JEFFERSON COUNTY, MISSOURI

2014 ROADWAY MASTER PLAN

Prepared by
JEFFERSON COUNTY PUBLIC WORKS
HIGHWAY DIVISION

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Executive Summary

Jefferson County has experienced growth since it formally became a County in December of 1818, three years prior to Missouri becoming a state. To accommodate this growth the existing roads, some of which were little more than trails or paths, had to be improved and new roads had to be built. This 2014 Roadway Master Plan is a step toward the improvement of those established roads. This Plan also shows areas for consideration of new roadway connectors to make travel in the county safer and allow for a smoother transition in accommodating the growth the county is experiencing. This 2014 Roadway Master Plan will also integrate into the Jefferson County Official Master Plan and together will guide the development of the county.

The availability of infrastructure (roads, public water and public sewer) helps to determine the areas of Jefferson County that will see additional growth. Jefferson County, north of Missouri Highways M, MM and W, (though mostly unincorporated), is designated as "Urbanized" by East-West Gateway Council of Governments. This area has been experiencing a major portion of the growth and development in the County.

Jefferson County currently maintains 419 roads, totaling over 667 linear miles, and 155 bridges. These roads, along with the Missouri Department of Transportation (MoDOT) maintained Interstate 55, US highways 61-67, the 6 State numbered routes (i.e. 21, 30, 109, 110, 141 & 231) and 28 State lettered routes (i.e. A, B, BB, C, K, etc.) are divided into eleven (11) functional classifications. These roadways are assigned to a functional classification, from Interstate and Expressway to the County Minor Local and Private Access roads. The functional classification of a road is determined by the roadways Annual Average Daily Traffic (A.A.D.T.) and the roads location (the roadways it interconnects). The County roads that are classified lower than "Urban Collector" or "Rural Major Collector" (see Table 3-2, pg 3-3) are not eligible for Federal funding assistance.

Appendix A of this Roadway Master Plan lists the roads maintained by the County in Alphabetical order, their length and their starting and ending points (North to South or East to West). Appendix A also shows which roads the County feels are most likely to be changed to a higher functional classification within 10 year and 20 year projections.

Appendix B lists the same County maintained roads in a County assigned "Road Number" Numerical order. Appendix B also shows in which Council District the road is located.

Appendix C is the Jefferson County Strategic Highway Safety Plan. This Plan was developed to give the County an idea on the state of traffic safety on our local roads system. By organizing crash data from 2007 thru 2011, the plan provides the County

Executive Summary (continued)

with a clearer understanding of which local roads, or specific sections of our local roads, are experiencing the most traffic accidents. There are approximately 20 different categories that were considered. Countermeasures and goals for serious and fatal accident reductions have been established as a result of this plan.

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Chapter 1
Introduction

A Roadway Master Plan is a critical component in facilitating safe and successful urban and rural growth in a city or county. It guides the location and type of roadways that are needed to meet projected traffic growth and support additional infrastructure improvements within Jefferson County. A Roadway Master Plan also integrates into the county Master Development Plan to guide in the smooth development of the county.

Background and Purpose

Jefferson County has a rich history. Settlements within Jefferson County began as early as the 1700's. The 656 square miles of Jefferson County were a small part of the more than 559 Million acres that were acquired by the United States in December of 1803 under President Thomas Jefferson, for whom our county was named. The first town in the county (then a territory) was New Hartford, and was laid out in 1806 in the vicinity of what is now the city of Herculaneum. Jefferson County has been growing ever since. On December 8, 1818, Jefferson County formally came into existence. In 1820 the population was estimated to be around 1,800 people. On August 10, 1821 Missouri became a state. In 1839 the County Seat was moved from Herculaneum to the city of Hillsboro (which was a stopping point near a spring along the trail between St. Louis and Potosi). In 1857 the Iron Mountain Railroad crossed the county, from St. Louis to the south, and allowed industrial plants to move to the area. Some railroad shops were then built in De Soto. In the late 1880's Jefferson County's population was around 19,000 people. This is around the time that the first county roads were being completed. Festus, Hillsboro, De Soto and other areas were linked through a system of gravel roads. Since then our population has grown to over 218,000 and the Jefferson County Public Works Department now maintains 419 roads, totaling over 667 linear miles. Those roads have many different types of surfaces, ranging from asphalt, chip & seal, and concrete to a new "pavement preservation" compound (which has proven very successful). Jefferson County is one of the largest and fastest growing counties in the State of Missouri and transportation is a major factor in accommodating the growth in population and development.

Efficient Transportation Corridors are an essential component of any county, which suggests the need for a Roadway Master Plan. Development in the county depends on the mobility of its citizenry, the efficient movement of goods and the availability of services to those citizens. Access to safe and efficient roadways for the residents, visitors and commercial entities in Jefferson County is paramount to the success and sustainability of the county.

Chapter 1
Introduction (continued)

The Roadway Master Plan takes into consideration many factors, including the county's demographics, current and future Functional Road Classifications, and Future Goals for the road system in Jefferson County. Jefferson County, located immediately south of St. Louis County, has been heavily influenced by the movement of people from urban areas relocating to a more rural setting. The local Metropolitan Planning Organization, the East-West Gateway Council of Governments, now identifies a substantial portion of northeastern Jefferson County, and a major portion of the eastern side of the county along Interstate 55, as an "urbanized" area, even though most of it remains unincorporated. This increase in population has created a need to improve the transportation system of the county. This population shift has meant more heavily used roadways, which has led to additional maintenance requirements and capacity improvements. Because of the topography, geology and available infrastructure, some areas of the county are subject to different development potential. This growth potential suggests a roadway classification system to identify roads that will require attention because of the current and future development patterns. *Note: Roads within the Incorporated Cities of Arnold, Byrnes Mill, Crystal City, DeSoto, Festus, Herculaneum, Hillsboro, Kimmswick, Olympian Village, Parkdale, Pevely, Scotsdale, the Village of Cedar Hill Lakes and the Village of Peaceful Village are the responsibility of those Municipal areas and are not included in this Roadway Master Plan. Private Subdivision Streets are also not included in this Plan.*

Objectives and Goals

Jefferson County strives to have a safe and efficient road system to further enhance the mobility and future growth of the county. This Roadway Master Plan includes the following goals and objectives:

- Create a current and updated road classification system, which will also provide more detailed requirements for development.

- Provide efficient quality of service with needed capacity, reasonable speed, convenience and safety for all of its users.

- Create a mobile road system that will accommodate and attract the residential, commercial and industrial growth this county finds desirable.

- Create a priority system showing the primary and secondary growth areas and project where the growth in the county will take place.

- To inform people about our current roadway projects and future roadway projects.

Chapter 1
Introduction (continued)

Objectives and Goals (continued)

- Identify Traffic Safety concerns on our County Local Roads System and Target Countermeasures to address those safety concerns.

Benefits of a Roadway Master Plan

The primary purpose of a Roadway Master Plan is to ensure orderly and progressive development of the urban and rural road system to serve the access needs of the public. Cities and counties that want to develop an efficient transportation system to meet existing and future transportation needs use a Roadway Master Plan. This planning is also interrelated with other planning entities to aid in this development process.

The benefits created by efficient transportation planning are realized by achieving the following objectives:

♦ Maximizing mobility while minimizing the negative impacts of street widening and construction on neighborhoods, communities, and the county as a whole, by recognizing where future improvements may be needed and incorporating those needs.

♦ Making efficient use of available resources by designating and recognizing the major roads that will likely require improvements due to the current and anticipated growth in that area.

♦ Identifying the functional role that each road should be designed to serve in order to promote and maintain the safety and stability of traffic and land use.

♦ Improve Traffic Safety by applying accident mitigation countermeasures on a systemic scale.

Chapter 2
Primary & Secondary Growth Areas

Identifying the areas of Primary and Secondary Growth in the county will help determine which roads will need the most attention. Normally the higher the population density of an area the more traffic a road will have, which will then lead to more frequent maintenance and desired improvements.

Demographics

The population of Jefferson County was 220,209 in 2012, which is a 11.2% growth since the 2000 census. This increase in population has made Jefferson County one of the faster growing counties in the state of Missouri.

In 2012 there were 80,703 households in Jefferson County with an average number of 2.67 persons per household.

There were 2.50 vehicles per household in 2010.

In January of 2013 Jefferson County had a labor force of 114,566. The unemployment rate in January 2013 was 7.9%.

A substantial number of the people that live in Jefferson County, especially in northern Jefferson County, work in the City of St. Louis, St. Louis County, St. Charles County, and even Illinois. This mobile work force creates a large amount of traffic on the county roadways, especially during rush hours.

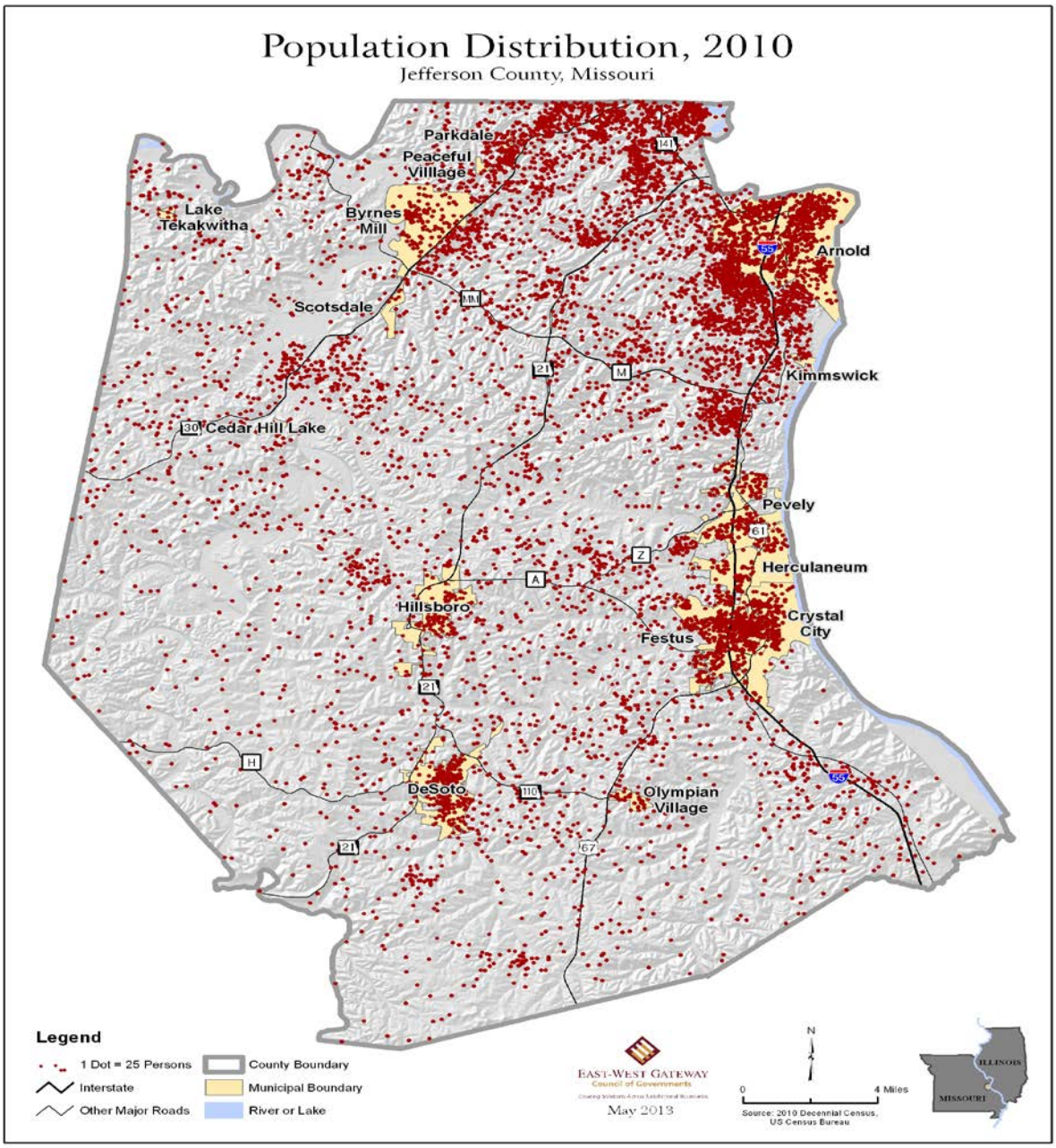
Figure 2-1 (on the following page) shows the Population Distribution of Jefferson County in 2010 (map from East-West Gateway Council of Governments). Notice how the majority of the population in Jefferson County is just south of the northern border with St. Louis County, down both the MO Route 30 corridor and down MO Route 141 toward Arnold (which is mostly unincorporated), and also over in the City of Arnold (just south of the Meramec River, which also borders St. Louis County) and down the I-55 corridor (which parallels the Mississippi River). The I-55 corridor includes the Incorporated cities of Arnold (pop. 20,808), Kimmswick (pop. 157), Pevely (pop. 5,484), Herculaneum (pop. 3,468), Crystal City (pop. 4,855) and Festus (pop. 11,602). The Cities of Hillsboro (pop. 2,821), which is the County Seat of Jefferson County, and DeSoto (pop. 6,400) also have a substantial number of residents.

(Note: All populations listed previously are from the US 2010 Census)

Chapter 2
Primary & Secondary Growth Areas

Demographics (continued)

Figure 2-1



Chapter 2
Primary & Secondary Growth Areas

Primary Growth Areas

The Jefferson County population growth is projected to occur primarily along the major highway corridors of Interstate 55, Missouri (MO) State Routes 21 and 30 and MO State Routes A, M, MM, W, and Z. Population growth is also anticipated in the northeastern and north central watersheds, including the Bear Creek, Buck Creek, Dulin Creek, Heads Creek, Joachim Creek, Little Creek and Sandy Creek watersheds (the locations of these watersheds are shown in **Figure 2-3**).

Transportation has become an important issue in the growth of Jefferson County. The county's roadways must be safe, efficient and mobile enough to keep the traffic moving as smoothly and efficiently as possible.

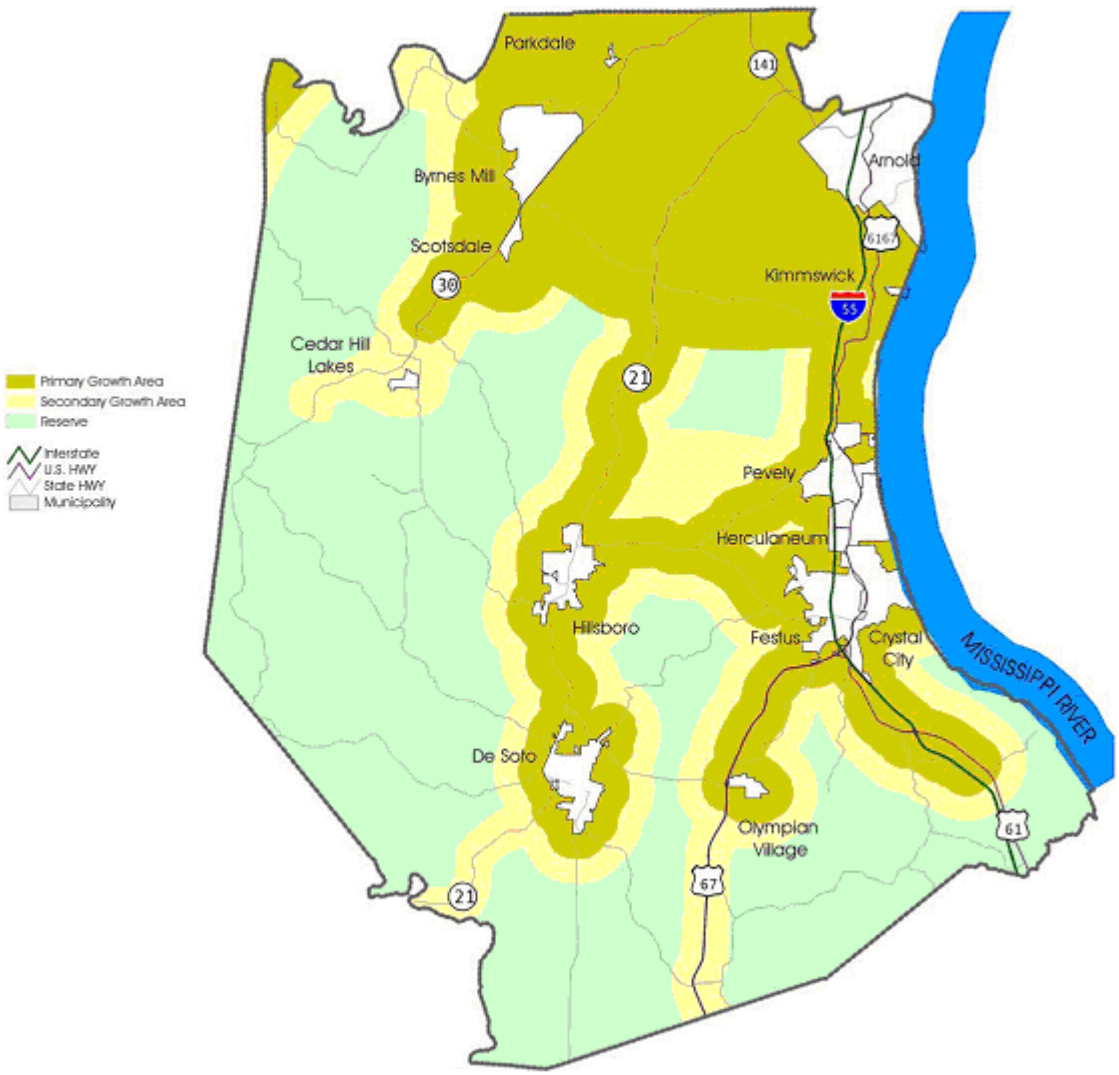
The growth in the northern part of the county has been occurring for years. The area north of MO State Routes M, MM & W is now considered to be part of the urban area. The growth has been filtering down into the rural areas for the last decade. One of the main reasons for the large amount of development in certain areas is the availability of public utilities. This allows areas to be able to develop subdivisions with houses that can be placed in a higher density. Seckman Road in the northeastern part of the county is one of the primary examples. There are a number of highly populated subdivisions along Seckman Road and more are being planned and developed. When a road like Seckman develops as quickly as it has, it causes major transportation concerns. This has led the county to make substantial improvements to this roadway.

A diagram from the 2003 Jefferson County Master Plan (**Figure 2-2**) shows where Primary Growth and Secondary Growth is projected to occur in the county. The Primary Growth area includes the entire part of the county north of MO Routes M, MM & W. The Primary Growth area further extends down MO Route 21 south to De Soto, along US Hwy 61 south (almost to the Ste. Genevieve County Line), US Hwy 67 south to Olympian Village, and down MO Route 30 south to Cedar Hill. The Secondary Growth area extends from and is adjacent to the Primary Growth areas. This projected growth places more focus on the maintenance of and the improvements to the roadways in those areas so they can safely and efficiently accommodate this potential growth.

Chapter 2
Primary & Secondary Growth Areas

Projected Primary and Secondary Growth areas

Figure 2-2



Source: 2003 Jefferson County Master Plan

Chapter 2
Primary & Secondary Growth Areas

Wastewater Consolidation areas

In 2001 a Comprehensive Wastewater Management Plan was created for Jefferson County. It includes watersheds and proposed wastewater system improvement projects. There are five consolidation areas located within the Jefferson County Public Sewer District (JCPSD). They are:

⇒**Consolidation area No. 1,** For Bear Creek, Dulin Creek, and Heads Creek Watersheds in the Big River Basin.

⇒**Consolidation area No. 2,** Serving part of Cedar Hill and the Sand Creek Watershed in the Big River Basin.

⇒**Consolidation area No. 3,** In the Little Creek Watershed in the Joachim Creek Watershed in the Mississippi River Basin.

⇒**Consolidation area No. 4,** In the Sandy Creek Watershed in the Joachim Creek Watershed in the Mississippi River Basin.

⇒**Consolidation area No. 5,** In the Buck Creek Watershed in the Joachim Creek Watershed in the Mississippi River Basin.

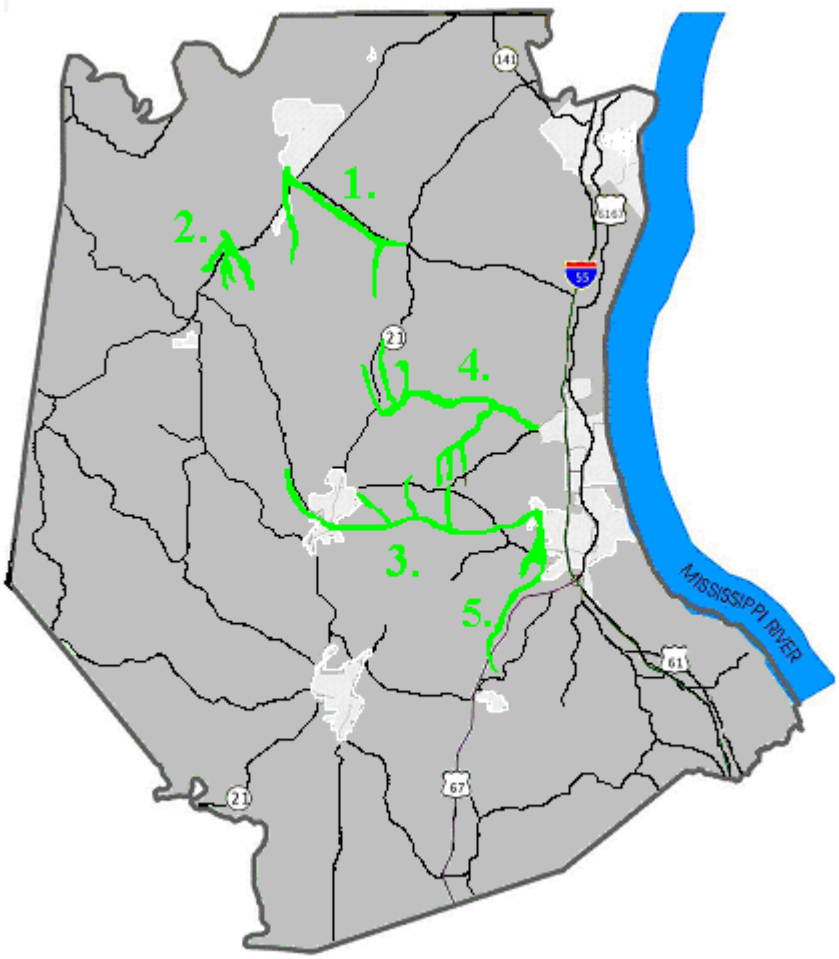
(**Figure 2-3** shows the location of these proposed consolidation areas.)

These consolidation areas will enable current and future residents to have a safer public wastewater system instead of their current private wastewater systems. This will also be more efficient and lead to possible growth in these areas due to the ability to develop major subdivisions, which could then connect to the newer public wastewater systems.

The rate of development in the northeastern part of Jefferson County has shown that public wastewater systems, and other infrastructure improvements, can influence the potential for growth in population and the corresponding commercial sector in an area.

Chapter 2
Primary & Secondary Growth Areas

Figure 2-3



Projected Wastewater Consolidation areas

1. Bear Creek, Dulin Creek, Heads Creek watersheds in the Big River basin.
2. Cedar Hill and the Sand Creek watersheds in the Big River basin.
3. Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin
4. Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin.
5. Buck Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

Chapter 3
Functional Classification System

The Functional Classification System is a hierarchical organization of roads and highways that facilitates the safe and efficient operation of vehicles along different types of roadways. The main distinction between the classifications is the focus on land access or the focus of movement. Interstates and Expressways are at one end, primarily focusing on the function of moving vehicles as efficiently as possible. While on the other end you have collectors, local roads and access roads, which are more focused on land access (**Figure 3-1** illustrates these points).

Figure 3-1
Functional Classification System Hierarchy

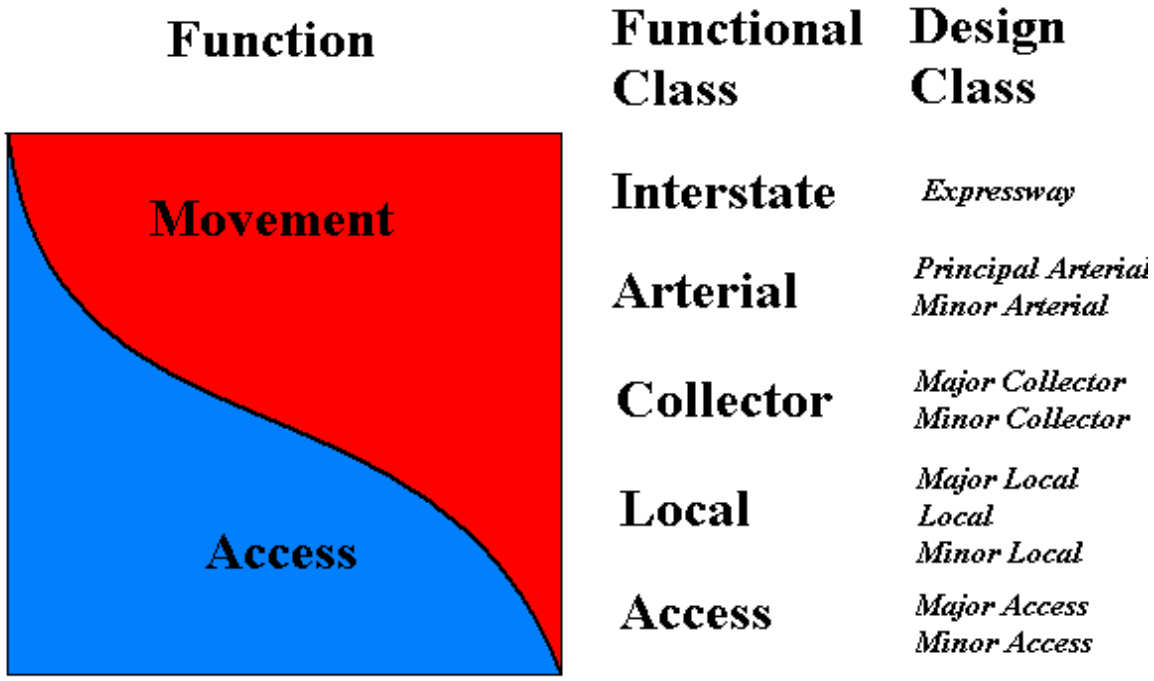


Figure 3-1 shows the Functional Classification System as it applies to the Jefferson County Roadway Master Plan

Chapter 3
Functional Classification System

Functional Classification & Categories

The following paragraphs on this page show the *Missouri Department of Transportation* Functional Classification system, which has been in effect since May of 1990.

• **Expressways**: This category of roadway can include such roadway types as "freeway or parkway." Basically, this category provides regional, county, and metropolitan continuity and unity. The facility has limited access and may be grade separated. Major intersections are either interchanges or controlled by traffic signals and lane channelization. Direct land use access is not intended.

• **Arterials**: This category provides unity through contiguous areas, usually forming municipal, community, or neighborhood boundaries. Land use access does occur, but should be limited.

• **Collectors**: The collector roads channel traffic from local roads and conduct it to the arterials or to local generators such as shopping centers, schools, community centers, or major employment centers. These roadways perform this function for both residential and commercial/industrial land use areas. Land use access should be a secondary function.

• **Local Roads**: The main purpose of a local road is to provide access to adjacent land uses with moving traffic a secondary function.

The classification system shown above was adopted in the 1990 Comprehensive Master Plan for Jefferson County.

Since the 1990's Jefferson County has seen major growth, which suggests the need for a little more detailed road classification system. The modifications are primarily in the Local Road category. Previously most county roads were placed in the "Local Road" category. Now that there are 418 county roads the county maintains, that combine for over 666 miles of roadway, those Local roads need to be more thoroughly identified (categorized). There are substantial differences between rural and urban county roads. For example, a road in the southern part of the county may only have 5 vehicles per day. A county road in the northern part of the county may have 5,000 vehicles on it a day. Generally, the county roads in the Urbanized areas, north of MO Routes M, MM & W (where a substantial part of the development has taken place) need more attention than the roads that are not in as high use in other areas of the county.

Chapter 3
Functional Classification System

Functional Classification & Categories (continued)

Because development in the northern part of Jefferson County is migrating down to the southern part of the county a more detailed functional classification system is required to identify these roads. An additional reason for doing this is the different design criteria (i.e.. amount of right-away needed for more heavily traveled roads) and the different geometric features required for each classification of road. (**Table 3-2** shows a detailed representation of the proposed Urban and Rural Functional Classes - (*Note: There are no Minor Collectors in the Urban areas*).

Table 3-2
Urban and Rural Roadway Functional Classes

Area Type	Roadway Functional Classes		
Urban	Arterial	Principal	Interstate
			Freeway/Expressway
			Other Principal
		Minor	
	Collector		
	Local	Major	
		Moderate	
		Minor	
	Access	Major	
		Minor	
Rural	Arterial	Principal	Interstate
			Freeway/Expressway
			Other Principal
		Minor	
	Collector	Major	
		Minor	
	Local	Major	
		Moderate	
		Minor	
	Access	Major	
		Minor	

Chapter 3
Functional Classification System

Functional Classification & Categories (continued)

Following is the modified Functional Classification hierarchy:

♦ **Interstate -** Primarily serves long distance regional travel between cities, and or states. Access is only allowed through interchanges and access to abutting property is restricted.

♦ **Expressways -** These routes provide for rapid movement of large volumes of traffic between urban areas. Access, for the most part, is restricted to commercial property and is allowed primarily at major intersections.
(*Note: Interstates and Expressways are sometimes Classified as a subset of Arterials. Due to their unique nature they are shown separate in this document)*

♦ **Arterials -** Primarily provide for efficient traffic movement, with a secondary function of providing direct access to abutting property. Principal Arterials typically serve as connections between major traffic generators and land use concentrations to facilitate large volumes of through traffic traveling across a community. Minor Arterials serve as connections between Principal Arterials and Collectors, and even Local Roads. These Arterial roads handle a large amount of traffic and can be a Local road type, but are in a very concentrated urban area where average daily traffic is high. Minor Arterials also have a greater focus on property access.

- **Principal Arterial -** Primary purpose is to serve the major long distance traffic movement within areas of the county, while access for individual properties is a secondary consideration. Direct land access is minimal and controlled, while most intersections are with other Arterials, Collectors and Major Local roads.

- **Minor Arterial -** Serves trips of moderate length at a somewhat lower level of travel mobility than Principal Arterial Roads. Collects traffic from Collector and Local roads, which permits or will permit movement of large volumes of traffic from one geographic area to another. Emphasis is on the distribution of vehicles to higher and lower roadway classes and land uses.

♦ **Collectors -** Provide for a balance of traffic movement and property access functions. Traffic movement is usually concentrated in rural areas connecting Access roads and Local roads or other collector roads. As compared to Arterials, Collectors accommodate lower traffic volumes over shorter distances but are important roadways in rural areas for connecting major roadways. They also provide service to neighborhoods and other local areas, and may border or traverse neighborhood boundaries.

Chapter 3
Functional Classification System

Functional Classification & Categories (continued)

- Urban Collector and Rural Major Collectors - Provide a connection between Arterial and Local roads while allowing direct access to abutting properties. These roads consist of medium distance trips between cities and neighborhoods and they collect traffic from the local roads and filter it into the arterial road system. Direct access to land uses is still a secondary function of this road classification.

- Rural Minor Collectors - Serves the Rural community by connecting local traffic to Rural Major Collectors and state Arterial routes and even other Rural Minor Collectors. Land access is a priority as much as traffic movement.

♦ **Local Roads** - The primary function of local roads is to provide direct access to adjacent land uses, whether it is businesses, residences, or community facilities. They typically have two lanes, have low to medium speed limits, and carry a relatively low amount of traffic compared to the higher classification roads (Collector, Arterial).

The reclassification of local roads is the biggest change in the classifications, expanding from one classification (Local) to three (Major Local, Moderate Local, and Minor Local).

- Major Local - The main purpose of a Major Local road is to provide direct service to adjoining properties and residences while also being used as a connector to other Local or higher classification roads. Major Local roads will, for the most part, have a substantial amount of development or they may be developed in the near future. Major Local roads will have speed limits up to 45 mph. This classification of roads has an Average estimated Daily Trip (A.D.T.) ranging from 1,500 to 3,500 vehicles per day.

- Moderate Local – Moderate Local roads provide direct access to adjoining property and residences, and for the most part are connectors, but they can also be dead end roads. Moderate Local roads are fairly developed, but may have the possibility of becoming a Major Local or higher classification in the future. Moderate Local roads will have speed limits ranging from 30 mph to 45 mph. This road classification has an estimated A.D.T. in the range of 400 to 1,500 vehicles per day.

- Minor Local – Minor Local roads provide service to travel over relatively short distances as compared to Moderate Local and Major Local roads. Their Primary service is to provide direct access to abutting property and residences. Minor Local roads

Chapter 3
Functional Classification System

Functional Classification & Categories (continued)

normally connect to other local roads. This classification of roads has an estimated ADT ranging up to 400 vehicles per day. Minor Local roads will have, on average, speed limits ranging from 25 mph to 40 mph.

♦ **Access Roads** - Access Roads are Subdivision roads (either residential or commercial) and need to be categorized in two different ways for design guidelines. The Major Access road is the main road(s) of the subdivision that all other roads in the subdivision utilize to access the Local roads. Access roads must be able to accommodate the most traffic since all of the residents of the subdivision will be leaving and entering and must be designed to handle that amount of daily traffic.

- Major Access - The main access roads of a subdivision are Major Access roads. They give direct access to the county maintained roads. Access roads must be able to filter traffic from the subdivision safely, while meeting access management standards that include minimum throat length, road width etc., possibly determined by the traffic counts obtained from these roads. Although these roads are a lower classification than local county roads their average daily traffic can exceed 400 vehicles per day.

- Minor Access - Privately maintained roads within a subdivision that filter to the Major Access roads of the subdivision and typically dead end.

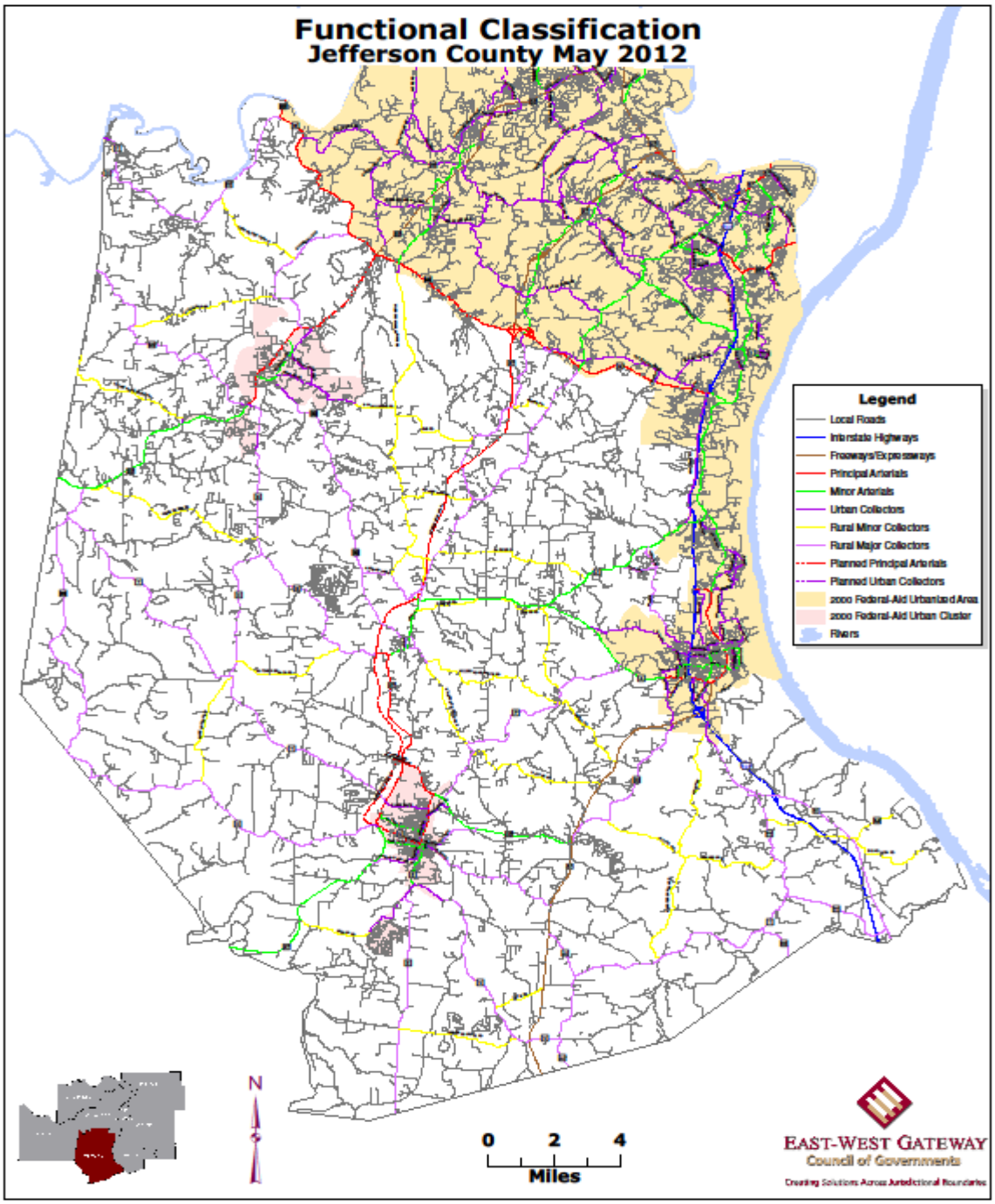
Appendix A is a list of all the current roads that are maintained by Jefferson County Public Works, their current classification, and their 10 and 20 year projected classifications. It also states if the roads are in the Primary or Secondary growth areas and if they are near any of the consolidated wastewater areas.

Design Criteria for these different roadway classifications can be found in Article 7 of the 2012 Jefferson County Unified Development Order (U.D.O.).

Figure 3-2 on the following page shows the different roadways in Jefferson County and their Functional Classifications.

Chapter 3
Functional Classification System

Figure 3-3



Chapter 4
Current Transportation

This chapter shows the existing transportation systems of Jefferson County that are maintained by the Highway Division of Jefferson County Public Works. It includes the Major roads as well as the Missouri State maintained roadways. *This chapter does not include roads maintained by any Municipalities within Jefferson County, any roadways within the Festus Special Road District, or any Private Subdivision (Access) streets.*

Major Roadways

One interstate and a number of state highways provide the basic framework of the transportation facilities serving Jefferson County. These major roadways range from 10 lanes with a separated median in the Arnold area, on I-55, to two-lane state maintained highways, which includes MO Route A and MO Highway 110. All roadways not maintained by Jefferson County Public Works, or various municipalities in Jefferson County, are maintained by the Festus Special Road District (which includes – North to South) the cities of Pevely, Herculaneum, Festus and Crystal City), the Hillsboro Road District or the Missouri Department of Transportation (MoDOT).

Interstate Highway

Interstate 55 (I-55) is the only Interstate Highway facility that lies within the borders of Jefferson County. I-55 runs in a North-South direction and effectively parallels the Mississippi River. I-55 is a controlled access facility and is one of the primary arteries to the St. Louis area. I-55 is a heavily traveled interstate accommodating traffic running from the northern part of the United States, through Chicago, all the way south to New Orleans. Access to and from I-55 is provided through grade-separated interchanges and utilizes numerous frontage roads on both the east and west sides of the interstate.

I-55 – in Jefferson County I-55 is a four to ten lane divided roadway with a posted speed limit ranging between 65 and 70 mph. At the northern border of Jefferson County I-55 is ten lanes. It goes to eight lanes at the Richardson-Vogel road interchange. I-55 narrows to six lanes south of the interchange at MO Route M. I-55 then narrows to four lanes at MO Route Z and continues that way to the Ste. Genevieve County Line. All of I-55 has a barrier median, either concrete or grass (with Guard cable), and shoulders.

US Highways

There are currently three (3) US Highways that serve Jefferson County. They are US Hwy. 61-67, US Hwy. 61, and US Hwy. 67. These highways run north to south and carry a large amount of traffic. They are two to four lanes. Some have concrete barrier medians and others have a center turn lane in the urban areas.

Chapter 4
Current Transportation

US Highways (continued)

US Hwy. 61-67 - begins in Festus and runs all the way to the Northeast part of the county. US Hwy. 61-67 is an urban roadway that runs along I-55 and has many businesses and other economic operations along it. It is four lanes and at some points has a center turn lane. It has a large amount of property access roads and access to county roads. US Hwy. 61-67 is classified as a Principal Arterial in the Herculaneum, Festus & Crystal City area and two portions within the Arnold City limits. All the rest of US Hwy. 61-67 is classified as Minor Arterial.

US Hwy. 61 - runs north and south along I-55. It is a rural two-lane highway that is used to connect the local roads to the interstate. US Hwy. 61 is classified as an Urban or Rural Major Collector.

US Hwy. 67 - runs south from Festus (at MO Route A) to the St. Francois County Line. It is a main route for people traveling north to south and exiting off of I-55 to come into the south central part of the county. It is a 4-lane divided roadway with a median and is a heavily traveled connector highway from the urban area to the rural area. US Hwy. 67 is classified as an Expressway.

Missouri State (Routes) Highways

There are six (6) numbered State highway facilities serving Jefferson County, Missouri; MO Route 21, MO Route 30, MO Route 109, MO Route 110, MO Route 141 and MO Route 231.

MO Route(s) 21 - run north and south, basically down the middle of the county, and is considered both "New 21" (4-lane – limited access – Maintained by MoDOT), MO Route 21 (2-lane with numerous access points – maintained by MoDOT) and "Old State Route 21" (2-lane with numerous access points – maintained by Jefferson County).

"New MO Route 21" starts as a four-lane highway at St. Louis County line (at the Meramec River) and is classified as an Expressway until it reaches the MO Route M/MM interchange. That portion of New MO Route 21 has medians and a posted speed limit of 65 mph.

MO Route 21 is classified as a Principal Arterial from the MO Route M/MM interchange south, all the way to MO Route H/N intersection (at the southern City Limits of De Soto). "New" MO Route 21 has no direct land access and is accessed by grade-separated interchanges. "New" MO Route 21 continues as 4-lanes from Route M/MM to MO Route B in Hillsboro.

Chapter 4
Current Transportation

Missouri State (Routes) Highways (continued)

MO Route 21 returns to a two-lane rural highway from MO Route B in Hillsboro to De Soto and has a posted speed limit of 55 mph (except when it goes through the City of De Soto). MO Route 21 is classified as a Minor Arterial from De Soto to the Washington County Line, and is a two-lane highway with a posted speed limit of 55 mph.

"Old State Route 21" (mostly Jefferson County maintained) starts at MO Highway 141 and continues to MO Route B, where it reconnects with MO Route 21, and continues as MO Route 21 (under State maintenance) to the Washington County line (at the Big River).

MO Route 30 - runs southwest from the St. Louis County line (in the north) to the Franklin County line (on the western side of Jefferson County). MO Route 30 is classified as an Expressway from the St. Louis County Line to the MO Route MM/W intersection in House Springs. MO Route 30 is a four-lane highway along that section and runs through the designated "urbanized" area of the county. It has multiple access points, the majority of which are controlled by traffic signals, but has some 'cross-overs'.

MO Route 30 is classified as a Principal Arterial from the MO Route MM/W intersection to the intersection at MO Route B & MO Route NN (in Cedar Hill). Along that section MO Route 30 is four lanes with a median and has a posted speed limit of 60 mph.

From Cedar Hill, at MO Route B/NN intersection, to the Franklin County line, MO Route 30 is a two-lane rural highway with a posted speed limit of 55 mph. This section is classified as a Minor Arterial.

MO Route 109 - runs north to south and is a connector from I-44 (in the Eureka area of St. Louis County) to the intersection of MO Route FF and MO Route W. The Jefferson County portion of MO Route 109 starts at the Meramec River, which is the north-western border of Jefferson County. MO Route 109 is a two-lane highway with a posted speed limit of 55 mph. It is classified as a Principal Arterial from the Meramec River to MO Route W.

MO Route 110 - runs east to west and is the connector for De Soto and other rural areas to US Hwy. 67. MO Route 110 is a two-lane highway with a posted speed limit of 60 mph. It is classified as a Minor Arterial from US Hwy. 67 West to De Soto Main Street. From De Soto Main Street, west to MO Route 21, it is classified as a Principal Arterial.

Chapter 4
Current Transportation

Missouri State (Routes) Highways (continued)

MO Route 141 - runs east to west along the northern part of the county, from US-61/67 and continues past the St. Louis County line (in Fenton). It is the primary connector between Arnold and Fenton. MO Route 141 is a four-lane road with a median and classified as an Expressway.

MO Route 231 – (also named Telegraph) is in the urban northeast part of the county. It begins, on the east, at the St. Louis County Line (Meramec River), and runs west to US Hwy. 61-67 (JeffCo Blvd.). It is a two-lane road for the most part, but on occasion it includes a center turn lane at some intersecting roadways. It is classified as a Principal Arterial.

There are Twenty-Eight (28) lettered Missouri State maintained Highways (Routes) in Jefferson County. All of these highways consist of two, 12 ft lanes with no shoulders. The exception to this is MO Route A, MO Route M & MO Route MM (exceptions noted below).

MO Route A has two 12 ft. lanes and also has 8 ft. shoulders.

MO Route M is the only four-lane lettered highway in the county (from I-55 to 'New' MO Route 21). It has a median and 6 ft. shoulders.

MO Route MM has had some major safety improvements since the 2008 Roadway Master Plan. Those safety improvements were done in three (3) separate phases. Phase 1 increased sight lines and added turn lanes at Miller Road and Sycamore Springs Drive as well as curve reduction and hill crest reduction. Phase 2 improved the sight distance at Heads Creek Road and added a turn lane. Phase 3 improved sight lines and included curve reduction on the west end of MO Route MM, to Hillsboro House Springs Road. Phase 3 also added a turn lane at the Northwest Early Childhood Center. All Phases included adding five (5) foot shoulders and rumble striping.

The state also maintains some service roads throughout the county in addition to the roads stated above.

The Expressways, Principal & Minor Arterials, as well as the Major and Minor Collectors roadways (many of which are maintained by Jefferson County) are listed below - by Classification (identifying their Locations by Start & End points).

Chapter 4
Current Transportation

Missouri State (Routes) Highways (continued)

The roads in bold and italicized are Jefferson County maintained roadways.
(Cities, i.e. *De Soto, Eureka, Festus, etc.* and Unincorporated Towns, i.e. *Antonia, Cedar Hill, House Springs, etc.* are mentioned for help in locating the "areas" of Roadways).

Expressways: (North to South or East to West)

US Hwy. 67	MO Route A to St. Francois County Line
New MO Route 21	MO Route 141 to the Interchange at MO Route M/MM
MO Route 30	St. Louis County Line to intersection of MO Route MM/W
MO Route 141	I-55 (Arnold) to St. Louis County Line (East of Fenton)

Principal Arterials

The Arterial road system consists of two categories, Principal Arterial and Minor Arterial, which include the following:

Principal Arterials: (North to South or East to West)

New MO Route 21	MO Route M/MM to intersection of MO Route N/H
MO Route 231 (Telegraph)	St. Louis County Line to US Hwy. 61-67 (Arnold)
MO Route 30	MO Route MM/W to intersection of MO Route B/NN
US Hwy. 61-67	St. Louis County Line to MO Route 141
US Hwy. 61-67	Richardson Road (Arnold) to MO Route 231 (Telegraph)
US Hwy. 61-67	McNutt St. (Herculaneum) to MO Route A
MO Route 109	St. Louis County Line (Eureka) to MO Routes FF & W
MO Route 110	MO Route 21 to Main Street (De Soto)
MO Route M	I-55 to (New) MO Route 21
MO Route MM	(New) MO Route 21 to MO Route 30 (House Springs)
MO Route N	MO Route E to MO Route 21
MO Route W	MO Route 30 (House Springs) to MO Route 109 (Eureka)

Minor Arterials: (North to South or East to West)

MO Route 21	Intersection of MO Route N/H to Washington County Line
MO Route 30	Intersection of MO Route B/NN to Franklin County Line
US Hwy. 61-67	MO Route 141 to Richardson Rd.

Chapter 4
Current Transportation

Minor Arterials (continued)

US Hwy. 61-67	US Hwy. 231 (Telegraph) to McNutt Street (Herculaneum)
MO Route 110	US Hwy. 67 to Main Street (De Soto)
MO Route A	Pounds Rd. (Festus) to (New) MO Route 21 (Hillsboro)
MO Route E	MO Route N to MO Route V
MO Route K	Market St. (Kimmswick) to US Hwy. 61-67 (Imperial)
MO Route M	US Hwy. 61-67 to I-55
MO Route Z	US Hwy. 61-67 (Pevely) to MO Route A
Cedar Hill Rd.	***Local Hillsboro Rd. to MO Route BB***
Gravois Rd. (Northwest School)	***MO Route 30 to Main St. (House Springs)***
High Ridge Blvd.	***MO Route 30 to Byrnes Mill City Limits***
Imperial Main	***US Hwy. 61-67 to State Maintenance to Old Antonia***
Local Hillsboro	***Cedar Hill Rd. to MO Route 30***
Main St. (House Springs)	***Gravois Rd. (Northwest School) to MO Route MM***
New Sugar Creek	***MO Route 30 to St. Louis County Line***
Old State Route 21	***New MO Route 21 (Fenton) to MO Route M***
Old MO Route 141	***St. Louis County Line to 13th St. (Guffey School)***
Old Lemay Ferry	***MO Route 141 (Arnold) to New MO Route M (Antonia)***
River St.	***MO Route K to US Hwy. 61-67***
Seckman Rd.	***I-55 West Outer Rd. to Old Lemay Ferry***
Vogel Road	***Arnold City Limits to Old Lemay Ferry***

The current Collector road system consists of two categories of Collectors, Urban or Rural Major Collector and Rural Minor Collector, which include the following:

Urban Collector or Rural Major Collectors:
(North to South or East to West)

MO Route 61	US 67 to Ste. Genevieve County Line
MO Route B	Old MO Route 21 (Hillsboro) to MO Route 30 (Cedar Hill)
MO Route BB	Old MO Route 21 (Hillsboro) to MO Route 30 (Cedar Hill)
MO Route C	MO Route B (Morse Mill) to MO Route Y
MO Route CC	US 67 (Festus) to US 67 (Olympian Village)
MO Route DD	MO Route T to Ste. Genevieve County Line
MO Route E	De Soto City Limits to St. Francois County Line
MO Route F	MO Route FF to Franklin County Line (Pacific)
MO Route FF	MO Route 109/W (Eureka) to MO Route F

Chapter 4
Current Transportation

Urban Collector or Rural Major Collectors (Continued):

MO Route H	MO Route 21 (De Soto) to Washington County Line
MO Route JJ	MO Route 67 to St. Francois County Line
MO Route NN	MO Route 30 (Cedar Hill) to Franklin County Line
MO Route O	MO Route F to Franklin County Line
MO Route P	MO Route A (Festus) to MO Route 110 (De Soto)
MO Route PP	MO Route 30 (High Ridge) to Byrnes Mill Rd.
MO Route T	MO Route TT to MO Route JJ
MO Route TT	US Hwy. 61 (South of Festus) to US Hwy. 61
MO Route V	MO Route JJ (Valle Mines) to MO Route E (De Soto)
MO Route WW	MO Route Y (Grubville) to MO Route H (Fletcher)
MO Route Y	MO Route 21 (De Soto) to MO Route 30 (Oermann)

Antire Rd.	***High Ridge Blvd. to St. Louis County Line***
Bear Creek Rd.	***West Four Ridge to Carol Park***
Brennan	***Little Brennan to Hillsboro Valley Park (High Ridge)***
Byrnes Mill Rd.	***MO Route PP to Byrnes Mill City Limits***
Byrnesville Rd.	***MO Route W to Lower (South) Byrnesville Rd.***
Carol Park Rd.	***MO Route 30 to Gravois Rd. (Northwest School Rd.)***
Cedar Hill Rd.	***Local Hillsboro Rd. to MO Route 30***
Diehl Rd.	***Saline to Old Sugar Creek***
Dillon Rd.	***MO Route 30 to Hillsboro Valley Park***
Dittmer Catawissa	***Dittmer Rd. to MO Route 30***
Dutch Bottom Rd.	***Missouri State Rd. to Lonedell Rd.***
East Four Ridge	***Old Lemay Ferry to Old State Route 21***
East Rock Creek	***Old Lemay Ferry to Old State Route 21***
Elm Dr.	***Arnold City Limits to Miller Rd.***
Flucom Rd.	***US Hwy. 67 to De Soto City Limits***
Fountain City Rd.	***State Maintenance Hwy. 110 to De Soto City Limits***
Goldman Spur	***Old Lemay Ferry to Old State Route 21***
Graham Rd.	***Local Hillsboro to Cedar Hill Rd.***
Gravois Rd.	***Little Brennan to Schumacher Rd. (High Ridge)***
Hawkins	***MoDOT Service Rd. (Fenton) to St. Louis County Line***
Hillsboro House Springs	***Redbird to MO Route A (at New MO Route 21)***
Hillsboro Valley Park	***St. Louis County Line to Williams Creek (High Ridge)***
Klondike South	***MO Route E (De Soto) to Designated Rural Area***
Konert Rd.	***Romaine Creek to Old State Route 21***
Lions Den	***Old Lemay Ferry to Old State Route 21***
Little Antire Rd.	***Antire/Jim Weber Rd. to MO Route PP***

Chapter 4
Current Transportation

Urban Collector or Rural Major Collectors (Continued)

Little Brennan	***Brennan Rd. (High Ridge) to MO Route 30***
Local Hillsboro	***Designated Rural Area to Cedar Hill Rd.***
Lonedell Rd.	***Arnold City Limits to Old State Route 21***
Miller Rd.	***I-55 West Outer Rd. to Old Lemay Ferry***
Missouri State Rd.	***Arnold City Limits to MO Route 141***
Moss Hollow Rd.	***Old Hwy. M to New MO Route M***
Montebello Rd.	***US Hwy. 61-67 to Kimmswick City Limits***
Northwest Blvd.	***Saline Rd. to MO Route 30***
Old Antonia Rd.	***Old Hwy. M to Imperial Main St. (Kimmswick)***
Old State Route 21	***MO Route M to MO Route A***
Old MO Route M	***Catlin Drive (at New MO Route M) to New MO Route M***
Old Lemay Ferry	***MO Route M to Goldman Spur***
Old State Rd.	***Imperial Main St. to US Hwy. 61-67***
Old Sugar Creek	***West Rock Creek to MO Route 30***
Redbird Lane	***Hillsboro House Springs to MO Route BB***
Romaine Creek Rd.	***MO Route 141 (Fenton) to West Rock Creek***
Saline Rd.	***St. Louis County Line (Fenton) to Romaine Creek***
South Byrnesville	***Gravois (by MO Route 30) to Byrnesville Rd.***
Tomahawk Rd.	***Lonedell Rd. to Vogel Rd.***
Twin Rivers Rd.	***MO Route PP to MO Route W***
Upper Plattin Rd.	***MO Route 110 to De Soto City Limits***
Vogel	***Old Lemay Ferry to Tomahawk***
West Four Ridge	***Old State Route 21 to West Rock Creek***
West Rock Creek	***Old State Route 21 to MO Route 30 (High Ridge)***
West Swaller Rd.	***Old State Route 21 to West Rock Creek***

Rural Minor Collectors: (North to South or East to West)

MO Route AA	MO Route TT to Weaver Rd.
MO Route EE	MO Route B (Morse Mill) to Jones Creek
Big Hollow Rd.	***AmerenUE Entrance (Truman Park) to MO Route AA***
Breckenridge Rd.	***Russell to MO Route H***
Butcher Branch Rd.	***MO Route B to MO Route C***
Byrnesville	***Lower Byrnesville to MO Route NN***
Charter Church Rd.	***Harness Rd. to MO Route T***

Chapter 4
Current Transportation

Rural Minor Collectors (Continued)

Dittmer Catawissa	***Dittmer Rd. to MO Route HH***
Ems Rd.	***Old State Route 21 to Hillsboro House Springs***
Glade Chapel	***Old State Route 21 to Hillsboro House Springs***
Harness Rd.	***MO Route TT to Plattin***
Hillsboro Hematite Rd.	***MO Route P to Hillsboro Victoria***
Hillsboro House Springs	***MO Route MM to Redbird***
Hillsboro Victoria Rd.	***Castle Ranch Rd. (Hillsboro) to MO Route P***
Jarvis Rd.	***MO Route Z to Old State Route 21***
John McKeever	***Byrnesville to MO Route FF***
Jones Creek	***MO Route EE to MO Route 30***
Klondike South Rd.	***Designated (De Soto) Urban Cluster to Knorpp***
Knorpp Rd.	***Klondike - South Rd. to Vineland Rd.***
Local Hillsboro Rd.	***Hillsboro House Springs to Designated Urban Cluster***
Mapaville Hematite Rd.	***Plass to MO Route P***
Meyer Rd.	***MO Route P to End of Festus Special Rd. District***
Papin Rd.	***US Hwy. 67 to MO Route V***
Pioneer	***MO Route A to Hillsboro City Limits***
Plass	***MO Route A (MO Rte. Z) to MO Route A (Sandy Valley)***
Plattin Rd.	***Festus Special Road District to MO Route CC***
Russell Rd.	***Ware Church Rd. to Breckenridge***
Schenk	***Old Lemay Ferry to Old State Route 21***
Sunrise School Rd.	***MO Route V to MO Route E***
Victoria Rd.	***US Hwy. 67 to MO Route P***
Vineland Rd.	***Knorpp to MO Route 21***
Ware Church Rd.	***MO Route Y to Russell***

All other roads in the county that are maintained by the Jefferson County Public Works - Highway Division are classified as Major Local, Moderate Local, or Minor Local roads.

Current Roadway and Bridge Projects

Butcher Branch Road Bridge Replacement (2014)
Bridge # 267-0021 – South of Whitehead Road – South of Hillsboro.

This bridge project is scheduled for a full replacement due to the existing bridge being hydraulically deficient and functionally obsolete.

Chapter 4
Current Transportation

Current Roadway and Bridge Projects (Continued)

Castle Ranch Road Bridge Replacement (2014)
Bridge # 259-0026 – East of MO Route 21 – South of Hillsboro.

This bridge project is scheduled for a full replacement due to bridge deterioration.

Fountain City Road Bridge Replacement (2014)
Bridge # 321-0027 – North of MO Route 110 – East of DeSoto.

This bridge project is scheduled for a full replacement due to bridge deterioration.

Fox Farm Road Culvert Replacement (2014)
Box Culvert # 0327-03658-001– South of Flucom Rd. – East of DeSoto.

This box culvert project is scheduled for a replacement due to severe deterioration. Fox Farm road was Closed at this location due to a failed inspection in April of 2013.

Gravois Road (Northwest School) Overlay – TIP #5768-14 (2014)
MO Route 30 to Main Street (House Springs)

The improvements shall consist of an asphalted concrete overlay of the existing roadway from the Intersection of Gravois Road (NW School) and MO Route 30 to Main Street (House Springs). Since this roadway is functionally classified as a Minor Arterial, the construction will be in accordance with current MoDOT and AASHTO design criteria/specifications for urban construction. This project is 2.46 miles long.

High Ridge Blvd. Overlay – TIP #5769-14 (2014)
MoDOT Right-of-way at MO Route 30 to MoDOT Right-of-way at MO Route PP

The improvements shall consist of a special 'Pavement Preservation' form of Chip and Seal that lasts much longer than the standard asphalt overlay. Since this roadway is functionally classified as a Minor Arterial, the construction will be in accordance with current MoDOT and AASHTO design criteria/specifications for urban construction. This project is 0.97 miles long.

Chapter 4
Current Transportation

Current Roadway and Bridge Projects (Continued)

Hillsboro House Springs Road Bridge Replacement (2014)
Bridge # 139-0054 – West of Old State Route 21 – South of Ems - North of Hillsboro.

This bridge project is scheduled for a full replacement due to bridge deterioration.

Hillsboro House Springs Road Culvert Replacement (2014)
Box Culvert # 0139-34309-003– North of Regina Road –North of Hillsboro.

This box culvert project is scheduled for a replacement due to severe deterioration.

Main Street (House Springs), Gravois (Northwest) & Indian Springs Intersection TIP #5579-14 (2014)
Intersection Realignment

This intersection in Old Town area of House Springs is a three-way stop intersection, just North of MO Route MM and just South of a Middle School and Elementary school. It has poor line-of-sight from Indian Springs due to the angle of intersection. Efforts to improve the line-of-sight and widen the roadway on Main (as much as the existing culvert over Heads Creek will allow) and adjusting vertical and horizontal alignment for safety improvements will be included. Main Street and Gravois Road (Northwest School) are both functionally classified as a Minor Arterials.

Mapaville - Hematite Road Bridge Replacement (2014)
Bridge # 252-0010 – South of MO Route A – East of Hillsboro.

This bridge project is scheduled for a full replacement due to bridge deterioration. MoDOT inspects all the Jefferson County Public Works every other year. In the Spring of 2013 MoDOT informed Jefferson County the Mapaville – Hematite bridge had deteriorated too much and MoDOT instructed us to no longer allow any traffic on that structure. The road remains closed at that point until the bridge is replaced, which is scheduled for 2013. Jefferson County will make additional improvements to the road near that bridge to minimize curves and widen pavement (as current Right-of-Way allows) during that construction project.

Chapter 4
Current Transportation

Current Roadway and Bridge Projects (Continued)

Old Antonia Road Bridge Replacement (2014)
Bridge # 119-0002 – West of Interstate 55 – North of Imperial-Main.

This bridge project is scheduled for a full replacement due to bridge deterioration.

Old Lemay Ferry Road Bridge Replacement (2014)
Bridge # 197-00271 – South of New MO Hwy M (near Klable Road).

This bridge project over a tributary to Glaize Creek is scheduled for deck rehabilitation due to deterioration.

Old Lemay Ferry Road Improvements – TIP #5578-12 (2014)
Intersection of Old Lemay Ferry Road and Vogel Road

The improvements shall consist of improving the volume of traffic that this intersection can accommodate. Current Plans call for adding turn lanes and making this intersection signalized. Since this roadway is functionally classified as a Minor Arterial the construction will be in accordance with current MoDOT and AASHTO design criteria/specifications for urban construction.

Old Route 141 Overlay – TIP #5771-14 (2014)
Springdale Lane to St. Louis County Line

The improvements shall consist of a Pavement Preservation overlay of the existing roadway. Since this roadway is functionally classified as a Minor Arterial, the construction will be in accordance with current MoDOT and AASHTO design criteria/specifications for urban construction. The existing 1.41 miles of roadway is rapidly deteriorating and this improvement is expected to increase the life of the road by eight (8) to ten (10) years.

Chapter 4
Current Transportation

Current Roadway and Bridge Projects (Continued)

Saline Road Improvements - Phase 1 (2014)
St. Louis County Line to Northwest Blvd.

The improvements shall consist of reconstructing the roadway and shoulders, and improving horizontal and vertical alignment. Since this roadway is functionally classified as an Urban Collector the construction will be in accordance with current MoDOT and AASHTO design criteria/specifications for urban construction. This project is 0.88 miles long.

Schneider Drive Bridge Replacement (2014)
Bridge # 065-0001 – Over Saline Creek - South of MO Route 141.

This bridge project is scheduled for a full replacement due to bridge deterioration.

Seckman Road Overlay – TIP #5773-14 (2014)
Interstate 55 Outer Road to Old Lemay Ferry Road

The improvements shall consist of resurfacing two lanes of pavement on Seckman Road. Since this roadway is functionally classified as a Minor Arterial the construction will be in accordance with current MoDOT and AASHTO design criteria/specifications for urban construction. This project is 3.48 miles long.

Tomahawk Road & Vogel Road Overlay – TIP #5775-14 (2014)

1) *Tomahawk – Lonedell Road to Gary Road, and*
2) *Vogel - Gary Road to Bluff Park Road*

The improvements on these two sections of roadway shall consist of resurfacing two lanes of pavement on each segment of roadway. Since both these roadways are functionally classified as Urban Collectors the construction will be in accordance with current MoDOT and AASHTO design criteria/specifications for urban construction. Total length of this project is 0.64 miles.

Chapter 4
Current Transportation

Current Roadway and Bridge Projects (Continued)

Whitehead Road Bridge Replacement (2014)
Bridge # 264-0022 – Over trib. of Cotter Creek - West of MO Route 21.

This bridge project is scheduled for a full replacement due to bridge deterioration.

Wilson Hollow Road Bridge Replacement (2014)
Bridge # 306-0007 – Over trib. of Big River - East of MO Route 21.

This bridge project is scheduled for a full replacement due to bridge deterioration.

Chapter 5
Future Outlook

The Missouri Department of Transportation (MoDOT) and Jefferson County Public Works have multiple road and bridge projects scheduled for Jefferson County over the next five (5) years. The list of projects that follows contains only the projects under the direction of Jefferson County Public Works. The projects that are receiving Federal Funding will include the E-W Gateway *Transportation Improvement Program* (T.I.P.) number for further reference on the E-W Gateway website. The year listed with the project is the currently scheduled year of construction.

Road Projects

Brennan Road Overlay – TIP #8029-15 (2016)
Little Brennan Road to Hillsboro Valley Park Road

Since this roadway is functionally classified as an Urban Collector the construction will be in accordance with current Missouri Department of Transportation (MoDOT), and the American Association of State Highway and Transportation (AASHTO) design criteria/specifications for urban construction. This project is 0.82 miles long.

Elm Drive Overlay – TIP #8030-15 (2016)
Near I-55 Outer Road to Miller Road

The improvements shall consist of an asphalt overlay of the existing roadway from the Arnold City Limits to Miller road. Since this roadway is functionally classified as an Urban Collector, the construction will be in accordance with current MoDOT and AASHTO design criteria/specifications for urban construction. The existing 0.89 miles of roadway has high Average Daily Traffic (A.D.T.) and this improvement is expected to increase the life of the road by 8 to 10 years.

Upper Plattin Road Overlay – TIP #8035-16 (2016)
Upper Plattin Spur to DeSoto City Limits

The improvements shall consist of resurfacing two lanes of pavement. Since this roadway is functionally classified as a Rural Major Collector the construction will be in accordance with current MoDOT and AASHTO design criteria/specifications for urban construction. This project is 1.84 miles long.

Chapter 5
Future Outlook

Federally Funded Projects (Continued)

Bridge Projects

Bridges are also an important aspect of transportation for the county. There are a number of bridge rehabilitations (deck replacement) and complete bridge replacements proposed. A number of these projects are federally funded due to their location, the amount of traffic that the bridge must accommodate on a daily basis, the size and cost of the project.

Federally Funded Bridge Projects

Big Hollow Road – Full Replacement - TIP #8031-15 (2017)
Klondike Road – Full Replacement – TIP #5189B-14 (2016)
Kramme Road – Full Replacement – TIP #5770-14 (2016)
Maness Road – Full Replacement – TIP #5189A-14 (2016)
Romaine Creek Road – Full Replacement – TIP #5572-14 (2016)
Stroup Road – Full Replacement – TIP #5574-14 (2016)

Un-Funded Bridge & Box Culvert Projects (not Eligible for Federal Funding)

Charter Church Road - Bridge #355-0010 (over Plattin Creek)
Konert Road - Bridge #069-0001 (over Romaine Creek)

Chapter 5
Future Outlook

Long-range improvement goals

Jefferson County has many long-range goals in the area of roadway improvements. These goals include connecting dead end local roads to create better connectivity and therefore better traffic distribution throughout the counties corridors. Other long-range goals include complete road reconstructions in the northern portion of the county to accommodate the large amount of growth that this area is being faced with or will be faced with in the near future. There are roads in Jefferson County that would benefit from realignment to help minimize curve radius and improve line of sight distance.

Dead End Connection – Road Extension

Connecting *Gravois Rd. (High Ridge) to Old Sugar Creek* - Gravois Road at this point is a dead end street. A connection to Old Sugar Creek Road would distribute the traffic more evenly and could also promote either residential or commercial growth on the portion of ground that lies between the two roadways.

Road Reconstruction

There are a number of county roadways that need to be reconstructed, either due to the traffic they currently accommodate or to the growth that is occurring in the area.

The desired roadway design includes two (2) 12-foot lanes with eight (8) foot shoulders and room for drainage area on each side. This design is ideal, yet hard to obtain in many cases. However, it has proven to positively affect the safety and mobility of a roadway and allow for future capacity improvements. Factors that make this design difficult to obtain are: 1) current roadway conditions, 2) the topography, 3) the development that has already occurred along the roadway and 3) the cost of obtaining right-of-way.

Old Lemay Ferry Road
Phase 1 – Vogel to East Rock Creek. Lane & Shoulder widening with Safety and Geometric Improvements. This section of road has a substantial number of vehicles using it on a daily basis. The current traffic volume and planned residential development make this section of road a viable candidate for road and safety improvements.

Chapter 5
Future Outlook

Road Reconstruction (continued)

Old Lemay Ferry Road (continued)

Phase 2 - The section of Old Lemay Ferry just north of the intersection with Frisco Hill Road and East Four Ridge is an area of concern due to limited sight distance, a substantial grade, sharp curve issues and a steep drop-off to the east. Realigning this section of Old Lemay Ferry to minimize the curves and improve the line of sight at the intersection would make this section of road much safer, but would cost quite a bit due to the amount of fill needed and for right-of-way acquisition.

Phase 3 - Another area of focus for this roadway is south of Old MO Route M to Klable Road. The remaining portion of the roadway running south of Klable to Goldman Road is an area for potential future growth. The section of Old Lemay Ferry from Old MO Route M to Klable is an area where development is projected to rise due to its access to major highways (i.e. New MO Route M, New MO Route 21 and Interstate 55), the amount of acreage that has the potential for development, the other improvements in infrastructure and the trend that appears to show this as one of the faster growing areas in Jefferson County. There are some engineering challenges along this roadway that include previously developed properties, a creek that runs alongside the roadway, and in some areas limited opportunities to widen the road without major excavation.

Old Antonia Road

This road currently has a number of large developments on it, which is the main reason for the heavy amount of traffic on the road. This road has potential for growth as there is a large open parcel of land near the intersection with Old MO Route M. There is also a large wooded area that runs along the eastern border of the road that may be developed. The developments are not the only reason for the traffic on this road. It also allows access to Interstate 55 in Imperial.

Flucom Road

Flucom Road is one of the most heavily traveled roadways in the southern portion of the county. It has seven roadways that feed into it to get to either US Hwy. 67 or the City of De Soto. This roadway is a major connector and has many needed improvements that we would like to achieve in the future. Flucom Road currently has a large amount of houses existing along it, which makes it difficult to think that Jefferson County could achieve the design requirements that they would like to accomplish.

Chapter 5
Future Outlook

Road Reconstruction (continued)

Imperial Main (Barnhart)

Imperial Main Street in Barnhart is a heavily travelled connector between I-55 and US 61/67 with a number of businesses on both the North and South sides of the road. Imperial Main Street and River Street are also a heavily used travel way to the Historic City of Kimmswick. A section of Imperial Main Street, from Old State Road (East of I-55) to the intersection with US 61-67 and partially down River Street, has been submitted for inclusion in the 2015-2018 Surface Transportation Improvement Program (TIP).

The improvements would include widening of the intersection at Imperial Main and US 61/67 by 15 feet to improve the sight distance and turning radii. Approximately 330 feet of River Street would also be improved to meet the new alignment.

Intersections in need of Traffic Safety Improvements

Multiple Intersections in Jefferson County were identified in the 2014 *County Strategic Highway Safety Plan for Jefferson County* in need of improved line of sight and other safety improvements. These intersections are listed below (to be prioritized as funding becomes available) with a brief description of the general issues:

Dillon at Hillsboro Valley Park
Poor line of sight and needing improved intersection geometrics.

Antire at Williams Creek
Poor line of sight and needing improved intersection geometrics.

MO Route 30 at the intersection with Dittmer (North) & Ficken (South)
Poor line of sight and needing improved intersection geometrics.

Old Lemay Ferry at Spring Forest
Poor line of sight and needing improved intersection geometrics.
(Narrow Lanes, No Shoulders, Steep Grade and Sharp Curve).

Old Lemay Ferry at Frisco Hill (East) & East Four Ridge (West)
Poor line of sight and needing improved intersection geometrics.

Chapter 5
Future Outlook

Intersections in need of Traffic Safety Improvements (continued)

Old State Route 21at the intersection with East Four Ridge & West Four Ridge
Poor line of sight and needing improved intersection geometrics.

Old State Route 21at Lions Den Road
Add southbound left turn lane to Old State Route 21.

West Four Ridge at Bear Creek
Poor line of sight and needing improved intersection geometrics.

Sandy Church at Huber Road
Poor sight distance.

Sandy Church at Jarvis Road
Poor line of sight and needing improved intersection geometrics.

East Rock Creek at Binning Road & Gary Road
Poor line of sight and needing improved intersection geometrics.

Seckman at Old Lemay Ferry (East) and Lions Den (West)
Possible future Traffic Signal needed, which may include school signal at Seckman Schools.

Chapter 6
Project Funding

Who Pays for It?

Obviously all these projects need a funding source. Funding comes from a number of sources, depending on who maintains that road or bridge and the location of the project.

The Missouri Department of Transportation (MoDOT) maintains all the Federal (Interstate) Roadways in the State of Missouri, i.e. I-55, US 61-67, US 61 and US 67. MoDOT also maintains all the State Numbered and Lettered Routes, i.e. MO Routes 21, MO Route 30, MO Route 104, MO Route 110, MO Route 141 and MO Route 231. The Lettered Routes in Jefferson County that MoDOT also maintains are: Routes A, AA, B, BB, C, CC, DD, E, F, FF, H, HH, JJ, K, M, MM, N, NN, O, P, PP, T, TT, V, W, WW, Y, and Z. (*side note; These Numbered and Lettered Routes are Not unique to Jefferson County).* One funding source that MoDOT utilizes is the Missouri State Gasoline Tax (along with some Licensing Fees, and other smaller miscellaneous sources). The MO State Gasoline Tax is currently $0.17 per gallon, and has not increased since 1996.

The roads and bridges MoDOT maintains are eligible for Federal Matching Funds from the Federal Highway Administration. These Matching Funds are administered by a local Metropolitan Planning Organization (M.P.O.). The East-West Gateway Council of Governments (E-W Gateway) is the M.P.O. for the St. Louis Region. The Matching Funds are normally an 80% Federal and 20% "Local" split, where "Local" is the Sponsoring Petitioner on the proposed project.

Jefferson County maintained roads and bridges are also eligible for those Matching Funds if the project is located in an area of Jefferson County that qualifies. The Federal Highway Administration (F.H.W.A.) directs E-W Gateway to categorize all the roadways within the region a specific 'Functional Classification' (as discussed at length in Chapter 3). Maps of the more significant roads in the E-W Gateway region, with their Functional Classification, can be found on the E-W Gateway website, http://ewgateway.org/trans/funcclass/funcclass.htm.

Jefferson County roads with a Functional Classification of Urban Collector or Rural Major Collector (and above) qualify for eligibility. However, there is only a limited amount of Matching Funds available through E-W Gateway. There are many more projects submitted than there are funds to initiate and complete those projects.

The decision as to which roads (and bridges on those roads) qualify is a petitioning and scoring process managed by E-W Gateway staff. The regional projects submitted then compete to see which projects have the highest score and fall above the available funding cut-off level. Those successful projects, upon approval by the Board of Directors of E-W Gateway, are then included in the regions Transportation Improvement Program (T.I.P.).

Chapter 6
Project Funding

Who Pays for It? (continued)

The T.I.P. is a four (4) funding cycle that determines when the project funding will be available for expenditure. Some projects are of such size and complexity that funding is spread out over multiple funding years. Preliminary Engineering (P.E.), Right-of-Way (R.O.W.) and actual project Construction are often scheduled for different funding cycles (years). The E-W Gateway website has the current four (4) year T.I.P. available at their site, http://www.ewgateway.org/trans/tip/tip.htm.

The successful Local entity that gets their project included in the T.I.P. still has to come up with the 20% match, which can be quite a sum of money.

One example of a Jefferson County project in the current 2013 to 2016 T.I.P. is the replacement of the Mapaville-Hematite Road Bridge. This bridge is scheduled to be completed in 2014. It has a Construction cost of $1,280,000. Jefferson County (the Local sponsor) is responsible for 20% of that construction cost, which comes to $256,000.

A second example in the 2013 to 2016 T.I.P. is the Stroup Road Bridge replacement, which is scheduled for construction in 2016. That $1,407,306 bridge project includes $170,177 for Preliminary Engineering (to be available in 2014), $6,732 for Right-of-way (2015) and $1,229,837 for Implementation (2016). Jefferson County's 20% match is $281,470 for the entire project.

Another example in the 2013 to 2016 T.I.P. is the Romaine Creek Bridge. It is a $359,400 bridge replacement project that allocates $100,000 for Preliminary Engineering (2014), $13,600 for Right-of-way (2015) and $245,800 for Implementation (2016). Jefferson County is required to provide 20% of that $359,400 project, which comes to $71,800.

Jefferson County Public Works relies heavily on a Road and Bridge Fund for its financing of Road and Bridge projects in Jefferson County. This fund comes from 1/2 of 1% of both the Assessed Real Estate Property Tax and the Assessed Personal Property Tax. The fund allows Jefferson County Public Works to make the 20% Match on the T.I.P. projects and also repair roads and bridges that do not qualify for those Federal Matching Funds.

An example of a Jefferson County project that relies completely on the Road and Bridge Fund is road resurfacing of county roads that are not eligible for Federal Matching funds. Jefferson County Public Works anticipates spending over $1,500,000 to resurface approximately 78 miles of County roads in 2014.

Chapter 6
Project Funding

Who Pays for It? (continued)

The following table (**Table 6-1**) shows the Jefferson County Public Works department projects that have been approved for funding over the next five years (2013 thru 2017). Due to funding uncertainty, project pursuits past 2016 have been limited until the County Road Tax is renewed in 2014, 2015 or 2016.

Table 6-1

PROJECT DESCRIPTION	FUNDING	IMPROVEMENTS	2013	2014	2015	2016	2017	TOTAL
BIG HOLLOW ROAD BRIDGE	STP-S	REPLACE BRIDGE, RDWY IMPR & RDWY SHLDRS	$0	$0	$163,600	$55,600	$1,052,300	**$1,271,500**
BRENNEN ROAD	STP-S	RESURFACING 2-LANE	$0	$0	$257,000	$0	$0	**$257,000**
BUTCHER BRANCH ROAD BRIDGE (OVER BUTCHER BRANCH CREEK)	STP-S	REPLACE BRIDGE	$80,000	$790,500	$0	$0	$0	**$870,500**
CASTLE RANCH ROAD BRIDGE (OVER TRIBUTARY OF COTTER CREEK)	STP-S	REPLACE BRIDGE, RDWY IMPR & RDWY SHLDRS	628,000	$0	$0	$0	$0	**$628,000**
ELM DRIVE	STP-S	RESURFACING 2-LANE	$0	$0	$257,000	$0	$0	**$257,000**
FOUNTAIN CITY ROAD BRIDGE (OVER HAVERSTICK CREEK)	STP-S	REHAB BRIDGE BRIDGE DECK REPAIR	$920,000	$0	$0	$0	$0	**$920,000**

Chapter 6
Project Funding

Table 6-1 (continued)

PROJECT DESCRIPTION	FUNDING	IMPROVEMENTS	2013	2014	2015	2016	2017	TOTAL
GRAVOIS NW ROAD AT MAIN STREET	STP-S	INTERSECTION IMPROVEMENTS GEOMETRY IMPROVEMENTS	$5,000	$143,000	$0	$0	$0	**$143,000**
GRAVOIS ROAD MO-30 TO MAIN STREET (MO-MM)	STP-S	RESURFACING 2-LANE	$0	$182,581	$0	$0	$0	**$182,581**
HIGH RIDGE BLVD (MO-30 TO MO-PP)	STP-S	RESURFACING 2-LANE	$0	$102,603	$0	$0	$0	**$102,603**
HILLSBORO-HOUSE SPR RD BRIDGE (OVER TRIBUTARY OF BELEW CRK)	STP-S	REPLACE BRIDGE, RDWY IMPR & RDWY SHLDRS	$800,000	$0	$0	$0	$0	**$800,000**
KLONDIKE ROAD BRIDGE	BRO	REPLACE BRIDGE ROADWAY WIDENING	$0	$120,000	$17,000	$438,000	$0	**$575,000**
KRAMME ROAD BRIDGE (OVER CALVEY CREEK)	STP-S	REPLACE BRIDGE ROADWAY WIDENING	$0	$135,000	$3,000	$402,000	$0	**$540,000**
MANESS ROAD BRIDGE	BRO	REPLACE BRIDGE ROADWAY IMPR	$0	$120,000	$35,000	$630,000	$0	**$785,000**
MAPAVILLE-HEMATITE ROAD BRIDGE (OVER LITTLE CREEK)	STP-S	REPLACE BRIDGE ROADWAY IMPR	$1,280,000	$0	$0	$0	$0	**$1,280,000**
OLD ANTONIA ROAD BRIDGE (OVER TRIBUTARY OF ROCK CREEK)	STP-S	REPLACE BRIDGE, ROADWAY & DRAINAGE IMPR	$641,200	$0	$0	$0	$0	**$641,200**

Chapter 6
Project Funding

Table 6-1 (continued)

PROJECT DESCRIPTION	FUNDING	IMPROVEMENTS	2013	2014	2015	2016	2017	TOTAL
OLD HWY M GUARDRAIL SOUTH SIDE OF HWY (OLD ANTONIA RD INTERSECTION)	STP-S	MISCELLANEOUS	$89,000	$0	$0	$0	$0	**$89,000**
OLD LEMAY FERRY ROAD AT VOGEL ROAD	STP-S	INTERSECTION IMPROVEMENTS	$55,000	$352,000	$0	$0	$0	**$407,000**
OLD LEMAY FERRY ROAD BRIDGE (OVER TRIBUTARY OF GLAIZE CREEK)	STP-S	REHAB BRIDGE DECK REPAIR	$702,000	$0	$0	$0	$0	**$702,000**
OLD ROUTE 141 (SPRINGDALE LANE TO ST. LOUIS COUNTY LINE)	STP-S	RESURFACING 2-LANE	$0	$264,300	$0	$0	$0	**$264,300**
ROMAINE CREEK ROAD BRIDGE (OVER SUGAR CREEK)	BRM	REPLACE BRIDGE	$0	$100,000	$13,600	$245,800	$0	**$359,400**
SANDY CHURCH ROAD	STP-S	REPLACE BRIDGE ROADWAY IMPR	$500,000	$0	$0	$0	$0	**$500,000**
SALINE ROAD, PHASE 1 (STL CO LINE TO EAST LEG OF NORTHWEST BLVD)	STP-S	RDWY RECONST DRAINAGE IMPR	$346,100	$1,924,300	$0	$0	$0	**$2,270,400**

Chapter 6
Project Funding

Table 6-1 (continued)

PROJECT DESCRIPTION	FUNDING	IMPROVEMENTS	2013	2014	2015	2016	2017	TOTAL
SCHNEIDER DRIVE BRIDGE (OVER SUGAR CREEK)	STP-S	REPLACE BRIDGE, RDWY IMPR & RDWY SHLDRS	$699,000	$0	$0	$0	$0	**$699,000**
SECKMAN ROAD (I-55 WEST OUTER ROAD TO OLD LEMAY FERRY ROAD)	STP-S	RESURFACING 2-LANE	$0	$527,000	$0	$0	$0	**$527,000**
STROUP ROAD BRIDGE (OVER LITTLE CREEK)	STP-S	REPLACE BRIDGE	$0	$170,777	$6,732	$1,229,837	$0	**$1,407,346**
TOMAHAWK (LONEDELL RD TO GARY RD) & VOGEL RD (GARY RD TO BLUFF PARK DR)	STP-S	RESURFACING 2-LANE	$0	$185,609	$0	$0	$0	**$185,609**
UPPER PLATTIN ROAD	STP-S	RESURFACING 2-LANE	$0	$0	$0	$488,800	$0	**$488,800**
VOGEL RD, PHASE 2 (OLD LEMAY FERRY RD TO VOGEL CIRCLE)	STP-S	ROADWAY REALIGNMENT MISCELLANEOUS	$500,000	$1,163,500	$0	$0	$0	**$1,663,500**
VOGEL RD, PHASE 1 (VOGEL CIRCLE RD TO BLUFF PARK)	STP-S	ROADWAY REALIGNMENT, RECON & IMPR	$125,000	$780,000	$0	$0	$0	**$905,000**
WEST FOUR RIDGE ROAD	STP-S	RESURFACING 2-LANE	$865,000	$0	$0	$0	$0	**$865,000**

Chapter 6
Project Funding

Table 6-1 (continued)

PROJECT DESCRIPTION	FUNDING	IMPROVEMENTS	2013	2014	2015	2016	2017	TOTAL
WHITEHEAD RD BRIDGE (OVER TRIBUTARY OF COTTER CREEK)	STP-S	REPLACE BRIDGE RDWY IMPR	$790,000	$0	$0	$0	$0	**$790,000**
WILSON HOLLOW RD BRIDGE (OVER TRIBUTARY OF BIG RIVER)	STP-S	REPLACE BRIDGE	$5,000	$673,000	$0	$0	$0	**$678.000**
		FY2013-FY2017 TOTALS	**$9,030,300**	**$7,734,170**	**$752,932**	**$3,490,037**	**$1,052,300**	**$22,059,739**

APPENDIX A

Roads Maintained by Jefferson County, MO
Public Works

Alphabetical Order

Appendix A - Jefferson County 2014 Roadway Master Plan

Jefferson County Roads with Functional Classification
(with 10 year and 20 year possible Future Functional Classification projections)

Each road maintained by Jefferson County Public Works is listed (in Alphabetical order) along with its Road #, length of pavement and starting & ending points (North to South or East to West). General Road location (per the 2013 Wunnenberg Street Guide for Jefferson County) is also noted.

Also listed is the road Current Functional Classification and Projected Classification in 10 year and 20 year time frames.

The list also includes whether the road is located in either the Primary growth area or the Secondary growth area (shown in Chapter 2, Fig. 2-2). The county also has five projected wastewater facility consolidation areas that are in the process of being developed (refer to Chapter 2, "Wastewater Consolidation areas"). It is also stated below if the roadway is in close proximity to these areas, which could influence the development potential of those areas and possible additional road improvement needs.

#			
1	**13th Street** (#427) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.057 miles 300 feet	MO Hwy. 141 (E) to End of County Maint. (W) Pg. 7-Z3
2	**Allen** (#220) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Located in the Secondary growth area,* *And is located in the Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River Basin.*	1.799 miles 9,500 feet	Rice (N) to Sandy Church (S) Pg. 31-V19

3	**Amy Clark** (#202)	2.342 miles	Buckeye (E) to Pioneer (W)
	Current Classification: Minor Local	12,365 feet	Pg. 46-T26
	10 year projection: Minor Local		
	20 year projection: Moderate Local		
	Located in the Primary growth area and the Secondary growth area due to its proximity to the city of Hillsboro,		
4	**Antire** (#15)	3.964 miles	High Ridge Blvd. (E) to StL County Line (W)
	Current Classification: Urban Collector	20,930 feet	Pg. 5-S5
	10 year projection: Urban Collector		
	20 year projection: Urban Collector		
	Located in the Primary growth area.		
5	**Argonne** (#246)	2.17 miles	Hillsboro Hematite (N) to MO Rte. P (S)
	Current Classification: Moderate Local	11,460 feet	Pg. 46-T28
	10 year projection: Moderate Local		
	20 year projection: Moderate Local		
6	**Armbruster** (#338)	1.947 miles	Athena School (E) to Flucom (W)
	Current Classification: Minor Local	10,280 feet	Pg. 65-W36
	10 year projection: Moderate Local		
	20 year projection: Moderate Local		
	Located partly in the Primary growth area and Secondary growth area.		
7	**Ashwell** (#153)	0.218 miles	Graham (N) to End of County Maintenance (S)
	Current Classification: Minor Local	1,150 feet	Pg. 19-L15
	10 year projection: Moderate Local		
	20 year projection: Moderate Local		
	Located in Primary growth area.		
8	**Athena School** (#337)	2.335 miles	MO Hwy. 110 (N) to Flucom (S)
	Current Classification: Moderate Local	12,330 feet	Pg. 56-X35
	10 year projection: Moderate Local		
	20 year projection: Major Local		
	Small length of road is in the Primary growth area, the rest of the road is in the Secondary growth area.		

9	**Augusta Ave.** *(Victoria)* (#392) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Secondary growth area.*	0.194 miles 1,025 feet (Dead End)	Chouteau (N) to End of County Maintenance (S) Pg. 55-T31
10	**Bader** (#326) Current Classification: Minor Local **10 year projection: Moderate Local** 20 year projection: Moderate Local *Located in Primary growth area.*	1.148 miles 6,060 feet	Flucom (N) to MO Rte. V (S) Pg. 64-S36
11	**Bage** (#375) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	0.617 miles 3,260 feet	Sunnyside (N) to End of County Maintenance (S) Pg. 47-W30
12	**Bald Pate** (#12) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Secondary growth area.*	0.161 miles 850 feet	End of County Maintenance (E) to MO Rte. W (W) Pg. 3-L3
13	**Baptist Park Road** (#106) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Primary growth area,* *And is located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.*	0.292 miles 1,540 feet	MO Rte. A (E) to MO Rte. Z (W) Pg. 39-W25

14	**Bear Creek** (#37) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in Primary growth area.*	1.134 miles 5,990 feet	West Four Ridge (E) to Carol Park (W) Pg. 12-T8
15	**Beckett** (#105) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Primary growth area,* *And is located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.*	0.10 miles 530 feet	MO Rte. Z (N) to Baptist Park (S) Pg. 39-W25
16	**Benson** (#344) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.694 miles 3,665 feet	Plattin School (N) to MO Rte. T (S) Pg. 67-DD38
17	**Berry Dairy** (#313) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Abuts DeSoto City Limits - Located in Primary growth area.*	1.799 miles 9,500 feet	De Soto City Limits (E) to MO Rte. V (W) Pg. 64-R36
18	**Big Hollow** (#369) **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector** *Small portion located in Primary growth area and another small portion located in the Secondary growth area.*	2.701 miles 14,250 feet	Ameren U.E. Entrance (E) to MO Rte. AA (W) Pg. 60-MM35

19	**Big River Heights** (#299) Current Classification: Minor Local **10 year projection: Moderate Local** 20 year projection: Moderate Local *Small portion located in the Secondary growth area.*	4.19 miles 22,125 feet	MO Rte. 21 (E) to Washington County Line (W) Pg. 62-L38
20	**Biltmore Dr.** (#57) Current Classification: Major Local 10 year projection: Major Local 20 year projection: Major Local *Industrial Court in Fenton area - Located in Primary growth area.*	0.476 miles 2,517 feet (Dead End)	Northwest Blvd. (E) to End of County Maint. (W) Pg. 7-Y2
21	**Binning** (#72) Current Classification: Minor Local **10 year projection: Moderate Local** 20 year projection: Moderate Local *Located in Primary growth area.*	1.035 miles 5,465 feet	East Rock Creek (E) to Lions Den (W) Pg. 14-Z9
22	**Black Creek** (#110) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Primary growth area.*	0.739 miles 3,900 feet (Dead End)	Miller Rd. *East* (N) to End of County Maint. (S) Pg. 24-EE12
23	**Black Hawk Lane** (#186) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.552 miles 2,915 feet (Dead End)	End of County Maint. (E) to MO Rte. WW (W) Pg. 34-C24
24	**Blecha** (#46) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in Primary growth area.*	0.814 miles 4,300 feet	West Rock Creek (N) to Old State Rte. 21 (S) Pg. 13-X7

25	**Bogey Ave.** *(Victoria)* (#257) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Secondary growth area.*	0.074 miles 390 feet	Victoria (E) to Hyfield (W) Pg. 55-T31
26	**Boyce Lane** (#228) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Half of road is located in the Primary growth area and the other half is located in the Secondary growth area.*	2.143 miles 11,315 feet	MO Rte. TT (E) to Plattin (W) Pg. 58-EE33
27	**Boyd Branch** (#353) Current Classification: Minor Local 10 year projection: Minor Local **20 year projection: Moderate Local**	3.349 miles 17,685 feet	Laguna Palma (E) to MO Rte. JJ (W) Pg. 73-AA42
28	**Boyne Street** *(De Soto)* (#318) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.384 miles 2,025 feet	Plum (E) to End of County Maintenance (W) Pg. 55-Q35
29	**Brackman Lane** *(Cedar Hill)* (#394) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.076 miles 400 feet	MO Rte. BB (E) to High Street (W) Pg. 19-K15
30	**Branch** (#286) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.259 miles 6,650 feet (Dead End)	MO Rte. Y (E) to End of County Maintenance (W) Pg. 44-I28

31	**Breckenridge** (#280) **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector**	1.599 miles 8,445 feet	Russell (N) to MO Rte. H (S) Pg. 52-H31
32	**Brennan** (#26) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in Primary growth area.*	0.824 miles 4,350 feet	Hillsboro Valley Park (N) to Little Brennan (S) Pg. 6-U2
33	**Brickyard** (#265) Current Classification: Moderate Local 10 year projection: Moderate Local **20 year projection: Major Local** *Located in Primary growth area.*	2.269 miles 11,980 feet	MO Rte. B (N) to Whitehead (S) Pg. 45-O27
34	**Brinley** (#182) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.62 miles 3,275 feet (Dead End)	MO Rte. EE (E) to End of County Maint. (W) Pg. 36-J22
35	**Britton** (#305) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.696 miles 3,675 feet (Loop)	MO Hwy. 21 (E) to MO Hwy. 21 (W) Pg. 62-K40
36	**Broadway** *(Kimmswick)* (#109) Current Classification: Major Local 10 year projection: Major Local 20 year projection: Major Local *Abuts City of Kimmswick - Located in Primary growth area.*	0.076 miles 400 feet	Lawn St. (N) to Vine St. (S) Pg. 24-FF14

37 **Brook Hollow** (#290) 1.273 miles MO Rte. WW (N) to MO Rte. WW (S)
Current Classification: Minor Local 6,720 feet Pg. 42-B27
10 year projection: Minor Local
20 year projection: Minor Local

38 **Browns Ford** (#284) 4.739 miles MO Rte. Y (E) to MO Rte. WW (W)
Current Classification: Moderate Local 25,020 feet Pg. 44-I28
10 year projection: Moderate Local
20 year projection: Major Local
Not located in a heavy growth area but has development taking place and has the potential to attract homeowners to its rural setting.

39 **Buckeye** (#250) 3.343 miles Plass (N) to Hillsboro Hematite (S)
Current Classification: Moderate Local 17,650 feet Pg. 39-U25
10 year projection: Moderate Local
20 year projection: Moderate Local
A portion of this road is located in both the Primary growth area and the Secondary growth area.

40 **Buckeye School** (#249) 0.993 miles Stroup (E) to Buckeye (W)
Current Classification: Minor Local 5,245 feet Pg. 47-V27
10 year projection: Minor Local
20 year projection: Minor Local

41 **Burgan Grove** (#33) 1.297 miles MO Rte. W (E) to End of County Maintenance (W)
Current Classification: Moderate Local 6,850 feet Pg. O9
10 year projection: Moderate Local
20 year projection: Moderate Local
Located in Primary growth area,
And located near the Bear Creek, Dulin Creek, Heads Creek watersheds in the Big River basin.

42 **Burgess Ford** (#145) 1.411 miles Cedar Hill Rd. (N) to End of County Maintenance (S)
Current Classification: Minor Local 7,450 feet Pg. 28-K16
10 year projection: Minor Local
20 year projection: Minor Local
Located in Secondary growth area.

43	**Burley** (#368) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in both the Primary growth area and the Secondary growth area.*	1.504 miles 7,940 feet	MO Rte. AA (E) to MO Rte. TT (W) Pg. 59-HH35
44	**Buscher** (#395) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Primary growth area.*	0.341 miles 1,800 feet (Dead End)	End of County Maintenance (N) to MO Rte. F (S) Pg. 2-E5
45	**Bushberg** (#219) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Primary growth area.*	0.653 miles 3,448 feet	Koch Valley (N) to Pevely City Limits (S) Pg. 33-EE19
46	**Butcher Branch** (#267) **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector** *Small portion of road is located in the Secondary growth area.*	3.812 miles 20,125 feet	MO Rte. B (E) to MO Rte. C (W) Pg. 45-N27
47	**Byrnes Mill** (#279) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in Primary growth area.*	0.303 miles 1,602 feet	MO Rte. PP (N) to Byrnes Mill City Limits (S) Pg. 4-P5

48 **Byrnesville** (#160) — 8.111 miles, 42,826 feet — MO Rte. W (N) to MO Rte. NN (S)

Section A — MO Rte. W (N) to Lower (South) Byrnesville (S) — Pg. 11-N9

Current Classification: Rural Major Collector
10 year projection: Rural Major Collector
20 year projection: Rural Major Collector
One half of road is in the Primary growth area and the other half is in the Secondary growth area.

Section B — Lower (South) Byrnesville (N) to MO Rte. NN (S) — Pg. 19-L12

Current Classification: Rural Minor Collector
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector
Small portion is located in the Secondary growth area.

49 **Calico Creek** (#291) — 0.445 miles, 2,350 feet — MO Rte. H (E) to Washington County Line (W) — Pg. 51-D32
Current Classification: Minor Local
10 year projection: Minor Local
20 year projection: Minor Local

50 **Calvey Creek** (#168) — 3.328 miles, 17,570 feet — Dittmer Catawissa (N) to MO Hwy. 30 (S) — Pg. 26-D16
Current Classification: Moderate Local
10 year projection: Moderate Local
20 year projection: Major Local
Small portion of road is in the Secondary growth area.

51 **Canepa** (#229) — 0.535 miles, 2,825 feet — I-55 Service Road (E) to US Hwy. 61 (W) — Pg. 58-EE32
Current Classification: Minor Local
10 year projection: Minor Local
20 year projection: Minor Local
Located in Primary growth area.

52 **Cape Town Village** (#396) 0.098 miles Cape Town Village Entrance (N) to High Ridge Blvd.(S)
Current Classification: Moderate Local 515 feet Pg. 5-T5
10 year projection: Moderate Local
20 year projection: Moderate Local
Located in Primary growth area.

53 **Carol Park** (#34) 1.735 miles MO Hwy. 30 (N) to Gravois Rd. (Northwest School) (S)
Current Classification: Urban Collector 9,160 feet Pg. 12-S7
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in the Primary growth area. ***Two new Subdivisions being Developed***

54 **Carroll Street** *(Hematite)* (#243) 0.090 miles MO Rte. P (E) to End of County Maintenance (W)
Current Classification: Minor Local 475 feet Pg. 47-W29
10 year projection: Minor Local (Dead End)
20 year projection: Minor Local

55 **Carron** (#103) 0.894 miles Festus Special Road Dist. (N) to Sunnyside (S)
Current Classification: Minor Local 4,720 feet Pg. 57-I31
10 year projection: Moderate Local
20 year projection: Moderate Local
Located in Primary growth area,
And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

56 **Castle Ranch** (#259) 2.816 miles Hillsboro Victoria (N) to MO Hwy. 21 (S)
Current Classification: Minor Local 14,870 feet Pg. 46-R27
10 year projection: Moderate Local
20 year projection: Moderate Local
Located in Primary growth area,
And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

57 **Cedar Hill** (#150) 3.096 miles MO Hwy. 30 (N) to MO Rte. B (S)
16,347 feet

Section A MO Hwy. 30 (N) to Local Hillsboro Rd. (S) Pg. 20-M13
Current Classification: Urban Collector
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in Primary growth area,
And located in the Cedar Hill and Sand Creek watersheds in the Big River basin.

Section B Local Hillsboro Rd. (N) to MO Rte. BB (S) Pg. 19-L14
Current Classification: Minor Arterial
10 year projection: Minor Arterial
20 year projection: Minor Arterial
Located in Primary growth area,
And located in the Cedar Hill and Sand Creek watersheds in the Big River basin.

Section C MO Rte. BB (N) to MO Rte. B (S) Pg. 19-K15
Current Classification: Moderate Local
10 year projection: Major Local
20 year projection: Major Local
Half of road is in the Primary growth area and the other half is in the Secondary growth area.

58 **Cedar Hill School** (#147) 0.391 miles Cedar Hill Rd. (E) to Veterans Dr. (W)
Current Classification: Minor Local 2,065 feet Pg. 19-K15
10 year projection: Minor Local
20 year projection: Minor Local
Located in Primary growth area,
And located in the Cedar Hill and Sand Creek watersheds in the Big River basin.

59 **Cedar Hollow** (#294) 1.809 miles MO Rte. H (N) to Washington County Line (S)
Current Classification: Minor Local 9,550 feet Pg. 52-F33
10 year projection: Minor Local
20 year projection: Minor Local

60 **Cedar Springs** (#157) — 0.693 miles — MO Hwy. 30 (E) to Silver Lane (W)
Current Classification: Moderate Local — 3,660 feet — Pg. 19-K14
10 year projection: Moderate Local
20 year projection: Major Local
Located in Primary growth area,
And located in the Cedar Hill and Sand Creek watersheds in the Big River basin.

61 **Charter Church** (#342) — 7.016 miles — Harness (N) to Ste. Genevieve County Line (S)
37,044 feet

Section A — Harness (N) to MO Rte. T (S) — Pg. 67-CC36
Current Classification: Rural Minor Collector
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector

Section B — MO Rte. T (N) to Ste. Genevieve County Line (S) — Pg. 66-BB40
Current Classification: Moderate Local
10 year projection: Moderate Local
20 year projection: Moderate Local

62 **Chouteau Ave.** *(Victoria)* (#258) — 0.213 miles — Augusta (E) to MO Rte. P (W)
Current Classification: Minor Local — 1,125 feet — Pg. 55-T31
10 year projection: Minor Local
20 year projection: Minor Local
Located in Secondary growth area.

63 **Church Street** *(Hematite)* (#397) — 0.272 miles — End of County Maintenance (N) to Cemetery (S)
Current Classification: Minor Local — 1,435 feet — Pg. 47-W29
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local

64 **Clayton Huskey** (#188) — 0.736 miles — MO Rte. BB (E) to Klondike (W)
Current Classification: Moderate Local — 3,885 feet — Pg. 37-N21
10 year projection: Moderate Local
20 year projection: Moderate Local

65 **Coil** (#53) — 0.492 miles — End of County Maint. (E) to New Sugar Creek (W)
Current Classification: Minor Local — 2,600 feet — Pg. 6-W2
10 year projection: Minor Local
20 year projection: Minor Local
Located in Primary growth area.

66 **Cole** (#233) — 0.663 miles — US Hwy. 61 (E) to End of County Maintenance (W)
Current Classification: Minor Local — 3,500 feet — Pg. 59-HH34
10 year projection: Minor Local
20 year projection: Moderate Local
Located in Primary growth area.

67 **College** (#200) — 0.578 miles — Venita Lane (E) to MO Hwy. 21 (W)
Current Classification: Minor Local — 3,050 feet — Pg. 38-R24
10 year projection: Minor Local
20 year projection: Minor Local

68 **College Heights** (#311) — 0.424 miles — MO Hwy. 21 (E) to Yellow Rock (W)
Current Classification: Minor Local — 2,240 feet — Pg. 63-P36
10 year projection: Minor Local
20 year projection: Minor Local
Portion of the road is in the Primary growth area and another portion is located in the Secondary growth area.

69 **Community Lane** (#22) **-** *was Civic Center* — 0.102 miles — End of County Maint. (N) to High Ridge Blvd. (S)
Current Classification: Minor Local — 540 feet — Pg. 5-S5
10 year projection: Minor Local
20 year projection: Minor Local
Located in Primary growth area (by Northwest School District Offices).

70	**Cook** (#120) Current Classification: Moderate Local 10 year projection: Moderate Local **20 year projection: Major Local** *Located in Primary growth area.*	0.713 miles 3,765 feet	Old Antonia (E) to End of County Maintenance (W) Pg. 24-CC14
71	**Cora Lane** *(Victoria)* (#398) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Secondary growth area.*	0.114 miles 600 feet	Chouteau (N) to Morse (S) Pg. 55-T31
72	**Corisande Hill** (#61) Current Classification: Major Local 10 year projection: Major Local **20 year projection: Urban Collector** *Located in Primary growth area.*	3.309 miles 17,472 feet	St. Louis County Line (E) to Old Hwy. 141 (W) Pg. 7-BB2
73	**County Line** (#172) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.597 miles 3,150 feet	Zimmerman (E) to MO Hwy. 30 (W) Pg. 26-C19
74	**Danby** (#366) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	1.045 miles 5,520 feet	US Hwy. 61 (E) to MO Rte. TT (W) Pg. 68-JJ37
75	**Delores Dr.** (#56) Current Classification: Major Local **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in Primary growth area.*	0.441 miles 2,328 feet	Fond du Lac (E) to MO Hwy. 30 (W) Pg. 6-X3

76	**Dickinson** (#379) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.417 miles 7,480 feet (Dead End)	Engledow (E) to End of County Maintenance (W) Pg. 76-N46
77	**Diehl** (#58) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in Primary growth area.*	0.525 miles 2,770 feet	Saline (E) to Old Sugar Creek (W) Pg. 6-X4
78	**Dillon** (#24) *Located in Primary growth area.*	1.336 miles 7,055 feet	MO Hwy. 30 (E) to Williams Creek (W) Pg. 5-T4
	Section A **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector**	MO Hwy. 30 (E) to Hillsboro House Springs (W)	
	Section B Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	Hillsboro House Springs (E) to Williams Creek (W)	
79	**Dittmer** (#166) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in Secondary growth area.*	1.411 miles 7,450 feet	MO Hwy. 30 (E) to Dittmer Catawissa (W) Pg. 28-I17

80	**Dittmer Catawissa** (#167)	4.026 miles 21,255 feet	MO Hwy. 30 (E) to MO Rte. HH (W) Pg. 27-G17
	Section A **Current Classification: Rural Major Collector** **10 year projection: Rural Major Collector** **20 year projection: Rural Major Collector**	MO Hwy. 30 (E) to Dittmer Spur (W)	
	Section B **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector** *Half of the road is in the Secondary growth area.*	Dittmer Spur (E) to MO Rte. HH (W)	
81	**Dittmer Church** (#176) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Secondary growth area.*	1.051 miles 5,550 feet	End of County Maint. (E) to Dittmer Ridge (W) Pg. 27-H18
82	**Dittmer Ridge** (#425) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in Secondary growth area.*	1.738 miles 9,175 feet	MO Hwy. 30 (N) to Ridge (S) Pg. 27-G17
83	**Dittmer Spur** (#399) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in Secondary growth area.*	0.148 miles 780 feet	Dittmer (E) to Dittmer Catawissa (W) Pg. 27-H17

84	**Doc Sargent** (#8) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	1.597 miles 8,430 feet (Loop)	MO Rte. F (E) to MO Rte. F (W) Pg. 9-H8
85	**Dodson Lane** (#301) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Half of road is in Secondary growth area.*	2.020 miles 10,665 feet	MO Rte. H (N) to Big River Heights (S) Pg. 53-L35
86	**Dooling Hollow** (#231) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in Primary growth area.*	0.541 miles 2,855 feet (Dead End)	End of County Maintenance (E) to US Hwy. 61 (W) Pg. 59-II32
87	**Doss Hollow** (#359) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.282 miles 6,768 feet	Dry Fork (N) to Ste Genevieve County Line (S) Pg. 67-EE40
88	**Douglas Street** *(Hematite)* (#240) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.208 miles 1,100 feet	MO Rte. P (E) to End of County Maintenance (W) Pg. 47-W29
89	**Drury** (#361) Current Classification: Minor Local **10 year projection: Moderate Local** 20 year projection: Moderate Local	1.203 miles 6,350 feet	Danby (N) to MO Rte. TT to End of County Maint. (S)

90	**Dry Creek** (#275) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.869 miles 9,870 feet (Dead End)	End of County Maintenance (N) to MO Rte. H (S) Pg. 53-J32
91	**Dry Fork** (#358) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	2.117 miles 11,180 feet	MO Rte. DD (E) to MO Rte. T (S) Pg. 67-FF39
92	**Dry Fork** *(East)* (#134) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in Primary growth area.*	1.733 miles 9,150 feet (Dead End)	Old Lemay Ferry (E) to End of County Maint. (W) Pg. 23-Y13
93	**Dry Fork** *(West)* (#132) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in Primary growth area.*	0.379 miles 2,000 feet (Dead End)	End of County Maint. (E) to Old MO State Hwy. 21 (W) Pg. 22-W12
94	**Dual** (#226) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Primary growth area,* *And located in the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.*	0.273 miles 1,440 feet	Victoria (N) to End of County Maintenance (S) Pg. 57-Y32
95	**Dubois Creek** (#372) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.263 miles 6,670 feet (Dead End)	Johnson (N) to End of County Maintenance (S) Pg. 69-KK37

96 **Duda** (#384) — 1.567 miles — End of County Maintenance (N) to MO Rte. MM (S)
Current Classification: Moderate Local — 8,275 feet — Pg. 12-S9
10 year projection: Moderate Local
20 year projection: Moderate Local
Located in Primary growth area,
And located in the Bear Creek, Dulin Creek, Heads Creek watersheds in the Big River basin.

97 **Dulin Creek** (#142) — 5.313 miles — MO Rte. MM (N) to Local Hillsboro (S)
Current Classification: Major Local — 28,055 feet — Pg. 11-P10
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector
Large portion of road is in the Primary growth area, and a smaller portion is located in the Secondary growth area,
(MoDOT has Major Improvements planned for the Northern portion of Dulin Creek in 2014-2015 time frame)

98 **Dutch Bottom** (#78) — 1.430 miles — Missouri State Rd. (E) to Lonedell (W)
Current Classification: Urban Collector — 7,550 feet — Pg. 14-BB6
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in Primary growth area.

99 **Dutch Creek** (#155) — 2.527 miles — Byrnesville (N) to MO Rte. NN (S)
Current Classification: Moderate Local — 13,340 feet — Pg. 19-J12
10 year projection: Moderate Local
20 year projection: Major Local
Located in Secondary growth area.

100 **East Blecha** (#133) — 0.256 miles — End of County Maint. (N) to Old MO State Rte. 21 (S)
Current Classification: Minor Local — 1,350 feet — Pg. 13-X8
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local
Located in Primary growth area.

101	**East Four Ridge** (#125) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in Primary growth area.*	2.893 miles 15,275 feet	Old Lemay Ferry (E) to Old MO State Rte. 21 (W) Pg. 23-Y12
102	**East Marriot Street** *(Barnhart)* (#97) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Primary growth area.*	0.123 miles 650 feet	Front Street (E) to End of County Maintenance (W) Pg. 33-DD16
103	**East Outer Road 21** (#64) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	0.444 miles 2,345 feet (Dead End)	Eastside of Hwy. 21 (off Hwy 141) to End of County Maint. (S) Pg. 7-BB5
104	**East Rock Creek** (#71) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in Primary growth area.*	3.021 miles 15,950 feet	Old Lemay Ferry (E) to Old MO State Rte. 21 (W) Pg. 14-AA10
105	**East Romaine Creek** (#67) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Located in Primary growth area.*	1.578 miles 8,330 feet	Romaine Creek (N) to West Rock Creek (S) Pg. 14-Y6
106	**East Street** *(Barnhart)* (#95) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in Primary growth area.*	0.234 miles 1,233 feet	US Hwy. 61-67 (E) to Front St. (W) Pg. 33-DD16

107	**East Swaller** (#74) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Located in Primary growth area.*	2.642 miles 13,950 feet	Old MO State Rte. 21 (N) to East Four Ridge (S) Pg. 13-X8
108	**Eime** (#162) Current Classification: Moderate Local 10 year projection: Moderate Local **20 year projection: Major Local** *Portion of the road is in the Secondary growth area.*	2.213 miles 11,685 feet	MO Rte. NN (N) to Dittmer Catawissa (S) Pg. 18-G14
109	**Elm Drive** (#112) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in Primary growth area.*	0.894 miles 4,720 feet	Arnold City Limits (E) to Miller (W) Pg. 15-DD10
110	**Ems** (#137) **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector** *Portion of road is in both the Primary growth area and the Secondary growth area,* *The eastern section of the road is located in the Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin.*	2.903 miles 15,326 feet	MO Hwy. 21 (E) to Hillsboro House Springs (W) Pg. 30-T18
111	**Engle Creek** (#215) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in Primary growth area.*	1.231 miles 6,500 feet	Metropolitan Blvd. (E) to End of County Maint. (W) Pg. 33-CC18

112	**Engledow** (#377) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	4.799 miles 25,340 feet	MO Rte. E (E) to Upper Blackwell (W) Pg. 76-P46
113	**Engleford** (#287) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	2.419 miles 12,770 feet (Dead End)	Browns Ford (E) to End of County Maintenance (W) Pg. 43-G28
114	**English** (#1) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	1.970 miles 10,400 feet (Dead End)	End of County Maintenance (E) to Buscher (W) Pg. 2-H5
115	**Fairview Lane** (#421) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.144 miles 760 feet (Dead End)	Heads Creek (N) to End of County Maintenance (S) Pg. 21-U15
116	**Ficken** (#151) Current Classification: Moderate Local 10 year projection: Moderate Local **20 year projection: Major Local** *Located in the Secondary growth area. Only Access to Village of Cedar Hill Lakes*	1.138 miles 6,010 feet	MO Rte. B (E) to MO Hwy. 30 (W) Pg. 28-J16
117	**Fiedler Lane** (#66) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Primary growth area.*	0.455 miles 2,400 feet	Old Rte. 141 (E) to MO Hwy. 141 to End of County Maint. (W) Pg. 7-Z4

118	**First Street** *(Imperial)* (#102) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.045 miles 240 feet	White Street (N) to Imperial Main (S) Pg. 24-EE14
119	**Flucom** (#324) **Current Classification: Rural Major Collector** **10 year projection: Urban Collector (De Soto City Limits), Rural Major Collector** **20 year projection: Urban Collector (De Soto City Limits), Rural Major Collector** *Small portion is located in the Primary growth area, and the rest is located in the Secondary growth area.*	4.381 miles 23,130 feet	US Hwy. 67 (E) to De Soto City Limits (W) Pg. 65-W38
120	**Flucom** *(East)* (#345) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Approximately Half of the road is located in the Secondary growth area.*	3.913 miles 20,660 feet	Charter Church (E) to US Hwy. 67 (W) Pg. 66-AA39
121	**Flucom Meadows** (#325) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.350 miles 1,850 feet (Dead End)	End of County Maintenance (N) to Flucom (S) Pg. 64-S36
122	**Fountain City** (#321)	4.268 miles 22,537 feet	MO Hwy. 110 (E) to De Soto City Limits (W) Pg. 56-X35
	Section A Current Classification: Major Local 10 year projection: Major Local **20 year projection: Rural Minor Collector** *Portion of the road is in the Primary growth area and the rest is in the Secondary growth area, only a small portion is not in either*	MO Hwy. 110 (E) to MO Hwy. 110 (W)	

Section B MO Hwy. 110 (E) to De Soto City Limits (W)
Current Classification: Urban Collector
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in Primary growth area.

123 **Fox Farm** (#327) 1.881 miles Flucom (N) to Mount Olive (S)
Current Classification: Moderate Local 9,930 feet Pg. 64-T36
10 year projection: Moderate Local
20 year projection: Moderate Local
Approximately half of the road is in the Secondary growth area.

124 **Frazier** (#357) 2.307 miles Doss Hollow (E) to Charter Church (W)
Current Classification: Minor Local 12,180 feet Pg. 67-EE40
10 year projection: Minor Local
20 year projection: Minor Local

125 **Frisco Hill** (#117) 3.264 miles Seckman (E) to Old Lemay Ferry (W)
Current Classification: Major Local 17,235 feet Pg. 23-BB12
10 year projection: Major Local
20 year projection: Major Local
Located in Primary growth area.

126 **Frissell** (#322) 0.691 miles Upper Plattin (E) to End of County Maintenance (W)
Current Classification: Minor Local 3,650 feet Pg. 55-S35
10 year projection: Moderate Local
20 year projection: Moderate Local
Located in Primary growth area.

127 **Front Street** *(Barnhart)* (#94) 0.278 miles Marriot (N) to US Hwy. 61-67 (S)
Current Classification: Minor Local 1,470 feet Pg. 33-DD16
10 year projection: Minor Local
20 year projection: Minor Local
Located in the Primary growth area.

128	**Frontier** (#253) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Located in Primary growth area,* *And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.*	1.159 miles 6,120 feet (Loop)	MO Rte. A (E) to MO Rte. A (W) Pg. 48-Y26
129	**Frost** (#173) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.632 miles 3,335 feet	MO Rte. Y (E) to Franklin County Line (W) Pg. 34-C21
130	**Furaway Lane** (#346) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.129 miles 680 feet (Dead End)	Charter Church (E) to End of County Maint. (W) Pg. 66-BB38
131	**Gansner** (#364) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.455 miles 2,400 feet (Dead End)	US Hwy. 61 (N) to End of County Maintenance (S) Pg. 68-JJ36
132	**Gary** (#76) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Located in the Primary growth area.*	1.608 miles 8,490 feet	Tomahawk/Vogel (E) to East Rock Creek (W) Pg. 14-BB8
133	**George Dover** (#282) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.67 miles 3,540 feet (Dead End)	Ware (E) to End of County Maintenance (W) Pg. 52-H31

134 **Girl Scout** (#221) — 0.469 miles — End of County Maint. (N) to Festus Special Road Dist. (S)
Current Classification: Minor Local — 2,475 feet — Pg. 32-Y20
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local

135 **Glade Chapel** (#189) — 4.115 miles — Old State Rte. 21 (E) to MO Rte. BB (W)
21,725 feet — Pg. 30-T20

Most of the roadway is in the Primary growth area and the rest of the road is in the Secondary growth area, And is located in the Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

Section A — MO Hwy. 21 (E) to Hillsboro House Springs (W)
Current Classification: Rural Minor Collector
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector

Section B — Hillsboro House Springs (E) to MO Rte. BB (W)
Current Classification: Moderate Local
10 year projection: Major Local
20 year projection: Major Local

136 **Golda Lane** (#55) — 0.246 miles — St. Louis Co. Line (N) to Old Gravois (S)
Current Classification: Moderate Local — 1,300 feet — Pg. 6-W2
10 year projection: Moderate Local
20 year projection: Moderate Local

137 **Goldman** (#196) — 3.267 miles — Old Lemay Ferry (N) to North Outer Rd. A (S)
Current Classification: Moderate Local — 17,250 feet — Pg. 30-T20
10 year projection: Moderate Local
20 year projection: Moderate Local
Located in both the Primary growth area and the Secondary growth area, And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi river basin and also near the Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

138 **Goldman East** (#211) 1.302 miles Johnson *(Festus Special Road Dist.)* (E) to Sandy Church (W)
Current Classification: Moderate Local 6,875 feet Pg. 39-X21
10 year projection: Moderate Local
20 year projection: Major Local
Located in the Secondary growth area.

139 **Goldman Spur** (#292) 0.437 miles Old Lemay Ferry (E) to Old State Rte. 21 (W)
Current Classification: Rural Minor Collector 2,310 feet Pg. 30-T20
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector
Located in the primary Growth area,
And located near the Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

140 **Gracie Waggoner** (#362) 0.426 miles MO Rte. AA (N) to End of County Maintenance (S)
Current Classification: Minor Local 2,250 feet Pg. 59-JJ35
10 year projection: Minor Local (Dead End)
20 year projection: Minor Local
Located in the Primary growth area.

141 **Graham** (#152) 1.171 miles Local Hillsboro (E) to Cedar Hill Rd. (W)
Current Classification: Urban Collector 6,185 feet Pg. 20-M15
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in the Primary growth area,
And near the Cedar Hill and the Sand Creek watershed in the Big River basin.

142 **Gravois** *(Byrnesville)* (#140) 0.578 miles End of County Maintenance (N) to MO Hwy. 30 (S)
Located in the Primary growth area, 3,050 feet Pg.20-M13
And near the Cedar Hill and the Sand Creek watershed in the Big River basin.

Section A End of County Maintenance (N) to Lower (South) Byrnesville (S)
Current Classification: Minor Local
10 year projection: Minor Local
20 year projection: Minor Local

Section B Lower (South) Byrnesville (N) to MO Hwy. 30 (S)

Current Classification: Urban Collector
10 year projection: Urban Collector
20 year projection: Urban Collector

143 **Gravois** *(Schumacher)* (#51) 2.599 miles 13,721 feet End of County Maint. (N) to End of County Maint. (S)

Section A End of County Maint. (N) to MO Hwy. 30 (S) Pg. 6-V3
Current Classification: Minor Local
10 year projection: Moderate Local
20 year projection: Moderate Local
*Located in the Primary growth area. T**his section may connect to Old Sugar Creek when development occurs.***

Section B MO Hwy. 30 (N) to Little Brennan (S) Pg. 6-V3
Current Classification: Major Local
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in the Primary growth area. May continue and connect to Old Sugar Creek when development occurs.

Section C Little Brennan (N) to Schumacher (S) Pg. 6-V3
Current Classification: Urban Collector
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in the Primary growth area.
MoDOT and THF (Developer) connected Gravois, south of Schumacher, to MO Route 30 @ High Ridge Blvd.

Section D Schumacher (N) to End of County Maint. (S) Pg. 5-T5
Current Classification: Minor Local
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in the Primary growth area.
MoDOT and THF (Developer) connected Gravois, south of Schumacher, to MO Route 30 @ High Ridge Blvd.

144 **Gravois** *(Northwest School)* — 2.434 miles — MO Hwy. 30 (N) to Main St. *(House Springs)* (S)
Current Classification: Minor Arterial — 12,850 feet — Pg. 12-R7
10 year projection: Minor Arterial
20 year projection: Minor Arterial
Located in the Primary growth area,
And located near the Bear Creek, Dulin Creek, Heads Creek watersheds in the Big River basin.

145 **Green House** (#383) — 0.224 miles — End of County Maintenance (N) to Fountain City (S)
Current Classification: Minor Local — 1,185 feet — Pg. 55-T34
10 year projection: Minor Local
20 year projection: Minor Local
Located in the Primary growth area.

146 **Hammel** (#283) — 1.0 miles — Ware (E) to End of County Maintenance (W)
Current Classification: Minor Local — 5,280 feet — Pg. 52-F32
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local

147 **Hardin** (#329) — 5.687 miles — MO Rte. V (N) to MO Rte. E (S)
30,025 feet — Pg. 64-S40

Section A — MO Rte. V (N) to Sunrise School (S)
Current Classification: Moderate Local
10 year projection: Moderate Local
20 year projection: Major Local

Section B — Sunrise School (N) to MO Rte. E (S)
Current Classification: Moderate Local
10 year projection: Moderate Local
20 year projection: Major Local

148	**Harmony Hills** (#320) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.592 miles 3,125 feet	Fountain City (N) to Fountain City (S) Pg. 55-R33
149	**Harness** (#340) **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector**	3.595 miles 18,980 feet	MO Rte. TT (E) to Plattin (W) Pg. 67-FF36
150	**Harrison** (#310) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Secondary growth area.*	0.348 miles 1,840 feet (Dead End)	Mt. Olive (E) to End of County Maintenance (W) Pg. 72-V43
151	**Harry Maupin** (#174) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.367 miles 1,940 feet	MO Rte. WW (E) to Franklin County Line (W) Pg. 34-B22
152	**Haverstick School** (#381) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.777 miles 4,100 feet (Dead End)	End of County Maintenance (N) to Victoria (S) Pg. 56-V31
153	**Hawkins** (#30) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in Primary growth area.*	0.266 miles 1,405 feet	MoDOT Service Road (E) to St. Louis County Line (W) Pg. 6-X2

154	**Hayden** (#191)	0.487 miles	MO Hwy. 21 (E) to Hillsboro House Springs (W)
	Current Classification: Major Local	2,570 feet	Pg. 38-R23
	10 year projection: Rural Minor Collector		
	20 year projection: Rural Minor Collector		
	Located in the Primary growth area. North of Jefferson College in Hillsboro		
155	**Heads Creek** (#135)	2.768 miles	Old State Rte. 21 (E) to MO Rte. MM (W)
	Current Classification: Moderate Local	14,615 feet	Pg. 22-V15
	10 year projection: Major Local		
	20 year projection: Major Local		
	Located in the Primary growth area,		
	And located near the Bear Creek, Dulin Creek, Heads Creek watersheds in the Big River basin.		
156	**Heather Lane** (#25)	0.057 miles	End of County Maintenance (N) to Dillon (S)
	Current Classification: Minor Local	300 feet	Pg. 5-T3
	10 year projection: Minor Local	(Dead End)	
	20 year projection: Minor Local		
	Located in the primary growth area.		
157	**Hencher** (#339)	0.112 miles	Fountain City (N) to End of County Maintenance (S)
	Current Classification: Minor Local	590 feet	Pg. 56-U34
	10 year projection: Minor Local	(Dead End)	
	20 year projection: Minor Local		
158	**Hencher** (#400)	1.553 miles	End of County Maintenance (N) to Flucom (S)
	Current Classification: Moderate Local	8,200 feet	Pg. 56-U35
	10 year projection: Moderate Local	(Dead End)	
	20 year projection: Moderate Local		
	Approximately half of the road is in the Secondary growth area.		
159	**Hensley** (#212)	1.079 miles	Rice (N) to Goldman East (S)
	Current Classification: Moderate Local	5,695 feet	Pg. 31-X20
	10 year projection: Major Local		
	20 year projection: Major Local		

Located in the Secondary growth area,
And located in the Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

160 **Hidden Valley Ranch** (#298) — 1.146 miles — MO Rte. H (E) to End of County Maintenance (W)
Current Classification: Minor Local — 6,050 feet — Pg. 53-I33
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local

161 **High Ridge Blvd.** (#18) — 1.884 miles — MO Hwy. 30 (N) to MO Rte. PP to Byrnes Mill City Limits (S)
Located in the Primary growth area. — 9,950 feet

Section A — MO Hwy. 30 (N) to MO Rte. PP (S) — Pg. 5-T5
Current Classification: Minor Arterial
10 year projection: Minor Arterial
20 year projection: Minor Arterial

Section B — MO Rte. PP to Byrnes Mill City Limits (S) — Pg. 12-S6
Current Classification: Minor Arterial
10 year projection: Minor Arterial
20 year projection: Minor Arterial

162 **High Street** *(Cedar Hill)* (#149) — 0.552 miles — Cedar Hill Rd. (N) to MO Rte. BB to Wolf St. (S)
Current Classification: Minor Local — 2,915 feet — Pg. 19-K15
10 year projection: Minor Local
20 year projection: Minor Local

163 **Highland Baptist Church** (#199) — 2.32 miles — MO Rte. A (E) to MO Hwy. 21 (W)
Current Classification: Moderate Local — 12,250 feet — Pg. 38-T24
10 year projection: Moderate Local
20 year projection: Major Local
Located in the Primary growth area.

164	**Hillcrest** (#70) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Primary growth area.*	1.388 miles 7,330 feet	Lonedell (E) to East Rock Creek (W) Pg. 14-Z7
165	**Hillcrest** *(South)* (#314) Current Classification: Major Local 10 year projection: Major Local 20 year projection: Major Local	0.697 miles 3,680 feet	Berry Dairy (E) to DeSoto City Limits (W) Pg. 64-Q37
166	**Hillsboro Avenue** *(Victoria)* (#255) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Secondary growth area.*	0.484 miles 2,555 feet (Dead End)	Victoria (N) to End of County Maintenance (S) Pg. 55-T31
167	**Hillsboro Hematite** (#248) **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector** *A small portion is located in both the Primary and Secondary growth areas.* *And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.*	5.174 miles 27,320 feet	MO Rte. P (E) to Hillsboro Victoria (W) Pg. 47-W29
168	**Hillsboro House Springs** (#139)	12.284 miles 64,862 feet	MO Rte. MM (N) to End of County Maintenance (S)
	Section A **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector**	MO Rte. MM (N) to Redbird (S)	Pg. 12-Q10

Section B Redbird (N) to End of County Maintenance *(at Commuter Parking Lot)* (S)
Current Classification: Rural Major Collector
10 year projection: Rural Major Collector
20 year projection: Rural Major Collector

169 **Hillsboro Valley Park** (#23) 3.189 miles St. Louis County Line (N) to Williams Creek (S)
Current Classification: Urban Collector 16,840 feet Pg. 6-U2
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in the Primary growth area.

170 **Hillsboro Victoria** (#254) 3.169 miles Castle Ranch (N) to MO Rte. P (S)
Current Classification: Rural Minor Collector 16,730 feet Pg. 46-R27
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector
A small portion of the road is located in the Primary growth area, while the rest is in the Secondary growth area.

171 **Holly Hills Terrace** (#234) 0.345 miles Carron (N) to Victoria (S)
Current Classification: Minor Local 1,820 feet Pg. 57-Y32
10 year projection: Minor Local
20 year projection: Minor Local
Located in the Primary growth area,
And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

172 **Huber** (#207) 0.35 miles Sandy Church (N) to End of County Maintenance (S)
Current Classification: Minor Local 1,850 feet Pg. 39-W23
10 year projection: Minor Local (Dead End)
20 year projection: Minor Local
Located in the Primary growth area.
And located in the Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

173	**Hunning** (#49) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Located in the Primary growth area.*	2.865 miles 15,127 feet	Old Sugar Creek (E) to West Rock Creek (W) Pg. 13-W6
174	**Huskey** (#343) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	1.206 miles 6,370 feet	Plattin School (E) to Charter Church (W) Pg. 67-DD38
175	**Hyfield** (#245) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Large portion of the road is located in the Primary growth area while the rest is located in the Secondary growth area.*	2.462 miles 13,000 feet	MO Rte. P (N) to Fountain City (S) Pg. 55-T31
176	**Hyfield School** (#244) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.295 miles 1,555 feet	Fountain City (N) to Fountain City (S) Pg. 56-U34 (Loop)
177	**Imperial Main** (#99) *Located in the Primary growth area.*	0.478 miles 2,525 feet	US Hwy. 61-67 (E) to Old Antonia (W)
	Section A **Current Classification: Minor Arterial** **10 year projection: Minor Arterial** **20 year projection: Minor Arterial**	US Hwy. 61-67 (E) to State Maintenance (W)	Pg. 24-EE14
	Section B **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector**	State Maintenance (E) to Old Antonia (W)	Pg. 24-DD14

178 **Indian Springs** (#32) — 0.712 miles — Main St. (House Springs) - (E) to MO Hwy. 30 (W)
Current Classification: Major Local — 3,757 feet — Pg. 11-P10
10 year projection: Major Local
20 year projection: Major Local
Located in Primary growth area,
And located near the Bear Creek, Dulin Creek, Heads Creek watersheds in the Big River basin.

179 **Jarvis** (#198) — 4.859 miles — MO Rte. Z (E) to MO Hwy. 21 (W)
Current Classification: Rural Minor Collector — 25,655 feet — Pg. 39-X24
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector
Located in both the Primary and the Secondary growth area.

180 **Jeffco Executive Drive** (#107) — 0.125 miles — End of County Maint. (E) to US Hwy. 61-67 (W)
Current Classification: Minor Local — 660 feet — Pg. 24-FF12
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local
Located in the Primary growth area.

181 **Jim Weber** (#14) — 3.456 miles — Antire (E) to Twin River (W)
Current Classification: Moderate Local — 18,250 feet — Pg. 5-Q4
10 year projection: Moderate Local
20 year projection: Major Local
Located in the Primary growth area.

182 **Jim Wilson** (#184) — 0.614 miles — End of County Maintenance (E) to MO Rte. Y (W)
Current Classification: Minor Local — 3,240 feet — Pg. 35-G24
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local

183	**Joe Buck** (#185) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.341 miles 1,800 feet (Dead End)	MO Rte. Y (N) to End of County Maintenance (S) Pg. 34-C22
184	**John McKeever** (#11) **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector** *A small portion of the road is located in the Secondary growth area.*	3.333 miles 17,600 feet	Byrnesville (E) to MO Rte. FF (W) Pg. 10-L10
185	**John Swaller** (#43) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Primary growth area.*	0.784 miles 4,140 feet	West Rock Creek (N) to End of County Maint. (S) Pg. 13-W8
186	**Johnson** (#365) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.288 miles 1,520 feet	MO Rte. H (E) to MO Rte. WW (W) Pg. 51-D32
187	**Johnson** (#371) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local	1.809 miles 9,550 feet	Big Hollow (E) to US Hwy. 61 (W) Pg. 69-LL36
188	**Jones Creek** (#179) **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector**	4.29 miles 22,650 feet	MO Rte. EE (E) to MO Hwy. 30 (W) Pg. 35-H21

189	**Kim** (#389) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	.091 miles 480 feet (Dead End)	MO Rte. JJ (E) to End of County Maintenance (W) Pg. 65-W39
190	**Kingsland** (#300) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.654 miles 3,455 feet	End of County Maint. (N) to Big River Heights (S) Pg. 61-H37
191	**Klable** (#128) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Located in the Primary growth area.*	1.201 miles 6,340 feet	Old Lemay Ferry (E) to MO Hwy. 21 (W) Pg. 31-V17
192	**Klondike** (#187) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local	5.768 miles 30,455 feet	MO Rte. BB (E) to MO Rte. B (W) Pg. 37-O23
193	**Klondike** *(South)* (#315) *Located in both the Primary and Secondary growth areas.*	5.862 miles 30,950 feet	MO Rte. E (E) to MO Rte. E (W)
	Section A **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector**	MO Rte. E (E) to Designated Urban Cluster (W)	Pg. 64-Q37
	Section B **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector**	Knorpp (E) to Designated Urban Cluster (W)	Pg. 63-O39

	Klondike *(South)* (#315) - continued *Section C* Current Classification: Minor Local **10 year projection: Moderate Local** 20 year projection: Moderate Local	Knorpp (N) to MO Rte. E (S)	Pg. 63-P40
194	**Kneff** (#131) Current Classification: Moderate Local 10 year projection: Moderate Local **20 year projection: Major Local** *Located in the Primary growth area.*	1.527 miles 8,065 feet	Old MO Rte. M (E) to Old Lemay Ferry (W) Pg. 23-Z14
195	**Knorpp** (#307) **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector**	1.443 miles 7,620 feet	Klondike *(South)* (E) to Vineland (W) Pg. 63-O39
196	**Koch Valley** (#217) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Primary growth area.*	0.895 miles 4,725 feet	Bushberg (E) to US Hwy. 61-67 (W) Pg. 33-EE19
197	**Konert** (#69) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in the Primary growth area.*	1.103 miles 5,825 feet	Old State Rte. 21 (E) to Romaine Creek (W) Pg. 14-Z6
198	**Kramme** (#169) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.11 miles 580 feet (Dead End)	Calvey Creek (E) to End of County Maintenance (W) Pg. 26-D17

199	**Krommer** (#163) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.653 miles 3,450 feet (Dead End)	Eime (E) to End of County Maintenance (W) Pg. 18-G15
200	**Laguna Palma** (#354) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	2.197 miles 11,600 feet	Charter Church (N) to St. Francois County Line (S) Pg. 73-BB41
201	**Lake Tekawitha** (#7) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	1.189 miles 6,280 feet (Loop)	MO Rte. F (E) to MO Rte. F (W) Pg. 9-F7
202	**Lawn Street** *(Kimmswick)* (#104) Current Classification: Major Local 10 year projection: Major Local 20 year projection: Major Local *Located in the Primary growth area.*	0.189 miles 1,000 feet	Broadway (E) to Montebello (W) Pg. 24-FF14
203	**Lee** (#237) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Approximately half of the road is in the Secondary growth area.*	0.672 miles 3,550 feet	End of County Maintenance (N) to Meyer (S) Pg. 47-X29
204	**Lee Pyle** (#347) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	2.893 miles 15,275 feet	Flucom *(East)* (E) to US Hwy. 67 (W) Pg. 66-Y38

205	**Lembeck Lake** (#312) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local	1.735 miles 9,160 feet (Dead End)	End of County Maintenance (E) to MO Hwy. 21 (W) Pg. 64-Q37
206	**Liberty School** (#263) Current Classification: Moderate Local 10 year projection: Moderate Local **20 year projection: Major Local** *Located in both the Primary and Secondary growth areas.*	3.411 miles 18,010 feet	MO Hwy. 21 (E) to Tinhouse (W) Pg. 55-Q31
207	**Liguori** (#121) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.191 miles 1,010 feet (Dead End)	US Hwy. 61-67 (E) to End of County Maintenance (W) Pg. 33-DD16
208	**Linhorst** (#209) Current Classification: Minor Local **10 year projection: Moderate Local** 20 year projection: Moderate Local *Located in the Secondary growth area,* *And located in the Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin.*	1.376 miles 7,265 feet	Johnston *(Festus Special Road Dist.)* (E) to Sandy Church (W) Pg. 40-Y22
209	**Lions Den** (#73) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in the Primary growth area.*	2.765 miles 14,597 feet	Old Lemay Ferry (E) to Old State Rte. 21 (W) Pg. 23-AA11
210	**Lions Den Lane** (#370) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.119 miles 630 feet (Loop)	Lions Den (N) to Lions Den (S) Pg. 14-Y9

211 **Little Antire** (#16) — 1.555 miles — Antire (N) to MO Rte. PP (S)
Current Classification: Urban Collector — 8,210 feet — Pg. 5-Q4
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in the Primary growth area.

212 **Little Brennan** (#27) — 0.744 miles — of Cnty Maint. (N) to State Maint. *(@Hwy. 30)* to Gravois (Schumacher) (S)
Located in the Primary growth area. — 3,890 feet — Pg. 6-V3

Section A — End of County Maintenance (N) to Brennan (S)
Current Classification: Major Local
10 year projection: Major Local
20 year projection: Major Local

Section B — Brennan (N) to State Maint. *(@ MO Hwy. 30)* to Gravois *(Schumacher)* (S)
Current Classification: Urban Collector
10 year projection: Urban Collector
20 year projection: Urban Collector

213 **Little Dutch Creek** (#154) — 1.163 miles — Dutch Creek (N) to MO Rte. NN (S)
Current Classification: Moderate Local — 6,140 feet — Pg. 19-I14
10 year projection: Moderate Local
20 year projection: Moderate Local
Located in the Secondary growth area.

214 **Local Hillsboro** (#143) — 4.832 miles — Hillsboro House Springs (E) to MO Hwy. 30 (W)
25,515 feet

Section A — Hillsboro House Springs (E) to Dulin Creek (W) — Pg. 29-P16
Current Classification: Rural Minor Collector
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector

Section B Dulin Creek (E) to Cedar Hill Rd.(W) Pg. 29-O16

Current Classification: Urban Collector
10 year projection: Urban Collector
20 year projection: Urban Collector
Local Hillsboro (#143)
Located in both the Primary and Secondary growth areas with a small portion of the road in neither areas,
And located near the Cedar Hill and the Sand Creek watershed in the Big River basin.

Section C Cedar Hill Rd. (E) to MO Hwy. 30 (W) Pg. 19-L14

Current Classification: Minor Arterial
10 year projection: Minor Arterial
20 year projection: Minor Arterial
Located in the Primary growth area

215 **Lonedell** (#77) 2.42 miles Arnold City Limits (E) to Old State Rte. 21 (W)
Current Classification: Urban Collector 12,775 feet Pg. 14-BB8
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in the Primary growth area.

216 **Long** (#336) 1.424 miles US Hwy. 67 (E) to Mt. Olive (W)
Current Classification: Moderate Local 7,520 feet Pg. 65-W39
10 year projection: Major Local
20 year projection: Major Local
Approximately half of the road is located in the Secondary growth area.

217 **Lynch** (#159) 2.886 miles MO Rte. F (N) to Byrnesville (S)
Current Classification: Moderate Local 15,240 feet Pg. 9-H9
10 year projection: Moderate Local
20 year projection: Moderate Local
A small portion of the road is in the Secondary growth area.

218	**Main Street** *(Hematite)* (#239) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.182 miles 960 feet (Dead End)	MO Rte. P (E) to End of County Maintenance (W) Pg. 47-W29
219	**Main Street** *(House Springs)* (#148) **Current Classification: Minor Arterial** **10 year projection: Minor Arterial** **20 year projection: Minor Arterial** *Located in the Primary growth area,* *And located near the Bear Creek, Dulin Creek, Heads Creek watersheds in the Big River basin.*	0.133 miles 700 feet	Gravois *(Northwest School)* (N) to MO Rte. MM (S) Pg. 12-Q10
220	**Mammoth** (#297) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local	3.351 miles 17,695 feet	MO Rte. H (N) to Washington County Line (S) Pg. 53-J35
221	**Maness** (#273) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.471 miles 7,765 feet	Stonehouse (N) to MO Rte. H (S) Pg. 53-L33
222	**Mangan** (#6) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Secondary growth area.*	1.383 miles 7,300 feet	MO Rte. O (N) to End of County Maintenance (S) Pg. 8-D6
223	**Mapaville Hematite** (#252) **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector** *A portion of the road is located in both the Primary and Secondary growth area.*	2.988 miles 15,775 feet	Plass (N) to MO Rte. P (S) Pg. 39-W25

224	**Marble Springs** (#214)	6.341 miles	Metropolitan Blvd. (E) to Rice (W)
	Current Classification: Moderate Local	33,481 feet	Pg. 33-CC20
	10 year projection: Major Local		
	20 year projection: Major Local		
	A small portion of the road is located in the Primary and Secondary growth areas.		
225	**Mark Drive** (#54)	0.265 miles	Hawkins *(St. Louis County Line)* (N) to Coil (S)
	Current Classification: Minor Local	1,400 feet	Pg. 6-W2
	10 year projection: Minor Local		
	20 year projection: Minor Local		
	Located in the Primary growth area.		
226	**Market Street** *(Hematite)* (#238)	0.29 miles	MO Rte. P (E) to End of County Maintenance (W)
	Current Classification: Minor Local	1,530 feet	Pg. 47-W29
	10 year projection: Minor Local	(Dead End)	
	20 year projection: Minor Local		
227	**Marty Martin** (#195)	0.492 miles	Hillsboro House Springs (E) to End of County Maint. (W)
	Current Classification: Minor Local	2,600 feet	Pg. 38-Q22
	10 year projection: Minor Local	(Dead End)	
	20 year projection: Minor Local		
	The road is located in both the Primary and Secondary growth areas.		
228	**Marty Martin** (#401)	0.82 miles	Glade Chapel (N) to End of County Maintenance (S)
	Current Classification: Minor Local	4,330 feet	Pg. 37-P21
	10 year projection: Minor Local	(Dead End)	
	20 year projection: Minor Local		
229	**McGehan** (#330)	1.282 miles	Hardin (E) to MO Rte. E (W)
	Current Classification: Moderate Local	6,770 feet	Pg. 71-S41
	10 year projection: Moderate Local		
	20 year projection: Moderate Local		

230	**McMillen** (#262) Current Classification: Minor Local **10 year projection: Moderate Local** 20 year projection: Moderate Local *Located in the Primary growth area.*	0.206 miles 1,090 feet	End of County Maintenance (N) to MO Hwy. 110 (S) Pg. 55-R32
231	**McMullin School** (#335) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.511 miles 2,700 feet (Dead End)	End of County Maintenance (E) to Mt. Olive (W) Pg. 65-V39
232	**McNamee** (#2) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *A small portion of the road is located in Secondary growth area.*	1.245 miles 6,575 feet	English (N) to McNamee School (S) Pg. 9-E6
233	**McNamee School** (#3) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.629 miles 8,600 feet (Dead End)	End of County Maintenance (E) to MO Rte. F (W) Pg. 9-H6
234	**Meadow Drive** (#28) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Primary growth area.*	0.643 miles 3,395 feet	New Sugar Creek (E) to Little Brennan (W) Pg. 6-V2
235	**Medley Hill Acres** (#194) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.267 miles 1,410 feet	End of County Maintenance (N) to Regina (S) Pg. 29-N17

236 **Meyer** (#223) 1.386 miles Festus Special Rd. District (E) to MO Rte. P (W)
Current Classification: Rural Minor Collector 7,320 feet Pg. 48-Y30
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector
Small portion of road is Located in both the Primary and Secondary growth area.
And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

237 **Meyer Road** *(East)* (#222) 0.712 miles MO Rte. CC (E) to US Hwy. 67 (W)
Current Classification: Moderate Local 3,760 feet Pg. 57-AA32
10 year projection: Major Local
20 year projection: Major Local
Located in the Primary growth area,
And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

238 **Miller** (#111) 3.172 miles I-55 Outer Road (E) to Old Lemay Ferry (W)
Current Classification: Urban Collector 16,750 feet Pg. 24-EE11
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in Primary growth area.

239 **Miller** *(off Hwy. MM)* (#40) 1.66 miles West Four Ridge (N) to MO Rte. MM (S)
Current Classification: Moderate Local 8,765 feet Pg. 12-T10
10 year projection: Major Local
20 year projection: Major Local
Located in the Primary growth area,
And located near the Bear Creek, Dulin Creek, Heads Creek watersheds in the Big River basin.

240 **Miller East** (#98) 0.39 miles US Hwy. 61-67 (N) to Black Creek (S)
Current Classification: Minor Local 2,060 feet Pg. 24-EE11
10 year projection: Minor Local
20 year projection: Minor Local

241	**Mining** (#334) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Secondary growth area.*	1.362 miles 7,190 feet (Dead End)	End of County Maintenance (N) to Papin (S) Pg. 65-V40
242	**Missouri State** (#79) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in the Primary growth area.*	0.938 miles 4,950 feet	Arnold City Limits (E) to Old MO State to Dead End (W) Pg. 15-CC7
243	**Mitch Sweet** (#356) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.106 miles 560 feet (Dead End)	Charter Church (N) to End of County Maintenance (S) Pg. 73-BB41
244	**Montebello** (#84) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in the Primary growth area.*	1.352 miles 7,140 feet	US Hwy. 61-67 (N) to Kimmswick City Limits (S) Pg. 24-EE13
245	**Morgan** (#208) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area,* *And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin, and also located in Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin.*	0.887 miles 4,685 feet (Dead End)	End of County Maintenance (N) to MO Rte. A (S) Pg. 39-V24

246 **Morse Avenue** *(Victoria)* (#256) — 0.15 miles — Cora St. (E) to Hyfield (W)
Current Classification: Minor Local — 790 feet — Pg. 55-T31
10 year projection: Minor Local
20 year projection: Minor Local
Located in the Secondary growth area.

247 **Morse Mill** (#180) — 3.832 miles — MO Rte. EE (E) to MO Rte. Y (W)
Current Classification: Moderate Local — 20,235 feet — Pg. 35-H21
10 year projection: Moderate Local
20 year projection: Moderate Local

248 **Moss Hollow** (#129) — 3.234 miles — Old MO Rte. M (N) to End of County Maintenance (S)
17,073 feet

Section A — Old MO Route M (N) to New MO Rout — Pg. 23-BB15
Current Classification: Urban Collector
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in the Primary growth area

Section B — New MO Route M (N) to End of County Maint. (S)
Current Classification: Moderate Local — Pg. 23-AA15
10 year projection: Major Local
20 year projection: Major Local
Located in the Secondary growth area.

249 **Mothershead** (#302) — 1.60 miles — MO Hwy. 21 (E) to Dodson Lane (W)
Current Classification: Minor Local — 8,540 feet — Pg. 63-N37
10 year projection: Minor Local
20 year projection: Moderate Local
Located in the Secondary growth area.

250	**Mothershead School** (#303) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Secondary growth area.*	0.283 miles 1,495 feet (Dead End)	End of County Maintenance (N) to Mothershead (S) Pg. 63-N37
251	**Mount Olive** (#328) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Small portion of road is in the Secondary growth area.*	4.895 miles 25,843 feet	MO Rte. V (N) to Papin to US Hwy. 67 (S) Pg. 64-S38
252	**Mulberry Hill** (#218) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Primary growth area.*	1.984 miles 10,475 feet	f County Maint. (E) to Koch Valley to US Hwy. 61-67 (W) Pg. 33-DD18
253	**New Sugar Creek** (#52) **Current Classification: Minor Arterial** **10 year projection: Minor Arterial** **20 year projection: Minor Arterial** *Located in the Primary growth area.*	0.841 miles 4,440 feet	St. Louis County Line (N) to MO Hwy. 30 (S) Pg. 6-V2
254	**Nickelson** (#293) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.265 miles 1,400 feet (Dead End)	End of County Maintenance (N) to Old MO Rte. H (S) Pg. 52-E32
255	**Nollman** (#19) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.638 miles 3,370 feet	Antire (E) to Little Antire (W) Pg. 5-R5

256	**North Outer Road Route A** (#108) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	0.483 miles 2,550 feet	Sandy Valley (E) to Highland Baptist (W) Pg. 39-U24
257	**Northwest Blvd.** (#4) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in the Primary growth area.*	0.566 miles 2,990 feet	MO Hwy. 30 (N) to Saline Road (S) Pg. 7-Y2
258	**Novotny** (#44) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.492 miles 2,600 feet (Dead End)	f County Maint. (N) to Blue Springs *(off Old Hwy. 21)* (S) Pg. 13-W9
259	**Oakvale** (#349) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Small portion of road is located in the Secondary growth area.*	3.322 miles 17,540 feet	MO Rte. T (E) to US Hwy. 67 (W) Pg. 66-AA40
260	**Oermann** (#175) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	0.749 miles 3,995 feet	MO Hwy. 30 (E) to Jones Creek (W) Pg. 27-E19

261	**Old Antonia** (#119) *Located in the Primary growth area.*	2.443 miles 12,900 feet	I-55 Outer Road (N) to Old Rte. M (S)
	Section A Current Classification: Major Local 10 year projection: Major Local 20 year projection: Major Local	I-55 West Outer Road (N) to Imperial Main (S)	Pg. 24-EE13
	Section B **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector**	Imperial Main (N) to Old Rte. M (S)	Pg. 24-DD14
262	**Old Blackwell** (#387) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.439 miles 2,320 feet	Upper Blackwell (E) to Upper Blackwell (W) Pg. 70-M43
263	**Old County** (#402) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.316 miles 1,670 feet (Dead End)	End of County Maint. (E) to Fountain City (W) Pg. 56-W34
264	**Old County** (#403) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.161 miles 850 feet (Dead End)	MO Hwy. 110 *Service Road* (E) to End of County Maint. (W) Pg. 56-X35
265	**Old Engledow** (#406) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.563 miles 2,975 feet (Dead End)	End of County Maintenance (N) to Old Blackwell (S) Pg. 70-M43

266 **Old Gravois** (#408) 0.36 miles Hwy. 30 Service Rd. (N) to MO Hwy. 30 Service Rd. (S)
Current Classification: Moderate Local 1,900 feet Pg. 6-X2
10 year projection: Moderate Local
20 year projection: Moderate Local

267 **Old Hunning**(#20) 0.217 miles End of County Maint. (E) to High Ridge Blvd. (W)
Current Classification: Minor Local 1,145 feet Pg. 5-S5
10 year projection: Minor Local (Dead End)
20 year projection: Minor Local
Located in the Primary growth area. ***Could be part of Major Development (Eventually)***

268 **Old Hwy. 141** *East* (#410) 0.742 miles MO Hwy. 141 (N) to End of County Maintenance (S)
Located in the Primary growth area. 3,920 feet Pg. 7-AA5

Section A MO Hwy. 141 (N) to Schneider *(East)* (S)
Current Classification: Moderate Local
10 year projection: Moderate Local
20 year projection: Moderate Local

Section B Schneider *(East)* (N) to End of County Maintenance (S)
Current Classification: Moderate Local (Dead End)
10 year projection: Moderate Local
20 year projection: Moderate Local

269 **Old Hwy. 141** *West* (#411) 0.273 miles End of County Maint. (N) to Romaine Creek (S)
Current Classification: Minor Local 1,440 feet Pg. 7-AA4
10 year projection: Minor Local (Dead End)
20 year projection: Minor Local
Located in the Primary growth area. ***May be connected to Fiedler Road as Development occurs.***

270 **Old Hwy. M** (#101) — 5.727 miles, 30,241 feet — Catlin Drive (E) to Old State Rte. 21 (W)

Section A — Catlin Drive (E) to MO Rte. M (W) — Pg. 24-CC15

Current Classification: Urban Collector
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in the Primary growth area.

Section B — MO Rte. M (E) to Old State Rte. 21 (W) to Dea — Pg. 22-W14

Current Classification: Major Local
10 year projection: Major Local
20 year projection: Major Local
Located in the Primary growth area.

271 **Old Lemay Ferry** (#113) — 12.65 miles, 66,823 feet — Arnold City Limits (N) to Sandy Creek State Park (S)

Section A — Arnold City Limits (N) to MO Rte. M (S) — Pg. 15-CC9

Current Classification: Minor Arterial
10 year projection: Minor Arterial
20 year projection: Minor Arterial
Located in the Primary growth area.

Section B — MO Rte. M (N) to Goldman Spur (S) — Pg. 22-X15

Current Classification: Rural Major Collector
10 year projection: Rural Major Collector
20 year projection: Rural Major Collector
Located in the Primary growth area,

Section C — Goldman Spur (N) to Sandy Creek State Park — Pg. 30-T20

Current Classification: Minor Local
10 year projection: Minor Local
20 year projection: Minor Local

272	**OLD Old Lemay Ferry** (#412) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area,* *And located in the Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin.*	0.213 miles 1,125 feet (Dead End)	End of County Maintenance (N) to MO Hwy. 21 (S) Pg. 38-T21
273	**Old Little Antire** (#17) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.43 miles 2,270 feet (Loop)	MO Rte. PP (E) to MO Rte. PP (W) Pg. 12-S6
274	**Old Morse Mill** (#183) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.233 miles 1,230 feet (Dead End)	MO Rte. EE (E) to Ball Memorial Park Entrance (W) Pg. 36-K22
275	**Old Morse Mill Spur** (#415) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.152 miles 800 feet	MO Rte. EE (N) to Old Morse Mill (S) Pg. 36-J22
276	**Old Route 141** (#62)	2.116 miles 11,026 feet	StL County Line (N) to End of County Maint. (S)
	Section A **Current Classification: Minor Arterial** **10 year projection: Minor Arterial** **20 year projection: Minor Arterial** *Located in the Primary growth area.*	St. Louis County Line (N) to MO Hwy. 141 (S)	Pg. 7-AA2

Old Route 141 (#62) - continued

	Section B	MO Hwy. 141 (N) to End of County Maint. (S)	Pg. 7-Z3

Current Classification: Major Local
10 year projection: Major Local
20 year projection: Major Local
Located in the Primary growth area.

277	**Old State Road H** (#426)	0.489 miles	MO Rte. H (E) to MO Rte. WW (W)
	Current Classification: Minor Local	2,580 feet	Pg. 51-D32
	10 year projection: Minor Local		
	20 year projection: Minor Local		
278	**Old State Road WW** (#177)	0.165 miles	MO Rte. Y (N) to MO Rte. WW (S)
	Current Classification: Minor Local	870 feet	Pg. 34-C21
	10 year projection: Minor Local		
	20 year projection: Minor Local		
279	**Old State Road** (#93)	0.866 miles	End of County Maintenance (N) to Wolf Hollow (S)
	Located in the Primary growth area.	4,571 feet	
	Section A	End of County Maintenance (N) to Imperial Ma	Pg. 24-EE13
	Current Classification: Minor Local	(Dead End)	
	10 year projection: Minor Local		
	20 year projection: Minor Local		
	Section B	Imperial Main (N) to Wolf Hollow (S)	Pg. 24-EE14
	Current Classification: Urban Collector		
	10 year projection: Urban Collector		
	20 year projection: Urban Collector		

280 **Old State Route 21** (#39) — 14.690 miles — South of Lonedell (N) to Hillsboro City Limits (S)
Located in the Primary growth area. — 77,565 feet

Section A — South of Lonedell (N) to MO Rte. M (S) — Pg. 14-Z6
Current Classification: Minor Arterial
10 year projection: Minor Arterial
20 year projection: Minor Arterial

Section B — MO Rte. M (N) to Hillsboro City Limits — Pg. 22-V13
Current Classification: Urban Collector
10 year projection: Urban Collector
20 year projection: Urban Collector

281 **Old Stroup** (#413) — 0.224 miles — End of County Maintenance (N) to Stroup (S)
Current Classification: Minor Local — 1,185 feet — Pg. 47-V27
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local
Located in the Secondary growth area,
And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

282 **Old Sugar Creek** (#47) — 4.295 miles — MO Hwy. 30 (N) to West Rock Creek (S)
Current Classification: Urban Collector — 22,677 feet — Pg. 6-W3
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in the Primary growth area.

283 **Olive Street** *(Hematite)* (#241) — 0.066 miles — End of County Maint. (N) to Hillsboro Hematite (S)
Current Classification: Minor Local — 350 feet — Pg. 47-W29
10 year projection: Minor Local
20 year projection: Minor Local

284	**Opeechee Beach** (#5) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.193 miles 1,020 feet (Dead End)	MO Rte. F (E) to End of County Maintenance (W) Pg. 1-D5
285	**Pagel** (#331) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.61 miles 8,500 feet (Dead End)	MO Rte. E (E) to End of County Maintenance (W) Pg. 70-P43
286	**Papin** (#333)	2.578 miles 13,610 feet	MO Rte. JJ (E) to MO Rte. V (W)
	Section A Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Located in the Secondary growth area.*	MO Rte. JJ (E) to US Hwy. 67 (W)	Pg. 72-X41
	Section B **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector**	US Hwy. 67 (E) to MO Rte. V (W)	Pg. 72-W41
287	**Park Lane** *(De Soto)* (#261) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.299 miles 1,580 feet (Dead End)	End of County Maintenance (N) to Clark Street (S) Pg. 55-Q33

288	**Patty Drive** (#29) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.227 miles 1,200 feet (Loop)	MO Rte. W (E) to MO Rte. W (W) Pg. 11-N7
289	**Paw Paw Lane** (#388) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.402 miles 2,125 feet (Dead End)	Peter Moore Lane (E) to End of County Maint. (W) Pg. 54-M34
290	**Perkins** (#304) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Secondary growth area.*	0.955 miles 5,040 feet (Dead End)	MO Hwy. 21 (E) to End of County Maintenance (W) Pg. 62-L38
291	**Pete O'Brien** (#146) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Primary growth area,* *And located near the Cedar Hill and the Sand Creek watershed in the Big River basin.*	0.403 miles 2,130 feet	MO Hwy. 30 (N) to Cedar Hill Rd. (S) Pg. 20-M13
292	**Peter Moore Lane** (#272) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	2.676 miles 14,130 feet	MO Rte. Y (N) to MO Rte. H (S) Pg. 54-M31
293	**Pfinister School** (#351) Current Classification: Minor Local **10 year projection: Moderate Local** 20 year projection: Moderate Local	2.704 miles 14,275 feet	Boyd Branch (E) to MO Rte. JJ (W) Pg. 73-AA42

294	**Pigg** (#274) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.203 miles 6,350 feet (Dead End)	Stonehouse (E) to End of County Maintenance (W) Pg. 53-K32
295	**Pillen** (#289) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	2.254 miles 11,900 feet	MO Rte. WW (N) to MO Rte. WW (S) Pg. 42-C26
296	**Pine Haven Lane** (#414) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Located in the Primary growth area.*	0.36 miles 1,900 feet	Old Lemay Ferry (E) to Dry Fork *(East)* (W) Pg. 23-Y13
297	**Pine Street** *(Hematite)* (#242) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.142 miles 750 feet	Market (N) to Hillsboro Hematite (S) Pg. 47-W29
298	**Pinson Ford** (#288) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.436 miles 7,580 feet (Dead End)	End of County Maintenance (N) to Engleford (S) Pg. 35-E24
299	**Pioneer** (#203) Current Classification: Major Local 10 year projection: Major Local 20 year projection: Major Local *Located in the Primary growth area,* *And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.*	1.243 miles 6,561 feet	MO Rte. A (E) to Hillsboro City Limits (W) Pg. 38-T25

300 **Plass** (#251) — 1.306 miles — MO Rte. A (E) to MO Rte. A (W)
Current Classification: Rural Minor Collector — 6,895 feet — Pg. 39-W25
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector
Located in the Primary growth area,
And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

301 **Plattin** (#227) — 5.944 miles — Festus Special Rd. District (N) to MO Rte. CC (S)
Current Classification: Rural Minor Collector — 31,383 feet — Pg. 58-CC32
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector
Small portion of the road is located in both the Primary and Secondary growth areas.

302 **Plattin School** (#341) — 3.497 miles — Harness (N) to MO Rte. T (S)
Current Classification: Moderate Local — 18,465 feet — Pg. 67-DD36
10 year projection: Moderate Local
20 year projection: Moderate Local

303 **Plum Street** *(Lewis Addition)* (#385) — 0.123 miles — De Soto City Limits (N) to De Soto City Limits (S)
Current Classification: Minor Local — 650 feet — Pg. 55-Q35
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local
Located in the Primary growth area.

304 **Prairie Hollow** (#116) — 1.927 miles — Spring Forest (N) to Seckman (S)
Current Classification: Minor Local — 10,175 feet — Pg. 14-BB10
10 year projection: Minor Local
20 year projection: Moderate Local
Located in the Primary growth area.

305 **Primo** (#380) — 0.933 miles — End of County Maintenance (N) to Danby (S)
Current Classification: Minor Local — 4,925 feet — Pg. 68-II37
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local

306	**R-7 School** (#230) Current Classification: Major Local 10 year projection: Major Local 20 year projection: Major Local	0.10 miles 530 feet	US Hwy. 61 (N) to MO Rte. TT (S) Pg. 58-FF33
307	**Red Bird Lane** (#190) **Current Classification: Rural Major Collector** **10 year projection: Rural Major Collector** **20 year projection: Rural Major Collector** *A portion of the road is in the Primary growth area, while the rest is located in the Secondary growth area.*	0.947 miles 5,000 feet	Hillsboro House Springs (E) to MO Rte. BB (W) Pg. 37-P23
308	**Regina** (#193) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	2.414 miles 12,745 feet	Hillsboro House Springs (E) to MO Rte. BB (W) Pg. 29-P18
309	**Renner** (#409) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	0.111 miles 585 feet	Old State Rte. 141 (E) to End of County Maint. (Rte. 141) (W) Pg. 7-AA5
310	**Reynolds Creek** (#268) Current Classification: Moderate Local 10 year projection: Moderate Local **20 year projection: Major Local**	3.112 miles 16,430 feet	MO Rte. B (E) to MO Rte. C (W) Pg. 45-M26
311	**Rhonda Sue** (#75) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Located in the Primary growth area.*	0.373 miles 1,970 feet	East Swaller (E) to Old State Rte. 21 (W) Pg. 13-W10

312 **Rice** (#213) — 3.125 miles — Johnston *(Festus Special Rd Dist.)* (E) to Old Lemay Ferry (W)
Current Classification: Moderate Local — 16,500 feet — Pg. 40-Y21
10 year projection: Major Local
20 year projection: Major Local
Located in the Secondary growth area,
And located near the Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

313 **Ridge** (#178) — 3.99 miles — MO Rte. B (E) to MO Hwy. 30 (W)
Current Classification: Moderate Local — 21,065 feet — Pg. 28-K18
10 year projection: Moderate Local
20 year projection: Moderate Local
Approximately half of the road is located in the Secondary growth area.

314 **River** *(Morse Mill area)* (#416) — 0.038 miles — End of County Maintenance (N) to MO Rte. C (S)
Current Classification: Minor Local — 200 feet — Pg. 36-J23
10 year projection: Minor Local
20 year projection: Minor Local

315 **River Street** *(Kimmswick area)* (#235) — 0.217 miles — MO Rte. K (E) to US Hwy. 61-67 (W)
Current Classification: Minor Arterial — 1,145 feet — Pg. 24-EE14
10 year projection: Minor Arterial
20 year projection: Minor Arterial
Located in the Primary growth area.

316 **Rock Creek Valley** (#42) — 3.053 miles — West Rock Creek (N) to West Four Ridge (S)
Current Classification: Moderate Local — 16,120 feet — Pg. 13-U8
10 year projection: Moderate Local
20 year projection: Major Local
Located in the Primary growth area.

317	**Romaine Creek** (#68) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in the Primary growth area.*	3.915 miles 20,670 feet	Old Hwy. 141 *West* (E) to West Rock Creek (W) Pg. 7-AA5
318	**Rouggly Kiepe** (#363) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.515 miles 2,720 feet	Big Hollow (N) to US Hwy. 61 (S) Pg. 59-JJ35
319	**Rudolph** (#352) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Secondary growth area.*	0.36 miles 1,900 feet (Dead End)	MO Rte. JJ (E) to End of County Maintenance (W) Pg. 72-X42
320	**Russell** (#276)	2.36 miles 12,462 feet	MO Rte. Y (E) to Breckenridge (W)
	Section A Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	MO Rte. Y (E) to Ware Church (W)	Pg. 44-K30
	Section B **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector**	Ware Church (N) to Breckenridge (S)	Pg. 43-H30
321	**Rutledge** (#181) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.979 miles 5,170 feet (Dead End)	End of County Maintenance (N) to Morse Mill (S) Pg. 35-E21

322 **Salamone** (#165) — 0.933 miles — MO Rte. NN (N) to End of County Maintenance (S)
Current Classification: Minor Local — 4,925 feet — Pg. 18-E14
10 year projection: Minor Local
20 year projection: Minor Local

323 **Saline** (#59) — 3.92 miles — St. Louis County Line (N) to Romaine Creek (S)
Current Classification: Urban Collector — 20,696 feet — Pg. 7-Z2
10 year projection: Urban Collector
20 year projection: Urban Collector

324 **Sand Cut** (#161) — 1.345 miles — Byrnesville (E) to MO Rte. NN (W)
Current Classification: Moderate Local — 7,100 feet — Pg. 18-G12
10 year projection: Moderate Local
20 year projection: Moderate Local

325 **Sandy Church** (#210) — 4.837 miles — MO Rte. Z (E) to Goldman (W)
Current Classification: Moderate Local — 25,540 feet — Pg. 39-W24
10 year projection: Major Local
20 year projection: Major Local
Small portion located in the Primary growth area, while the rest is in the Secondary growth area,
And located near the Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

326 **Sandy Valley** (#205) — 2.220 miles — Sandy Church (N) to MO Rte. A (S)
Current Classification: Moderate Local — 11,720 feet — Pg. 39-U21
10 year projection: Major Local
20 year projection: Major Local
The road is located in both the Primary and Secondary growth areas,
And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

327 **Schenk** (#127) — 1.383 miles — Old Lemay Ferry (E) to Old State Rte. 21 (W)
Current Classification: Rural Minor Collector — 7,300 feet — Pg. 31-W16
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector

328	**Schneider** *(East)* (#417) Current Classification: Major Local 10 year projection: Major Local 20 year projection: Major Local *Located in the Primary growth area.*	0.147 miles 775 feet	Old Hwy. 141 *East* (E) to MO Hwy. 141 (W) Pg. 7-AA5
329	**Schneider Drive** (#65) Current Classification: Major Local 10 year projection: Major Local 20 year projection: Major Local *Located in the primary growth area.*	0.566 miles 2,990 feet	Romaine Creek (N) to MO Hwy. 141 (S) Pg. 7-AA5
330	**Schneider Hill Court** (#418) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.424 miles 2,240 feet (Dead End)	Schneider Dr. (E) to End of County Maintenance (W) Pg. 7-AA5
331	**Schumacher** (#50) Current Classification: Major Local **10 year projection: Urban Collector** 20 year projection: Urban Collector *Located in the Primary growth area.*	3.123 miles 16,490 feet	Old Sugar Creek (E) to MO Hwy. 30 (W) Pg. 6-W4
332	**Seckman** (#87) **Current Classification: Minor Arterial** **10 year projection: Minor Arterial** **20 year projection: Minor Arterial** *Located in the Primary growth area.*	3.509 miles 18,530 feet	I-55 Outer Rd. (E) to Old Lemay Ferry (W) Pg. 24-EE13
333	**Seckman** *(East)* (#90) Current Classification: Minor Local 10 year projection: Minor Local **20 year projection: Moderate Local**	0.262 miles 1,385 feet (Dead End)	US Hwy. 61-67 (E) to End of County Maintenance (W) Pg. 24-EE13

Located in the Primary growth area.

334	**Seckman Spur** (#197) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Primary growth area.*	0.167 miles 880 feet (Dead End)	Seckman Rd. (E) to Dead End (W) Pg. 23-AA11
335	**Second Street** *(Sulphur Springs)* (#88) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.098 miles 520 feet	End of County Maintenance (N) to Sulphur Springs (S) Pg. 33-EE16
336	**Selma** (#350) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.263 miles 6,670 feet	Flucom *(East)* (E) to Oakvale (W) Pg. 66-Z38
337	**Shelter** (#124) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.246 miles 1,300 feet (Dead End)	Animal Control Office (N) to Wedde (S) Pg. 31-X16
338	**Siebel** (#277) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.672 miles 3,550 feet (Dead End)	MO Rte. Y (N) to End of County Maintenance (S) Pg. 44-K30

339 **Silver Lane** (#156) — 0.975 miles — MO Hwy. 30 (E) to End of County Maintenance (W)
Current Classification: Moderate Local — 5,150 feet — Pg. 19-L14
10 year projection: Major Local — (Dead End)
20 year projection: Major Local
Located in the Primary growth area.
And located near the Cedar Hill and the Sand Creek watershed in the Big River basin.

340 **Silver Springs** (#386) — 1.205 miles — St. Francois County Line (E) to Hardin (W)
Current Classification: Minor Local — 6,365 feet — Pg. 77-S46
10 year projection: Minor Local
20 year projection: Minor Local

341 **Singing Hills** (#126) — 0.376 miles — End of County Maint. (N) to East Four Ridge (S)
Current Classification: Minor Local — 1,985 feet — Pg. 22-X11
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local
Located in the Primary growth area.

342 **South** *(Lower)* **Byrnesville** (#158) — 1.515 miles — Gravois *(MO Hwy 30)* (E) to Byrnesville (W)
Current Classification: Rural Major Collector — 8,000 feet — Pg. 19-L13
10 year projection: Rural Major Collector
20 year projection: Rural Major Collector
Located in the Primary growth area,
And located near the Cedar Hill and the Sand Creek watershed in the Big River basin.

343 **South Engle Creek** (#216) — 0.866 miles — End of County Maintenance (N) to Marble Springs (S)
Current Classification: Minor Local — 4,575 feet — Pg. 32-AA17
10 year projection: Moderate Local
20 year projection: Moderate Local

344 **Spring Forest** (#115) — 1.264 miles — Miller (E) to Old Lemay Ferry (W)
Current Classification: Moderate Local — 6,675 feet — Pg. 14-BB10
10 year projection: Major Local
20 year projection: Major Local
Located in the Primary growth area.

345 **Springdale** (#316) — 1.241 miles — Klondike *(South)* (N) to End of County Maint. (S)
Current Classification: Minor Local — 6,550 feet — Pg. 70-P41
10 year projection: Moderate Local
20 year projection: Moderate Local

346 **Springs** (#419) — 0.15 miles — Silver Lane (E) to Cedar Springs (W)
Current Classification: Moderate Local — 790 feet — Pg. 19-K14
10 year projection: Moderate Local
20 year projection: Moderate Local
Located in the Primary growth area,
And located near the Cedar Hill and the Sand Creek watershed in the Big River basin.

347 **St. Joseph Hill** (#10) — 0.871 miles — MO Rte. F (N) to End of County Maintenance (S)
Current Classification: Minor Local — 4,600 feet — Pg. 9-H9
10 year projection: Moderate Local — (Dead End)
20 year projection: Moderate Local

348 **Stahl** (#122) — 0.473 miles — Metropolitan Blvd. (E) to End of County Maint. (W)
Current Classification: Minor Local — 2,500 feet — Pg. 33-CC18
10 year projection: Moderate Local
20 year projection: Moderate Local
Located in the Primary growth area.

349 **Stephenson** (#91) — 0.159 miles — US Hwy. 61-67 (E) to End of County Maint. (W)
Current Classification: Minor Local — 840 feet — Pg. 33-EE16
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local
Located in the Primary growth area.

350	**Stonehouse** (#270)	4.994 miles	MO Rte. H (E) to MO Rte. Y (W)
	Current Classification: Minor Local	26,370 feet	Pg. 53-L31
	10 year projection: Minor Local		
	20 year projection: Minor Local		
	A small portion of the road is located in the Primary and Secondary growth areas.		
351	**Stroup** (#247)	2.452 miles	Plass (N) to Hillsboro Hematite (S)
	Current Classification: Moderate Local	12,945 feet	Pg. 39-V25
	10 year projection: Moderate Local		
	20 year projection: Major Local		
	A large portion of the road is in both the Primary and Secondary growth areas,		
	And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.		
352	**Sullens** (#391)	0.35 miles	End of County Maintenance (N) to MO Rte. T (S)
	Current Classification: Minor Local	1,850 feet	Pg. 66-BB39
	10 year projection: Minor Local	(Dead End)	
	20 year projection: Minor Local		
353	**Sulphur Springs** (#85)	0.674 miles	Sulphur Springs Landing (E) to US Hwy. 61-67 (W)
	Current Classification: Moderate Local	3,560 feet	Pg. 33-EE17
	10 year projection: Moderate Local		
	20 year projection: Moderate Local		
	Located in the Primary growth area.		
354	**Sulphur Springs Landing** (#86)	0.106 miles	Sulphur Springs (N) to Third Street (S)
	Current Classification: Minor Local	560 feet	Pg. 33-EE17
	10 year projection: Minor Local		
	20 year projection: Minor Local		
	Located in the Primary growth area.		
355	**Summit** (#114)	0.426 miles	End of County Maintenance (N) to Long (S)
	Current Classification: Minor Local	2,250 feet	Pg. 65-W38
	10 year projection: Minor Local	(Dead End)	
	20 year projection: Minor Local		

Located in the Secondary growth area.

356	**Summit Street** *(Kimmswick)* (#390) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Primary growth area.*	0.194 miles 1.025 feet (Loop)	Montebello (N) to Montebello (S) Pg. 24-FF14
357	**Sunnyside** (#236) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *A large portion of the road is located in both the Primary and Secondary growth areas.*	4.442 miles 23,455 feet	Meyer (N) to US Hwy. 67 to MO Rte. CC (S) Pg. 47-X29
358	**Sunridge** (#420) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Secondary growth area.*	0.208 miles 1,100 feet (Dead End)	Tower (E) to End of County Maintenance (W) Pg. 30-S17
359	**Sunrise School** (#332) **Current Classification: Rural Minor Collector** **10 year projection: Rural Minor Collector** **20 year projection: Rural Minor Collector**	3.866 miles 20,415 feet	MO Rte. V (E) to MO Rte. E (W) Pg. 72-V43
360	**Third Street** *(Sulphur Springs)* (#89) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.104 miles 550 feet	Sulphur Springs (N) to Sulphur Springs Landing (S) Pg. 33-EE17

361 **Three B** (#144) — 1.158 miles — MO Rte. BB (N) to End of County Maintenance (S)
Current Classification: Moderate Local — 6,115 feet — Pg. 29-M17
10 year projection: Moderate Local — (Dead End)
20 year projection: Moderate Local
Located in the Secondary growth area.

362 **Tinhouse** (#266) — 3.853 miles — MO Rte. B (N) to MO Rte. Y (S)
Current Classification: Moderate Local — 20,345 feet — Pg. 45-O27
10 year projection: Major Local
20 year projection: Major Local
A small portion is located in both the Primary and Secondary growth areas.

363 **Tishomingo** (#192) — 2.717 miles — MO Hwy. 21 (E) to Hillsboro House Springs (W)
Current Classification: Major Local — 14,345 feet — Pg. 30-S18
10 year projection: Major Local
20 year projection: Major Local
Located in both the Primary and Secondary growth areas,
Eastern section of road is located near the Sandy Creek watershed in the Joachim Creek watershed in the Mississippi River basin

364 **Tom Frost** (#164) — 2.232 miles — MO Rte. NN (E) to MO Rte. HH (W)
Current Classification: Minor Local — 11,785 feet — Pg. 18-E13
10 year projection: Minor Local
20 year projection: Moderate Local

365 **Tom Sparks** (#295) — 0.545 miles — MO Rte. H (E) to MO Rte. H (W)
Current Classification: Minor Local — 2,880 feet — Pg. 52-E33
10 year projection: Minor Local — (Loop)
20 year projection: Minor Local

366 **Tomahawk** (#81) — 0.439 miles — Lonedell (N) to Vogel (S)
Current Classification: Urban Collector — 2,320 feet — Pg. 14-BB8
10 year projection: Urban Collector
20 year projection: Urban Collector
Located in the Primary growth area.

367	**Tower** (#136) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *A large portion of the road is located in both the Primary and Secondary growth areas.*	5.617 miles 29,660 feet	Old MO Hwy. 21 (E) to Hillsboro House Springs (W) Pg. 30-T18
368	**Township Lane** (#170) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Secondary growth area.*	1.455 miles 7,685 feet	MO Hwy. 30 (E) to Calvey Creek (W) Pg. 27-F17
369	**Tracy Lane** (#269) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.629 miles 3,320 feet	MO Rte. B (N) to End of County Maintenance (S) Pg. 36-L24
370	**Turley** (#296) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	2.14 miles 11,300 feet (Dead End)	End of County Maintenance (N) to Mammoth (S) Pg. 52-F35
371	**Twin River** (#13) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Large portion of the road is in the Primary growth area, while the rest is in the Secondary growth area.*	4.18 miles 22,070 feet	MO Rte. PP (E) to MO Rte. W (W) Pg. 4-P5
372	**Upper Blackwell** (#378) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	4.356 miles 23,000 feet	Hardin (E) to St. Francois County Line (W) Pg. 71-Q45

373 **Upper Moss Hollow** (#130) — 1.956 miles — Moss Hollow (E) to Marble Springs (W)
Current Classification: Minor Local — 10,330 feet — Pg. 32-Z17
10 year projection: Moderate Local
20 year projection: Moderate Local

374 **Upper Plattin** (#319) — 3.142 miles — Fountain City (E) to De Soto City Limits (W)
16,589 feet

Section A — Fountain City to Intersection of Hwy. 110 — Pg. 56-V35
Current Classification: Moderate Local
10 year projection: Major Local
20 year projection: Major Local
Approximately half of the road is in the Secondary growth area.

Section B — Intersection of Hwy. 110 to De Soto City Limits — Pg. 56-V35
Current Classification: Rural Major Collector
10 year projection: Rural Major Collector
20 year projection: Rural Major Collector
Located in the Primary growth area.

375 **Valles Mines** (#373) — 3.722 miles — MO Rte. V (E) to Sunrise to Hardin (W)
Current Classification: Moderate Local — 19,650 feet — Pg. 72-U43
10 year projection: Moderate Local
20 year projection: Moderate Local

376 **Valles Mines Post Office** (#422) — 0.062 miles — End of County Maintenance (N) to MO Rte. V (S)
Current Classification: Minor Local — 325 feet — Pg. 72-V43
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local
Located in the Secondary growth area.

377	**Valles Mines School** (#374) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Secondary growth area.*	1.175 miles 6,203 feet	MO Rte. V (N) to US Hwy. 67 (S) Pg. 72-V43
378	**Valley Drive** (#48) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.119 miles 630 feet (Dead End)	Old Sugar Creek (N) to School Parking Lot (S) Pg. 6-W3
379	**Venita Lane** (#201) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.467 miles 2,465 feet (Dead End)	End of County Maintenance (N) to College (S) Pg. 38-S24
380	**Veterans Drive** *(Cedar Hill)* (#423) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.507 miles 2,675 feet (Dead End)	End of Cnty Maint. (N) to Rte. BB to End of Cnty Maint. (S) Pg. 19-K15
381	**Victoria** (#225)	5.847 miles 30,870 feet	MO Rte. CC (E) to MO Rte. P (W)
	Section A Current Classification: Major Local **<u>10 year projection: Rural Minor Collector</u>** **<u>20 year projection: Rural Minor Collector</u>** *Located in the Primary growth area.*	MO Rte. CC (E) to US Hwy. 67 (W)	Pg. 57-AA32

Victoria (#225) - continued

Section B — US Hwy. 67 (E) to MO Rte. P (W) — Pg. 57-Y32

Current Classification: Rural Minor Collector
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector
Approximately half of the road is located in the Secondary growth area,
And located near the Little Creek watershed in the Joachim Creek watershed in the Mississippi River basin.

382 **Victoria Cemetery** (#260) — 0.658 miles — Hillsboro Victoria (E) to End of County Maint. (W)
Current Classification: Minor Local — 3,475 feet — Pg. 55-S31
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local
Located in the Secondary growth area.

383 **Vineland** (#308) — 2.821 miles — MO Hwy. 21 (N) to MO Hwy. 21 (S)
Located in the Secondary growth area. — 14,895 feet — (Loop)

Section A — MO Hwy. 21 (N) to Knorpp (S) — Pg. 63-N37
Current Classification: Moderate Local
10 year projection: Moderate Local
20 year projection: Moderate Local

Section B — Knorpp (E) to MO Hwy. 21 (W) — Pg. 63-M39
Current Classification: Rural Minor Collector
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector
Located in the Secondary growth area.

384 **Vogel** (#80) 1.499 miles Arnold City Limits (E) to Tomahawk (W)
Located in the Primary growth area. 7,915 feet

Section A Arnold City Limits (E) to Old Lemay Ferry (W) Pg. 15-CC10
Current Classification: Minor Arterial
10 year projection: Minor Arterial
20 year projection: Minor Arterial
Located in the Primary growth area.

Section B Old Lemay Ferry (E) to Tomahawk (W) Pg. 14-BB9
Current Classification: Urban Collector
10 year projection: Urban Collector
20 year projection: Urban Collector

385 **Wade** (#9) 1.081 miles End of County Maint. (E) to Franklin County Line (W)
Current Classification: Moderate Local 5,710 feet Pg. 9-F10
10 year projection: Moderate Local
20 year projection: Moderate Local
Small portion of the road is located in the Secondary growth area.

386 **Waggoner** (#367) 3.026 miles MO Rte. AA (E) to MO Rte. TT (W)
Current Classification: Minor Local 15,975 feet Pg. 59-II35
10 year projection: Minor Local
20 year projection: Minor Local
The road is located in the Primary and Secondary growth areas.

387 **Walnut** *(House Springs)* (#36) 0.05 miles Main St. *(House Springs)* (E) to Dead End (W)
Current Classification: Minor Local 265 feet Pg. 12-Q10
10 year projection: Minor Local (Dead End)
20 year projection: Minor Local
Located in the Primary growth area,
And located near the Bear Creek, Dulin Creek, Heads Creek watersheds in the Big River basin.

388 **Walters Place** (#141) — 0.238 miles — MO Rte. MM (E) to MO Rte. MM (W)
Current Classification: Major Local — 1,255 feet — Pg. 11-P10
10 year projection: Major Local — (Loop)
20 year projection: Major Local
Located in the Primary growth area,
And located near the Bear Creek, Dulin Creek, Heads Creek watersheds in the Big River basin.

389 **Ware** (#281) — 1.802 miles — Breckenridge (N) to MO Rte. H (S)
Current Classification: Minor Local — 9,515 feet — Pg. 52-H31
10 year projection: Minor Local
20 year projection: Minor Local

390 **Ware Church** (#278) — 2.266 miles — MO Rte. Y (N) to Russell (S)
Current Classification: Rural Minor Collector — 11,965 feet — Pg. 44-J28
10 year projection: Rural Minor Collector
20 year projection: Rural Minor Collector

391 **Ware Lake** (#285) — 0.876 miles — Browns Ford (N) to End of County Maintenance (S)
Current Classification: Minor Local — 4,625 feet — Pg. 43-F28
10 year projection: Minor Local — (Dead End)
20 year projection: Minor Local

392 **Weaver** (#232) — 1.752 miles — MO Rte. AA (E) to US Hwy. 61 (W)
Current Classification: Moderate Local — 9,250 feet — Pg. 59-JJ34
10 year projection: Moderate Local
20 year projection: Moderate Local
Located in the Primary growth area.

393 **Webb** (#271) — 0.959 miles — Tinhouse (E) to End of County Maintenance (W)
Current Classification: Minor Local — 5,147 feet — Pg. 45-M29
10 year projection: Minor Local — (Dead End)
20 year projection: Moderate Local

394	**Wedde** (#123) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Approximately half of road is in the Primary growth area.*	2.646 miles 13,970 feet	Moss Hollow (E) to Old Lemay Ferry (W) Pg. 32-Z17
395	**Wegmann** (#348) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *The road is in both the Primary and Secondary growth areas.*	1.622 miles 8,565 feet (Dead End)	End of County Maintenance (E) to Lee Pyle (W) Pg. 66-BB36
396	**West Four Ridge** (#38) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in the Primary growth area.*	5.10 miles 26,930 feet	Old Hwy. 21 (E) to West Rock Creek (W) Pg. 22-V12
397	**West Outer 21 Road**(#63) Current Classification: Moderate Local **10 year projection: Major Local** 20 year projection: Major Local *Located in the Primary growth area.*	0.682 miles 3,600 feet	MO Hwy. 141 (N) to Old State Rte. 21 (S) Pg. 7-AA5
398	**West Rock Creek** (#41) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in the Primary growth area.*	5.861 miles 30,945 feet	Old State Rte. 21 (E) to MO Hwy. 30 (W) Pg. 14-Y7

399	**West Swaller** (#45) **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector** *Located in the Primary growth area.*	1.004 miles 5,300 feet	Blecha (E) to West Rock Creek (W) Pg. 13-X8
400	**White** (#382) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.742 miles 9,200 feet	MO Rte. C (E) to End of County Maintenance (W) Pg. 36-J24
401	**White Oak School Road** (#31) Current Classification: Minor Local **10 year projection: Moderate Local** 20 year projection: Moderate Local *Located in the Primary growth area.*	1.742 miles 9,200 feet (Dead End)	End of County Maintenance (N) to MO Rte. W (S) Pg. 4-O5
402	**White Street** *(Imperial)* (#100) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.198 miles 1,045 feet	Imperial Main (E) to Old State (W) Pg. 24-EE14
403	**Whitehead** (#264)	4.68 miles 24,700 feet	End of County Maintenance (E) to Butcher Branch (W)
	Section A Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	End of County Maint. (E) to Liberty School (W)	Pg. 54-P32
	Section B Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	Liberty School (E) to Butcher Branch (W)	Pg. 54-P31

404	**Wilkinson** (#323) Current Classification: Minor Local 10 year projection: Minor Local **20 year projection: Moderate Local** *Located in the Primary growth area.*	1.357 miles 7,165 feet (Dead End)	End of County Maintenance (E) to Flucom (W) Pg. 55-T35
405	**Williams Creek** (#21) *Located in the Primary growth area.*	2.528 miles 13,350 feet	End of County Maintenance (N) to Antire (S) (Dead End on North End)
	Section A Current Classification: Major Local 10 year projection: Major Local 20 year projection: Major Local	End of Cnty Maint. (N) to Hillsboro Valley Park (S)	Pg. 5-S3
	Section B **Current Classification: Urban Collector** **10 year projection: Urban Collector** **20 year projection: Urban Collector**	Hillsboro Valley Park (N) to Antire (S)	Pg. 5-S5
406	**Willing Street** *(Barnhart)* (#96) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.252 miles 1,338 feet (Dead End)	End of County Maintenance (N) to US Hwy. 61-67 (S) Pg. 33-DD16
407	**Wilson Hollow** (#306) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Secondary growth area.*	1.383 miles 7,300 feet	Vineland (N) to St. Francois County Line (S) Pg. 63-M39
408	**Windmill** (#118) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local	1.506 miles 7,950 feet (Dead End)	Seckman (N) to End of County Maintenance (S) Pg. 24-CC12

Located in the Primary growth area.

409	**Windsor Harbor** (#83) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Primary growth area.*	1.127 miles 5,950 feet	Kimmswick City Limits (E) to US Hwy. 61-67 (W) Pg. 24-FF14
410	**Windsor Terrace** (#82) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.061 miles 320 feet	Windsor Harbor (E) to End of County Maintenance (W) Pg. 24-EE14
411	**Windy Valley Lane** (#407) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.35 miles 1,850 feet	Mangan Rd. (E) to Franklin County Line (W) Pg. 30-R17
412	**Winters Hill** (#224) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Primary growth area.*	0.135 miles 715 feet (Dead End)	End of County Maintenance (E) to Lions Den (S) Pg. 23-AA11
413	**Wohlbold** (#138) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local *Located in the Secondary growth area.*	0.449 miles 2,370 feet (Dead End)	End of County Maintenance (N) to Ems (S) Pg. 30-R17

414	**Wolf Hollow** (#92) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Primary growth area.*	.72 miles 3,816 feet (Dead End)	US Hwy. 61-67 (E) to End of County Maintenance (W) Pg. 24-EE15
415	**Wolf Street** *(Cedar Hill)* (#424) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	0.128 miles 675 feet	Cedar Hill Rd. (E) to End of County Maintenance (W) Pg. 19-K15
416	**Woodland Lane** (#204) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *Located in the Primary growth area.*	0.329 miles 1,735 feet	MO Rte. Z (N) to Festus Special Road District (S) Pg. 39-X24
417	**Yellow Rock** (#309) Current Classification: Moderate Local 10 year projection: Moderate Local 20 year projection: Moderate Local *A portion of the road is in both the Primary and Secondary growth area.*	3.12 miles 16,475 feet (Dead End)	MO Hwy. 21 (E) to End of County Maintenance (W) Pg. 63-P36
418	**Zimmerman** (#171) Current Classification: Minor Local 10 year projection: Minor Local 20 year projection: Minor Local	1.87 miles 9,875 feet (Dead End)	MO Hwy. 30 (E) to End of County Maintenance (W) Pg. 26-C20
419	**Zion Lutheran Church** (#206) Current Classification: Minor Local **10 year projection: Moderate Local** 20 year projection: Moderate Local *Located in both the Primary and Secondary growth area.*	1.007 miles 5,315 feet	Jarvis (E) To Sandy Valley (W) Pg. 39-V23

Appendix B for 2014 Roadway Master Plan

List of Jefferson County Maintained Roads by Assigned Road Number

Field Explanation:
Road Number - Number assigned by Jefferson County Public Works
Road Name - Name assigned by Jefferson County Public Works
Length (in miles) - From JeffCo Public Works Road Database
(portions of road may be maintained by other entities)

Functional Classification - assigned by East-West Gateway Council of Governments
Roads in GREEN are **Minor Arterials** (eligible for 80/20 Funding)
Roads in RED are **Major Collectors** (eligible for 80/20 Funding)
Roads in *Bold Italics* are ***Minor Collectors*** (NOT eligible for 80/20 Funding)
All 'Local' Classification Roads are NOT eligible for 80/20 Funding

Council District(s) - JeffCo Council District number(s) as of April, 2014

Rd #	Road Name	Length (mi.)	Functional Classification	District
1	English	1.970	Moderate Local	1
2	McNamee	1.245	Moderate Local	1
3	McNamee School	1.629	Minor Local	1
4	**Northwest Blvd.**	**0.566**	**Urban (Major) Collector**	1
5	Opeechee Beach	0.193	Minor Local	1
6	Mangan	1.383	Minor Local	1
7	Lake Tekawitha	1.189	Moderate Local	1
8	Doc Sargent	1.597	Moderate Local	1
9	Wade	1.081	Moderate Local	1
10	St. Joseph Hill	0.871	Minor Local	1 & 7
11	***John McKeever***	***3.333***	***Minor Collector***	1
12	Bald Pate	0.161	Minor Local	1
13	**Twin River**	**4.180**	**Major Collector**	1
14	Jim Weber	3.456	Moderate Local	1
15	**Antire**	**3.964**	**Urban (Major) Collector**	1
16	**Little Antire**	**1.555**	**Urban (Major) Collector**	1
17	Old Little Antire	0.430	Minor Local	1
18	**High Ridge Blvd.**	**1.884**	**Minor Arterial**	1
19	Nollman	0.638	Minor Local	1
20	Old Hunning	0.217	Minor Local	1
21	**Williams Creek**	**2.528**	**Urban (Major) Collector**	1
22	Community Lane	0.102	Minor Local	1
23	**Hillsboro Valley Park**	**3.189**	**Urban (Major) Collector**	1
24	**Dillon**	**1.336**	**Urban (Major) Collector**	1
25	Heather Lane	0.057	Minor Local	1
26	**Brennan**	**0.824**	**Urban (Major) Collector**	1
27	**Little Brennan**	**0.744**	**Urban (Major) Collector**	1
28	Meadow Drive	0.643	Moderate Local	1

Rd #	Road Name	Length (mi.)	Functional Classification	District
29	Patty Drive	0.227	Minor Local	1
30	**Hawkins**	**0.266**	**Urban (Major) Collector**	1
31	White Oak School Rd.	1.742	Minor Local	1
32	Indian Springs	0.712	Major Local	1 & 7
33	Burgan Grove	1.297	Moderate Local	7
34	**Carol Park**	**1.735**	**Urban (Major) Collector**	1 & 7
35	**Gravois (Northwest School)**	**2.434**	**Minor Arterial**	1 & 7
36	Walnut	0.050	Minor Local	7
37	**Bear Creek**	**1.134**	**Urban (Major) Collector**	1 & 7
38	**West Four Ridge**	**5.100**	**Urban (Major) Collector**	1,2,4 & 7
39	**Old State Rte. 21**	**14.690**	**Minor Arterial**	2,4 & 7
40	Miller (off Hwy MM)	1.660	Moderate Local	7
41	**West Rock Creek**	**5.861**	**Major Collector**	1 & 2
42	Rock Creek Valley	3.053	Moderate Local	2
43	John Swaller	0.784	Moderate Local	2
44	Novotny	0.492	Minor Local	2
45	**West Swaller**	**1.004**	**Major Collector**	2
46	Blecha	0.814	Moderate Local	2
47	**Old Sugar Creek**	**4.295**	**Urban (Major) Collector**	1 & 2
48	Valley Dr.	0.119	Minor Local	1
49	Hunning	2.865	Moderate Local	1 & 2
50	Schumacher	3.123	Major Local	1
51	**Gravois (Schumacher)**	**2.599**	**Urban (Major) Collector**	1
52	**New Sugar Creek**	**0.841**	**Minor Arterial**	1
53	Coil	0.492	Minor Local	1
54	Mark Dr.	0.265	Minor Local	1
55	Golda Lane	0.246	Moderate Local	1
56	Delores Drive	0.441	Major Local	1
57	Biltmore Drive	0.476	Major Local	1
58	**Diehl**	**0.525**	**Urban (Major) Collector**	1 & 2
59	**Saline**	**3.920**	**Urban (Major) Collector**	1 & 2
60	*(Not Assigned)*	*(Not Assigned)*	*(Not Assigned)*	*N/A*
61	Corisande Hill	3.309	Major Local	2
62	**Old Rte. 141**	**2.116**	**Minor Arterial**	2 & 3
63	West Outer 21 Rd.	0.682	Moderate Local	2
64	East Outer 21 Rd.	0.444	Moderate Local	2
65	Schneider Drive	0.566	Major Local	2
66	Fiedler Lane	0.455	Moderate Local	2
67	East Romaine Creek	1.578	Moderate Local	2
68	**Romaine Creek**	**3.915**	**Urban (Major) Collector**	2
69	**Konert**	**1.103**	**Urban (Major) Collector**	2
70	Hillcrest	1.388	Moderate Local	2
71	**East Rock Creek**	**3.021**	**Urban (Major) Collector**	2 & 3
72	Binning	1.035	Minor Local	2
73	**Lions Den**	**2.765**	**Urban (Major) Collector**	2
74	East Swaller	2.642	Moderate Local	2
75	Rhonda Sue	0.373	Moderate Local	2

Rd #	Road Name	Length (mi.)	Functional Classification	District
76	Gary	1.608	Moderate Local	2 & 3
77	**Lonedell**	**2.420**	**Urban (Major) Collector**	2
78	**Dutch Bottom**	**1.430**	**Urban (Major) Collector**	2
79	**Missouri State**	**0.938**	**Urban (Major) Collector**	2
80	**Vogel**	**1.499**	**Minor Arterial**	3
81	**Tomahawk**	**0.439**	**Urban (Major) Collector**	2 & 3
82	Windsor Terrace	0.061	Minor Local	4
83	Windsor Harbor	1.127	Moderate Local	4
84	**Montebello**	**1.352**	**Urban (Major) Collector**	4
85	Sulphur Springs	0.674	Moderate Local	4
86	Sulphur Springs Landing	0.106	Minor Local	4
87	**Seckman**	**3.509**	**Minor Arterial**	4
88	Second St. (Sulphur Springs)	0.098	Minor Local	4
89	Third St. (Sulphur Springs)	0.104	Minor Local	4
90	Seckman (East)	0.262	Minor Local	4
91	Stephenson	0.159	Minor Local	4
92	Wolf Hollow	0.723	Moderate Local	4
93	**Old State Road**	**0.866**	**Urban (Major) Collector**	4
94	Front St. (Barnhart)	0.286	Minor Local	4
95	East St. (Barnhart)	0.251	Minor Local	4
96	Willing St. (Barnhart)	0.253	Minor Local	4
97	East Marriot St. (Barnhart)	0.146	Minor Local	4
98	Miller East	0.390	Minor Local	3 & 4
99	**Imperial Main**	**0.478**	**Minor Arterial**	4
100	White St. (Imperial)	0.198	Minor Local	4
101	**Old Hwy M**	**5.727**	**Urban (Major) Collector**	2 & 4
102	First St. (Imperial)	0.045	Minor Local	4
103	Carron	0.894	Minor Local	6
104	Lawn St. (Kimmswick)	0.189	Major Local	4
105	Beckett	0.100	Minor Local	4
106	Baptist Park Road	0.292	Minor Local	4
107	JeffCo Executive Drive	0.125	Minor Local	4
108	North Outer Rd. A	0.483	Moderate Local	4 & 7
109	Broadway (Kimmswick)	0.076	Major Local	4
110	Black Creek	0.739	Minor Local	4
111	**Miller**	**3.172**	**Urban (Major) Collector**	3 & 4
112	**Elm Drive**	**0.894**	**Urban (Major) Collector**	3
113	**Old Lemay Ferry**	**12.656**	**Minor Arterial**	2,3,4 & 7
114	Summit	0.426	Minor Local	6
115	Spring Forest	1.264	Moderate Local	3 & 4
116	Prairie Hollow	1.927	Minor Local	4
117	Frisco Hill	3.264	Major Local	4
118	Windmill	1.506	Moderate Local	4
119	**Old Antonia**	**2.443**	**Urban (Major) Collector**	4
120	Cook	0.713	Moderate Local	4
121	Liguori	0.191	Minor Local	4
122	Stahl	0.473	Minor Local	4

Rd #	Road Name	Length (mi.)	Functional Classification	District
123	Wedde	2.646	Moderate Local	4
124	Shelter	0.246	Minor Local	4
125	**East Four Ridge**	**2.893**	**Urban (Major) Collector**	2
126	Singing Hills	0.376	Minor Local	2
127	***Schenk***	***1.383***	***Minor Collector***	4
128	Klable	1.201	Moderate Local	4 & 7
129	Moss Hollow	3.234	Moderate Local	4
130	Upper Moss Hollow	1.956	Minor Local	4
131	Kneff	1.527	Moderate Local	4
132	Dry Fork (East)	1.733	Moderate Local	2
133	East Blecha	0.256	Minor Local	2
134	Dry Fork (West)	0.379	Moderate Local	2
135	Heads Creek	2.768	Moderate Local	4 & 7
136	Tower	5.617	Moderate Local	7
137	***Ems***	***2.903***	***Minor Collector***	7
138	Wohlbold	0.449	Minor Local	7
139	**Hillsboro House Springs**	**12.284**	**Major Collector**	6 & 7
140	**Gravois**	**0.578**	**Urban (Major) Collector**	7
141	Walters Place	0.238	Major Local	7
142	Dulin Creek	5.313	Major Local	7
143	**Local Hillsboro**	**4.832**	**Major Collector**	7
144	Three B	1.158	Moderate Local	7
145	Burgess Ford	1.411	Minor Local	7
146	Pete O'Brien	0.403	Moderate Local	7
147	Cedar Hill School	0.391	Minor Local	7
148	**Main St. (House Springs)**	**0.133**	**Minor Arterial**	7
149	High St. (Cedar Hill)	0.552	Minor Local	7
150	**Cedar Hill**	**3.096**	**Major Collector**	7
151	Ficken	1.138	Moderate Local	7
152	**Graham**	**1.171**	**Major Collector**	7
153	Ashwell Lane	0.218	Minor Local	7
154	Little Dutch Creek	1.163	Moderate Local	7
155	Dutch Creek	2.527	Moderate Local	7
156	Silver Lane	0.975	Moderate Local	7
157	Cedar Springs	0.693	Moderate Local	7
158	**South Byrnesville**	**1.515**	**Major Collector**	7
159	Lynch	2.886	Moderate Local	1 & 7
160	**Byrnesville**	**8.111**	**Major Collector**	1 & 7
161	Sand Cut	1.345	Moderate Local	7
162	Eime	2.213	Moderate Local	7
163	Krommer	0.653	Minor Local	7
164	Tom Frost	2.232	Minor Local	7
165	Salamone	0.933	Minor Local	7
166	Dittmer	1.411	Moderate Local	7
167	**Dittmer Catawissa**	**4.026**	**Major Collector**	7
168	Calvey Creek	3.328	Moderate Local	7
169	Kramme	0.110	Minor Local	7

Rd #	Road Name	Length (mi.)	Functional Classification	District
170	Township Lane	1.455	Moderate Local	7
171	Zimmerman	1.870	Minor Local	7
172	County Line	0.597	Minor Local	7
173	Frost	0.632	Minor Local	7
174	Harry Maupin	0.367	Minor Local	7
175	Oermann	0.749	Moderate Local	7
176	Dittmer Church	1.051	Minor Local	7
177	Old State Rd. WW	0.165	Minor Local	7
178	Ridge	3.990	Moderate Local	7
179	***Jones Creek***	***4.290***	***Minor Collector***	7
180	Morse Mill	3.832	Moderate Local	7
181	Rutledge	0.979	Minor Local	7
182	Brinley	0.620	Minor Local	7
183	Old Morse Mill	0.233	Minor Local	7
184	Jim Wilson	0.614	Minor Local	7
185	Joe Buck	0.341	Minor Local	7
186	Black Hawk Lane	0.548	Minor Local	7
187	Klondike	5.768	Moderate Local	6 & 7
188	Clayton Huskey	0.736	Moderate Local	7
189	***Glade Chapel***	***4.115***	***Minor Collector***	7
190	**Red Bird Lane**	**0.947**	**Major Collector**	6 & 7
191	Hayden	0.487	Major Local	7
192	Tishomingo	2.717	Major Local	7
193	Regina	2.414	Moderate Local	7
194	Medley Hill Acres	0.267	Minor Local	7
195	Marty Martin	0.492	Minor Local	7
196	Goldman	3.267	Major Local	7
197	Seckman Spur	0.167	Minor Local	4
198	***Jarvis***	***4.859***	***Minor Collector***	4 & 7
199	Highland Baptist Church	2.320	Moderate Local	7
200	College	0.578	Minor Local	7
201	Venita Lane	0.467	Minor Local	7
202	Amy Clark	2.342	Minor Local	7
203	Pioneer	1.243	Major Local	7
204	Woodland	0.329	Moderate Local	4 & 5
205	Sandy Valley	2.220	Moderate Local	4
206	Zion Lutheran Church	1.007	Minor Local	4
207	Huber	0.350	Minor Local	4
208	Morgan	0.887	Minor Local	4
209	Linhorst	1.376	Minor Local	4
210	Sandy Church	4.837	Moderate Local	4
211	Goldman East	1.302	Moderate Local	7
212	Hensley	1.079	Moderate Local	4
213	Rice	3.125	Moderate Local	4
214	Marble Springs	6.341	Moderate Local	4
215	Engle Creek	1.231	Moderate Local	4
216	South Engle Creek	0.866	Minor Local	4
217	Koch Valley	0.895	Moderate Local	4

Rd #	Road Name	Length (mi.)	Functional Classification	District
218	Mulberry Hill	1.984	Moderate Local	4
219	Bushberg	0.653	Minor Local	4 & 5
220	Allen	1.799	Major Local	4
221	Girl Scout	0.469	Minor Local	4
222	Meyer Road East	0.712	Moderate Local	6
223	***Meyer***	***1.386***	***Minor Collector***	6
224	Winters Hill	0.135	Minor Local	2
225	***Victoria***	***5.847***	***Minor Collector***	6
226	Dual	0.273	Minor Local	6
227	***Plattin***	***5.944***	***Minor Collector***	5 & 6
228	Boyce Lane	2.143	Moderate Local	5
229	Canepa	0.535	Minor Local	5
230	R-7 School	0.100	Major Local	5
231	Dooling Hollow	0.541	Moderate Local	5
232	Weaver	1.752	Moderate Local	5
233	Cole	0.663	Minor Local	5
234	Holly Hills Terrace	0.345	Minor Local	6
235	**River Street**	**0.217**	**Minor Arterial**	4
236	Sunnyside	4.442	Moderate Local	6
237	Lee	0.672	Minor Local	6
238	Market St. (Hematite)	0.290	Minor Local	6
239	Main Street (Hematite)	0.182	Minor Local	6
240	Douglas St. (Hematite)	0.208	Minor Local	6
241	Olive St. (Hematite)	0.066	Minor Local	6
242	Pine St. (Hematite)	0.142	Minor Local	6
243	Carroll St. (Hematite)	0.090	Minor Local	6
244	Hyfield School	0.295	Minor Local	6
245	Hyfield	2.462	Moderate Local	6
246	Argonne	2.170	Moderate Local	6
247	Stroup	2.452	Moderate Local	4 & 6
248	***Hillsboro Hematite***	***5.174***	***Minor Collector***	6 & 7
249	Buckeye School	0.993	Minor Local	4 & 6
250	Buckeye	3.343	Moderate Local	4 & 6
251	***Plass***	***1.306***	***Minor Collector***	4
252	***Mapaville Hematite***	***2.988***	***Minor Collector***	4 & 6
253	Frontier	1.159	Moderate Local	4
254	***Hillsboro Victoria***	***3.169***	***Minor Collector***	6
255	Hillsboro Ave. (Victoria)	0.484	Minor Local	6
256	Morse Ave. (Victoria)	0.150	Minor Local	6
257	Bogey Ave. (Victoria)	0.074	Minor Local	6
258	Chouteau Ave. (Victoria)	0.213	Minor Local	6
259	Castle Ranch	2.816	Moderate Local	6 & 7
260	Victoria Cemetery	0.658	Minor Local	6
261	Park Lane	0.299	Minor Local	6
262	McMillen	0.206	Minor Local	6
263	Liberty School	3.411	Moderate Local	6
264	Whitehead	4.559	Moderate Local	6
265	Brickyard	2.269	Moderate Local	6

Rd #	Road Name	Length (mi.)	Functional Classification	District
266	Tinhouse	3.853	Moderate Local	6
267	***Butcher Branch***	***3.812***	***Minor Collector***	6 & 7
268	Reynolds Creek	3.112	Moderate Local	6 & 7
269	Tracy Lane	0.629	Minor Local	6
270	Stonehouse	4.994	Minor Local	6 & 7
271	Webb	0.959	Minor Local	6 & 7
272	Peter Moore Lane	2.676	Moderate Local	7
273	Maness	1.471	Minor Local	6 & 7
274	Pigg	1.203	Minor Local	7
275	Dry Creek	1.869	Minor Local	7
276	***Russell***	***2.360***	***Minor Collector***	7
277	Siebel	0.672	Minor Local	7
278	***Ware Church***	***2.266***	***Minor Collector***	7
279	**Byrnes Mill**	**0.303**	**Urban (Major) Collector**	1
280	***Breckenridge***	***1.599***	***Minor Collector***	7
281	Ware	1.802	Minor Local	7
282	George Dover	0.670	Minor Local	7
283	Hammel	1.000	Minor Local	7
284	Browns Ford	4.739	Moderate Local	7
285	Ware Lake	0.876	Minor Local	7
286	Branch	1.259	Minor Local	7
287	Engleford	2.419	Minor Local	7
288	Pinson Ford	1.436	Minor Local	7
289	Pillen	2.254	Minor Local	7
290	Brook Hollow	1.273	Minor Local	1
291	Calico Creek	0.445	Minor Local	7
292	***Goldman Spur***	***0.438***	***Rural Major Collector***	***7***
293	Nickelson	0.265	Minor Local	7
294	Cedar Hollow	1.809	Minor Local	7
295	Tom Sparks	0.545	Minor Local	7
296	Turley	2.140	Minor Local	6 & 7
297	Mammoth	3.351	Moderate Local	6 & 7
298	Hidden Valley Ranch	1.146	Minor Local	7
299	Big River Heights	4.190	Minor Local	6
300	Kingsland	0.654	Minor Local	6
301	Dodson Lane	2.020	Moderate Local	6
302	Mothershead	1.600	Minor Local	6
303	Mothershead School	0.283	Minor Local	6
304	Perkins	0.955	Moderate Local	6
305	Britton	0.696	Minor Local	6
306	Wilson Hollow	1.383	Minor Local	6
307	***Knorpp***	***1.443***	***Minor Collector***	6
308	***Vineland***	***2.821***	***Minor Collector***	6
309	Yellow Rock	3.120	Moderate Local	6
310	Harrison	0.348	Minor Local	6
311	College Heights	0.424	Minor Local	6
312	Lembeck Lake	1.735	Moderate Local	6
313	Berry Dairy	1.799	Moderate Local	6

Rd #	Road Name	Length (mi.)	Functional Classification	District
314	Hillcrest (South)	0.697	Moderate Local	6
315	**Klondike (South)**	**5.862**	**Major Collector**	6
316	Springdale	1.241	Minor Local	6
317	*(Not Assigned)*	*(Not Assigned)*	*(Not Assigned)*	*N/A*
318	Boyne St. (DeSoto)	0.384	Minor Local	6
319	**Upper Plattin**	**3.142**	**Major Collector**	6
320	Harmony Hills	0.592	Minor Local	6
321	**Fountain City**	**4.268**	**Major Collector**	6
322	Frissell	0.691	Minor Local	6
323	Wilkinson	1.357	Minor Local	6
324	**Flucom**	**4.381**	**Major Collector**	6
325	Flucom Meadows	0.350	Minor Local	6
326	Bader	1.148	Minor Local	6
327	Fox Farm	1.881	Moderate Local	6
328	Mount Olive	4.895	Moderate Local	6
329	Hardin	5.687	Moderate Local	6
330	McGehan	1.282	Moderate Local	6
331	Pagel	1.610	Minor Local	6
332	***Sunrise School***	***3.866***	***Minor Collector***	6
333	***Papin***	***2.578***	***Minor Collector***	6
334	Mining	1.362	Minor Local	6
335	McMullen School	0.511	Minor Local	6
336	Long	1.424	Moderate Local	6
337	Athena School	2.335	Moderate Local	6
338	Armbruster	1.947	Minor Local	6
339	Hencher *(North)*	0.112	Minor Local	6
340	***Harness***	***3.595***	***Minor Collector***	5
341	Plattin School	3.497	Moderate Local	5
342	***Charter Church***	***7.016***	***Minor Collector***	5 & 6
343	Huskey	1.206	Moderate Local	5
344	Benson	0.694	Minor Local	5
345	Flucom (East)	3.913	Moderate Local	6
346	Furaway Lane	0.129	Minor Local	6
347	Lee Pyle	2.893	Moderate Local	5 & 6
348	Wegmann	1.622	Moderate Local	5 & 6
349	Oakvale	3.322	Moderate Local	6
350	Selma	1.263	Minor Local	6
351	Pfinster School	2.704	Minor Local	6
352	Rudolph	0.360	Minor Local	6
353	Boyd Branch	3.349	Minor Local	6
354	Laguna Palma	2.197	Minor Local	6
355	*(Not Assigned)*	*(Not Assigned)*	*(Not Assigned)*	*N/A*
356	Mitch Sweet	0.106	Minor Local	6
357	Frazier	2.307	Minor Local	6
358	Dry Fork	2.117	Minor Local	6
359	Doss Hollow	1.282	Minor Local	6
360	Drury	1.205	Minor Local	5

Rd #	Road Name	Length (mi.)	Functional Classification	District
361	*(Not Assigned)*	*(Not Assigned)*	*(Not Assigned)*	*N/A*
362	Gracie Waggoner	0.426	Minor Local	5
363	Rouggly Kiepe	0.515	Minor Local	5
364	Gansner	0.455	Minor Local	5
365	Johnson	0.288	Moderate Local	7
366	Danby	1.045	Moderate Local	5
367	Waggoner	3.026	Minor Local	5
368	Burley	1.504	Moderate Local	5
369	***Big Hollow***	***2.701***	***Minor Collector***	5
370	Lions Den Lane	0.119	Minor Local	2
371	Johnson	1.809	Minor Local	5
372	Dubois Creek	1.263	Minor Local	5
373	Valles Mines	3.722	Moderate Local	6
374	Valles Mines School	1.175	Moderate Local	6
375	Bage	0.617	Moderate Local	6
376	*(Not Assigned)*	*(Not Assigned)*	*(Not Assigned)*	*N/A*
377	Engledow	4.799	Minor Local	6
378	Upper Blackwell	4.356	Minor Local	6
379	Dickinson	1.417	Minor Local	6
380	Primo	0.933	Minor Local	5
381	Haverstick School	0.777	Minor Local	6
382	White	1.742	Minor Local	7
383	Green House	0.224	Minor Local	6
384	Duda	1.567	Moderate Local	7
385	Plum St. (Lewis Addition)	0.123	Minor Local	6
386	Silver Springs	1.205	Minor Local	6
387	Old Blackwell	0.439	Minor Local	6
388	Paw Paw Lane	0.402	Minor Local	6
389	Kim	0.091	Minor Local	6
390	Summit Street	0.194	Moderate Local	4
391	Sullens	0.350	Minor Local	5
392	Augusta Ave. (Victoria)	0.194	Minor Local	6
393	*(Not Assigned)*	*(Not Assigned)*	*(Not Assigned)*	*N/A*
394	Brackman Lane (Cedar Hill)	0.076	Minor Local	7
395	Buscher	0.341	Minor Local	1
396	Capetown Village	0.098	Moderate Local	1
397	Church St. (Hematite)	0.272	Minor Local	6
398	Cora Lane (Victoria)	0.114	Minor Local	6
399	Dittmer Spur	0.148	Moderate Local	7
400	**Hencher** *(South)*	1.553	Moderate Local	6
401	**Marty Martin**	0.820	Minor Local	7
402	**Old County**	0.316	Minor Local	6
403	**Old County**	0.161	Minor Local	6
404	*(Not Assigned)*	*(Not Assigned)*	*(Not Assigned)*	*N/A*
405	*(Not Assigned)*	*(Not Assigned)*	*(Not Assigned)*	*N/A*
406	Old Engledow	0.563	Minor Local	6
407	Windy Valley Lane	0.350	Minor Local	1

Rd #	Road Name	Length (mi.)	Functional Classification	District
408	Old Gravois	0.360	Moderate Local	1
409	Renner	0.111	Minor Local	2
410	Old Hwy 141 East	0.766	Moderate Local	2
411	Old Hwy 141 West	0.273	Minor Local	2
412	Old Lemay Ferry	0.213	Minor Local	7
413	Old Stroup	0.224	Minor Local	6
414	Pine Haven Lane	0.360	Moderate Local	7
415	Old Morse Mill Spur	0.152	Minor Local	7
416	River	0.038	Minor Local	7
417	Schneider (East)	0.147	Major Local	2
418	Schneider Hill Court	0.424	Minor Local	2
419	Springs	0.150	Moderate Local	7
420	Sunridge	0.208	Minor Local	7
421	Fairview Lane	0.144	Minor Local	7
422	Valles Mines Post Office	0.062	Minor Local	6
423	Veterans Drive	0.507	Minor Local	7
424	Wolf St. (Cedar Hill)	0.128	Minor Local	7
425	Dittmer Ridge	1.738	Moderate Local	7
426	Old State Road H	0.489	Minor Local	7
427	13th Street	0.057	Minor Local	2

Total JeffCo Maintained Road Miles	**667.140**
419 **Total JeffCo Maintained Roads**	

County Strategic Highway Safety Plan for Jefferson County, Missouri

Presented to the Missouri Department of Transportation,

the St. Louis Region of the Missouri Coalition for Roadway Safety,

and Jefferson County Safety Stakeholders

Prepared by Leidos

January 10, 2014

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Introduction

In the past several years, Missouri's roadway fatalities have declined from a high of 1,257 in 2005 to 786 in 2011. This decline is due in large part to implementing key strategies outlined in the state's evolving strategic highway safety plan (SHSP).

SAFETEA-LU established the requirement for states to develop such plans and to report fatality and serious injury data on both the state and local roadway systems. The provisions of the latest highway reauthorization bill, Moving Ahead for Progress in the 21st Century (MAP-21), continue to require that states develop SHSPs and use the basic plan elements established in SAFETEA-LU, i.e. all roads, data-driven, involvement of multidisciplinary stakeholders, etc.

In 2004, Missouri completed its first SHSP, *Missouri's Blueprint for Safer Roadways*. Then, the plan was updated in 2008 and 2012. Each plan establishes a fatality reduction goal, and both of the 2004 and 2008 goals were met earlier than expected. The 2012 version, *Missouri's Blueprint to Save More Lives*, includes a vision, mission, fatality reduction goal, and recommended strategies to reduce roadway fatalities and serious injuries. The vision is part of a national effort, Toward Zero Deaths (TZD), to recognize any roadway death as too tragic to ignore.

Blueprint Vision

Continuously Moving Missouri Toward Zero Deaths

Blueprint Mission

To make travel on Missouri's roadways safer though a partnership of committed local, state, federal, public, and private organizations

Blueprint Goal

700 or fewer roadway fatalities by 2016

The Missouri Coalition for Roadway Safety (MCRS) is responsible for implementing the plan and monitoring its success. The Coalition is organized into an executive committee, 12 state-level subcommittees and 7 regional coalitions. The collective efforts of the MCRS and safety partners throughout the State are driving fatalities and serious injuries down on Missouri roadways.

Figures 1 and 2 show the decline of roadway fatalities and serious injuries on Missouri roadways. Between 2005 and 2011 Missouri experienced 6 consecutive years of decline in traffic crash fatalities and a 34 percent overall reduction. Traffic crash serious injuries declined for the sixth straight year in 2011 from 8,624 in 2005 to 5,644 in 2011.

Since the establishment of the Blueprint, the Coalition and its partners have seen a reduction of roadway fatalities to its lowest point since the year 1947.

Figure 1. 2005 – 2011 Missouri Traffic Crash Fatalities.
Source: Missouri Coalition for Roadway Safety, 2012.

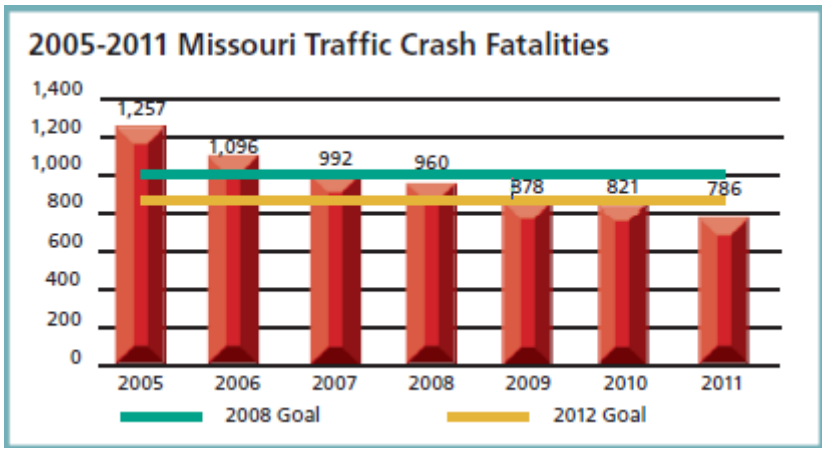
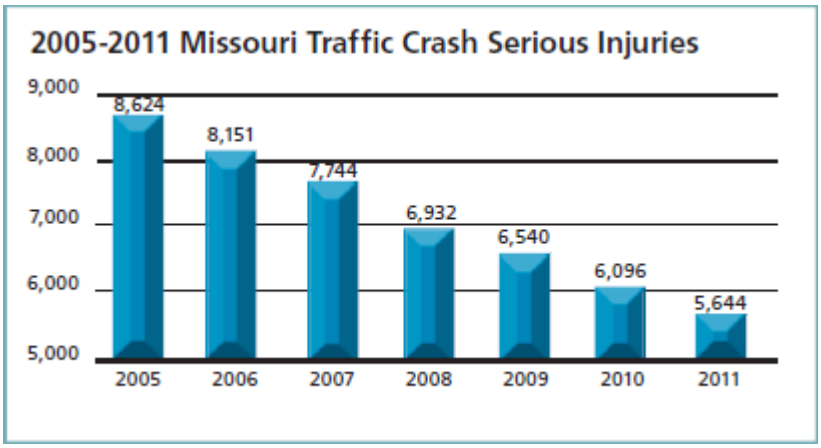


Figure 2. 2005 – 2011 Missouri Traffic Crash Serious Injuries.
Source: Missouri Coalition for Roadway Safety, 2012.



Next Generation for Roadway Safety: County Safety Plans

Missouri's roadways are made up of both a state and locally owned system. The state-owned system is approximately 33,500 miles and is the responsibility of MoDOT. The remaining 96,000 miles are locally owned. About 73 percent of the traffic fatalities occur on the state-owned system. In order to reach 700 or fewer fatalities by 2016, key strategies must be implemented on targeted roadways throughout each system.

Data analysis revealed that 67 percent of the local roadway fatalities occurred in 14 counties while the other 101 counties accounted for the remaining 33 percent. Table 1 lists the 14 counties with the highest number of local roadway fatalities and serious injuries, and Figure 3 displays the percentage of roadway fatalities occurring in the top 5 counties and the remaining 101 counties.

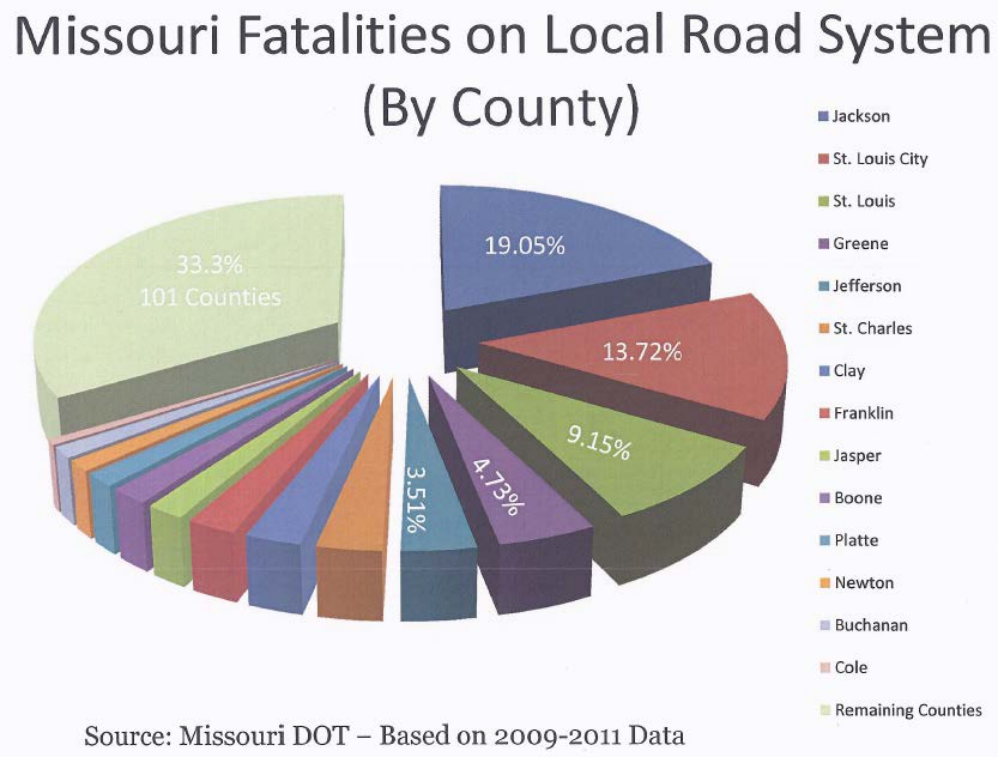
To achieve fatal and serious injury reductions on the local roadway system, county-specific SHSPs must be developed and implemented. These plans tie directly to MAP-21 and *Missouri's Blueprint to Save More Lives,* which places emphasis on improving safety specifically on local roads. Initial county-specific SHSP development will focus on the counties with the highest number of fatal injuries.

Each of the 14 counties listed in Table 1 may have the opportunity to work with MoDOT and the consultant team, along with their representative safety stakeholders, to develop an implementable safety plan for local roads within the county. **This plan is for Jefferson County.**

Table 1. Missouri Counties Sorted by Fatalities. Source: MoDOT.

Years 2009 to 2011	Fatalities	Serious Injuries	Population (2010 Census)	Local Yearly VMT
Jackson	125	1111	674,158	1,731,512,915
St. Louis City	90	440	319,294	571,041,770
St. Louis County	60	663	998,954	3,305,471,025
Greene	31	280	275,174	842,384,595
Jefferson	23	252	218,733	649,977,035
St. Charles	21	243	360,485	1,003,352,880
Clay	17	189	221,939	775,038,445
Franklin	15	100	101,492	454,561,510
Jasper	12	123	117,404	354,941,695
Boone	13	82	162,642	516,377,180
Platte	10	34	89,322	466,554,315
Newton	8	71	58,114	266,543,075
Buchanan	8	292	89,201	252,333,525
Cole	4	116	75,990	212,576,000
Total	**437**	**3,996**		

Figure 3. Percentage of Roadway Fatalities by County



St. Louis Region

The St. Louis Region encompasses four counties, in addition to the City of St. Louis: St. Louis, St. Charles, Franklin, and Jefferson.[1] These four counties and St. Louis City represent one of the seven MCRS regions across the state. Since 2005, the St. Louis Region has seen a 29 percent reduction in fatalities. Figure 4 shows the number of roadway fatalities that occurred within the St. Louis Region on all roads and on Jefferson County local roads for 2005-2011. The second line represents the number of roadway fatalities on local roads within only Jefferson County from the years 2007 to 2011.

To accomplish the statewide goal of 700 or fewer fatalities by 2016, MCRS has established a fatality reduction goal for each region, using the 2008 fatality reduction goal of 850 or fewer fatalities by 2012 as the baseline. Figure 4 shows the projected annual fatality reduction numbers in the St. Louis Region through 2016.

Figure 5 shows the reductions in serious injuries attained by the St. Louis Region and Jefferson County through 2011.

[1] It should be noted that the Jefferson County SHSP is for Jefferson County, Missouri only and does not include strategies for other counties in the St. Louis Region.

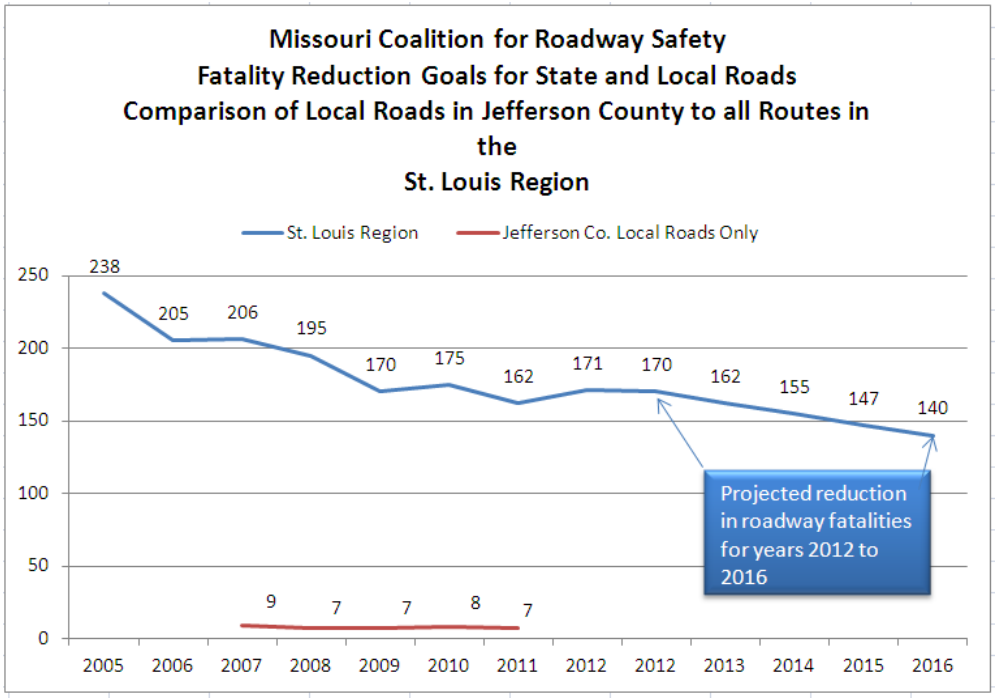


Figure 5. MCRS Fatality Reduction Goals in the St. Louis Region and Jefferson County

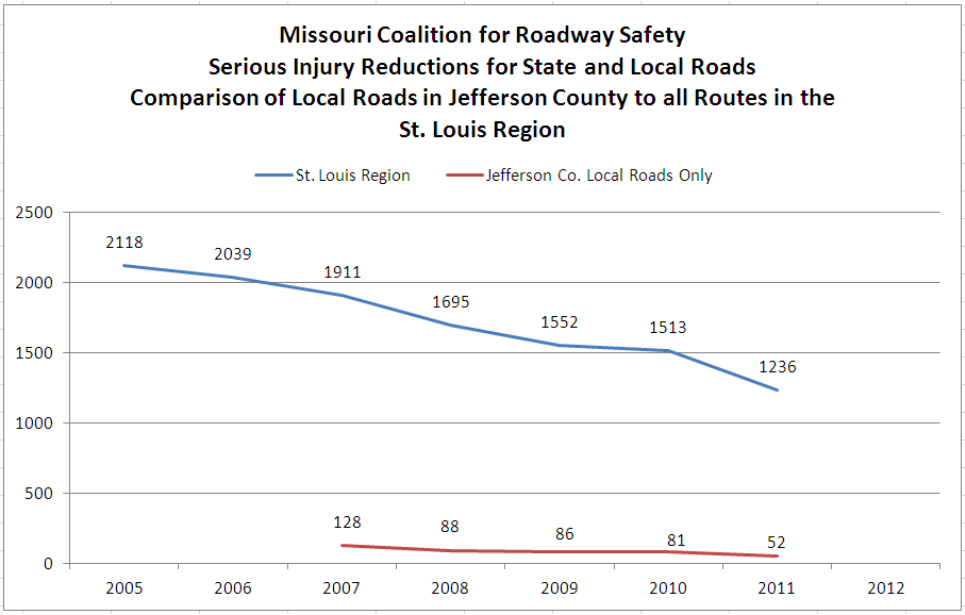


Figure 4. MCRS Serious Injury Reductions in the St. Louis Region and Jefferson County

According to the graph, the St. Louis Region needs to reduce fatalities to 140 by 2016. To meet this goal, the St. Louis Region must implement safety countermeasures on both the state and local roadway systems. To complement the St. Louis Region goal and fatal and serious injury reduction trend, Jefferson County needs to save at least 1 life and 22 serious injury crashes per year until 2016 on their local roads.

Jefferson County SHSP

It will take a united, sustained effort among the safety stakeholders in Jefferson County to save lives on local roadways. The transportation safety stakeholders each have the similar goal of reducing fatalities and serious injury crashes; however, each has identified various means of reaching that goal. Safety experts identify safety issues or assess safety goals using different measurements and qualification methods. For example, one agency may identify safety concerns and progress measurements using crash rates, while another uses crash frequency. In addition, a disparate level of crash and roadway information is known across the various agencies in the county. To make strides in reducing fatalities and serious injury roadway crashes, agencies need to combine the strengths of law enforcement, emergency medical service providers, educational outreach efforts, and infrastructure improvements.

The fatality and serious injury reduction goal for the Jefferson County SHSP is to save at least 1 life per year and prevent 22 serious injury crashes from occurring.

The following sections highlight the plan for Jefferson County to reduce fatalities and serious injury crashes. The information contained in these sections results from a straw man outline consisting of the roadway locations selected, proposed countermeasures, and the estimated cost of implementation on Jefferson County's local roads. One important component of the plan is the use of low-cost countermeasures as a systemic approach to reduce roadway fatalities. MoDOT has successfully used the systemic process to reduce intersection-related and roadway departure-related crashes and Missouri's Intersection Plan is found on FHWA's Office of Safety website. [2]

Action Plan

In Jefferson County, more than 9,100 roadway crashes occurred on local roads in the five-year period between 2007 through 2011. The development and implementation of a local SHSP can reduce fatalities and serious injury crashes. Missouri has successfully used four approaches to reduce roadway fatalities, as outlined in Table 2. They include systemic, traditional, standards-based and comprehensive. Each approach has its role in improving roadway safety. Jefferson County's plan focuses on systemic and comprehensive improvements, as these have the best potential to reduce fatalities and serious injury crashes in the immediate future.

[2] Federal Highway Administration, Office of Safety, Example Data Analysis Package and Straw Man Outline, http://safety.fhwa.dot.gov/intersection/resources/edapsmo0709/

Table 2. Approaches to Improving Roadway Safety

Approach Name	Description	Benefits	Disadvantages
Systemic	Identifies the select crash types and risk factors that generate the highest fatalities and serious injuries. Low-cost countermeasures are implemented over several locations with similar crash characteristics.	Systemic solutions can reduce overall severe crashes of certain types within a jurisdiction more effectively than choosing a small number of spot installations. This approach allows an agency to compensate for incomplete and lower-quality crash history and/or roadway data, as it is less vital for that information to be perfect when many locations/segments are addressed with low cost treatments.	Implementation must be widespread to make a region-wide impact. Also, it can be difficult to convince stakeholders to apply safety treatments (even if low-cost) at locations that do not have a history of crashes.
Traditional	Locates "black spots" or the highest frequency of crashes and is location-based.	Easily located using roadway and crash data.	This approach does not adequately deal with the randomness of the location of fatalities. An agency may apply a countermeasure using frequency or rate but may not address the most prevalent crash types.
Standards-based	Incorporates countermeasures not as a reactive measure but within the agency's day-to-day business policies.	The standards-based approach ensures that noteworthy practices become ingrained into the culture over time.	Benefits may lag as the number of applications move from individual sites to widespread use.
Comprehensive [3]	Incorporates all aspects of roadway safety, going beyond just infrastructure countermeasures.	This approach addresses the human element of traffic safety, factoring in the reality that even a "perfect roadway" can experience crashes if people make unsafe personal decisions. Agencies can target corridors with enforcement, associated education initiatives, and engineering infrastructure to combat a wide-range of issues.	Agencies may view this as "extra" effort in addition to daily duties.

[3] The comprehensive approach is one that accounts for both infrastructure and behavioral components that can be deployed on a corridor level or regional basis.

In order to concentrate resources where they will best achieve safety goals, a focused approach is necessary to isolate the most severe crash types from the 9,100 crashes that occurred on local roads in Jefferson County between 2007 through 2011. Though fatal and serious injury crashes tend to occur at random locations over time, identifying the most common contributing circumstances, or crash types (e.g., vulnerable users, environmental factors, high-risk drivers, roadway characteristics, special vehicles), associated with fatal and serious injury crashes can help us to identify emphasis areas on which to focus.

The State of Missouri is a nationally recognized leader for using a systemic approach to improve roadway safety. Two early uses of the systemic approach reduced fatal and serious injury crashes specific to intersections and roadway departure.

The consultant team began developing Jefferson County's plan by using the MCRS emphasis areas for Jefferson County local roads. The emphasis areas listed in Table 3 cover the common crash types contributing to fatalities and serious injuries on local roads in Jefferson County from 2007–2011. This list is ranked using the number of fatalities and serious injuries and identifies high-risk behaviors, vulnerable users, and special vehicles. Focusing implementation resources on the areas with most need determines which countermeasures will achieve the highest results. MCRS uses these emphasis areas for all regions, agencies, and roadway networks.

Table 3. Emphasis Areas on Jefferson County Local Roads for 2007-2011 [4]

Fatalities						
Description	**2007**	**2008**	**2009**	**2010**	**2011**	**Total**
Aggressive Driving						
Following too close	0	0	0	0	0	**0**
Too fast for conditions	4	3	4	0	3	**14**
Speed limit exceeded	4	1	2	5	3	**15**
TOTAL for 3 conditions	8	4	6	5	6	**29**
Run-off-Road crashes	5	5	5	6	3	**24**
Unrestrained Occupants [5]	5	4	4	3	6	**22**
Horizontal Curves	6	5	4	2	5	**22**
Alcohol and/or other drugs	4	5	5	4	3	**21**
Collision with Tree	1	3	3	4	2	**13**
Young Drivers – 15-20	2	3	2	1	2	**10**
Distracted Drivers	2	2	2	1	1	**8**
Motorcyclists killed	1	1	1	1	1	**5**
Intersection crashes						
Unsignalized	1	0	0	1	1	**3**
Signalized	1	0	0	0	0	**1**
TOTAL for Intersection Fatalities	2	0	0	1	1	**4**
Head-on Crashes						
Head-on – Non-Interstate	2	0	0	0	2	**4**
TOTAL Head-on	2	0	0	0	2	**4**
Pedestrians killed	1	1	1	0	0	**3**
Unlicensed drivers	2	0	0	1	0	**3**
Commercial Motor Vehicles	0	0	0	1	2	**3**
Collision with Utility Pole	1	0	0	0	1	**2**
Older Drivers – 65-75	0	0	0	1	0	**1**
Older Drivers – 76 or older	0	0	0	1	0	**1**
Work Zones	0	0	0	0	0	**0**
Bicyclists Killed	0	0	0	0	0	**0**
School Buses/School bus signal [6]	0	0	0	0	0	**0**
Total						**176**

Serious Injuries						
Description	**2007**	**2008**	**2009**	**2010**	**2011**	**Total**
Run-off-Road crashes	102	69	76	66	38	**351**
Horizontal Curves	83	59	75	47	41	**305**
Aggressive Driving						
Following too close	3	4	1	2	0	**10**
Too fast for conditions	60	43	46	32	30	**211**
Speed limit exceeded	14	5	10	8	5	**42**
TOTAL for 3 conditions	77	52	57	42	35	**263**
Unrestrained Occupants	50	46	44	28	19	**187**
Collision with Tree	46	36	42	27	23	**174**
Young Drivers – 15-20	37	37	36	21	18	**149**
Distracted Drivers	35	29	29	20	19	**132**
Alcohol and/or other drugs	29	20	34	17	15	**115**
Intersection crashes						
Unsignalized	11	11	3	2	5	**32**
Signalized	5	3	5	7	8	**28**
TOTAL for Intersection Serious Injuries	16	14	8	9	13	**60**
Head-on Crashes						
Head-on – Non-Interstate	22	12	12	4	8	**58**
TOTAL Head-on	22	12	12	4	8	**58**
Unlicensed drivers	22	9	10	8	4	**53**
Motorcyclists Seriously Injured	16	8	6	8	7	**45**
Collision with Utility Pole	7	9	10	12	5	**43**
Older Drivers – 65-75	8	5	2	5	6	**26**
Pedestrians Seriously Injured	9	3	3	4	5	**24**
Commercial Motor Vehicles	3	3	3	4	6	**19**
Older Drivers – 76 or older	5	3	1	0	2	**11**
Work Zones	0	0	0	2	0	**2**
Bicyclists Seriously Injured	0	2	0	0	0	**2**
School Buses/School bus signal	0	0	0	0	0	**0**
Total						**2019**

[4] Fatalities and serious injuries may account for and be included in multiple crash types.
[5] The numbers shown are for drivers and occupants.
[6] Calculated using crashes occurring under “School Zone” in the “Traffic Control Zone” variable in the vehicle table.

Based on Table 3, the emphasis areas contributing to the majority of fatal and serious injuries in Jefferson County are:

- Aggressive driving[7]—76% of roadway fatalities and 62% of serious injuries
- Run-off-road (roadway departure) —63% of roadway fatalities and 83% of serious injuries
- Unrestrained occupants—58% of roadway fatalities and 44% of serious injuries
- Horizontal curves—58% of roadway fatalities and 72% of serious injuries
- Impairment—55% of roadway fatalities and 27% of serious injuries
- Collisions with trees—13% of roadway fatalities and 41% of serious injuries
- Young drivers (ages 15-20) —26% of roadway fatalities and 35% of serious injuries.

The fatal and severe crash locations for each emphasis area in Jefferson County are found in Appendix A.

Approach

Missouri's *Blueprint to Save More Lives* presents the vision and direction for establishing a statewide and county SHSP. The Jefferson County SHSP carries that vision forward while specifically defining safety projects that help meet the state's goal of 700 or fewer fatalities by 2016.

Developing Jefferson County's SHSP requires numerous steps. They included:

1. Holding a safety champions meeting
2. Reviewing literature review and interviewing stakeholders
3. Analyzing data
4. Matching crash types with locations
5. Identifying potential countermeasure
6. Selecting countermeasures with local safety stakeholders
7. Developing a Draft SHSP
8. Distributing the Draft SHSP for review by stakeholders
9. Revising the draft and preparing the final SHSP

The following steps detail the process that the consultant team used to develop Jefferson County's SHSP.

Step 1: Hold Safety Champions Meeting. A safety champions meeting was held on October 17, 2013 at the Jefferson County Public Works office to discuss:

- A high-level overview of Jefferson County's local road crash data
- The process by which the county would support and implement the SHSP

[7] Aggressive driving is defined in Missouri as: (1) driving too close, (2) driving too fast for conditions, and (3) driving over the speed limit.

- Potential attendees of the data/countermeasure workshop
- Jefferson County's expectations of the SHSP and development process

As a result of this meeting, the consultant team presented information at the October 24, 2013 Jefferson County Transportation Subcommittee Meeting. They discussed the SHSP development process and presented preliminary data findings.

Step 2: Conduct literature review and conduct stakeholder interviews. The consultant team gathered information through a combination of agency interviews and document reviews from agency websites. The consultant team then conducted a literature review of the available relevant safety-related data (e.g., crash history and roadway inventory) and existing plans for Jefferson County, East-West Gateway (EWG), MoDOT, advocacy groups, and local agencies within the county. The resources consisted of documented enforcement efforts, marketing plans, major safety initiatives, program accomplishments, capital improvement plans, and long-range transportation plans. Appendix B provides a complete list of reviewed documents and findings, which was provided to Jefferson County safety stakeholders on October 23, 2013.

Step 3: Perform basic analyses to review the accuracy of the data and isolate overrepresented crash types. Data sets were used to identify and isolate overrepresented locations, crash types, and contributing circumstances that are most likely to contribute to fatal and serious injury crashes in Jefferson County. The emphasis areas were used to begin categorizing locations of concentration. These "clusters" of crash types were located by roadway segment or intersection.

Table 4 provides an example of cluster data pertaining to horizontal curve crashes on Jefferson County roads. According to the data, 34 crashes occurred on 10 horizontal curves in Jefferson County from 2007 to 2011. These 10 curves represent 1.26 percent of the horizontal curves on Jefferson County local roads; however, more than 20 percent of the total crashes occurred at these locations. Cluster data such as this are used in the next step to determine the level of implementation needed to reduce the total number of crashes, including fatalities.

Table 4. Example of Cluster Data for Curve Crashes in Jefferson County

Curve Crashes - Local Roads - 2007-2011 - Summary

NUMBER OF CRASHES PER CURVE	NUMBER OF CURVES	CUMULATIVE		CUMULATIVE	
		CURVES	PERCENT	CRASHES	PERCENT
113	1	1	0.13%	113	4.03%
77	1	2	0.25%	190	6.78%
69	1	3	0.38%	259	9.24%
52	3	6	0.76%	415	14.81%
41	2	8	1.01%	497	17.73%
37	1	9	1.14%	534	19.05%
34	1	10	1.26%	568	20.26%
31	1	11	1.39%	599	21.37%
29	1	12	1.52%	628	22.40%
28	1	13	1.64%	656	23.40%
27	3	16	2.02%	737	26.29%
26	2	18	2.27%	789	28.15%
25	2	20	2.53%	839	29.93%
24	-	20	2.53%	839	29.93%
23	1	21	2.65%	862	30.75%
22	-	21	2.65%	862	30.75%
21	3	24	3.03%	925	33.00%
20	2	26	3.28%	965	34.43%
19	3	29	3.66%	1,022	36.46%
18	2	31	3.91%	1,058	37.75%
17	4	35	4.42%	1,126	40.17%
16	1	36	4.55%	1,142	40.74%
15	3	39	4.92%	1,187	42.35%
14	4	43	5.43%	1,243	44.35%
13	3	46	5.81%	1,282	45.74%
12	1	47	5.93%	1,294	46.16%
11	6	53	6.69%	1,360	48.52%
10	5	58	7.32%	1,410	50.30%
9	7	65	8.21%	1,473	52.55%
8	9	74	9.34%	1,545	55.12%
7	14	88	11.11%	1,643	58.62%
6	15	103	13.01%	1,733	61.83%
5	21	124	15.66%	1,838	65.57%
4	31	155	19.57%	1,962	70.00%
3	51	206	26.01%	2,115	75.45%
2	102	308	38.89%	2,319	82.73%
1	484	792	100.00%	2,803	100.00%
Total	**792**	**792**	**100.00%**	**2,803**	**100.00%**

1.26 percent of Jefferson County's curves are responsible for 20.26 percent of horizontal curve crashes.

The consultant team discovered that some of the location information was missing. Locating a specific point on the road requires three attributes: milepost (log point), roadway name, and direction. A milepost is the common reference point used to locate crashes on Missouri's roadway network and within the state's crash database. For city streets, over 40% of the crash

records contained a null milepost. Crash reports on county routes had a null milepost for almost one-third of the reports.

Step 4: Match crash types and locations with potential countermeasures. Using both systemic and comprehensive approaches, the consultant team identified low-cost, proven safety countermeasures. Next, the team screened the Jefferson County local road network to find highway sections that have targeted crashes at or above a crash threshold that would ensure cost-effective deployment of these countermeasures. Estimating deployment impacts involves projected countywide crashes prevented, annual lives saved, and overall costs to deploy the countermeasures.

Crash data drives both approaches. The systemic approach identifies crash types that specific countermeasures are designed to address and identifies clusters of locations that have targeted crashes at or above a designated threshold level. The total number of targeted crashes in these clusters is then coupled with a predicted Crash Modification Factor (CMF)[8] to estimate the total number of targeted crashes that could be reduced based on countermeasure implementation at each cluster. The impact of these improvements in terms of crash severity reduction is determined by multiplying these targeted crash reductions by serious injuries per 100 crashes and fatalities per 100 crashes for targeted crashes in the environment of the clusters identified.

Once the locations of the overrepresented crash types were linked by road or corridor and paired with potential countermeasures, the consultant team identified thresholds for each corridor or roadway, indicating the number of potential treatment sites (or lengths of sites). The CMF for each potential treatment was applied, which resulted in the associated fatal and serious injury crash reductions and cost of treatment installation.

Thresholds for each countermeasure were based on a combination of factors. The threshold determines the level of deployment for each countermeasure. The number of deployments usually covers 20 to 40 percent of the locations. However, these locations account for the vast majority of crashes. For example, the number of deployments to reduce the number of crashes in horizontal curves in Jefferson County accounts for 39 percent of the locations, but addresses more than 80 percent of the curve crashes in Jefferson County. Another factor the team used to evaluate the deployments is the cost of saving one life and preventing one serious injury. The curve treatments will cost about $0.85 million per life saved and $0.08 million per serious injury prevented. A cost-effective treatment falls between $1 and $2 million dollars per life saved.

[8] A CMF is a multiplicative factor used to compute the expected number of crashes after implementing a given countermeasure at a specific site. The CMF is multiplied by the expected crash frequency without treatment. A CMF greater than 1.0 indicates an expected increase in crashes, while a value less than 1.0 indicates an expected reduction in crashes after implementation of a given countermeasure. For example, a CMF of 0.8 indicates an expected safety benefit; specifically, a 20%expected reduction in crashes. A CMF of 1.2 indicates an expected degradation in safety; specifically, a 20%expected increase in crashes. (Source: http://safety.fhwa.dot.gov/tools/crf/resources/fhwasa10032/). CMFs were identified primarily from information contained in the Crash Modification Factor clearinghouse at http://www.cmfclearinghouse.org.

Using a systemic approach helps offset the missing location data mentioned in Step 4. A widely deployed countermeasure ensures the level of effort will sufficiently reduce the total number of crashes and consequently reduce the number of severest crashes as well.

Step 5: Select countermeasures by involving local safety stakeholders. Using the potential countermeasures associated with fatal and serious injury crash reductions and installation costs identified in Step 4, Jefferson County safety stakeholders were invited to participate in selecting the countermeasures for the Jefferson County SHSP. Invited stakeholders included Jefferson County Public Works staff and law enforcement, Missouri State Highway Patrol (MSHP), EWG staff, MoDOT staff, and other safety and education partners.

The consultant team conducted a Data and Countermeasure Workshop on Wednesday, November 13, 2013 at Jefferson County Public Works office in Hillsboro. In attendance were 15 safety stakeholders representing Jefferson County engineering and law enforcement, educators, local transportation safety task force members, and others. For a complete list of those who participated in this workshop, see Appendix C. The primary objectives of the workshop were the following:

- Introduce stakeholders to the Jefferson County SHSP development process, including data analysis and crash factor identification, crash data trends, and potential countermeasures.
- Define the fatal and serious injury reduction goals.
- Explain potential countermeasures, their applicability to the safety issues, and obstacles associated with implementation.
- Establish a comprehensive approach including the five Es: Enforcement, Education, Engineering, Emergency Medical Services, and Everyone.
- Illustrate how the Jefferson County SHSP falls under the Missouri *Blueprint to Save More Lives* umbrella and how county safety goal achievement aligns with the vision of the *Blueprint*.

Step 6: Develop Draft Jefferson County SHSP. An initial action plan was developed identifying the locations of roadway segments and associated countermeasures. The consultant team used cost estimates and CMFs to assess the impact of implementation. These are contingent on actual level of implementation after field validation of the countermeasures for each location. This initial action plan is located in Appendix D, Data Package and Strategy Matrix.

The consultant team further refined the list of countermeasures to include the most effective strategies based on crash reduction, cost-effectiveness, ease of implementation, and support from Jefferson County safety stakeholders. Table 7 lists the final recommended safety countermeasures.

Step 7: Implementation. Each state has a Highway Safety Improvement Program (HSIP) and receives funding from the Federal government to implement safety improvements. To obligate

HSIP funds, a state must have an SHSP that identifies and analyzes highway safety issues and opportunities to reduce fatal and serious injury roadway crashes.

The safety improvements identified in the Jefferson County SHSP are eligible for possible HSIP funding. This county SHSP identifies implementable countermeasures related to engineering infrastructure, educational opportunities, and enforcement. To identify top priorities, the Jefferson County safety stakeholders should collaboratively identify a few key strategies and safety implementations with which to move forward initially.

The action plan allows the agencies to make adjustments as more precise information becomes available. Local agencies in Jefferson County will need to field verify roadway information, determine which countermeasures are necessary, and refine costs. Discussions related to funding implementations shown in this plan are located in the Funding section on page 70.

Approved Countermeasures

Jefferson County safety stakeholders, MoDOT, and the consultant team discussed and supported the countermeasures that appear in Table 5 during the *Data and Countermeasure Workshop* held on November 13, 2013. Table 5 indicates the following:

- Emphasis area crash types and associated historical fatalities and serious injuries
- Recommended safety countermeasures to address the crash type
- The crash modification factor (CMF)
- Expected life of the treatment
- Average deployment or construction costs associated with each countermeasure

Table 5 is organized by descending historical fatality counts from 2007-2011 for each crash type. The exact effectiveness of each countermeasure depends both on the information shown in this table (historical fatality/injury figures, CMF, cost of implementation) and the geographic dispersion of recommended implementation locations based on historical crash locations. It should be noted that many of the countermeasures identified in Table 5 will require multiple application sites, which will increase the overall costs for each countermeasure.

Table 5. Most Prevalent Fatal and Serious Injury Crash Types in Jefferson County

Emphasis Area Crash Types	Number of Fatalities (2007-2011)	Number of Serious Injuries (2007-2011)	Recommended Countermeasures	Crash Modification Factor	Expected Life	Average Unit Construction Cost (per each deployment)
Aggressive Driving	29	263	Speed Enforcement/Education	0.80 [9]	5-yr program	$52k per section [10] for enforcement + $50k for education
Run-off-Road crashes	24	351	Add Edge Line Striping	0.90	3 years	$1,000 per mile
			Add Edge Line Rumble Strips	0.82 – 0.87	10 years	$10,000 per mile
			Increase Clear Zone (0-5')	0.66	10 years	$5,000 per mile
			Delineate Utility Posts and other fixed objects	0.90	10 years	$1,000 per mile
Unrestrained Occupants	22	187	Seatbelt Enforcement/Education	0.80	5-yr program	$52k per section[1] for enforcement + $50k for education
			Primary Seatbelt Ordinance	unknown	Duration of ordinance	unknown
Horizontal Curves	22	305	Add Curve Signing (Advanced Curve Warning Signs, Speed Plaques, Chevrons, Reflective Posts)	0.70	10 years	$3,000 per curve
			Add ITS (Speed Feedback Signs)	0.49	10 years	$13,000 per curve
Alcohol and/or other drugs	21	115	Impairment Enforcement/Checkpoints/Education	0.80	5-yr program	$52k per section[1] for enforcement + $50k for education
Collision with Tree	13	174	Increase Clear Zone (0-5')	0.66	10 years	$5,000 per mile
Young Drivers (15-20)	10	149	Licensure Enforcement/Education (Drivers Education Courses, Education Campaigns)	0.80	5-yr program	$52k per section[1] for enforcement + $50k for education

[9] The CMF for all enforcement and education countermeasures is valid as long as the enforcement/education program is continued and in place.
[10] Enforcement cost assumption: 1 officer * $40/hr * 10 hrs/week * 26 weeks/yr * 5 yr program

Table 6 discusses the details related to deploying each countermeasure and the assumptions that were used to determine the CMF shown in Table 5. Should Jefferson County modify the installation from the description provided in Table 6, the countermeasure effectiveness may vary. Additionally, the consultant team followed the guidelines for combining multiple CMFs found in the Highway Safety Manual. The formula can result in a combined CMF which may be unrealistically too low (CMF <= 0.3) at some spot locations. Limiting the CMFs of multiple countermeasures to 0.7 or 30% reduction is recommended for estimating purposes.

Table 6. Countermeasure Descriptions

Countermeasure	Countermeasure Descriptions
Speed, Seatbelt, Impairment, Young Driver Enforcement/ Education, Primary Seatbelt Ordinance	• Involve local law enforcement to increase enforcement of identified driver issues (alcohol related, aggressive driving including speeding, and non-use of safety belts). Determine appropriate types and levels of enforcement needed to improve driver behavior. (At least 10 hours of active visible enforcement per 5 miles within the corridor.) • Once a firm commitment is made by law enforcement to significantly increase active visible enforcement on the corridor (at least to the minimum 10 hours per week per 5-mile section) initiate a public information campaign targeting adjacent and near population areas that use the corridor advising of the driver actions that are causing many of the crashes on the corridor, the increased police activities being initiated to enforce the law, and actions drivers can take to reduce the potential for being in a corridor crash. Consider supplementing the public information campaign with targeted enforcement area signs or similar signs at the beginning of the corridor to reinforce the public information campaign and reach those drivers that are not from the local area or are infrequent users of the corridor. • Involve EMS personnel that service crashes within the corridor to determine enhancements to substantially improve survivability of severe crash victims within the corridor. These would include activities that will reliably get the EMS personnel to the scene quicker, training or equipment improvements to improve survivability at the scene, and activities to transport the injured to a hospital quicker. • Continue and grow summer driver's education courses and related opportunities to target young drivers. • Educate and advocate for passing a primary seatbelt ordinance.
Add Edge Line Striping	• Consider application of edge lines only, on narrow, 18-feet or less unmarked rural highways, which have a roadway departure crash problem and a suitable edge to apply the marking.
Add Edge Line Rumble Strips	• Apply on new hot bituminous surfaces and existing hot bituminous surfaces in good condition. • Apply a fog seal on the newly cut strip to reduce crack potential. • Avoid use in urban areas or in areas where the strip can create a potential noise issue with adjacent dwellings. Do not apply on pavements or shoulders that do not have a hot bituminous or concrete surface. Also, avoid use on pavements that have visible pavement surface distress. • Minor improvements also include corrections to pavement shoulder drop-offs 2 inches or greater. • Initiate program to keep shoulder level with pavement to minimize edge drop-offs. • Considering adding safety edge on all resurfacing projects.
Increase Clear Zone (0-5')	• Remove trees, brush, and other obstacles within 5' of the edge of travel way.
Delineate Utility Posts and other	• Delineation should be considered in those sections having high frequencies and proportions of nighttime single vehicle fixed object crashes. All fixed objects including head walls, trees, poles, and guard rail should

Countermeasure	Countermeasure Descriptions
fixed objects	be considered.
Add Curve Signing (Advanced Curve Warning Signs, Speed Plaques, Chevrons, Reflective Posts)	• Apply oversized fluorescent yellow advanced curve warning sign (MUTCD retro-reflective material compliant), both left and right, with reflective post strip, advisory speed plate, chevrons as required in the MUTCD, with long lines (desirably 6-inch width) at least 300 feet in advance and through the curve. Speed reduction pavement markings including SLOW (optional advisory speed) and a curve symbol or use of OPTI-Bars or peripheral transverse pavement markings also included.
Add Speed Feedback Signs	• Same as enhanced signs and markings for curves plus dynamic curve warning signs activated and advising only speeding motorists to slow down.

Develop Jefferson County SHSP

Table 7 provides the prioritized list of safety countermeasures that Jefferson County safety stakeholders should implement to save at least 1 life and 22 serious injury crashes per year over the next 5 years, once full implementation of safety countermeasures is reached. The estimated cost for implementing these countermeasures is $1.37 million per year.

Table 7 uses the following terminology:

- The ***description*** of the countermeasure is a general title of the deployment. The countermeasures may represent a group of treatments at a location. For instance, countermeasures at signals include updated clearance timing, use of reflectorized back plates, and discontinuing late night flash (if used).
- The ***approach*** designates whether the deployments are systemic, traditional, standards-based, or comprehensive. This plan is focused on systemic approach by using low-cost treatments to account for the random location of fatality crashes. Agencies will have the opportunity to fold some of these treatments into their standards and policies to ensure that time-proven safety treatments are considered throughout planning, design, construction, and operations. Comprehensive treatments provide the opportunity for enforcement, emergency medical service providers, education, and engineering to collaborate to improve safety.
- ***Estimated number of improvements*** is the number of roadways, roadway segments, intersections, or corridors recommended for improvement.
- ***Cost*** is the total cost necessary to fund the number of improvements. For illustration, the deployment is shown over a five-year period and the costs can be spread over this time. Infrastructure costs represent installation only; ongoing operation or

maintenance costs are not reflected. Costs for enforcement include labor costs only and do not reflect the ongoing effort needed from enforcement.

- ***Annual targeted crash reduction*** is the reduction of the specific crash type for the deployment. For example, center line rumble strip deployment targets roadway departure which targets head-on or different direction side-swipe crashes. These reduction numbers are reductions per year once the countermeasure has been deployed at the full number of implementation sites.
- ***Annual estimated serious injury crash reductions*** are the reduction in the number of serious crashes associated in injuries. This estimate is contingent on the level of deployment of the plan.
- ***Annual estimated fatality reductions*** are the number of lives saved per year. The targeted deployment of low-cost countermeasures over a wide area such as Jefferson County will gain reductions in total crashes and consequently reduce the number of fatalities that result from these crashes. This estimate is contingent on the level of deployment of the plan.
- The ***$(millions) required to prevent/reduce one annual severe injury*** is a measure of cost-effectiveness.
- The ***$(millions) needed to save one annual life*** is a measure of cost-effectiveness. A prioritized list of countermeasures was chosen from this list based on those closest to $1.0 to $2.0 million.

Table 7. Recommended Safety Countermeasures – Sample 5-Year Implementation Plan

Countermeasure	Approach	Estimated Number of Improvements	Associated Costs ($ Million) [1]	Annual Targeted Crash Reduction	Annual Estimated Serious Injury Crash Reduction	Annual Estimated Fatality Reduction	$ (million) Required to Prevent/Reduce One Annual Serious Injury Crash	$ (million) Required to Save One Annual Life
Local Roads								
Enhanced Curve Sign and Marking Countermeasure	Systemic	154	$0.46	69.57	5.96	0.55	0.08	0.85
Curve Speed Feedback Sign Treatments	Systemic	29	$0.38	71.91	6.16	0.56	0.06	0.67
Edge Line Striping	Systemic	25	$0.05	7.10	0.74	0.07	0.07	0.77
Milled-In Edge Line Rumble Strips	Systemic	32	$0.32	15.22	1.58	0.14	0.20	2.24
Tree Removal/Clear Zone Improvements (0-5')	Systemic	59	$0.30	13.88	2.01	0.19	0.15	1.58
Tree Removal/Clear Zone Improvements (0-5') Curves Only	Systemic	40	$0.20	11.70	1.96	0.16	0.10	1.27
Utility Pole and Other Fixed Object Delineation	Systemic	14	$0.01	5.28	0.42	0.02	0.03	0.58
Enforcement and Education: Alcohol Related	Comprehensive	53	$2.80	7.99	1.05	0.24	2.65	11.61
Enforcement and Education: Unbelted Crashes	Comprehensive	2	$0.17	1.49	0.13	0.02	1.31	11.12
Education and Enforcement: Speeding Related Crashes	Comprehensive	34	$1.80	18.86	1.74	0.27	1.04	6.75
Driver Age - Young Drivers	Comprehensive	6	$0.38	8.16	0.31	0.03	1.24	13.81
Total Cost and Benefit (Local Roads)								
Total Cost ($Million)			**$6.87**	**-**	**-**	**-**	**-**	**-**
Annual Cost ($ Million) for 5 years; Annual Benefit			**$1.37**	**231**	**22.05**[11]	**2.24**[11]	**-**	**-**

[11] Based on full implementation of these countermeasures, Jefferson County can expect to save more than 2 lives and 22 serious injury crashes per year after installation is complete.

The following sections provide the suggested implementation sites for each countermeasure described in Table 7. These implementation sites were prioritized based on 2007-2011 crash data. The suggested implementation sites should be verified in field conditions using engineering judgment to determine feasibility of implementation of the recommended countermeasure. Also, to meet the goal of at least 1 life and 22 serious injury crashes saved per year, agencies must implement the minimum "estimated number of improvements" for each countermeasure listed in Table 7.

For each implementation site table, a log mile range is given denoting where the recommended implementation should occur. The 0.0 log mile point for each route is at the furthermost north (for primarily north-south corridors) or west (for primarily east-west corridors). Implementation sites are shown on the corresponding countermeasure implementation site maps in Appendix A.

Countermeasure: Enhanced Curve Signing and Marking and Curve Speed Feedback Sign Treatments

The proposed signing and marking treatments for curves with crashes at or above the crash threshold are shown below. It should be noted that deviation from the recommended installation requirements below may affect crash reduction effectiveness.

Enhanced Curve Signing and Marking:

- Advance oversize fluorescent yellow curve warning signs, both left and right.
- Chevrons with spacing in Table 2C-6 of the 2009 MUTCD.
- Advisory speed plates beneath the advance warning sign with a standardized approach to determine the appropriate advisory speed in accordance with Table 2C-5 of the 2009 MUTCD. Consider the FHWA document SA-11-22, Procedures for Setting Advisory Speeds on Curves, dated June 2011, [12] when setting the approach speed.
- Reflective post strips on all sign posts approaching and within curve.
- Place "SLOW" and either a "CURVE" legend or curve symbol pavement markings in advance of the curve. Note that the curve pavement marking symbol layout must receive FHWA approval. In addition, consider alternate pavement marking options to slow high-end approach speeds, such as advisory speeds and the use of peripheral transverse pavement markings.

Curve Speed Feedback Signs:

- At particularly high-crash locations, install dynamic curve warning signs that are activated when approaching motorists are traveling above the curve advisory speed and communicate the need to slow through the curve.
- Speed feedback signs should be installed in both directions of travel in advance of the curve with sufficient distance to perceive and react to the information.

The following table lists suggested implementation sites for both treatments on routes with the largest number of curve crashes. Each entry shows the number of crashes occurring within that section of roadway and which section may benefit from the use of speed feedback signs in addition to the signing and marking improvements.

Implementation Cost: $3,000 per curve for enhanced signing and marking improvements and $13,000 per curve for speed feedback signs

[12] The FHWA document can be found at http://safety.fhwa.dot.gov/speedmgt/ref_mats/fhwasa1122/fhwasa1122.pdf.

Determine specific implementation sites in the field using engineering judgment. Those curve crashes that were identified on the corridor but not specifically located along a route are included in the "route total curve crashes" groups; it is possible/likely that some un-located crashes occurred within the sections shown within each route. [13]

Table 8. Recommended Enhanced Curve Signing and Marking and Speed Feedback Signs Implementation Sites

Route	Municipality	Route Total Curve Crashes [14] ('07-'11)	Signing and Marking Improvement Sites			Notes	Potential Curve Speed Feedback Signs [15] Implementation Site(s) and #
			Section Begin Log Point	Section End Log Point	Subsection Curve Crashes ('07-'11)		
Old Lemay Ferry Road	Jefferson County	113					
			1.0	2.3	43		Yes – 1 or 2
			3.0	4.5	23		Yes – 1 or 2
			Un-located crashes along this corridor		35		
Old Hwy 21	Jefferson County	90					
			0.2	0.8	9		Yes - 1
			1.1	1.6	14		Yes - 1
			6.8	7.1	6		
			Un-located crashes along this corridor		28		
Rock Creek Road	Jefferson County	90	0.3	0.9	9		Yes - 1
			1.3	1.9	5		
			4.0	5.0	7		
			5.3	6.2	9		Yes - 1
			6.8	7.6	9		Yes - 1

[13] While the crashes are located to the corridor but not to a specific log mile range, it is likely that some of the un-located crashes can be attributed to the crash clusters shown in the log mile ranges in the lines above the un-located crashes. For this reason, the crash clusters should be regarded as the minimum number of crashes occurring between the specified log mile ranges.

[14] Route Total Curve Crashes are equal to the total number (including all crash severities) of clustered crashes within each section listed, the un-located crashes on the route, and other crashes that did not appear in clusters.

[15] Recommendations to install speed feedback signs were based on a crash threshold of at least 8 crashes per curve.

Route	Municipality	Route Total Curve Crashes[14] ('07-'11)	Signing and Marking Improvement Sites			Notes	Potential Curve Speed Feedback Signs[15] Implementation Site(s) and #
			Section Begin Log Point	Section End Log Point	Subsection Curve Crashes ('07-'11)		
			8.3	8.9	6		
			Un-located crashes along this corridor		33		
Richardson Road	Arnold	77					
			0.5	0.6	5		
			0.8	1.0	27		Yes – 1
			1.5	1.6	22		Yes – 1
			Un-located crashes along this corridor		8		
Romaine Creek Road	Jefferson County	60	0.0	0.4	16		Yes -1
			2.1	3.5	31		Yes -1 or 2
			Un-located crashes along this corridor		12		
Saline Road	Jefferson County	53	0.7	1.0	5		
			1.3	2.2	17		Yes – 1 or 2
			3.1	4.2	12		Yes – 1
			Un-located crashes along this corridor		16		
Four Ridge Road[16]	Jefferson County	51	0.0	0.6	10		Yes - 1
			Un-located crashes along this corridor		18		
Hillsboro Valley Park Road	Jefferson County	46	0.0	1.7	16		Yes - 1
			1.9	3.1	9		Yes - 1
			Un-located crashes along this corridor		20		

[16] Four Ridge Road, East Four Ridge Road, and West Four Ridge Road data were combined in this field.

Route	Municipality	Route Total Curve Crashes[14] ('07-'11)	Signing and Marking Improvement Sites			Notes	Potential Curve Speed Feedback Signs[15] Implementation Site(s) and #
			Section Begin Log Point	Section End Log Point	Subsection Curve Crashes ('07-'11)		
Old Sugar Creek Road	Jefferson County	45	0.0	0.7	19		Yes – 1
			1.0	1.9	6		
			2.1	3.1	10		Yes – 1
			Un-located crashes along this corridor		7		
Seckman Road	Jefferson County	44	2.2	3.5	28		Yes – 1 or 2
			Un-located crashes along this corridor		11		
Lions Den Road	Jefferson County	43	0.0	0.8	26		Yes – 1 or 2
			Un-located crashes along this corridor		11		
Lonedell Road	Jefferson County	42	0.0	0.4	8		Yes - 1
			0.6	1.5	7		
			1.5	2.1	11		Yes - 1
			Un-located crashes along this corridor		16		
Flucom Road	Jefferson County	38	0.6	1.6	12		Yes – 1
			1.7	2.0	5		
			2.7	3.6	5		
			4.1	4.6	6		
			Un-located crashes along this corridor		6		
McNutt Street	Herculaneum	37	0.0	0.6	37		Yes - 1
			Un-located crashes along this corridor		27		
Gravois Road	Jefferson	35	0.0	0.5	8		Yes - 1

Route	Municipality	Route Total Curve Crashes[14] ('07-'11)	Signing and Marking Improvement Sites			Notes	Potential Curve Speed Feedback Signs[15] Implementation Site(s) and #
			Section Begin Log Point	Section End Log Point	Subsection Curve Crashes ('07-'11)		
	County		1.1	2.2	5		
			Un-located crashes along this corridor		15		
Miller Road	Jefferson County	33	0.3	1.7	14		Yes - 1
			2.0	3.2	7		
			Un-located crashes along this corridor		10		
Antire Road	Jefferson County	30	1.6	2.7	4		
			3.8	4.0	7		
			4.7	5.2	5		
			Un-located crashes along this corridor		12		
Konert Road	Jefferson County	30	0.0	1.1	22	Log 0.3 – 0.5 has 9 crashes	Yes – 1 or 2
			Un-located crashes along this corridor		8		
Vogel Road	Arnold	26	0.0	0.3	19		Yes - 1
			Un-located crashes along this corridor		3		
Vogel Road	Jefferson County	26	0.0	0.8	15		Yes - 1
			Un-located crashes along this corridor		10		
Hillsboro House Springs Road	Jefferson County	26	1.9	3.3	6		
			Un-located crashes along this corridor		12		
Dulin Creek Road	Jefferson County	25	0.0	1.4	14		Yes - 1
			Un-located crashes along this corridor		7		

Countermeasure: Edge Line Striping

The proposed edge line striping locations based on existing unmarked roads with the highest crash frequency are shown below. It should be noted that deviation from the recommended installation requirements below may affect crash reduction effectiveness.

Consider application of edge lines **only**, on narrow, 18-feet or less unmarked rural highways, which have a roadway departure crash problem and a suitable edge to apply the marking.

Implementation Cost: $2,000 per 1-mile section. Determine specific implementation sites in the field using engineering judgment.

Table 9. Recommended Edge Line Striping Locations

Route	Municipality	Jefferson County Route Number	Shed	Total Run-off Road Crashes [17] ('07-'11)	Road Length, mile
Klondike Road	Jefferson County	187	West	16	5.768
Mount Olive Road	Jefferson County	328	East	14	4.895
Dittmer-Catawissa	Jefferson County	167	West	12	4.026
Sunnyside	Jefferson County	236	East	8	4.442
Klondike Road South	Jefferson County	315	East	3	5.862
Dittmer	Jefferson County	166	West	3	1.411
Total Length, miles					**26.407**

[17] Route Total Run-off Road Crashes are equal to the total number (including all crash severities) of crashes for each road listed.

Countermeasure: Milled Edge Line Rumble Strips or Stripes [18]

This countermeasure involves installing milled edge line rumble strips on both edge lines of a two-lane, two-way road, or both inside and outside edge lines of a divided road. It should be noted that deviation from the recommended installation requirements below may affect crash reduction effectiveness.

- Apply on new hot bituminous surfaces and existing hot bituminous surfaces in good condition.
- Apply a fog seal on the newly cut strip to reduce crack potential.
- Avoid use in urban areas or in areas where the strip can create a potential noise issue with adjacent dwellings. Do not apply on pavements or shoulders that do not have a hot bituminous or concrete surface. Also, avoid use on pavements that have visible pavement surface distress.
- Minor improvements also include corrections to pavement shoulder drop-offs 2 inches or greater.
- Initiate program to keep shoulder level with pavement to minimize edge drop-offs.
- Considering adding safety edge on all resurfacing projects.

The following list shows suggested implementation sites on routes with the largest number of run-off-road crashes. Additionally, each entry shows the number of crashes occurring within that section of roadway.

Implementation Cost: $10,000 per 1-mile segment

One implementation site equals one mile of roadway. Determine specific implementation sites in the field using engineering judgment. Those run-off road crashes that were identified on the corridor but not specifically located along a route are included in the "route total crashes" groups; it is possible/likely that some un-located crashes occurred within the sections shown within each route. [19]

[18] For detailed information related to rumble strip implementation, refer to MoDOT's Engineering Policy Guide: http://epg.modot.mo.gov/index.php?title=Category:626_Rumble_Strips

[19] While the crashes are located to the corridor but not to a specific log mile range, it is likely that some of the un-located crashes can be attributed to the crash clusters shown in the log mile ranges in the lines above the un-located crashes. For this reason, the crash clusters should be regarded as the minimum number of crashes occurring between the specified log mile ranges.

Table 10. Recommended Milled Edge Line Rumble Strip Implementation Sites

Route	Municipality	Route Total Run-off Road Crashes[20] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Run-off Road Crashes (07-11)	Cumulative 1-mile Sections
Old Lemay Ferry Road	Jefferson County	154	1.1	5.1	79	4
			8.0	10.0	9	6
			Un-located or un-clustered crashes along this corridor		47	
Old Hwy 21	Jefferson County	71	0.0	4.0	26	10
			4.0	6.0	10	16
			Un-located or un-clustered crashes along this corridor		16	
Rock Creek Road	Jefferson County	56	5.5	8.5	20	19
			Un-located or un-clustered crashes along this corridor		16	
Seckman Road	Jefferson County	52	2.5	3.5	33	20
			Un-located or un-clustered crashes along this corridor		11	
Saline Road	Jefferson County	50	0.7	2.7	25	22
			3.2	4.2	8	25
			Un-located or un-clustered crashes along this corridor		17	
Dulin Creek Road	Jefferson County	47	0.0	1.0	22	26
			3.0	4.0	6	28
			Un-located or un-clustered crashes along this corridor		14	
Old Sugar Creek Road	Jefferson County	46	0.1	1.1	11	29
			1.3	4.3	26	33
			Un-located or un-clustered crashes along this corridor		9	

[20] Route Total Run-off Road Crashes are equal to the total number (including all crash severities) of clustered crashes within each section listed, the un-located crashes on the route, and other crashes that did not appear in clusters.

Route	Municipality	Route Total Run-off Road Crashes[20] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Run-off Road Crashes (07-11)	Cumulative 1-mile Sections
Miller Road	Jefferson County	43	0.0	3.2	35	36
			Un-located or un-clustered crashes along this corridor		8	
Lonedell Road	Jefferson County	41	0.0	2.0	23	38
			Un-located or un-clustered crashes along this corridor		18	
Flucom Road	Jefferson County	39	1.0	2.0	16	39
			2.4	4.4	15	42
			Un-located or un-clustered crashes along this corridor		4	
Romaine Creek Road	Jefferson County	36	2.4	3.4	17	43
			Un-located or un-clustered crashes along this corridor		12	

Countermeasure: Tree Removal/Increase Clear Zone to 5' Beyond Edge of Pavement

The fixed object associated with the greatest number of roadway departure fatalities is trees. One of the challenges associated with this initiative is that tree removal alone may not be the only necessary low-cost countermeasure; also consider removal or relocation of other vulnerable fixed objects. In addition, many vulnerable trees are located beyond the ditch line (approximately 3 to 5 feet from the roadway edge) and on private property. Vulnerable trees are trees that have evidence of previous collisions with vehicles and trees that are well within the clear zone for the highway. Develop processes to work with property owners to allow for removal of vulnerable trees off of the right-of-way. For example, consider replanting the tree in a less vulnerable location or replace the tree with impact-friendly shrubbery.

The following lists suggested implementation sites on routes with the largest number of tree crashes. Also, each entry shows the number of crashes occurring within that section of roadway.

Implementation Cost: $5,000 per 1-mile segment
Determine specific implementation sites in the field using engineering judgment. Those tree crashes that were identified on the corridor but not specifically located along a route are included in the "route total crashes" groups; it is possible/likely that some un-located crashes occurred within the sections shown within each route. [21]

Table 11. Recommended Tree Removal/Clear Zone Improvement Sites

Route	Municipality	Route Total Tree Crashes [22] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree Crashes (07-11)	Cumulative 1-mile Sections
Old Lemay Ferry Road	Jefferson County	46	1.1	2.2	8	1.1
			3.0	4.1	9	2.2
			4.1	5.1	5	3.2
			9.0	9.5	3	3.7
			10.3	11	3	4.1
			Un-located crashes along this		18	

[21] While the crashes are located to the corridor but not to a specific log mile range, it is likely that some of the un-located crashes can be attributed to the crash clusters shown in the log mile ranges in the lines above the un-located crashes. For this reason, the crash clusters should be regarded as the minimum number of crashes occurring between the specified log mile ranges.
[22] Route Total Tree Crashes are equal to the total number (including all crash severities) of clustered crashes within each section listed, the un-located crashes on the route, and other crashes that did not appear in clusters.

Route	Municipality	Route Total Tree Crashes [22] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree Crashes (07-11)	Cumulative 1-mile Sections
			corridor			
Rock Creek Road	Jefferson County	33	0.6	0.8	2	4.3
			1.3	1.9	3	4.9
			6.8	7.6	4	5.7
			Un-located crashes along this corridor		24	
Four Ridge Road [23]	Jefferson County	27	0.1	0.6	5	6.2
			1.2	2.8	11	7.8
			3.2	4.2	4	8.8
			Un-located crashes along this corridor		7	
Old Highway 21	Jefferson County	25	1.5	1.6	3	8.9
			2.3	2.4	3	9.0
			Un-located crashes along this corridor		19	
Seckman Road	Jefferson County	23	2.2	2.3	2	9.1
			2.7	3.5	16	9.9
			Un-located crashes along this corridor		5	
Hillsboro Valley Park Road	Jefferson County	22	0.5	1.5	7	10.9
			1.7	2.7	4	11.9
			Un-located crashes along this corridor		11	
Antire Road	Jefferson County	19	1.6	2.6	4	12.9
			3.9	4.5	4	13.5
			Un-located crashes along this corridor		11	
Hillsboro House	Jefferson	19	1.5	2.1	2	14.1
			2.4	3.1	2	14.8

[23] Four Ridge Road, East Four Ridge Road, and West Four Ridge Road data were combined in this field.

Route	Municipality	Route Total Tree Crashes [22] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree Crashes (07-11)	Cumulative 1-mile Sections
Springs Road	County		5.0	6.0	3	15.8
			Un-located crashes along this corridor		12	
Lions Den Road [24]	Jefferson County	16	0.0	0.7	8	16.5
			1.6	1.7	1	16.6
			Un-located crashes along this corridor		7	
Saline Road	Jefferson County	15	0.7	0.9	2	16.8
			1.3	1.8	2	17.3
			2.2	2.7	2	17.8
			3.6	4.1	5	18.3
			Un-located crashes along this corridor		4	
Dulin Creek Road	Jefferson County	15	0.0	0.9	5	19.2
			3.3	4.1	3	19.9
			Un-located crashes along this corridor		7	
Lonedell Road	Jefferson County	13	0.3	1.5	4	21.1
			Un-located crashes along this corridor		9	
Flucom Road	Jefferson County	12	0.6	1.5	3	22.0
			1.8	2.0	1	22.2
			4.1	4.5	5	22.6
			Un-located crashes along this corridor		3	
Romaine Creek Road	Jefferson County	11	0.0	0.3	1	22.9
			2.1	3.3	6	24.1
			Un-located crashes along this		4	

[24] Crash data does not take into account the reconstruction/realignment of this roadway.

Route	Municipality	Route Total Tree Crashes [22] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree Crashes (07-11)	Cumulative 1-mile Sections
			corridor			
Hunning Road	Jefferson County	10	0.4	1.2	2	24.9
			Un-located crashes along this corridor		8	
Williams Creek Road	Jefferson County	10	0.5	0.7	1	25.1
			1.4	2.3	7	26.0
			Un-located crashes along this corridor		2	
Konert Road	Jefferson County	9	0.0	0.6	5	26.6
			0.9	1.2	1	26.9
			Un-located crashes along this corridor		3	
Gamel Cemetery Road	Festus	8	Un-located crashes along this corridor		8	26.9
Old Sugar Creek Road	Jefferson County	9	0.1	0.7	4	27.5
			2.1	3.0	2	28.4
			3.4	4.0	2	29.0
			Un-located crashes along this corridor		1	
Miller Road	Jefferson County	8	0.2	1.7	5	30.5
			Un-located crashes along this corridor		3	
Plattin road	Jefferson County	9	0.0	1.7	3	32.2
			5.0	6.0	2	33.2
			Un-located crashes along this corridor		4	
Mount Olive Road	Jefferson County	8	0.0	1.3	7	34.5
			Un-located crashes along this corridor		1	

Route	Municipality	Route Total Tree Crashes [22] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree Crashes (07-11)	Cumulative 1-mile Sections
Main Street	De Soto	11	0.5	0.6	1	34.6
			1.2	1.7	3	35.1
			8.8	9.2	1	35.5
			Un-located crashes along this corridor		6	
Old Antonia Road	Jefferson County	7	0.0	0.9	5	36.4
			1.2	1.4	1	36.6
			Un-located crashes along this corridor		1	
Victoria Road	Jefferson County	7	1.8	2.4	1	37.2
			3.2	4.3	5	38.3
			Un-located crashes along this corridor		1	
Klondike Road	Jefferson County	8	0.4	0.9	1	38.8
			1.8	2.4	1	39.4
			3.3	3.5	1	39.6
			4.3	4.7	1	40.0
			Un-located crashes along this corridor		4	
Marble Springs Road	Jefferson County	6	2.3	3.1	1	40.8
			4.0	6.0	5	42.8
			Un-located crashes along this corridor		0	
Jones Creek Road	Jefferson County	6	0.5	1.3	3	43.6
			2.0	3.1	2	44.7
			Un-located crashes along this corridor		1	
Old Highway M	Jefferson County	6	4.1	6.0	5	46.6
			Un-located crashes along this		1	

Route	Municipality	Route Total Tree Crashes [22] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree Crashes (07-11)	Cumulative 1-mile Sections
			corridor			
Buck Creek Road	Jefferson County	7	0.1	1.6	3	48.1
			1.8	2.6	1	48.9
			Un-located crashes along this corridor		3	
Ware Church Road	Jefferson County	7	0.1	2.3	6	50.1
			Un-located crashes along this corridor		1	
Upper Plattin Road	Jefferson County	6	0.0	0.2	1	50.3
			1.3	2.1	3	51.1
			Un-located crashes along this corridor		2	
Byrnes Mill Road	Byrnes Mill	5	3.0	3.8	2	51.9
			Un-located crashes along this corridor		3	
Armbruster Road	Jefferson County	5	0.7	2.0	3	53.2
			Un-located crashes along this corridor		2	
Tishomingo Road	Jefferson County	5	1.8	2.7	3	54.2
			Un-located crashes along this corridor		2	
Schumacher Road	Jefferson County	5	0.0	1.0	4	55.2
			Un-located crashes along this corridor		1	
Sandy Creek Road	Jefferson County	5	0.0	0.3	1	55.5
			0.9	1.7	3	56.3
			Un-located crashes along this corridor		1	
Local Hillsboro	Jefferson	5	1.0	1.5	4	56.8

Route	Municipality	Route Total Tree Crashes [22] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree Crashes (07-11)	Cumulative 1-mile Sections
Road	County		Un-located crashes along this corridor		1	
Hillsboro Victoria Road	Jefferson County	8	0.5	1.4	4	57.8
			Un-located crashes along this corridor		4	
Little Antire Road	Jefferson County	6	0.2	1.2	5	58.8
			Un-located crashes along this corridor		1	
Gravois Road	Jefferson County	5	0.0	0.5	3	59.3
			0.6	1.3	1	60.0
			3.0	3.1	1	60.1
			Un-located crashes along this corridor			

Countermeasure: Tree Removal/Increase Clear Zone to 5' Beyond Edge of Pavement in Horizontal Curve Sections

The previous section identified removal of fixed objects such as trees on general roadway sections. This section analyzed data for the combination of fixed object within horizontal curves. This combination would be a focused effort for roadway departure. The fixed object associated with the greatest number of roadway departure fatalities is trees. One of the challenges associated with this initiative is that tree removal alone may not be the only necessary low-cost countermeasure; also consider removal or relocation of other vulnerable fixed objects. In addition, many vulnerable trees are located beyond the ditch line and on private property. Vulnerable trees are trees that have evidence of previous collisions with vehicles and trees that are well within the clear zone for the highway. Develop processes to work with property owners to allow for removal of vulnerable trees outside of the public right-of-way. For example, consider replanting the tree in a less vulnerable location or replace the tree with impact-friendly shrubbery.

The following table lists suggested implementation sites on routes with the largest number of tree crashes in horizontal curve sections. Also, each entry shows the number of crashes occurring within that section of roadway.

Implementation Cost: $5,000 per 1-mile segment
Determine specific implementation sites in the field using engineering judgment. Those horizontal curve/tree crashes that were identified on the corridor but not specifically located along a route are included in the "route total crashes" groups; it is possible/likely that some un-located crashes occurred within the sections shown within each route.[25]

[25] While the crashes are located to the corridor but not to a specific log mile range, it is likely that some of the un-located crashes can be attributed to the crash clusters shown in the log mile ranges in the lines above the un-located crashes. For this reason, the crash clusters should be regarded as the minimum number of crashes occurring between the specified log mile ranges.

Table 12. Recommended Tree Removal/Clear Zone Improvement Sites in Horizontal Curves

Route	Municipality	Route Total Tree/Horz Curve Crashes[26] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree/Horz Curve Crashes (07-11)	Cumulative 1-mile Sections
Old Lemay Ferry Road	Jefferson County	32	1.1	2.2	7	1.1
			3.0	4.1	8	2.2
			4.1	5.1	3	3.2
			9.0	9.5	2	3.7
			10.3	11	3	4.4
			Un-located crashes along this corridor		9	
Rock Creek Road	Jefferson County	27	0.6	0.8	2	4.6
			1.3	1.9	3	5.2
			6.8	7.6	4	6.0
			Un-located crashes along this corridor		18	
Four Ridge Road[27]	Jefferson County	20	0.1	0.6	4	6.5
			0.9	1.4	3	7.0
			2.0	2.7	4	7.7
			3.2	4.2	3	8.7
			Un-located crashes along this corridor		2	
Hillsboro Valley Park Road	Jefferson County	17	0.8	1.4	6	9.3
			2.3	2.7	2	9.7
			Un-located crashes along this corridor		9	
Antire Road	Jefferson	15	1.6	2.6	3	10.7

[26] Route Total Tree Crashes are equal to the total number (including all crash severities) of clustered crashes within each section listed, the un-located crashes on the route, and other crashes that did not appear in clusters.
[27] Four Ridge Road, East Four Ridge Road, and West Four Ridge Road data were combined in this field.

Route	Municipality	Route Total Tree/Horz Curve Crashes[26] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree/Horz Curve Crashes (07-11)	Cumulative 1-mile Sections
	County		3.9	4.5	4	11.3
			Un-located crashes along this corridor		8	
Hillsboro House Springs Road	Jefferson County	15	1.5	2.1	2	11.9
			2.4	3.1	2	12.8
			5.0	6.0	3	13.8
			Un-located crashes along this corridor		8	
Lions Den Road[28]	Jefferson County	14	0.0	0.7	8	14.5
			1.6	1.7	1	14.6
			Un-located crashes along this corridor		5	
Old Highway 21	Jefferson County	14	1.5	1.6	2	14.7
			2.3	2.4	2	14.8
			Un-located crashes along this corridor		10	
Saline Road	Jefferson County	12	0.7	0.9	2	15.0
			1.3	1.8	2	15.5
			2.2	2.7	1	16.0
			3.6	4.1	5	16.5
			Un-located crashes along this corridor		2	
Seckman Road	Jefferson County	11	2.2	2.3	2	16.6
			2.7	3.5	7	17.4
			Un-located crashes along this corridor		2	

[28] Crash data does not take into account the reconstruction/realignment of this roadway.

Route	Municipality	Route Total Tree/Horz Curve Crashes[26] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree/Horz Curve Crashes (07-11)	Cumulative 1-mile Sections
Lonedell Road	Jefferson County	11	0.3	0.4	1	17.5
			0.9	1.1	2	17.7
			Un-located crashes along this corridor		8	
Romaine Creek Road	Jefferson County	11	0.0	0.2	1	17.9
			2.1	3.3	6	19.0
			Un-located crashes along this corridor		4	
Dulin Creek Road	Jefferson County	9	0.0	0.9	4	19.9
			3.5	4.1	1	20.5
			Un-located crashes along this corridor		4	
Flucom Road	Jefferson County	8	0.6	1.6	4	21.5
			1.8	2.0	1	21.7
			4.1	4.5	3	22.1
			Un-located crashes along this corridor		6	
Hunning Road	Jefferson County	7	0.6	0.7	1	22.2
			Un-located crashes along this corridor		6	
Williams Creek Road	Jefferson County	7	1.4	2.3	5	23.1
			Un-located crashes along this corridor		2	
Konert Road	Jefferson County	8	0.0	0.5	4	23.6
			Un-located crashes along this corridor		4	
Gamel Cemetary	Jefferson	7	Un-located crashes along this corridor		7	

Route	Municipality	Route Total Tree/Horz Curve Crashes[26] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree/Horz Curve Crashes (07-11)	Cumulative 1-mile Sections
Road	County					
Old Sugar Creek Road	Jefferson County	3	0.2	0.4	2	23.8
			2.1	2.9	1	24.6
			Un-located crashes along this corridor		0	
Miller Road	Jefferson County	4	1.3	1.6	2	24.9
			Un-located crashes along this corridor		2	
Plattin Road	Jefferson County	6	0.0	0.6	1	25.5
			1.7	2.0	1	25.8
			5.0	6.0	2	26.8
			Un-located crashes along this corridor		1	
Mount Olive Road	Jefferson County	1	0.7	1.3	1	27.4
			Un-located crashes along this corridor		0	
Old Anatonia Road	Jefferson County	4	0.0	0.6	3	28.0
			1.2	1.4	1	28.2
			Un-located crashes along this corridor		0	
Victoria Road	Jefferson County	4	1.8	2.4	1	28.8
			3.6	4.3	2	29.5
			Un-located crashes along this corridor		1	
Klondike Road	Jefferson County	5	0.4	0.9	1	30.0
			3.3	3.5	1	30.2
			4.3	4.7	1	30.6

Route	Municipality	Route Total Tree/Horz Curve Crashes[26] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree/Horz Curve Crashes (07-11)	Cumulative 1-mile Sections
			Un-located crashes along this corridor		2	
Marble Springs Road	Jefferson County	4	2.3	3.1	1	31.4
			4.0	5.3	3	32.7
			Un-located crashes along this corridor		0	
Jones Creek Road	Jefferson County	1	2.0	2.2	1	32.9
			Un-located crashes along this corridor		0	
Old Highway M	Jefferson County	1	4.3	4.6	1	33.2
			Un-located crashes along this corridor		0	
Buck Creek Road	Jefferson County	5	0.1	1.3	2	34.4
			1.8	2.6	1	35.2
			Un-located crashes along this corridor		2	
Ware Church Road	Jefferson County	3	0.1	2.3	3	37.4
			Un-located crashes along this corridor		0	
Upper Plattin Road	Jefferson County	2	1.3	1.7	1	37.8
			Un-located crashes along this corridor		1	
Byrnes Mill road	Jefferson County	4	3.2	3.8	1	38.4
			Un-located crashes along this corridor		3	
Armbruster Road	Jefferson County	4	0.7	2.0	3	38.7
			Un-located crashes along this corridor		1	

Route	Municipality	Route Total Tree/Horz Curve Crashes[26] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Tree/Horz Curve Crashes (07-11)	Cumulative 1-mile Sections
Tishomingo Road	Jefferson County	5	1.8	2.7	3	39.6
			Un-located crashes along this corridor		2	
Sandy Creek Road	Jefferson County	5	0.0	0.3	1	39.9
			0.9	1.7	3	40.7
			Un-located crashes along this corridor		1	

Countermeasure: Utility Poles and Other Fixed Objects (FO) Delineation

Delineation should be considered in those sections having high frequencies and proportions of nighttime single-vehicle fixed-object crashes. All fixed objects including head walls, trees, poles, and guard rail should be considered.

Implementation Cost: $1,000 per 1-mile segment

Determine specific implementation sites in the field using engineering judgment. Those utility pole/FO crashes that were identified on the corridor but not specifically located along a route are included in the "route total crashes" groups; it is possible/likely that some un-located crashes occurred within the sections shown within each route. [29]

Table 13. Recommended Utility Poles and Other Fixed Object Delineation Implementation Sites

Route	Municipality	Route Total Utility Pole /FO Crashes [30] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Utility Pole /FO Crashes (07-11)	Cumulative 1-mile Sections
Old Lemay Ferry Road	Jefferson County	23	0.0	9.0	13	9
			Un-located crashes along this corridor		10	
Rock Creek Road	Jefferson County	15	0.0	9.0	11	18
			Un-located crashes along this corridor		4	
Miller Road	Jefferson County	14	0.0	3.0	10	21
			Un-located crashes along this corridor		4	
Romaine Creek Road	Jefferson County	10	0.0	3.5	5	25
			Un-located crashes along this corridor		5	
Main Street	Festus	9	0.0	0.8	4	26
			Un-located crashes along this		5	

[29] While the crashes are located to the corridor but not to a specific log mile range, it is likely that some of the un-located crashes can be attributed to the crash clusters shown in the log mile ranges in the lines above the un-located crashes. For this reason, the crash clusters should be regarded as the minimum number of crashes occurring between the specified log mile ranges.

[30] Route Total Utility Pole/FO Crashes are equal to the total number (including all crash severities) of clustered crashes within each section listed, the un-located crashes on the route, and other crashes that did not appear in clusters.

Route	Municipality	Route Total Utility Pole /FO Crashes[30] (07-11)	Section Begin Log Point	Section End Log Point	Subsection Utility Pole /FO Crashes (07-11)	Cumulative 1-mile Sections
			corridor			
Saline Road	Jefferson County	7	0.0	3.6	6	30
			Un-located crashes along this corridor		1	

Countermeasure: Education and Enforcement – Alcohol

This countermeasure assumes enforcement for one hour per week for 52 weeks at locations listed in Table 14. This table includes suggested education/enforcement sites on routes with the largest number of alcohol-related crashes. Also, this table provides a range of potential sections for patrol, potential checkpoint sites, and best enforcement time periods based on 2007-2011 crash data trends.

Implementation Cost: $52,000 per year plus $50,000 for education (per 5 years)

Determine specific implementation sites in the field using engineering judgment where road alignment is conducive to enforcement activities. Those alcohol-related crashes that were identified on the corridor but not specifically located along a route are included in the "route total crashes" groups; it is possible/likely that some un-located crashes occurred within the sections shown within each route. [31]

[31] While the crashes are located to the corridor but not to a specific log mile range, it is likely that some of the un-located crashes can be attributed to the crash clusters shown in the log mile ranges in the lines above the un-located crashes. For this reason, the crash clusters should be regarded as the minimum number of crashes occurring between the specified log mile ranges.

Table 14. Recommended Education and Enforcement (Alcohol) Sites

Route	Municipality	Route Total Alcohol-Related Crashes[32] ('07-'11)	Patrol Section				Details/Notes (example)
			Section Begin Log Point	Section End Log Point	Section Alcohol-Related Crashes ('07-'11)	Potential Checkpoint Locations (Log-points; Alcohol-Related crashes)	
Old Lemay Ferry Road	Jefferson County	29	0.0	11.1	20	• 1.1-2.2; 7 crashes • 3.2-4.5; 5 crashes	Best enforcement time periods: • Sun, midnight to 3 am • Sat, 9pm to 3am • Fri, 9pm to midnight • Thurs, midnight to 3am
			Un-located crashes along this corridor		9		
Rock Creek Road	Jefferson County	21	0.0	8.8	16	• 4.9-6.2; 4 crashes • 7.0-8.8; 5 crashes	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		5		
Old Hwy 21	Jefferson County	18	0.0	12.5	15	Entire corridor	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		3		
Lonedell Road	Arnold & Jefferson County	15	0.0	2.1	12	• 0.1-0.4; 7 crashes	Best enforcement time periods in Arnold: • Sat, midnight to 3am • Fri, midnight to 3am
			Un-located crashes along this corridor		3	8 crashes within Arnold and 7 crashes within Jefferson County	

[32] Route Total Alcohol-Related Crashes are equal to the total number (including all crash severities) of clustered crashes within each section listed, the un-located crashes on the route, and other crashes that did not appear in clusters.

Route	Municipality	Route Total Alcohol-Related Crashes[32] ('07-'11)	Patrol Section				Details/Notes (example)
			Section Begin Log Point	Section End Log Point	Section Alcohol-Related Crashes ('07-'11)	Potential Checkpoint Locations (Log-points; Alcohol-Related crashes)	
							• Sun, 9pm – 3am See previous Jefferson County enforcement times.
Romaine Creek Road	Jefferson County	14	0.0	3.4	8	• 2.8-3.4; 4 crashes	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		6		
Miller Road	Jefferson County	12	0.0	3.2	10	Entire corridor	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		2		
Gravois Road	Jefferson County	12	0.0	3.1	7	• 0.3-0.7; 3 crashes • 0.9-1.9; 3 crashes	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		5		
Saline Road	Jefferson County	11	0.0	4.2	0	Entire corridor	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		11		
Old Sugar Creek Road	Jefferson County	11	0.1	0.6	5	• 0.1-0.6; 5 crashes	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		2		
Four Ridge Road[33]	Jefferson County	11	0.0	4.2	3	• 0.7-1.2; 3 crashes	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		4		
Main Street	DeSoto	10	0.0	1.7	3	Entire corridor	See previous DeSoto enforcement
			Un-located crashes		7		

[33] Four Ridge Road, East Four Ridge Road, and West Four Ridge Road data were combined in this field.

Route	Municipality	Route Total Alcohol-Related Crashes[32] ('07-'11)	Patrol Section				Details/Notes (example)
			Section Begin Log Point	Section End Log Point	Section Alcohol-Related Crashes ('07-'11)	Potential Checkpoint Locations (Log-points; Alcohol-Related crashes)	
			along this corridor				times.
Hillsboro Valley Park Road	Jefferson County	10	1.0	3.1	5	Entire corridor	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		5		
Richardson Road	Arnold	9	0.0	1.6	8	Entire corridor	See previous Arnold enforcement times.
			Un-located crashes along this corridor		1		
Old Highway M	Jefferson County	7	2.8	6.1	6	Entire corridor	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		1		
Elm Drive	Jefferson County	7	0.3	0.8	6	Entire corridor	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		1		
Old Highway 141	Jefferson County	7	0.0	0.9	4	Entire corridor	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		3		
Williams Creek Road	Jefferson County	6	1.4	2.6	6	• 1.4-1.6; 4 crashes	See previous Jefferson County enforcement times.
Lions Den Road	Jefferson County	6	0.0	0.9	4	• 0.7-0.9; 3 crashes	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		2		
Victoria Road	Jefferson County	5	0.3	3.1	4	Entire corridor.	
			Un-located crashes along this corridor		1		
Local Hillsboro	Jefferson County	5	1.1	1.5	2	Entire corridor.	
			Un-located crashes		3		

Route	Municipality	Route Total Alcohol-Related Crashes[32] ('07-'11)	Patrol Section				Details/Notes (example)
			Section Begin Log Point	Section End Log Point	Section Alcohol-Related Crashes ('07-'11)	Potential Checkpoint Locations (Log-points; Alcohol-Related crashes)	
Road			along this corridor				
Dulin Creek Road	Jefferson County	8	0.0	0.9	7	Entire corridor.	
			Un-located crashes along this corridor		1		
Sandy Church Road	Jefferson County	5	0.0	2.5	4	• 0.0-0.9: 3 crashes	
			Un-located crashes along this corridor		1		
Vogel Road	Jefferson County	7	0.3	1.2	3	Entire corridor.	
			Un-located crashes along this corridor		4		
Seckman Road	Jefferson County	6	2.7	3.5	3	Entire corridor.	
			Un-located crashes along this corridor		3		
New Sugar Creek Road	Jefferson County	4	0.3	1.1	4	Entire corridor.	
Hillsboro-Victoria Road	Jefferson County	6	2.8	3.6	2	Entire corridor.	
			Un-located crashes along this corridor		4		
Arnold Tenbrook Road	Arnold	4	0.3	0.5	1	Entire corridor.	
			Un-located crashes along this corridor		3		
Jarvis Road	Jefferson County	4	0.0	1.2	4	Entire corridor.	
Antire Road	Jefferson County	6	1.6	2.6	2	Entire corridor.	
			4.5	4.7	2	Entire corridor.	
			Un-located crashes		2		

Route	Municipality	Route Total Alcohol-Related Crashes[32] ('07-'11)	Patrol Section				Details/Notes (example)
			Section Begin Log Point	Section End Log Point	Section Alcohol-Related Crashes ('07-'11)	Potential Checkpoint Locations (Log-points; Alcohol-Related crashes)	
			along this corridor				
Main Street	Pevely	4	Un-located crashes along this corridor		4	Entire corridor.	
Jeffco Blvd.	Arnold	5	181.5	184.0	2	Entire corridor.	
			209.5	210.0	2	Entire corridor.	
			Un-located crashes along this corridor		1		
Tenbrook Road	Arnold	4	0.0	2.5	3	• 0.0-0.8: 2 crashes • 2.5: 1 crash	
			Un-located crashes along this corridor		1		
Konert Road	Jefferson County	4	0.0	0.6	4	Entire corridor.	
Old Antonia Road	Jefferson County	5	0.1	2.4	4	• 0.1-0.5: 2 crashes • 1.2-2.4: 2 crashes	
			Un-located crashes along this corridor		1		
High Ridge Blvd.	Jefferson County	3	1.1	2.1	2	Entire corridor.	
			Un-located crashes along this corridor		1		
Gamel Cemetery Road	Festus	3	Un-located crashes along this corridor		3	Entire corridor.	
Flucom Road	Jefferson County	5	0.4	1.6	3	Entire corridor.	
			Un-located crashes along this corridor		2		

Route	Municipality	Route Total Alcohol-Related Crashes[32] ('07-'11)	Patrol Section				Details/Notes (example)
			Section Begin Log Point	Section End Log Point	Section Alcohol-Related Crashes ('07-'11)	Potential Checkpoint Locations (Log-points; Alcohol-Related crashes)	
Graham Road	Jefferson County	3	0.0	0.9	3	Entire corridor.	
Catlin Drive	Jefferson County	4	0.1	0.5	3	Entire corridor.	
			Un-located crashes along this corridor		1		
Amvets Road	De Soto	3	0.5	0.9	3	Entire corridor.	
West Rock Creek Road	Jefferson County	5	5.3	5.6	2	Entire corridor.	
			Un-located crashes along this corridor		3		
Jones Creek Road	Jefferson County	3	0.5	3.9	2	Entire corridor.	
			Un-located crashes along this corridor		1		
West Four Ridge Road	Jefferson County	5	3.1	4.2	2	Entire corridor.	
			Un-located crashes along this corridor		3		
Vogel Road	Arnold	4	0.0	0.2	2	Entire corridor.	
			Un-located crashes along this corridor		2		
Marble Springs Road	Jefferson County	3	4.7	6.0	2	Entire corridor.	
			Un-located crashes along this corridor		1		
South Byrnesville Road	Jefferson County	3	0.9	1.0	2	Entire corridor.	
			Un-located crashes along this corridor		1		

Countermeasure: Education and Enforcement – Speeding

This countermeasure assumes enforcement for one hour per week for 52 weeks at locations shown in Table 15. This table lists suggested education/enforcement sites on routes with the largest number of speed-related crashes. Also, the table provides a range of potential sections for patrol and best enforcement time periods based on 2007-2011 crash data trends.

Implementation Cost: $52,000 per year plus $50,000 for education (per 5 years)

Determine specific implementation sites in the field using engineering judgment where road alignment is conducive to enforcement activities. Those speeding-related crashes that were identified on the corridor but not specifically located along a route are included in the "route total crashes" groups; it is possible/likely that some un-located crashes occurred within the sections shown within each route. [34]

Table 15. Recommended Education and Enforcement (Speeding) Sites

Route	Municipality	Route Total Speed-Related Crashes [35] ('07-'11)	Patrol Area				Details/Notes
			Section Begin Log Point	Section End Log Point	Section Speed-Related Crashes ('07-'11)	Potential Checkpoint Locations (Log-points; Speed-Related crashes)	
Old Lemay Ferry Road	Jefferson County	92	1.1	2.5	31	• 1.1-1.3; 13 crashes	Best enforcement time periods: • Weekday afternoons during rush hour (3-6 pm) • Fri, 3-9pm • Sat, 3-9pm
			3.0	4.6	20	• 3.2-4.1; 11 crashes	
			8.0	11.1	11	• 8.0-8.3; 4 crashes	
			Un-located crashes along this corridor		23		
Rock Creek	Jefferson	56	0.0	1.9	8	• 0.6-0.9; 5 crashes	See previous

[34] While the crashes are located to the corridor but not to a specific log mile range, it is likely that some of the un-located crashes can be attributed to the crash clusters shown in the log mile ranges in the lines above the un-located crashes. For this reason, the crash clusters should be regarded as the minimum number of crashes occurring between the specified log mile ranges.

[35] Route Total Speed-Related Crashes are equal to the total number (including all crash severities) of clustered crashes within each section listed, the un-located crashes on the route, and other crashes that did not appear in clusters.

Route	Municipality	Route Total Speed-Related Crashes[35] ('07-'11)	Patrol Area				Details/Notes
			Section Begin Log Point	Section End Log Point	Section Speed-Related Crashes ('07-'11)	Potential Checkpoint Locations (Log-points; Speed-Related crashes)	
Road	County		4.0	6.0	8	•	Jefferson County enforcement times.
			6.2	8.9	20	• 7.1-7.6; 5 crashes • 8.3-8.9; 9 crashes	
			Un-located crashes along this corridor		20		
Old Hwy 21	Jefferson County	51	0.0	2.0	10		See previous Jefferson County enforcement times.
			6.0	7.1	8	• 7.0-7.1; 5 crashes	
			Un-located crashes along this corridor		18		
Old Sugar Creek Road	Jefferson County	39	0.0	1.7	20	• 0.0-0.3; 6 crashes • 0.3-0.7; 9 crashes	See previous Jefferson County enforcement times.
			2.1	2.9	9		
			Un-located crashes along this corridor		7		
Seckman Road	Jefferson County	37	1.3	3.5	31	• 1.8-2.2; 6 crashes • 2.7-3.5; 13 crashes	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		6		
Lions Den	Jefferson	36	0.0	2.8	27	• 0.0-0.2; 8 crashes • 0.2-0.7; 14 crashes	See previous Jefferson County

Route	Municipality	Route Total Speed-Related Crashes[35] ('07-'11)	Patrol Area				Details/Notes
			Section Begin Log Point	Section End Log Point	Section Speed-Related Crashes ('07-'11)	Potential Checkpoint Locations (Log-points; Speed-Related crashes)	
Road	County		Un-located crashes along this corridor		9		enforcement times.
Gravois Road	Jefferson County	36	0.0	2.0	17	•	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		14		
Lonedell Road	Jefferson County	36	0.2	1.1	15	• 0.2-0.4; 10 crashes	See previous Jefferson County enforcement times.
			1.5	2.1	7	• 2.1; 5 crashes	
			Un-located crashes along this corridor		14		
Miller Road	Jefferson County	34	0.3	2.0	17	• 1.1-1.6; 8 crashes	See previous Jefferson County enforcement times.
			2.9	3.1	9		
			Un-located crashes along this corridor		8		
Saline Road	Jefferson County	31	0.5	1.0	6	•	See previous Jefferson County enforcement times.
			1.9	2.2	6	•	
			Un-located crashes along this corridor		8		
Romaine Creek Road	Jefferson County	27	0.0	0.8	6		See previous Jefferson County
			2.1	3.5	14	• 2.6-3.0; 7 crashes	

Route	Municipality	Route Total Speed-Related Crashes[35] ('07-'11)	Patrol Area				Details/Notes
			Section Begin Log Point	Section End Log Point	Section Speed-Related Crashes ('07-'11)	Potential Checkpoint Locations (Log-points; Speed-Related crashes)	
			Un-located crashes along this corridor		6		enforcement times.
Dulin Creek Road	Jefferson County	24	0.0	1.4	15	• 0.4-0.9; 9 crashes	See previous Jefferson County enforcement times.
			3.3	4.1	4		
			Un-located crashes along this corridor		4		
McNutt Street	Herculaneum	24	0.0	0.8	11		Best enforcement time periods: • Sat, midnight-3am • Weekday afternoons during rush hour (3-6 pm)
			Un-located crashes along this corridor		13		
Konert Road	Jefferson County	23	0.0	1.1	17	• 0.0-0.6; 12 crashes	See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		6		
Local Hillsboro Road	Jefferson County	23	0.0	0.4	6		See previous Jefferson County enforcement times.
			1.0	2.2	9	• 1.0-1.3; 5 crashes	
			Un-located crashes along this corridor		8		
Little Antire	Jefferson	19	0.4	1.2	11		See previous

Route	Municipality	Route Total Speed-Related Crashes[35] ('07-'11)	Patrol Area				Details/Notes
			Section Begin Log Point	Section End Log Point	Section Speed-Related Crashes ('07-'11)	Potential Checkpoint Locations (Log-points; Speed-Related crashes)	
Road	County		Un-located crashes along this corridor		8		Jefferson County enforcement times.
Flucom Road	Jefferson County	18	0.1	1.8	10		See previous Jefferson County enforcement times.
			2.7	4.5	7		
			Un-located crashes along this corridor		1		
Plattin Road	Jefferson County	18	0.0	2.6	7		See previous Jefferson County enforcement times.
			5.0	7.0	4		
			Un-located crashes along this corridor		7		
Vogel Road	Jefferson County	16	0.0	1.4	12		See previous Jefferson County enforcement times.
			Un-located crashes along this corridor				
Hillsboro Valley Park Road	Jefferson County	16	0.0	3.1	6		See previous Jefferson County enforcement times.
			Un-located crashes along this corridor		10		
Gamel Cemetery Road	Festus	15	0.0	0.8	1		Best enforcement time periods: • Fri, 3-6pm and midnight-3am
			Un-located crashes along this corridor		14		

Route	Municipality	Route Total Speed-Related Crashes[35] ('07-'11)	Patrol Area				Details/Notes
			Section Begin Log Point	Section End Log Point	Section Speed-Related Crashes ('07-'11)	Potential Checkpoint Locations (Log-points; Speed-Related crashes)	
							• Tues, noon-3pm • Weekday afternoons during rush hour (3-6 pm)

Countermeasure: Education and Enforcement – Unbelted

Based on MoDOT data, one municipality in Jefferson County has a primary seat belt ordinance, even though the state does not have a primary seat belt law. This presents opportunities for additional municipalities and Jefferson County to consider passing a primary seatbelt ordinance.

This countermeasure assumes enforcement for one hour per week for 52 weeks at locations provided in Table 16. This table lists suggested education/enforcement sites on routes with the largest number of unbelted-related crashes. Also, the table provides a range of potential sections for patrol and best enforcement time periods based on 2007-2011 crash data trends.

Implementation Cost: $52,000 per year plus $50,000 for education (per 5 years)
Determine specific implementation sites in the field using engineering judgment where road alignment is conducive to enforcement activities. Those unbelted crashes that were identified on the corridor but not specifically located along a route are included in the "total corridor" groups; it is possible/likely that some un-located crashes occurred within the sections shown within each route. [36]

Table 16. Recommended Education and Enforcement (Unbelted) Sites

Route	Municipality	Route Total Crashes with Restraint-Related Injuries [37] ('07-'11)	Patrol Area			Details/Notes (example)
			Section Begin Log Point	Section End Log Point	Section Restraint-Related Crashes ('07-'11)	
Old Hwy 21	Jefferson County	36	0.0	0.6	6	Enforcement details: • Sun, 3-6pm and midnight to 3am • Sat, 9pm – 3am • Fri, 3-6pm and 9pm to midnight
			1.1	2.6	9	
			4.4	12.7	12	
			15.7	16.5	3	
			Un-located crashes along this corridor		6	

[36] While the crashes are located to the corridor but not to a specific log mile range, it is likely that some of the un-located crashes can be attributed to the crash clusters shown in the log mile ranges in the lines above the un-located crashes. For this reason, the crash clusters should be regarded as the minimum number of crashes occurring between the specified log mile ranges.
[37] Route Total Restraint-Related Crashes are equal to the total number (including all crash severities) of clustered crashes within each section listed, the un-located crashes on the route, and other crashes that did not appear in clusters.

Route	Municipality	Route Total Crashes with Restraint-Related Injuries[37] ('07-'11)	Patrol Area			Details/Notes (example)
			Section Begin Log Point	Section End Log Point	Section Restraint-Related Crashes ('07-'11)	
Old Lemay Ferry Road	Jefferson County	24	0.0	2.2	8	See previous Jefferson County enforcement times.
			4.1	5.8	5	
			Un-located crashes along this corridor		6	

Countermeasure: Young Driver Licensure Enforcement

This countermeasure assumes enforcement for one hour per week for 52 weeks at locations provided in Table 17. This table lists suggested education/enforcement sites on routes with the largest number of young driver-related crashes.

Implementation Cost: $52,000 per year plus $50,000 for education (per 5 years)

Determine specific implementation sites in the field using engineering judgment where road alignment is conducive to enforcement activities. Those young driver crashes that were identified on the corridor but not specifically located along a route are included in the "route total crashes" groups; it is possible/likely that some un-located crashes occurred within the sections shown within each route.[38]

Table 17. Recommended Young Driver Licensure Enforcement Implementation Sites

Route	Municipality	Route Total Crashes Involving Young Drivers[39] (07-11)	Patrol Area			
			Section Begin Log Point	Section End Log Point	Section Crashes Involving Young Drivers (07-11)	Potential Checkpoint Locations (Log-points; crashes)
Old Lemay Ferry Road	Jefferson County	140	0.1	5.7	71	• 1.1-1.8; 22 crashes • 3.2-4.1; 18 crashes
			6.3	6.3	3	
			8.0	12.2	12	
			Un-located crashes along this corridor		54	

[38] While the crashes are located to the corridor but not to a specific log mile range, it is likely that some of the un-located crashes can be attributed to the crash clusters shown in the log mile ranges in the lines above the un-located crashes. For this reason, the crash clusters should be regarded as the minimum number of crashes occurring between the specified log mile ranges.

[39] Route Total Young Driver-Related Crashes are equal to the total number (including all crash severities) of clustered crashes within each section listed, the un-located crashes on the route, and other crashes that did not appear in clusters.

Route	Municipality	Route Total Crashes Involving Young Drivers [39] (07-11)	Patrol Area			
			Section Begin Log Point	Section End Log Point	Section Crashes Involving Young Drivers (07-11)	Potential Checkpoint Locations (Log-points; crashes)
Seckman Road	Jefferson County	68	0.0	3.5	46	• 2.6-3.5; 17 crashes
			Un-located crashes along this corridor		22	
Miller Road	Jefferson County	51	0.0	3.2	32	• 0.4-0.7; 5 crashes • 1.2-1.9; 9 crashes • 3.1-3.2; 6 crashes
			Un-located crashes along this corridor		19	
Tenbrook Road	Arnold	51	0.0	2.1	36	• 0.0-0.2; 24 crashes
			Un-located crashes along this corridor		15	
Miller Street	De Soto	35	0.0	0.8	32	• 0.4-0.5; 16 crashes
			Un-located crashes along this corridor		3	
Lonedell Road	Jefferson County	31	0.2	2.1	17	
			Un-located crashes along this corridor		14	
Lions Den Road	Jefferson County	30	0.0	2.8	20	• 0.0-0.7; 15 crashes
			Un-located crashes along this corridor		10	
Flucom Road	Jefferson County	26	0.2	4.6	21	• 4.1-4.6; 5 crashes
			Un-located crashes		5	

Route	Municipality	Route Total Crashes Involving Young Drivers [39] (07-11)	Patrol Area			
			Section Begin Log Point	Section End Log Point	Section Crashes Involving Young Drivers (07-11)	Potential Checkpoint Locations (Log-points; crashes)
			along this corridor			
Sunshine Drive	Festus	23	0.0	1.3	6	
			Un-located crashes along this corridor		17	
Missouri State Road	Arnold	19	1.2	2.0	12	• 1.2-1.4; 4 crashes • 1.9-2.0; 6 crashes
			Un-located crashes along this corridor		7	

Funding

Each state has a highway safety improvement plan (HSIP) and receives funding from the Federal government to implement safety improvements. To obligate HSIP funds, a state must have a strategic highway safety plan (SHSP) that identifies and analyzes highway safety issues and opportunities towards reducing fatal and serious injury roadway crashes.

Safety improvements identified in this SHSP are eligible for HSIP funding according to MoDOT's funding process. The projects listed here will be eligible for federal funding once MoDOT establishes a process for funding which may require matching funds from local agencies.

Next Steps

This local SHSP identifies implementable countermeasures related to engineering infrastructure, educational opportunities, and enforcement. The Jefferson County safety stakeholders should collaboratively identify a few key strategies and safety implementations to move forward initially, in order to focus on their top priorities.

The action plan has a proposed 5-year implementation plan to allow agencies to make adjustments due to more precise information. Local agencies in Jefferson County will need to field verify roadway information, determine which countermeasures are necessary, and refine costs.

Appendix D lists resources that can be used to help with implementation of this SHSP.

Future Recommendations

Jefferson County has an opportunity to improve data collection and assessment efforts as a means to enhance future transportation safety efforts. For example, by collecting traffic volume and speed data on a regular basis and inventorying horizontal curves, substantial efforts may be made in identifying and applying safety treatments to the roads, corridors, and horizontal curves most in need of safety improvements.

Additionally, as Jefferson County programs and plans for future asphalt overlays on the local road system, Safety Edge$_{SM}$ may be used, providing additional safety benefits when run-off-road crashes occur for minimal cost. Jefferson County may also benefit from the use of high friction surface treatments at locations or curves where safety measures beyond the ones identified in this SHSP are needed.

Appendix A
Appendix A: Implementation Site Maps

Jefferson County, Missouri

Recommended Edge Line
Striping Locations
(2007 - 2011)

Legend

Recommended Edge Line Striping Locations

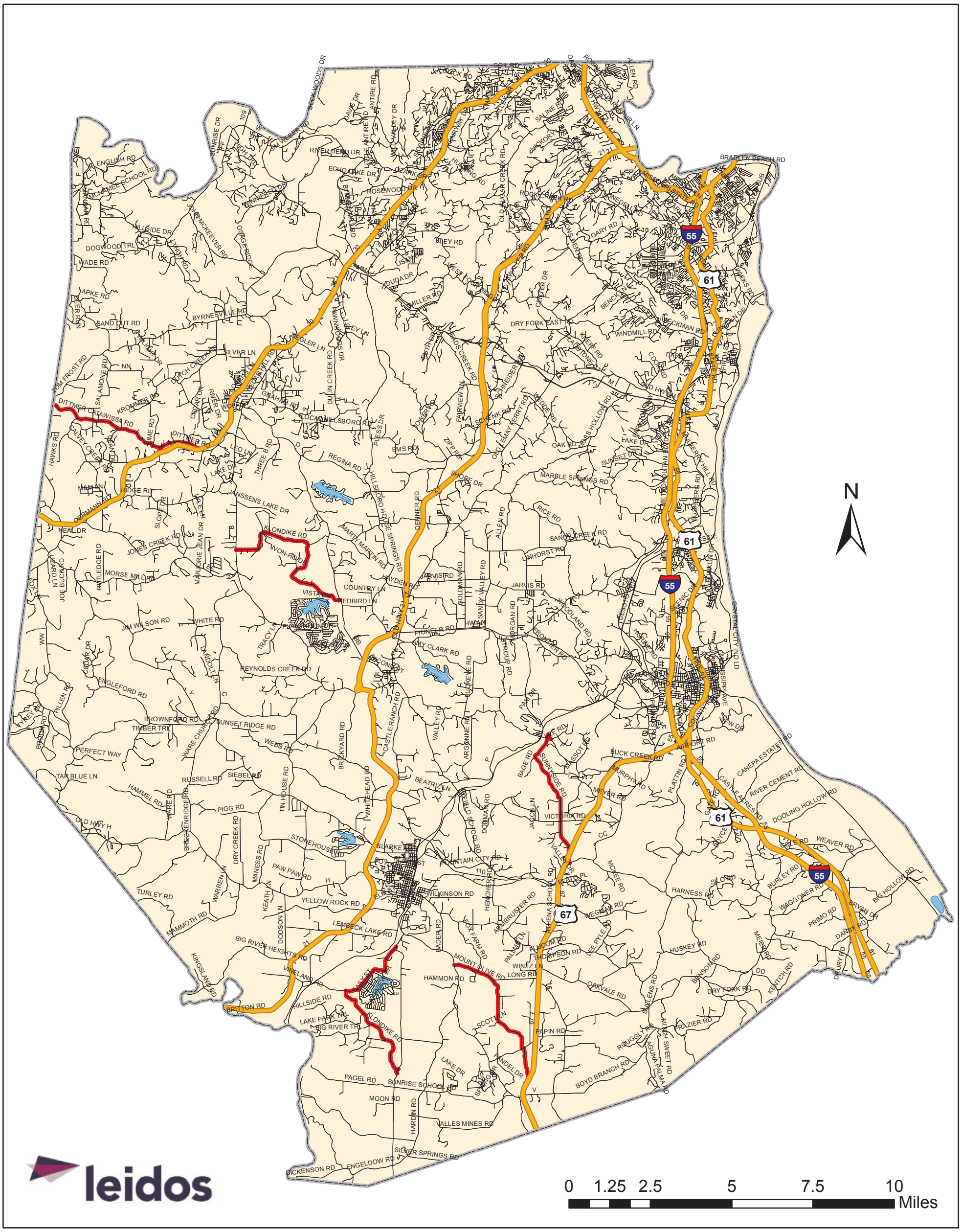
Roads

Local Road

Highway

Lakes

County Limits



Jefferson County, Missouri

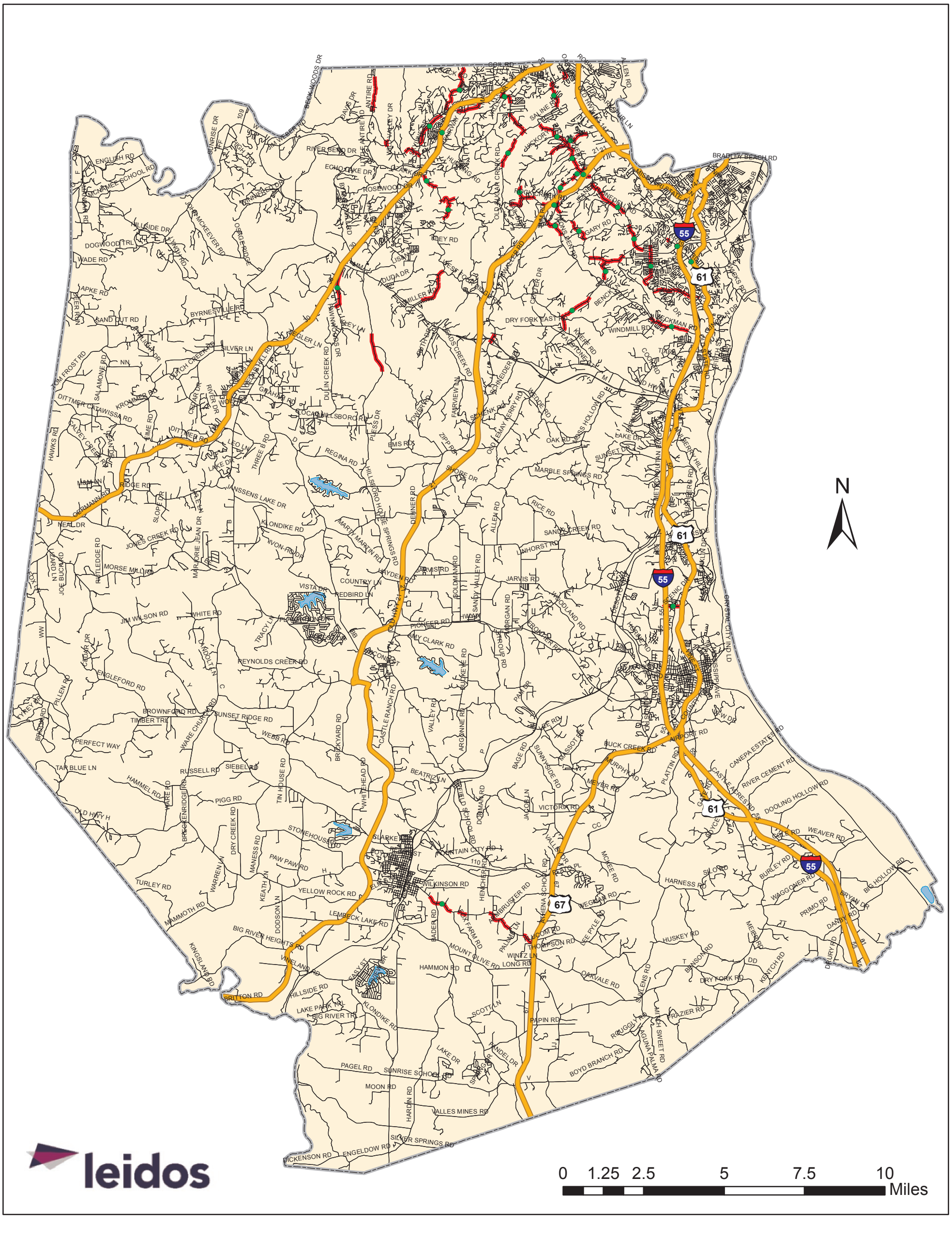
Recommended Enhanced Curve Signing and Marking and Speed Feedback Signs Implementation Sites (2007 - 2011)

Legend

- Curve Speed Feedback Signs
- Recommended Enhanced Curve Signing and Marking Implementation Sites

Roads

- Local Road
- Highway
- Lakes
- County Limits



Jefferson County, Missouri

Recommended Milled Edge Line Rumble Strip Implementation Sites (2007 - 2011)

Legend

Recommended Milled Edge Line Rumble Strip Implementation Sites

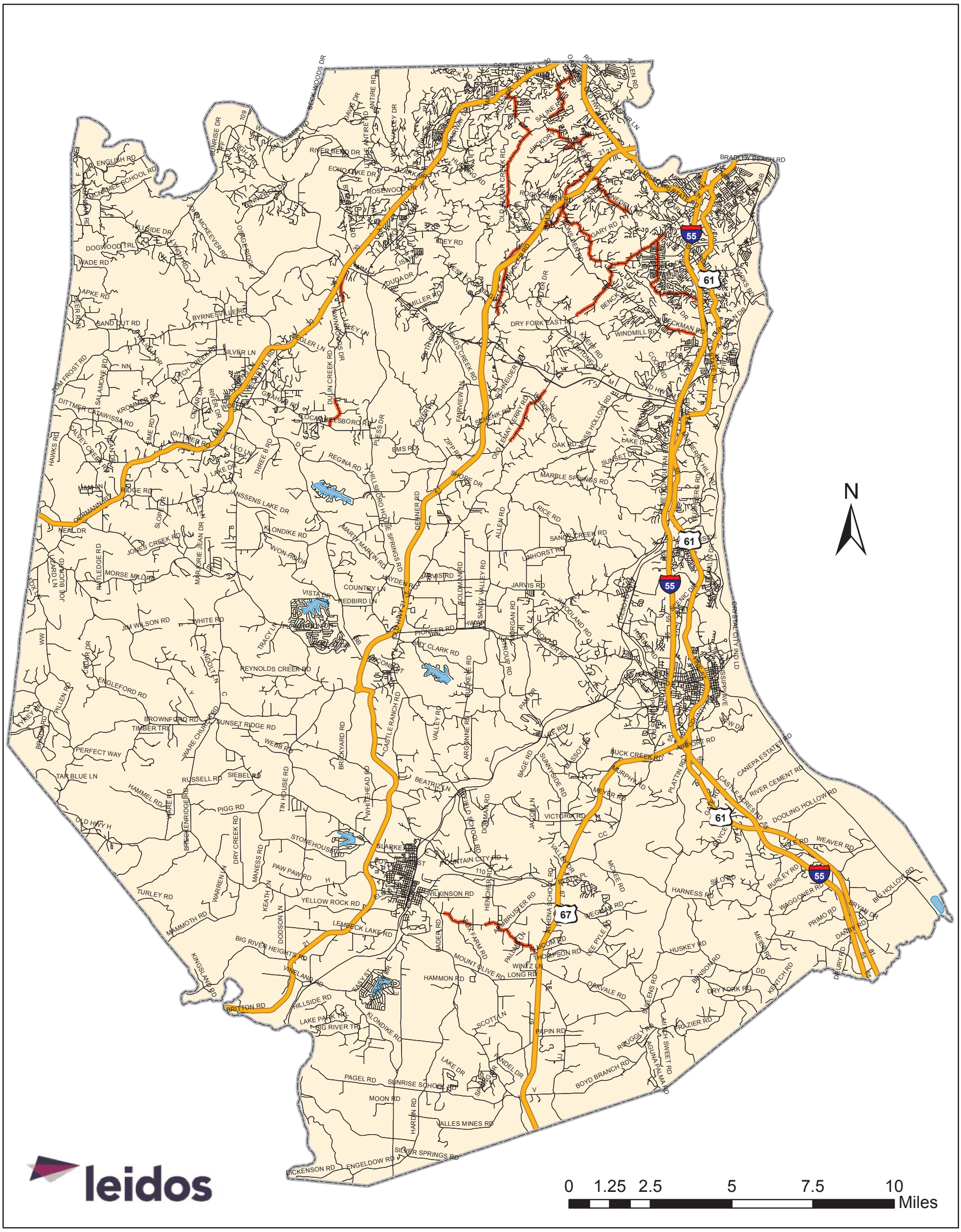
Roads

Local Road

Highway

Lakes

County Limits



Jefferson County, Missouri

Recommended Education and Enforcement (Unbelted) Sites (2007 - 2011)

Legend

Recommended Education and Enforcement (Unbelted) Sites

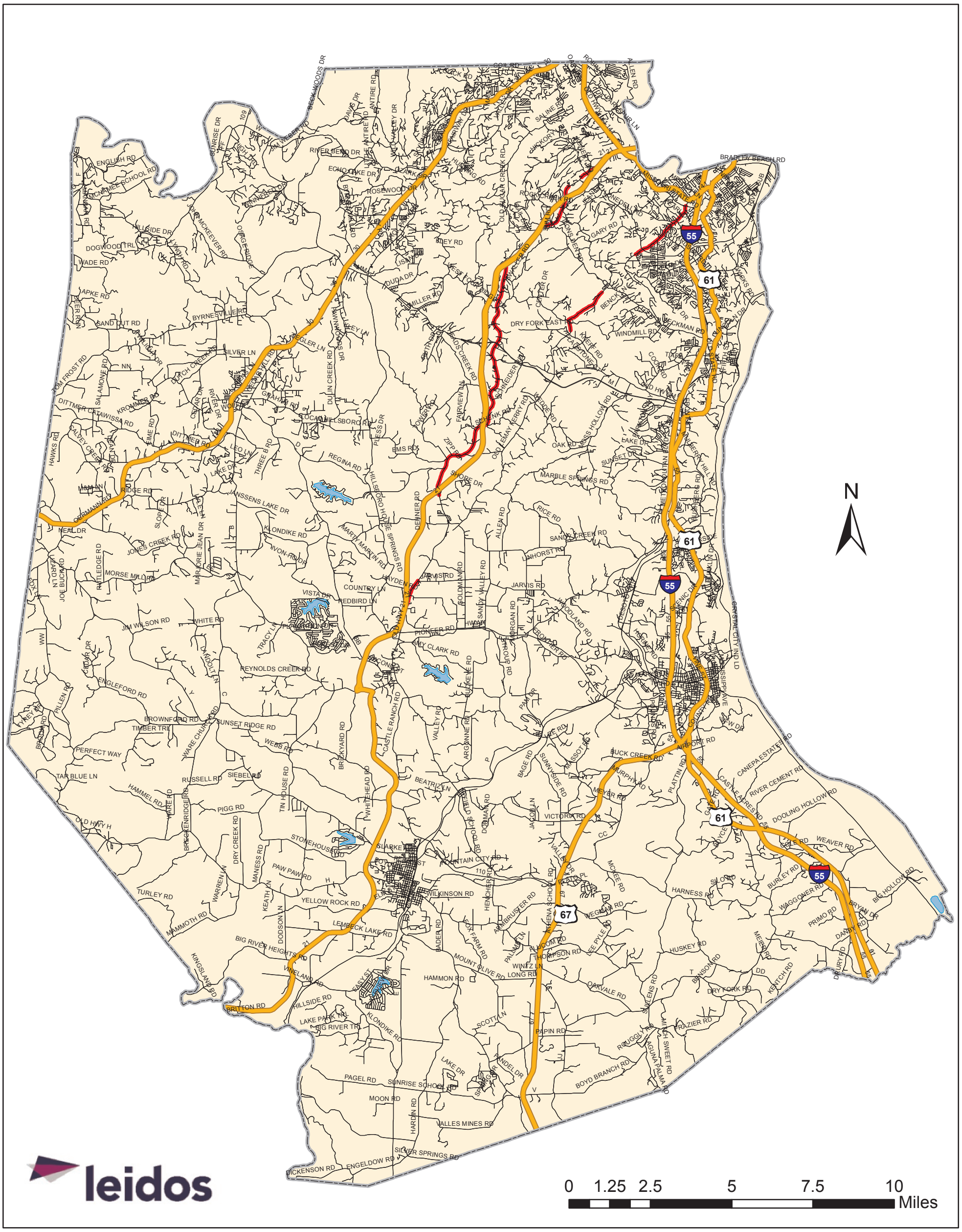
Roads

Local Road

Highway

Lakes

County Limits



Jefferson County, Missouri

Recommended Education and Enforcement (Speeding) Sites

(2007 - 2011)

Legend

Recommended Education and Enforcement (Speeding) Sites

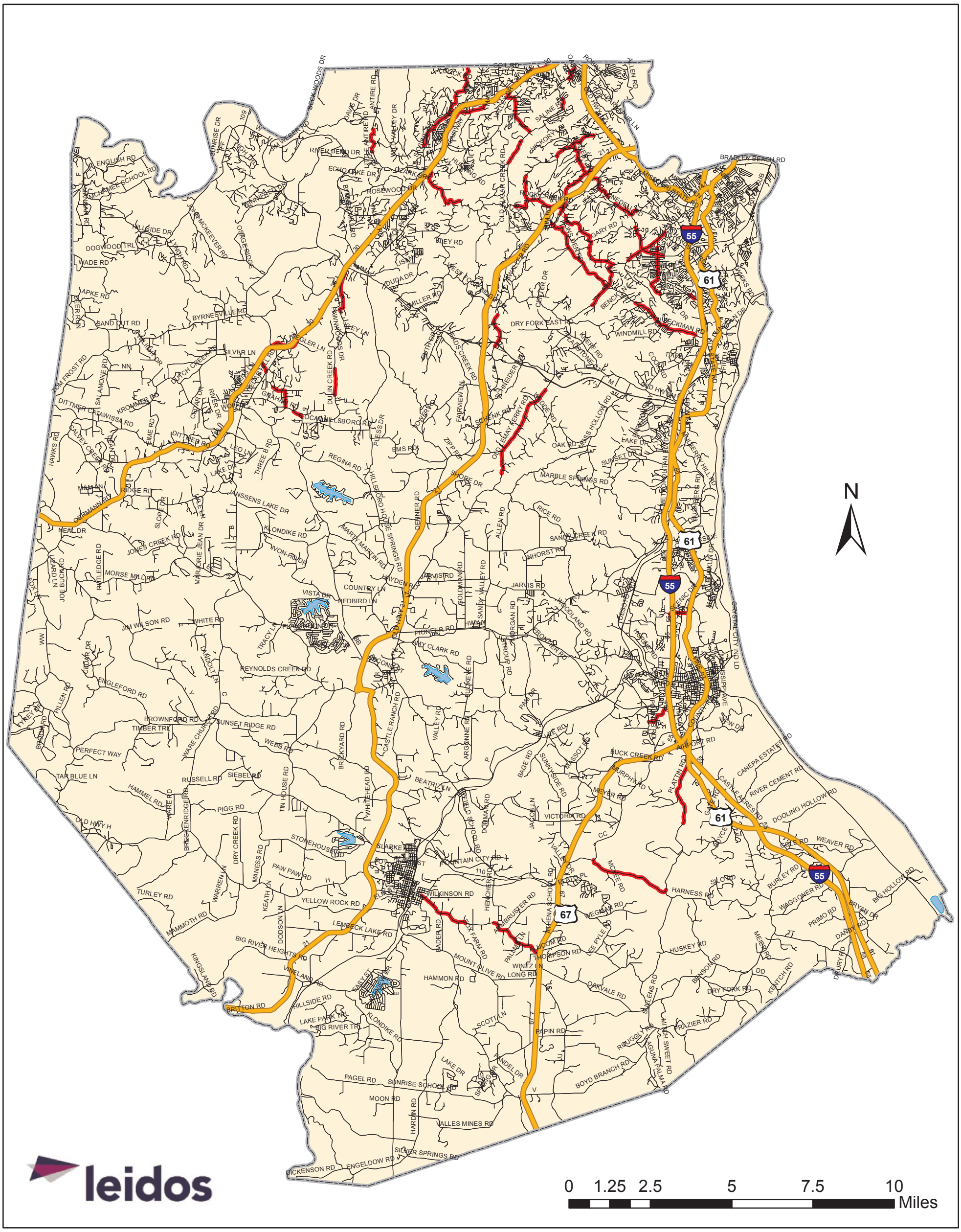
Roads

Local Road

Highway

Lakes

County Limits



Jefferson County, Missouri

Recommended Tree Removal/Clear Zone Improvement Sites (2007 - 2011)

Legend

Recommended Tree Removal/Clear Zone Improvement Sites

Roads

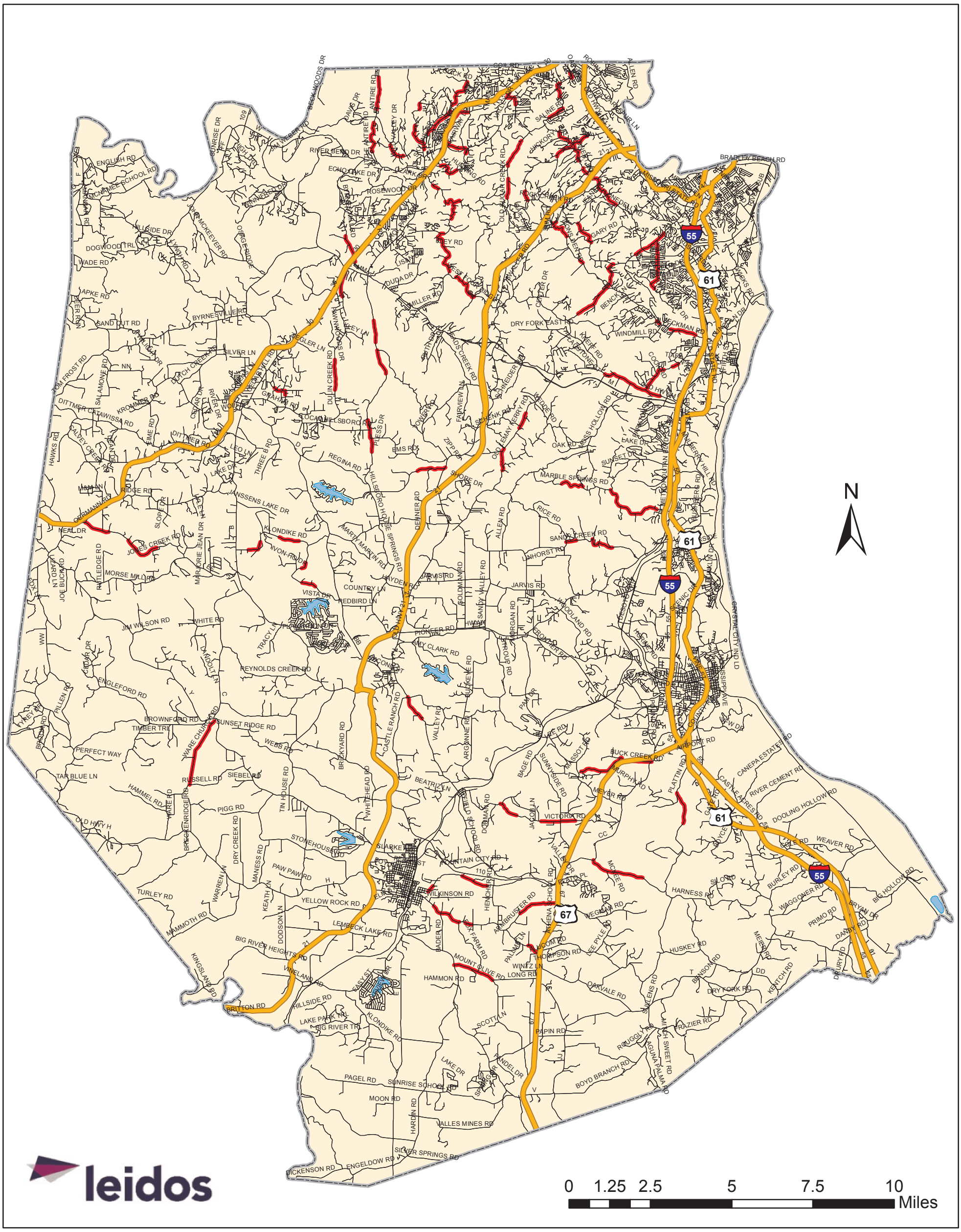
Local Road

Highway

Lakes

County Limits

*Main Street implementation sites in DeSoto were not located on the map due to issues with disjointed sections relative to known log mile points.



Jefferson County, Missouri

Recommended Tree Removal/Clear Zone Improvement Sites in Horizontal Curves (2007 - 2011)

Legend

Recommended Tree Removal/Clear Zone Improvement Sites in Horizontal Curves

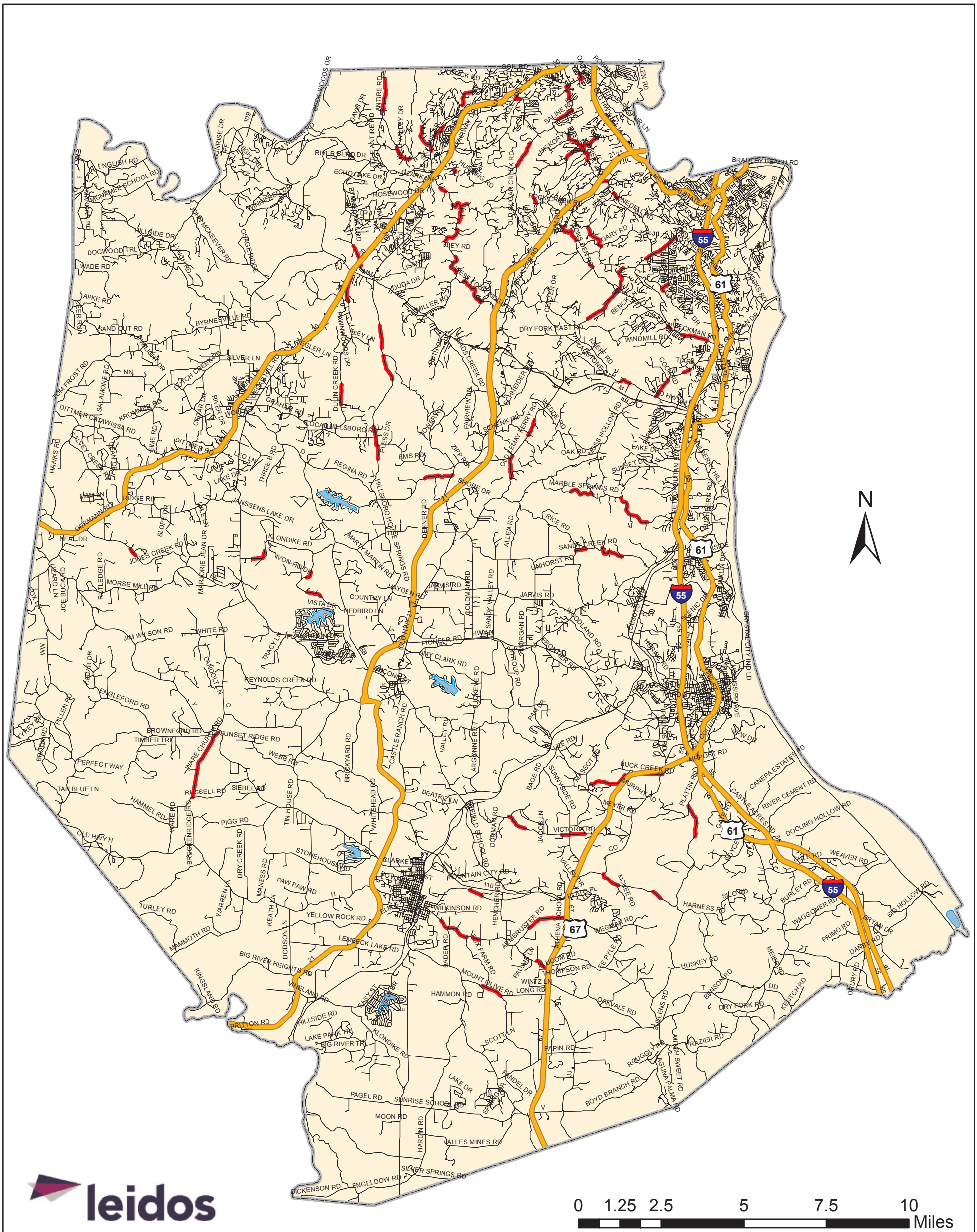
Roads

Local Road

Highway

Lakes

County Limits



Jefferson County, Missouri

Recommended Utility Poles and Other Fixed Object Delineation Implementation Sites (2007 - 2011)

Legend

Recommended Utility Poles and Other Fixed Object Delineation Implementation Sites

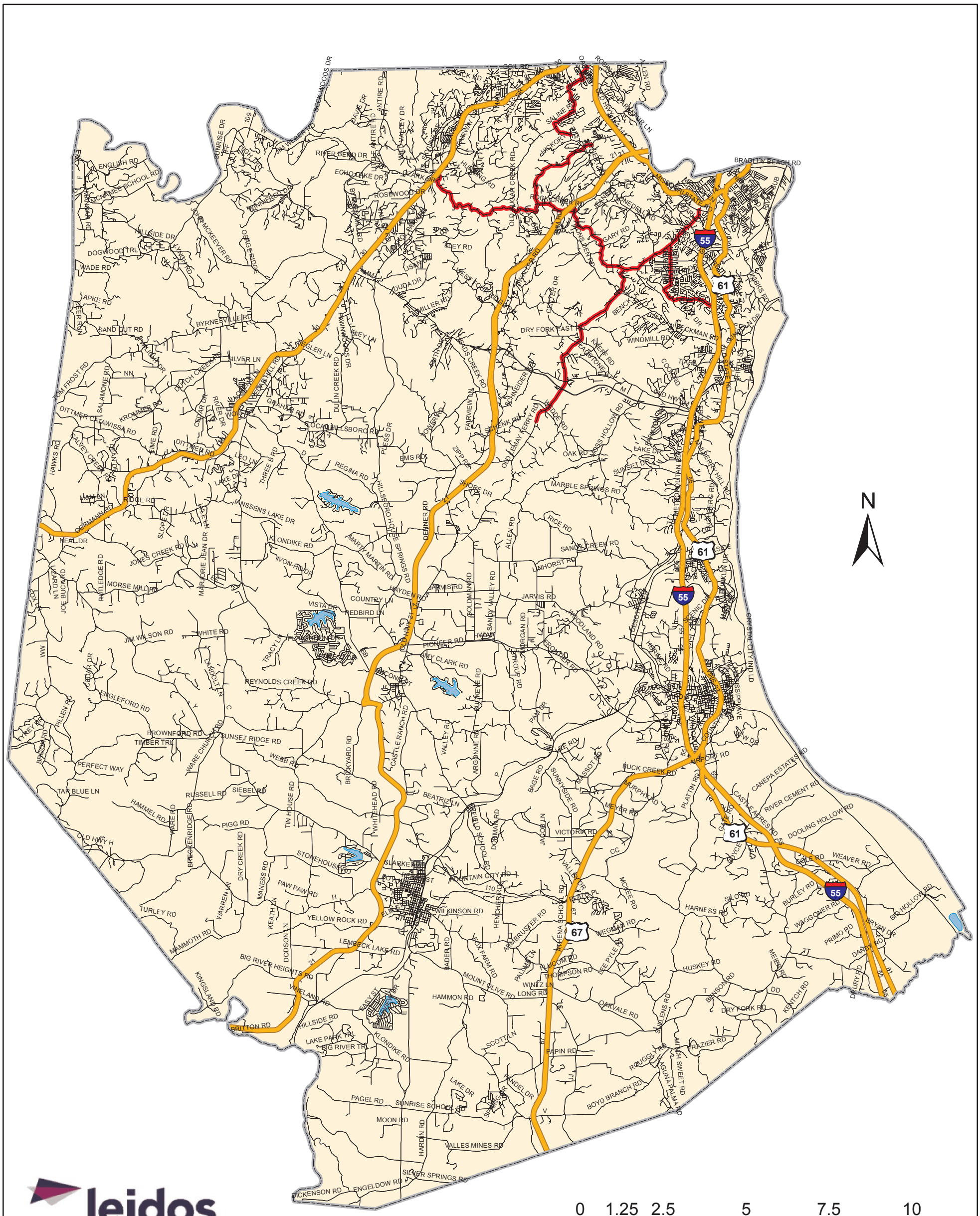
Roads

Local Road

Highway

Lakes

County Limits



Jefferson County, Missouri

Recommended Young Driver Licensure Enforcement Implementation Sites (2007 - 2011)

Legend

Recommended Young Driver Licensure Enforcement Implementation Sites

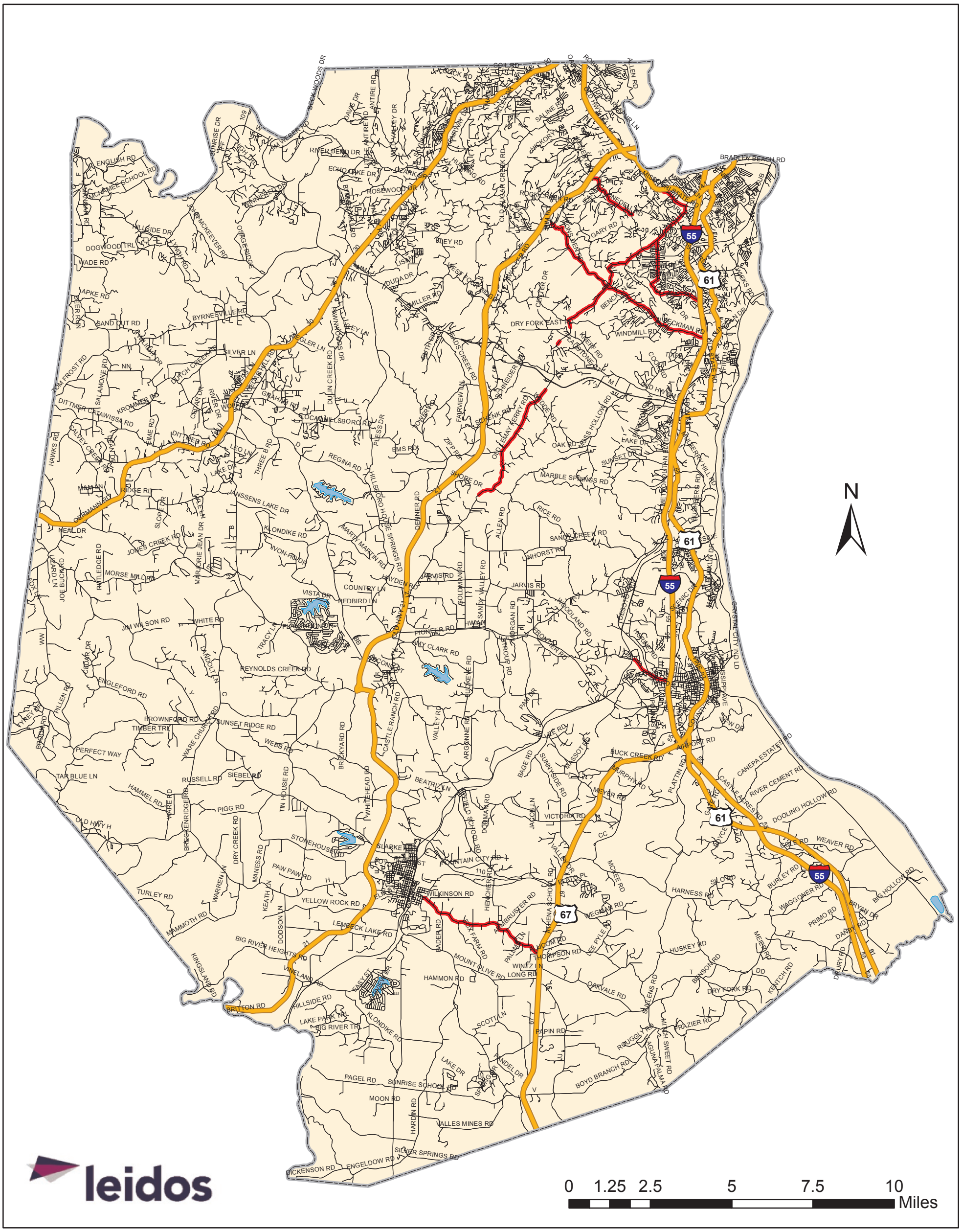
Roads

Local Road

Highway

Lakes

County Limits



Appendix B
Appendix B: Literature Review

1. Task Overview

The consultant team reviewed applicable Missouri Department of Transportation (MoDOT), Missouri Coalition for Roadway Safety (MCRS), county, and local safety plans, programs, and policy information and safety-related research in order to apply this data directly to Jefferson County's Strategic Highway Safety Plan (SHSP). It is important that we understand both the broad and specific safety practices of the State of Missouri, Jefferson County, and the local agencies within Jefferson County, and how State and county practices impact each other.

The information gathered this task will be used to:

- Determine possible roadway fatality reduction strategies that are under-utilized.
- Recognize noteworthy strategies and the level of effort allocated to these strategies.
- Help assess possible roadway fatality reduction goals and performance measures.
- Assist in creating a balanced, comprehensive plan from the systemic implementation of enforcement, education, and enforcement strategies.
- Identify where additional data collection is necessary.
- Review the connection to Missouri's SHSP to determine how recommended strategies could be funded through the Highway Safety Improvement Program.

2. Research Method

The consultant team gathered information through a combination of agency interviews and document reviews from agency websites. The consultant team conducted a literature review of relevant safety-related data (e.g., crash history, roadway inventory) and existing plans for Jefferson County, East-West Gateway Council of Governments (EWG), and local agencies within the county. The resources consisted of documented enforcement efforts, marketing plans, major safety initiatives, program accomplishments, Capital Improvement Plans, and the long-range transportation plans. A complete list of reviewed documents is found in Appendix A.

3. Research Findings

The consultant team coordinated with Jason Jonas, Director of Public Works for Jefferson County; Judy Wagner, Area Engineer for Jefferson County with Missouri DOT; and Larry Grither and Anna Musial of EWG to determine the resources most applicable to the Jefferson County SHSP development process. The team reviewed each resource for content relevant to the following key areas:

- The "State of Safety" on the county's local road network
- Safety partners and stakeholders
- Transportation safety policies, programs, and legislative platforms
- Goals for improving transportation safety
- Crash and roadway data sources for local roads

Appendix B

- Emphasis areas, predominate crash types, and high-risk users on local roads within Jefferson County
- The approved educational, enforcement, and engineering strategies identified by the county and local agencies
- Performance measures and results from executing strategies

This report details the foundational results that will inform our data collection and analysis process, discussion topics for the stakeholder workshop, countermeasures selection, and the Jefferson County SHSP.

3.1. Safety Partners and Stakeholders

Within MoDOT, the St. Louis District includes Jefferson County, Franklin County, St. Charles County, St. Louis County, and St. Louis City. The partners and stakeholders presented in this section span not only the St. Louis District, but it also includes organizations and programs that serve the areas surrounding St. Louis in Illinois.

One of the primary organizations serving the St. Louis metro area and surrounding Missouri and Illinois counties is the EWG. The EWG provides a forum for local governments of the bi-state St. Louis area to work together to solve problems that cross jurisdictional boundaries. The EWG's Board of Directors includes members from the following organizations (* indicates a non-voting member):

- Franklin County (Missouri)
- Jefferson County (Missouri)
- St. Charles County (Missouri)
- St. Louis County (Missouri)
- City of St. Louis (Missouri)
- City of East St. Louis (Illinois)
- St. Clair County (Illinois)
- Monroe County (Illinois)
- Madison County (Illinois)
- St. Louis County Municipal League
- Southwestern Illinois Council of Mayors
- Southwestern Illinois Metropolitan and Regional Planning Commission
- Regional Citizens
- Illinois Department of Commerce and Economic Opportunity*
- Illinois Department of Transportation*
- Missouri Department of Transportation*
- Missouri Office of Administration*
- Metro*

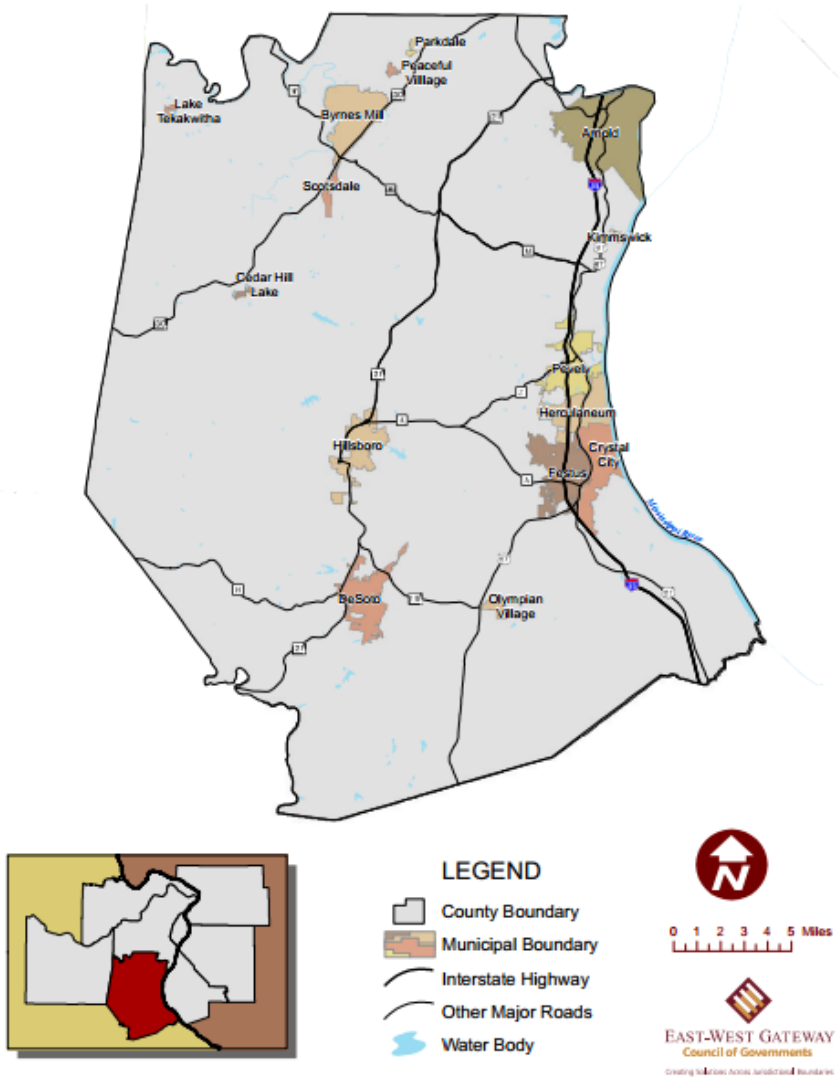
The geographic region that EWG serves encompasses the City of St. Louis; Franklin, Jefferson, St. Charles, and St. Louis counties in Missouri; and Madison, Monroe, and St. Clair counties in Illinois.

Within Jefferson County, the following municipalities are represented:

Appendix B

City of Arnold	City of Festus	City of Olympian Village
City of Byrnes Mill	City of Herculaneum	Village of Parkdale
Village of Cedar Hill Lakes	City of Hillsboro	Village of Peaceful Village
City of Crystal City	City of Kimmswick	City of Pevely
City of DeSoto	Village of Lake Tekakwitha	Town of Scotsdale

Figure 6: Map of Jefferson County. [40]



The Safety First Coalition is a partnership among local agencies and stakeholders that are involved in improving transportation safety in Jefferson County. The Coalition provides a means for various community sectors—law enforcement, engineers, safety advocates, education leadership, citizens, public works managers, local officials, and planners—to improve transportation system safety in Jefferson County.

[40] http://www.ewgateway.org/pdffiles/library/pod/POD-Current.pdf

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Safety First has recently been formed met in September 2013 for the first time. Safety First partners include the following:

Missouri Department of Transportation	City of Arnold
East-West Gateway	City of Byrnes Mill
Jefferson County	City of Crystal City
Missouri State Highway Patrol	City of Desoto
Jefferson County Sheriff's Department	City of Hillsboro
Route 21 Task Force	City of Festus
Route W/MM Citizens Task Force	City of Pevely
Jefferson College	One Curve at a Time

The St. Louis Regional Traffic Safety Council contains members from more than 70 groups, representing corporations, businesses, and fire/police departments. It is one of the leading organizations for safety education and enforcement in the Midwest. To accomplish their mission of improving traffic safety, the Council created a program called "Operation Impact," which focuses on providing additional police enforcement on the first Wednesday of the month to decrease speeding and intoxicated driving and to increase seat belt use. Its Board of Directors consists of members or staff from:

- Webster Groves Police Department
- St. Charles County Sheriff Department
- Chesterfield Police Department
- Creve Coeur Police Department
- St. Louis County Police Department
- Missouri Department of Transportation
- Missouri State Highway Patrol
- Gateway M.A.D.D.
- St. Charles County Prosecuting Attorney's Office/Victim Services
- Overland Police Department
- Private Consulting Firms

The St. Louis Area Regional Response System (STARRS), founded in 2003 and composed of local emergency response professionals and volunteers, coordinates the response for large-scale critical incidents in or around St. Louis.

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3.2. Transportation Safety Policies, Programs, and Legislative Platforms

Within the boundaries of EWG's eight member counties, any transportation project that will be wholly or partially funded with federal dollars must be listed in plans that have been formally adopted by EWG Board of Directors. The EWG Council of Governments solicits for a wide variety of transportation related grants for the St. Louis region.

The EWG encourages a safe and efficient transportation system within their regional boundaries by, in part, performing actions in transportation safety-related areas such as transportation planning and community mobility:[41]

- The St. Louis Region's long-range and short-range plans are contained in the EWG's *Regional Transportation Plan 2040* (*RTP 2040*).[42]. The *RTP 2040* revolves around ten transportation principles:
    1. Preserve and maintain the existing system
    2. Support public transportation
    3. Support neighborhoods and communities throughout the region
    4. Foster a vibrant downtown
    5. Provide more transportation choices
    6. Promote safety and security
    7. Support a diverse economy throughout the region
    8. Support quality job development
    9. Strengthen intermodal connections
    10. Link transportation planning to housing, environment, education, and energy
- The EWG's *Great Streets Initiative St. Louis* was developed to improve the overall planning and use of the streets in the St. Louis Region. The organization focuses on making streets attractive and designing them for multi-modal use.
- The EWG's *Regional Bicycling and Walking Transportation Plan* focuses on creating a complete, safe, and continuous transportation system that encourages bicycling and walking for people of all abilities.

Several independent programs also encourage transportation safety in the St. Louis region. The Safe Kids St. Louis Coalition (serving St. Louis City, St. Louis County, Jefferson County, Franklin County, and Washington County) provides tips to parents, including how to install and check car seat restraints, and reminders not to leave children in unattended vehicles. Another organization is the non-profit, non-governmental, public service organization called the Safety Council of Greater St. Louis. For almost 100 years, this council has worked to improve the transportation safety needs of the Greater St. Louis Metropolitan area by offering driver improvement programs and programs on overcoming drug or alcohol abuse. Members of the Council participate in various divisions including highway/traffic safety and motor transportation.

[41] EWG website (http://www.ewgateway.org/trans/transportation.htm)
[42] http://www.ewgateway.org/pdffiles/library/trans/rtp2040/lrtp2040.pdf

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According to MoDOT, 32 municipalities in Missouri have primary seat belt ordinances, even though the state does not have a primary seat belt law. Those municipalities and the effective date of the ordinances are listed in Table 19.

Table 18: Primary Seat Belt Ordinances in Missouri Municipalities

	Municipality	County	Effective Date
1	St. Louis County	St. Louis	2007
2	Creve Coeur	St. Louis	2008
3	Ballwin	St. Louis	2008
4	Weston	Platte	2008
5	Merriam Woods	Taney	2009
6	St. John	St. Louis	2009
7	Nixa	Christian	2009
8	Willow Springs	Howell	2009
9	Chesterfield	St. Louis	2009
10	Herculaneum	Jefferson	2009
11	Willard	Greene	2009
12	Clarkson Valley	St. Louis	2010
13	New Melle	St. Charles	2010
14	Edmundson	St. Louis	2009
15	Charlack	St. Louis	2010
16	Calverton Park	St. Louis	2010
17	Webster Groves	St. Louis	2010
18	Brentwood	St. Louis	2000
19	Manchester	St. Louis	Apr 2011
20	Hazelwood	St. Louis	Jul 2011
21	Foristell	St. Charles/Warren	Sep 2011
22	Weldon Spring	St. Charles	Oct 2011
23	Cottleville	St. Charles	Aug 2011
24	Mountain View	Howell	Mar 2012
25	Hartville	Wright	Jun 2012
26	Kirkwood	St. Louis	Jul 2012
27	Bloomfield	Stoddard	Aug 2012
28	Essex	Stoddard	Aug 2012
29	Clever	Christian	Dec 2012
30	Bertrand	Mississippi	Mar 2013
31	Kansas City	Jackson	Apr 2013
32	Grandview	Jackson	Jul 9, 2013

3.3. Goals for Improving Transportation Safety

The vision for Missouri's State SHSP, also called *The Blueprint to Save More Lives*, is "Show-Me Zero Roadway-Related Deaths," which is modeled after Sweden's "Vision Zero." The new goal of Missouri's SHSP is to reduce the number of transportation fatalities to 700 or fewer by 2016. To achieve the state-wide goals, Missouri was broken up into seven regional coalitions that are tasked with developing a strategic plan based on *The Blueprint* and the crash data within the region.

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In the *Regional Transportation Plan 2040*, EWG identified several strategies for addressing the current issues related to transportation safety. These strategies include:

- Give priority to preservation in the programming of suballocated federal funds to encourage consistent improvement of locally-owned roads and bridges
- Encourage State and local governments to coordinate on projects that rehabilitate and enhance arterial road systems
- Provide added value to projects that consider access improvements, place-making, and community impacts in the programming of suballocated federal funds
- Support projects that focus on pedestrian and bicycle facilities connections and "wayfinding" in the downtown area
- Work with partners to maintain systematic planning to improve regional transportation safety, focusing on engineering, education, enforcement, and emergency response
- Continue to advance education programs through the safety initiative that works to change unsafe driving behavior
- Support a medical communications center to coordinate communications among hospitals, EMS, public health, and emergency managers
- Prepare a transportation evacuation plan for use in major natural or man-made incidents requiring the mass movement of people

The Jefferson County *Roadway Master Plan (2008)*, a component of the *Jefferson County Official Master Plan*, provides a plan for safe and successful urban and rural growth considering the county's demographics, road classifications, and future goals for the road system. The plan identifies several goals and objectives:

1. Create a current and updated road classification system, which will also provide more detailed requirements for development.
2. Provide efficient quality of service with needed capacity, reasonable speed, convenience, and safety for all of its users.
3. Create a mobile road system that will accommodate and attract the residential, commercial, and industrial growth this county finds desirable.
4. Create a priority system showing the primary and secondary growth areas and project where the growth in the county will take place.
5. Inform people about the current and future roadway projects.

Jefferson County's list of short-term improvement goals includes specific modifications for certain identified roadways. The modifications include lane widening, adding shoulders, repaving, and redesigning roadway sections. The long-term goals focus on reducing the number of dead-end connections and reconstructing road segments.

Three cities within Jefferson County also contain their own master plans: Hillsboro, Herculaneum, and Arnold.

The high priority issues presented in the *Hillsboro Master Plan* were identified by eight focus groups including an infrastructure improvement group and transportation group.[43] As the plan

[43] http://www.hillsboromo.org/Master%20Plan/Hillsboro%20Master%20Plan%20FINAL.pdf

progresses, the focus groups morph into implementation teams as their recommendations are implemented. Current improvements include constructing new ADA-compliant sidewalks and bike routes, connecting dead-end roads, and constructing an outer road to connect the east-west arterials inside the Highway 21 Bypass.

The infrastructure portion of the *Herculaneum Master Plan* focuses mainly on roadway appearance and construction standards, with minimal emphasis placed on the safety of the road.

The Transportation Framework chapter of the *Arnold 2001 Transportation Master Plan* contains the following goals and objectives:

1. Plan and develop a coordinated and comprehensive intermodal transportation system to provide for safe and efficient movement of people and goods within and through the community.
2. Provide coordination with applicable land use and development plans in order to insure that the transportation system contributes to orderly development of the community.
3. Identify policies to make more efficient use of the existing transportation system to accommodate existing and future travel demands.
4. Integrate all forms of transportation, where possible, focusing in particular on alternative forms of transportation to the auto in order to reduce congestion and environmental impact, save energy and provide a reasonable alternative to driving.
5. Improve existing city streets to acceptable levels of service and safety.
6. Provide interconnection of local streets with collector and arterial streets.
7. Encourage subdivisions to upgrade their streets to a level acceptable for city maintenance.
8. Provide for the interconnection of streets dead-ending within a few feet of each other.
9. Discourage the development of streets and conditions that hinder local and city-wide circulation.
10. Encourage a network of pedestrian and bicycle pathways throughout the city.

As presented in the *Arnold County Comprehensive Plan*, Arnold County is placing a new emphasis on providing mobility choices to a broader group of users, aiding in building a sustainable community, getting more out of the existing street system, managing maintenance costs, and enhancing transportation options.[44] Fundamental to achieving this new direction will be the reinvestment in Arnold's existing network to enhance connectivity, pedestrian/bike safety, trails, future transit, and maintain mobility for commerce.

3.4. Crash and Roadway Data Sources for Local Roads

The *Regional Transportation Plan's State of the System* estimates that motor vehicle crashes cost the St. Louis region approximately $2.7 billion in 2009.[45] Table 20 contains the crash data from the St. Louis Region.

[44] http://www.arnoldmo.org/vertical/sites/%7BAF85B466-E495-4714-83DD-358A9D1E15C4%7D/uploads/8_Arnold_Transportation_December.pdf
[45] http://www.ewgateway.org/pdffiles/Library/Trans/RTP2040/RTP-StateOfTheSystem-2011.pdf

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Table 19: St. Louis Region Crash Statistics (Regional Transportation Plan's State of the System)

Year	All Crashes	Number of Fatal Crashes	Number of Fatalities	Number of Injury Crashes
2005	82,298	289	320	19,162
2006	79,142	269	296	17,837
2007	78,270	262	289	17,344
2008	74,384	238	265	16,339
2009	70,607	216	232	15,732

On the MoDOT website, users can download regional-based tables with information on the number of fatal and serious injuries resulting from motor vehicle crashes on Missouri's highway system.[46] As mentioned in Section 3.1, within MoDOT, the St. Louis District includes Jefferson County, Franklin County, St. Charles County, St. Louis County, and St. Louis City. Tables 21 and 22 present the total number of fatalities and serious injuries that occurred on Missouri's Highway system in St. Louis District.

Table 20: Total Fatalities on Missouri's Highway System in St. Louis District

Year	St. Louis	State	Percent (%)
2009	170	878	19.36 %
2010	175	821	21.32 %
2011	162	786	20.61 %
Total/Average	507	2,845	20.40 %

Table 21: Total Serious Injuries on Missouri's Highway System St. Louis District

Year	St. Louis	State	Percent (%)
2009	1,552	6,540	23.73 %
2010	1,513	6,096	24.82 %
2011	1,236	5,643	21.90 %
Total/Average	4,301	18,279	23.53 %

Other emphasis areas that can be selected within the webform include distraction-related crashes, relationship to a signalized intersection, type of vehicle/pedestrian killed (bicyclist, pedestrian, motorcyclist), or whether the crash occurred in a work zone. Table 23 presents the number of fatalities and serious injuries on local roads in Jefferson County caused by the most common crash types.

[46] http://www.modot.org/safety/BlueprintCrashStatistics.htm

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Table 22: Crash Type and Number of Fatalities or Serious Injuries

Fatalities Involving

Description	2009	2010	2011	Total
Aggressive Driving				
Following too close	0	0	0	0
Too fast for conditions	4	0	3	7
Speed exceeded limit	2	5	3	10
TOTAL for 3 conditions	6	5	6	17
Unrestrained Occupants	4	3	6	13
Run-Off-Road Crashes	5	5	3	13
Alcohol and/or Other Drugs	6	4	3	13
Horizontal Curves	5	2	5	12
Collision with Tree	3	4	2	9
Young Drivers—15-20	4	1	2	7
Distracted Drivers	2	1	1	4
Motorcyclists Killed	1	1	1	3
Commercial Motor Vehicles	0	1	2	3
Unlicensed Drivers	0	2	0	2
Head-On Crashes				
Head-On - Non-Interstate	0	0	2	2
Head-On - Interstates	0	0	0	0
TOTAL for Non-Interstate and Interstate	0	0	2	2
Intersection Crashes				
Unsignalized	0	1	0	1
Signalized	0	0	0	0
TOTAL for Intersection Fatalities	0	1	0	1
Older Drivers—65-75	0	1	0	1
Older Drivers – 76 or Older	0	1	0	1
Pedestrians Killed	1	0	0	1
Collision with Utility Pole	0	0	0	0
Work Zones	0	0	0	0
School Buses / School Bus Signal	0	0	0	0
Bicyclists Killed	0	0	0	0

Serious Injuries Involving

Description	2009	2010	2011	Total
Run-Off-Road Crashes	75	59	33	167
Horizontal Curves	76	47	39	162
Aggressive Driving				
Following too close	1	2	0	3
Too fast for conditions	46	31	30	107
Speed exceeded limit	8	8	5	21
TOTAL for 3 conditions	55	41	35	131
Collision with Tree	42	27	19	88
Unrestrained Occupants	41	27	17	85
Young Drivers—15-20	36	20	16	72
Alcohol and/or Other Drugs	33	17	16	66
Distracted Drivers	28	15	18	61
Intersection Crashes				
Unsignalized	4	3	7	14
Signalized	3	4	8	15
TOTAL for Intersection Serious Injuries	7	7	15	29
Unlicensed Drivers	11	11	7	29
Collision with Utility Pole	10	12	5	27
Head-On Crashes				
Head-On - Non-Interstate	11	3	8	22
Head-On - Interstates	0	0	0	0
TOTAL for Non-Interstate and Interstate	11	3	8	22
Motorcyclists Seriously Injured	5	8	7	20
Commercial Motor Vehicles	3	4	6	13
Pedestrians Seriously Injured	3	4	4	11
Older Drivers—65-75	2	2	6	10
Older Drivers – 76 or Older	1	0	2	3
Work Zones	0	2	0	2
Bicyclists Seriously Injured	0	0	0	0
School Buses / School Bus Signal	0	0	0	0

Jefferson County maintains 418 roads with more than 662 linear miles.[47] To help manage the growing number of roads in Missouri, the EWG has recently redefined their Roadway Functional Classification System. The new re-stratified classification system can be seen in Table 24.[48]

47 http://www.jeffcomo.org/uploads/Public%20Works/Ordinances/Roadway%20Master%20Plan/RoadwayMasterPlanAndAppendix04-02-2008.pdf

48 http://www.ewgateway.org/trans/funcclass/funcclass.htm

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Table 23: New Functional Classes (EWG)

Area Type	Roadway Functional Classes		
Urban	Arterial	Principal	Interstate
			Freeway/Expressway
			Other Principal
		Minor	
	Collector		
	Local		
Rural	Arterial	Principal	Interstate
			Freeway/Expressway
			Other Principal
		Minor	
	Collector	Major	
		Minor	
	Local		

Figure 7 illustrates the results of the new functional classification system in Jefferson County. Examples of the classification are as follows (also, see Figures 8 and 9):

- Principal Arterial: Route 30, Route N
- Minor Arterial: Old Highway 30, Cedar Hill Road, Route 110, Route 21
- Collector: Route BB, Route B, Graham Road, Byrnesville Road, Upper Plattin Road, Route P, Route Y
- Local Road: Dutch Creek Road, Skull Bones Road, Hyfield Road, Lembeck Lake Drive, Yellow Rock Road

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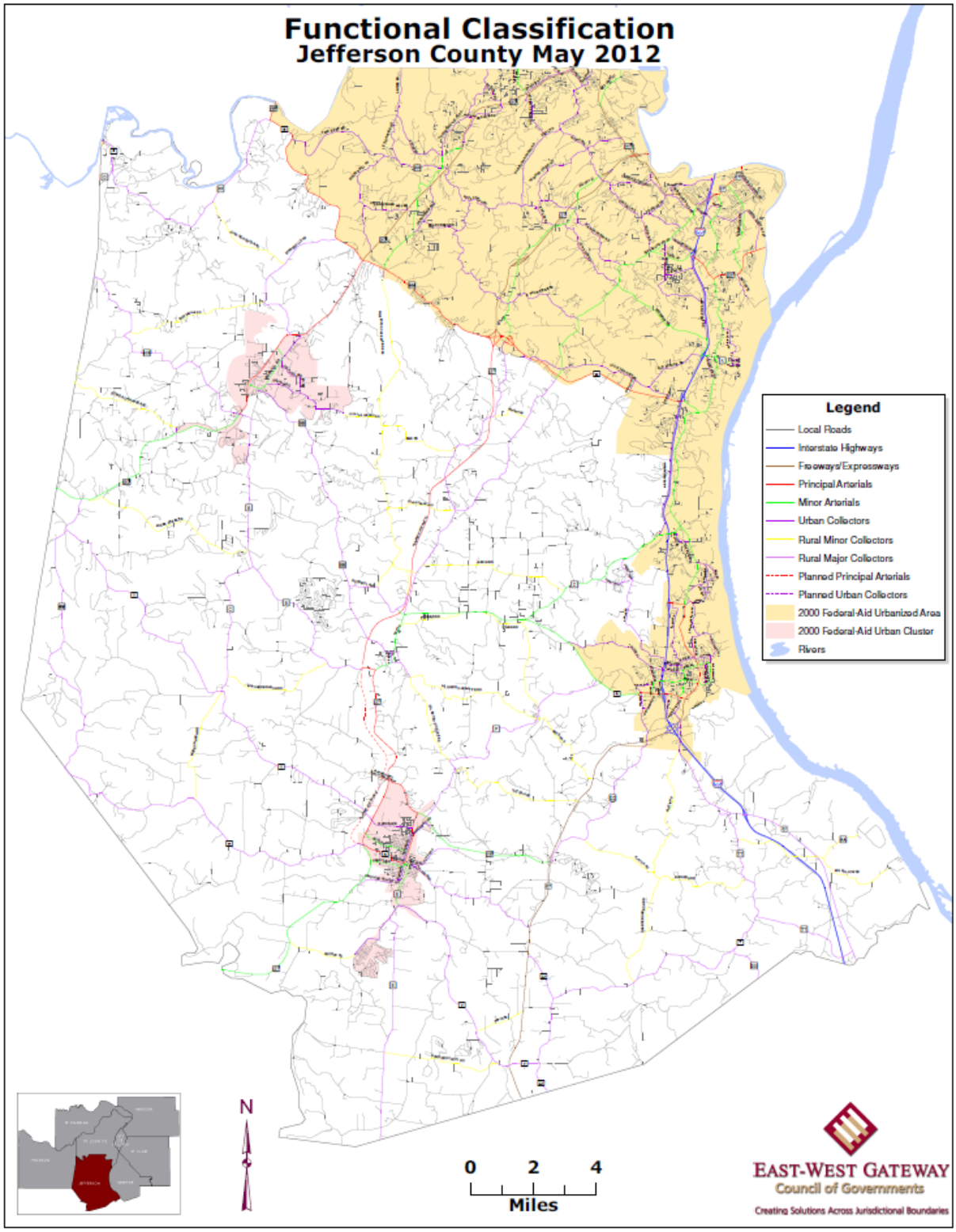

Figure 7: Map showing the functional classification of roadways throughout Jefferson County

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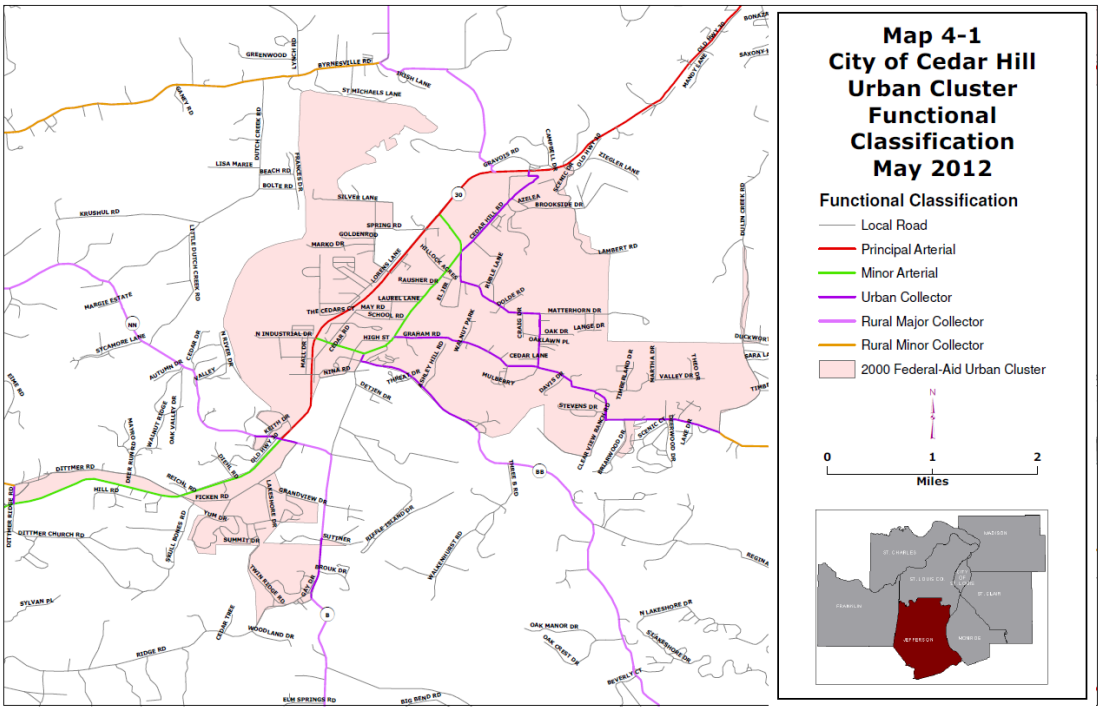


Figure 8: Map showing the functional classification of roadways in the City of Cedar Hill

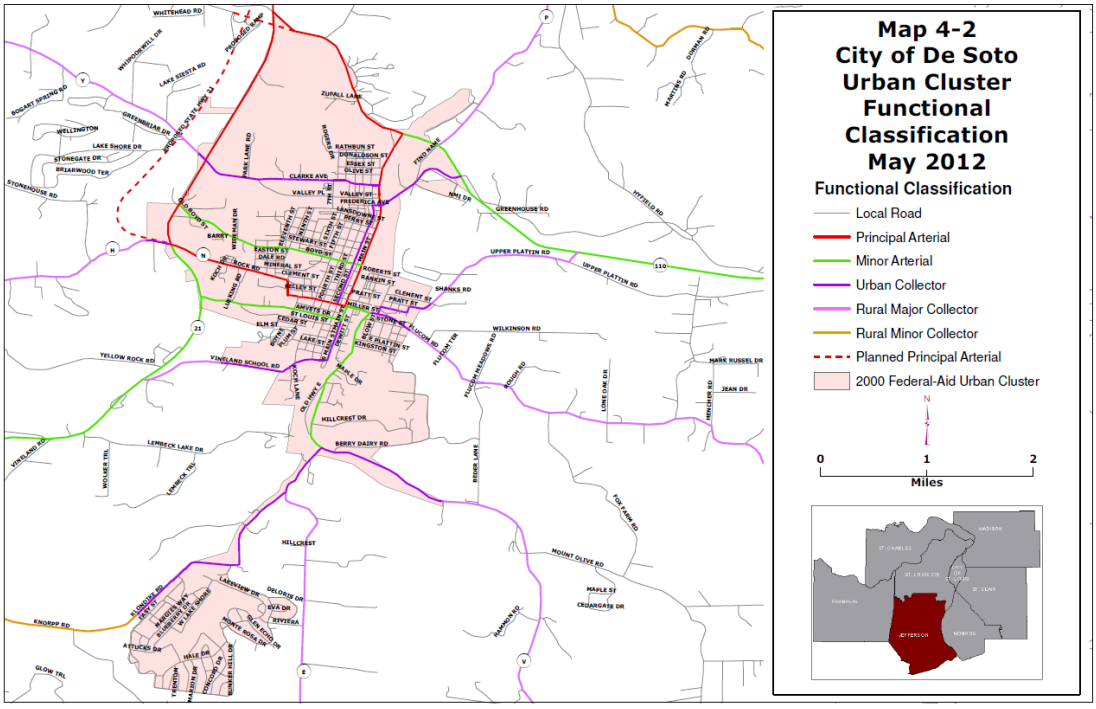


Figure 9: Map showing the functional classification of roadways in the City of De Soto

The 2012 Year-End Report for the Jefferson County Sheriff's Office indicated that the number of fatal crashes, injury crashes, and non-injury crashes remained unchanged from 2011 to 2012.

However, as seen in Table 25, the Traffic Enforcement Unit issued approximately 250 fewer tickets in 2012 than they did in the previous year.

Table 24: Jefferson County Injury Classification

	2011	2012
Fatality Crashes	3	3
Injury Crashes	26	26
Non-Injury Crashes	44	44
Tickets Issued	7,667	7,405

The Year-End Report also summarizes the results of the DWI Enforcement Unit as seen in Table 26.

Table 25: Jefferson County DWI Data

	2011	2012
DWI Arrest	254	334
Speeding Violations	118	197
Stop Sign Violations	40	45
Driving While Suspended	54	122
Seatbelt Violations	111	50
Non-Moving Violations	502	350

3.5. Emphasis Areas, Predominate Crash Types, and High-Risk Users on Local Roads within Jefferson County

Missouri's SHSP (*Missouri's Blueprint to Save More Lives*)[49] provides six emphasis areas to focus on from 2012-2016. The emphasis areas include:

1. Serious Crash Types
2. High-Risk Drivers
3. Special Vehicles
4. Vulnerable Roadway Users
5. Special Roadway Environments
6. Data and Data System Improvements

3.6. Approved Educational, Enforcement, and Engineering Strategies Identified by County and Local Agencies

While no information is publically available, many of the transportation safety stakeholders cited earlier in this report do conduct traffic safety education.

[49] http://www.savemolives.com/documents/Blueprint-2012-2016.pdf

Appendix B

3.7. Performance Measures and Results from Executing Strategies

Each edition of the Missouri SHSP, *The Blueprint*, has seen successful implementation of the recommended countermeasures and has been able to meet the given performance goals. Since 2005, the total number of motor vehicle fatalities has fallen from 1,257 to 786. The strategies taken were to reduce the fatalities in specific crash areas (unrestrained occupants, run-off-road crashes, aggressive drivers, horizontal curves, substance-impaired drivers, distracted drivers, young drivers, and intersection crashes).

Appendix B
Literature Resources

This appendix is a list of the resources identified and reviewed by the research team to identify relevant safety-related data (e.g., crash history, roadway inventory) and existing plans for Jefferson County and local agencies within the county.

Ref #	Resource	Year	Author(s)
1	Jefferson County Public Works: Upcoming Project List	2013	Jefferson County, Missouri
2	Jefferson County Public Works Projects	2013	Jefferson County, Missouri
3	2008 Jefferson County Roadway Master Plan	2008	Jefferson County Public Works Highway Division
4	Hillsboro Master Plan (Infrastructure Section)	2005	City of Hillsboro
5	2006 Herculaneum Master Plan	2006	City of Herculaneum
6	Arnold MO Transportation Framework Comprehensive Plan	2011	City of Arnold
7	East-West Gateway Public Officials Directory 2013	2013	East-West Gateway
8	Travel Safe Program	n/a	n/a
9	Jefferson County Functional Classification Map	2012	East-West Gateway
10	Desoto Functional Classification Map	2012	East-West Gateway
11	Cedar Hill Functional Classification Map	2012	East-West Gateway
12	2040 Transportation Plan	2011	East-West Gateway
13	RTP 2040 State of the System	2011	East-West Gateway
14	Jefferson County Roadway Master Plan	2008	Jefferson County Public Works
15	Hillsboro Master Plan	2005	Master Plan Steering Committee
16	Herculaneum Master Plan	2006	Master Plan Committee
17	Links for Municipalities	n/a	East-West Gateway
18	Gateway Mothers Against Drunk Driving website	n/a	MADD
19	Missouri DOT's Blueprint to Arrive Alive 2012-2016	2012	Missouri DOT
20	Safe Kids St. Louis website	n/a	Safe Kids St. Louis
21	Safety Council of Greater St. Louis website	n/a	Safety Council of Greater St. Louis
22	St. Louis Regional Traffic Safety Council website	n/a	St. Louis Regional Traffic Safety Council
23	St. Louis Area Regional Response System website	n/a	St. Louis Area Regional Response System
24	Jefferson County Safety First Coalition roster	2013	JeffCo SFC
25	2012 Year End Report	2012	Jefferson County Sheriff's Office
26	Cedar Hill Cluster Map 2012	2012	n/a
27	Desoto Cluster Map 2012	2012	n/a
28	Jefferson County Map 2012	2012	n/a

Appendix C

Appendix C: List of Data/Countermeasure Workshop Attendees on November 13, 2013

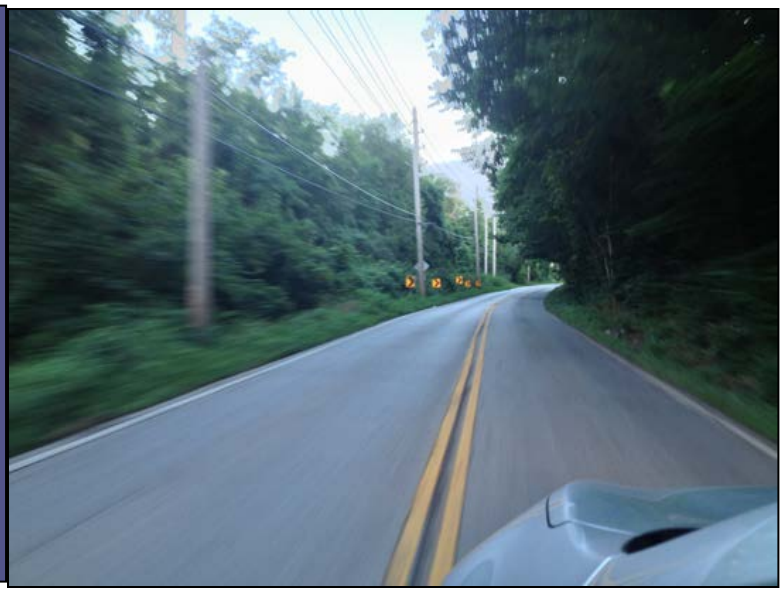
Attendee	Agency
Jason Jonas	Jefferson County Public Works
Kristy Yates	Jefferson County Public Works
Ashley Reinkemeyer	MoDOT
Teresa Krenning	MoDOT
Judy Wagner	MoDOT
Larry Grither	EWG
Anna Musial	EWG
Eddie Blaylock	Missouri State Highway Patrol – Troop C
Timothy Whitney	Jefferson County Sherriff's Office
Ray Cummisky	Route 21 Task Force/Jefferson College
Jim Terry	Route W/MM Task Force
Stacie Stryhal	DeSoto School District
Matt Myers	Leidos
Jennifer Atkinson	Leidos
Shawn Leight	CBB

Appendix D

Appendix D: Data Analysis and Strategy Matrix

Jefferson County, MO – Final Data Package and Strategy Matrix

December 4, 2013



Appendix D

Data Overview

The set of crashes included in this analysis is all crashes occurring on local roads, including county roads and city streets, in Jefferson County, MO between 2007 and 2011. The preliminary overview tables present information about State and Local crashes in Jefferson and other counties to show what proportion of the problem occurs on just local roads within Jefferson County.

Table 26: Total Crashes and Fatalities in the Top-14 Missouri Counties (State and Local)

	Crashes		Fatalities	
County	Total	%	Total	%
JACKSON	110,428	20.4%	378	19.5%
ST. LOUIS	139,807	25.8%	264	13.6%
ST. LOUIS CITY	75,618	14.0%	231	11.9%
JEFFERSON	23,417	4.3%	164	8.4%
GREENE	41,269	7.6%	145	7.5%
ST. CHARLES	39,471	7.3%	129	6.6%
FRANKLIN	13,625	2.5%	120	6.2%
CLAY	25,740	4.7%	115	5.9%
NEWTON	5,800	1.1%	89	4.6%
BOONE	16,269	3.0%	82	4.2%
JASPER	15,616	2.9%	79	4.1%
PLATTE	11,962	2.2%	62	3.2%
COLE	8,937	1.6%	45	2.3%
BUCHANAN	14,044	2.6%	40	2.1%
Top-14 Total	**542,003**	**100.0%**	**1,943**	**100.0%**

Table 27: Total Jefferson County Crashes and Fatalities by Locality

	Crashes		Injuries		Fatalities	
Locality	Total	%	Total	%	Total	%
Local	9,133	39.0%	3,005	32.9%	38	23.2%
State	13,395	57.2%	6,013	65.7%	124	75.6%
Unknown	889	3.8%	129	1.4%	2	1.2%
Jefferson County Total	**23,417**	**100.0%**	**9,147**	**100.0%**	**164**	**100.0%**

Table 28: Total Local Jefferson County Crashes and Fatalities by Year

		Year					
Locality	Totals	2007	2008	2009	2010	2011	Total
Local	Crashes	1,912	1,869	1,842	1,789	1,721	**9,133**
	Fatalities	9	7	7	8	7	**38**
	Fatalities per 100 crashes	0.47	0.37	0.38	0.45	0.41	**0.42**

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Table 29: Total Local Jefferson County Crashes and Fatalities by Highway Classification

	Crashes		Injuries		Fatalities	
Highway Classification	**Total**	**%**	**Total**	**%**	**Total**	**%**
COUNTY ROAD	4,903	53.7%	2,033	67.7%	32	84.2%
CITY STREET	4,230	46.3%	972	32.3%	6	15.8%
Jefferson County Total	**9,133**	**100.0%**	**3,005**	**100.0%**	**38**	**100.0%**

Table 30: Local Crashes by Highway Classification and Year

		Year					
Highway Classification	**Totals**	**2007**	**2008**	**2009**	**2010**	**2011**	**Total**
COUNTY ROAD	Crashes	960	881	1,030	1,084	948	**4,903**
	Fatalities	6	5	7	7	7	**32**
	Fatalities per 100 crashes	0.63	0.57	0.68	0.65	0.74	**0.65**
CITY STREET	Crashes	952	988	812	705	773	**4,230**
	Fatalities	3	2	-	1	-	**6**
	Fatalities per 100 crashes	0.32	0.20	-	0.14	-	**0.14**

Table 31: Injury Severity of Persons Involved in Local Crashes by Year

		Year					
Highway Classification	**Person Injury Level**	**2007**	**2008**	**2009**	**2010**	**2011**	**Total**
COUNTY ROAD	<null>	1,547	1,400	1,710	1,803	1,595	**8,055**
	FATAL	6	5	7	7	7	**32**
	DISABLING INJURY	115	88	99	73	57	**432**
	EVIDENT INJURY (NOT DISABLING)	201	198	207	229	170	**1,005**
	PROBABLY INJURY (NOT APPARENT)	131	136	139	126	67	**599**
	NONE APPARENT	1,600	1,414	1,655	1,880	1,580	**8,129**
	UNKNOWN	42	23	47	50	38	**200**
	County Total	***3,642***	***3,264***	***3,864***	***4,168***	***3,514***	**18,452**
CITY STREET	<null>	1,955	2,064	1,682	1,497	1,618	**8,816**
	FATAL	3	2		1		**6**
	DISABLING INJURY	43	22	9	12	11	**97**
	EVIDENT INJURY (NOT DISABLING)	110	83	64	59	68	**384**
	PROBABLY INJURY (NOT APPARENT)	154	118	94	57	68	**491**
	NONE APPARENT	1,935	2,141	1,563	1,453	1,715	**8,807**
	UNKNOWN	23	13	19	13	11	**79**
	City Total	***4,223***	***4,443***	***3,431***	***3,092***	***3,491***	**18,680**
Jefferson County Local Total		**7,865**	**7,707**	**7,295**	**7,260**	**7,005**	**37,132**

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Table 32: Local Urban Crashes by Municipality

Locality	MUNICIPALITY	Total Crashes	Total Fatalities	Fatalities per 100 crashes
Local	ARNOLD	1,329	2	0.15
	FESTUS	928	-	0.00
	DE SOTO	498	-	0.00
	NON-CITY OR UNINCORPORATED	491	3	0.61
	HERCULANEUM	323	1	0.31
	CRYSTAL CITY	300	-	0.00
	PEVELY	152	-	0.00
	HILLSBORO	138	-	0.00
	BYRNES MILL	70	-	0.00
	FENTON	1	-	0.00
Total Local Municipal Crashes and Fatalities		**4,230**	**6**	**0.14**

Table 33: Local Jefferson County - Severe and Fatal Local Crashes - Compared to Top 14

			Year					
SEVERITY	County	Locality	2007	2008	2009	2010	2011	Total
FATAL	JEFFERSON	Local	9	7	7	8	7	**38**
	TOP-14 COUNTIES		143	152	148	149	142	**734**
	Jefferson County Rate (out of Top-14)		6.3%	4.6%	4.7%	5.4%	4.9%	**5.2%**
DISABLING INJURY	JEFFERSON	Local	128	88	86	71	52	**425**
	TOP-14 COUNTIES		1460	1332	1341	1225	1212	**6,570**
	Jefferson County Rate (out of Top-14)		8.8%	6.6%	6.4%	5.8%	4.3%	**6.5%**

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Table 34: Local Jefferson County - Severe and Fatal Local Crashes - Compared to Top 14

			Crashes		Fatalities	
County, Locality	Highway Classification	Speed Limit	Total	%	Total	%
JEFFERSON, Local	County Road	05	8	0.2%	-	0.0%
		10	10	0.2%	1	3.1%
		15	50	1.0%	-	0.0%
		20	130	2.7%	-	0.0%
		25	310	6.3%	1	3.1%
		30	381	7.8%	-	0.0%
		35	1,441	29.4%	12	37.5%
		40	1,017	20.7%	7	21.9%
		45	931	19.0%	7	21.9%
		50	309	6.3%	1	3.1%
		55	218	4.4%	3	9.4%
		60	27	0.6%	-	0.0%
		65	2	0.0%	-	0.0%
		N/A	6	0.1%	-	0.0%
		U	63	1.3%	-	0.0%
	County Road Total		***4,903***	***100.0%***	***32***	***100.0%***
	City Street	05	2	0.0%	-	0.0%
		10	16	0.4%	-	0.0%
		15	80	1.9%	-	0.0%
		20	891	21.1%	1	16.7%
		25	689	16.3%	-	0.0%
		30	1,358	32.1%	2	33.3%
		35	475	11.2%	2	33.3%
		40	352	8.3%	-	0.0%
		45	276	6.5%	1	16.7%
		50	12	0.3%	-	0.0%
		55	5	0.1%	-	0.0%
		60	1	0.0%	-	0.0%
		NA	2	0.0%	-	0.0%
		U	71	1.7%	-	0.0%
	City Street Total		***4,230***	***100.0%***	***6***	***100.0%***
Jefferson County Local Total			**9,133**		**38**	

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Table 35: Total Crashes and Fatalities by Speeding-Related and Locality

Speeding Involvement	Highway Classification	Crashes		Fatalities		Fatalities per 100 crashes
		Total	%	Total	%	
Yes, Speeding Involved	County Road	1,506	16.5%	25	65.8%	1.66
	City Street	548	6.0%	4	10.5%	0.73
	Speeding-Involved Total	**2,054**	**22.5%**	**29**	**76.3%**	**1.41**
No, Speeding not Involved	County Road	3,397	37.2%	7	18.4%	0.21
	City Street	3,682	40.3%	2	5.3%	0.05
	No Speeding Involved Total	**7,079**	**77.5%**	**9**	**23.7%**	**0.13**
Local Total		**9,133**	**100.0%**	**38**	**100.0%**	**0.42**

Table 36: Total Crashes and Fatalities by Alcohol-Related and Locality

Alcohol Involvement	Highway Classification	Crashes		Fatalities		Fatalities per 100 crashes
		Total	%	Total	%	
Yes, Alcohol Involved	County Road	481	5.3%	16	76.2%	3.33
	City Street	217	2.4%	5	23.8%	2.30
	Alcohol-Involved Total	**698**	**7.6%**	**21**	**55.3%**	**3.01**
No, Alcohol not Involved	County Road	4,422	48.4%	16	42.1%	0.36
	City Street	4,013	43.9%	1	2.6%	0.02
	No Alcohol Involved Total	**8,435**	**92.4%**	**17**	**44.7%**	**0.20**
Local Total		**9,133**	**100.0%**	**38**	**100.0%**	**0.42**

Table 37: Total Fatalities and Disabling Injuries by Restraint Use

Person's Injury Level	Restraint Use	# Persons	% of Total	% By Inj. Sev
Fatal Injury	Restrained	8	1.5%	22.9%
	Unknown Restraint Usage	5	0.9%	14.3%
	Unrestrained	22	4.1%	62.9%
Fatal Injury Total		***35***	***6.5%***	**100.0%**
Incapacitating Injury	Restrained	285	52.9%	56.5%
	Unknown Restraint Usage	32	5.9%	6.3%
	Unrestrained	187	34.7%	37.1%
Incapacitating Injury Total		***504***	***93.5%***	**100.0%**
County Local Total - Drivers and Occupants		**539**	**100.0%**	-

Table 38: Total Crashes and Fatalities by Pedestrian Involvement and Locality

Pedestrian Involvement	Highway Classification	# Crashes	# Fatalities	Fatalities per 100 crashes	# Injuries	Injuries per 100 crashes
Pedestrian Crashes	County Road	40	1	2.50	11	27.50
	City Street	50	2	4.00	10	20.00
	Local Pedestrian Crashes	**90**	**3**	**3.33**	**21**	**23.33**
Non-Pedestrian Crashes	County Road	4,863	31	0.64	2,022	41.58
	City Street	4,180	4	0.10	962	23.01
	Local Non-Pedestrian Crashes	**9,043**	**35**	**0.39**	**2,984**	**33.00**
Local Total		**9,133**	**38**	**0.42**	**3,005**	**32.90**

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Countermeasure(s): All Sign and Marking Countermeasures and Curve ITS Treatments

Table 39: Curve Crashes - Total - Local Roads - 2007-2011

LOCALITY/ Highway Classification	TOTAL CRASHES	TOTAL FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
LOCAL	**2,803**	**22**	**240**	**0.78**	**8.56**
Rural	2,039	21	215	1.03	10.54
Urban	764	1	25	0.13	3.27
Total	**2,803**	**22**	**240**	**0.78**	**8.56**

Table 40: Curve Crashes - Local Roads –2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	6	6	0.76%	415	14.81%
30 - 49	4	10	1.26%	568	20.26%
20 - 29	11	21	2.65%	862	30.75%
10 - 19	26	47	5.93%	1,294	46.16%
5 - 9	77	124	15.66%	1,838	65.57%
4	31	155	19.57%	1,962	70.00%
3	51	206	26.01%	2,115	75.45%
2	102	308	38.89%	2,319	82.73%
1	484	792	100.00%	2,803	100.00%
Total	**792**	**792**	**100.00%**	**2,803**	**100.00%**

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Countermeasure(s): Raised Thermoplastic Centerline Rumble Stripes or Milled-In Centerline Rumble Strips or Stripes

Table 41: Head-On and Sideswipe, Opposite Direction Crashes – Local Roads - 2007-2011

State/Local	TOTAL CRASHES	TOTAL FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
LOCAL	**1,515**	**13**	**142**	**0.86**	**9.37**
Rural	1,123	12	124	1.07	11.04
Urban	392	1	18	0.26	4.59
Total	**1,515**	**13**	**142**	**0.86**	**9.37**

Table 42: Head-On and Sideswipe, Opposite Direction Crashes - Local Roads –2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	3	3	0.53%	122	8.05%
20 - 29	7	10	1.78%	304	20.07%
10 - 19	12	22	3.91%	492	32.48%
5 - 9	39	61	10.85%	779	51.42%
4	24	85	15.12%	875	57.76%
3	39	124	22.06%	992	65.48%
2	85	209	37.19%	1,162	76.70%
1	353	562	100.00%	1,515	100.00%
Total	**562**	**562**	**100.00%**	**1,515**	**100.00%**

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Countermeasure(s): Raised Thermoplastic Edge Line Rumble Stripes or Milled-In Edge Line Rumble Strips

Table 43: Single Vehicle Crashes – Local Roads – All Shoulder Widths and Types - 2007-2011

LOCALITY	TOTAL CRASHES	TOTAL FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
LOCAL	**2,791**	**26**	**290**	**0.93**	**10.39**
Rural	2,202	24	257	1.09	11.67
Urban	589	2	33	0.34	5.60
Total	**2,791**	**26**	**290**	**0.93**	**10.39**

Table 44: Single Vehicle Run-Off Road Crashes – Local Roads – 2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	2	2	0.24%	180	6.45%
30 - 49	10	12	1.43%	577	20.67%
20 - 29	7	19	2.27%	758	27.16%
10 - 19	27	46	5.49%	1,196	42.85%
5 - 9	81	127	15.16%	1,774	63.56%
4	32	159	18.97%	1,902	68.15%
3	48	207	24.70%	2,046	73.31%
2	114	321	38.31%	2,274	81.48%
1	517	838	100.00%	2,791	100.00%
Total	**838**	**838**	**100.00%**	**2,791**	**100.00%**

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Countermeasure(s): Alignment Delineation, Lighting

Table 45: Dark Crashes – Local Roads - 2007-2011

LOCALITY	TOTAL CRASHES	TOTAL FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Local	**2,920**	**22**	**174**	**0.75**	**5.96**
Rural	1,784	18	141	1.01	7.90
Urban	1,136	4	33	0.35	2.90
Total	**2,920**	**22**	**174**	**0.75**	**5.96**

Table 46: Dark Crashes - Local Roads - 2007-2011 - Summary
Dark Crashes / Total Crashes Ratio - Threshold = 0.427

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	1	1	0.13%	41	2.93%
20 - 29	1	2	0.26%	71	5.08%
10 - 19	5	7	0.89%	152	10.88%
5 - 9	37	44	5.62%	406	29.06%
4	18	62	7.92%	478	34.22%
3	49	111	14.18%	625	44.74%
2	100	211	26.95%	825	59.06%
1	572	783	100.00%	1,397	100.00%
Total	**783**	**783**	**100.00%**	**1,397**	**100.00%**

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Countermeasure(s): High-Friction Surfaces and High-Friction Surfaces on Curves

Table 47: Total Wet Crashes – Local Roads - 2007-2011

LOCALITY	TOTAL CRASHES	TOTAL FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Local	**1,756**	**4**	**76**	**0.23**	**4.33**
Rural	1,025	3	70	0.29	6.83
Urban	731	1	6	0.14	0.82
Total	**1,756**	**4**	**76**	**0.23**	**4.33**

Table 48: Total Wet Crashes – Local – 2007-2011 – Summary
WET / TOTAL RATIO- Threshold = 0.304

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	1	1	0.24%	73	8.83%
30 - 49	-	1	0.24%	73	8.83%
20 - 29	2	3	0.71%	125	15.11%
10 - 19	3	6	1.42%	166	20.07%
5 - 9	20	26	6.15%	299	36.15%
4	9	35	8.27%	335	40.51%
3	25	60	14.18%	410	49.58%
2	54	114	26.95%	518	62.64%
1	309	423	100.00%	827	100.00%
Total	**423**	**423**	**100.00%**	**827**	**100.00%**

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Table 49: Curve Wet Crashes – Local Roads - 2007-2011

LOCALITY	TOTAL CRASHES	TOTAL FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Local Curves	**724**	**2**	**47**	**0.28**	**6.49**
Rural	548	2	46	0.36	8.39
Urban	176	-	1	0.00	0.57
Total	**724**	**2**	**47**	**0.28**	**6.49**

Table 50: Wet Curve Crashes – Local – 2007-2011 - Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	1	1	0.34%	56	7.73%
30 - 49	-	1	0.34%	56	7.73%
20 - 29	1	2	0.68%	83	11.46%
10 - 19	8	10	3.41%	191	26.38%
5 - 9	23	33	11.26%	353	48.76%
4	7	40	13.65%	381	52.62%
3	18	58	19.80%	435	60.08%
2	54	112	38.23%	543	75.00%
1	181	293	100.00%	724	100.00%
Total	**293**	**293**	**100.00%**	**724**	**100.00%**

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Countermeasure(s): Tree Removal/Safety Enhancements, Shield Tree(s)

Table 51: Total Tree Crashes – Local Roads - 2007-2011

LOCALITY	CRASHES	FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Local	**962**	**13**	**139**	**1.35**	**14.45**
Rural	814	13	125	1.60	15.36
Urban	148	-	14	0.00	9.46
Total	**962**	**13**	**139**	**1.35**	**14.45**

Table 52: Tree Crashes – Local – 2007-2011 - Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	1	1	0.24%	37	3.85%
20 - 29	1	2	0.48%	60	6.24%
10 - 19	7	9	2.16%	172	17.88%
5 - 9	39	48	11.54%	443	46.05%
4	14	62	14.90%	499	51.87%
3	23	85	20.43%	568	59.04%
2	63	148	35.58%	694	72.14%
1	268	416	100.00%	962	100.00%
Total	**416**	**416**	**100.00%**	**962**	**100.00%**

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Table 53: Total Tree Crashes – ONLY ON CURVES – Local Roads - 2007-2011

LOCALITY	CRASHES	FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Local	**586**	**8**	**98**	**1.37**	**16.72**
Rural	507	8	88	1.58	17.36
Urban	79	-	10	0.00	12.66
Total	**586**	**8**	**98**	**1.37**	**16.72**

Table 54: Tree Crashes – ONLY ON CURVES – Local – 2007-2011 - Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	-	-	0.00%	-	0.00%
20 - 29	1	1	0.39%	28	4.78%
10 - 19	5	6	2.33%	97	16.55%
5 - 9	20	26	10.12%	240	40.96%
4	14	40	15.56%	296	50.51%
3	12	52	20.23%	332	56.66%
2	49	101	39.30%	430	73.38%
1	156	257	100.00%	586	100.00%
Total	**257**	**257**	**100.00%**	**586**	**100.00%**

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Countermeasure(s): Utility Pole Relocation/Safety Enhancements

Table 55: Total Utility Pole Crashes – Local Roads - 2007-2011

LOCALITY	CRASHES	FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Local	**424**	**2**	**34**	**0.47**	**8.02**
Rural	300	2	28	0.67	9.33
Urban	124	-	6	0.00	4.84
Total	**424**	**2**	**34**	**0.47**	**8.02**

Table 56: Utility Pole Crashes – Local – 2007-2011 - Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	-	-	0.00%	-	0.00%
20 - 29	-	-	0.00%	-	0.00%
10 - 19	2	2	0.86%	30	7.08%
5 - 9	13	15	6.47%	117	27.59%
4	8	23	9.91%	149	35.14%
3	17	40	17.24%	200	47.17%
2	32	72	31.03%	264	62.26%
1	160	232	100.00%	424	100.00%
Total	**232**	**232**	**100.00%**	**424**	**100.00%**

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Countermeasure(s): Enforcement and Education

Table 57: Crashes – Local Roads - Alcohol-Related - 2007-2011

LOCALITY	TOTAL CRASHES	TOTAL FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Local	**697**	**21**	**92**	**3.01**	**13.20**
Rural	480	16	79	3.33	16.46
Urban	217	5	13	2.30	5.99
Total	**697**	**21**	**92**	**3.01**	**13.20**

Table 58: Total Crashes - Alcohol-Related - Local Roads – 2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	-	-	0.00%	-	0.00%
20 - 29	-	-	0.00%	-	0.00%
10 - 19	4	4	1.04%	61	8.75%
5 - 9	23	27	7.03%	205	29.41%
4	11	38	9.90%	249	35.72%
3	28	66	17.19%	333	47.78%
2	46	112	29.17%	425	60.98%
1	272	384	100.00%	697	100.00%
Total	**384**	**384**	**100.00%**	**697**	**100.00%**

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Table 59: Total Crashes – Local Roads - Speeding-Related - 2007-2011

LOCALITY	TOTAL CRASHES	TOTAL FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Local	**2,054**	**29**	**189**	**1.41**	**9.20**
Rural	1,506	25	165	1.66	10.96
Urban	548	4	24	0.73	4.38
Total	**2,054**	**29**	**189**	**1.41**	**9.20**

Table 60: Total Crashes –Local Roads – Speeding-Related– 2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	1	1	0.14%	78	3.80%
30 - 49	4	5	0.68%	211	10.27%
20 - 29	6	11	1.50%	383	18.65%
10 - 19	16	27	3.68%	629	30.62%
5 - 9	67	94	12.81%	1,121	54.58%
4	27	121	16.49%	1,229	59.83%
3	47	168	22.89%	1,370	66.70%
2	118	286	38.96%	1,606	78.19%
1	448	734	100.00%	2,054	100.00%
Total	**734**	**734**	**100.00%**	**2,054**	**100.00%**

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Table 61: Total Crashes – Local Roads - Unbelted - 2007-2011

LOCALITY	TOTAL CRASHES	TOTAL FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Local	**2,083**	**22**	**187**	**1.06**	**8.98**
Rural	1,411	20	154	1.42	10.91
Urban	672	2	33	0.30	4.91
Total	**2,083**	**22**	**187**	**1.06**	**8.98**

Table 62: Total Crashes – Local Roads – Unbelted – 2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	-	-	0.00%	-	0.00%
20 - 29	1	1	0.23%	27	3.21%
10 - 19	9	10	2.30%	150	17.86%
5 - 9	20	30	6.90%	295	35.12%
4	12	42	9.66%	343	40.83%
3	25	67	15.40%	418	49.76%
2	54	121	27.82%	526	62.62%
1	314	435	100.00%	840	100.00%
Total	**435**	**435**	**100.00%**	**840**	**100.00%**

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Countermeasure(s): Pedestrian Crossing Treatments

Table 63: Total Pedestrian Crashes – Local Roads - 2007-2011

LOCALITY	CRASHES	FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Local, Intersection	**10**	**-**	**2**	**0.00**	**20.00**
Signalized	4	-	2	0.00	50.00
Stop-controlled	6	-	-	0.00	0.00
Local, Non-intersection	**62**	**2**	**13**	**3.23**	**20.97**
Non-Intersection	62	2	13	3.23	20.97
Total	**72**	**2**	**15**	**3.23**	**40.97**

Table 64: Pedestrian Crashes – Signalized Intersections - Local Roads – 2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	-	-	0.00%	-	0.00%
20 - 29	-	-	0.00%	-	0.00%
10 - 19	-	-	0.00%	-	0.00%
5 - 9	-	-	0.00%	-	0.00%
4	-	-	0.00%	-	0.00%
3	-	-	0.00%	-	0.00%
2	-	-	0.00%	-	0.00%
1	3	3	100.00%	3	100.00%
Total	**3**	**3**	**100.00%**	**3**	**100.00%**

Table 65: Pedestrian Crashes – Stop-controlled Intersections - Local Roads – 2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	-	-	0.00%	-	0.00%
20 - 29	-	-	0.00%	-	0.00%
10 - 19	-	-	0.00%	-	0.00%
5 - 9	-	-	0.00%	-	0.00%
4	-	-	0.00%	-	0.00%
3	-	-	0.00%	-	0.00%
2	-	-	0.00%	-	0.00%
1	1	1	100.00%	1	100.00%
Total	**1**	**1**	**100.00%**	**1**	**100.00%**

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Table 66: Pedestrian Crashes – Not At Intersections - Local Roads – 2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	-	-	0.00%	-	0.00%
20 - 29	-	-	0.00%	-	0.00%
10 - 19	-	-	0.00%	-	0.00%
5 - 9	-	-	0.00%	-	0.00%
4	-	-	0.00%	-	0.00%
3	-	-	0.00%	-	0.00%
2	1	1	1.64%	2	3.23%
1	60	61	100.00%	62	100.00%
Total	**61**	**61**	**100.00%**	**62**	**100.00%**

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Countermeasure(s): Intersection Treatments

Table 67: Total Crashes at Intersections – Local Roads - 2007-2011

LOCALITY	CRASHES	FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Signalized	**664**	**1**	**21**	**0.15**	**3.16**
<45 MPH	608	1	15	0.16	2.47
45+ MPH	56	-	6	0.00	10.71
Stop-Controlled	**724**	**3**	**23**	**0.41**	**3.18**
<45 MPH	657	2	14	0.30	2.13
45+ MPH	67	1	9	1.49	13.43
Total	**1,388**	**4**	**44**	**0.29**	**3.17**

Table 68: Intersection Crashes – Signalized Intersection – Under 45 mph – Local Roads – 2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	2	2	2.13%	132	21.71%
30 - 49	1	3	3.19%	166	27.30%
20 - 29	3	6	6.38%	241	39.64%
10 - 19	6	12	12.77%	329	54.11%
5 - 9	21	33	35.11%	489	80.43%
4	9	42	44.68%	525	86.35%
3	9	51	54.26%	552	90.79%
2	13	64	68.09%	578	95.07%
1	30	94	100.00%	608	100.00%
Total	**94**	**94**	**100.00%**	**608**	**100.00%**

Table 69: Intersection Crashes – Signalized Intersections – 45 mph or greater – Local Roads – 2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	-	-	0.00%	-	0.00%
20 - 29	-	-	0.00%	-	0.00%
10 - 19	1	1	3.70%	12	21.43%
5 - 9	-	1	3.70%	12	21.43%
4	2	3	11.11%	20	35.71%
3	4	7	25.93%	32	57.14%
2	4	11	40.74%	40	71.43%
1	16	27	100.00%	56	100.00%
Total	**27**	**27**	**100.00%**	**56**	**100.00%**

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Table 70: Intersection Crashes – Stop-controlled Intersection – Under 45 mph – Local Roads – 2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	-	-	0.00%	-	0.00%
20 - 29	-	-	0.00%	-	0.00%
10 - 19	3	3	0.77%	46	7.00%
5 - 9	16	19	4.86%	141	21.46%
4	11	30	7.67%	185	28.16%
3	26	56	14.32%	263	40.03%
2	59	115	29.41%	381	57.99%
1	276	391	100.00%	657	100.00%
Total	**391**	**391**	**100.00%**	**657**	**100.00%**

Table 71: Intersection Crashes – Stop-controlled Intersections – 45 mph or greater – Local Roads – 2007-2011 – Summary

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	-	-	0.00%	-	0.00%
20 - 29	-	-	0.00%	-	0.00%
10 - 19	-	-	0.00%	-	0.00%
5 - 9	1	1	2.38%	9	13.43%
4	3	4	9.52%	21	31.34%
3	1	5	11.90%	24	35.82%
2	6	11	26.19%	36	53.73%
1	31	42	100.00%	67	100.00%
Total	**42**	**42**	**100.00%**	**67**	**100.00%**

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Countermeasure(s): Younger Driver Education and Enforcement

Table 72: Total Crashes – Local Roads – Younger Drivers - 2007-2011

LOCALITY	TOTAL CRASHES	TOTAL FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Local	**2,943**	**10**	**111**	**0.34**	**3.77**
Rural	1,639	10	91	0.61	5.55
Urban	1,304	-	20	0.00	1.53
Total	**2,943**	**10**	**111**	**0.34**	**3.77**

Table 73: Younger Driver Crashes – Local Roads – 2007-2011 – Summary
Younger Driver Crashes / Total Crashes Ratio – Threshold = 0.412

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	2	2	0.35%	150	12.44%
30 - 49	3	5	0.88%	265	21.97%
20 - 29	3	8	1.40%	340	28.19%
10 - 19	3	11	1.93%	389	32.26%
5 - 9	25	36	6.30%	544	45.11%
4	10	46	8.06%	584	48.42%
3	19	65	11.38%	641	53.15%
2	59	124	21.72%	759	62.94%
1	447	571	100.00%	1,206	100.00%
Total	**571**	**571**	**100.00%**	**1,206**	**100.00%**

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Countermeasure(s): Older Driver Enhanced Signing and Markings

Table 74: Total Crashes – Local Roads – Older Drivers - 2007-2011

LOCALITY	TOTAL CRASHES	TOTAL FATALITIES	TOTAL INCAP. INJURY CRASHES	FATALITIES PER 100 CRASHES	INCAP. INJURY CRASHES PER 100 CRASHES
Local	**943**	**2**	**30**	**0.21**	**3.18**
Rural	334	2	18	0.60	5.39
Urban	609	-	12	0.00	1.97
Total	**943**	**2**	**30**	**0.21**	**3.18**

Table 75: Older Crashes – Local Roads – 2007-2011 – Summary
Older Driver Crashes / Total Crashes Ratio – Threshold = 0.204

NUMBER OF CRASHES PER SECTION	NUMBER OF SECTIONS	CUMULATIVE		CUMULATIVE	
		SECTIONS	PERCENT	CRASHES	PERCENT
50 and greater	-	-	0.00%	-	0.00%
30 - 49	1	1	0.48%	38	9.52%
20 - 29	1	2	0.97%	60	15.04%
10 - 19	2	4	1.93%	94	23.56%
5 - 9	10	14	6.76%	168	42.11%
4	2	16	7.73%	176	44.11%
3	5	21	10.14%	191	47.87%
2	22	43	20.77%	235	58.90%
1	164	207	100.00%	399	100.00%
Total	**207**	**207**	**100.00%**	**399**	**100.00%**

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Jefferson County, MO Candidate Countermeasures and Potential Applications

Table 76: Candidate Countermeasures and Potential Applications/Reductions

Countermeasure	Targeted Crashes	Typical Crash Threshold for Application	State Urban	State Rural	Local Urban	Local Rural	CMF b (%)	Comments
Systematic Low-Cost Countermeasures (Project comprising many similar improvements at various locations)								
Fundamental Signs and Markings for Curves	All curve crashes	≥3			X	X	0.90	Standard advanced curve warning sign plus advisory speed plaque and curve center and edge lines; chevrons per MUTCD NPA.
Enhanced Signs and Markings for Curves	All curve crashes	AADT >5,000: ≥5 AADT <5,000: ≥3	X	X	X	X	0.70	Oversized, left, and right fluorescent yellow, advance warning signs; chevrons; slow and XX mph pavement markings; center and edge lines.
Enhanced Signs and Markings for Curves Plus Flashing Beacons	All curve crashes	AADT >5,000: ≥8 AADT <5,000: ≥6	X	X	X	X	0.51 combined	Same as enhanced signs and markings for curves except solar powered flashing beacons added to warning signs.
Enhanced Signs and Markings for Curves Plus Dynamic Curve Warning System	All curve crashes	AADT >5,000: ≥10 AADT <5,000: ≥6	X	X	X		0.49 combined	Same as enhanced signs and markings for curves except dynamic advanced warning signs added.
Reconstruct Curve, Minor to Intermediate	All curve crashes	AADT >5,000: ≥10 AADT <5,000: ≥8	X	X	X	X	Varies	High friction surface, shoulder widening; increased recovery zone. CMF depends on type of improvement.
Center Line Rumble Stripes	Head-on crashes [c]	≥3 in 15,000 feet and pavement widths ≥22 feet		X		X	0.66 (fatal & injury)	
Wider Center Line Pavement Markings	Head-on crashes [c]	≥3 in 15,000 feet and pavement widths ≥20 feet	X	X	X	X	5 [d]	Apply where center line rumble stripes cannot be installed.
Edge Line Rumble Stripes or Shoulder Rumble Strips	SVROR crashes	≥5 in 3,000 feet		X		X	0.71 (fatal & injury)- Local 2 Lane Roads	
Standard Edge Line Markings	ROR crashes	≥3 in 3,000 feet and no existing edge lines		X		X	0.90 [d]	

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Countermeasure	Targeted Crashes	Typical Crash Threshold for Application	State Urban	State Rural	Local Urban	Local Rural	CMF b (%)	Comments
Wider Edge Line Markings	ROR crashes	≥5 in 3,000 feet		X	X	X	0.95 [d]	Apply in problem sections where edge or shoulder rumble strips cannot be applied.
Pavement Wedge or Safety Edge SM	ROR crashes	All paving operations	X	X	X	X	NA	Apply during paving operations or in areas of recurring edge drop-off.
Alignment Delineation	Night crashes	≥5 in 3,000 feet	X	X	X	X	0.85 [d]	
Lighting	Dark, dusk, or dawn crashes	≥15 in 3,000 feet	X	X	X	X	0.50 (night only)	
High Friction Surface Treatments	Wet pavement crashes and high friction demand locations.	≥8 in 3,000 feet		X		X	0.50 (wet) 0.75 (all)	
Wider Shoulders	crashes	≥12 in 3,000 feet and existing shoulders ≤2 feet		X		X	Varies	CMF dependent on initial and final shoulder width. See Toolbox or Roadside Design Guide to determine.
Tree Removal	Tree crashes	≥3 in 3,000 feet	X	X	X	X	Up to 1	
Shield Tree(s)	Tree crashes	≥3 in 3,000 feet					Varies	Apply when removal is not feasible. Risk analysis will provide CMF.
Utility Pole Relocation	Utility pole crashes	≥3 in 3,000 feet	X	X	X	X		CMF dependent on initial and final distance and spacing.
Fixed Object Delineation	Night fixed object crashes	≥5 in 3,000 feet	X	X	X	X	0.90 [d]	

[a] Threshold levels will vary depending on volumes and number of crashes in individual states. Threshold applies to 5 years of the targeted crashes.
[b] CMFs are primarily from FHWA toolbox and are applied to targeted crashes unless otherwise noted.
[c] Head-on includes opposite direction sideswipes and similar crashes based on the State crash data elements.
[d] CMF is estimate since there is no reliable information available.
[e] Fatal and severe injury crashes.
[f] Number of sites to be determined based on discussion with State (may be 5-10 in some states or 50-60 in another).

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Strategy Matrix for Systematic Low-Cost Countermeasures

Table 77: Enhanced Signs and Markings for Curves – Curve Crashes – Local Roads

AADT	Threshold Crash Level (5 Years)	Number of Local Routes	Number of Crashes in 5 Years (2007-2011)	Estimated Number of Improvements [1]	Construction Costs ($ Million) [2]	Fatalities per 100 Crashes	Severe Injury Crashes per 100 Crashes	Annual Targeted Crash Reduction [3]	Annual Estimated Severe Injury Crash Reduction	Annual Estimated Fatality Reduction
Local	2	308	2,319	154	$ 0.46	0.78	8.56	69.57	5.96	0.55

[1] Assumes 50% of curves can be improved.

[2] Assumes an average cost of $3,000 per curve.

[3] A CMF of 0.7 is used (oversized, left, and right fluorescent yellow, advance warning signs; chevrons; slow and XX mph pavement markings; center and edge lines).

Table 78: ITS Curve Treatments (Speed Feedback Signs) – Curve Crashes – Local Roads

AADT	Threshold Crash Level (5 Years)	Number of Local Routes	Number of Crashes in 5 Years (2007-2011)	Estimated Number of Improvements [1]	Construction Costs ($ Million) [2]	Fatalities per 100 Crashes	Severe Injury Crashes per 100 Crashes	Annual Targeted Crash Reduction [3]	Annual Estimated Severe Injury Crash Reduction	Annual Estimated Fatality Reduction
Local	10	58	1,410	29	$ 0.38	0.78	8.56	71.91	6.16	0.56

[1] Assumes 50% of curves can be improved.

[2] Assumes an average cost of $13,000 per curve.

[3] A CMF of 0.49 is used for standard curve signing on local rural roads.

Table 79: Milled Edge Line Rumble Stripes – Single Vehicle Run-Off Road Crashes – Local Roads

Locality	Threshold Crash Level (5 Years)	Number of Local Routes	Number of Crashes in 5 Years (2007-2011)	Estimated Number of Improvements [1]	Construction Costs ($ Million) [2]	Fatalities per 100 Crashes	Severe Injury Crashes per 100 Crashes	Annual Targeted Crash Reduction [3]	Annual Estimated Severe Injury Crash Reduction	Annual Estimated Fatality Reduction
Total Local	4	159	1,902	32	$ 0.32	0.93	10.39	15.22	1.58	0.14

[1] Assumes 20% of locations can be improved.

[2] Assumes an average cost of $10,000 per route.

[3] A CMF of 0.8 is used.

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Table 80: Edge Line Striping – Single Vehicle Run-Off Road Crashes – Local Roads

Locality	Threshold Crash Level (5 Years)	Number of Local Routes	Number of Crashes in 5 Years (2007-2011)	Estimated Number of Improvements [1]	Construction Costs ($ Million) [2]	Fatalities per 100 Crashes	Severe Injury Crashes per 100 Crashes	Annual Targeted Crash Reduction [3]	Annual Estimated Severe Injury Crash Reduction	Annual Estimated Fatality Reduction
Total Local	5	127	1,774	25	$ 0.05	0.93	10.39	7.10	0.74	0.07

[1] Assumes 20% of locations can be improved.

[2] Assumes an average cost of $2,000 per mile.

[3] A CMF of 0.9 is used.

Table 81: Tree Relocation/Safety Enhancements – Local Roads

Locality	Threshold Crash Level (5 Years)	Number of Local Routes	Number of Crashes in 5 Years (2007-2011)	Estimated Number of Improvements [1]	Construction Costs ($ Million) [2]	Fatalities per 100 Crashes	Severe Injury Crashes per 100 Crashes	Annual Targeted Crash Reduction [3]	Annual Estimated Severe Injury Crash Reduction	Annual Estimated Fatality Reduction
Local	2	148	694	59	$ 0.30	1.35	14.45	13.88	2.01	0.19

[1] Assumes 40% of local locations can be addressed. Other improvements to reduce roadway departure frequencies in the vicinity of the struck trees, or reduced speed to reduce severity. A field review will be needed to determine the appropriate countermeasure.

[2] Assumes an average cost of $5,000 per mile.

[3] An average CMF of 0.66 is used.

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Table 82: Tree Relocation/Safety Enhancements – CURVES ONLY – Local Roads

Locality	Threshold Crash Level (5 Years)	Number of Local Routes	Number of Crashes in 5 Years (2007-2011)	Estimated Number of Improvements [1]	Construction Costs ($ Million) [2]	Fatalities per 100 Crashes	Severe Injury Crashes per 100 Crashes	Annual Targeted Crash Reduction [3]	Annual Estimated Severe Injury Crash Reduction	Annual Estimated Fatality Reduction
Local	2	101	430	40	$ 0.20	1.37	16.72	11.70	1.96	0.16

[1] Assumes 40% of local locations can be addressed. Other improvements to reduce roadway departure frequencies in the vicinity of the struck trees, or reduced speed to reduce severity. A field review will be needed to determine the appropriate countermeasure.
[2] Assumes an average cost of $5,000 per mile.
[3] An average CMF of 0.66 is used.

Table 83: Utility Pole Delineation/Safety Enhancements – Local Roads

Locality	Threshold Crash Level (5 Years)	Number of Local Routes	Number of Crashes in 5 Years (2007-2011)	Estimated Number of Improvements [1]	Construction Costs ($ Million) [2]	Fatalities per 100 Crashes	Severe Injury Crashes per 100 Crashes	Annual Targeted Crash Reduction [3]	Annual Estimated Severe Injury Crash Reduction	Annual Estimated Fatality Reduction
Local	2	72	264	14	$ 0.01	0.47	8.02	5.28	0.42	0.02

[1] Assumes 20% of locations can be improved by pole delineation, other improvements to reduce roadway departure frequencies in the vicinity of the struck poles, or reduced speed to reduce severity. A field review will be needed to determine the appropriate countermeasure.
[2] Assumes an average cost of $1,000 per mile.
[3] An average CMF of 0.9 is used as an overall average for all possible utility pole countermeasures.

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Strategy Matrix for Comprehensive Improvements

Table 84: Enhanced Corridor Enforcement – Local Crashes – Alcohol-Related

Locality	Threshold Crash Level (5 Years)	Number of Local Routes	Number of Crashes in 5 Years (2007-2011)	Estimated Number of Improvements [1]	Costs ($ Million) [2]	Fatalities per 100 Crashes	Severe Injury Crashes per 100 Crashes	Annual Targeted Crash Reduction [3]	Annual Estimated Severe Injury Crash Reduction	Annual Estimated Fatality Reduction
Local	3	66	333	53	$ 2.80	3.01	13.20	7.99	1.05	0.24

[1] Assumes 80% of locations will have sufficient enforcement capabilities to implement enhanced alcohol enforcement (i.e. sobriety checkpoints).
[2] Assumes an enforcement cost of $52,000 per route for the 5 year program plus $50,000 for education.
[3] An average CMF of 0.8 is used as an overall average for all possible enhanced corridor enforcement countermeasures. Estimated from speed and safety belt enforcement effectiveness information in NHTSA's Countermeasures That Work: Highway Safety Countermeasure Guide For State Highway Safety Offices. http://www.nhtsa.gov/staticfiles/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/811081.pdf

Table 85: Enhanced Corridor Enforcement – Local Crashes – Speeding-Related

Locality	Threshold Crash Level (5 Years)	Number of Local Routes	Number of Crashes in 5 Years (2007-2011)	Estimated Number of Improvements [1]	Costs ($ Million) [2]	Fatalities per 100 Crashes	Severe Injury Crashes per 100 Crashes	Annual Targeted Crash Reduction [3]	Annual Estimated Severe Injury Crash Reduction	Annual Estimated Fatality Reduction
Local	15	3	62	2	$ 0.17	1.06	8.98	1.49	0.13	0.02

[1] Assumes 80% of locations will have sufficient enforcement capabilities to implement enhanced enforcement (at least 10 hours per week of highly visible active enforcement per section)
[2] Assumes an average annual enforcement cost of $52,000 per local road for the 5 year program plus $50,000 for education.
[3] An average CMF of 0.8 is used as an overall average for all possible enhanced corridor enforcement countermeasures.Estimated from speed and safety belt enforcement effectiveness information in NHTSA's Countermeasures That Work: Highway Safety Countermeasure Guide For State Highway Safety Offices. http://www.nhtsa.gov/staticfiles/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/811081.pdf

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Table 86: Enhanced Corridor Enforcement – Local Crashes – Unbelted

Locality	Threshold Crash Level (5 Years)	Number of Local Routes	Number of Crashes in 5 Years (2007-2011)	Estimated Number of Improvements [1]	Costs ($ Million) [2]	Fatalities per 100 Crashes	Severe Injury Crashes per 100 Crashes	Annual Targeted Crash Reduction [3]	Annual Estimated Severe Injury Crash Reduction	Annual Estimated Fatality Reduction
Local	10	42	786	34	$ 1.80	1.41	9.20	18.86	1.74	0.27

[1] Assumes 80% of locations can be improved by incorporating speed reduction traffic calming measures through pavement markings.

[2] Assumes an average annual enforcement cost of $52,000 per local road for the 5 year program plus $50,000 for education.

[3] An average CMF of 0.8 is used as an overall average for all possible enhanced corridor enforcement countermeasures. Estimated from speed and safety belt enforcement effectiveness information in NHTSA's Countermeasures That Work: Highway Safety Countermeasure Guide For State Highway Safety Offices. http://www.nhtsa.gov/staticfiles/DOT/NHTSA/Traffic%20Injury%20Control/Articles/Associated%20Files/811081.pdf

Table 87: Enhanced Corridor Enforcement – Younger Drivers – Local Crashes

Locality	Threshold Crash Level (5 Years)	Number of Local Routes	Number of Crashes in 5 Years (2007-2011)	Estimated Number of Improvements [1]	Construction Costs ($ Million) [2]	Fatalities per 100 Crashes	Severe Injury Crashes per 100 Crashes	Annual Targeted Crash Reduction [3]	Annual Estimated Severe Injury Crash Reduction	Annual Estimated Fatality Reduction
Local	20	8	340	6	$ 0.38	0.34	3.77	8.16	0.31	0.03

[1] Assumes 80% of local routes can be improved.

[2] Assumes an average cost of $52,000 per local route over the 5-year program plus $50,000 for education.

[3] A CMF of 0.8 is used.

* Need a younger driver to total crash ratio of at least 0.412 for Local roads.

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Summary of Final Strategy Matrix

Table 88: Final List of Countermeasures, Deployment Levels, Costs, and Crash Impacts to Achieve Goal

Countermeasure	Approach	Estimated Number of Improvements	Associated Costs ($ Million)	Annual Targeted Crash Reduction	Annual Estimated Severe Injury Crash Reduction	Annual Estimated Fatality Reduction	$ (million) Required to Prevent/Reduce One Annual Severe Injury Crash	$ (million) Required to Save One Annual Life
Local Roads								
Enhanced Curve Sign and Marking Countermeasures - Total Local	Systematic	154	$ 0.46	69.57	5.96	0.55	0.08	0.85
Curve ITS Treatments - Local Roads	Systematic	29	$ 0.38	71.91	6.16	0.56	0.06	0.67
Milled-In Edge Line Rumble Strips - Total Local	Systematic	32	$ 0.32	15.22	1.58	0.14	0.20	2.24
Edge Line Striping - Total Local	Systematic	25	$ 0.05	7.10	0.74	0.07	0.07	0.77
Tree Removal/Safety Enhancements, Shield Tree(s) - Local	Systematic	59	$ 0.30	13.88	2.01	0.19	0.15	1.58
Tree Removal/Safety Enhancements, Shield Tree(s) - Local Curves only	Systematic	40	$ 0.20	11.70	1.96	0.16	0.10	1.27
Utility Pole Relocation/Safety Enhancements - Local	Systematic	14	$ 0.01	5.28	0.42	0.02	0.03	0.58
Enforcement and Education: Alcohol Related - Local	Education and Enforcement	53	$ 2.80	7.99	1.05	0.24	2.65	11.61
Enforcement and Education: Unbelted Crashes - Local	Education and Enforcement	2	$ 0.17	1.49	0.13	0.02	1.31	11.12
Education and Enforcement: Speeding Related Crashes - Local	Education and Enforcement	34	$ 1.80	18.86	1.74	0.27	1.04	6.75
Driver Age - Young Drivers - Total Local	Education and Enforcement	6	$ 0.38	8.16	0.31	0.03	1.24	13.81
Total Cost and Benefit (Local Roads)								
Total Cost ($Million)			**$ 6.87**	**-**	**-**	**-**		
Annual Cost ($ Million) for 5 years; Annual Benefit			**$ 1.37**	**231**	**22.05**	**2.24**		

Appendix E

Appendix E: Helpful Links

Resource Name	Author	Website
A Systemic Approach to Safety – Using Risk to Drive Action	Federal Highway Administration (FHWA), Office of Safety	http://safety.fhwa.dot.gov/systemic/
Roadway Safety Noteworthy Practices Database	FHWA, Office of Safety	http://rspcb.safety.fhwa.dot.gov/noteworthy/default.aspx
FHWA Proven Safety Countermeasures	FHWA, Office of Safety	http://safety.fhwa.dot.gov/provencountermeasures/
Missouri's Blueprint to Save More Lives (2012-2016)	Missouri Coalition for Roadway Safety	http://www.savemolives.com/the-situation.html
Manual on Uniform Traffic Control Devices (MUTCD)	FHWA	http://mutcd.fhwa.dot.gov/pdfs/2009r1r2/pdf_index.htm
Missouri Local Public Agency Program	MoDOT	http://www.modot.org/business/lpa/index.htm
Traffic Practices a Guidebook for Cities and Counties	MoDOT, MCRS, MoLTAP	http://contribute.modot.mo.gov/safety/documents/TrafficPracticesaGuidebookforcitycountyagencies.pdf
MoDOT's Engineering Policy Guide: Category: 626 Rumble Strips	MoDOT	http://epg.modot.mo.gov/index.php?title=Category:626_Rumble_Strips
Systemic Safety Project Selection Tool	FHWA	http://safety.fhwa.dot.gov/systemic/about.htm