Turn, Sideswipe, Same Direction (1)     |   |

**2010 IOWA LOCATION #6- UTICA RIDGE RD & EAST 53<sup>RD</sup> ST – DAVENPORT**

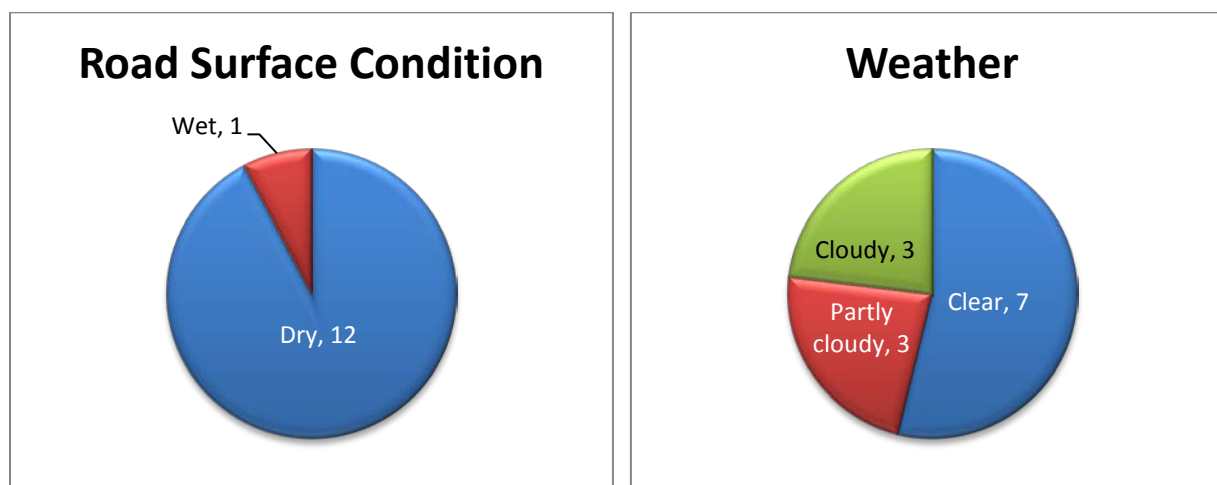
Tied for rank six, with a score of 19, this location experienced 13 crashes in 2010, resulting in 7 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.11 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Mondays, Tuesdays, and Saturdays with no reported crashes Sundays and Fridays.

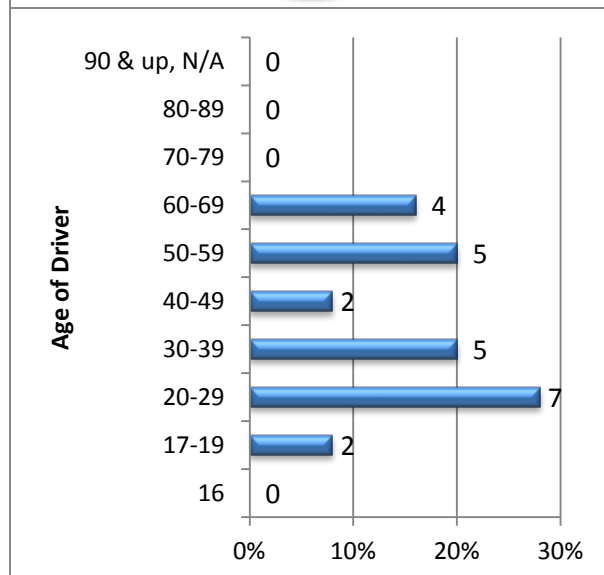
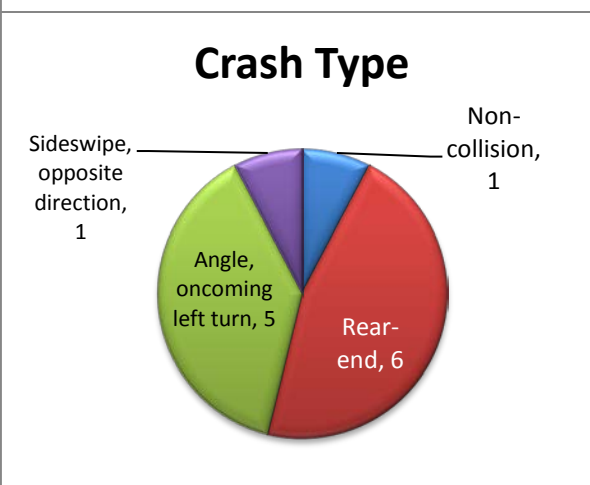
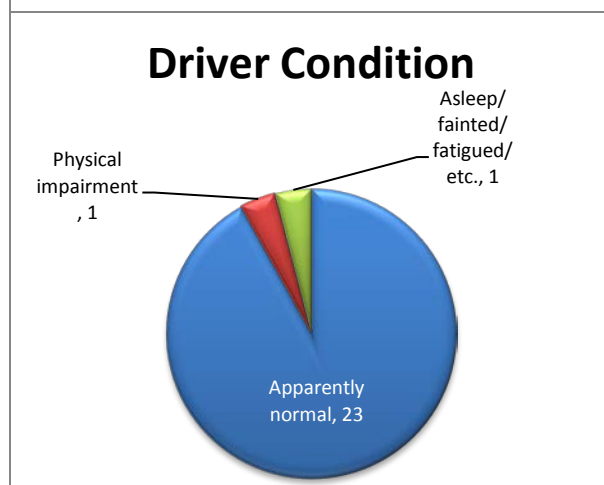
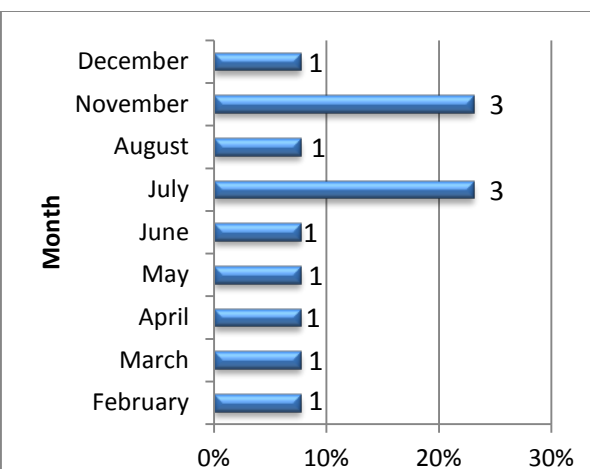
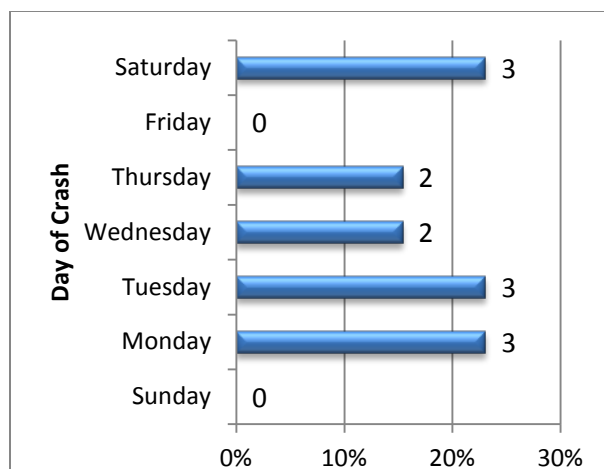
Average daily traffic count for this intersection is 32,150. Utica Ridge Rd is a minor arterial roadway with 5 lanes. East 53<sup>rd</sup> St is a 5 lane principal arterial roadway at this location. The posted speed limit along Utica Ridge Rd and East 53<sup>rd</sup> St, at this location, is 45 mph. The southbound and northbound approaches of Utica Ridge Rd have one left turn lane and one right turn lane. The eastbound approach of 53<sup>rd</sup> St has one left turn lane, two through lanes, and one right turn lane. The westbound approach of 53<sup>rd</sup> St has on left turn lane.

**Table 3.6**  
**Utica Ridge Rd & East 53<sup>rd</sup> St (Davenport) 2007 & 2010 Comparison**

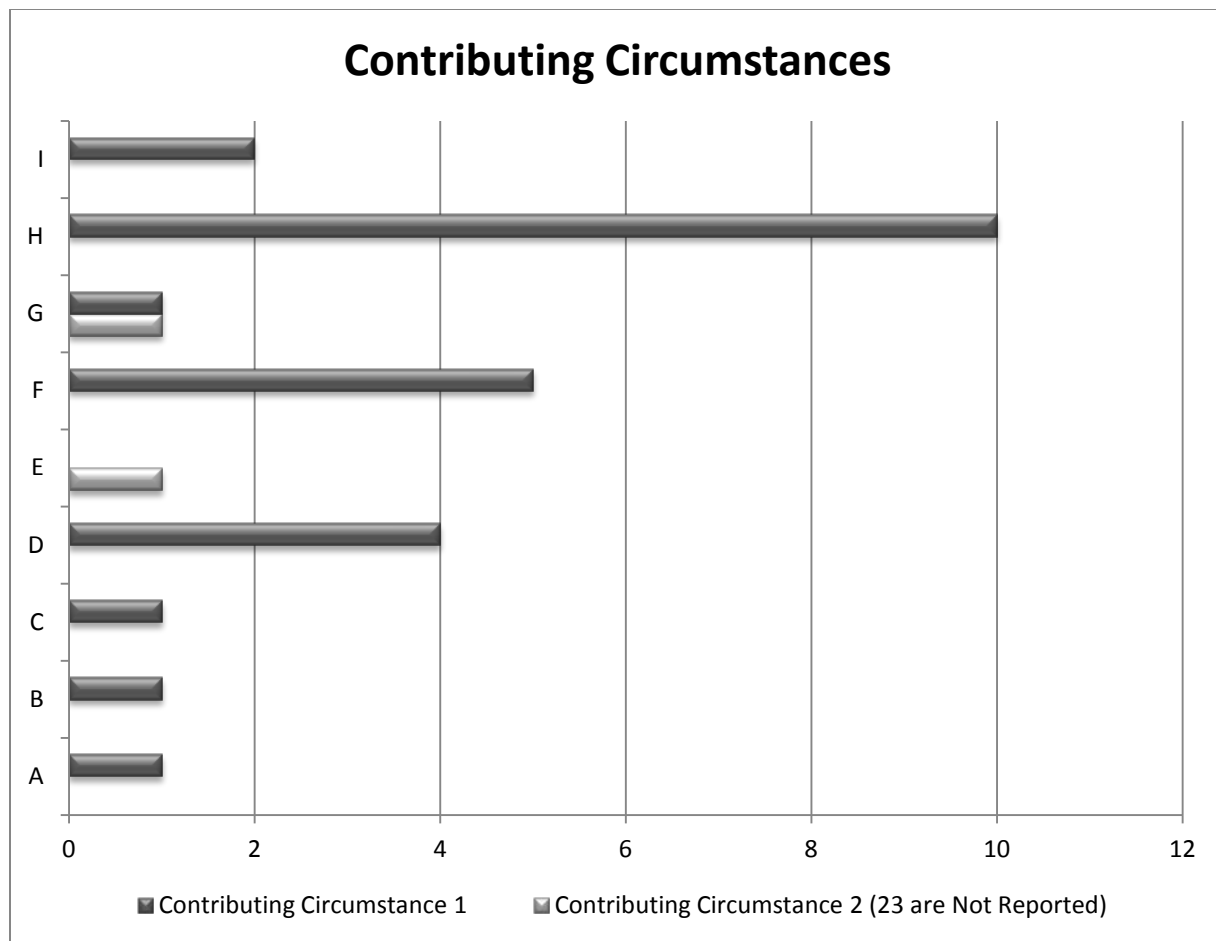
	<b>2007 (<i>not in top ten</i>)</b>	<b>2010</b>
<b>Rank</b>	19	6
<b>Total Crashes</b>	10	13
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	0
<b># of Injury related crashes</b>	<i>Not Ranked</i>	7
<b>Crash Rate</b>	0.82	1.11
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Rear-end

**Figure 3.6**  
**Utica Ridge Rd & East 53<sup>rd</sup> St (Davenport) – Crash Frequency by Various Conditions**





Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	0
6-7:59am	2
8-9:59am	0
10-11:59am	1
Noon-1:59pm	3
2-3:59pm	3
4-5:59pm	2
6-7:59pm	0
8-9:59pm	1
10-11:59pm	1



#### Chart Key

- A: Exceeded authorized speed
- B: Made improper turn
- C: Lost control
- D: Followed too close
- E: Operating vehicle in an erratic/reckless/careless/negligent/aggressive manner
- F: FTYROW: Making left turn
- G: Other: Other improper action
- H: Other: No improper action
- I: Unknown



**Map 3.6**  
**Iowa Location #6- Utica Ridge Rd & E. 53<sup>rd</sup> St (Davenport)**



- |  |   |
|--|---|
| 1. North Bound, Straight, Rear end (1)                   | 6. South Bound, Right Turn, Non-Collision (1)               |
| 2. North Bound, Left Turn, Angle, Oncoming Left Turn (1) | 7. West Bound, Left Turn, Sideswipe, Opposite Direction (1) |
| 3. East Bound, Straight, Rear end (3)                    | 8. West Bound, Left Turn, Angle, Oncoming Left Turn (1)     |
| 4. East Bound, Left Turn, Angle, Oncoming Left Turn (2)  | 9. West Bound, Straight, Angle, Oncoming Left Turn (1)      |
| 5. South Bound, Slowing/Stopping, Rear end (1)           | 10. West Bound, Straight, Rear end (1)                      |

**2010 IOWA LOCATION #6- WELCOME WAY & 53<sup>RD</sup> ST – DAVENPORT**

Tied for rank 6, with a score of 19, this location experienced 14 crashes in 2010, resulting in 6 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.23 crashes per MEV. Broadside crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Saturdays with no reported crashes on Wednesdays.

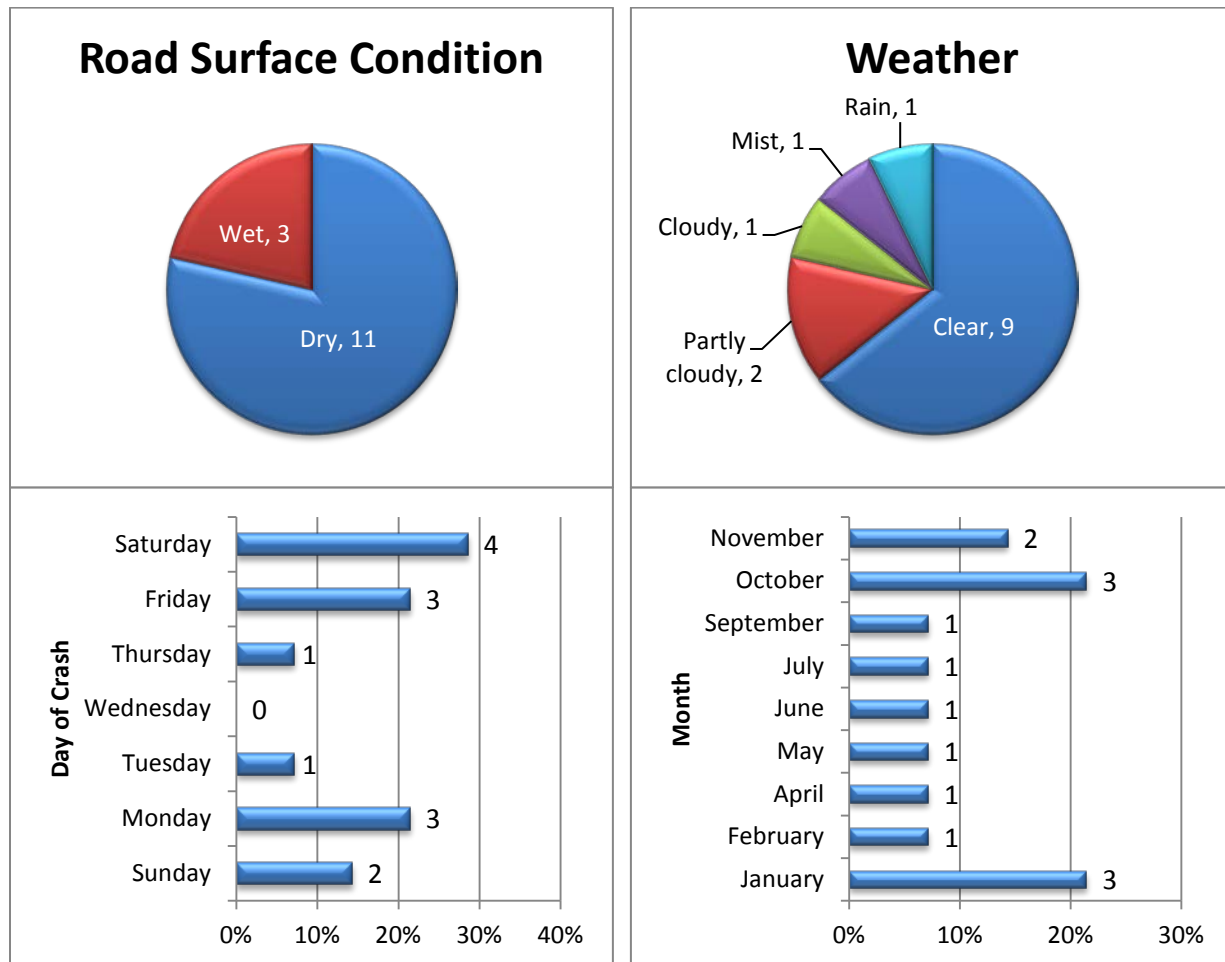
The average daily traffic count for this intersection is 31,200. Welcome Way is a 3 lane, one-way (southbound) principal arterial roadway. 53<sup>rd</sup> St is a principal arterial roadway with 5 lanes east of Welcome Way and 4 lanes west of Welcome Way. The posted speed limit is 45 mph along Welcome Way. The posted speed limit is 35 mph along 53<sup>rd</sup> St. Eastbound 53<sup>rd</sup> St has two through lanes and one right turn lane. Approximately 150 ft from the intersection there is also a left turn cut out in the median for access to a business drive. Westbound 53<sup>rd</sup> St has two left turn lanes (with a left turn traffic signal.) Approximately 200 ft east of the intersection (just east of the left turn lanes) the eastbound lane of 53<sup>rd</sup> St has a left turn cut out in the median for access to a business drive.

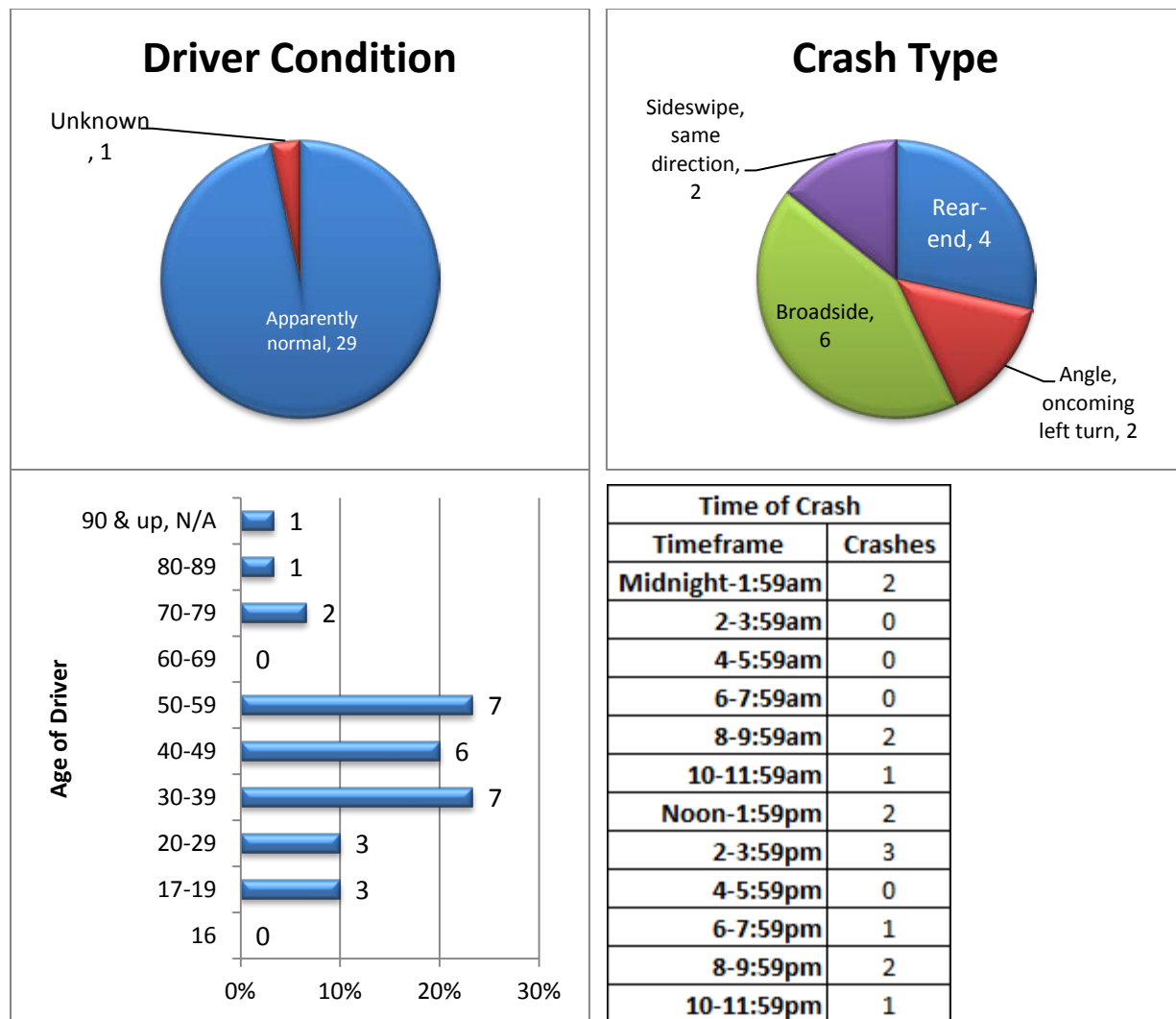
**Table 3.7**  
**Welcome Way & 53<sup>rd</sup> St (Davenport) 2007 & 2010 Comparison**

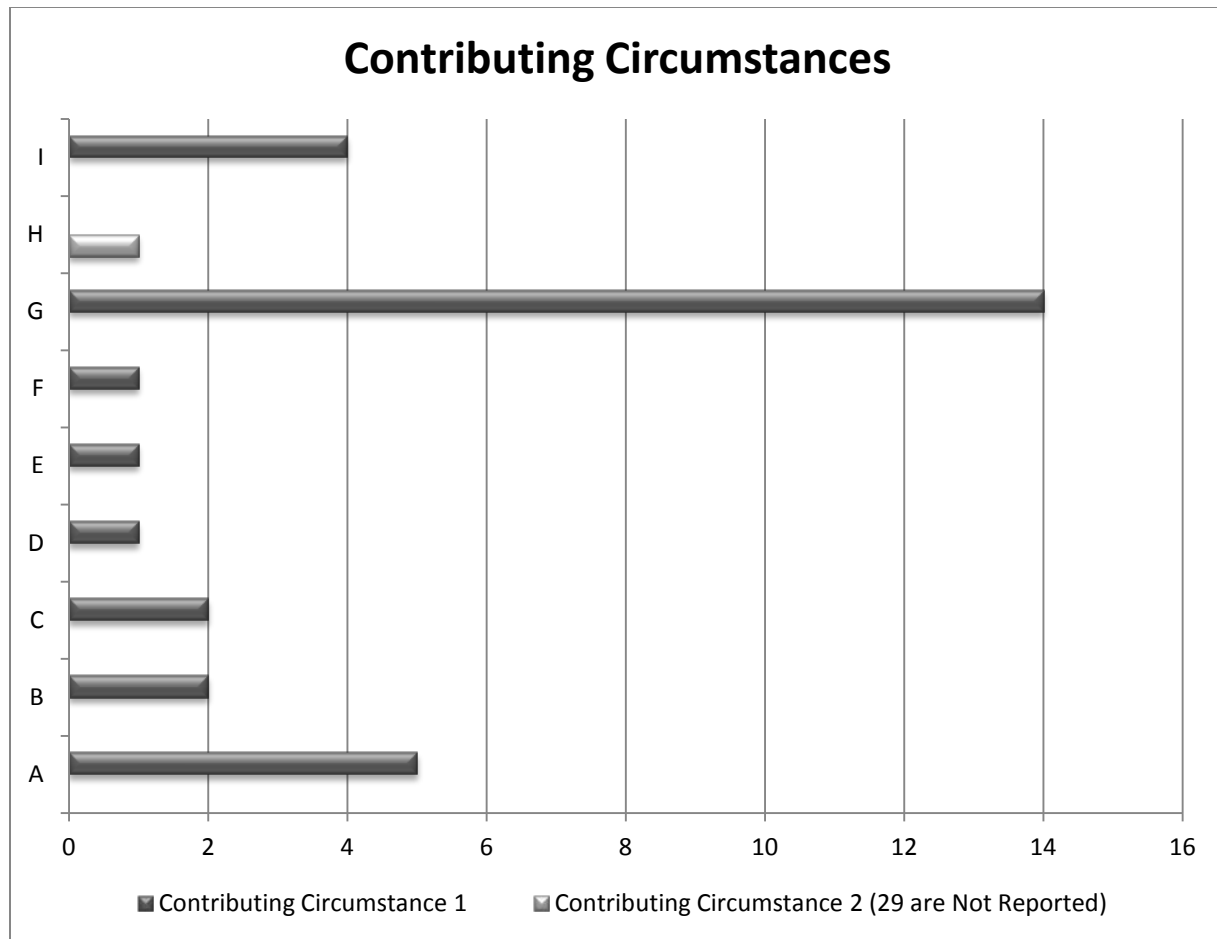
	<b>2007 (not in top ten)</b>	<b>2010</b>
<b>Rank</b>	11	6
<b>Total Crashes</b>	11	14
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	0
<b># of Injury related crashes</b>	<i>Not Ranked</i>	6
<b>Crash Rate</b>	1.00	1.23
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Broadside



**Figure 3.7**  
**Welcome Way & 53<sup>rd</sup> St (Davenport) – Crash Frequency by Various Conditions**







#### Chart Key

- A: Ran traffic signal
- B: Driving too fast for conditions
- C: Made improper turn
- D: Followed too close
- E: Swerved to avoid: vehicle/object/non-motorist/or animal in roadway
- F: Inattentive/distracted by: use of phone or other device
- G: Other: No improper action
- H: Other: Other improper action
- I: Unknown

**Map 3.7**  
**Iowa Location #6 – Welcome Way & 53<sup>rd</sup> St (Davenport)**



- |  |   |
|--|---|
| 2. East Bound, Slowing/Stopping, Rear end (1)          | 8. South Bound, Changing Lanes, Sideswipe, Same Direction (1) |
| 1. East Bound, Straight, Broadside (2)                 | 9. South Bound, Unknown, Broadside (1)                        |
| 3. East Bound, Straight, Angle, Oncoming Left Turn (1) | 5. South Bound, Left Turn, Sideswipe, Same Direction (1)      |
| 6. South Bound, Right Turn, Broadside (1)              | 10. South Bound, Left Turn, Angle, Oncoming Left Turn (1)     |
| 7. South Bound, Straight, Rear end (2)                 | 11. West Bound, Straight, Broadside (2)                       |
| 4. South Bound, Slowing/Stopping, Rear end (1)         |   |

**2010 IOWA LOCATION #8 – HARRISON ST & WEST 3<sup>RD</sup> ST – DAVENPORT**

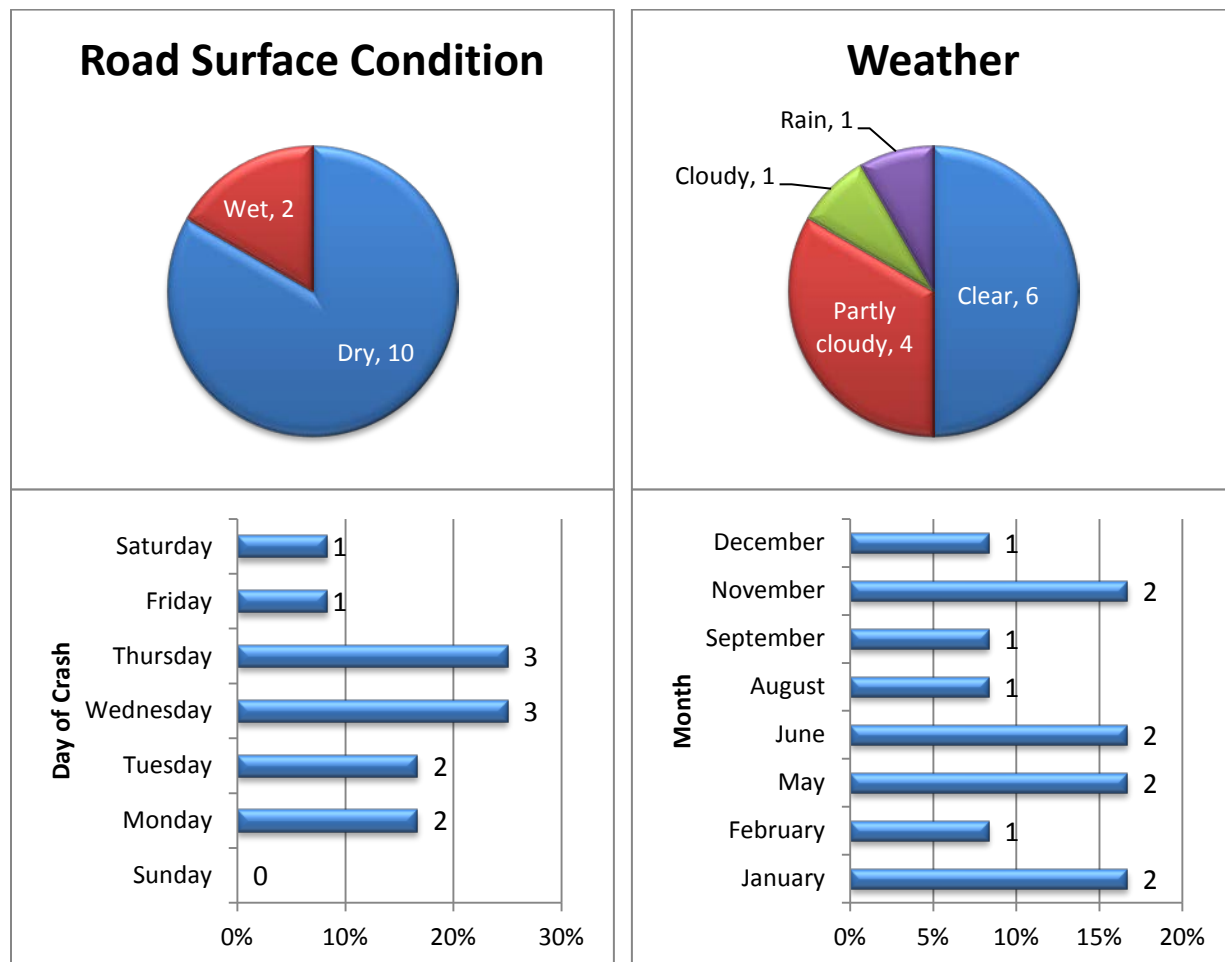
Tied for rank eight, with a score of 18, this location experienced 12 crashes in 2010, resulting in 1 injury related crash. Taking into account traffic volume, the crash rate for this intersection was above average at 1.86 crashes per MEV. Side-swipes from the same direction were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Wednesdays and Thursdays with no reported crashes on Sundays.

The average daily traffic for this intersection is 17,700. Harrison St is a one-way (southbound), 4 lane, principal arterial road. West 3<sup>rd</sup> St is a one-way (eastbound), 3 lane, minor arterial road. The posted speed limit is 25 mph along Harrison St. The posted speed limit is 20 mph along 3<sup>rd</sup> St at this location. Harrison St has one left turn lane and one left turn/through lane.

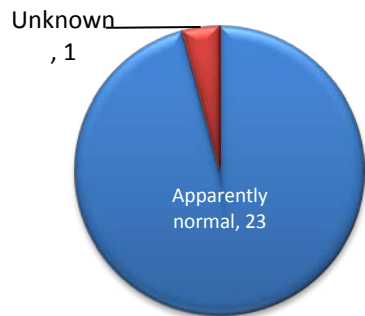
**Table 3.8**  
**Harrison St & West 3<sup>rd</sup> St (Davenport) 2007 & 2010 Comparison**

	<b>2007</b> <i>(not in ranking)</i>	<b>2010</b>
<b>Rank</b>	<i>Not Ranked</i>	8
<b>Total Crashes</b>	<i>Not Ranked</i>	12
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	0
<b># of Injury related crashes</b>	<i>Not Ranked</i>	1
<b>Crash Rate</b>	<i>Not Ranked</i>	1.86
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Side Swipe Same Direction

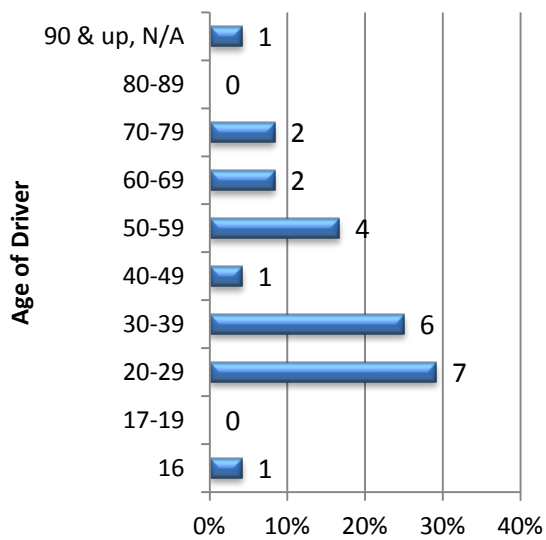
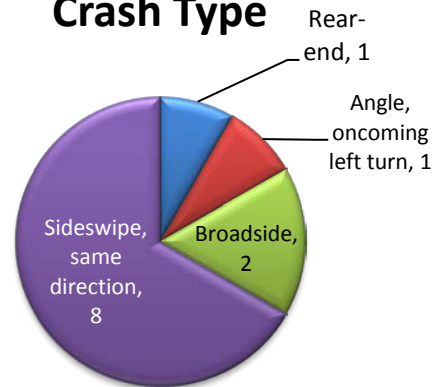
**Figure 3.8**  
**Harrison St & West 3<sup>rd</sup> St (Davenport) – Crash Frequency by Various Conditions**



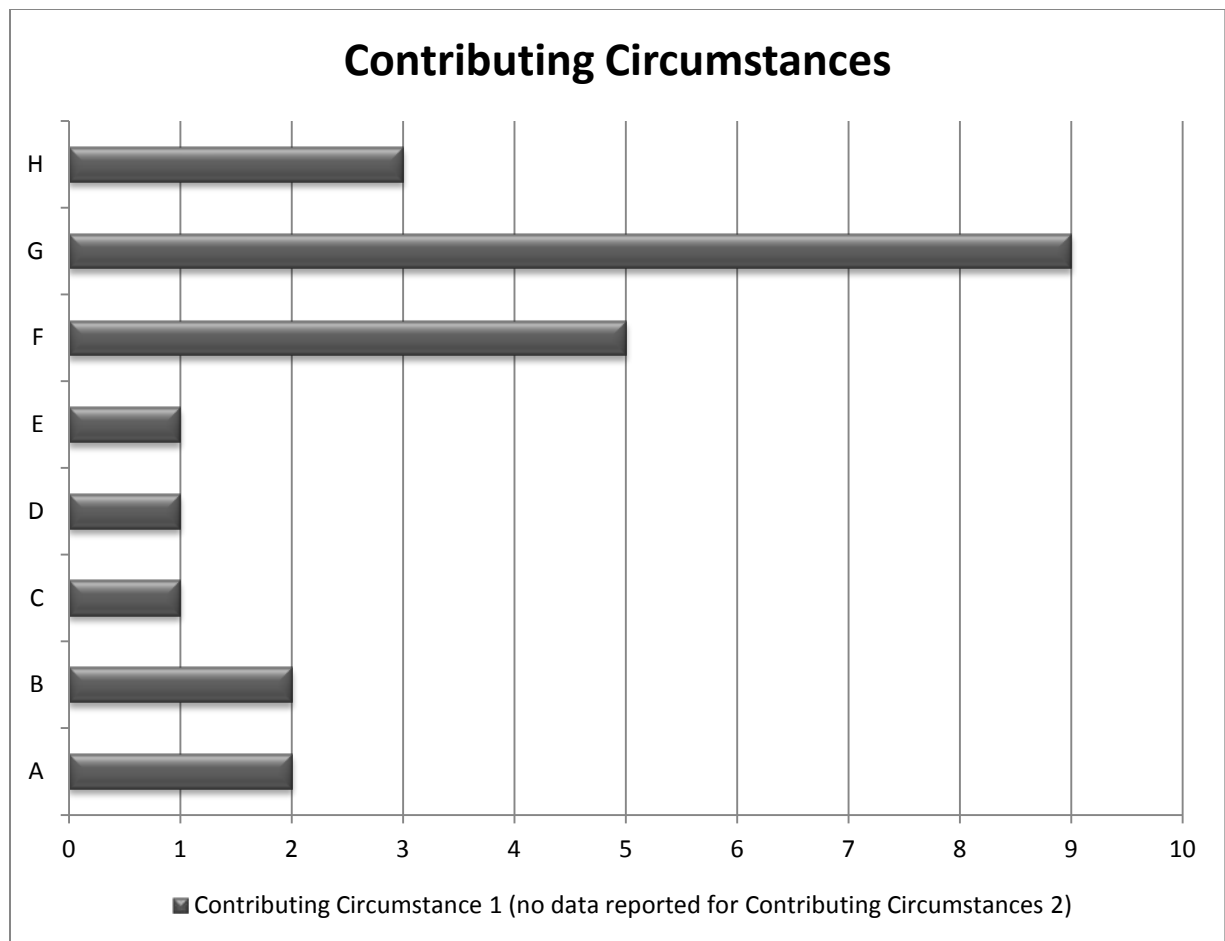
### Driver Condition



### Crash Type



Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	0
6-7:59am	1
8-9:59am	2
10-11:59am	0
Noon-1:59pm	4
2-3:59pm	1
4-5:59pm	3
6-7:59pm	0
8-9:59pm	0
10-11:59pm	1



#### Chart Key

- A: Ran traffic signal
- B: Made improper turn
- C: Followed too close
- D: Operating vehicle in an erratic/reckless/careless, negligent/aggressive manner
- E: FTYROW: Other
- F: Other: Other improper action
- G: Other: No improper action
- H: Unknown



**Map 3.8**  
**Iowa Location #8 – Harrison St & 3<sup>rd</sup> St (Davenport)**



- 2. East Bound, Straight, Sideswipe, Same Direction (2)
- 6. South Bound, Straight, Broadside (1)
- 4. East Bound, Straight, Rear end (1)
- 1. East Bound, Straight, Broadside (1)

- 3. East Bound, Left Turn, Sideswipe, Same Direction (1)
- 5. South Bound, Straight, Angle, Oncoming Left Turn (1)
- 8. South Bound, Straight, Sideswipe, Same Direction (3)
- 7. South Bound, Left Turn, Sideswipe, Same Direction (2)

**2010 IOWA LOCATION #8 – KIMBERLY RD & EASTERN AVE – DAVENPORT**

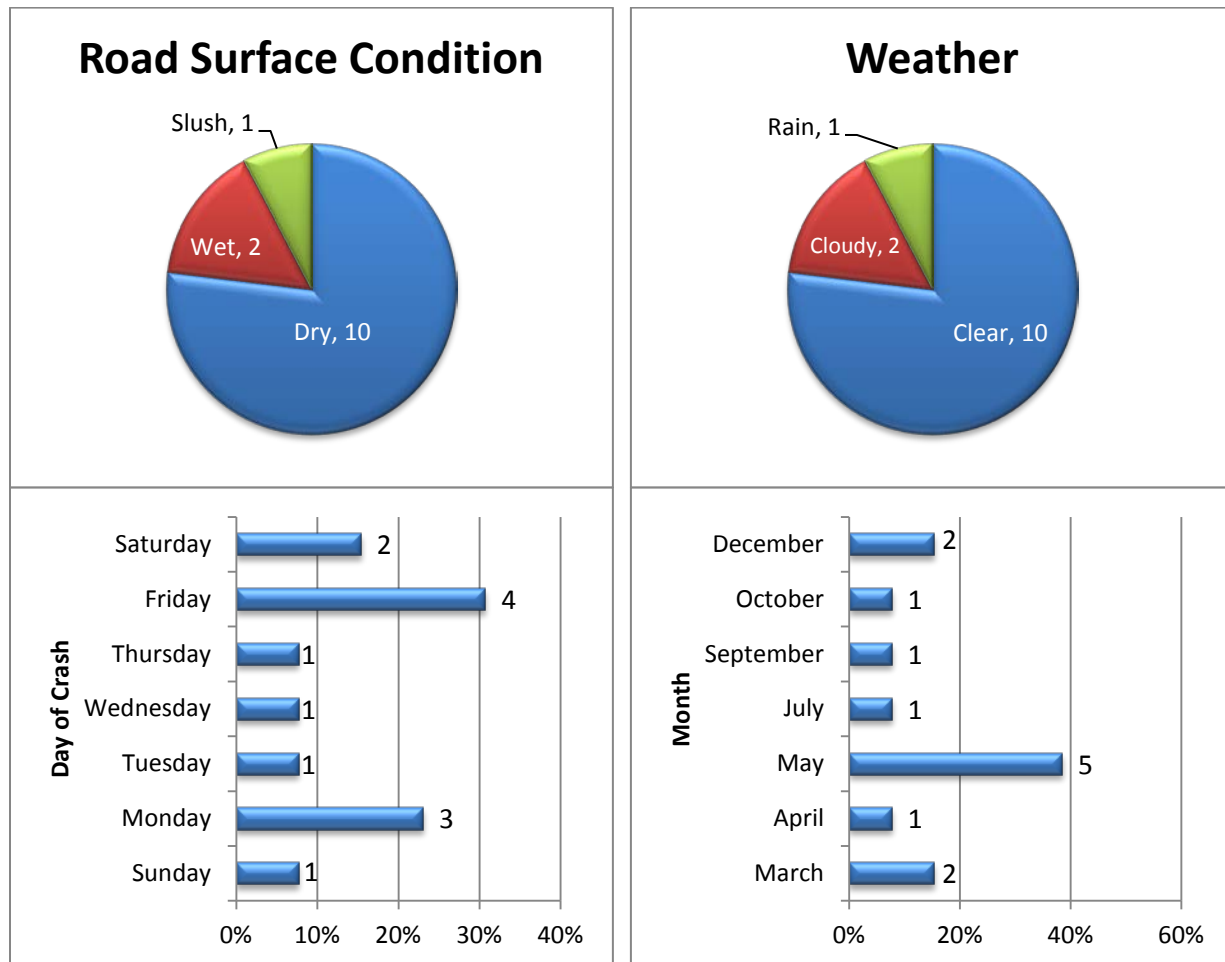
Tied for eighth, with a score of 18, this location experienced 13 crashes in 2010, resulting in 6 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 0.85 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Fridays with reported crashes on all days of the week.

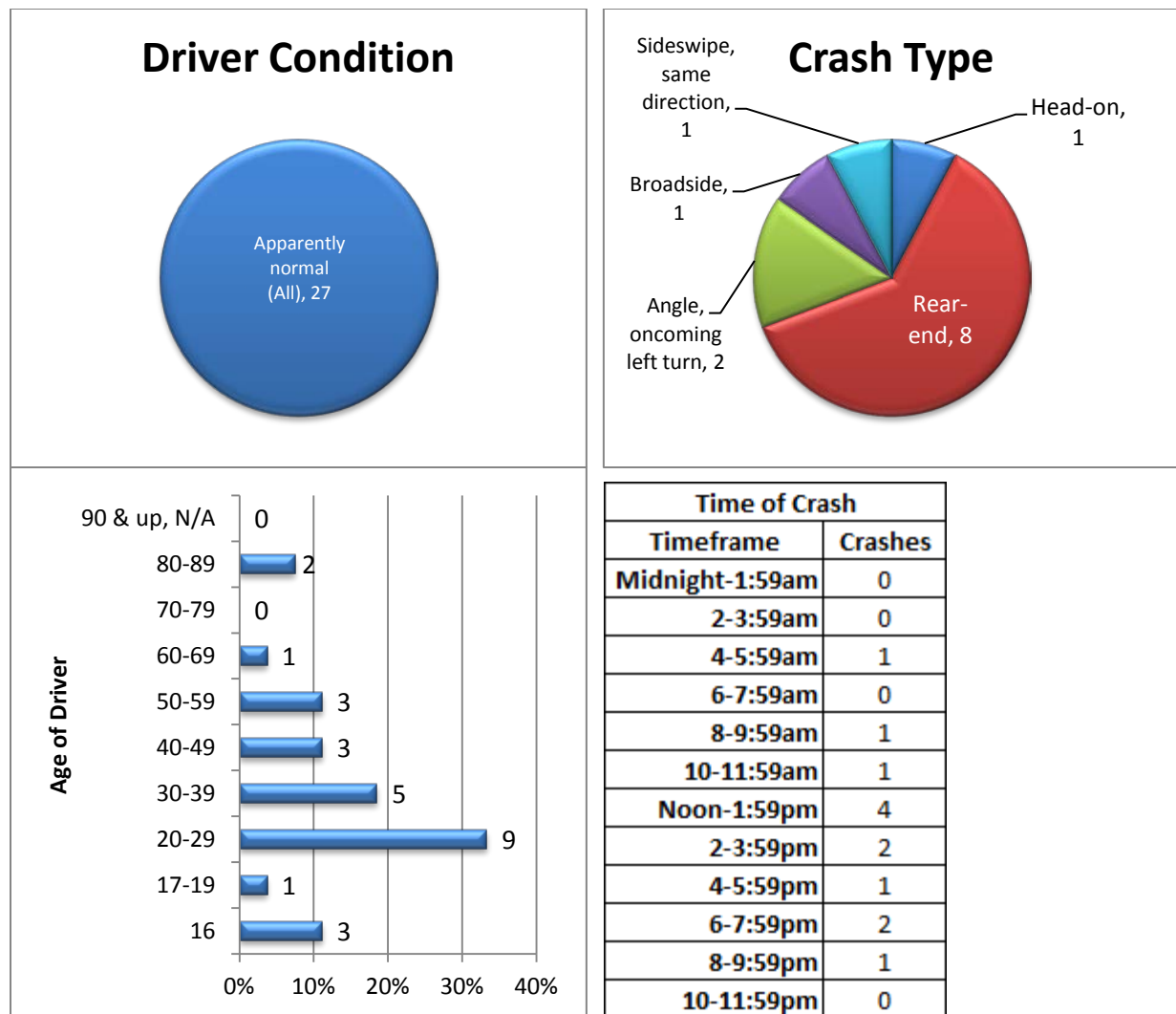
The average daily traffic at this intersection is 41,900. Eastern Ave is a 5 lane minor arterial road. Kimberly Rd is a 6 lane principal arterial road. The posted speed limit along Eastern Ave is 35 mph. The posted speed limit along Kimberly Rd is 45 mph. There is a right lane and a separated left turn lane per approach along Kimberly Rd. There is a left turn lane per approach along Eastern Ave. Eastern Ave has a left turn arrow with a yield on green for both approaches.

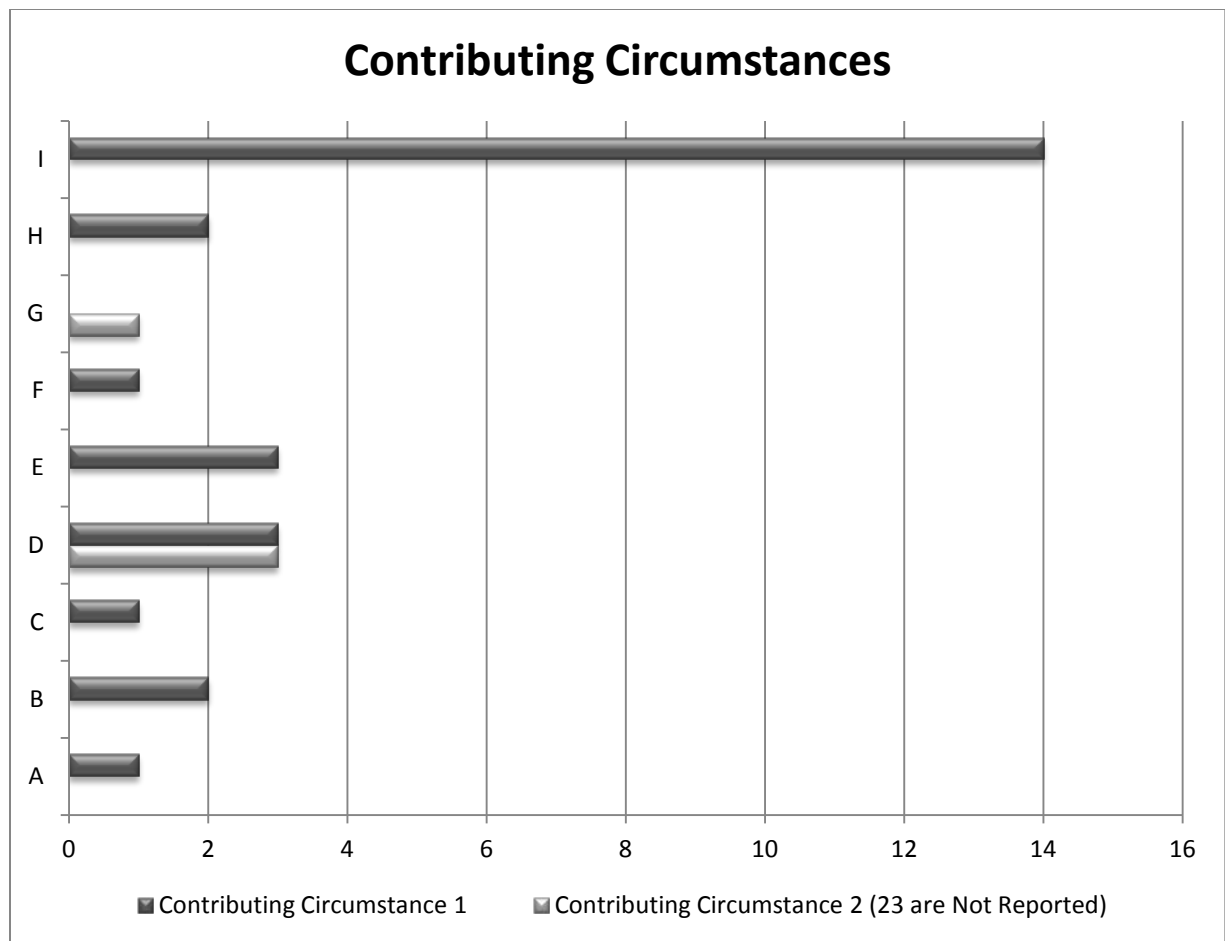
**Table 3.9**  
**Kimberly Rd & Eastern Ave (Davenport) 2007 & 2010 Comparison**

	<b>2007</b>	<b>2010</b>
<b>Rank</b>	7	8
<b>Total Crashes</b>	15	13
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	7	6
<b>Crash Rate</b>	0.91	0.85
<b>Predominant Crash Type</b>	Rear-end	Rear-end

**Figure 3.9**  
**Kimberly Rd & Eastern Ave (Davenport) – Crash Frequency by Various Conditions**







#### Chart Key

- A: Ran traffic signal
- B: Driving too fast for conditions
- C: Lost control
- D: Followed too close
- E: FTYROW: Making left turn
- F: Inattentive/distracted by: Vision obstructed
- G: Inattentive/distracted by: passenger
- H: Other: Other improper action
- I: Other: No improper action

**Map 3.9**  
**Iowa Location #8- Kimberly Rd & Eastern Ave (Davenport)**



- |  |   |
|--|---|
| 1. North Bound, Left Turn, Angle, Oncoming Left Turn (2) | 6. South Bound, Backing, Rear end (1)                         |
| 2. Eastbound, Straight, Rear end (4)                     | 7. South Bound, Changing Lanes, Sideswipe, Same Direction (1) |
| 3. East Bound, Changing Lanes, Rear end (1)              | 8. West Bound, Slowing/Stopping, Rear end (1)                 |
| 4. South Bound, Left Turn, Head on (1)                   | 9. West Bound, Changing Lanes, Rear end (1)                   |
| 5. South Bound, Straight, Broadside (1)                  |   |



### **2010 IOWA LOCATION #8 – KIMBERLY RD/SPRUCE HILLS DR & ELMORE AVE – DAVENPORT/BETTENDORF**

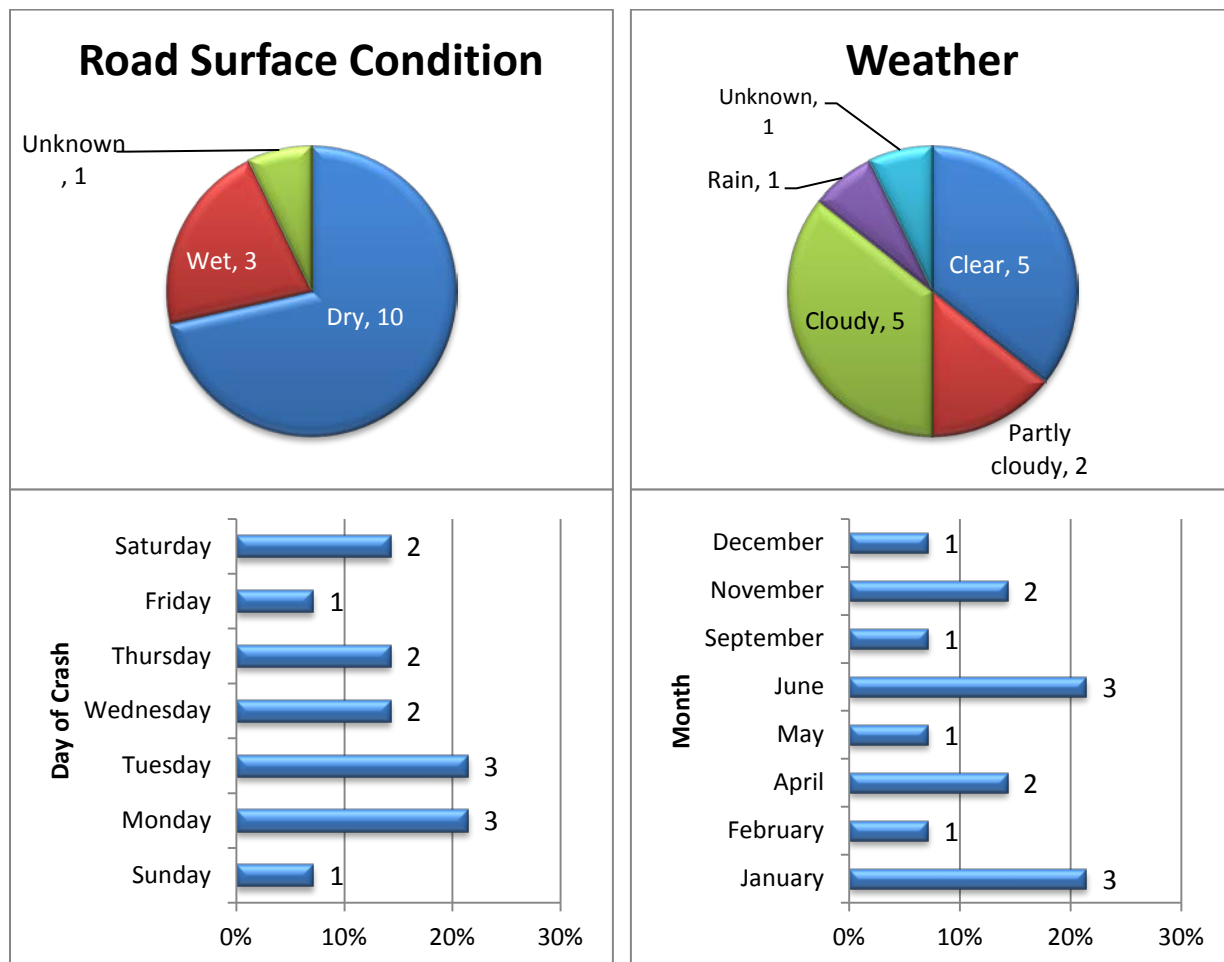
Ranked eighth, with a score of 18, this location experienced 14 crashes in 2010, resulting in 6 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 0.86 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear and cloudy weather conditions and dry road surface conditions. The highest number of crashes occurred on Mondays and Tuesdays with crashes reported for all days of the week.

The average daily traffic at this intersection is 44,850. Elmore Avenue is the north road of this intersection it is a four-lane arterial highway. The lane entering the intersection has one through lane and one right turn lane. The speed limit on Elmore Avenue is 35 mph. Kimberly Rd is the west and south road of this intersection. Kimberly Rd is a 6 lane minor arterial road south of the intersection and a 7 lane principal arterial road west of the intersection. There is one left turn lane and one right turn lane on the east bound lane. The north bound lane has one left turn lane and one right turn lane. The posted speed limit along the west branch of Kimberly Rd is 45 mph and 35 mph along the south branch. Spruce Hills Dr is the east road of the intersection. It has one left turn lane and one right turn lane. The posted speed limit along this 7 lane principal arterial road is 45 mph.

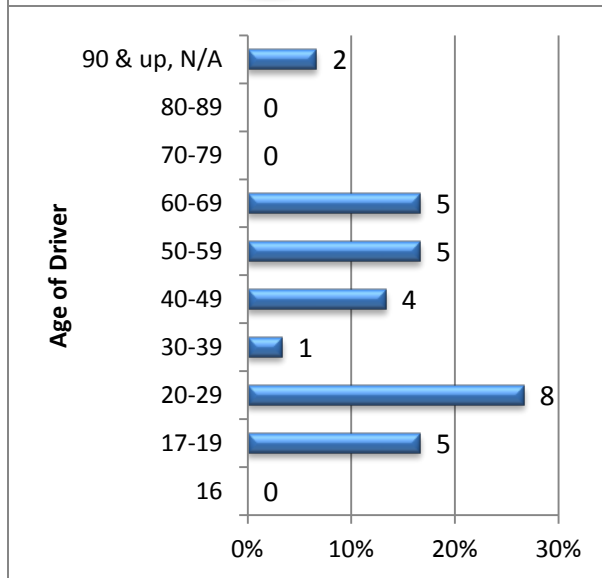
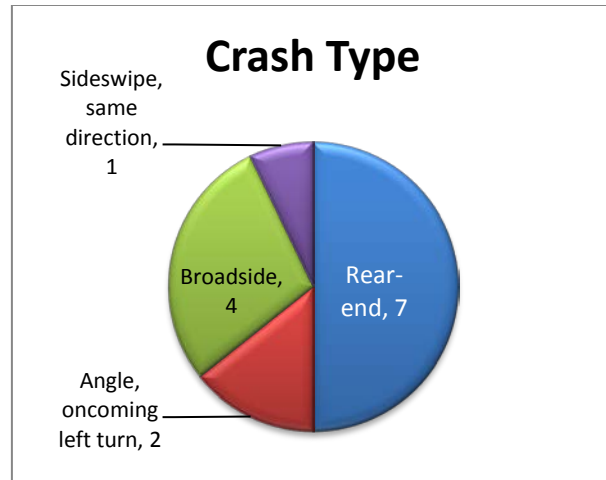
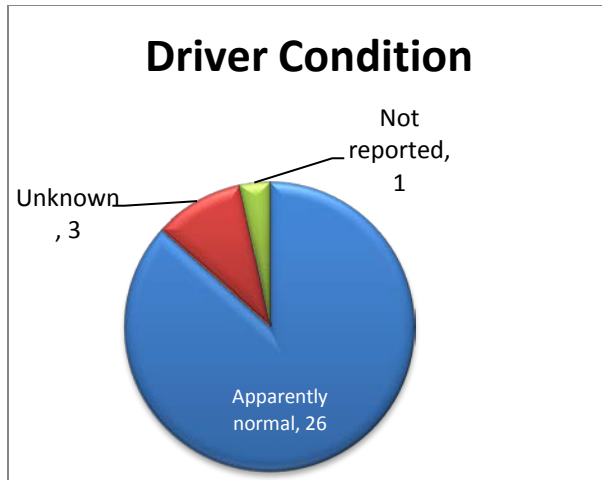
**Table 3.10**  
**Kimberly Rd & Elmore Ave (Dav/Bett) 2007 & 2010 Comparison**

	<b>2007</b>	<b>2010</b>
<b>Rank</b>	10	8
<b>Total Crashes</b>	16	14
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	6	6
<b>Crash Rate</b>	0.86	0.86
<b>Predominant Crash Type</b>	Rear-end	Rear-end

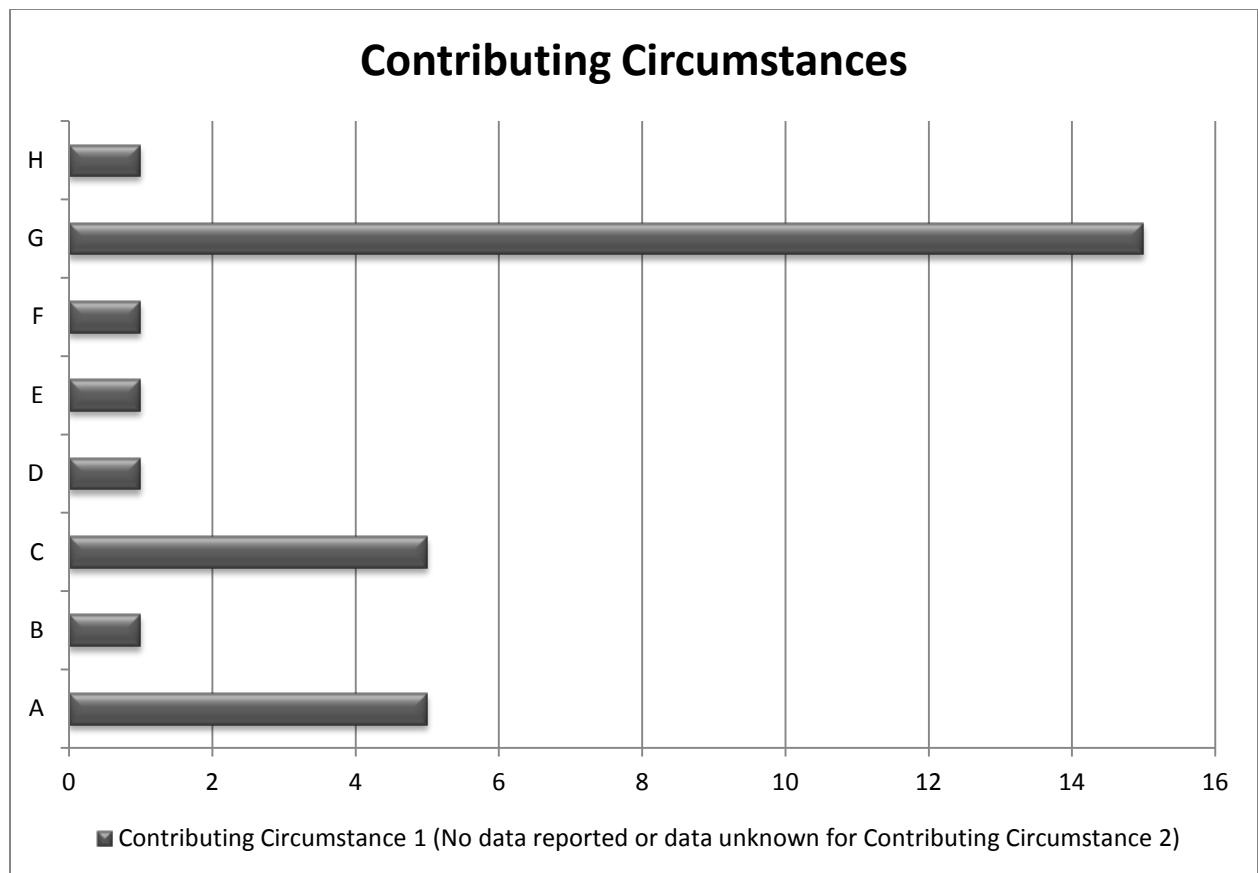
**Figure 3.10**  
**Kimberly Rd & Elmore Ave (Dav/Bett) – Crash Frequency by Various Conditions**







Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	0
6-7:59am	0
8-9:59am	0
10-11:59am	3
Noon-1:59pm	0
2-3:59pm	5
4-5:59pm	3
6-7:59pm	2
8-9:59pm	0
10-11:59pm	1



#### Chart Key

- A: Ran traffic signal
- B: Lost control
- C: Followed too close
- D: FTYROW: making left turn
- E: FTYROW: making right turn on red signal
- F: Other: other improper action
- G: Other: no improper action
- H: Unknown

**Figure 3.10**  
**Iowa Location #8- Kimberly Rd. & Elmore Ave (Dav/Bett)**



- |   |  |
|---|--|
| 1. East Bound, Straight, Rear end (1)                   | 8. South Bound, Straight, Broadside (1)                  |
| 2. East Bound, Straight, Broadside (1)                  | 9. South Bound, Straight, Rear end (1)                   |
| 3. East Bound, Right Turn, Rear end (1)                 | 10. West Bound, Left Turn, Angle, Oncoming Left Turn (1) |
| 4. East Bound, Left Turn, Angle, Oncoming Left Turn (1) | 11. West Bound, Straight, Broadside (1)                  |
| 5. South Bound, Straight, Sideswipe, Same Direction (1) | 12. West Bound, Slowing/Stopping, Rear end (2)           |
| 6. South Bound, Left Turn, Broadside (1)                | 13. West Bound, Straight, Rear end (1)                   |
| 7. South Bound, Slowing/Stopping, Rear end (1)          |  |

**2010 IOWA LOCATION #8- W. 35<sup>TH</sup> ST & MARQUETTE ST – DAVENPORT**

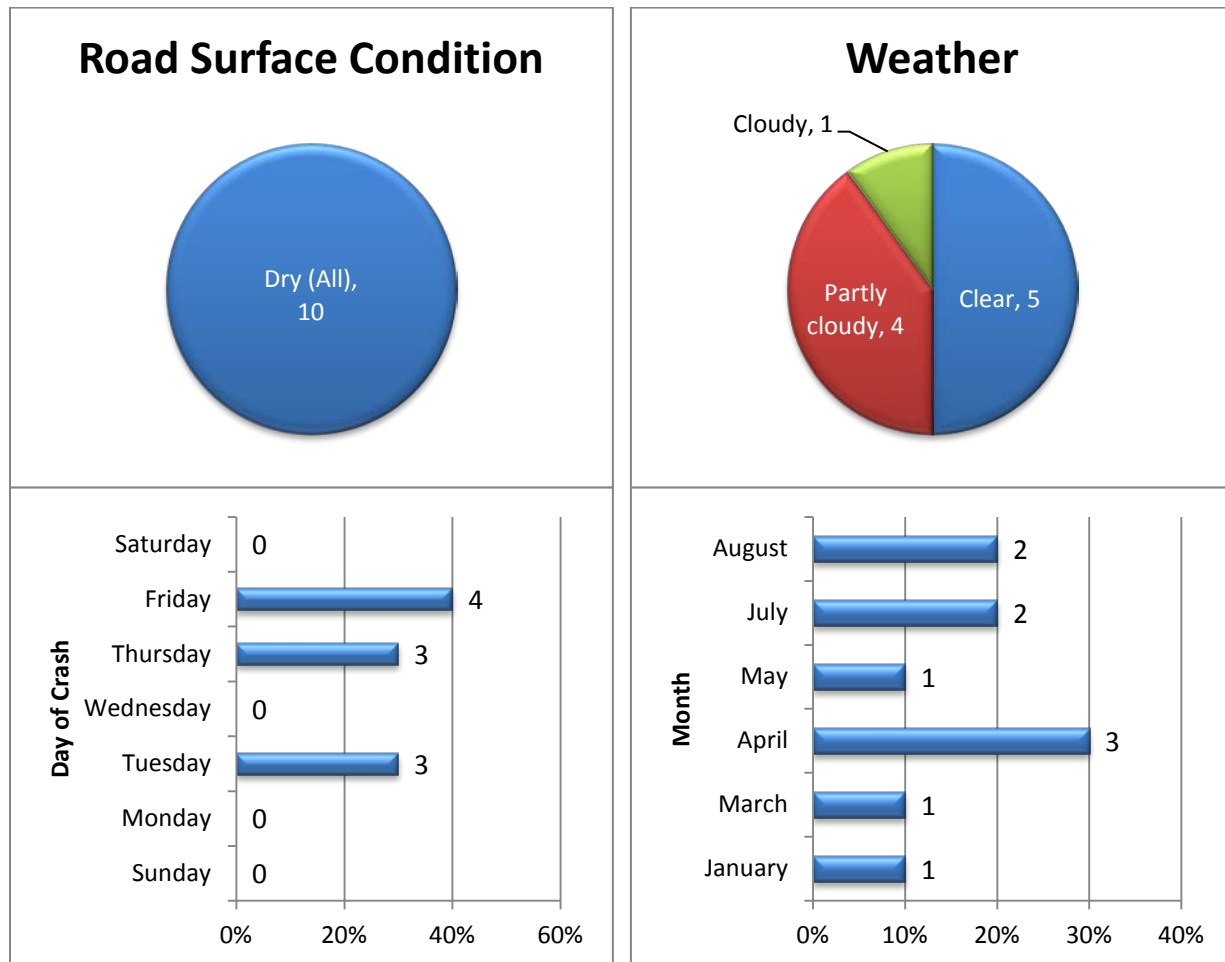
Tied for eighth, with a score of 18, this location experienced 10 crashes in 2010, resulting in 5 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 1.82 crashes per MEV. Angle, oncoming left turn crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Fridays with crashes being reported for Tuesdays and Thursdays, as well.

The average daily traffic at this intersection is 15,040. Marquette St is a 4 lane collector road with a posted speed limit of 35 mph. West 35<sup>th</sup> St is a collector roadway with 2 lanes west of Marquette St with a posted speed limit of 30 mph and 4 lanes east of Marquette St with a posted speed limit of 35 mph. The west bound lane of 35<sup>th</sup> St has one left turn lane.

**Table 3.11**  
**W. 35<sup>th</sup> St & Marquette St (Davenport) 2007 & 2010 Comparison**

	<b>2007 (<i>not in top ten</i>)</b>	<b>2010</b>
<b>Rank</b>	24	8
<b>Total Crashes</b>	7	10
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	0
<b># of Injury related crashes</b>	<i>Not Ranked</i>	5
<b>Crash Rate</b>	1.14	1.82
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Angle, oncoming left turn

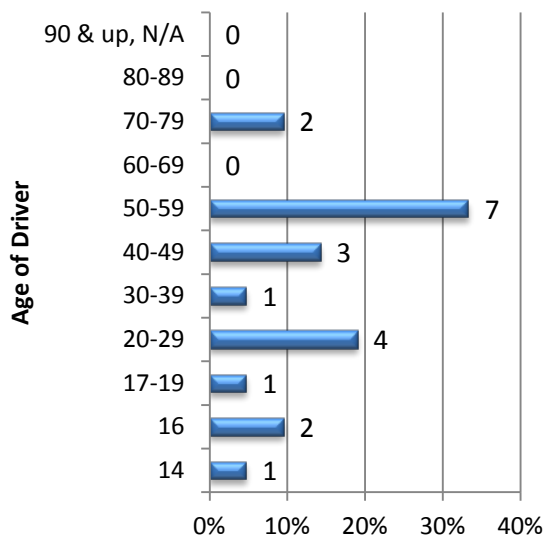
**Figure 3.11**  
**W. 35<sup>th</sup> St & Marquette St (Davenport) – Crash Frequency by Various Conditions**



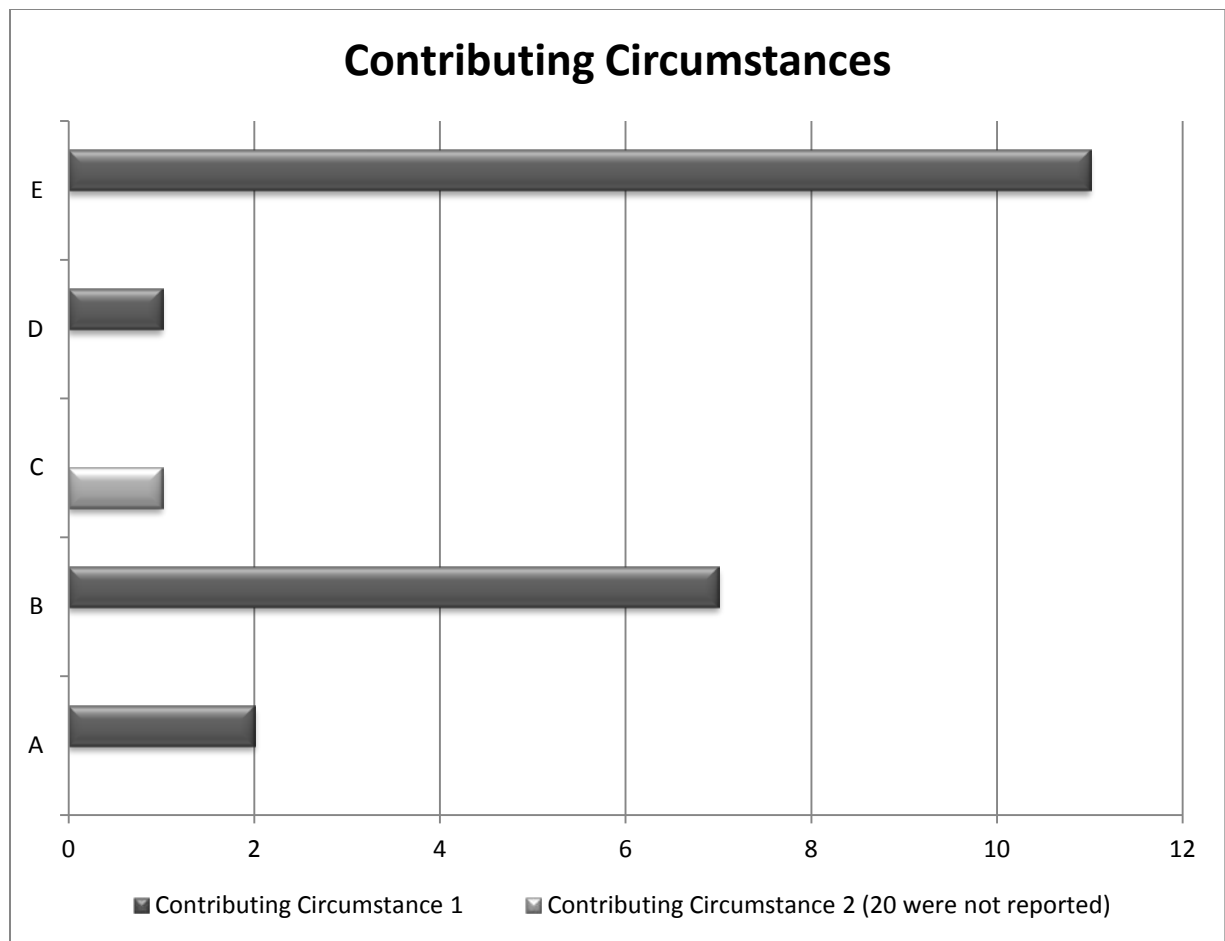
## Driver Condition



## Crash Type



Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	0
6-7:59am	0
8-9:59am	2
10-11:59am	2
Noon-1:59pm	2
2-3:59pm	1
4-5:59pm	0
6-7:59pm	1
8-9:59pm	2
10-11:59pm	0

**Chart Key**

- A: Followed too close
- B: FTYROW: making left turn
- C: Operating vehicle in an erratic/reckless/careless/negligent/aggressive manner
- D: Other: other improper action
- E: Other: no improper action



**Map 3.11**  
**Iowa Location #8 – 35<sup>th</sup> St & Marquette St (Davenport)**



1. North Bound, Left Turn, Angle, Oncoming Left Turn (5)
2. North Bound, Slowing/Stopping, Rear end (1)
3. North Bound, Straight, Rear end (1)

4. South Bound, Straight, Rear end (1)
5. South Bound, Left Turn, Angle, Oncoming Left Turn (1)
6. West Bound, Left Turn, Angle, Oncoming Left Turn (1)



## 2010 IOWA LOCATION #8 – W. LOCUST ST, N. DIVISION ST, & HICKORY GROVE RD – DAVENPORT

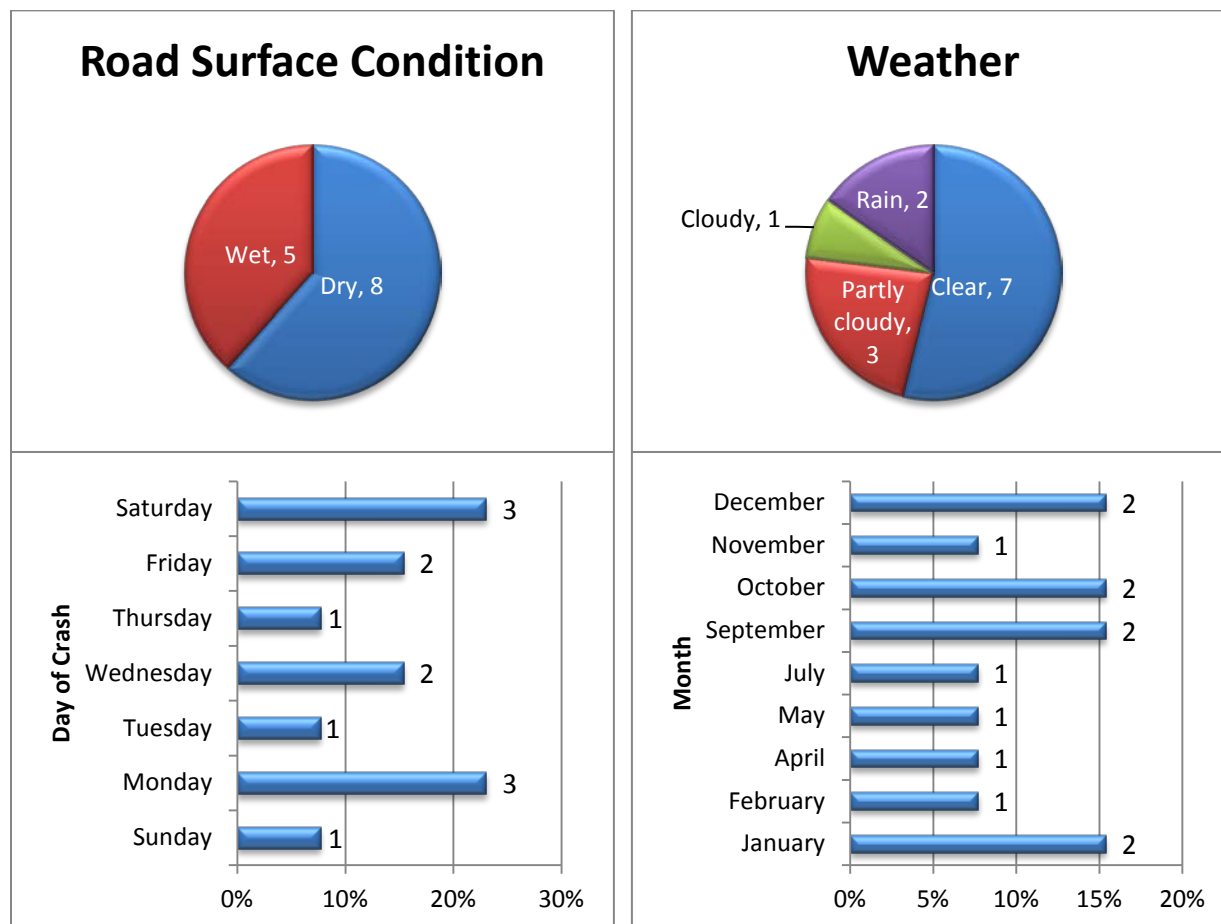
Tied for eighth, with a score of 18, this location experienced 13 crashes in 2010, resulting in 4 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.12 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Mondays and Saturdays with crashes reported for all days of the week.

The average daily traffic for this intersection is 31,800. North Division St, at this location, is a 5 lane minor arterial road with a posted speed limit of 35 mph. On both approaches, northbound and southbound, of N. Division St has one left turn lane. West Locust St is a 5 lane minor arterial road with a post speed limit of 25 mph. Both approaches, eastbound and westbound, of W. Locust St has one left turn lane. Hickory Grove Rd is a 4 lane minor arterial road with a posted speed limit of 35 mph.

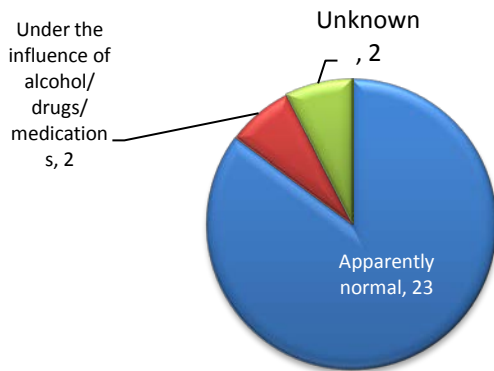
**Table 3.12**  
**W. Locust St, N. Division St, & Hickory Grove Rd (Davenport) 2007 & 2010 Comparison**

	<b>2007 (<i>not in top ten</i>)</b>	<b>2010</b>
<b>Rank</b>	<i>Not Ranked</i>	8
<b>Total Crashes</b>	<i>Not Ranked</i>	13
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	0
<b># of Injury related crashes</b>	<i>Not Ranked</i>	4
<b>Crash Rate</b>	<i>Not Ranked</i>	1.12
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Rear-end

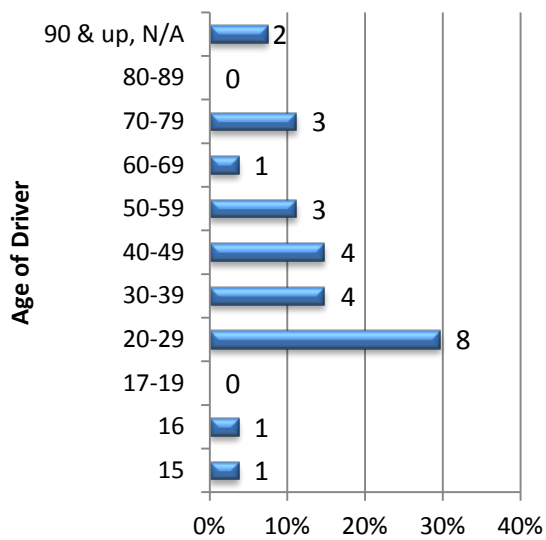
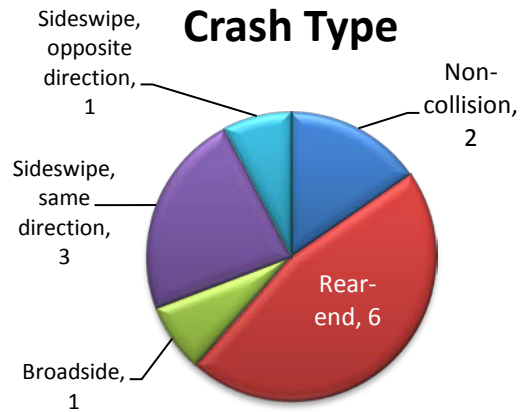
**Figure 3.12**  
**W. Locust St, N. Division St, & Hickory Grove Rd (Davenport) – Crash Frequency**  
**by Various Conditions**



### Driver Condition

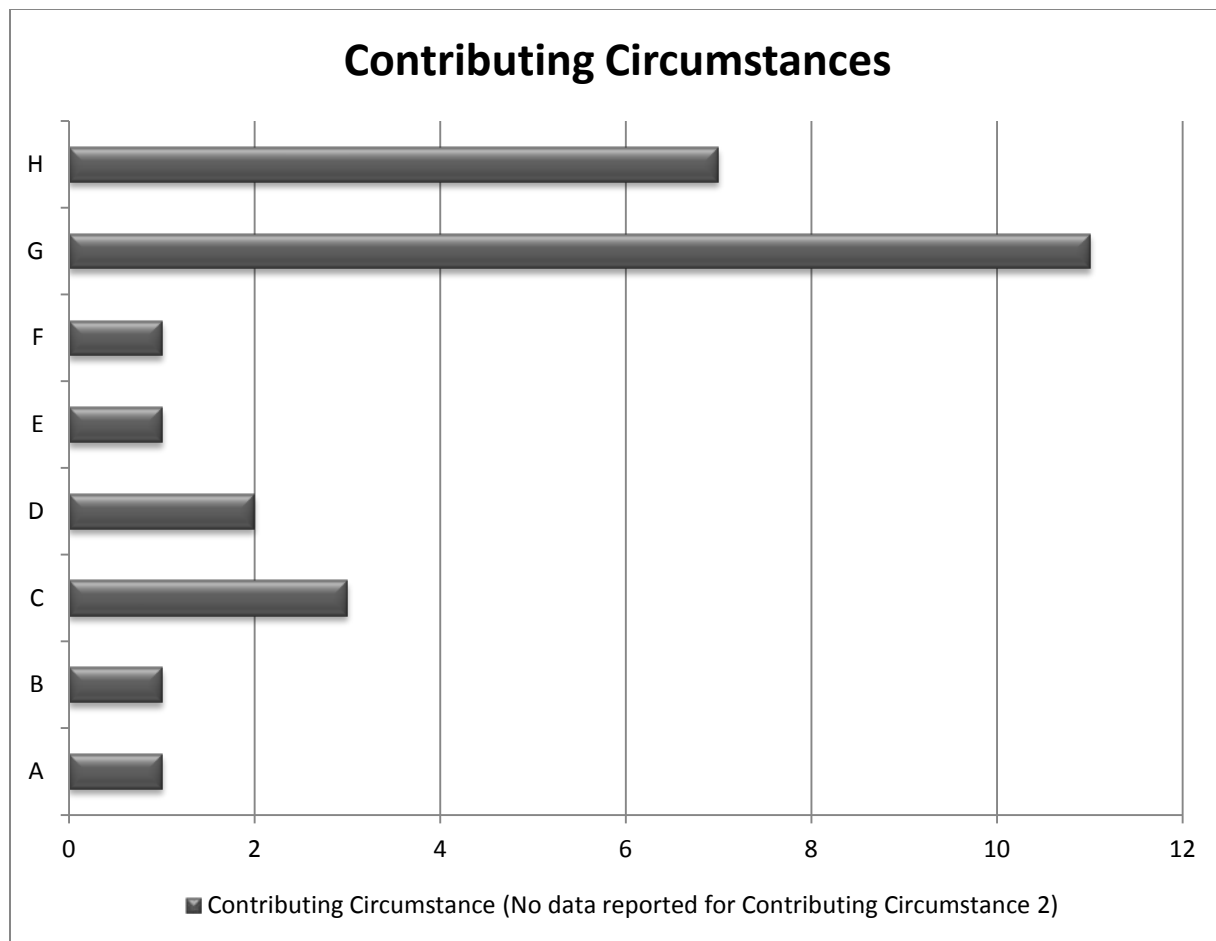


### Crash Type



### Time of Crash

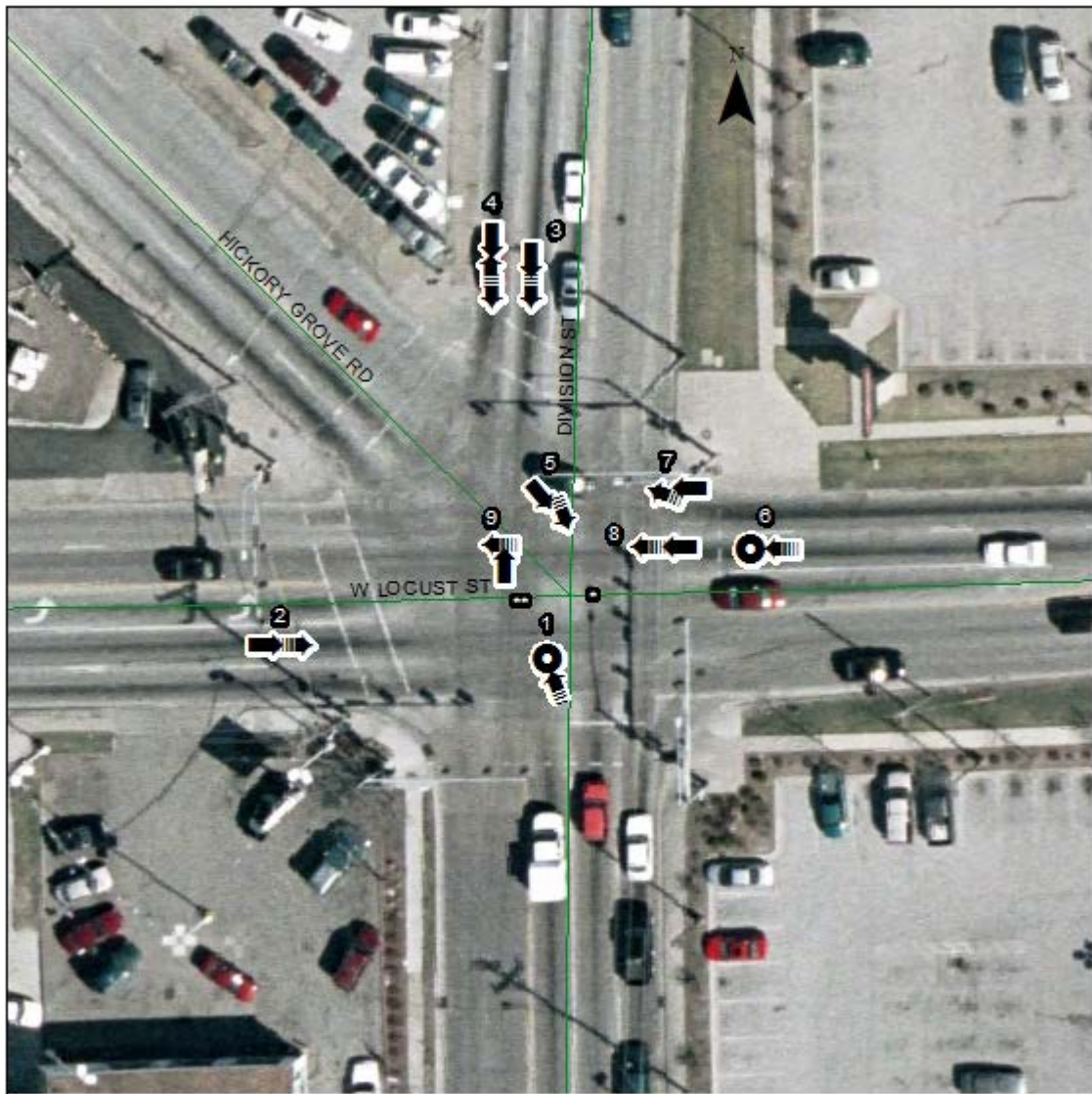
Timeframe	Crashes
Midnight-1:59am	2
2-3:59am	0
4-5:59am	0
6-7:59am	1
8-9:59am	1
10-11:59am	1
Noon-1:59pm	3
2-3:59pm	1
4-5:59pm	1
6-7:59pm	1
8-9:59pm	2
10-11:59pm	0



#### Chart Key

- A: Driving too fast for conditions
- B: Made improper turn
- C: Lost control
- D: Followed too close
- E: Other: vision obstructed
- F: Other: other improper action
- G: Other: no improper action
- H: Unknown

**Map 3.12**  
**Iowa Location #8 – Locust St, Division St, & Hickory Grove Rd (Davenport)**



- |  |   |
|--|---|
| 1. North Bound, Left Turn, Non-Collision (1)             | 7. West Bound, Right Turn, Sideswipe, Same Direction (1)          |
| 2. East Bound, Straight, Rear end (1)                    | 8. West Bound, Straight, Rear end (2)                             |
| 3. South Bound, Slowing/Stopping, Rear end (1)           | 9. West Bound, Straight, Broadside (1)                            |
| 4. South Bound, Backing, Rear end (1)                    | * North Bound, Not Enough Info, Sideswipe, Opposite Direction (1) |
| 5. South Bound, Left Turn, Sideswipe, Same Direction (2) | ** East Bound, Unknown, Rear end (1)                              |
| 6. West Bound, Straight, Non-Collision (1)               |   |

**CHAPTER 3 – PART 2    2011 IOWA INTERSECTION CRASH DATA****2011 IOWA LOCATION #1 – KIMBERLY RD & EASTERN AVE – DAVENPORT**

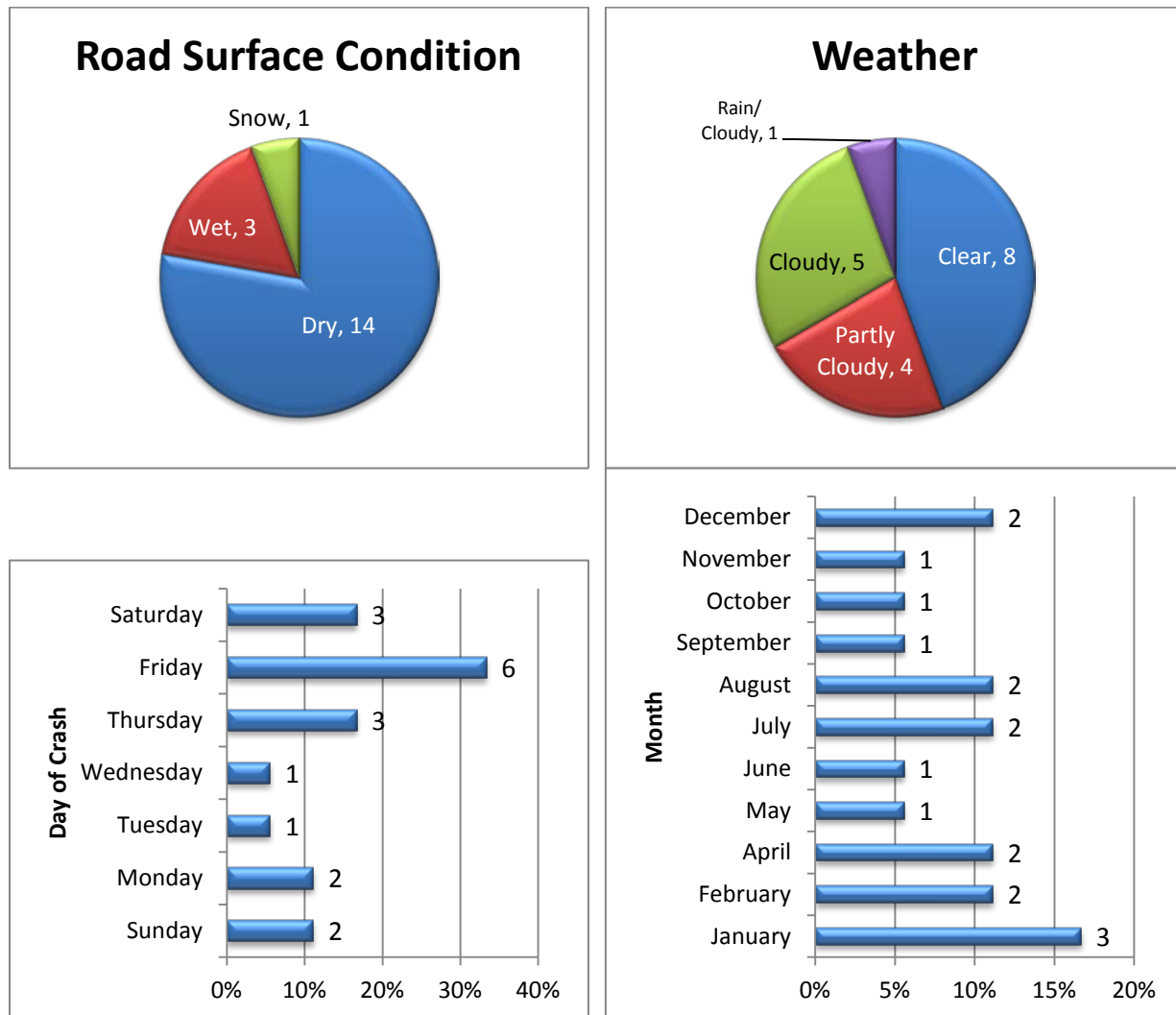
Tied for eighth, with a score of 22, this location experienced 18 crashes in 2010, resulting in 7 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.19 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Fridays with crashes reported for all days of the week.

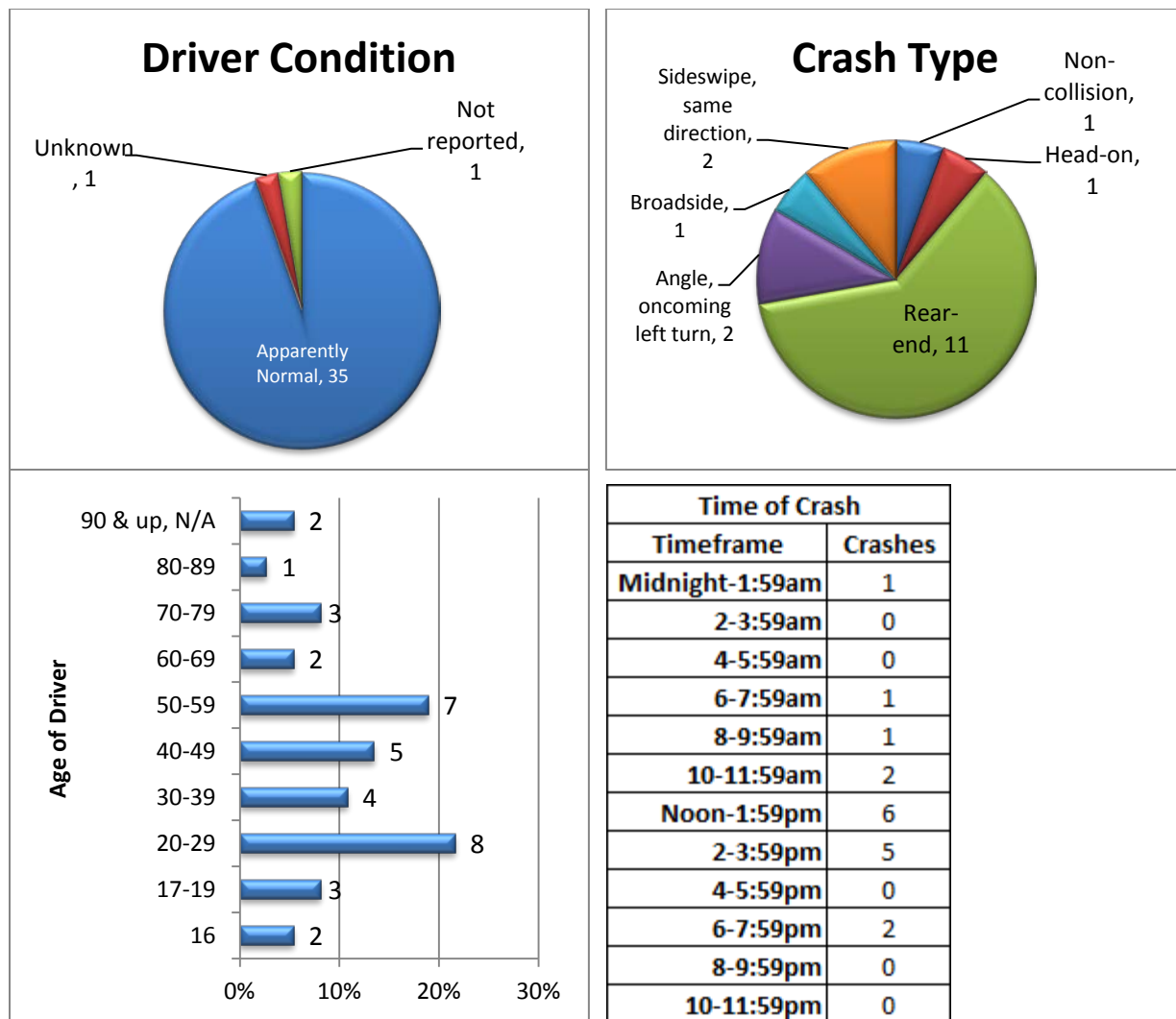
The average daily traffic at this intersection is 41,400. Eastern Ave is a 5 lane minor arterial road. Kimberly Rd is a 6 lane principal arterial road. The posted speed limit along Eastern Ave is 35 mph. The posted speed limit along Kimberly Rd is 45 mph. There is a separated left turn lane per approach along Kimberly Rd. There is a left turn lane per approach along Eastern Ave. Eastern Ave has a left turn arrow with a yield on green for both approaches.

**Table 3.13**  
**Kimberly Rd & Eastern Ave (Davenport) 2010 & 2011 Comparison**

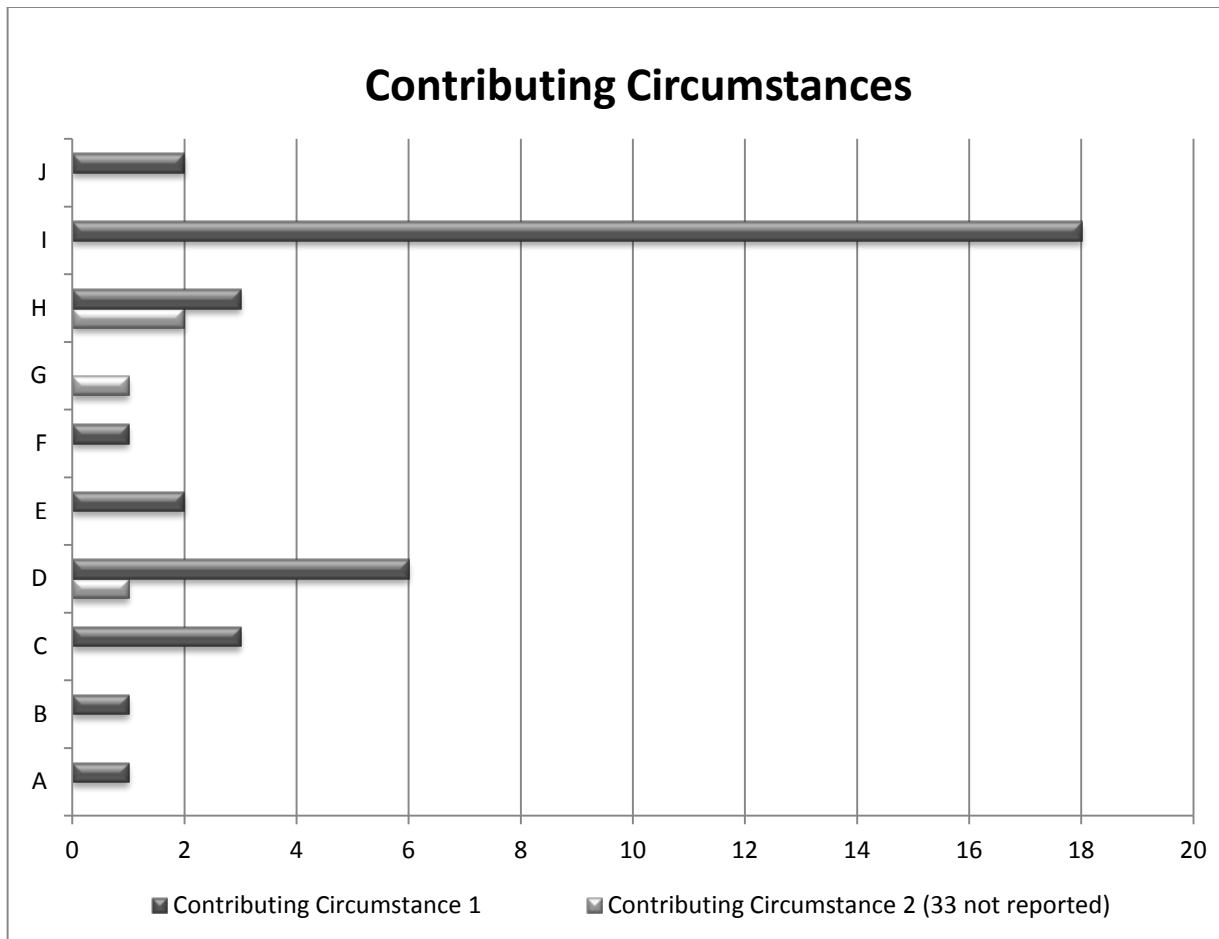
	<b>2010</b>	<b>2011</b>
<b>Rank</b>	8	1
<b>Total Crashes</b>	13	18
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	6	7
<b>Crash Rate</b>	0.85	1.19
<b>Predominant Crash Type</b>	Rear-end	Rear-end

**Figure 3.13**  
**Kimberly Rd & Eastern Ave (Davenport) – Crash Frequency by Various Conditions**









#### Chart Key

- A: Ran Traffic Signal
- B: Made Improper turn
- C: Lost Control
- D: Followed too close
- E: FTYROW: Making left turn
- F: FTYROW: Other
- G: Inattentive/distracted by: Use of phone or other device
- H: Other: Other improper action
- I: Other: No improper action
- J: Unknown

**Map 3.13**  
**Iowa Location #1 – Kimberly Rd & Eastern Ave (Davenport)**



- |   |   |
|---|---|
| 1. North Bound, Slowing/Stopping, Rear end (1)                | 7. South Bound, Straight, Broadside (1)                           |
| 2. North Bound, Making U-Turn, Swideswipe, Same Direction (1) | 8. South Bound, Overtaking/Passing, Sideswipe, Same Direction (1) |
| 3. North Bound, Left Turn, Angle, Oncoming Left Turn (1)      | 9. West Bound, Straight, Head on (1)                              |
| 4. East Bound, Straight, Rear end (4)                         | 10. West Bound, Stopped for Stop Sign/Signal, Rear end (1)        |
| 5. South Bound, Left Turn, Head on (1)                        | 11. West Bound, Straight, Rear end (4)                            |
| 6. South Bound, Left Turn, Angle, Oncoming Left Turn (1)      | 12. West Bound, Slowing/Stopping, Rear end (1)                    |

## 2011 IOWA LOCATION #2 - EAST 53<sup>RD</sup> ST & JERSEY RIDGE RD – DAVENPORT

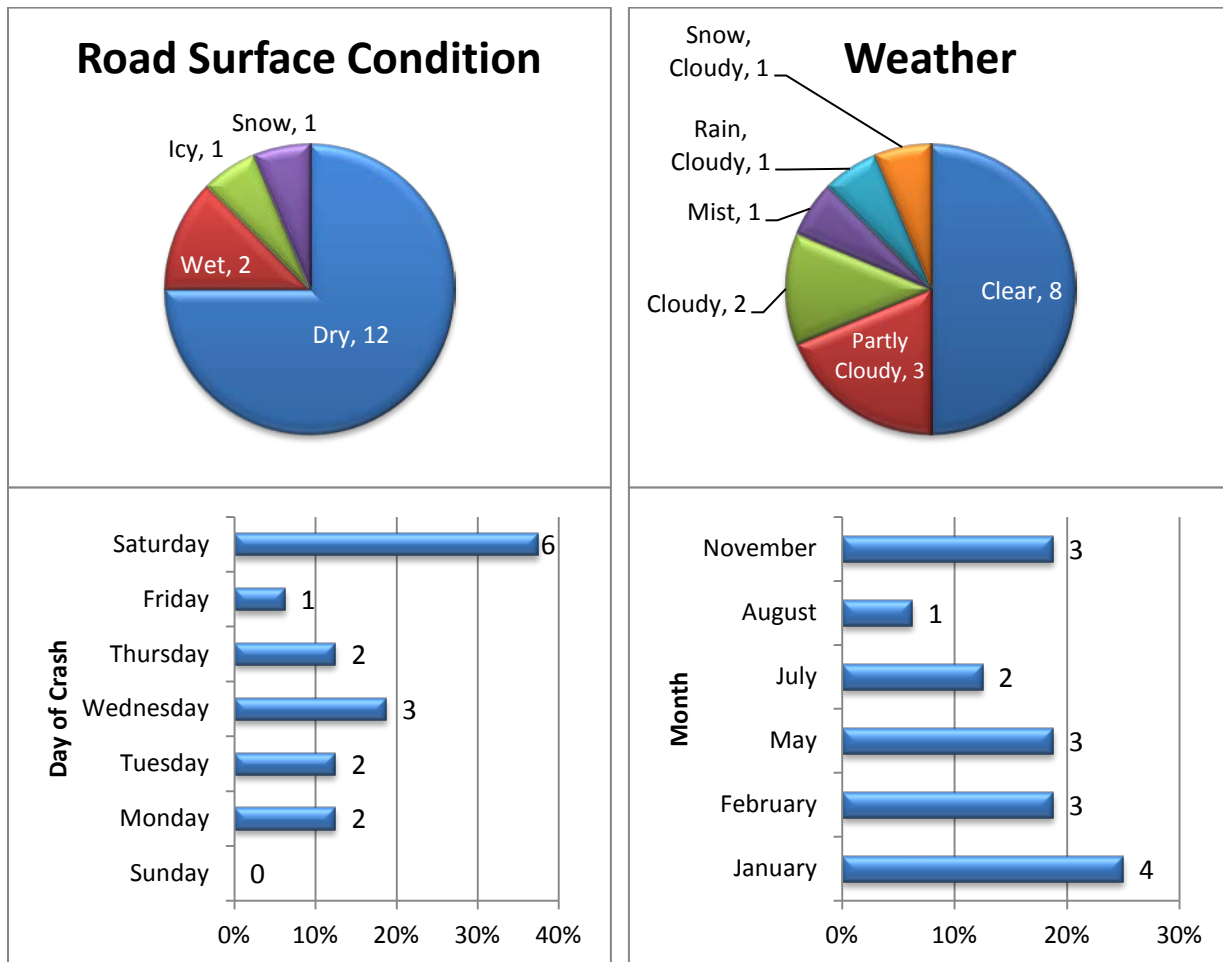
Ranked second, in 2011, with a score of 19, this location experienced 16 crashes in 2011, resulting in 2 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 1.30 crashes per MEV. Rear-ends were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Saturdays, with no crashes on Sundays.

Average daily traffic count for this intersection is 33,800. Jersey Ridge Rd is a 5 lane minor arterial road. The posted speed limit north of E. 53<sup>rd</sup> St is 45 mph, south of E. 53<sup>rd</sup> St is 35 mph. East 53<sup>rd</sup> St is a 5 lane principal arterial road with a posted speed limit of 45 mph at this location. All approaches at this intersection have a left turn lane. East 53<sup>rd</sup> St has left turn arrow signals. Jersey Ridge Rd has left turn arrow signals with yield on green light.

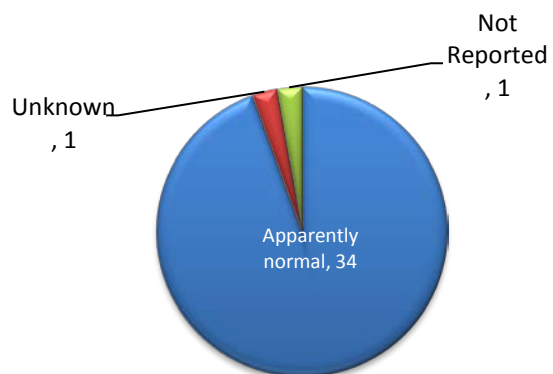
**Table 3.14**  
**East 53<sup>rd</sup> St & Jersey Ridge Rd (Davenport) 2010 & 2011 Comparison**

	<b>2010</b> <i>(not in top ten)</i>	<b>2011</b>
<b>Rank</b>	17	2
<b>Total Crashes</b>	12	16
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	3	2
<b>Crash Severity</b>	18	20
<b>Crash Rate</b>	0.97	1.30
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Rear-end

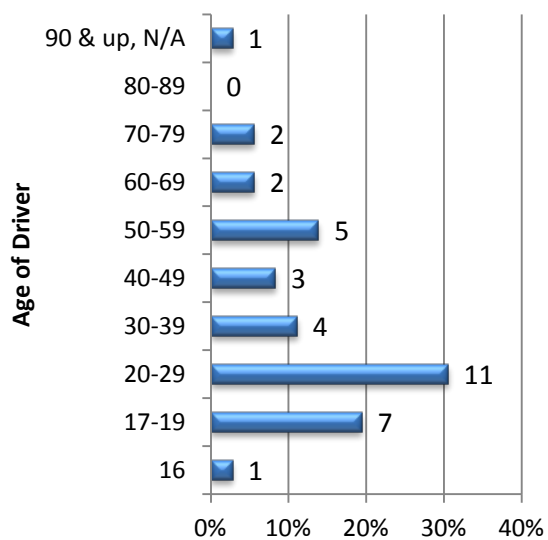
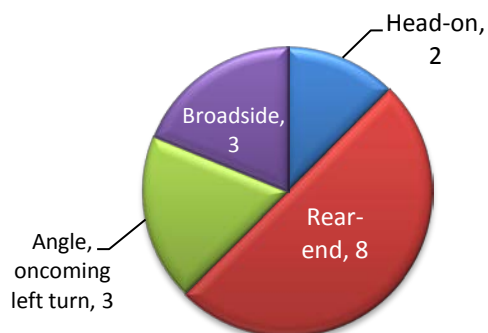
**Figure 3.14**  
**East 53<sup>rd</sup> St & Jersey Ridge Rd (Davenport) – Crash Frequency by Various Conditions**



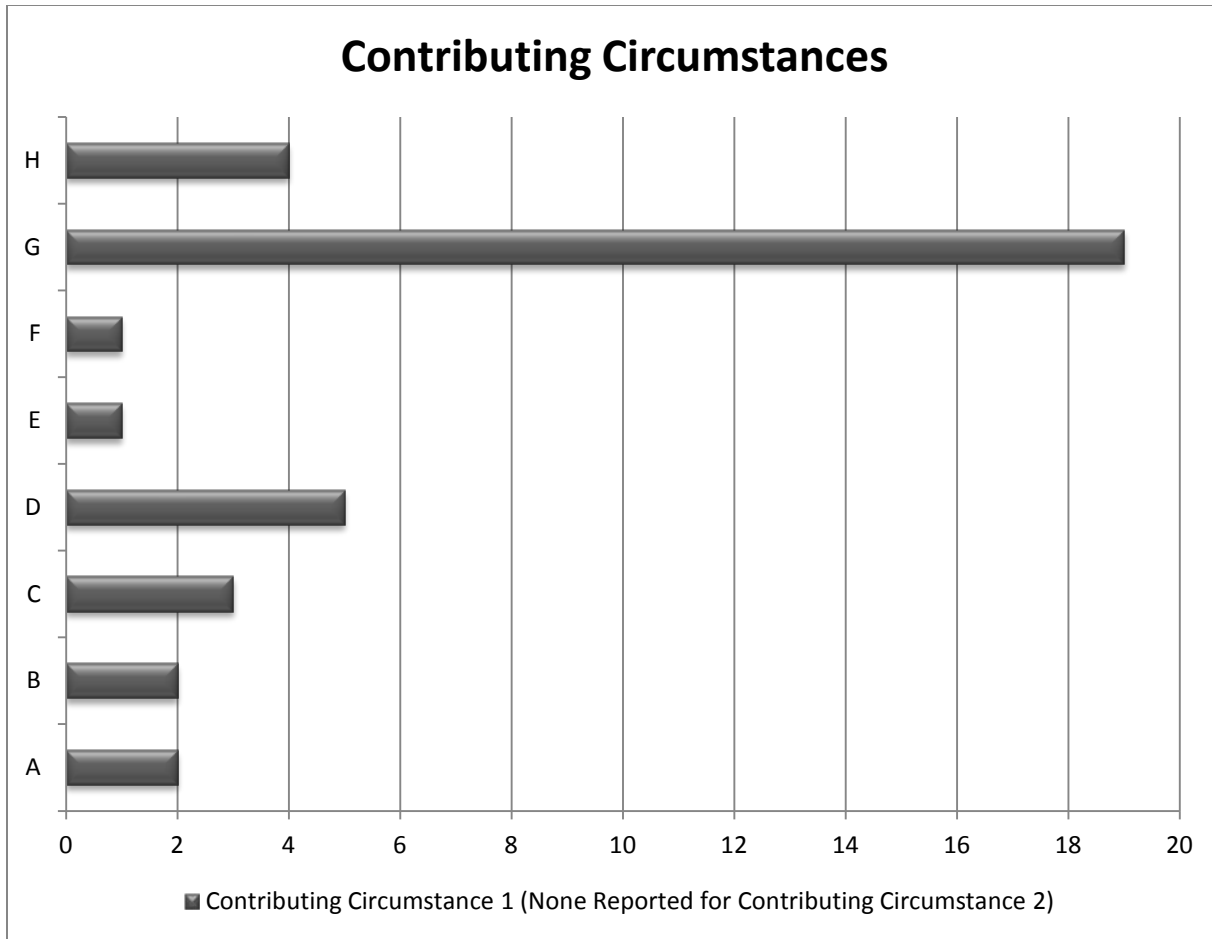
### Driver Condition



### Crash Type



Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	1
6-7:59am	0
8-9:59am	0
10-11:59am	3
Noon-1:59pm	1
2-3:59pm	1
4-5:59pm	2
6-7:59pm	2
8-9:59pm	6
10-11:59pm	0



**Chart Key**

- A: Ran Traffic Signal
- B: Lost Control
- C: Followed too close
- D: FTYROW: Making left turn
- E: FTYROW: Making right turn on red signal
- F: Other: Other improper action
- G: Other: No improper action
- H: Unknown



**Map 3.14**  
**2011 Iowa Location #1 - 53<sup>rd</sup> St & Jersey Ridge Rd (Davenport)**



- |  |  |
|--|--|
| 1. North Bound, Slowing/Stopping, Rear end (1) | 8. South Bound, Left Turn, Angle, Oncoming Left Turn (1) |
| 2. North Bound, Straight, Broadside (1)        | 9. West Bound, Left Turn, Angle, Oncoming Left Turn (2)  |
| 3. North Bound, Left Turn, Head on (1)         | 10. West Bound, Changing Lanes, Rear end (1)             |
| 4. North Bound, Right Turn, Broadside (1)      | 11. West Bound, Straight, Rear end (3)                   |
| 5. East Bound, Left Turn, Head on (1)          | 12. West Bound, Straight, Broadside (1)                  |
| 6. East Bound, Straight, Rear end (1)          | 13. West Bound, Slowing/Stopping, Rear end (1)           |
| 7. South Bound, Straight, Rear end (1)         |  |

**2011 IOWA LOCATION #3 – GAINES ST & WEST 3<sup>RD</sup> ST – DAVENPORT**

Tied for third, in 2011, with a score of 18, this location experienced 11 crashes in 2011, resulting in 5 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 1.31 crashes per MEV. Broadside was the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Wednesdays, although crashes did occur on every day of the week.

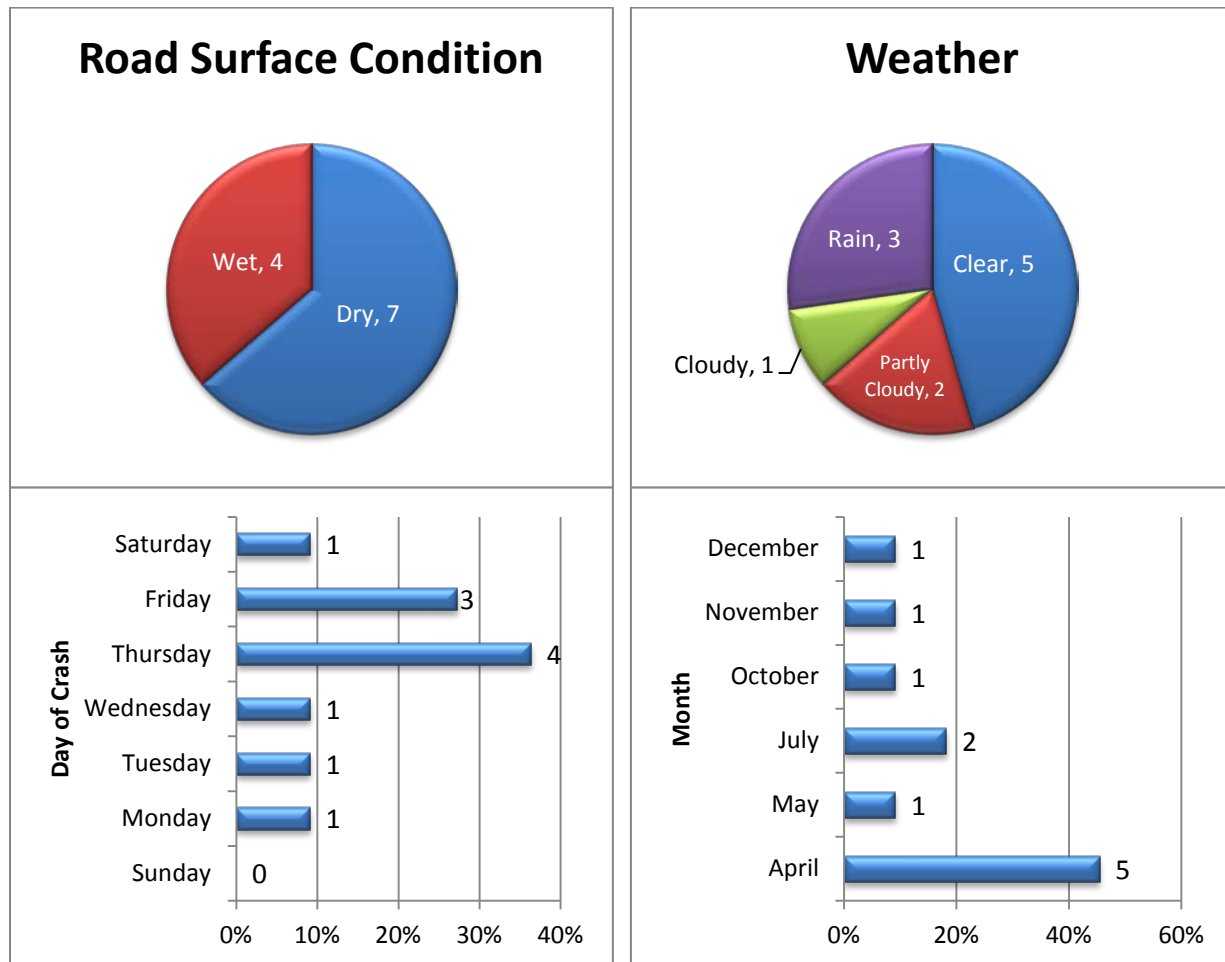
Average daily traffic count for this intersection is 22,950. Gaines St is a 4 lane collector road with a posted speed limit of 20 mph. West 3<sup>rd</sup> St is a 3 lane, one way (eastbound), minor arterial road with a posted speed limit of 20 mph.

**Table 3.15**  
**Gaines St & West 3<sup>rd</sup> St (Davenport) 2010 & 2011 Comparison**

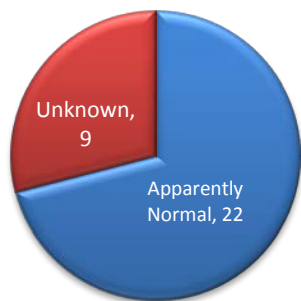
	<b>2010 (<i>not ranked</i>)</b>	<b>2011</b>
<b>Rank</b>	<i>Not Ranked</i>	3
<b>Total Crashes</b>	<i>Not Ranked</i>	11
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	0
<b># of Injury related crashes</b>	<i>Not Ranked</i>	5
<b>Crash Severity</b>	<i>Not Ranked</i>	21
<b>Crash Rate</b>	<i>Not Ranked</i>	1.31
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Broadside



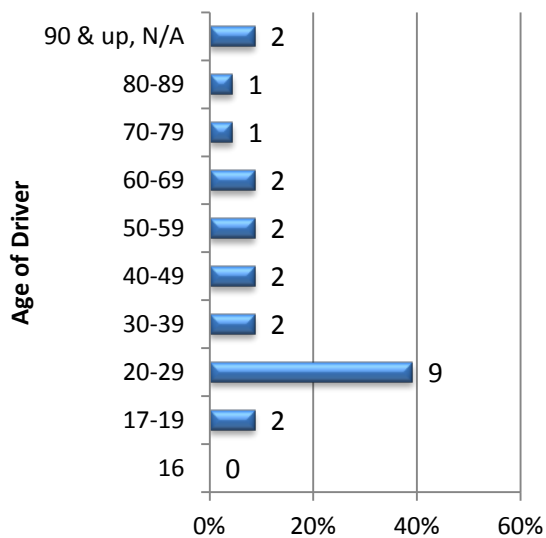
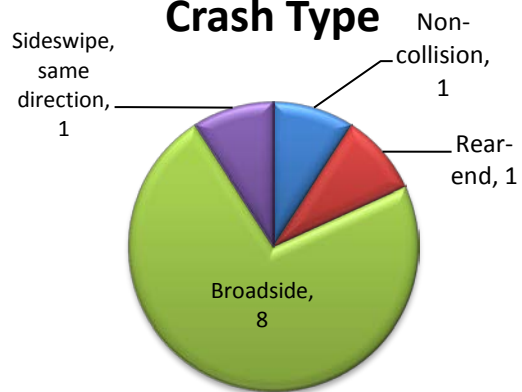
**Figure 3.15**  
**Gaines St & West 3<sup>rd</sup> St (Davenport) – Crash Frequency by Various Conditions**



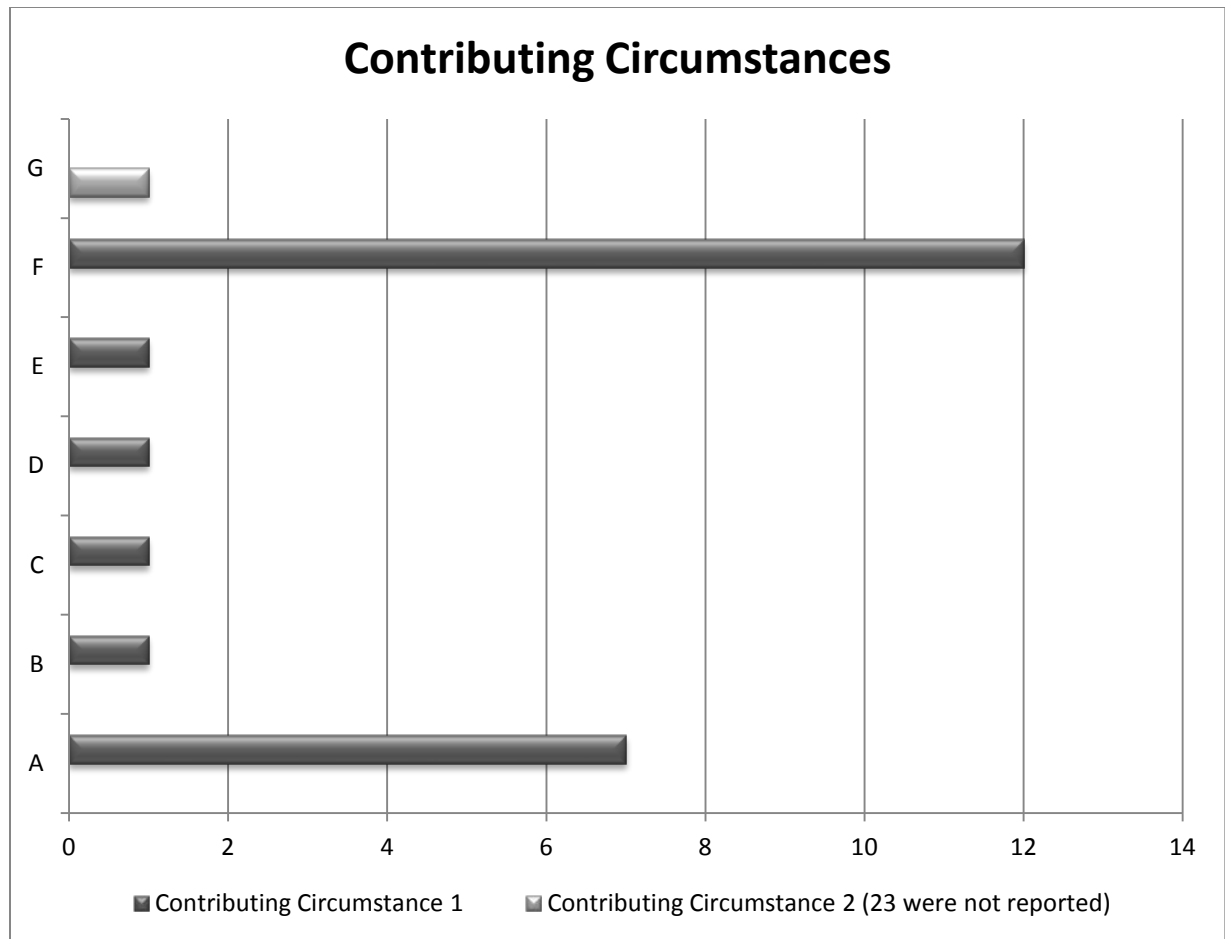
## Driver Condition



## Crash Type



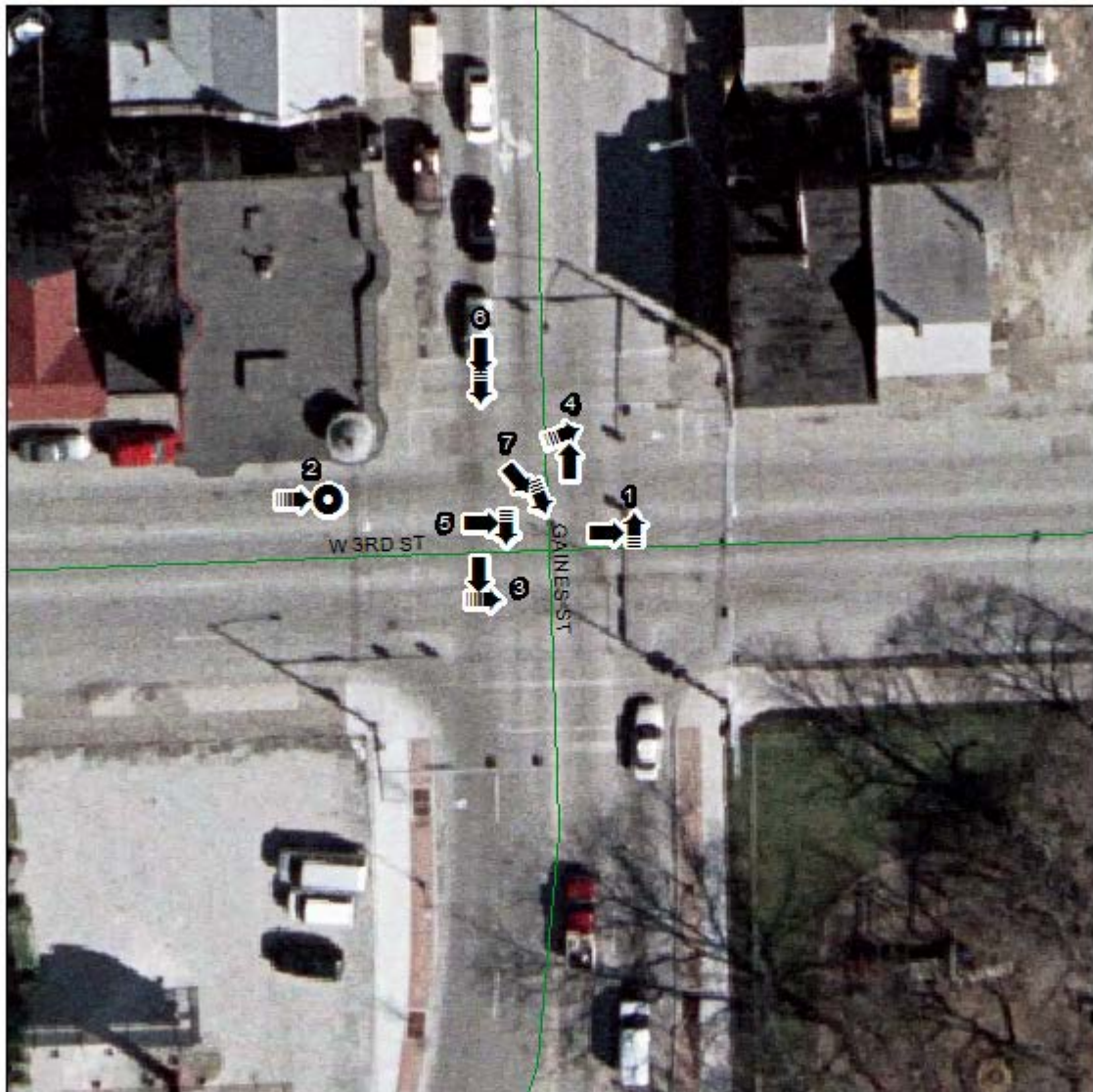
Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	0
6-7:59am	2
8-9:59am	1
10-11:59am	1
Noon-1:59pm	1
2-3:59pm	2
4-5:59pm	1
6-7:59pm	2
8-9:59pm	1
10-11:59pm	0



#### Chart Key

- A: Ran Traffic Signal
- B: Made improper turn
- C: Followed too close
- D: FTYROW: To pedestrian
- E: Other: Other improper action
- F: Other: No improper action
- G: Operating vehicle in an erratic/reckless/careless/negligent/aggressive manner

**Map 3.15**  
**2011 Iowa Location #3 - Gaines St & 3<sup>rd</sup> St (Davenport)**



- |  |  |
|--|--|
| 1. North Bound, Straight, Broadside (1)    | 4. East Bound, Left Turn, Non-Collision (1)              |
| 3. East Bound, Straight, Broadside (1)     | 7. South Bound, Left Turn, Sideswipe, Same Direction (1) |
| 5. South Bound, Straight, Broadside (5)    | 6. South Bound, Straight, Rear end (1)                   |
| 2. East Bound, Straight, Non-Collision (1) |  |

**2011 IOWA LOCATION #3 – MARQUETTE ST & WEST 4<sup>TH</sup> ST - DAVENPORT**

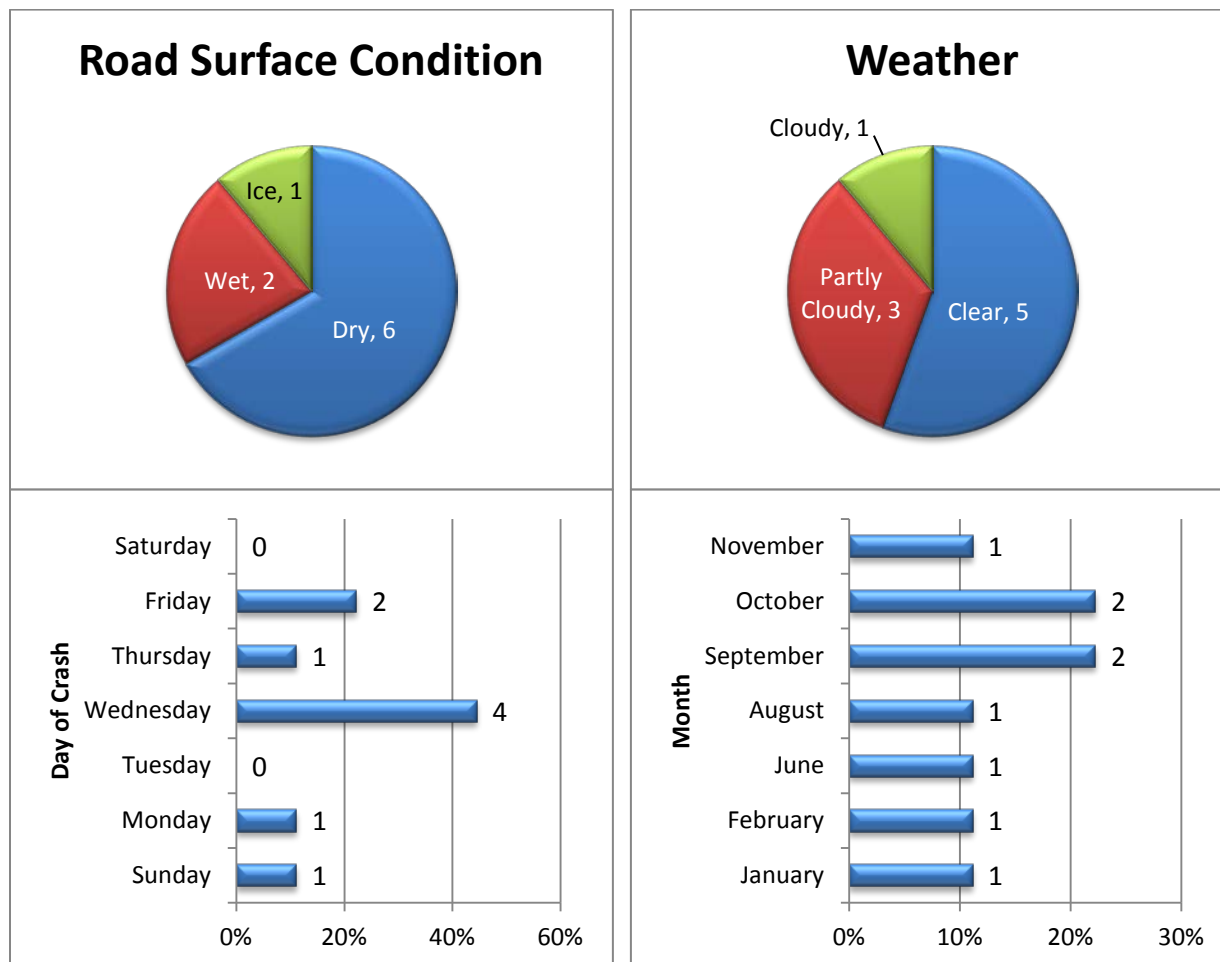
Tied for third, in 2011, with a score of 18, this location experienced 9 crashes in 2011, resulting in 4 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 1.79 crashes per MEV. Broadsides were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Wednesdays with no reported crashes on Tuesdays and Saturdays.

Average daily traffic count for this intersection is 13,750. Marquette St is a 3 lane collector road with a posted speed limit of 25 mph. West 4<sup>th</sup> St is a 3 lane, one-way, minor arterial road with a posted speed limit of 20 mph.

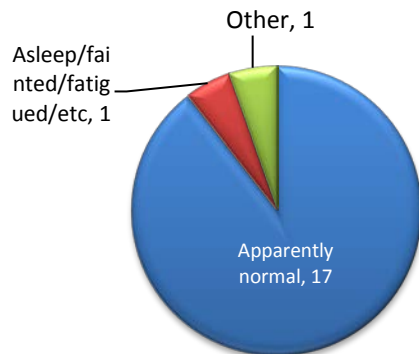
**Table 3.16**  
**Marquette St & W. 4<sup>th</sup> St (Davenport) 2010 & 2011 Comparison**

	<b>2010 (<i>not ranked</i>)</b>	<b>2011</b>
<b>Rank</b>	<i>Not Ranked</i>	3
<b>Total Crashes</b>	<i>Not Ranked</i>	9
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	0
<b># of Injury related crashes</b>	<i>Not Ranked</i>	4
<b>Crash Severity</b>	<i>Not Ranked</i>	17
<b>Crash Rate</b>	<i>Not Ranked</i>	1.79
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Broadside

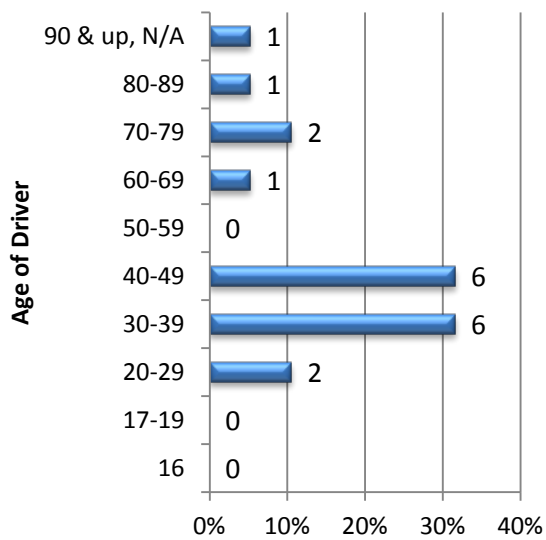
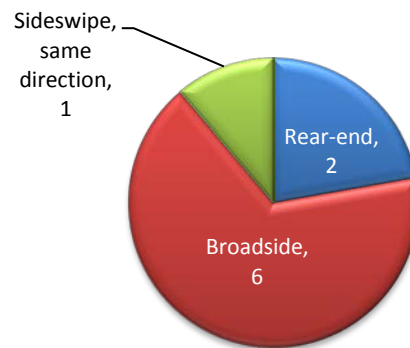
**Figure 3.16**  
**Marquette St & W. 4<sup>th</sup> St (Davenport) – Crash Frequency by Various Conditions**



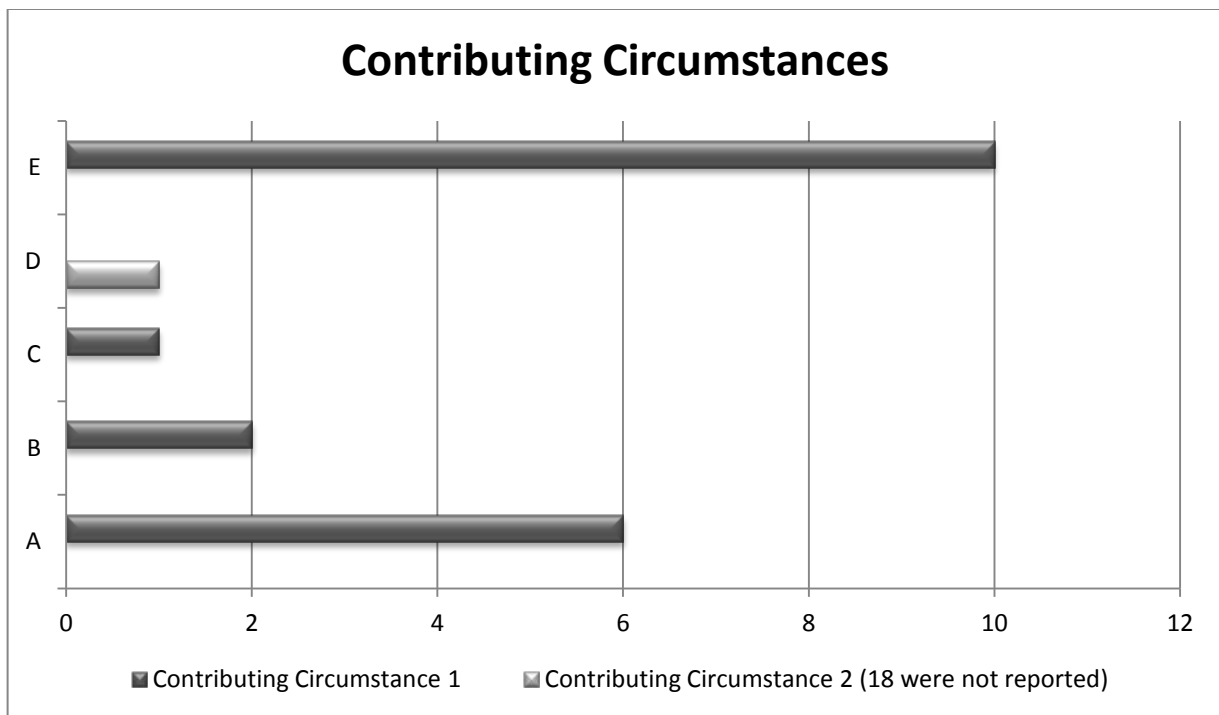
### Driver Condition



### Crash Type



Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	1
6-7:59am	1
8-9:59am	1
10-11:59am	1
Noon-1:59pm	2
2-3:59pm	0
4-5:59pm	1
6-7:59pm	0
8-9:59pm	0
10-11:59pm	1



**Chart Key**

- A: Ran Traffic Signal
- B: Followed too close
- C: Swerved to avoid:
- D: Inattentive/distracted by: Fatigued/asleep
- E: No improper action



**Map 3.16**  
**2011 Iowa Location #3 - Marquette St & W. 4<sup>th</sup> St (Davenport)**



- 1. North Bound, Straight, Broadside (2)
- 2. South Bound, Straight, Broadside (3)
- 3. South Bound, Straight, Rear end (1)

- 4. West Bound, Straight, Broadside (1)
- 5. West Bound, Right Turn, Rear end (1)
- 6. West Bound, Straight, Sideswipe, Same Direction (1)

**2011 IOWA LOCATION #3 – SPRING ST & EAST KIMBERLY RD – DAVENPORT**

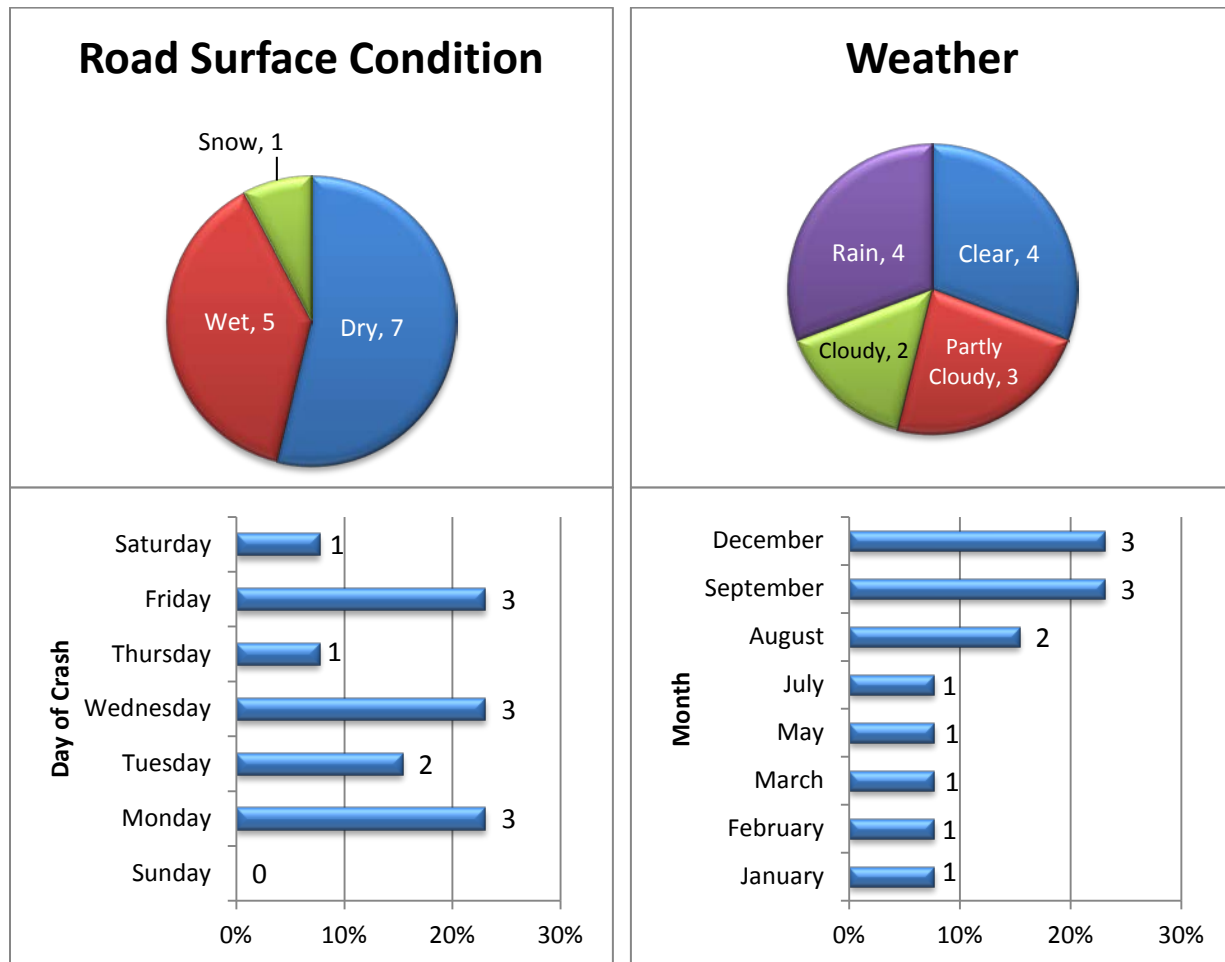
Tied for third, in 2011, with a score of 18, this location experienced 13 crashes in 2011, resulting in 4 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.16 crashes per MEV. Rear-ends were the predominant crash type. Most crashes occurred during daylight hours in a tie between clear and rain weather conditions and mostly dry surface conditions. The highest number of crashes occurred on Mondays, Wednesdays, and Fridays with no reported crashes on Sundays.

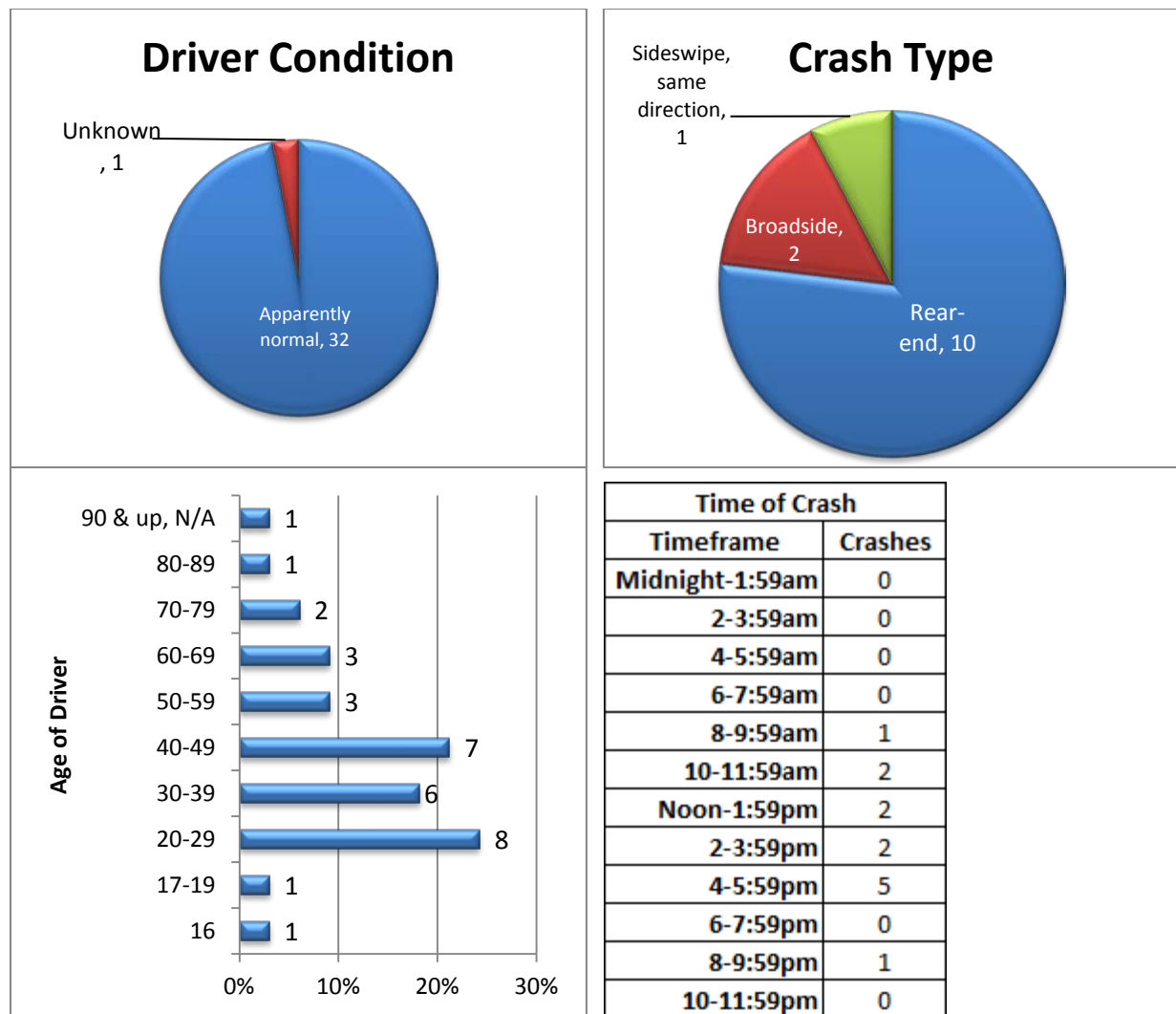
Average daily traffic count for intersection is 30,775. Spring St is a local road with one left turn lane, one through lane, and one right turn lane on each approach. Kimberly Rd is a 6 lane principal arterial road with a divided left turn lane, two through lanes, and one right turn lane on each approach.

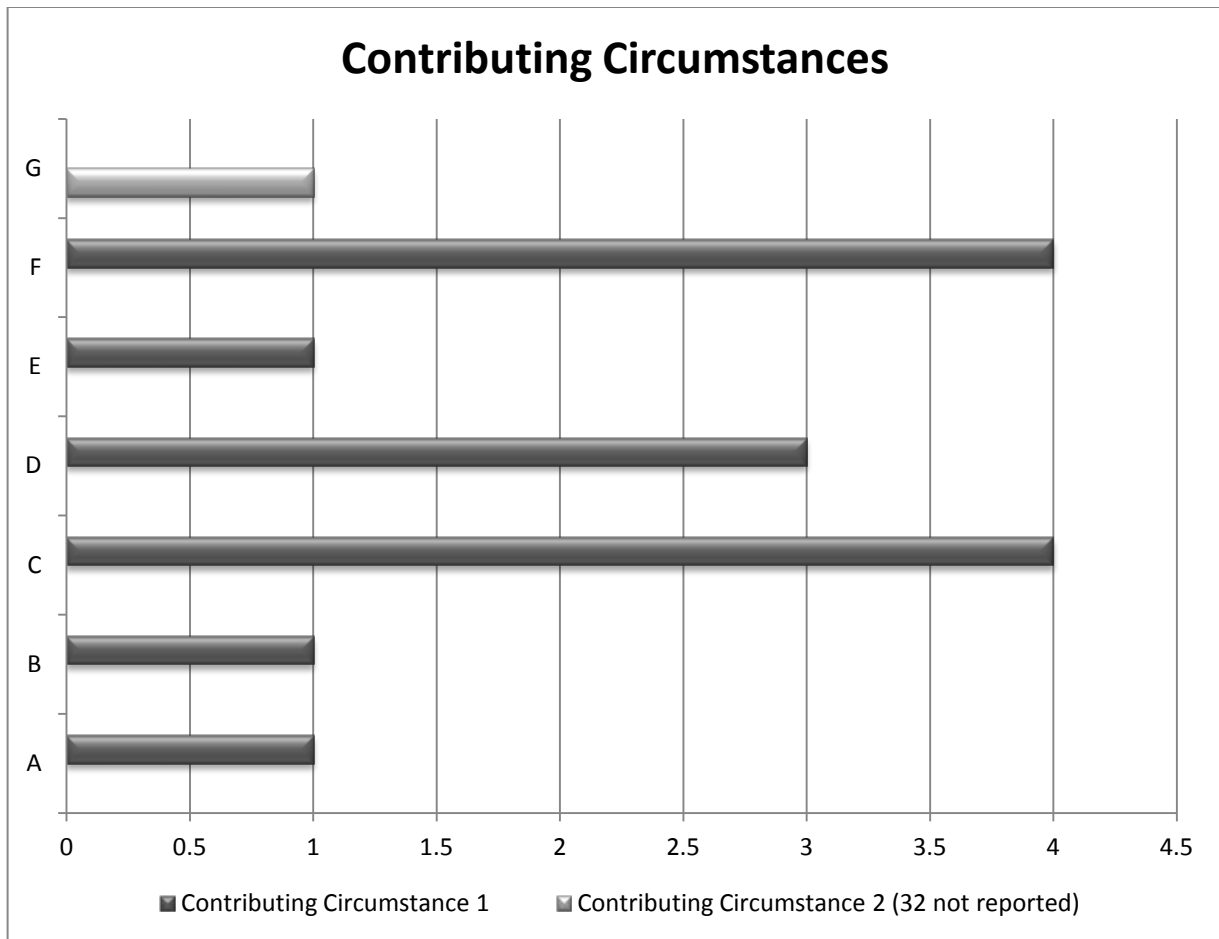
**Table 3.17**  
**Spring St & E. Kimberly Rd (Davenport) 2010 & 2011 Comparison**

	<b>2010 (<i>not in top ten</i>)</b>	<b>2011</b>
<b>Rank</b>	16	3
<b>Total Crashes</b>	12	13
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	4	4
<b>Crash Severity</b>	20	21
<b>Crash Rate</b>	1.05	1.16
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Rear-end

**Figure 3.17**  
**Spring St & E. Kimberly Rd (Davenport) – Crash Frequency by Various Conditions**







#### Chart Key

- A: Ran Traffic Signal
- B: Driving too fast for conditions
- C: Lost Control
- D: Followed too close
- E: FTYROW: Making right turn on red signal
- F: Other: Other improper action
- G: Unknown

**Map 3.17**  
**2011 Iowa Location #3 – Spring St & Kimberly St (Davenport)**



1. East Bound, Straight, Rear end (4)
2. East Bound, Right Turn, Sideswipe, Same Direction (1)
3. South Bound, Straight, Broadside (1)

4. South Bound, Right Turn, Broadside (1)
5. West Bound, Straight, Rear end (6)



**2011 IOWA LOCATION #3 - WEST LOCUST ST & HARRISON ST – DAVENPORT**

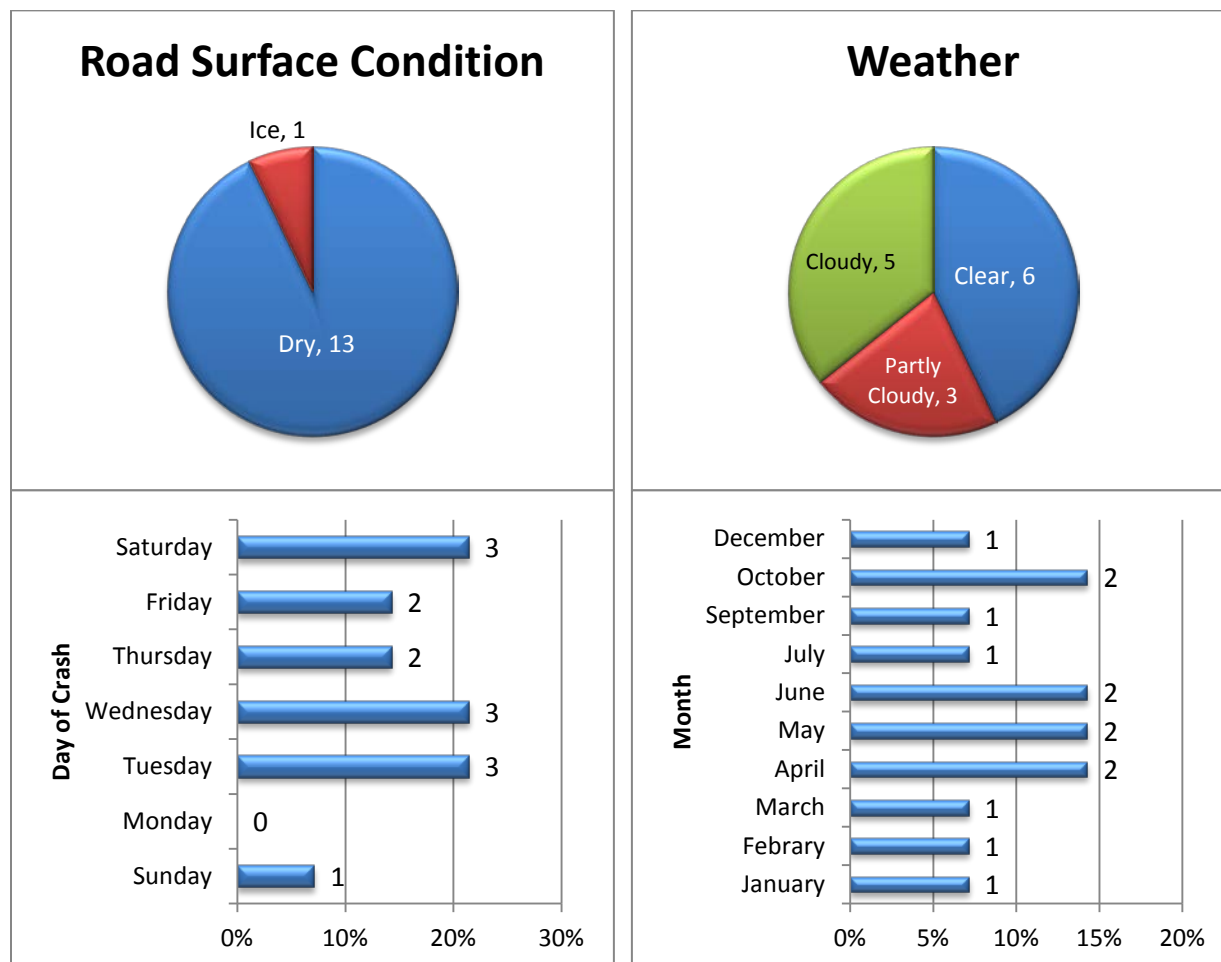
Tied for third, in 2011, with a score of 18, this location experienced 14 crashes in 2011, resulting in 5 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.20 crashes per MEV. Rear-ends were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry surface conditions. The highest number of crashes occurred on Tuesdays, Wednesdays, and Saturdays with no reported crashes on Mondays.

Average daily traffic count for intersection is 31,900. Harrison St is a 4 lane, one way (southbound) principal arterial road with a posted speed limit of 35 mph north of Locust St and 30 mph south of Locust St. Locust St is a 5 lane minor arterial road with a posted speed limit of 25 mph.

**Table 3.18**  
**West Locust St & Harrison St (Davenport) 2010 & 2011 Comparison**

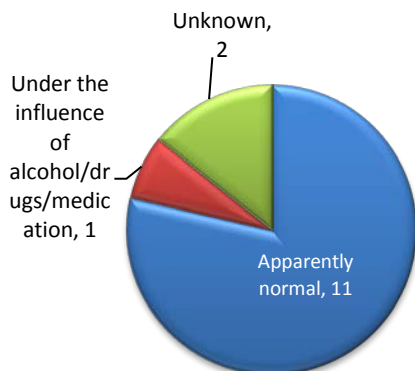
	<b>2010</b> ( <i>not in top ten</i> )	<b>2011</b>
<b>Rank</b>	22	3
<b>Total Crashes</b>	10	14
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	2	5
<b>Crash Severity</b>	14	24
<b>Crash Rate</b>	0.85	1.20
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Rear-end

**Figure 3.18**  
**West Locust St & Harrison St (Davenport) – Crash Frequency by Various Conditions**

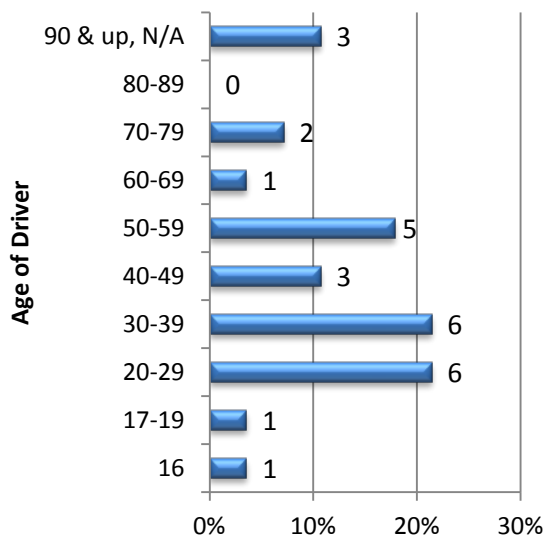
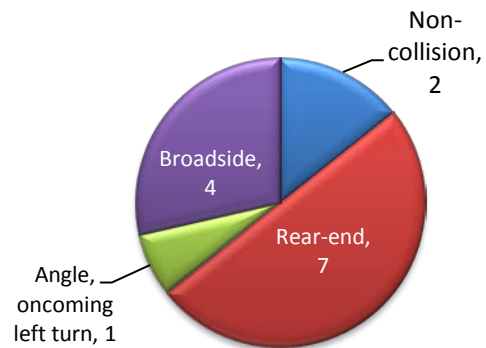




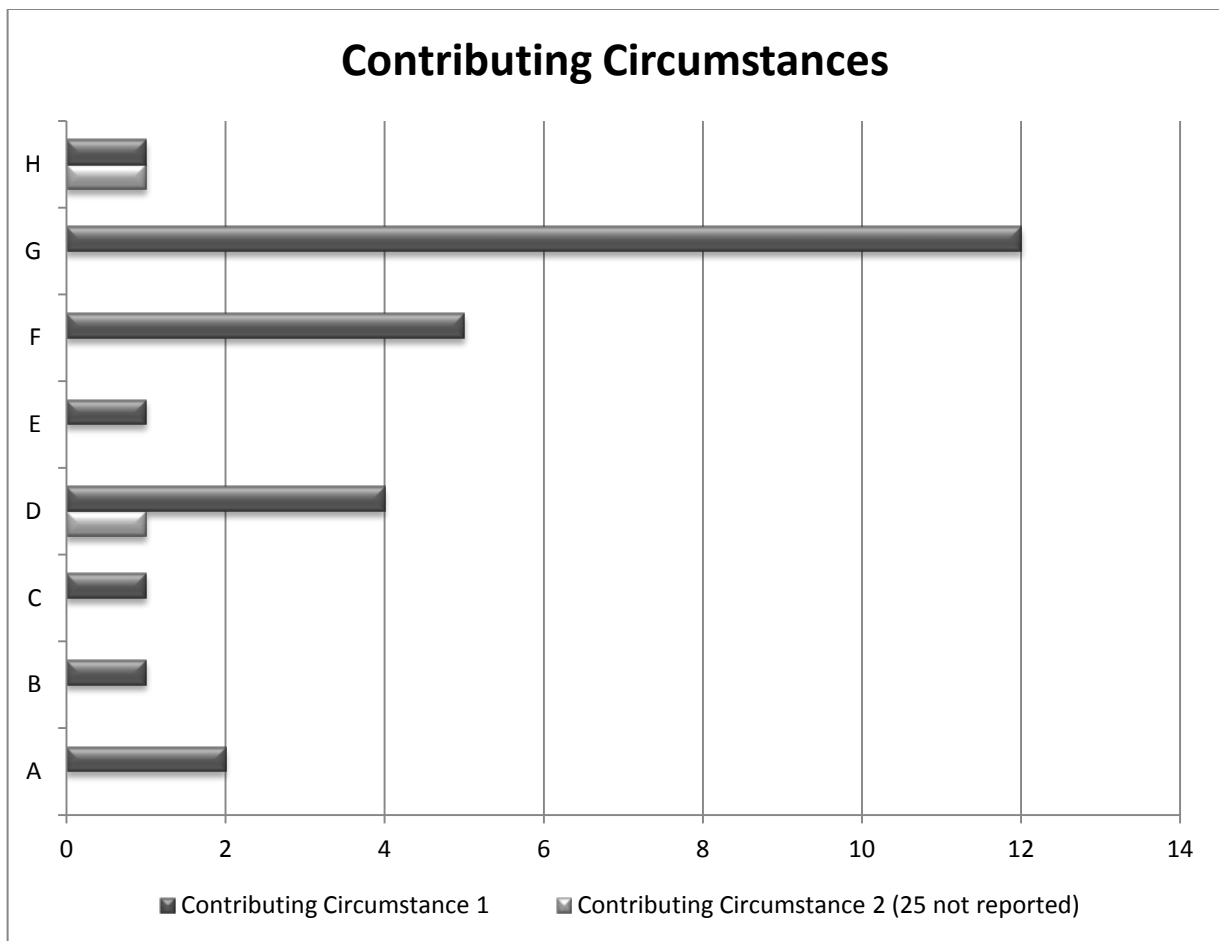
### Driver Condition



### Crash Type



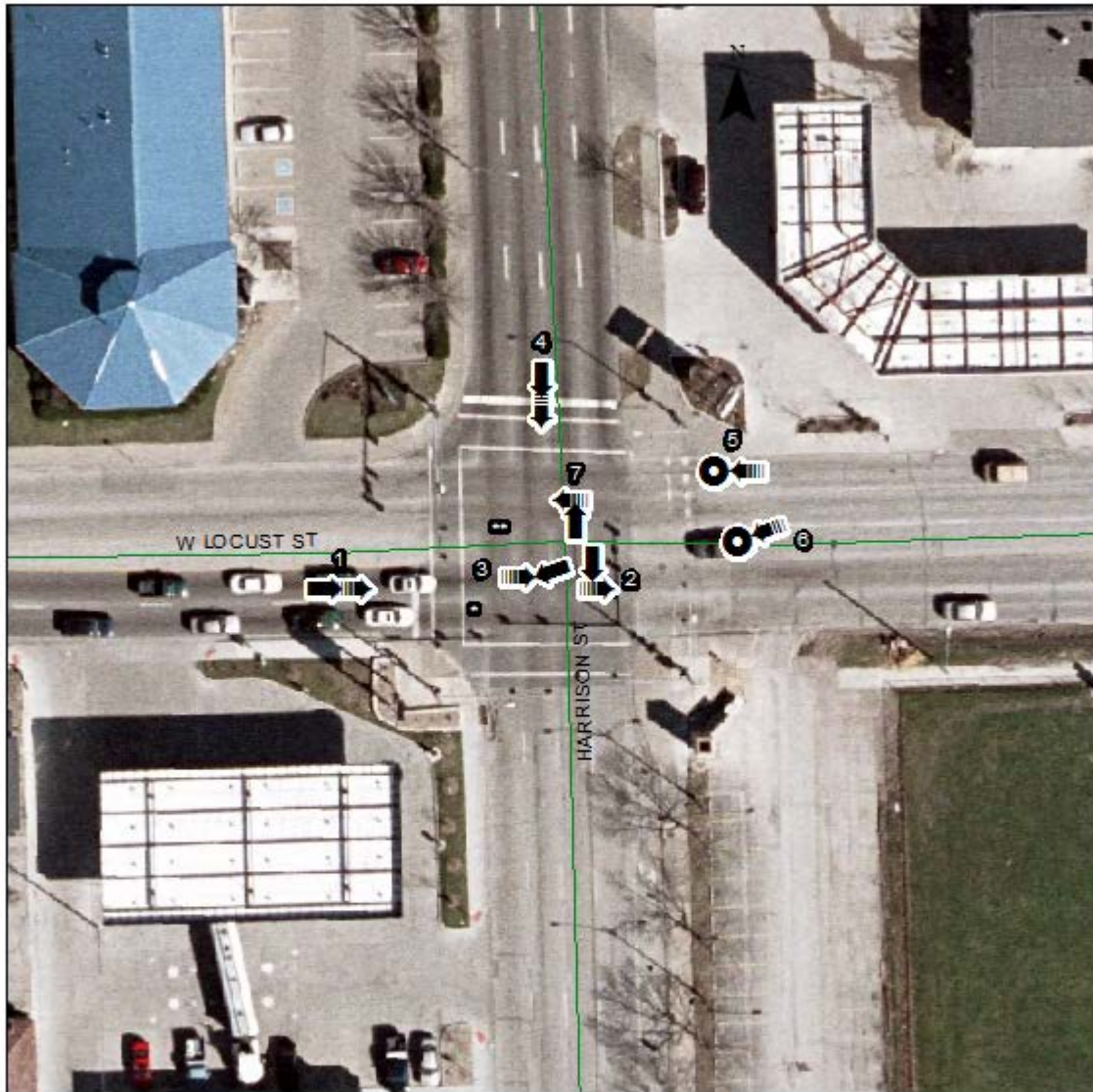
Time of Crash	
Timeframe	Crashes
Midnight-1:59am	2
2-3:59am	0
4-5:59am	0
6-7:59am	1
8-9:59am	0
10-11:59am	4
Noon-1:59pm	1
2-3:59pm	2
4-5:59pm	1
6-7:59pm	1
8-9:59pm	1
10-11:59pm	1



**Chart Key**

- A: Ran Traffic Signal
- B: Exceeded authorized speed
- C: Driving too fast for conditions
- D: Lost Control
- E: Followed too close
- F: Other: other improper action
- G: Other: no improper action
- H: Unknown

**Map 3.18**  
**2011 Iowa Location #3 – W. Locust St & Harrison St (Davenport)**



- |  |  |
|--|--|
| 1. East Bound, Straight, Rear end (5)                  | 6. West Bound, Left Turn, Non-Collision (1)  |
| 2. East Bound, Straight, Broadside (1)                 | 7. West Bound, Straight, Broadside (1)       |
| 3. East Bound, Straight, Angle, Oncoming Left Turn (1) | * East Bound, Not Enough Info, Broadside (1) |
| 4. South Bound, Straight, Rear end (2)                 | ← Not Reported, Straight, Broadside (1)      |
| 5. West Bound, Straight, Non-Collision (1)             |  |

**2011 IOWA LOCATION #7 – ELMORE AVE & EAST 53<sup>RD</sup> ST – DAVENPORT**

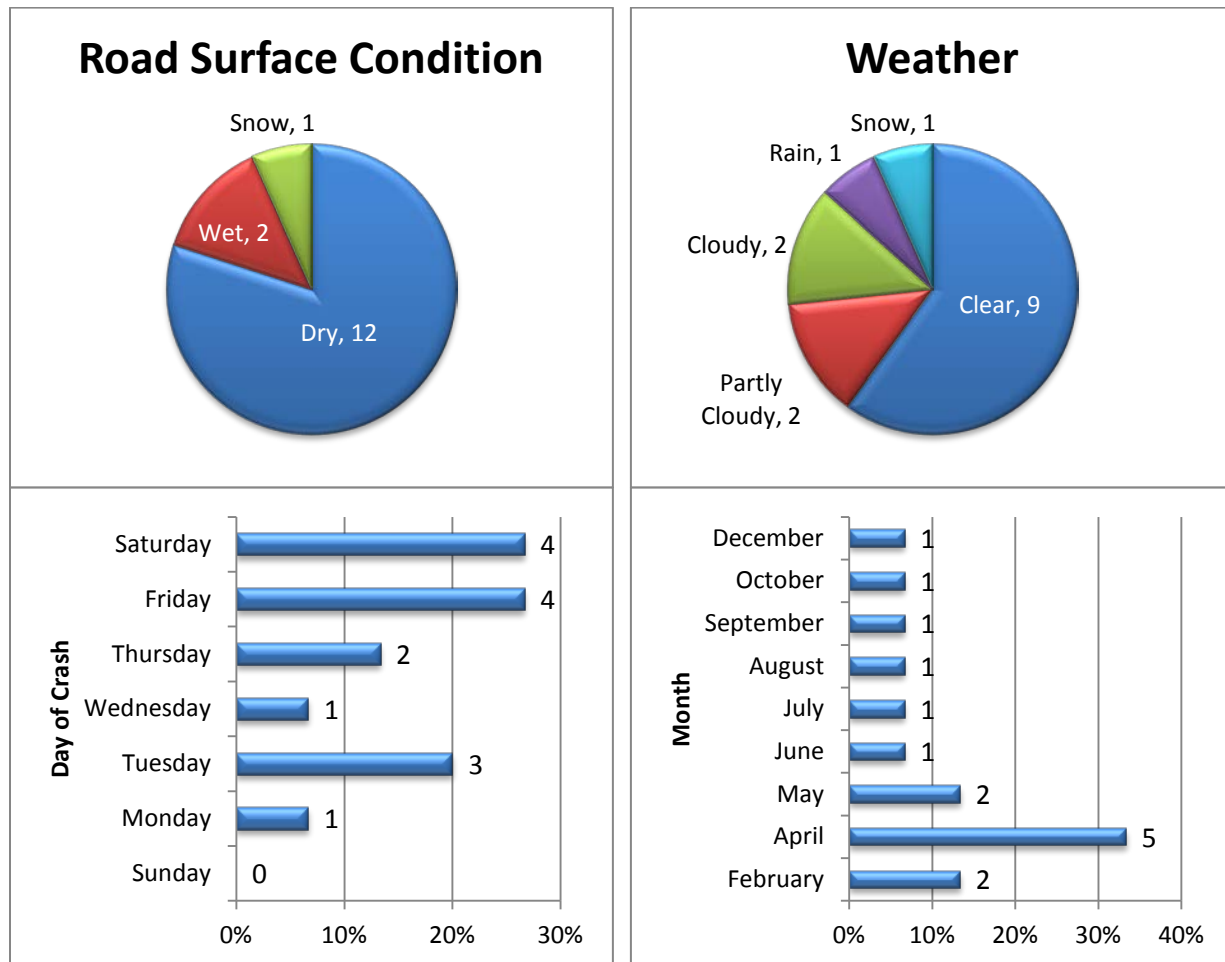
Ranked seventh, with a score of 17, this location experienced 15 crashes in 2011, resulting in 2 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 0.93 crashes per MEV. Crashes involving rear-ends and same direction sideswipes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Fridays and Saturdays.

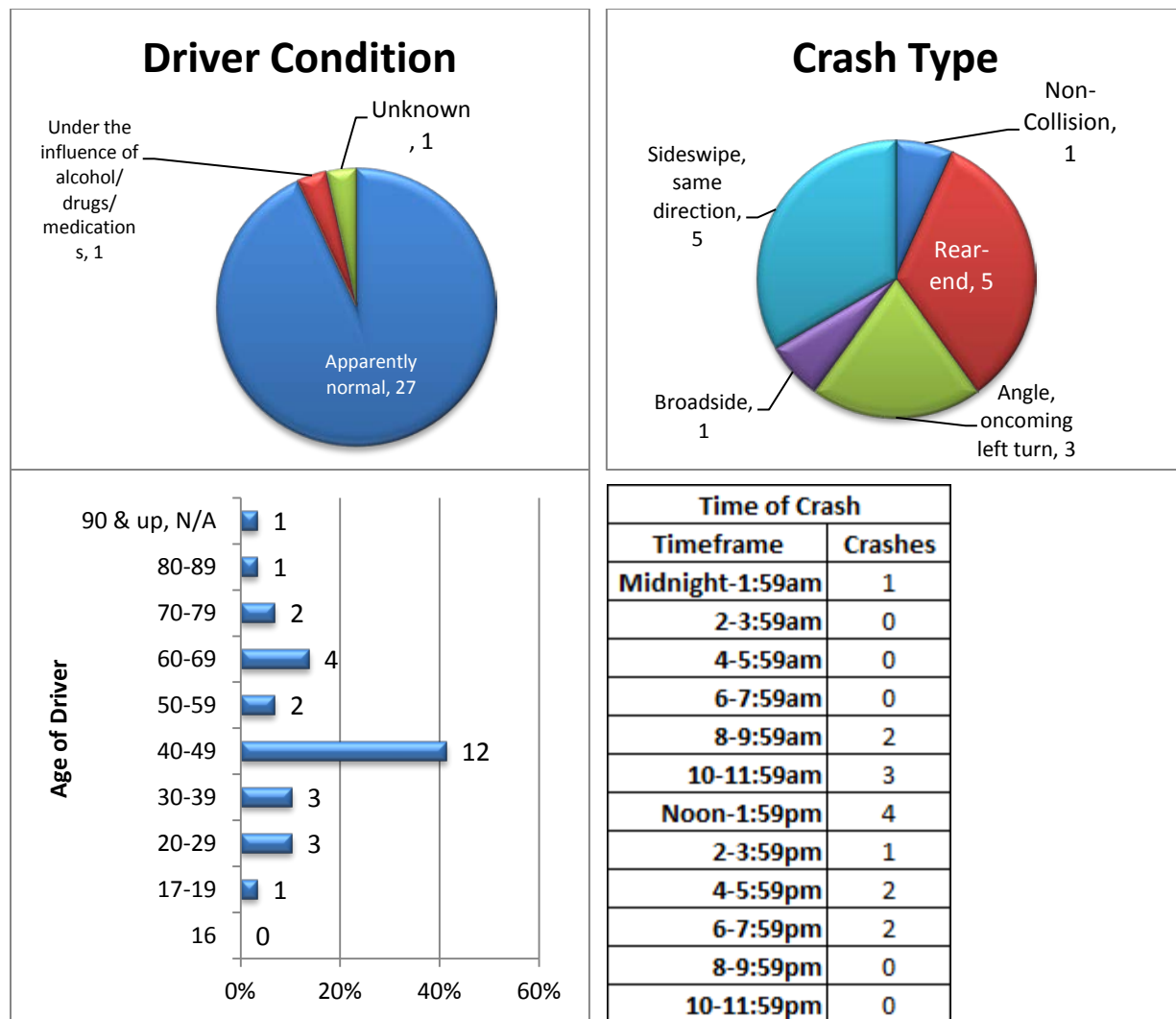
The average daily traffic is 44,050 at this intersection. Elmore Ave is local 4 lane road with a posted speed limit of 45 mph. East 53<sup>rd</sup> St is a 7 lane principal arterial roadway with a posted speed limit of 45 mph. East 53<sup>rd</sup> St has, on each eastbound and westbound approach, two left turn lanes, two through lanes, and one right turn lane.

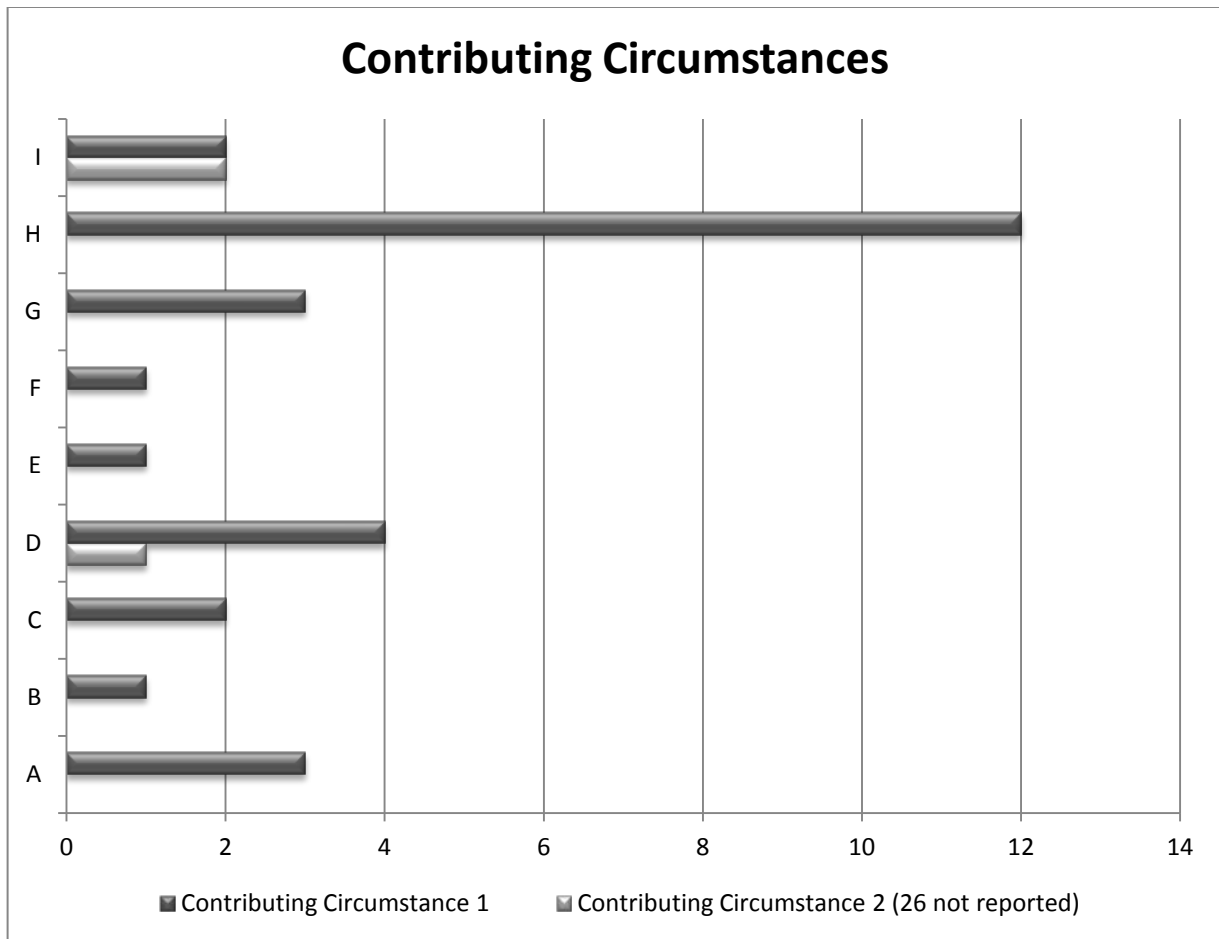
**Table 3.19**  
**Elmore Ave & East 53<sup>rd</sup> St (Davenport) 2010 & 2011 Comparison**

	<b>2010</b>	<b>2011</b>
<b>Rank</b>	5	7
<b>Total Crashes</b>	18	15
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	2	2
<b>Crash Rate</b>	1.12	0.93
<b>Predominant Crash Type</b>	Following too close	Rear-end & Same direction sideswipes

**Figure 3.19**  
**Elmore Ave & East 53<sup>rd</sup> St (Davenport) – Crash Frequency by Various Conditions**







#### Chart Key

- A: Ran Traffic Signal
- B: Driving too fast for conditions
- C: Made improper turn
- D: Followed too close
- E: FTYROW: Making left turn
- F: FTYROW: Other
- G: Other: Other improper action
- H: Other: No improper action
- I: Unknown



**Map 3.19**  
**2011 Iowa Location #7 - Elmore Ave & 53<sup>rd</sup> St (Davenport)**



- |  |  |
|--|--|
| 2. North Bound, Right Turn, Non-Collision (1)                | 10. West Bound, Straight, Broadside (1)                  |
| 3. East Bound, Right Turn, Rear end (1)                      | 4. South Bound, Right Turn, Rear end (1)                 |
| 8. West Bound, Left Turn, Sideswipe, Same Direction (2)      | 6. South Bound, Left Turn, Angle, Oncoming Left Turn (1) |
| 9. West Bound, Changing Lanes, Sideswipe, Same Direction (1) | 5. South Bound, Left Turn, Sideswipe, Same Direction (2) |
| 1. North Bound, Right Turn, Rear end (3)                     | 7. West Bound, Straight, Angle, Oncoming Left Turn (1)   |
| 4. East Bound, Left Turn, Angle, Oncoming Left Turn (1)      |  |



## 2011 IOWA LOCATION #8 – KIMBERLY RD & LOCUST ST/MIDDLE RD – DAVENPORT/BETTENDORF

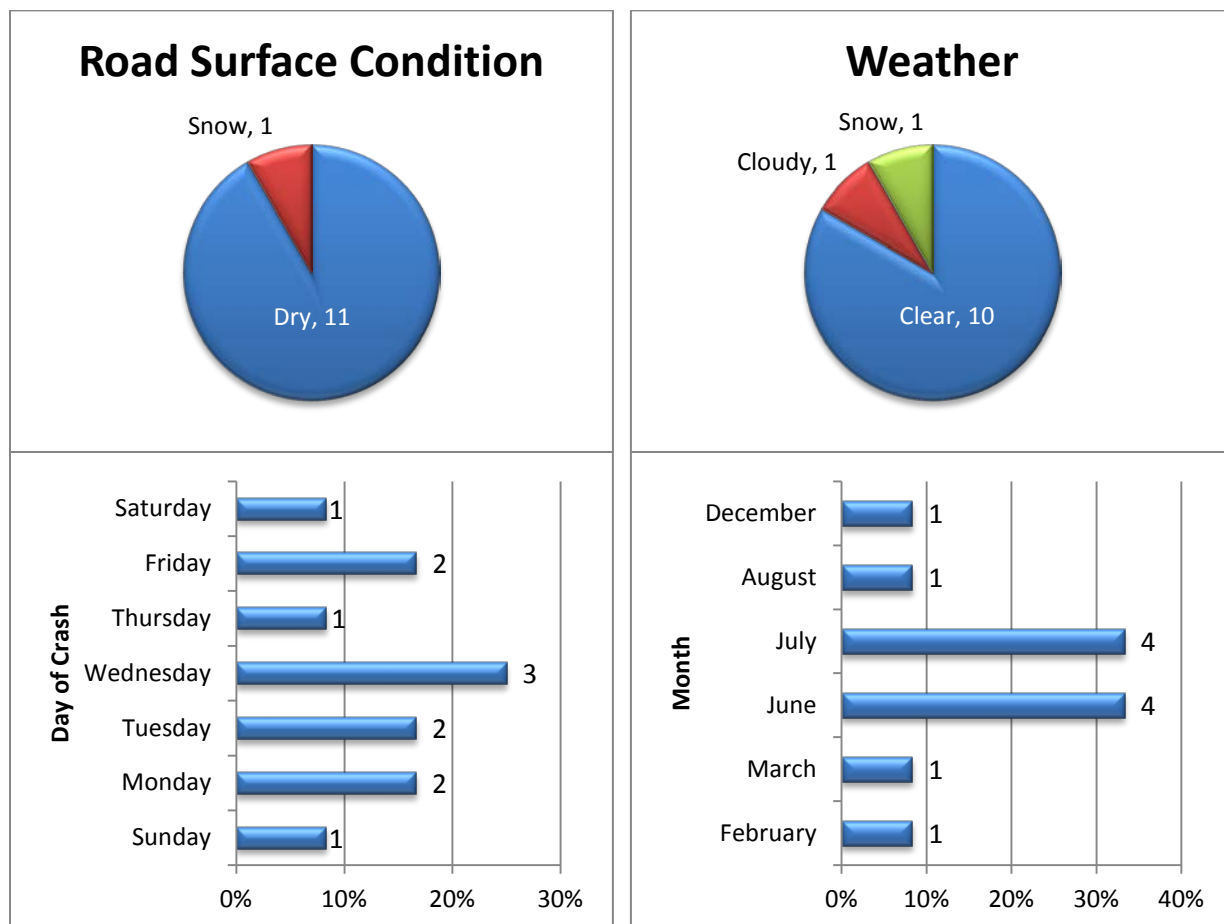
Tied for rank eight, with a score of 16, this location experienced 12 crashes in 2011, resulting in 4 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.04 crashes per MEV. Crashes involving angle, oncoming left turn was the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Wednesdays with crashes being reported on all days of the week.

The average daily traffic is 31,500 at this intersection. Kimberly Rd is a 5 lane minor arterial road with a posted speed limit of 35 mph. Locust St is a 5 lane minor arterial road with a posted speed limit of 30 mph. Middle Rd is a 5 lane minor arterial road with a posted speed limit of 30 mph. The eastbound approach of Locust St has one left turn lane. The westbound approach of Middle Rd has one left turn lane. Both approaches of Kimberly Rd has one left turn lane.

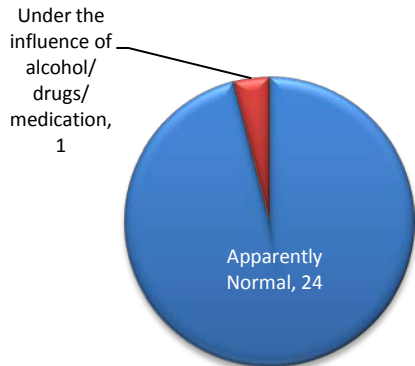
**Table 3.20**  
**Kimberly Rd & Locust St/Middle Rd (Davenport/Bettendorf)**  
**2010 & 2011 Comparison**

	<b>2010 (<i>not ranked</i>)</b>	<b>2011</b>
<b>Rank</b>	<i>Not Ranked</i>	8
<b>Total Crashes</b>	<i>Not Ranked</i>	12
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	0
<b># of Injury related crashes</b>	<i>Not Ranked</i>	4
<b>Crash Rate</b>	<i>Not Ranked</i>	1.04
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Angle, oncoming left turn

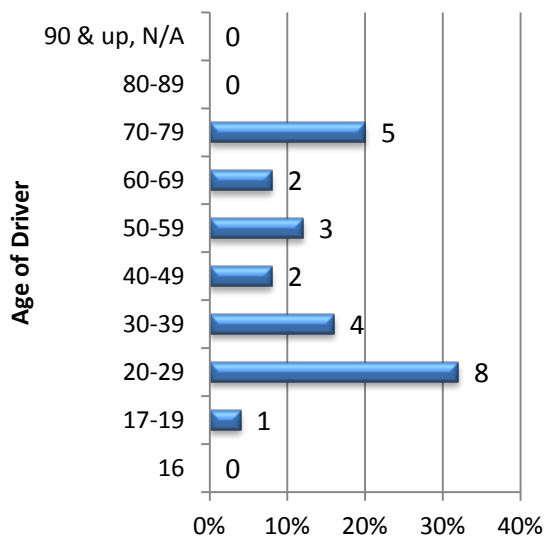
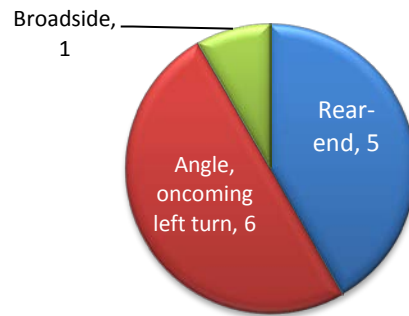
**Figure 3.20**  
**Kimberly Rd & Locust St/Middle Rd (Davenport/Bettendorf) – Crash Frequency by Various Conditions**



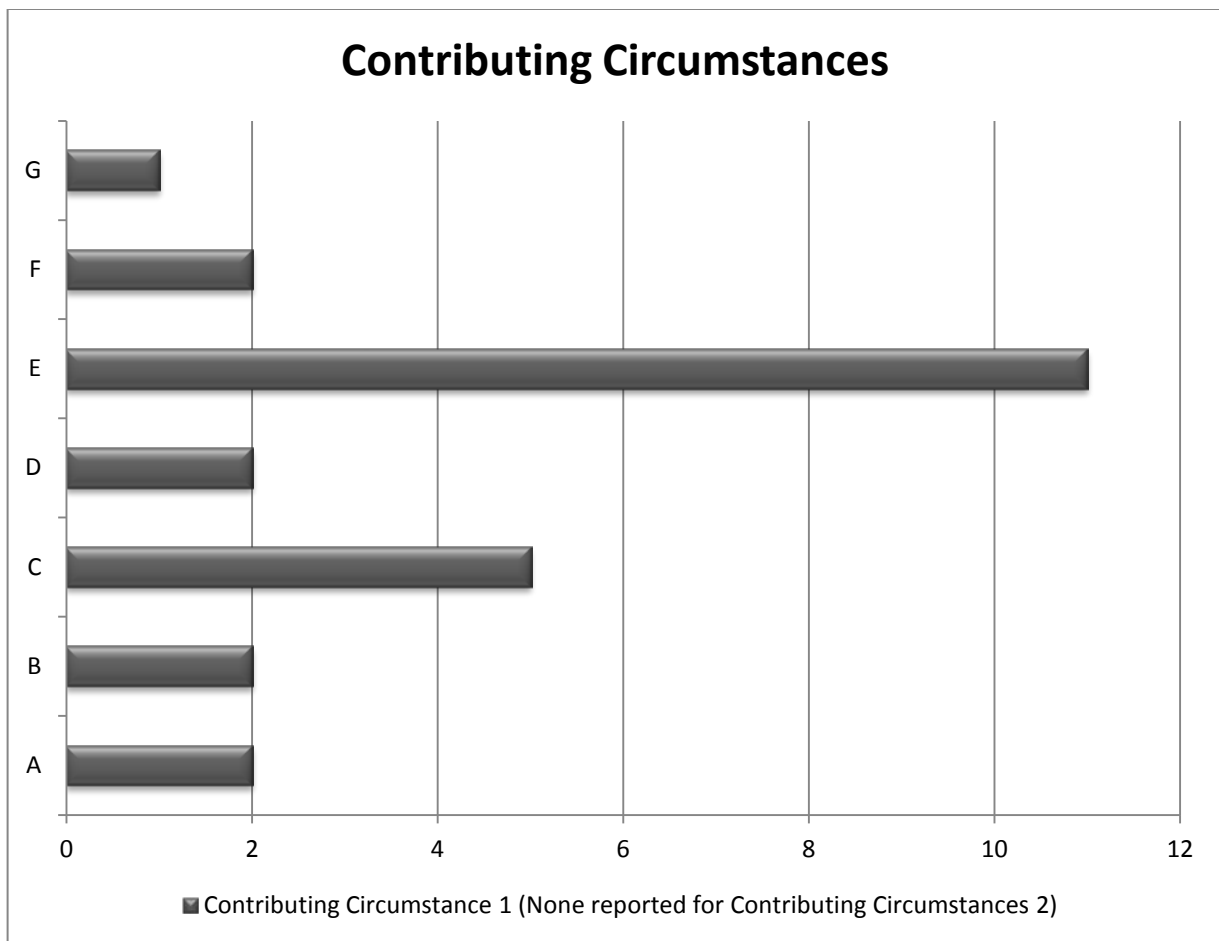
### Driver Condition



### Crash Type



Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	0
6-7:59am	0
8-9:59am	2
10-11:59am	1
Noon-1:59pm	3
2-3:59pm	4
4-5:59pm	0
6-7:59pm	0
8-9:59pm	0
10-11:59pm	2



#### Chart Key

- A: Driving too fast for conditions
- B: Lost Control
- C: FTYROW: Making left turn
- D: Other: Other improper action
- E: Other: no improper action
- F: Unknown
- G: Made improper turn

**Map 3.20**  
**2011 Iowa Location #8 - Kimberly Rd & Locust St/Middle Rd (Davenport/Bettendorf)**



- |  |  |
|--|--|
| 1. North Bound, Left Turn, Angle, Oncoming Left Turn (3) | 5. East Bound, Slowing/Stopping, Rear end (1)            |
| 2. North Bound, Straight, Angle, Oncoming Left Turn (1)  | 7. South Bound, Left Turn, Angle, Oncoming Left Turn (1) |
| 3. North Bound, Straight, Rear end (1)                   | 8. West Bound, Left Turn, Broadside (1)                  |
| 4. East Bound, Straight, Rear end (3)                    | 6. East Bound, Straight, Angle, Oncoming Left Turn (1)   |

**2011 IOWA LOCATION #8 – NORTH DIVISION ST & WEST 4<sup>TH</sup> ST – DAVENPORT**

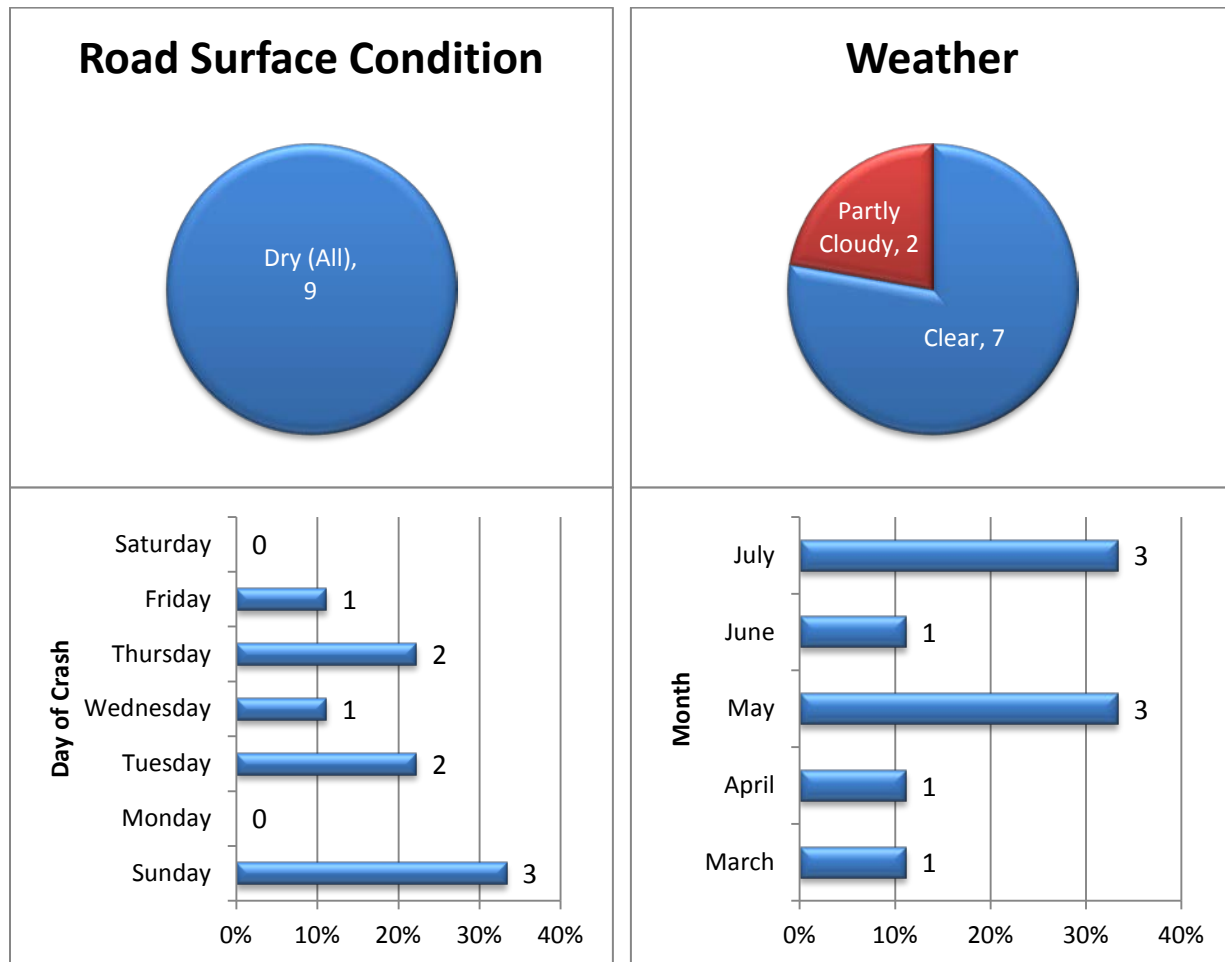
Tied for rank 8, with a score of 16, this location experienced 9 crashes in 2011, resulting in 4 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 1.43 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Sundays with no reported crashes on Mondays and Saturdays.

Average daily traffic count for this intersection is 17,250. North Division St is a 4 lane, one way (westbound) minor arterial road with a posted speed limit of 35 mph north of 4<sup>th</sup> St and 25 mph south of 4<sup>th</sup> St. West 4<sup>th</sup> St is a 3 lane minor arterial road with a posted speed limit of 35 mph.

**Table 3.21**  
**N. Division St & W. 4<sup>th</sup> St (Davenport) 2010 & 2011 Comparison**

	<b>2010 (<i>not ranked</i>)</b>	<b>2011</b>
<b>Rank</b>	<i>Not Ranked</i>	8
<b>Total Crashes</b>	<i>Not Ranked</i>	9
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	0
<b># of Injury related crashes</b>	<i>Not Ranked</i>	4
<b>Crash Rate</b>	<i>Not Ranked</i>	1.43
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Rear-end

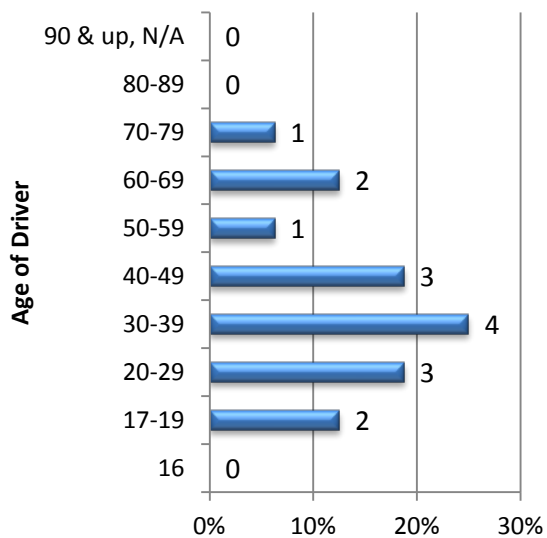
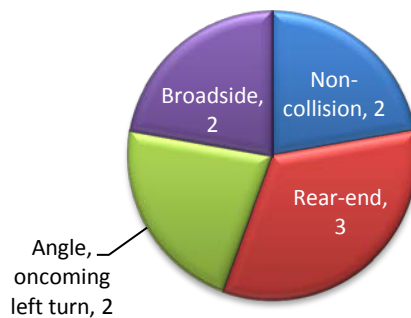
**Figure 3.21**  
**N. Division St & W. 4<sup>th</sup> St (Davenport) – Crash Frequency by Various Conditions**



## Driver Condition

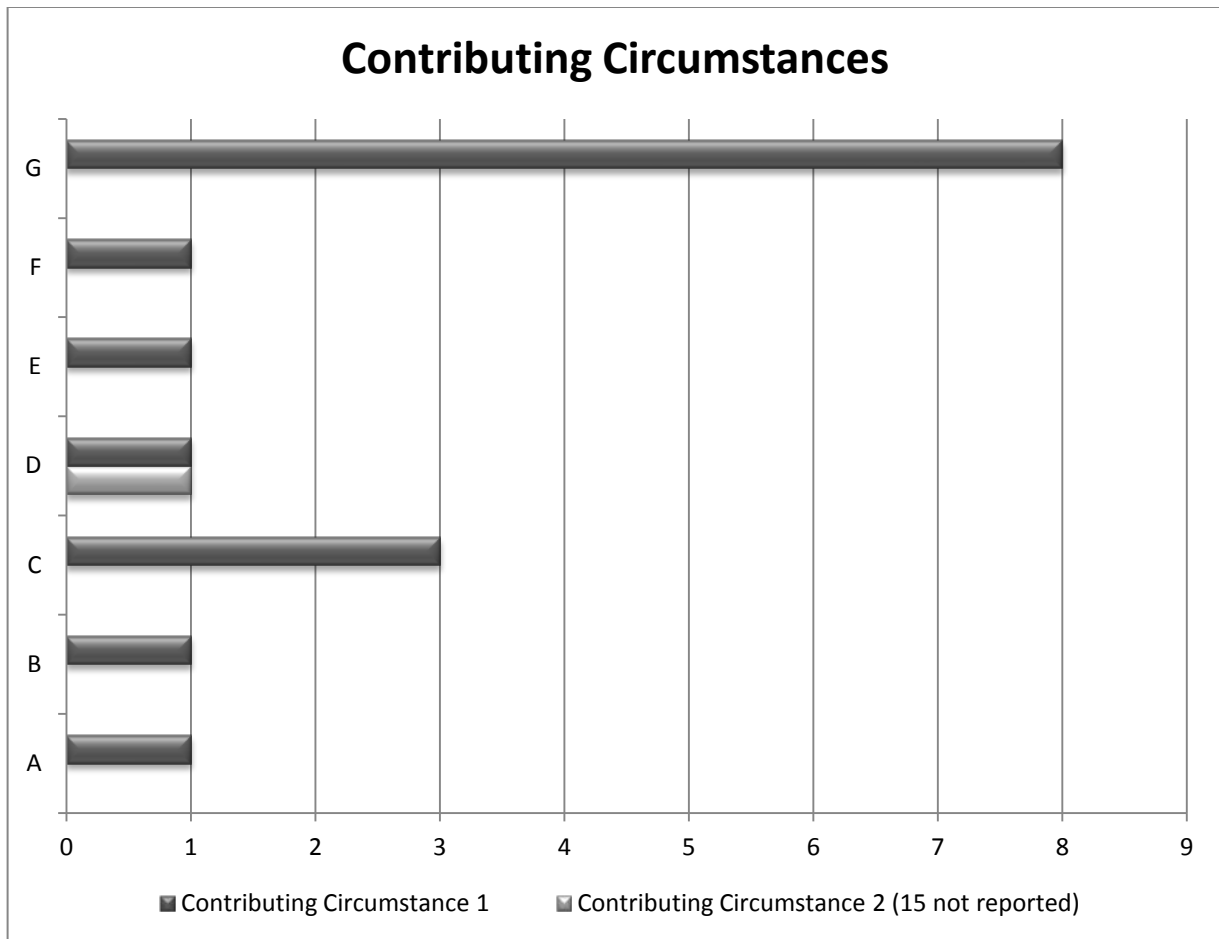


## Crash Type



Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	0
6-7:59am	1
8-9:59am	1
10-11:59am	0
Noon-1:59pm	2
2-3:59pm	2
4-5:59pm	0
6-7:59pm	1
8-9:59pm	2
10-11:59pm	0

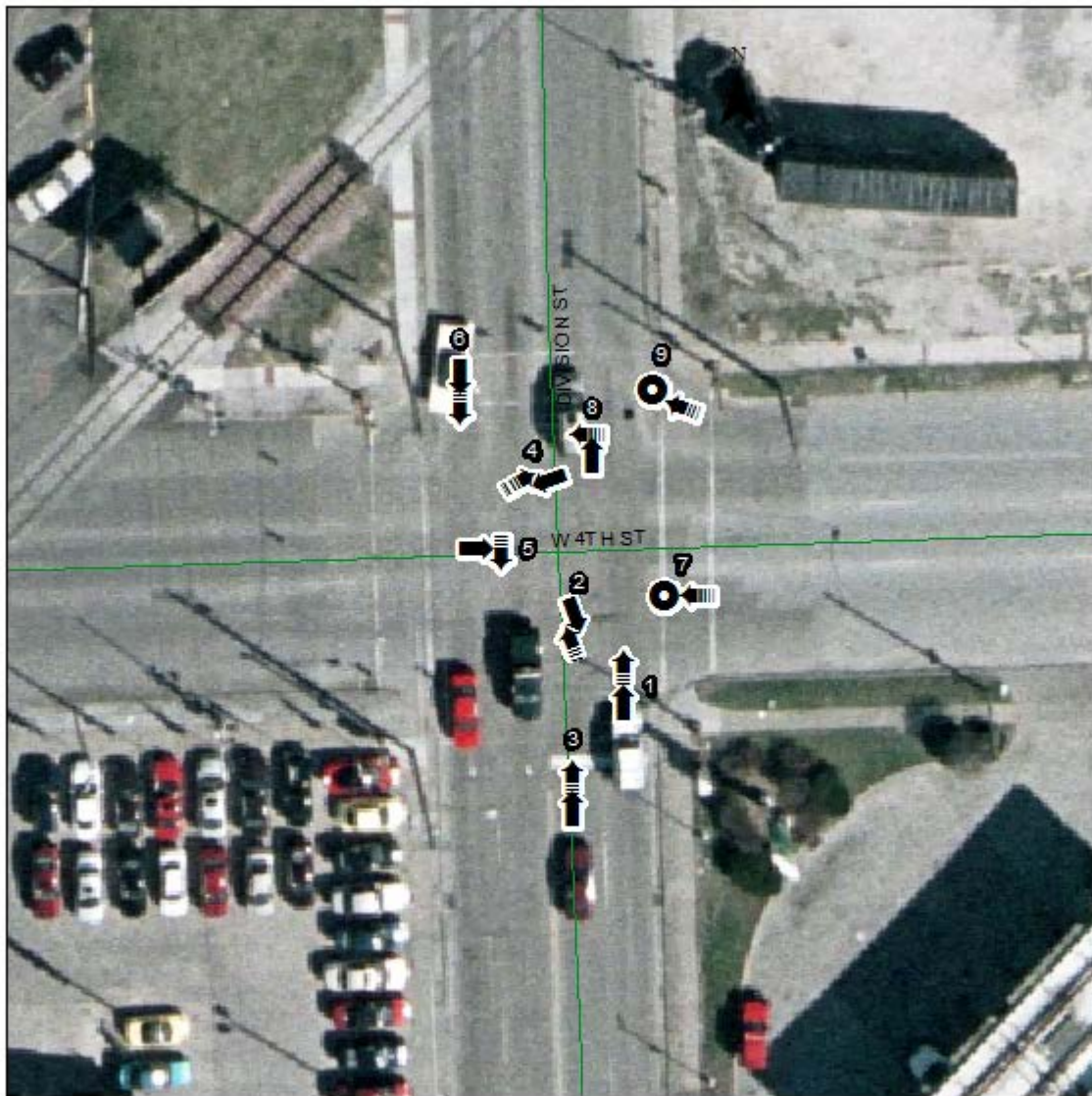




#### Chart Key

- A: Ran Traffic Signal
- B: Made improper turn
- C: Lost Control
- D: Followed too close
- E: FTYROW: Making left turn
- F: FTYROW: To pedestrian
- G: Other: No improper action

**Map 3.21**  
**2011 Iowa Location #8 – N. Division St & W. 4<sup>th</sup> St (Davenport)**



- |  |   |
|--|---|
| 1. North Bound, Straight, Rear end (1)                   | 9. West Bound, Right Turn, Non-Collision (1)            |
| 2. North Bound, Left Turn, Angle, Oncoming Left Turn (1) | 5. South Bound, Straight, Browsing (1)                  |
| 6. South Bound, Straight, Rear end (1)                   | 4. East Bound, Left Turn, Angle, Oncoming Left Turn (1) |
| 7. West Bound, Straight, Non-Collision (1)               | 3. North Bound, Slowing/Stopping, Rear end (1)          |
| 8. West Bound, Straight, Browsing (1)                    |   |

## 2011 IOWA LOCATION #10 – W. CENTRAL PARK AVE & MARQUETTE ST – DAVENPORT

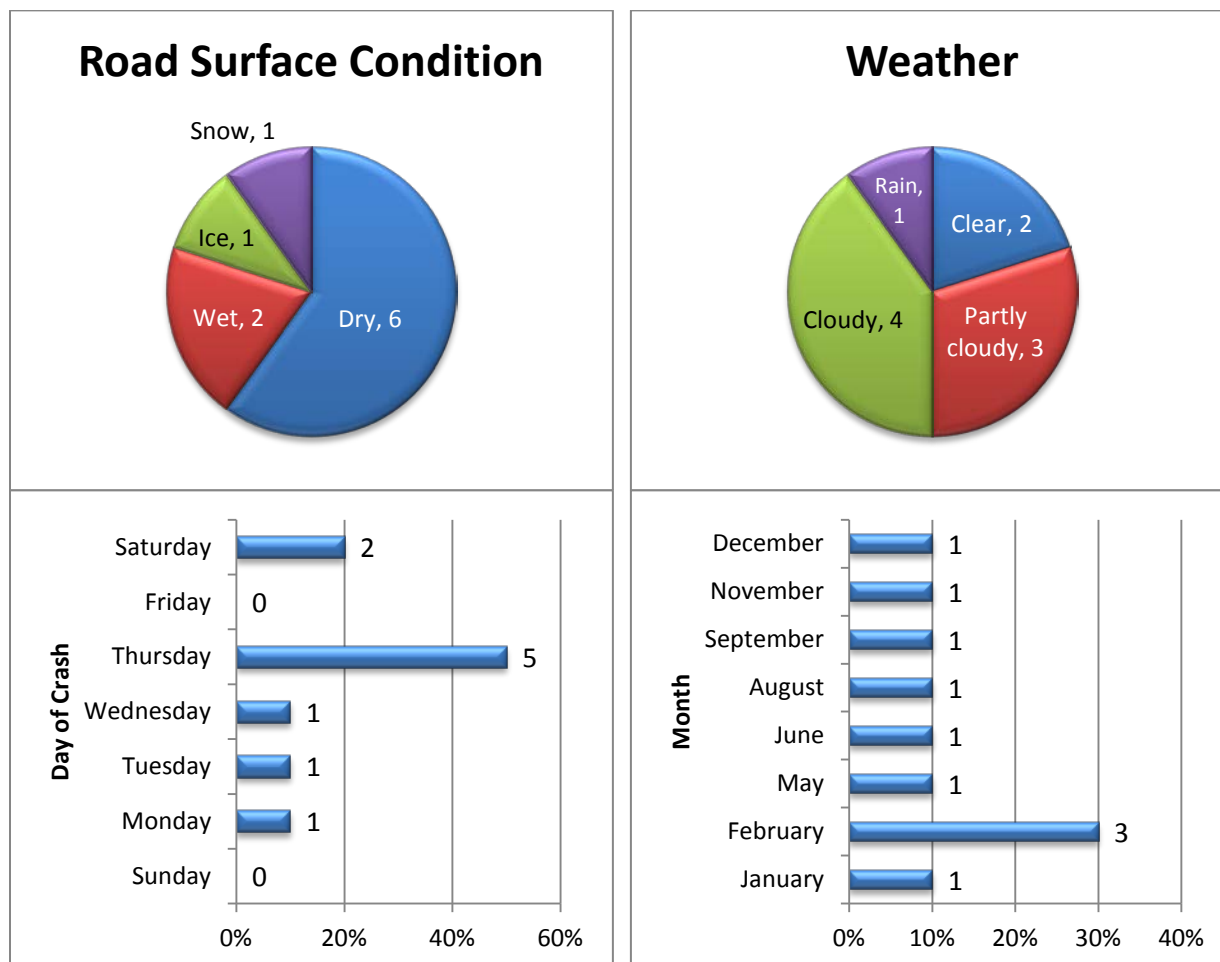
Tied for rank 10, with a score of 15, this location experienced 10 crashes in 2011, resulting in 2 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 1.41 crashes per MEV. Broadside crashes were the predominant crash type. Most crashes occurred during daylight hours in cloudy weather conditions and dry road surface conditions. The highest number of crashes occurred on Thursdays with no reported crashes on Sundays and Fridays.

Average daily traffic count for this intersection is 19,400. West Central Park Ave is a 4 lane minor arterial road. Marquette St is a 4 lane collector road north of West Central Park Ave and a 2 lane collector road south of West Central Park Ave. The posted speed limit along West Central Park Ave, in this area, is 30 mph. The posted speed limit is 35 mph along Marquette St in this area. The southbound approach of Marquette St has one left turn lane.

**Table 3.22**  
**W. Central Park Ave & Marquette St (Davenport) 2010 & 2011 Comparison**

	<b>2010</b>	<b>2011</b>
<b>Rank</b>	2	10
<b>Total Crashes</b>	13	10
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	6	2
<b>Crash Rate</b>	1.84	1.41
<b>Predominant Crash Type</b>	Rear-end	Broadside

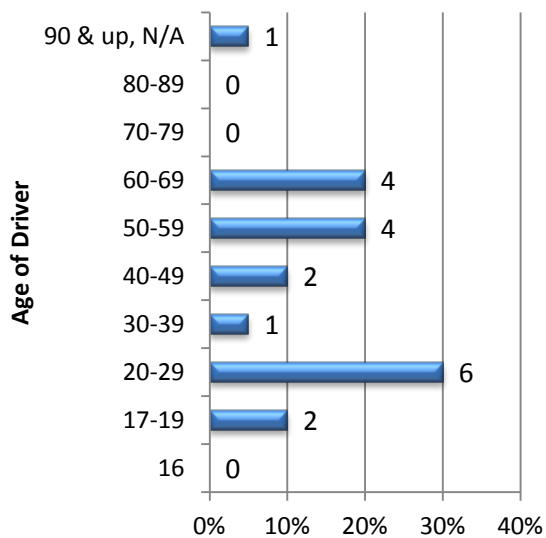
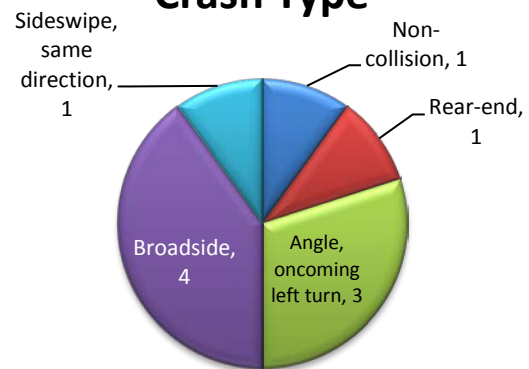
**Figure 3.22**  
**W. Central Park Ave & Marquette St (Davenport) – Crash Frequency by Various Conditions**



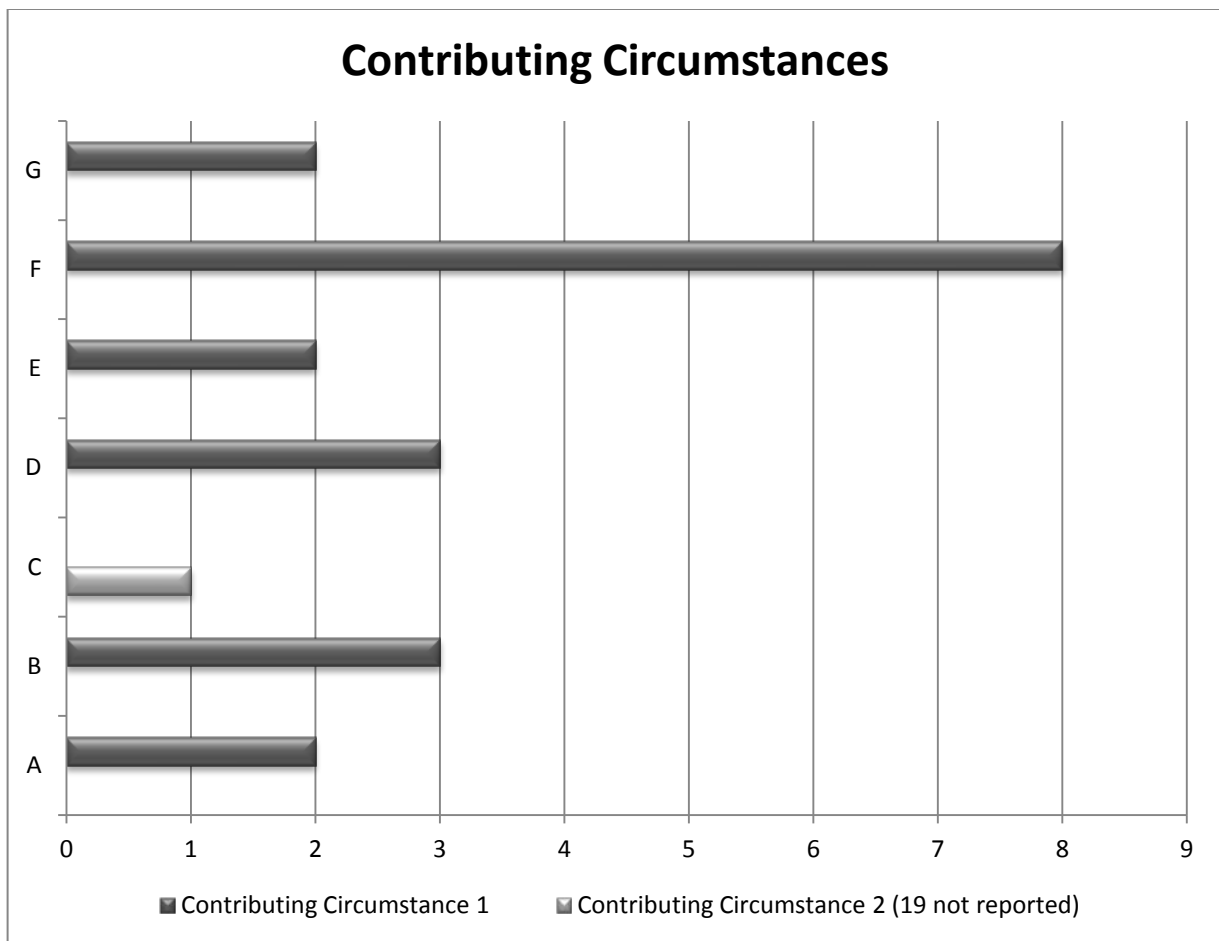
## Driver Condition



## Crash Type



Time of Crash	
Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	0
6-7:59am	1
8-9:59am	2
10-11:59am	2
Noon-1:59pm	0
2-3:59pm	3
4-5:59pm	0
6-7:59pm	1
8-9:59pm	0
10-11:59pm	1



**Chart Key**

- A: Ran Traffic Signal
- B: Lost Control
- C: Made improper turn
- D: FTYROW: Making left turn
- E: Other: Other improper action
- F: Other: No improper action
- G: Unknown

**Map 3.22**  
**2011 Iowa Location #10 – W. Central Park Ave & Marquette St (Davenport)**



- |   |  |
|---|--|
| 2. North Bound, Right Turn, Sideswipe, Same Direction (1) | 7. West Bound, Right Turn, Broadside (1)                 |
| 4. South Bound, Left Turn, Angle, Oncoming Left Turn (2)  | 8. West Bound, Left Turn, Non-Collision (1)              |
| 5. South Bound, Left Turn, Rear end (1)                   | 3. North Bound, Straight, Broadside (1)                  |
| 6. West Bound, Straight, Broadside (2)                    | 1. North Bound, Left Turn, Angle, Oncoming Left Turn (1) |



**2011 IOWA LOCATION #10 - LOCUST ST & MAIN ST – DAVENPORT**

Tied for rank 10, with a score of 15, this location experienced 9 crashes in 2011, resulting in 6 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 0.99 crashes per MEV. Broadside crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Fridays with no reported crashes on Sundays and Mondays.

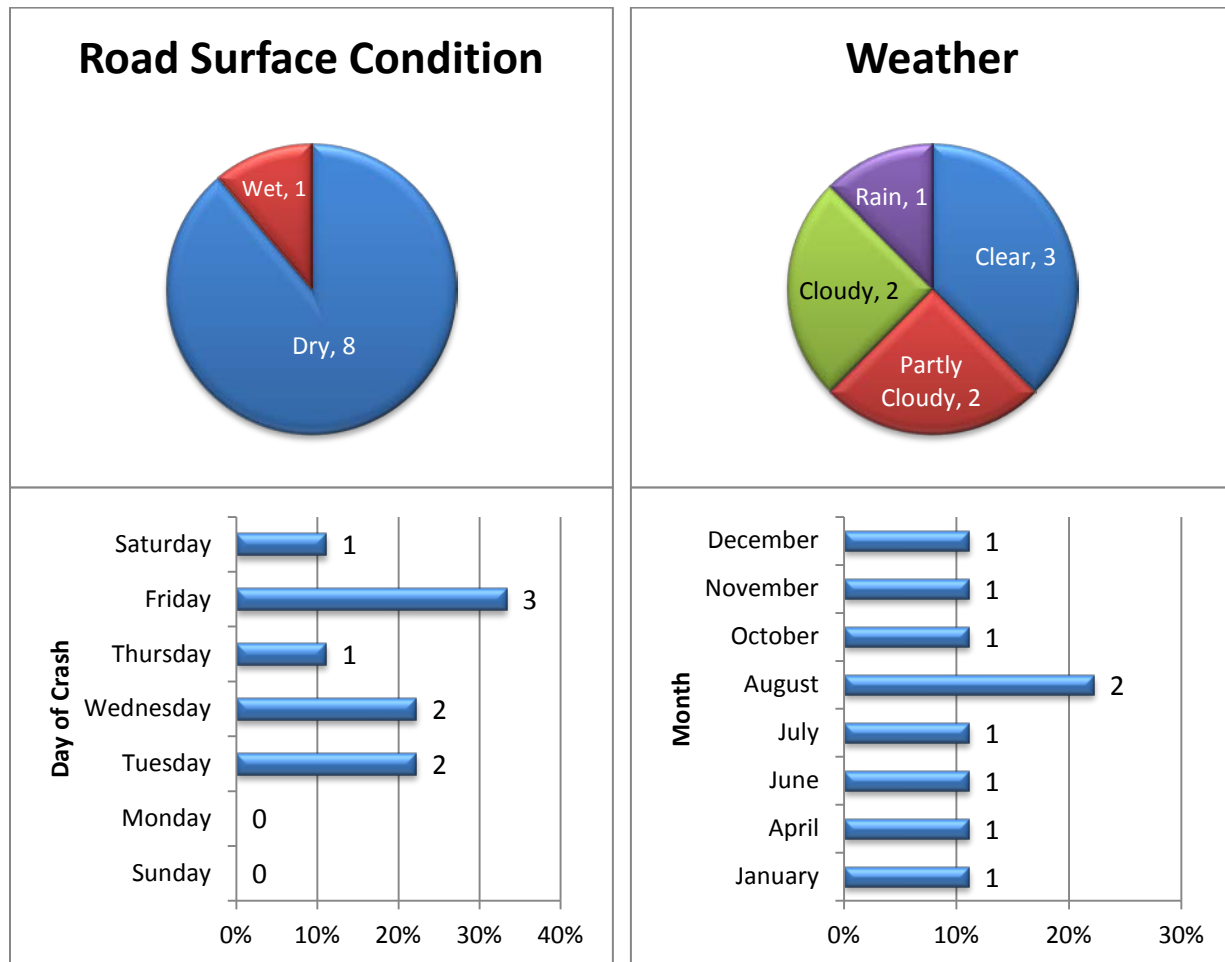
Average daily traffic count for this intersection is 24,945. Main St is a 2 lane minor arterial, south of Locust St, and local, north of Locust St, road with a posted speed limit of 30 mph. Locust St is a 5 lane minor arterial road with a posted speed limit of 25 mph.

**Table 3.23**  
**Locust St & Main St (Davenport) 2010 & 2011 Comparison**

	<b>2010 (<i>not ranked</i>)</b>	<b>2011</b>
<b>Rank</b>	<i>Not Ranked</i>	10
<b>Total Crashes</b>	<i>Not Ranked</i>	9
<b># of Fatality related crashes</b>	<i>Not Ranked</i>	0
<b># of Injury related crashes</b>	<i>Not Ranked</i>	6
<b>Crash Rate</b>	<i>Not Ranked</i>	0.99
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Broadside



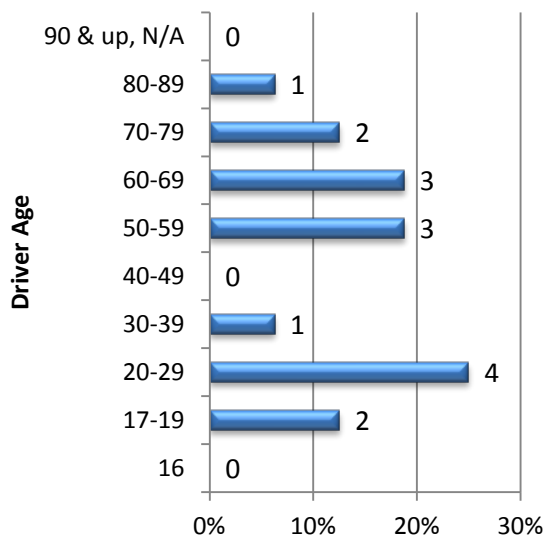
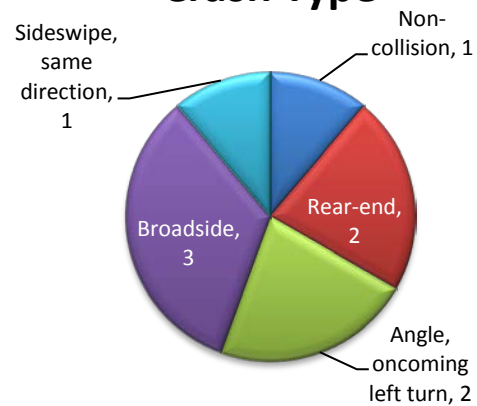
**Figure 3.23**  
**Locust St & Main St (Davenport) – Crash Frequency by Various Conditions**



## Driver Condition

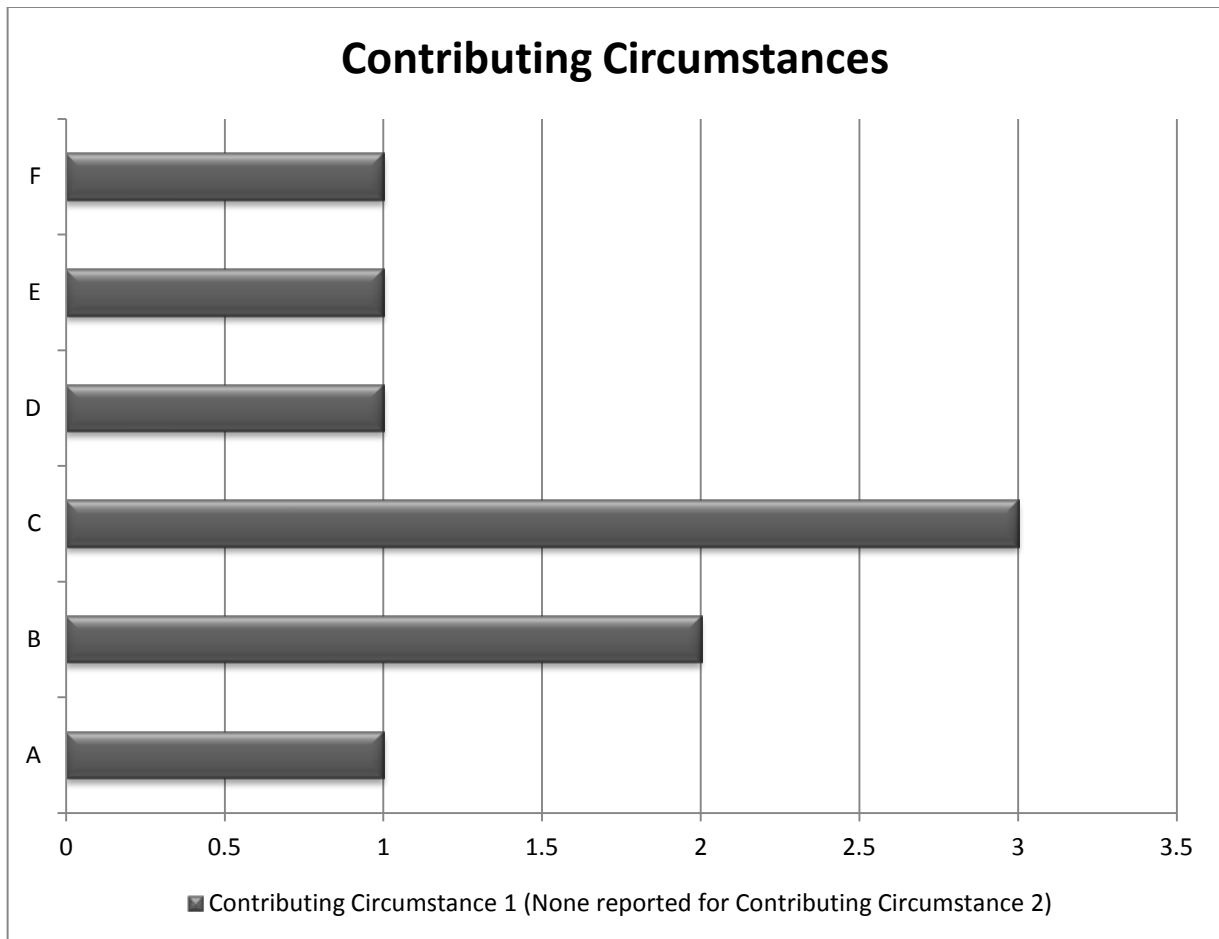


## Crash Type



## Time of Crash

Timeframe	Crashes
Midnight-1:59am	0
2-3:59am	0
4-5:59am	0
6-7:59am	0
8-9:59am	1
10-11:59am	1
Noon-1:59pm	0
2-3:59pm	4
4-5:59pm	3
6-7:59pm	0
8-9:59pm	0
10-11:59pm	0

**Chart Key**

- A: Ran Traffic Signal
- B: Followed too close
- C: TRYROW: Making left turn
- D: FTYROW: To pedestrian
- E: Other: Other improper action
- F: Unknown

**Map 3.23**  
**2011 Iowa Location #10 - Locust St & Main St (Davenport)**



- |  |   |
|--|---|
| 1. North Bound, Straight, Rear end (1)                       | 3. East Bound, Straight, Broadside (1)                  |
| 4. East Bound, Changing Lanes, Sideswipe, Same Direction (1) | 2. East Bound, Left Turn, Angle, Oncoming Left Turn (1) |
| 5. East Bound, Straight, Rear end (1)                        | 7. West Bound, Left Turn, Non-Collision (1)             |
| 6. South Bound, Left Turn, Broadside (1)                     | 9. West Bound, Left Turn, Angle, Oncoming Left Turn (1) |
| 8. West Bound, Straight, Broadside (1)                       |   |

### **Detailed Analysis of Illinois Quad Cities Top Locations**

In this chapter, top ranked intersections in the Illinois Quad Cities are analyzed individually. Each location analysis includes figures describing frequency of crash type, day of crash, weather, and road conditions. The first part of this chapter reports 2010 data and the second part of this chapter reports 2011 data.

As discussed in Chapter 3, the average crash rate for the top 12 Illinois locations for 2010 is 2.05. In the first part of this chapter, crash rates at each location are compared with the average crash rate. A table comparing each intersection's 2010 performance with 2007 performance is also given. Some intersections ranking in the top ten in 2010, were not ranked in 2007 and are so indicated in that location's comparison table.

The average crash rate for the top 10 Illinois locations for 2010 is 1.84. In the second part of this chapter, crash rates at each location are compared with the average crash rate. A table comparing each intersection's 2011 performance with 2010 performance is also given.

**CHAPTER 4 – PART 1     2010 ILLINOIS INTERSECTION CRASH DATA****2010 ILLINOIS LOCATION #1- IL 5/JOHN DEERE EXPY & 38<sup>TH</sup> ST- MOLINE**

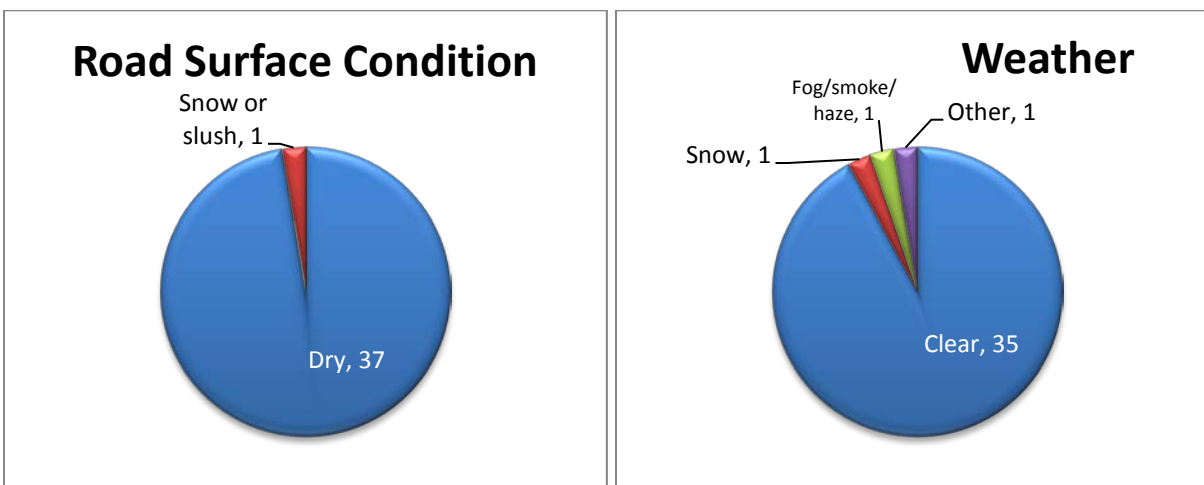
Ranked first, with a score of 38, this location experienced 38 crashes in 2010, resulting in 13 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.93 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Wednesdays with crashes reported for all days of the week.

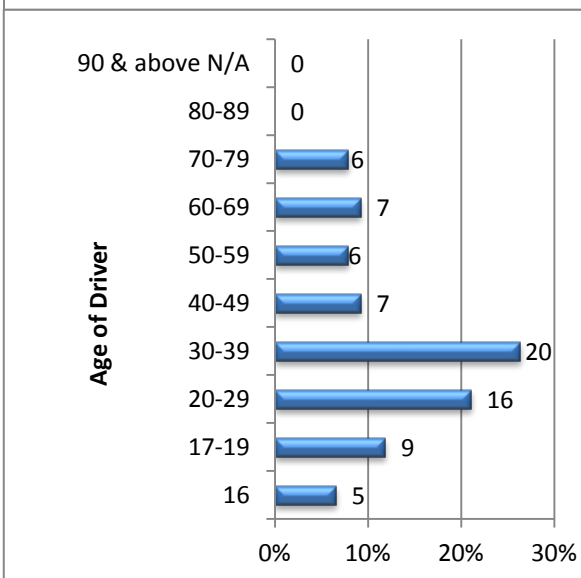
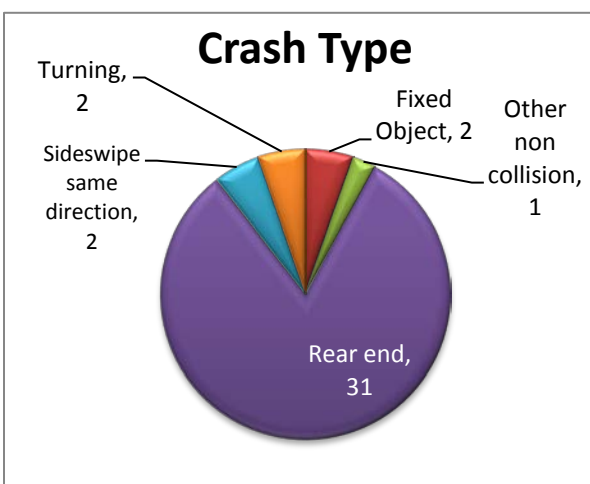
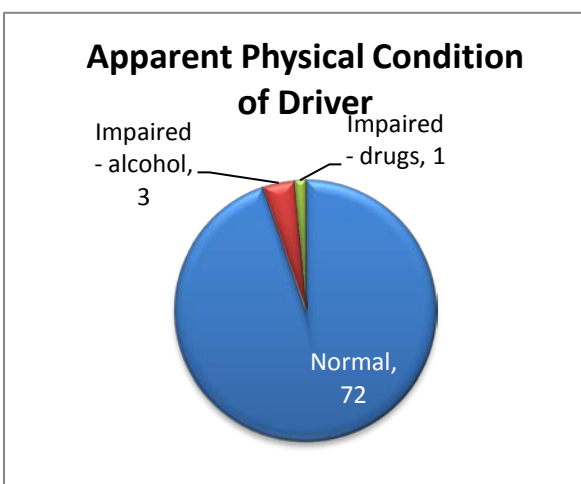
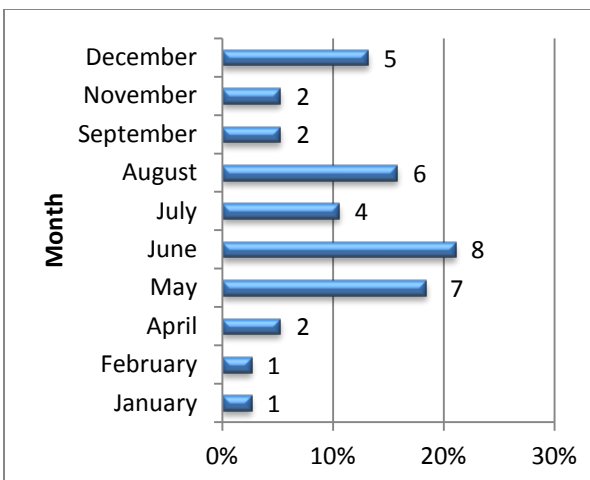
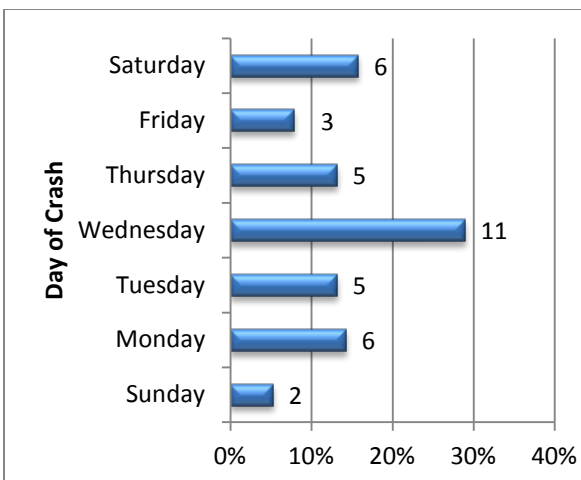
Average daily traffic for this intersection is 54,050. IL 5/ John Deere Expressway is a divided, four-lane highway with a posted speed limit of 55 mph. There are left-turn only lanes on both the east and west approaches. Thirty-Eighth Street is a two-lane collector road with a posted speed limit of 40 mph on the southbound lanes and 30 mph on the northbound lanes. There are left and right turn only lanes on both the north and south approaches.

**Table 4.1**  
**IL 5/ John Deere Expy. & 38<sup>th</sup> St (Moline) 2007 & 2010 Comparison**

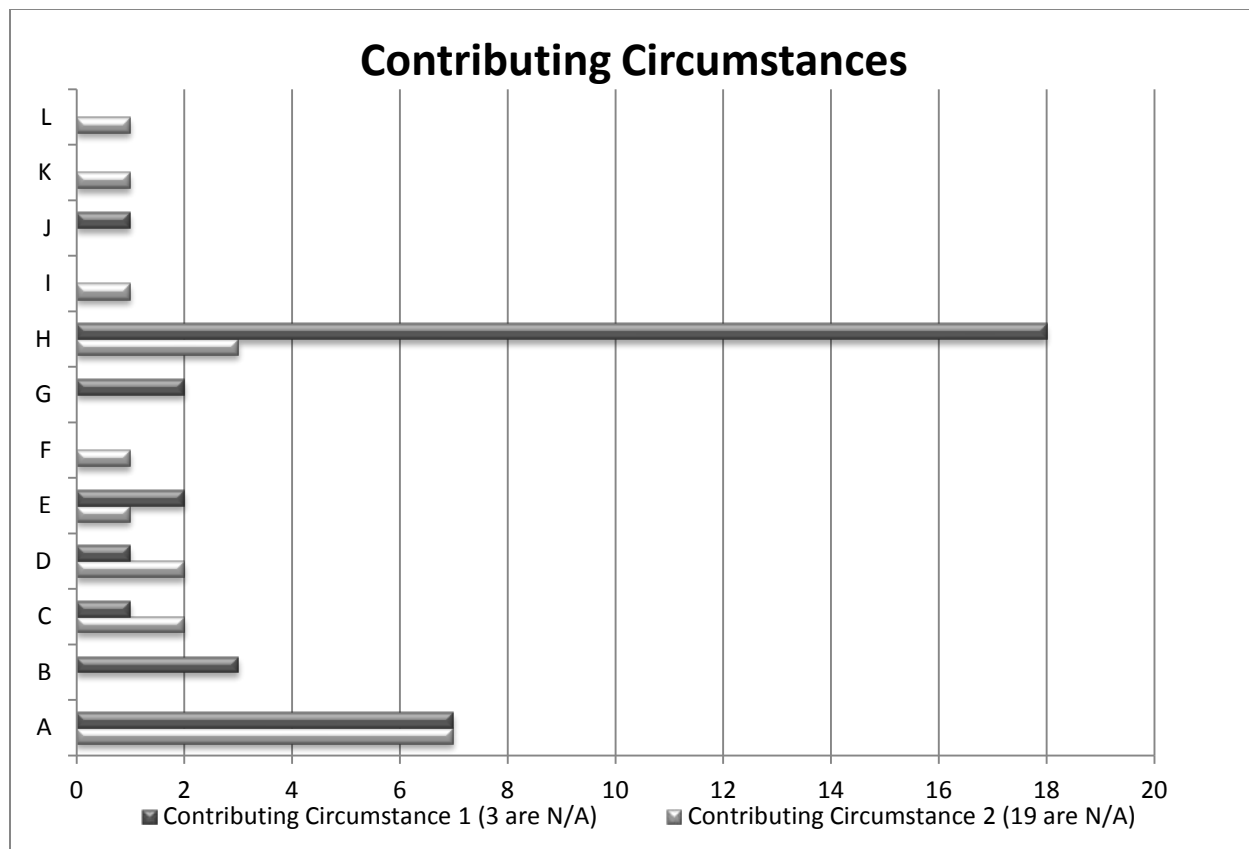
	<b>2007</b>	<b>2010</b>
<b>Rank</b>	2	1
<b>Total Crashes</b>	46	38
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	12	13
<b>Crash Rate</b>	2.43	1.93
<b>Predominant Crash Type</b>	Rear-end	Rear-end

**Figure 4.1**  
**Illinois Location #1 - Crash Frequency by Crash Type and Various Conditions**





Time of Crash			
Hour	Crashes	Hour	Crashes
1	1	13	3
2	1	14	4
3	0	15	1
4	0	16	4
5	0	17	3
6	0	18	1
7	4	19	0
8	0	20	3
9	0	21	0
10	3	22	1
11	2	23	1
12	6	24	0

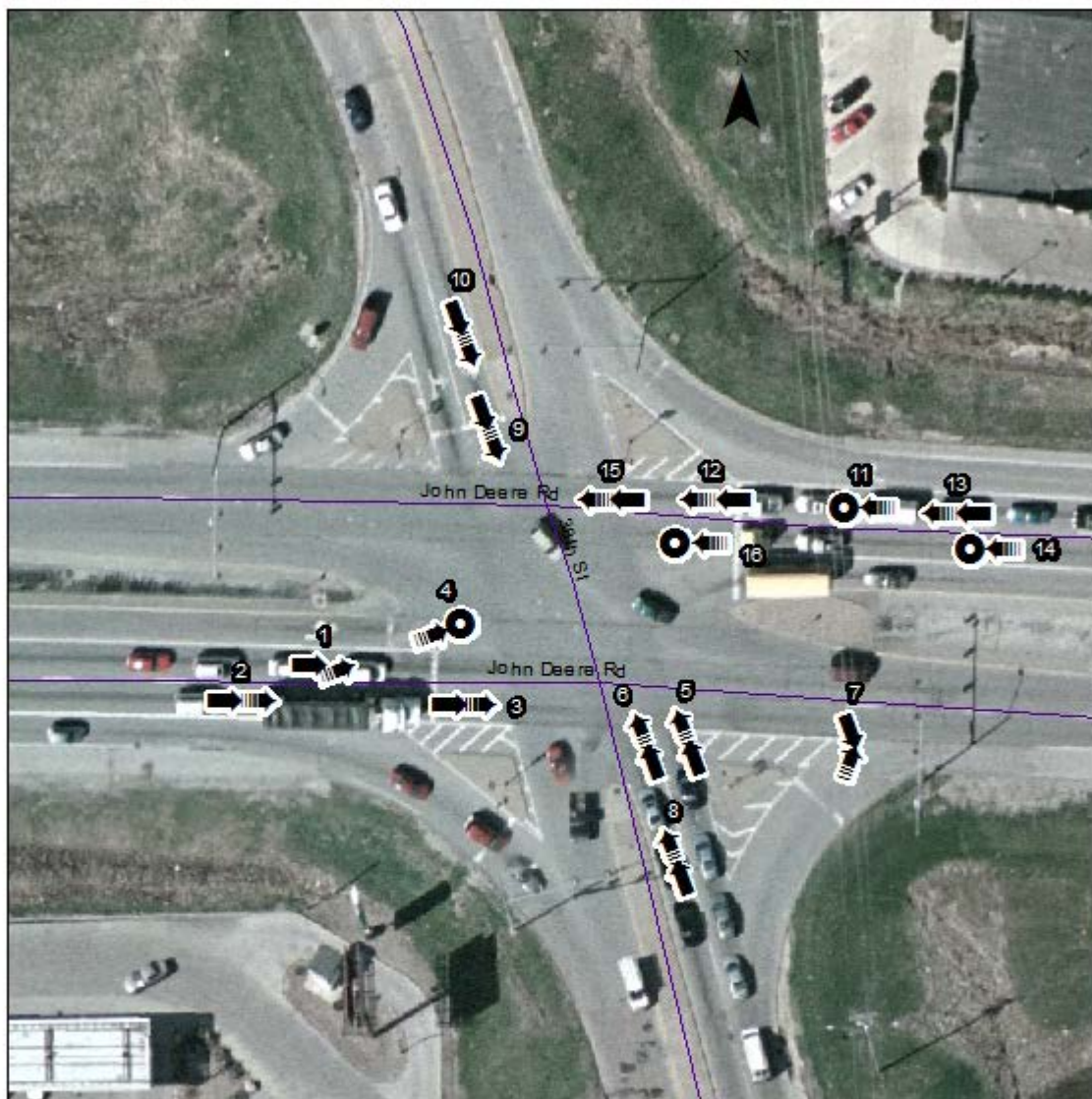


#### Chart Key

- A: Following too closely
- B: Under the influence of alcohol/drugs
- C: Equipment - vehicle condition
- D: Driving skills/knowledge/experience
- E: Improper lane usage
- F: Exceeding safe speed for conditions
- G: Disregarding traffic signals
- H: Failing to reduce speed to avoid a crash
- I: Distraction from inside vehicle
- J: Distraction from outside vehicle
- K: Distraction - electronic communication device (cell phone, texting, etc.)
- L: Operating vehicle in erratic, reckless, careless, negligent, or aggressive manner



**Map 4.1**  
**2010 Illinois Location #1- IL 5/John Deere Expy & 38<sup>th</sup> St (Moline)**



- |  |  |
|--|--|
| 1. East Bound, Changing Lanes, Sideswipe, Same Direction (2) | 9. South Bound, Slow/Stop in Traffic, Rear end (1)             |
| 2. East Bound, Slow/Stop in Traffic, Rear end (7)            | 10. Southeast Bound, Straight, Rear end (1)                    |
| 3. East Bound, Straight, Rear end (6)                        | 11. West Bound, Skidding/Control Loss, Other Non-Collision (1) |
| 4. East Bound, Left Turn, Fixed Object (1)                   | 12. West Bound, Slow/Stop in Traffic, Rear end (4)             |
| 5. North Bound, Starting in Traffic, Rear end (1)            | 13. West Bound, Starting in Traffic, Rear end (1)              |
| 6. North Bound, Straight, Rear end (1)                       | 14. West Bound, Skidding/Control Loss, Other Non-Collision (1) |
| 7. Northeast Bound, Right turn, Turning (1)                  | 15. West Bound, Straight, Rear end (8)                         |
| 8. Northwest Bound, Slow/Stop in Traffic, Rear end (1)       | 16. West Bound, Straight, Fixed Object (1)                     |

**2010 ILLINOIS LOCATION #2 - IL 5/JOHN DEERE EXPY & 41<sup>ST</sup> ST- MOLINE**

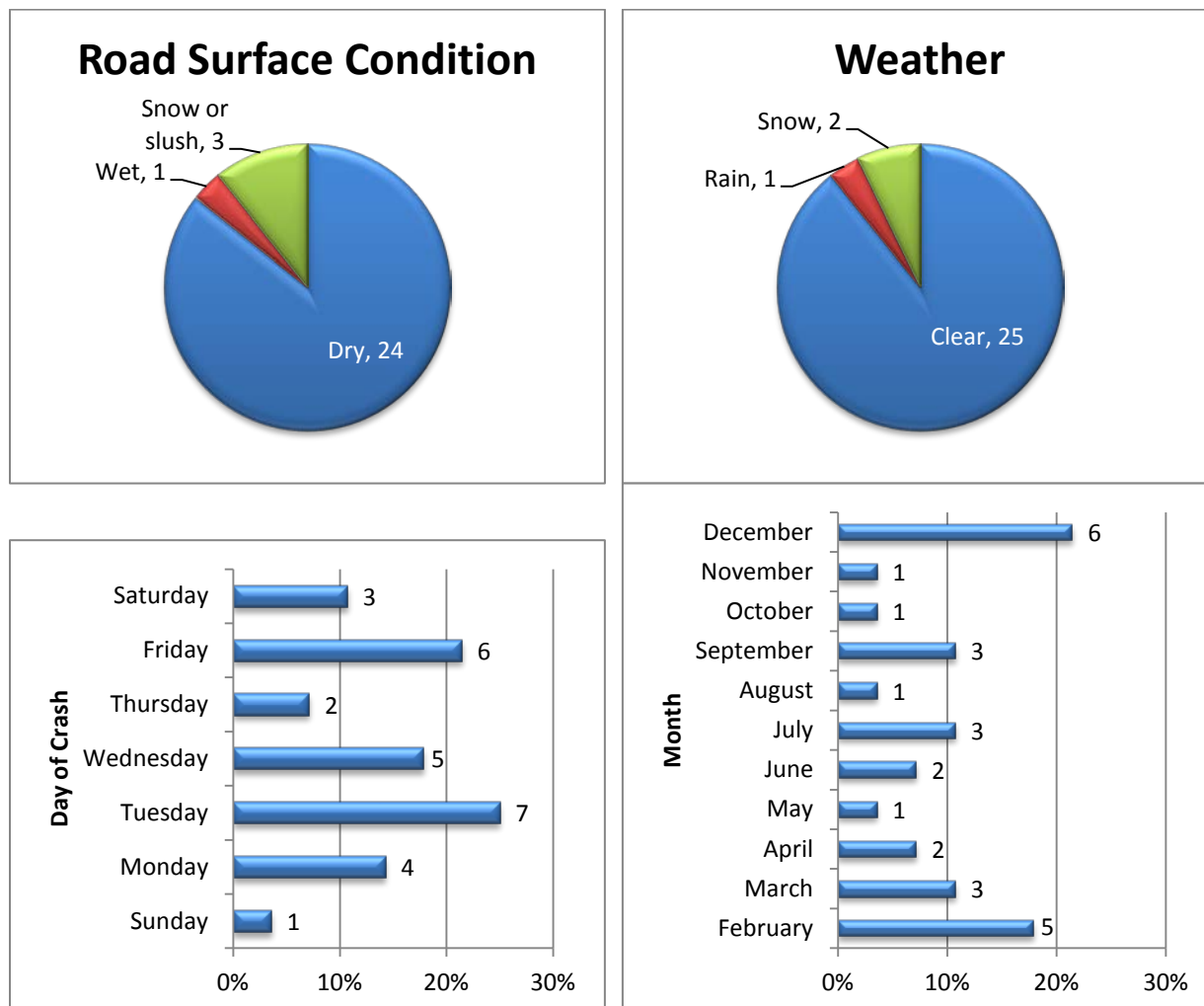
Ranked second, with a score of 33, this location experienced 28 crashes in 2010, resulting in 10 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.55 crashes per MEV. Similar to the previous IL 5/John Deere Expressway intersection, rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Fridays with crashes reported for all days of the week.

Average daily traffic for this intersection is 49,600. IL 5/John Deere Expressway is a four-lane principal arterial road at this location, with a speed limit of 55 mph. Forty-First Street is a four-lane minor arterial on the southbound approach and collector on the northbound approach. Left turn lanes are provided for all approaches at this intersection. Right-turn lanes are provided and channelized at each corner.

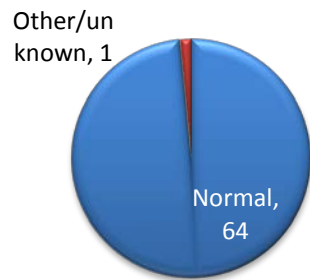
**Table 4.2**  
**IL 5/ John Deere Expy & 41<sup>st</sup> St (Moline) 2007 & 2010 Comparison**

	<b>2007</b>	<b>2010</b>
<b>Rank</b>	3	2
<b>Total Crashes</b>	34	28
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	15	10
<b>Crash Rate</b>	1.98	1.55
<b>Predominant Crash Type</b>	Rear-end	Rear-end

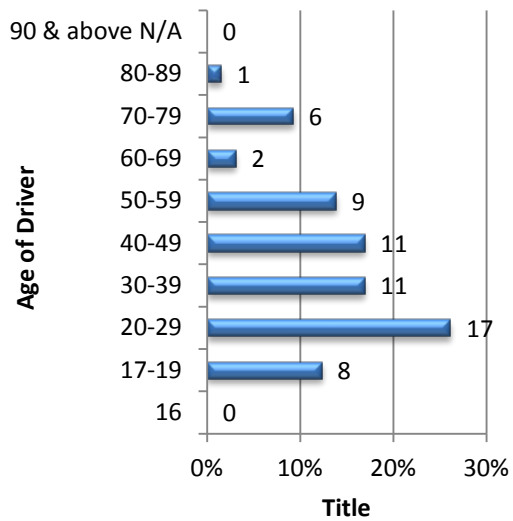
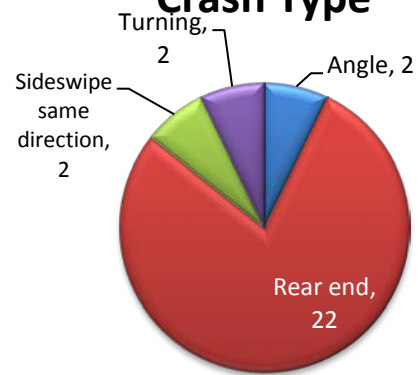
**Figure 4.2**  
**IL 5/John Deere Expy & 41<sup>st</sup> (Moline) – Crash Frequency by Various Conditions**



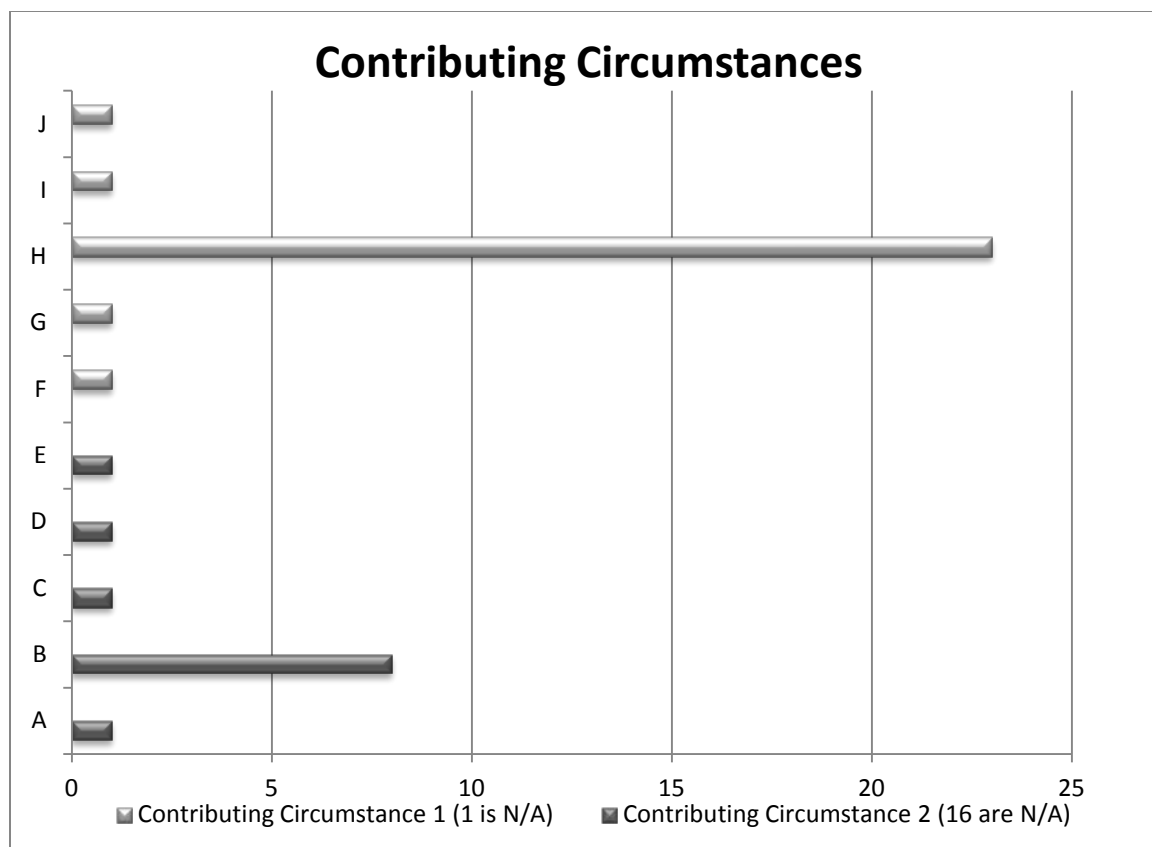
## Apparent Physical Condition of Driver



## Crash Type



Hour	Crashes	Hour	Crashes
1	0	13	2
2	0	14	3
3	0	15	3
4	0	16	2
5	0	17	7
6	0	18	0
7	2	19	0
8	1	20	1
9	2	21	0
10	0	22	1
11	1	23	0
12	1	24	0



#### Chart Key

- A: Failing to yield right-of-way
- B: Following too closely
- C: Equipment - vehicle condition
- D: Exceeding safe speed for conditions
- E: Distraction - electronic communication device (cell phone, texting, etc.)
- F: Driving skills/knowledge/experience
- G: Disregarding traffic signals
- H: Failing to reduce speed for conditions
- I: Improper backing
- J: Distraction - from inside vehicle



**Map 4.2**  
**Illinois Location #3- IL 5/John Deere Expy. & 41<sup>st</sup> St. (Moline)**



- |   |   |
|---|---|
| 1. East Bound, Skidding/Control Loss, Rear end (1)      | 9. South Bound, Slow/Stop, Left Turn, Rear end (1)      |
| 2. East Bound, Slow/Stop in Traffic, Rear end (1)       | 10. West Bound, Backing, Rear end (1)                   |
| 3. East Bound, Straight, Rear end (8)                   | 11. West Bound, Skidding/Control Loss, Angle (1)        |
| 4. North Bound, Slow/Stop in Traffic, Rear end (1)      | 12. West Bound, Slow/Stop in Traffic, Rear end (2)      |
| 5. North Bound, Straight, Rear end (1)                  | 13. West Bound, Straight, Rear end (4)                  |
| 6. Northeast Bound, Slow/Stop, Right Turn, Rear end (1) | 14. West Bound, Straight, Sideswipe, Same Direction (2) |
| 7. Northeast Bound, Straight, Turning (2)               | 15. West Bound, Straight, Angle (1)                     |
| 8. Northeast Bound, Right Turn, Turning (2)             |   |

### 2010 ILLINOIS LOCATION #3 - 16<sup>TH</sup> ST & IL 5/JOHN DEERE EXPY- MOLINE

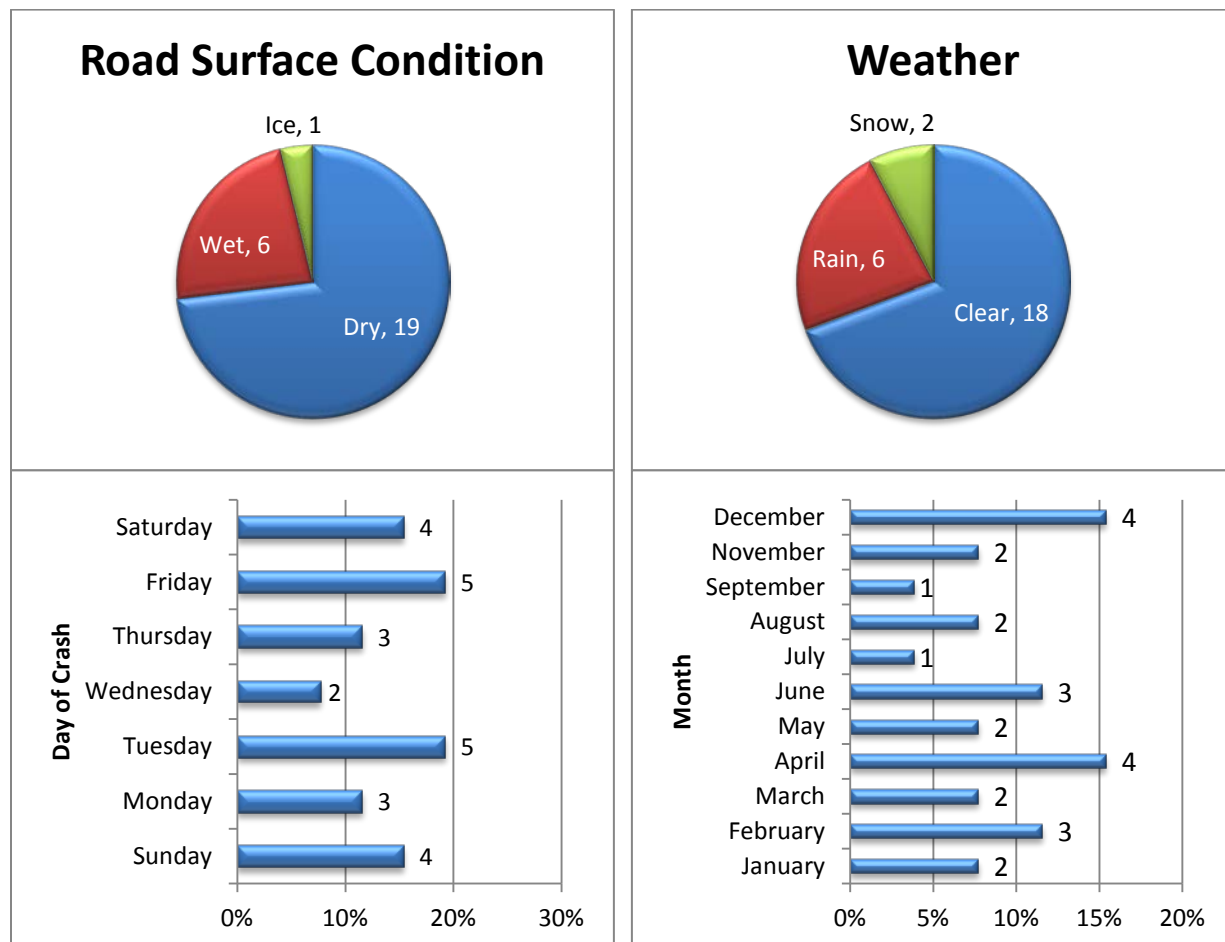
Ranked third, with a score of 32, this location experienced 26 crashes in 2010, resulting in 12 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.48 crashes per MEV. Like the previous two Illinois locations, rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Tuesdays and Fridays with crashes reported for all days of the week.

Average daily traffic for this intersection is 48,050. IL 5/John Deere Expressway is a principal arterial roadway. The west approach has a posted speed limit of 45 mph with one left-turn lane, three through lanes and one right-turn only lane for the east-bound traffic. The east approach of John Deere Expressway has a posted speed limit of 55 mph with dual left-turn only lanes, one right-turn lane and two through lanes for the west-bound traffic. Sixteenth Street is a minor arterial road north of the intersection and a collector road south of the intersection with two through lanes, one left-turn, and one right-turn only lanes for both south and north approaches entering the intersection. Sixteenth Street has a posted speed limit of 40 mph north of the intersection and 30 mph south of the intersection.

**Table 4.3**  
**16<sup>th</sup> St. & IL 5/John Deere Expy (Moline) 2007 & 2010 Comparison**

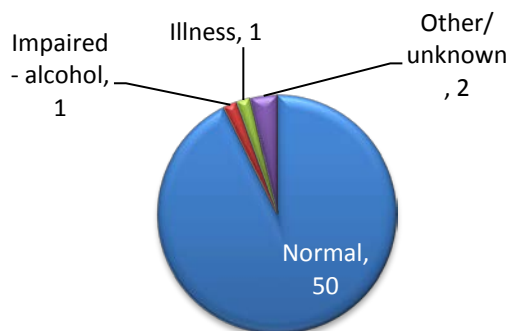
	<b>2007</b>	<b>2010</b>
<b>Rank</b>	3	3
<b>Total Crashes</b>	33	26
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	19	12
<b>Crash Rate</b>	1.97	1.48
<b>Predominant Crash Type</b>	Rear-end	Rear-end

**Figure 4.3**  
**16<sup>th</sup> St & IL 5/John Deere Expy (Moline) – Crash Frequency by Various Conditions**

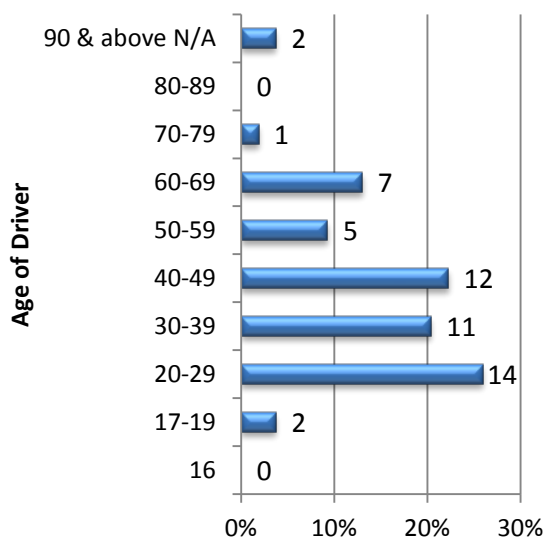
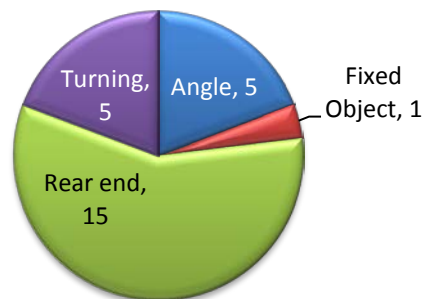




### Apparent Physical Condition of Driver

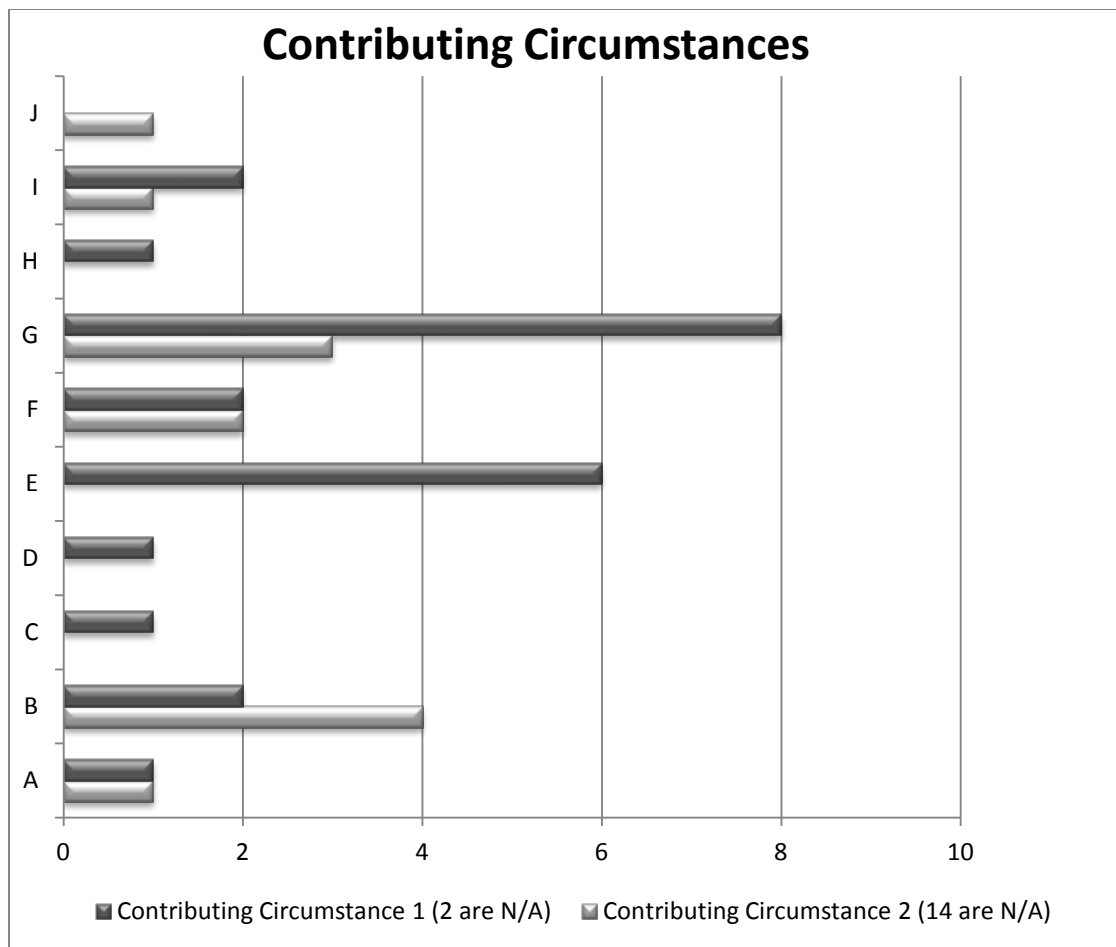


### Crash Type



### Time of Crash

Hour	Crashes	Hour	Crashes
1	0	13	3
2	0	14	0
3	0	15	0
4	1	16	2
5	0	17	2
6	1	18	0
7	1	19	1
8	0	20	2
9	0	21	3
10	2	22	0
11	1	23	0
12	4	24	1



#### Chart Key

- A: Failing to yield right-of-way
- B: Following too close
- C: Improper turning/no signal
- D: Under the influence of alcohol/drugs
- E: Disregarding traffic signals
- F: Exceeding safe speed for conditions
- G: Failing to reduce speed to avoid crash
- H: Distraction - from outside vehicle
- I: Distraction - from inside vehicle
- J: Physical Condition of Driver

**Map 4.3**  
**2010 Illinois Location #3 - 16<sup>th</sup> St. & IL 5/John Deere Expy. (Moline)**



- |   |  |
|---|--|
| 1. East Bound, Slow/Stop in Traffic, Rear end (1)       | 11. South Bound, Skidding/Control Loss, Angle (1)        |
| 2. East Bound, Starting in Traffic, Rear end (1)        | 12. South Bound, Straight, Angle (1)                     |
| 3. East Bound, Straight, Turning (1)                    | 13. Southwest Bound, Slow/Stop, Right Turn, Rear end (1) |
| 4. East Bound, Straight, Rear end (3)                   | 14. Southwest Bound, Left Turn, Turning (1)              |
| 5. North Bound, Straight, Rear end (2)                  | 15. West Bound, Skidding/Control Loss, Rear end (2)      |
| 6. North bound, Straight, Angle (1)                     | 16. West Bound, Slow/Stop in Traffic, Rear end (2)       |
| 7. Northeast Bound, Slow/Stop, Right Turn, Rear end (1) | 17. West Bound, Straight, Turning (1)                    |
| 8. Northeast Bound, Starting in Traffic, Rear end (1)   | 18. West Bound, Straight, Rear end (1)                   |
| 9. Northeast Bound, Right Turn, Turning (2)             | 19. West Bound, Straight, Angle (1)                      |
| 10. Northwest Bound, Straight, Angle (1)                | *. Unknown, Unknown/NA, Fixed Object (1)                 |

## 2010 ILLINOIS LOCATION #4 – 15<sup>TH</sup> ST/US 67 & CENTENNIAL BRIDGE NORTHBOUND ON-RAMP – ROCK ISLAND

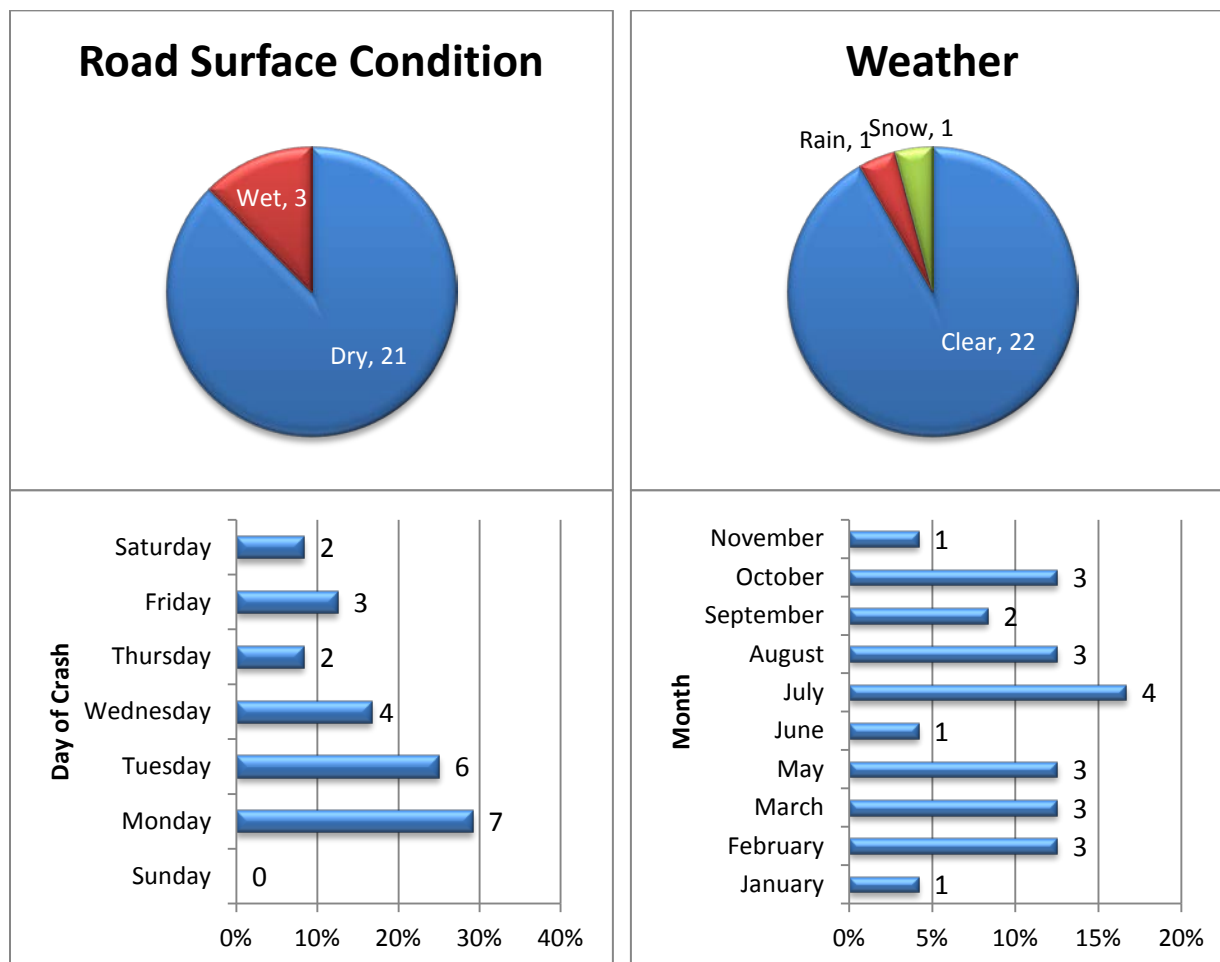
Ranked forth, with a score of 29, this location experienced 24 crashes in 2010, resulting in no injuries. Taking into account traffic volume, the crash rate for this intersection was above average at 2.74 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Mondays.

Average daily traffic for this intersection is 24,000. Fifteenth Street/US 67 is a principal arterial road with a posted speed limit of 30 mph. The on-ramp to northbound 15<sup>th</sup> Street/US 67 has a posted speed limit of 30 mph. The on-ramp has a yield sign on the approach to 15<sup>th</sup> Street/US 67. From observations, many treat this as a merge lane rather than yielding to the northbound traffic along 15<sup>th</sup> Street/US 67.

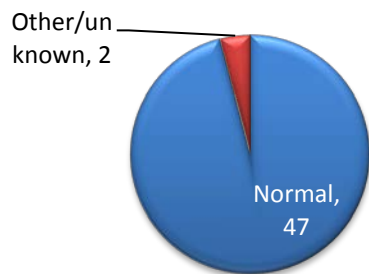
**Table 4.4**  
**15<sup>th</sup> St/US 67 & Centennial Bridge on ramp (Rock Island) 2007 & 2010 Comparison**

	<b>2007</b> <i>(not in top ten)</i>	<b>2010</b>
<b>Rank</b>	64	4
<b>Total Crashes</b>	8	24
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	0	0
<b>Crash Rate</b>	0.70	2.74
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Rear-end

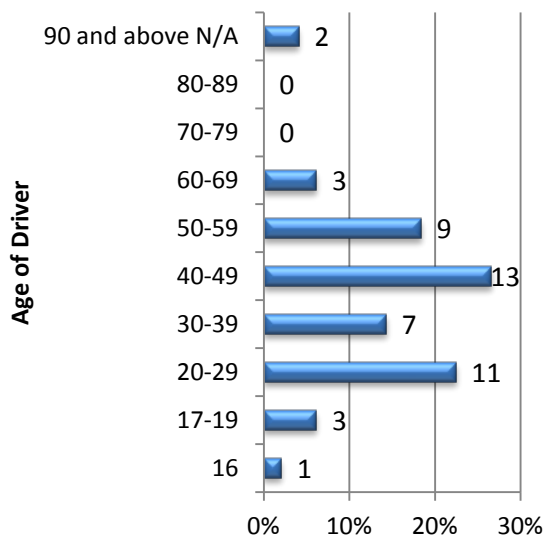
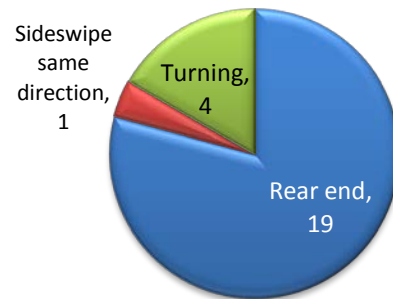
**Figure 4.4**  
**15<sup>th</sup> St/US 67 & Centennial Bridge on ramp (Rock Island) – Crash Frequency by Various Conditions**



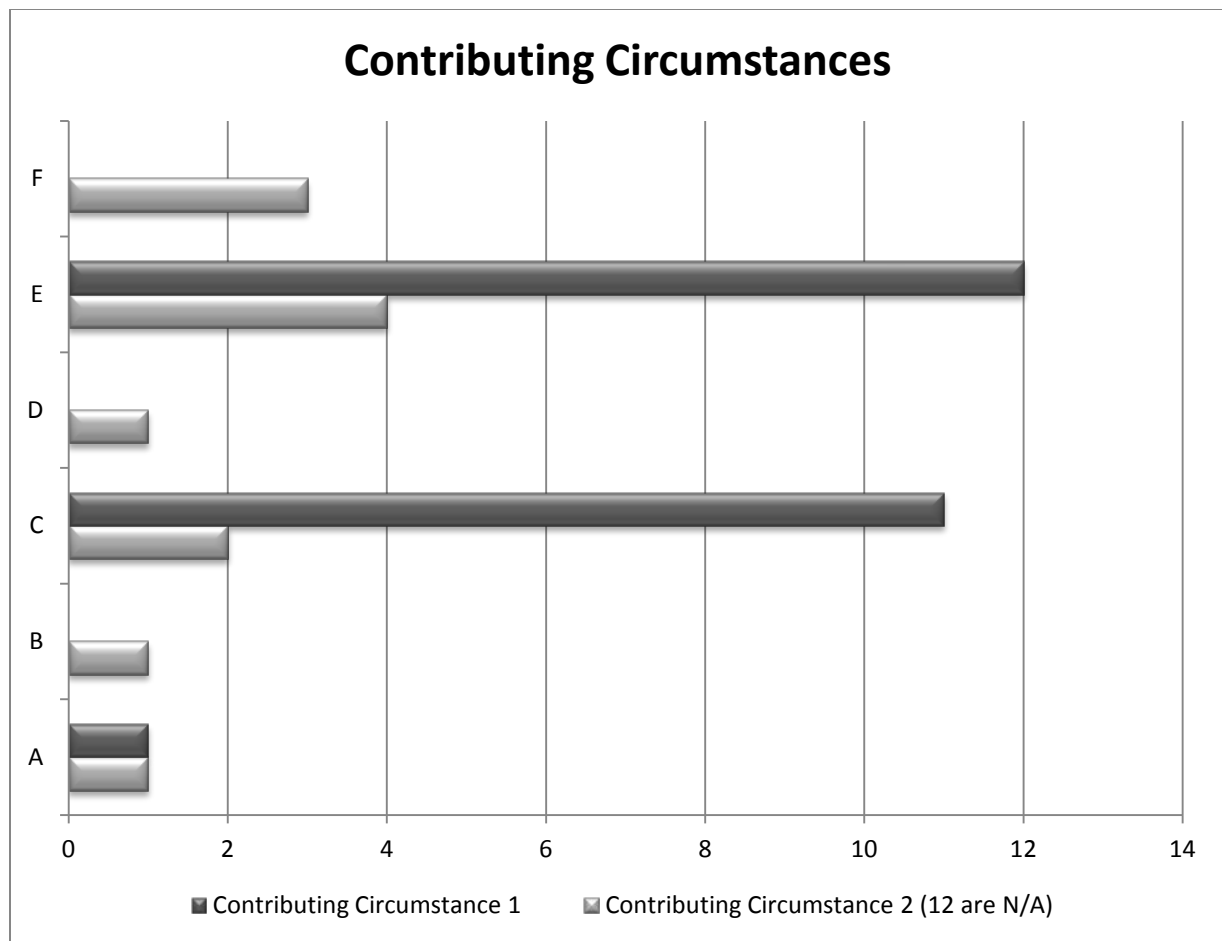
## Apparent Physical Condition of Driver



## Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	1
2	0	14	2
3	0	15	3
4	1	16	7
5	0	17	3
6	0	18	1
7	2	19	0
8	3	20	1
9	0	21	0
10	0	22	0
11	1	23	0
12	0	24	0



#### Chart Key

- A: Failing to yield right-of-way
- B: Exceeding authorized speed limit
- C: Following too close
- D: Driving skills/knowledge/experience
- E: Failing to reduce speed for conditions
- F: Unable to determine



**Map 4.4**  
**2010 Illinois Location #4- 15<sup>th</sup> St/US 67 & Centennial Bridge on ramp (Rock Island)**



- |  |   |
|--|---|
| 1. North Bound, Merging, Rear end (2)              | 8. North Bound, Unknown, Sideswipe, Same Direction (1)  |
| 2. North Bound, Negotiating Curve, Rear end (1)    | 9. Northwest Bound, Merging, Rear end (2)               |
| 3. North Bound, Slow/Stop in Traffic, Turning (1)  | 10. Northwest Bound, Slow/Stop in Traffic, Rear end (1) |
| 4. North Bound, Slow/Stop in Traffic, Rear end (2) | 11. Northwest Bound, Straight, Turning (1)              |
| 5. North Bound, Starting in Traffic, Rear end (1)  | 12. Northwest Bound, Right Turn, Turning (1)            |
| 6. North Bound, Straight, Rear end (8)             | 13. West Bound, Merging, Rear end (1)                   |
| 7. North Bound, Right Turn, Turning (1)            | 14. West Bound, Straight, Rear end (1)                  |



## 2010 ILLINOIS LOCATION #5 - KENNEDY DR & AVENUE OF THE CITIES- EAST MOLINE

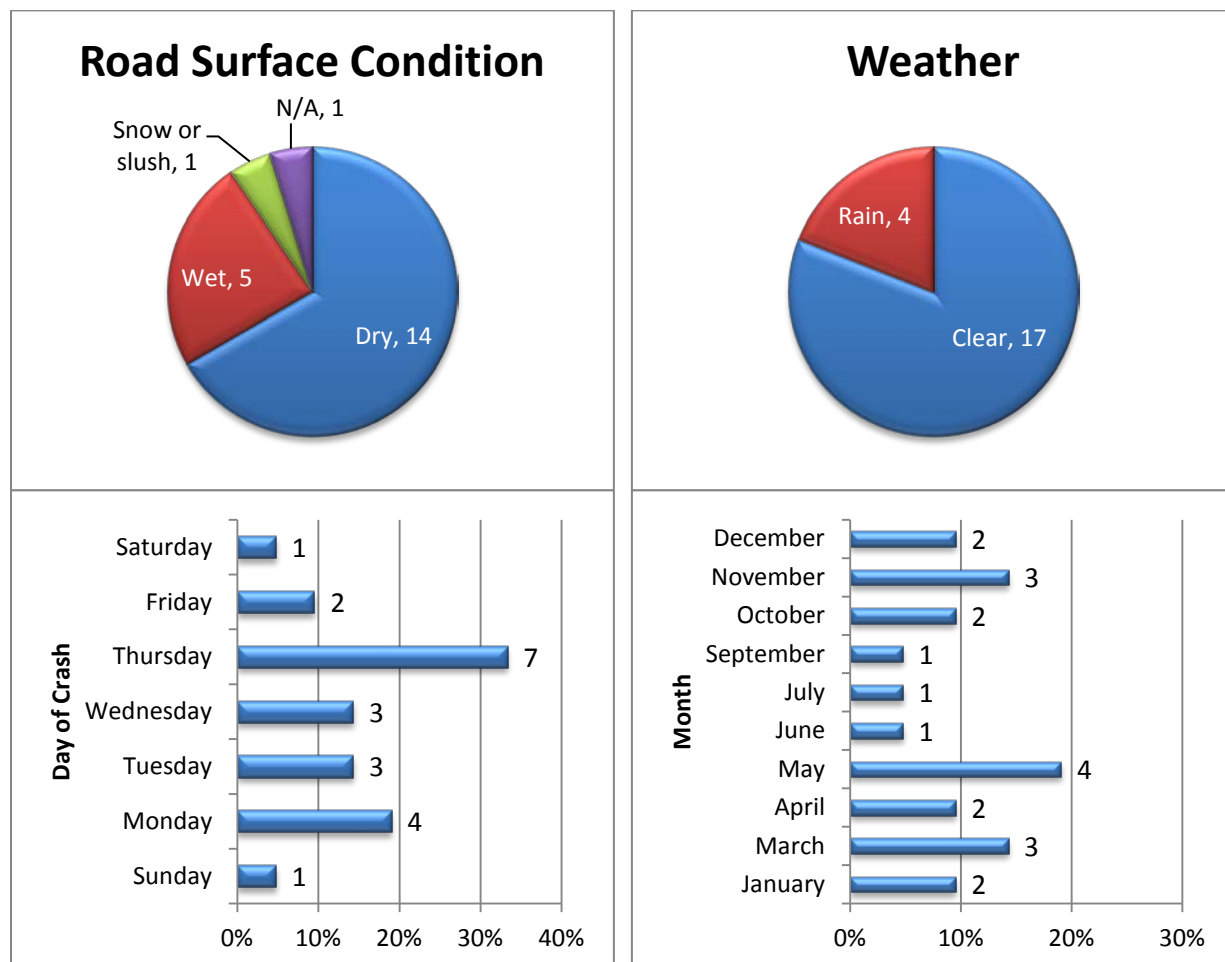
Ranked fifth, with a score of 28, this location experienced 21 crashes in 2010, resulting in 4 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 2.06 crashes per MEV. Crashes involving turning vehicles were the predominant crash type. Most crashes occurred during daylight hours in clear, dry conditions. The highest number of crashes occurred on Thursdays with crashes reported all days of the week.

Average daily traffic for this intersection is 27,900. Avenue of the Cities is a four-lane minor arterial road with a posted speed limit of 45 mph. There are left-turn only lanes at both east and west approaches. Kennedy Drive is a minor arterial with a speed limit of 35 mph. Kennedy Drive has left-turn only lanes and channelized right turn only lanes on both the north and south approaches.

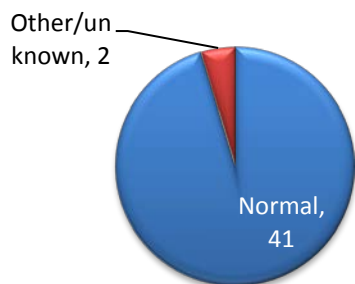
**Table 4.5**  
**Kennedy Dr & Ave of the Cities (East Moline) 2007 & 2010 Comparison**

	<b>2007</b>	<b>2010</b>
<b>Rank</b>	1	5
<b>Total Crashes</b>	38	21
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	28	4
<b>Crash Rate</b>	3.72	2.06
<b>Predominant Crash Type</b>	Turning	Turning

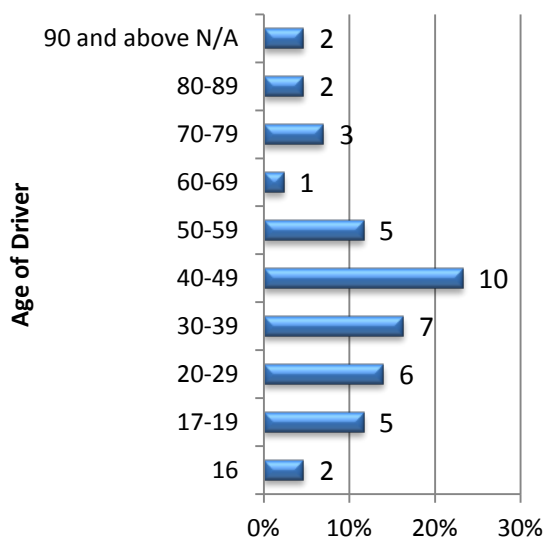
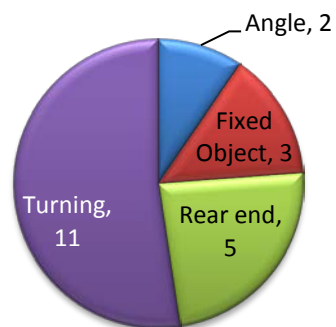
**Figure 4.5**  
**Kennedy Dr & Ave of the Cities (East Moline) – Crash Frequency by Various Conditions**



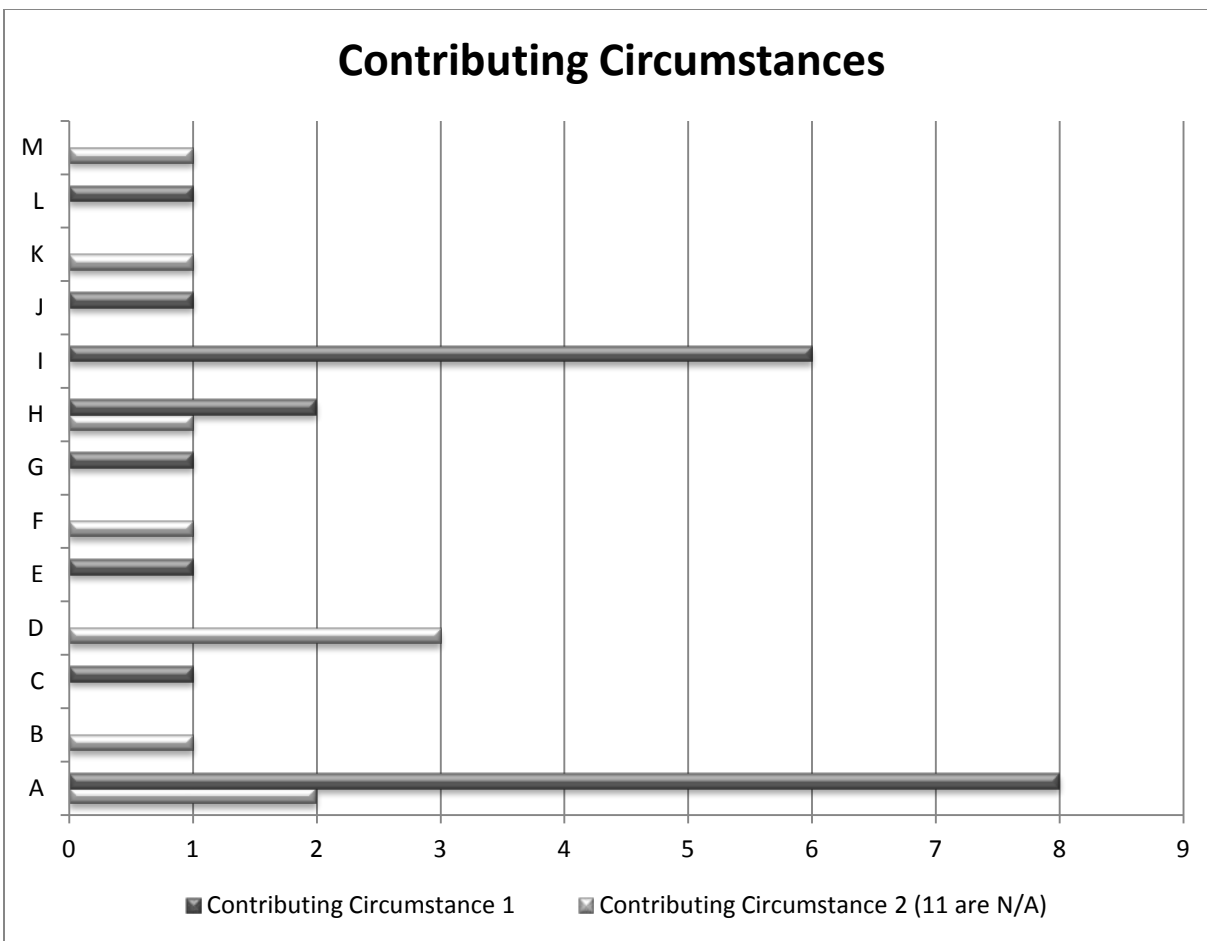
### Apparent Physical Condition of Driver



### Crash Type



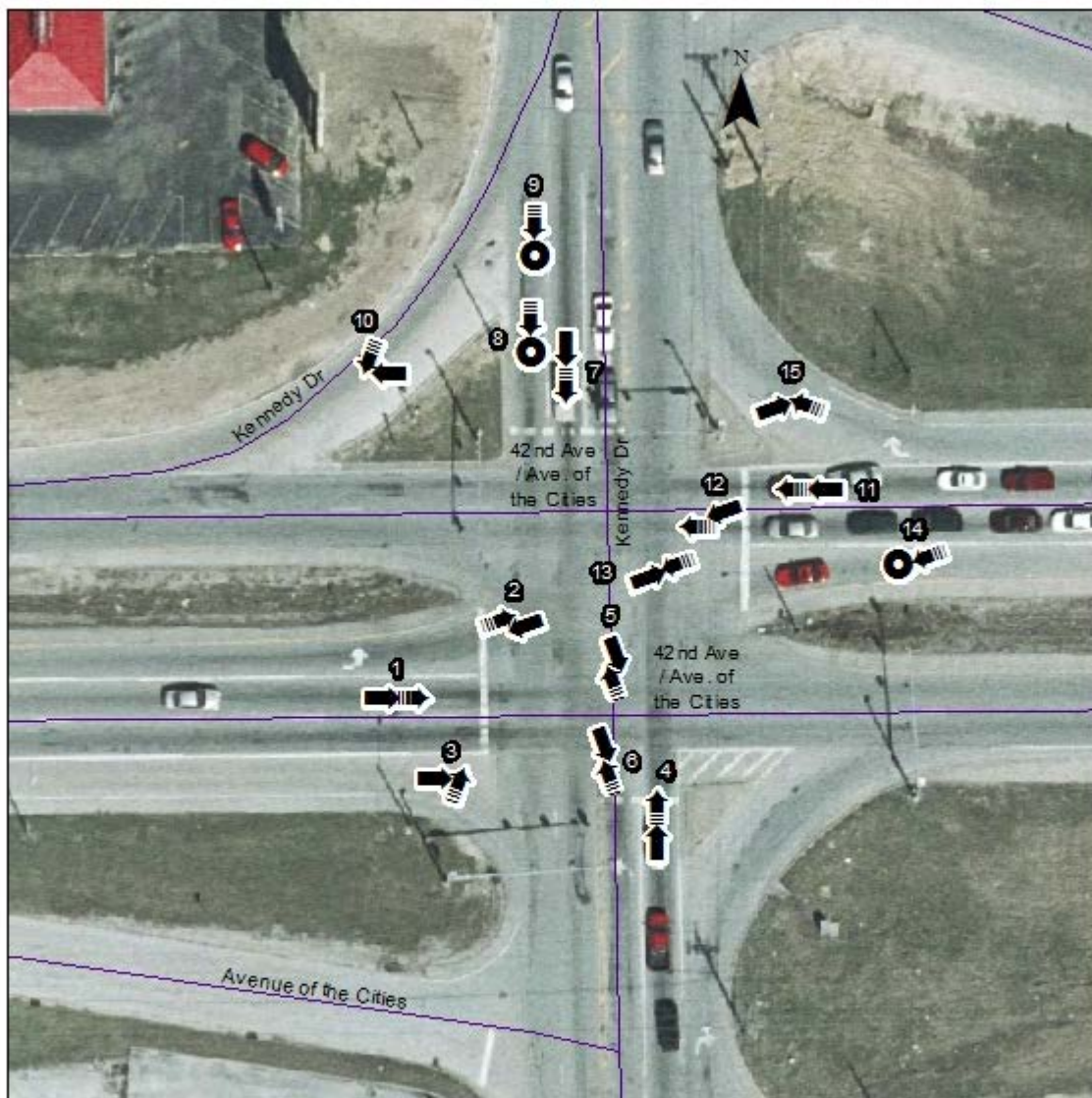
Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	1
2	0	14	1
3	0	15	5
4	0	16	0
5	0	17	3
6	0	18	1
7	0	19	2
8	1	20	1
9	1	21	0
10	0	22	0
11	2	23	1
12	2	24	0



**Chart Key**

- A: Failing to yield right-of-way
- B: Improper turning no signal
- C: Following too closely
- D: Weather
- E: Turning right on red
- F: Driving skills/knowledge/experience
- G: Disregarding traffic signals
- H: Exceeding safe speed for conditions
- I: Failing to reduce speed to avoid crash
- J: Distraction - from inside vehicle
- K: Distraction - from outside vehicle
- L: Operating vehicle in erratic, reckless, careless, negligent or aggressive manner
- M: Unable to determine

**Map 4.5**  
**2010 Illinois Location #5 - Kennedy Dr & Ave of the Cities (East Moline)**



- |   |   |
|---|---|
| 1. East Bound, Straight, Rear end (1)                   | 9. Southwest Bound, Skidding/Control Loss, Fixed Object (1) |
| 2. East Bound, Left Turn, Turning (1)                   | 10. Southwest Bound, Right Turn, Turning (2)                |
| 3. East Bound, Turning on Red, Turning (1)              | 11. West Bound, Straight, Rear end (2)                      |
| 4. North Bound, Slow/Stop in Traffic, Rear end (1)      | 12. West Bound, Straight, Angle (1)                         |
| 5. North Bound, Left Turn, Turning (3)                  | 13. West Bound, Left Turn, Turning (2)                      |
| 6. Northeast Bound, Slow/Stop, Left Turn, Angle (1)     | 14. West Bound, Left Turn, Fixed Object (1)                 |
| 7. South Bound, Other, Rear end (1)                     | 15. West Bound, Right Turn, Turning (2)                     |
| 8. South Bound, Skidding/Control Loss, Fixed Object (1) |   |

**2010 ILLINOIS LOCATION #6 - 7<sup>TH</sup> ST & AVENUE OF THE CITIES- EAST MOLINE**

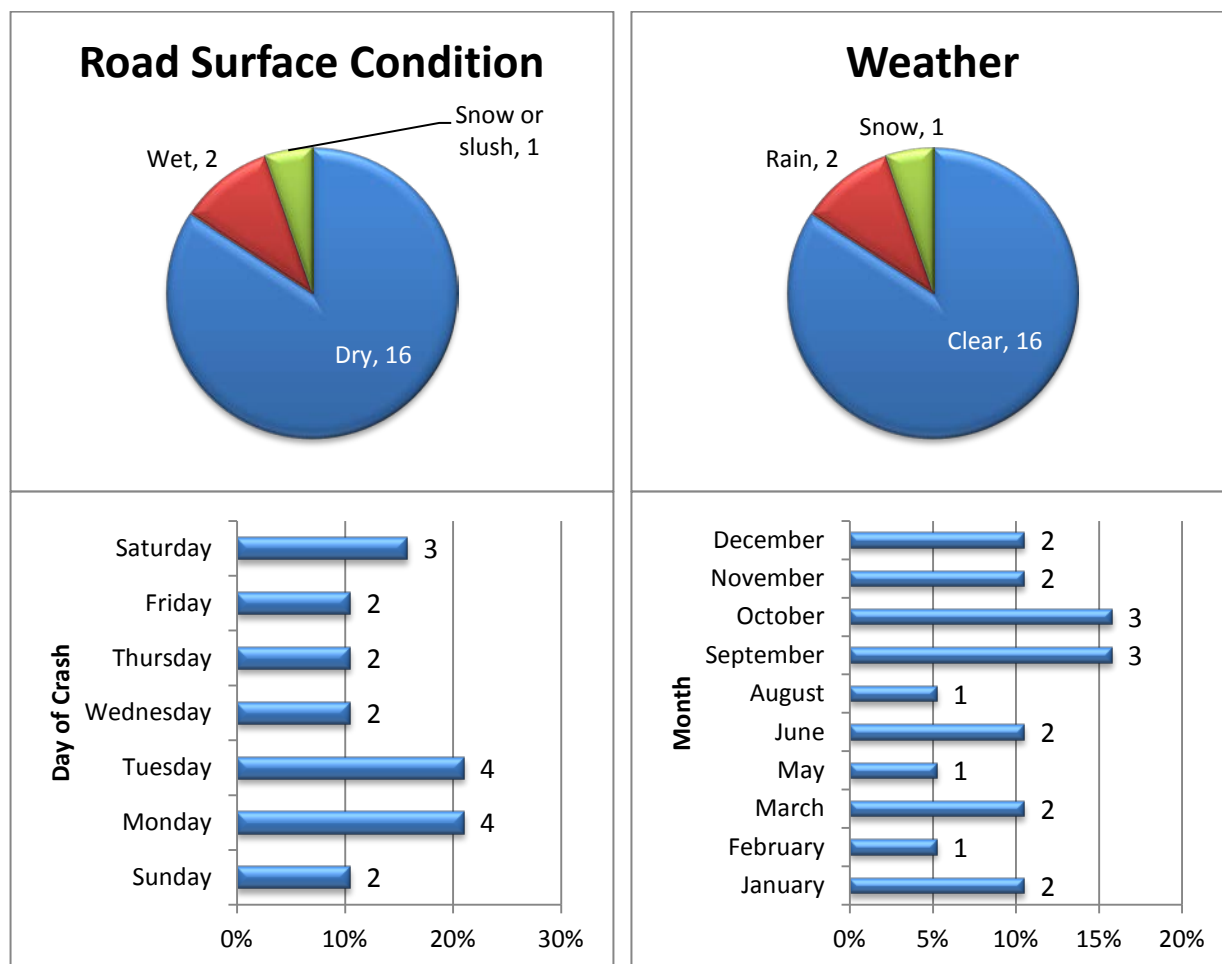
Ranked sixth, with a score of 27, this location experienced 19 crashes in 2010, resulting in 7 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.88 crashes per MEV. Crashes involving turning vehicles were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Mondays and Tuesdays with crashes reported for all days of the week.

Average daily traffic for this intersection is 27,750. Avenue of the Cities is a four-lane minor arterial at this location, with a speed limit of 45 mph. Left-turn and right-turn only lanes are provided for both east and west approaches. Seventh Street is a four-lane minor arterial road with a posted speed limit of 30 mph. Left-turn only lanes are present for both north and south approaches, and a channelized right-turn only lane is present for the north approach.

**Table 4.6**  
**7<sup>th</sup> St. & Ave of the Cities (East Moline) 2007 & 2010 Comparison**

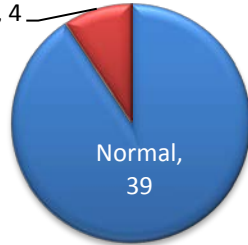
	<b>2007</b>	<b>2010</b>
<b>Rank</b>	5	6
<b>Total Crashes</b>	24	19
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	15	7
<b>Crash Rate</b>	2.37	1.88
<b>Predominant Crash Type</b>	Turning	Turning

**Figure 4.6**  
**7<sup>th</sup> St. & Ave of the Cities (East Moline) – Crash Frequency by Various Conditions**

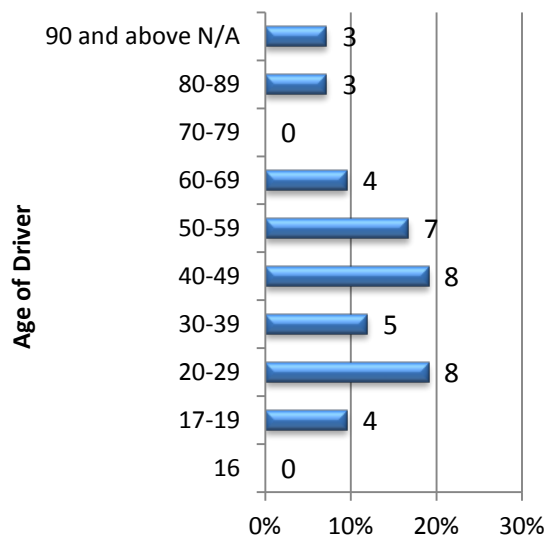


## Apparent Physical Condition of Driver

Other/un  
known, 4

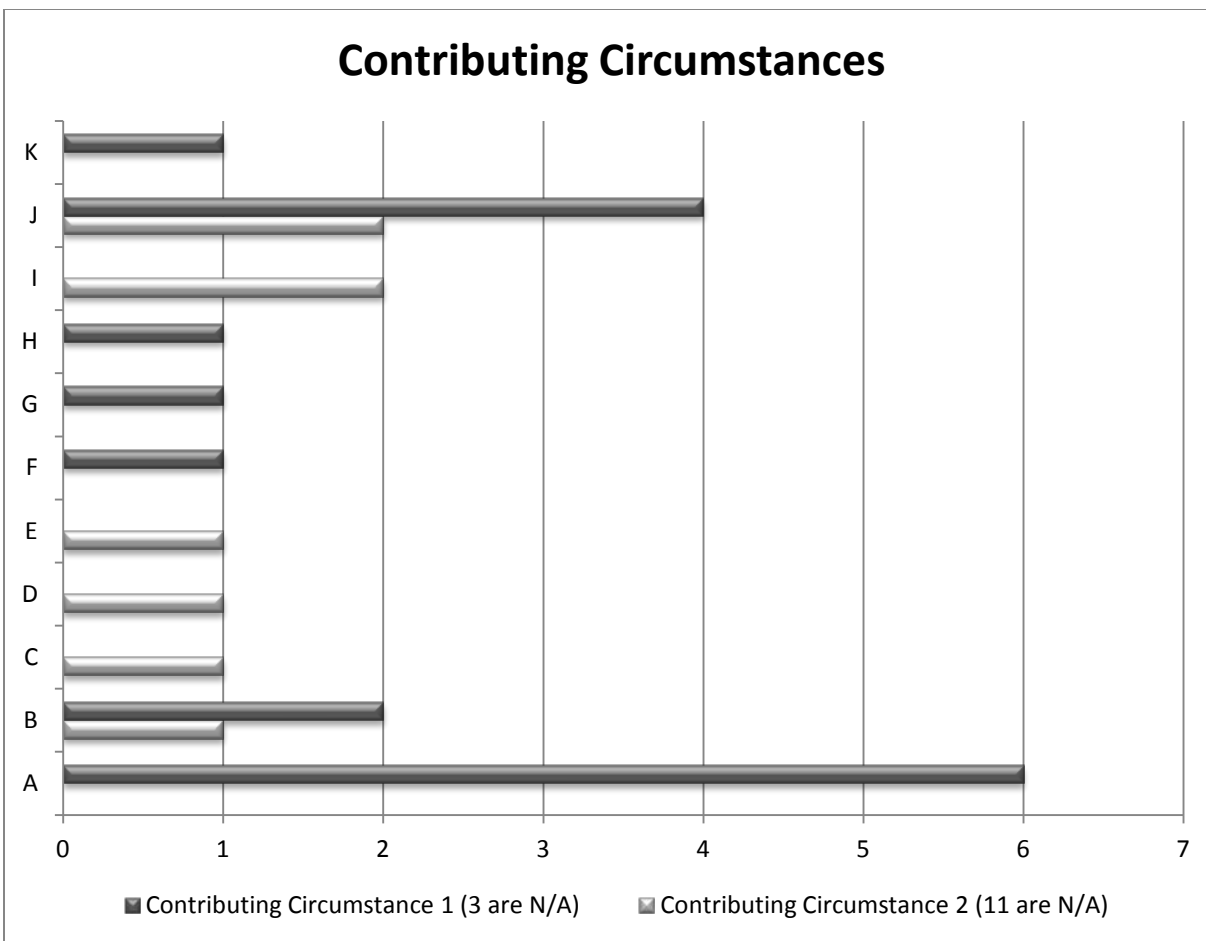


## Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	0
2	0	14	3
3	0	15	3
4	0	16	3
5	0	17	2
6	0	18	1
7	0	19	0
8	0	20	1
9	0	21	0
10	0	22	1
11	1	23	0
12	3	24	0

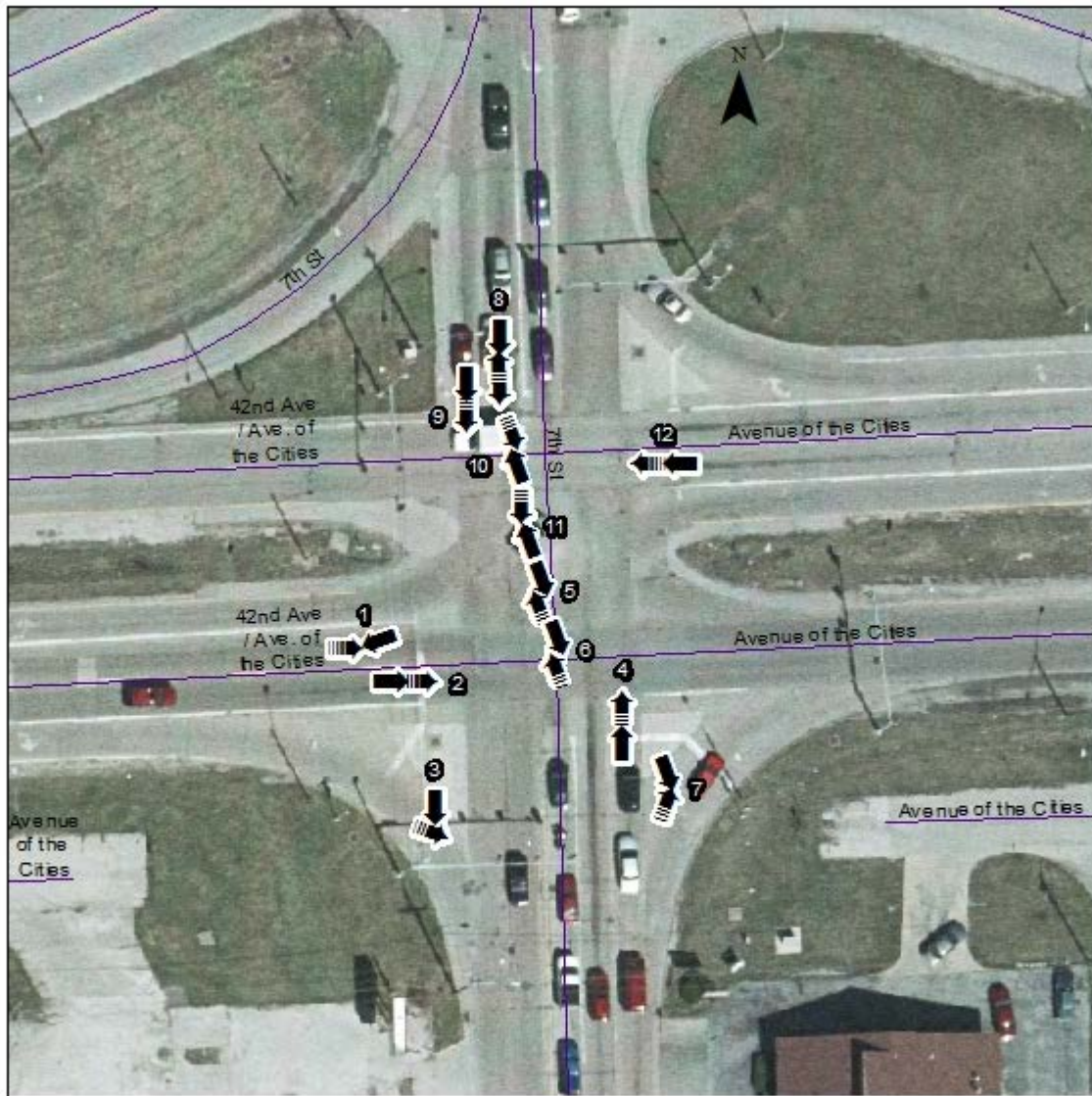




#### Chart Key

- A: Failing to yield to right-of-way
- B: Following too closely
- C: Equipment - vehicle condition
- D: Weather
- E: Road construction/maintenance
- F: Disregarding stop sign
- G: Disregarding traffic signals
- H: Exceeding safe speed for conditions
- I: Vision obscured (signs, tree limbs, buildings, etc)
- J: Failing to reduce speed to avoid crash
- K: Improper backing

**Map 4.6**  
**2010 Illinois Location #6- 7<sup>th</sup> St. & Ave of the Cities (East Moline)**



- |  |   |
|--|---|
| 1. East Bound, Straight, Turning (1)       | 7. Northwest Bound, Right Turn, Turning (1) |
| 2. East Bound, Straight, Rear end (1)      | 8. South Bound, Backing, Rear end (1)       |
| 3. East Bound, Right Turn, Turning (1)     | 9. South Bound, Straight, Rear end (1)      |
| 4. North Bound, Straight, Rear end (2)     | 10. South Bound, Left Turn, Turning (2)     |
| 5. North Bound, Left Turn, Turning (2)     | 11. Southwest Bound, Left Turn, Turning (2) |
| 6. Northeast Bound, Left Turn, Turning (3) | 12. West Bound, Straight, Rear end (2)      |

## 2010 ILLINOIS LOCATION #7 - 19<sup>TH</sup> ST (EAST OF I-74) & AVENUE OF THE CITIES-MOLINE

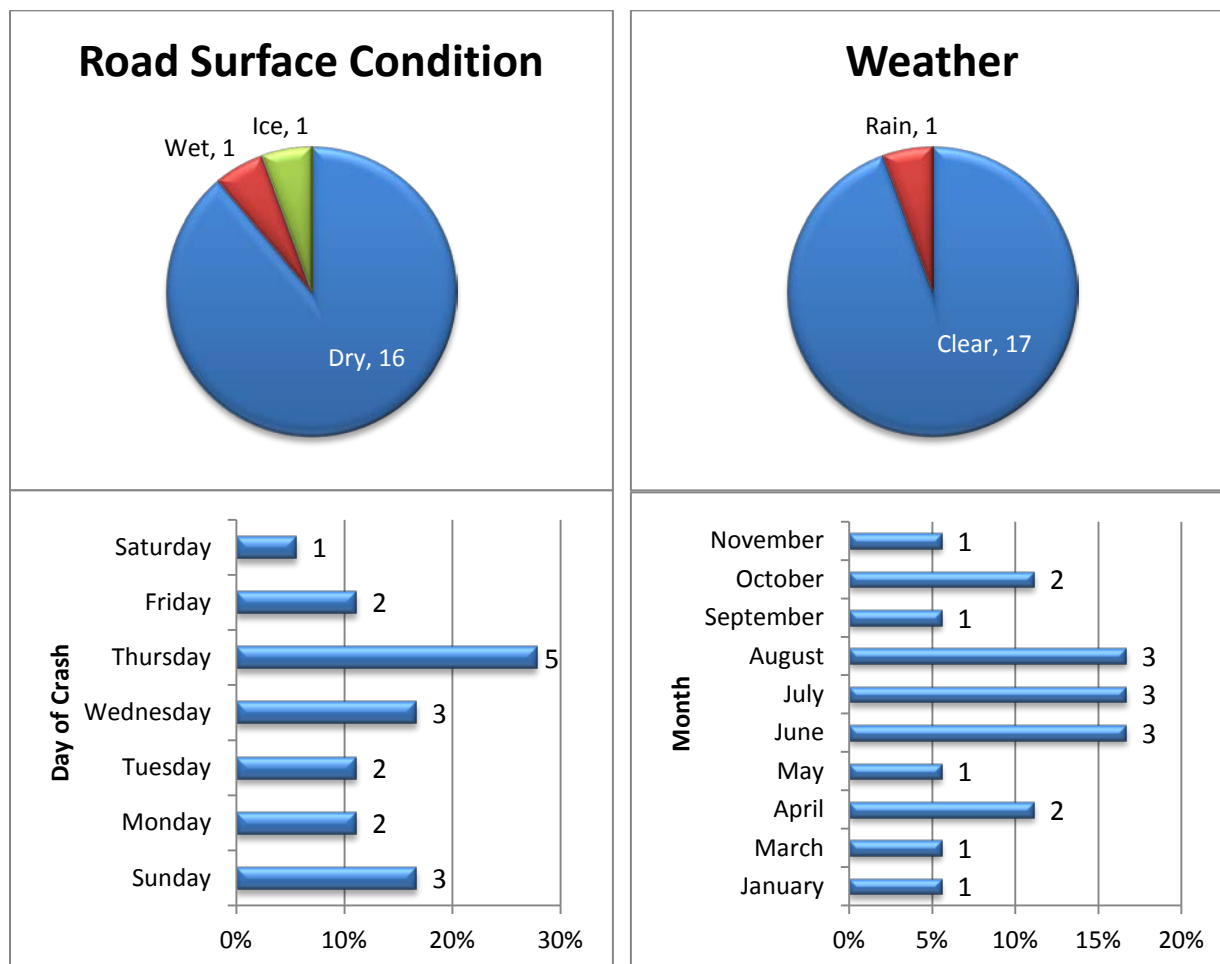
Ranked seventh, with a score of 26, this location experienced 18 crashes in 2010, resulting in 4 injuries. Taking into account traffic volume, the crash rate for this intersection was above average at 2.21 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Thursdays with crashes reported on all days of the week.

Average daily traffic for this intersection is 22,275. Avenue of the Cities is an undivided arterial with a posted speed limit of 35 mph at this location. Nineteenth Street is a minor arterial road divided by I-74 and the east portion is two lanes for southbound traffic with one left- and one right-turn only lanes (both with markings.) Nineteenth Street has a posted speed limit of 45 mph. Because 19<sup>th</sup> Street at this location is one-way, there is no left-turn from Avenue of the Cities on the west approach (which does have a right-turn only lane) and no right-turn from the east approach (which has a left-turn only lane).

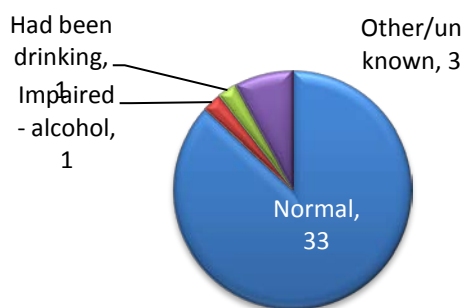
**Table 4.7**  
**19<sup>th</sup> St (East of I-74) & Avenue of the Cities (Moline) 2007 & 2010 Comparison**

	<b>2007</b>	<b>2010</b>
<b>Rank</b>	6	7
<b>Total Crashes</b>	24	18
<b># of Fatalities</b>	0	0
<b># of Injuries</b>	5	4
<b>Crash Rate</b>	2.37	2.21
<b>Predominant Crash Type</b>	Rear-end	Rear-end

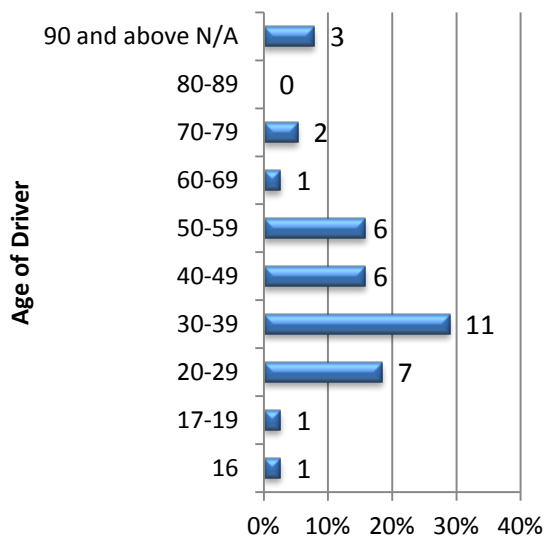
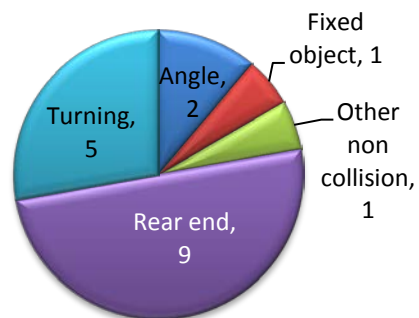
**Figure 4.7**  
**19<sup>th</sup> St (East of I-74) & Ave of the Cities (Moline) – Crash Frequency by Various Conditions**



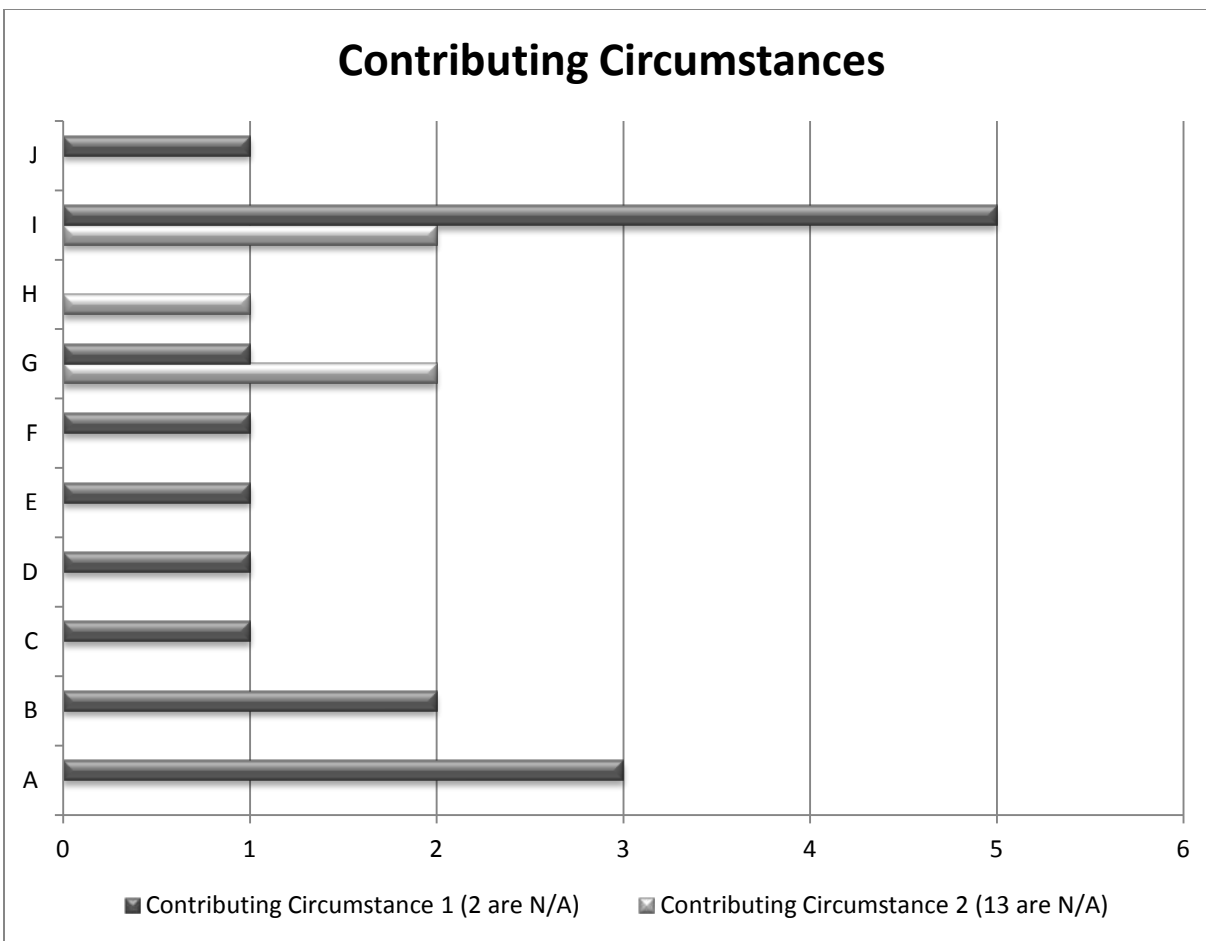
### Apparent Physical Condition of Driver



### Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	1
2	0	14	0
3	0	15	0
4	0	16	1
5	0	17	3
6	0	18	1
7	3	19	1
8	2	20	0
9	2	21	0
10	0	22	0
11	1	23	0
12	2	24	0

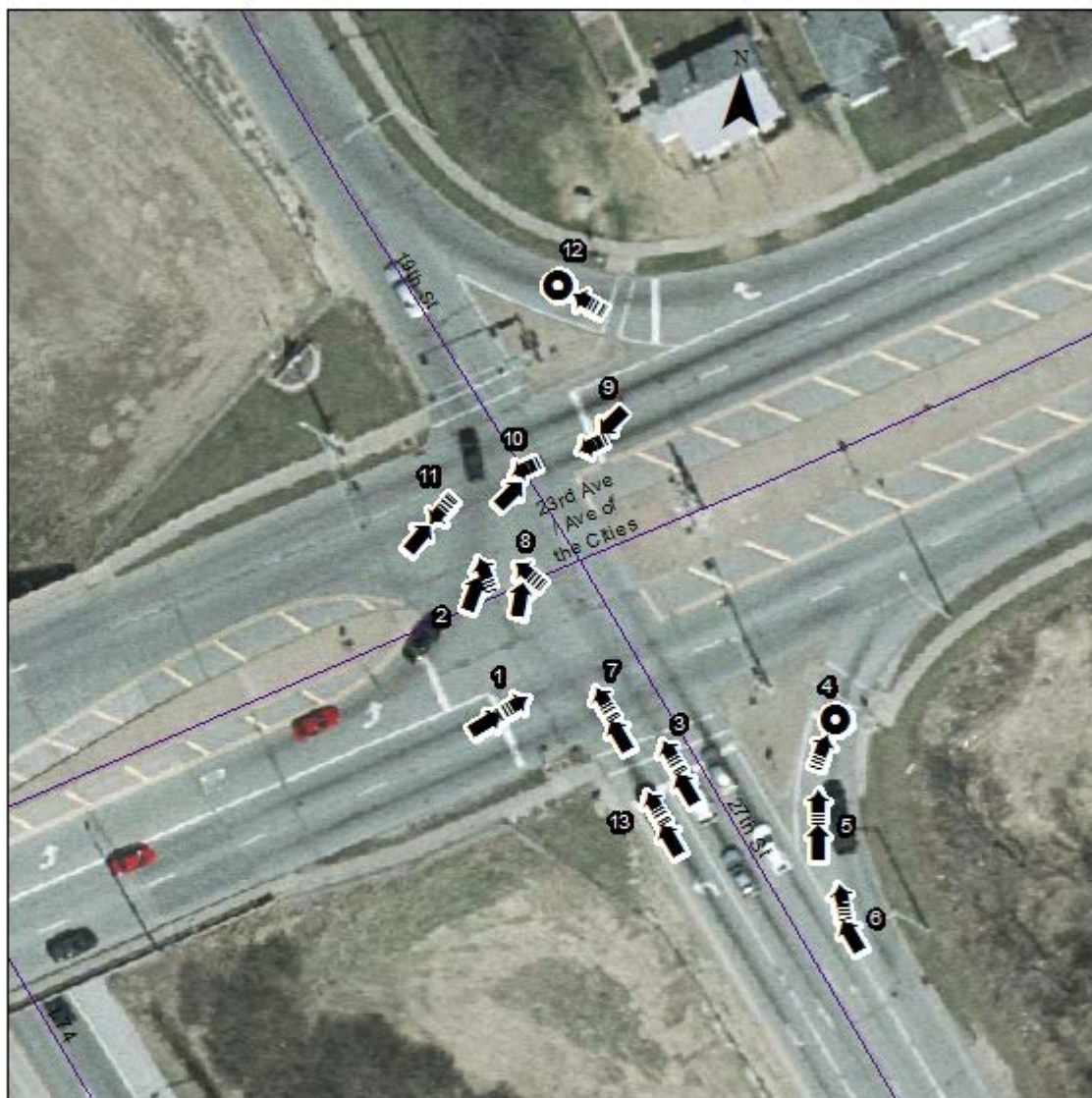


#### Chart Key

- A: Following too closely
- B: Under the influence of alcohol/drugs
- C: Equipment - vehicle condition
- D: Road Construction/maintenance
- E: Vision obscured (signs, tree limbs, buildings, etc.)
- F: Unable to determine
- G: Disregarding traffic signals
- H: Exceeding safe speed for conditions
- I: Failing to reduce speed to avoid crash
- J: Distraction - electronic communication device (cell phone, texting, etc.)



**Map 4.7**  
**2010 Illinois Location #7- 19<sup>th</sup> St (East of I-74) & Ave of the Cities (Moline)**



- |  |   |
|--|---|
| 1. East Bound, Straight, Rear end (3)                              | 8. Northwest Bound, Left Turn, Turning (1)    |
| 2. North Bound, Straight, Turning (1)                              | 9. West Bound, Straight, Angle (2)            |
| 3. North Bound, Straight, Rear end (1)                             | 10. West Bound, Straight, Turning (1)         |
| 4. Northeast Bound, Slow/Stop, Right Turn, Other Non-Collision (1) | 11. West Bound, Left Turn, Turning (1)        |
| 5. Northeast Bound, Slow/Stop in Traffic, Rear end (1)             | 12. West Bound, Right Turn, Fixed Object (1)  |
| 6. Northeast Bound, Slow/Stop, Right Turn, Rear end (2)            | 13. Northwest Bound, Unknown/NA, Rear end (1) |
| 7. Northwest Bound, Straight, Rear end (1)                         |   |

**2010 ILLINOIS LOCATION #8 – 38<sup>TH</sup> AVE & 41<sup>ST</sup> ST - MOLINE**

Ranked eighth, with a score of 25, this location experienced 15 crashes in 2010, resulting in 3 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 2.53 crashes per MEV. Crashes involving turning were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Mondays.

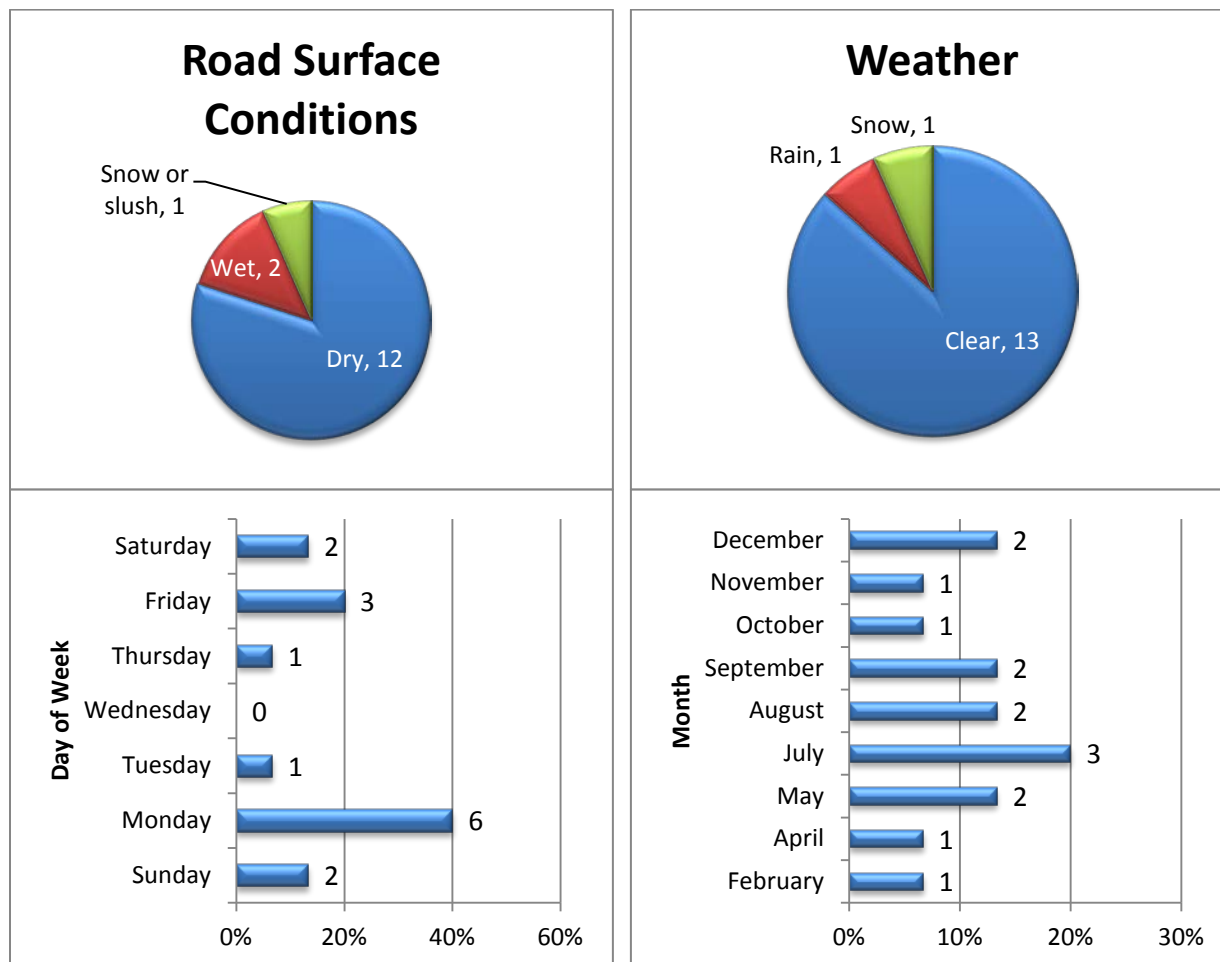
Average daily traffic at this intersection is 16,275. Forty-first Street is a 4 lane minor arterial road with an additional right turn only lane on the southbound approach and a left turn and right turn lane on the southbound approach. Forty-first Street has a posted speed limit of 35 mph. Thirty-eighth Avenue is a 2 lane local road with a posted speed limit of 40 mph.

**Table 4.8**  
**38<sup>th</sup> Ave & 41<sup>st</sup> St (Moline) 2007 & 2010 Comparison**

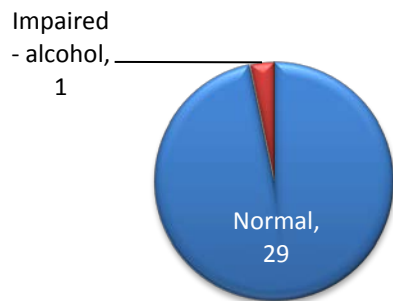
	<b>2007</b> <i>(not in top ten)</i>	<b>2010</b>
<b>Rank</b>	35	8
<b>Total Crashes</b>	9	15
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	2	3
<b>Crash Rate</b>	1.40	2.53
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Turning



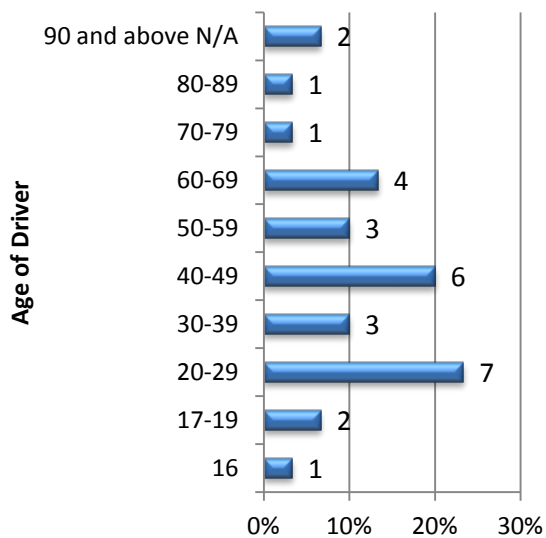
**Figure 4.8**  
**38<sup>th</sup> Ave & 41<sup>st</sup> St (Moline) – Crash Frequency by Various Conditions**



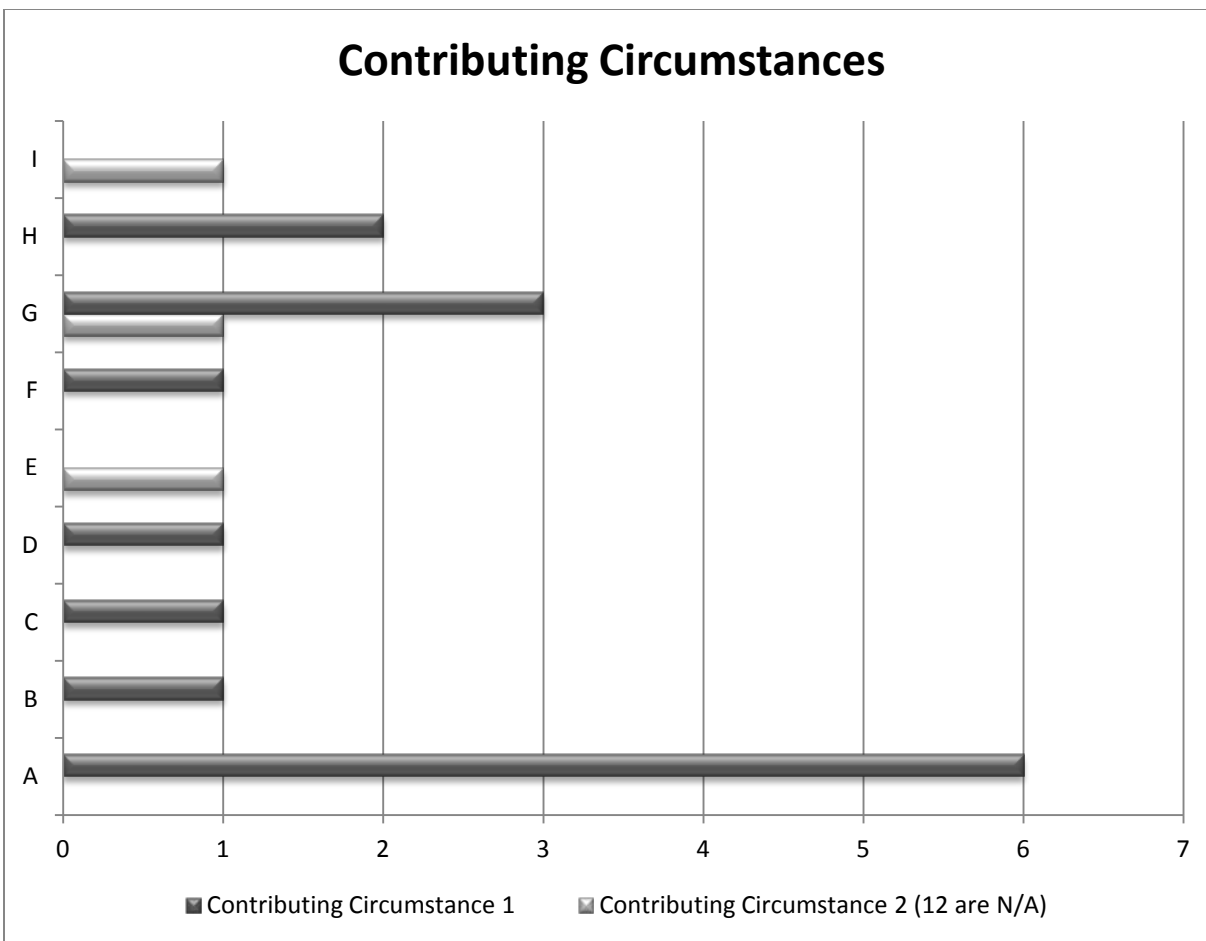
## Apparent Physical Condition of Driver



## Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	1
2	0	14	3
3	0	15	1
4	0	16	1
5	0	17	2
6	0	18	1
7	2	19	1
8	0	20	0
9	2	21	0
10	0	22	0
11	0	23	0
12	1	24	0



#### Chart Key

- A: Failing to yield right-of-way
- B: Following too closely
- C: Under the influence of alcohol/drugs
- D: Driving skills/knowledge/experience
- E: Improper lane usage
- F: Unable to determine
- G: Disregarding traffic signals
- H: Failing to reduce speed to avoid crash
- I: Exceeding safe speed for conditions

**Map 6.8**  
**2010 Illinois Location #6 - 38<sup>th</sup> Ave & 41<sup>st</sup> St (Moline)**



1. South Bound, Skidding/Loss of Control, Rear end (1)
2. East Bound, Straight, Rear end (1)
3. North Bound, Straight, Rear end (1)
4. North Bound, Straight, Angle (1)
5. Northeast Bound, Straight, Turning (1)
6. South Bound, Straight, Angle (3)

7. West Bound, Straight, Angle (1)
8. East Bound, Left Turn, Turning (2)
9. North Bound, Left Turn, Turning (2)
10. Northwest Bound, Left Turn, Turning (1)
11. West Bound, Right Turn, Turning (1)

## 2010 ILLINOIS LOCATION #9 - 19<sup>TH</sup> ST (WEST OF I-74) & AVENUE OF THE CITIES-MOLINE

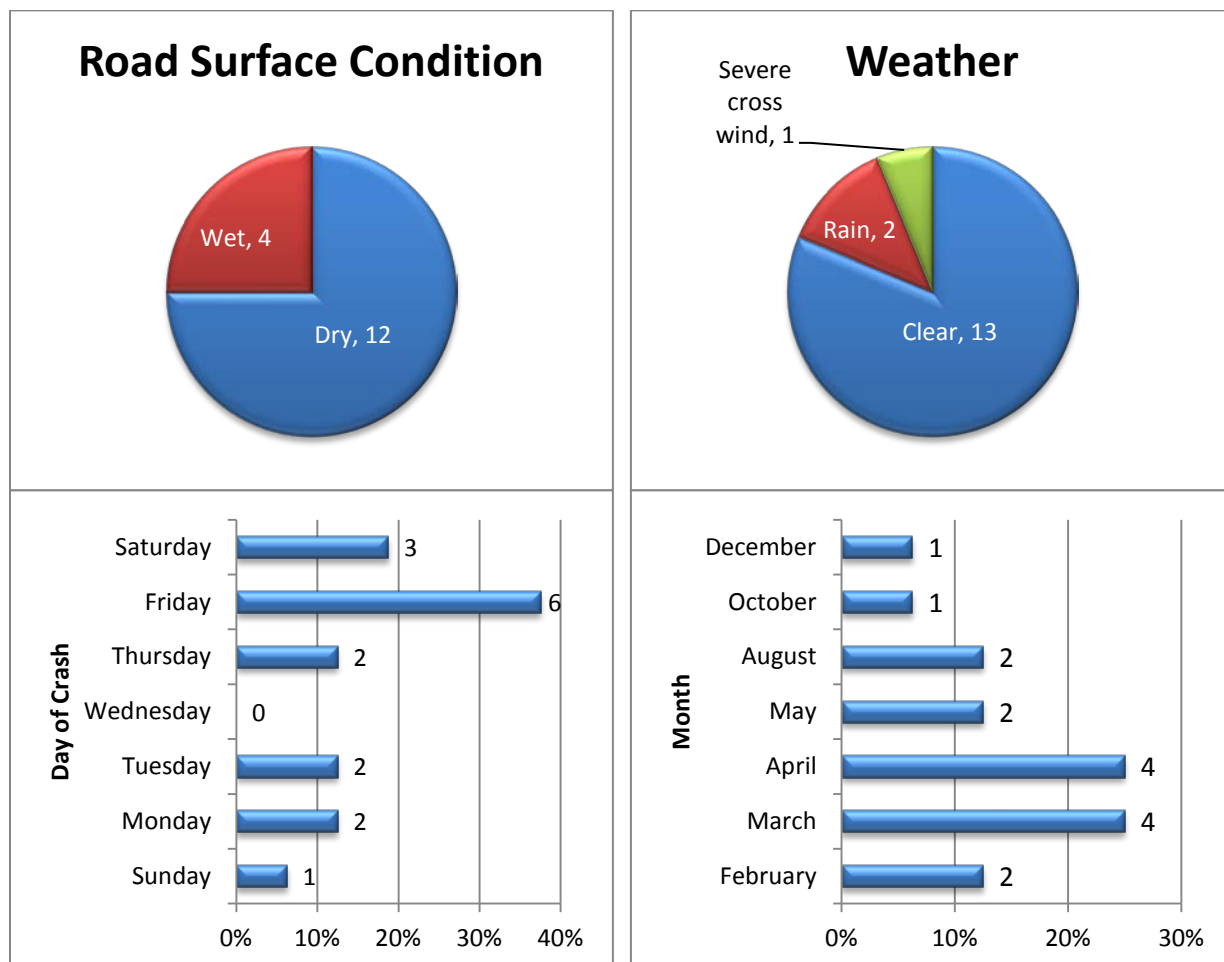
Ranked ninth, with a score of 24, this location experienced 16 crashes in 2010, resulting in 7 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.79 crashes per MEV. Angle crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Fridays with no reported crashes on Wednesdays.

Average daily traffic at this intersection is 24,550. Nineteenth Avenue is a 5 lane minor arterial, one-way road with a right turn lane and left turn lane. Nineteenth Avenue has a posted speed limit of 45 mph. Avenue of the Cities is a 5 lane minor arterial road with a posted speed limit of 30 mph. The eastbound approach has a right turn lane on to the one-way 19<sup>th</sup> St. The westbound approach has a left turn lane on to the one-way 19<sup>th</sup> St.

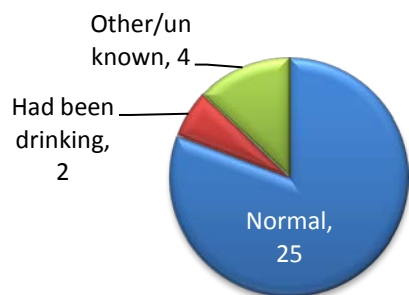
**Table 4.9**  
**19<sup>th</sup> St. (West of I74) & Avenue of the Cities (Moline) 2007 & 2010 Comparison**

	<b>2007</b> <i>(not in top ten)</i>	<b>2010</b>
<b>Rank</b>	18	9
<b>Total Crashes</b>	18	16
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	1	7
<b>Crash Rate</b>	1.69	1.79
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Angle

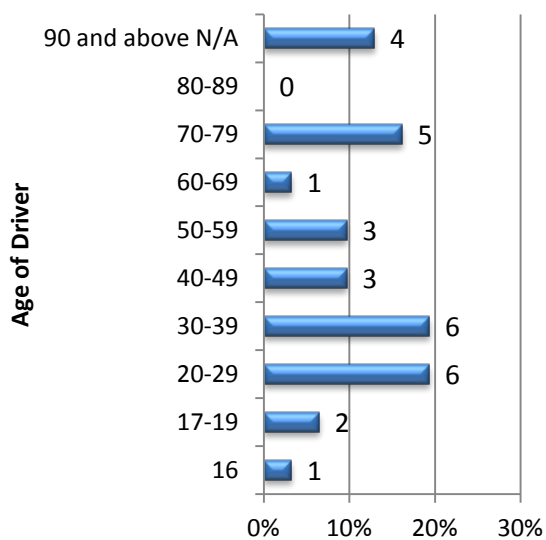
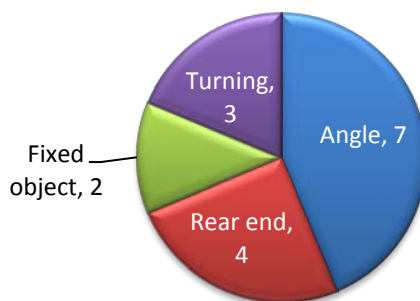
**Figure 4.9**  
**19<sup>th</sup> St (West of I74) & Ave of the Cities (Moline) – Crash Frequency by Various Conditions**



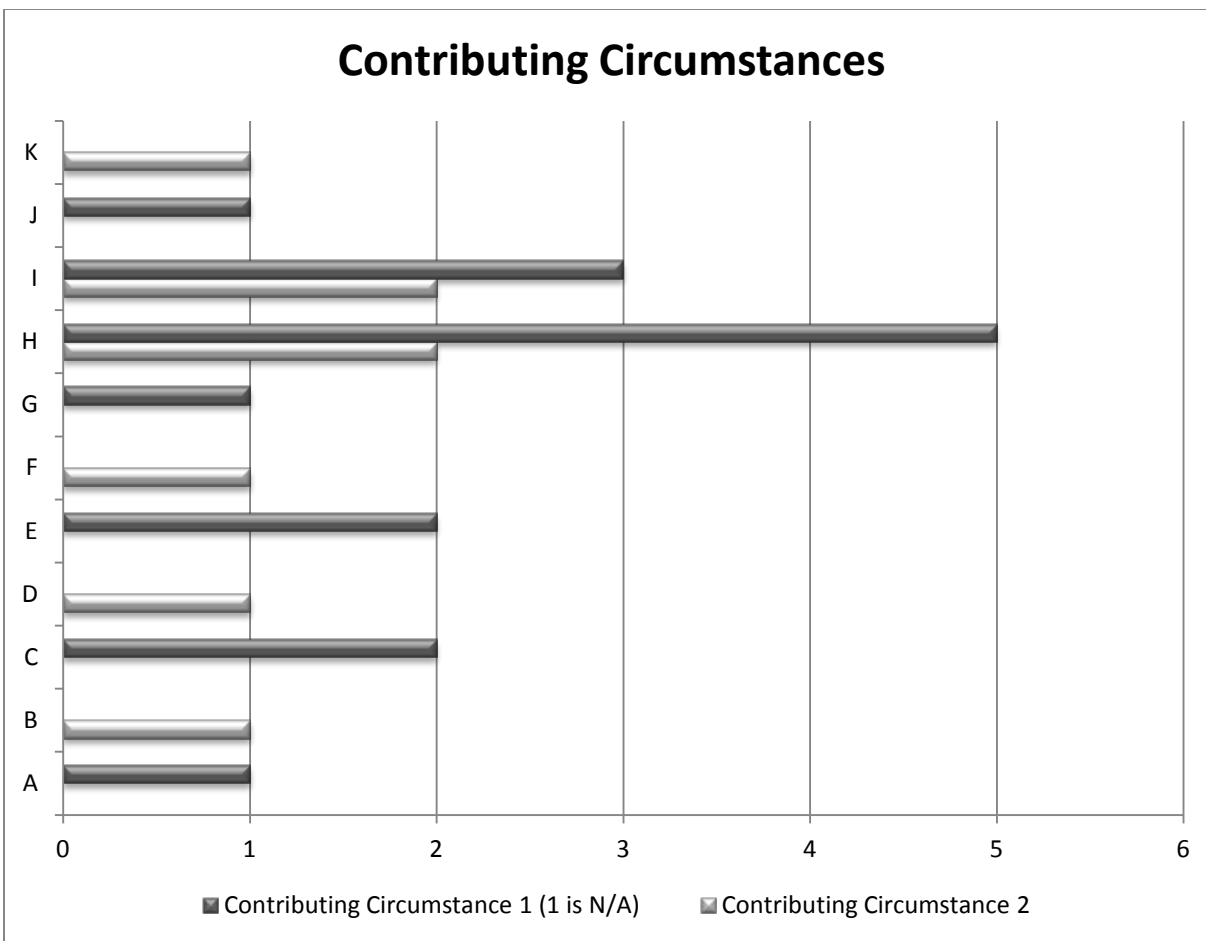
### Apparent Physical Condition of Driver



### Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	1
2	2	14	0
3	1	15	0
4	0	16	3
5	0	17	1
6	0	18	1
7	3	19	0
8	0	20	0
9	0	21	0
10	1	22	0
11	0	23	0
12	2	24	0

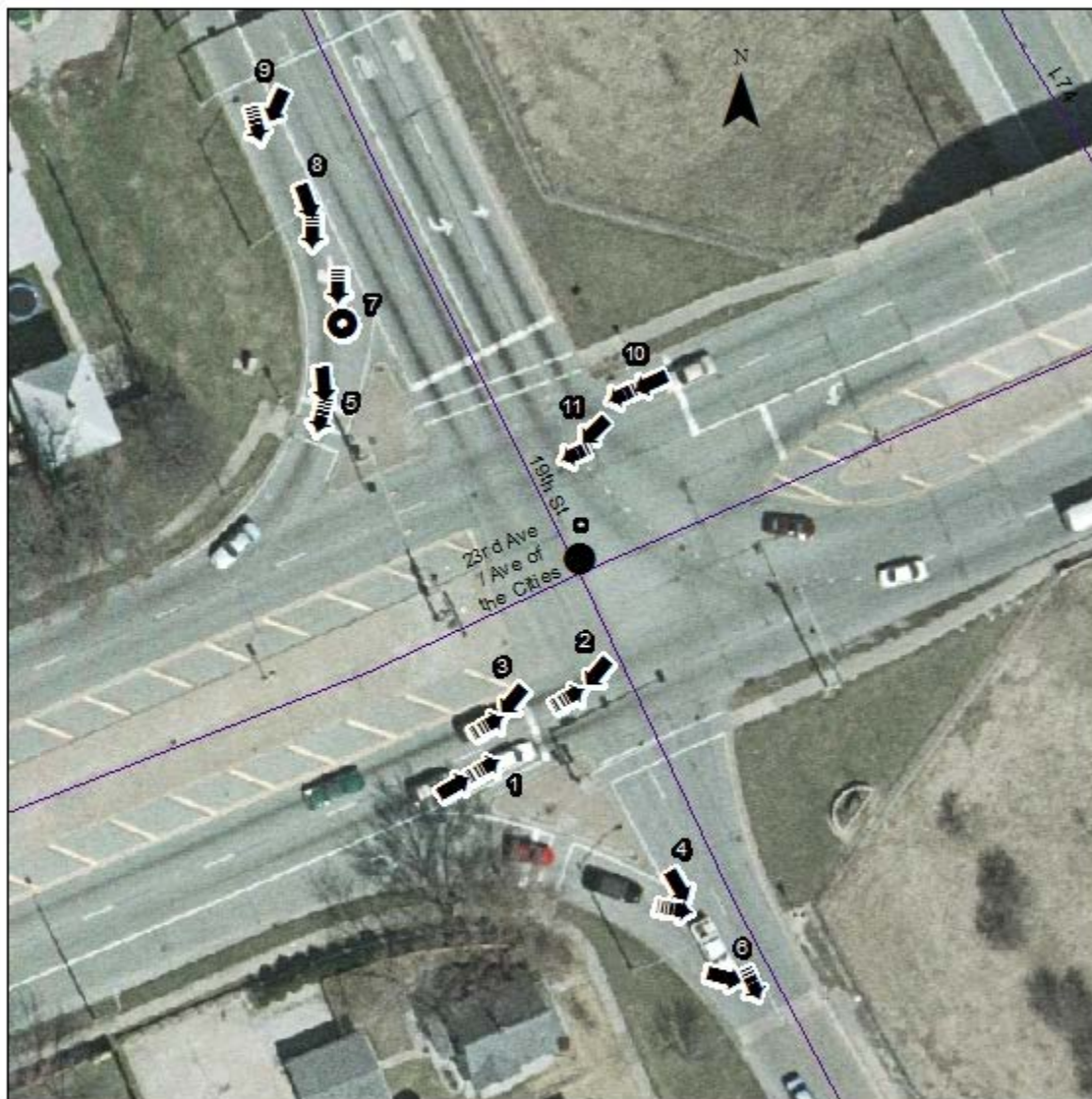


**Chart Key**

- A Failing to yield right-of-way
- B Exceeding authorized speed limit
- C Following too closely
- D Vision obscured (signs, tree limbs, buildings, etc.)
- E Under the influence of alcohol/drugs
- F Driving skills/knowledge/experience
- G Disregarding other traffic signs
- H Disregarding traffic signals
- I Failing to reduce speed to avoid crash
- J Distraction - from inside vehicle
- K Distraction - from outside vehicle



**Map 4.9**  
**2010 Illinois Location #9 - 19<sup>th</sup> St (West of I74) & Ave of the Cities (Moline)**



1. East Bound, Slow/Stop in Traffic, Rear end (1)
2. East Bound, Straight, Turning (1)
3. East Bound, Straight Angle (1)
4. East Bound, Turning on Red, Turning (1)
5. South Bound, Slow/Stop, Right Turn, Rear end (1)
6. South Bound, Straight, Angle (2)

7. South Bound, Right Turn, Fixed Object (1)
8. Southeast Bound, Slow/Stop, Right Turn, Rear end (1)
9. Southwest Bound, Right Turn, Angle (1)
10. West Bound, Straight, Rear end (1)
11. West Bound, Straight, Angle (4)
- \*, Unknown, Unknown/NA, Fixed Object (1)

**2010 ILLINOIS LOCATION #10 – JOHN DEERE RD/IL 5 & KENNEDY DR - MOLINE**

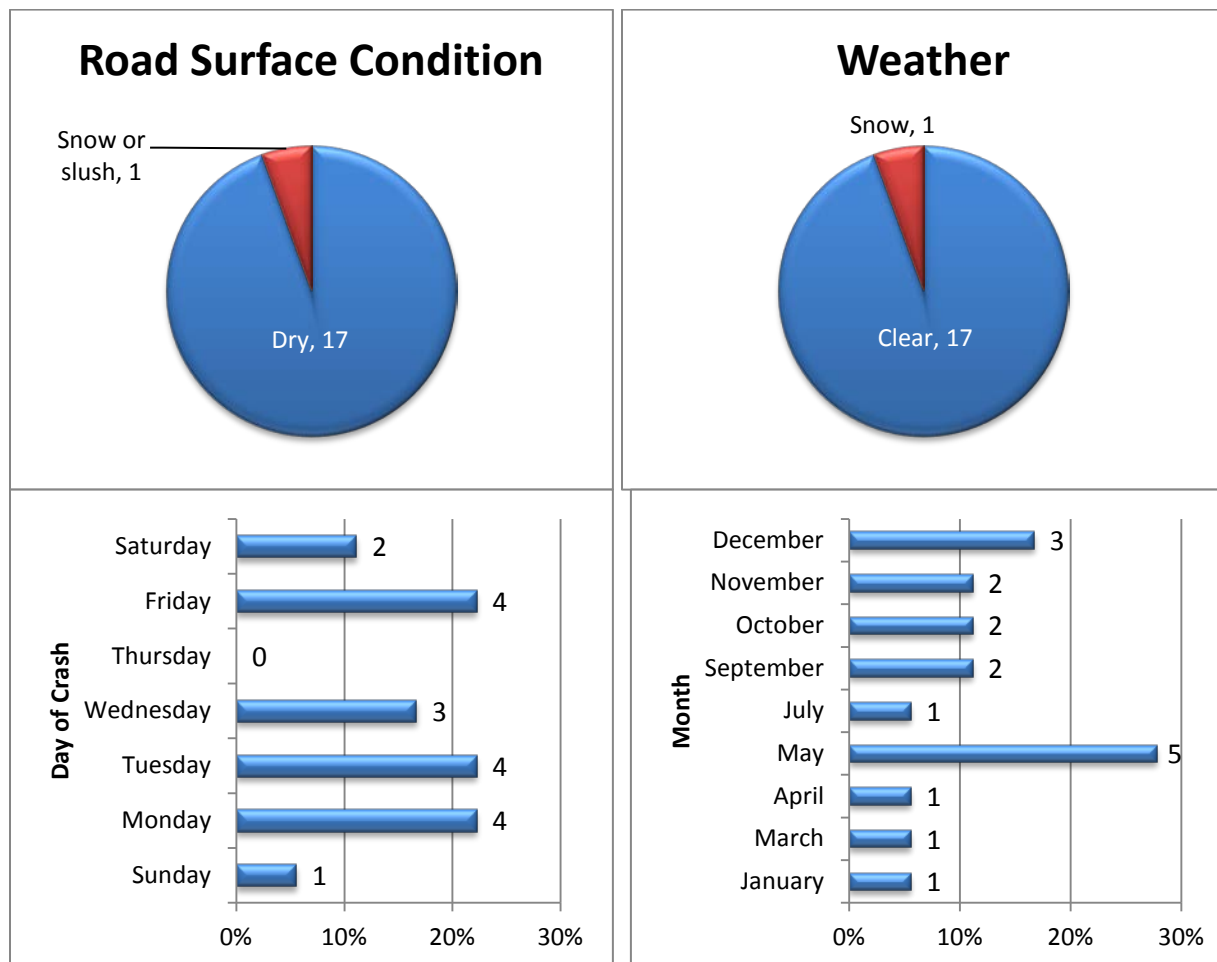
Tied for tenth, with a score of 23, this location experienced 18 crashes in 2010, resulting in 7 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.39 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Mondays, Tuesdays, and Fridays with no crashes reported for Thursdays.

Average daily traffic at this intersection is 35,600. John Deere Rd is a principal arterial road with a posted speed limit of 55 mph. Both approaches of John Deere Rd have one left turn lane and the right turn lane is channelized to southbound Kennedy Dr. Kennedy Dr on the southbound approach is a minor arterial road with a posted speed limit of 30 mph. The southbound approach has one left turn lane and a long channelized right turn lane. The northbound approach (60<sup>th</sup> St) is a 2 lane collector road with a channelized right turn lane and a posted speed limit of 30 mph.

**Table 4.10**  
**John Deere Rd & Kennedy Dr (Moline) 2007 & 2010 Comparison**

	<b>2007</b> <i>(not in top ten)</i>	<b>2010</b>
<b>Rank</b>	12	10
<b>Total Crashes</b>	15	18
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	5	7
<b>Crash Rate</b>	1.17	2.37
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Rear-end

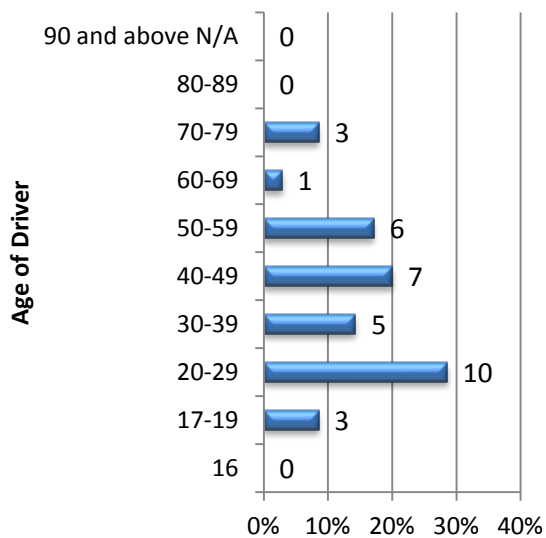
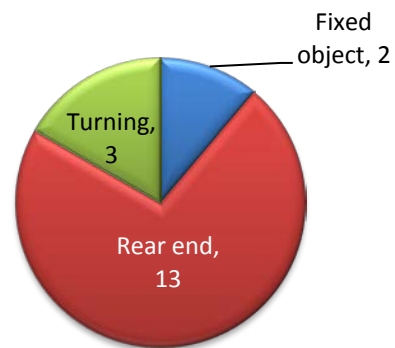
**Figure 4.10**  
**John Deere Rd & Kennedy Dr (Moline) – Crash Frequency by Various Conditions**



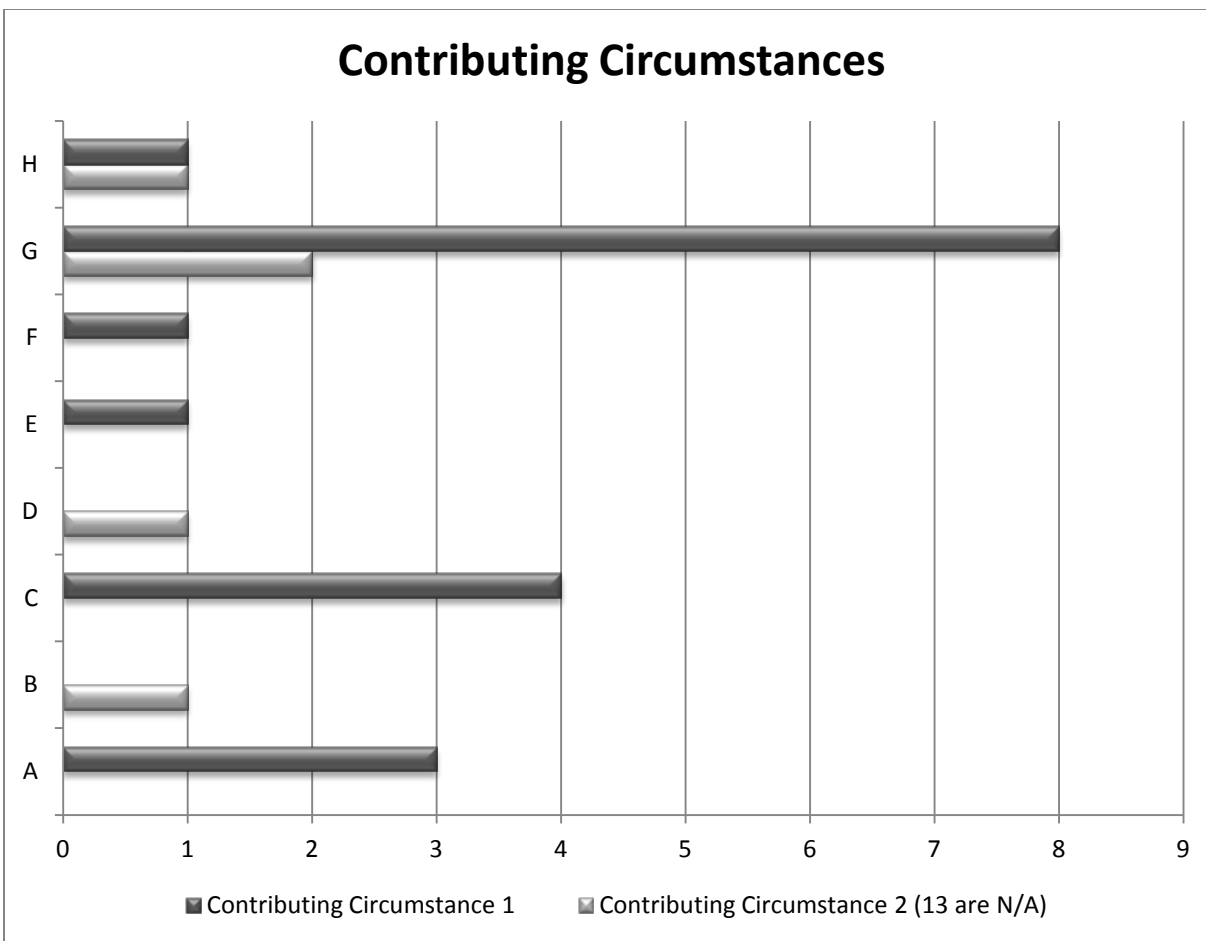
## Apparent Physical Condition of Driver



## Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	2
2	0	14	1
3	0	15	1
4	0	16	0
5	0	17	1
6	0	18	0
7	0	19	2
8	4	20	0
9	1	21	0
10	1	22	0
11	2	23	0
12	1	24	1



#### Chart Key

- A: Failing to yield right-of-way
- B: Turning right on red
- C: Following too closely
- D: Weather
- E: Unable to determine
- F: Exceeding safe speed for conditions
- G: Failing to reduce speed to avoid crash
- H: Distraction - from inside vehicle

**Map 4.10**  
**2010 Illinois Location #10 - John Deere Rd & Kennedy Dr (Moline)**



- |   |   |
|---|---|
| 1. East Bound, Skidding/Control Loss, Rear end (1)    | 6. North Bound, Left Turn, Rear end (2)                     |
| 2. East Bound, Slow/Stop in Traffic, Rear end (3)     | 7. Northeast Bound, Slow/Stop, Right Turn, Rear end (1)     |
| 3. East Bound, Slow/Stop, Left Turn, Fixed Object (1) | 8. Northwest Bound, Skidding/Control Loss, Fixed Object (1) |
| 4. East Bound, Straight, Rear end (4)                 | 9. Northwest Bound, Left Turn, Turning (1)                  |
| 5. North Bound, Slow/Stop in Traffic, Rear end (3)    | 10. West Bound, Slow/Stop in Traffic, Rear end (1)          |



## 2010 ILLINOIS LOCATION #10 - 6<sup>TH</sup> AVE & 23<sup>RD</sup> ST- MOLINE

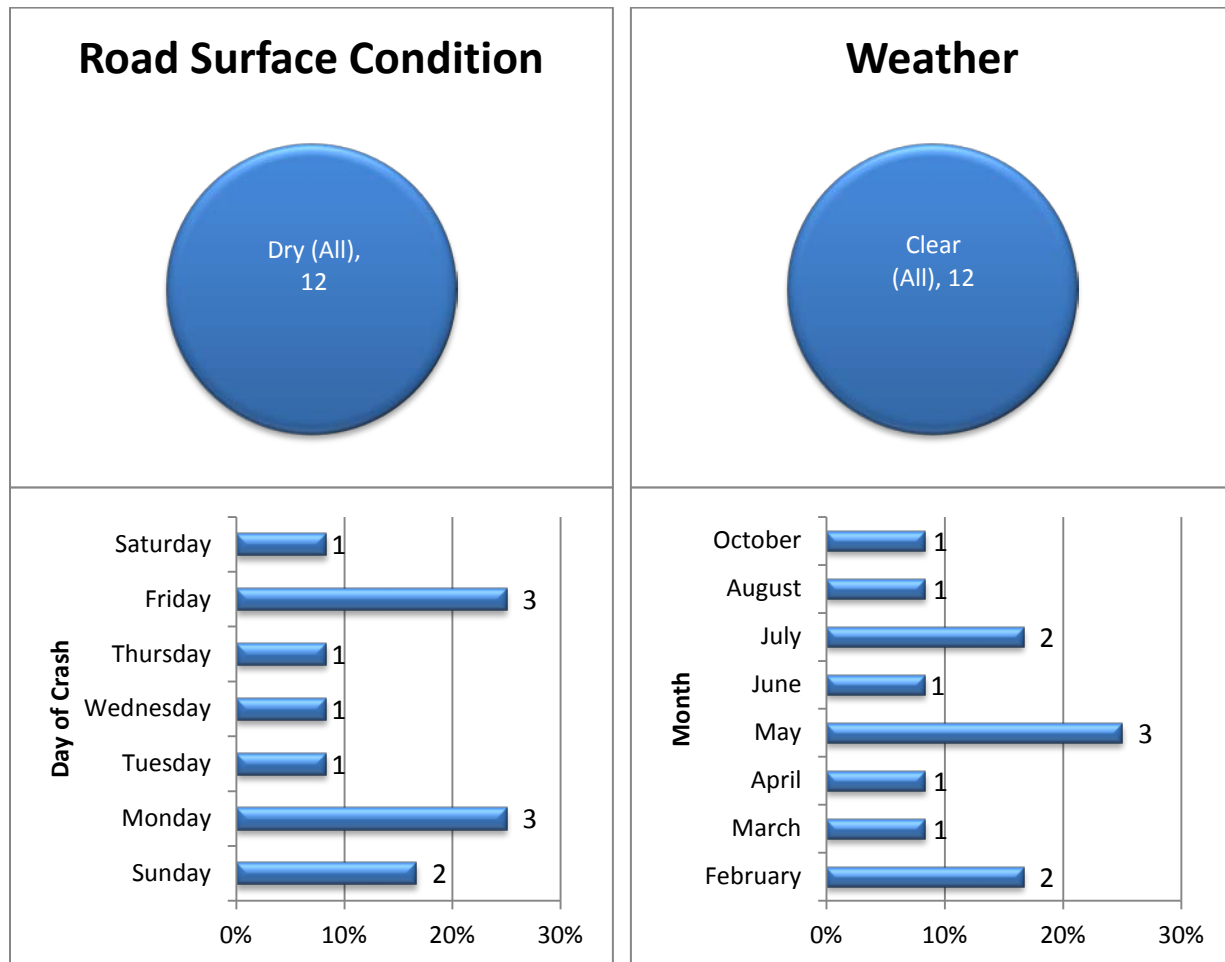
Tied for tenth, with a score of 23, this location experienced 12 crashes, resulting in 4 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 2.98 crashes per MEV. Crashes involving turning were the predominant crash type closely followed by rear-end crashes. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Mondays and Fridays with crashes reported all days of the week.

Average daily traffic at this intersection is 11,025. Sixth Avenue is a one-way (eastbound), two lane principal arterial road with a posted speed limit of 30 mph. Sixth Avenue has one left turn lane and one right turn lane. Twenty-Third Street is a four lane collector road also with a speed limit of 30 mph. The northbound approach of 23<sup>rd</sup> St has a channelized right turn lane. The southbound approach of 23<sup>rd</sup> St has a left turn lane and a left turn/through lane.

**Table 4.11**  
**6<sup>th</sup> Ave & 23<sup>rd</sup> St. (Moline) 2007 & 2010 Comparison**

	<b>2007</b>	<b>2010</b>
<b>Rank</b>	7	10
<b>Total Crashes</b>	18	12
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	3	4
<b>Crash Rate</b>	5.51	2.98
<b>Predominant Crash Type</b>	Rear-end	Turning

**Figure 4.11**  
**6<sup>th</sup> Ave & 23<sup>rd</sup> St. (Moline) – Crash Frequency by Various Conditions**

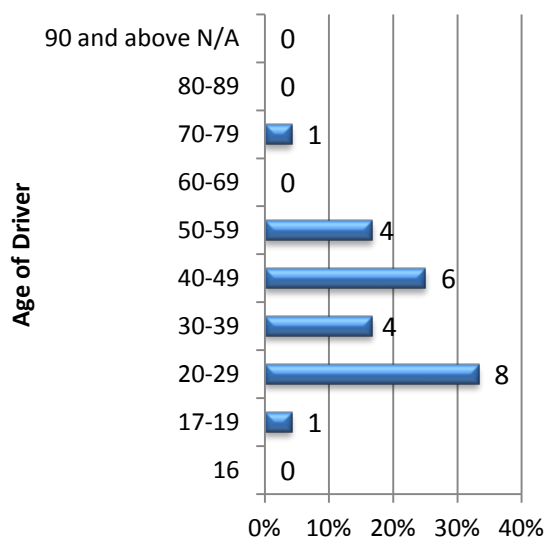
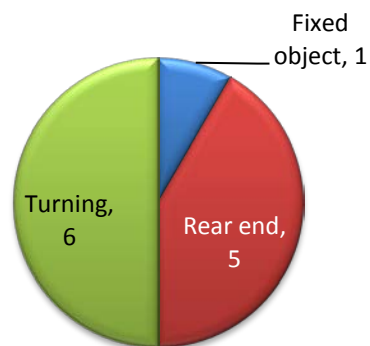




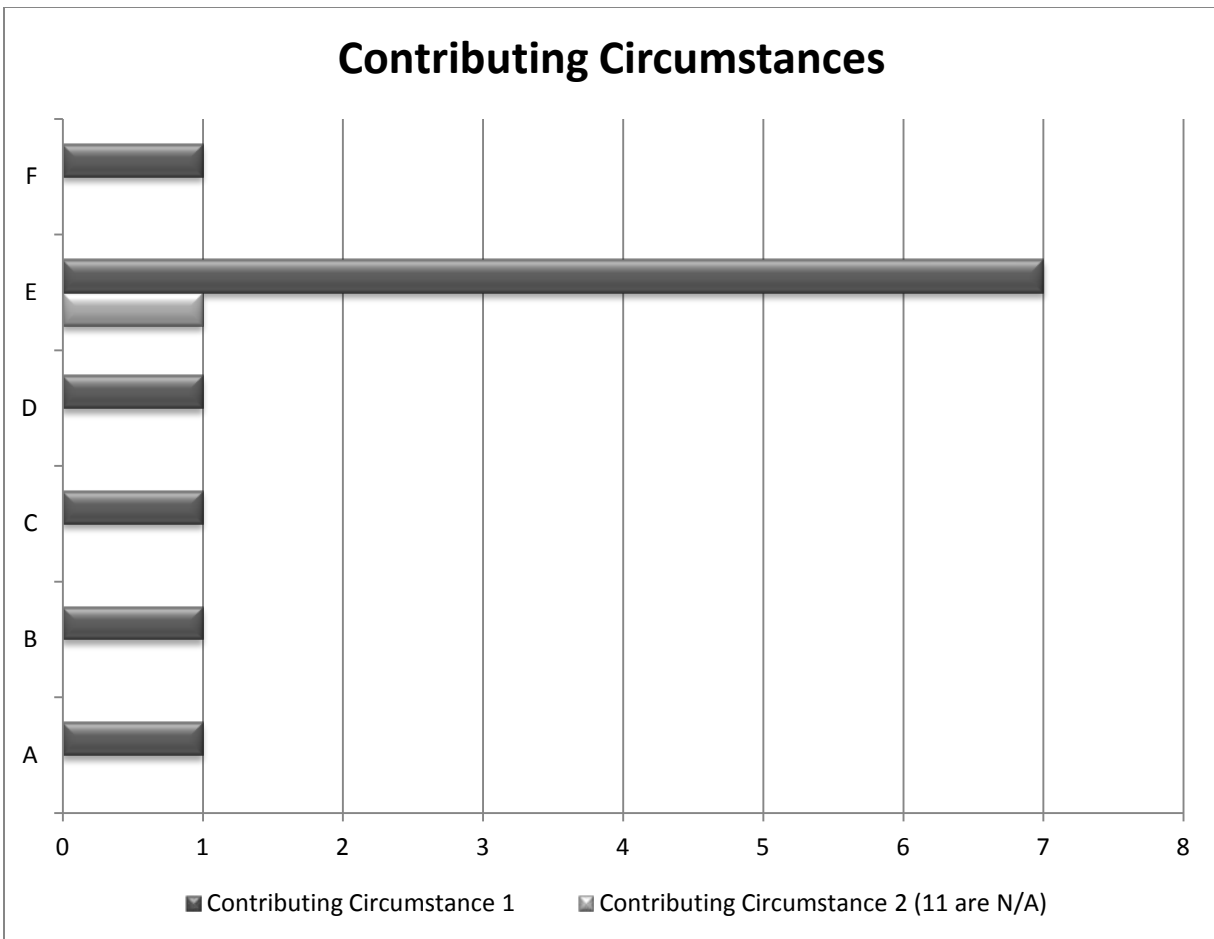
## Apparent Physical Condition of Driver



## Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	2
2	0	14	3
3	0	15	0
4	0	16	2
5	0	17	1
6	0	18	0
7	0	19	1
8	0	20	0
9	0	21	1
10	0	22	0
11	0	23	0
12	2	24	0



**Chart Key**

- A: Failing to yield to right-of-way
- B: Following too closely
- C: turning right on red
- D: Improper lane usage
- E: Failing to reduce speed to avoid crash
- F: Distraction - from inside vehicle

**Map 4.11**  
**2010 Illinois Location #10 - 6<sup>th</sup> Ave & 23<sup>rd</sup> St. (Moline)**



1. North Bound, Slow/Stop in Traffic, Rear end (1)
2. Northeast Bound, Slow/Stop, Right Turn, Rear end (1)
3. East Bound, Straight, Rear end (2)
4. North Bound, Straight, Rear end (1)

5. East Bound, Left Turn, Turning (1)
6. North Bound, Right Turn, Rear end (1)
7. Northeast Bound, Right Turn, Rear end (4)
8. Northeast Bound, Right Turn, Fixed Object (1)

**2010 ILLINOIS LOCATION #10 – 1<sup>ST</sup> AVE/US 67 & 92<sup>ND</sup> AVE WEST - MILAN**

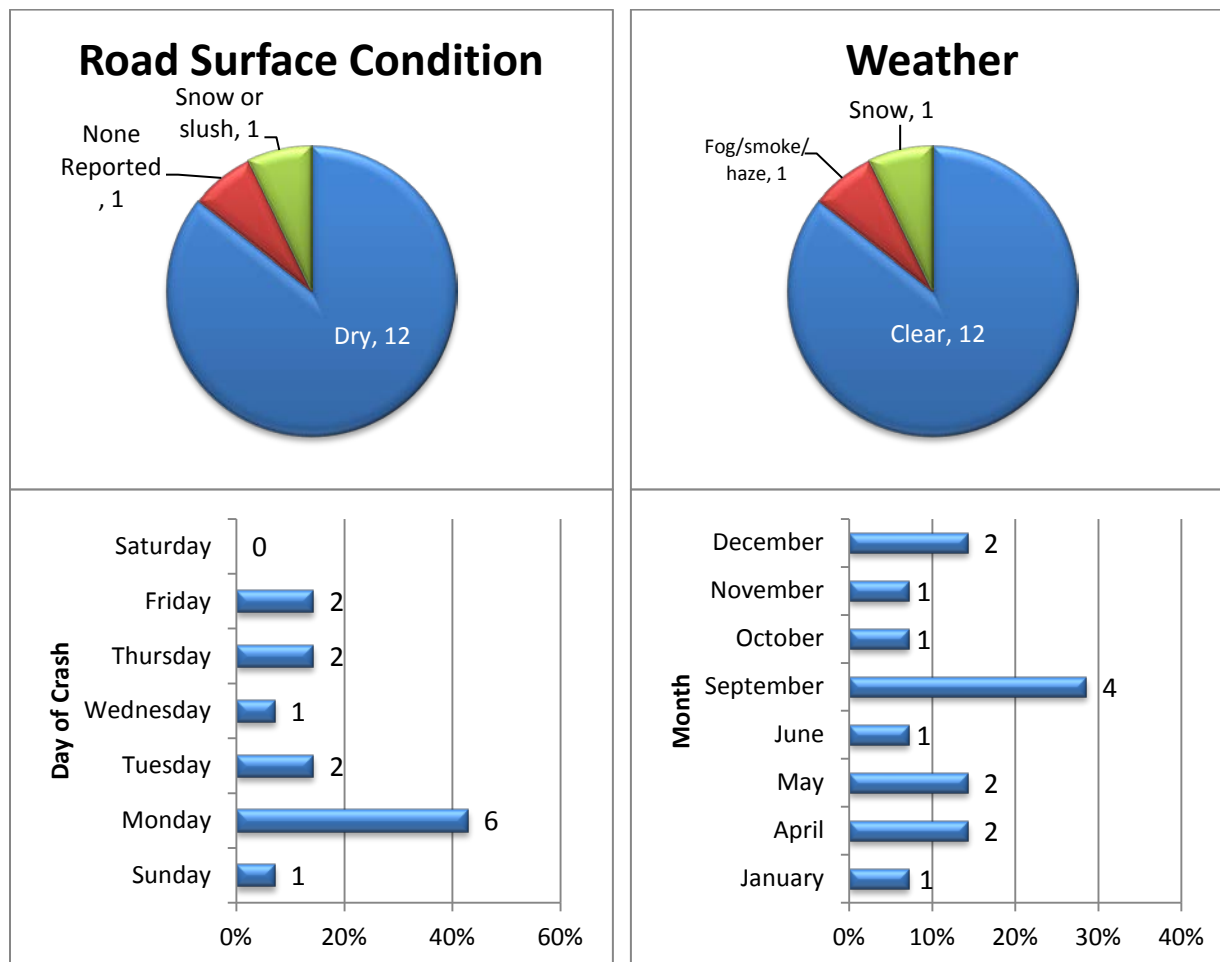
Tied for tenth, with a score of 23, this location experienced 14 crashes, resulting in 7 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 2.08 crashes per MEV. Crashes involving turning were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Mondays with no reported crashes on Saturdays.

Average daily traffic at this intersection is 18,400. First St/US 67 is principal arterial road with a posted speed limit of 55 mph on the southbound approach and 35 mph on the northbound approach. Ninety-second Ave West/Milan Beltway is a principal arterial road with a posted speed limit of 55 mph. All approaches to this intersection have one left turn lane and one channelized right turn lane.

**Table 4.12**  
**1<sup>st</sup> Ave/US 67 & 92<sup>nd</sup> Ave W. (Milan) 2007 & 2010 Comparison**

	<b>2007 (<i>not in top ten</i>)</b>	<b>2010</b>
<b>Rank</b>	11	10
<b>Total Crashes</b>	12	14
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	5	7
<b>Crash Rate</b>	1.93	2.08
<b>Predominant Crash Type</b>	<i>Not Ranked</i>	Turning

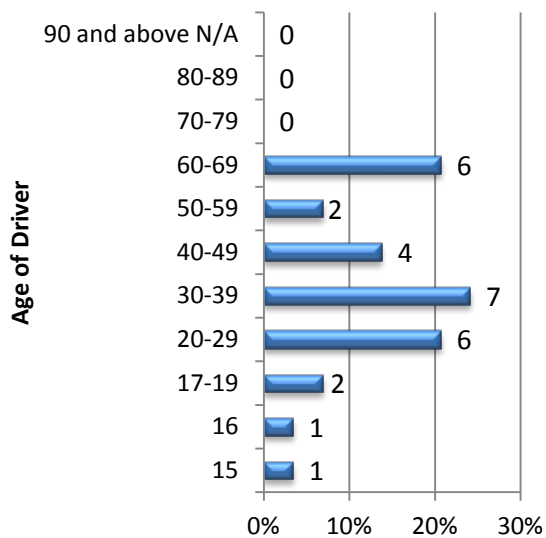
**Figure 4.12**  
**1<sup>st</sup> Ave/US 67 & 92<sup>nd</sup> Ave W. (Milan) – Crash Frequency by Various Conditions**



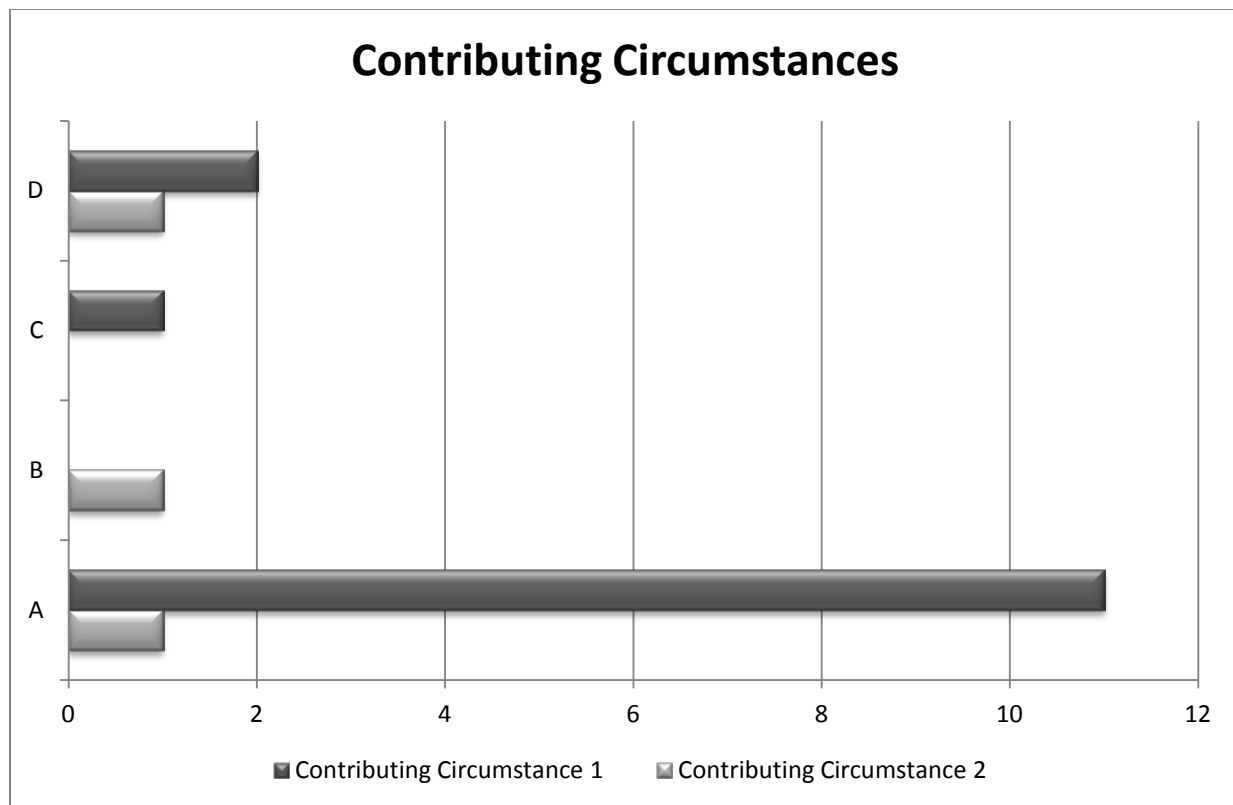
## Apparent Physical Condition of Driver



## Crash Type



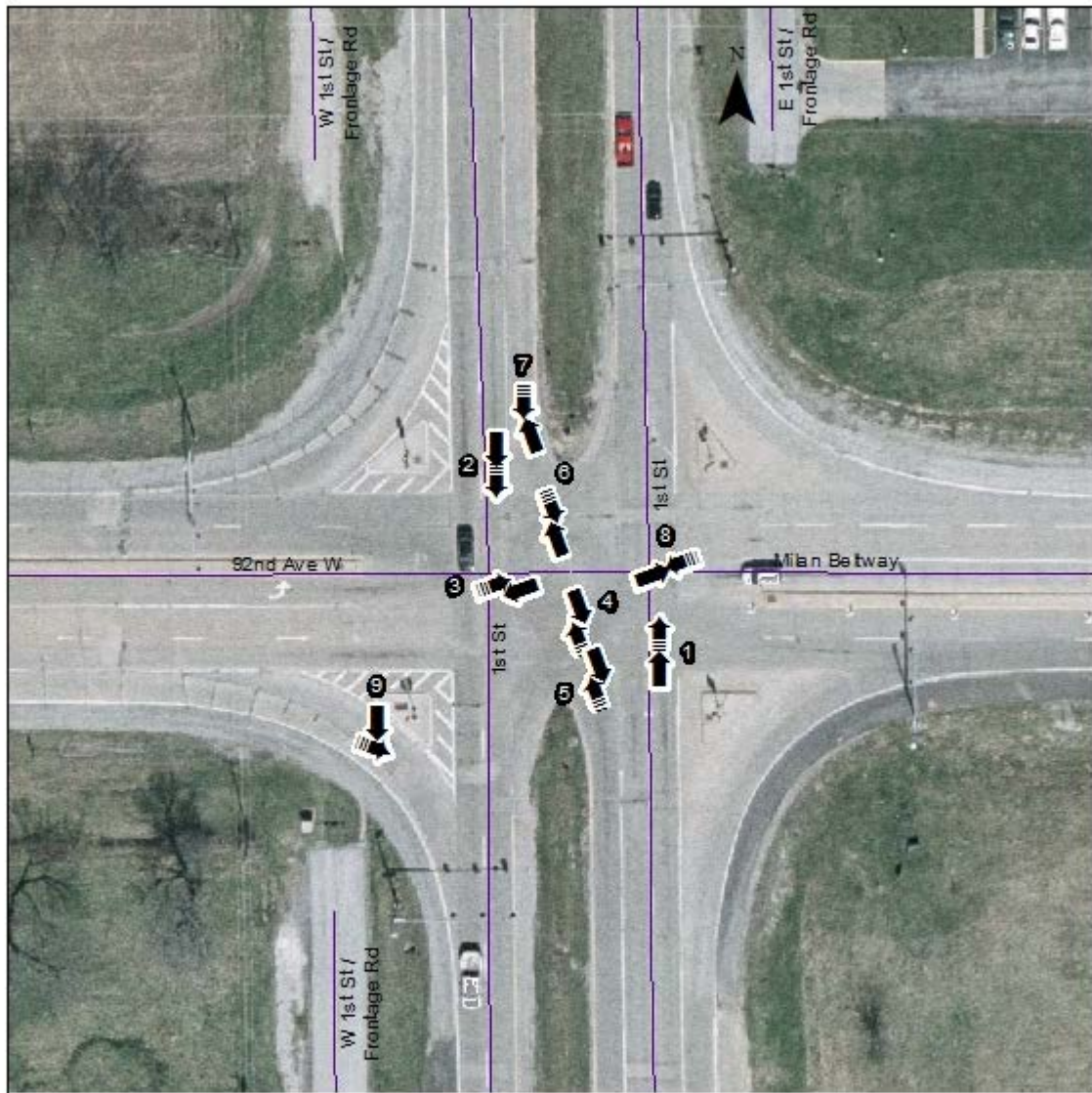
Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	1
2	0	14	2
3	0	15	2
4	0	16	2
5	1	17	2
6	1	18	0
7	0	19	0
8	0	20	0
9	0	21	2
10	1	22	0
11	0	23	0
12	0	24	0

**Chart Key**

- A: Failing to yield right-of-way
- B: Disregarding traffic signals
- C: Exceeding safe speed for conditions
- D: Failing to reduce speed for conditions



**Map 4.12**  
**2010 Illinois Location #10 - 1<sup>st</sup> Ave/US 67 & 92<sup>nd</sup> Ave W. (Milan)**



- |  |  |
|--|--|
| 1. North Bound, Straight, Rear end (2)     | 6. South Bound, Left Turn, Turning (2)     |
| 2. South Bound, Straight, Rear end (1)     | 7. Southwest Bound, Left Turn, Turning (2) |
| 3. East Bound, Left Turn, Turning (1)      | 8. West Bound, Left Turn, Turning (2)      |
| 4. Northeast Bound, Left Turn, Turning (2) | 9. East Bound, Right Turn, Turning (1)     |
| 5. Northwest Bound, Left Turn, Turning (1) |  |



**CHAPTER 4 – PART 2    2011 ILLINOIS INTERSECTION CRASH DATA****2011 ILLINOIS LOCATION #1- IL 5/JOHN DEERE EXPY & 38<sup>TH</sup> ST- MOLINE**

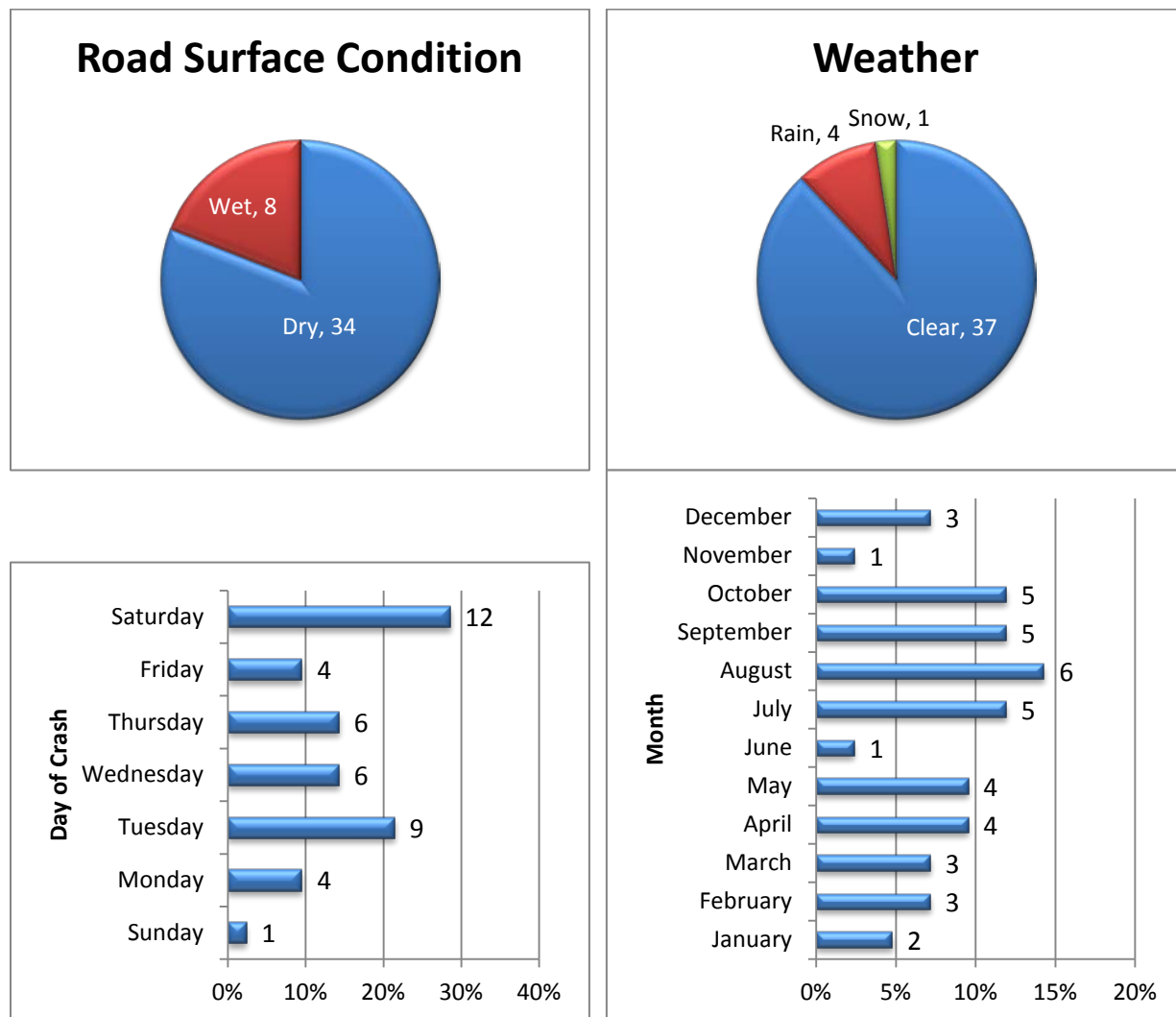
Ranked first, with a score of 39, this location experienced 42 crashes in 2011, resulting in 15 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 2.15 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Saturdays with crashes reported for all days of the week.

Average daily traffic for this intersection is 53,400. IL 5/ John Deere Expressway is a divided, four-lane highway with a posted speed limit of 55 mph. There are left-turn only lanes on both the east and west approaches. Thirty-Eighth Street is a two-lane collector road with a posted speed limit of 40 mph on the southbound lanes and 30 mph on the northbound lanes. There are left and right turn only lanes on both the north and south approaches.

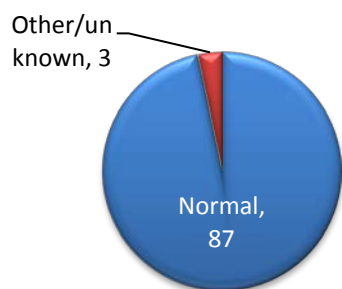
**Table 4.13**  
**IL 5/John Deere Expy & 38<sup>th</sup> St (Moline) 2010 & 2011 Comparison**

	<b>2010</b>	<b>2011</b>
<b>Rank</b>	1	1
<b>Total Crashes</b>	38	42
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	13	15
<b>Crash Rate</b>	1.93	2.15
<b>Predominant Crash Type</b>	Rear-end	Rear-end

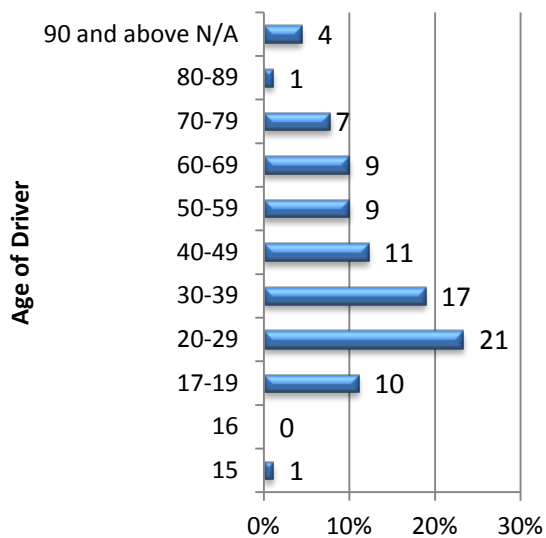
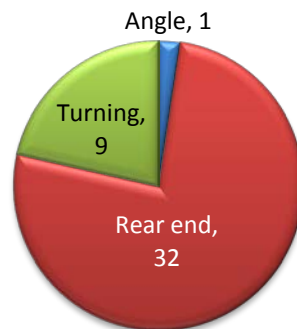
**Figure 4.13**  
**IL 5/John Deere Expy & 38<sup>th</sup> St (Moline) – Crash Frequency by Various Conditions**



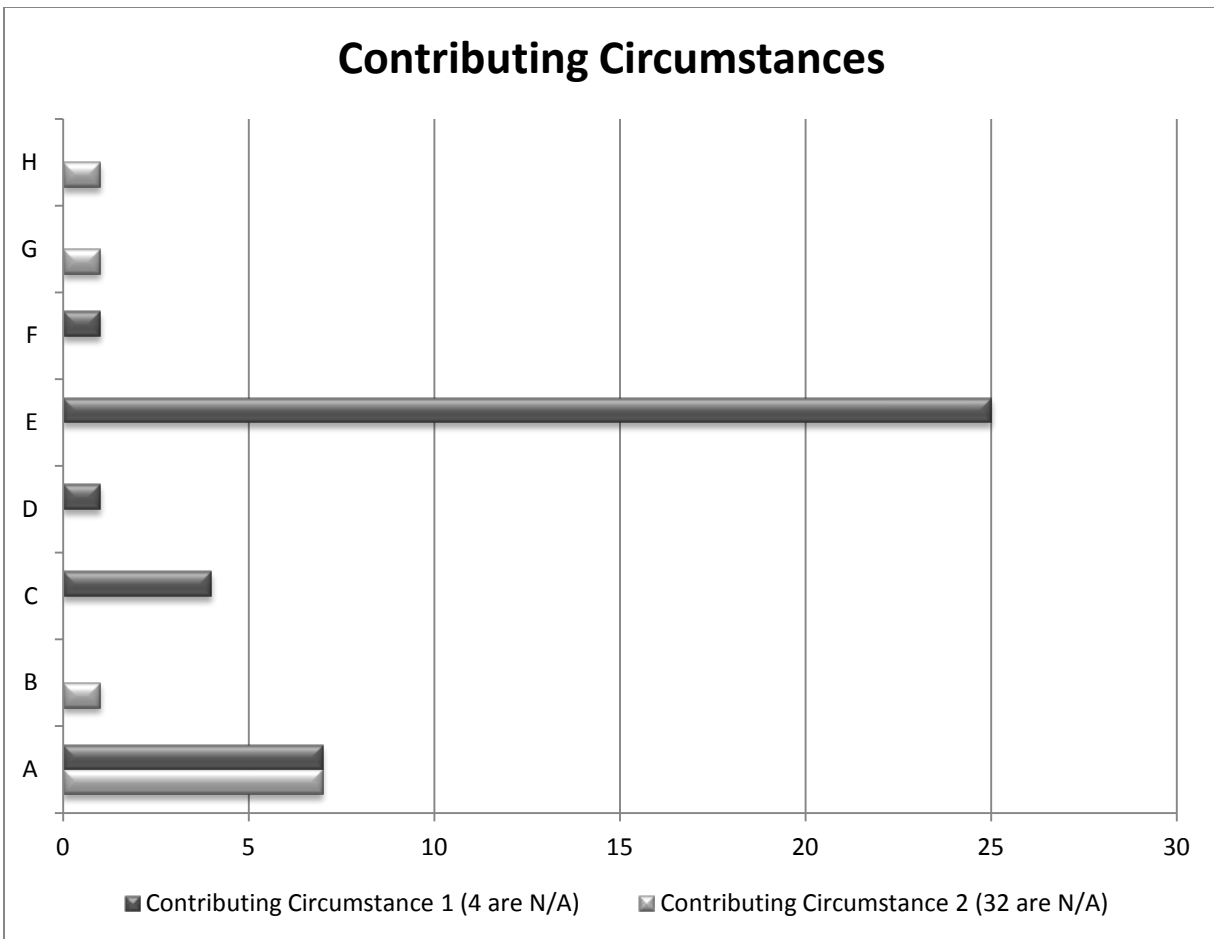
### Apparent Physical Condition of Driver



### Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	2
2	0	14	10
3	0	15	2
4	0	16	2
5	0	17	3
6	0	18	3
7	5	19	0
8	2	20	1
9	1	21	3
10	2	22	0
11	3	23	0
12	1	24	1



**Chart Key**

- A: Following too closely
- B: Weather
- C: Improper lane usage
- D: Exceeding safe speed for conditions
- E: Failing to reduce speed to avoid crash
- F: Distraction - from inside vehicle
- G: Distraction - from outside vehicle
- H: Unable to determine

**Map 4.13**  
**2011 Illinois Location #1 - IL 5/John Deere Expy & 38<sup>th</sup> St (Moline)**



1. East Bound, Slow/Stop in Traffic, Rear end (3)
2. East Bound, Starting in Traffic, Rear end (1)
3. East Bound, Straight, Rear end (9)
4. East Bound, Right Turn, Turning (2)
5. East Bound, Unknown, Rear end (1)
6. North Bound, Straight, Turning (3)
7. North Bound, Right Turn, Turning (1)
8. Northeast Bound, Slow/Stop, Right Turn, Angle (1)

9. South Bound, Slow/Stop in Traffic, Rear end (1)
10. South Bound, Starting in Traffic, Rear end (1)
11. South Bound, Straight, Rear end (1)
12. South Bound, Left Turn, Turning (1)
13. Southeast Bound, Right Turn, Turning (2)
14. West Bound, Skidding/Control Loss, Rear end (2)
15. West Bound, Slow/Stop in Traffic, Rear end (2)
16. West Bound, Straight, Rear end (11)

**2011 ILLINOIS LOCATION #2 - IL 5/JOHN DEERE EXPY & 41<sup>ST</sup> ST- MOLINE**

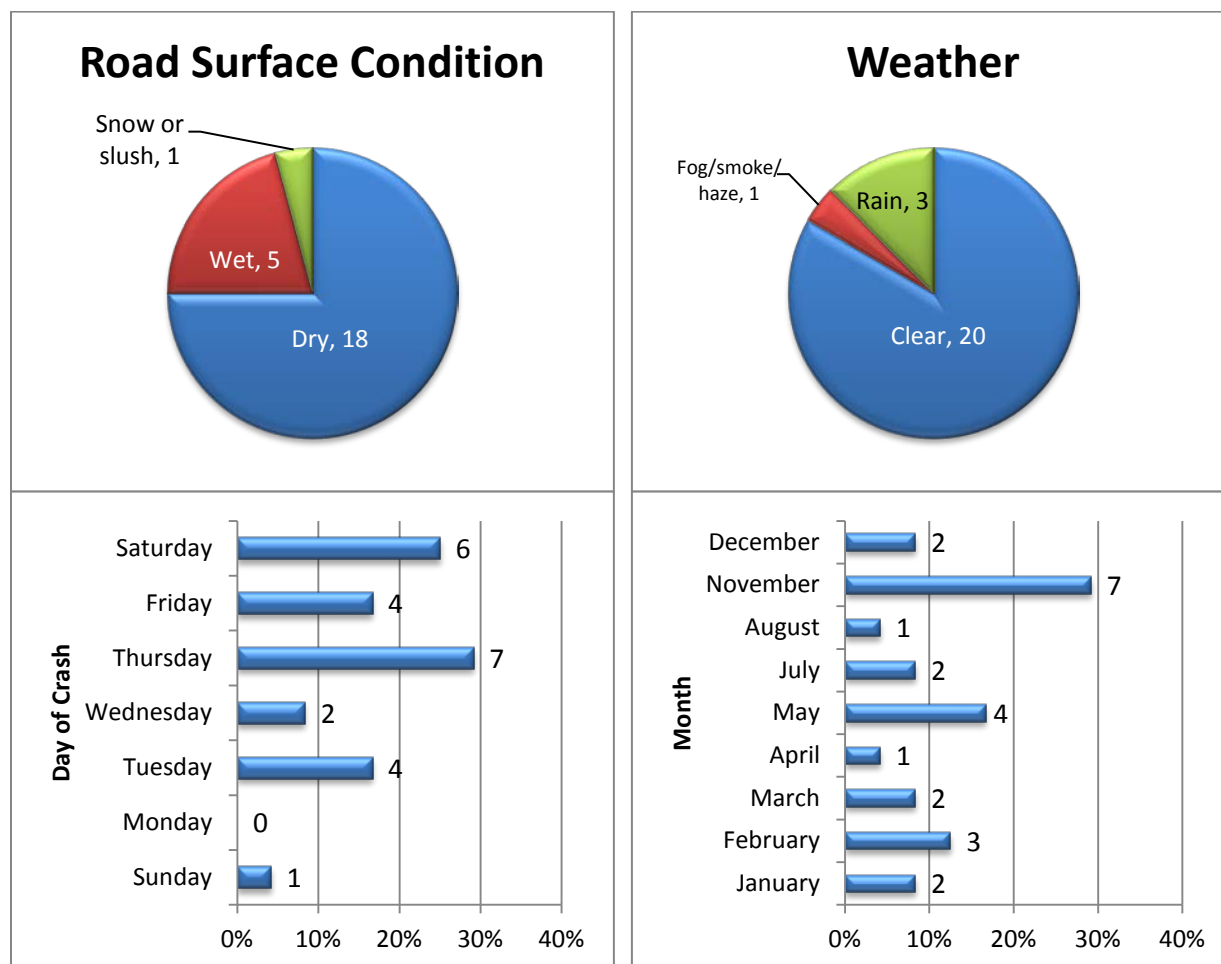
Ranked second, with a score of 29, this location experienced 24 crashes in 2011, resulting in 10 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.31 crashes per MEV. Similar to the previous IL 5/John Deere Expressway intersection, rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Thursdays with no crashes reported for Mondays.

Average daily traffic for this intersection is 50,050. IL 5/John Deere Expressway is a four-lane principal arterial road at this location, with a speed limit of 55 mph. Forty-First Street is a four-lane minor arterial on the southbound approach and collector on the northbound approach. Left turn lanes are provided for all approaches at this intersection. Right-turn lanes are provided and channelized at each corner.

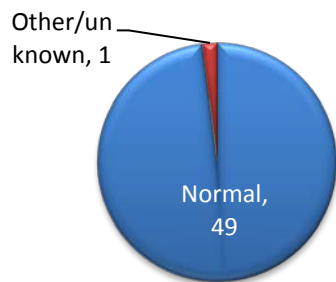
**Table 4.14**  
**IL 5/John Deere Expy & 41<sup>st</sup> St (Moline) 2010 & 2011 Comparison**

	<b>2010</b>	<b>2011</b>
<b>Rank</b>	2	2
<b>Total Crashes</b>	28	24
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	10	10
<b>Crash Rate</b>	1.55	1.31
<b>Predominant Crash Type</b>	Rear-end	Rear-end

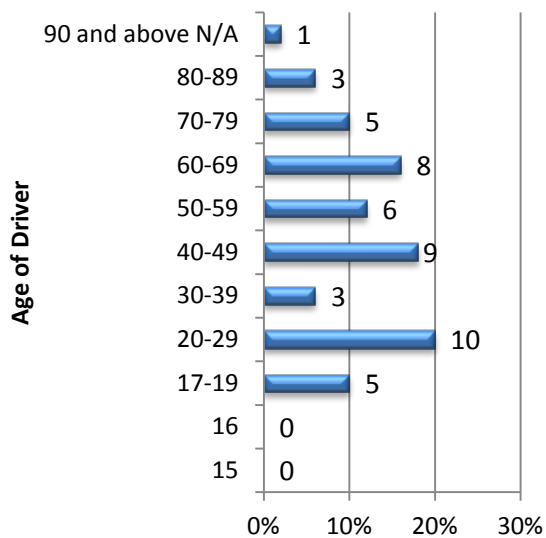
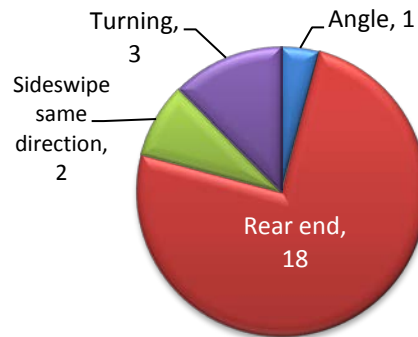
**Figure 4.14**  
**IL 5/John Deere Expy & 41<sup>st</sup> St (Moline) – Crash Frequency by Various Conditions**



## Apparent Physical Condition of Driver

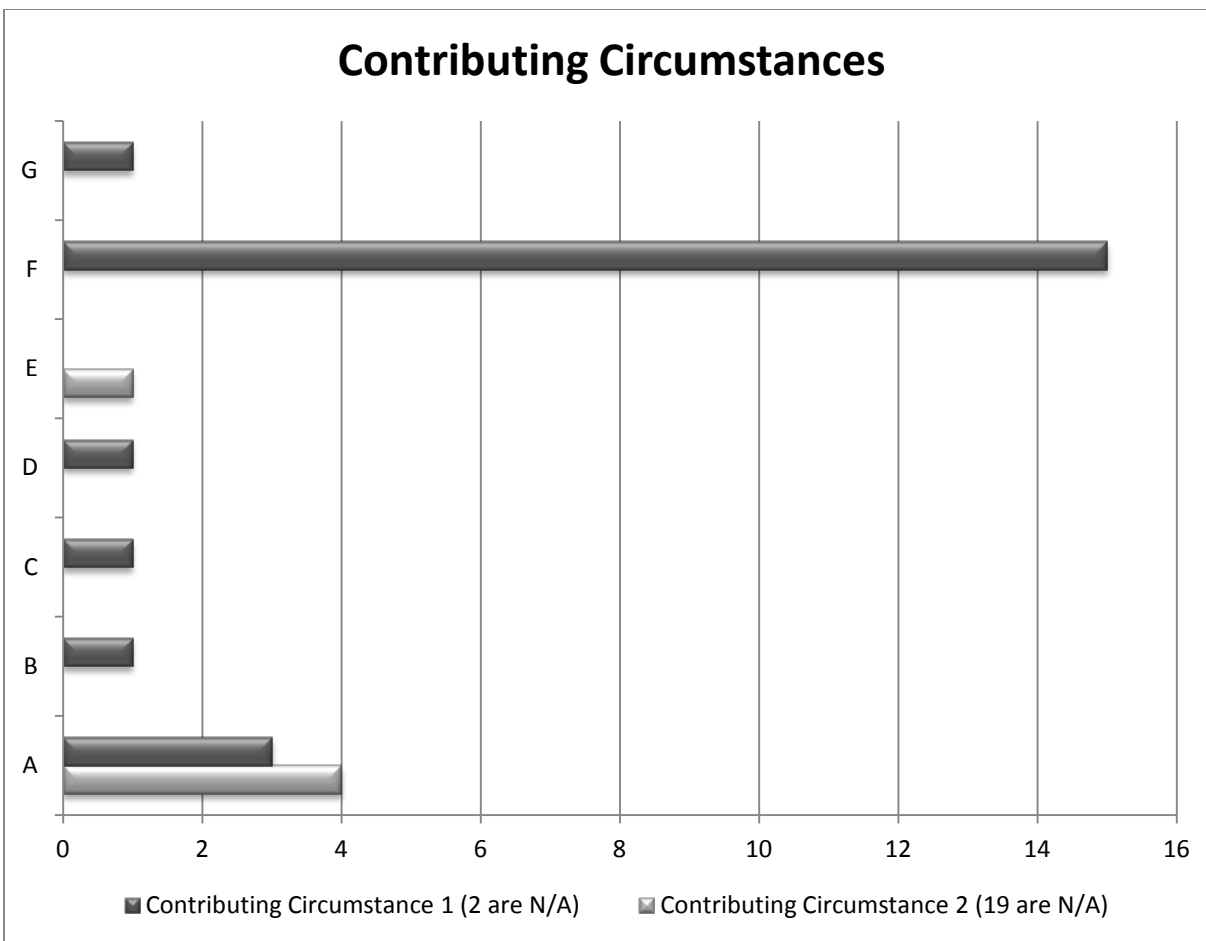


## Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	2
2	0	14	2
3	0	15	2
4	0	16	4
5	0	17	1
6	0	18	2
7	2	19	2
8	1	20	0
9	1	21	0
10	1	22	0
11	0	23	0
12	4	24	0





#### Chart Key

- A: Following too closely
- B: Turning right on red
- C: Unable to determine
- D: Improper lane usage
- E: Improper turning/no signal
- F: Failing to reduce speed to avoid crash
- G: Distraction - from inside vehicle

**Map 4.14**  
**2011 Illinois Location #2 - IL 5/John Deere Expy & 41<sup>st</sup> St (Moline)**



- |  |  |
|--|--|
| 1. East Bound, Avoiding Vehicle/Objects, Sideswipe, Same Direction (1) | 8. Northeast Bound, Right Turn, Turning (1)              |
| 2. East Bound, Straight, Rear end (5)                                  | 9. Northwest Bound, Starting in Traffic, Rear end (1)    |
| 3. East Bound, Right Turn, Turning (1)                                 | 10. South Bound, Straight, Sideswipe, Same Direction (1) |
| 4. East Bound, Unknown, Rear end (1)                                   | 11. South Bound, Straight, Angle (1)                     |
| 5. North Bound, Straight, Rear end (1)                                 | 12. Southwest Bound, Left Turn, Turning (1)              |
| 6. Northeast Bound, Slow/Stop, Right Turn, Rear end (2)                | 13. West Bound, Slow/Stop in Traffic, Rear end (1)       |
| 7. Northeast Bound, Straight, Rear end (3)                             | 14. West Bound, Straight, Rear end (4)                   |

### 2011 ILLINOIS LOCATION #3 - 7<sup>TH</sup> ST & AVENUE OF THE CITIES- EAST MOLINE

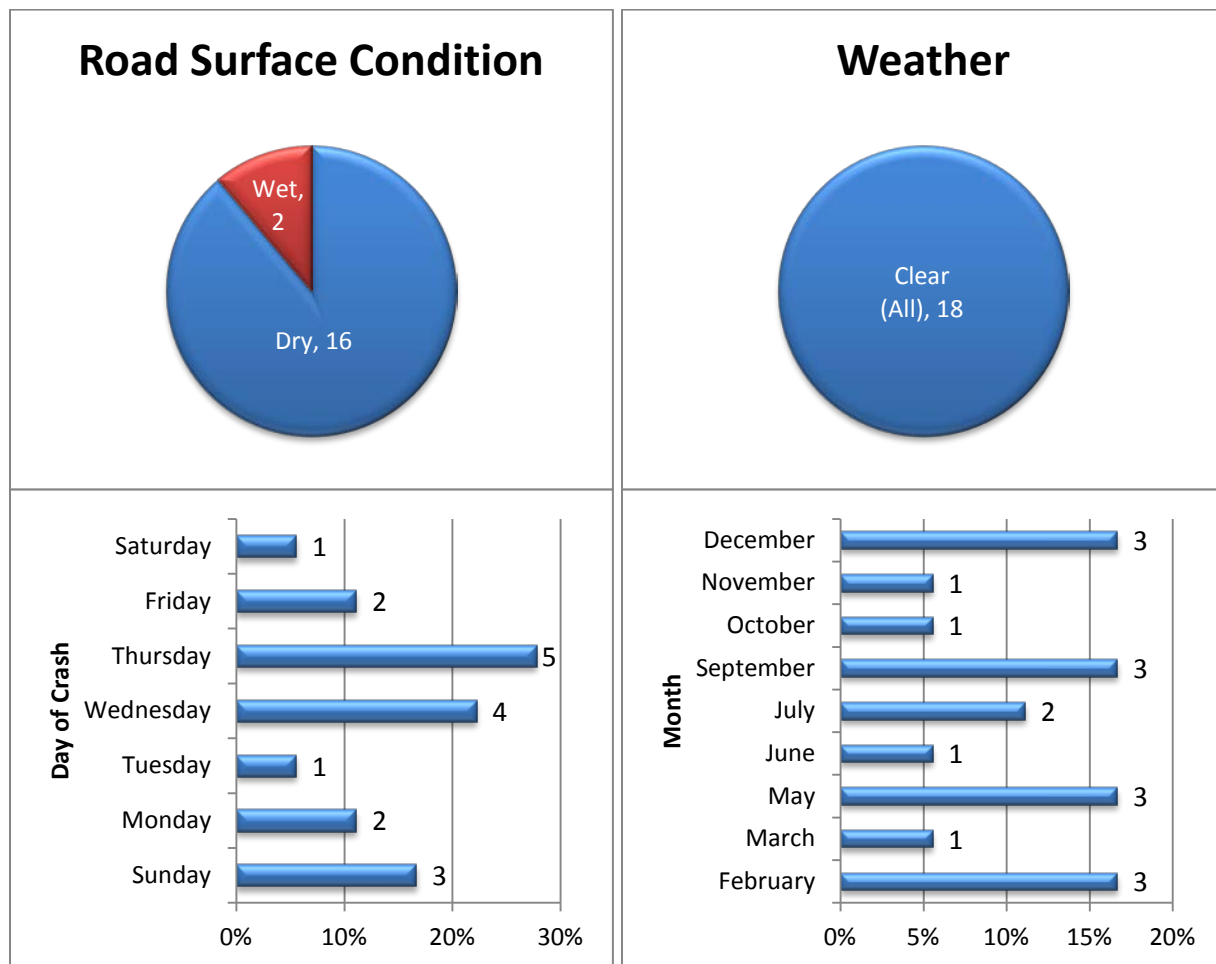
Tied for third, with a score of 25, this location experienced 18 crashes in 2011, resulting in 7 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.78 crashes per MEV. Crashes involving turning vehicles were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Thursdays and with crashes reported for all days of the week.

Average daily traffic for this intersection is 27,750. Avenue of the Cities is a four-lane minor arterial at this location, with a speed limit of 45 mph. Left-turn and right-turn only lanes are provided for both east and west approaches. Seventh Street is a four-lane minor arterial road with a posted speed limit of 30 mph. Left-turn only lanes are present for both north and south approaches, and a channelized right-turn only lane is present for the north approach.

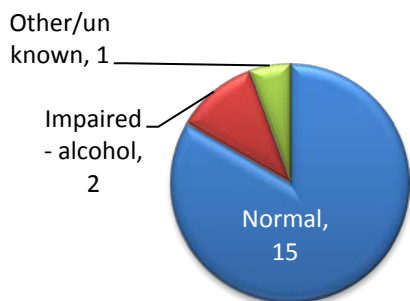
**Table 4.15**  
**7<sup>th</sup> St & Ave of the Cities (East Moline) 2010 & 2011 Comparison**

	<b>2010</b>	<b>2011</b>
<b>Rank</b>	6	3
<b>Total Crashes</b>	19	18
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	7	7
<b>Crash Rate</b>	1.88	1.78
<b>Predominant Crash Type</b>	Turning	Turning

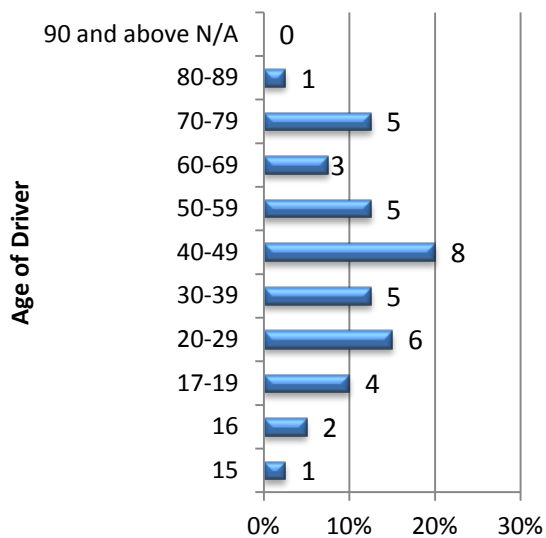
**Figure 4.15**  
**7<sup>th</sup> St & Ave of the Cities (East Moline) – Crash Frequency by Various Conditions**



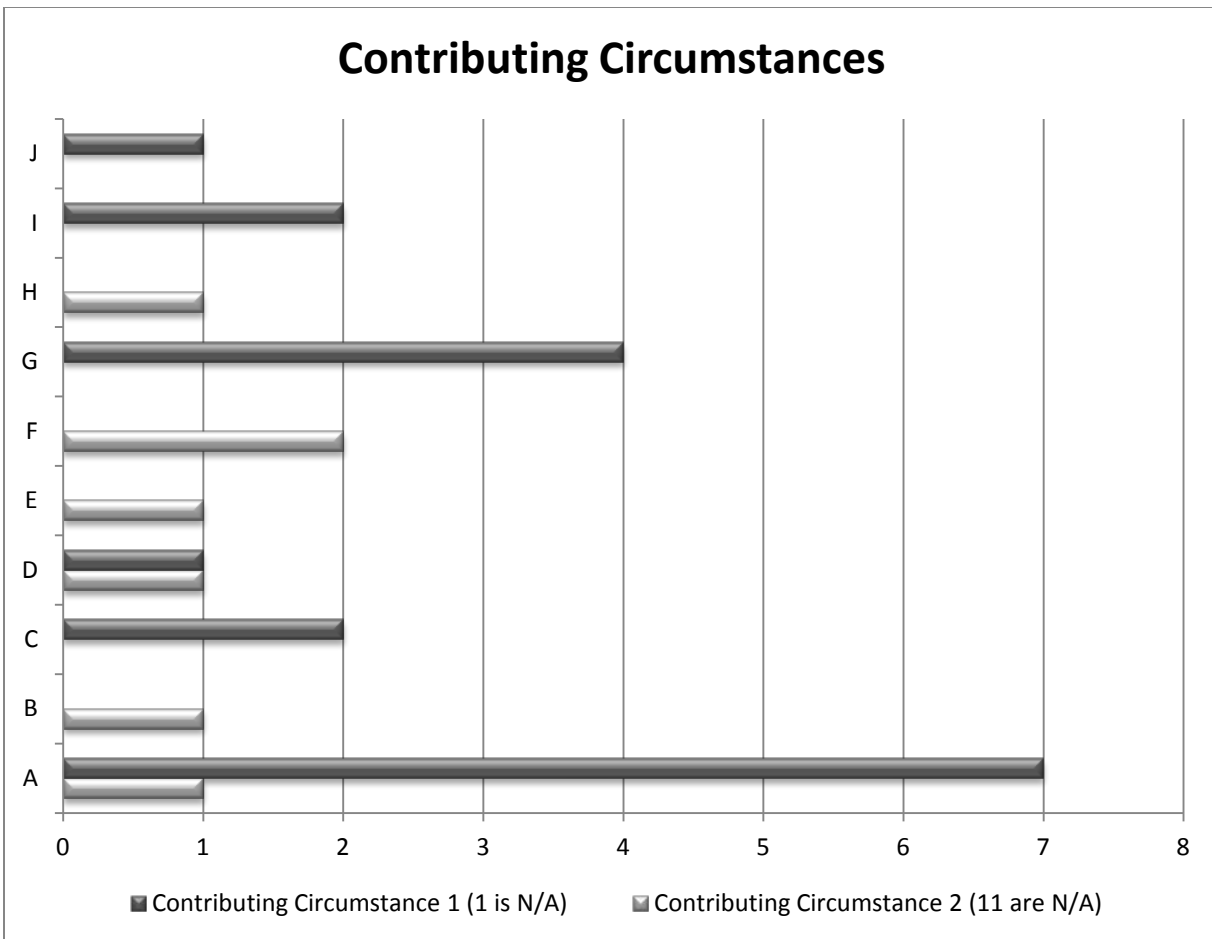
### Apparent Physical Condition of Driver



### Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	2
2	0	14	4
3	0	15	0
4	0	16	2
5	1	17	1
6	0	18	1
7	0	19	0
8	1	20	1
9	1	21	1
10	0	22	0
11	2	23	1
12	0	24	0

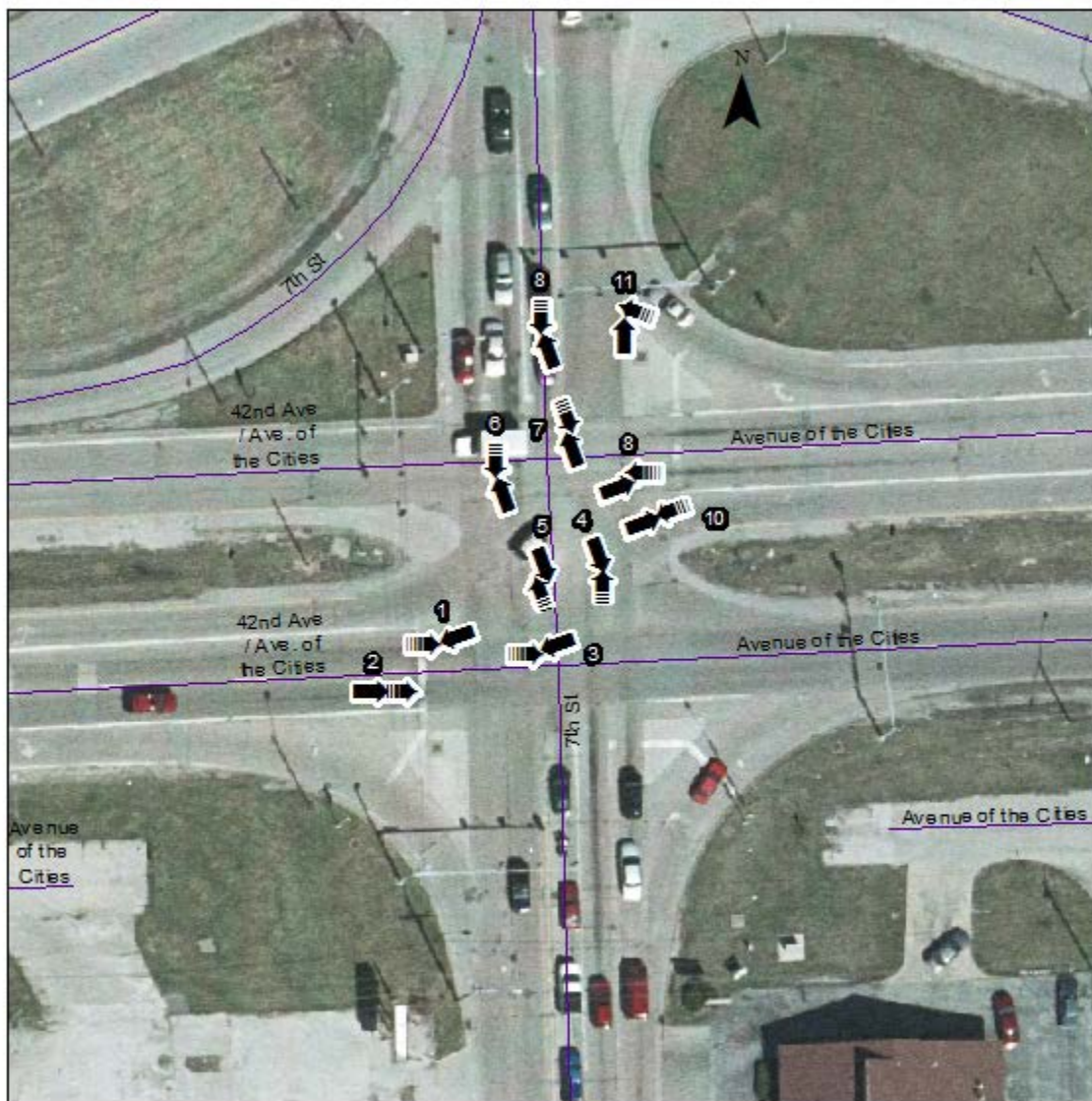


#### Chart Key

- A: Failing to yield right-of-way
- B: Following too closely
- C: Under the influence of alcohol/drugs
- D: Improper lane usage
- E: Improper overtaking/passing
- F: Driving skills/knowledge/experience
- G: Disregarding traffic signals
- H: Operating vehicle in erratic, reckless, careless, negligent or aggressive manner
- I: Failing to reduce speed to avoid crash
- J: Distraction - from outside vehicle



**Map 4.15**  
**2011 Illinois Location #3 - 7<sup>th</sup> St & Ave of the Cities (East Moline)**



- 2. East Bound, Straight, Rear end (2)
- 1. East Bound, Straight, Turning (1)
- 7. South Bound, Left Turn, Turning (2)
- 3. East Bound, Straight, Angle (1)
- 5. North Bound, Left Turn, Turning (1)
- 4. North Bound, Straight, Turning (1)

- 10. West Bound, Left Turn, Turning (2)
- 8. West Bound, Straight, Turning (1)
- 6. South Bound, Straight, Angle (3)
- 8. Southwest Bound, Left Turn, Turning (1)
- 11. West Bound, Turning on Red, Turning (1)

**2011 ILLINOIS LOCATION #3 - 16<sup>TH</sup> ST & IL 5/JOHN DEERE EXPY- MOLINE**

Tied for third, with a score of 25, this location experienced 21 crashes in 2011, resulting in 7 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.17 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Mondays with no crashes reported for Fridays.

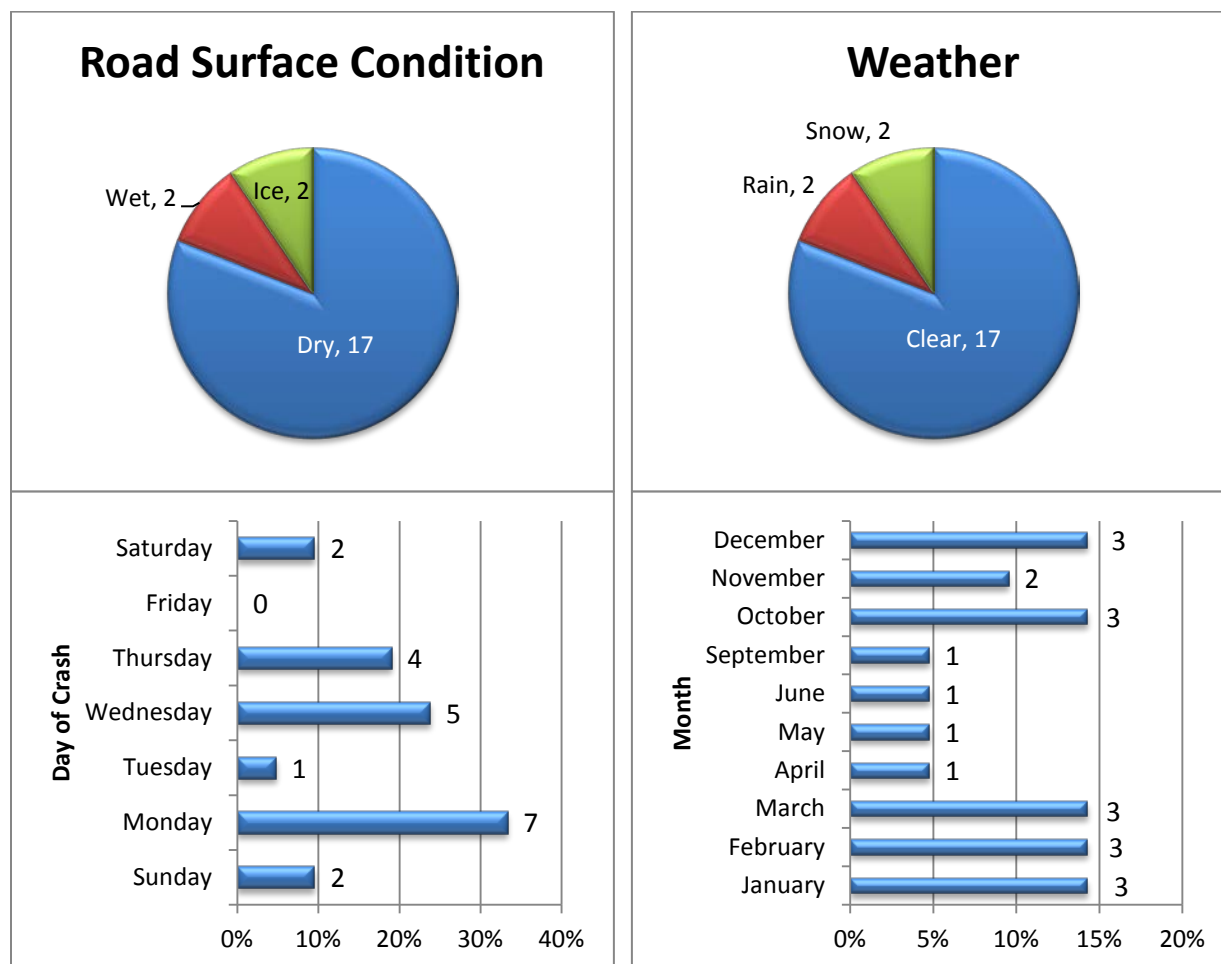
Average daily traffic for this intersection is 49,250. IL 5/John Deere Expressway is a principal arterial roadway. The west approach has a posted speed limit of 45 mph with one left-turn lane, three through lanes and one right-turn only lane for the east-bound traffic. The east approach of John Deere Expressway has a posted speed limit of 55 mph with dual left-turn only lanes, one right-turn lane and two through lanes for the west-bound traffic. Sixteenth Street is a minor arterial road north of the intersection and a collector road south of the intersection with two through lanes, one left-turn, and one right-turn only lanes for both south and north approaches entering the intersection. Sixteenth Street has a posted speed limit of 40 mph north of the intersection and 30 mph south of the intersection.

**Table 4.16**  
**16<sup>th</sup> St & IL 5/John Deere Expy (Moline) 2010 & 2011 Comparison**

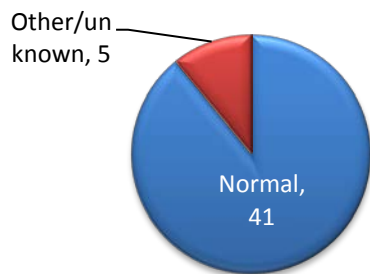
	<b>2010</b>	<b>2011</b>
<b>Rank</b>	3	3
<b>Total Crashes</b>	26	21
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	12	7
<b>Crash Rate</b>	1.48	1.17
<b>Predominant Crash Type</b>	Rear-end	Rear-end



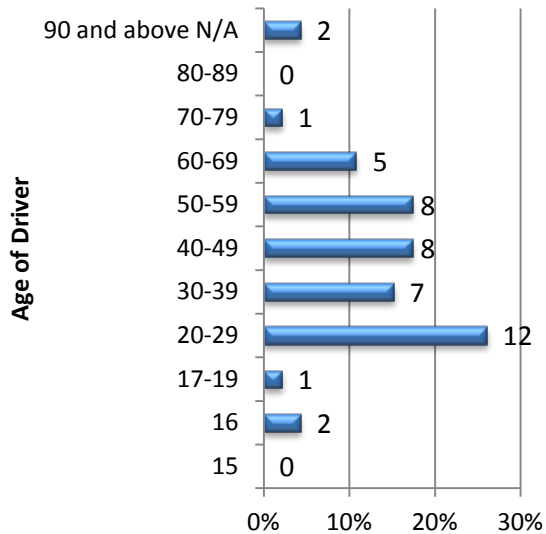
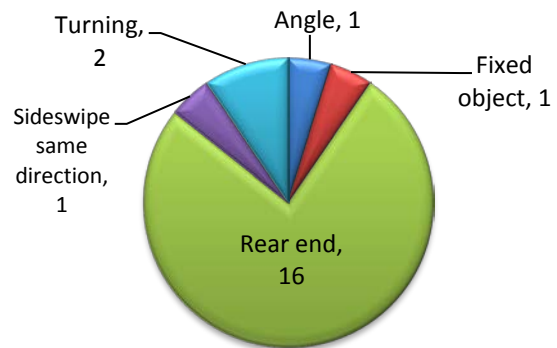
**Figure 4.16**  
**16<sup>th</sup> St & IL 5/John Deere Expy (Moline) – Crash Frequency by Various Conditions**



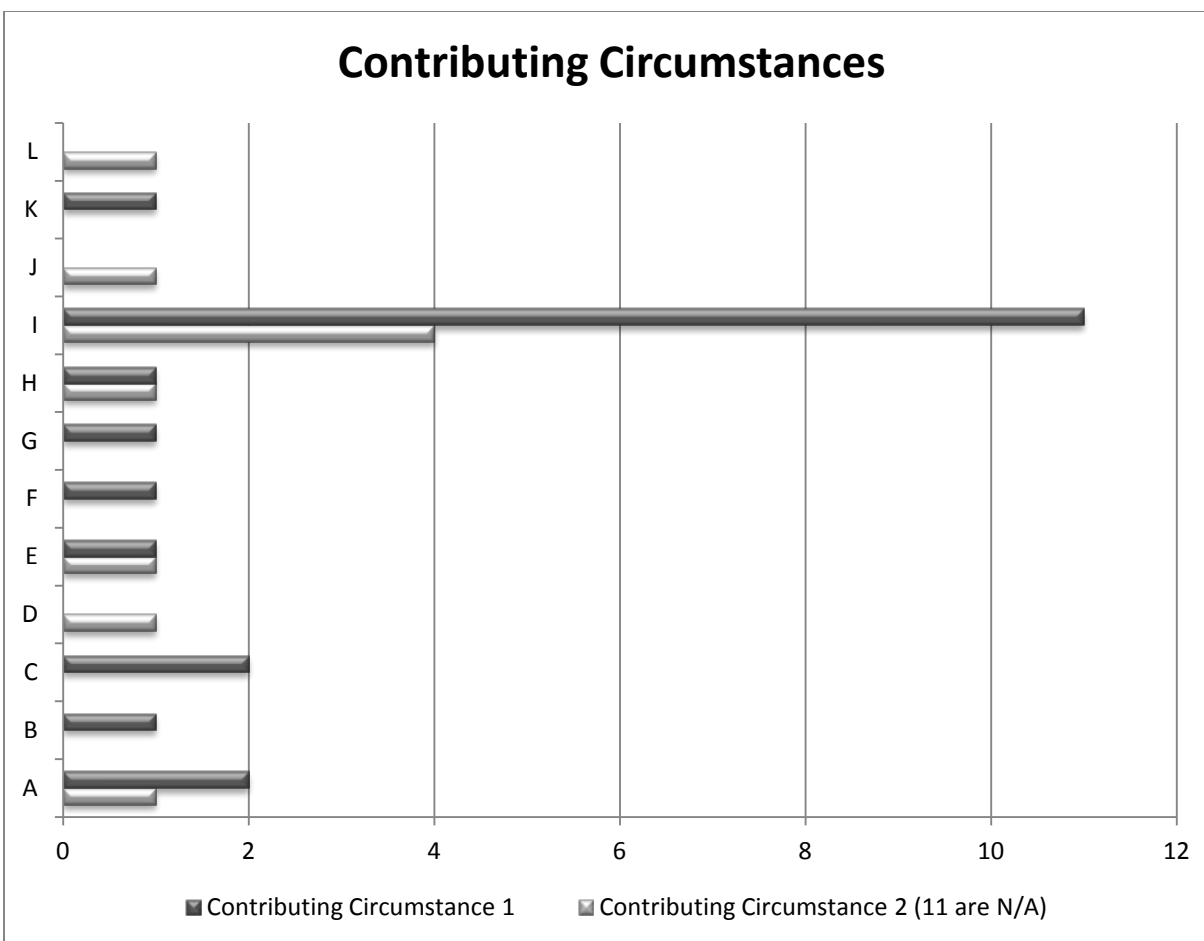
## Apparent Physical Condition of Driver



## Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	1	13	1
2	0	14	2
3	0	15	3
4	0	16	2
5	0	17	0
6	0	18	1
7	1	19	1
8	1	20	2
9	0	21	0
10	0	22	0
11	3	23	2
12	1	24	0



#### Contributing Circumstances

- A: Following too closely
- B: Equipment - vehicle condition
- C: Driving skills/knowledge/experience
- D: Weather
- E: Unable to determine
- F: Improper lane usage
- G: Disregarding traffic signals
- H: Exceeding safe speed for conditions
- I: Failing to reduce speed to avoid crash
- J: Improper backing
- K: Distraction - from inside vehicle
- L: Distraction - from outside vehicle

**Map 4.16**  
**2011 Illinois Location #3- 16<sup>th</sup> St. & IL 5/John Deere Expy. (Moline)**



- |  |   |
|--|---|
| 1. East Bound, Backing, Rear end (1)                         | 7. South Bound, Slow/Stop, Right Turn, Rear end (1) |
| 2. East Bound, Changing Lanes, Rear end (2)                  | 8. Southwest Bound, Left Turn, Turning (1)          |
| 3. East Bound, Changing Lanes, Sideswipe, Same Direction (1) | 9. West Bound, Skidding/Control Loss, Angle (1)     |
| 4. East Bound, Skidding/Control Loss, Rear end (2)           | 10. West Bound, Slow/Stop in Traffic, Rear end (1)  |
| 5. East Bound, Straight, Rear end (5)                        | 11. West Bound, Straight, Rear end (4)              |
| 6. East Bound, Right Turn, Fixed Object (1)                  | 12. West Bound, Straight, Fixed Object (1)          |

## 2011 ILLINOIS LOCATION #5 – JOHN DEERE RD/IL 5 & KENNEDY DR - MOLINE

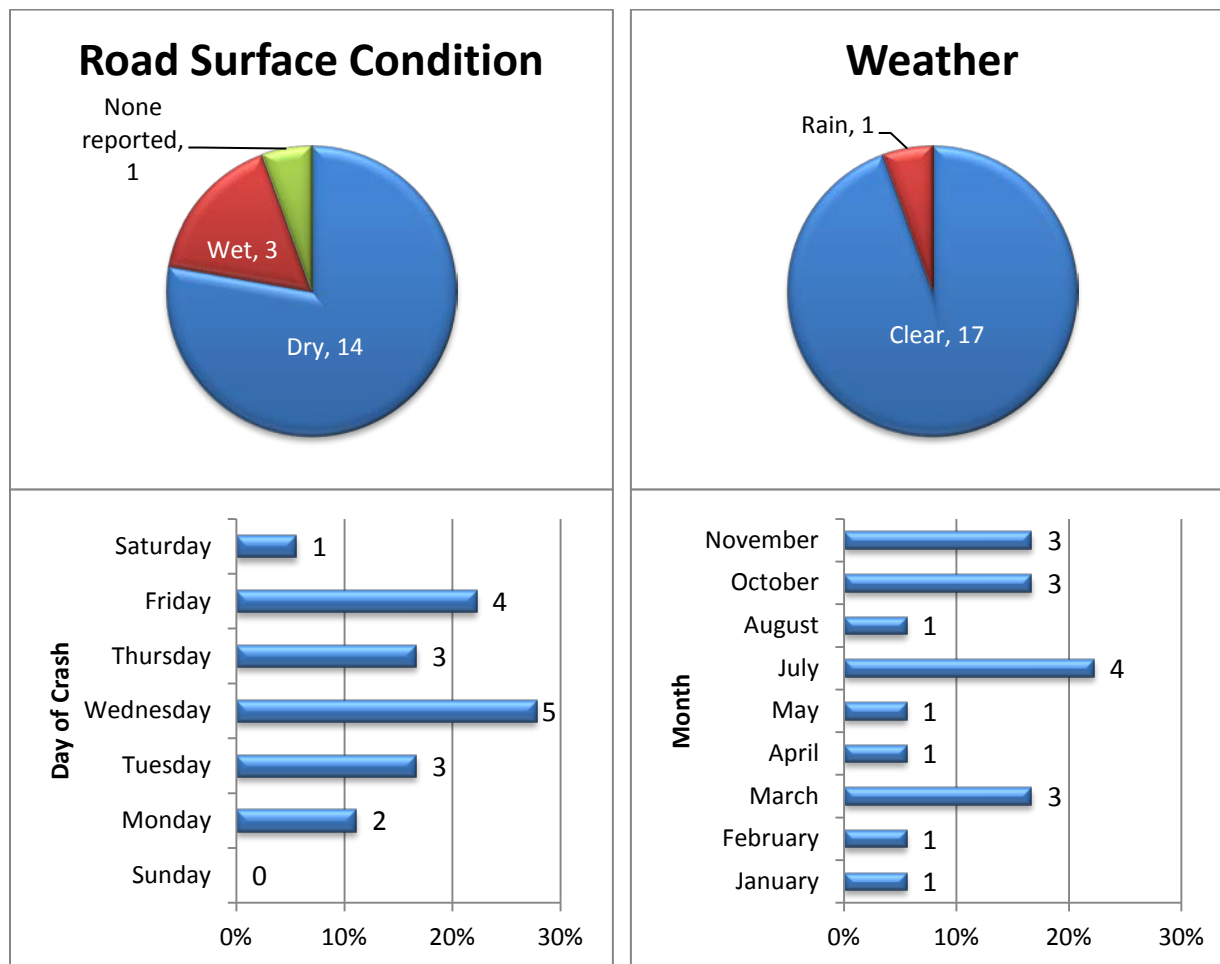
Tied for fifth, with a score of 22, this location experienced 18 crashes in 2011, resulting in 5 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.44 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Wednesdays with crashes reported for all days of the week.

Average daily traffic at this intersection is 34,350. John Deere Rd is a principal arterial road with a posted speed limit of 55 mph. Both approaches of John Deere Rd have one left turn lane and the right turn lane is channelized to southbound Kennedy Dr. Kennedy Dr on the southbound approach is a minor arterial road with a posted speed limit of 30 mph. The southbound approach has one left turn lane and a long channelized right turn lane. The northbound approach (60<sup>th</sup> St) is a 2 lane collector road with a channelized right turn lane and a posted speed limit of 30 mph.

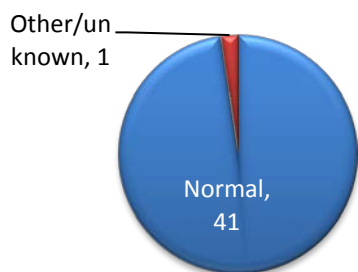
**Table 4.17**  
**John Deere Rd & Kennedy Dr (Moline) 2010 & 2011 Comparison**

	<b>2010</b>	<b>2011</b>
<b>Rank</b>	10	5
<b>Total Crashes</b>	18	18
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	7	5
<b>Crash Rate</b>	2.37	1.44
<b>Predominant Crash Type</b>	Rear-end	Rear-end

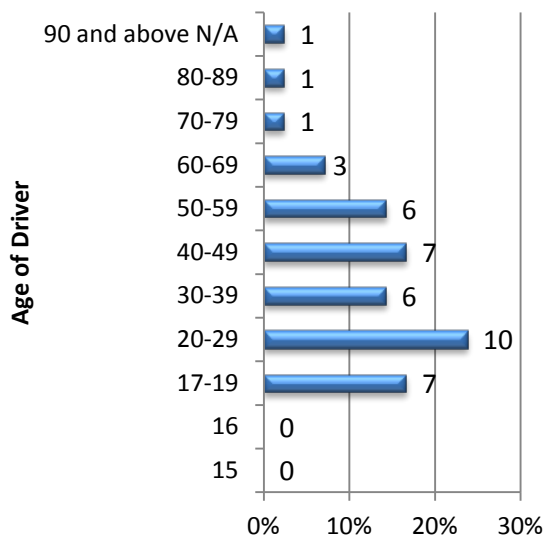
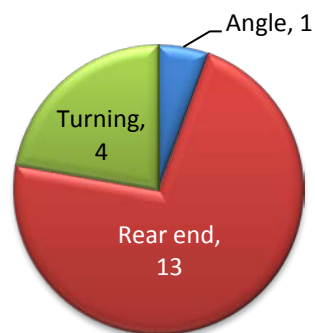
**Figure 4.17**  
**John Deere Rd & Kennedy Dr (Moline) – Crash Frequency by Various Conditions**



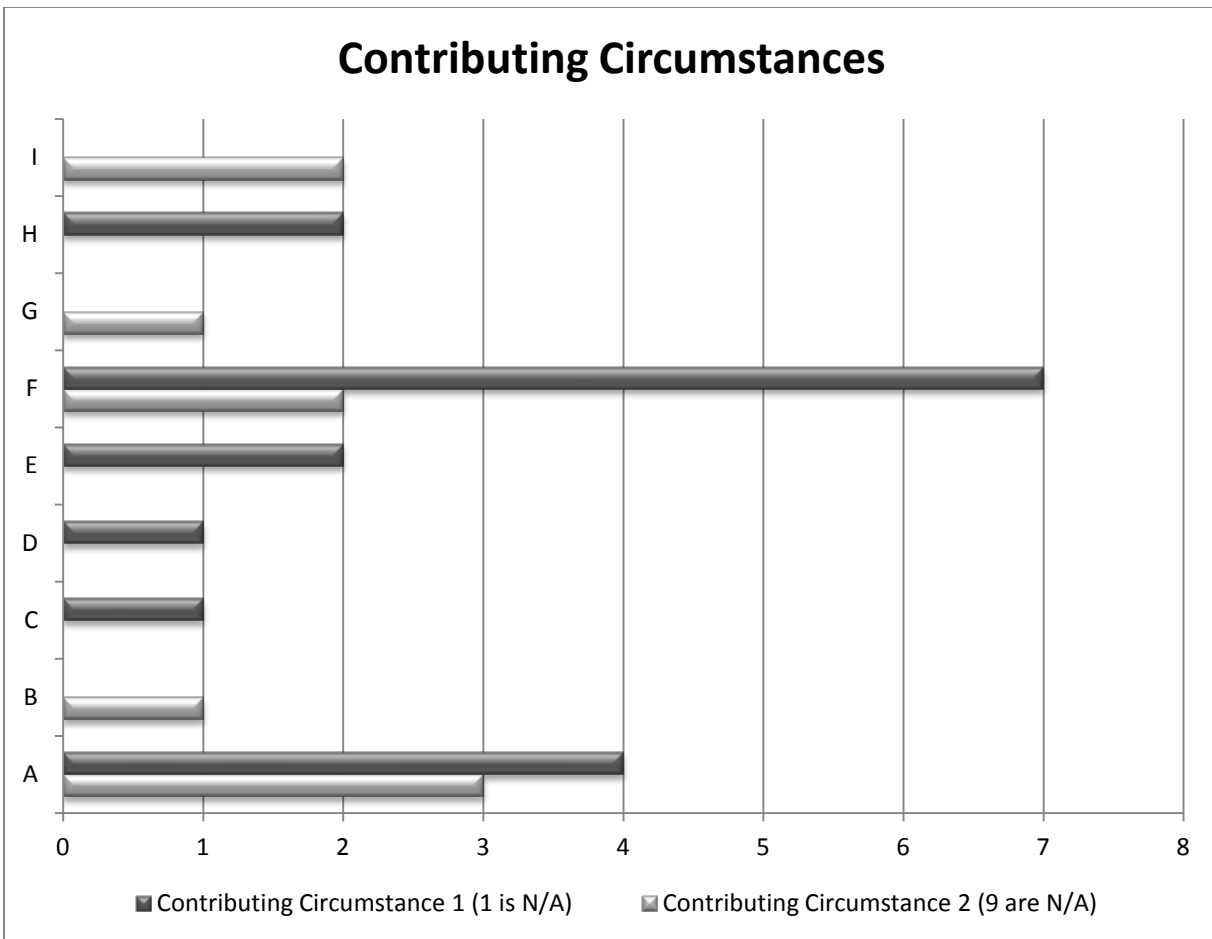
### Apparent Physical Condition of Driver



### Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	1
2	0	14	1
3	0	15	0
4	0	16	2
5	0	17	2
6	0	18	2
7	0	19	1
8	2	20	0
9	2	21	0
10	2	22	0
11	1	23	1
12	1	24	0



**Chart Key**

- A: Following too closely
- B: Failing to yield right-of-way
- C: Turning right on red
- D: Road construction/maintenance
- E: Disregarding traffic signals
- F: Failing to reduce speed to avoid crash
- G: Distraction - from inside vehicle
- H: Distraction - from outside vehicle
- I: Unable to determine



**Map 4.17**  
**2011 Illinois Location #5 - John Deere Rd & Kennedy Dr (Moline)**



- |   |  |
|---|--|
| 1. East Bound, Slow/Stop, Right Turn, Rear end (1)      | 8. Northeast Bound, Slow/Stop in Traffic, Rear end (1) |
| 2. East Bound, Slow/Stop in Traffic, Rear end (1)       | 9. Northeast Bound, Right Turn, Turning (1)            |
| 3. East Bound, Straight, Rear end (3)                   | 10. South Bound, Left Turn, Turning (1)                |
| 4. North Bound, Straight, Rear end (1)                  | 11. West Bound, Skidding/Control Loss, Rear end (1)    |
| 5. North Bound, Left Turn, Turning (1)                  | 12. West Bound, Slow/Stop in Traffic, Rear end (1)     |
| 6. Northeast Bound, Backing, Angle (1)                  | 13. West Bound, Straight, Rear end (2)                 |
| 7. Northeast Bound, Slow/Stop, Right Turn, Rear end (2) | 14. West Bound, Left Turn, Turning (1)                 |

## 2011 ILLINOIS LOCATION #5 - 19<sup>TH</sup> ST (EAST OF I-74) & AVENUE OF THE CITIES-MOLINE

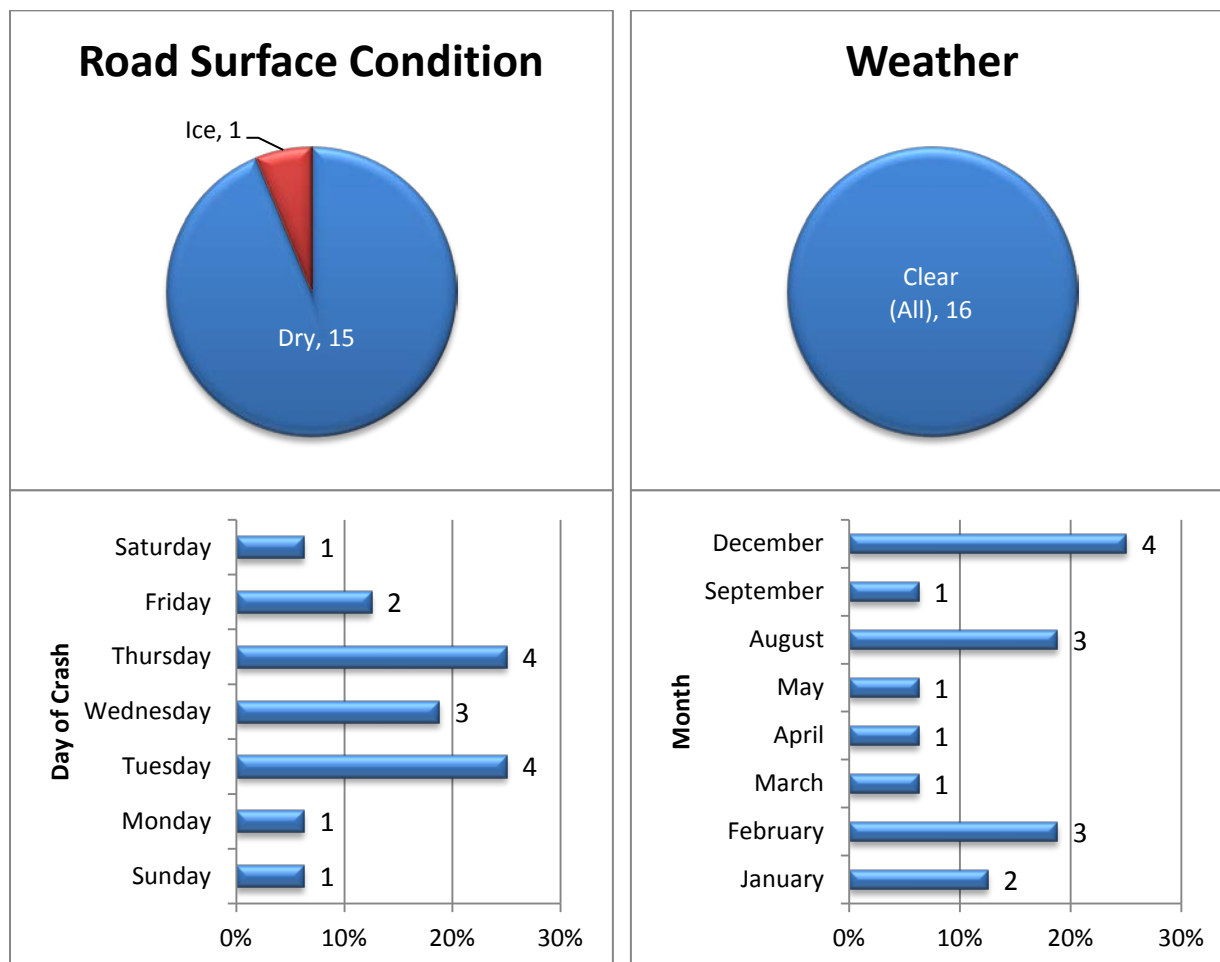
Tied for fifth, with a score of 22, this location experienced 16 crashes in 2011, resulting in 4 injuries. Taking into account traffic volume, the crash rate for this intersection was above average at 1.97 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Tuesdays and Thursdays with crashes reported on all days of the week.

Average daily traffic for this intersection is 22,275. Avenue of the Cities is an undivided arterial with a posted speed limit of 35 mph at this location. Nineteenth Street is a minor arterial road divided by I-74 and the east portion is two lanes for southbound traffic with one left- and one right-turn only lanes (both with markings.) Nineteenth Street has a posted speed limit of 45 mph. Because 19<sup>th</sup> Street at this location is one-way, there is no left-turn from Avenue of the Cities on the west approach (which does have a right-turn only lane) and no right-turn from the east approach (which has a left-turn only lane).

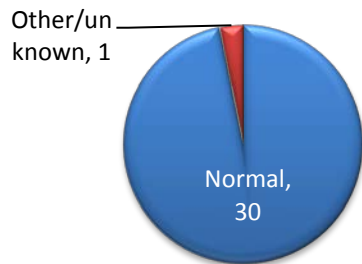
**Table 4.18**  
**19<sup>th</sup> St (East of I74) & Avenue of the Cities (Moline) 2010 & 2011 Comparison**

	<b>2010</b>	<b>2011</b>
<b>Rank</b>	7	5
<b>Total Crashes</b>	18	16
<b># of Fatalities</b>	0	0
<b># of Injuries</b>	4	4
<b>Crash Rate</b>	2.21	1.97
<b>Predominant Crash Type</b>	Rear-end	Rear-end

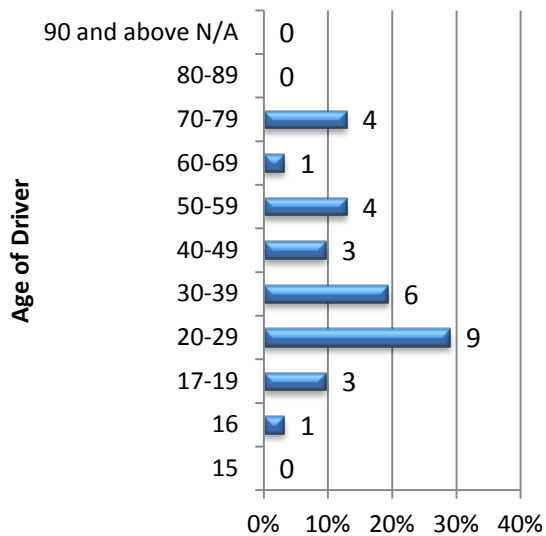
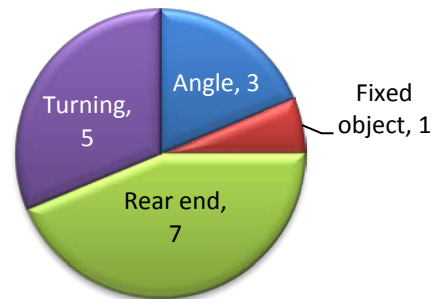
**Figure 4.18**  
**19<sup>th</sup> St (East of I74) & Ave of the Cities (Moline) – Crash Frequency by Various Conditions**



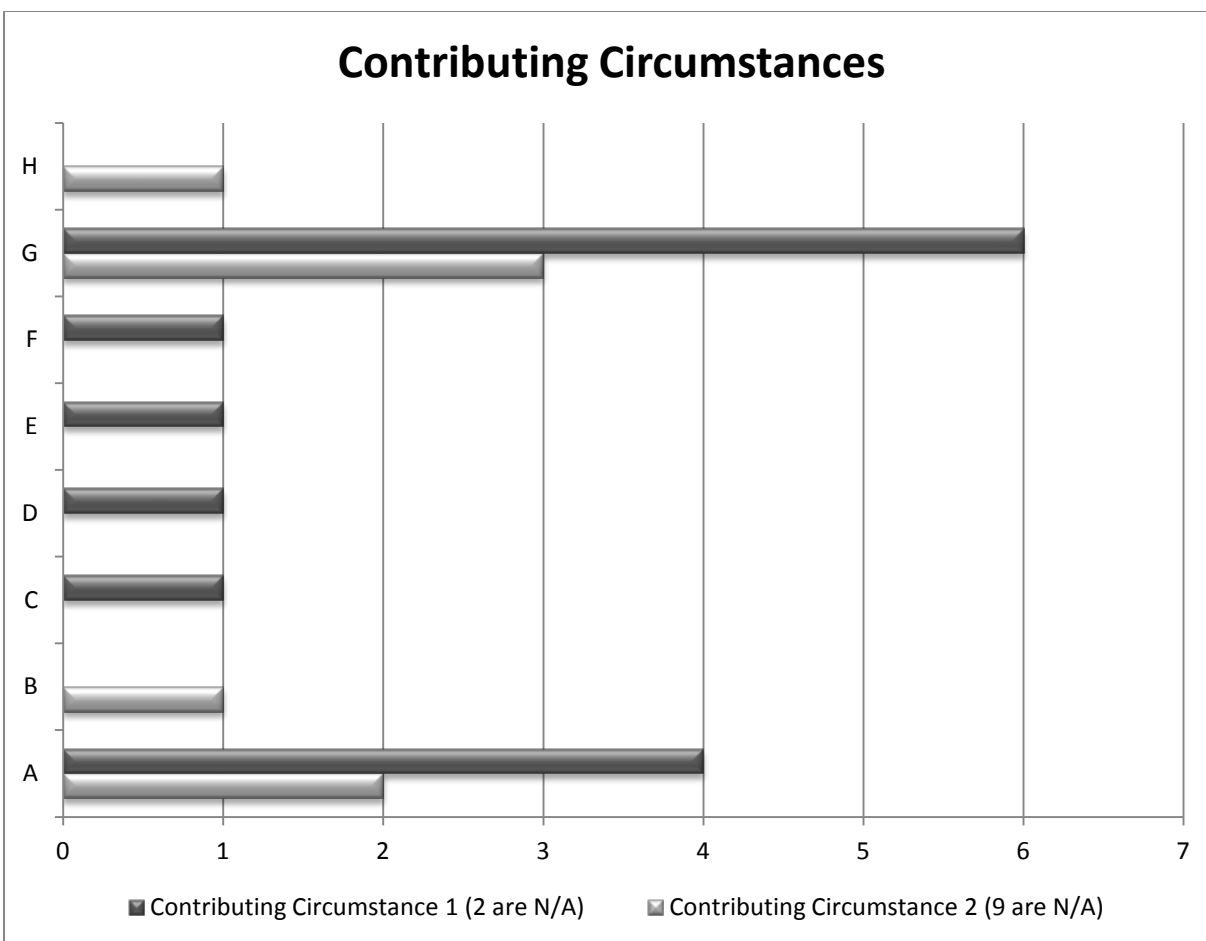
## Apparent Physical Condition of Driver



## Crash Type



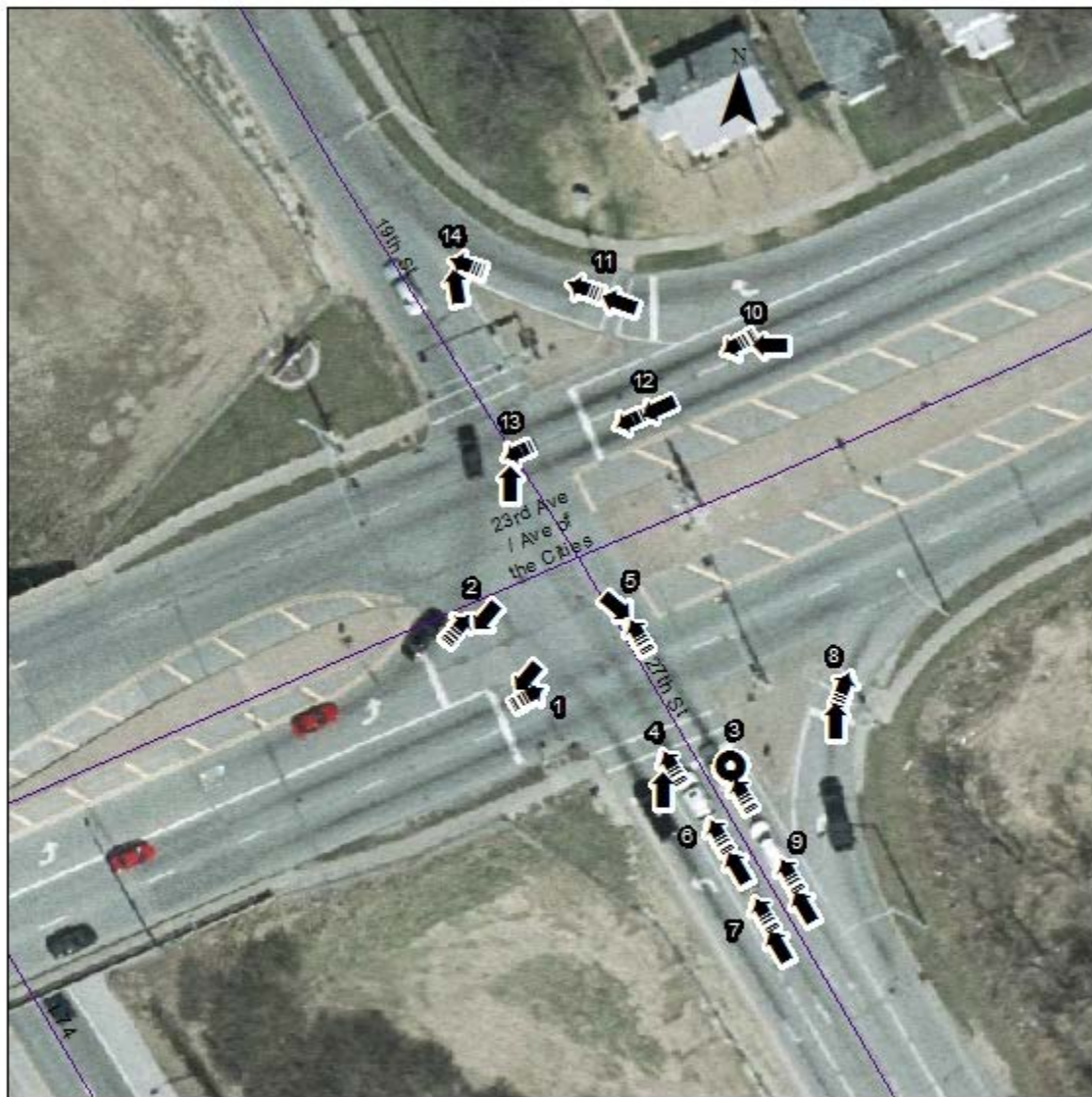
Time of Crash			
Hour	Crashes	Hour	Crashes
1	1	13	1
2	0	14	1
3	0	15	2
4	0	16	0
5	0	17	0
6	0	18	0
7	1	19	0
8	1	20	0
9	0	21	0
10	4	22	0
11	3	23	0
12	2	24	0



#### Chart Key

- A: Following too closely
- B: Disregarding traffic signals
- C: Equipment - vehicle condition
- D: Weather
- E: Vision obscured (signs, tree limbs, buildings, etc.)
- F: Improper lane usage
- G: Failing to reduce speed to avoid crash
- H: Distraction - from inside vehicle

**Map 4.18**  
**2011 Illinois Location #5 - 19<sup>th</sup> St. (East of I74) & Avenue of the Cities (Moline)**



- |   |   |
|---|---|
| 1. East Bound, Slow/Stop in Traffic, Angle (1)          | 8. Northwest Bound, Right Turn, Rear end (3)        |
| 2. East Bound, Left Turn, Turning (1)                   | 9. Northwest Bound, Unknown, Rear end (1)           |
| 3. North Bound, Skidding/Control Loss, Fixed Object (1) | 10. West Bound, Changing Lanes, Rear end (1)        |
| 4. North Bound, Slow/Stop in Traffic, Angle (1)         | 11. West Bound, Slow/Stop, Right Turn, Rear end (1) |
| 5. North Bound, Straight, Angle (1)                     | 12. West Bound, Straight, Rear end (1)              |
| 6. North Bound, Unknown, Rear end (1)                   | 13. West Bound, Straight, Angle (1)                 |
| 7. Northwest, Slow/Stop in Traffic, Rear end (1)        | 14. West Bound, Right Turn, Turning (1)             |



## 2011 ILLINOIS LOCATION #5 - 19<sup>TH</sup> ST (WEST OF I-74) & AVENUE OF THE CITIES-MOLINE

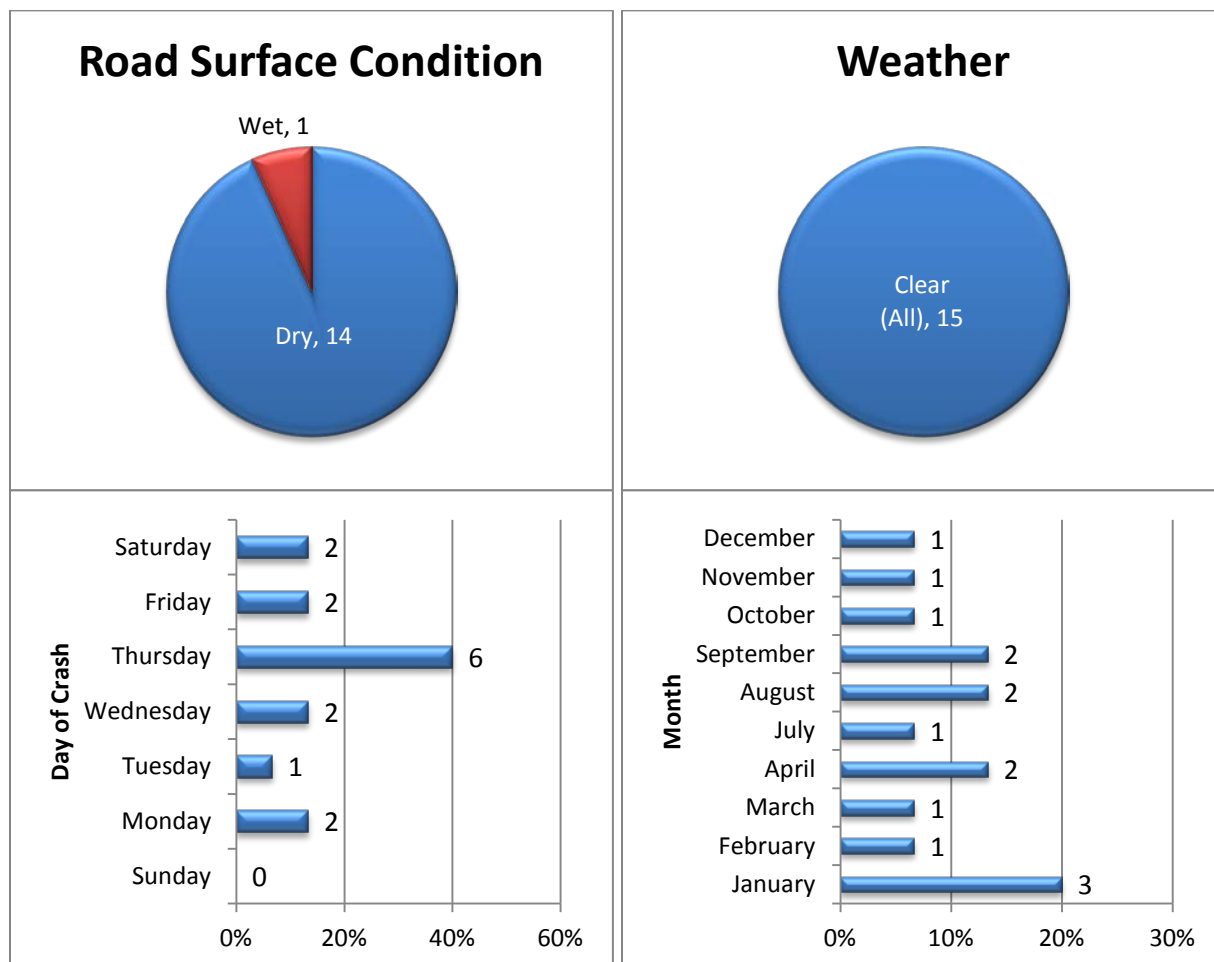
Tied for fifth, with a score of 22, this location experienced 15 crashes in 2011, resulting in 6 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was below average at 1.67 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Thursdays with no reported crashes on Sundays.

Average daily traffic at this intersection is 24,550. Nineteenth Avenue is a 5 lane minor arterial, one-way road with a right turn lane and left turn lane. Nineteenth Avenue has a posted speed limit of 45 mph. Avenue of the Cities is a 5 lane minor arterial road with a posted speed limit of 30 mph. The eastbound approach has a right turn lane on to the one-way 19<sup>th</sup> St. The westbound approach has a left turn lane on to the one-way 19<sup>th</sup> St.

**Table 4.19**  
**19<sup>th</sup> St (West of I74) & Ave of the Cities (Moline) 2010 & 2011 Comparison**

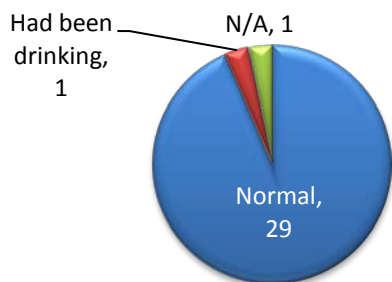
	<b>2010</b>	<b>2011</b>
<b>Rank</b>	9	5
<b>Total Crashes</b>	16	15
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	7	6
<b>Crash Rate</b>	1.79	1.67
<b>Predominant Crash Type</b>	Angle	Rear-end

**Figure 4.19**  
**19<sup>th</sup> St (West of I74) & Ave of the Cities (Moline) – Crash Frequency by Various Conditions**

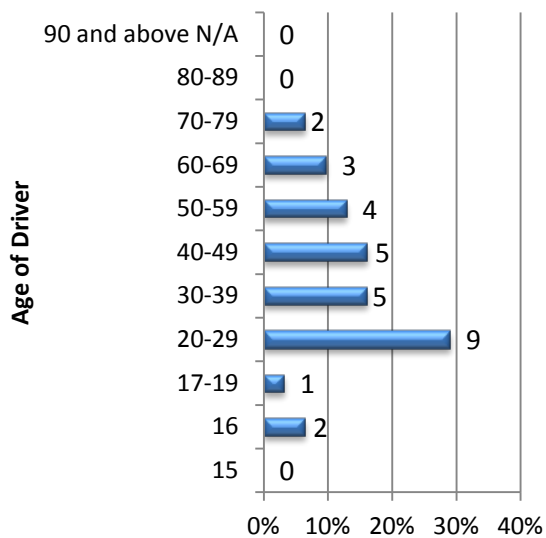




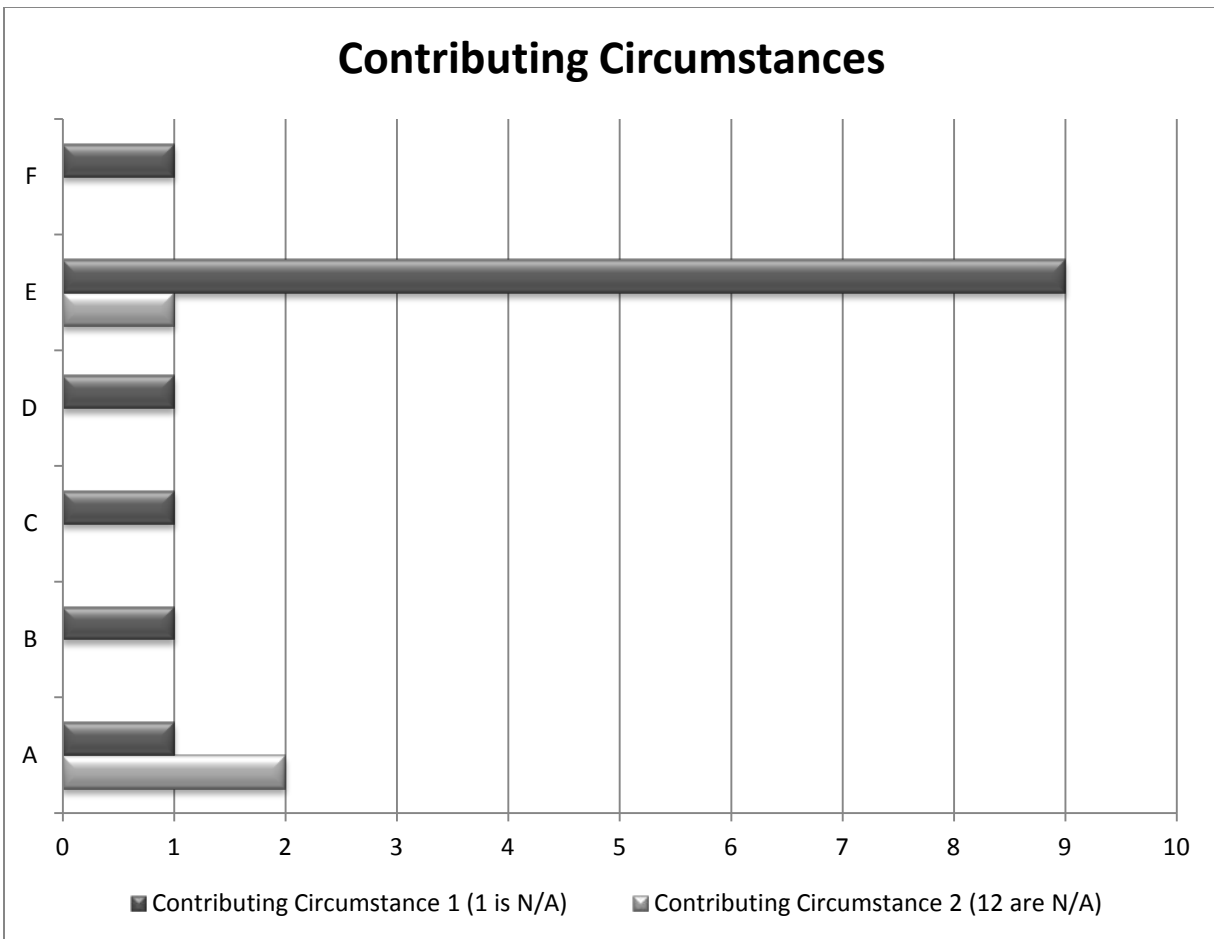
### Apparent Physical Condition of Driver



### Crash Type



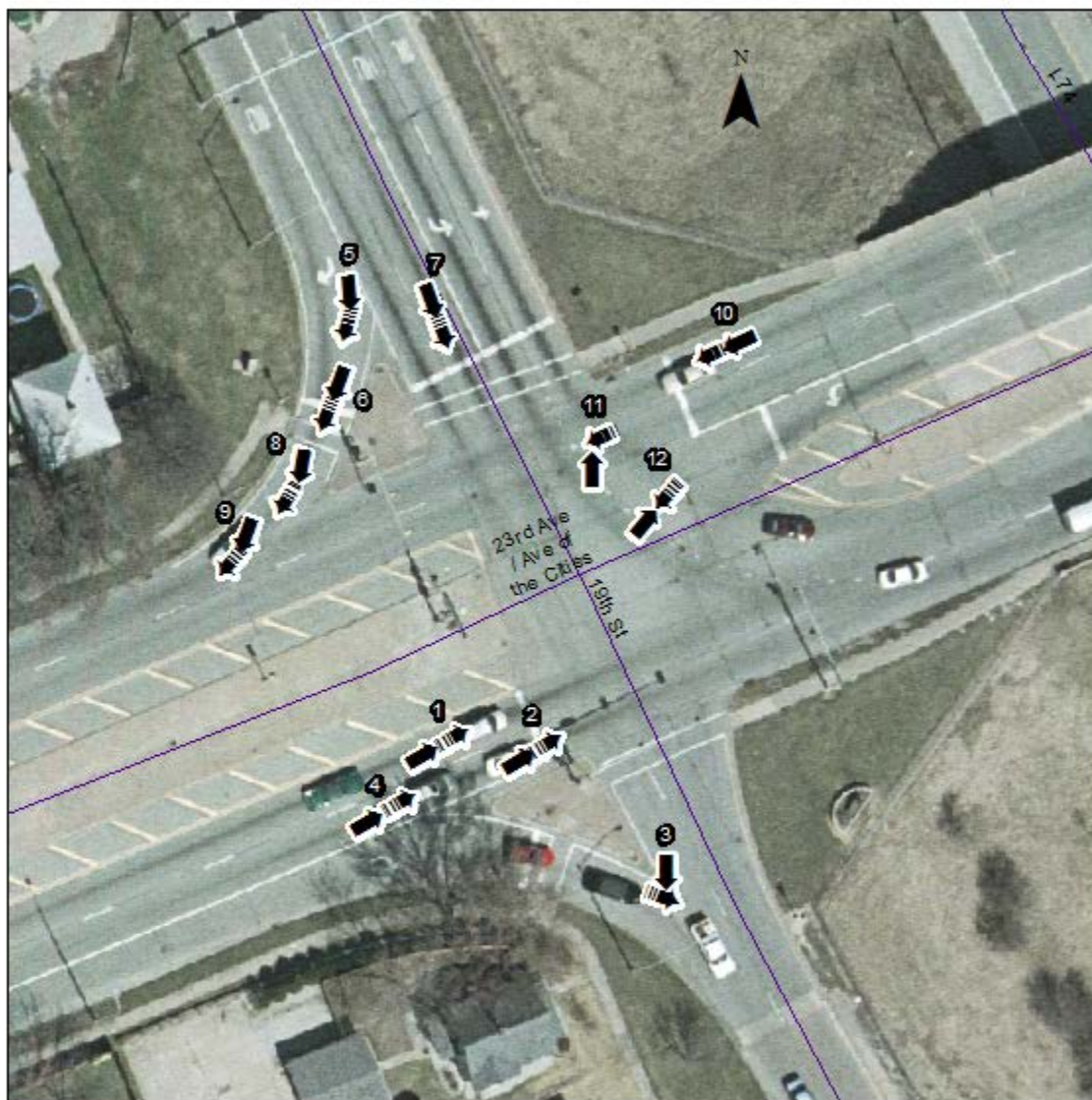
Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	2
2	1	14	0
3	0	15	2
4	1	16	2
5	0	17	1
6	0	18	1
7	0	19	0
8	2	20	0
9	0	21	0
10	0	22	0
11	1	23	1
12	1	24	0



#### Chart Key

- A: Following too closely
- B: Equipment - vehicle condition
- C: Unable to determine
- D: Exceeding safe speed for conditions
- E: Failing to reduce speed to avoid crash
- F: Operating vehicle in erratic, reckless, careless, negligent or aggressive manner

**Map 4.19**  
**2011 Illinois Location #6- 19<sup>th</sup> St. (West of I-74) & Ave of the Cities (Moline)**



- |  |   |
|--|---|
| 1. East Bound, Slow/Stop in Traffic, Rear end (1)      | 7. South Bound, Straight, Rear end (1)                  |
| 2. East Bound, Straight, Rear end (3)                  | 8. Southeast Bound, Slow/Stop, Right Turn, Rear end (1) |
| 3. East Bound, Right Turn, Turning (1)                 | 9. Southwest Bound, Slow/Stop, Right Turn, Rear end (2) |
| 4. Northeast Bound, Slow/Stop in Traffic, Rear end (1) | 10. West Bound, Straight, Rear end (1)                  |
| 5. South Bound, Slow/Stop, Right Turn, Rear end (1)    | 11. West Bound, Straight, Angle (1)                     |
| 6. South Bound, Slow/Stop in Traffic, Rear end (1)     | 12. West Bound, Left Turn, Turning (1)                  |

**2011 ILLINOIS LOCATION #5 – 1<sup>ST</sup> AVE/US 67 & 92<sup>ND</sup> AVE WEST - MILAN**

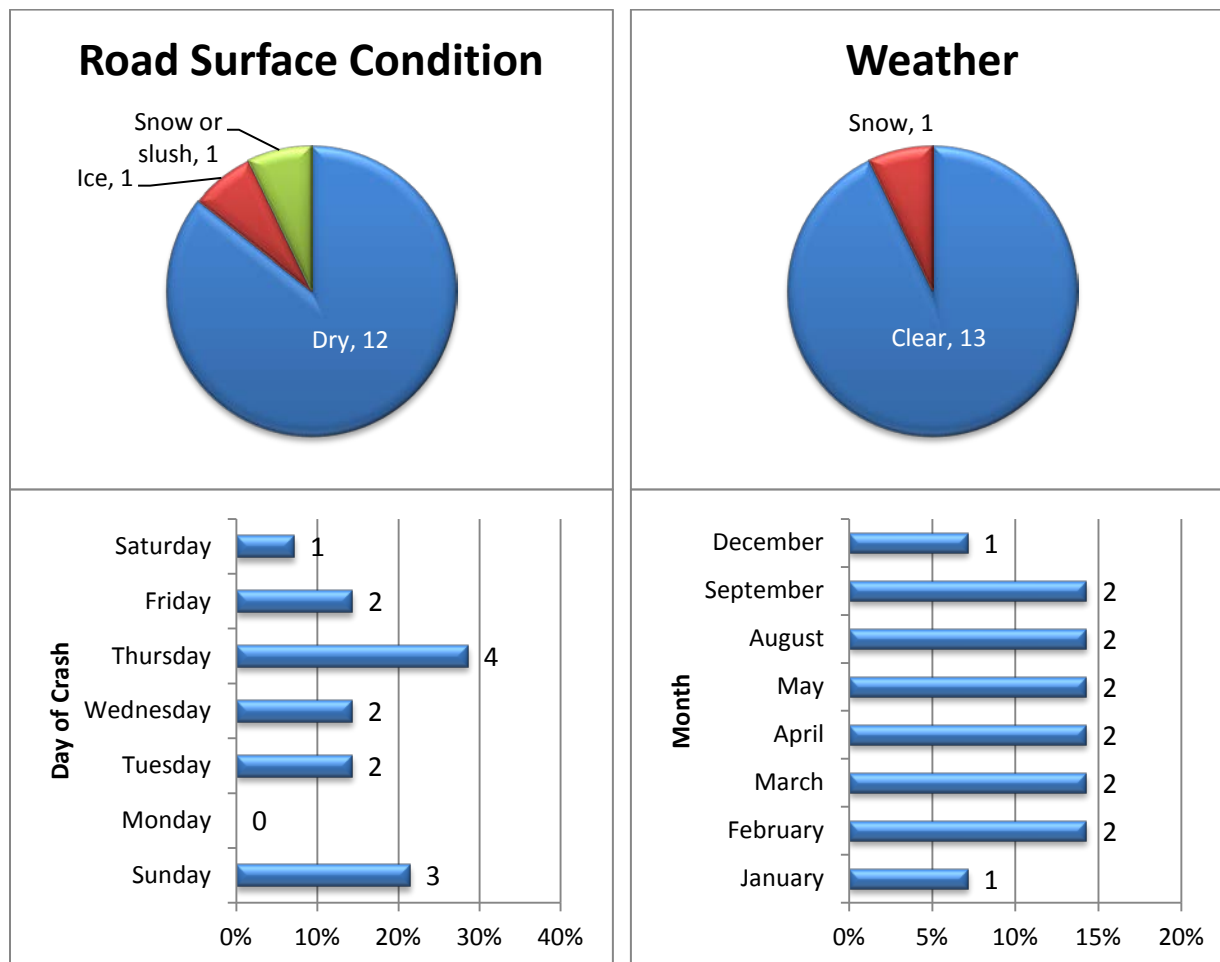
Tied for fifth, with a score of 22, this location experienced 14 crashes, resulting in 4 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 2.24 crashes per MEV. Crashes involving turning were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Thursdays with no reported crashes on Mondays.

Average daily traffic at this intersection is 17,125. First St/US 67 is principal arterial road with a posted speed limit of 55 mph on the southbound approach and 35 mph on the northbound approach. Ninety-second Ave West/Milan Beltway is a principal arterial road with a posted speed limit of 55 mph. All approaches to this intersection have one left turn lane and one channelized right turn lane.

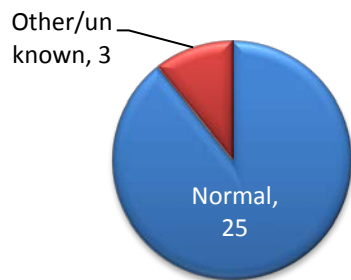
**Table 4.20**  
**1<sup>st</sup> Ave/US 67 & 92<sup>nd</sup> Ave W. (Milan) 2010 & 2011 Comparison**

	<b>2010</b>	<b>2011</b>
<b>Rank</b>	10	5
<b>Total Crashes</b>	14	14
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	7	4
<b>Crash Rate</b>	2.08	2.24
<b>Predominant Crash Type</b>	Turning	Turning

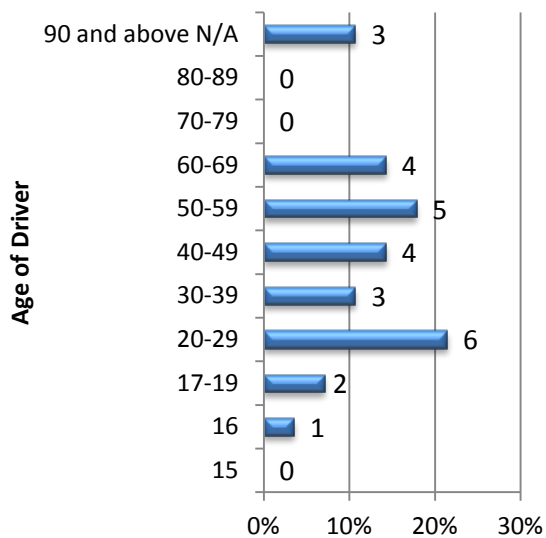
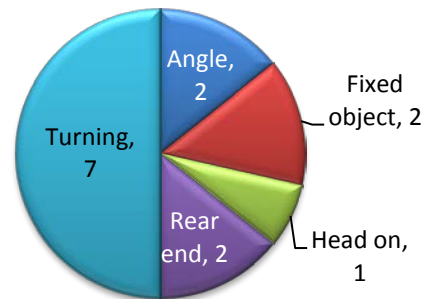
**Figure 4.20**  
**1<sup>st</sup> Ave/US 67 & 92<sup>nd</sup> Ave W. (Milan) – Crash Frequency by Various Conditions**



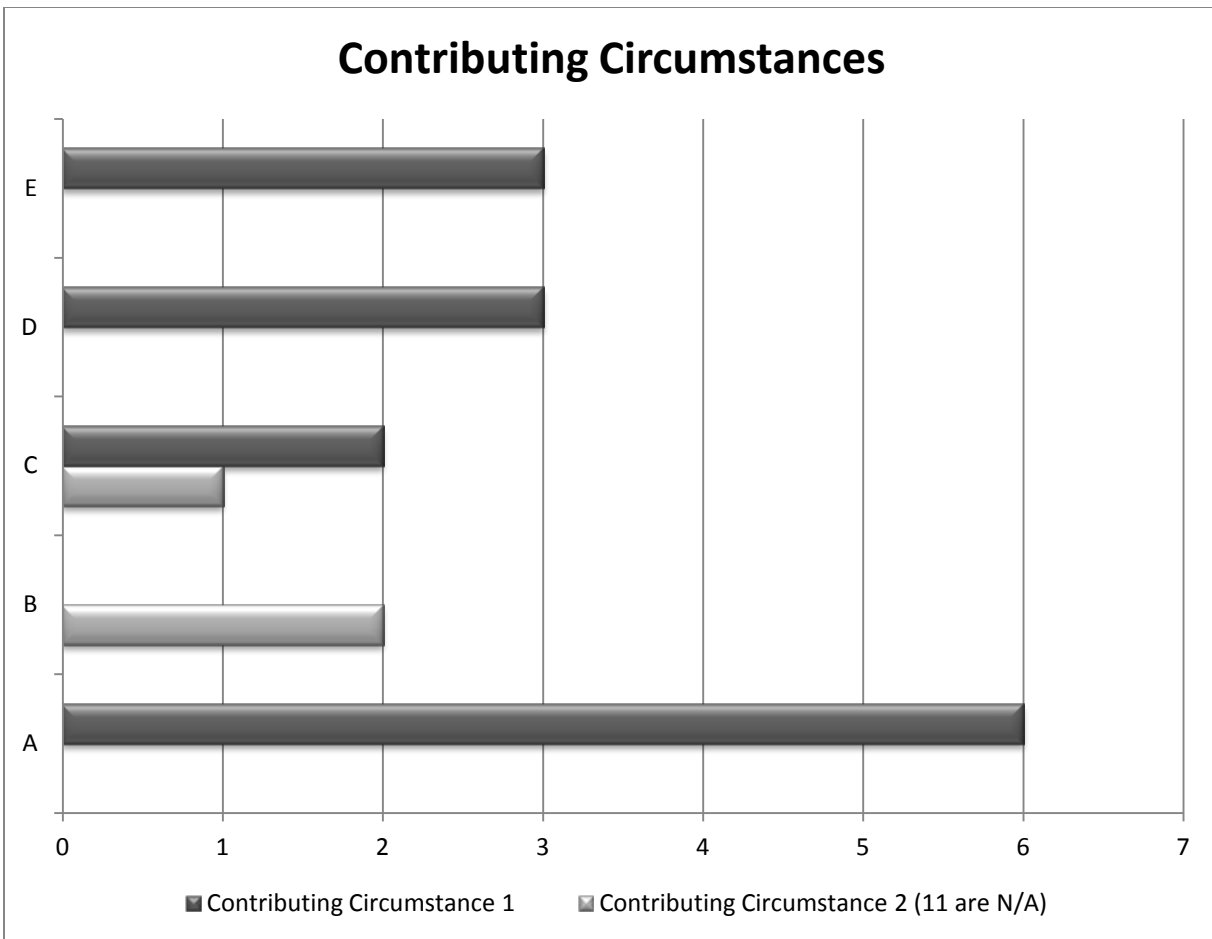
## Apparent Physical Condition of Driver



## Crash Type



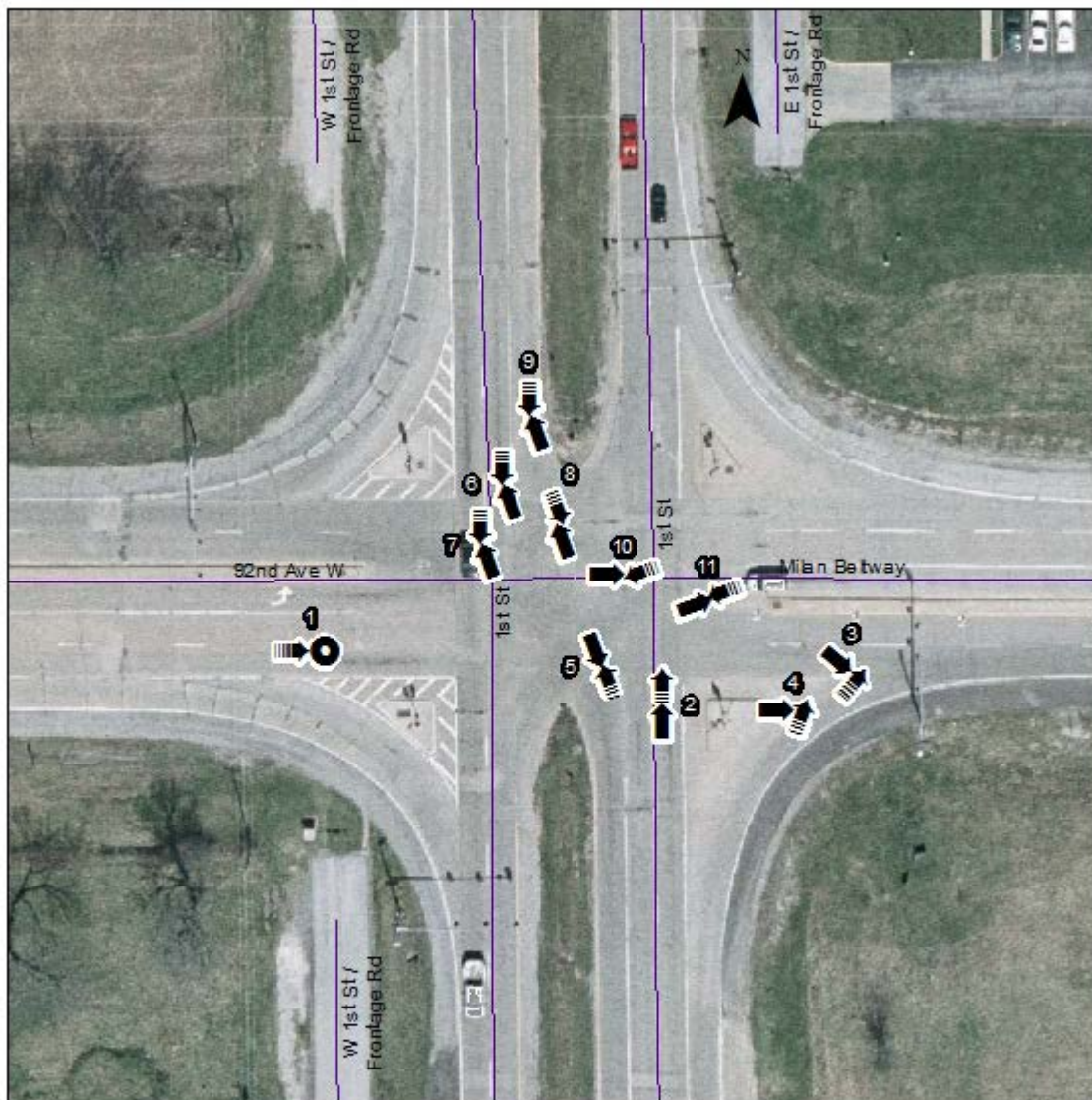
Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	0
2	0	14	0
3	0	15	0
4	1	16	0
5	0	17	2
6	0	18	1
7	2	19	1
8	2	20	0
9	1	21	0
10	0	22	0
11	1	23	0
12	1	24	2

**Chart Key**

- A: Failing to yield right-of-way
- B: Weather
- C: Unable to determine
- D: Disregarding traffic signals
- E: Failing to reduce speed to avoid crash



**Map 4.20**  
**2011 Illinois Location #5 - 1<sup>st</sup> Ave/US 67 & 92<sup>nd</sup> Ave W. (Milan)**



- |   |   |
|---|---|
| 1. East Bound, Unknown, Fixed Object (2)            | 7. South Bound, Straight, Angle (1)               |
| 2. North Bound, Straight, Rear end (2)              | 8. South Bound, Left Turn, Angle (1)              |
| 3. North Bound, Right Turn, Turning (1)             | 9. Southwest Bound, Left Turn, Turning (1)        |
| 4. Northeast Bound, Right Turn, Turning (1)         | 10. West Bound, Slow/Stop, Left Turn, Head on (1) |
| 5. Northwest Bound, Slow/Stop, Left Turn, Angle (1) | 11. West Bound, Left Turn, Turning (2)            |
| 6. South Bound, Straight, Turning (1)               |   |



## 2011 ILLINOIS LOCATION #9 - 6<sup>TH</sup> AVE & 23<sup>RD</sup> ST- MOLINE

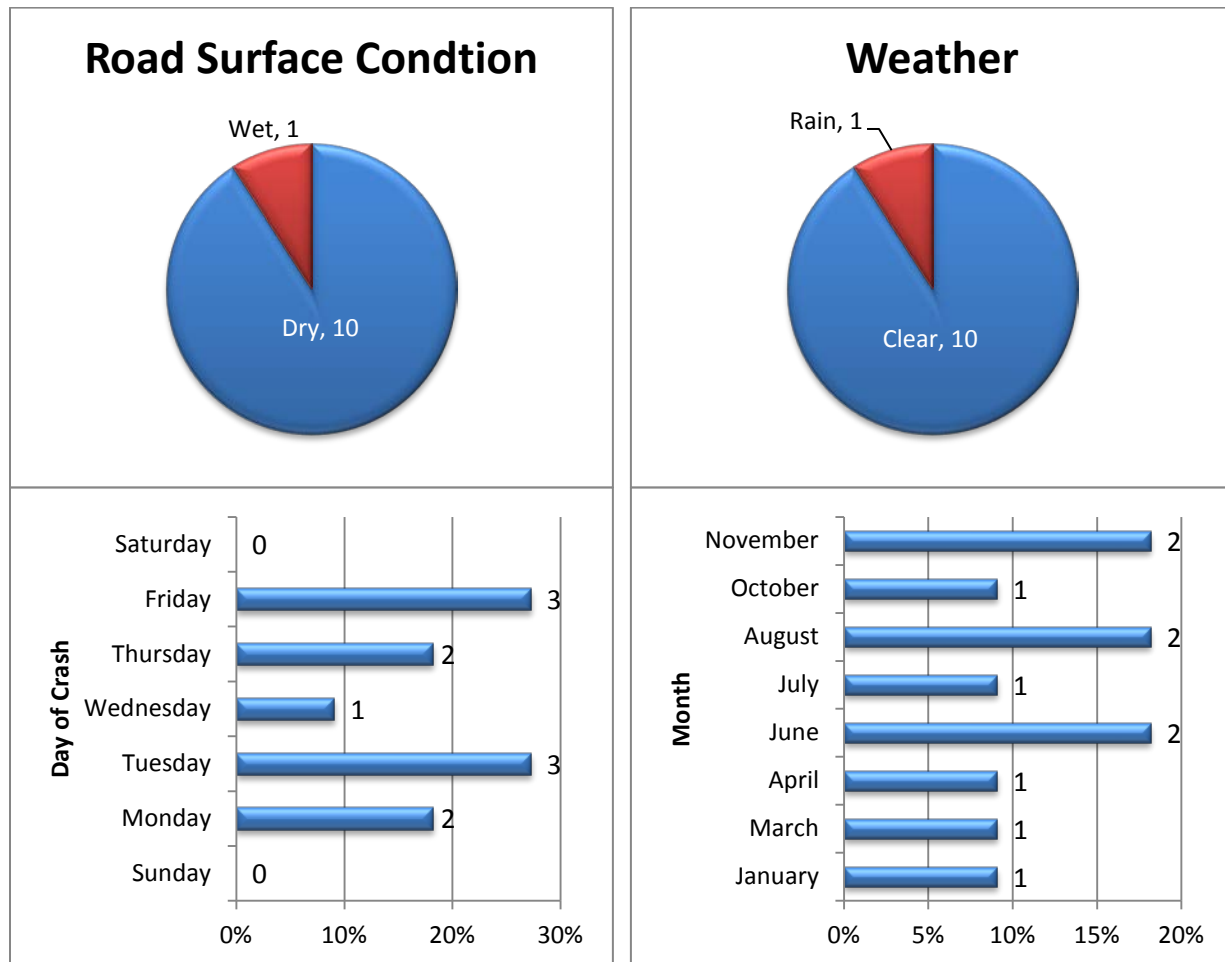
Tied for ninth, with a score of 21, this location experienced 11 crashes in 2011, resulting in 2 injury related crashes. Taking into account traffic volume, the crash rate for this intersection was above average at 2.73 crashes per MEV. Crashes involving turning were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Tuesdays and Fridays with no crashes reported on Sundays and Saturdays.

Average daily traffic at this intersection is 11,025. Sixth Avenue is a one-way (eastbound), two lane principal arterial road with a posted speed limit of 30 mph. Sixth Avenue has one left turn lane and one right turn lane. Twenty-Third Street is a four lane collector road also with a speed limit of 30 mph. The northbound approach of 23<sup>rd</sup> St has a channelized right turn lane. The southbound approach of 23<sup>rd</sup> St has a left turn lane and a left turn/through lane.

**Table 4.21**  
**6<sup>th</sup> Ave & 23<sup>rd</sup> St. (Moline) 2010 & 2011 Comparison**

	<b>2010</b>	<b>2011</b>
<b>Rank</b>	10	9
<b>Total Crashes</b>	12	11
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	4	2
<b>Crash Rate</b>	2.98	2.73
<b>Predominant Crash Type</b>	Turning	Turning

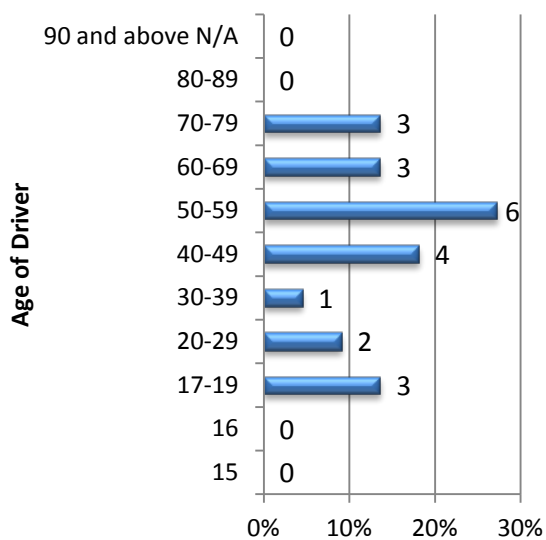
**Figure 4.21**  
**6<sup>th</sup> Ave & 23<sup>rd</sup> St. (Moline) – Crash Frequency by Various Conditions**



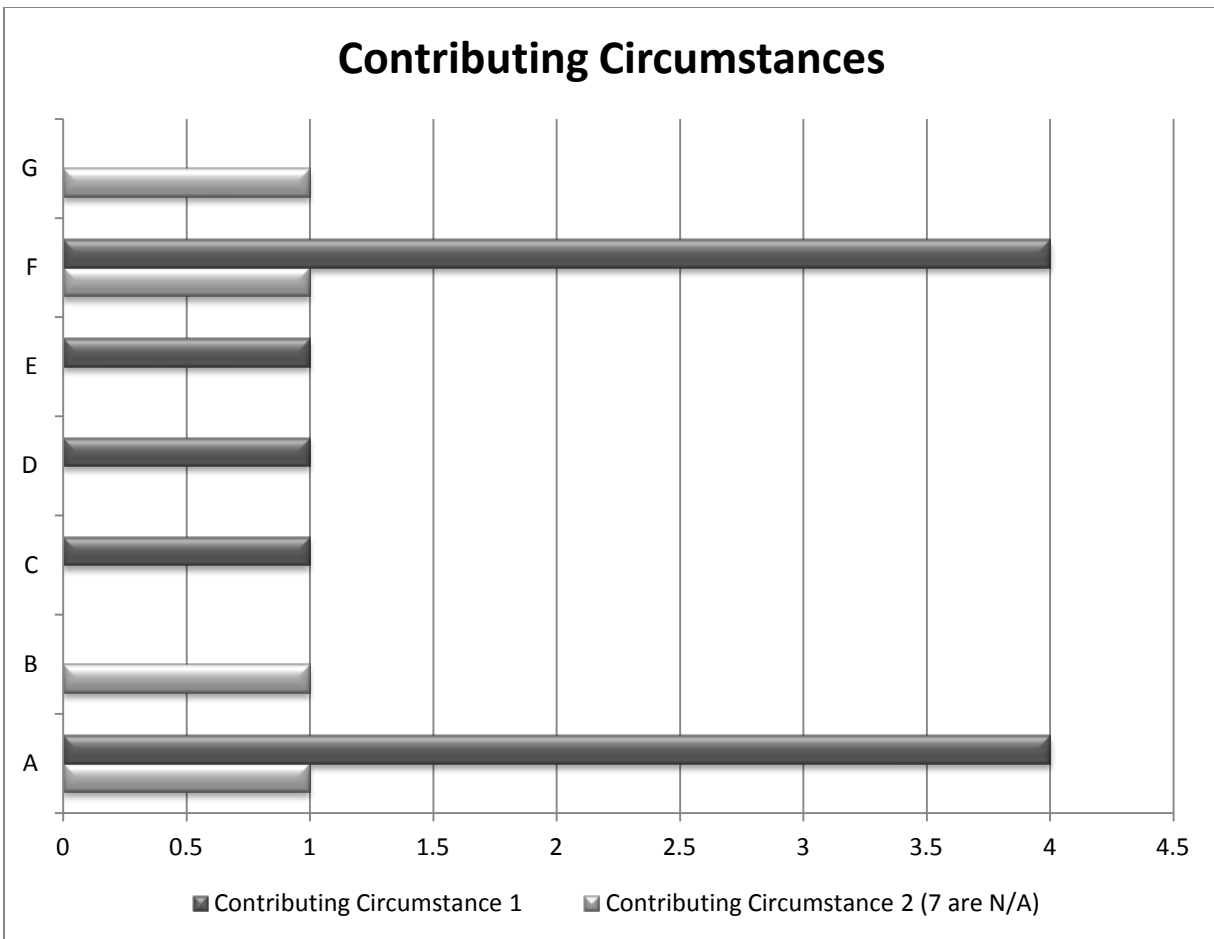
### Apparent Physical Condition of Driver



### Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	2
2	0	14	1
3	0	15	0
4	0	16	1
5	0	17	1
6	0	18	0
7	1	19	2
8	0	20	1
9	0	21	0
10	1	22	0
11	0	23	0
12	0	24	0



**Chart Key**

- A: Following too closely
- B: Failing to yield right-of-way
- C: Turning right on red
- D: Driving skills/knowledge/experience
- E: Disregarding traffic signals
- F: Failing to reduce speed to avoid crash
- G: Distraction - from inside of vehicle

**Map 4.21**  
**2011 Illinois Location #9 - 6<sup>th</sup> Ave & 23<sup>rd</sup> St. (Moline)**



1. East Bound, Right Turn, Turning (1)
2. North Bound, Slow/Stop, Right Turn, Rear end (1)
3. North Bound, Right Turn, Turning (2)
4. Northeast Bound, Slow/Stop, Right Turn, Rear end (2)

5. Northeast Bound, Turning on Red, Turning (1)
6. Northeast Bound, Right Turn, Turning (2)
7. South Bound, Other, Angle (1)
8. South Bound, Left Turn, Turning (1)

## 2011 ILLINOIS LOCATION #9 – 15<sup>TH</sup> ST/US 67 & CENTENNIAL BRIDGE NORTHBOUND ON-RAMP – ROCK ISLAND

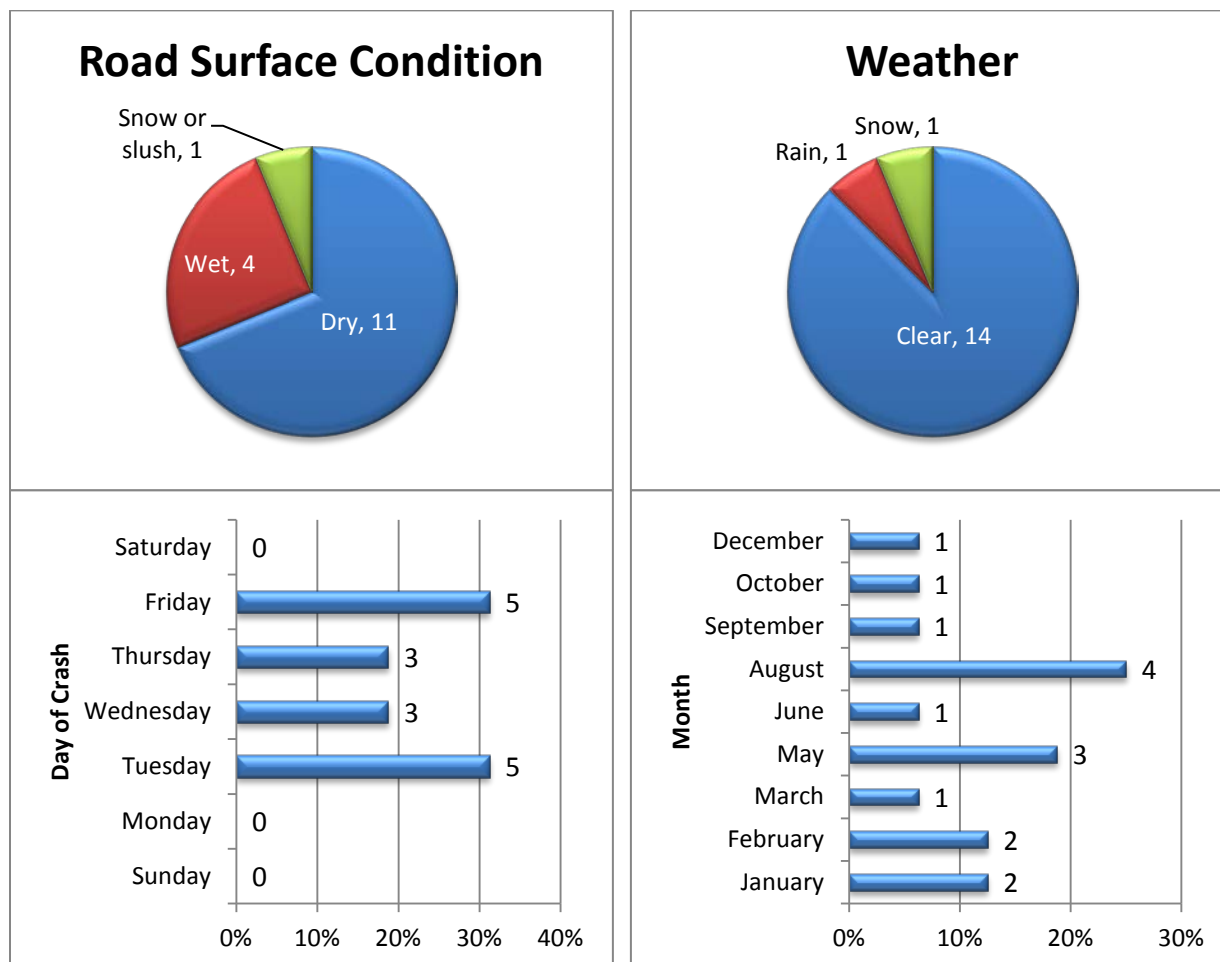
Tied for ninth, with a score of 21, this location experienced 16 crashes in 2011, resulting in 2 injuries. Taking into account traffic volume, the crash rate for this intersection was above average at 1.89 crashes per MEV. Rear-end crashes were the predominant crash type. Most crashes occurred during daylight hours in clear weather conditions and dry road surface conditions. The highest number of crashes occurred on Tuesdays and Fridays, followed by Wednesdays and Thursdays.

Average daily traffic for this intersection is 23,200. Fifteenth Street/US 67 is a principal arterial road with a posted speed limit of 30 mph. The on-ramp to northbound 15<sup>th</sup> Street/US 67 has a posted speed limit of 30 mph. The on-ramp has a yield sign on the approach to 15<sup>th</sup> Street/US 67. From observations, many treat this as a merge lane rather than yielding to the northbound traffic along 15<sup>th</sup> Street/US 67.

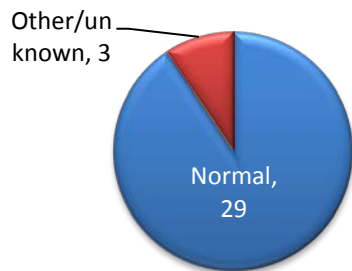
**Table 4.22**  
**15<sup>th</sup> St/US 67 & Centennial Bridge on ramp (Rock Island) 2010 & 2011 Comparison**

	<b>2010</b>	<b>2011</b>
<b>Rank</b>	4	9
<b>Total Crashes</b>	24	16
<b># of Fatality related crashes</b>	0	0
<b># of Injury related crashes</b>	0	2
<b>Crash Rate</b>	2.74	1.89
<b>Predominant Crash Type</b>	Rear-end	Rear-end

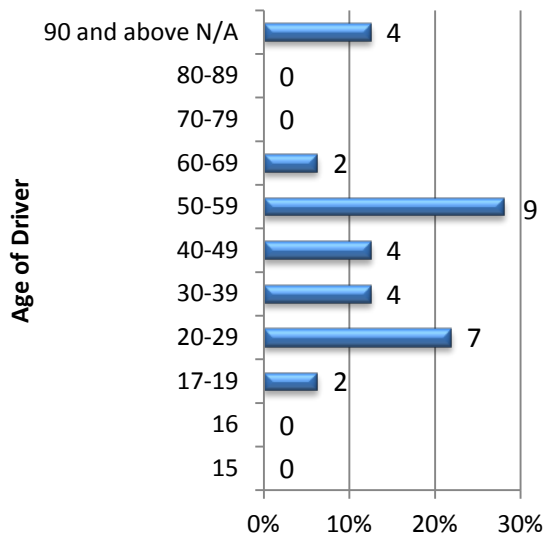
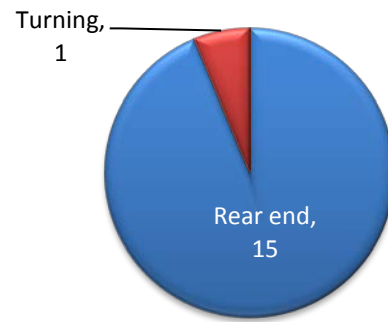
**Figure 4.22**  
**15<sup>th</sup> St/US 67 & Centennial Bridge on ramp (Rock Island) – Crash Frequency by Various Conditions**



## Apparent Physical Condition of Driver

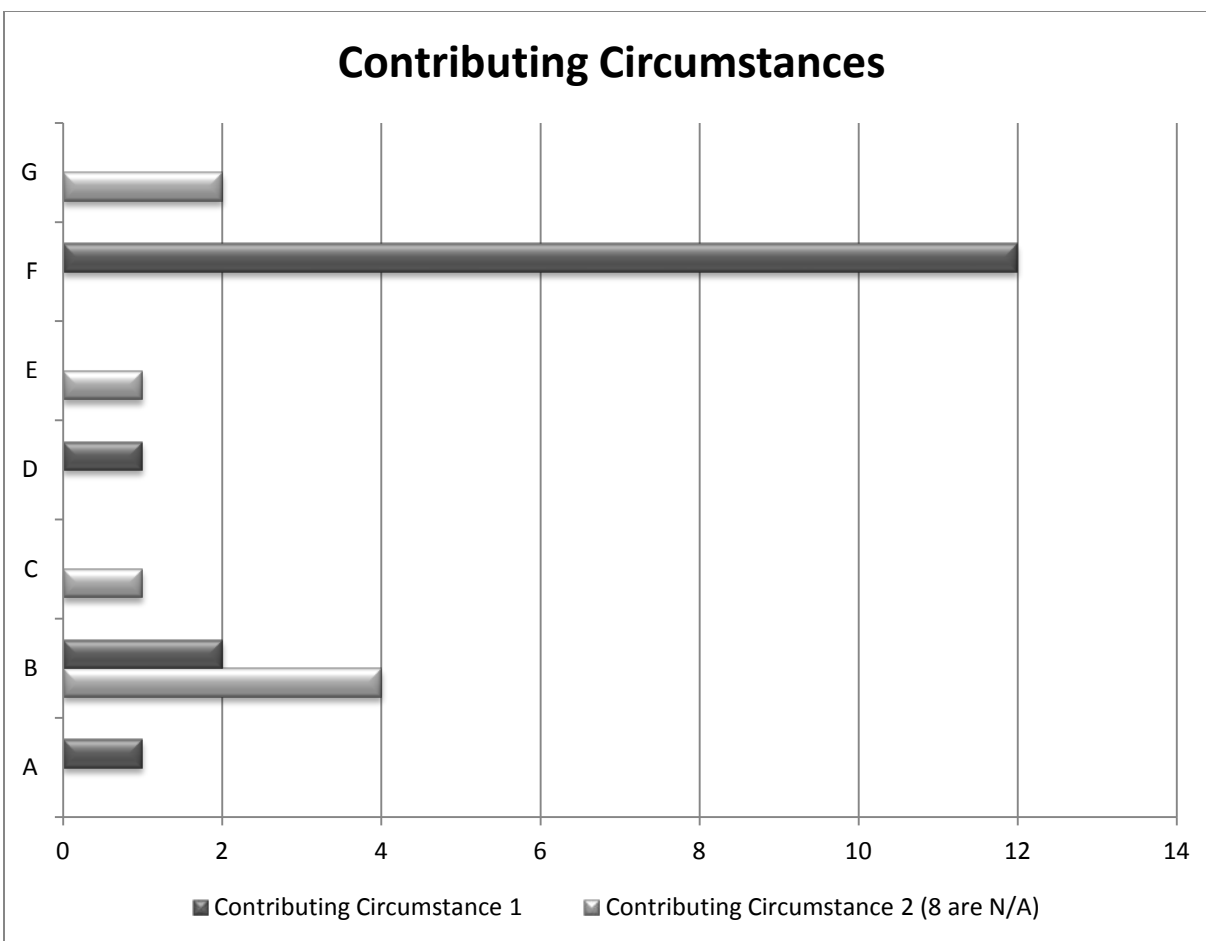


## Crash Type



Time of Crash			
Hour	Crashes	Hour	Crashes
1	0	13	1
2	0	14	2
3	0	15	2
4	0	16	2
5	0	17	6
6	0	18	0
7	0	19	0
8	1	20	1
9	1	21	0
10	0	22	0
11	0	23	0
12	0	24	0



**Chart Key**

- A: Failing to yield right-of-way
- B: Following too closely
- C: Improper lane usage
- D: Exceeding safe speed for conditions
- E: Distraction - from outside vehicle
- F: Failing to reduce speed to avoid crash
- G: Unable to determine

**Map 4.22**  
**2011 Illinois Location #9 - 15<sup>th</sup> St/US 67 & Centennial Bridge on ramp (Rock Island)**



- 2. North Bound, Slow/Stop in Traffic, Rear end (2)
- 3. North Bound, Straight, Rear end (6)
- 4. Northwest Bound, Merging, Rear end (2)
- 6. Northwest Bound, Starting in Traffic, Rear end (1)

- 7. Northwest Bound, Straight, Rear end (1)
- 8. Northwest Bound, Right Turn, Turning (1)
- 1. North Bound, Merging, Rear end (2)
- 5. Northwest Bound, Slow/Stop in Traffic, Rear end (1)

### **Status of Previously Ranked Intersections**

This Chapter evaluates the 2010 and 2011 statuses of top-ranked locations in the previous report studying 2007 data. Tables 7.1 and 7.2 give a comparison of the number of crashes and overall ranking of 2007 top-ranked intersections in Iowa and Illinois, respectively.

**Table 5.1**  
**Status of 2007 Top Ranked Intersections (Iowa)**

Location	Total # of Crashes			Overall Rank		
	2007	2010	2011	2007	2010	2011
Harrison St & W. Locust St - Davenport	16	10	14	1	22	3
N. Fairmount St & W. Kimberly Rd - Davenport	12	Not Ranked	Not Ranked	2	Not Ranked	Not Ranked
Brady St & Kimberly Rd - Davenport	19	14	11	3	13	16
W. 37 <sup>th</sup> St & Kimberly Rd - Davenport	16	Not Ranked	Not Ranked	3	Not Ranked	Not Ranked
Iowa St & E. Locust St - Davenport	15	16	Not Ranked	3	1	Not Ranked
14 <sup>th</sup> St & State St - Bettendorf	13	Not Ranked	Not Ranked	6	Not Ranked	Not Ranked
Eastern Ave & Kimberly Rd - Davenport	15	13	18	7	8	1
N. Pine St & W. Kimberly Rd - Davenport	13	7	Not Ranked	7	28	Not Ranked
W. Locust St & Brady St - Davenport	13	13	8	7	13	27
Kimberly Rd/Spruce Hills Dr & Elmore Ave - Davenport	16	14	8	10	8	32
Eastern Ave & E. 53 <sup>rd</sup> St - Davenport	11	Not Ranked	Not Ranked	10	Not Ranked	Not Ranked
Elsie Ave & W. Kimberly Rd – Davenport	9	Not Ranked	Not Ranked	10	Not Ranked	Not Ranked
Jersey Ridge Rd & E. 46 <sup>th</sup> St - Davenport	7	Not Ranked	Not Ranked	10	Not Ranked	Not Ranked

**Table 5.2**  
**Status of 2007 Top Ranked Intersections (Illinois)**

Location	Total # of Crashes			Overall Rank		
	2007	2010	2011	2007	2010	2011
Kennedy Dr & Ave of the Cities – East Moline	38	21	14	1	5	12
John Deere Rd/IL 5 & 38 <sup>th</sup> St – Moline	46	38	42	2	1	1
John Deere Rd/IL 5 & 16 <sup>th</sup> St – Moline	33	26	21	3	3	3
John Deere Rd/IL 5 & 41 <sup>st</sup> St - Moline	34	28	24	3	2	2
Ave of the Cities & 7 <sup>th</sup> St – East Moline	24	19	18	5	6	3
Ave of the Cities & 19 <sup>th</sup> St (East of I-74) – Moline	24	18	16	6	7	5
6 <sup>th</sup> Ave & 23 <sup>rd</sup> St – Moline	18	12	11	7	10	9
19 <sup>th</sup> St & 6 <sup>th</sup> Ave – Moline	16	10	Not Ranked	8	16	Not Ranked
12 <sup>th</sup> Ave & 41 <sup>st</sup> St – Moline	13	9	7	8	20	33
16 <sup>th</sup> Ave & 7 <sup>th</sup> St – East Moline	12	10	9	10	13	12

## **Intersection Improvements**

### **TOOLS FOR FUTURE IMPROVEMENTS**

To aid agencies in the decision as to what improvements will be the most effective at a certain intersection, several tools have been developed. One of these is the concept of a crash reduction factor (CRF).

A CRF is “the percentage crash reduction that might be expected after implementing a given countermeasure at a specific site”. CRFs are especially helpful in fulfilling data requirements of SAFETEA-LU by providing quantitative measures of improvement effectiveness. There are several resources allowing agencies access to a wide variety of CRFs and decision making tools, including<sup>3</sup>:

- The Federal Highway Administration’s (FHWA) *Desktop Reference for Crash Reduction Factors* (FHWA-SA-08-011)
- FHWA’s *Traffic Signals, Toolbox of Countermeasures and Their Potential Effectiveness for Intersection Crashes, Toolbox for Countermeasures and Their Potential Effectiveness for Pedestrian Crashes, and Toolbox of Countermeasures and Their Potential Effectiveness for Roadway Departure*<sup>4</sup>
- *SafetyAnalyst* software<sup>5</sup>
- *Interactive Highway Safety Design Model (IHSDM)*<sup>6</sup>
- Training courses through the National Highway Institute (NHI)<sup>7</sup>

### **LINKING IMPROVEMENTS TO FUNDING**

The Quad City Crash Report identifies intersections with poor performance based on number of crashes, severity and frequency of crash exposure. In some cases, geometric or physical improvements at these locations may help the situation. In other cases, non-engineering modifications may be needed, such as driver education and awareness or law enforcement. In either case, there are state and federal funding sources available to improve traffic safety.

Both the Illinois and Iowa Quad Cities receive an annual allocation of Surface Transportation Program (STP) funds. Bi-State Regional Commission facilitates a competitive selection process to prioritize and program these funds. STP funds may be used on either National Highway System (NHS) or federal-aid eligible routes. Bridges, safety projects, carpooling and bicycle/pedestrian oriented projects may be located on any public road. Candidate projects are submitted on an as needed. Typically, funding rounds occur every two or three years. Projects are ranked using criteria for level of

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<sup>3</sup> Using CRFs To Improve Highway Safety; *Public Roads*; May/June 2009

<sup>4</sup> Available at <http://safety.fhwa.dot.gov/tools/crf/>

<sup>5</sup> [www.safetyanalyst.org](http://www.safetyanalyst.org)

<sup>6</sup> [www.tfhr.gov/safety/ihsdm/ihsdm.htm](http://www.tfhr.gov/safety/ihsdm/ihsdm.htm)

<sup>7</sup> <http://www.nhi.fhwa.dot.gov/Training/train.aspx>

service, safety and physical condition. Safety consideration is equally weighted with the other two factors. Intersections highlighted in this report would score well, if they are on a federally eligible route.

In Iowa, there are a number of traffic engineering and funding programs offered through the Iowa Department of Transportation (IADOT) to assist with cost-effective traffic safety and operational improvements. For cities, there is the Traffic Engineering Assistance Program (TEAP) for communities with less than a 35,000 population and the Urban-State Traffic Engineering Program (U-STEP). There is also the Traffic Safety Improvement Program (TSIP), a statewide competitive program to construct or improve traffic safety or operations, purchase traffic safety equipment or conduct research, such as sign inventory, work zone safety or review accident data. Iowa Clean Air Attainment Program (ICAAP) funds can be used to improve traffic safety as it relates to emission reductions. IADOT outlines these programs on-line in a funding guide at [http://www.iowadot.gov/pol\\_leg\\_services/funding\\_guide.htm](http://www.iowadot.gov/pol_leg_services/funding_guide.htm).

In Illinois, there are also traffic safety funds available to communities through the Illinois Department of Transportation (ILDOT). There are several traffic safety enforcement programs offered by the ILDOT. The Illinois Highway Safety Program (HSP) reimburses communities for safety improvements. Information on these programs is available at: <http://www.dot.state.il.us/grants.html>.

Both states of Illinois and Iowa support Safe Routes to School Programs, which are eligible activities under MAP-21 Transportation Alternatives Program (TAP) assistance. These funds under SAFETEA-LU and now MAP-21 provide for improvements that result in more students walking or bicycling to school.

**Appendix A**  
**Crash Patterns,  
Probable Causes  
and General Countermeasures**

Excerpted from:  
Technology Improvement Group (TIG)  
Crash, Cause Countermeasures, 2007

American Association of State Highway  
and Transportation Officials

## Appendix A

<b>Crash Pattern</b>	<b>Probable Cause</b>	<b>General Countermeasure</b>
Right-angle collisions at unsignalized intersections	Restricted sight distance	Remove sight obstructions Restrict parking near corners Install stop signs (see MUTCD) Install warning signs (see MUTCD) Install/improve street lighting Reduce speed limit on approaches* Install signals (see MUTCD) Channelize intersection
	Large total intersection volume	Install signals (see MUTCD)
	High approach speed	Reduce speed limit on approaches* Install rumble strips
Right-angle collisions at signalized intersections	Poor visibility of signals	Install advanced warning devices (see MUTCD) Install 12-in. signal lenses (see MUTCD) Install overhead signals Install visors Install back plates Improve location of signal heads Add additional signal heads Reduce speed limit on approaches*
	Inadequate signal timing	Adjust Change interval Provide all-red clearance interval Install signal actuation Retime signals Provide progression through a set of signalized intersections
Rear-end collisions at unsignalized intersections	Pedestrian crossing	Install/improve signing or marking of pedestrian crosswalks Relocate crosswalk
	Driver not aware of intersection	Install/improve warning signs
	Slippery surface	Overlay pavement Provide adequate drainage Groove pavement Reduce speed limit on approaches* Provide "SLIPPERY WHEN WET" signs
	Large numbers of turning vehicles	Create left-or right-turn lanes Prohibit turns Increase curb radii



<b>Crash Pattern</b>	<b>Probable Cause</b>	<b>General Countermeasure</b>
Rear-end collisions at signalized intersections	Poor visibility of signals	Install/improve advance warning devices Install overhead signals Install 12 in. signal lenses (see MUTCD) Install visors Install back plates Relocate signals Add additional signal heads Remove obstacles Reduce speed limits on approaches*
	Inadequate signal timing	Adjust change interval Provide progression through a set of signalized intersections
	Pedestrian crossings	Install/improve signing or marking of pedestrian crosswalks Provide pedestrian "WALK" signal indication
	Slippery surface	Overlay pavement Provide adequate drainage Groove pavement Reduce speed limit on approaches* Provide "SLIPPERY WHEN WET" signs
	Unwarranted signals	Remove signals (see MUTCD)
	Large turning volumes	Create left or right-turn lanes Prohibit turns Increase curb radii
Pedestrian accidents at intersections	Restricted sight distance	Remove sight obstructions Install pedestrian crossings Improve/install pedestrian crossing signs Reroute pedestrian paths
	Inadequate protection for pedestrians	Add pedestrian refuge islands
	Inadequate signals	Install pedestrian signals (see MUTCD)
	Inadequate signal phasing	Add pedestrian "WALK" signal indication Change timing of pedestrian phase
	School crossing area	Use school crossing guards
Pedestrian accidents between intersections	Driver has inadequate warning of frequent mid-block crossings	Prohibit parking Install warning signs Lower speed limit* Install pedestrian barriers
	Pedestrians walking on roadway	Install sidewalks

## Appendix A

<b>Crash Pattern</b>	<b>Probable Cause</b>	<b>General Countermeasure</b>
	Long distance to nearest crosswalk	Install pedestrian crosswalk Install pedestrian actuated signals (see MUTCD)
Pedestrian accidents at driveway crossings	Sidewalk too close to traveled way	Move sidewalk laterally away from highway
Left-turn collisions at intersections	Large volume of left turns	Provide left-turn signal phases Prohibit left turns Reroute left-turn traffic Channelize intersection Install STOP signs (see MUTCD) Create one-way streets
	Restricted sight distance	Remove obstacles Install warning signs Reduce speed limit on approaches*
Right-turn collisions at intersections	Short turning radii	Increase curb radii
Fixed-object collisions	Objects near traveled way	Remove obstacles near roadway Install barrier curbing Install breakaway feature to light poles, signposts, etc. Protect objects with guardrail
Fixed-object collisions and/or vehicles running off roadway	Slippery pavement	Overlay existing pavement Provide adequate drainage Groove existing pavement Reduce speed limit* Provide "SLIPPERY WHEN WET" signs
	Roadway design inadequate for traffic conditions	Widen lanes Relocate islands Close curb lane
	Poor delineation	Improve/install pavement markings Install roadside delineators Install advance warning signs (e.g., curves)
Sideswipe collisions between vehicles traveling in opposite directions or head-on collisions	Roadway design inadequate for traffic conditions	Install/improve pavement markings Channelize intersections Create one-way streets Install median divider Widen lanes
Collisions between vehicles traveling in same direction such as sideswipe, turning or lane changing	Roadway design inadequate for traffic conditions	Widen lanes Channelize intersections Provide turning bays Install advance route or street signs Install/improve pavement lane lines Remove parking Reduce speed limit*

<b>Crash Pattern</b>	<b>Probable Cause</b>	<b>General Countermeasure</b>
	Roadway design inadequate for present conditions	Widen lanes Change from angle to parallel parking Prohibit parking Reroute through traffic
Collisions at driveways	Left-turning vehicles	Install median divider Install two-way left-turn lanes
	Improperly located driveway	Regulate minimum spacing of driveways Regulate minimum corner clearance Move driveway to side street Install curbing to define driveway location Consolidate adjacent driveways
	Right-turning vehicles	Provide right-turn lanes Restrict parking near driveways Increase the width of the driveway Widen through lanes Increase curb radii
	Large volume of through traffic	Move driveway to side street Construct a local service road Reroute through traffic
	Large volume of driveway traffic	Signalize driveway Provide acceleration and deceleration lanes Channelize driveway
	Restricted sight distance	Remove sight obstructions Restrict parking near driveway Install/improve street lighting Reduce speed limit*
Night accidents	Poor visibility	Install/improve street lighting Install/improve delineation markings Install/improve warning signs
Wet pavement accidents	Slippery pavement	Overlay existing pavement Provide adequate drainage Groove existing pavement Reduce speed limit* Provide "SLIPPERY WHEN WET" signs
Collisions at railroad crossings	Restricted sight distance	Remove sight obstructions Reduce grades Install train actuated signals (see MUTCD) Install stop signs (see MUTCD) Install gates (see MUTCD) Install advance warning signs (see MUTCD)

\*Speed study should be conducted to justify speed limit change.



**Appendix B**

**Costs of Typical Intersection Improvements**

Illinois Department of Transportation

## Appendix B

<b>Improvements</b>	<b>Cost</b>
Install Street Lighting	\$10,000- \$15,000 per pole
Install Traffic Signals at Unsignalized Intersections	\$100,000- \$160,000
Rumble Strips	\$3500 per leg of intersection
Install Advance Warning Devices	\$7000 each for flashing light
Install 12" Signal Lenses	\$130 per section; backplate \$70 each
Install Overhead Signals	\$25,000 per mast arm; \$10,000 per signal post
Adjust Signal Phasing	\$1000- \$4000
Install Signal Actuation (for Both Intersections and Left Turn Lanes)	\$20,000- \$30,000
Re-Time Signals	\$10,000
Provide Signal Progression	\$4,000- \$10,000 per intersection
Channelize Intersection	\$200,000- \$1,000,000
Install Stop Signs	\$800 each
Improve/ Install Pavement Markings	\$4000- \$6000 for thermoplastic; \$2000- \$4000 for paint
Provide Turning Bays/Lanes	\$50,000- \$125,000 per bay/lane
Improving Turning Radii	\$40,000 - \$100,000
Install Controller	\$20,000
Grade Separation at Intersection	\$1,000,000 and up

**Appendix C**  
**Crash Countermeasures**  
**and**  
**Corresponding Crash Reduction Factors**

Excerpted from:  
Illinois Highway Safety Improvement Program  
Benefit-Cost Tool Users Manual, 2008

Illinois Department of Transportation

## Appendix C

COUNTERMEASURES	Unit	Service Life	CRF	Crash Type Affected
1.1 General				
1.1.1 Improvement/Realignment/Reconstruction URBAN	Unit Qnty	15	50%	All
1.1.2 Improvement/Realignment/Reconstruction RURAL	Unit Qnty	15	30%	All
1.2 Pavement				
1.2.1 Widening and Resurfacing or Widening alone	Miles	15	25%	All
1.2.2 Resurfacing alone	Miles	10	-	
1.2.3 De-Slick (formerly known as skidproofing)	Miles	5	45%	WP
1.2.4 Rumble Strips (Shoulder)	Miles	3	30%	FO,OVT-off the road
1.2.5 Rumble Strips (Centerline)	Miles	3	-	
1.2.6 Rumble Strips (Transverse)	Miles	3	25%	All
1.2.7 Channelization	Miles	15	50%	RE,HO,SSD,SOD,LT,FO,O VT,T,RT
1.2.8 Raised Reflective Marker Median	Miles	15	50%	HO,SOD,LT,T,RT
1.2.9 Rumble Strip Median	Miles	10	50%	HO,SOD,LT,T,RT
1.2.10 Thermoplastic or Preformed Tape Median	Miles	3	50%	RE,HO,SSD,SOD,LT,RT,T
1.2.11 Painted Median	Miles	2	50%	RE,HO,SSD,SOD,LT,RT,T
1.2.12 Lane Addition	Unit Qnty	15	50%	RE,SSD, LT,RT,T
1.2.13 Left Turn Lane	Unit Qnty	15	25%	Each leg w/added Left turn, RE,SSD,SOD,LT
1.2.14 Right Turn Lane	Unit Qnty	15	25%	Each leg w/added Right turn, RE,SSD,RT
1.2.15 Bidirectional Left Turn Lane	Unit Qnty	15	50%	RE,HO,SSD,SOD,LT
1.2.16 Left Turn Acceleration Lane	Unit Qnty	15	50%	RE,SOD,SSD,AG,LT
1.2.17 Right Turn Acceleration Lane	Unit Qnty	15	50%	RE,SSD,RT
1.2.18 Deceleration Lane	Unit Qnty	15	50%	RE,SSD,RT
1.2.19 One-Way Couple	Unit Qnty	15	50%	All
1.2.20 Install Roundabout	Unit Qnty	15	60%	All
1.2.21 Install Passing Lane	Unit Qnty	15	25%	All
1.2.22 Increase Width of Paved Shoulder	Miles	10	10%	All
1.2.23 Increase Lane Width	Miles	15	10%	All



COUNTERMEASURES	Unit	Service Life	CRF	Crash Type Affected
1.3 Signing				
1.3.1 Modernization	Unit Qnty	6	25%	All
1.3.2 Installation	Unit Qnty	6	40%	All
1.3.3 Speed Signing	Unit Qnty	6	40%	All
1.3.4 Advance Warning Signs	Unit Qnty	6	25%	All
1.3.5 Street Name Signs	Unit Qnty	6	25%	All
1.3.6 Four Way Stop	Unit Qnty	5	50%	All
1.3.7 Minor Leg Stop	Unit Qnty	5	40%	AG,LT,RT,T
1.3.8 Yield Sign	Unit Qnty	5	40%	AG,LT,RT,T
1.3.9 Changeable Message Signs	Unit Qnty	6	10%	All
1.3.10 Delineators	Unit Qnty	4	40%	All
1.3.11 Overhead Sign Truss	Unit Qnty	15	40%	RE,SOD
1.4 Signalization				
1.4.1 Modernization	Unit Qnty	10	25%	PD,FO,RE,SSD,SOD,AG,L T,RT,T
1.4.2 Install Traffic Signals	Unit Qnty	15	23%, 38%	23% All Other. -38% RE. 67% RAG
1.4.3 Relocation of Signal Supports	Unit Qnty	15	25%	FO
1.4.4 Advance Warning with Flasher	Unit Qnty	10	15%	OVT,FO,RE,SSD,SOD,AG, LT,RT,T
1.4.5 Red/Yellow Flashing Beacon	Unit Qnty	10	NR	Not recommended.
1.4.6 Red Flashing Beacon	Unit Qnty	10	45%	AG
1.4.7 Add Left Turn Phase with Left Turn Lane	Unit Qnty	10	35%	All
1.4.8 Add Left Turn Phase without Left Turn Lane	Unit Qnty	10	25%	All
1.4.9 Phase Adjustment	Unit Qnty	10	25%	All
1.4.10 Increase to 12 Inch Lens	Unit Qnty	10	25%	All
1.4.11 Add Traffic Actuation	Unit Qnty	10	25%	RE,AG,LT,RT,T
1.4.12 Time Lane Control	Unit Qnty	10	25%	HO,SOD
1.4.13 Optical Programmed	Unit Qnty	10	25%	RE,AG,LT,RT,T
1.4.14 Add Pedestrian Controls	Unit Qnty	10	25%	PD,PDC
1.4.15 Add Mast Arms and Signal Head per Lane	Unit Qnty	15	25%	RE,AG,LT,RT,T
1.4.16 Safety Lighting	Unit Qnty	15	50%	50% NGT

## Appendix C

COUNTERMEASURES	Unit	Service Life	CRF	Crash Type Affected
1.4.17 Install Automated Enforcement of Red Light Violations	Unit Qnty	10	25%	AG <sub>1</sub> -15% RE