

2014

## *Village of Innsbrook Transportation Plan*



VILLAGE OF INNSBROOK

1/18/2014



## 2014 Transportation Plan

Village of Innsbrook, Missouri

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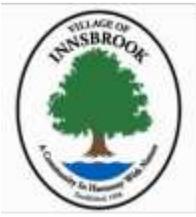
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## INTRODUCTION

### Section 1. Purpose

The purpose for undertaking this Transportation Plan is to provide strategic direction for the Village of Innsbrook to guide in the development of the future transportation network, policies, standards and progress. Planning for the Village of Innsbrook's current and future transportation needs was a major objective behind the development of the Comprehensive Plan. The Village's transportation system currently does not functionally provide the level of vehicular, pedestrian and multi-modal transportation infrastructure needed to provide future safe and efficient circulation to the community's growing population and weekend peak traffic volumes. The following goal was adopted as a part of the Village's 2013 Comprehensive Plan Update:

***TRANSPORTATION GOAL: Identify future needs for the movement of people and vehicles around and through the Village and develop a Transportation Plan. This plan will include definitions and guidance for human sized streets, street restoration, traffic calming techniques, paths, sidewalks, future connectivity, connecting with regional paths and trails, identification of corridors for future development and funding.***

### Scope of the Plan

The implementation of good planning and land-use principles are critical to meeting this goal. This Plan reviews the Village's existing transportation conditions, land-use and functional roadway design elements and suggests improvements that are necessary in balancing the Village's circulation needs with existing and anticipated development and growth. The Plan will also coordinate with MODOT, Warren County and the Boonslick Regional Planning Commission (BRPC) with respect to their input into the transportation network. Transportation safety is the key element to any transportation study. The community strongly believes that widening key transportation routes to include shoulders and turning lanes at strategic locations, installing bike/pedestrian paths and ongoing maintenance will resolve many of the current traffic circulation and accessibility problems. Prior to implementing any major transportation investment, this Plan recommends that the Village evaluate the community's existing conditions and prioritize the anticipated needs. This plan takes an integrated approach to reviewing the Village's transportation needs and takes a comprehensive, systems planning approach, to the development of objectives and recommendations to address the Village's transportation needs. This Plan recommends the following Objective implementation strategies.



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**Transportation Goal:** Identify future needs for the movement of people and vehicles around and through the Village and develop a Transportation Plan.

**Objective:**

Prioritize and seek funding to implement the recommended future transportation improvements contained in this plan.

**Implementation Strategy 1:**

Develop an access management policy to eliminate redundant driveways, align opposing driveways and regulate the distance between new driveways.

**Implementation Strategy 2:**

Improve Highways F & M and Stracks Church Road to include shoulders/break-down lanes in each direction and turn lanes at the major entrance to the Innsbrook Resort and where F & M intersect.

**Implementation Strategy 4:**

Encourage future development to incorporate alternative transportation elements (pedestrian walkways, bike facilities, public transit etc.) into proposed site improvements, subdivisions and transportation enhancements.

**Implementation Strategy 5:**

Work with the Innsbrook Resort, MoDOT, Warren County and the Boonslick Regional Planning Commission to implement the recommendations contained in this Plan.

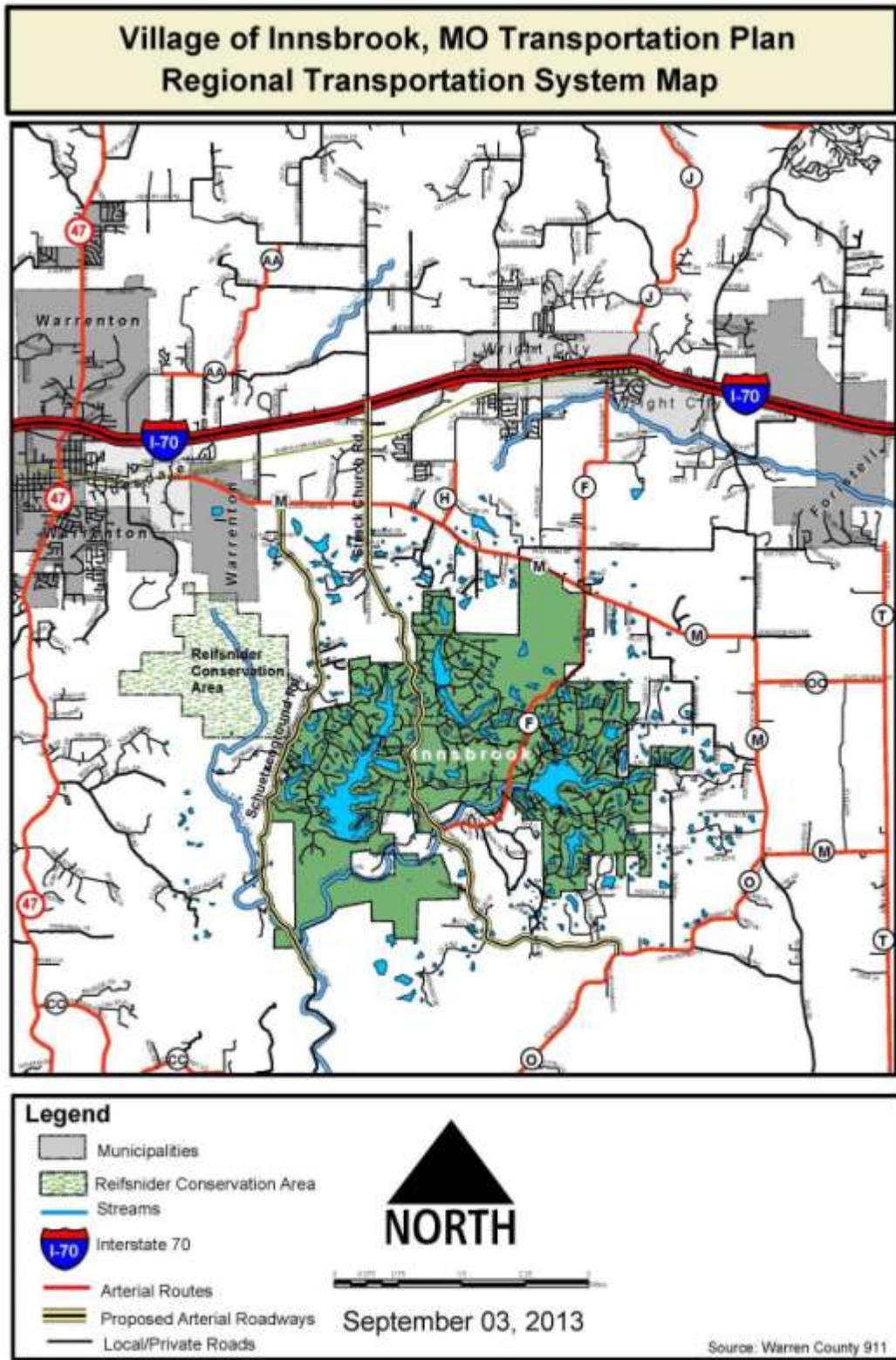
**Implementation Strategy 6:**

Reconfigure the intersection of F and M; consideration should be given to the installation of a roundabout at this location.



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### Section 2. Functional Roadway Classifications

To better review and evaluate the Village's road system, the streets have been classified into functional categories. The Functional Classification System, as defined by MoDOT, is a system used to categorize the design and operational standards of roadways according to their purpose in moving vehicles. The classification system adheres to a hierarchical structure to describe the operation of roadways within a transportation system. A higher functional classification implies higher traffic capacities and speeds, and typically longer traveling distances. Lower functional classes, such as local roads and collectors, provide greater access to adjacent properties as compared to higher functional classifications such as arterial or interstate roadways, which provide greater mobility. If the transportation system is working correctly, all portions of this hierarchy should work together to facilitate efficient and safe movement between origins and destinations.

The hierarchy of street types in descending order includes Interstate/Freeways, Arterial, Major Collector, Minor Collector and Local. This classification is used throughout this document to establish a functional hierarchy of roadways, which was developed based on the existing MoDOT functional classification system. The differentiation between street classifications is generally based upon through traffic movement and access to adjacent land. Lower functional classes, such as local roads and collectors, provide greater access to adjacent properties as compared to higher functional classifications such as arterial or interstate roadways, which provide greater mobility. Routes classified as —Collector and —Local make up all the road miles within the Innsbrook transportation system. These roadways serve mostly local destination traffic, and have a lower level of access control. The following is an overview of the functional roadway classification.

**Freeway/Expressway:** An interstate or freeway is a major roadway designed for relatively uninterrupted, high volume, high-speed traffic movement between urban centers and across the region. There are no traffic stops on this level of roadway and access is limited, with access provided only by grade-separated interchanges. Interstates are not intended to provide direct access to adjacent land. Interstate 70 is the only example of Freeways/Expressways within the planning area. I-70 is a four-lane freeway that carries the most diverse and largest volume of traffic through Warren County. Interstate 70 is located approximately three (3) miles north of the Village of Innsbrook.

**Arterial:** Arterials are intended to provide a high level of mobility to traffic passing through a community, with limited access to abutting parcels. Arterials are designed for medium to high volume, moderate speed traffic. Entrances off arterial roadways to abutting property shall be carefully reviewed to ensure traffic movements are not impeded. Generally, arterial roadways are intended to serve long-distance trips at relatively high speeds. Their primary purpose is to provide access between collectors and roadways of higher functional classification while offering local mobility and some access to land. Although arterials are limited access highways,



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they have some at-grade crossings and signals at major intersections. Highway 47 is an example of an arterial roadway.

**Collector (Major & Minor):** As the name implies, collector roads collect and distribute traffic to/from roadways having a higher functional design classification. They are intended for low to moderate volume, low speed, and short length trips while providing direct access to abutting properties. Traffic volumes on collector streets can range from 1,000 to 10,000 vehicles per day. Access management is necessary along any collector street that provides access to any destination or use that generates high volumes of traffic or where the frequency of curb-cuts (entrances) exceed more than one driveway every 85-100 feet. For the purposes of this Plan, collector roadways have been classified into major and minor collector streets.

**Major Collectors:** Highways F, M and H are examples of major collector roadways that serve the Innsbrook planning area. A list of all the Major Collector roadways is provided in Table 1-1. All the Major Collector highways are owned and maintained by MoDOT. Highway F cuts through the middle of the Village, providing the main north and south entry into the Village. The primary entrances to the Innsbrook Resort are located off Highway F. As Highway F runs through the Village of Innsbrook its classification maintains the Major Collector designation. However, as the number of driveways increases and the popularity of the Innsbrook Resort grows, the more dangerous this primary route to Innsbrook will become. If MoDOT constructs an interchange at Mile marker 197, Stracks Church Road should also be improved to a Major Collector.

**MOON Corridor (Hwy M, OO & N).** A popular route for visitors coming to and from St. Louis County and the City of St. Louis to Innsbrook is State Highway M to State Highway OO to State Highway N, see figure 2.1. The Route is known as the —MOON Route and provides a scenic, albeit curvy, alternative to Interstate 70 for visitors coming to Innsbrook from the east via Interstate 40/61.

**Minor Collectors:** Stracks Church Road, Stringtown Road and Schuetzengrund Road are presently classified as Minor Collector. These roads provide linkages to Interstate 70 and the cities of Wright City, Truesdale, Marthasville and Warrenton. Drive speed should also be reviewed in conjunction within any major development, road improvement or any anticipated increase in traffic volume.

**Local:** Local roads include roads that accommodate low-volume, low-speed, traffic for short-length trips to and from abutting properties. The primary purpose for local roads is to provide access between abutting properties and roads of higher functional classifications. All roads, not already mentioned above, are classified as local roads.

Currently, there are no Village owned roads, however, there are over 100 miles of privately owned roads that provide access to the residents of the Village, including the Innsbrook Resort.



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While the State and County roads are designed to move vehicles, some of the privately owned roads accommodate pedestrians and other forms of non-motorized transportation in addition to vehicles. The private roads are narrower, contain more curvature than typical streets built today and are not always paved, which studies have shown, slow down speeds and make them more appealing to vacation home owners and those who desire rural living. Table 1.1, provides the name and functional classification of the Village of Innsbrook's transportation system.

***Table 1-1: Innsbrook Roadway Classifications***

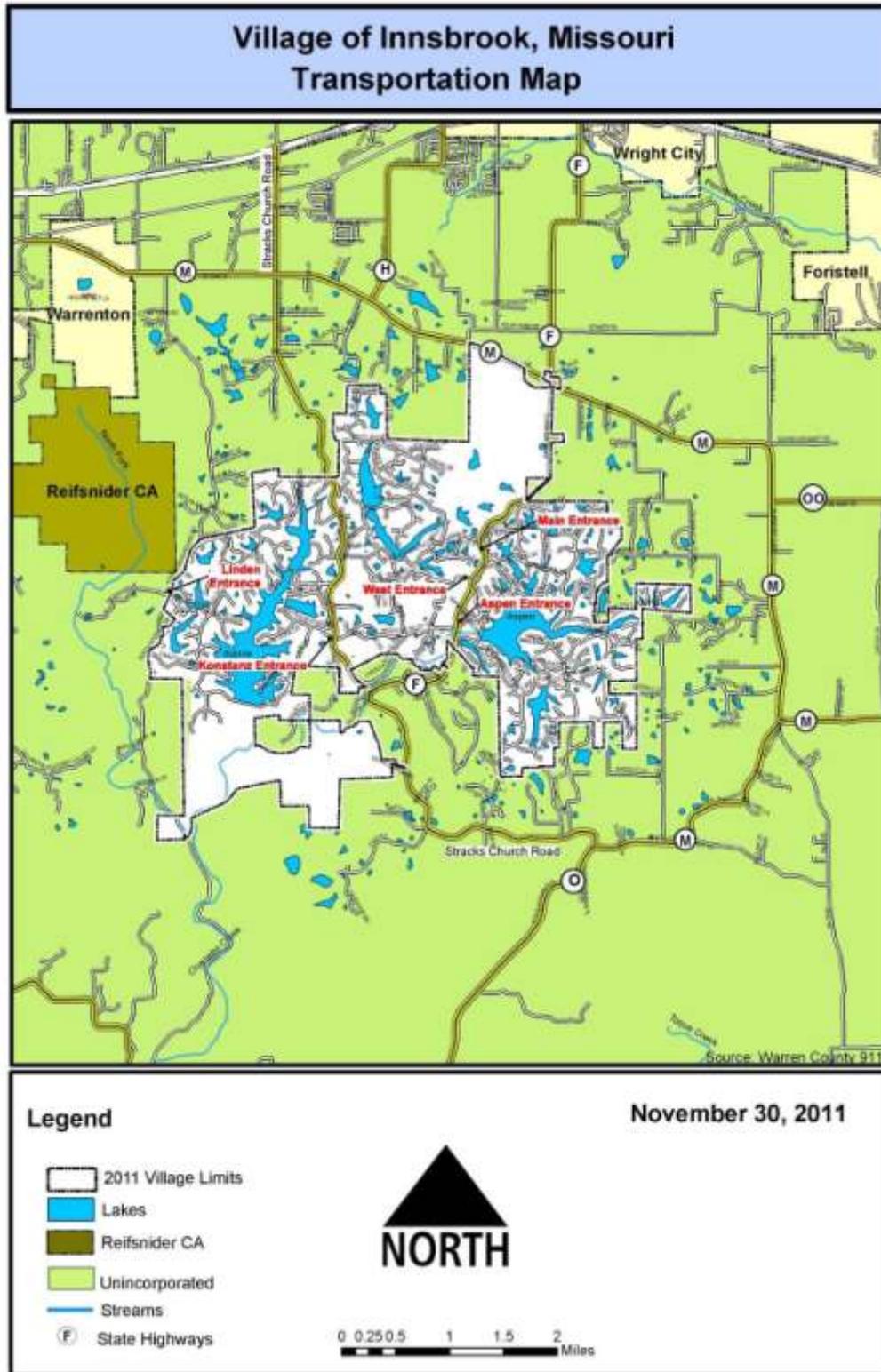
<b>Freeway/Expressway</b>	<b>Arterial</b>	<b>Major Collector</b>	<b>Minor Collector</b>	<b>Local</b>
Interstate 70	Highway 47	Highway F Highway H Highway M Highway N Highway O Highway OO	*Stracks Church Rd Stringtown Rd Schuetzenground Rd.	Oakwood Dr. Walker's Way Leprechaun Ln.

*\* If MoDOT constructs an interchange at mile marker 197, Stracks Church Road should be reclassified as a Major Collector.*



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### Section 3. Existing Transportation Conditions

The transportation problems found in Innsbrook are a result of continuous population and land development without contemporaneous updates to the roadway system. The Village's transportation circulation problems will continue to increase with the introduction of new dwellings and the expansion of the Innsbrook Resort without incrementally updating the Village's transportation network. The Village of Innsbrook has done an excellent job in the area of planning and readjusting its Comprehensive Plan and Zoning Code to address the latest development trends and market demands.

Currently, the Village's transportation system is functioning with minimal congestion or safety hazards, except during the summer holidays when the Innsbrook Resort hosts major events—congestion becomes a problem. The success of the Innsbrook Resort and the seasonal activities and events hosted by the Resort attract more and more visitors each year, which further justifies the need for continued investment in the area's transportation system. Traffic congestion during the summer months becomes problematic along Highway F at the main entrances to the Innsbrook Resort. Each roadway within a community is an important component to an integrated transportation system in which the whole is greater than the sum of its parts. Therefore, when a major transportation corridor is crippled by traffic congestion (as mentioned above) the problems are not localized, but impact the entire system.

#### *Traffic Volumes*

A vehicle count was performed by the Boonslick Regional Planning Commission during the Spring-Summer of 2012. The vehicle count used electronic devices simultaneously were placed at four (4) separate locations, as follows

- Location #1 was placed on Highway F, just south of the intersection of Highway M and north of the major entrance to the Innsbrook Resort.
- Location #2 was placed on Highway F just south of the two entrances to the Innsbrook Resort.
- Location #3 was placed on Stracks Church Road which includes an entrance to the Innsbrook Resort.
- Location #4 was placed on Schuetzengrund Road which includes an entrance to the Innsbrook Resort and delineates the western boundary of the Resort and Village limits.

According to the Study, —as the Village of Innsbrook continues to grow, the traffic will increase in proportion to the residential growth. (Boonslick Regional Planning Commission). A summary of the Traffic Counts is provided in Table 1.2.



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**Table: 1.2 2012 Average Weekday Traffic (AWT)**

Date	Location (1-4)	AWT	South Bound	North Bound	ADT
3/14	1. Hwy F & M	11,485	6065 (52.8%) SB	5420 (47.2%) NB	1,641
6/14		15,747	8,012 (50.9%) SB	7,735 (49.1%) NB	2,250
7/3		20,031	10,216 (52.8%) SB	9,815 (41.2%) NB	2,862
3/14	2. Hwy F (South of Resort)	2,087	1,665 (79.8%) SB	422 (20.2%) NB	298
6/14		1,322	141 (10.6%) SB	1,191 (89.4%) NB	189
7/3		3,549	1,746 (79.8%) SB	1,803 (20.2%) NB	507
3/14	3. Stracks Church Rd- (Near M)	5,778	2,687 (46.5%) SB	3,091 (53.5%) NB	825
6/14		5,559	2,560 (46.1%) SB	2,999 (53.9%) NB	794
*7/3		2,534	1,252 (49.4%) SB	1,282 (50.6%)	362
3/14	Schuetzenground Rd	5,896	2,922 (49.6%) SB	2,974 (50.4%) NB	842
6/14		5,773	2,851 (49.4%) SB	2,922 (50.6%) NB	825
**7/3		1,350	1,053 (78%) SB	297 (22%) NB	193

\*It was reported that the counter was defective during the July 4<sup>th</sup> Holiday in this location- therefore the counts are not accurate.

\*\*These counts are contrary to the previous counts and deceptive due to the typical peak counts experienced on other locations during the July 4th Holiday. The Village should inquire if counter(s) may have been removed or defective at this location as well.

### ***Travel Safety***

The frequency of traffic accidents is a major factor in determining existing conditions and needs. Accidents have a cost to the drivers involved as well as the driving public. The causes of accidents vary, however they are typically a reflection of the physical roadway features and the traffic volumes the road carries. In gauging whether the accident rates on a particular roadway segment are reasonable for that type of roadway, a comparison can be made to accident rates for similar roadways, according to MoDOT.

The potential for accident reduction exists on routes where accidents exceed the statewide average for similar facilities. The Village should periodically examine accident rates at dangerous intersections. The accident rates could be used as an indicator or need assessment for traffic improvements. Traffic safety is an important criteria the State and Federal Departments use in evaluating and prioritizing future transportation improvements. Therefore, the Village should include applicable accident rates and reports with all applications requesting State or Federal funding for transportation improvements.

MoDOT provided accident data for State roadways serving the Village of Innsbrook from 2007-2010. The frequency of accidents is a major factor in determining existing conditions and needs, and the frequency generally reflects the physical features and the traffic volumes the road carries. Table 1.3 shows the year, location, number and cause of accident from 2007-2012 on State Roadways.

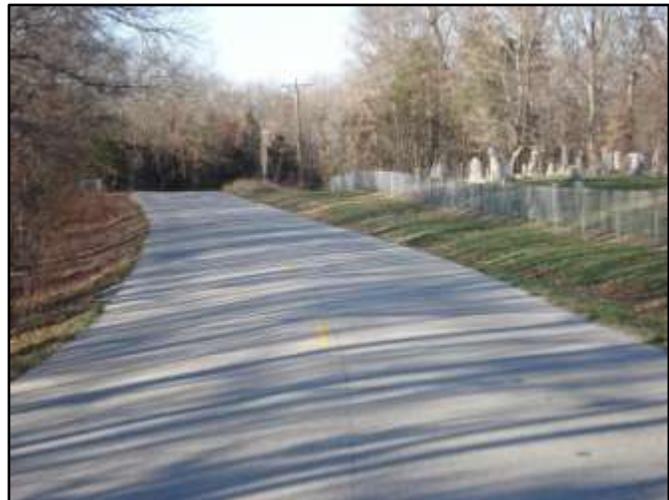
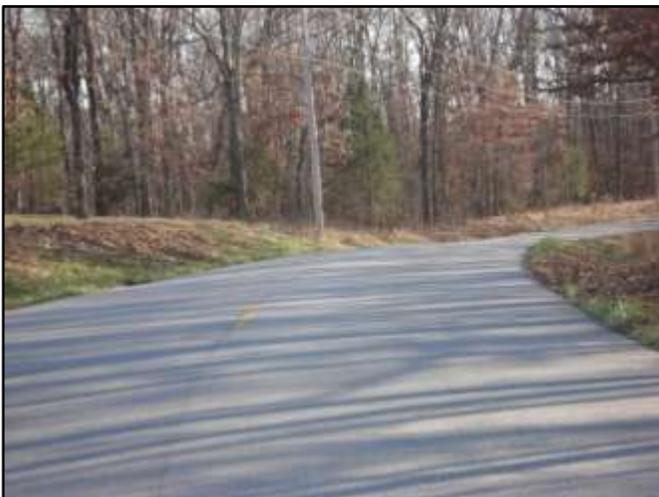


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<b>Table 1.3 : Summary of Accidents on State Roads (2007-10)</b>		
Year	Location	Cause
2010	Stracks Church (1)	Hit Fixed Object
2010	Stracks Church (2)	Hit Fixed Object
2009	Aspen Circle Drive	Hit Fixed Object
2009	Oakwood Street (1)	Hit Animal
2009	Stracks Church (3)	Rear Ended a Car
2009	Highway M (1)	Hit Animal
2009	Highway M (2)	Hit Animal
2008	Stracks Church (4)	Head on collision w/ injury
2008	Stracks Church (5)	Overtuned Vehicle
2008	Stracks Church (6)	Hit Fixed Vehicle
2008	Oakwood Street (2)	Hit Fixed Object
2008	Highway F (1)	Hit Fixed Object
2008	Highway M (3)	Hit Animal
2008	Highway M (4)	Hit Object
2007	No Accidents	
Source: MoDOT		

The highest accident locations typically coincide with the highest volume streets; however, the above information indicates that the highest accident locations were along Stracks Church Road (42.9%), rather than Highway F- (the highest volume road) (7.1%). This indicates that further study is needed to determine if roadway design, sight distance or other traffic conditions contribute to the accidents along Stracks Church Road.



**Stracks Church Road**



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### Section 4. Airports

There are no airports within the corporate boundaries of the Village, however, Spirit Airport is 40 miles away and Lambert St. Louis International Airport is approximately 50 miles away. Several private airports are also located nearby. The closest private airport is Stark Airport. Stark Airport is located 19 miles away from Innsbrook and two (2) miles south of Warrenton. Smartt Field is located 57 miles away and is a public airport owned and operated by St. Charles County. Below is a summary of the major airports serving the Village of Innsbrook:

- Washington Airport: Washington Airport is located in southern Warren County along State Highway 47. The Runway is 5000 feet long by 75 feet wide concrete construction and lighted. The runway orientation is 15/33. The Airport identifier is MO6. Elevation is 488 feet. Corporate jets and small aircraft are primary users of this airport.
- Spirit of St. Louis Airport: This airport is located in Chesterfield and is operated by St. Louis County. The airport has two runways. The main is 7,500 feet long by 150 feet wide and is all weather and the secondary is 5,000 feet long by 75 feet wide. Both are constructed of concrete and lighted. The Airport identifier is KSUS. Corporate jets and small aircraft are primary users of this airport.
- Lambert International Airport: Lambert International Airport sits on approximately 2800 acres. There are over 89 gates servicing 11 major airlines, 11 commuter airlines, 4 cargo to 7,600 feet.

### Section 5. Transportation Improvement Indicators

The existing conditions of the greater Innsbrook area serve as an indicator for future and anticipated transportation improvement needs. Demographic growth rates such as population, housing, and economic development are measurable conditions that help determine the level of service needed to adequately serve the community. This information will help prioritize the type and scope of improvements needed to efficiently serve the growing community as well as nearby communities and larger statewide interests.

#### *Population Growth*

During the last official US Decennial Census (2000-2010), Warren County was the 3<sup>rd</sup> fastest growing County in Missouri. The County grew by 33%, while the majority of counties within the state either showed no growth or actually experienced population loss. The population growth in Warren County was concentrated within incorporated areas. Warrenton, the largest city in the County, grew by 49%. Wright City more than doubled its population. Innsbrook grew by 18%, from 469 residents in 2000 to 552 in 2010. When you factor in the number of second homes within the Village of Innsbrook and the weekend population drawn to the Resort, especially during summer holidays, the local population can explode to over 10,000. This places a significant impact on the local transportation system.



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As the population of Warren County continues to be centered around Wright City and the Village of Innsbrook, the transportation systems serving this area must be functionally improved to serve the growing metropolitan population.

### *Housing Stock*

The current housing stock available within Innsbrook consists of approximately 1,345 units, according to the US Census Bureau's estimate in 2009. The construction of new residential housing units within the Village has documented an increase of 24.9% from 2000-2010, or an annual increase of 2.25%. These numbers do not account for residential units recently annexed into the Village or housing units located outside the Village limits. The increase in housing growth is anticipated to continue well into the future as more lots are sold and developed. This is especially true in the Tyrol Valley area of the Innsbrook Resort, where new construction activity is anticipated over the next several years. This development of land will increase traffic volumes and require the installation of new roads, sidewalks public facilities and businesses.

The past, present and anticipated future population, housing, and economic growth within and around the Village of Innsbrook will necessitate future improvements and ongoing maintenance to the Village's transportation system. The Village must take the lead to implement the recommended improvements to better integrate the operations and management of the Village's transportation needs. These improvements will help achieve greater utilization and efficiency in the local road system and also make the Village more attractive to new residents and businesses.

## **Section 6. Transportation Enhancement**

The goal for this plan is to increase transportation mobility and safety in a manner that is compatible with or enhances land use and community values. The transportation elements of this plan seek to provide a degree of mobility to users of the transportation system that is in balance with planning and urban design objectives. The following section provides recommendations of how Innsbrook's transportation system can be improved to better serve the Village's present and growing population.

The transportation system appropriately supports a community when it integrates and enhances the social, physical (environmental) and economic components of the community. In the development of transportation projects these elements must be considered fully along with technical issues so that final decisions are made in the best overall public interest. According to MoDOT, consideration should be given to the following:

- A. *Preservation of the existing infrastructure.* Managing and maintaining current road, bridge, transit, and intermodal assets.
- B. *Safety and security in travel.* Decreasing the risk of personal injury and property damage on, in and around transportation facilities.



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- C. *Congestion management.* Ensuring that congestion on the region's roadways does not reach levels which compromise economic competitiveness.
- D. *Efficient movement of goods.* Improving the movement of freight within and through the region by rail, air, and surface transportation modes.
- E. *Sustainable development.* Coordinating land use, transportation, economic development, environmental quality, and community aesthetics.

According to MoDOT, proper consideration of these items requires that proposed improvements be viewed from the perspectives of the user, the nearby community, and larger statewide interests. To the user, efficient travel and safety are paramount concerns. Meanwhile, the community often is more concerned about local aesthetic, social, and economic impacts. The general population, however, tends to be interested in how successfully a project functions as part of the overall transportation system and how large a share of available capital resources it consumes. Therefore, the Village must prioritize improvements on the basis of overall system benefits as well as community plan goals and values.

### Section 7. Implementation Strategies & Recommendations

Throughout the Village's transportation system there are several specific locations that are experiencing traffic related problems. Some locations, although not necessarily a traffic congestion problem, are potential hazardous locations. The intent of the proposed recommendations is to target transportation investments that are cost-effective, that is, they maximize transportation system performance and economic return. This Plan recommends immediate implementation of the following transportation recommendations:

#### A. *Freeway/Expressway Interchange Recommendations*

This Plan recommends the Village continue to be active in the planning and decision-making process regarding MoDOT's I-70 Corridor Study. The Village should be vocal about and lend support to the interchange alternative that best serves the Village and be vocal about which interchanges, if any, are removed. At the time of this writing, the proposed interchange that best serves the Village was located at mile marker 199; this would result in the abandonment of the current interchange at mile marker 200. MoDOT is also considering a new interchange at Stracks Church Road. This plan also recommends that a new interchange needs to be constructed at Stracks Church Road. As this Plan progresses towards adoption, we will continue to follow the I-70 Corridor Plan and memorialize support for the desired alternative by including the option that provides the best access to Highway's F and H, Stracks Church Rd, and Schuetzenground Rd in this Plan.

#### B. *Arterial Roadway Recommendations*

**Upgrade the classification of Highway M & F:** At the time of this writing, there were no arterial roadways designated in the planning area, however, this plan recommends the Village



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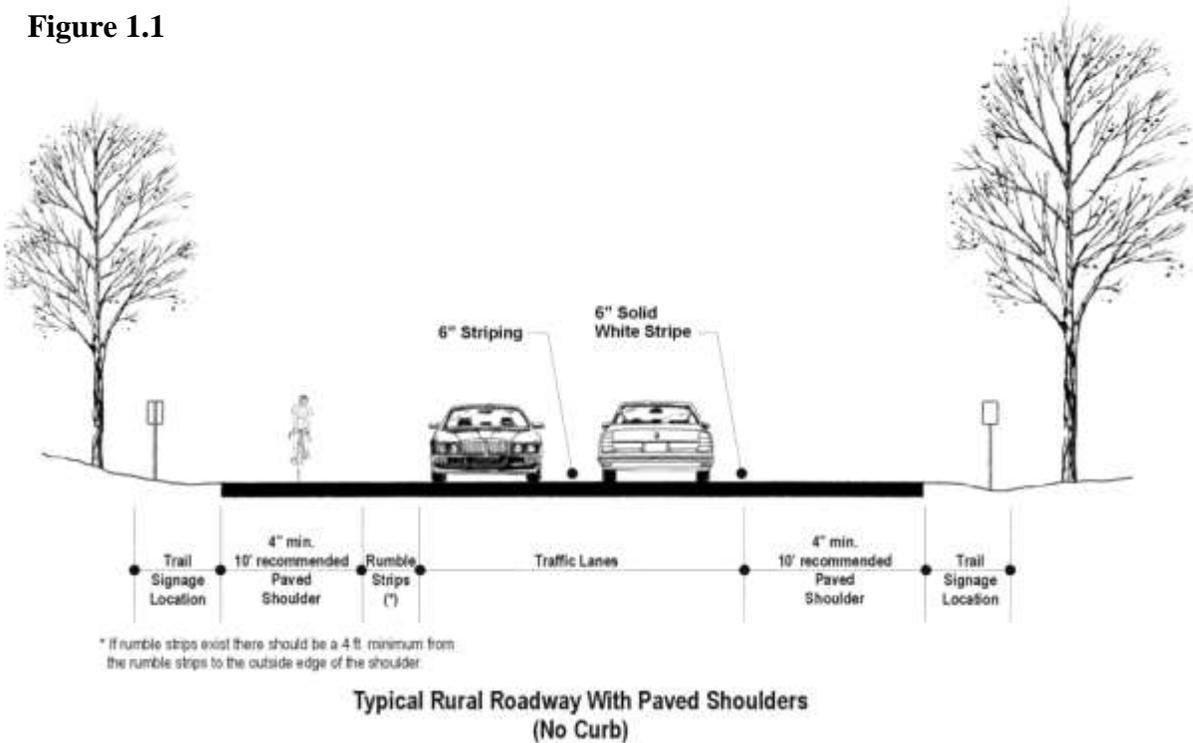
request MoDOT consider reclassifying Highway M and F as arterial roadways. This plan recommends the Village work with County and State agencies to widen Highway F and install designated turn lanes on Highway F to avoid dangerous traffic back-ups, improve traffic flow and provide room within the right-of-way for adequate traffic flow and emergency vehicles.

### C. *Major Collector Recommendations*

- 1) **MOON Corridor (Hwy M, OO & N):** This plan recommends the Village emphasize the significance of this corridor by supporting continued investment and preservation efforts. Cedar Lake Cellars, a local winery and events center, took advantage of this well-traveled corridor and has experienced strong growth over the last four (4) years. Cedar Lake Cellars is quickly becoming a favorite destination for Innsbrook property owners. While there are lots of things Cedar Lake Cellars has done right to succeed, its strength lies in its location; which offers excellent visibility and access off the highly popular —Moon route. The MOON Route offers great economic development opportunities that will increase the frequency and duration of visits to the area. Further study and coordination with applicable agencies to analyze and preserve the —MOON Route and aid area agencies in the procurement of public and private funding for recommended improvements and enhancements should be a top priority. The study should include, but not be limited to, the following elements:
  - Highway M intersects Stringtown Road at a curve resulting in limited sight distances and unsafe intersection geometrics.
  - Bike and Pedestrian Accessibility
  - Roadway Widening
  - Curb and Gutter
  - Drive Speeds
  - Farm implement movement / safety
- 2) **Shoulders / Bicycle Accessibility:** Provide ten foot (10') shoulders on both sides of all Major Collector Roadways. The designated Major Collector Roadways in the Innsbrook Area are Hwy M, F, H, and Stracks Church Road. Stracks Church Road was included due to the potential increase in traffic from Interstate Hwy 70 and due to the higher accident occurrences on this road. It is also recommended that, at the minimum, that the shoulder on one side of the roadway be paved to accommodate a bicycle pathway. IN addition to the required safety striping, the bicycle path should be separated from the drive lane with a rumble strip to caution drivers to stay off the designated bike path. See Figure 1.1 showing a typical rural roadway with paved shoulders. Ultimately both sides of the roadway would be paved to accommodate bicycle pathways.



Figure 1.1



- 3) **Upgrade the classification of Stracks Church Road, Stringtown Road and Schuetzengrund Road:** Upgrade Stracks Church Road, Stringtown Road and Schuetzengrund Road to —major collectors‖ like Highway F and M is presently designated. Upgrading these roads to major collectors is needed to improve the safety and drivability of the main roads that serve the Village and provide better access and connectivity. If the proposed interchange of Stracks Church Road and I-70 becomes a reality we recommend Stracks Church Road be reopened from Highway M to I-70 which will serve as a major collector for the Village of Innsbrook.

**E. Lane Width/Shoulders**

The lane width of a roadway greatly influences the safety, speed and comfort of driving. This plan recommends a minimum lane width of twelve (12) feet on higher volume roadways. A 12 foot lane provides the needed clearance between larger commercial, emergency and farm vehicles and reduces the cost of roadway maintenance and repair by reducing wheel concentrations on the edge of pavement. However, in areas where the Village would like to slow traffic or increase driver awareness, the stripped lane should be reduced to a narrower lane width (10' minimum) while maintaining the recommended 24' minimum roadway pavement width for traffic lanes. Reducing lane widths will provide opportunities to incorporate shoulders, bike lanes and turn lanes within the roadway.



### **F. Access Management**

Implement access management techniques throughout the Village to ensure safe separation between driveways, safe sight distances and designated turn lanes installed to store cars on the roadway where back-ups commonly occur. The installation of a center turn lane on Highway F as it approaches the main entrance into the Innsbrook Resort should be an immediate consideration to avoid future accidents, traffic congestions and inconvenience. This may be achieved within the existing right-of-way by reducing the drive lane widths. All Major Collector Roads need full shoulders to provide Safety for the travelling public.

### **G. Turn Lanes**

Auxiliary lanes at intersections or major points of entry into the Resort are recommended to facilitate traffic movement. During the summer holidays and other special events, traffic along Highway F is occasionally stopped as vehicles line up to gain entry into the Resort. A turn lane at the Main Resort entrance is recommended to facilitate uninterrupted traffic flow along Highway F. Figure 1.2 provides an example of a standard three-lane roadway section.

**Figure 1.2. Typical 3-Lane Roadway**

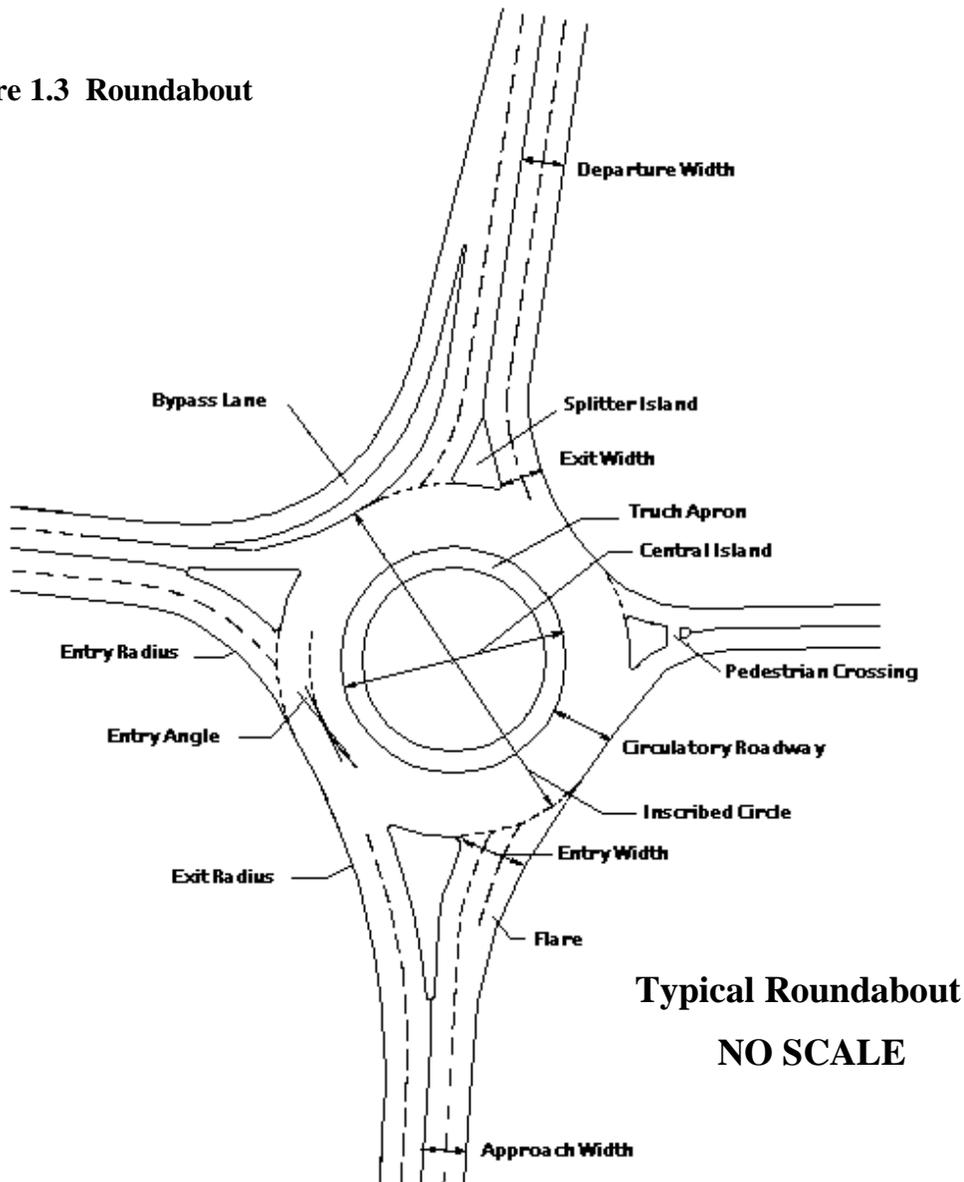




## H. Roundabout

The Village should consider, for future installation, a roundabout at the intersection of Highway F and Highway M. This will better serve the local population and visitors to the Village heading to St. Louis County via the highly utilized —MOON|| route. The recommended roundabout should also be designed to accommodate truck traffic as well as pedestrian and cyclists. See Figure 1.3 for an example of the recommended roundabout. If traffic substantially increases on Stracks Church Road due to a possible I-70 interchange a round-a-bout at the intersection of Highway M and Stracks Church Road may be considered desirable.

Figure 1.3 Roundabout





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### **I. *Alternative Transportation Modes***

Alternative transportation modes are necessary to accommodate the diverse needs of the population. To ensure everyone has access to the Village's transportation system, public transit, sidewalks and bike / cart paths should be provided in addition to providing adequate roads. The Innsbrook area has very limited access to transit. This plan recommends the Village raise awareness of the local demand for transit and the ability to reduce vehicle miles traveled (VMT) by providing multi-modal transportation choices.

### **J. *Bike & Pedestrian Paths***

Pedestrian paths and trails provide alternative means for people accessing activity centers and neighborhoods without relying on vehicular transportation. Participants in the Town Planning Workshops conducted in conjunction with the development of the Comprehensive Plan strongly recommend the implementation of a Village-wide system of multi-use paths for pedestrians, bikes and golf carts/utility vehicles. This Plan recommends the preservation of a pathway corridor for the future installation of a multi-use trail linking the Innsbrook Resort to other key existing and planned destinations, neighborhoods, schools, parks, churches, businesses and employment centers.

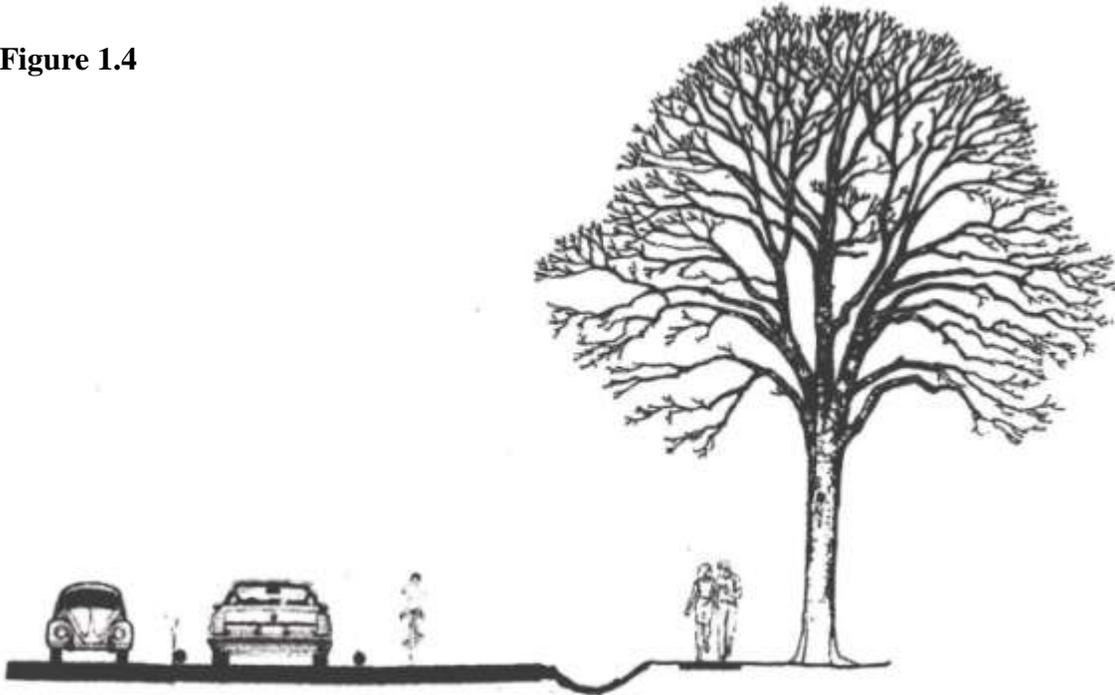


It is recommended that new residential development with nine (9) or more homes having lots less than one acre and all non-residential development are required to install sidewalks or make payment to the Village in lieu of the installation of sidewalks so the Village can install sidewalks in the future or invest the money in other improvements. Please see the Future Transportation Map for the recommended future bike/pedestrian trail corridors.

It is recommended that the Village consider a future bicycle lane and/or pedestrian pathway be constructed alongside Highway F, Highway M and Stracks Church Road to provide a pedestrian/bike corridor as shown on the Future Trails Master Plan Map. The proposed shoulder should be designed to include an on-road bike lane and breakdown lane. The minimum width of the shoulder should be 10 feet (10') and be constructed of a paved, dust-free surface. A pedestrian way is also recommended. The pedestrian way should be separated from the drive lanes via the existing storm drainage channel. The minimum width of the pedestrian way should be six feet (6') and be constructed of a paved, dust-free surface. The Figure 1.4 shows the recommended roadway with reduced lane widths, shoulders and separated trailway.



**Figure 1.4**



### **K. Golf Cart & Utility Terrain Vehicles (UTV)**

Due to the popularity of golf carts and utility-terrain vehicles (UTV), this Plan recommends the Village of Innsbrook permit such modes of traffic, but regulate them to ensure adequate safety measures. The following regulations are recommended to be adopted into the Village's Municipal Code:

1. Golf carts and other utility-terrain vehicles operated on Village Streets shall be equipped with adequate brakes, lights, slow moving vehicle signage and shall meet any other safety requirements imposed by the governing body.
2. A golf cart, motorized wheelchair or UTV/ATV shall not be operated on any state or federal highway, but may be operated upon such highway in order to cross a portion of the state highway, except where the state highway being crossed has a posted speed limit of more than forty-five (45) miles per hour.

### **L. Roadway Marking**

A major element providing safety for the traveling population includes the Paint striping of all —Major Collector| roadways within the Village. Paint striping of the centerline and a reflective paint stripe at the edges of each roadway, provides visual reference to aid the driver. This is



## 2014 Transportation Plan

Village of Innsbrook, Missouri

especially important during night time or inclement weather traveling. Paint striping alone will make a major difference in the decrease of the accident rate on the roadways.

### **M. Segmental improvements**

This transportation study is an overall approach to the ultimate development of the transportation network. During this study, the proposed considerations look to the future and is described within this study. It is with this understanding that each item of the proposed improvement can be broken down into segments, building each segment toward the completed plan improvements. The reason to segment the improvements may be due to the financial considerations, keeping in mind the ultimate construction proposed. In other words, this plan can utilize segments to build towards the desired ultimate construction.

It is also understood that many of the areas described for transportation improvements lie outside of the Village Boundaries. Therefore the Village will have no direct ability to effectuate enhancing the transportation development of those areas. In that case, the Village will continue to encourage the construction of these enhancements of those transportation elements. A priority schedule for ALL proposed enhancements has been developed as a means to establish a desired construction program. The Village will promote and encourage development of this construction program for the betterment of the transportation needs of the public.

For instance the Village has taken steps to have a portion of Highway F widened with a 4 foot gravel shoulder on each side of the roadway, during the year 2014. This segmental step is desired to enhance the safety aspects for the driving public while keeping the financial restraints in mind. The ultimate development of this roadway, as shown in this study, should have 10 foot wide paved shoulders for a breakdown lane and to accommodate alternative bicycle access along the roadway.

### **N. Zoned improvements**

In order to best describe the proposed program for improvements, the recommendations have been broken down in **Zones**, as shown on TrailMaster Plan Map and Zone designation.

**Zone A** is along Highway F from Highway M to the end of the State of Missouri maintained Highway F.

Zone A1 is from Highway M to the Resort

Zone A2 is from the Resort to the end of Highway F as maintained by State of MO.

**Zone B** is along the extension of Highway F to Stracks Church Road. This extension is maintained by Warren County.

**Zone C** is the Stracks Church Road from the extension of Highway F to Highway M. Stracks Church Road is maintained by Warren County.

Zone C1 is Stracks Church Rd. from Highway M to Resort Boundary



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Zone C2 is Stracks Church Rd. from Resort Boundary to Extension of Highway F

Zone C3 is Stracks Church Rd from Extension of Highway F to Highway O

**Zone D** is Highway M from Stracks Church Road to Highway F

**Zone E** is Highway M from Highway F to Stringtown Road.

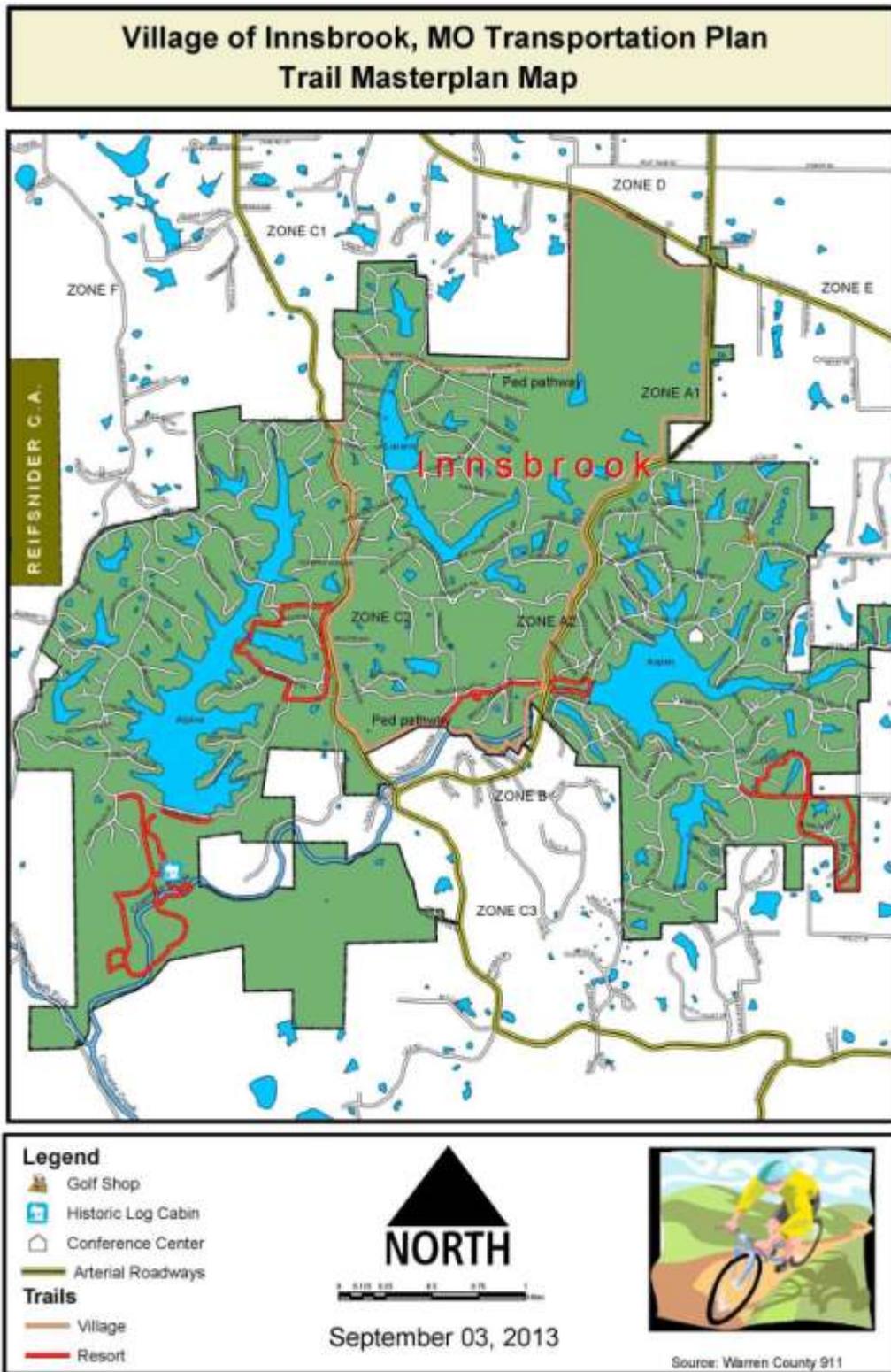
**Zone F** is Schuetzenground Road from Highway M to a point near the entrance to the Resort.



# 2014 Transportation Plan

Map Title add "and Zone Designation"

Village of Innsbrook, Missouri





**Section 8. Timeframe for Recommendations**

The Village should require future transportation improvements in conjunction with requests for annexation, zoning, business licenses, conditional use permits, special use permits or building permits. The costs of these improvements shall be shared by the developer and phased, if necessary, to balance the cost of new development and supporting infrastructure. The Village should also look into funding mechanisms to facilitate these improvements. The collective sum of all these relatively small improvements will help sustain the Village’s internal traffic circulation patterns.

The following table outlines the recommended —Short Term and —Long Term improvements.

Time Frame	Short Term Recommendations
<b>Short Term (1-5 years)</b>	Construct 4 foot wide shoulders on each side of the Highway F in Zone A1. This work has been engineered and is anticipated to be completed during 2014.
	Implement access management policies and zoning regulations that minimize the impact of new development.
	Construct 4 foot wide shoulders on each side of the Highway F in Zone A2.
	Construct turn lanes into the Resort on Highway F.
	Repave extension to Highway F in Zone B, including 4 foot wide shoulders on each side of the extension.
	For Safety purposes, White Stripping the Zone B extension to Highway F and White Stripping Stracks Church Rd Zone C1, C2 and C3 also White Stripping Schuetzenground Rd. Zone F. White stripping shall consist of centerline and edge of road paint stripping.
	Construct 4 foot gravel shoulders along Stracks Church Rd in Zone C2
	RESERVED
	RESERVED
	RESERVED



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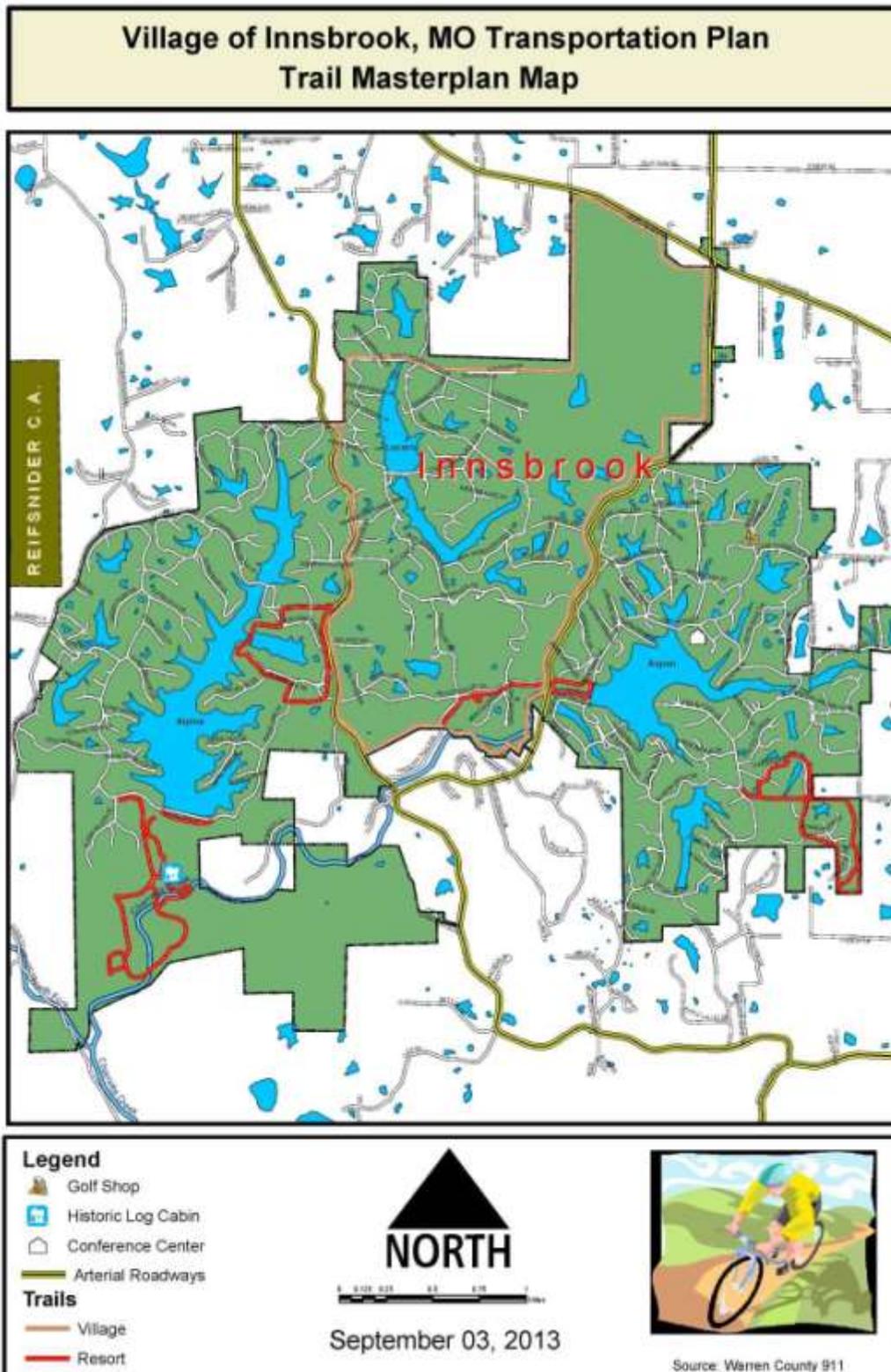
Village of Innsbrook, Missouri

Time Frame	Long Term Recommendations
<b>Long Term (6+ Years)</b>	Acquire right of way along major residential and collector roads to enable upgrades and improvements to the road system. This should be concentrated on streets that need to be brought up to urban standards and/or streets that are designated as bike/pedestrian corridors
	Construct 10 foot gravel shoulders along Highway F in Zone A1, A2 Construct 10 foot gravel shoulders along Stracks Church Rd and Schuetzenground Rd.
	Construct Pedestrian pathways at the edge of Village Boundary from Highway F to Stracks Church Rd. Construct Pedestrian pathways along one side of Highway F (Zone A1, A2) and along one side of Stracks Church Rd. Zone C2
	Construct Round-a-bout at Highway F and Highway M
	Construct 10 foot paved shoulders along Highway F, Highway M, and Stracks Church Rd. with a bicycle lane.
	Construct 10 foot paved shoulder along Scheitzenground Rd, Zone F.
	RESERVED
	RESERVED
	RESERVED
	RESERVED



# 2014 Transportation Plan

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### Section 9. Funding Sources

Planning for Innsbrook's current and future transportation needs is an important element of the City's Comprehensive Plan. Major transportation improvements should be evaluated from a comprehensive or systems approach, to ensure future transportation projects are evaluated in relationship to their cost and neighborhood impact as well as their transportation benefit. It is necessary to evaluate the existing conditions and prioritize the anticipated needs in light of the overall long term impact on all aspects of the community.

Innsbrook can draw from a variety of federal, state, local, and private-sector funding sources to fund transportation infrastructure improvements and bicycle and pedestrian programs. Where possible, local funds should be leveraged as match to secure external funding, maximizing the impact of local investment. With new federal transportation programs currently in development, the future of transportation, bicycle and pedestrian funding through the United States Department of Transportation will continue to provide opportunities. As of the date of this writing, the following funding sources and transportation programs were active. The Village should consider these sources when making any decisions regarding future transportation improvements.

#### TRANSPORTATION ENHANCEMENT FUNDING SOURCES

**Department of Transportation (DOT) TIGER Grants:** DOT Information Related to the TIGER II Discretionary Grant Program DOT is authorized to award \$600 million in TIGER II Discretionary Grants pursuant to Title I (Department of Transportation) of the FY 2010 Appropriations Act (Pub. L. 111-117, Dec. 16, 2009). This appropriation is similar, but not identical to the appropriation for the Transportation Investment Generating Economic Recovery, or —TIGER Discretionary Grant, program authorized and implemented pursuant to the American Recovery and Reinvestment Act of 2009 (the —Recovery Act). Because of the similarity in program structure and objectives, DOT is referring to the grants for National Infrastructure Investments under the FY 2010 Appropriations Act as —TIGER II Discretionary Grants. As with the TIGER program, funds for the TIGER II program are to be awarded on a competitive basis for projects that will have a significant impact on the Nation, a metropolitan area or a region. View a copy of the full Final Notice of Funding Availability.

More Information: <http://www.modot.org/central>

**Economic Development Administration - Public Works and Economic Development Program:** Through the Public Works and Economic Development Act of 1965, the United States Department of Commerce, through its EDA branch, offers project grants to enhance regional competitiveness and promote long-term economic development in regions experiencing substantial economic distress. EDA provides Public Works investments to help distressed communities and regions revitalize, expand, and upgrade their physical infrastructure to attract new industry, encourage business expansion, diversify local economies and generate or retain



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long-term private sector jobs and investment. Current priorities include proposals that help support existing industry clusters, develop emerging new clusters or attract new economic drivers.

More Information: <http://www.eda.gov>

**Missouri Department of Economic Development:** The Missouri Department of Economic Development administers the Community Development Group offers over 15 different tax credit and grant programs to specifically meet the needs of local government in areas such as infrastructure improvement, housing, violence prevention, and community facilities.

More Information: <http://www.ded.mo.gov>

**Highway Safety Improvement Program (HSIP).** Developed to reduce traffic fatalities and serious injuries on all public roads, the HSIP provides a funding source for local entities to develop countermeasures to improve bicyclist and pedestrian safety. Eligible projects include safety improvements for cyclists and pedestrians both on-road and on publicly owned bicycle and publically owned pedestrian pathways or trails.

More information: <http://www.fhwa.dot.gov>

**Land, Water, and Conservation Fund (LWCF):** Grants are available to cities, counties and school districts for outdoor recreation facilities, including trails. Projects require a 55% match. Federal facilities must remain for the purpose of public outdoor recreation in perpetuity. LWCF grants are funded by the US Department of Interior, National Park Service and administered by the Missouri Department of Natural Resources of State Parks.

More information: <http://mostateparks.com>

**Developer Impact Fees / Excise Tax.** As new development occurs, the Village may charge developers to fund the additional service or improvement required for the development. These development charges, or impact fees, can be used to construct transportation infrastructure, including roads, transit stations or stops, and bicycle and pedestrian facilities. Additionally, an excise tax may be used for improvements, typically peripheral to a development location. The excise tax may be imposed upon a developer to help pay for infrastructure improvements, park land, or other costs necessitated or impacted by a given development.

More information: <http://www.impactfees.com>

**Community Improvement Districts (CIDs).** A —CID| is defined as an area in which property owners pay an additional tax or fee to finance capital improvements, additional security or marketing the district as a commercial destination. Potential capital improvements include



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sidewalks, street lighting, benches, trash receptacles, information kiosks, public art projects, and other pedestrian-oriented features.

More information: <http://www.stlrcga.org>

**Neighborhood Improvement Districts (NIDs).** Similar to Community Improvement Districts, NIDs are created to create public-use improvements through special tax assessments to property owners in which the improvements are made. Typical improvements in NID's include sidewalk and crosswalk improvements, street lighting systems, parks and recreational facilities, pedestrian bridges, overpasses or tunnels, and landscaping enhancements.

More information: <http://www.moga.mo.gov>

**Transportation Development Districts (TDDs).** Missouri statutes authorize cities to create transportation development districts encompassing all or a portion of the city. The purpose of a transportation development district is to "fund, promote, plan, design, construct, improve, maintain, and operate one or more [transportation] projects or to assist in such activity." A transportation development district is created by submission of a petition to the circuit court from either 50 registered voters in the district or by the city's governing body. The petition must identify the district's boundaries, each proposed project, and a proposal for funding the projects. After receipt of a petition and a hearing to determine that the petition complies with the law, the circuit court enters a judgment certifying the questions regarding creation of the district, projects to be developed, and proposed funding for voter approval. If a simple majority of those included in the district boundaries vote in favor, the transportation development district is created. If the issue fails, it cannot be resubmitted to the voters again for two years. If approved, an election is held within 120 days to elect a board of directors for the district.

More Information: <http://www.missouridevelopment.org>

**The Kodak American Greenways Program.** Funded by The Conservation Fund, Eastman Kodak Company, and the National Geographic Society, the program provides —seedll grants for the planning and design of greenways and other open spaces systems. Since 1989, the program has granted over \$800,000 to nearly 700 organizations across the country.

More information: <http://www.conservationfund.org>

**Adopt a Bikeway/Sidewalk/Trail Program.** Local organizations, businesses and community groups often engage in civic projects, including Adopt-A-Highway programs and other landscape and beautification projects. The Village could develop an —Adopt a Spotl or —Adopt a Trail/Sidewalkl program to assist in the routine maintenance or landscaping of the Village's bicycle and pedestrian network.



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**Robert Wood Johnson Foundation.** The Robert Wood Johnson Foundation (RWJF) offers a wide range of funding opportunities dealing with healthy and active living. Anyone is eligible to apply, but check the website to make sure that you meet requirements per grant. For more information, check the website periodically for new calls for proposals.

More information: <http://www.rwjf.org>

**Right-of-Way Exactions.** Exactions are requirements imposed as part of the development approval process that require a person seeking such approval to give something to the City as a condition of such approval. Traditionally, municipalities have required developers to dedicate right-of-way for streets within the development and for streets abutting the development as a condition of a specific development's approval requiring such a dedication is an exercise of the City's regulatory police power. Typically, these right-of-way exactions have been imposed at the time of zoning or subdivision approval, with the understanding that the dedication would take place at no cost to the entity requiring the dedication. In 1994, the United States Supreme Court decided the case of *Dolan v. City of Tigard*, in which it held that any requirements for the dedication of land imposed as a condition of development approval must be roughly proportional to that development's contribution to the need for new public facilities. Further, the Supreme Court held that the local government imposing the exaction must make an —individualized determination regarding the proportionality between the exaction and the impacts caused on public facilities. After *Dolan*, it can no longer be assumed that street right-of-way dedications may always be exacted at no charge. An individualized determination must be made, in each instance, to insure that the dedication requested is roughly proportionate to the demand for right-of-way created by the proposed development. At a minimum, there must be some methodology used to quantify the development's impact and the amount of the dedication required to offset that impact. However, the courts have made it clear that mathematical precision of the relationship between the impact and the dedication is not required.

**Private Funding:** Private funding sources can play a significant role in the community development enhancement programs and projects. In the Village of Pacific, partnerships, project and event sponsorships, and other collaborations have resulted in successful improvements to the park system, including tree plantings, creek clean-ups, and even the construction of park facilities. Private funding sources can also be used to provide the local match for external funding sources.

**Transportation Sales Taxes.** Cities throughout the State of Missouri have utilized local option sales taxes to provide facilities and services for related to transportation. At either 1/4 or 1/2 cent, these sales taxes can be used to fund street repairs and transportation projects. Tax revenue can serve as matching funds for grants. Revenue growth is dependent upon commercial growth in the community. Voter approval should be sought.



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**General Obligation Bonds:** General obligation bonds are paid by levying a debt service on real and personal property annually. This funding source may be used, for example, to develop municipal buildings, to construct streets, or to acquire park land. The issuance of bonds requires voter approval and are subject to certain constitutional and statutory limitations. The primary of which is a constitutional limit on the total amount of debt the city can incur which is based on a set percentage of its assessed valuation. General obligation bonds are long-term obligations backed by the full faith and credit of the City. Missouri statutes authorize the cities to issue bonds for the —construction, reconstruction, improvement, maintenance and repair of any and all public roads, highways, bridges and culverts.¶ This includes the acquisition of right-of-way for public roads through eminent domain. The proceeds from such bonds must be kept as a separate fund to be known as —The Road Bond Construction Fund.¶ These funds may also be used in the construction, reconstruction, improvement, maintenance and repair of any street, avenue, road or alley in the city.

**Lease Purchase Financing:** Lease purchase financing uses the proceeds of the Capital Sales Tax to pay off bonds sold to finance projects. This revenue source can be used to construct a water tower, install a computer system to a municipal building or expand the wastewater treatment plant.

**Water / Wastewater Revenue Bonds:** Water/wastewater revenue bonds and/or low interest loans are a viable means to finance such improvement projects. Funding to amortize debt could be achieved by rate increases for utility services and/or reductions in utility operating costs.

**Personal Property / Real Estate Taxes:** Increasing personal property/real estate taxes, which is a most critical funding source for city and public school system operations. Personal property/real estate tax increases require voter approval, which may be difficult to obtain.

**Fees for Services:** Fees for services provided by the City, i.e., Building permit fees, zoning application processing fees, publication costs, etc. may be set to cover the cost of service, thus reducing dependency on general operating funds.

### TRAILS & GREENWAYS

**Outdoor Recreation:** The Missouri Department of Natural Resources is accepting applications for the federally funded Land and Water Conservation Fund to assist in financing outdoor recreation projects. The department holds annual grant application workshops to assist agencies interested in applying for these grants at the offices of East-West Gateway. All local governments and public school districts are eligible for the federal funds, which are made available through the National Park Service. Projects can be for the development or renovation of outdoor recreational facilities or for acquisition of park land. A 55 percent match is required. The Department of Natural Resources administers the grant program.



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More Information: [www.mostateparks.com/grantinfo.htm](http://www.mostateparks.com/grantinfo.htm).

**Great Rivers Greenway:** Great Rivers Greenways (GRG) collects an estimated \$10 million annually from a 1/10th of 1 cent sales tax. GRG's mission is to work towards a clean, green, connected St. Louis region. GRG funds a variety of projects that supports the implementation of —The River Ring<sup>®</sup>, an interconnected system of greenways, parks and trails that will encircle the St. Louis region, enhancing the quality of life for residents and visitors.

More Information: [www.mostateparks.com/grantinfo.htm](http://www.mostateparks.com/grantinfo.htm).

**Healthy & Active Communities / Trailnet:** In 2013, Trailnet was awarded a grant in the amount of \$349,506 to continue its work on the Healthy & Active Communities (HAC) Initiative over the next three (3) years. The initiative focuses on creating model healthy and active communities that support resident's health —from cradle to canel by making it easier to make healthy choices by increasing residents' access to healthy foods and opportunities for physical activity. The program's focus is to create far-reaching, long-term sustainable solutions to the obesity epidemic through policy, the built environment, and social networks of support. Trailnet is currently partnering with four communities on this effort: the City of De Soto, the City of Ferguson, Old North St. Louis and the West End neighborhoods of St. Louis City. The goal for the initiative is to highlight the connections between the places people live, work and travel and their health. Funding for this project is provided in part by The Missouri Foundation for Health. The Missouri Foundation for Health is a philanthropic organization whose vision is to improve the health of the people in the communities it serves. Trailnet's HAC initiative recently received national attention from the Robert Wood Johnson Foundation and the Center for Disease Control and Prevention—the initiative is one of two obesity prevention initiatives in 6 the country selected for a site visit for its innovative work in the area of land-use and transportation policy.

More information: [www.trailnet.org](http://www.trailnet.org)

### PARTNERSHIP DEBT-FINANCING PROGRAMS

The following programs offer loans to public improvement projects.

**Missouri Transportation Finance Corporation (MTFC):** A non-profit lending corporation established to assist local transportation projects, and to administer the Statewide Transportation Assistance Revolving Fund (STAR Fund)

**State Transportation Assistance Revolving Fund (STAR Fund):** A fund created by the Missouri General Assembly to assist in the planning, acquisition, development and construction of non-highway transportation facilities.



## 2014 Transportation Plan

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In addition to the above revenue sources and programs, the Village should explore opportunities to partner with local businesses, the Chamber of Commerce, the Booneslick Regional Planning, and other local entities to share in the implementation of the recommendations of this plan, raise awareness, and develop a program to encourage residents and visitors reduce their reliance on vehicle travel.

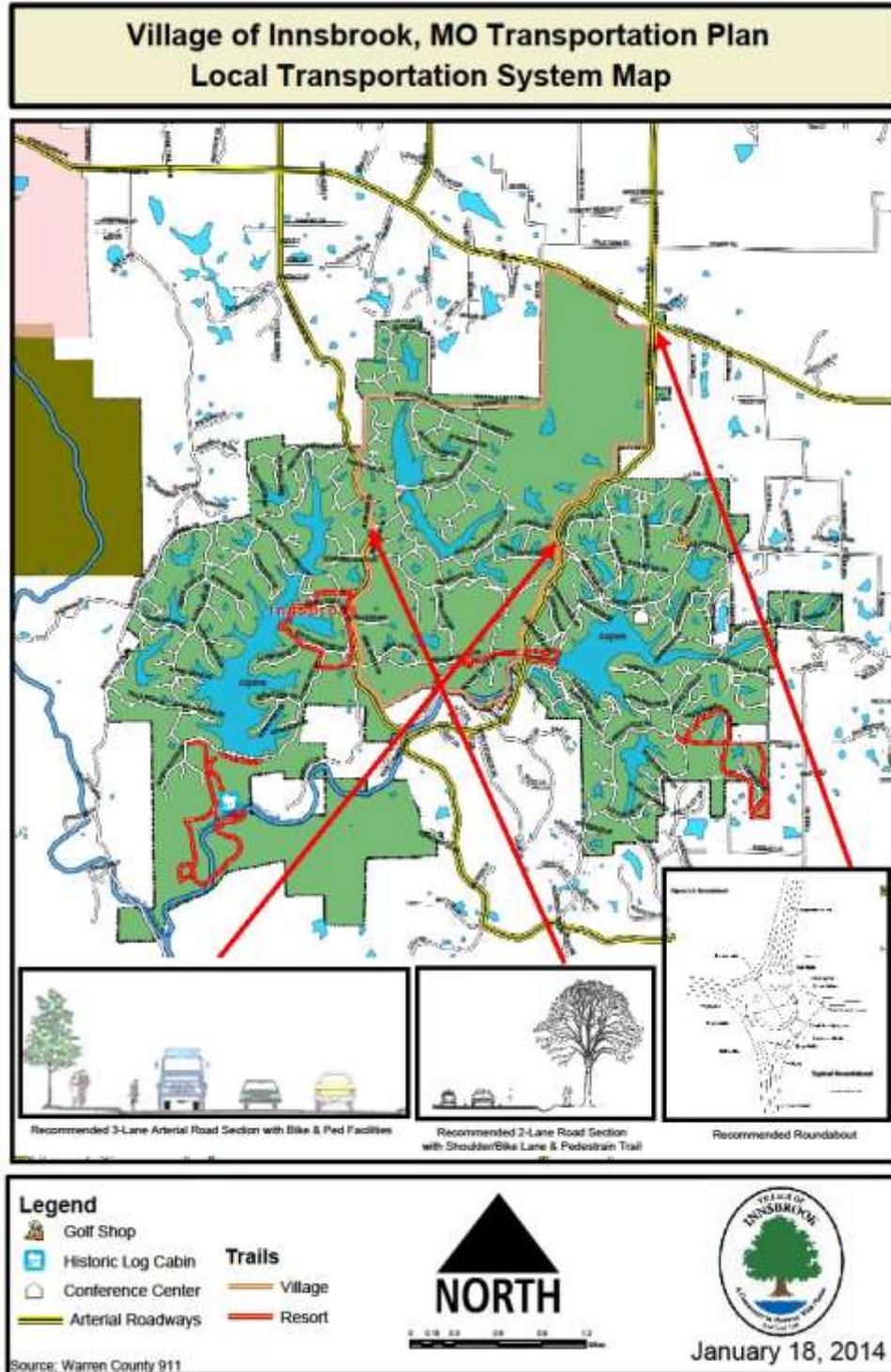
### **Section 10. Summary**

This Plan should be used as a guide for future transportation improvements. The information contained in this plan is intended to aid Village Officials in acquiring available transportation funds and memorize the justification and intended uses for these funds. This Plan and Future Transportation Map does not replace the Comprehensive Plan or Future Land Use Map. This Study is intended to complement the Comprehensive Plan and be adopted as an integral part of said Plan.



# 2014 Transportation Plan

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# Appendix A



## 2014 Transportation Plan

Village of Innsbrook, Missouri

### 1. TRANSPORTATION ENHANCEMENT PRIORITIES

It is understood that these priorities are for the basis of providing support by the Village. The Village should work toward effectuating these priorities. It is also understood that many of these suggested priorities presently lay outside of the Village Boundaries. Therefore the Village will not be able (unless annexation takes place in the future) to financially participate in the construction, but the Village will lend support and encourage the proposed construction.

It is also understood that the established priorities need to be built in the future, as the population and volume of traffic increases and demands for a better transportation network become a reality.

Priorities	Zone	Description
1	A1	4 foot gravel shoulders along Highway F
2	B	Re-paving extension Highway F to Stracks Church Road, 4 foot gravel shoulders
3	A2	4 foot gravel shoulders along Highway F
4	B	Centerline stripping and white stripes along both sides of extension
5	A1	Turn lanes into the Resort on Highway F
6	F	Centerline stripping and white stripes along both side of Schuetzenground Road
7	C	Centerline stripping and white stripes along both sides of Stracks Church Rd.
8	C1	4 foot gravel shoulders along Stracks Church Rd Zone C1
9	C2	4 foot gravel shoulders along Stracks Church Rd Zone C2
10	D	4 foot gravel shoulders along each side of Highway M
11	F	4 foot gravel shoulders along Schuetzenground Road
12	C3	4 foot gravel shoulders along Stracks Church Rd Zone C3
13	E	4 foot gravel shoulders along Highway M
14	A1	10 foot gravel shoulders along Highway F
15	A2	10 foot gravel shoulders along Highway F



## 2014 Transportation Plan

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16	A1	Round-a-bout at Highway F and Highway M
17	E	10 foot gravel shoulders along Highway M
18	B	10 foot gravel shoulders along the extension
19	E	10 foot paved shoulders along Highway M
20	C1	10 foot gravel shoulders along Stracks Church Rd Zone C1
21	C2	10 foot gravel shoulders along Stracks Church Rd Zone C2
22	F	10 foot gravel shoulders along Schuetzenground Road
23	A2	10 foot paved shoulders along Highway F
24	A1	10 foot paved shoulders along Highway F
25	D	10 foot gravel shoulders along each side of Highway M
26	A1	Pedestrian pathway along one side of Highway F
27	B	Pedestrian pathway along one side of extension
28	F	10 foot paved shoulders along Schuetzenground Road
29	C3	10 foot gravel shoulders along Stracks Church Rd Zone C3
30	B	10 foot paved shoulders along the extension
31	D	10 foot paved shoulders along each side of Highway M
32	D	Pedestrian pathway along one side of Highway M
33	F	Pedestrian pathway along one side of Schuetzenground Road
34	A2	Pedestrian pathway along one side of Highway F
35	C	10 foot paved shoulders along Stracks Church Rd
36	C	Pedestrian pathway along one side of Stracks Church Rd.
37	C	Pedestrian pathway at edge of 2013 Village Boundary From Stracks Church to Hwy F extension.



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38	D	Pedestrian pathway at edge of 2013 Village Boundary from Highway F to Stracks Church Rd.
39	E	Pedestrian pathway along one side of Highway M

### 2. REGIONAL TRANSPORTATION CONDITIONS

During the update of the Village of Innsbrook’s Comprehensive Plan, several local government officials were contacted to discuss their long range land use and transportation improvement plans. Comprehensive plans and zoning maps from Warren County and the cities of Foristell, Warrenton, Wright City and Marthasville were obtained and reviewed to gain a better understanding of anticipated or planned future growth, annexation and proposed land use in the surrounding areas. In addition to the consideration of future land use and growth, Comprehensive plans also include recommendations for future transportation improvements needed to access future land uses and the provision of essential utility systems (infrastructure) to service land use activities. The following are relevant goals, objectives and action items contained in the aforementioned comprehensive plans and zoning ordinances from municipalities adjacent or nearby the study area:

- Warren County:** Warren County updated its County Master Plan in 2002-2003 leading to formal adoption on March 17<sup>th</sup> 2003. The plan utilizes a series of tiers to segregate various land uses and densities to direct future growth and development. The future land use tiers included urban, suburban, rural and agriculture. The intent of the plan is to minimize conflicts between urban and rural land uses by limiting development to areas that are already impacted by existing development and where services can efficiently be provided. The urban tiers are planned to concentrate development around existing cities within the county. The County is in the process of rezoning land around its I-70 interchanges to encourage commercial development. The county has anticipated a need for access control, parking and effective buffering from nearby residential uses at these interchanges.
- City of Warrenton:** The City of Warrenton’s Comprehensive Plan was updated in December 2000. The overall vision for the future according to the Plan is to —provide for the development and growth of Warrenton in such a manner that the community will retain its historic and rural characteristics while responding to the needs of a growing population. Specific objectives include discouraging and/or minimizing the —piecemeal conversion of residential property to commercial uses and the development of strip commercial shopping facilities. Warrenton is actively trying to attract additional industrial development and would like to direct future commercial and industrial development to vacant land north of I-70. General transportation goals include improving the existing transportation system and building new facilities to support the city’s planned growth patterns.
- City of Foristell:** The City of Foristell’s Comprehensive Plan consists of a land use —Projection Map that designates all land adjacent to I-70 and all other major roads as —Commercial. It is



## 2014 Transportation Plan

Village of Innsbrook, Missouri

unrealistic the area would support the magnitude of commercial development proposed on the Map, especially in areas outside the I-70 corridor. Foristell Officials acknowledge the City's Comprehensive Plan is in need of an update, however at the time of this writing, the City had not begun the process of updating the City's Plan. As it presently stands, the current plan is the City's Official Comprehensive Plan and therefore the City anticipates extensive highway-oriented commercial development along all major roadways. While the City's —Projected land use map shows extensive commercial land use, the City's Zoning Map, dated 10/17/2003 only shows commercially zoned property along I-70, centered around the existing interchange and two dispersed commercial areas along Highway W.

- **City of Wright City:** Wright City's Comprehensive Plan was updated on April 22, 2004. The Plan includes four (4) proposed —Commercial Centers located at key nodes along I-70 (Stracks Church Road, Bell Road, Highway F, and Stringtown Road). The vast majority of property adjacent to I-70 is designated as —Commercial and Light Industrial. A few areas along I-70 are designated as —Recreation, Trails Cultural and —Public, Quasi-Public. The property outside the I-70 corridor is designated as —Residential with the exception of three (3) dispersed areas designated as —Limited Agriculture. Commercial nodal areas are also proposed where two or more major roads intersect. The two (2) largest commercial nodal areas include the wedge between Highway M and Stamer Road and at the intersection of Highway H & M. The —2020 Wright City Land Use and Transportation Map proposes several major transportation improvements; including, but not limited to:
  1. Upgrading Stracks Church Road from Highway M to I-70
  2. Upgrading Bell Road (Highway H/J) to Pleasant Hill Road
  3. Upgrading Springtown Road north of I-70 for approx. 1 mile.
  4. The following roads area designated as —New/Upgrade Minor Arterial
    - Roelker Road from Fruit Farm Road to I-70
    - Stuerman Road from Stracks Church Road to Stringtown Road
    - New minor arterial connection between Highway H to Highway F.
    - New minor arterial connection between Stracks Church Rd to Highway J.

### 3. I-70 CORRIDOR STUDY- EXISTING LAND USE

Commercial strip development centered around full-access interchanges along I-70 is common. The outlets and other retail/convenience store development at the Route 47 interchange in Warrenton is a prime example of the aforementioned development scenario. Most scattered commercial developments along these highways and other county roads are primarily convenience commercial activities. In the more rural western section of the study corridor, convenience and service commercial land uses are also scattered along the major roadway, intersecting I-70. Warren County has the largest concentration of commercial land use and Montgomery County has the most agriculture / undeveloped land uses.



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There is little industrial activity along the I-70 study corridor. Overall, industrial activity is one of the most underrepresented land use activities in the entire study corridor, due in part to the historically rural nature of the area. Industrial land use is generally concentrated in larger communities, but is also occasionally found as a freestanding use in a rural location. New industrial activities are typically located at the periphery of larger established towns.

In Warren County, Wright City and Warrenton have a substantial cluster of residential use near Interstate 70, while the majority of land use in Warren County is classified as agriculture, forestry, fishing and hunting. Land use is distributed similarly in Montgomery County. Land use in St. Charles County along the I-70 Corridor is more evenly distributed with commercial, industrial and institutional uses taking up the majority of the I-70 Corridor. The following table provides a summary of the land uses by type for the I-70 Corridor in the counties of Warren, Montgomery and St. Charles:

Land Use	Warren Cnty		Montgomery Cnty		St. Charles Cnty	
	acres	percent	acres	percent	acres	percent
Suburban Residential	3.6	0.10%	0	0.00%	15.1	1.00%
Rural Residential	417.7	14.50%	241	10.10%	135	9.00%
Urban Residential	9.1	0.30%	3.1	0.10%	25.6	1.70%
General sales or services (commercial)	349	12.10%	238.9	10.00%	279	18.70%
Manufacturing and construction	127.6	4.40%	182.2	7.70%	55.9	3.70%
Transportation, communication, & utilities	17.9	0.60%	60.2	2.50%	18.7	1.20%
Arts, entertainment, and recreation	N/A	N/A	8.1	0.30%	53.8	3.60%
Education, public administration, health care	44.6	1.50%	39.4	1.70%	85.6	5.70%
Mining and extraction	0	0.00%	0	0.00%	0	0.00%
Agriculture, forestry, fishing and hunting	1,425.80	49.50%	1,428.00	60.00%	468.8	31.40%
Vacant land	488	16.90%	177.6	7.50%	355.8	23.80%
Total:	2,883.30	100%	2,378.50	100%	1,493.20	100%

*Source: www.improvei70.org*

#### 4. HAZARDOUS OR POTENTIALLY HAZARDOUS SITES

One site had been identified as being considered a high potential impact. The site is located in unincorporated Warren County just south of Wright City and north of the Village of Innsbrook, just south of Highway M. The site is the —Zykan Landfill and it is presently being monitored by the EPA, according to Village Officials.



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### 5. BOONSLICK REGIONAL PLANNING COMMISSION

The Boonslick Regional Planning Commission-Transportation Advisory Committee makes recommendations regarding future transportation enhancements. In 2012, BRPC plans to update the Regional Transportation Plan and update the Comprehensive Economic Development Strategy.

### 6. CITY OF WASHINGTON, MO

No improvements are funded at this time. However, MoDOT does plan to replace the Highway 47/Missouri River Bridge. The preferred location of the new Highway 47/Missouri River Bridge is just upstream from the existing bridge. All other proposed improvements to Highway 47 relating to the bridge replacement will generally follow the existing alignment. The bridge replacement is expected to be completed by 2017-2019. The replacement is going to occur, according to City Officials, because the cost to repair the existing bridge is estimated to cost more than the new replacement bridge. The latest updates regarding future transportation enhancements are provided on MoDOT's webpage – See Environmental Assessments.

### 7. ZERO CAR DISTRIBUTION

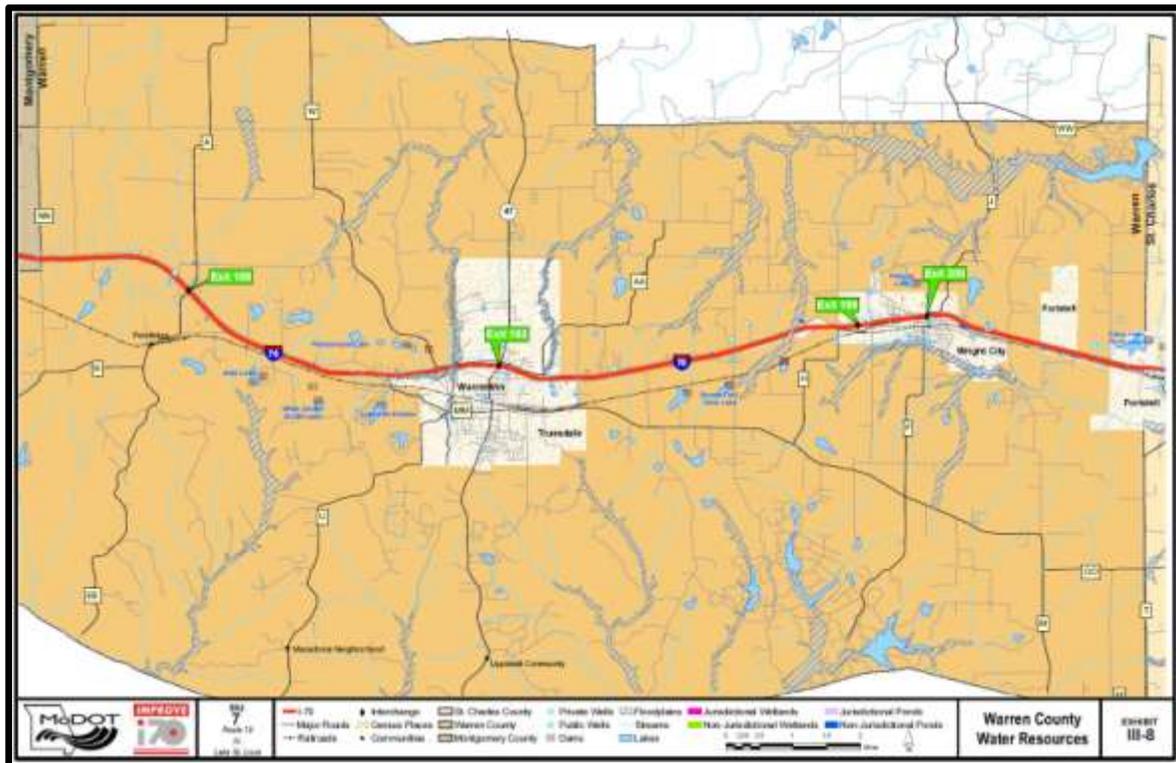
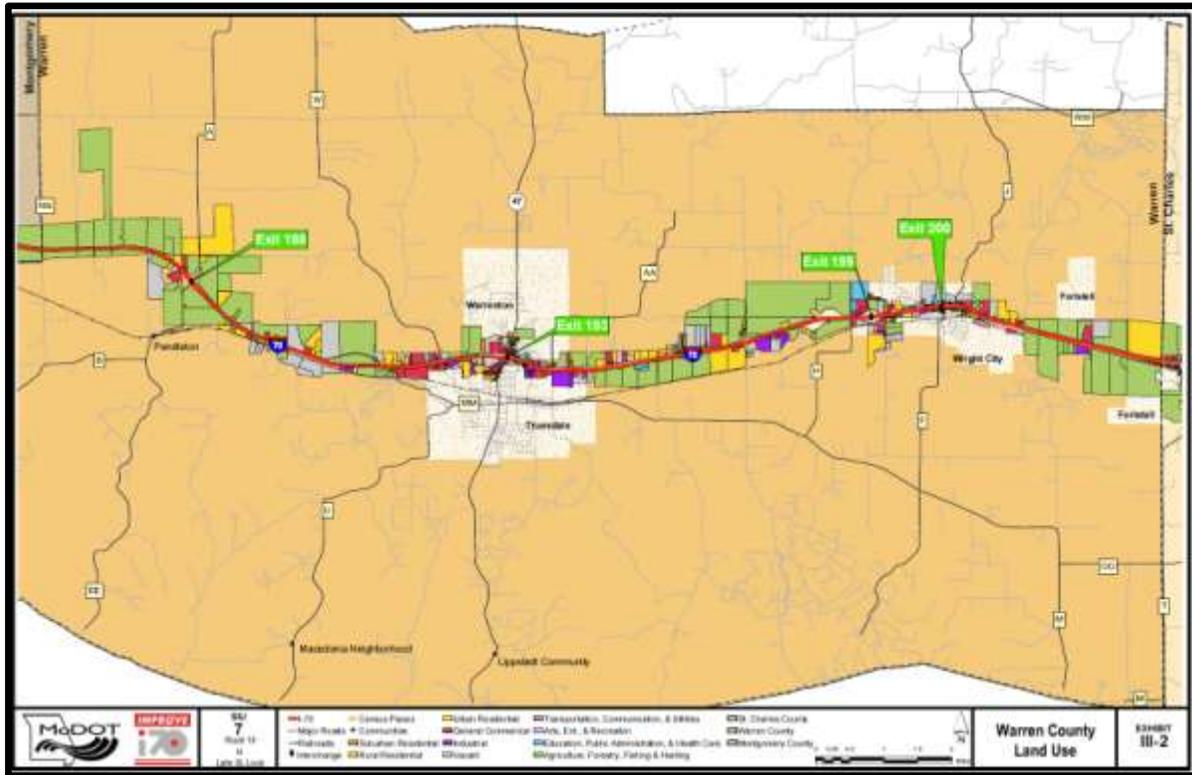
<b>Table TBD: Car Distribution Per Household</b>			
<b>County</b>	<b>Households</b>	<b>Zero Car Households</b>	<b>Percent Zero Car Households</b>
St. Charles	131,569	4,778	3.6%
St. Louis	402,346	25,069	6.2%
Warren	12,012	624	5.2%
Washington	8,620	418	4.8%
St. Louis City	146,463	31,637	21.6%
St. Louis MSA	1,111,547	84,608	7.6%
<i>Source: East-West Gateway</i>			

<b>Table TBD: Warren County Car Distribution</b>			
<b>Warren County Places</b>	<b>Households</b>	<b>Zero Car Households</b>	<b>Percent Zero Car Households</b>
Innsbrook village	340	15	4.4%
Marthasville city	314	8	2.5%
Pendleton village	29	0	0.0%
3 Creeks village	20	0	0.0%
Truesdale city	233	21	9.0%
Warrenton city	2718	197	7.2%
<i>Source: East-West Gateway</i>			



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