

2006 TIPPECANOE COUNTY VEHICLE CRASH REPORT



Prepared by

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Indiana Department of Transportation
Battle Ground Police Department
Purdue Police Department, and
Dayton Police Department

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EXECUTIVE SUMMARY

In 2006, police agencies reported 7,244 crashes in Tippecanoe County, 5689 of which occurred on public roadways e.g., parking facilities and private drives/property are excluded from this analysis. This averages to approximately 16 crashes per day on the road system. As is typical, the vast majority of crashes only involved property damage (4608 or 81%). Nearly 19 percent (1060) involved one or more personal injuries. The number of fatalities typically fluctuates year to year; however, there were a 21 fatality crashes in 2006.

The winter months (October, November, December, and January) typically rank the highest for property damage crashes, with this year's peak in October, followed by November. The pattern for personal injury crashes is also high in the autumn and winter months with a peak in August, followed by October and September.

Fridays consistently had the most crashes of all types and accounted for 1,076 or 18.9% of the total number of crashes. Likewise, Sunday consistently had the fewest total crashes (549 or 9.7% of total). In 2006, the peak for fatality accidents occurred on Mondays, followed by Saturdays, with Fridays reporting the least number of fatality crashes with only 1.

Historically 25% of all accidents (including property damage and injury crashes) occurred between 3-6pm. This year's peak was between 5-6pm for total (470), property damage (371), and personal injury crashes (99). Typically 3am to 6am have the fewest crashes with this year's low occurring from 4-5am (52).

Of the primary circumstances that contribute to a crash, forty percent were due to *following too closely* and *failing to yield the right-of-way*. Naturally the top two types of collisions were *rear end*, 33.6%, and *right angle*, 18.1%.

There were 100 intersections that had ten or more crashes, and all but 1 of the top 40 (ranked by number of crashes) involved a state road. The intersection that had the most crashes was SR 26 and Creasy with 46 crashes, followed by a tie for second between US 231/River Rd and SR 26, and US 52 and SR 26 with 36 crashes each. These intersections, along with US 52 and Teal, and US 52 and SR 38, are historically ranked in the top 10 crash locations.

When crash locations are compared based on exposure (i.e., crashes per Million Entering Vehicles-MEV) the worst intersection was SR 43 and the SB Exit/Entrance Ramps to I-65 followed by Main St and S 18th St. Although these are not heavily traveled intersections, their relative rate of crashes was larger than the other major intersections in the county. The intersection at US 231 and SR 26 ranked as the 5th most dangerous intersection. SR 26 and Creasy came in 32nd place out of the 100 intersections.

GLOSSARY

ARIES: Automated Reporting Information Exchange System (ARIES) developed and maintained by the Indiana State Police. ARIES provides officer's an electronic means to complete the Indiana Officer's Crash Report form. The system also allows access to authorized individuals to the Indiana State Police crash records database. ARIES was formerly known as the Vehicle Crash Record System (VCRS).

Aggressive Driving: Two or more driver behaviors actions that occur in a relatively short distance that include but not limited to: following too close, failure to signal lane changes, speeding, driving on the shoulder, cutting back into lane without sufficient clearance, etc.

Alcohol-Related Crash: A crash in which the investigating officer reported one or more of the following: Primary Contributing Circumstance for the crashes as Alcoholic Beverages; Vehicle Contributing Circumstance for one or more of the involved vehicles as Alcoholic Beverage, or; A Blood Alcohol Concentration of greater than 0.08 percent for one or more of the drivers involved in the crash.

Construction Zone: It begins with the first actual lane restriction or required reduction of speed and ends when the lanes are returned to a normal flow and normal speed.

Contributing Circumstances: For each vehicle, the officer can select up to two "Driver" contributing circumstances, and one "Vehicle" and one "Environmental" contributing circumstances. For one of the vehicles in the accident, one the four possible contributing circumstances must be the primary factor. Appendix A provides the options available to the Officers.

Crash Report:

Motor vehicle crashes have a number of characteristics that are used to determine whether or not a crash report is required. If the answer to each of the questions below is "yes", the incident is a motor vehicle crash¹:

1. Did the incident involve one or more motor vehicles?
2. Of the motor vehicles involved, was at least one in motion?
3. Did the incident originate on a traffic way, or on private property; and where injury or apparent damage occurred?
4. Was there at least one occurrence of injury or damage, which was not a direct result of a cataclysm (act of nature)?

If vehicles are moved, a report should be completed and is required by law if the crash involves \$1,000 or more in property damage, or when personal injury or death has occurred, regardless if the vehicle(s) have been moved prior to the officer's arrival.

If a chain of events occurs without the situation coming to a [stabilized condition](#), it is one crash regardless of how many vehicles are involved. For example, an object falls from a vehicle, bounces off the road and strikes another vehicle. This would require a single crash report to be completed. However, if the vehicles and conditions surrounding the crash have stabilized

¹ Previously, acts of "[Deliberate intent](#)" (suicide, homicide, legal intervention, etc.) were excluded from crash reports and documented on criminal case reports; however, depending on an agencies policy, a victim or their agent could have difficulty in obtaining needed information. As a result of this, if a deliberate act meets the criteria set forth in questions 1-4, a crash report will be required in addition to any criminal report(s).

and another event occurs it becomes two separate crashes e.g., an object falls from a vehicle, bounces off the road and strikes another vehicle; then, after stabilization, another vehicle strikes either the object or vehicle from

Crash Severity: The severity of a crash based on the type, or lack of injuries involved crash. The types used in this report Fatal Injury Crash, Personal Injury Crash, or Property Damage Only Crash.

Driver/Operator: The person who is in actual physical control of a vehicle in transit.

Fatal Injury: An injury that results in death within a 30-day period after the crash occurred.

Fatal Injury Crash: A crash that results in one or more of the vehicle(s) occupants or non-motorists. Other occupants or non-motorists may be injured in addition to the fatality.

FHWA: Federal Highway Administration (FHWA) is a division of the United States Department of Transportation.

Incapacitating Injury: A non-fatal injury that prevents the injured person from walking, driving or normally continuing the activities with person was capable of performing before the injury occurred. Hospitalization is usually required. Examples are: sever lacerations, broken limbs, skull fracture, crushed chest, internal injuries, etc.

Indiana Criminal Justice Institute (ICJI): The Traffic Safety Division is responsible for implementing programming to reduce the number of people injured and killed each year on Indiana's roadways. Responsible for allocating and managing State funds, as well as Federal dollars granted to Indiana from the National Highway Traffic Safety Administration, U.S. Department of Transportation, Federal Highway Administration, and the Federal Motor Carrier Safety Administration, the Traffic Safety Division's primary purposes include overseeing grant-funded programs, conducting media campaigns, producing public information and educational materials, and funding law enforcement with the goal of reducing the number of people killed and injured in vehicle crashes. The status of the ISP's ARIES system and ongoing efforts to improve the completeness and reliability of its data is documented in ICJI's 2006 Problem Identification Report.

Indiana State Police (ISP): Responsible for the processing, storage and dissemination of traffic collision reports (ARIES); the support of local agencies through their Districts; and answering public requests for collision information. Crash reporting is handled by and the ARIES system are handled by the Crash Records Section Indiana Government Center North 100 North Senate Avenue Indianapolis, IN 46204-2259.

Personal Injury Crash: A crash in which at least one of the vehicle occupants or non-motorists were injured, but not a fatality. Non-Fatal Injuries are classified as Incapacitating, Non-Incapacitating, or Probable. In a few instances, crashes classified as an injury accident if the individual(s) refused treatment at the scene.

Possible Injury: Any injury reported or claimed which was not visible, e.g., the complaint of back or neck pain.

Property Damage Only Crash: A crash in which at least one vehicle or property is damaged by no occupants or non-motorists are injured. As of 1990, a crash is required to be reported if the amount of the damage was \$750 or more.

MEV: Million of entering vehicles into an intersection. This is an approximation from traffic counts surrounding an intersection based on actually directional counts, dividing a roads' traffic in half to approximate one direction or travel, or by making an assumption as to the number of cars from similar streets.

Manner of Collision: Indicates what the driver/vehicle was doing (turning left, right going straight, etc.) at the time of the crash as referred to in the Officer's Standard Crash Report Code Sheet. Appendix A provides the options available to the Officers.

Motor Vehicle Crash: A crash involving a motor vehicle in transport on a public traffic way (in Indiana) that results in injury, death or at least \$750 property damage.

Non-Incapacitating Injury: An injury, other than a fatal or incapacitating injury, which is evident to the officer at the scene of the crash and may require medical treatment. Although, hospitalization is usually not required. Examples are abrasions, minor bleeding and lacerations, etc.

VCRS: Vehicle Crash Reporting System (VCRS) is now known as the Automated Reporting Information Exchange System (ARIES).

1 INTRODUCTION

Vehicle crashes are an inevitable occurrence on any roadway. Crashes result from three primary factors: operator error, vehicular failure, or highway environment, including weather and facility deficiencies. Given the thousands of crashes reported to law enforcement officials annually, the task of identifying specific factors for all roads, streets, and intersections in Tippecanoe County can be complex and costly. Identifying problem is also complicated by the random nature of vehicle crashes. Crashes are a dynamic phenomenon: they change in response to land use and other economic variables. Identifying and evaluating crash patterns requires a comprehensive, readily accessible, and well maintained crash database from all local jurisdictions.

The objective of this study is to analyze the 2006 crash data and identify area wide trends and hazardous intersections. The problem areas can then receive follow-up analysis to identify specific problems for which appropriate countermeasures can be designed and implemented.

The data for this report came from the Indiana State Police (ISP) Vehicle Crash Records System (VCRS) database of crash reports submitted by Police departments of Lafayette, West Lafayette, Purdue, Dayton, Battleground, the Tippecanoe County Sheriff, the Department of Natural Resources, and the ISP. The database contains a subset of the most important information that was submitted for each accident reported to the ISP Automated Reporting Information Exchange System (ARIES). If necessary, the entire crash report was obtained through the ARIES web site, or from the reporting agency. Appendix A provides an example of the ISP Officer's Standard Crash Reporting Form as well as the database columns used for the analysis presented in the report.

In 2006, all local reporting agencies began to submit their crash reports using an electronic submission system. Approximately 24% of the 2006 crash reports used in this analysis were submitted before the electronic reporting began. During this time paper crash reports were mailed to the ISP where they were manually inserted (or scanned using a text recognition software program) into the report database. The data entry and level of quality control allowed for numerous errors to occur in the data. The database fields were corrected, as time allowed, but still may have several errors not corrected for this analysis.

The analysis covered in this report includes all injury, fatality, and property damage crashes. The report includes analysis of 5689 crashes that occurred on all public streets (local as well as state maintained). The additional 1555 crashes were reported that occurred on alleys, parking lots/garages, loading docks, and private property and were excluded from this analysis.

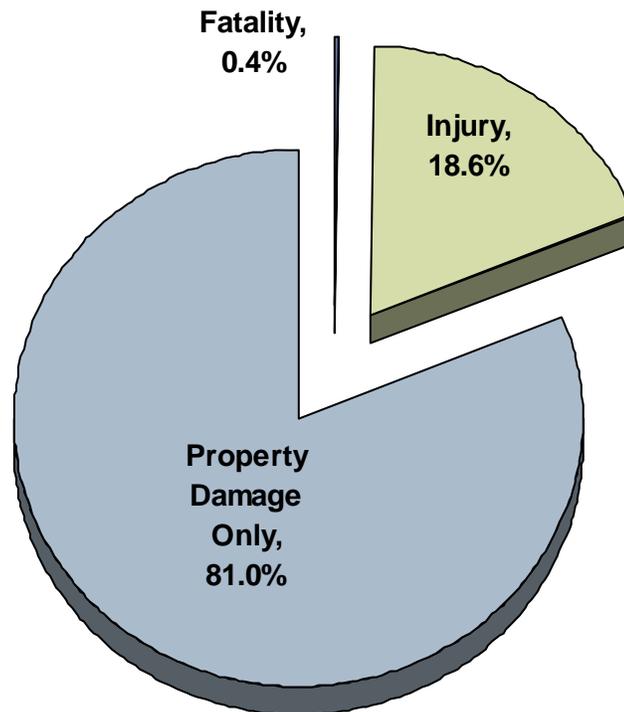
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2 SYSTEM-WIDE ANALYSIS

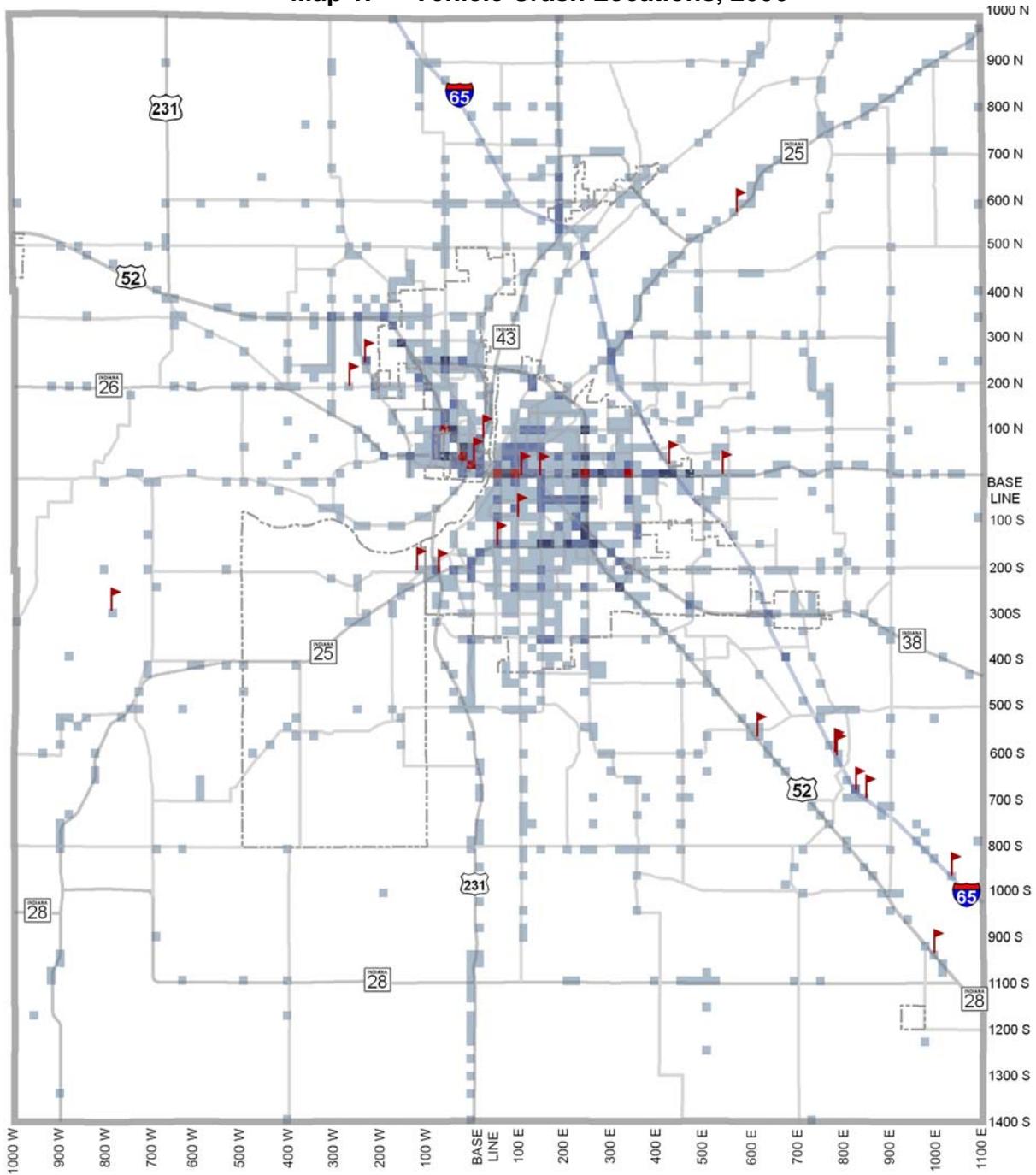
2006 Vehicle crashes can be classified by their severity, as shown in Table 1 as property damage only (only damage to vehicles and objects), personal injury (one or more persons injured), and fatality (one or more fatalities and zero to multiple persons injured). Of the 5,689 qualified roadway vehicle crashes reported in the study area in 2006, 81.0% were "property damage only", and 18.6% of all crashes involved one or more personal injuries resulting in 1,471 injured individuals. Fatality crashes accounted for only 0.4% of the total crashes. For 2006 all fatality crashes only involved 1 fatality each, with an additional 23 injured during the crashes. Map 1 shows the location and intensity of all roadway crashes and Map 2 all injury crashes within the county.

Table 1. Vehicle Crashes, Injured Persons, and Fatalities, 2006

Severity Classification	Total Crashes	Percent of Total Crashes	Total Injured Persons	Total Fatalities
Property Damage Only	4608	81.0%	0	0
Personal Injury Only	1060	18.6%	1471	0
Fatality	21	0.4%	23	21
<i>Total</i>	<i>5689</i>	<i>100.0%</i>	<i>1494</i>	<i>21</i>



Map 1. Vehicle Crash Locations, 2006



Legend

- | | |
|--|--|
|  Fatality Crash |  Municipal Boundary |
| Number of Crashes
(per 1000x1000sqft) |  Interstate Highway |
|  |  US Highway |
| 1 - 9 |  State Highway |
| 10-29 |  Major Local Road |
| 30-49 | |
| 50-96 | |

*Crash Data Source: 2006 Indiana State Police Vehicle Crash Records Database (extracted 04/06/07)

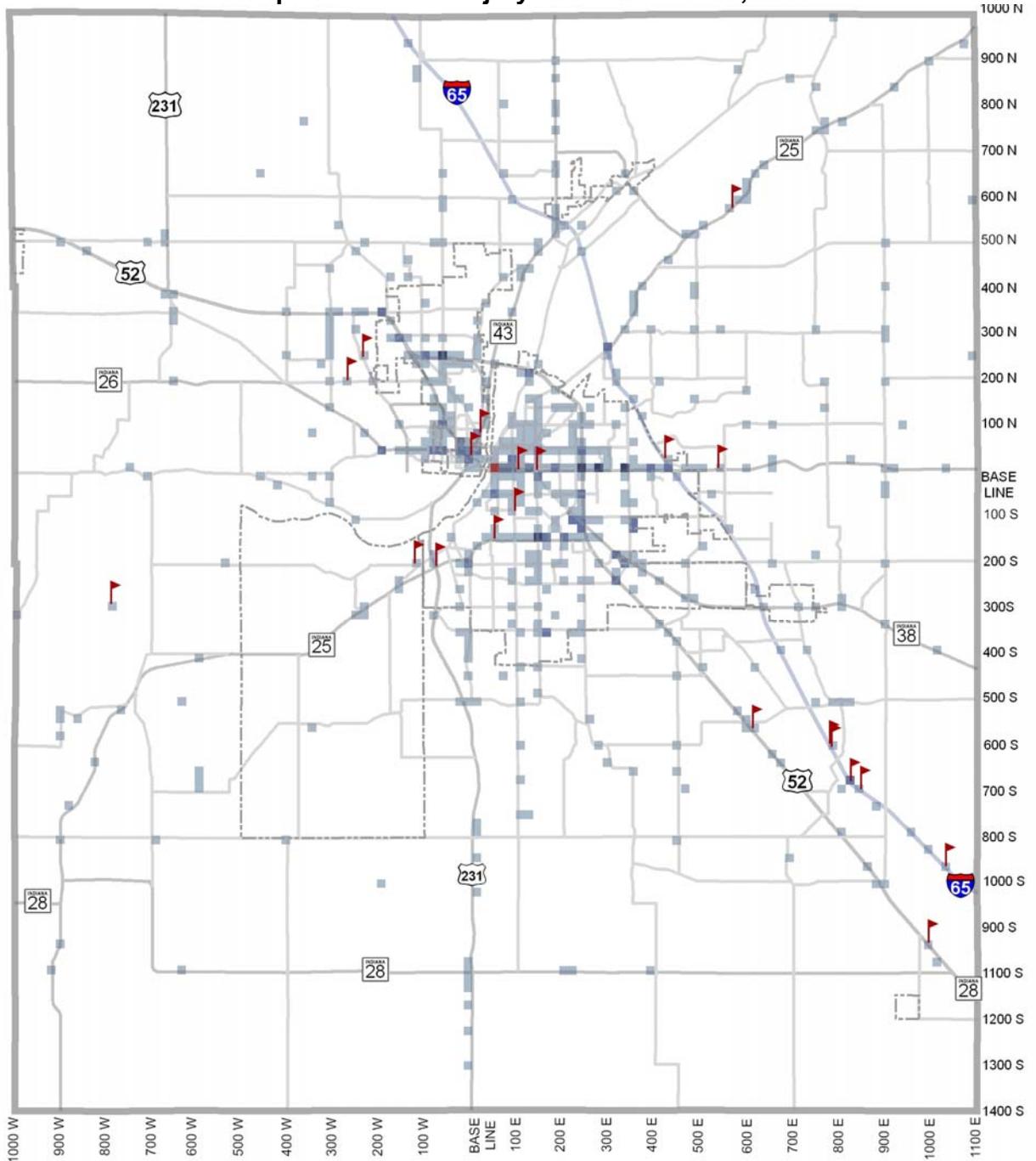


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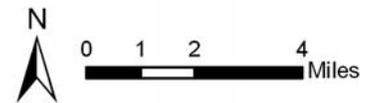
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Map 2. Vehicle Injury Crash Locations, 2006



Legend

-  Fatality Crash
 -  Municipal Boundary
 -  Interstate Highway
 -  US Highway
 -  State Highway
 -  Major Local Road
- Number of Injury Crashes (per 1000x1000sqft)**
-  1 - 4
 -  5 - 9
 -  10 - 14
 -  15 - 18
 - 



The Area Plan Commission
of Tippecanoe County

Date: July 2007

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*Crash Data Source: 2006 Indiana State Police Vehicle Crash Records Database (extracted 04/06/07)

Of the 1,081 injury and/or fatality crashes, injuries were reported for 1,515 persons including 21 deaths. Table 2 gives a summary of the number of injuries per crash and the total injuries involved. The majority of the total crashes either involved one (13.8%) or two (3.8%) injured persons

Table 2. Vehicle Crashes by Number of Injured in Crash, 2006

Personal Injuries Per Crash (excludes Fatalities)	Personal Injury Only Crashes	Personal Injury and Fatality* Crashes	Total Crashes	Percent of Total Crashes	Total Fatalities and Persons Injured
26 Persons	1	0	1	0.02%	26
6 Persons	5	0	5	0.09%	30
5 Persons	2	0	2	0.04%	10
4 Persons	17	2	19	0.33%	78**
3 Persons	45	0	45	0.79%	135
2 Persons	212	4	216	3.80%	436**
1 Persons	778	7	785	13.80%	792**
0 Persons	0	8	8	0.14%	8
Totals	1060	21	1081	19.00%	1515

*All Fatality Crashes involved a Single Fatality

** (4 persons per crash x 19 crashes +2 fatalities)

(2 persons per crash x 216 crashes +4 fatalities)

(1 persons per crash x 785 crashes +7 fatalities)

The proximity of crashes to the intersections was examined at a distance of 100ft from the stop bar associated with an intersection. In 2006, 68.9% of crashes occurred within 100ft of an intersection (Table 3). Additional analysis of intersection crashes can be found in Section 3.

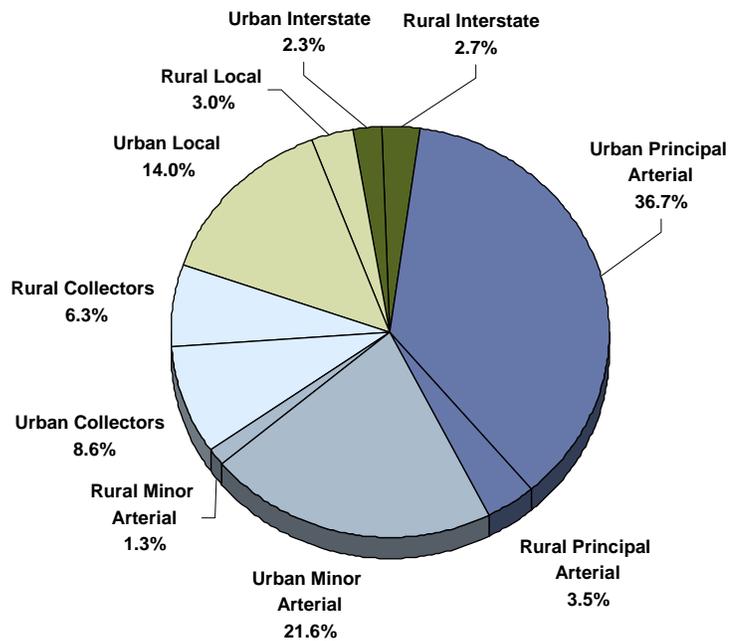
Table 3. Intersection Proximity to the Vehicle Crashes, 2006

Crash Location	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Crashes
	Within 0 - 100ft of an Intersection	3180	731	6	3917
Mid-Block (>100 ft from an Intersection)	1428	329	15	1772	31.1%

The function streets serve and their location (rural or urban) provides insight into crashes as seen in Table 4. The majority of roads in the urban area have curbs or wide shoulders; whereas rural roads are typically narrower without shoulders. The street classification with the highest percentage of total crashes in 2006 (40.2%) was *Principal Arterials*, e.g., South, State, and Columbia St (SR 26) and Sagamore Parkway/US 52. This is not surprising because *Principal Arterials* carry the most non-interstate traffic of any other street classification per mile. The second highest percentage of crashes (22.9%) occurred in the *Minor Arterial* category, e.g., Earl Ave and Salisbury St. *Minor Arterials* carry less traffic overall but generally are more numerous within the County than *Principal Arterials*. A close third was the *Local* road category with 17.0%. A *Local* road's primary function is to provide local access, either directly or through other local roads, from small businesses or dwelling units to another busier (higher classed) road. While traffic counts are lower on *Local* roads, there are many more of them. However, more motorists may be using these streets to circumnavigate congested arterial routes.

Table 4. Vehicle Crashes by Roadway Type, 2006

	Functional Class	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Crashes
Urban	Interstate	115	14	1	130	2.3%
	Principal Arterial	1693	392	5	2090	36.7%
	Minor Arterial	984	241	3	1228	21.6%
	Collectors	391	99	1	491	8.6%
	Local	705	90	1	796	14.0%
	<i>Total Urban Crashes</i>		3888	836	11	4735
Rural	Interstate	124	23	5	152	2.7%
	Principal Arterial	149	49	1	199	3.5%
	Minor Arterial	53	19	0	72	1.3%
	Collectors	267	90	3	360	6.3%
	Local	127	43	1	171	3.0%
	<i>Total Rural Crashes</i>		720	224	10	954
Total	<i>Interstate</i>	239	37	6	282	5.0%
	<i>Principal Arterial</i>	1842	441	6	2289	40.2%
	<i>Minor Arterial</i>	1037	260	3	1300	22.9%
	<i>Collectors</i>	658	189	4	851	15.0%
	<i>Local</i>	832	133	2	967	17.0%
	<i>Total Crashes</i>		4608	1060	21	5689



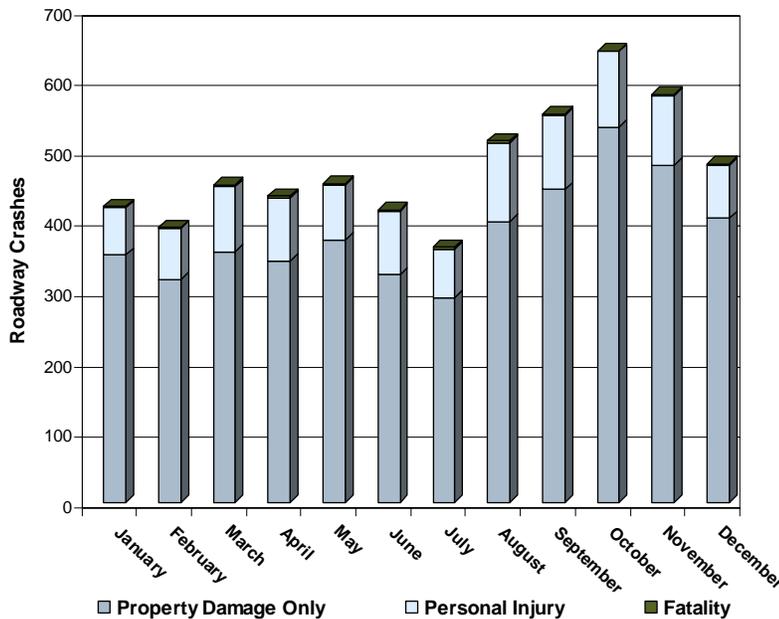
Monthly variation in crashes (Table 5) show that October had the most crashes at 641, or 11.3% of the total. This peak is historically consistent when compared to previous countywide crash summaries. August, September, and November also had a high number of crashes with over five hundred each. Early winter months consistently have higher crash totals than the summer months and July had the fewest number of crashes with 362 or 6.4%. Injury crashes peaked in August but were also high in September and October. The injury crashes remained relatively consistent between January and July, followed by the distinctive rise from August through November.

Table 5. Vehicle Crashes by Month, 2006

Month	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Crashes
January*	351	67	2	420	7.4%
February*	316	73	1	390	6.9%
March*	356	92	2	450	7.9%
April*	342	90	3	435	7.6%
May*	372	78	2	452	7.9%
June	323	91	1	415	7.3%
July	291	69	2	362	6.4%
August**	398	113	2	513	9.0%
September**	444	106	1	551	9.7%
October**	533	107	1	641	11.3%
November**	479	98	2	579	10.2%
December**	403	76	2	481	8.5%

*Purdue University 2006 Spring Semester: January 9th – May 15th 2006

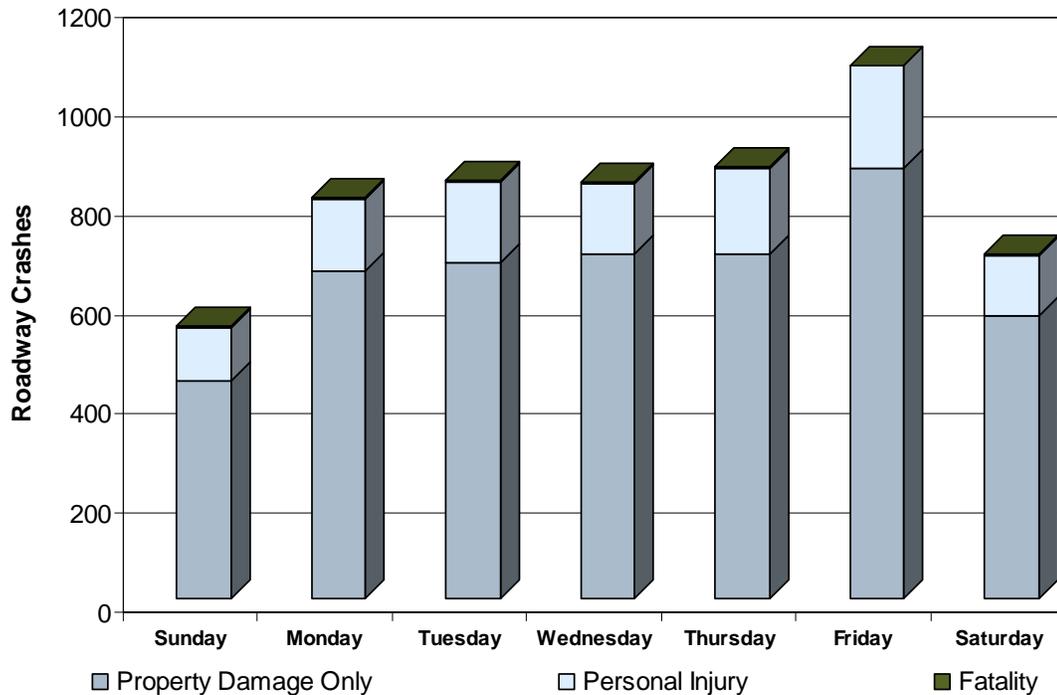
**Purdue University 2006 Fall Semester: August 21st – December 17th 2006



Friday had the most total and injury crashes (Table 6). As is also typical, Sunday had the fewest total crashes. This is a direct correlation with traffic volume: Sunday is the least traveled day, while Friday is the most. Usually, crashes gradually increase during the week, peaking on Friday. In 2006, Mondays had the most fatality crashes most of which occurred in the early morning/late evening hours. Opposite the total and injury crash trends, fatality crashes were a minimum on Fridays in 2006.

Table 6. Vehicle Crashes by Day of the Week, 2006

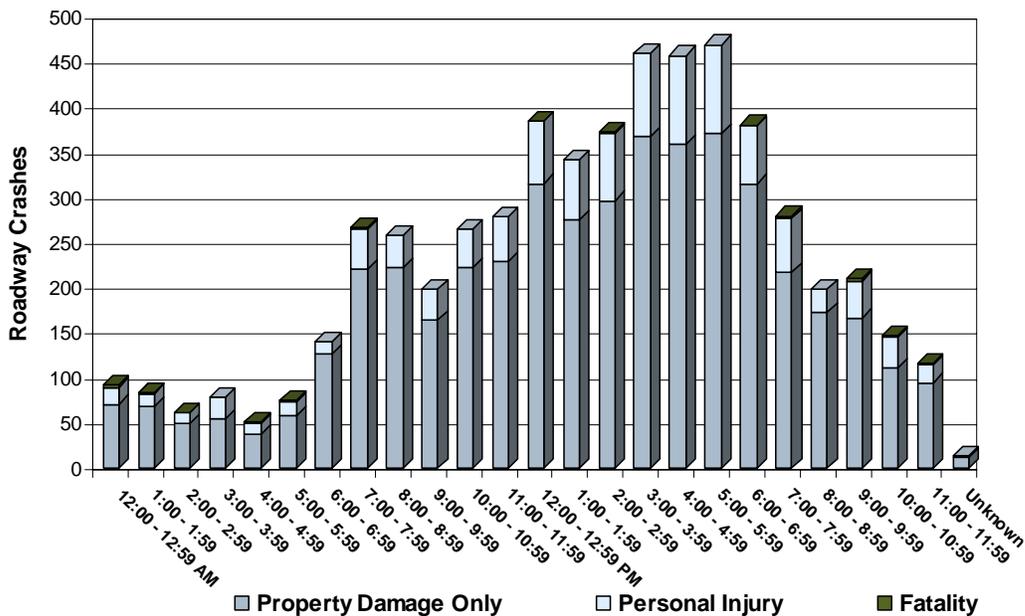
Day of the Week	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Crashes
Sunday	438	108	3	549	9.7%
Monday	660	146	5	811	14.3%
Tuesday	679	163	3	845	14.9%
Wednesday	695	143	2	840	14.8%
Thursday	695	175	3	873	15.3%
Friday	870	205	1	1076	18.9%
Saturday	571	120	4	695	12.2%



Previous analysis has shown that crashes are more likely to occur during evening peak travel times when traffic volume is at or near capacity between 3pm to 6pm. In 2006, Table 7 shows the 5-6pm hour had the most crashes (470), 3-4pm was second (460), and 4-5pm was third (458). As is typical, evening peak hours accounted for approximately 31.1% of all crashes. The hourly crash trends also show morning and noon rush hour spikes with significantly fewer crashes between Midnight and 6am.

Table 7. Vehicle Crashes by Hour in Day, 2006

Time of the Day	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Crashes
12:00 - 12:59 AM	71	19	2	92	1.6%
1:00 - 1:59	68	15	1	84	1.5%
2:00 - 2:59	50	11	1	62	1.1%
3:00 - 3:59	55	24	0	79	1.4%
4:00 - 4:59	37	13	2	52	0.9%
5:00 - 5:59	59	15	2	76	1.3%
6:00 - 6:59	127	13	0	140	2.5%
7:00 - 7:59	221	45	1	267	4.7%
8:00 - 8:59	223	36	0	259	4.6%
9:00 - 9:59	164	34	0	198	3.5%
10:00 - 10:59	223	42	0	265	4.7%
11:00 - 11:59	230	49	0	279	4.9%
12:00 - 12:59 PM	316	69	1	386	6.8%
1:00 - 1:59	276	66	0	342	6.0%
2:00 - 2:59	297	74	2	373	6.6%
3:00 - 3:59	368	92	0	460	8.1%
4:00 - 4:59	360	98	0	458	8.1%
5:00 - 5:59	371	99	0	470	8.3%
6:00 - 6:59	316	64	1	381	6.7%
7:00 - 7:59	217	61	2	280	4.9%
8:00 - 8:59	173	25	0	198	3.5%
9:00 - 9:59	167	41	3	211	3.7%
10:00 - 10:59	112	34	1	147	2.6%
11:00 - 11:59	95	20	2	117	2.1%
Unknown	12	1	0	13	0.2%



There are many circumstances that contribute to a crash. For each crash report, Officer's are allowed to specify two "Driver", one "Vehicle", and one "Environmental" contributing circumstances for each vehicle. Appendix B, gives the frequency each contributing circumstance was specified for all 2006 crashes (roadway and non-roadway).

For one of the vehicles in the crash, one the four possible contributing circumstances must be the listed as the primary contributing circumstance (also referred to as the primary factor) for the crash. Table 8 gives the top 20 primary contributing circumstances reported in 2006. The top 20 primary crash factors represent 96% of the total accidents. As is typical, the two most cited causes were: *following too closely* and *failure to yield right of way*.

Table 8. Top 20 Primary Contributing Circumstance for Crashes, 2006

Primary Contributing Circumstance	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Crashes
Following Too Closely	1126	188	0	1314	23.1%
Failure To Yield Right Of Way	745	222	2	969	17.0%
Other (Driver) - Explain In Narrative	452	119	1	572	10.1%
Animal/Object In Roadway	378	7	0	385	6.8%
Unsafe Backing	247	4	0	251	4.4%
Unsafe Speed	182	65	3	250	4.4%
Speed Too Fast For Weather Conditions	192	55	0	247	4.3%
Disregard Signal/Regulatory Sign	157	83	1	241	4.2%
Ran Off Road Right	171	65	4	240	4.2%
Improper Lane Usage	218	14	0	232	4.1%
Improper Turning	151	13	0	164	2.9%
Overcorrecting/Over-steering	60	35	3	98	1.7%
Driver Distracted - Explain In Narrative	80	17	0	97	1.7%
Alcoholic Beverages**	58	33	1	92	1.6%
Left Of Center	64	25	2	91	1.6%
Improper Passing	73	8	0	81	1.4%
Roadway Surface Condition	51	9	0	60	1.1%
None (Driver)	28	9	0	37	0.7%
Ran Off Road Left	25	8	1	34	0.6%
Driver Asleep Or Fatigued	20	13	1	34	0.6%

** See Table 9 and 10

Table 9 gives additional information on primary factors given for Tippecanoe County crashes. As noted, cell phone usage was listed as a primary cause for 11 crashes. However as shown in Appendix B, an additional 26 crashes listed cell phone usage as a

secondary contributing circumstance to the crash.² Impaired drivers from alcohol, illegal, and prescription drugs were reported as the primary factor in 1.7% of the total crashes (Table 9).³ Furthermore, roadway conditions were reported as a primary factor in crashes for only 0.16% of the total crashes.

Table 9. Other Notable Primary Contributing Circumstances for Crashes, 2006

Primary Contributing Circumstance	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Crashes
Distractions					
Cell Phone Usage	8	3	0	11	0.19%
Passenger Distraction	2	1	0	3	0.05%
Impaired Drivers					
Alcoholic Beverages	58	33	1	92	1.62%
Illegal Drugs	1	3	0	4	0.07%
Prescription Drugs	1	2	0	3	0.05%
Roadway Conditions					
Holes/Ruts In Surface	3	0	0	3	0.05%
Traffic Control Inoperative/Missing/ Obscured	3	0	0	3	0.05%
Lane Marking Obscured	1	0	0	1	0.02%
Obstruction Not Marked	1	0	0	1	0.02%
Road Under Construction	1	0	0	1	0.02%

According to the INDOT State Highway Safety Plan (9/15/06):

In 2004, 32% of Indiana's 947 fatalities involved alcohol. Although Indiana has been successful in reducing the incidence of driving while impaired by alcohol or other drugs, such behavior remains a significant safety problem. The percentage of alcohol related fatalities has been on a downward trend from 41% in 1998 to 32% in 2004. Nevertheless, this is an unacceptable toll and additional efforts are needed to target this problem.

Of the 234 total crashes listed with alcoholic beverage consumption as a contributing circumstance (Appendix B), only 92 crashes (39%) listed it as a primary factor for the crash.⁴ The remaining 142 crashes reported alcoholic beverages as a secondary contributing circumstance. For the total 234 crashes, blood alcohol content results $\geq 0.08\%$ were only given for 182 crashes; data for the remaining 52 crashes was missing/not available in the ISP crash database for unknown reasons.

² Only the *primary factor* for a crash is provided in the digital crash database export used in this analysis. Data for secondary factors is not provided with the database and can only be viewed on the individual crash reports themselves or by a generalized summary based on generalized search criteria, e.g., county, jurisdiction, street name, and/or date.

³ Current electronic crash reporting policy states that 'alcohol' or 'asleep/fatigued' should not be used as the primary factor in a crash. For example, if an impaired driver crosses the center line and strikes a vehicle, the primary cause should be "left of center" with a contributing circumstance of "alcohol". This policy is not enforced at this time. Therefore, alcohol continues to be specified a primary cause for crashes within Tippecanoe County.

⁴ Only the primary factor for a crash was provided with the digital crash database. Analysis of secondary factors would involve individual analysis of each of the 7,422 crash reports.

Table 10 presents the location of 92 crashes primarily attributed to alcohol beverage consumption. Approximately 60% of the alcohol related crashes occurred in the urbanized area. The heavily traveled urban and rural Principal Arterials and narrow Rural Local roads had the largest number of injury alcohol related crashes. However for property damage only crashes, the numerous Urban Local and Rural Collectors accounted for the largest number of crashes.

Table 10. Crashes From Alcoholic Beverages by Roadway Classification, 2006

		Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Alcohol Crashes
	Functional Class					
Urban	Interstate	0	1	0	1	1.1%
	Principal Arterial	10	7	0	17	18.5%
	Minor Arterial	6	4	0	10	10.9%
	Collectors	7	5	0	12	13.0%
	Local	12	3	0	15	16.3%
	<i>Total Urban of Total Crashes</i>		35	20	0	55
Rural	Interstate	1	2	0	3	3.3%
	Principal Arterial	2	4	1	7	7.6%
	Minor Arterial	3	0	0	3	3.3%
	Collectors	12	3	0	15	16.3%
	Local	5	4	0	9	9.8%
	<i>Total Rural of Total Crashes</i>		23	13	1	37
Total	<i>Interstate</i>	1	3	0	4	4.3%
	<i>Principal Arterial</i>	12	11	1	24	26.1%
	<i>Minor Arterial</i>	9	4	0	13	14.1%
	<i>Collectors</i>	19	8	0	27	29.3%
	<i>Local</i>	17	7	0	24	26.1%
	<i>Total Crashes</i>		58	33	1	92

The most frequent type of collision (Table 11) was rear end crashes which comprise almost 34% of all accidents. Right-angle collisions make up over 18.1% of the total with leaving the roadway (*ran off the road*) and same direction sideswipes accounting for 11.4% and 11.0% of all crashes, respectively.

Table 11. Manner of Collision for Crashes, 2006

Manner of Collision	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Crashes
Rear End	1602	309	1	1912	33.6%
Right Angle	762	266	4	1032	18.1%
Ran Off Road	462	180	9	651	11.4%
Same Direction Sideswipe	590	32	2	624	11.0%
Head On	329	93	2	424	7.5%
Left Turn	239	66	0	305	5.4%
Backing Crash	227	3	0	230	4.0%
Other - Explain In Narrative	154	54	1	209	3.7%
Opposite Direction Sideswipe	92	20	1	113	2.0%
Right Turn	69	11	0	80	1.4%
Non-Collision	43	22	1	66	1.2%
Left/Right Turn	16	2	0	18	0.3%
None Specified	15	1	0	16	0.3%
Rear To Rear	8	1	0	9	0.2%

Table 12, Table 13, and Table 14 provide information on the weather, lighting conditions, and roadway surface conditions for the Tippecanoe County crashes. As expected, the overwhelming majority of crashes took place during the day and on dry roadway conditions. It is important to note that the winter months were relatively snow free in 2006 with only two one-inch accumulation days. The first snow accumulation occurred in January and the second February. According to Lafayette weather observations, there were only 131 days (35.8% of the year) with recorded rainfall amounts, i.e., a trace or more of rain.

Table 12. Weather Conditions for Crashes, 2006

Weather Conditions	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Crashes
Clear	2461	575	16	3052	53.6%
Cloudy	1216	282	4	1502	26.4%
Rain	796	175	1	972	17.1%
Snow	83	16	0	99	1.7%
Fog/Smoke/Smog	23	7	0	30	0.5%
Blowing Sand/Soil/Snow	13	1	0	14	0.2%
Sleet/Hail/Freezing Rain	7	3	0	10	0.2%
None Specified	6	0	0	6	0.1%
Severe Cross Wind	3	1	0	4	0.1%

Table 13. Light Conditions for Crashes, 2006

Light Condition	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Crashes
Daylight	3090	736	5	3831	67.3%
Dark (Not Lighted)	683	153	11	847	14.9%
Dark (Lighted)	565	128	5	698	12.3%
Dawn/Dusk	225	42	0	267	4.7%
Unknown	43	1	0	44	0.8%
<i>None Specified</i>	2	0	0	2	0.0%

Table 14. Roadway Surface Condition for Crashes, 2006

Surface Condition	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Crashes
Dry	3339	756	17	4112	72.3%
Wet	1139	280	4	1423	25.0%
Snow/Slush	55	7	0	62	1.1%
Ice	43	5	0	48	0.8%
Loose Material On Road	17	7	0	24	0.4%
Water (Standing Or Moving)	9	1	0	10	0.2%
Muddy	2	3	0	5	0.1%
<i>None Specified</i>	4	1	0	5	0.1%

Historically, the yearly crash summaries had provided information on the “collision object” associated with each crash. In the modernization of the crash report and the digital data system, this information is now stored with each vehicle associated with the crash (see Appendix A). The 2006 crash database only provided vehicle information (database records) for 5,595 (98.3%) of the 5,689 crashes. Table 15 provides the collision object for the first (primary) vehicle listed in the crash reports. Collisions with *another motor vehicle* accounted for almost $\frac{3}{4}$ of the total crashes followed by collisions with *deer* (Map 3) and *trees*, respectively. A detailed analysis of crashes involving pedestrians, bicyclists, and motorcycles/mopeds can be found in Appendices C, D, and E respectively.

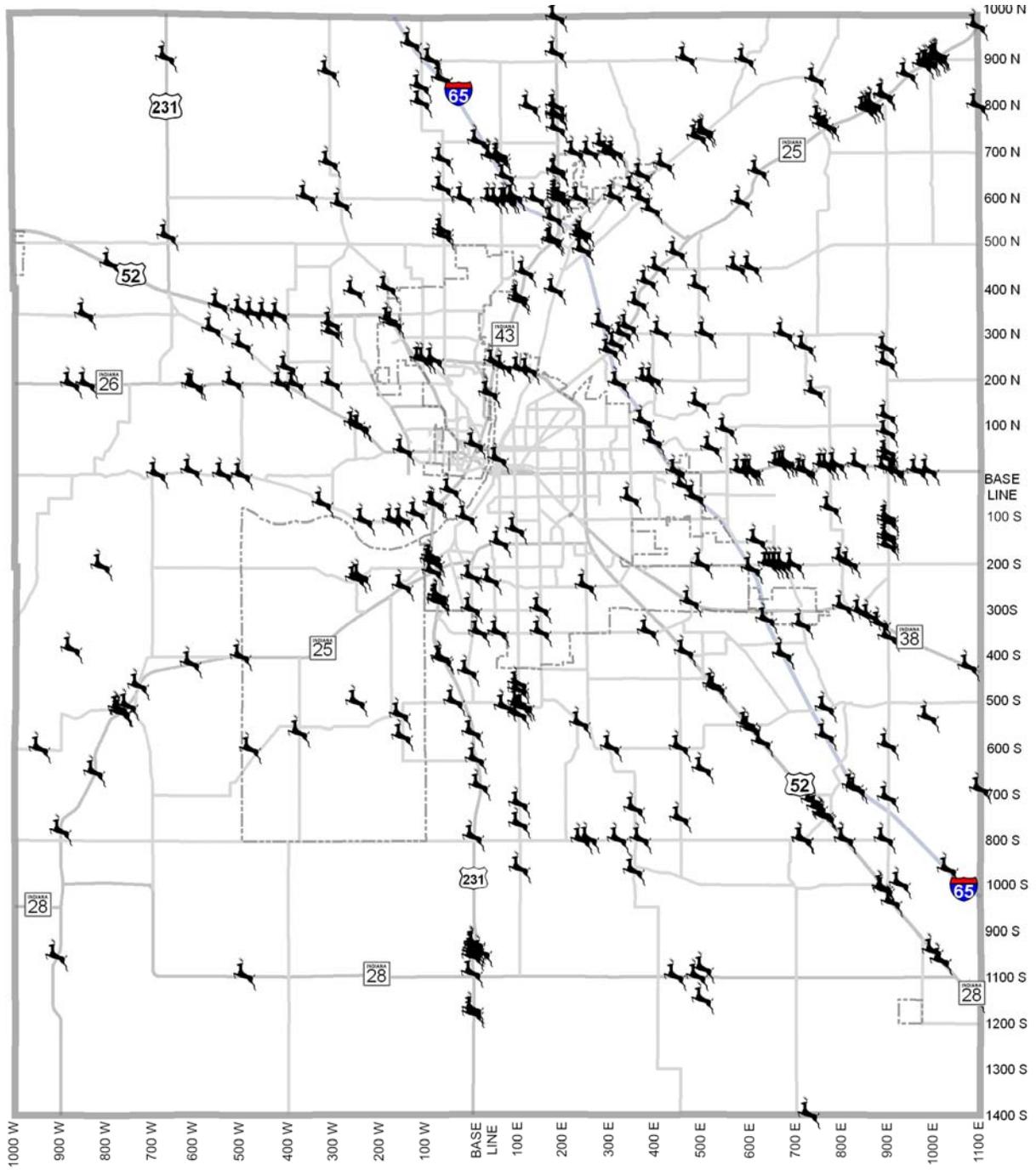
Table 15. Leading Objects of Collision for Crashes, 2006

Collision Object	Vehicle 1	Percent of Total Reporting Crashes	Collision Object (Continued)	Vehicle 1	Percent of Total Reporting Crashes
Another Motor Vehicle	4120	72.42%	Wall/Building/Tunnel	21	0.37%
Deer	367	6.45%	Bridge Rail	17	0.30%
Tree	153	2.69%	Light/Luminaire Support	16	0.28%
Other - Explain In Nar	111	1.95%	Animal Other Than Deer	13	0.23%
Ditch	100	1.76%	Guardrail End	12	0.21%
Utility Pole	85	1.49%	Fell From Vehicle (Non Collision)	11	0.19%
<i>Not Specified</i>	94	1.65%	Culvert	10	0.18%
Curb	58	1.02%	Cargo/Equip Shift/Loss	8	0.14%
Bicycle*	54	0.95%	Jackknife	5	0.09%
Off Roadway	53	0.93%	Impact Atten/Crash Cushion	4	0.07%
Overturn/Rollover	51	0.90%	Work Zone Maint Equip	4	0.07%
Fence	49	0.83%	Bridge Overhead Struct	3	0.05%
Highway Traffic Sign Post	47	0.86%	Bridge Pier Or Abutment	3	0.05%
Other Post/Pole/Support	43	0.76%	Fire/Explosion	3	0.05%
Pedestrian**	42	0.74%	Animal Drawn Vehicle	2	0.04%
Guardrail Face	36	0.63%	Bridge Parapet End	2	0.04%
Mailbox	35	0.62%	Overhead Sign Post	2	0.04%
Embankment	29	0.51%	Immersion	1	0.02%
Median Barrier	25	0.44%			

*There were actually 58 Bicycle crashes; 4 incidents did not report vehicle information.

**There were actually 45 Pedestrian crashes; 3 crashes did not report vehicle information.

Map 3. Crashes involving Deer, 2006



Legend

-  Deer Crashes*
-  Interstate Highway
-  US Highway
-  State Highway
-  Municipal Boundary
-  Major Local Road



The Area Plan Commission
of Tippecanoe County

Date: July 2007

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*Crash Data Source: 2006 Indiana State Police Vehicle Crash Records Database (extracted 04/06/07)

Below is other interesting information from the 2006 vehicle crash database:

- 101 (1.8%) crashes were noted for “Aggressive Driving”⁵
- 605 (10.6%) crashes were reported as “Hit and Run” accidents that:
 - 545 of the 605 (90.1%) were listed as a property damage only crash
 - 60 of the 605 (9.9%) involved an injury and/or fatality
 - 5 of the 605 (0.83%) involved pedestrians
 - 7 of the 605 (1.2%) involved motorcycles/mopeds
 - 4 of the 605 (0.66%) involved bicyclists
 - 199 of the 605 (32.9%) involved one or more parked vehicles
 - 86 of the 605 (14.2%) involved one or more slowing or vehicles stopped in traffic.
- 195 (3.4%) crashes were listed involved one or more trailers
- 119 (2.1%) crashes were listed as taking place in school zones.
- 88 (1.5%) crashes were listed as taking place in work zones (Table 16). The 2006 there were several major construction zones in the county, i.e., the intersection of Creasy Ln and SR 26, the joint replacement on US 52 through West Lafayette, and rebuilding of Greenbush St and Salisbury St. Work zones with greater than 5 crashes were:
 - Creasy Ln had 15 work zone crashes
 - US 52 / Sagamore Parkway had 9 work zone crashes
 - Greenbush St had 7 work zone crashes
 - I-65 had 5 work zone crashes
 - SR 26 / South St had 5 work zone crashes
 - SR 43 had 5 work zone crashes
 - US 231S had 5 work zone crashes

Table 16. Construction Type for Work Zone Crashes, 2006

Construction Type of Work Zone Crashes	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes
Lane Closure	36	12	0	48
Work On Shoulder	18	3	0	21
Intermittent Or Moving Work	8	4	0	12
X-Over/Lane Shift	4	2	0	6
Not Specified	1	0	0	1

⁵ **Aggressive Driving:** Two or more driver behaviors actions that occur in a relatively short distance that include but not limited to: following too close, failure to signal lane changes, speeding, driving on the shoulder, cutting back into lane without sufficient clearance, etc.

3 INTERSECTION ANALYSIS

To identify which accidents were associated with intersections, staff used the *Manual of Traffic Engineering Studies* as a guide. The "One Hundred Foot Rule" was used to identify intersections with the most frequent number of crashes: any crash occurring within one hundred feet of the intersection was counted as having taken place at that intersection. Table 17 shows that in 2006, 3,917 crashes occurred within 100ft of an intersection, or 68.9% of the total crashes.

In 2006, the state of INDOT began looking at the top 5% of crash locations statewide. Indiana is required to submit an annual report describing not less than 5 percent of their highway locations exhibiting the most severe safety needs.⁶ The intent of the report is to raise the public awareness of the highway safety needs and the challenges that exist. For the report INDOT set the intersection search radius at 250ft. Table 17 also lists the number of crashes within 250ft of an intersection.

Table 17. Crashes within 100ft and 250ft of an Intersection, 2006

Crash Location	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Crashes
100 ft Intersection Radius					
Intersection: 0 - 100ft Radius	3180	731	6	3917	68.9%
Mid-Block: > 100ft Radius	1428	329	15	1772	31.1%
250 ft Intersection Radius					
Intersection: 0 - 250ft Radius	3611	822	9	4442	78.1%
Mid-Block: > 250ft Radius	997	238	12	1247	21.9%

Intersections reporting ten or more crashes per year are considered very hazardous⁷. Table 18 and Map 4 show the intersections having greater than or equal to 10 crashes occurring within 100ft of the intersection ranked by crash frequency. In 2006 there were 100 intersections out of the approximate 4600 total intersections with greater than or equal to 10 crashes. These 100 hazardous intersections accounted for 29.5% of the total number of crashes within the county.

The Tippecanoe County intersection with the highest number of crashes was SR 26 East and Creasy Ln with 46 crashes. It is important to note that this area was a construction zone from late April through November. The intersections at SR 26 and US 52 and US 231 and SR 26 tied for second with 36 crashes each. The remaining top ten in 2006 were: SR 26 and Farabee Dr; US 52 and Salisbury St; US 52 and SR 25/Teal Rd; US 52 and SR 38/Main St; US 52 and McCarty Ln; US 52 and Creasy Ln; US 52 and Cumberland Ave; and SR 26 and the SB exit ramp from I-65.

Table 18 also gives the intersection rank for combined totals from fatality and injury crashes. SR 26 and Farabee Dr had the most injury accidents in 2006 with 12 injury

⁶ <http://www.in.gov/dot/pubs/> *Highway Safety Improvement Program: Indiana "5 Percent Report"*, INDOT, August 2006.

⁷ *Identification of Hazardous Locations*, Report No. FHWA-RD-77-83

accidents, followed by: SR 26 and Creasy Ln (8); US 52 and SR 26 (8); US 52 and Creasy (8) and US 52 and McCarty Ln (7), US 52 and Cumberland(7), and SR 25/Teal and S 18th St (7).

Nine of the crashes in the top 100 worst intersections involved one or two incapacitating injuries (noted in Table 18 with a + or ++, respectively). For the three fatality intersection crashes, each reported one fatality and two individuals with non-incapacitating injuries.

Table 18. Hazardous Intersections* Ranked by Crash Frequency, 2006

T indicates a Tie

Total Crash Frequency Rank	Injury and Fatality Frequency Rank	Intersection		Crash Type			Total Crashes
		Road 1	Road 2	P.D.O.	Injury	Fatality**	
1	T 2	SR 26 E/E SOUTH ST	CREASY LN	38	8	0	46
T 2	T 2	US 52/SAGAMORE PKY	SR 26 E	28	8	0	36
T 2	T 22	US 231/RIVER RD	SR 26/STATE ST	32	3	1	36
T 4	1	SR 26 E/E SOUTH ST	FARABEE DR N	21	12 ⁺	0	33
T 4	T 8	US 52/SAGAMORE PKY W	N SALISBURY ST	27	6	0	33
6	T 22	US 52/SAGAMORE PKY S	SR 25 E/TEAL RD	29	4	0	33
7	T 22	US 52/SAGAMORE PKY S	SR 38 E/MAIN ST	27	4	0	31
8	T 5	US 52/SAGAMORE PKY S	MCCARTY LN	23	7	0	30
T 9	T 2	US 52/SAGAMORE PKY S	CREASY LN	21	8	0	29
T 9	T 5	US 52/SAGAMORE PKY W	CUMBERLAND AVE	22	7 ⁺	0	29
T 9	T 15	SR 26 E/E SOUTH ST	SB I-65 EXIT/ENTRANCE RAMP	24	5	0	29
11	T 5	SR 25 E/TEAL RD	S 18TH ST	21	7	0	28
12	T 34	US 52/SAGAMORE PKY N	UNION ST E	23	3	0	26
T 13	T 8	SR 26 E/SOUTH ST	S 3RD ST	19	6	0	25
T 13	T 15	SR 25 E/TEAL RD	SUMMERFIELD DR	20	5	0	25
T 13	T 22	US 52/SAGAMORE PKY N	GREENBUSH	21	4	0	25
T 16	T 8	SR 38 E/MAIN ST	S CREASY LN	18	6	0	24
T 16	T 15	US 231 N/NORTHWESTERN AVE	STADIUM AVE	19	5	0	24
T 16	T 22	SR 43 N	SB I-65 EXIT/ENTRANCE RAMP	20	4	0	24
T 16	T 34	SR 26 E/E SOUTH ST	SHENANDOAH DR	21	3	0	24
20	T 52	SR 26 E/E SOUTH ST	S EARL AVE	20	2	0	22
T 21	T 34	US 52/SAGAMORE PKY W	WB US 52 RAMP AT SR 443N	18	3	0	21
T 21	T 52	SR 26 W/W STATE ST	N GRANT ST	19	2 ⁺	0	21
T 21	T 75	US 52/SAGAMORE PKY S	NATIONAL DR	20	1	0	21
T 24	T 8	US 52/SAGAMORE PKY W	MOREHOUSE RD	14	6	0	20
T 24	T 15	US 52/SAGAMORE PKY W	YEAGER RD	15	5 ⁺⁺	0	20
T 24	T 34	SR 38 E/MAIN ST	S CR 475 E	17	3 ⁺	0	20
T 27	T 8	SR 25 E/TEAL RD	SEQUOYA DR	13	6	0	19
T 27	T 8	SR 26 E/SOUTH ST	S 4TH ST	13	6 ⁺	0	19
T 27	T 22	US 52/SAGAMORE PKY W	DUNCAN RD	15	4	0	19
T 30	T 15	US 52/SAGAMORE PKY S	KOSSUTH ST E	13	5 ⁺	0	18
T 30	T 34	SR 25/TEAL/OLD US 231 S	S 4TH ST	15	3	0	18
T 30	T 75	SR 26 W/W STATE ST	NORTHWESTERN AVE	17	1	0	18
T 33	T 34	SR 26 W/W STATE ST	PIERCE ST	14	3	0	17
T 33	T 52	SR 25 E/TEAL RD	S 9TH ST	15	2	0	17
T 33	T 75	MAIN ST	S EARL ST	16	1	0	17

T indicates a Tie

Total Crash Frequency Rank	Injury and Fatality Frequency Rank	Intersection		Crash Type			Total Crashes
		Road 1	Road 2	P.D.O.	Injury	Fatality**	
T 36	T 8	SR 26 E/E SOUTH ST	PARK EAST BLVD/BRINKER ST	10	6	0	16
T 36	T 34	SR 26 W/W STATE ST	RUSSELL ST	13	3	0	16
T 36	T 52	SR 26 W/W STATE ST	UNIVERSITY ST	14	2	0	16
T 36	T 52	SR 26 E/E SOUTH ST	MEIJER WAY	14	2	0	16
T 36	T 75	SR 26 E/E SOUTH ST	PROGRESS DR/RED CLOUD TRL	15	1	0	16
T 41	T 22	KOSSUTH ST	S 4TH ST	11	4	0	15
T 41	T 34	MAIN ST	S 18TH ST	12	3	0	15
T 41	T 34	SR 25 E	OLD US 231 S	12	3	0	15
T 41	T 52	SR 25 E/TEAL RD	22ND ST	13	2	0	15
T 41	T 52	SR 26 E/E SOUTH ST	MARKETPLACE DR/COCHISE TRL	13	2	0	15
T 41	T 75	US 52/SAGAMORE PKY N	SCHUYLER AVE	14	1	0	15
T 47	T 34	SR 26 E/E SOUTH ST	BRITT FARM RD/EASTLAND DR	11	3	0	14
T 47	T 52	SR 26 E/E SOUTH ST	PARK AVE/ SCOTT ST/CRESCENT DR	12	2	0	14
T 47	T 52	SR 26 W/W STATE ST	SR 26 W/S CHAUNCEY AVE	12	2	0	14
T 47	T 75	US 231 N/NORTHWESTERN AVE	YEAGER RD	13	1	0	14
T 47	T 75	SR 26 E/E SOUTH ST	FRONTAGE RD	13	1	0	14
T 47	N/A	SR 25 E/TEAL RD	S 30TH ST	14	0	0	14
T 53	T 22	SR 38 E/MAIN ST	MAPLE POINT DR/POPLAR LN	9	4	0	13
T 53	T 34	SR 43 N/N RIVER RD	ROBINSON ST	10	3	0	13
T 53	T 34	S 18TH ST	BRADY LN	10	3	0	13
T 53	T 52	MAIN ST	N 9TH ST	11	2	0	13
T 53	T 52	UNIVERSITY ST	1ST ST	11	2	0	13
T 53	T 52	KOSSUTH ST	MAIN ST	11	2	0	13
T 53	T 52	S CREASY LN	MCCARTY LN	11	2	0	13
T 53	T 52	SR 26 W/W STATE ST	SALISBURY ST	11	2 ⁺	0	13
T 53	N/A	W STADIUM AVE	UNIVERSITY ST	13	0	0	13
T 62	T 15	US 231 S/ S RIVER RD	SR 25	7	4 ⁺⁺	1	12
T 62	T 22	US 231 N/ RIVER RD	EB RAMP TO HARRISON BRIDGE (RAMP A)	8	4	0	12
T 62	T 22	SR 26 E/SOUTH ST	S 18TH ST	8	3	1	12
T 62	T 34	UNION ST	SHENADOAH DR	9	3	0	12
T 62	T 52	CONCORD RD	BRADY LN	10	2	0	12
T 62	T 52	SR 26 W/E STATE ST	ROEBUCK DR	10	2	0	12
T 62	T 52	US 231 N/NORTHWESTERN AVE	LINDBERG RD	10	2	0	12
T 62	T 75	SALEM ST	N 9TH ST	11	1	0	12
T 70	T 15	MAIN ST	MCCARTY LN	6	5	0	11
T 70	T 34	J R HIATT DR	S 18TH ST	8	3	0	11
T 70	T 34	US 52/SAGAMORE PKY W	KLONDIKE RD/N 300 W	8	3	0	11
T 70	T 52	BECK LN	S 18TH ST	9	2	0	11
T 70	T 52	S CREASY LN	FORTUNE DR	9	2 ⁺	0	11
T 70	T 52	E CR 350 S	S 18TH ST	9	2	0	11
T 70	T 52	E CR 350 S	CONCORD RD	9	2	0	11
T 70	T 52	SR 26 E/SOUTH ST	MAIN ST	9	2	0	11
T 70	T 75	SR 26 E/COLUMBIA ST	N 3RD ST	10	1	0	11
T 70	T 75	SR 26 E/SOUTH ST	S 9TH ST	10	1	0	11

T indicates a Tie

Total Crash Frequency Rank	Injury and Fatality Frequency Rank	Intersection		Crash Type			Total Crashes
		Road 1	Road 2	P.D.O.	Injury	Fatality**	
T 70	T 75	SR 25 E/TEAL RD	CONCORD RD	10	1	0	11
T 70	T 75	US 231 N/NORTHWESTERN AVE	US 231 N/FOWLER AVE	10	1	0	11
T 70	N/A	SR 25 E	OLD ROMNEY RD	11	0	0	11
T 70	N/A	SR 26 E/E SOUTH ST	N 36TH ST	11	0	0	11
T 70	N/A	SR 26 E/E SOUTH ST	FAIRINGTON AVE	11	0	0	11
T 85	T 22	UNION ST	N 18TH ST	6	4	0	10
T 85	T 22	US 231 N/NORTHWESTERN AVE	DODGE ST	6	4	0	10
T 85	T 34	E CR 350 S	OLD US 231 S	7	3	0	10
T 85	T 34	UNION ST	N 26TH ST	7	3	0	10
T 85	T 34	SR 26 W/W STATE ST	NEWMAN RD	7	3	0	10
T 85	T 52	SR 26 W/W STATE ST	TAPAWINGO DR	8	2	0	10
T 85	T 75	N 6TH ST	SALEM ST	9	1	0	10
T 85	T 75	SR 26 E/E SOUTH ST	S 2ND ST	9	1	0	10
T 85	T 75	KOSSUTH ST	S 18TH ST	9	1	0	10
T 85	T 75	SALEM ST	N 18 TH ST	9	1	0	10

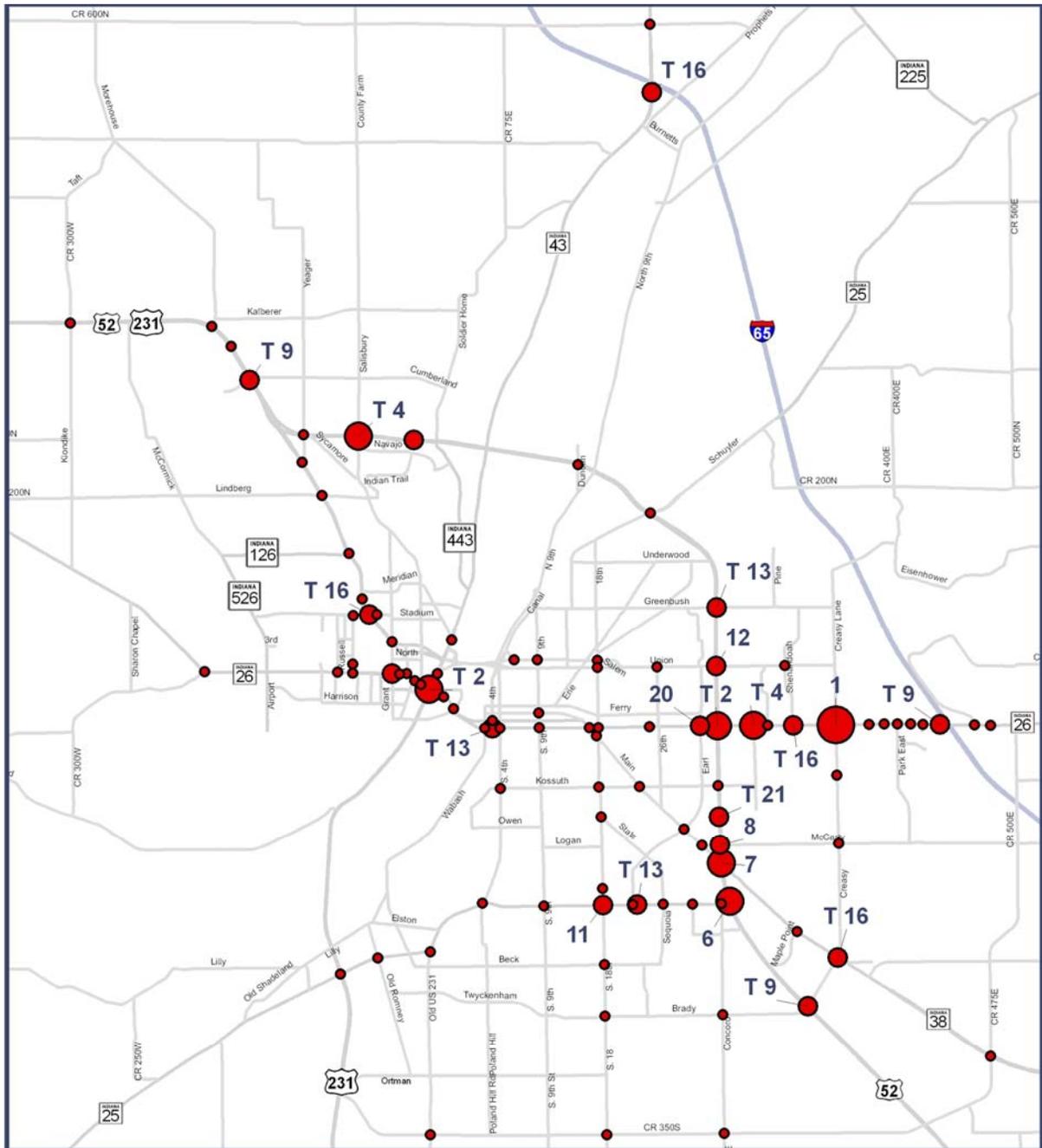
*"One Hundred Foot Rule" is applied.

**All intersection fatality crashes involved one fatality and two other persons with non-incapacitating injuries.

+One of the injury crashes involved one person with an incapacitating injury.

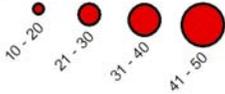
++One of the injury crashes involved two persons with an incapacitating injury.

Map 4. Hazardous Intersections by Crash Frequency, 2006



Legend

Total Intersection Crashes 2006 (Ranking of Top 20 Intersections Labeled)



- Interstate Highway
- State Highway
- US Highway
- Major Local Road

*Crash Data Source: 2006 Indiana State Police Vehicle Crash Records Database (extracted 04/06/07)

Map Location:



0 0.5 1 2 Miles

The Area Plan Commission
of Tippecanoe County

Date: July 2007

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Table 19 lists the intersections with the highest crash rate with respect to traffic entering the intersection i.e., crashes per million entering vehicles (MEV). The MEV Rate provides a vehicle's relative crash exposure rate, generating a ratio of crashes to approximate traffic volume.

$$MEVRate = \frac{A}{MEV} = A \times \frac{1,000,000}{365 \times (V_1 + V_2 + V_3 + V_4)} \quad \text{[Equation 1]}$$

Where:

- MEV Rate = Accidents rate per 1 million entering vehicles.
- A = Accident frequency for a given analysis period (i.e., one year)
- MEV = Millions of vehicles entering an intersection in the study period (i.e., one year)
- V₁ = Average daily traffic (ADT) at the north approach
- V₂ = ADT at the south approach
- V₃ = ADT at the east approach
- V₄ = ADT at the west approach

To determine the significance of the MEV Rate, a Critical Rate Factor (CRF) was also computed for each intersection. By using the MEV and crash frequency for a specific time period (365 days), we can generate a critical rate factor with a 95% confidence level. An intersection with an MEV rate higher than its CRF is determined to be critical or significant. Intersections meeting this criterion are listed in bold typeface in Table 19.

$$CRF = R_a + K \sqrt{\frac{R_a}{MEV} + \frac{1}{2MEV}} \quad \text{[Equation 2]}$$

Where:

- CRF = Critical accident rate factor for a location (accidents per million entering vehicles)
- R_a = Average MEV Rate for all intersections
- MEV = Millions of vehicles entering an intersection in the study period (i.e., one year); and
- K = Probability factor determined by the level of significance (confidence level) for the equation. For a 95% confidence level, K = 1.645

Source: Transportation and Traffic Engineering Handbook. Institute of Transportation Engineers. 1976, pg. 390.

As shown in Table 19 and Map 5 the intersection with the highest MEV rate in 2006 was SR 43 and the SB exit/entrance ramps from I-65. Interestingly, the top 25 (traffic volume) intersections (e.g., the SR 26 intersections between US 52 and I-65, US 52 intersections between SR 25/Teal Rd and Cumberland) only accounted for 6 of the top 25 intersections ranked by the MEV Rate. Conversely, the top three ranked intersections in Table 19 (e.g., SR 43 and I-65, Main and 18th St, and Stadium Ave and Garfield St) had relatively low traffic, but numerous accidents causing them to rise to the top of the list.

Table 19. Hazardous Intersections* Ranked by MEV Rate, 2006**

Intersection		T indicates a Tie						
Rank	Road 1	Road 2	Total Crashes	*** ADT Entering Volume	** MEV Rate	**** CRF	Total Crash Frequency Rank	Injury Crash Frequency Rank
1	SR 43 N	SB I-65 EXIT/ENTRANCE RAMP	24	14,010	4.693	2.756	T 16	T 22
2	MAIN ST	S 18TH ST	15	11,200	3.669	2.893	T 41	T 34
3	W STADIUM AVE	GARFIELD ST	10	7,500	3.653	3.189	T 85	N/A
4	SR 26 E/SOUTH ST	S 3RD ST	25	19,632	3.489	2.580	T 13	T 8
5	US 231/RIVER RD	SR 26/STATE ST	36	28,869	3.416	2.417	T 2	T 22
6	US 52/SAGAMORE PKY W	WB US 52 RAMP AT SR 443N	21	18,413	3.125	2.611	T 21	T 34
7	SR 25 E/TEAL RD	SUMMERFIELD DR	25	22,960	2.983	2.509	T 13	T 15
8	US 52/SAGAMORE PKY S	CREASY LN	29	29,944	2.653	2.403	T 9	T 2
9	SR 26 E/E SOUTH ST	FARABEE DR N	33	35,570	2.542	2.342	T 4	1
10	MAIN ST	N 9TH ST	13	14,048	2.535	2.754	T 53	T 52
11	US 231 N/ RIVER RD	EB RAMP TO HARRISON BRIDGE (RAMP A)	12	13,116	2.507	2.794	T 62	T 22
12	KOSSUTH ST	S 4TH ST	15	16,427	2.502	2.668	T 41	T 22
13	SR 25 E/TEAL RD	SEQUOYA DR	19	21,443	2.428	2.539	T 27	T 8
14	SR 38 E/MAIN ST	S CR 475 E	20	22,964	2.386	2.509	T 24	T 34
15	SR 26 W/W STATE ST	N GRANT ST	21	24,286	2.369	2.486	T 21	T 52
16	N 6TH ST	SALEM ST	10	12,001	2.283	2.848	T 85	T 75
17	J R HIATT DR	S 18TH ST	11	13,220	2.280	2.789	T 70	T 34
18	SR 26 W/W STATE ST	RUSSELL ST	16	19,366	2.264	2.586	T 36	T 34
19	SR 25 E/TEAL RD	S 18TH ST	28	34,897	2.198	2.349	11	T 5
20	UNIVERSITY ST	1ST ST	13	16,244	2.193	2.674	T 53	T 52
21	US 52/SAGAMORE PKY S	SR 25 E/TEAL RD	33	41,982	2.154	2.289	6	T 22
22	SR 25/TEAL/OLD US 231 S	S 4TH ST	18	23,376	2.110	2.502	T 30	T 34
23	SR 26 E/E SOUTH ST	S EARL AVE	22	28,582	2.109	2.421	20	T 52
24	SR 26 E/SOUTH ST	S 4TH ST	19	25,184	2.067	2.471	T 27	T 8
25	US 52/SAGAMORE PKY S	MCCARTY LN	30	39,959	2.057	2.304	8	T 5
26	SR 26 E/E SOUTH ST	PARK AVE/ SCOTT ST/CRESCENT DR	14	18,889	2.031	2.598	T 47	T 52
27	US 52/SAGAMORE PKY W	N SALISBURY ST	33	45,261	1.998	2.266	T 4	T 8
28	SR 25 E	OLD US 231 S	15	20,577	1.997	2.558	T 41	T 34
29	UNION ST	SHENADOAH DR	12	16,719	1.966	2.659	T 62	T 34
30	SR 38 E/MAIN ST	S CREASY LN	24	33,739	1.949	2.360	T 16	T 8
31	W STADIUM AVE	UNIVERSITY ST	13	18,423	1.933	2.610	T 53	N/A
32	SR 26 E/E SOUTH ST	CREASY LN	46	65,671	1.919	2.167	1	T 2
33	SR 26 W/W STATE ST	PIERCE ST	17	24,407	1.908	2.483	T 33	T 34
34	CONCORD RD	BRADY LN	12	17,288	1.902	2.642	T 62	T 52
35	US 52/SAGAMORE PKY W	CUMBERLAND AVE	29	43,418	1.830	2.279	T 9	T 5
36	SR 26 E/E SOUTH ST	SHENANDOAH DR	24	36,979	1.778	2.329	T 16	T 34
37	SR 26 W/W STATE ST	UNIVERSITY ST	16	24,749	1.771	2.478	T 36	T 52
38	US 231 N/ NORTHWESTERN AVE	STADIUM AVE	24	37,653	1.746	2.323	T 16	T 15
39	US 52/SAGAMORE PKY S	SR 38 E/MAIN ST	31	48,989	1.734	2.243	7	T 22
40	SR 26 W/W STATE ST	NORTHWESTERN AVE	18	28,829	1.711	2.417	T 30	T 75
41	US 52/SAGAMORE PKY S	NATIONAL DR	21	34,160	1.684	2.356	T 21	T 75

Intersection			T indicates a Tie					
Rank	Road 1	Road 2	Total Crashes	*** ADT Entering Volume	** MEV Rate	**** CRF	Total Crash Frequency Rank	Injury Crash Frequency Rank
42	US 52/SAGAMORE PKY	SR 26 E	36	59,385	1.661	2.192	T 2	T 2
43	SR 25 E/TEAL RD	S 9TH ST	17	28,312	1.645	2.424	T 33	T 52
44	SR 43 N	E CR 600 N	10	16,880	1.623	2.654	T 85	N/A
45	SR 26 E/COLUMBIA ST	N 3RD ST	11	18,712	1.611	2.603	T 70	T 75
46	SR 25 E/TEAL RD	S 30TH ST	14	24,241	1.582	2.486	T 47	N/A
47	US 231 N/ NORTHWESTERN AVE	YEAGER RD	14	24,552	1.562	2.481	T 47	T 75
48	US 52/SAGAMORE PKY N	GREENBUSH	25	43,885	1.561	2.275	T 13	T 22
49	S 18TH ST	CENTRAL ST/STATE ST	10	17,636	1.553	2.632	T 85	N/A
50	US 52/SAGAMORE PKY W	YEAGER RD	20	35,296	1.552	2.345	T 24	T 15
51	SR 26 E/E SOUTH ST	MEIJER WAY	16	28,573	1.534	2.421	T 36	T 52
52	SALEM ST	N 9TH ST	12	21,585	1.523	2.536	T 62	T 75
53	SR 26 E/E SOUTH ST	S 2ND ST	10	18,063	1.517	2.620	T 85	T 75
54	SR 43 N/N RIVER RD	ROBINSON ST	13	23,603	1.509	2.498	T 53	T 34
55	US 52/SAGAMORE PKY W	MOREHOUSE RD	20	36,948	1.483	2.330	T 24	T 8
56	MAIN ST	S EARL ST	17	31,443	1.481	2.385	T 33	T 75
57	SR 25 E	OLD ROMNEY RD	11	20,382	1.479	2.562	T 70	N/A
58	SR 26 W/W STATE ST	SR 26 W/S CHAUNCEY AVE	14	26,685	1.437	2.447	T 47	T 52
59	E CR 350 S	OLD US 231 S	10	19,132	1.432	2.592	T 85	T 34
60	SR 38 E/MAIN ST	MAPLE POINT DR/ POPLAR LN	13	25,036	1.423	2.473	T 53	T 22
61	MAIN ST	MCCARTY LN	11	21,238	1.419	2.544	T 70	T 15
62	S 18TH ST	BRADY LN	13	25,166	1.415	2.471	T 53	T 34
63	SR 26 E/SOUTH ST	S 9TH ST	11	21,336	1.412	2.542	T 70	T 75
64	KOSSUTH ST	MAIN ST	13	25,236	1.411	2.470	T 53	T 52
65	BECK LN	S 18TH ST	11	21,468	1.404	2.539	T 70	T 52
66	SR 25 E/TEAL RD	22ND ST	15	29,308	1.402	2.411	T 41	T 52
67	US 52/SAGAMORE PKY N	UNION ST E	26	50,882	1.400	2.233	12	T 34
68	SR 26 E/E SOUTH ST	SB I-65 EXIT/ ENTRANCE RAMP	29	58,866	1.350	2.194	T 9	T 15
69	S CREAMY LN	FORTUNE DR	11	22,545	1.337	2.517	T 70	T 52
70	US 52/SAGAMORE PKY W	DUNCAN RD	19	39,890	1.305	2.305	T 27	T 22
71	E CR 350 S	S 18TH ST	11	23,247	1.296	2.504	T 70	T 52
72	UNION ST	N 18TH ST	10	21,176	1.294	2.545	T 85	T 22
73	KOSSUTH ST	S 18TH ST	10	21,650	1.265	2.535	T 85	T 75
74	SALEM ST	N 18TH ST	10	21,935	1.249	2.529	T 85	T 75
75	SR 26 E/SOUTH ST	S 18TH ST	12	26,465	1.242	2.451	T 62	T 22
76	US 231 N/ NORTHWESTERN AVE	DODGE ST	10	22,126	1.238	2.525	T 85	T 22
77	UNION ST	N 26TH ST	10	22,245	1.232	2.523	T 85	T 34
78	SR 26 E/E SOUTH ST	FRONTAGE RD	14	31,233	1.228	2.388	T 47	T 75
79	S CREAMY LN	MCCARTY LN	13	29,433	1.210	2.410	T 53	T 52
80	SR 26 W/W STATE ST	TAPAWINGO DR	10	23,013	1.191	2.508	T 85	T 52
81	E CR 350 S	CONCORD RD	11	25,374	1.188	2.467	T 70	T 52
82	SR 26 W/W STATE ST	SALISBURY ST	13	30,008	1.187	2.402	T 53	T 52
83	SR 25 E/TEAL RD	CONCORD RD	11	26,479	1.138	2.450	T 70	T 75
84	US 231 S/ S RIVER RD	SR 25	12	29,403	1.118	2.410	T 62	T 15

Intersection			<i>T indicates a Tie</i>					
Rank	Road 1	Road 2	Total Crashes	*** ADT Entering Volume	** MEV Rate	**** CRF	Total Crash Frequency Rank	Injury Crash Frequency Rank
85	US 231 N/ NORTHWESTERN AVE	SR 126 E/CHERRY LN	10	25,390	1.079	2.467	T 85	N/A
86	US 52/SAGAMORE PKY S	KOSSUTH ST E	18	46,382	1.063	2.259	T 30	T 15
87	SR 26 W/E STATE ST	ROEBUCK DR	12	31,211	1.053	2.388	T 62	T 52
88	US 231 N/ NORTHWESTERN AVE	LINDBERG RD	12	33,233	0.989	2.366	T 62	T 52
89	US 52/SAGAMORE PKY W	KLONDIKE RD/N 300 W	11	30,716	0.981	2.394	T 70	T 34
90	SR 26 E/SOUTH ST	MAIN ST	11	31,979	0.942	2.379	T 70	T 52
91	US 231 N/ NORTHWESTERN AVE	US 231 N/FOWLER AVE	11	33,219	0.907	2.366	T 70	T 75
92	SR 26 E/E SOUTH ST	BRITT FARM RD/EASTLAND PROGRESS DR/RED CLOUD TRL	14	44,628	0.859	2.270	T 47	T 34
93	SR 26 E/E SOUTH ST	SCHUYLER AVE	16	51,914	0.844	2.227	T 36	T 75
94	US 52/SAGAMORE PKY N	N 36TH ST	15	48,920	0.840	2.244	T 41	T 75
95	SR 26 E/E SOUTH ST	PARK EAST BLVD/ BRINKER ST	11	36,052	0.836	2.338	T 70	N/A
96	SR 26 E/E SOUTH ST	MARKETPLACE DR/COCHISE TRL	16	53,990	0.812	2.217	T 36	T 8
97	SR 26 E/E SOUTH ST	WIN HENTSCHEL BLVD/GREAT LAKES BLVD	15	50,914	0.807	2.233	T 41	T 52
98	US 52/SAGAMORE PKY W	NEWMAN RD	10	35,183	0.779	2.346	T 85	T 75
99	SR 26 W/W STATE ST	FAIRINGTON AVE	10	38,713	0.708	2.314	T 85	T 34
100	SR 26 E/E SOUTH ST		11	50,035	0.602	2.238	T 70	N/A

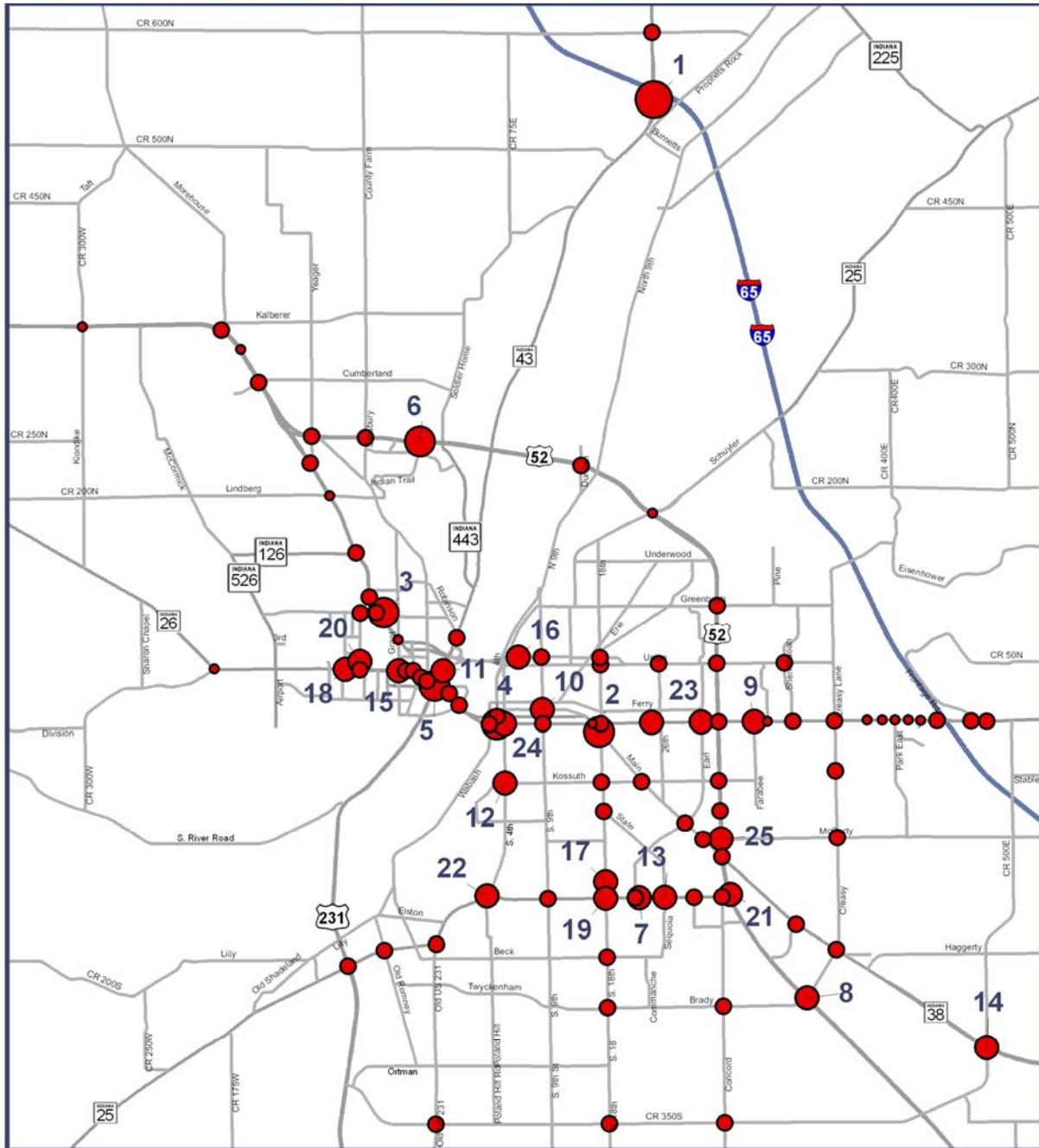
* "One Hundred Foot Rule" is applied

** Crash Rate Million Entering Vehicles (see Equation 1)

*** Average Daily Traffic

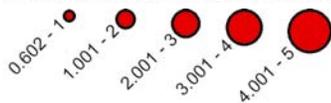
**** Critical Rate Factor (see Equation 2)

Map 5. Hazardous Intersections by Crashes per MEV, 2006



Legend

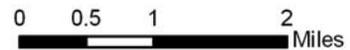
Intersection Crash Rate per Million Entering Vehicles
 (The Rank of the Top 25 Dangerous Intersections is Labeled)



- Interstate Highway
- State Highway
- US Highway
- Major Local Road

*Crash Data Source: 2006 Indiana State Police Vehicle Crash Records Database (extracted 04/06/07)

Map Location:



The Area Plan Commission
 of Tippecanoe County

Date: July 2007

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4 PEDESTRIAN ANALYSIS

There were 61 pedestrians involved in 45 accidents⁸ as presented in Table 20. As expected, the concentration of pedestrian crashes surrounded Purdue University and the Chauncey Hill area (37.7%). Only four of the 45 crashes occurred within school zones involving 5 pedestrians. Map 6 shows that three crashes occurred in the school zones surrounding Durgan Elementary, and Tecumseh Middle School, and Jefferson High School, and the fourth occurred at Edgelea Elementary. Three of the four school zone crashes occurred in the 7am hour before school and the other around 11:30am. All school zone pedestrian crashes involved pedestrians between the ages of 13 and 18-years old.

Most of the pedestrian crashes involved a single pedestrian and another vehicle, except for two crashes that involved three pedestrians, and one crash that involved two pedestrians.

Table 20. Pedestrian Involved Crashes, Injuries, and Fatalities by Severity Classification, 2006

Severity Classification	Total Pedestrian Crashes	Percent of Total Pedestrian Crashes	Total Injured Pedestrians	Total Pedestrian Fatalities
Property Damage Only	4	8.9%	0	0
Personal Injury Only*	40	88.9%	41	0
Fatality**	1	2.2%	0	1
Total	45	100.0%	41	1

*39 of the 40 personal injury only crashes involved a single pedestrian and 1 crash involved 2 pedestrians

**Fatality was a Pedestrian, without injuries in the other vehicles

Table 21 through Table 28 provide information and statistics associated with pedestrian crashes. The majority of the pedestrian crashes occurred on the principal arterials like the Purdue Mall area on Northwestern Blvd/US231 (Table 22). The most dangerous time for pedestrians in 2006 was in the month of November (Table 23). However, when the crashes surrounding Purdue are removed from the data in Table 23, pedestrians are at most risk in October where all 5 crashes occurred outside the campus area.

Tuesday was the most dangerous day in 2006 with 11 crashes (Table 24). As shown in Table 25, the 7am hour had the most crashes with 6; three of which occurred on a Tuesday. Following times were also dangerous with more than one pedestrian crash: Monday at 7pm; Tue at 10am; Wednesday at 5pm and 7pm; Thursday at 2pm; Friday at noon and 7pm; and Saturday night at 11pm.

Pedestrians were more likely to be involved in accidents during the daylight hours, followed by dark, but lighted, conditions (Table 27). Most pedestrian crashes also occurred in dry conditions; however 20% of the crashes occurred during wet (e.g., rain or drizzle) conditions (Table 28).

⁸ Note the ISP database only contained individual data records for 58 of the pedestrians involved with 42 of the pedestrian crashes. The additional 3 individuals were added to account for three additional pedestrian accidents.

Table 21. Intersection Proximity to Pedestrian Involved Crashes, 2006

Crash Location	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Pedestrian Crashes	Percent of Total Pedestrian Crashes
100 ft Intersection Radius					
Intersection: 0 - 100ft Radius	3	36	1	40	88.9%
Mid-Block: > 100ft Radius	1	4	0	5	11.1%
250 ft Intersection Radius					
Intersection: 0 - 250ft Radius	3	38	1	42	93.3%
Mid-Block: > 250ft Radius	1	2	0	3	6.7%

Table 22. Pedestrian Involved Crashes by Roadway Classification, 2006

Roadway Functional Class	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Pedestrian Crashes	Percent of Total Pedestrian Crashes
Urban Principal Arterial	1	20	0	21	46.7%
Urban Minor Arterial	2	8	0	10	22.2%
Urban Local	1	6	1	8	17.8%
Urban Collector	0	5	0	5	11.1%
Rural Collector	0	1	0	1	2.2%

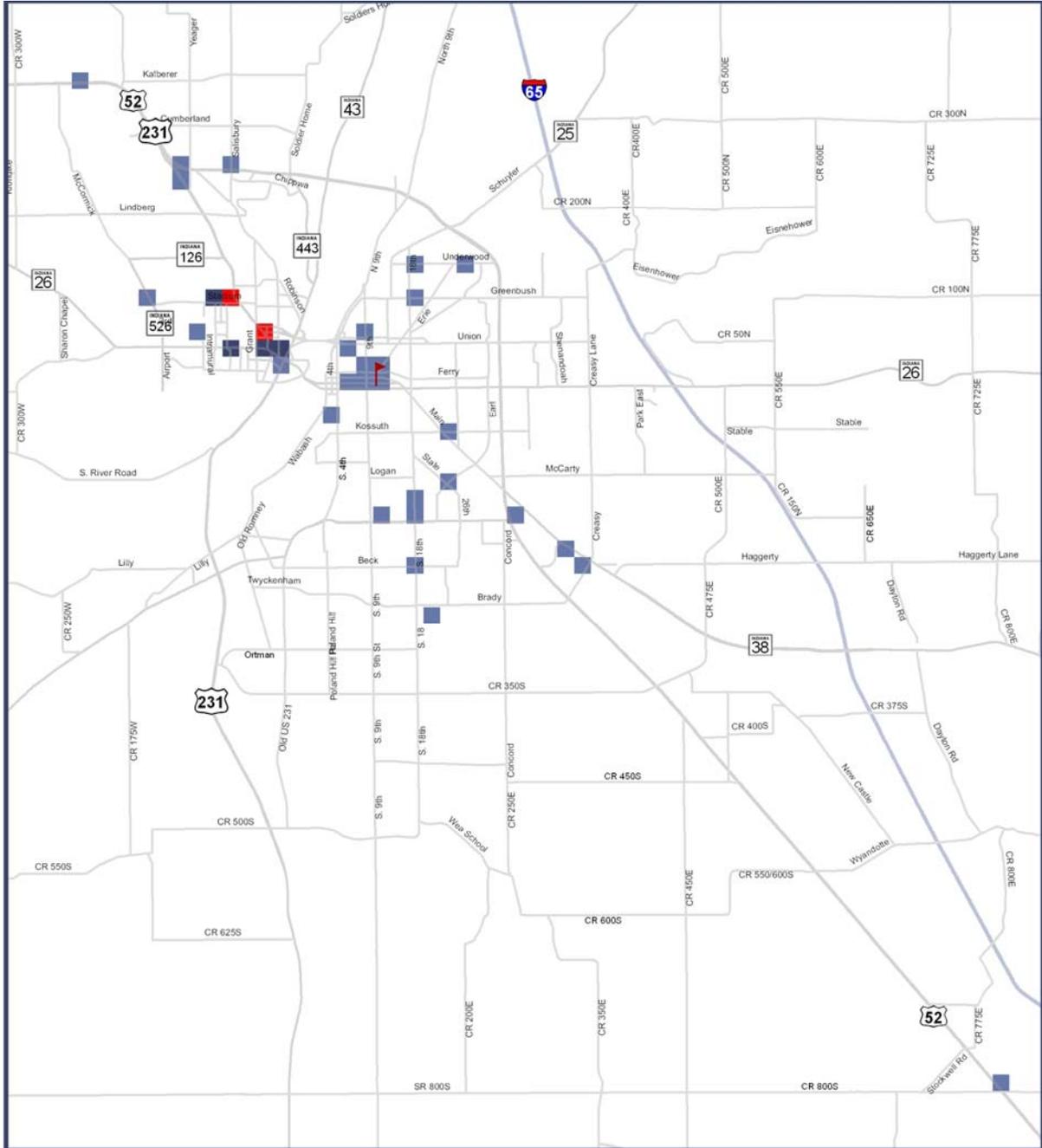
Table 23. Pedestrian Involved Crashes by Month, 2006

Month	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Pedestrian Crashes	Percent of Total Pedestrian Crashes
January*	1	5	0	6	13.3%
February*	1	1	0	2	4.4%
March*	0	5	0	5	11.1%
April*	0	2	0	2	4.4%
May*	0	1	0	1	2.2%
June	0	4	0	4	8.9%
July	0	1	0	1	2.2%
August**	0	2	0	2	4.4%
September**	0	5	0	5	11.1%
October**	0	5	0	5	11.1%
November**	2	5	1	8	17.8%
December**	0	4	0	4	8.9%

*Purdue University 2006 Spring Semester: January 9th – May 15th 2006

**Purdue University 2006 Fall Semester: August 21st – December 17th 2006

Map 6. Pedestrian Crash Intensity, 2006



Legend

-  Pedestrian Fatality Crash*
- Number of Pedestrian Involved Crashes (per 1000x1000 sqft)***
- 
-  Interstate Highway
-  US Highway
-  State Highway
-  Major Local Road

*Crash Data Source: 2006 Indiana State Police Vehicle Crash Records Database (extracted 04/06/07)

Map Location:



0 0.5 1 2 Miles

The Area Plan Commission of Tippecanoe County

Date: July 2007

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Table 24. Pedestrian Involved Crashes by Day of the Week, 2006

Day of the Week	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Pedestrian Crashes	Percent of Total Pedestrian Crashes
Sunday	0	1	0	1	2.2%
Monday	1	5	0	6	13.3%
Tuesday	1	10	0	11	24.4%
Wednesday	0	7	0	7	15.6%
Thursday	0	6	1	7	15.6%
Friday	2	6	0	8	17.8%
Saturday	0	5	0	5	11.1%

Table 25. Pedestrian Involved Crashes by Time of Day, 2006

Time of the Day	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Pedestrian Crashes	Percent of Total Pedestrian Crashes
12:00 - 12:59 AM	0	1	0	1	2.2%
1:00 - 1:59	0	0	0	0	0.0%
2:00 - 2:59	0	0	0	0	0.0%
3:00 - 3:59	0	0	0	0	0.0%
4:00 - 4:59	0	1	0	1	2.2%
5:00 - 5:59	0	0	0	0	0.0%
6:00 - 6:59	0	0	0	0	0.0%
7:00 - 7:59	1	5	0	6	13.3%
8:00 - 8:59	0	0	0	0	0.0%
9:00 - 9:59	0	2	0	2	4.4%
10:00 - 10:59	1	1	0	2	4.4%
11:00 - 11:59	0	2	0	2	4.4%
12:00 - 12:59 PM	1	2	0	3	6.7%
1:00 - 1:59	0	1	0	1	2.2%
2:00 - 2:59	0	3	0	3	6.7%
3:00 - 3:59	0	2	0	2	4.4%
4:00 - 4:59	0	2	0	2	4.4%
5:00 - 5:59	0	2	0	2	4.4%
6:00 - 6:59	0	3	0	3	6.7%
7:00 - 7:59	1	3	1	5	11.1%
8:00 - 8:59	0	3	0	3	6.7%
9:00 - 9:59	0	3	0	3	6.7%
10:00 - 10:59	0	3	0	3	6.7%
11:00 - 11:59	0	1	0	1	2.2%

Table 26. Pedestrian Involved Crashes by Primary Factor, 2006

Primary Factor	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Pedestrian Crashes	Percent of Total Pedestrian Crashes
Pedestrian Action	1	17	1	19	42.2%
Failure To Yield Right Of Way	1	12	0	13	28.9%
Other (Driver) - Explain In Narrative	1	7	0	8	17.8%
View Obstructed	0	1	0	1	2.2%
Unsafe Backing	0	1	0	1	2.2%
Speed Too Fast For Weather Conditions	1	0	0	1	2.2%
Driver Distracted - Explain In Narrative	0	1	0	1	2.2%
Disregard Signal/Reg Sign	0	1	0	1	2.2%

Table 27. Pedestrian Involved Crashes by Light Conditions, 2006

Light Condition	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Pedestrian Crashes	Percent of Total Pedestrian Crashes
Daylight	2	20	0	22	48.9%
Dark (Lighted)	1	14	1	16	35.6%
Dawn/Dusk	1	3	0	4	8.9%
Dark (Not Lighted)	0	3	0	3	6.7%

Table 28. Pedestrian Involved Crashes by Roadway Surface Condition, 2006

Surface Condition	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Pedestrian Crashes	Percent of Total Pedestrian Crashes
Dry	3	32	1	36	80.0%
Wet	1	8	0	9	20.0%

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5 BICYCLE ANALYSIS

In Tippecanoe County there were 58 crashes in 2006 involving bicyclists as shown in Table 29 and in Map 7. Unfortunately, two crashes included a fatality of a bicyclist. One fatality occurred when a car ran off the road and hit a cyclist on the sidewalk. The other fatal crash occurred when a motorist hit a cyclist on the roadway. Of the 49 injury crashes, five were listed injuries as *incapacitating*, 36 *non-incapacitating*, one as *possible*, and one as *refused*. All the remaining six injured bicyclist's injuries were not categorized.

Table 29. Bicyclists Involved Crashes, Injuries, and Fatalities by Severity Classification, 2006

Severity Classification	Total Crashes	Percent of Total Bicyclist Crashes	Total Injured Persons	Total Fatalities
Property Damage Only	8	13.8%	0	0
Personal Injury Only	48	82.8%	49	0
Fatality Injury*	2	3.4%	0	2
Total	58	100.0%	49	2

*Fatalities were Bicyclists, without injuries in the other vehicles

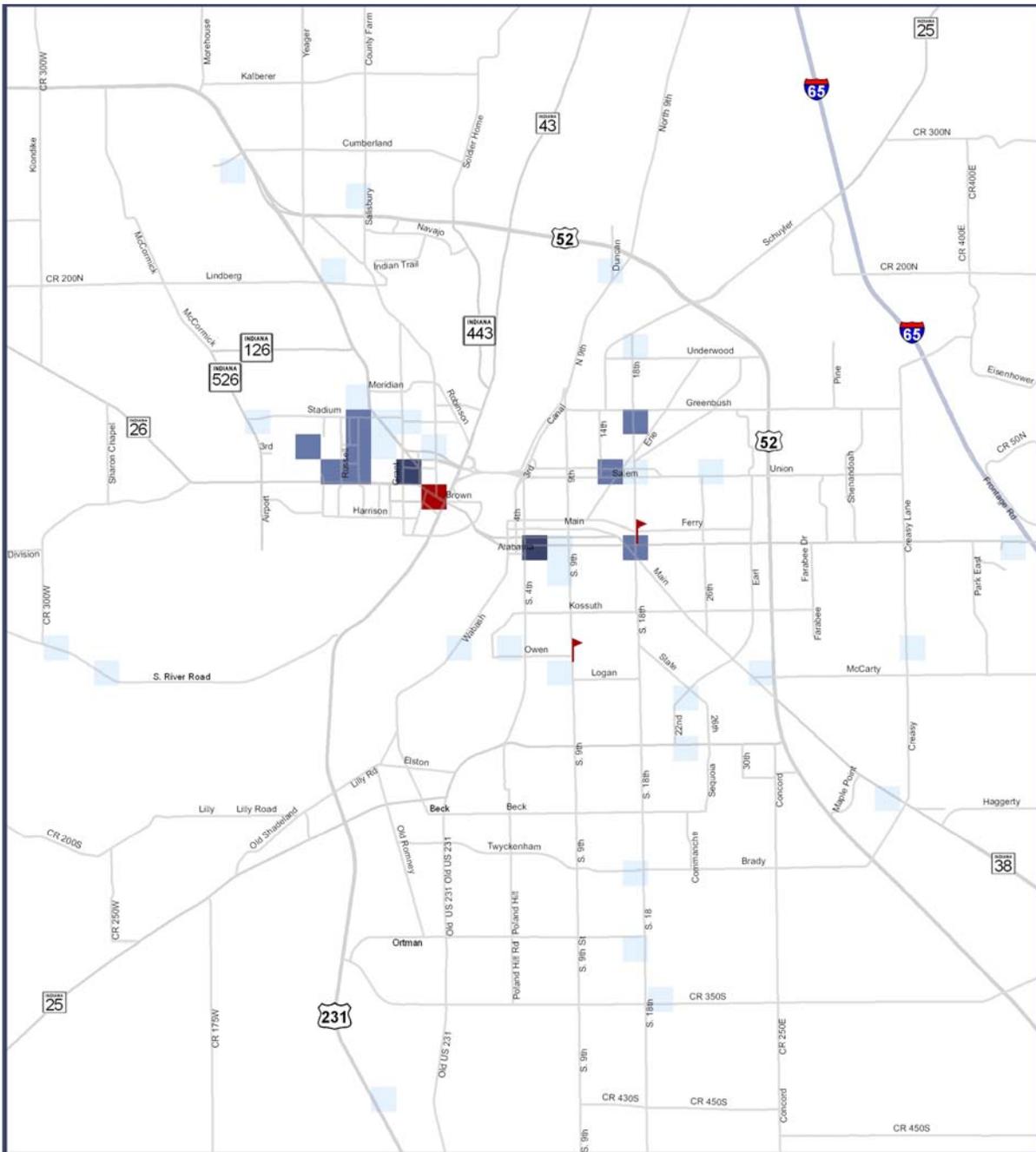
The majority of all bicycle crashes took place in or within 100ft of an intersection (Table 30) as did the majority of injury crashes and the fatalities crashes. Urban *Principal* and *Minor Arterials*, the two busiest non-interstate road types, accounted for a combine 65.5% of the total bicycle crashes (Table 31). The only two crashes occurred in the rural area. Both occurred on South River Road a popular and scenic route used by bicyclists and bicycle clubs. A highest concentration of crashes, 24 (41.4%), occurred in the surrounding the Purdue University campus bounded by SR 526 on the west to US 231 (River Rd) on the east. Other high bicycle crash locations included SR 26 through downtown Lafayette and the Union/Salem St area south of St. Elizabeth's Hospital.

August and September accounting for almost half of the yearly bicycle crashes in 2006 (Table 32). Thursday and Fridays were hazardous for bicyclists accounting for 50% of the weekly crashes. As shown in Table 34, the peak for bicycle accidents occurred between 4-5pm. Furthermore, Friday between 4-5pm was the most hazardous time for a bicyclist in 2006 with five of the eleven crashes.

The primary factor specified for the bicyclist crashes is a bit more ambiguous as shown in Table 35. The number one factor was due to unspecified driver actions (*Other (driver)*), followed by the motorist's/bicyclist's *failure to yield the right of way*. The third most specified factor for the crash was *pedestrian action* which was used when the bicyclist's actions triggered the crash e.g., not stopping when exiting sidewalks and crossing roads, riding the wrong side of the street, or against traffic on a one-way street. As expected the majority of these crashes (60.3%) were right-angle crashes where vehicles and cyclists collided during turns at intersections. An additional eight crashes were the result of left and right turn turning movements made by the motorists.

As shown in Table 37 and Table 38 the overwhelming majority of the bicycle crashes occurred during the day with dry weather.

Map 7. Bicycle Crash Intensity, 2006



Legend



Bicycle Fatality Crash*

Number of Bicyclist Involved Crashes (per 1000x1000 sqft)*



1

2

3

4

5

— Interstate Highway

— US Highway

— State Highway

— Major Local Road

*Crash Data Source: 2006 Indiana State Police Vehicle Crash Records Database (extracted 04/06/07)

Map Location:



N



0 0.5 1 2 Miles

The Area Plan Commission
of Tippecanoe County

Date: July 2007

Disclaimers and copyright restrictions apply to this map and data. Complete disclaimer can be viewed at: <http://www.tippecanoe.in.gov/gis/Disclaimer.htm>

Table 30. Intersection Proximity to Bicyclist Involved Crashes, 2006

Bicyclist Crash Location	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Bicyclist Crashes	Percent of Total Bicyclist Crashes
100 ft Intersection Radius					
Intersection: 0 - 100ft Radius	6	39	2	47	81.0%
Mid-Block: > 100ft Radius	2	9	0	11	19.0%
250 ft Intersection Radius					
Intersection: 0 - 250ft Radius	7	41	2	50	86.2%
Mid-Block: > 250ft Radius	1	7	0	8	13.8%

Table 31. Bicyclist Involved Crashes by Roadway Classification, 2006

Roadway Functional Class	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Bicyclist Crashes	Percent of Total Bicyclist Crashes
Urban Principal Arterial	4	19	1	24	41.4%
Urban Minor Arterial	1	12	1	14	24.1%
Urban Collector	3	6	0	9	15.5%
Urban Local	0	9	0	9	15.5%
Rural Collector	0	2	0	2	3.4%

Table 32. Bicyclist Involved Crashes by Month, 2006

Month	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Bicyclist Crashes	Percent of Total Bicyclist Crashes
January*	0	1	0	1	1.7%
February*	0	3	0	3	5.2%
March*	0	1	0	1	1.7%
April*	1	4	0	5	8.6%
May*	1	2	0	3	5.2%
June	0	6	0	6	10.3%
July	0	3	1	4	6.9%
August**	4	9	0	13	22.4%
September**	2	13	0	15	25.9%
October**	0	4	0	4	6.9%
November**	0	0	0	0	0.0%
December**	0	2	1	3	5.2%

*Purdue University 2006 Spring Semester: January 9th – May 15th 2006

**Purdue University 2006 Fall Semester: August 21st – December 17th 2006

Table 33. Bicyclist Involved Crashes by Day of the Week, 2006

Day of the Week	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Bicyclist Crashes	Percent of Total Bicyclist Crashes
Sunday	0	3	0	3	5.2%
Monday	1	7	0	8	13.8%
Tuesday	1	3	1	5	8.6%
Wednesday	2	6	1	9	15.5%
Thursday	2	12	0	14	24.1%
Friday	1	14	0	15	25.9%
Saturday	1	3	0	4	6.9%

Table 34. Bicyclist Involved Crashes by Time of Day, 2006

Time of the Day	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Bicyclist Crashes	Percent of Total Bicyclist Crashes
12:00 - 12:59 AM	0	1	0	1	1.7%
1:00 - 1:59	0	0	0	0	0.0%
2:00 - 2:59	0	0	0	0	0.0%
3:00 - 3:59	0	0	0	0	0.0%
4:00 - 4:59	0	0	0	0	0.0%
5:00 - 5:59	0	0	1	1	1.7%
6:00 - 6:59	0	0	0	0	0.0%
7:00 - 7:59	0	0	0	0	0.0%
8:00 - 8:59	0	4	0	4	6.9%
9:00 - 9:59	0	3	0	3	5.2%
10:00 - 10:59	0	2	0	2	3.4%
11:00 - 11:59	0	3	0	3	5.2%
12:00 - 12:59 PM	0	4	0	4	6.9%
1:00 - 1:59	1	3	0	4	6.9%
2:00 - 2:59	1	0	1	2	3.4%
3:00 - 3:59	0	7	0	7	12.1%
4:00 - 4:59	2	9	0	11	19.0%
5:00 - 5:59	1	6	0	7	12.1%
6:00 - 6:59	1	3	0	4	6.9%
7:00 - 7:59	0	3	0	3	5.2%
8:00 - 8:59	2	0	0	2	3.4%
9:00 - 9:59	0	0	0	0	0.0%
10:00 - 10:59	0	0	0	0	0.0%
11:00 - 11:59	0	0	0	0	0.0%

Table 35. Primary Factor for Bicyclist Involved Crashes, 2006

Primary Factor	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Bicyclist Crashes	Percent of Total Bicyclist Crashes
Other (Driver) - Explain In Narrative	4	18	1	23	39.7%
Failure To Yield Right Of Way	1	15	0	16	27.6%
Pedestrian Action	1	9	0	10	17.2%
Disregard Signal/Regulator Sign	0	1	0	1	1.7%
Following Too Closely	0	1	0	1	1.7%
None (Driver)	1	0	0	1	1.7%
None (Vehicle)	1	0	0	1	1.7%
Other (Environmental) - Explain In Narrative	0	1	0	1	1.7%
Overcorrecting/Over steering	0	1	0	1	1.7%
Ran Off Road Right	0	0	1	1	1.7%
Unsafe Speed	0	1	0	1	1.7%
View Obstructed	0	1	0	1	1.7%

Table 36. Manner of Collision for Bicyclist Involved Crashes, 2006

Manner of Collision	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Bicyclist Crashes	Percent of Total Bicyclist Crashes
Right Angle	6	29	0	35	60.3%
Other - Explain In Narrative	1	4	0	5	8.6%
Left Turn	1	4	0	5	8.6%
Same Direction Sideswipe	0	3	1	4	6.9%
Right Turn	0	3	0	3	5.2%
Head On	0	3	0	3	5.2%
Rear End	0	1	0	1	1.7%
Ran Off Road	0	0	1	1	1.7%
Opposite Direction Sideswipe	0	1	0	1	1.7%

Table 37. Light Conditions for Bicyclist Involved Crashes, 2006

Light Condition	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Bicyclist Crashes	Percent of Total Bicyclist Crashes
Daylight	7	46	1	54	93.1%
Dark (Lighted)	0	2	1	3	5.2%
Dawn/Dusk	1	0	0	1	1.7%

Table 38. Roadway Surface for Bicyclist Involved Crashes, 2006

Surface Condition	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Bicyclist Crashes	Percent of Total Bicyclist Crashes
Dry	8	47	1	56	96.6%
Wet	0	1	1	2	3.4%

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6 MOTORCYCLE AND MOPED ANALYSIS

There were 105 roadway crash reports that involved in motorcycles in 2006, 22 of which involved mopeds. Of the 21 total fatalities, four (21%) were motorcyclists and none were listed as wearing a helmet. As shown in Table 40 the majority of motorcycle crashes took place on urban roadways, specifically on urban *Primary* and *Minor Arterials*. As expected motorcycle crashes peaked during the spring and the autumn months with a lull during the winter months (Table 41). Forty-five percent of the motorcycle crashes (Table 46) were reported as primarily due to driver error (*Other (Driver)*), *failure to yield the right-of-way*, or an *unsafe speed* by either the motorcyclist and/or and other drivers involved. Unfortunately, *alcoholic beverages* use was listed as a primary factor for 5 (4.8%) of the 106 total motorcycle crashes.

In the crash database, 'individual' information was only available for 104 of the motorcyclist and/or passengers involved in the crashes. Of the 104 individuals:

- Only 28 (26.9%) were reported as wearing helmets⁹
- 8 (7.7%) tested above the legal limit (0.08%) for alcohol
- 52 (50%) were reported as transported to the hospital for injuries, an additional 4 (3.8%) were reported as fatalities

Table 39. Motorcycle and Moped Crashes, Injuries, and Fatalities by Severity Classification, 2006

Severity Classification	Total Crashes	Percent of Total Motorcycle Crashes	Total Injured Persons	Total Fatalities
Property Damage Only Crashes	32	30.5%	0	0
Personal Injury Crashes	69	65.7%	72	0
Fatality Injury Crashes*	4	3.8%	3	4
<i>Total</i>	<i>105</i>	<i>100.0%</i>	<i>75</i>	<i>4</i>

*Fatalities were Motorcyclists

Table 40. Motorcycle and Moped Crashes by Roadway Classification, 2006

Roadway Functional Class	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Motorcycle Crashes	Percent of Total Motorcycle Crashes
Urban Principal Arterial	10	27	0	37	35.2%
Urban Minor Arterial	10	8	1	19	18.1%
Urban Local	6	12	0	18	17.1%
Rural Collector	2	8	2	12	11.4%
Urban Collector	2	6	0	8	7.6%
Rural Local	1	6	0	7	6.7%
Rural Principal Arterial	0	2	1	3	2.9%
Urban Interstate	1	0	0	1	1.0%

⁹ Helmets are estimated by NHTSA to be 37% effective in preventing fatal injuries to motorcyclists
Calculating Lives Saved by Motorcycle Helmets, William V. Deutermann, 08/2005 DOT HS 809 861

Table 41. 2006 Motorcycle and Moped Crashes by Month, 2006

Month	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Motorcycle Crashes	Percent of Total Motorcycle Crashes
January*	1	0	0	1	1.0%
February*	0	0	0	0	0.0%
March*	1	2	0	3	2.9%
April*	1	9	2	12	11.4%
May*	4	10	1	15	14.3%
June	5	7	0	12	11.4%
July	3	5	0	8	7.6%
August**	5	15	1	21	20.0%
September**	8	10	0	18	17.1%
October**	4	7	0	11	10.5%
November**	0	4	0	4	3.8%
December**	0	0	0	0	0.0%

*Purdue University Spring Semester 2006: January 9th – May 15th 2006

**Purdue University Fall Semester 2006: August 21st – December 17th 2006

Table 42. Motorcycle and Moped Crashes by Day of Week, 2006

Day of the Week	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Motorcycle Crashes
Sunday	5	9	1	15	14.3%
Monday	4	9	0	13	12.4%
Tuesday	5	8	0	13	12.4%
Wednesday	4	5	1	10	9.5%
Thursday	3	10	1	14	13.3%
Friday	6	13	1	20	19.0%
Saturday	5	15	0	20	19.0%

Table 43. Motorcycle and Moped Crashes by Light Conditions, 2006

Light Condition	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Motorcycle Crashes
Daylight	20	42	1	63	60.0%
Dark (Not Lighted)	6	12	2	20	19.0%
Dark (Lighted)	3	11	1	15	14.3%
Dawn/Dusk	3	4	0	7	6.7%

Table 44. Motorcycle and Moped Crashes by Roadway Surface, 2006

Surface Condition	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Motorcycle Crashes
Dry	28	58	4	90	85.7%
Loose Material On Road	1	3	0	4	3.8%
Wet	3	8	0	11	10.5%

Table 45. Motorcycle and Moped Crashes by Time of Day, 2006

Time of the Day	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Motorcycle Crashes
12:00 - 12:59 AM	0	1	1	2	1.9%
1:00 - 1:59	1	0	0	1	1.0%
2:00 - 2:59	1	0	0	1	1.0%
3:00 - 3:59	1	1	0	2	1.9%
4:00 - 4:59	0	0	0	0	0.0%
5:00 - 5:59	0	1	0	1	1.0%
6:00 - 6:59	0	2	0	2	1.9%
7:00 - 7:59	2	1	0	3	2.9%
8:00 - 8:59	1	2	0	3	2.9%
9:00 - 9:59	0	0	0	0	0.0%
10:00 - 10:59	1	0	0	1	1.0%
11:00 - 11:59	1	2	0	3	2.9%
12:00 - 12:59 PM	1	1	0	2	1.9%
1:00 - 1:59	2	4	0	6	5.7%
2:00 - 2:59	2	5	0	7	6.7%
3:00 - 3:59	2	10	0	12	11.4%
4:00 - 4:59	4	3	0	7	6.7%
5:00 - 5:59	2	7	0	9	8.6%
6:00 - 6:59	4	3	1	8	7.6%
7:00 - 7:59	1	4	0	5	4.8%
8:00 - 8:59	2	6	0	8	7.6%
9:00 - 9:59	0	8	1	9	8.6%
10:00 - 10:59	2	5	1	8	7.6%
11:00 - 11:59	2	3	0	5	4.8%
Unknown	0	1	1	2	1.9%

Table 46. Motorcycle and Moped Crashes by Primary Factor, 2006

Primary Factor	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Motorcycle Crashes
Other (Driver) - Explain In Narrative	6	12	0	18	17.1%
Failure To Yield Right Of Way	2	13	2	17	16.2%
Unsafe Speed	5	7	1	13	12.4%
Following Too Closely	4	5	0	9	8.6%
Ran Off Road Right	1	7	0	8	7.6%
Overcorrecting/Over steering	1	4	0	5	4.8%
Alcoholic Beverages	1	3	1	5	4.8%
Improper Turning	2	1	0	3	2.9%
Unsafe Backing	3	0	0	3	2.9%
Speed Too Fast For Weather Cond	1	2	0	3	2.9%
Animal/Object In Roadway	2	1	0	3	2.9%
Other (Environ) - Explain In Narrative	0	3	0	3	2.9%
Driver Distracted - Explain In Narrative	1	2	0	3	2.9%
Disregard Signal/Regulatory Sign	0	2	0	2	1.9%
Improper Lane Usage	2	0	0	2	1.9%
Improper Passing	1	1	0	2	1.9%
Violation Of License Restriction	0	1	0	1	1.0%
Driver Asleep Or Fatigued	0	1	0	1	1.0%
Pedestrian Action	0	1	0	1	1.0%
Brake Failure Or Defective	0	1	0	1	1.0%
Ran Off Road Left	0	1	0	1	1.0%
None (Driver)	0	1	0	1	1.0%

Table 47. Motorcycle and Moped Crashes by Collision With Object, 2006

Motorcycle Collision With Object	Property Damage Only Crashes	Personal Injury Crashes	Fatality Crashes	Total Crashes	Percent of Total Motorcycle Crashes
Another Motor Vehicle	19	26	4	49	46.7%
Curb	2	12	0	14	13.3%
Overturn/Rollover	5	5	0	10	9.5%
Other - Explain In Narrative	5	4	0	9	8.6%
Fell From Vehicle (Non Collision)	0	6	0	6	5.7%
Ditch	0	5	0	5	4.8%
Off Roadway	0	4	0	4	3.8%
Deer	1	1	0	2	1.9%
Pedestrian	0	1	0	1	1.0%
Mailbox	0	1	0	1	1.0%
Culvert	0	1	0	1	1.0%
Bridge Rail	0	1	0	1	1.0%
Bridge Pier Or Abutment	0	1	0	1	1.0%
Bicycle	0	1	0	1	1.0%

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Local ID

Type of Crash

Time Notified M	Time Arrived M	Other Location of Investigation AT SCENE ONLY			
Assisting Officer		ID No.	Agency	Investigation Complete? NO	Photos Taken? NO
Assisting Officer		ID No.	Agency	Date of Report //	
Investigating Officer		ID No.	Agency	Reviewing Officer	

Narrative

UNIT INFORMATION

Local ID

Driver's Name (Last, First, MI)				Safety Equipment Used			
Address (Street, City, State, Zip)				Safety Equipment Effective?			
				Ejection/Trapped			
Date of Birth		Age		Gender		EMS No.	
						Driver Injury Status	
Driver's License #			Lic Type	CDL Class	Lic State	Nature of Most Severe Injury	
Apparent Physical Status		Restrictions				Location of Most Severe Injury	
<input type="checkbox"/> Normal <input type="checkbox"/> Had Been Drinking <input type="checkbox"/> Handicapped <input type="checkbox"/> Ill <input type="checkbox"/> Asleep/Fatigued <input type="checkbox"/> Drugs/Medication <input type="checkbox"/> Unknown		<input type="checkbox"/> Glasses/Contact Lenses <input type="checkbox"/> Outside Rearview Mirror <input type="checkbox"/> Daylight Driving <input type="checkbox"/> Automatic Transmission <input type="checkbox"/> Special Controls <input type="checkbox"/> Employment Only <input type="checkbox"/> Motorcycle Only <input type="checkbox"/> To/From Employment <input type="checkbox"/> None				<input type="checkbox"/> Employer's Vehicle Only <input type="checkbox"/> State-Owned Vehicles <input type="checkbox"/> PP Chauffeurs Taxi Only <input type="checkbox"/> Power Steering <input type="checkbox"/> Special Restrictions <input type="checkbox"/> Probation DWI <input type="checkbox"/> Probation HTO	
Test Given		Type Given		If Cited?			
		<input type="checkbox"/> Blood <input type="checkbox"/> Urine <input type="checkbox"/> Breath <input type="checkbox"/> SFST <input type="checkbox"/> PBT		<input type="checkbox"/> Infraction <input type="checkbox"/> Misdemeanor <input type="checkbox"/> Felony			
Alcohol Results				Drug Results			
PBT Certified Test <input type="checkbox"/> Pending							
Veh#	Color	Vehicle Year	Make	Model	Style	Initial Impact Area	
1						<input type="checkbox"/> Undercarriage <input type="checkbox"/> Trailer <input type="checkbox"/> None <input type="checkbox"/> Unknown	
# Occupants		Lic Year	License #		License State		Front
							Rear
# Axles	Speed Limit	Insured By			Phone Number		
Registered Owner's Name (Last, First, MI)				<input type="checkbox"/> Same as Driver			
Address (Street, City, State, Zip)				Areas Damaged (Multiples)			
				<input type="checkbox"/> Undercarriage <input type="checkbox"/> Trailer <input type="checkbox"/> None <input type="checkbox"/> Unknown			
Towed?	Towed To		Towed By				
Lic State	Lic Year	Registered Owner's Name (Last, First, MI)			<input type="checkbox"/> Same as Driver		Vehicle Use
License#		Address (Street, City, State, Zip)					
Veh Year	Make						Vehicle Type
Lic State	Lic Year	Registered Owner's Name (Last, First, MI)			<input type="checkbox"/> Same as Driver		Pre-Crash Vehicle Action
License#		Address (Street, City, State, Zip)					
Veh Year	Make						Direction of Travel
Commercial Vehicle: Carrier's Name and Address							
HAZMAT Proper Shipping Name:							
US DOT#		ICC#		State DOT#			
Vehicle Identification#				CMV Inspection		If Yes	
Gross Vehicle Weight Rating			Cargo Body Type				
HAZMAT Placard	HAZMAT Release of Cargo		HAZMAT 4-Digit ID#	Hazard Class #			

NON-DRIVER INJURED INFORMATION

Local ID

Injured Pre-crash Location: Veh#			Safety Equipment Used											
Name (Last, First, MI)			Safety Equipment Effective?											
Address (Street, City, State, Zip)			Ejection/Trapped											
Date of Birth		Age	Gender		EMS No.									
Driver Injury Status		Nature of Most Severe Injury												
Position in or on Vehicle			Location of Most Severe Injury											
<input type="checkbox"/> Front <table border="1" style="display: inline-table; vertical-align: middle;"> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </table> <input type="checkbox"/> Rear			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Test Given Type Given <input type="checkbox"/> Blood <input type="checkbox"/> Urine <input type="checkbox"/> Breath <input type="checkbox"/> SFST <input type="checkbox"/> PBT		
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
Alcohol Results			Certified Test		Drug Results									
PBT			<input type="checkbox"/> Pending											

Injured Pre-crash Location: Veh#			Safety Equipment Used											
Name (Last, First, MI)			Safety Equipment Effective?											
Address (Street, City, State, Zip)			Ejection/Trapped											
Date of Birth		Age	Gender		EMS No.									
Driver Injury Status		Nature of Most Severe Injury												
Position in or on Vehicle			Location of Most Severe Injury											
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
Alcohol Results			Certified Test		Drug Results									
PBT			<input type="checkbox"/> Pending											

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Date of Birth		Age	Gender		EMS No.									
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
Alcohol Results			Certified Test		Drug Results									
PBT			<input type="checkbox"/> Pending											

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Name (Last, First, MI)			Safety Equipment Effective?											
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<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>												
Alcohol Results			Certified Test		Drug Results									
PBT			<input type="checkbox"/> Pending											

PROPERTY/WITNESS INFORMATION

Local ID _____

Other Property Damage

Other Property Damage	#	State Property	Owner's Name and Address
Other Property Damage	#	State Property	Owner's Name and Address
Other Property Damage	#	State Property	Owner's Name and Address
Other Property Damage	#	State Property	Owner's Name and Address
Other Property Damage	#	State Property	Owner's Name and Address
Other Property Damage	#	State Property	Owner's Name and Address
Other Property Damage	#	State Property	Owner's Name and Address
Other Property Damage	#	State Property	Owner's Name and Address
Other Property Damage	#	State Property	Owner's Name and Address

Witness/Other Participant

<input type="checkbox"/> Witness	#	(Last Name, First Name, MI)	Phone #
<input type="checkbox"/> Other Participant	Address etc.		Location at Time of Crash
<input type="checkbox"/> Witness	#	(Last Name, First Name, MI)	Phone #
<input type="checkbox"/> Other Participant	Address etc.		Location at Time of Crash
<input type="checkbox"/> Witness	#	(Last Name, First Name, MI)	Phone #
<input type="checkbox"/> Other Participant	Address etc.		Location at Time of Crash
<input type="checkbox"/> Witness	#	(Last Name, First Name, MI)	Phone #
<input type="checkbox"/> Other Participant	Address etc.		Location at Time of Crash
<input type="checkbox"/> Witness	#	(Last Name, First Name, MI)	Phone #
<input type="checkbox"/> Other Participant	Address etc.		Location at Time of Crash
<input type="checkbox"/> Witness	#	(Last Name, First Name, MI)	Phone #
<input type="checkbox"/> Other Participant	Address etc.		Location at Time of Crash
<input type="checkbox"/> Witness	#	(Last Name, First Name, MI)	Phone #
<input type="checkbox"/> Other Participant	Address etc.		Location at Time of Crash

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APPENDIX B – COMPLETE SUMMARY OF CONTRIBUTING CIRCUMSTANCES FOR ALL 2006 CRASHES

There are many circumstances that contribute to a crash. For each crash report, Officer's are allowed to specify two "Driver", one "Vehicle", and one "Environmental" contributing circumstances for each vehicle. For one of the vehicles in the crash, one the four possible contributing circumstances must be the listed as the primary contributing circumstance (also referred to as the primary factor) for the crash.

The following table shows all contributing circumstances (primary and secondary) specified for all 2006 Tippecanoe County crashes (roadway and non-roadway). For additional information, see Table 8 for the top 20 primary contributing circumstances reported in 2006.

Contributing Circumstances	Total Collisions	Total Fatal Crashes	Total Injury Crashes	Property Damage	Number Killed	Number Injured
Following Too Closely	1,384	0	194	1,190	0	294
Failure To Yield Right Of Way	1,097	2	242	853	2	366
Other (Driver) Explain In Narrative	1,056	1	165	890	1	218
Unsafe Backing	1,032	0	17	1,015	0	19
Animal/Object In Roadway	463	0	24	439	0	33
Roadway Surface Condition	456	0	82	374	0	111
Unsafe Speed	329	5	81	243	5	110
Ran Off Road Right	318	6	86	226	6	107
Improper Turning	314	0	19	295	0	20
Speed Too Fast For Weather Conditions	305	0	67	238	0	93
Improper Lane Usage	282	0	19	263	0	28
Disregard Signal/Regulatory Sign	262	1	89	172	1	135
Alcoholic Beverages	234	5	77	152	5	108
Overcorrecting/Over-steering	151	4	50	97	4	76
Driver Distracted Explain In Narrative	151	0	28	123	0	47
Left Of Center	121	2	33	86	2	66
Other (Vehicle) Explain In Narrative	101	0	7	94	0	11
Improper Passing	98	0	11	87	0	16
Other (Environmental) Explain In Narrative	96	0	20	76	0	31
View Obstructed	72	1	9	62	1	13
Brake Failure Or Defective	65	0	16	49	0	21
Driver Asleep Or Fatigued	56	1	21	34	1	31
Glare	45	1	9	35	1	17
Ran Off Road Left	42	1	10	31	1	11
Cell Phone Usage	37	0	6	31	0	10
Driver Illness	34	0	17	17	0	23
Pedestrian Action	34	1	26	7	1	27
Tire Failure Or Defective	22	0	3	19	0	4
Insecure/Leaky Load	18	0	0	18	0	0
Illegal Drugs	14	1	8	5	1	12

Contributing Circumstances	Total Collisions	Total Fatal Crashes	Total Injury Crashes	Property Damage	Number Killed	Number Injured
Unknown Factor Code	14	0	0	14	0	0
Accelerator Failure Or Defective	12	0	6	6	0	11
Wrong Way On One Way	11	0	3	8	0	3
Road Under Construction	10	0	1	9	0	1
Prescription Drugs	9	0	4	5	0	4
Engine Failure Or Defective	9	0	1	8	0	2
Passenger Distraction	8	0	3	5	0	3
Steering Failure	6	0	2	4	0	2
Other Telematics In Use	5	0	0	5	0	0
Traffic Control Inoperative/Missing	5	0	0	5	0	0
Holes/Ruts In Surface	4	0	0	4	0	0
Headlight Defective Or Not On	3	1	1	1	1	1
Severe Crosswinds	3	0	0	3	0	0
Obstruction Not Marked	3	0	0	3	0	0
Lane Marking Obscured	3	0	0	3	0	0
Utility Work	3	0	0	3	0	0
Violation Of License Restriction	2	0	1	1	0	1
Jackknifing	2	0	0	2	0	0
Other Lights Defective	2	0	0	2	0	0
Tow Hitch Failure	2	0	0	2	0	0
Oversize/Overweight Load	1	0	0	1	0	0

