# Table of Contents

Acronyms and Abbreviations .............................................................................................................. viii

Executive Summary ........................................................................................................................... vii

**Section 1 Background** .................................................................................................................... 1-1

1.1 National ........................................................................................................................................ 1-1
1.2 Illinois ........................................................................................................................................... 1-2
1.3 Illinois County Safety Initiative .................................................................................................... 1-9
1.4 Champaign County ....................................................................................................................... 1-10
1.5 Goals .......................................................................................................................................... 1-13

**Section 2 Prioritizing Emphasis Areas** .......................................................................................... 2-1

2.1 Data Trees ................................................................................................................................... 2-1
2.2 Age Related ................................................................................................................................. 2-17
  2.2.1 Younger Driver Related ........................................................................................................ 2-18
  2.2.2 Older Driver Related ............................................................................................................ 2-20
2.3 Unsafe Behavior ............................................................................................................................ 2-22
  2.3.1 Speeding/Aggressive Driving ............................................................................................. 2-23
  2.3.2 Impaired Driver .................................................................................................................... 2-25
  2.3.3 Unrestrained ......................................................................................................................... 2-27
2.4 Vulnerable Users .......................................................................................................................... 2-29
  2.4.1 Pedestrians .......................................................................................................................... 2-31
  2.4.2 Pedalcyclists ........................................................................................................................ 2-33
  2.4.3 Motorcycles ........................................................................................................................ 2-35
2.5 Heavy Vehicles .............................................................................................................................. 2-37
  2.5.1 Heavy Vehicle Related ....................................................................................................... 2-38
2.6 Roadway Departure ....................................................................................................................... 2-40
  2.6.1 Roadway Departure Related .............................................................................................. 2-41
2.7 Intersection .................................................................................................................................. 2-43
  2.7.1 Intersection Related ............................................................................................................ 2-44
2.8 Distracted/Fatigued/Drowsy ........................................................................................................ 2-47
  2.8.1 Distracted/Fatigued/Drowsy Driver .................................................................................. 2-48

**Section 3 Countywide, City, and Location-Specific Analysis** .......................................................... 3-1

3.1 Map Series .................................................................................................................................. 3-1
  3.1.1 Heat Maps ............................................................................................................................ 3-1
  3.1.2 Detailed Maps ....................................................................................................................... 3-1
3.2 Identification of Countywide Trends ........................................................................................... 3-2
  3.2.1 Younger Driver .................................................................................................................... 3-2
  3.2.2 Older Driver ........................................................................................................................ 3-7
  3.2.3 Speeding/Aggressive Driver ............................................................................................... 3-7
  3.2.4 Impaired Driver ................................................................................................................... 3-7
  3.2.5 Unrestrained ......................................................................................................................... 3-7
  3.2.6 Pedestrian and Pedalcyclist ............................................................................................... 3-7
  3.2.7 Motorcycle .......................................................................................................................... 3-7
  3.2.8 Heavy Vehicle .................................................................................................................... 3-7
  3.2.9 Roadway Departure ............................................................................................................ 3-8
  3.2.10 Intersection ....................................................................................................................... 3-8
  3.2.11 Distracted/Fatigued/Drowsy Driver .................................................................................. 3-8
3.3 City Maps Evaluation .................................................................................................................... 3-55
# TABLE OF CONTENTS

## Section 4 Summary

4.1 County Safety Projects

## Section 5 References

### Appendixes

- Appendix A  County Workshops
- Appendix B  Monticello Road Highway Safety Improvement Project
- Appendix C  Emphasis Area Definitions and Terminology
- Appendix D  Strategies for Champaign Emphasis Areas
- Appendix E  Behavioral and Infrastructure Strategies
- Appendix F  How to Read Data Trees

### Tables

1-1 County Ranking for Fatalities and A-type Injuries on All Roadway Networks, State and Local ... 1-9
1-2 Champaign County Performance Measure Goal Setting ........................................................... 1-15
1-3 Champaign MAP-21 Section 148: Older Driver/Pedestrian ....................................................... 1-23

2-1 Champaign County Emphasis Areas ........................................................................................... 2-3

### Figures

1-1 Nationwide Fatalities, 2004 to 2013 ....................................................................................... 1-1
1-2 Statewide Fatalities, 2004 to 2013 ....................................................................................... 1-3
1-3 Statewide A-Type Injuries, 2004 to 2013 ............................................................................. 1-3
1-4 Statewide Fatality Crash Rate 2004 to 2013 ........................................................................... 1-4
1-5 Statewide A-type Injuries, 2004 to 2013............................................................................. 1-5
1-6 Statewide A-type Injuries, State Routes vs. Local Routes, 2004 to 2013 ................................ 1-5
1-9 Statewide Fatalities, Local Routes, Urban vs. Rural ............................................................... 1-7
1-10 Statewide A-type Injuries, State Routes, Urban vs. Rural ..................................................... 1-7
1-11 Statewide A-type Injuries, Local Routes, Urban vs. Rural..................................................... 1-8
1-12 Champaign County Fatalities, 2004 to 2013 ...................................................................... 1-9
1-13 Champaign County Fatalities State Routes vs. Local Routes 2004 to 2013, ......................... 1-10
1-14 Champaign County A-type Injuries, 2004 to 2013 ............................................................. 1-11
1-15 Champaign County A-type Injuries, State Routes vs. Local Routes, 2004 to 2013 ............... 1-11
1-16 Champaign County Fatality Crash Rate, 2004 to 2013 ....................................................... 1-12
1-17 Champaign County A-type Injury Rate, 2004 to 2013 ....................................................... 1-12
1-18 Champaign County Performance Measure Goal Setting Trend ........................................... 1-17
1-19 Champaign County Older Driver/Pedestrian Fatalities.......................................................... 1-19
1-20 Champaign County Older Driver/Pedestrian Fatality Rate (per capita) .............................. 1-20
1-21 Champaign County Older Driver/Pedestrian Serious Injuries ............................................ 1-20
1-22 Champaign County Older Driver/Pedestrian Serious Injuries Rate (per capita) ................. 1-21
2-1 State System – Other Principal Arterial & Major Collector Roadways .............................. 2-5
2-2 State System – Local Road or Street & Minor Collector ....................................................... 2-7
2-3 State System – Minor Arterial Roadways ........................................................................... 2-9
2-4 Local System – Other Principal Arterial & Major Collector Roadways ............................ 2-11
2-5 Local System – Local Road or Street & Minor Collector Roadways ................................ 2-13
2-6 Local System – Minor Arterial Roadways ........................................................................ 2-15
2-7 Younger Driver (16 to 20) Fatalities and A-type Injuries 2009 to 2013 .............................. 2-17
2-8 Younger Driver (16 to 20) A-type Injuries ........................................................................ 2-19
2-9 Older Driver (65 or Older) Fatalities ................................................................................... 2-20
2-10 Older Driver (65 or Older) A-type Injuries ......................................................................... 2-20
<table>
<thead>
<tr>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-16</td>
<td>Champaign County KAB Motorcycle Crashes Per Section Square (2009-2013) – Zoom-in</td>
</tr>
<tr>
<td>3-17</td>
<td>Champaign County KAB Heavy Vehicle Crashes Per Section Square (2009-2013)</td>
</tr>
<tr>
<td>3-18</td>
<td>Champaign County KAB Heavy Vehicle Crashes Per Section Square (2009-2013) – Zoom-in</td>
</tr>
<tr>
<td>3-19</td>
<td>Champaign County KAB Roadway Departure Crashes Per Section Square (2009-2013)</td>
</tr>
<tr>
<td>3-20</td>
<td>Champaign County KAB Roadway Departure Crashes Per Section Square (2009-2013) – Zoom-in</td>
</tr>
<tr>
<td>3-21</td>
<td>Champaign County KAB Intersection Related Crashes Per Section Square (2009-2013)</td>
</tr>
<tr>
<td>3-22</td>
<td>Champaign County KAB Intersection Related Crashes Per Section Square (2009-2013) – Zoom-in</td>
</tr>
<tr>
<td>3-23</td>
<td>Champaign County KAB Distracted/Fatigued/Drowsy Driver Crashes Per Section Square (2009-2013)</td>
</tr>
<tr>
<td>3-24</td>
<td>Champaign County KAB Distracted/Fatigued/Drowsy Driver Crashes Per Section Square (2009-2013) – Zoom-in</td>
</tr>
<tr>
<td>3-25</td>
<td>City of Champaign, KAB Crashes Per Section Square Within City Boundary (2009-2013)</td>
</tr>
<tr>
<td>3-26</td>
<td>City of Champaign, KAB Crashes per Section Square Within City Boundary (2009-2013) – Zoom In</td>
</tr>
<tr>
<td>3-27</td>
<td>City of Urbana, KAB Crashes Per Section Square Within City Boundary (2009-2013)</td>
</tr>
<tr>
<td>3-28</td>
<td>City of Urbana, KAB Crashes Per Section Square Within City Boundary (2009-2013) – Zoom In</td>
</tr>
</tbody>
</table>
## Acronyms and Abbreviations

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 E’s</td>
<td>engineering, education, enforcement, and emergency medical services</td>
</tr>
<tr>
<td>AASHTO</td>
<td>American Association of State Highway and Transportation Officials</td>
</tr>
<tr>
<td>BSE</td>
<td>Bureau of Safety Engineering</td>
</tr>
<tr>
<td>CCRPC</td>
<td>Champaign County Regional Planning Commission</td>
</tr>
<tr>
<td>CUUATS</td>
<td>Champaign-Urbana Urbanized Area Transportation Study</td>
</tr>
<tr>
<td>CU-MTD</td>
<td>Champaign-Urbana Mass Transit District</td>
</tr>
<tr>
<td>C-U SRTS</td>
<td>Champaign-Urbana Safe Routes to School</td>
</tr>
<tr>
<td>DWI</td>
<td>Driving While Intoxicated</td>
</tr>
<tr>
<td>FHWA</td>
<td>Federal Highway Administration</td>
</tr>
<tr>
<td>HMVMT</td>
<td>hundred million vehicle miles traveled</td>
</tr>
<tr>
<td>HSIP</td>
<td>Highway Safety Improvement Program</td>
</tr>
<tr>
<td>ICHSP</td>
<td>Illinois Comprehensive Highway Safety Plan</td>
</tr>
<tr>
<td>IDOT</td>
<td>Illinois Department of Transportation</td>
</tr>
<tr>
<td>ISHSP</td>
<td>Illinois Strategic Highway Safety Plan</td>
</tr>
<tr>
<td>KAB</td>
<td>Fatal, A-injury, and B-Injury Combined</td>
</tr>
<tr>
<td>MAP-21</td>
<td>Moving Ahead for Progress in the 21st Century Act</td>
</tr>
<tr>
<td>MPO</td>
<td>Metropolitan Planning Organization</td>
</tr>
<tr>
<td>NCHRP</td>
<td>National Cooperative Highway Research Program</td>
</tr>
<tr>
<td>NHTSA</td>
<td>National Highway Traffic Safety Administration</td>
</tr>
<tr>
<td>Plan</td>
<td>Strategic Highway Safety Plan for Champaign County</td>
</tr>
<tr>
<td>SAFETEA-LU</td>
<td>Safe, Accountable, Flexible, Efficient Transportation Equity Act</td>
</tr>
<tr>
<td>SHSP</td>
<td>Strategic Highway Safety Plan</td>
</tr>
<tr>
<td>TRB</td>
<td>Transportation Research Board of the National Academies</td>
</tr>
<tr>
<td>TZD</td>
<td>Toward Zero Deaths: A National Strategy on Highway Safety</td>
</tr>
<tr>
<td>UIUC</td>
<td>University of Illinois Urbana-Champaign</td>
</tr>
<tr>
<td>UN</td>
<td>United Nations</td>
</tr>
<tr>
<td>USDOT</td>
<td>United States Department of Transportation</td>
</tr>
</tbody>
</table>
Executive Summary

In an effort to achieve zero fatalities on roadways in Illinois, the Illinois Department of Transportation (IDOT) initiated a process to develop county Strategic Highway Safety Plans (SHSPs). This Strategic Highway Safety Plan for Champaign County (Plan) was prepared as part of the Illinois statewide highway safety planning process. The Plan was data-driven, with a goal to reduce severe crashes (those involving fatalities and serious injuries) by documenting at-risk locations, identifying effective safety improvement strategies, and better positioning the county to compete for available safety funds. The Plan includes a description of the connection to safety planning efforts at the national level, state level (through the Illinois Strategic Highway Safety Plan [ISHSP] and the Highway Safety Improvement Program [HSIP]), and Metropolitan Planning Organization (MPO) level.

Specifically, this Champaign County Safety Plan includes:

- Background information
- A description of the Safety Emphasis Areas
- Data analysis of each of the emphasis areas
- Identification of a short list of high priority, low-cost Safety Strategies

The information in this Plan is consistent with best practices in safety planning as presented in guidance prepared by the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO) and the National Cooperative Highway Research Program (NCHRP). In addition to these primary sources, a comprehensive list of agencies and organizations whose guidance documents were referenced to complete this Plan is included in Section 5. The Champaign County Comprehensive Highway Safety Plan1 prepared in February 2008 and the Traffic Crash Facts for Champaign-Urbana report prepared by CCRPC in June 2011 initialized formal County safety planning efforts. To supplement these previous efforts and follow new SHSP processes this information is provided to Champaign County to reduce the number of severe crashes on their highway system, and it is understood that the final decision to implement any of the suggested projects resides with the Champaign County Engineer. It should also be noted that the emphasis areas are identified for Champaign County based on a comparison to the statewide system. The emphasis areas suggest a general priority, and it is understood that actual project development decisions will be made by County staff based on consideration of economic, social, and political issues and coordination with other projects already in the County’s Capital Improvement Program. The County is encouraged to coordinate with IDOT in order to pursue any countermeasure implementation on the state's right-of-way. This Plan does NOT set requirements or mandates, is NOT a standard, and is neither intended to be, nor does it establish a legal standard of care. In an effort to help reduce the potential exposure to claims of negligence associated with motor vehicle crashes on Champaign County’s highway system, key points should be considered:

Federal law (23 United States Code Section 409) established that information generated as part of the statewide safety planning process is considered privileged and unavailable to the public. The privileged status includes crash data, where value/detail has been added by analysts during the safety planning process (for example: computation of crash rates, disaggregation of crashes by type or severity, documentation of contributing factors, and so forth), the lists of at-risk locations, and information supporting the development and evaluation of potential safety projects. The federal law and the privileged status of the safety information was upheld by the U. S. Supreme Court in the case of Pierce County (Washington) v. Guillen.

A final point to note relates to the expected life of this Plan. As with any transportation plan, the expected shelf life of this document is not infinite—the distribution of crashes can change over time as well as roadway and traffic conditions that can contribute to the occurrence of crashes. As a result, Champaign County is encouraged to consider periodically updating this Plan when they have run out of safety projects to develop or after approximately 5 years.

1. Champaign County Comprehensive Highway Safety Plan 2008
Section 1 Background

1.1 National

Recognizing nearly 1.24 million people die and between 20 million and 50 million more are injured in roadway crashes annually on a global level, the United Nations (UN) has instituted the Decade of Action for Road Safety. On May 10, 2010, a resolution to the UN General Assembly proclaimed the period 2011 to 2020 as the Decade of Action for Road Safety, with a goal to stabilize and then reduce the forecast level of road traffic fatalities around the world by increasing safety initiatives around the world.

The United States Department of Transportation (USDOT) Federal Highway Administration (FHWA) initiated Toward Zero Deaths (TZD): A National Strategy on Highway Safety. TZD was created to contribute to the UN Decade of Action, because over 30,000 fatalities occur on the nation’s highways each year and there is no singular strategy that unites these common efforts aimed at reduction of fatal crashes (Figure 1-1). The National Strategy is a data-driven effort focusing on identifying and creating opportunities for changing American culture to improve highway safety through engineering, education, enforcement, and emergency medical services (4 E’s).

FIGURE 1-1
Nationwide Fatalities, 2004 to 2013

On July 6, 2012, President Obama signed into law P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21). MAP-21 builds on the Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA-LU) by continuing to support the Highway Safety Improvement Program (HSIP) along with the development and implementation of the Strategic Highway Safety Plan (SHSP). MAP-21 ensures ongoing progress toward achieving safety targets by requiring regular plan updates, and the SHSP remains a statewide coordinated plan developed in cooperation with a broad range of multidisciplinary stakeholders. MAP-21 includes certain contingencies such as:

- States will set targets for the number of serious injuries and fatalities (and the number per vehicle mile of travel). If a state fails to make progress toward its safety targets, it will have to devote a certain portion of its formula obligation limitation to the safety program and submit an annual implementation plan on how the state will make progress to meet performance targets.
Although MAP-21 eliminates the requirement for every state to set aside funds for High Risk Rural Roads, a state is required to obligate funds for this purpose if the fatality rate on such roads increases.

States are required to incorporate strategies focused on older drivers and pedestrians if fatalities and injuries per capita for those groups increase.

1.2 Illinois

The Illinois Comprehensive Highway Safety Plan\(^2\) (ICHSP) was developed in 2005 to meet the requirements of SAFETEA-LU. The ICHSP identified the following:

- A goal to reduce the number of traffic-related deaths from 1,454 in 2003 to 1,000 or fewer by 2008, a rate of 1.0 fatality per 100 million vehicle miles traveled (VMT)
- A unified approach for addressing traffic fatalities in Illinois
- Key crash types to target (also referred to as Critical Emphasis Areas)
- High priority strategies intended to form the focus of future programs and projects (also referred to as Critical Strategies)

The safety goals in the ICHSP were achieved, and the Illinois Strategic Highway Safety Plan\(^3\) (ISHSP) set a new goal of zero fatalities in 2009. Although recent years have been the safest, far too many people are still being killed on Illinois roadways. With that in mind, the highway safety program is targeting an aggressive new goal of “Zero Fatalities,” which envisions reducing fatalities on Illinois roads to zero in the long term. Through integrating the efforts and resources of multidisciplinary safety stakeholders, the ISHSP defines a system, organization, and process for managing the attributes of the road, driver, and vehicle to achieve the highest level of highway safety. To further advance safety in Illinois, the Illinois Department of Transportation (IDOT) has initiated a program to develop county SHSPs. This development process has included data analysis and safety workshops to involve the safety partners in the challenge of reducing highway-related fatalities and life-altering injuries. Data were provided to the stakeholders who discussed the challenges and identified strategies for addressing safety concerns.

Similar to the national trends, Illinois has experienced a significant reduction in traffic fatalities and the fatal crash rate has experienced the lowest number of fatalities since 1921. Since the year 2004, the number of statewide traffic fatalities has dropped by approximately 27 percent, while the number of statewide A-type injuries has dropped by approximately 34 percent. This shows an average reduction of approximately 3 percent per year for fatalities and 4 percent for A-type injuries from 2004 to 2013. The largest yearly reduction occurred in 2008 where the total number of fatalities and A-type injuries has decreased by 16 percent (Figures 1-2 and 1-5). For the purpose of this report, a fatality is defined as a death that resulted from a traffic crash, and an A-type injury (serious injury) is defined as any other injury which prevents the injured person from walking, driving, or continuing the normal activities they were capable of performing before the injury occurred.
Statewide fatalities have steadily declined on both state and local routes since 2004 (Figure 1-3). State routes have seen an average reduction of 4 percent per year while local routes had an average reduction of 2 percent per year. On statewide facilities the split between fatalities on state versus local routes has been roughly equal with approximately 55 percent occurring on state routes and 45 percent occurring on local routes from 2004 to 2013. The split also shows that starting with year 2011, opposed to prior years, state routes started having less fatality occurrences (47 percent) than local routes (53 percent) as shown in Figure 1-3.
A crash was defined as occurring on the local or state system by using the “Class of Trafficway” field found in the IDOT Crash Extract. The crash was identified as local if its Class of Trafficway was identified as “County and Local Roads Urban” or “City Streets Urban.” All other Class of Trafficway entries were defined as occurring on the state system.

Since the year 2004, the statewide average annual vehicle miles traveled has been approximately 106.2 billion. The statewide fatality crash rate has dropped by approximately 24 percent since 2004, which is an average reduction of 3 percent per year. The fatality crash rate has been below 1.00 since the year 2008 and has had an average of 0.90 since 2009. The largest reduction occurred in the year 2008 where the fatality crash rate decreased by 15 percent, as shown in Figure 1-4.

Statewide A-type injuries have seen an average reduction of 4 percent per year on state routes and 4 percent per year on local routes (Figure 1-5). Also, the total dropped from 18,644 to 12,300 or approximately 34 percent from 2004 to 2013. The split between A-type injuries on state and local routes has been roughly equal with approximately 51 percent occurring on state routes and 49 percent occurring on local routes. Figure 1-6 shows the split between state routes and local routes shows that starting with year 2011, opposed to prior years, less A-type injuries occurred on state routes (44%) than local routes(56%).

Note: Fatality rate is calculated based on HMVMT (hundred million vehicle miles traveled)
The statewide A-type injury crash rate has dropped by approximately 32 percent since the year 2004, which is an average reduction of 4 percent per year. The greatest decrease occurred in 2008 when the A-type injury crash rate declined by 14 percent (Figure 1-7).
Note: Fatality rate is calculated based on HMVMT (hundred million vehicle miles traveled).

The split between state route fatalities in urban versus rural areas is slightly skewed toward urban areas with approximately 57 percent of state route fatalities occurring in urban areas and 43 percent of state route fatalities occurring in rural areas (Figure 1-8). The same figure 1-8 shows how on state routes alone, the occurrence of fatalities has dropped 68 percent in urban areas from 2004 to 2013, a much faster reduction compared to rural areas reduction of 17 percent. The split between local route fatalities is nearly equal with approximately 51 percent occurring in urban areas and 49 percent occurring in rural areas (Figure 1-9).
A-type injuries were more likely to occur in urban areas for both state and local routes. The split between urban versus rural for state routes is approximately 72 percent for urban areas and 28 percent for rural areas. On state routes alone, the occurrence of A-type injuries has dropped 58 percent in urban areas, almost a double of rural areas reduction of 30 percent (Figure 1-10). Also, the total dropped from 8,452 to 5,382 or approximately 36 percent from 2004 to 2013. Similarly, the split for local routes is approximately 70 percent for urban areas and 30 percent for rural areas (Figure 1-11).
FIGURE 1-11
Statewide A-type Injuries, Local Routes, Urban vs. Rural

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>Urban</th>
<th>Rural</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>10192</td>
<td>7440</td>
<td>2752</td>
</tr>
<tr>
<td>2005</td>
<td>8491</td>
<td>6096</td>
<td>2395</td>
</tr>
<tr>
<td>2006</td>
<td>8351</td>
<td>5925</td>
<td>2426</td>
</tr>
<tr>
<td>2007</td>
<td>7222</td>
<td>4957</td>
<td>2265</td>
</tr>
<tr>
<td>2008</td>
<td>5793</td>
<td>3798</td>
<td>1995</td>
</tr>
<tr>
<td>2009</td>
<td>5855</td>
<td>3897</td>
<td>1958</td>
</tr>
<tr>
<td>2010</td>
<td>5486</td>
<td>3602</td>
<td>1884</td>
</tr>
<tr>
<td>2011</td>
<td>6644</td>
<td>4769</td>
<td>1875</td>
</tr>
<tr>
<td>2012</td>
<td>7059</td>
<td>4989</td>
<td>2070</td>
</tr>
<tr>
<td>2013</td>
<td>6918</td>
<td>5182</td>
<td>1736</td>
</tr>
</tbody>
</table>

XX%: Percent Change
1.3 Illinois County Safety Initiative

Illinois embarked on a county safety initiative to focus safety efforts on specific counties in Illinois with a significant number of fatalities and A-type injuries. Table 1-1 shows the ranking of the fatalities and A-type injuries by county based on 2009-2013 data. Champaign County is ranked 10th and is the focus of this Plan.

**TABLE 1-1**
County Ranking for Fatalities and A-type Injuries on All Roadway Networks, State and Local

*based on 2009 to 2013 data

<table>
<thead>
<tr>
<th>Number</th>
<th>Code</th>
<th>County</th>
<th>Fatalities (K)</th>
<th>A-injuries</th>
<th>K+A</th>
<th>Tier</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16</td>
<td>Cook</td>
<td>1254</td>
<td>20361</td>
<td>21615</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>22</td>
<td>DuPage</td>
<td>139</td>
<td>3632</td>
<td>3771</td>
<td>1</td>
</tr>
<tr>
<td>3</td>
<td>99</td>
<td>Will</td>
<td>215</td>
<td>2743</td>
<td>2958</td>
<td>1</td>
</tr>
<tr>
<td>4</td>
<td>45</td>
<td>Kane</td>
<td>127</td>
<td>2262</td>
<td>2389</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>49</td>
<td>Lake</td>
<td>137</td>
<td>2218</td>
<td>2355</td>
<td>1</td>
</tr>
<tr>
<td>6</td>
<td>60</td>
<td>Madison</td>
<td>144</td>
<td>1683</td>
<td>1827</td>
<td>1</td>
</tr>
<tr>
<td>7</td>
<td>82</td>
<td>St. Clair</td>
<td>161</td>
<td>1584</td>
<td>1745</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>84</td>
<td>Sangamon</td>
<td>107</td>
<td>1411</td>
<td>1518</td>
<td>1</td>
</tr>
<tr>
<td>9</td>
<td>101</td>
<td>Winnebago</td>
<td>143</td>
<td>1201</td>
<td>1344</td>
<td>1</td>
</tr>
<tr>
<td>10</td>
<td>10</td>
<td>Champaign</td>
<td>73</td>
<td>1192</td>
<td>1265</td>
<td>1</td>
</tr>
<tr>
<td>11</td>
<td>56</td>
<td>McHenry</td>
<td>85</td>
<td>1142</td>
<td>1227</td>
<td>1</td>
</tr>
<tr>
<td>12</td>
<td>72</td>
<td>Peoria</td>
<td>76</td>
<td>948</td>
<td>1024</td>
<td>1</td>
</tr>
<tr>
<td>13</td>
<td>50</td>
<td>LaSalle</td>
<td>73</td>
<td>950</td>
<td>1023</td>
<td>1</td>
</tr>
<tr>
<td>14</td>
<td>57</td>
<td>McLean</td>
<td>61</td>
<td>948</td>
<td>1009</td>
<td>1</td>
</tr>
<tr>
<td>15</td>
<td>90</td>
<td>Tazewell</td>
<td>42</td>
<td>888</td>
<td>930</td>
<td>1</td>
</tr>
<tr>
<td>16</td>
<td>46</td>
<td>Kankakee</td>
<td>66</td>
<td>817</td>
<td>883</td>
<td>2</td>
</tr>
<tr>
<td>17</td>
<td>58</td>
<td>Macon</td>
<td>43</td>
<td>770</td>
<td>813</td>
<td>2</td>
</tr>
<tr>
<td>18</td>
<td>100</td>
<td>Williamson</td>
<td>45</td>
<td>725</td>
<td>770</td>
<td>2</td>
</tr>
<tr>
<td>19</td>
<td>81</td>
<td>Rock Island</td>
<td>29</td>
<td>643</td>
<td>672</td>
<td>2</td>
</tr>
<tr>
<td>20</td>
<td>41</td>
<td>Jefferson</td>
<td>47</td>
<td>561</td>
<td>608</td>
<td>2</td>
</tr>
<tr>
<td>21</td>
<td>39</td>
<td>Jackson</td>
<td>31</td>
<td>571</td>
<td>602</td>
<td>2</td>
</tr>
<tr>
<td>22</td>
<td>92</td>
<td>Vermillion</td>
<td>51</td>
<td>546</td>
<td>597</td>
<td>2</td>
</tr>
<tr>
<td>23</td>
<td>19</td>
<td>DeKalb</td>
<td>38</td>
<td>551</td>
<td>589</td>
<td>2</td>
</tr>
<tr>
<td>24</td>
<td>28</td>
<td>Franklin</td>
<td>38</td>
<td>529</td>
<td>567</td>
<td>2</td>
</tr>
<tr>
<td>25</td>
<td>98</td>
<td>Whiteside</td>
<td>28</td>
<td>484</td>
<td>512</td>
<td>2</td>
</tr>
<tr>
<td>26</td>
<td>25</td>
<td>Effingham</td>
<td>43</td>
<td>423</td>
<td>466</td>
<td>2</td>
</tr>
<tr>
<td>27</td>
<td>47</td>
<td>Kendall</td>
<td>39</td>
<td>423</td>
<td>462</td>
<td>2</td>
</tr>
<tr>
<td>28</td>
<td>15</td>
<td>Coles</td>
<td>49</td>
<td>409</td>
<td>458</td>
<td>2</td>
</tr>
<tr>
<td>29</td>
<td>32</td>
<td>Grundy</td>
<td>37</td>
<td>366</td>
<td>403</td>
<td>2</td>
</tr>
<tr>
<td>30</td>
<td>4</td>
<td>Boone</td>
<td>36</td>
<td>336</td>
<td>372</td>
<td>2</td>
</tr>
<tr>
<td>31</td>
<td>89</td>
<td>Stephenson</td>
<td>23</td>
<td>347</td>
<td>370</td>
<td>2</td>
</tr>
<tr>
<td>32</td>
<td>68</td>
<td>Montgomery</td>
<td>28</td>
<td>328</td>
<td>356</td>
<td>2</td>
</tr>
<tr>
<td>33</td>
<td>38</td>
<td>Iroquois</td>
<td>51</td>
<td>303</td>
<td>354</td>
<td>2</td>
</tr>
<tr>
<td>34</td>
<td>61</td>
<td>Marion</td>
<td>24</td>
<td>318</td>
<td>342</td>
<td>2</td>
</tr>
<tr>
<td>35</td>
<td>71</td>
<td>Ogle</td>
<td>45</td>
<td>293</td>
<td>338</td>
<td>2</td>
</tr>
</tbody>
</table>
1.4 Champaign County

While there have been some declines, the number of traffic fatalities in Champaign County have been sporadic with an average reduction in fatalities of 3 percent per year as shown in Figure 1-12. Also, the total dropped from 24 to 18 or approximately 25 percent from 2004 to 2013, however, this Champaign County’s fatality reduction is still below the Illinois State’s reduction of 27 percent. Over the years the split between fatalities on state and local routes has been roughly equal with approximately 51 percent occurring on state routes and 49 percent occurring on local routes (Figure 1-13).

FIGURE 1-12
Champaign County Fatalities, 2004 to 2013

FIGURE 1-13
Champaign County Fatalities State Routes vs. Local Routes 2004 to 2013,
Since the year 2004, there has been a 40 percent reduction of A-type injuries in Champaign County from 292 to 174, which is an average decrease of 4 percent per year (Figure 1-14). A-type injuries on state routes have decreased at an average of 4 percent per year, and A-type injuries on local routes have decreased at an average of 5 percent per year. The split between A-type injuries over the years on state and local routes is slightly skewed toward local routes with approximately 43 percent occurring on state routes and 57 percent occurring on local routes, as shown in Figure 1-15. Generally, more A-type injuries have occurred on the local system.

FIGURE 1-14
Champaign County A-type Injuries, 2004 to 2013

FIGURE 1-15
Champaign County A-type Injuries, State Routes vs. Local Routes, 2004 to 2013
The fatality crash rate for Champaign County has also been somewhat erratic. The fatality crash rate has decreased an average of 2 percent per year since the year 2004, and the average fatality crash rate over the 9 years is only slightly below 1.00 (Figure 1-16). The A-type injury crash rate has mostly declined and has decreased an average of 4 percent per year (Figure 1-17). Fatality rates and A-injury rates are calculated based on HMVMT (hundred million vehicle mile travel) obtained from Illinois Travel Statistics reports for 2004-2013.

**FIGURE 1-16**
Champaign County Fatality Crash Rate, 2004 to 2013

**FIGURE 1-17**
Champaign County A-Type Injury Rate, 2004 to 2013
The national SHSP and the ISHSP were developed through coordination with a variety of stakeholders from public and private agencies. In Illinois, the processes for the ISHSP and this county-specific Plan involve working with stakeholders outside of the traditional safety planning process—including planning organizations, counties, cities, or tribal units of government—when developing countermeasures to address county-specific safety issues. Individuals representing the 4 E’s were invited to participate in the SHSP process. Those representing other modes of transportation—such as bicycle, pedestrian, commercial vehicles, and motorcycles—were also encouraged to participate.

Two County safety workshops were held on December 15, 2011, and March 7, 2012, and stakeholders were invited with the main purpose of having them help solicit feedback, and they were also educated, which helped them focus their efforts. A summary of each workshop is provided in Appendix A. Additionally, as a result of the second workshop, a list of countermeasures (also in Appendix A) was developed by stakeholders under the direction of IDOT Bureau of Safety Engineering.

An important part of the Plan process has been the identification of road safety partners already in place in the community. These partners provided substantial input to the identification and prioritization of road safety issues and solutions for this Plan. Key agencies involved in the development of this Plan include:

- Champaign County Highway Department
- Champaign County Regional Planning Commission
- City of Champaign
- City of Urbana
- FHWA
- IDOT
- Illinois State Police
- Champaign-Urbana Mass Transit District (CU-MTD)
- University of Illinois
- Village of Savoy
- City of Champaign Police Department
- City of Urbana Police Department
- Champaign County Sheriff’s Department
- University of Illinois Police Department
- Provena
- Champaign County Justice

This SHSP for Champaign County was prepared as part of the Illinois statewide highway safety planning process. Specifically, this Plan includes:

- A description of the Safety Emphasis Areas (Section 2)
- Data analysis of each of the emphasis areas (Section 2)
- Identification of a short list of high priority, low-cost Safety Strategies (Section 2)
- A location-specific analysis of Emphasis Areas (Section 3)

This Plan is meant to serve as a guiding document to identify emphasis areas and high payoff strategies to reduce fatalities and serious injuries in Champaign County. Goals and measurable objectives should be developed to gauge progress and the effectiveness of current countermeasure strategies. Before and After Studies can be performed as more historical safety data become available to identify proven countermeasures that address the key emphasis areas. These studies, like the Monticello Road Highway Safety Improvement Project (Appendix B), should be added to this Plan for future reference. This Plan should be updated regularly as more countermeasures are implemented and safety data improve, so that analysis techniques can be modified and refined toward making more informed decisions in the future.

1.5 Goals

The Champaign County Regional Planning Commission (CCRPC) has been actively setting goals and objectives to improve roadway safety in Champaign-Urbana while partnering with cities and villages, law enforcement, CU-MTD, the Champaign-Urbana Safe Routes to School (C-U SRTS), and developers.
The specific objectives set forth by the 2035 Champaign-Urbana Long Range Transportation Plan (LRTP) are:

1. Reduce the total number of crashes in Champaign-Urbana by 5 percent by 2014.
2. Reduce the total number of fatalities and A-type injuries in Champaign-Urbana by 25 percent between 2009 and 2014.
3. Reduce the total number of crashes involving bicyclists and pedestrians in Champaign-Urbana by 15 percent by 2014.

Some of the current strategies being implemented to achieve these goals include a biyearly Selected Crash Intersection Locations report to identify high risk intersections, the C-U SRTS program to educate the public on pedestrian and bicycle safety issues, the Operation Cool program to encourage students to wear seatbelts and drive sober, and utilizing Complete Streets concepts to provide safe facilities for all modes of transportation. The CCRPC has also recently performed a Yellow and All-Red Signal Clearance Interval study to reduce signal change interval related crashes by identifying improperly timed signalized intersections and updating the current signal timing policy to the Institute of Transportation Engineers kinetic model.

IDOT BSE has provided historical fatality, serious (A-type) injury, fatality rate and serious injury rate data to be used for additional goal setting for Champaign County. A goal setting spreadsheet has been developed with the provided data shown in Table 1-2.
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of fatalities (Total)</td>
<td>24</td>
<td>18</td>
<td>16</td>
<td>19</td>
<td>23</td>
<td>12</td>
<td>19</td>
<td>12</td>
<td>12</td>
<td>18</td>
</tr>
<tr>
<td>Number of fatalities (State Routes)</td>
<td>9</td>
<td>14</td>
<td>8</td>
<td>12</td>
<td>12</td>
<td>9</td>
<td>8</td>
<td>4</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Number of fatalities (Local Routes)</td>
<td>15</td>
<td>4</td>
<td>8</td>
<td>7</td>
<td>11</td>
<td>3</td>
<td>11</td>
<td>8</td>
<td>6</td>
<td>12</td>
</tr>
<tr>
<td>Number of serious injuries (Total)</td>
<td>292</td>
<td>277</td>
<td>269</td>
<td>264</td>
<td>260</td>
<td>302</td>
<td>241</td>
<td>225</td>
<td>250</td>
<td>174</td>
</tr>
<tr>
<td>Number of serious injuries (State Routes)</td>
<td>117</td>
<td>126</td>
<td>95</td>
<td>106</td>
<td>125</td>
<td>137</td>
<td>141</td>
<td>87</td>
<td>103</td>
<td>72</td>
</tr>
<tr>
<td>Number of serious injuries (Local Routes)</td>
<td>175</td>
<td>151</td>
<td>174</td>
<td>158</td>
<td>135</td>
<td>165</td>
<td>100</td>
<td>138</td>
<td>147</td>
<td>102</td>
</tr>
<tr>
<td>Fatality rate (per HMVMT)</td>
<td>1.3</td>
<td>1.0</td>
<td>0.8</td>
<td>1.0</td>
<td>1.3</td>
<td>0.7</td>
<td>1.0</td>
<td>0.7</td>
<td>0.7</td>
<td>1.0</td>
</tr>
<tr>
<td>Serious injury rate (per HMVMT)</td>
<td>15.7</td>
<td>14.7</td>
<td>14.1</td>
<td>14.5</td>
<td>14.7</td>
<td>16.6</td>
<td>13.2</td>
<td>12.7</td>
<td>14.1</td>
<td>9.6</td>
</tr>
</tbody>
</table>

| i. 5 Yr Rolling Avg Number of fatalities | Cannot calculate 5-year rolling averages for these years. |
| ii. 5 Yr Rolling Avg Number of serious injuries (A only) | 20 | 18 | 18 | 17 | 16 | 15 |
| iii. 5 Yr Rolling Avg Fatality rate (per HMVMT) | 272 | 274 | 267 | 258 | 256 | 238 |
| iv. 5 Yr Rolling Avg Serious injury rate (per HMVMT) | 14.7 | 14.9 | 14.6 | 14.3 | 14.2 | 13.2 |

Source: IDOT Crash Extracts, Total Killed and A-Injuries; Illinois travel statistics

*States should use a 5-year rolling average to present the performance measures

**Decreasing rate:**

- **3.00%**

<table>
<thead>
<tr>
<th>Average Rate</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013 (set rate)</th>
</tr>
</thead>
<tbody>
<tr>
<td>i</td>
<td>-5.32%</td>
<td>-12.00%</td>
<td>1.14%</td>
<td>-4.49%</td>
<td>-8.24%</td>
<td>-6.41%</td>
</tr>
<tr>
<td>ii</td>
<td>-1.85%</td>
<td>0.73%</td>
<td>-2.62%</td>
<td>-3.29%</td>
<td>-1.08%</td>
<td>-6.73%</td>
</tr>
<tr>
<td>iii</td>
<td>-4.78%</td>
<td>-11.70%</td>
<td>1.86%</td>
<td>-3.34%</td>
<td>-7.73%</td>
<td>-6.91%</td>
</tr>
<tr>
<td>iv</td>
<td>-1.25%</td>
<td>1.16%</td>
<td>-1.95%</td>
<td>-1.95%</td>
<td>-0.52%</td>
<td>-7.06%</td>
</tr>
</tbody>
</table>

Avg. | -3.30% |
MAP-21 established new requirements for performance management to ensure the most efficient investment of Federal transportation funds. It requires state departments of transportation to establish targets for key safety performance measures. There are four national performance measures for the Highway Safety Program (23 CFR 490.207) that include the number of fatalities, A-type injuries, fatality rate, and A-type injury rate. Each performance measure should be calculated using a five year historic rolling average to establish targets. The targets will be monitored to ensure substantial progress is being met in these areas.

The legislation also identifies two special rules for older drivers and pedestrians and high risk rural roads.

23 U.S.C. 148(g)(2) states: —
if traffic fatalities and serious injuries per capita for drivers and pedestrians over the age of 65 in a State increases during the most recent 2-year period for which data are available, that State shall be required to include, in the subsequent Strategic Highway Safety Plan [(SHSP)] of the State, strategies to address the increases in those rates, taking into account the recommendations included in the publication of the Federal Highway Administration entitled 'Highway Design Handbook for Older Drivers and Pedestrians' (FHWA-RD-01-103), and dated May 2001, or as subsequently revised and updated.

FIGURE 1-19
Champaign County Older Driver/Pedestrian Fatalities
SECTION 1 BACKGROUND

FIGURE 1-20
Champaign County Older Driver/Pedestrian Fatality Rate (per capita)

FIGURE 1-21
Champaign County Older Driver/Pedestrian Serious Injuries
FIGURE 1-22
Champaign County Older Driver/Pedestrian Serious Injuries Rate (per capita)
### TABLE 1-3
Champaign MAP-21 Section 148: Older Driver/Pedestrian

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of People 65 Years of Age and Older (Per 1,000 Total Population)¹</td>
<td>97</td>
<td>97</td>
<td>97</td>
<td>97</td>
<td>97</td>
<td>99</td>
<td>99</td>
<td>100</td>
<td>102</td>
</tr>
<tr>
<td>Older Driver and Older Pedestrian Fatalities (65+)²</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Older Driver and Older Pedestrian Serious Injuries (65+)²</td>
<td>10</td>
<td>13</td>
<td>5</td>
<td>20</td>
<td>19</td>
<td>15</td>
<td>26</td>
<td>20</td>
<td>15</td>
</tr>
<tr>
<td>Fatality Rate (per capita)³</td>
<td>0.02</td>
<td>0</td>
<td>0.02</td>
<td>0.01</td>
<td>0.02</td>
<td>0.03</td>
<td>0.02</td>
<td>0.01</td>
<td>0.02</td>
</tr>
<tr>
<td>Serious Injury Rate (per capita)³</td>
<td>0.1</td>
<td>0.13</td>
<td>0.05</td>
<td>0.21</td>
<td>0.19</td>
<td>0.15</td>
<td>0.26</td>
<td>0.2</td>
<td>0.15</td>
</tr>
<tr>
<td>Rolling Average Older Driver and Older Pedestrian Fatalities (65+)³</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rolling Average Older Driver and Older Pedestrian Serious Injuries (65+)³</td>
<td>13</td>
<td>14</td>
<td>17</td>
<td>20</td>
<td>19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rolling Average Fatality Rate (per capita)³</td>
<td>0.01</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td>0.02</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rolling Average Serious Injury Rate (per capita)³</td>
<td>0.14</td>
<td>0.15</td>
<td>0.17</td>
<td>0.2</td>
<td>0.19</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

¹ Source: U.S. Census ["http://www.census.gov/"]
² Source: IDOT Crash Extracts
³ Based on MAP-21 Section148 ["http://www.fhwa.dot.gov/map21/guidance/guideolder.cfm"]
Section 2 Prioritizing Emphasis Areas

Emphasis areas were chosen based on the greatest frequency of fatalities and A-type injuries and those showing an overrepresentation when compared to the statewide system. The Champaign County Emphasis Area Table (Table 2-1) shows the frequency and percentage of fatalities and A-type injuries per emphasis area for Champaign County and the Illinois statewide system. The unrestrained, pedestrian, and pedalcyclist categories only include fatalities and A-type injuries fitting these descriptions, while the remaining categories include all fatalities and A-type injuries inflicted by the category’s description. The emphasis area categories are not mutually exclusive, and thus fatalities and A-type injuries may be included in multiple categories. The data definitions for the emphasis areas can be found in Appendix C. In total, 12 emphasis areas were selected: Younger Driver, Older Driver, Speeding and Aggressive Driving, Impaired Driver, Unrestrained Occupants, Pedestrian, Pedalcyclist, Motorcycle, Heavy Vehicle, Roadway Departure, Intersection Related and Distracted/Fatigued/Drowsy Driver. The emphasis areas for Train and Work Zone are not selected for further analysis because the crash occurrences for train and work zone are relatively low for each year and the county is performing well in work zones compared to state averages.

The majority of the state urban severe crashes were classified as road departure for non-intersection locations and turning at signalized intersections. The most frequent collision type on the state rural system was road departure and rear-end/sideswipe same direction for non-intersection locations. The most common collision type on the municipality system was road departure for non-intersection locations and angle for unsignalized intersections. The majority of severe crashes on both county and township routes occurred in rural areas where the most frequent collision types were road departure for non-intersection locations and angle for unsignalized intersections.

Throughout the rest of this section, each emphasis area’s subsection ends with a list of strategies. More strategies are shown in Appendix D. Also, Appendix E expands on the details of some countermeasures, showing their effectiveness and impact.

2.1 Data Trees

Data Trees are used to identify the jurisdiction, location, and various other factors pertaining to crashes to support and guide local safety planning efforts. The data tree shows a 5-year frequency and percentage for all crash severity types and severe crash types only. A 5-year period is used to give an overall understanding of the crashes, rather than looking at random crashes for each year. It is important to ensure that the potential locations where severe crashes have occurred are considered for safety improvements, to reduce fatal or severe crashes in the near future. Data trees are highly beneficial in determining which jurisdiction of roadways should be the primary concern focus area. Appendix F explains how to read Data Trees in more detail.

The Champaign County Crash Data Tree (Figures 2-1 through 2-6) indicates that 37 percent (366 out of 981) of severe crashes (including fatal and A-type injury crashes) occurred on state routes in Champaign County, while 57 percent (560 out of 981) occurred on local systems. On state systems, 70% (80 out of 114) of intersection severe crashes on urban principle arterials occurred at signalized intersections as shown in Figure 2-1. On local systems, 54% (78 out of 144) of intersection severe crashes on urban minor arterials occurred at unsignalized intersections as shown in Figure 2-6.
<table>
<thead>
<tr>
<th>Emphasis Areas (14 areas)</th>
<th>Illinois Statewide</th>
<th>Champaign County</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>State Routes</td>
<td>Local Routes</td>
</tr>
<tr>
<td></td>
<td>Percent</td>
<td>Frequency</td>
</tr>
<tr>
<td>Total Fatalities and A-Injuries</td>
<td>20.2%</td>
<td>116</td>
</tr>
<tr>
<td>Younger Driver (16-20)</td>
<td>19.2%</td>
<td>6271</td>
</tr>
<tr>
<td>Older Driver (65+)</td>
<td>17.4%</td>
<td>5688</td>
</tr>
<tr>
<td>Unsafe Driver Behavior</td>
<td>46.1%</td>
<td>15101</td>
</tr>
<tr>
<td>Speeding and Aggressive Driver</td>
<td>22.1%</td>
<td>7238</td>
</tr>
<tr>
<td>Impaired Driver</td>
<td>16.0%</td>
<td>5243</td>
</tr>
<tr>
<td>Unrestrained Occupants</td>
<td>20.5%</td>
<td>6712</td>
</tr>
<tr>
<td>Pedestrian</td>
<td>5.6%</td>
<td>1832</td>
</tr>
<tr>
<td>Pedalcyclist</td>
<td>1.8%</td>
<td>573</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>9.0%</td>
<td>2945</td>
</tr>
<tr>
<td>Heavy Vehicle</td>
<td>10.5%</td>
<td>3450</td>
</tr>
<tr>
<td>Train</td>
<td>0.0%</td>
<td>10</td>
</tr>
<tr>
<td>Road Departure</td>
<td>31.4%</td>
<td>10267</td>
</tr>
<tr>
<td>Intersection Related</td>
<td>42.6%</td>
<td>13947</td>
</tr>
<tr>
<td>Work Zone</td>
<td>2.6%</td>
<td>862</td>
</tr>
<tr>
<td>Distracted/Fatigued/Drowsy Driver</td>
<td>5.4%</td>
<td>1766</td>
</tr>
</tbody>
</table>

DISCLAIMER: Results of the analyses shown in this table are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.
Figure 2-1
Champaign County, Illinois
2009 to 2013 Crash Data Overview
State System - Other Principal Arterial & Major Collector Roadways

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Crashes</td>
<td>1,754</td>
<td>1,187</td>
<td>2,941</td>
<td>850</td>
<td>1,650</td>
<td>110</td>
</tr>
<tr>
<td>%</td>
<td>35%</td>
<td>64%</td>
<td>100%</td>
<td>35%</td>
<td>65%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Arterial</td>
<td>2,700</td>
<td>81</td>
<td>2,781</td>
<td>155</td>
<td>114</td>
<td>51</td>
</tr>
<tr>
<td>%</td>
<td>50%</td>
<td>2%</td>
<td>52%</td>
<td>12%</td>
<td>10%</td>
<td>25%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arterial</td>
<td>1,187</td>
<td>77</td>
<td>1,264</td>
<td>110</td>
<td>27</td>
<td>13</td>
</tr>
<tr>
<td>%</td>
<td>71%</td>
<td>6%</td>
<td>77%</td>
<td>100%</td>
<td>25%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway Departure</td>
<td>11,176</td>
<td>9,680</td>
<td>20,856</td>
<td>5,520</td>
<td>14,336</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>54%</td>
<td>46%</td>
<td>100%</td>
<td>27%</td>
<td>73%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collision Type Overview</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All Crashes</td>
<td>12</td>
<td>0</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>11%</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other: Other Non-Collision/Other Object/Parked Car/Train</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>9%</td>
<td>0%</td>
<td>100%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>花卉</td>
<td>231</td>
<td>2,853</td>
<td>3,084</td>
<td>850</td>
<td>1,650</td>
<td>110</td>
</tr>
<tr>
<td>%</td>
<td>45%</td>
<td>72%</td>
<td>62%</td>
<td>35%</td>
<td>65%</td>
<td>100%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>HO</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>3%</td>
<td>0%</td>
<td>3%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Other</td>
<td>25</td>
<td>2</td>
<td>27</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>5%</td>
<td>2%</td>
<td>5%</td>
<td>0%</td>
<td>2%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>PDC: Pedalcyclist</td>
<td>5</td>
<td>6</td>
<td>11</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>0%</td>
<td>2%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSD: Sideswipe Same Direction</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUR: Turning</td>
<td>5</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signalized</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>1%</td>
<td>0%</td>
<td>1%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Arterial</td>
<td>25</td>
<td>0</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>5%</td>
<td>0%</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedalcyclist</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSD: Sideswipe Same Direction</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>9%</td>
<td>0%</td>
<td>9%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUR: Turning</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>7%</td>
<td>0%</td>
<td>7%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway Departure</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>2%</td>
<td>0%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway Departure</td>
<td>10</td>
<td>0</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>2%</td>
<td>0%</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Arterial</td>
<td>25</td>
<td>0</td>
<td>25</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>5%</td>
<td>0%</td>
<td>5%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pedalcyclist</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>SSD: Sideswipe Same Direction</td>
<td>3</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>9%</td>
<td>0%</td>
<td>9%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Category</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>TUR: Turning</td>
<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>%</td>
<td>7%</td>
<td>0%</td>
<td>7%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Figure 2-2
Champaign County, Illinois
2009 to 2013 Crash Data Overview
State System - Interstate & Freeway and Expressway Roadways
Urban and Rural designations are defined by the Class of Trafficway code in the Illinois Roadway Inventory System.

State System/Local System/Unknown System is defined by the Class of Trafficway code in the Illinois Roadway Inventory System.

Results of the analyses are based on data that was received from the Illinois Department of Transportation. Crash data for years 2009 to 2012 was received from IDOT on November 26, 2013, and crash data for 2013 was received from IDOT on December 4, 2014.

The data was used "as is" for analysis purposes and should be interpreted accordingly.

Reference: IDOT Crash Extracts 2009 - 2013 Crash Data

Source: IDOT Crash Extracts 2009 - 2013 Crash Data

"All crashes" include fatal, all injury and property damage only crashes.

"Severe crashes" include fatal and incapacitating injury crashes (K + A).

### Example

**All Crashes**: 16,015

**Severe Crashes**: 1,736

<table>
<thead>
<tr>
<th>Roadway Departure</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signalized</td>
<td>916</td>
<td>233</td>
<td>1,149</td>
</tr>
<tr>
<td>Unsignalized</td>
<td>842</td>
<td>270</td>
<td>1,112</td>
</tr>
<tr>
<td>Other/Unknown</td>
<td>21</td>
<td>42</td>
<td>63</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Traffic Control</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal</td>
<td>927</td>
<td>233</td>
<td>1,160</td>
</tr>
<tr>
<td>Other/Unknown</td>
<td>21</td>
<td>42</td>
<td>63</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Control</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signal</td>
<td>927</td>
<td>233</td>
<td>1,160</td>
</tr>
<tr>
<td>Other</td>
<td>21</td>
<td>42</td>
<td>63</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Urban System</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Collector</td>
<td>55%</td>
<td>4%</td>
<td>59%</td>
</tr>
<tr>
<td>Principal Arterial</td>
<td>44%</td>
<td>16%</td>
<td>60%</td>
</tr>
<tr>
<td>Other/Unknown</td>
<td>11%</td>
<td>4%</td>
<td>15%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Class of Trafficway</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type A</td>
<td>32%</td>
<td>25</td>
<td>57%</td>
</tr>
<tr>
<td>Type B</td>
<td>44%</td>
<td>16%</td>
<td>60%</td>
</tr>
<tr>
<td>Type C</td>
<td>19%</td>
<td>4%</td>
<td>23%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Urban Rural</th>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Major Collector</td>
<td>55%</td>
<td>4%</td>
<td>59%</td>
</tr>
<tr>
<td>Principal Arterial</td>
<td>44%</td>
<td>16%</td>
<td>60%</td>
</tr>
<tr>
<td>Other/Unknown</td>
<td>11%</td>
<td>4%</td>
<td>15%</td>
</tr>
<tr>
<td>Non-Intersection</td>
<td>Intersection</td>
<td>Total</td>
<td>2009</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------</td>
<td>-------</td>
<td>------</td>
</tr>
<tr>
<td>Non-Intersection</td>
<td>230</td>
<td>59%</td>
<td>43</td>
</tr>
<tr>
<td>Intersection</td>
<td>147</td>
<td>37%</td>
<td>28</td>
</tr>
<tr>
<td>Non-Intersection</td>
<td>13</td>
<td>3%</td>
<td>3</td>
</tr>
<tr>
<td>Intersection</td>
<td>14</td>
<td>2%</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>31</td>
<td>10%</td>
<td>6</td>
<td>3%</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Urban</td>
<td>179</td>
<td>60%</td>
<td>36</td>
<td>13%</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Unknown</td>
<td>94</td>
<td>30%</td>
<td>16</td>
<td>6%</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Non-Intersection</th>
<th>Intersection</th>
<th>Total</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Intersection</td>
<td>29</td>
<td>26%</td>
<td>21</td>
<td>17%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Intersection</td>
<td>21</td>
<td>17%</td>
<td>14</td>
<td>12%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Non-Intersection</td>
<td>10</td>
<td>9%</td>
<td>7</td>
<td>5%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Intersection</td>
<td>3</td>
<td>3%</td>
<td>2</td>
<td>2%</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Accident Type</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>ANM</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>AMM</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>AMR</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>FO</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>FO</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>HO</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>HO</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>PED</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>PED</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>RE</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>RE</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>SSD</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>SSD</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>TUR</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>TUR</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Collision Type</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>ANM</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>AMM</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>AMR</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>FO</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>FO</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>HO</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>HO</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>PED</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>PED</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>RE</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>RE</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>SSD</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>SSD</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>TUR</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
<tr>
<td>TUR</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
</tr>
</tbody>
</table>

| Query definitions for 'Roadway Departure' and 'On Curve': | | | | | | | |
| Roads Departure: FO/OVT/HO/SOD | SSD | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| On Curve: Road Departure Crashes on Level Curve/Curve on Urban and Rural designations are defined by the Class of Trafficway code in the Illinois Roadway Inventory System. Intersection crashes are defined as crashes coded as intersection related by the reporting police officer.  Traffic control devices are considered Signalled if the code is equal to 1.  Traffic Signal - Non-Signalled equals a signal in "1 - Uncontrolled", "2 - Stop Sign/Flasher" or "3 - Yield". Other/Limited traffic control codes are the remaining inputs. Results of the analyses are based on data that was received from the Illinois Department of Transportation. Crash data for the years 2009 to 2012 was received from IDOT on November 26, 2013, and crash data for 2013 was received from IDOT on December 4, 2014. The data was used "as is" for analysis purposes and should be interpreted accordingly. Draft - March 2015

**Figure 2-** Champaign County, Illinois 2009 to 2013 Crash Data Overview
Local System - Other Principal Arterial & Major Collector Roadways

- **Source:** IDOT Crash Extracts 2009 - 2013 Crash Data
- **All crashes** include fatal, all injury and property damage only crashes
- **Severe crashes** include fatal and incapacitating injury crashes only (K + A)
### Figure 2-5

**Champaign County, Illinois**

**2009 to 2013 Crash Data Overview**

Local System - Local Road or Street & Minor Collector Roadways

<table>
<thead>
<tr>
<th>Category</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Crashes</td>
<td>11,497</td>
<td>1,486</td>
<td>34</td>
</tr>
<tr>
<td>Severe Crashes</td>
<td>16,015</td>
<td>546</td>
<td>880</td>
</tr>
<tr>
<td>All Crashes</td>
<td>1,864</td>
<td>31%</td>
<td>43%</td>
</tr>
<tr>
<td>Severe Crashes</td>
<td>3,619</td>
<td>29%</td>
<td>38%</td>
</tr>
</tbody>
</table>

2009 to 2013 Crash Data Overview

- 'All crashes' include fatal, all injury and property damage only crashes
- 'Severe crashes' include fatal and incapacitating injury crashes only (K + A)

**Local System - Local Road or Street & Minor Collector Roadways**

<table>
<thead>
<tr>
<th>Category</th>
<th>State System</th>
<th>Local System</th>
<th>Unknown System</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Crashes</td>
<td>11,497</td>
<td>1,486</td>
<td>34</td>
</tr>
<tr>
<td>Severe Crashes</td>
<td>16,015</td>
<td>546</td>
<td>880</td>
</tr>
<tr>
<td>All Crashes</td>
<td>1,864</td>
<td>31%</td>
<td>43%</td>
</tr>
<tr>
<td>Severe Crashes</td>
<td>3,619</td>
<td>29%</td>
<td>38%</td>
</tr>
</tbody>
</table>

### Data Source

IDOT Crash Extracts 2009 - 2013 Crash Data

- 'All crashes' include fatal, all injury and property damage only crashes
- 'Severe crashes' include fatal and incapacitating injury crashes only (K + A)

The data was used for analysis purposes and should be interpreted accordingly.
### Champaign County, Illinois

#### 2009 to 2013 Crash Data Overview

**Local System - Minor Arterial Roadways**

#### Crash Type

<table>
<thead>
<tr>
<th>Crash Type</th>
<th>2009-13 Crashes</th>
<th>5-Year Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Crashes</td>
<td>16,015</td>
<td>16,015</td>
</tr>
</tbody>
</table>

#### Roadway Departure

<table>
<thead>
<tr>
<th>Roadway Departure</th>
<th>Percent Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Intersection</td>
<td>96%</td>
</tr>
<tr>
<td>Intersection</td>
<td>4%</td>
</tr>
</tbody>
</table>

#### On Curve

<table>
<thead>
<tr>
<th>On Curve</th>
<th>Percent Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Intersection</td>
<td>98%</td>
</tr>
<tr>
<td>Intersection</td>
<td>2%</td>
</tr>
</tbody>
</table>

#### Traffic Control

<table>
<thead>
<tr>
<th>Traffic Control</th>
<th>Percent Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Signalized</td>
<td>44%</td>
</tr>
<tr>
<td>Unsignalized</td>
<td>56%</td>
</tr>
<tr>
<td>Other/Unknown</td>
<td>0%</td>
</tr>
</tbody>
</table>

#### Severity

<table>
<thead>
<tr>
<th>Severity</th>
<th>Percent Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Severe</td>
<td>1%</td>
</tr>
<tr>
<td>Non-Severe</td>
<td>99%</td>
</tr>
</tbody>
</table>

#### Urban Rural

<table>
<thead>
<tr>
<th>Urban Rural</th>
<th>Percent Distribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>96%</td>
</tr>
<tr>
<td>Rural</td>
<td>4%</td>
</tr>
</tbody>
</table>

#### Example

- **All Crashes**: 16,015
- **5-Year Crashes**: 16,015

---

**Collisions Abbreviations**

- **ANG**: Angle
- **ANM**: Animal
- **FO**: Fixed Object
- **HO**: Head-On
- **OVT**: Overturned
- **PED**: Pedestrian
- **PDC**: Pedalcyclist
- **RE**: Rear End
- **SOD**: Sideswipe Opposite Direction
- **SSD**: Sideswipe Same Direction
- **T**: Turning

---

**Crash Definitions**

- **Roadway Departure**: FO/OVT/HO/SOD
- **On Curve**: Road Departure Crashes on Level Curve/Curve on Grade/Curve on Hillcrest

---

**System Classification**

- **Local System**: Minor Arterial Roadways
- **State System**: Unknown System
- **Urban System**: State System

---

**Data Sources**

- **Data** from the Illinois Department of Transportation
- **Crasnt Data** for 2009 to 2013 was received from IDOT on November 26, 2013, and crash data for 2013 was received from IDOT on December 4, 2014.

---

**Additional Notes**

- **Data was used as is** for analysis purposes and should be interpreted accordingly.
2.2 Age Related

Age related crashes consist of both younger drivers age 16 to 20 and older drivers age 65 and older. These categories represent a subset of the driving population that deserves special attention. Younger drivers are more likely to be involved in a motor vehicle crash than any other age group. Young drivers are less experienced with complex driving tasks and are more likely to engage in risky driving behaviors. Older drivers frequently experience diminished reflexes, flexibility, visual acuity, memory, and the ability to focus due to normal aging or medical problems. Older drivers are also more vulnerable to injury once in a crash.

Champaign County is unique because the younger driver population increases every August when the fall semester begins at the University of Illinois. New students are often unfamiliar with the surrounding roadways and are more likely to make a driving error when required to make an instantaneous decision.
2.2.1 Younger Driver Related

From 2009 to 2013, there were a total of 275 younger driver related fatalities and A-type injuries in Champaign County, as shown in Figure 2-9. For this Plan, younger drivers are defined as 16 to 20 years of age. A total of 10 fatalities and 149 A-type injuries occurred on the local system, while 3 fatalities and 113 A-type injuries occurred on the state system. The Champaign County younger driver fatalities chart does not indicate a significant trend, but Figure 2-10 showing A-type injuries does indicate a decrease from 77 to 40 over the 5-year span. The state system had an average A-type injury reduction of 20 percent per year; whereas, the local system does not show a significant decrease although it increased since 2011 after a drop in 2010. The Champaign County Heat Maps (Section 3) can be used to further identify younger driver improvement areas.

---

**FIGURE 2-9**

Younger Driver (16 to 20) Fatalities

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>State</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2010</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2011</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2012</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2013</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

---

**TABLE 2-9**

Younger Driver (16 to 20) Fatalities

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>State</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2010</td>
<td>4</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2011</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2012</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>2013</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
</tbody>
</table>

---

DISCLAIMER: Results of the analyses shown in this table are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.
Potential Countermeasures to reduce younger driver fatal and A-type injury crashes are listed as follows:

- Publicize and conduct high visibility enforcement of Graduate License Program restrictions, cellular and texting laws, underage drinking and driving, and seatbelt laws.

- Engage parents through outreach programs designed to educate parents about teen driving risks and driving tips for their teens, facilitate parental supervision and management of young drivers and encourage selection of safer vehicles, with safety as a priority over convenience.

Current Accomplishments:

- Operation Cool: A program that encourages students to wear seatbelts and drive sober.
2.2.2 Older Driver Related

From 2009 to 2013, there were a total of 236 older driver related fatalities and A-type injuries in Champaign County, as shown in Figure 2-11. For this Plan, older drivers are those aged 65 years or older. A total of 6 fatalities and 118 A-type injuries occurred on the local system, while 7 fatalities and 105 A-type injuries took place on the state system. The Champaign older driver fatalities chart does not indicate a significant trend but it increased 3 percent annually over the 5-year period. The A-type injuries chart (Figure 2-12) does not indicate any significant trend. The Champaign County Heat Maps (Section 3) can be used to further identify older driver related improvement areas.

**FIGURE 2-11**
Older Driver (65 or older) Fatalities

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>State</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2011</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2012</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2013</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
</tbody>
</table>

**FIGURE 2-12**
Older Driver (65 or Older) A-type Injuries

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>State</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>56</td>
<td>34</td>
<td>22</td>
</tr>
<tr>
<td>2010</td>
<td>37</td>
<td>19</td>
<td>18</td>
</tr>
<tr>
<td>2011</td>
<td>40</td>
<td>13</td>
<td>27</td>
</tr>
<tr>
<td>2012</td>
<td>53</td>
<td>21</td>
<td>32</td>
</tr>
<tr>
<td>2013</td>
<td>37</td>
<td>18</td>
<td>19</td>
</tr>
</tbody>
</table>
Potential countermeasures to reduce older driver related fatal and A-type injury crashes are listed as follows:

- Establish a broad-based coalition to plan to address older adults’ transportation needs
- Provide advance warning signs
- Provide advance-guidance and street name signs
- Provide all-red clearance intervals at signalized intersections
- Provide more protected left turn signal phases at high-volume intersections
- Provide offset left turn lanes at intersections
- Improve lighting at intersections, horizontal curves, and railroad grade crossings
- Improve roadway delineation
- Replace painted channelization with raised channelization
- Reduce intersection skew angle
- Improve traffic control at work zones
- Strengthen the role of medical advisory boards
- Update procedures for assessing medical fitness to drive
- Encourage external reporting of at-risk drivers to licensing authorities
- Provide remedial assistance to help functionally impaired older drivers lower their crash risk
- Establish resource centers within communities to promote safe mobility choices
- Provide educational and training opportunities for the general older driver population
- Increase seatbelt use by older drivers and passengers
- Re-evaluate driving skill
2.3 Unsafe Behavior

Unsafe behavior includes driving while impaired, speeding and aggressive driving, failure to wear safety restraints or wearing safety restraints improperly, and distracted driving.

Impaired driving is a common contributor to motor vehicle crashes and a serious threat to all roadway users. An impaired driver will often experience slower reaction time, impaired judgment and perception, and diminished reasoning ability and memory, which make the driver more likely to cause a motor vehicle crash. Speeding and aggressive driving are serious roadway problems where a driver operates a motor vehicle in a selfish, pushy, or impatient manner. Aggressive drivers often commit a combination of unsafe moving traffic offenses that endanger themselves, their occupants, and other roadway users. Motor vehicle safety restraints are known to save lives and also have significant economic benefits. A severe injury caused by a failure to wear a safety restraint is a tragedy that easily could have been avoided. Distracted driving is a type of driver behavior that leads to a majority of personnel injury and fatal crashes, according to state police data. As cell phones are more widely used, people become distracted while driving and sending text messages and making phone calls.

Strict enforcement of the four types of unsafe driving behaviors is one of the best options in reducing crashes. More importantly, before strict enforcement is put into practice, the public should be made aware of the consequences of these driving behaviors. Participating agencies are encouraged to conduct various campaigns to promote public awareness with media releases.

Analyses in section 2.3 are performed for the first three behaviors, including speeding, aggressive driver, impaired driver, and unrestrained occupants. Distracted/fatigued/drowsy behavior is underreported in Illinois and the most recent crash data is not comparable with the first three behaviors. Additional information for distracted/fatigue/drowsy drivers can be found in Section 2.8.

Figure 2-13 is a Venn diagram showing all relations between the unsafe behavior subsets. This Venn diagram shows that 133 out of the 562 total unsafe behavior fatalities and A-type injuries fell in multiple unsafe behavior categories.
2.3.1 Speeding/Aggressive Driving

For this Plan, speeding/aggressive driving is identified where the primary cause of the crash involves speeds exceeding the authorized speed limit, exceeding safe speed for conditions, failing to reduce speed to avoid crash, or operating a vehicle in an erratic, reckless, careless, negligent, or aggressive manner. From 2009 to 2013, there were a total of 245 fatalities and A-type injuries related to speeding/aggressive driving in Champaign County, as shown in Figures 2-14 and 2-15. A total of 7 fatalities and 117 serious injuries occurred on the local system, and only 6 fatalities and 115 A-type injuries occurred on the state system.

FIGURE 2-14
Speeding/Aggressive Driver Fatalities

FIGURE 2-15
Speeding/Aggressive Driver A-type Injuries
Speeding/aggressive driving behavior is difficult to identify because it does not always result in a crash; therefore this information may under represent the speeding/aggressive driving issues in Champaign County. The Champaign aggressive/speeding driver fatalities chart does not indicate a significant trend, but the serious injuries chart does indicate a decrease from 2009 to 2013, with an overall change of 70 to 37 over the 5-year span.

Potential countermeasures to reduce speeding/aggressive driver related fatal and A-type injury crashes are listed as follows:

- Target enforcement
- Conduct educational and public information campaigns
- Educate and impose sanctions against repeat offenders
- Change or mitigate the effects of identified elements in the environment
- Reduce nonrecurring delays and provide better information about delays
- Install dynamic speed feedback signs
2.3.2 Impaired Driver

From 2009 to 2013, there were a total of 196 impaired driver related fatalities and A-type injuries in Champaign County, as shown in Figures 2-16 and 2-17. For this Plan, impaired drivers are defined as those that are impaired by alcohol, drugs including illegal substances and medications, and also those that had been drinking. Driving under the influence is the crime of driving a motor vehicle with blood levels of alcohol in excess of a legal limit ("Blood Alcohol Concentration", or "BAC"). Among the 85 fatalities in Champaign County, 37 (44 percent) are DUI related fatalities from 2009 to 2013. At the same time, 170 out of the 1279 A-type injuries are related to DUIs which is approximately 13 percent.

FIGURE 2-16
Impaired Driver Fatalities

FIGURE 2-17
Impaired Driver A-type Injuries
The figures on the previous page illustrate that a total of 21 fatalities and 89 A-type injuries took place on the local system, while 16 fatalities and 70 A-type injuries occurred on the state system. The fatalities chart does indicate a significant trend over the 5-year period with an annual average increase of 21 percent. But, the A-type injuries chart does not show a significant trend.

Potential countermeasures to reduce impaired driver related fatal and A-type injury crashes are listed as follows:

- Support community programs for alternate transportation
- Conduct well-publicized Driving While Intoxicated (DWI) saturations
- Suspend driver’s license upon arrest
- Require ignition interlocks as a condition of license reinstatement
- Monitor convicted DWI offenders closely
- Targeted law enforcement
2.3.3 Unrestrained

From 2009 to 2013, there were a total of 266 unrestrained related fatalities and A-type injuries in Champaign County, as shown in Figures 2-18 and 2-19. For this Plan, unrestrained occupants are defined as those that had no safety equipment present, safety belt not used, helmet not used, child restraint used improperly, or child restraint not used. A total of 18 fatalities and 120 A-type injuries took place on the local system, while 18 fatalities and 110 A-type injuries occurred on the state system. The fatalities chart does not indicate a significant trend but with an annual average increase of 40 percent. The A-type injuries chart indicates a decrease from 51 to 27 over the 5-year period.

FIGURE 2-18
Unrestrained Driver Fatalities

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>State</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>10</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>2011</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>2012</td>
<td>5</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>2013</td>
<td>13</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

FIGURE 2-19
Unrestrained Driver A-type Injuries

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>State</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>51</td>
<td>26</td>
<td>25</td>
</tr>
<tr>
<td>2010</td>
<td>55</td>
<td>34</td>
<td>21</td>
</tr>
<tr>
<td>2011</td>
<td>51</td>
<td>19</td>
<td>32</td>
</tr>
<tr>
<td>2012</td>
<td>46</td>
<td>18</td>
<td>28</td>
</tr>
<tr>
<td>2013</td>
<td>27</td>
<td>13</td>
<td>14</td>
</tr>
</tbody>
</table>
Potential countermeasures to reduce unrestrained occupants related fatal and A-type injury crashes are listed as follows:

- Conduct educational and public information campaigns
- Target enforcement
- Conduct high-profile “child restraint inspection” events
- Train advocates to check for proper child restrain use

Current Accomplishments:

- Operation Cool: A program that encourages students to wear seatbelts and drive sober
2.4 Vulnerable Users

Although passenger vehicles constitute the majority of roadway users, other users such as pedestrians, pedalcyclists, and motorcyclists are also considered roadway users. Vulnerable users are often overlooked due to their low representation, though their presence requires special attention due to their relatively higher potential to be seriously injured or become a fatality in a crash.

From 2009 to 2013, there were a total of 83 pedestrian fatalities and A-type injuries in Champaign County. More details on this emphasis area are provided in section 2.4.1. Common factors associated with pedestrian related crashes are pre-crash actions and behaviors of both the pedestrian and the driver such as distraction, driver speed, and alcohol use. Other factors include vehicle type and design, pedestrian and vehicle volumes/exposure, and the surrounding environment (such as roadway design and presence of pedestrian facilities and street-crossing facilities) all contribute to pedestrian related crashes.

From 2009 to 2013, there were a total of 51 pedalcyclist fatalities and A-type injuries in Champaign County. More details on this emphasis area are provided in section 2.4.1. Pedalcyclists (bicycles) are difficult to characterize because they include users of all ages with various levels of skill, perception, and judgment. Because bicycles have smaller profiles than motorcycles and are typically purchased without headlights and rear active lights, they are less visible to many motorists, especially at night. Bicycles do not provide protection as motor vehicles do. Therefore, many bicyclists avoid high speed, high traffic situations. Bicycle related crashes and pedestrian related crashes exhibit similarities among common contributing factors.

From 2009 to 2013, there were a total of 104 motorcycle involved fatalities and A-type injuries in Champaign County. More details on this emphasis area are provided in section 2.4.1. Motorcycling has become an increasingly popular mode of transportation in the last couple of decades. Like bicycles, motorcycles offer riders minimal protection from a crash, making them a vulnerable roadway user. A motorcycle is essentially more difficult to operate compared to a passenger vehicle because it requires more physical ability. The correlation between speed and balance should be a critical consideration when riding a motorcycle; the stability of the motorcycle is relative to speed. A motorcycle becomes more stable the faster it goes; however it also becomes less controllable. At low speeds, the motorcycle rider needs to be balanced. The National Highway Traffic Safety Administration\(^{14}\) (NHTSA) estimates that per VMT, motorcyclists are about 25 times more likely to die in traffic crashes than passenger car occupants.

**FIGURE 2-20**

Pedestrian Fatalities and A-type Injuries 2009 to 2013
FIGURE 2-21
Pedalcyclist Fatalities and A-type Injuries Crashes 2009 to 2013

FIGURE 2-22
Motorcycle Fatalities and A-type Injuries Crashes 2009 to 2013
2.4.1 Pedestrians

From 2009 to 2013, there were a total of 83 pedestrian fatalities and A-type injuries in Champaign County, as shown in Figures 2-23 and 2-24. A total of 5 pedestrian fatalities and 51 pedestrian A-type injuries occurred on the local system, and 6 fatalities and 21 A-type injuries occurred on the state system. The Champaign pedestrian fatalities chart does indicate a significant decrease of 17 percent per year over the 5-year span, while the A-type injury chart does not show any significant trend.

FIGURE 2-23
Pedestrian Fatalities

FIGURE 2-24
Pedestrian A-type Injuries
The primary area of concern is identified in the Champaign County Data Trees. Figure 2-6 indicates that on the urban minor arterial on local system, 14 percent (28 out of 80) of non-intersection related severe crashes involve pedestrian.

Potential countermeasures to reduce pedestrian fatal and serious injury crashes are listed as follows:

- Provide median and pedestrian refuge areas\(^6\)
- Install lighting at pedestrian/bicycle paths and intersections\(^6\)
- Convert from yield signal control to signalized control\(^6\)
- Install high visibility yellow, continental type crosswalks\(^6\)
- Install speed restriction devices\(^6\)
- Educate parents and users on bicycle/pedestrian laws\(^6\)
- Create outreach program for non-English speaking population\(^6\)
- Provide full/partial diverters and street closure\(^6\)
- Curb extensions and sidewalks\(^6\)

Current Accomplishments:

- Champaign-Urbana Safe Routes to School: A program that helps educate the public on pedestrian and bicycle safety issues and provides predetermined safe routes for students to use
- Complete Streets: A program to provide safe facilities for all modes of transportation
2.4.2 Pedalcyclists

From 2009 to 2013, there were a total of 51 pedalcyclist fatalities and A-type injuries in Champaign County as shown in Figures 2-25 and 2-26. A total of 4 pedalcyclist fatalities and 41 pedalcyclist serious injuries occurred on the local system, and only 6 A-type injuries occurred on the state system. The Champaign pedalcyclist fatality chart and A-type injury chart do not indicate a significant increase or decrease over the 5-year span.

FIGURE 2-25
Pedalcyclist Fatalities

FIGURE 2-26
Pedalcyclist A-type Injuries
The primary area of concern is identified in the Champaign County Data Trees. Figure 2-6 indicates that on the urban minor arterial on local system, 15 percent (33 out of 80) of non-intersection related severe crashes involve pedalcyclist.

Potential countermeasures to reduce pedalcyclist fatal and serious injury crashes are listed as follows:

- Install lighting at pedestrian/bicycle paths and intersections
- Install speed restriction devices
- Provide bike lanes
- Increase bicycle helmet usage, enhance enforcement of bicycle laws, and publicize issues
- Make bike path maps readily available to public
- Educate parents and users on bicycle/pedestrian laws
- Create outreach program for non-English speaking population
- Addition of bike boxes

Current Accomplishments:

- C-U SRTS: A program that helps educate the public on pedestrian and bicycle safety issues and provides predetermined safe routes for students to use
- Complete Streets: A program to provide safe facilities for all modes of transportation
2.4.3 Motorcycles

From 2009 to 2013, there were a total of 104 motorcyclist related fatalities and A-type injuries in Champaign County, as shown in Figures 2-27 and 2-28. A total of 3 fatalities and 70 A-type injuries occurred on the local system, while 3 fatalities and 28 A-type injuries took place on the state system in Champaign County. Figure 2-27 shows low fatality counts. The A-type chart does not show any distinct trends over the 5-year period but it decreased from 22 in 2009 to 9 in 2013.

FIGURE 2-27
Motorcycle Fatalities

FIGURE 2-28
Motorcycle A-type Injuries
Potential countermeasures to reduce motorcycle fatal and serious injury crashes are listed as follows:

- Incorporate motorcycle-friendly roadway design, traffic control, construction, and maintenance policies and practices\(^8\)
- Reduce the number of motorcycle crashes due to rider impairment\(^8\)
- Reduce the number of motorcycle crashes due to unlicensed or untrained motorcycle riders\(^8\)
- Increase the visibility of motorcyclists\(^8\)
- Reduce the severity of motorcycle crashes\(^8\)
- Increase motorcycle rider safety awareness\(^8\)
- Increase safety enhancements for motorcyclists\(^8\)
- Improve motorcycle safety research, data, and analysis\(^8\)
- Helmet law enforcement\(^8\)
2.5 Heavy Vehicles

Heavy vehicle crashes are unique in a few different ways. These types of vehicles have distinct characteristics that pose potential threats. Buses can carry upwards of 50 people, and any major collision is likely to result in many significant injuries, especially in the case of rollover collisions. Trucks with semi-trailers carry many types of cargo. If cargo breaks loose from the semi-trailer during a collision, drivers may have to dodge the cargo, possibly causing other collisions.

Figure 2-29 shows heavy vehicle fatalities and serious injuries in Champaign County for 2009 to 2013. State systems have the majority of injuries over this 5-year period.

All of the vehicle types identified as a heavy vehicle have two major things in common: large size and weight. These two factors combine to increase the likelihood that a collision will have a high injury severity, typically to the non-heavy vehicle.
2.5.1 Heavy Vehicle Related

For this Plan, heavy vehicles are identified as buses up to 15 passengers, buses over 15 passengers, truck-single unit, truck with semi-trailer, and truck without semi-trailer. From 2009 to 2013, there were a total of 10 fatalities and 75 A-type injuries related to heavy vehicles in Champaign County, as shown in Figures 2-30 and 2-31. Of these heavy vehicle crashes, a total of 4 fatalities and 47 A-type injuries occurred on the state system, while 6 fatalities and 28 A-type injuries occurred on the local system. The Champaign County heavy vehicle fatalities chart shows a small count of crashes happening in 2009 to 2013 although there was spike in 2013. There is decreasing trend in the Champaign County heavy vehicle A-type injury chart from 2010 to 2013 with an annual average 16 percent.

FIGURE 2-30
Heavy Vehicle Fatalities

FIGURE 2-31
Heavy Vehicle A-type Injuries
Potential countermeasures to reduce heavy vehicle fatal and serious injury crashes are listed as follows:

- Reducing truck driver fatigue
- Strengthening commercial driver’s license (CDL) requirements and enforcement
- Increasing public knowledge about sharing the road
- Improving maintenance of heavy trucks
- Identifying and correcting unsafe roadway and operational characteristics
- Improving and enhancing truck safety data
- Promoting industry safety initiatives
2.6 Roadway Departure

A roadway departure collision is defined as a collision that is head-on, opposite direction sideswipe, struck a fixed object, or the vehicle overturned, regardless of whether the collision involved single or multiple vehicles. Head-on and fixed-object collisions have a tendency to be severe crashes and are unforgiving. Head-on crashes occur when a driver leaves their lane and encroaches into the oncoming traffic’s lane, directly striking another vehicle. Even at low speeds, these collisions can result in fatalities and serious injuries; as speeds increase, the injury severity is likely to follow. Fixed objects include trees, utility poles, telephone poles, and signing supports to name a few. These are typically joined very securely to the ground and do not “give” much, ending with an abrupt change of speed for the vehicle.

Figure 2-32 shows that highest percentage of all roadway departure fatalities and serious injuries in Champaign County occur on the local system. The best approach to reducing roadway departures is to make an attempt to eliminate the frequency of drivers leaving their lane. A list of countermeasures is shown at the end of Section 2.6.
2.6.1 Roadway Departure Related

From 2009 to 2013, there were a total of 380 roadway departure related fatalities and A-type injuries in Champaign County as shown in Figures 2-33 and 2-34. A total of 206 of those occurred on the local system, where 24 were fatalities and the remaining 182 were A-type injuries. The remaining 174 happened on the state system, where 18 were fatalities and 156 were A-type injuries. The Champaign County road departure fatalities chart does not indicate a significant trend but with a spike in 2010 and 2013 and lower counts in 2009, 2011 and 2012. But, the A-type injury chart does not indicate any significant trend over 5-year span.

FIGURE 2-33
Roadway Departure Fatalities

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>State</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>4</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>2010</td>
<td>11</td>
<td>5</td>
<td>6</td>
</tr>
<tr>
<td>2011</td>
<td>7</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>2012</td>
<td>7</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2013</td>
<td>13</td>
<td>5</td>
<td>8</td>
</tr>
</tbody>
</table>

FIGURE 2-34
Roadway Departure A-type Injuries

<table>
<thead>
<tr>
<th>Year</th>
<th>Total</th>
<th>State</th>
<th>Local</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>62</td>
<td>22</td>
<td>40</td>
</tr>
<tr>
<td>2010</td>
<td>70</td>
<td>40</td>
<td>30</td>
</tr>
<tr>
<td>2011</td>
<td>66</td>
<td>36</td>
<td>30</td>
</tr>
<tr>
<td>2012</td>
<td>77</td>
<td>32</td>
<td>45</td>
</tr>
<tr>
<td>2013</td>
<td>63</td>
<td>26</td>
<td>37</td>
</tr>
</tbody>
</table>
The primary area of concern is identified in the Champaign County Data Trees. Figure 2-1 indicates that on rural-major collector on the local system, 82 percent (32 out of 39) of non-intersection severe crashes are road departure crashes. Of these roadway departure crash types, 31 percent of those occurred on a curve.

Potential infrastructure countermeasures to reduce fatal and serious injury roadway departure crashes are listed as follows:

- Change barrier along embankment to less rigid type
- Install guardrails along embankment
- Install edgeline (at curve/tangent)
- Install edgeline, centerline, and/or shoulder rumble strips
- Install chevrons at horizontal curves
- Install fluorescent curve signs or upgrade them to fluorescent sheeting
- Install safety edge
- Flatten sideslopes
- Install raised pavement markers and transverse rumble strips
- Straighten out curves
- Remove/relocate objects in hazardous locations
2.7 Intersection

Intersection collisions range from all types and all severities. Yet, depending on which type of intersection is in consideration, some collision types and severities may be more frequent than others. Figure 2-35 shows that for Champaign County, nearly three-fifths of intersection fatalities and A-type injuries occur on the local system. These numbers are broken down even further in Figures 2-36 and 2-37.

Intersections create a unique situation for users because there are many different types, which include rural, urban, signalized, unsignalized, and skewed approaches, among others. These different intersection types create an abundance of conflict points, possibly confusing the driver and causing a collision. Reducing the number of conflict points can help reduce the number of collisions. Many countermeasures are listed at the end of Section 2.7; they are listed separately for signalized and unsignalized intersections.

FIGURE 2-35
Intersection Fatalities and A-type Injuries 2009 to 2013
2.7.1 Intersection Related

From 2009 to 2013, there were a total of 640 intersection related fatalities and A-type injuries in Champaign County, as shown in Figures 2-36 and 2-37. A total of 387 of those occurred on the local system, where 9 were fatalities and the remaining 378 were A-type injuries. The remaining 253 took place on the state system, where 8 were fatalities and 245 were A-type injuries. The Champaign County intersection fatality chart does not indicate a significant increase or decrease over the 5-year span, but contains a spike in 2011 and 2013 and relatively lower counts in 2009, 2010, and 2012. Meanwhile, the Champaign County intersection A-type injury chart shows a slight increase from 2010 to 2012, but fell in 2013 with an overall decrease of 12 percent annually over a period of 5 years.

FIGURE 2-36
Intersection Related Fatalities

FIGURE 2-37
Intersection Related A-type Injuries
The primary area of concern is identified in the Champaign County Data Trees. Figure 2-1 indicates that on urban principal arterial on the state system, 70 percent (114 out of 164) of severe crashes occurred at intersections. Of those intersection related severe crashes, 70 percent (80 out of 114) were at signalized intersections.

Potential infrastructure countermeasures to reduce fatal and serious injury intersection crashes are listed as follows:

- Call attention to the intersection by installing rumble strips on intersection approaches
- Provide dashed markings for major-road continuity across the median opening at divided highway
- Provide supplementary stop signs mounted over the roadway
- Provide pavement markings with supplementary messages, such as STOP AHEAD
- Provide improved maintenance of stop signs
- Install flashing beacons at stop-controlled intersections
- Avoid signalizing through roads
- Provide all-way stop control at appropriate intersections
- Provide roundabouts at appropriate locations
- Provide targeted enforcement to reduce stop sign violations
- Provide targeted public information and education on safety problems at specific intersections
- Provide targeted speed enforcement
- Provide traffic calming on intersection approaches through a combination of geometrics and traffic control devices
- Post appropriate speed limit on intersection approaches
- Provide turn path markings
- Provide a double yellow centerline on the median opening of a divided highway at intersections
- Provide lane assignment signing or marking at complex intersections
- Presence of right turning lane on arterial with signal coordination
- Add centerline and STOP bar, replace 24-inch with 30-inch stop signs
- Add signal (additional primary head)
- Convert stop-control to signal
- Provide flashing beacons at four-leg stop-controlled intersections on two-lane roads
- Install advance warning signs (positive guidance)
- Convert from yield signal control to signalized control
- Introduce painted left-turn channelization
- Convert signal from pedestal-mounted to mast arm
- Install flashing beacons as advance warning
- Provide increased pavement friction
- Introduce stop ahead pavement markings
- Resurface pavement
- Advance street name signs
- Advanced signing and delineation
• Improve visibility of unsignalized intersections by providing lighting

Current Accomplishments:

• Selected Crash Intersection Locations: A biyearly report that identifies high-risk intersections in the Champaign-Urbana area
  Yellow and All-Red Signal Clearance Interval Study: A study performed to reduce signalized intersection change interval related crashes
2.8 Distracted/Fatigued/Drowsy

A distracted/fatigued/drowsy driver-involved crash is defined as a crash where at least one of the drivers involved was reported to have performed one or both of the following behaviors:

- **Fatigued/drowsy driving**—the driver’s apparent condition is fatigued, asleep/fainted, or illness/fainted.

- **Distracted driving**—the driver is distracted from inside or outside the vehicle or by any electronic communication device, such as a navigation device or DVD player, or using a cell phone for texting or other uses.

Between 2009 and 2013, a total of 123 fatalities and 3,170 A-injuries in distracted/fatigued/drowsy crashes occurred in Illinois. Figure 2-38 illustrates that the majority of all distracted/fatigued/drowsy fatalities and serious injuries in Champaign County occur on the state system. The best approach to reducing distracted/fatigued/drowsy driving is to make an attempt to make drivers aware of their distractions through roadway enhancements, service stopping areas, education, and enforcement programs.

**FIGURE 2-38**
Distracted/Fatigued/Drowsy Fatalities and A-type Injuries 2009 to 2013
2.8.1 Distracted/Fatigued/Drowsy Driver

From 2009 to 2013, there were a total of 55 distracted/fatigued/drowsy driver-involved fatalities and A-type injuries in Champaign County, as shown in Figures 2-39 and 2-40. A total of 22 of those occurred on the local system, where 1 was fatality and 21 were A-type injuries. The remaining 33 took place on the state system, where 1 was fatality and 32 were A-type injuries. The Champaign County distracted/fatigued/drowsy fatality chart does not indicate a significant increase or decrease over the 5-year span and the numbers have been 0 for most of the years. Meanwhile, the A-type injury chart shows a decreasing trend, with an annual reduction of 15 percent over the 5 years.

**FIGURE 2-39**
Distracted/Fatigued/Drowsy Related Fatalities

**FIGURE 2-40**
Distracted/Fatigued/Drowsy Related A-type Injuries
Potential countermeasures to reduce distracted/fatigued/drowsy driver fatal and A-type injury crashes include the following:

- Make roadways safer for distracted drivers
  - Install shoulder and/or centerline rumble strips
  - Implement other roadway improvements to reduce the likelihood and severity of run-off-road and/or head-on collisions

- Provide safe stopping and resting areas
  - Improve access to safe stopping and resting areas
  - Improve rest area security and services

- Increase driver awareness of the risks of distracted driving and promote driver focus
  - Conduct education and awareness campaigns targeting the general driving public
  - Visibly enforce existing statutes to deter distracted driving

- Implement programs that target populations at increased risk of distracted driving crashes
  - Strengthen graduated driver licensing requirements for young novice drivers
  - Incorporate information on distracted and fatigued driving into education programs and materials for young drivers
  - Encourage trucking companies and other fleet operators to implement fatigue management programs
  - Implement targeted interventions for other high-risk populations
Section 3 Countywide, City, and Location-Specific Analysis

The purpose of this section is to identify crash data trends spatially in Champaign County. In the previous section, crash data were analyzed and summarized in Emphasis Area table (Table 2-1) and Data Trees (Figure 2-1 to 2-6) to identify any system wide trends within the county.

3.1 Map Series

With the emphasis areas prioritized based on the percentage in Table 2-1, a series of county-level heat maps are used to identify specific locations where crash patterns continually occur for each of the selected areas. A zoomed-in detailed map is then provided to specify the exact blocks and streets where crashes of that emphasis area are most concentrated in Champaign County.

Besides these emphasis area heat maps and the detailed map series at the county level, additional maps are provided for Champaign-Urbana city areas, which include total fatal and A-type and B-type injury crashes (KAB crashes) heat maps at city levels along with zoomed-in detailed maps, which are symbolized based on collision type.

If any trends and locations are identified through development of these maps, a selection of the most effective safety strategies for reducing severe crashes can be identified and implemented within the county and Champaign-Urbana cities.

3.1.1 Heat Maps

Heat maps are produced to identify specific locations where crash patterns continually occur. County Data Trees and Emphasis Area tables were originally used to establish which crash types and emphasis areas were predominant in Champaign County on a certain roadway type or among a certain person type. Once a specific emphasis area is observed as being problematic, heat maps help to find where these crashes are occurring within the county. These maps summarize the frequency of crashes within a given geographical area. For this effort, section lines (approximately 1 square mile) were mapped with a range of colors identifying the “hot spots.” High crash density locations or clusters where there are many hot spots indicate areas where safety programs may be most effective. This map series analysis was performed summarizing fatal, A-type injury, and B-type injury crashes to minimize the effects of a small sample size. As the number of people in each vehicle is random and not stable, the crash is counted as a whole; and crash frequencies will serve as the measurement of crash distribution rather than the fatalities and serious injuries number.

3.1.2 Detailed Maps

In addition to the heat maps, detailed maps are developed focusing on the specific location of the crashes in each emphasis area. The objective of this map series is to find locations that exhibit unusually high crash frequencies and identify the exact location of each crash. The base crash data are analyzed, and problem locations are identified, prioritized, and ranked based on infrastructure countermeasures which can be applied. This methodology typically considers the total of fatal, A-type and B-type injury crashes, since fatal and A-type injury crashes (severe crashes) account for a small percentage of the total crashes and severe crashes are relatively random, widely distributed geographically, and have less chances to occur, making it hard to identify specific problematic locations. These detailed maps are anticipated to assist local officials in identifying the accurate block and streets where severe crashes tend to concentrate over the analysis period (2009 to 2013). Though it is still approximately a 1-square-mile area, it is significantly more detailed compared to the larger-scale countywide heat map. Thus, the detailed maps allow one to focus on these streets and intersections for enforcement, education, or media campaigns and infrastructure improvement.
3.2 Identification of Countywide Trends

These map series are being used by enforcement agencies and engineers to address major issues. Since many different types of heat maps can be made, they can be compared to each other to see which specific maps have higher rates of crashes. This allows the ability to focus on a few certain crash types, behavioral issues, or roadway types.

Enforcement agencies could use the map series geared toward behavioral issues to isolate areas that need more police presence. If the existence of police can influence driver behaviors in these areas, it is hoped that the frequency of crashes can be brought down. Engineers can use the map series to locate areas that might have geometric issues or signage problems. If a specific area is continually having “run off road” crashes, engineers can locate roads that have curves and suggest countermeasures to help address the crashes. Some agencies had multiple squares that were red, indicating an issue in the area, and the agency could apply the detailed map to see a “zoom-in” of that area. The detailed maps would provide detailed, street by street views of exactly where these crashes are taking place.

3.2.1 Younger Driver

Figure 3-1 and Figure 3-2 show the frequency of young driver related crashes per square mile in Champaign County using color-coded sections of 1 square mile each. Younger drivers are defined as drivers between the age of 16 and 20. As noted in the legend of the map, the white sections are locations where there were zero KAB crashes involving younger drivers. The sections with shades of green identify locations with 1 to 10 young driver related crashes. Locations exceeding 10 are identified in shades of yellow to orange and locations in red have 22-28 crashes per square mile. These are the high priority locations that should be considered for additional enforcement, education, and media campaigns to address younger driver related driving. The highest concentration of younger driver related serious injury crashes are located within Champaign and Urbana campus areas where there is a large population of college students.
FIGURE 3-1
CHAMPAIGN COUNTY
KAB Younger Driver Crashes Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

Legend
- City Boundary
- County Boundary
- District Boundary

KAB Younger Driver Crashes Per Section Square
- 0
- 1 - 5
- 6 - 10
- 11 - 15
- 16 - 21
- 22 - 28

*Legend intervals are based on KAB younger driver crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 3/30/2015
Legend

KAB Younger Driver Crashes
City Boundary
County Boundary

KAB Younger Driver Crashes Per Section Square

0
1 - 5
6 - 10
11 - 15
16 - 21
22 - 28

*Legend intervals are based on KAB younger driver crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

FIGURE 3-2
CHAMPAIGN COUNTY
KAB Younger Driver Crashes Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 3/20/2015
3.2.2 Older Driver

Figure 3-3 and Figure 3-4 illustrate the frequency of older driver related KAB crashes per square mile in Champaign County. Older drivers are those who are equal or older than 65 years old. These maps illustrate that the older driver related KAB crashes are occurring within the city of Champaign and Urbana city areas in Champaign County. The highest frequency of 15 to 19 older driver related crashes per square mile occurred in these two urbanized areas.

3.2.3 Speeding/Aggressive Driver

Figure 3-5 and Figure 3-6 illustrate the frequency of speeding/aggressive driving related KAB crashes per square mile in Champaign County. This map illustrates that the speeding/aggressive driving related KAB crashes are occurring within the Champaign and Urban areas in Champaign County and along interstate routes and its surrounding major roads. The highest frequency of more than 17 speeding/aggressive driver related KAB crashes per square mile occurred at these locations between year 2009 and 2013.

3.2.4 Impaired Driver

Figure 3-7 through Figure 3-8B illustrate the frequency of impaired driver related KAB crashes per square mile in Champaign County. Impaired drivers are drivers who are impaired by drugs or alcohol, or had been drinking alcohol. The maps illustrate high frequency areas within Urbana-Champaign downtown areas where more than 7 impaired driver related KAB crashes per square mile occurred from 2009 to 2013.

3.2.5 Unrestrained

Figure 3-9 and Figure 3-10 illustrate the frequency of unrestrained driver and occupant related KAB crashes. Unrestrained driver and occupants refer to the drivers and passengers with no safety equipment or no safety belt/helmet used, or child restraint used improperly/not used. As illustrated on the map, the majority of the unrestrained crashes are concentrated within the city limits of Champaign and Urbana. The highest concentration area with 17 unrestrained driver related crashes is in the northwest side of downtown Champaign. Based on the findings from these maps, Champaign and Urbana should consider implementing additional enforcement, education, and media campaigns to address safety restraint usage.

3.2.6 Pedestrian and Pedalcyclist

Figures 3-11 through Figure 3-14 illustrate the frequency of pedestrian and pedalcyclist KAB crashes per square mile in Champaign County. These figures show that the majority of pedestrian and pedalcyclist KAB crashes are occurring in the centralized Champaign-Urbana area, with a high concentration in Urbana in the vicinity of UIUC north campus. The numbers of pedestrian and pedalcyclist crashes are based on collision type. The highest concentration areas, marked with a red box shows 25 to 31 KAB pedestrian crashes and 34 pedalcyclist crashes per square mile occurred at these locations from 2009 to 2013.

3.2.7 Motorcycle

Figure 3-15 and Figure 3-16 illustrate the frequency of motorcycle KAB crashes per square mile in Champaign County. This figure shows that the majority of motorcycle KAB crashes are occurring in the centralized Urbana-Champaign area. The highest crash concentrations, marked with red box shows 10 to 12 KAB crashes occurred in the urban areas of Urbana and Champaign.

3.2.8 Heavy Vehicle

Figure 3-17 and Figure 3-18 illustrate the frequency of heavy vehicle KAB crashes per square mile in Champaign County. This includes five types of vehicles: bus up to 15 passengers, bus over 15 passengers, single unit truck, tractor with semi-trailer, and tractor without semi-trailer. The maps indicate that the highest concentration of heavy vehicle crashes are at interstate 57-74 interchange in Champaign, and in the urban areas of Urbana with 10 to 13 KAB crashes per square mile occurring from 2009 to 2013.
3.2.9 Roadway Departure

Figure 3-19 and Figure 3-20 illustrate the frequency of roadway departure KAB crashes per square mile in Champaign County. Road departure crashes include the collision types of fixed object, sideswipe opposite direction, head on, and overturned. The highest frequency area containing 32 crashes are located in the northwest corner of the city of Champaign in the vicinity of interstate 57-74 interchange.

3.2.10 Intersection

Figure 3-21 and Figure 3-22 illustrate the frequency of intersection related KAB crashes per square mile in Champaign County. The highest concentration of intersection related KAB crashes is within the centralized Champaign-Urban area. The highest frequency locations containing 69 to 85 crashes per square mile are in downtown Champaign and the UIUC campus area to the north of Kirby Ave.

3.2.11 Distracted/Fatigued/Drowsy Driver

Figure 3-23 and Figure 3-24 illustrate the frequency of distracted driver related KAB crashes per square mile in Champaign County. The highest concentration of these crashes occurred in the city of Champaign. At this location, 6 distracted driver related KAB crashes per square mile have occurred from 2009 to 2013.
FIGURE 3-3
CHAMPAIGN COUNTY
KAB Older Driver Crashes Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

Legend
City Boundary
County Boundary
District Boundary
KAB Older Driver Crashes Per Section Square
0
1 - 3
4 - 6
7 - 9
10 - 14
15 - 19
*Legend intervals are based on KAB older driver crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 3/19/2015
FIGURE 3-4  
CHAMPAIGN COUNTY  
KAB Older Driver Crashes Per Section Square  
(All Routes Included)  
Analysis Period: 2009-2013

Note: On average, section squares have an area of approximately 1 square mile.

**Legend:**  
- KAB Older Driver Crashes  
- City Boundary  
- County Boundary

**KAB Older Driver Crashes Per Section Square**

0  
1 - 3  
4 - 6  
7 - 9  
10 - 14  
15 - 19  

*Legend intervals are based on KAB older driver crashes that occurred in this county.  

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used “as is” for analysis purposes and should be interpreted accordingly.
**FIGURE 3-5**

CHAMPAIGN COUNTY

KAB Speeding/Aggressive Driver Crashes
Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

Legend

- City Boundary
- County Boundary
- District Boundary

KAB Speeding/Aggressive Driver Crashes Per Section Square

*Legend intervals are based on KAB speeding/aggressive driver crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2010 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 2/20/2015
FIGURE 3-6
CHAMPAIGN COUNTY
KAB Speeding/Aggressive Driver Crashes Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

Legend
KAB Speeding/Aggressive Driver Crashes
City Boundary
County Boundary

KAB Speeding/Aggressive Driver Crashes Per Section Square
0
10
1 - 4
5 - 8
9 - 12
13 - 17
18 - 23

*Legend intervals are based on KAB speeding/aggressive driver crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used “as is” for analysis purposes and should be interpreted accordingly.

Date: 3/9/2015
FIGURE 3-7
CHAMPAIGN COUNTY
KAB Impaired Driver Crashes Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

Legend
City Boundary
County Boundary
District Boundary

KAB Impaired Driver Crashes Per Section Square
0
1
2
3
4 - 6
7 - 9

*Legend intervals are based on KAB impaired driver crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.
DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other law enforcement agencies. Crash data for 2009 to 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Note: On average, section squares have an area of approximately 1 square mile.
CHAMPAIGN COUNTY

KAB Impaired Driver Crashes Per Section Square

(All Routes Included)

Analysis Period: 2009-2013

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 4/21/2015

Legend
- KAB Impaired Driver Crashes
- City Boundary
- County Boundary

KAB Impaired Driver Crashes Per Section Square

- 0
- 1
- 2
- 3
- 4 - 6
- 7 - 9

*Legend intervals are based on KAB impaired driver crashes that occurred in this county.
**FIGURE 3-9**

CHAMPAIGN COUNTY

KAB Unrestrained Occupants Crashes Per Section Square

(All Routes Included)

Analysis Period: 2009-2013

**DISCLAIMER:** Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the State Police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

**Note:** On average, section squares have an area of approximately 1 square mile.

Date: 2/19/2015

*Legend intervals are based on KAB unrestrained occupants crashes that occurred in this county.*
**Legend**

- KAB Unrestrained Occupants Crashes
- City Boundary
- County Boundary

**KAB Unrestrained Occupants Crashes Per Section Square**

<table>
<thead>
<tr>
<th>Interval</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 - 1</td>
<td>0.0%</td>
</tr>
<tr>
<td>1 - 3</td>
<td>0.0%</td>
</tr>
<tr>
<td>4 - 6</td>
<td>0.0%</td>
</tr>
<tr>
<td>7 - 9</td>
<td>0.0%</td>
</tr>
<tr>
<td>10 - 13</td>
<td>0.0%</td>
</tr>
<tr>
<td>14 - 17</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

*Legend intervals are based on KAB unrestrained occupants crashes that occurred in this county.*

**FIGURE 3-10**

**CHAMPAIGN COUNTY**

KAB Unrestrained Occupants Crashes Per Section Square

(All Routes Included)

Analysis Period: 2009-2013

**Note:** On average, section squares have an area of approximately 1 square mile.

**DISCLAIMER:** Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 3/9/2015
FIGURE 3-11
CHAMPAIGN COUNTY
KAB Pedestrian Crashes Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

Note: On average, section squares have an area of approximately 1 square mile.

Legend
City Boundary
County Boundary
District Boundary
KAB Pedestrian Crashes Per Section Square
0
1 - 6
7 - 12
13 - 18
19 - 24
25 - 31

*Legend intervals are based on KAB pedestrian crashes that occurred in this county.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represent years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2010 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 2/20/2015
FIGURE 3-12
CHAMPAIGN COUNTY
KAB Pedestrian Crashes Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

Legend
KAB Pedestrian Crashes
City Boundary
County Boundary

KAB Pedestrian Crashes Per Section Square

0
1 - 6
7 - 12
13 - 18
19 - 24
25 - 31

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 3/9/2015
FIGURE 3-13
CHAMPAIGN COUNTY
KAB Pedalcyclist Crashes Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

Note: On average, section squares have an area of approximately 1 square mile.

Legend
- City Boundary
- County Boundary
- District Boundary
KAB Pedalcyclist Crashes Per Section Square
- 0
- 1 - 6
- 7 - 12
- 13 - 18
- 19 - 26
- 27 - 34

*Legend intervals are based on KAB pedalcyclist crashes that occurred in this county.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 2/23/2015
CHAMPAIGN COUNTY

KAB Pedalcyclist Crashes Per Section Square (All Routes Included)
Analysis Period: 2009-2013

FIGURE 3-14

Legend
- KAB Pedalcyclist Crashes
- City Boundary
- County Boundary

KAB Pedalcyclist Crashes Per Section Square

*Legend intervals are based on KAB pedalcyclist crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analysis shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 3/11/2015
FIGURE 3-15
CHAMPAIGN COUNTY
KAB Motorcycle Crashes Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

Legend
City Boundary
County Boundary
District Boundary
KAB Motorcycle Crashes Per Section Square
0
1 - 2
3 - 4
5 - 6
7 - 9
10 - 12

*Legend intervals are based on KAB motorcycle crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2010 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 2/20/2015
KAB Motorcycle Crashes Per Section Square

Legend
- KAB Motorcycle Crashes
- City Boundary
- County Boundary

KAB Motorcycle Crashes Per Section Square

*Legend intervals are based on KAB motorcycle crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2013 was received from IDOT on November 28, 2013. Crash data for 2009 to 2012 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 3/11/2015
KAB Heavy Vehicle Crashes Per Section Square (All Routes Included)
Analysis Period: 2009-2013

Legend
City Boundary
County Boundary
District Boundary
KAB Heavy Vehicle Crashes Per Section Square
0
1 - 2
3 - 4
5 - 6
7 - 9
10 - 13

*Legend intervals are based on KAB heavy vehicle crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.
FIGURE 3-18
CHAMPAIGN COUNTY
KAB Heavy Vehicle Crashes Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

Legend
KAB Heavy Vehicle Crashes
City Boundary
County Boundary

KAB Heavy Vehicle Crashes Per Section Square
0
1 - 2
3 - 4
5 - 6
7 - 9
10 - 13

*Legend intervals are based on KAB heavy vehicle crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 3/11/2015
Legend
City Boundary
County Boundary
District Boundary
KAB Roadway Departure Crashes Per Section Square

*Legend intervals are based on KAB roadway departure crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 2/17/2015
FIGURE 3-21
CHAMPAIGN COUNTY
KAB Intersection Related Crashes Per Section Square
(All Routes Included)

Analysis Period: 2009-2013

Legend

- City Boundary
- County Boundary
- District Boundary

KAB Intersection Related Crashes Per Section Square

- 0
- 1 - 17
- 18 - 34
- 35 - 51
- 52 - 68
- 69 - 85

*Legend intervals are based on KAB intersection related crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 2/19/2015
KAB Intersection Related Crashes Per Section Square

Legend
- KAB Intersection Related Crashes
- City Boundary
- County Boundary

KAB Intersection Related Crashes Per Section Square

- 0
- 1 - 17
- 18 - 34
- 35 - 51
- 52 - 68
- 69 - 85

*Legend intervals are based on KAB intersection related crashes that occurred in this county.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 3/10/2015
FIGURE 3-25
CHAMPAIGN COUNTY
KAB Work Zone Crashes Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 2/23/2015
Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analysis shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 3/13/2015
KAB Distracted/Drowsy/Fatigued Driver Crashes Per Section Square (All Routes Included)
Analysis Period: 2009-2013

Legend
- City Boundary
- County Boundary
- District Boundary
- KAB Distracted/Drowsy/Fatigued Driver Crashes Per Section Square

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2013 was received from IDOT on November 26, 2013. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.
FIGURE 3-24
CHAMPAIGN COUNTY
KAB Distracted/Fatigued/Drowsy Driver Crashes Per Section Square
(All Routes Included)
Analysis Period: 2009-2013

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Legend
- KAB Distracted/Fatigued/Drowsy Driver Crashes
- City Boundary
- County Boundary

KAB Distracted/Fatigued/Drowsy Driver Crashes Per Section Square

Legend intervals are based on KAB distracted/fatigued/drowsy driver crashes that occurred in this county.

Date: 4/16/2015
3.3 City Maps Evaluation

Using the most recent crash data (2009 to 2013), maps were created to identify specific locations and types of KAB crashes in urban areas of Champaign County. Cities were chosen for map analysis based on Census population, Census driving commuters, and the presence of a Metropolitan Planning Organization (MPO).

The purpose of the maps is to identify any trends within urban areas; the trends are mostly related to roadway infrastructure and environment. Typical trends identified with the maps include, but are not limited to:

- Clusters of rear-end, turning, and angle collision at intersections
- Run-off road collisions along rural two-lane segments
- Collisions on curves
- Head-on and/or sideswipe collisions along undivided segments
- Pedestrian and pedalcyclist issues

The MPOs, counties, and other planning agencies could use the city maps to identify locations with different crash types and recommend strategies, such as increased enforcement or improved roadway engineering, to mitigate the issues and ultimately achieve the safety targets.

In Champaign County, city analyses are performed for the City of Champaign (Figure 3-25 and 3-26) and the City of Urbana (Figure 3-27 and 3-28).
**Legend**
- **All Routes**
- **Major Roadway**
- **City Boundary**

**KAB Crashes Per Section Square**

- **0**
- **1 - 24**
- **25 - 28**
- **29 - 72**
- **73 - 96**
- **97 - 121**

*Legend intervals are based on KAB crashes that occurred in the city of Champaign.*

**DISCLAIMER:** Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used “as is” for analysis purposes and should be interpreted accordingly.

Date: 5/8/2015
Note: On average, section squares have an area of approximately 1 square mile.

FIGURE 3-26
CITY OF CHAMPAIGN (Zoom-in)
KAB Crashes Per Section Square
Within City Boundary
(All Routes Included)
Analysis Period: 2009-2013

Legend
- All Routes
- Major Roadway
- City Boundary

KAB Crashes Per Section Square

- 0
- 1 - 24
- 25 - 28
- 29 - 72
- 73 - 96
- 97 - 121

*Legend intervals are based on KAB crashes that occurred in the city of Champaign.

DISCLAIMER: Results of the analyses shown in this map are based on data that was released from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2013 was received from IDOT on November 28, 2013. Crash data for 2013 was released from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 5/11/2015
FIGURE 3-27
CITY OF URBANA
KAB Crashes Per Section Square
Within City Boundary
(All Routes Included)
Analysis Period: 2009-2013

Legend

- All Routes
- Major Roadway
- City Boundary

KAB Crashes Per Section Square

- 0
- 1 - 24
- 25 - 48
- 49 - 72
- 73 - 96
- 97 - 121

*Legend intervals are based on KAB crashes that occurred in the city of Urbana.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.
KAB Crashes Per Section Square
Within City Boundary
(All Routes Included)
Analysis Period: 2009-2013

Legend

All Routes
Major Roadway
KAB Crashes Per Section Square

0
1 - 24
25 - 48
49 - 72
73 - 96
97 - 121

*Legend intervals are based on KAB crashes that occurred in the city of Urbana.

Note: On average, section squares have an area of approximately 1 square mile.

DISCLAIMER: Results of the analyses shown in this map are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other enforcement agencies. Crash data for 2009 to 2012 was received from IDOT on November 26, 2013. Crash data for 2013 was received from IDOT on December 4, 2014. The roadway and intersection data was developed by IDOT and represents the end of the 2011 year conditions. The data was used "as is" for analysis purposes and should be interpreted accordingly.

Date: 5/11/2015
Section 4 Summary

The following provides a summary of critical strategies that have been identified for each emphasis area and further identifies low-cost strategies that can be implemented with a limited budget for projects. The discussion also includes resources that will be useful in providing additional background toward making informed decisions with regard to project programming in the future, or carefully scrutinizing critical locations for infrastructure improvements to improve the potential for safety.

4.1 County Safety Projects

One of the key objectives of Champaign County’s safety planning effort involved identifying low cost safety-related projects that are focused on the County’s documented Safety Emphasis Areas. These Safety Emphasis Areas contain the greatest number of severe crashes occurring along the County’s system of highways. Deploying mitigations for the factors contributing to these crashes represent the best opportunity to move Champaign County Toward Zero Deaths. The need for low cost projects can be widely deployed across the County’s system of highways.

The effort to develop low cost safety projects is based on the application of high priority strategies for the most overrepresented emphasis areas that were identified for Champaign County. Some of the high priority safety strategies identified basically consist of the following types of improvements:

- Improve the edges of rural highways and enhance delineation of horizontal curves in rural areas
- Upgrade the signs and pavement markings, installing street lights at rural stop-controlled intersections
- Improve sight distance at unsignalized intersections
- Conduct behavioral campaigns to increase seatbelt compliance, reduce impaired driving, increase motorcycle helmet usage, decrease speeding (aggressive driving), and support the graduated driver license law.

The actual implementation of individual projects will be a function of securing funding from the state’s HSIP. This Plan, prepared for Champaign County, is consistent with the ISHSP, and the high priority safety strategies are among those recommended for local systems.

This Plan should be updated regularly to modify, improve, and expand upon implementation strategies to reflect lessons learned. As more countermeasures are implemented, collection of safety data improves, and more historical data are available, analyses techniques can be modified and refined toward making more and more informed decisions in the future.
Section 5 References


Champaign County Regional Planning Commission. 2013. *Monticello Road Highway Safety Improvement Program.*


Appendix A
County Workshops
Appendix A Contents

Workshop 1

- Local SHSP Initiative Workshop: Champaign & Vermilion Counties Technical Memorandum, December 29, 2011

Workshop 2

- Champaign Safety Workshop #2 Technical Memorandum, March 2012
- Notes on Countermeasures by Groups - Champaign County, March 7, 2012
Local SHSP Initiative Workshop: Champaign & Vermilion Counties

PREPARED FOR: Illinois Department of Transportation
Bureau of Safety Engineer

PREPARED BY: CH2M Hill

DATE: December 29, 2011

PROJECT NUMBER: 381335

A workshop was conducted on December 15th, 2011 to present strategic highway safety initiatives to the Illinois counties of Champaign and Vermilion. The workshop took place at the multimodal Illinois Terminal in Champaign, Illinois, and was hosted by the Champaign Urbana Urbanized Area Transportation Study (CUUATS). The effort was led by Priscilla Tobias of the Bureau of Safety of the Illinois Department of Transportation (IDOT).

Current Initiatives:
The workshop was attended by representatives of IDOT and FHWA, state, county, and local engineers, local district law enforcement, and an emergency medical response team. Brief presentations were then given by Priscilla Tobias of IDOT, Les Nunes of the Division of Traffic Safety of IDOT, Dave Beasley of Illinois District 5 Police, and Rita Morcoima-Black of CUUATS. From these, each representative introduced safety goals and areas of concern, past and current efforts to address them, and what had been proven to succeed or fail.

Areas of Emphasis:
IDOT has identified the goal of having zero fatalities on the roadways, and has started addressing the goal with both behavioral and infrastructural areas of emphasis. The local district law enforcement is focused mainly on behavioral areas, while CUUATTS is working with mixed strategies specifically for their location, as well as acquiring the necessary funding.

Moving Forward With Proven Strategic Initiatives:
After a brief break for lunch, an open forum was led by Howard Preston of CH2M Hill, the project’s consulting engineering firm. Having worked closely with the Minnesota Department of Transportation (MnDOT) on their Strategic Highway Safety Plan, Mr. Preston explained the process of developing a plan for moving forward by choosing strategies that would specifically address the areas of emphasis outlined by the Champaign and Vermilion County representatives. The discussion in the open forum covered initiatives that addressed both infrastructure- and behavioral-related causes for collisions.

At the conclusion of the day, the attendees were encouraged to vote on the strategic initiatives that would be most effective for addressing the goals for the county highways. Although the discussion was drawn mostly towards infrastructure-related solutions, the strategies with the most votes were concentrated in the behavioral sections. Impairment was the front-running area of emphasis, with Aggressive & Distracted Driving being a distant second. The infrastructure-related area of emphasis that garnered the most attention was Road Departure.
Next Steps:
Following the workshop, IDOT and CH2M Hill will move forward with the data collected, and with the input of the representatives present at the workshop, formulate a strategic safety plan to be used for Champaign and Vermilion County Highways.
Champaign County Safety Workshop #2

PREPARED FOR: IDOT Bureau of Safety
PREPARED BY: CH2M Hill
DATE: June 21, 2013
PROJECT NUMBER: 381335

The Champaign County Safety Workshop took place on Wednesday, March 7, 2012 at the Champaign County Administration Building. It was hosted by Rita Morocaima-Black of CUUATS and attended by representatives of IDOT, FHWA, Illinois State Police District 10, local law enforcement and judicial system, and University of Illinois.

Ms. Black gave an introduction and goals of the workshop, then turned it over to Kim Kolody-Silverman of CH2M Hill, IDOT’s consulting engineering firm for the project. Ms. Silverman began the meeting with a recap of Workshop #1 held in December 2011. She explained the steps taken in the realm of traffic safety at a national level, state level, and county level, and identified the areas of high priority for Champaign county specifically. These high priority areas had been discussed at Workshop #1, and correlating countermeasures had been voted on by the attendees. The results of this, as well as further analysis based on the workshop were then presented.

Ms. Silverman went on to explain the Crash Analysis that has been done for Champaign county. The data has shown that rural roads have a majority of Road Departure-related collisions, and occur mostly at unsignalized intersections. Likewise, municipal roads have recurring collisions at unsignalized intersections. It was then clarified that collisions on roadways are given an ID based upon the road’s jurisdiction- the highest jurisdiction always applies.

For CUUATS MPO, however, all data within the municipal boundaries was used to give an accurate view of the area, regardless of jurisdiction. Their crash analysis encompassed 2006-2011, and showed that within the municipal boundaries of Champaign, the majority of collisions were occurring at urban intersections, and were classified as Angle, Turning, and Rear-End types. It was noted that the data might be slightly skewed by incomplete crash records and coding errors, but the trends indicated that the amount of collisions has decreased by approximately 50% over the time span studied. Despite this, the number of intersection-related collisions has not changed, the cause was stated to be the unresolved issues at unsignalized intersections.

CUUATS detailed the corridor analysis that was performed, the results showing a total of 27 fatal collisions along those routes from 2006-2010, 49% of which were Angle, Turning or Rear-End. This started a site-specific discussion about identifying appropriate countermeasures, and applying for funding. CUUATS’ goals moving forward include improving their ability to identify issues, direct their resources appropriately, evaluate countermeasures, reduce fatalities on all Champaign County roadways, and to keep the Safety Committee going.

A question was raised about how severe of a collision a location needed to have before a high-cost countermeasure could be considered for funding. IDOT explained the evaluation process and how the
Benefit Cost Tool could be applied. Further discussion and explanation was given on the collisions by location, which was illustrated with maps in the handouts. It was also noted that pedestrian measures taken on the University of Illinois campus have been a deterrent to vehicular traffic.

After a short break for lunch, Priscilla Tobias, State Safety Engineer of Illinois, asked the attendees to break into small groups to discuss the next steps to be taken for Champaign County’s safety initiative. This involved discussing countermeasures and their success levels, as well as measures that might not have previously been considered. After the break-out, Ms. Tobias brought the meeting to a close by explaining that the information gathered at the workshop would be used to guide the next steps for the safety initiative, which include enhancing the Champaign County SHSP and identifying three projects that could potentially be submitted to the HSIP for funding.
Notes on countermeasures by the groups; Champaign County workshop on 3/7/2012

Signalized Intersections

- Optimize signal timing
- 17.2A – Can answer 70% of crash problems
- 17.2D – Agree → tree trimming and advanced notice
- 17.2G – Agree
- Lagging left turn
- Optimize clearance intervals

Unsignalized Intersections

- 17.1C1 – Agree – Also include parking signs, light poles, utility poles
- 17.1E – Important for rural unsignalized intersections
- Advanced warning signs and delineation
- Roundabouts/Traffic circles
- Lighting in town
- Access management (drivers, conflict points)
- Road diets as appropriate

Roadway Departure

- 15.1A
- 15.1A4 – Straighten out curves
- 15.1B – helpful strategies – esp. 15.1B2
- Rumble strips (centerline and shoulder)
- Relocated fixed objects (townships)
- Safety Edge (Engineering issue)
- Consider “context” with rumble strips
- Evaluation of Roadways (treatments)

+ Lincoln Ave – North of University
  - Left turn lanes to prevent rear end crashes
  - Study bay lengths
+ Kirby – between Neil and Prospect
  - turn lanes to and from commercial uses
+ Between Mathis (spelling?) and Duncan
  - turn lanes, road diets
+ Bradley Ave
  - Fatality at railroad crossing?
**Roadway Departure (continued)**

+900 N
   - Shoulders

+200 N
   - At Broadway – sharp curve? – State route (chance for funding?)
   - Neil St
     - Traffic calming
     - Speed table – with ped crossing on it

+Prospect – South of Springfield
   - Narrow down to 2 thin lanes and center TWLTL

**Aggressive Driving**

- Speed feedback signs
- Strict enforcement/prosecution

**Young Drivers (up to age 25)/Bike/Pedestrians**

- Situational awareness
- Lighting/reflectors (free give-aways)
- High visibility items
  - Flashing lights
  - Flags
- Bike path maps
- Educating parents
- Education of laws (same as Rules of the Road for vehicles)
- Outreach and education for non-English speaking population (ie, Hispanic population)

**Impaired Roadway Users**

- Enforcement
- Safe Cab/Safe Ride
- Suspend Driver’s License
- Ignition Interlock
- H.S. mock crash/CUI and education
- Publicize DUI checkpoints
- Administrative license suspension
- Drug/DUI court
- Incarceration if DUI court doesn’t work
- Targeted law enforcement
  - Corridors/U of I area
Seatbelt Usage

- Publicity/Enforcement
- Child Restraints → Training at hospitals
- Ongoing law enforcement (hire back)
- Focus on night time belt compliance
- Education
  - The younger the better
    - Grade school → H.S.
  - Positive peer pressure
- Clarify distracted driving laws and ordinances

Distracted Driving

- Education on drowsiness and cell phones
- Rumble strips
- Legislative – ban on telephones
- Better lane markings – may help drivers

Motorcycle Driving

1. Proper training and licensing; driver education
2. Motorcycle safety rally
   a. Cycle rodeos
   b. Used as education
   c. For other drivers
   d. For cyclists
   e. High visibility clothing
Appendix B Contents

Monticello Road Highway Safety Improvement Project: Before and After Analysis, February 2013
Monticello Road Highway Safety Improvement Project: Before and After
February 2013

As part of the statewide safety initiative, Monticello Road was selected to receive Highway Safety Improvements Projects (HSIP) funding based on historical data related to crashes along the corridor. The project limits extended from US Route 45 to Piatt County line. Over a five-year period extending from 2005-2009, 108 crashes were reported along the study corridor. About 35% of the crashes could be related to roadway departure (fixed object and overturned) and another 14% of the crashes were angle crashes. The crashes resulted in 46 injuries and 2 fatalities. Table 1 shows the collision type distribution over the five-year period, from 2005-2009. Figure 2 illustrates the crash severity of the reported crashes.

Table 1: Collision Type Distribution over the Five-Year Period (2005-2009)

<table>
<thead>
<tr>
<th>Collision Type</th>
<th>Year</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2005</td>
<td>2006</td>
</tr>
<tr>
<td>Angle</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Animal</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixed Object</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Head-on</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other Object</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Overturned</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Parked Motor vehicle</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Rear-end</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Turning</td>
<td>8</td>
<td>6</td>
</tr>
<tr>
<td>Other non-collision</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>26</td>
<td>21</td>
</tr>
</tbody>
</table>

Figure 1: Crash Severity over the Five-Year Period (2005-2009)

As part of the HSIP grant application, improvements were proposed to mitigate the roadway departure crashes along Monticello Road. The safety improvements included; shoulder widening from 2 feet...
aggregate shoulders to 6 feet paved shoulders, surface replacement, centerline rumble strips, edge line rumble strips, raised reflective pavement markings, re-grade of existing slopes and ditches to meet safety standards. The project construction started in April 2010 and was finished in October 2010. A short-term before-after crash data analysis was performed to identify the changes in the crash trend.

An eighteen (18) month before-after crash analysis was performed. The “before” period was prior to the roadway improvements from September 2008 to February 2010. The “after” period was post-construction from December 2010 to May 2012. Over an 18 month comparison period, the number of crashes reduced from 24 to 19. Figure 2 illustrates the cause of crashes along the study corridor. Table 2 shows the change in crash severity. Table 3 shows the change in different collision types between the before and after period.

**Figure 2: Cause of Crashes along Monticello Road: Before and After**

**Table 2: Crash Severity: Before and After**

<table>
<thead>
<tr>
<th>Crash Severity</th>
<th>Before</th>
<th>After</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fatal Crashes</td>
<td>1</td>
<td>-</td>
</tr>
<tr>
<td>A- Injuries Crashes</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>B- Injuries Crashes</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>C- Injuries Crashes</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>PDO Crashes</td>
<td>15</td>
<td>10</td>
</tr>
</tbody>
</table>
Table 3: Collision Type Distribution: Before and After

<table>
<thead>
<tr>
<th>Collision Type</th>
<th>Before</th>
<th>After</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angle</td>
<td>1</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>Animal</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Fixed Object</td>
<td>8</td>
<td>1</td>
<td>-7</td>
</tr>
<tr>
<td>Overturned</td>
<td>5</td>
<td>1</td>
<td>-4</td>
</tr>
<tr>
<td>Rear End</td>
<td>5</td>
<td>5</td>
<td>0</td>
</tr>
<tr>
<td>Turning</td>
<td>3</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Sideswipe Opposite</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>24</strong></td>
<td><strong>19</strong></td>
<td><strong>-5</strong></td>
</tr>
</tbody>
</table>

Conclusion:

The Monticello Road HSIP improvements focused on reducing/eliminating the roadway departure crashes. The analysis shows that the improvements significantly mitigate the roadway departure crashes (fixed/other objects and overturning). No fatal crashes occurred after roadway improvements were made to this roadway. The angle, rear end and turning crashes are mainly intersection related and need to be addressed separately in the future.
Appendix C
Emphasis Area Definitions and Terminology
Appendix C Contents

Emphasis Area Definitions
Ter i olog
Appendix C - Emphasis Area Definitions and Terminology

Definitions

**Young Driver (16-20)**
Definition: At least one of the drivers was between the ages 16 to 20.
- Crash Extract
  a. Count Fatalities
  b. Count A-Type Injuries
- Person Extract
  a. Where Person Type = 1 (Driver)
  b. Where Age= 16 to 20

**Old Driver**
Definition: At least one of the drivers was over the age of 65. Excludes the age “99” (unknown).
- Crash Extract
  a. Count Fatalities
  b. Count A-Type Injuries
- Person Extract
  a. Where Person Type = 1 (Driver)
  b. Where Age= 65 or greater [Excluding 99]

**Speeding/Aggressive**
Definition: Crash where the first cause was exceeding authorized speed limit, exceeding safe speed for conditions, failing to reduce speed to avoid crash, or operating vehicle in a erratic, reckless, careless, negligent, or aggressive manner.
- Crash Extract
  a. Count Fatalities
  b. Count A-Type Injuries
  c. Cause 1 Code = 1 (Exceeding authorized speed limit) or 27 (Exceeding safe speed for conditions) or 28 (Failing to reduce speed to avoid crash) or 50 (Operating vehicle in an erratic, reckless, careless, negligent or aggressive manner)

**Impaired**
Definition: At least one of the drivers was impaired by alcohol, impaired by drugs, medicated, or had been drinking.
- Crash Extract
  a. Count Fatalities
  b. Count A-Type Injuries
- Person Extract
  a. Where Person Type = 1 (Driver)
  b. Where Driver Condition = 2 (Impaired – alcohol) or 3 (Impaired – drugs) or 6 (Medicated) or 7 (Had been drinking)
**Unrestrained**
Definition: A fatality or A-type injury where the person (driver or passenger) injured had no safety equipment present, safety belt not used, helmet not used, child restraint used improperly, or child restraint not used.
- **Person Extract**
  a. Count Persons
  b. Person Type = 1 (Driver) or 7 (Passenger)
  c. Safety Equipment = 1 (None present) or 3 (Safety belt not used) or 5 (Helmet not used) or 7 (Child restrain used improperly) or 8 (Child restraint not used)

**Fatigue**
Definition: At least one driver involved in the crash is listed as fatigued (for 2003-2012 data only).
- **Person Extract**
  a. Where Person Type = 1 (Driver)
  b. Where DRAC (Driver Apparent Condition) = 8 (Fatigued)

**Drowsy**
Definition: At least one driver involved in the crash is listed as drowsy (for 2003-2012 data only).
- **Person Extract**
  a. Where Person Type = 1 (Driver)
  b. Where DRAC (Driver Apparent Condition) = 5 (Asleep/Fainted)

**Distracted**
Definition: Crash that involved a driver that was distracted.
- **Crash Extract**
  a) 2003-2012 Crash Extracts
    a. Where Cause 1 = 40 (Distraction – from outside vehicle) or 41 (Distraction – from inside vehicle) or 42 (Distraction – electronic communication device) or 43 (Distraction (Other electronic device: navigation device, DVD player, etc.)
  b) 2013 Crash Extract
    a. Where Cause 1 = 40 (Distraction – from outside vehicle) or 41 (Distraction – from inside vehicle) or = 44 (Texting) or 45 (Cell phone other than texting)

**Pedestrian**
Definition: A fatality or A-Type injury where the person injured was a pedestrian.
- **Person Extract**
  a. Count Persons
  b. Injury Severity = 4 (Fatality) or 3 (A-Type Injury)
  c. Person Type = 2 (Pedestrian)

**Pedalcyclist**
Definition: A fatality or A-Type injury where the person injured was a pedalcyclist.
- **Person Extract**
  a. Count Persons
  b. Injury Severity = 4 (Fatality) or 3 (A-Type Injury)
c. Person Type = 3 (Pedalcyclist)

**Motorcycle**
Definition: Crash that involved at least one motorcycle (over 150cc) or motor driven cycle.
- Crash Extract
  a. Count Fatalities
  b. Count A-Type Injuries
- Vehicle Extract
  a. VEHT = 10 [Motorcycle (over 150 cc)] or 11 (Motor driven cycle)

**Heavy Vehicle**
Definition: At least one of the vehicles was a bus up to 15 passengers, bus over 15 passengers, trunk single-unit, tractor with semi-trailer, or tractor without semi-trailer.
- Crash Extract
  a. Count Fatalities
  b. Count A-Type Injuries
- Vehicle Extract
  a. Where VEHT = 4 (Bus up to 15 passengers) or 5 (Bus over 15 passengers) or 6 (Truck – single unit) or 7 (Tractor w/semi-trailer) or 8 (Tractor w/o semi-trailer)

**Roadway Departure**
Definition: Crash where the collision type was overturned, fixed object, sideswipe-opposite direction, or head-on.
- Crash Extract
  a. Count Fatalities
  b. Count A-Type Injuries
  c. Where Collision Type Code = 5 (Overturned) or 6 (Fixed Object) or 13 (Sideswipe-opposite direction) or 14 (Head on)

**Intersection**
Definition: Crash that was intersection related.
- Crash Extract
  a. Count Fatalities
  b. Count A-Type Injuries
  c. Intersection related="Y"

**Work Zone**
Definition: Crash that took place in a construction zone, maintenance zone, utility work zone, or work zone-unknown.
- Crash Extract
  a. Count Fatalities
  b. Count A-Type Injuries
  c. Where Road Defect Code = 2 (Construction Zone) or 3 (Maintenance Zone) or 4 (Utility Work Zone) or 5 (Work Zone- unknown)
### Terminology

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Crash (number of crashes)</th>
<th>Person (number of people)</th>
</tr>
</thead>
<tbody>
<tr>
<td>K</td>
<td>Fatal crashes</td>
<td>Fatalities</td>
</tr>
<tr>
<td>A</td>
<td>A-type injury crashes OR A-injury crashes OR serious injury crashes</td>
<td>A-type injuries OR A-Injuries OR serious injuries</td>
</tr>
<tr>
<td>KA</td>
<td>Fatal and A-type injury crashes OR fatal and A-injury crashes OR severe crashes</td>
<td>Fatalities and A-type injuries OR Fatalities and A-injuries OR fatalities and serious injuries</td>
</tr>
</tbody>
</table>
Appendix D Contents

Champaign Emphasis Area Photos
  ➢ Younger Driver (16-20)
  ➢ Older Driver (65+)
  ➢ Speeding/Aggressive Driver
  ➢ Impaired Driver
  ➢ Unrestrained Driver
  ➢ Pedestrian
  ➢ Pedalcyclist
  ➢ Motorcycle
  ➢ Heavy Vehicle
  ➢ Roadway Departure
  ➢ Intersection
Younger Driver

Engage parents through outreach programs designed to educate parents.

Publicize and conduct high visibility enforcement of GDL restrictions, underage drinking and driving and seatbelt laws.

Guide is available at www.cyberdriveillinois.com/departments/drivers/teen_driver_safety/gdl.html
Older Driver

Re-evaluate driving skills.

Photo courtesy of www.wmfd.com
Speeding/Agressive Driver

Install Dynamic Speed Feedback Sign.

Publicize and conduct high visibility targeted enforcement of speeding and aggressive driving; impose sanctions against repeat offenders.
Impaired Driver

Law enforcement checkpoints

Photo courtesy of www.badboysbailbondutah.com
Unrestrained

Conduct high-profile “child restraint inspection” events at multiple community locations
Pedestrians

Provide full/partial diverters and street closure. Below are four examples of several types of diverters.
Pedalcylist

Addition of bike boxes

Photo courtesy of www.treehugger.com
Motorcycle

Complete proper training

Photo courtesy of http://www.saddleupva.com/

Signs for public awareness of motorcycles sharing the roads with passenger vehicles

Photo courtesy of http://www.startseeingmotorcycles.org
Heavy Vehicles
Complete proper training

Photo courtesy of http://prairiestate.edu/cdl/

Better maintenance for heavy vehicles

Photo courtesy of http://www.alextech.edu/en/Students/Programs/Transportation/TruckDriving/ProgramFocus.aspx
Roadway Departure

Edge Treatments

Without Safety Edge

With Safety Edge

Paved Shoulder and Rumble Strip

Rumble StripE

Roadside Safety Strategies (2 of 6)
Provide advanced delineation for sharp curves

Photo courtesy of www.fhwa.gov

Photo courtesy of www.ctre.iastate.edu
Intersection

Enhanced Signing and Delineation

- Add can delineators to Stop sign
- Stop Bar, 12” to 24” wide, 8’ to 12’ back from edgeline
- Provide three devices indicating upcoming intersection
- 36”, reserve 48” for intersections with documented deficiency and where there are RR grade crossings on the CH approach
- ½ distance between Stop Ahead and Stop Ahead Sign
- 450' (min.) to 750' back, 1 size larger than Stop (up to 48”)

Source: MoDOT Dia 3-13 County
BSA - CH/M HILL 2006
Intersection (5 of 8)

Improve visibility of unsignalized intersections by providing lighting

Images courtesy of Missouri Department of Transportation
Appendix E
Behavioral and Infrastructure Strategies
Appendix E Contents

Driver Behavior Based Strategies
Infrastructure Based Safety Strategies
## Driver Behavior Based Strategies

### Impaired Driving Strategies

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Strategies</th>
<th>Effectiveness</th>
<th>*Programs and Tactics</th>
<th>*Impact</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>*5.1 A-Eliminate Drinking and Driving</td>
<td>5.1 A2-Require Responsible Beverage Service Policies for Alcohol Servers and Retailers</td>
<td>Proven</td>
<td>Advocate for Server Training and strong management support</td>
<td>Medium</td>
<td>2</td>
</tr>
<tr>
<td>5.1 B-Enforce DWI Laws</td>
<td>*5.1 B1-Conduct Regular Well-Publicized DWI Saturations</td>
<td>Proven</td>
<td>A Saturation is a multi-agency, multi-squad car enforcement effort. These agencies and cars enforce the same community or roadway with the number of squad cars proportionate to the community size.</td>
<td>High</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>*5.1 B3-Conduct education and awareness campaign of the targeted enforcement of Zero Tolerance Laws for Drivers Under Age 21</td>
<td>Proven</td>
<td>Publicizing is best done through community events for the local media and a public education campaign in the community about the enforcement. High visibility enforcement is when multiple jurisdictions and/or multiple squads are out at the same time patrolling in brightly colored vests and signage about the enforcement.</td>
<td>Low</td>
<td>2</td>
</tr>
<tr>
<td>5.1 C-Prosecute, Impose Sanctions on, and Treat DWI Offenders</td>
<td>5.1 C1-Suspend Driver's License Administratively Upon Arrest</td>
<td>Proven</td>
<td>Minnesota revokes driving privileges 7 days after alcohol test failure of 0.08 or above or test refusal.</td>
<td>High</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>5.1 D—Control High-BAC and Repeat Offenders</td>
<td>Proven</td>
<td>Encourage the criminal justice system to use ignition interlock for monitoring DWI offenders. Multiple alcohol violations on ignition interlock reports are predictive of re-offense and further assessment of the offender’s chemical use is needed.</td>
<td>High</td>
<td>4</td>
</tr>
</tbody>
</table>

### Seatbelt Usage Strategies

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Strategies</th>
<th>Effectiveness</th>
<th>*Programs and Tactics</th>
<th>*Impact</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.1 A- Maximize use of occupant restraints by all vehicle occupants</td>
<td>*8.1 A1- Conduct highly publicized enforcement campaigns to maximize restraint use. Specifically, night time belt enforcement saturation.</td>
<td>Proven</td>
<td>Publicizing is best done through community events for the local media and a public education campaign in the community about the enforcement. High visibility enforcement is when multiple jurisdictions and/or multiple squads are out at the same time patrolling in brightly colored vests and signage about the enforcement. Methods for night time enforcement include having multi-agency and multiple squad cars in well lit areas where slow moving vehicles are passing and conducting for a limited time slot.</td>
<td>High</td>
<td>4</td>
</tr>
<tr>
<td>6.1 D3—Encourage employers to 1) offer education programs to employees and to 2) enact traffic safety policies with clear consequences for failure to comply.</td>
<td>Proven</td>
<td>Utilize materials and policy statements designed for employers by Network of Employers for Traffic Safety</td>
<td></td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>8.1 B- Insure that restraints, especially child and infant restraints, are properly used</td>
<td>8.1 B2- Conduct high-profile “child restraint inspection” events at multiple community locations.</td>
<td>Proven</td>
<td></td>
<td>Low</td>
<td></td>
</tr>
</tbody>
</table>

### Distracted Driving Strategies

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Strategies</th>
<th>Effectiveness</th>
<th>*Programs and Tactics</th>
<th>*Impact</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.1 D3—Encourage employers to 1) offer fatigue management programs to employees working nighttime or rotating shifts and to 2) enact traffic safety policies with clear consequences for failure to comply.</td>
<td>Proven</td>
<td>Utilize materials and policy statements designed for employers by Network of Employers for Traffic Safety</td>
<td>Medium</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Motorcycle Safety Strategies

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Strategies</th>
<th>Effectiveness</th>
<th>*Programs and Tactics</th>
<th>*Impact</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.1 B Reduce the number of motorcycle crashes due to rider impairment</td>
<td>Publicize and conduct a high visibility enforcement of all laws pertaining to motorcycle riding.</td>
<td>Proven</td>
<td>Publicizing is best done through community events for the local media and a public education campaign in the community about the enforcement. High visibility enforcement is when multiple jurisdictions and/or multiple squads are out at the same time patrolling in brightly colored vests and signage about the enforcement. Methods for night time enforcement include having multi-agency and multiple squad cars in well lit areas where slow moving vehicles are passing and conducting for a limited time slot.</td>
<td>High</td>
<td>2</td>
</tr>
<tr>
<td>11.1 E Reduce the severity of motorcycle crashes</td>
<td>11.1 E1 Increase the use of FMVSS 218 compliant helmets.</td>
<td>Proven</td>
<td>Motorcycle DWI Detection Guide or Detection of DWI Motorcyclists</td>
<td>Medium</td>
<td></td>
</tr>
</tbody>
</table>

### Young Driver & Bicycles Strategies

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Strategies</th>
<th>Effectiveness</th>
<th>*Programs and Tactics</th>
<th>*Impact</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1B Publicize, enforce, and adjudicate laws pertaining to young drivers</td>
<td>1.1B -- Publicize and conduct a high visibility enforcement GDL restrictions, cell and texting laws, underage drinking and driving and seatbelt laws</td>
<td>Proven</td>
<td>Publicizing is best done through community events for the local media and a public education campaign in the community about the applicable laws, parental involvement and the enforcement. High visibility enforcement is when multiple jurisdictions and/or multiple squads are out at the same time patrolling in areas frequented by teen drivers in brightly colored vests and signage about the enforcement.</td>
<td>High</td>
<td>2</td>
</tr>
</tbody>
</table>
## INFRASTRUCTURE BASED SAFETY STRATEGIES

### Roadway Departure Strategies

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Strategies</th>
<th>Cost to Implement and Operate</th>
<th>Effectiveness</th>
<th>Timeframe for Implementation</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>15.1 A -- Keep vehicles from encroaching on the roadside</td>
<td>15.1 A1 -- Install shoulder rumble strips</td>
<td>Low</td>
<td>Proven*</td>
<td>Short</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>15.1 A3 -- Install centerline rumble strips</td>
<td>Low</td>
<td>Proven*</td>
<td>Short</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15.1 A4 -- Provide enhanced shoulder or delineation and marking for sharp curves</td>
<td>Low</td>
<td>Tried / Proven</td>
<td>Short</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15.1 A5 -- Provide improved highway geometry for horizontal curves</td>
<td>High*</td>
<td>Proven*</td>
<td>Long</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15.1 A8 -- Apply shoulder treatments *Eliminate shoulder drop-offs *Safety edge *Widen and/or pave shoulders</td>
<td>Moderate</td>
<td>Experiment al/ Proven</td>
<td>Medium</td>
<td>3</td>
</tr>
<tr>
<td>15.1 B -- Minimize the likelihood of crashing into an object or overturning if the vehicle travels off the shoulder</td>
<td>15.1 B1 -- Design safer slopes and ditches to prevent rollovers</td>
<td>Moderate to High*</td>
<td>Proven</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15.1 B2 -- Remove/relocate objects in hazardous locations</td>
<td>Moderate to High</td>
<td>Proven</td>
<td>Medium</td>
<td></td>
</tr>
</tbody>
</table>

### Unsignalized Intersection Strategies

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Strategies</th>
<th>Cost to Implement and Operate</th>
<th>Effectiveness</th>
<th>Timeframe for Implementation</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.1 B -- Reduce the frequency and severity of intersection conflicts through geometric design improvements</td>
<td>17.1 B16 -- Realign intersection approaches to reduce or eliminate intersection skew</td>
<td>High</td>
<td>Proven</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td>17.1 E -- Improve driver awareness of intersections as viewed from the intersection approach</td>
<td>17.1 E2 -- Improve visibility of intersections by providing lighting</td>
<td>Low to Moderate*</td>
<td>Proven</td>
<td>Medium</td>
<td>3</td>
</tr>
<tr>
<td>17.1 F -- Choose appropriate intersection traffic control to minimize crash frequency and severity</td>
<td>17.1 F3 -- Provide roundabouts at appropriate locations</td>
<td>High</td>
<td>Proven</td>
<td>Long</td>
<td>2</td>
</tr>
<tr>
<td>17.1 H -- Reduce operating speeds on specific intersection approaches</td>
<td>17.1 H1 -- Install dynamic speed feedback signs*</td>
<td>Low</td>
<td>Proven</td>
<td>Short</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17.1 H2 -- Provide traffic calming on intersection approaches through a combination of geometrics and traffic control devices</td>
<td>Moderate</td>
<td>Proven</td>
<td>Medium</td>
<td></td>
</tr>
</tbody>
</table>
## Signalized Intersection Strategies

<table>
<thead>
<tr>
<th>Objectives</th>
<th>Strategies</th>
<th>Cost to Implement and Operate</th>
<th>Effectiveness</th>
<th>Timeframe for Implementation</th>
<th>Votes</th>
</tr>
</thead>
<tbody>
<tr>
<td>17.2 A -- Reduce frequency and severity of intersection conflicts through traffic control and operational improvements</td>
<td>17.2 A1 -- Optimize signal operation (phasing/timing, etc)</td>
<td>Low</td>
<td>Tried / Proven</td>
<td>Short</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17.2 A2 -- Optimize clearance intervals</td>
<td>Low</td>
<td>Proven</td>
<td>Short</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17.2 A4 -- Employ signal coordination along a corridor or route</td>
<td>Low*</td>
<td>Proven</td>
<td>Medium</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17.2 A6 -- Improve operation of pedestrian and bicycle facilities at signalized intersections</td>
<td>Low</td>
<td>Tried / Proven</td>
<td>Short</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17.2 A7 -- Remove unwarranted/unnecessary signal</td>
<td>Low</td>
<td>Proven</td>
<td>Short</td>
<td></td>
</tr>
<tr>
<td>17.2 G -- Improve safety through other infrastructure treatments</td>
<td>17.2 G5 -- Restrict or eliminate parking on intersection approaches</td>
<td>Low</td>
<td>Proven</td>
<td>Short</td>
<td></td>
</tr>
</tbody>
</table>


*Updated by CH2M HILL

Short (<1 year) | Low (<$100,000/intersection) |       |
Medium (1-2 years) | Moderate ($100,000-$500,000/intersection) |       |
Long (>2 years) | High (>$500,000/intersection) |       |
Appendix F
How to Read Data Trees
Step 1: Identify which of the three systems on this branch represents a higher percentage of crashes; 'All Crashes' are shown in black and 'Severe Crashes' are shown in red.

Step 2: Since the Local System (highlighted in yellow) has the majority of crashes, skip to page 4 where the Local System is detailed.

Winnebago County, Illinois
2009 to 2013 Crash Data Overview
State System - Other Principal Arterial & Major Collector Roadways

Collision Type Abbreviations:
ANG: Angle
HO: Head-On
OVT: Overturned
PED: Pedestrian
SOD: Sideswipe Opposite Direction
TUR: Turn

Grade/Curve on Hillcrest
Urban and Rural designations are defined by the Class of Trafficway code in the Illinois Roadway Inventory System.

Results of the analyses are based on data that was received from the Illinois Department of Transportation. Crash data represents 2000 to 2013 and was obtained from the state police and the Illinois Department of Transportation. Crash data for years 2000 to 2011 was received from IDOT on November 26, 2013, and crash data for 2013 was received from IDOT on December 4, 2014.

The data was used as is for analysis purposes and should be interpreted accordingly.

Source: IDOT Crash Extracts 2009 - 2013 Crash Data
All crashes include fatal, all injury and property damage only crashes. Severe crashes include fatal and incapacitating injury crashes with (or without) property damage.

Note: Cells highlighted in yellow help indicate to the reader that a specific system is experiencing over-representation of both KABCO and K-4 crashes. Underlined and bolded crash types are the highest frequency crash type in its respective branch.

The orange lines and boxes that start at the top '5 Year Crashes' box is shown on pages 1, 4 and 6; these are not included on all data tables. It is only shown on this example to help the reader absorb the thought process needed to gain value from the data tables.

Highlighting Criteria:
State/Local/Unknown System Branch: highlighted if ≥ 55% 
Functional Class Branch: highlighted if ≥ 25%
Urban/Rural Branch: highlighted if ≥ 55%
Intersection/Non-Intersection Branch: highlighted if ≥ 55%
Animal/Non-Animal: highlighted if ≥ 55%
Roadway Departure Branch: highlighted if ≥ 40%
On Curve Branch: highlighted if ≥ 25%
Winnebago County, Illinois
2009 to 2013 Crash Data Overview
State System - Interstate & Freeway and Expressway Roadways

| Source: IDOT Crash Extracts 2009 - 2013 Crash Data
| All crashes include fatal, all injury and property damage only crashes.
| 'All crashes' include fatal and incapacitating injury crashes only (i.e., A).

### 2009 to 2013 Crash Data Overview

<table>
<thead>
<tr>
<th>Category</th>
<th>All Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sandy</td>
</tr>
<tr>
<td>5-Year Crashes</td>
<td>31,232</td>
</tr>
<tr>
<td>Sandy Crash</td>
<td>7,571</td>
</tr>
<tr>
<td>Kentville Crash</td>
<td>6,520</td>
</tr>
<tr>
<td>Fox Crash</td>
<td>1,766</td>
</tr>
<tr>
<td>Sandy Kentville Crash</td>
<td>3,288</td>
</tr>
<tr>
<td>Kentville Fox Crash</td>
<td>1,470</td>
</tr>
</tbody>
</table>

### State System

<table>
<thead>
<tr>
<th>Category</th>
<th>All Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sandy</td>
</tr>
<tr>
<td>5-Year Crashes</td>
<td>31,232</td>
</tr>
<tr>
<td>Sandy Crash</td>
<td>7,571</td>
</tr>
<tr>
<td>Kentville Crash</td>
<td>6,520</td>
</tr>
<tr>
<td>Fox Crash</td>
<td>1,766</td>
</tr>
<tr>
<td>Sandy Kentville Crash</td>
<td>3,288</td>
</tr>
<tr>
<td>Kentville Fox Crash</td>
<td>1,470</td>
</tr>
</tbody>
</table>

### Collision Type Abbreviations:
- ANG: Angle
- ANM: Animal
- Fo: Fixed Object
- HO: Head On
- Other: Other Non-Collision/Other Object/Parked Car/Train/Unknown
- OVT: Overturned
- PED: Pedestrian
- PDC: Pedalcyclist
- RE: Rear End
- SSD: Sideswipe Opposite Direction
- SSD: Sideswipe Same Direction
- T: Turning

The data was used "as is" for analysis purposes and should be interpreted accordingly.

---

State System/Loudoun Avenue System is defined by the Class of Traffic facility in the State Roadway Inventory System. Crashes are considered "Local" of the Class of Traffic facility in a specific "1. County Local Public Road/3. City Streets/Urban/14. Unknown Systems/6. Airport/Other urban systems are equal to 1." Unknown Urban/Non-Urban systems are the remaining inputs.

### Results of the analysis are based on data that was received from the Bureaus for the Department of Transportation:

- The data was used "as is" for analysis purposes and should be interpreted accordingly.
Winnebago County, Illinois
2009 to 2013 Crash Data Overview
State System - Minor Arterial Roadways

Collision Type Abbreviations:
ANG: Angle
ANM: Animal
FO: Fixed Object
HO: Head-On
OVT: Overturned
PED: Pedestrian
PDC: Pedalcyclist
RE: Rear End
SSD: Sideswipe Opposite Direction
SOD: Sideswipe Same Direction
TUR: Turn

Query definitions for 'Roadway Departure' and 'On Curve':
Roadway Departure: FO/OVT/HO/SOD
On Curve: Road Departure Crashes on Level Curve/Curve on Grade/Curve on Hillcrest

Interaction crashes are defined as crashes resulted by interaction resulted by the non-impacting other. Traffic control devices are considered 'Signaled' if the code is equal to 1: 'Traffic Signal - Non-Signaled' crash is equal to 11: 'No Controls - 3 - Stop Sign/Fixtures' or 12: 'Road - No Controls'. "Other/Unknown" traffic control codes are the remaining inputs.


Results of the analyses are based on data that was received from the Illinois Department of Transportation. Crash data for years 2009 to 2012 was received from IDOT on November 26, 2013, and crash data for 2013 was received from IDOT on December 4, 2014.

The data was used "as is" for analyses purposes and should be interpreted accordingly.

Source: IDOT Crash Extracts 2008 - 2013 Crash Data
'All crashes' include fatal, all injury and property damage only crashes
'Severe crashes' include fatal and incapacitating injury crashes only (K + A)
### Winnebago County, Illinois
#### 2009 to 2013 Crash Data Overview

Local System - Other Principal Arterial & Major Collector Roadways

<table>
<thead>
<tr>
<th>Crash Type Abbreviations</th>
<th>Collision Type Abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANG: Angle</td>
<td>ANM: Animal</td>
</tr>
<tr>
<td>FO: Fixed Object</td>
<td>HO: Head-On</td>
</tr>
<tr>
<td>Other: Other Non-Collision/Other Object/Parked Car/Train/Unknown</td>
<td></td>
</tr>
<tr>
<td>On Curve: Road Departure Crashes on Level Curve/Curve on Grade/Curve on Hillcrest</td>
<td></td>
</tr>
<tr>
<td>On Curve: Road Departure Crashes on Level Curve/Curve on Grade/Curve on Hillcrest</td>
<td></td>
</tr>
</tbody>
</table>

Results of the analyses are based on data that was received from the Illinois Department of Transportation. Crash data for 2009 to 2013 was received from IDOT on November 26, 2013, and crash data for 2013 was received from IDOT on December 4, 2014.

The data was used "as is" for analysis purposes and should be interpreted accordingly.

### Step 2: Identify which Functional Class system from the Local System branch has the highest percentage of crashes ↔ Minor Arterial

Since the Minor Arterial branch is of interest, skip to page 6 where this branch is detailed for the Local System.
Winnebago County, Illinois
2009 to 2013 Crash Data Overview
Local System - Local Road or Street & Minor Collector Roadways

<table>
<thead>
<tr>
<th>Collision Type Abbreviations</th>
<th>HO: Head-On</th>
<th>Other: Other Non-Collision/Other Object/Parked Car/Train/Unknown</th>
<th>SOD: Sideswipe Opposite Direction</th>
<th>SSD: Sideswipe Same Direction</th>
<th>T: Turning</th>
<th>Roadway Departure: FO/OVT/HO/SOD</th>
<th>Grade/Curve on Hillcrest</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>All Crashes</th>
<th>%</th>
<th>Severe Crashes</th>
<th>%</th>
<th>Severe/Crashes</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Crashes</td>
<td>7,266</td>
<td>133</td>
<td>9,576</td>
<td>71</td>
<td>53,366</td>
</tr>
<tr>
<td>Intersection</td>
<td>499</td>
<td>73%</td>
<td>27%</td>
<td>29</td>
<td>60%</td>
</tr>
<tr>
<td>Non-Intersection</td>
<td>1,062</td>
<td>25%</td>
<td>75%</td>
<td>38</td>
<td>36%</td>
</tr>
<tr>
<td>Non-Local System</td>
<td>833</td>
<td>18%</td>
<td>82%</td>
<td>16</td>
<td>11%</td>
</tr>
<tr>
<td>At-Acc</td>
<td>116</td>
<td>20%</td>
<td>80%</td>
<td>141</td>
<td>21%</td>
</tr>
<tr>
<td>TUR</td>
<td>173</td>
<td>5%</td>
<td>95%</td>
<td>24</td>
<td>36%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>5-Year Crashes</th>
<th>%</th>
<th>5-Year Crashes</th>
<th>%</th>
<th>5-Year Crashes</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Crashes</td>
<td>3,386</td>
<td>16%</td>
<td>526</td>
<td>20%</td>
<td>10%</td>
</tr>
<tr>
<td>Intersection</td>
<td>773</td>
<td>15%</td>
<td>35%</td>
<td>21%</td>
<td></td>
</tr>
<tr>
<td>Non-Intersection</td>
<td>259</td>
<td>35%</td>
<td>35%</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>Non-Local System</td>
<td>203</td>
<td>4%</td>
<td>203</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>At-Acc</td>
<td>46</td>
<td>4%</td>
<td>46</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>TUR</td>
<td>19</td>
<td>1%</td>
<td>19</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State System</th>
<th>%</th>
<th>State System</th>
<th>%</th>
<th>State System</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Crashes</td>
<td>1,441</td>
<td>53</td>
<td>1,441</td>
<td>53</td>
<td>1,441</td>
</tr>
<tr>
<td>Intersection</td>
<td>64</td>
<td>1%</td>
<td>64</td>
<td>1%</td>
<td>64</td>
</tr>
<tr>
<td>Non-Intersection</td>
<td>141</td>
<td>21%</td>
<td>141</td>
<td>21%</td>
<td>141</td>
</tr>
<tr>
<td>Non-Local System</td>
<td>133</td>
<td>23%</td>
<td>133</td>
<td>23%</td>
<td>133</td>
</tr>
<tr>
<td>At-Acc</td>
<td>4</td>
<td>1%</td>
<td>4</td>
<td>1%</td>
<td>4</td>
</tr>
<tr>
<td>TUR</td>
<td>1</td>
<td>0%</td>
<td>1</td>
<td>0%</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local System</th>
<th>%</th>
<th>Local System</th>
<th>%</th>
<th>Local System</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Crashes</td>
<td>3,276</td>
<td>75%</td>
<td>526</td>
<td>20%</td>
<td>637</td>
</tr>
<tr>
<td>Intersection</td>
<td>773</td>
<td>15%</td>
<td>773</td>
<td>15%</td>
<td>35%</td>
</tr>
<tr>
<td>Non-Intersection</td>
<td>259</td>
<td>35%</td>
<td>259</td>
<td>35%</td>
<td></td>
</tr>
<tr>
<td>Non-Local System</td>
<td>203</td>
<td>4%</td>
<td>203</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>At-Acc</td>
<td>46</td>
<td>4%</td>
<td>46</td>
<td>4%</td>
<td></td>
</tr>
<tr>
<td>TUR</td>
<td>19</td>
<td>1%</td>
<td>19</td>
<td>1%</td>
<td></td>
</tr>
</tbody>
</table>

The data was used "as is" for analysis purposes and should be interpreted accordingly.

Results of the analyses are based on data that was received from the Illinois Department of Transportation. Crash data represents years 2009 to 2013 and was obtained from the state police and other law enforcement agencies. Crash data for years 2009 to 2012 was accessed from DOTS on December 16, 2013, and crash data 2013 was accessed from DOTS on December 4, 2014.

Printed by CH2M HILL

Draft - March 2015
Page 5
**Winnebago County, Illinois**

**2009 to 2013 Crash Data Overview**

**Local System - Minor Arterial Roadways**

<table>
<thead>
<tr>
<th>Category</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>All Crashes %</strong></td>
<td>25%</td>
<td>26%</td>
<td>25%</td>
<td>24%</td>
<td>24%</td>
<td>24%</td>
</tr>
<tr>
<td><strong>Severe Crashes %</strong></td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>All Crashes</strong></td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Severe Crashes</strong></td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>Fatalities</strong></td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
<tr>
<td><strong>All Crashes</strong></td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
<td>20%</td>
</tr>
<tr>
<td><strong>Severe Crashes</strong></td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**Steps Overview**

**Step 1:** Identify if Local, Minor Arterial, Urban area crashes occurred more frequently at intersections or non-intersection locations.

In this case, it is fairly balanced between KABC and K-A crashes. Since 87% K-A crashes versus 95 K-ABC crashes is very stable, one might use the KABC crashes to determine which branch should be followed next.

Since 55% of KABC crashes are intersection related, this branch will be followed in Step 6.

**Step 6:** Identify if Local, Minor Arterial, Urban intersection related crashes occurred more frequently at Signalized Intersections or Unsignalized Intersections. In this case, it again appears that KABC crashes will be the deciding factor of which branch to follow.

**Step 7:** Identify which crash types are most frequent and abbreviations are defined in the bottom left of every page.

**Step 8:** Proposal/implement countermeasures that are appropriate for the most frequent crash types and the system they are occurring.