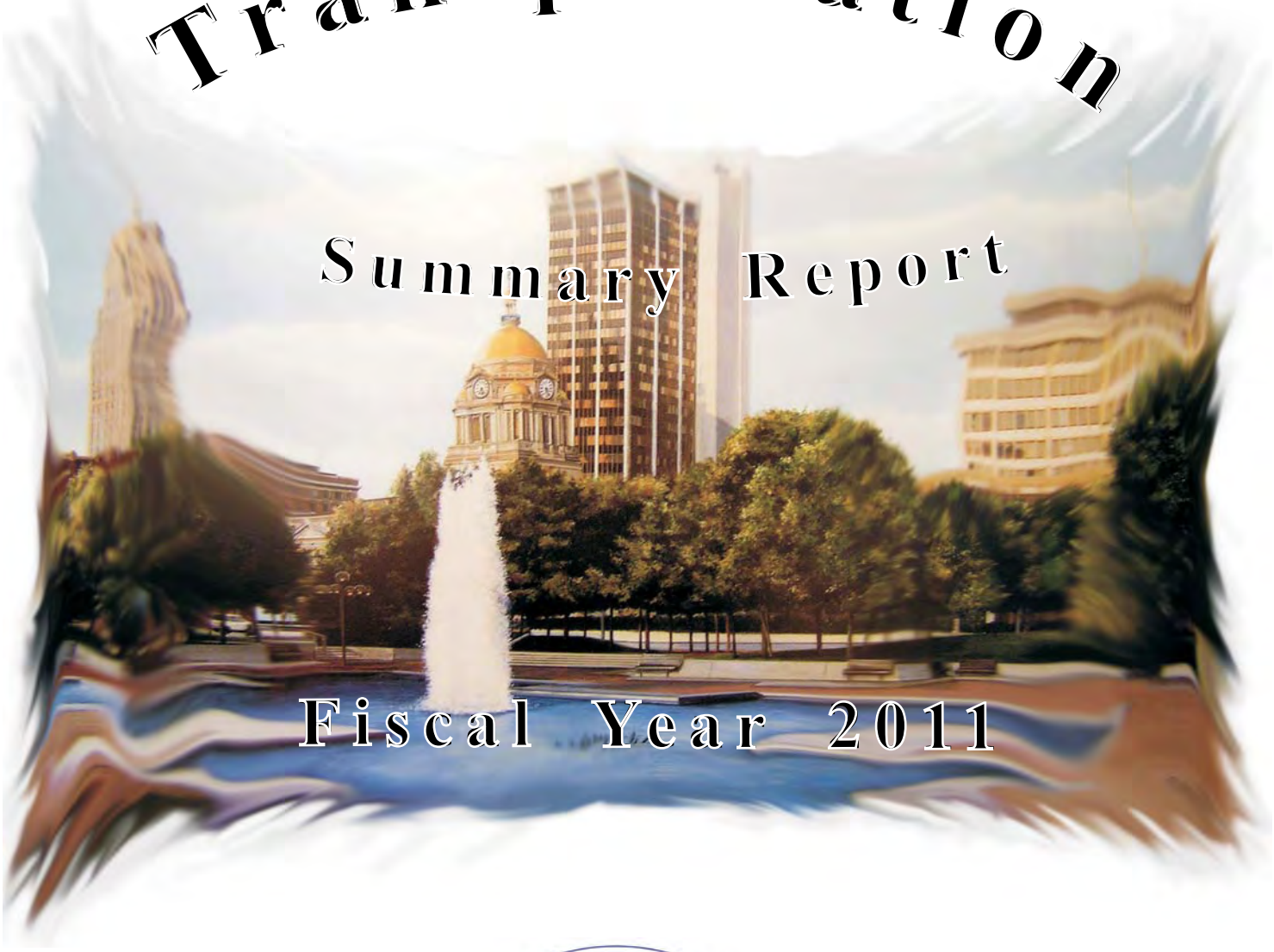
Transportation



Summary Report

Fiscal Year 2011

Northeastern Indiana Regional Coordinating Council

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INTRODUCTION

The Northeastern Indiana Regional Coordinating Council (NIRCC) is designated as the metropolitan planning organization (MPO) responsible for conducting transportation planning in the Fort Wayne-New Haven-Allen County Metropolitan Planning Area. Working with other public and private agencies, NIRCC strives to implement a transportation system that assures healthy growth and orderly development in the region. One of the main goals of NIRCC is working to develop a well-coordinated, multimodal, and functional transportation system to satisfy existing and future travel demands.

NIRCC and its staff work to provide a complete transportation system, one which will enhance the efficient movement of goods and people, while promoting greater safety and maintaining a conscious regard for the quality of life. For this goal to become a reality, constant monitoring of the existing system must occur. Staff is continually collecting data on the existing system to support the short-range planning process and to identify the challenges and opportunities of the future.

This Transportation Summary Report highlights and visually illustrates some of the transportation planning activities conducted and the products produced by NIRCC during Fiscal Year 2011. The primary purpose of this report is to familiarize the reader with the techniques used by NIRCC and the resulting products to promote a better understanding of the transportation planning process in our community. Included in this report is a summary of the traffic surveillance activities, intersection and arterial analyses, corridor studies, travel time and delay studies, Fiscal Year 2012-2015 Transportation Improvement Program (TIP) Projects for the Fort Wayne-New Haven-Allen County Metropolitan Planning Area, Safety Management System (SMS) activities, and bicycle/pedestrian planning activities.

Traffic Surveillance

Studies completed by the Northeastern Indiana Regional Coordinating Council

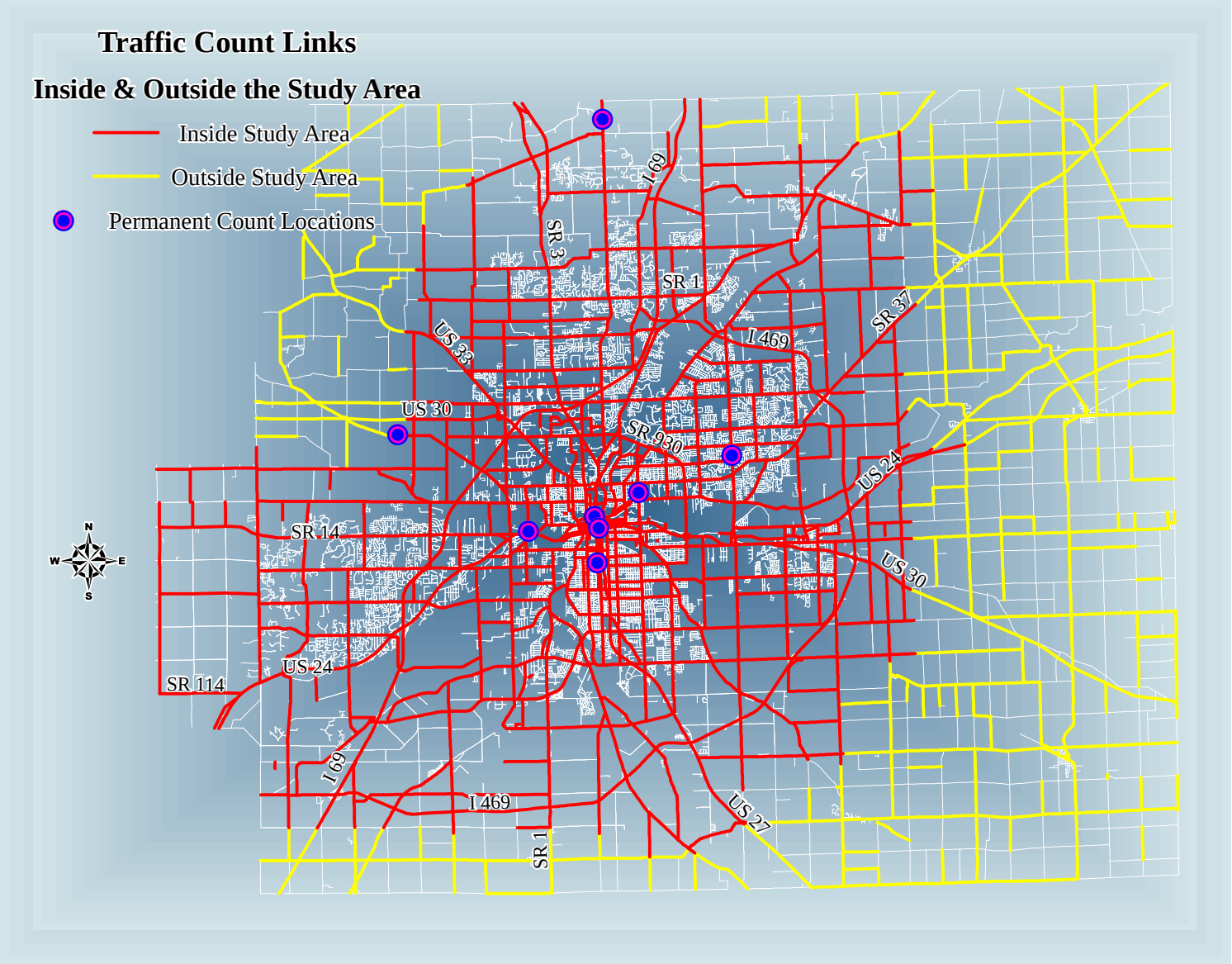
Transportation Summary Report Fiscal Year 2011

TRAFFIC SURVEILLANCE

Traffic counting provides an important base for short- and long-range transportation planning in an area. NIRCC is responsible for collecting and recording traffic count data for more than 2,000 traffic count links just within Allen County, as illustrated in Figure 1. The majority of these links are located within the Metropolitan Planning Area and are shown in red. The yellow links are collected as part of our rural traffic count program. The data is collected on a rotational basis, which varies from link to link. NIRCC employs three types of counts, weekly, temporary ground counts, and classification counts.

The first type of counts are weekly counts. These are done at eight permanent local counting stations, also illustrated in Figure 1. The permanent weekly counts are in locations that represent arterials and collectors in four different planning areas of Fort Wayne and Allen County. The Indiana Department of Transportation (INDOT) maintains permanent

Figure 1



counting stations on Interstate 69 and State Road 930. The data from these stations, collected each month, is used to develop monthly count factors. Monthly count factors are important to determine because traffic volumes vary from one season to another for various reasons. Weather conditions, construction, economic activities and school/work schedules

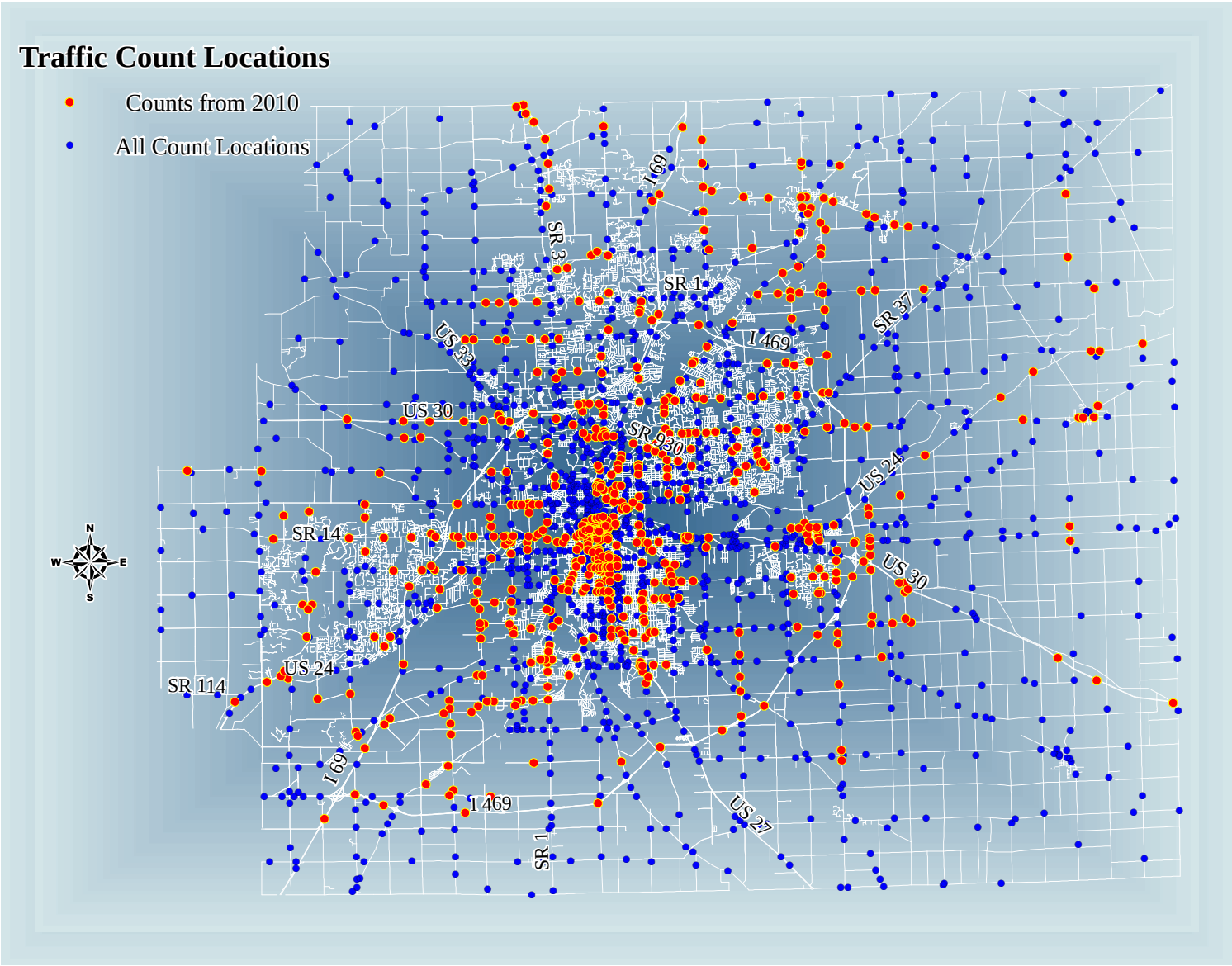


Figure 2

are just a few of the variables that cause seasonal variations in traffic flow. Traffic count data collected in November may be very different than traffic count data collected in July. Because of these differences, traffic counts throughout the year must be adjusted with these factors depending on the month and season if they are to be accurately compared. These factors are what adjust the raw traffic count data into the Average Annual Daily Traffic (AADT) volumes.

The second type of counts are temporary ground counts. In Count Year 2010 (March - November), data was collected at 672 locations, as illustrated in Figure 2. Out of the 672 Counts, 78 locations were State Counts which are collected throughout the county and reported to INDOT. All of these counts are forty-eight hour, weekday counts that are

conducted region-wide and adjusted for vehicle axle variability and seasonal variability. These counts fulfill three main objectives:

1) sample locations to estimate vehicle miles of travel, 2) sample highway performance monitoring system locations, and 3) collect coverage and special counts for planning and analysis purposes.

The last type of traffic counts are traffic classifications. Classification counts are conducted at selected locations to determine the frequency of various vehicle types. This data is collected, summarized, and then recorded as a component of the transportation characteristic file. The amount of truck traffic at a sampled location is the critical information collected by classification counts. The information is used for general system monitoring and for augmenting the data needs of Highway Performance Monitoring System (HPMS) sections and several management systems.

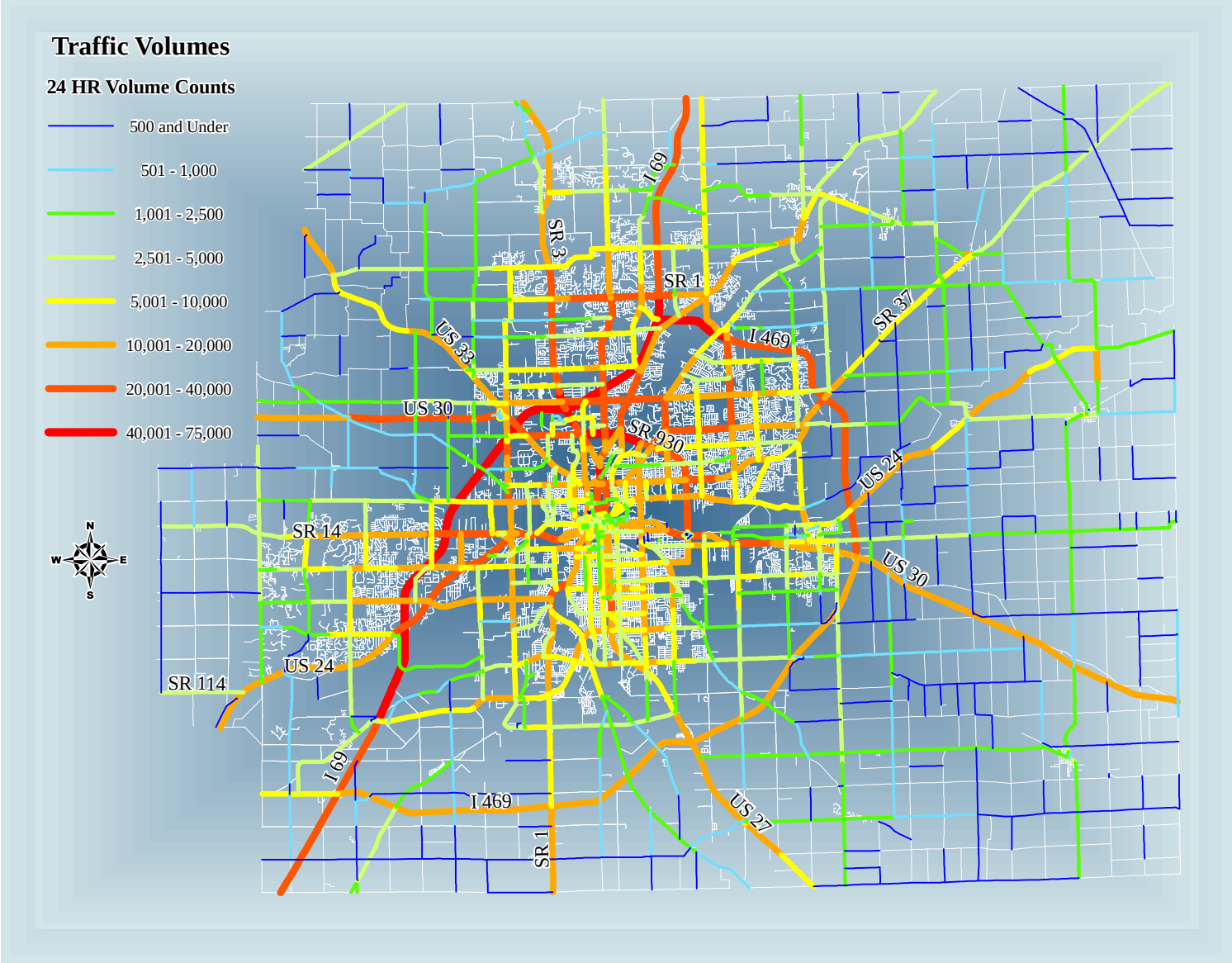


Figure 3

Figure 3 provides the range of traffic volumes present throughout Allen County. Some of the traffic count links shown in Figure 1 and Figure 3 exhibit links that may look unconnected or isolated. These links appear this way because they are usually part of the local road type samples or the railroad inventory count locations. Since most of the links are not functionally classified, they do not illustrate the continuity that the other links reveal.

Vehicle Miles of Travel

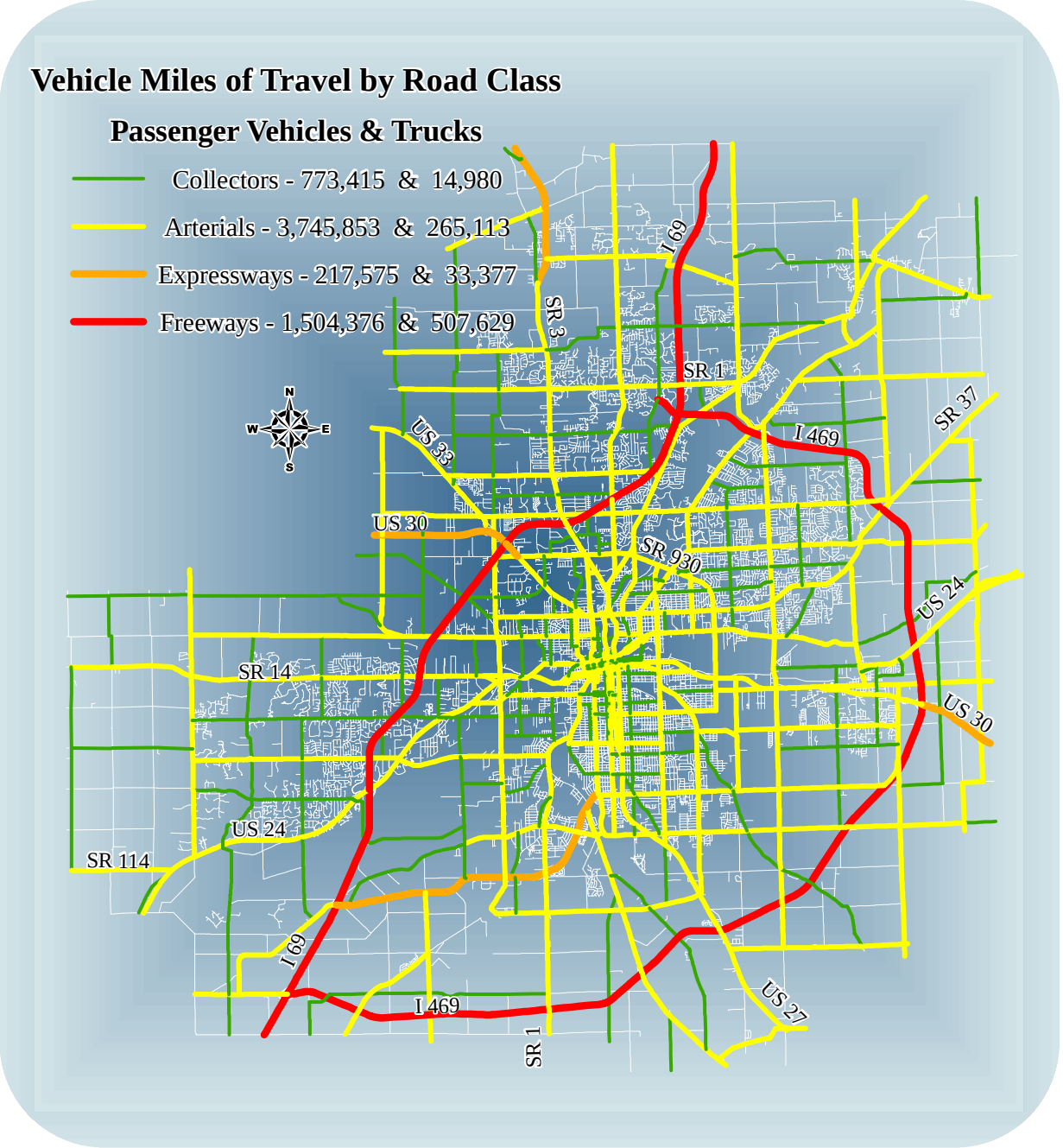
Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2011

VEHICLE MILES OF TRAVEL

The purpose of the vehicle miles of travel (VMT) estimate is to provide a measurement of regional traffic growth. The VMT estimate incorporates several factors that influence quality of travel within a region including traffic volume, length and type of roadway facility, seasonal traffic variations, and vehicle types. The VMT estimate has been published annually for the region beginning in Fiscal Year 1986. With each annual estimate, NIRCC staff has attempted to improve its sampling and analytical skills to produce the most reliable estimate possible. Region wide, vehicle miles of travel decreased from 7,252,988 million in 2009 to 7,062,317 million in 2010. This represents a decrease of 2.63 percent. The VMT decreased on freeways (2.89%), on arterial streets (2.73%), and on collector streets (4.09%) from 2009. The VMT increased on expressways (6.51%) over the previous year. The VMT is illustrated for 2010 in Figure 4.

Figure 4



The changes in VMT from year to year can be attributed to a number of possibilities. The most evident reason for VMT changes can be accredited to the increase or decrease in the amount of travel. Other factors that can affect the increase or decrease in VMT can include the price of gasoline, unemployment rates, automobile operating costs, and weather.

The bar chart shown in Figure 5 displays the annual VMT estimates for the ten year time period spanning from 2000 to 2010 for the Fort Wayne-New Haven-Allen County Metropolitan Planning Area. It also provides a benchmark for VMT displaying the first estimate done in 1986. These VMT estimates do not include the number of vehicle miles traveled on the local streets. The amount of local samples NIRCC collects is not sufficient to calculate a reliable VMT estimate. With some exceptions, the general trend shown on the chart shows an increasing total VMT throughout the ten year period as well as a significant increase since the inception of VMT in 1986. The VMT is anticipated to level out or continue to slightly increase. Even though gas prices and economic hardships may slightly change the growth patterns of VMT, there still seems to be factors that will continue to keep the VMT increasing a little even though 2010 experienced a decrease. These factors include an increase in automobile ownership per family, the spread of development, suburb to suburb travel, a rise in the percentage of two-income families, and other lifestyle changes.

Figure 5

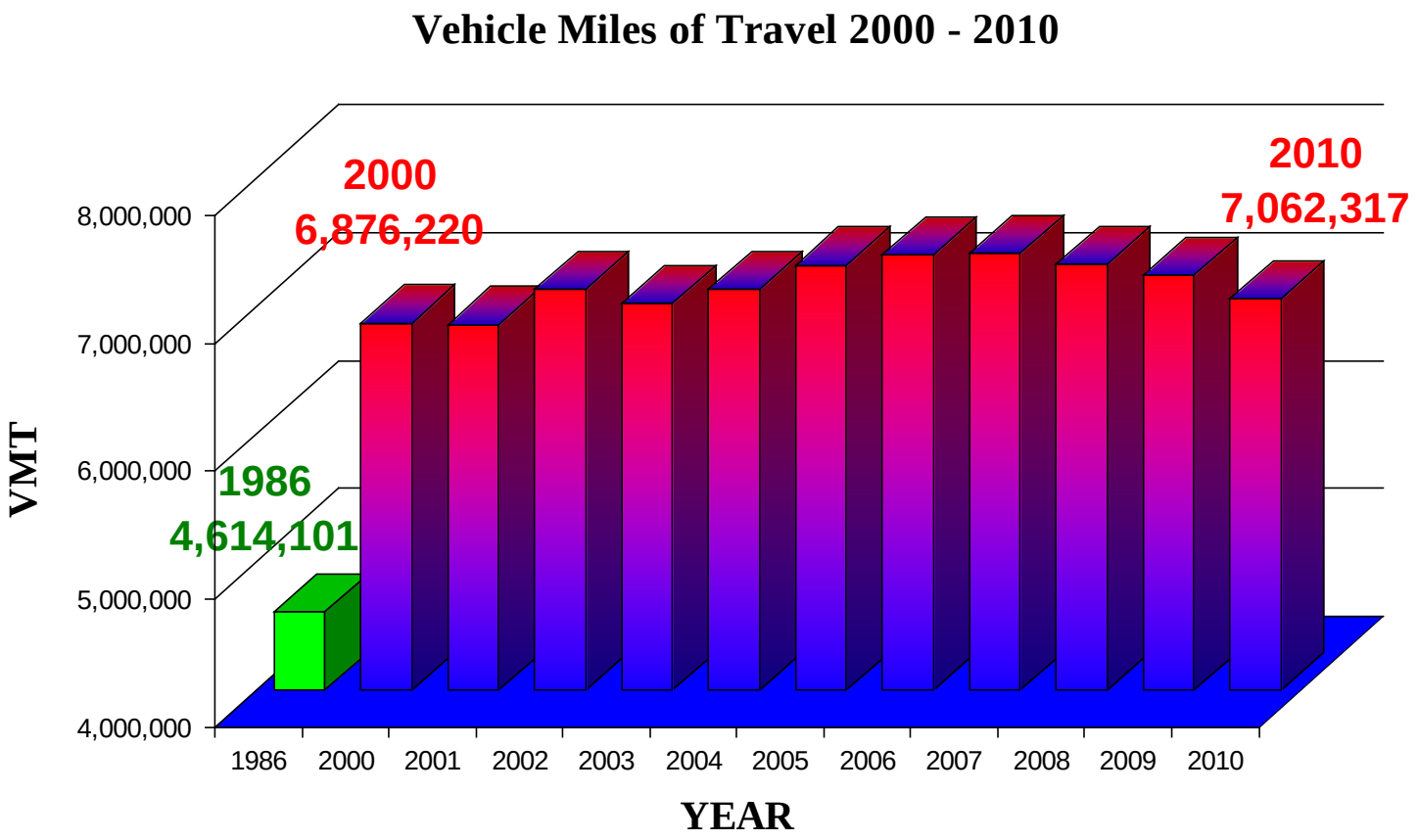
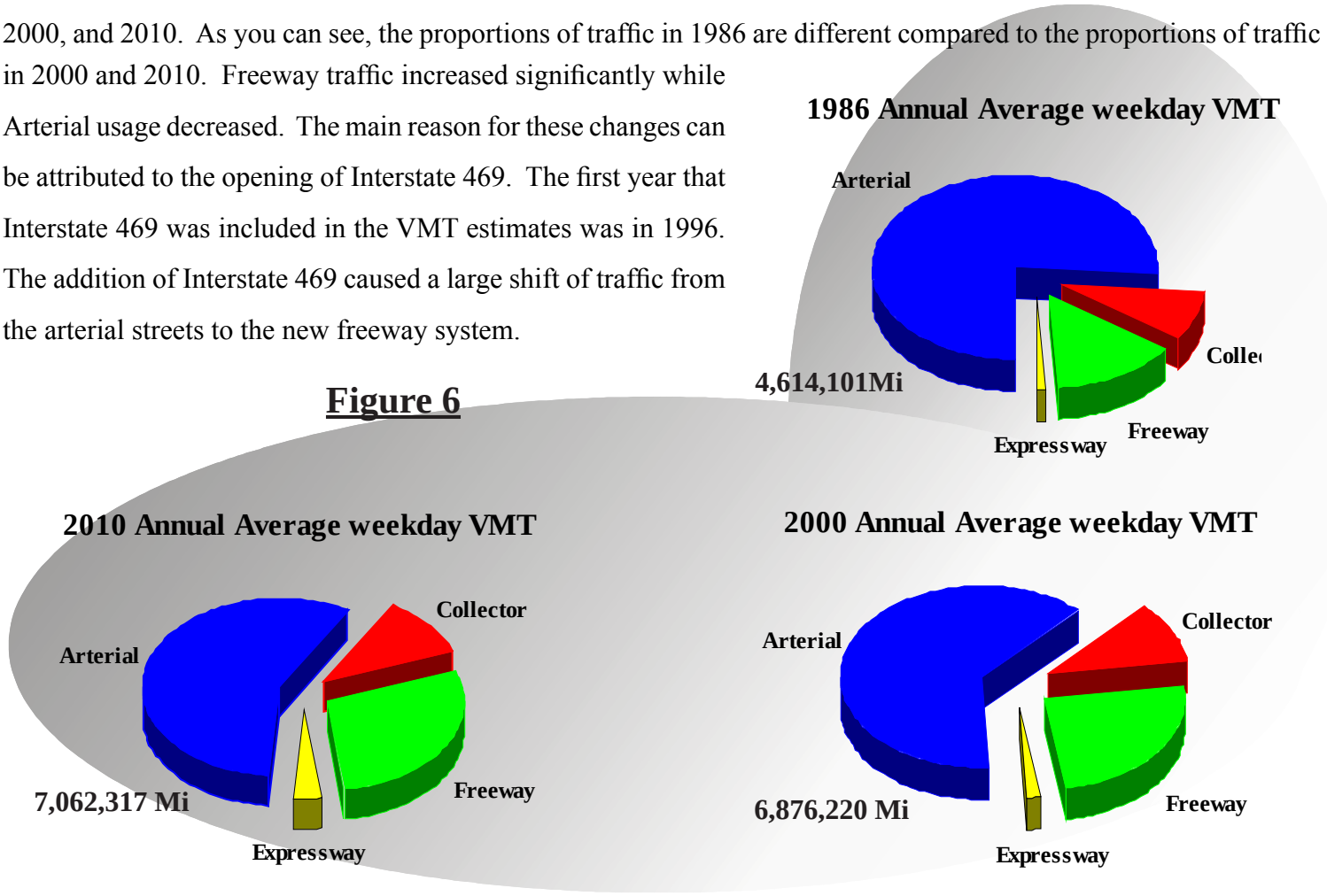


Figure 6 presents three pie charts that represent the proportions of VMT by street classification for the years 1986, 2000, and 2010. As you can see, the proportions of traffic in 1986 are different compared to the proportions of traffic in 2000 and 2010. Freeway traffic increased significantly while Arterial usage decreased. The main reason for these changes can be attributed to the opening of Interstate 469. The first year that Interstate 469 was included in the VMT estimates was in 1996. The addition of Interstate 469 caused a large shift of traffic from the arterial streets to the new freeway system.

Figure 6

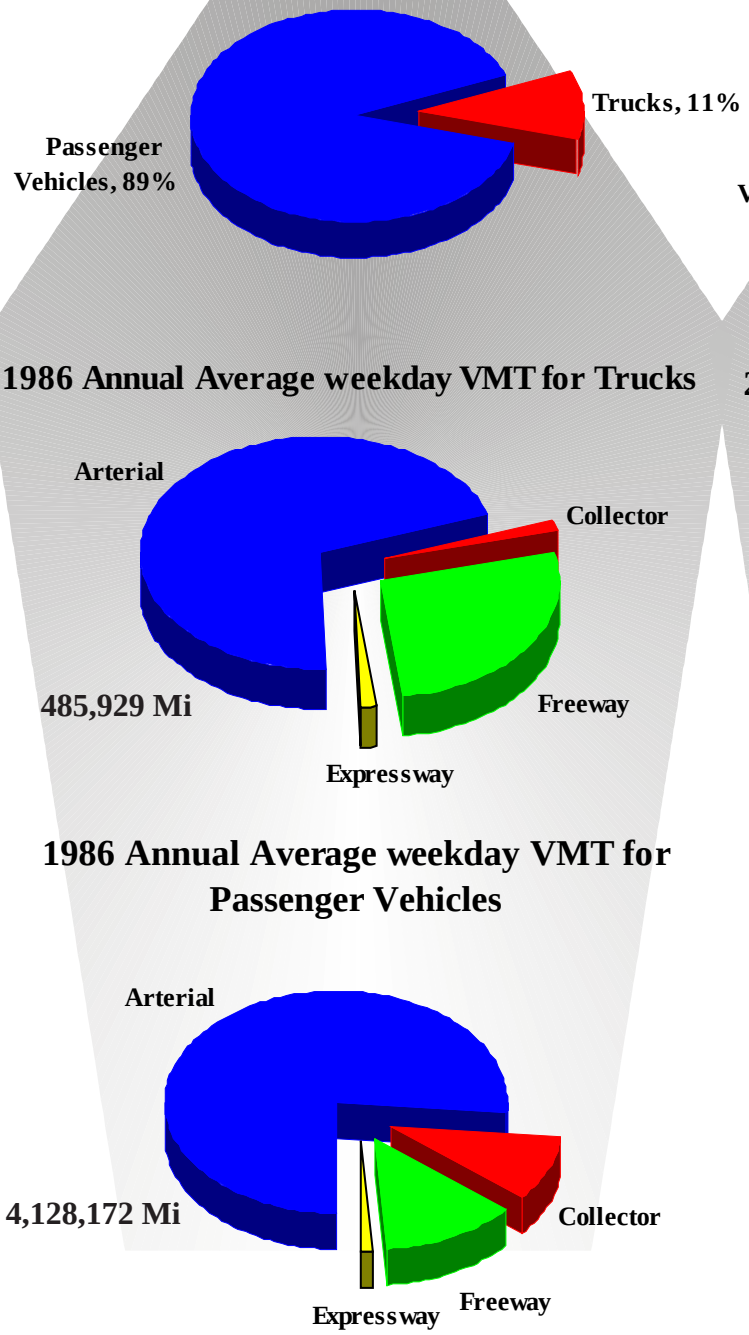


The VMT is also broken down to show the annual average VMT for passenger vehicles and trucks. The pie charts contained in Figure 7 illustrate the VMT for 1986 and 2010. The proportion of truck traffic compared to passenger vehicle traffic is almost identical in 1986 and 2010. A further breakdown of the proportionate usage of passenger vehicles versus trucks on the different road classifications shows some interesting differences between 1986 and 2010. Even though the proportion of truck traffic compared to passenger vehicle traffic is nearly the same for these two years, the distribution of traffic on arterials and freeways are much different. As previously mentioned, the traffic distributions between arterials and freeways changed significantly when Interstate 469 was included into the VMT estimates. The most significant change in traffic distribution between 1986 and 2010 came from the Annual Average weekday VMT totals for trucks. The pie charts show how much of an impact Interstate 469 has made between 1986 and 2010. The utilization of the freeway system has alleviated a significant amount of truck traffic from the arterials.

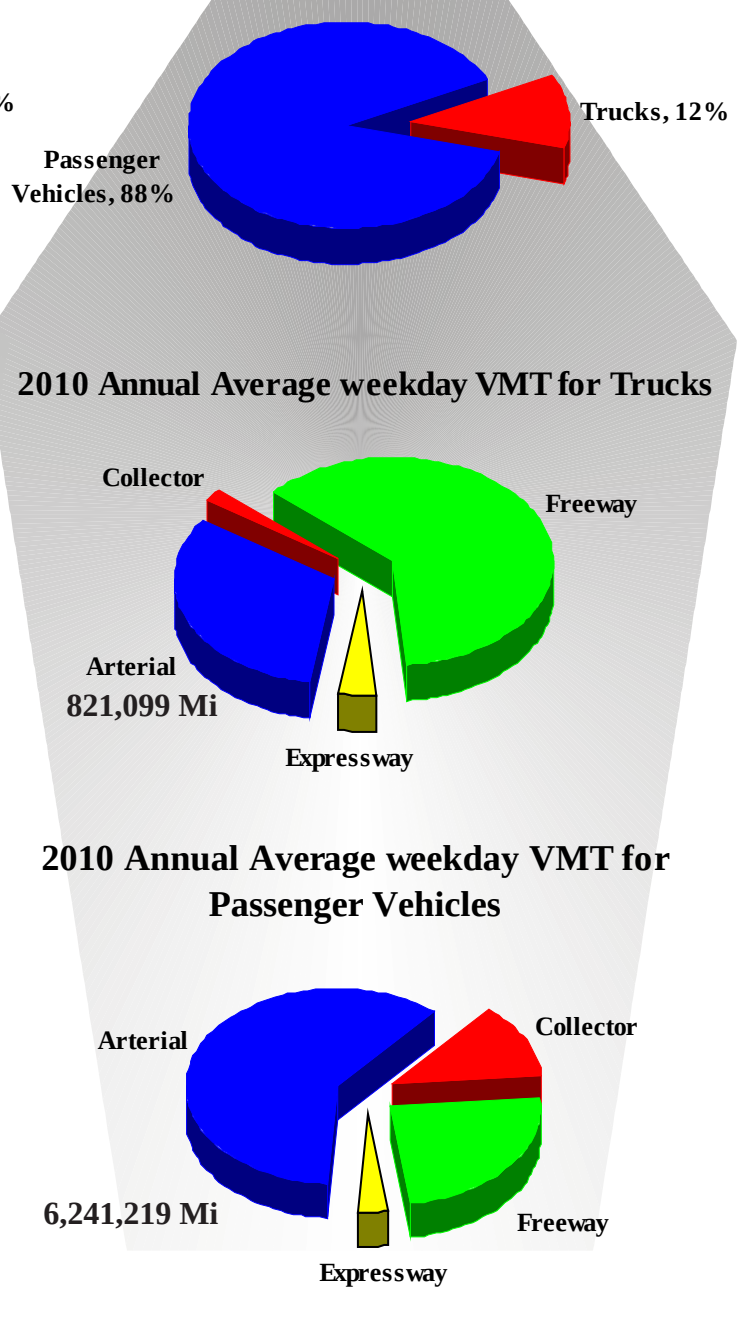
The pie charts contained in Figure 8 illustrate the proportion of passenger vehicle traffic versus truck traffic for each type of road classification. Even though the amounts of truck traffic and passenger vehicle traffic significantly changed

Figure 7

1986



2010



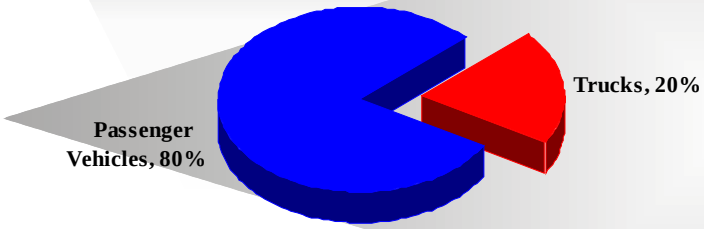
for some of the road classifications, the proportions of passenger vehicles and trucks for each road classification remained very similar between 1986 and 2010.

Figure 8

1986

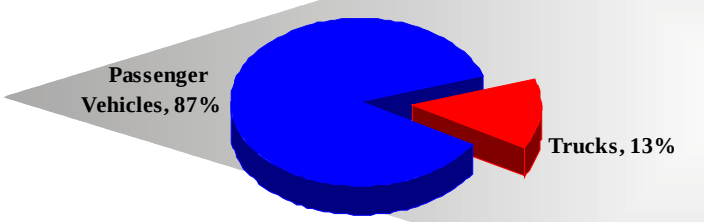
Freeways

Percentage of 1986 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



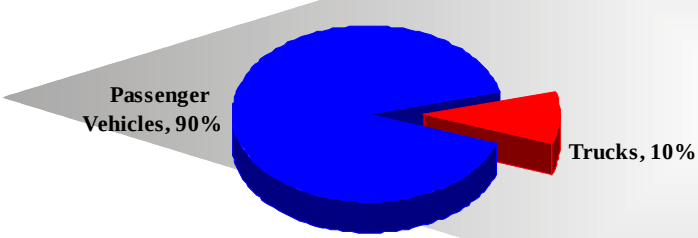
Expressways

Percentage of 1986 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



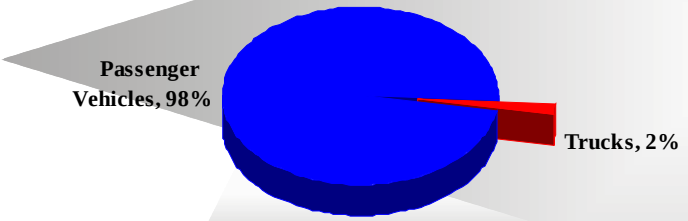
Arterials

Percentage of 1986 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



Collectors

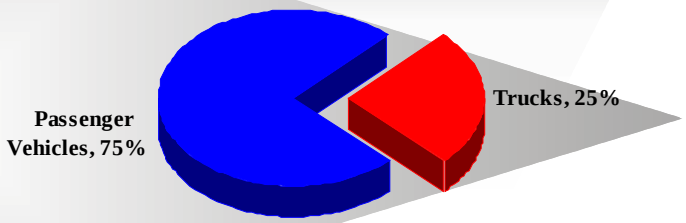
Percentage of 1986 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



2010

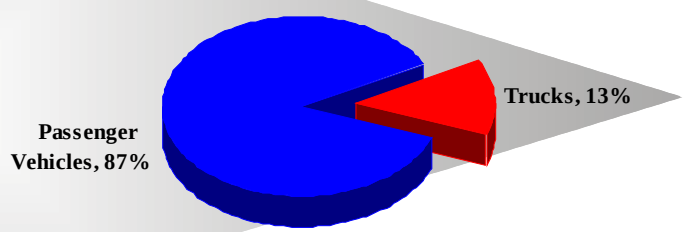
Freeways

Percentage of 2010 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



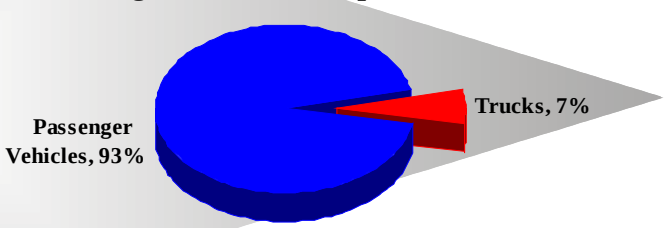
Expressways

Percentage of 2010 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



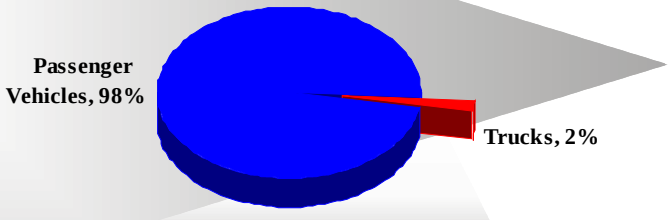
Arterials

Percentage of 2010 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



Collectors

Percentage of 2010 Annual Average weekday VMT for Passenger Vehicles compared to Trucks



Socioeconomic and Land Use Updates

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2011

SOCIOECONOMIC AND LAND USE UPDATES

Socioeconomic variables continue to be updated to reflect current demographic conditions. This is accomplished by utilizing the 2000 Census data as a base and reviewing building and demolition information to update dwelling unit data. This helps estimate employment, development, and population patterns which is necessary for highway and transit planning activities. This demographic data forms the basis of sound transportation planning including modeling and alternative evaluation analysis.

Analysis and graphical representations of socioeconomic and demographic data is necessary for transportation planning. To accomplish this, NIRCC's road inventory along with several other databases and Geographical Information System (GIS) files are updated with the most up-to-date Census data, population and dwelling unit updates, auto ownership data, and employment information. The review and incorporation of Census products such as CTPP (Census Transportation Planning Products) into the transportation data files and GIS are also utilized to track socioeconomic patterns.

One of the most significant updates being made to the socioeconomic data began this past fiscal year with the first release of data from the 2010 Decennial Census. The 2010 Census Redistricting Data Summary Files were released for download at the beginning of 2011. NIRCC staff has begun to use this data and update GIS files and database files that will be used as a base for continued updates to the socioeconomic data.

This first round of data released from the 2010 Census includes population, race, Hispanic/Latino, and housing unit data. The total population for Allen County has increased from 331,849 people in the 2000 Census to 355,329 people in 2010. This 7.1% increase is slightly less than the national increase of 9.7%. The national trends show an increase of 9.8% from 1980 to 1990 and a 13.2% increase from 1990 to 2000. The national increase of 9.7% in 2010 is the lowest percentage of population change over a decennial census since before the 1950s.

Compared to the State of Indiana, Allen County is slightly above the percentage of population change from 2000 to 2010. Indiana saw an increase in population of 6.6% in the 2010 Census while the entire Midwest only increased by 3.9%. Allen County has the 3rd largest population in Indiana. Marion County is 1st and Lake County is 2nd.

The maps shown in Figures 9 and 11 show some of the data that has been updated so far. In Figures 10 and 12 you will see the percent of change between the 2000 census data and the 2010 census data. These two maps show where Allen County has experienced the most growth and loss in population and housing units. As you can see from the red shaded areas on the map, the western and northern parts of the county have experienced the most significant growth.

Figure 9

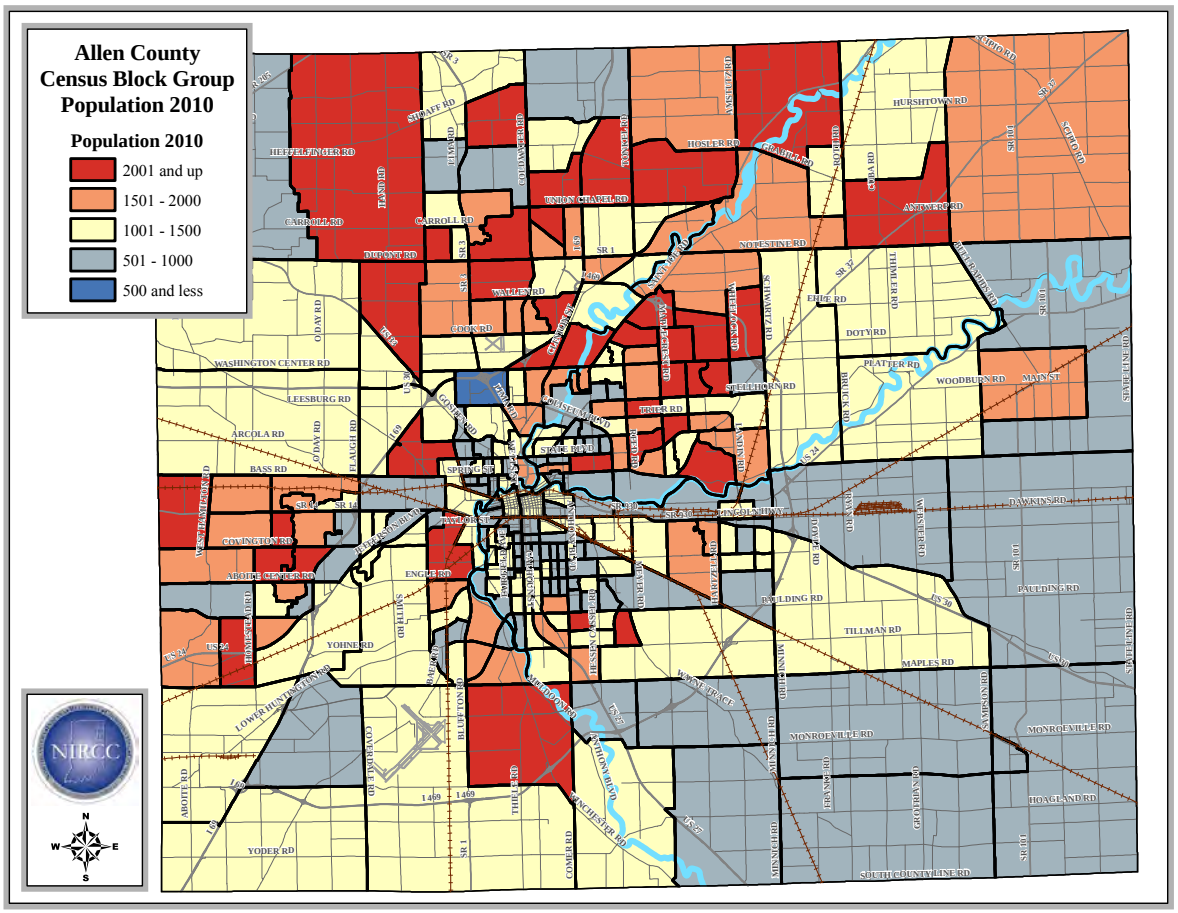


Figure 10

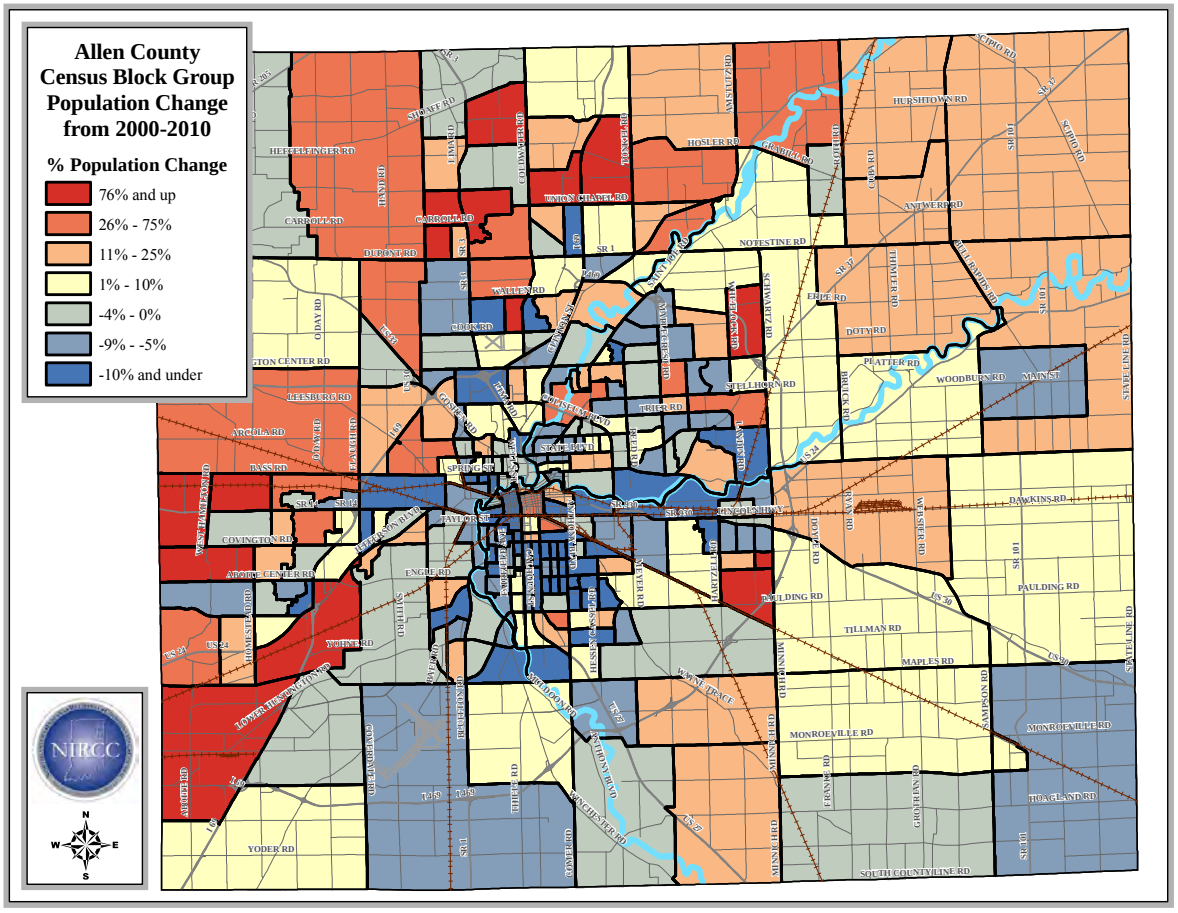


Figure 11

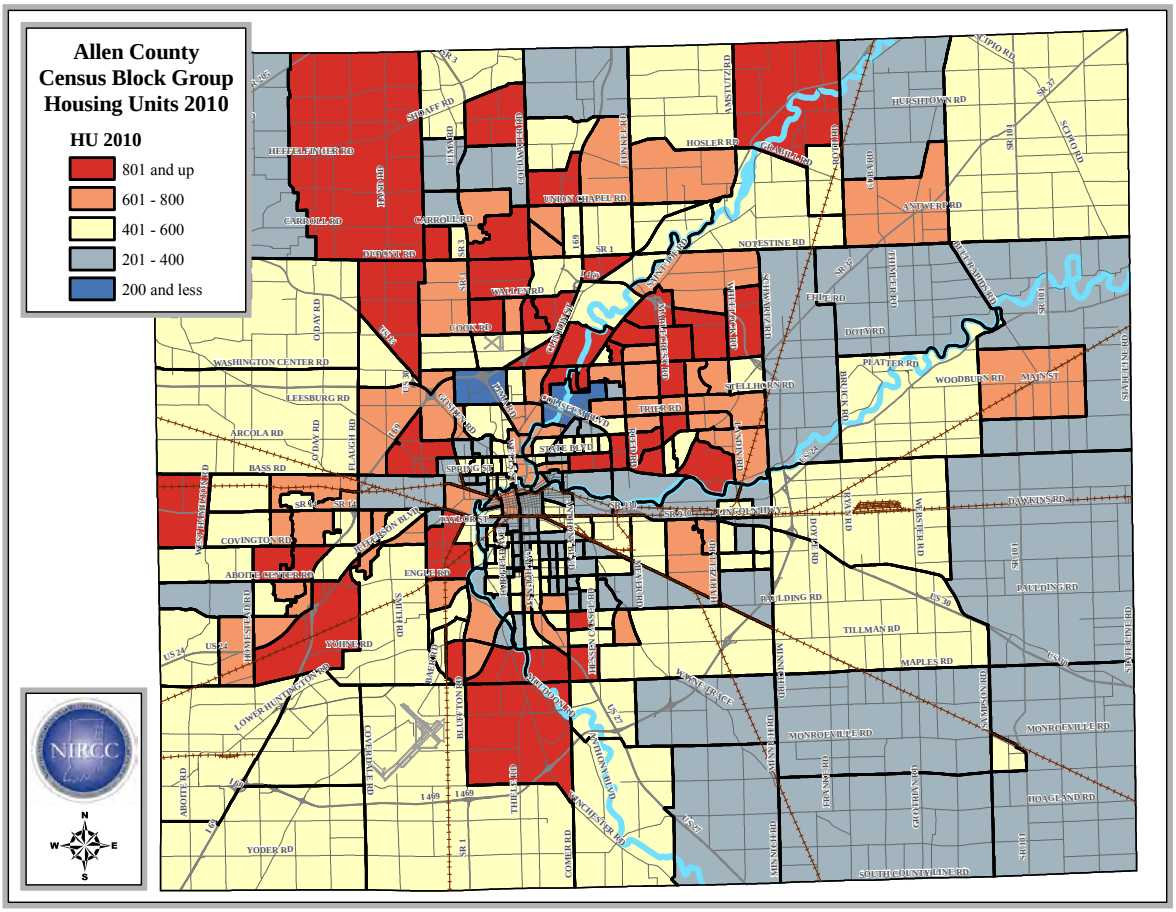
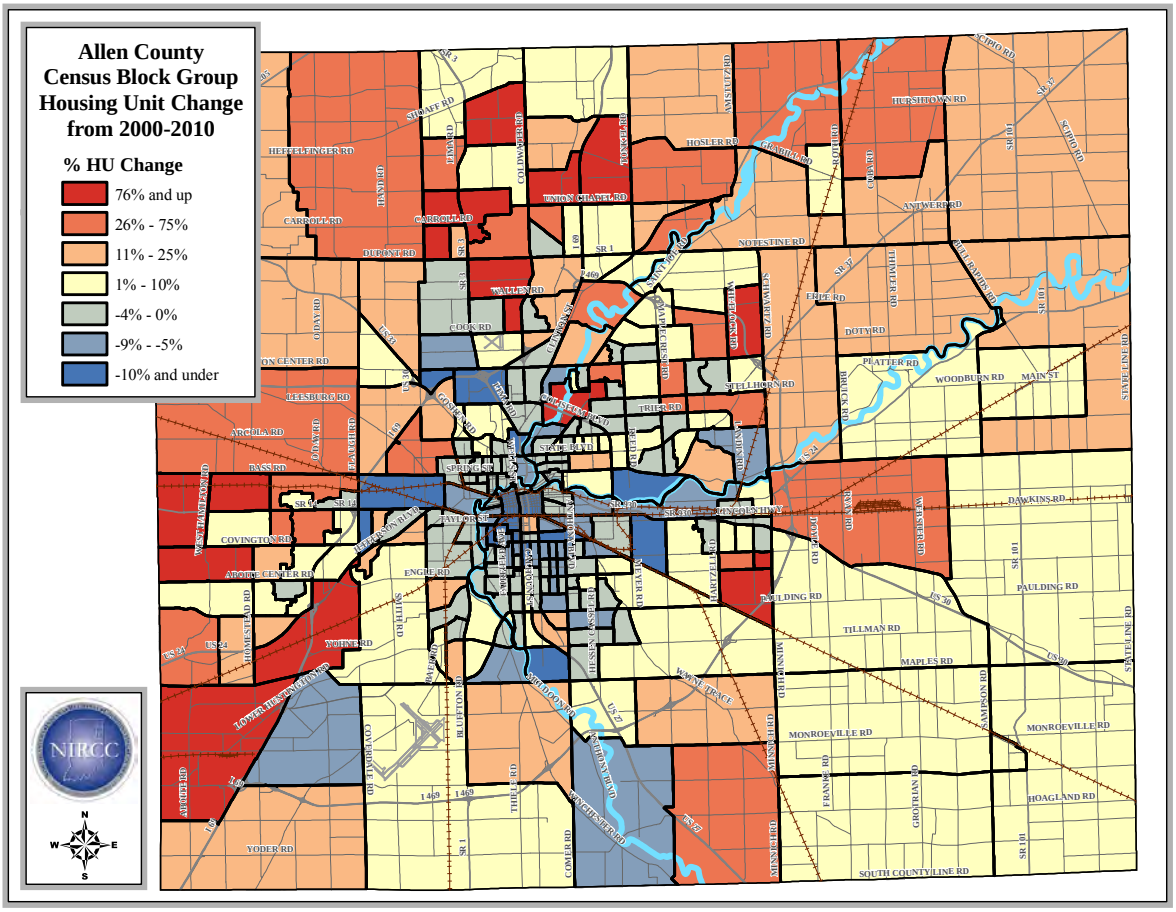


Figure 12



Intersection and Arterial Analysis

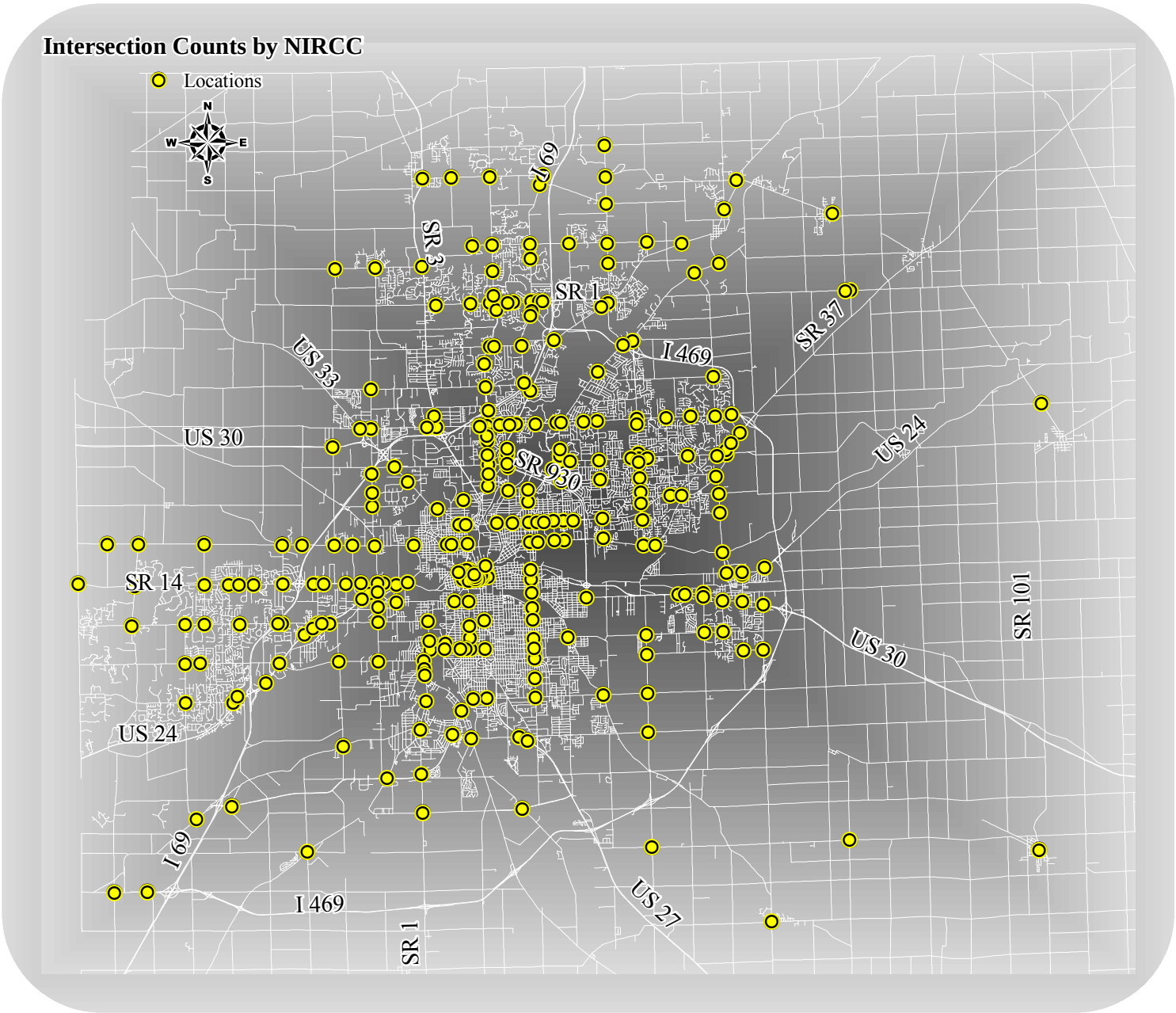
Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2011

INTERSECTION AND ARTERIAL ANALYSIS

NIRCC also conducts intersection and arterial analyses. Staff studies intersections within Allen County and examines their performance characteristics. These studies are conducted based on requests from the City of Fort Wayne, the City of New Haven, the Allen County Highway Department, and the Indiana Department of Transportation to evaluate problems and concerns with specific intersections. Figure 13 illustrates all the intersections that have been studied by NIRCC in the past. In fiscal year 2011, NIRCC evaluated 19 intersections which are listed in the table contained in Figure 14. Out of these 19 intersections, 18 were signalized and 1 was unsignalized.

Figure 13



The targeted measures of effectiveness for intersections are delay and capacity. The level of service (LOS) of an intersection is defined alphabetically A through F, A being the best LOS and F being the worst. The LOS is based on the average delay (measured in seconds) experienced at an intersection. Level of service cannot be calculated when the volume to capacity ratio (V/C) exceeds 1.2 for an individual group. The level of service for each of the intersections counted in Fiscal Year 2011 are illustrated in Figures 15 through 18 for each approach. These levels of service are only based on the peak hour for each intersection.

In order to qualify for a traffic signal, intersections must meet one or more of the primary volume signal warrants or both all-way stop warrants as described in the Manual on Uniform Traffic Control Devices 2009 Edition. The intersections reviewed for signal warrants along with other types of intersection analyses in Fiscal Year 2011 are illustrated in Figure 19.

Figure 14

Signalized Intersections
•Ardmore Ave / Covington Rd
•Ardmore Ave / Jefferson Blvd
• Ardmore Ave / Taylor St
•Broadway / Taylor St
•Ewing St / Jefferson Blvd
•Ewing St / Main St
•Ewing St / Washington Blvd
•Fairfield Ave / Home Ave
•Fairfield Ave / Jefferson Blvd
•Fairfield Ave / Kinsmoor Ave
•Fairfield Ave / Main St
•Fairfield Ave / Washington Blvd
•Freeman St / Jefferson Blvd
•Freeman St / Taylor St
•Indiana Ave / Rudisill Blvd
•Riviera Plaza / St Joe Center Rd
•Rudisill Blvd / South Wayne Ave
•St Joe Rd / St Joe Center Rd
Unsignalized Intersections
•Landin Rd / Shordon Rd

Figure 15

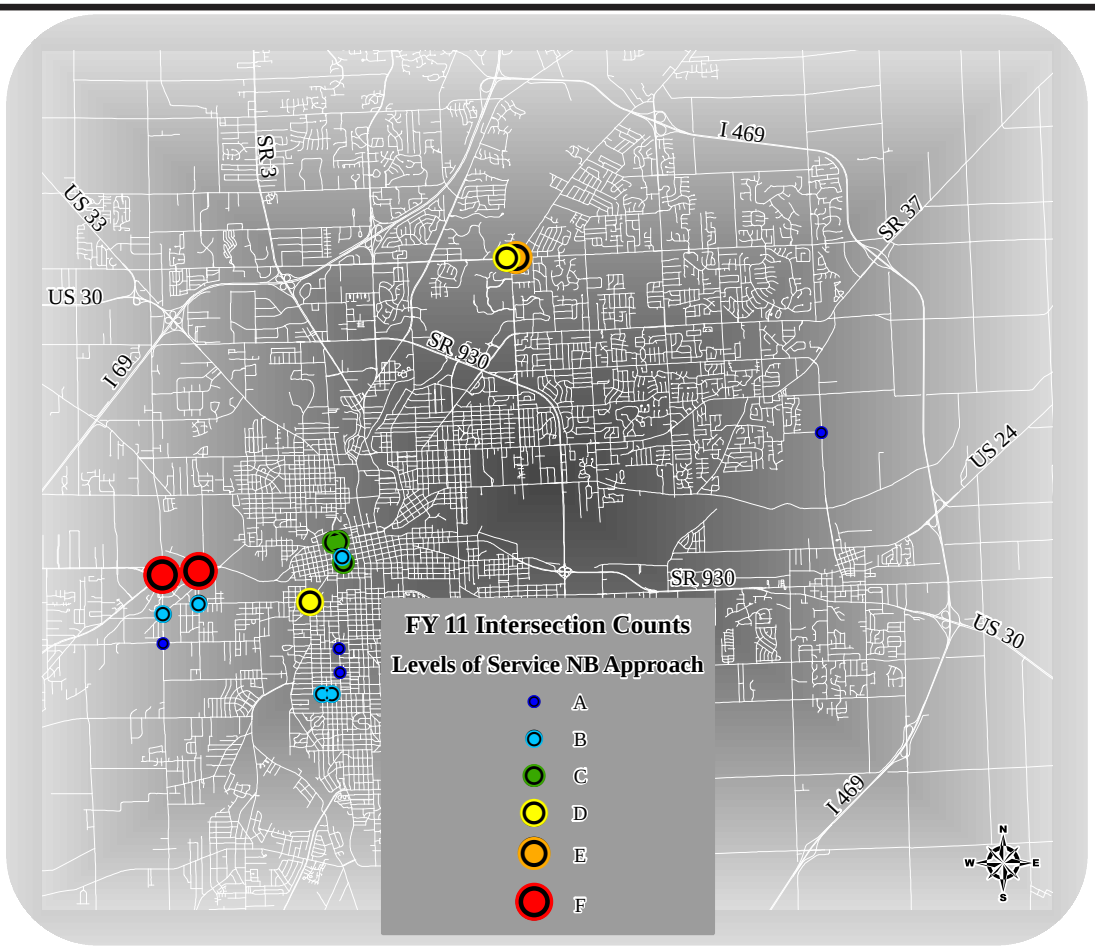
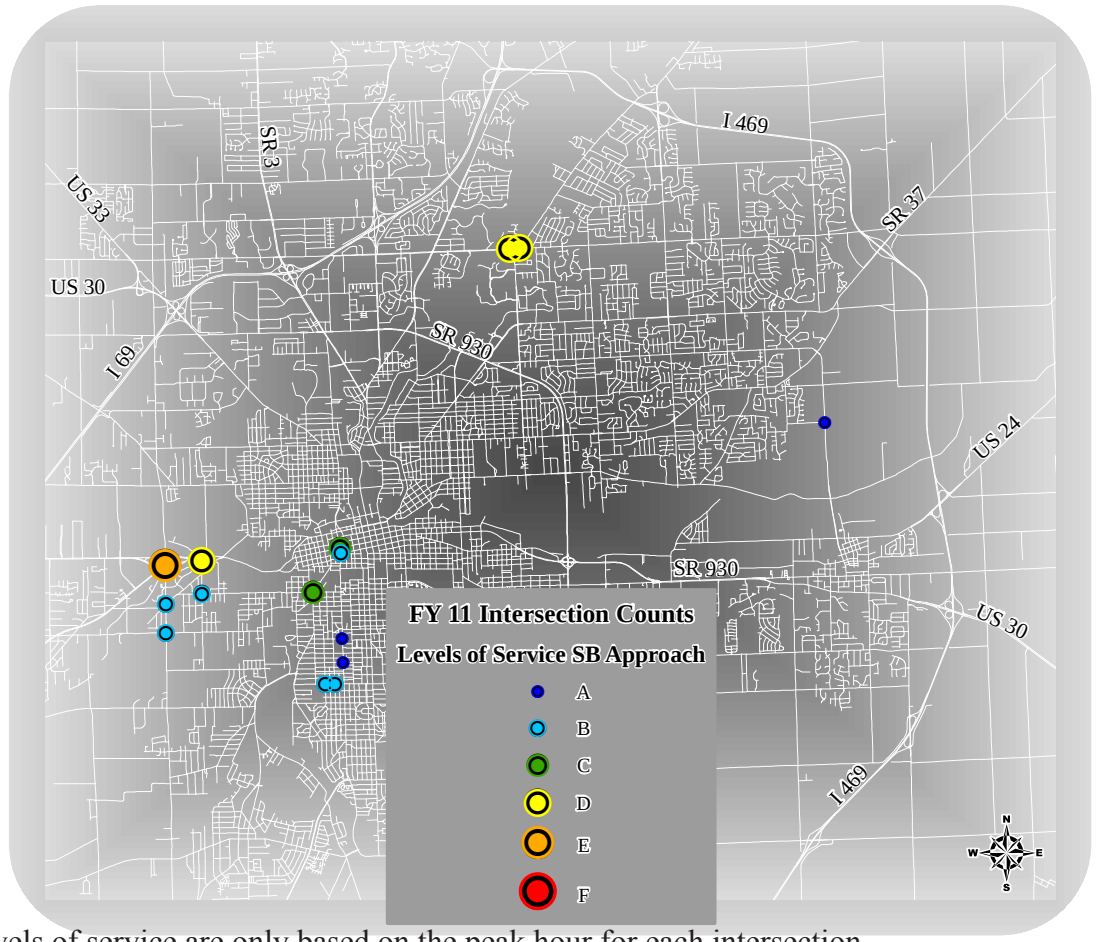


Figure 16



*These levels of service are only based on the peak hour for each intersection.

Figure 17

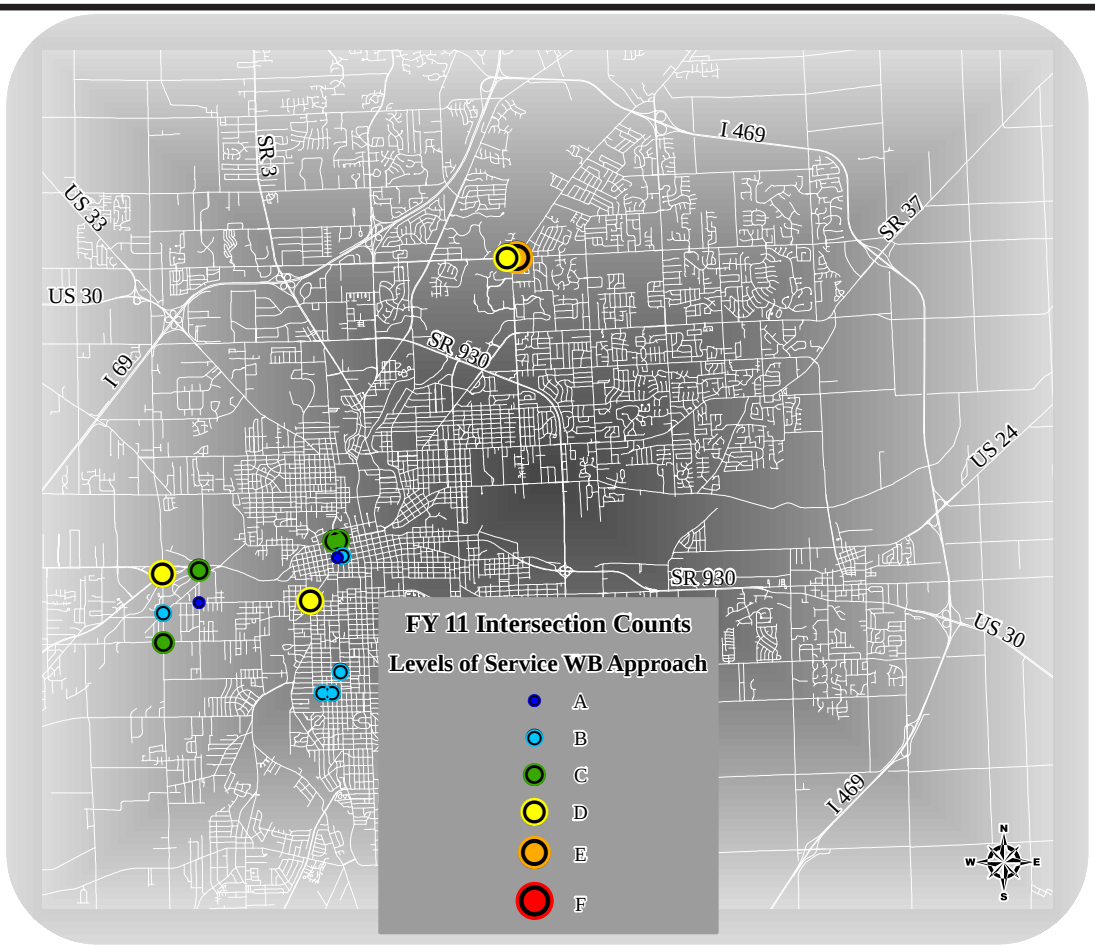
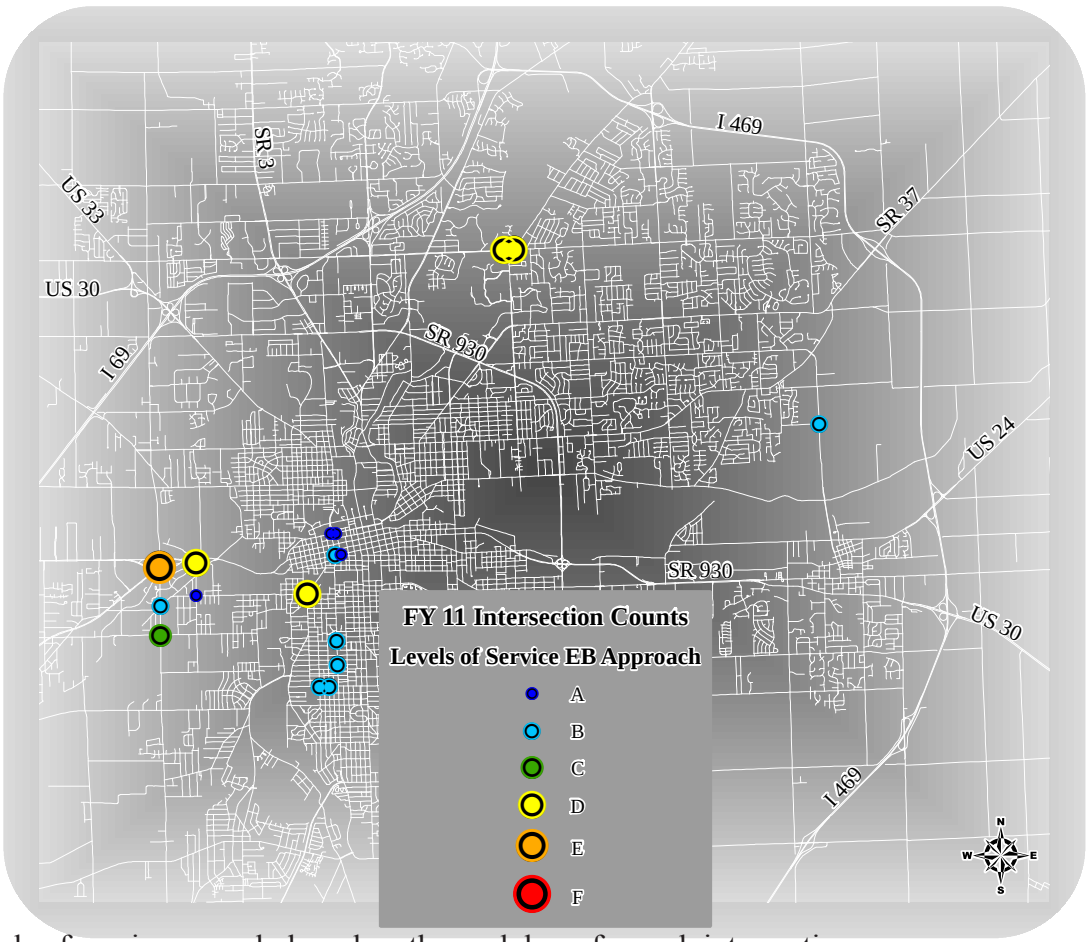
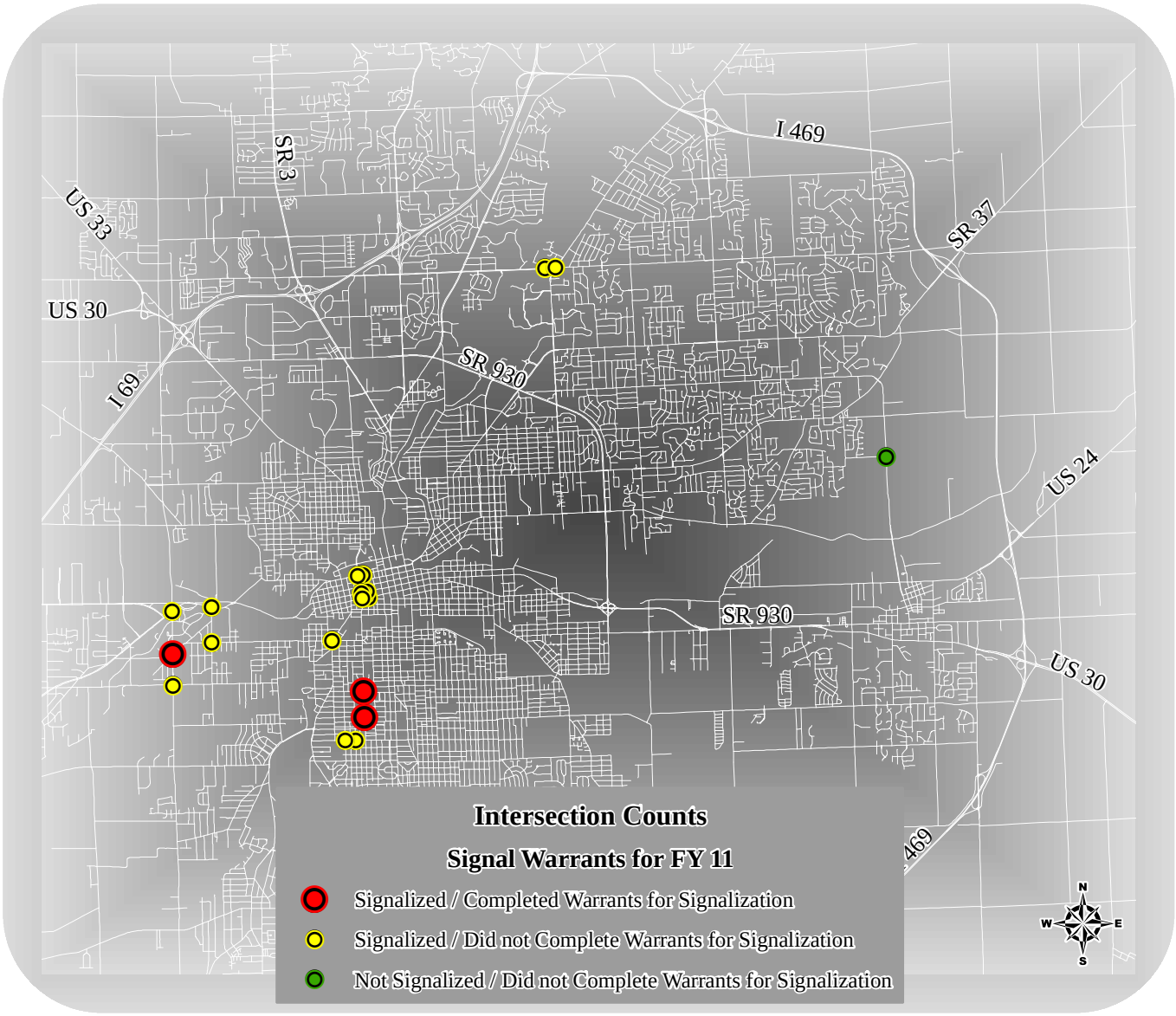


Figure 18



*These levels of service are only based on the peak hour for each intersection.

Figure 19


I 469
SR 3
US 33
SR 37
US 30
SR 930
I 69
US 24
SR 930
US 30
469
Intersection Counts
Signal Warrants for FY 11
Signalized / Completed Warrants for Signalization
Signalized / Did not Complete Warrants for Signalization
Not Signalized / Did not Complete Warrants for Signalization
N
W
E
S

Corridor Studies

Studies completed by the Northeastern Indiana Regional Coordinating Council

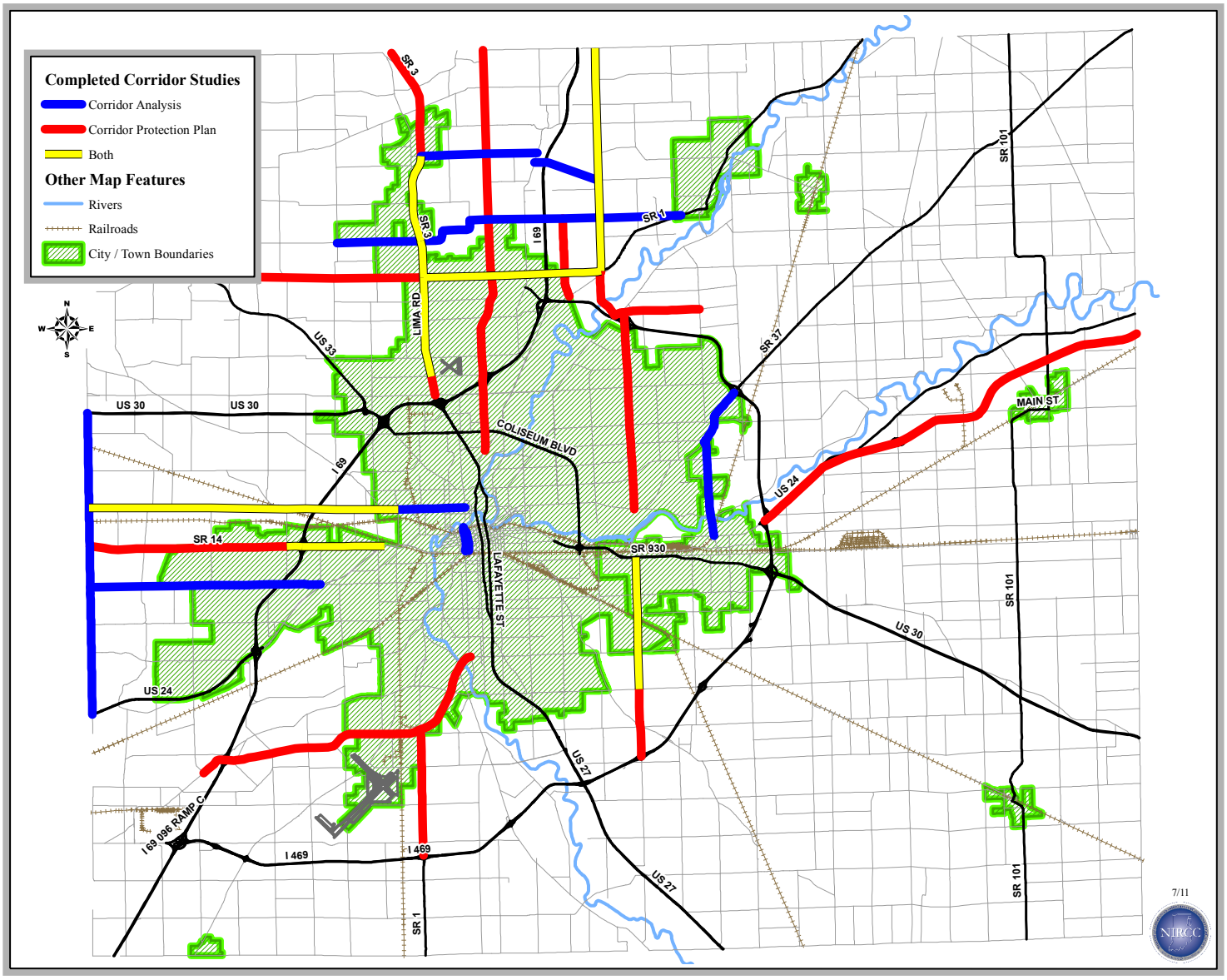
Transportation Summary Report Fiscal Year 2011

CORRIDOR STUDIES

Another activity conducted by NIRCC is the study of corridors throughout Allen County. There are two types of studies that are used to evaluate different aspects of the corridors: corridor and impact analysis studies and corridor protection studies and plans. Figure 20 illustrates the corridor studies that have been completed by NIRCC.

The main purpose of a corridor and impact analysis is to evaluate traffic impacts of future developments on an existing corridor, as well as locations that are in need of current or future infrastructure improvements. The corridor analysis estimates the number of new trips from anticipated developments that will be added to an existing facility to examine the changes of service level. When service levels fall below acceptable levels, recommendations are tested

Figure 20



to accommodate future traffic and relieve anticipated congestion problems along the corridor. Information provided by a corridor and impact analysis helps in developing a corridor protection plan that can be an efficient tool for mitigating potential congestion.

Corridor protection studies and plans evaluate and identify optimal access points along corridors for future developments and improvements. The adoptions of these plans facilitate efforts to resolve existing congestion and mitigate future problems. The recommendations from the plans aid local officials, planners, and developers during future development by protecting the integrity of the corridor from detrimental access.

Besides the traditional corridor studies which often only analyze one corridor or set of continuous corridors NIRCC also performs a study called a sub-area analysis. A sub-area analysis analyzes a number of corridors within a given area or development. Information and materials produced by this type of analysis will provide local policy-makers with an additional tool for assessing the impacts of new and expanding development to an area. The analysis focuses on assessing the current and future operating characteristics of the corridors and developing alternative strategies to improve safety and mitigate congestion. Staff looks at highway, transit, pedestrian and bicycle access as the major components of the analysis. Staff also evaluates how facilities, both within and outside of the analysis area, interact with each other and impact the current and future traffic patterns.

In Fiscal Year 2011, NIRCC completed one Corridor Analysis study shown in Figure 21 and one Sub-area Analysis shown in Figure 22. These studies are described on pages 35 through 43.

Figure 21

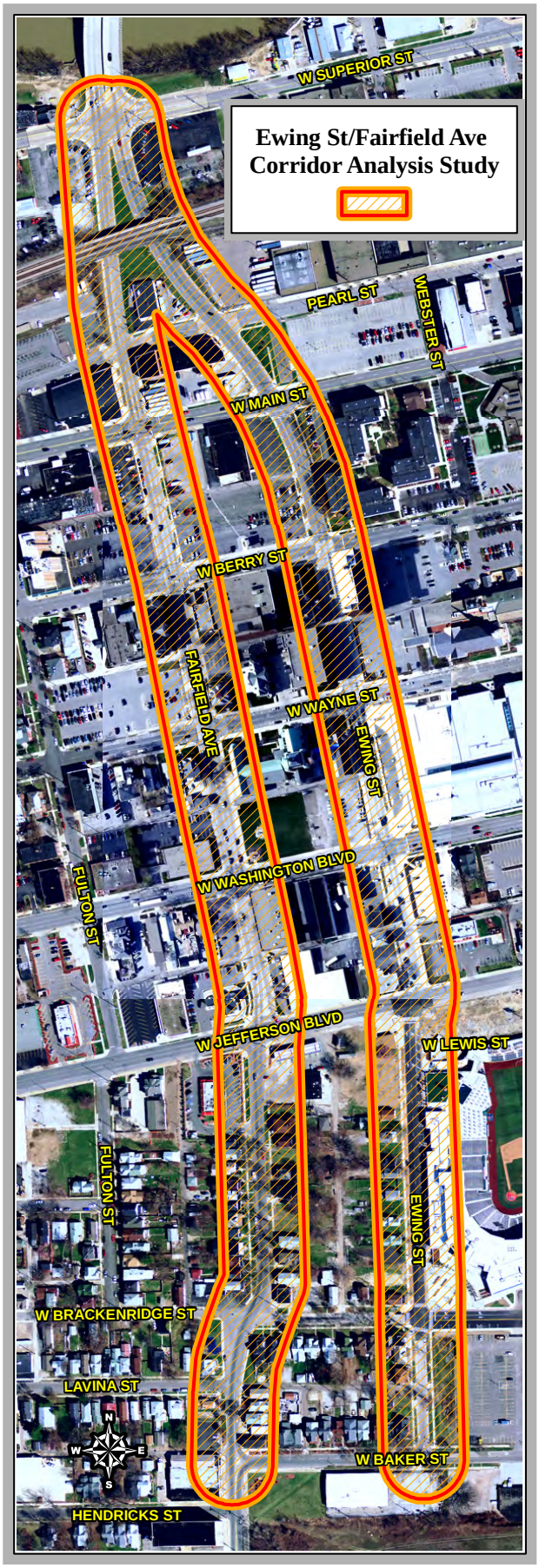


Figure 22


Village of Coventry
Jefferson Blvd
I-69
Coventry Ln
Falls Dr
US 24
Liberty Mills Rd
Ellison Rd
US 24/Jefferson Blvd Sub-Area Analysis
N
W
E
S

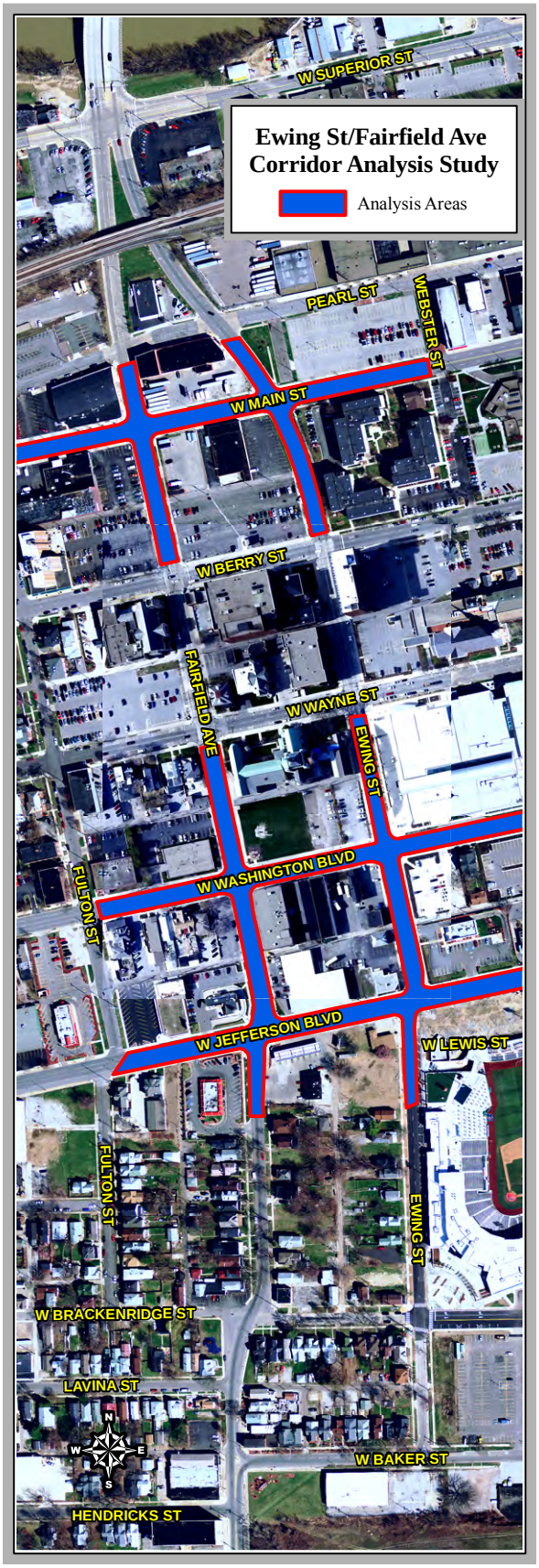
Corridor Analysis Study
Ewing Street / Fairfield Avenue Corridor Analysis Study

The main purpose of this corridor analysis is to evaluate traffic impacts of proposed roadway projects on an existing corridor. The City of Fort Wayne requested that an analysis be completed for the Ewing Street / Fairfield Avenue Corridor to find out what type of impacts a project converting these two one-way streets into two-way streets would have using existing conditions and future projected conditions. The analysis calculated and examined the existing and estimated future changes to the levels of service (LOS) based on current and projected traffic volumes.

LOS is defined in terms of delay, which is a measure of driver discomfort, frustration, fuel consumption, and lost travel time. LOS is based upon the average stopped delay per vehicle for various movements within the intersection. LOS "A" describes operations with very low delays; most vehicles do not stop at all. LOS "C" describes operations with longer delays, stopping vehicles are significant but many still pass without stopping. LOS "F" describes operations with delays unacceptable to most drivers, the intersection is exceeding capacity. When service levels fall below acceptable levels, recommendations are tested to accommodate future traffic and relieve anticipated congestion problems along the corridor. These studies also identify problem areas and develop recommendations for roadway improvements.

The Ewing Street / Fairfield Corridor (Figure 21) is a north / south route through the Central Business District in the City of Fort Wayne. The focus of this study is the area between Superior Street to the north and Baker Street to the south. Figure 23 shows the intersections, or

Figure 23



analysis areas, that were studied. This report examines the following:

1. LOS using existing traffic volumes and lane configurations.
2. LOS using existing traffic volumes with Ewing St and Fairfield Ave converted to two-way facilities.
3. LOS using 2030 projected traffic volumes with Ewing St and Fairfield Ave converted to two-way facilities.

Figure 24 gives an idea of what the current traffic flow is like around this area. Figures 21 - 25 show the existing intersection configurations that are highlighted in Figure 23 showing the analysis areas. Figure 30 on page 38 provides the LOS for these intersections and show the differences between the existing conditions and future conditions. Notice for the Main Street intersection with Ewing Street and Fairfield that LOS was also calculated to show what would happen if Main Street were reduced to three lanes. The traffic volumes for 2030 were analyzed using an annual growth rate of 1.0%. These LOS are based on AM and PM peak periods only.

Figure 24

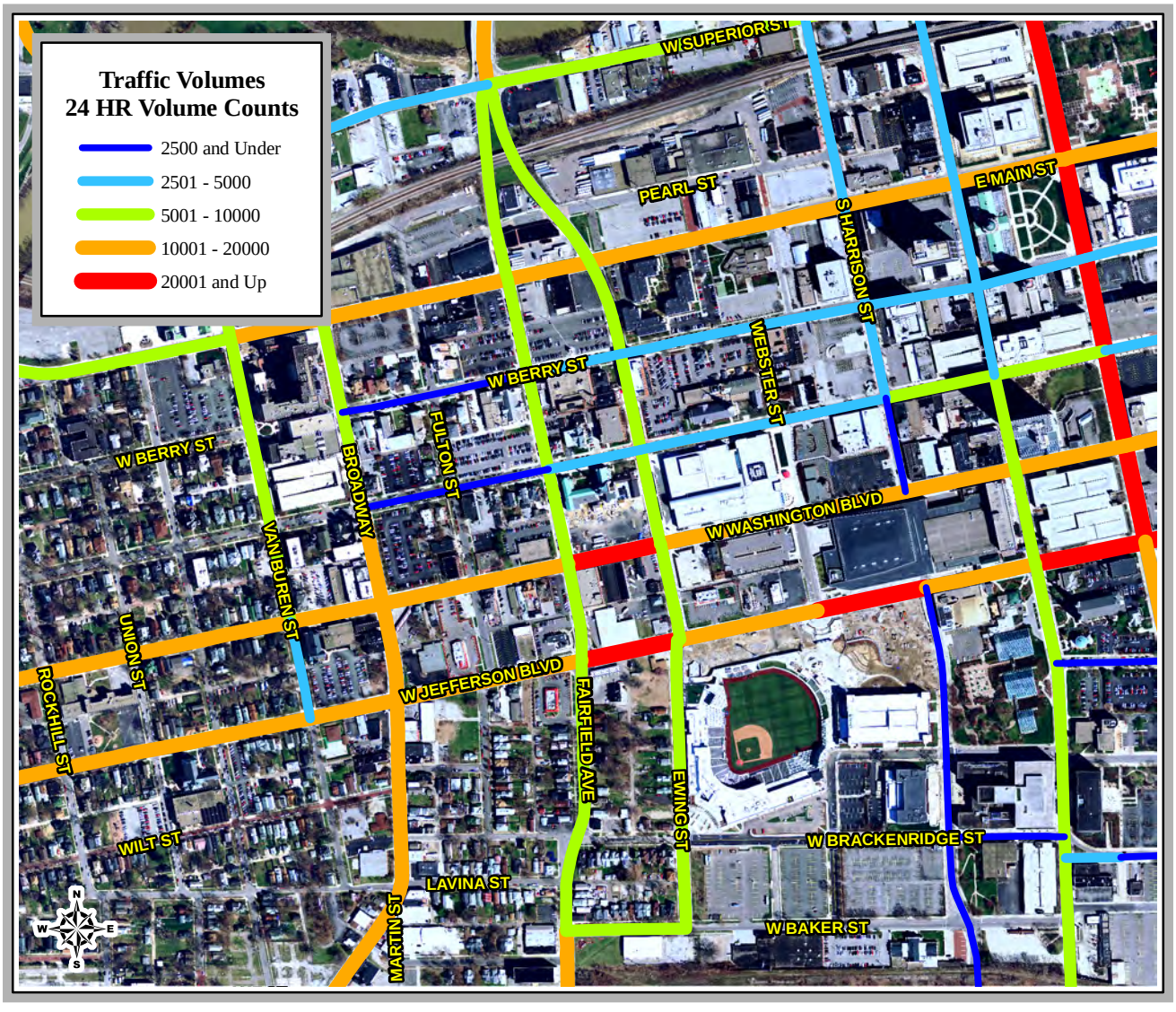


Figure 25

Figure 26

Figure 27

Figure 28

Figure 29

Figure 30

Intersection LOS (Level Of Service)	Ewing St @ Main St LOS		Fairfield Ave @ Main St LOS	
	AM	PM	AM	PM
Existing 2010 Volumes & Lanes	B	B	B	C
Existing 2010 Volumes + 2-way	C	C	C	D
Existing 2010 2-way + Main St 3-Lanes	C	C	C	D
Projected 2030 2-way AGR 1.0%	C	C	D	F
Projected 2030 Main St 3-Lanes 1.0%	C	C	D	E

Intersection LOS (Level Of Service)	Ewing St @ Jefferson Blvd LOS		Ewing St @ Washington Blvd LOS	
	AM	PM	AM	PM
Existing 2010 Volumes & Lanes	A	B	B	B
Existing 2010 Volumes + 2-way	A	A	B	B
Projected 2030 2-way AGR 1.0%	A	A	B	B

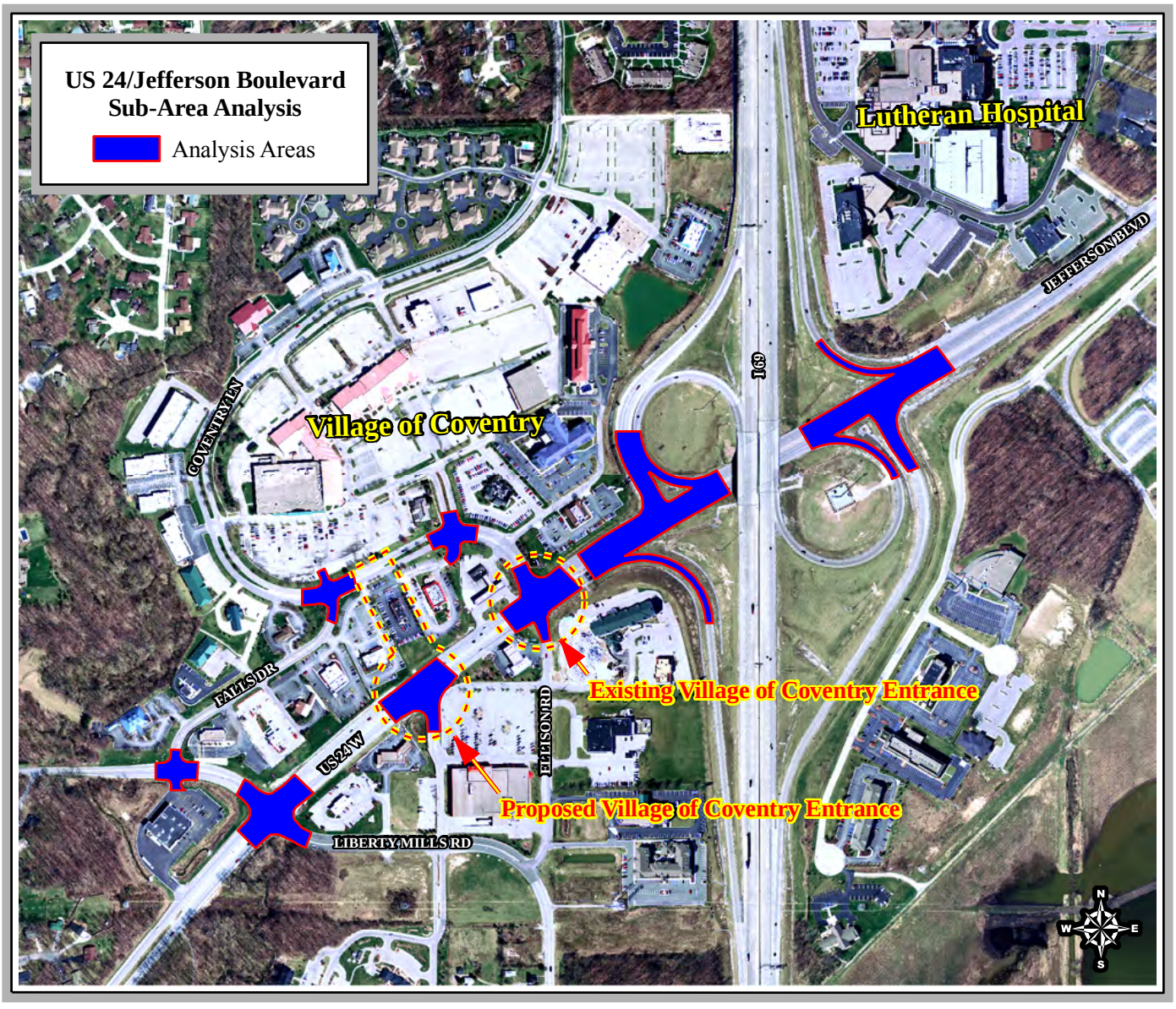
Intersection LOS (Level Of Service)	Fairfield Ave @ Jefferson Blvd LOS		Fairfield Ave @ Washington Blvd LOS	
	AM	PM	AM	PM
Existing 2010 Volumes & Lanes	B	B	A	B
Existing 2010 Volumes + 2-way	B	C	A	C
Projected 2030 2-way AGR 1.0%	C	C	B	D

Sub-area Analysis

The area surrounding US 24 / Interstate 69, Ellison Road, and the Village of Coventry

The purpose of this sub-area analysis is to evaluate the potential traffic impacts of relocating the primary entrance to the Village of Coventry from the intersection of Coventry Lane and US 24 to a relocated entrance approximately 500 feet west on US 24 (See Figure 31). Business and property owners in the Village of Coventry and the Kroger Development on the south side of US 24 approached the Indiana Department of Transportation (INDOT) and the City of Fort Wayne to determine if relocating the full entrance was a feasible option. The Northeastern Indiana Regional Coordinating Council (NIRCC) agreed to conduct this Sub-area Analysis to evaluate the traffic impacts to the public roadway system and also to examine the impacts that proposed changes would make to the roadway network.

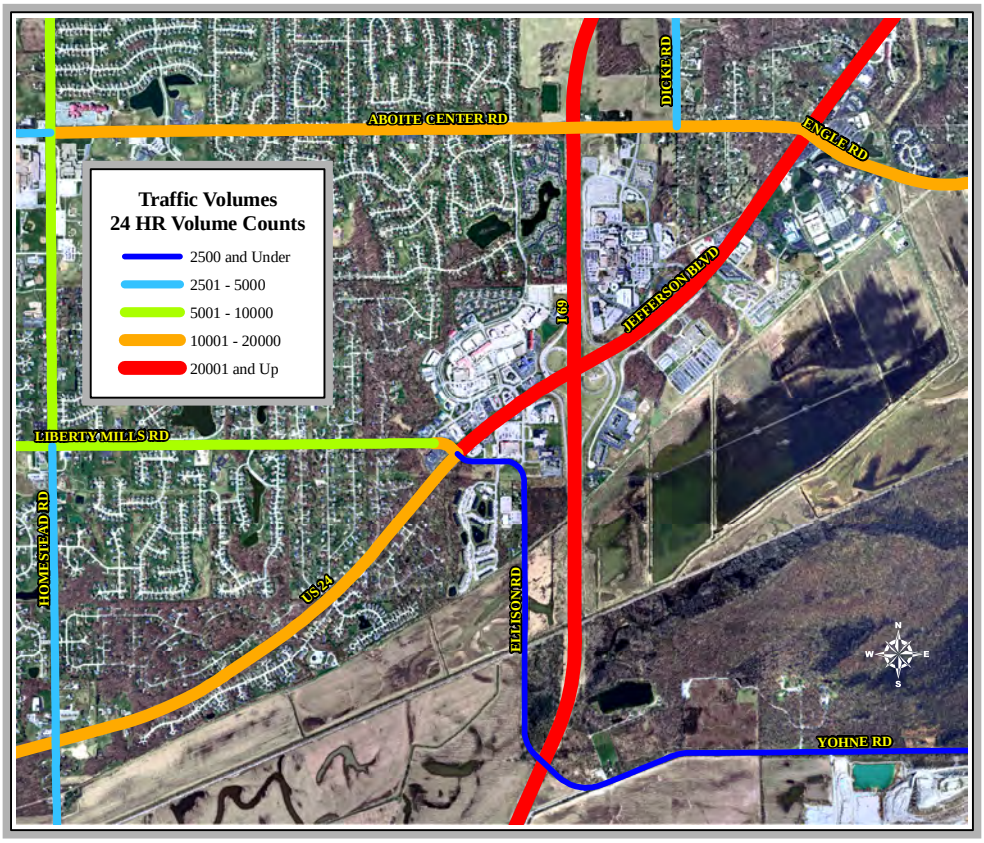
Figure 31



The current access to the Village of Coventry consists of a 4 legged intersection and traffic signal. The intersection (Figure 31) consists of Coventry Lane, US 24, and Ellison Road. Ellison Road is currently a one-way northbound roadway as it approaches the intersection at US 24. Coventry Lane serves as the main entrance to the Village of Coventry on the north side of the intersection. Village of Coventry is a major retail and commercial center in the northwest quadrant of the Interstate 69 and US 24 interchange. The land use throughout this area primarily consists of commercial development including restaurants, hotels, convenience markets with fueling stations and grocery stores. Proposed renovations in the area include consolidating two grocery stores, the Kroger store on the south side of US 24 and the Scott's Store in the Village of Coventry, into a new larger building at the current Scott's location. This, along with Business owners along Ellison Road expressing concern over the impacts of the current one-way section of Ellison Road which serves as access to their sites, has served as a catalyst to review the current configuration and explore opportunities to improve traffic flow and efficiency throughout the area (See Figure 32 for existing traffic patterns).

The proximity of the Southbound Interstate 69 off ramp with the US 24 / Coventry Lane intersection has been problematic due to the volume of traffic and multiple weaving movements within a relatively short distance (approximately 500 feet). The proximity of these two intersections adds to the already congested area caused by the signalized ramps on the east and west sides of the Interstate 69 interchange along US 24. The Indiana Department of Transportation plans to extend an eastbound right turn lane that currently terminates at the southbound I-69 on-ramp further east to the northbound I-69 on-ramp. This will help to improve eastbound travel through the interchange area.

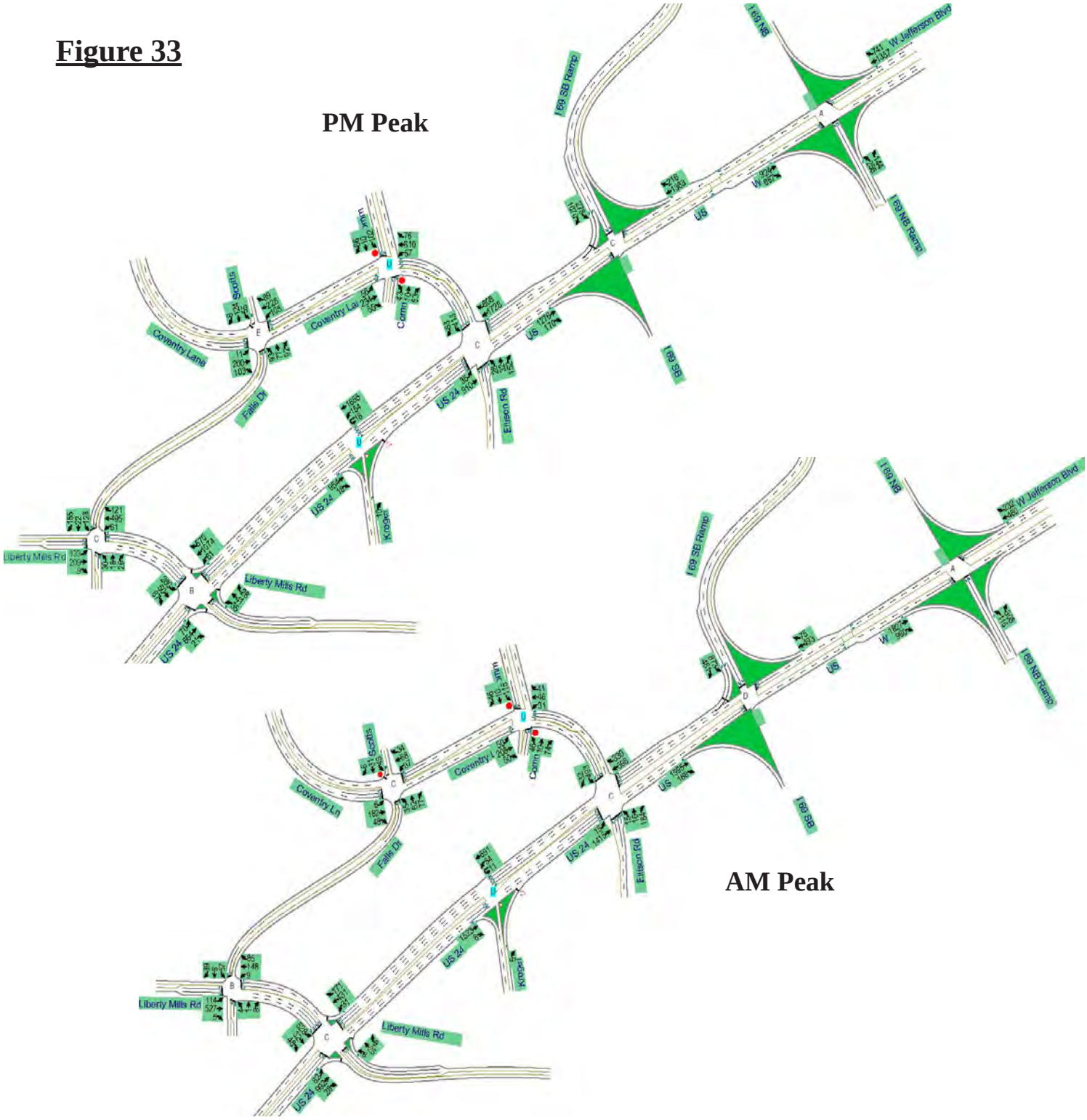
Figure 32



The major change to this area is the proposed relocation of the Village of Coventry entrance about 500 ft west of the current alignment. This proposed change has the potential to improve safety and traffic flow on US 24 and provide an improved access for businesses in the Village of Coventry, businesses along Ellison

Road, and the current Kroger site which will be redeveloped after the grocery stores are consolidated. To do this, the Sub-area Analysis evaluates the level of service (LOS) at selected intersections, vehicle stacking, safety, and overall corridor performance of US 24. A total of five intersections on the US 24 corridor, two intersections on Coventry Lane, and one intersection on Liberty Mills Road were analyzed. Figure 33 shows the existing alignments throughout the area and the existing LOS for each intersection during the AM and PM peak hours. The study is then divided into three parts including: existing conditions; existing conditions plus traffic impacts from the consolidated grocery store

Figure 33



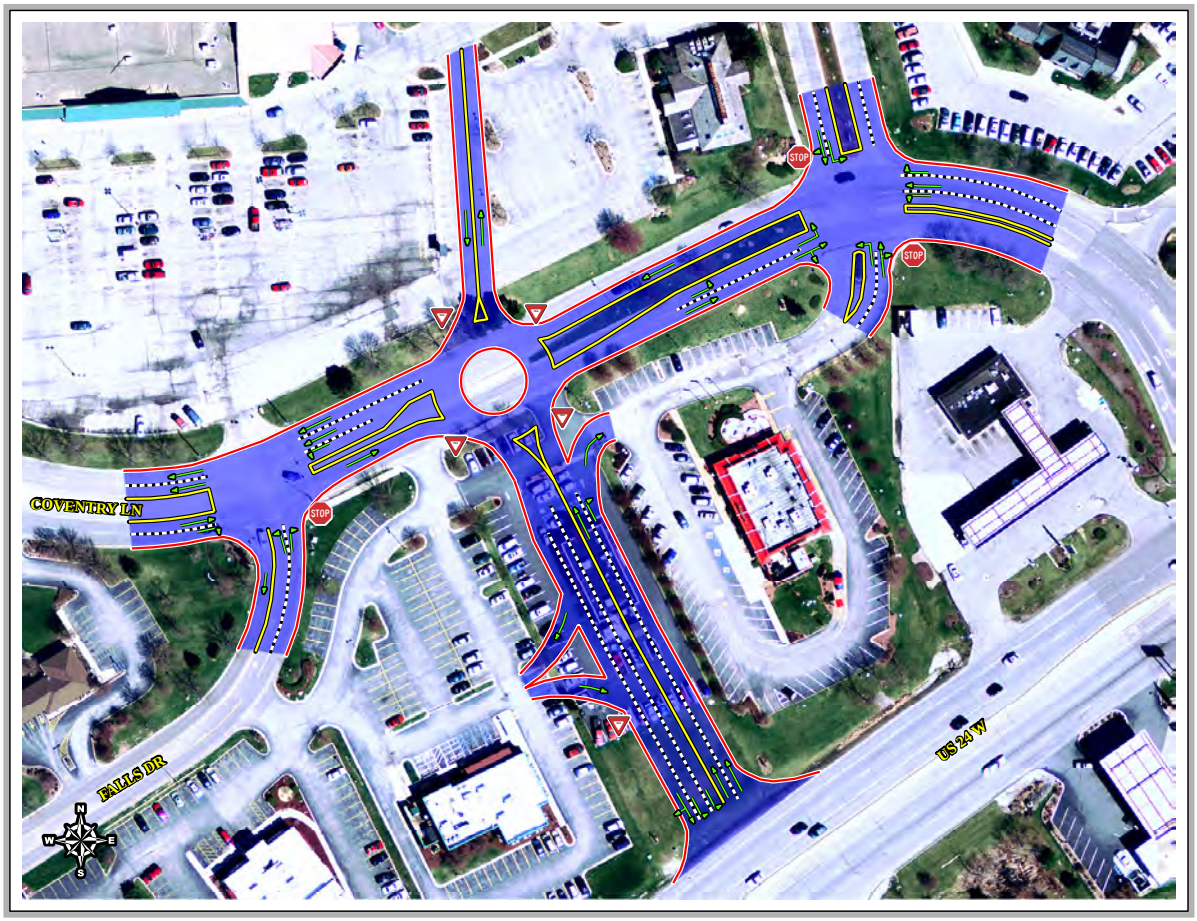
and redevelopment of the Kroger site (Phase I); and existing conditions plus Phase I and new potential developments along Ellison Road and Liberty Mills Road (Phase II) (Figure34).

The study evaluates the generation and redistribution of vehicle trips based on the relocation of the Village of Coventry entrance, a new consolidated grocery store, redesigned intersections, and development of vacant land within the study area. The analysis focused on evaluating the impacts of the new and redistributed trips to the intersection LOS and overall operating characteristics of the US 24 corridor. After evaluation of this Sub-area Analysis, Figures 35 and 36 show what the preferred new access to the Village of Coventry could look like along with a roundabout proposed for the internal intersection of the development. These improvements will improve traffic flow throughout the area and relieve congestion at the Interstate 69 interchange as well.

Figure 34

Figure 35
Existing Configuration

Figure 36
Proposed Configuration



Travel Time and Delay Studies

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2011

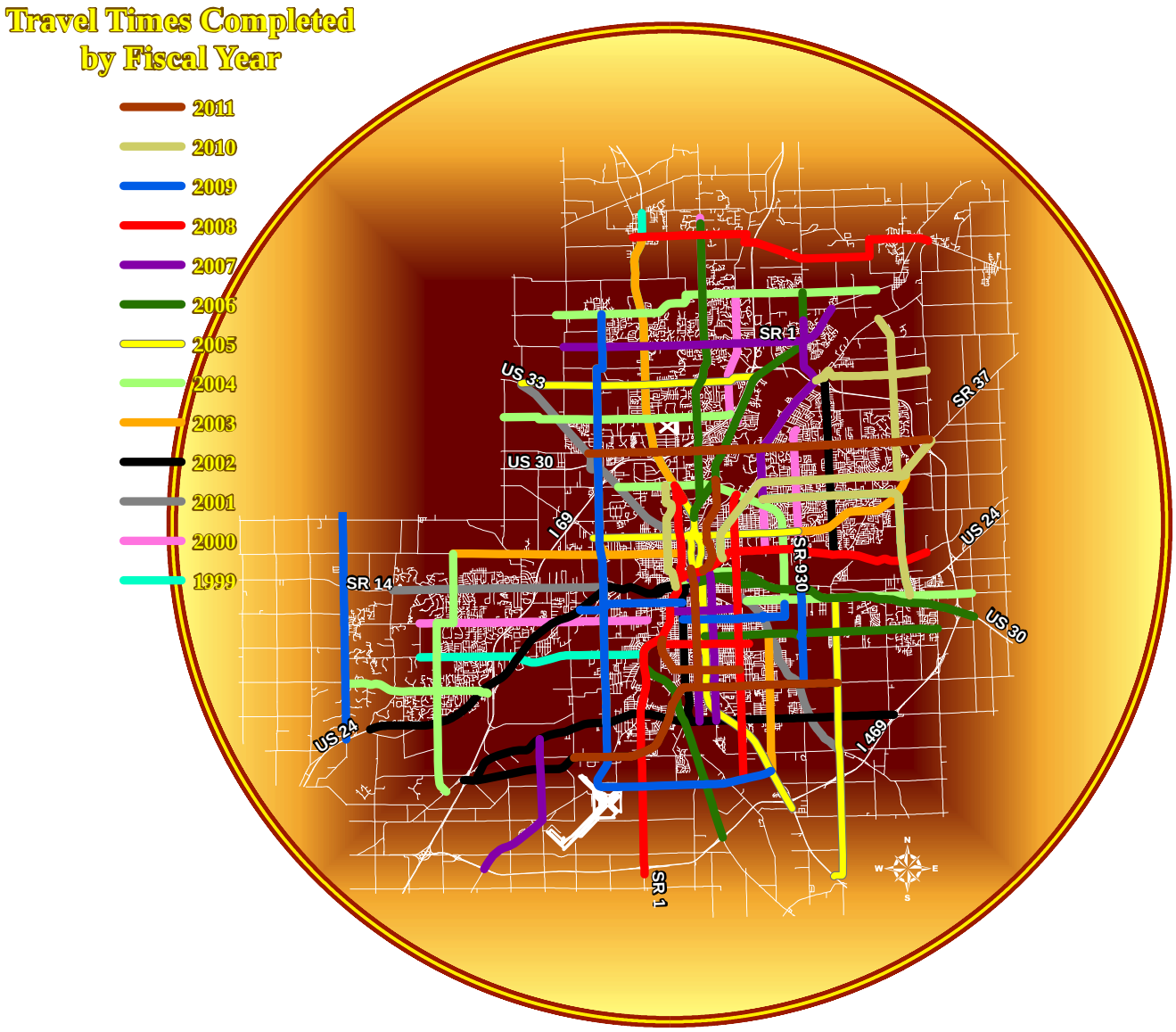
TRAVEL TIME & DELAY STUDIES

Another activity conducted by NIRCC is the travel time and delay studies. Figure 37 illustrates the travel time and delay studies that have been completed since Fiscal Year 1999. Travel time is one method to measure the congestion in the transportation system. It is essential for proper evaluation of the system because time is one of the most compelling and accurate yardsticks of the efficiency of street and highway service. Travel time is defined as the total time for a vehicle to complete a designated trip over a section of the road or from a specific origin to a specific destination. The studies conducted by NIRCC use the "average speed" method to obtain the travel time and delay data.

The following lists some of the uses that travel time data provide.

- *Identification of problem locations on facilities by virtue of high travel times and delay.*
- *Measurement of arterial level of service.*
- *Input into transportation planning models.*
- *Evaluations of route improvements.*
- *Input to economic analysis of transportation alternatives.*

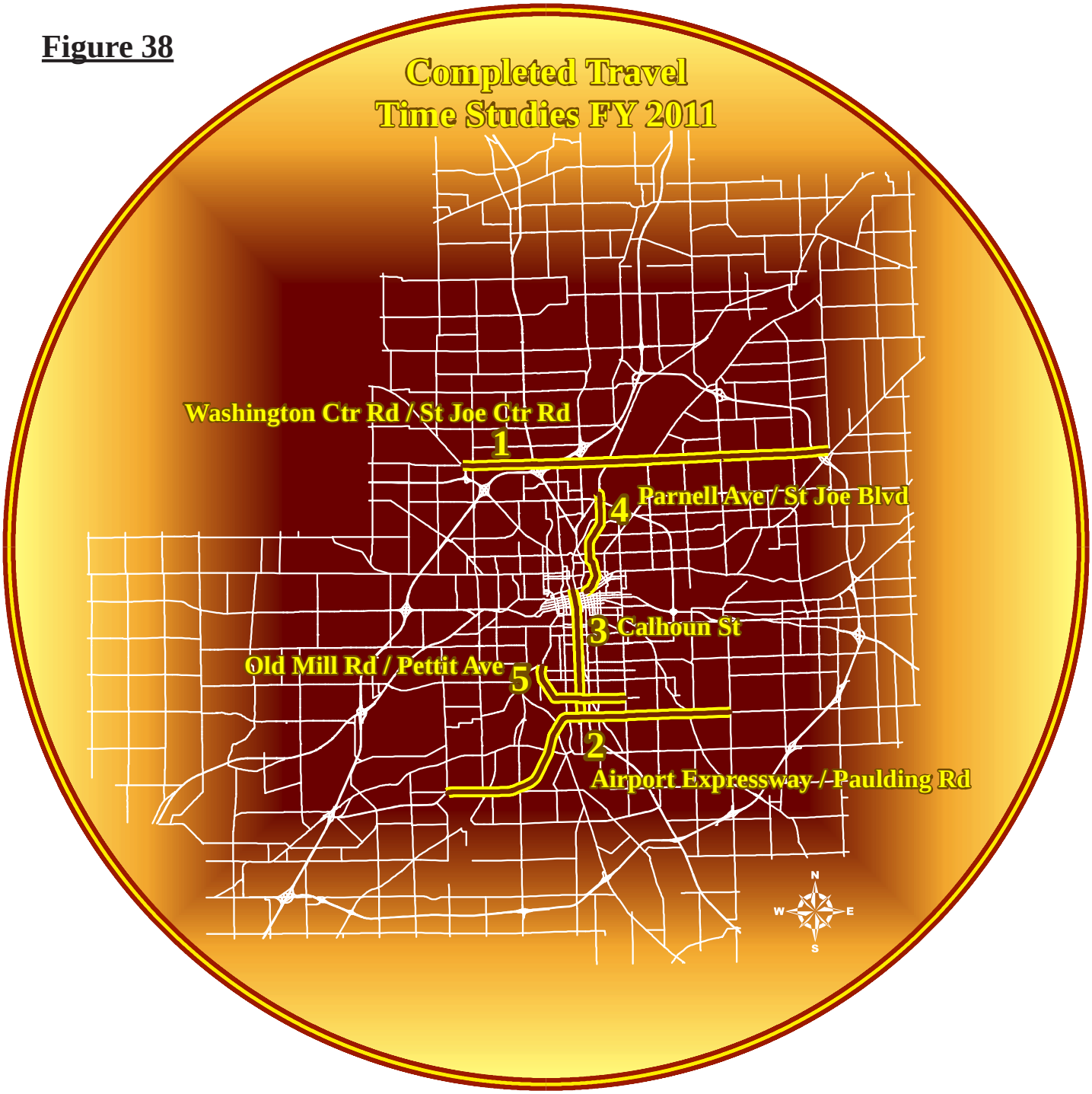
Figure 37



NIRCC studied five (5) corridors during Fiscal Year 2011 including: **1) Washington Center Road / St Joe Center Road** from US 33 to Schwartz Road, **2) Airport Expressway / Paulding Road** from Smith Road to Adams Center Road, **3) Calhoun Street** from Superior Street to Paulding Road, **4) Parnell Avenue / St Joe Boulevard** from Clinton Street to Main Street, and **5) Old Mill Road / Pettit Avenue** from Bluffton Road to Anthony Boulevard. The travel time studies completed during Fiscal Year 2011 are illustrated in Figure 38 below.

In order to calculate average travel times for a corridor, six runs are completed in each direction for three different

Figure 38



time periods; morning peak travel (AM peak), evening peak travel (PM peak), and daytime travel (OFF peak). Traffic count information for each link in a corridor is examined to determine the peak hours.

In fiscal year 2007, NIRCC began using GPS (Global Positioning System) technology to conduct travel time and delay studies. The GPS software computes travel times by recording latitude and longitude coordinates every second during the travel time. The software takes this data and computes speed and time. This information can then be exported to create maps of every point taken by the software. We take the point data from the AM and PM peak time periods and create density maps. As the travel time vehicle slows down or stops, a mass of points are taken in a smaller area compared to the vehicle traveling at faster speeds resulting in more spacing between the points taken. The density maps shown in Figures 39 - 51 give the results of this data. You will see on the maps that as the travel time vehicle slows down or stops multiple times at any given point the areas are shown in red. The blue areas indicate the vehicle is traveling at faster speeds.

The following pages present a summary along with density maps of the five corridors studied in fiscal year 2011. Some of the density maps show only sections of the entire travel time while others show the entire corridor. The density maps provided in this report only show the AM and PM peak time periods in each direction. Red boxes around any of the density maps reveal that they are the travel time with the greatest amount of delay for that corridor. Green boxes around any of the density maps reveal that they are the time period with the least amount of delay for that corridor. If an Off peak time period experienced either the greatest or least amount of delay it will not be provided as a density map.

Bar graphs are also included on each page. Two of the bar charts display the average time that NIRCC staff actually encountered from the beginning to the end of the travel time corridor during the time period with the greatest amount of delay, shown in red, and the time period with the least amount of delay, shown in green. These two bar charts also display, in blue, what the travel time would be if there were no delays along the corridor. This time is reflective to what a person would experience if he or she were able to travel along this corridor at the posted speed limit without having to stop or slow down for traffic control devices and traffic congestion.

The other two bar charts display the average speed that NIRCC staff actually encountered from the beginning to the end of the travel time corridor during the time period with the greatest amount of delay, shown in red, and the time period with the least amount of delay, shown in green. These two bar charts also display, in blue, what the average speed would be if there were no delays along the corridor. This speed is reflective to what a person would experience if he or she was able to travel along this corridor at the posted speed limit without having to stop or slow down for traffic control devices and traffic congestion.

Travel Time and Delay Summary Section for Fiscal Year 2011

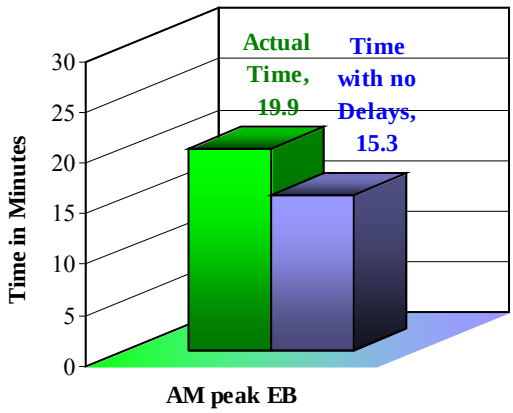
Figure 39

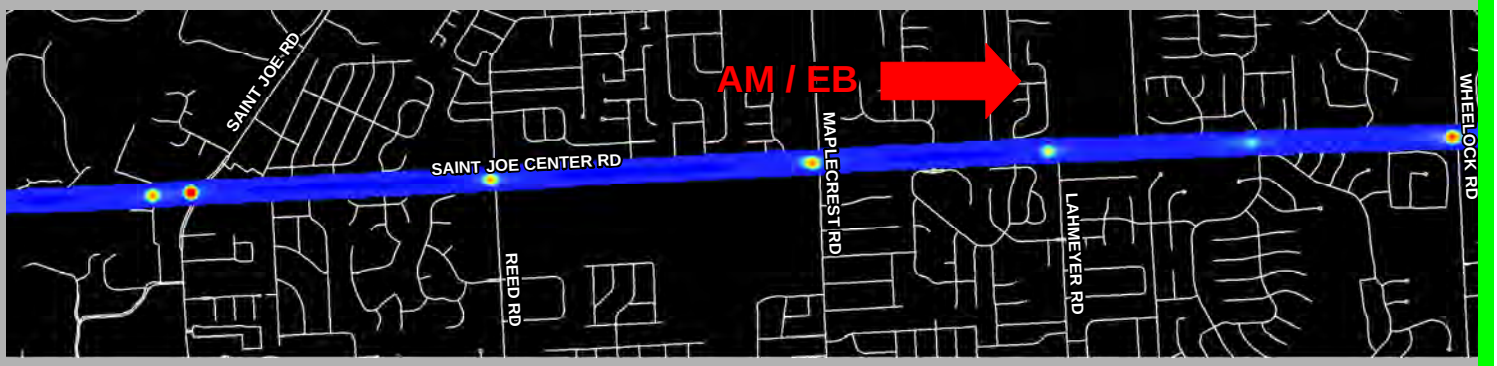
Washington Center Road / St Joe Center Road
AM Peak Eastbound

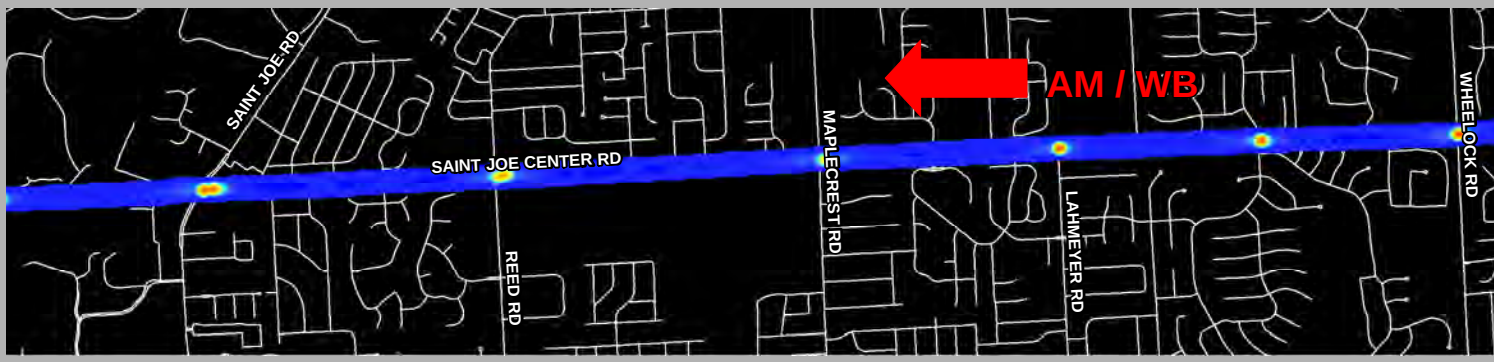
Figure 40

Washington Center Road / St Joe Center Road
AM Peak Westbound

Travel Time with the Least Amount of delay







Travel Speed with the Least Amount of delay

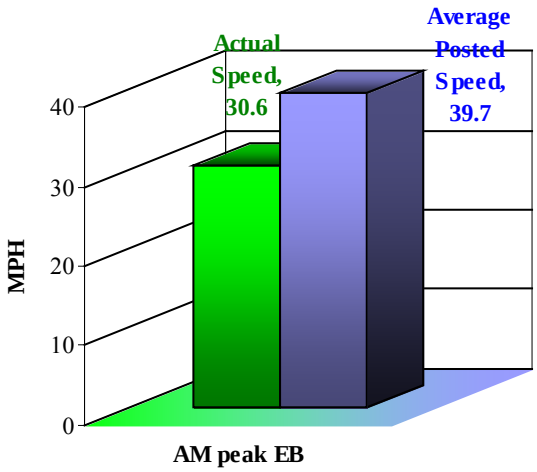


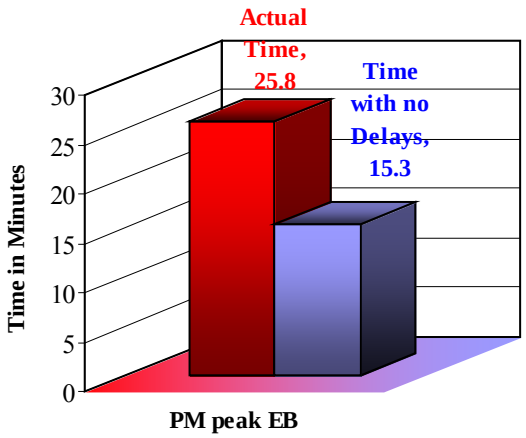
Figure 41

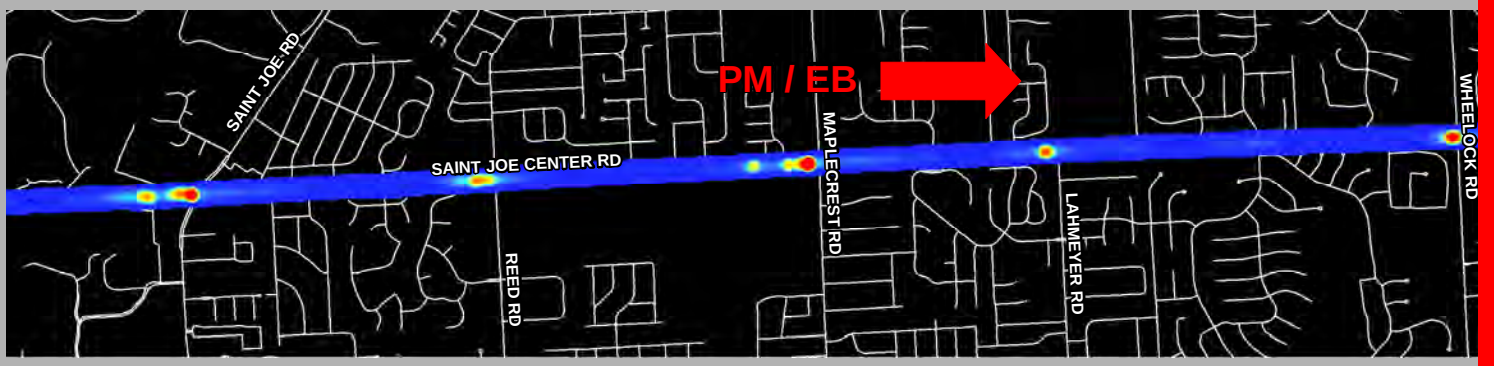
Washington Center Road / St Joe Center Road
PM Peak Eastbound

Figure 42

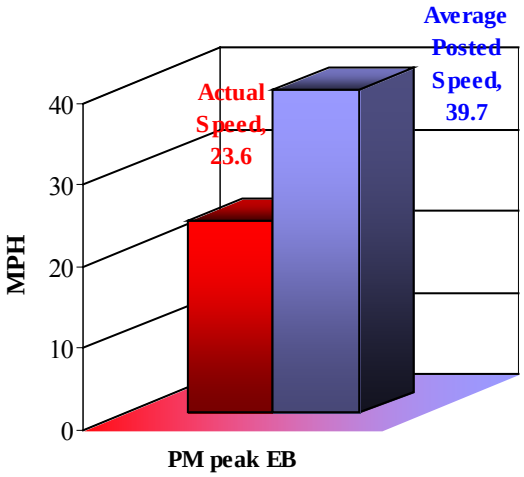
Washington Center Road / St Joe Center Road
PM Peak Westbound

Travel Time with the Greatest Amount of delay





Travel Speed with the Greatest Amount of delay



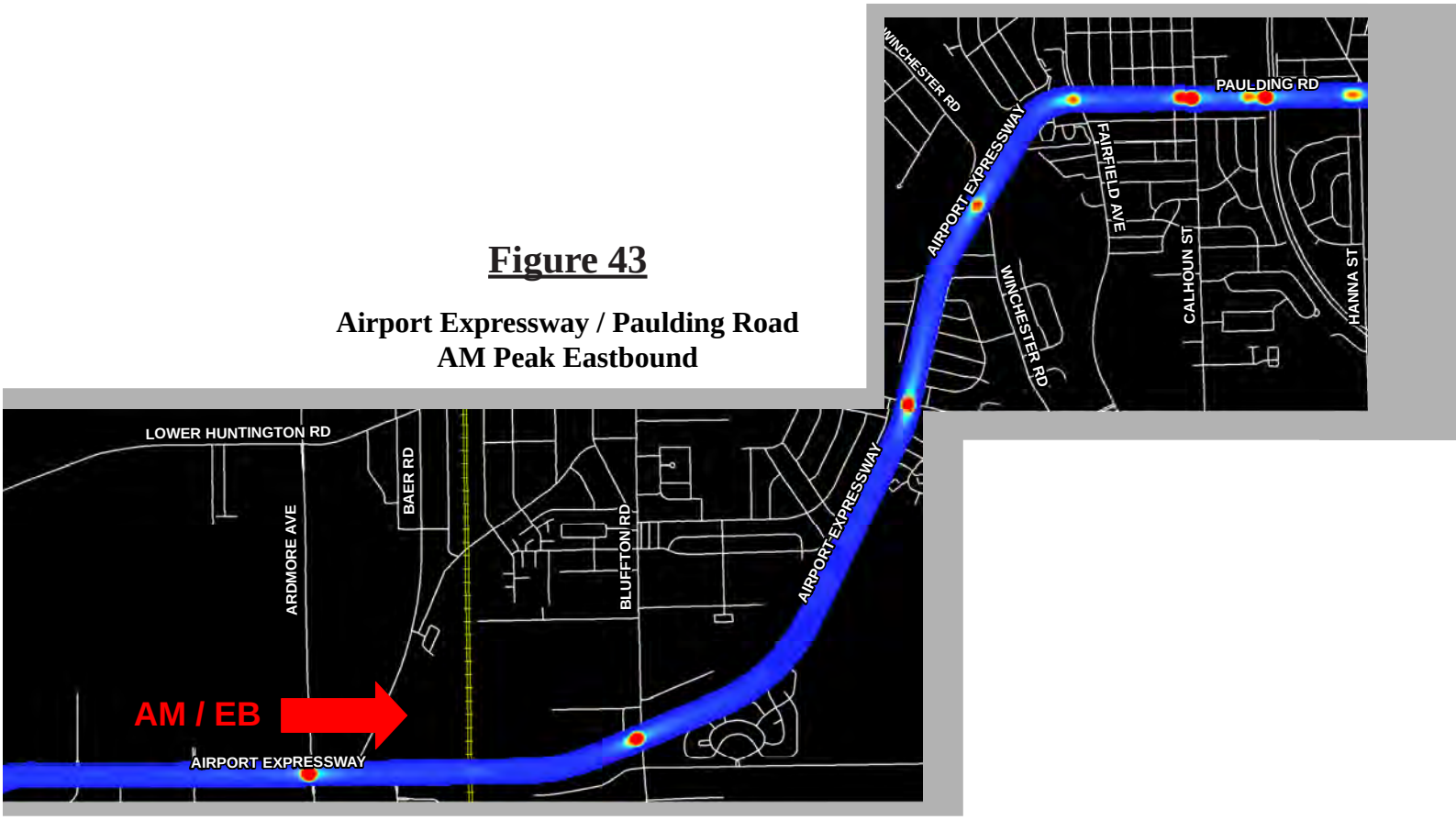


Figure 43

Airport Expressway / Paulding Road
AM Peak Eastbound

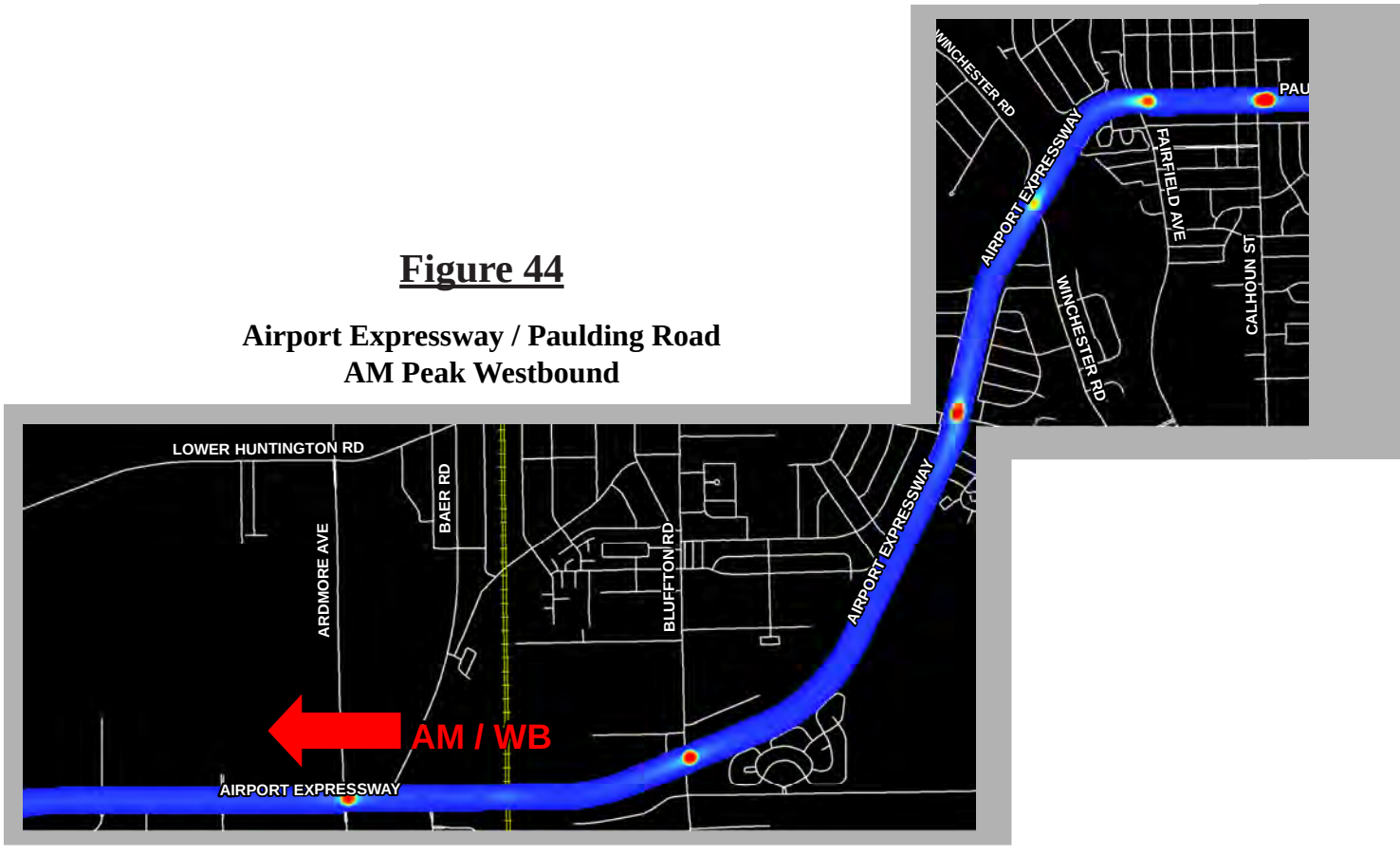
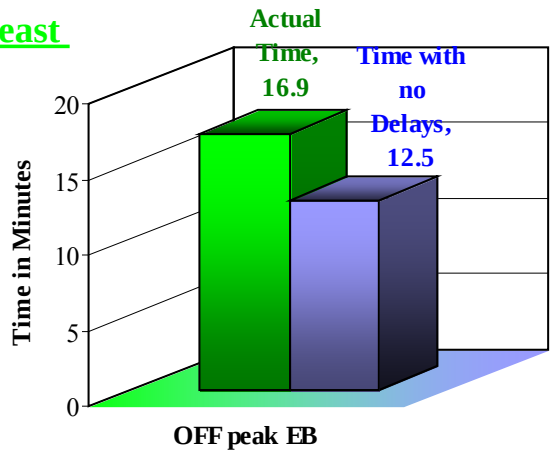


Figure 44

Airport Expressway / Paulding Road
AM Peak Westbound

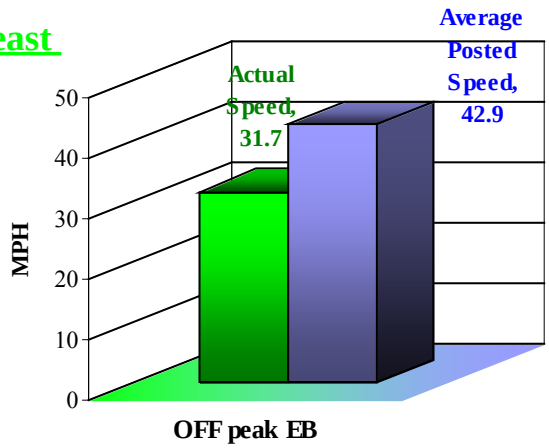
Travel Time with the Least Amount of delay

*Off Peak Travel Times are not shown graphically.



Travel Speed with the Least Amount of delay

*Off Peak Travel Times are not shown graphically.



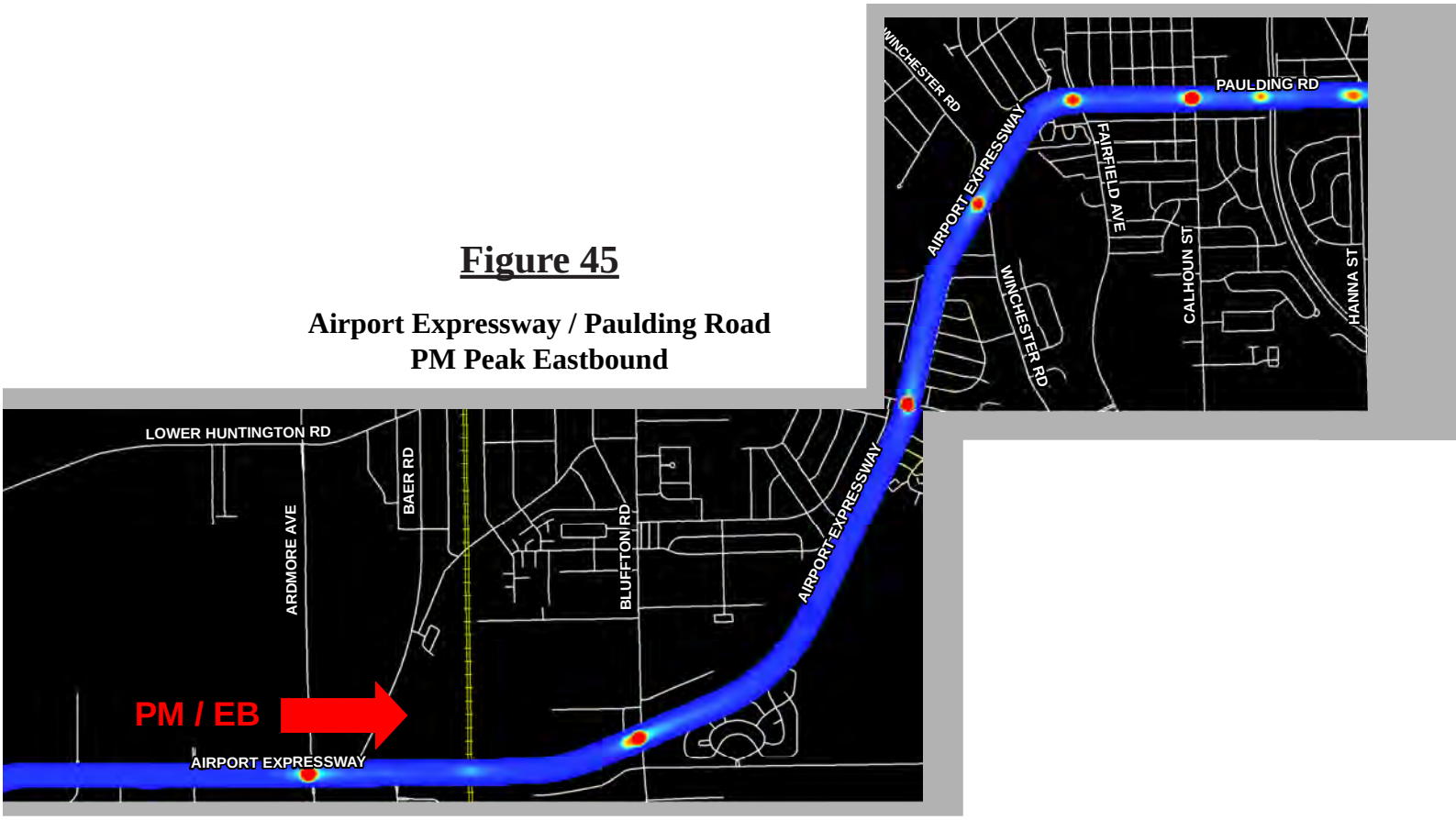


Figure 45

Airport Expressway / Paulding Road
PM Peak Eastbound

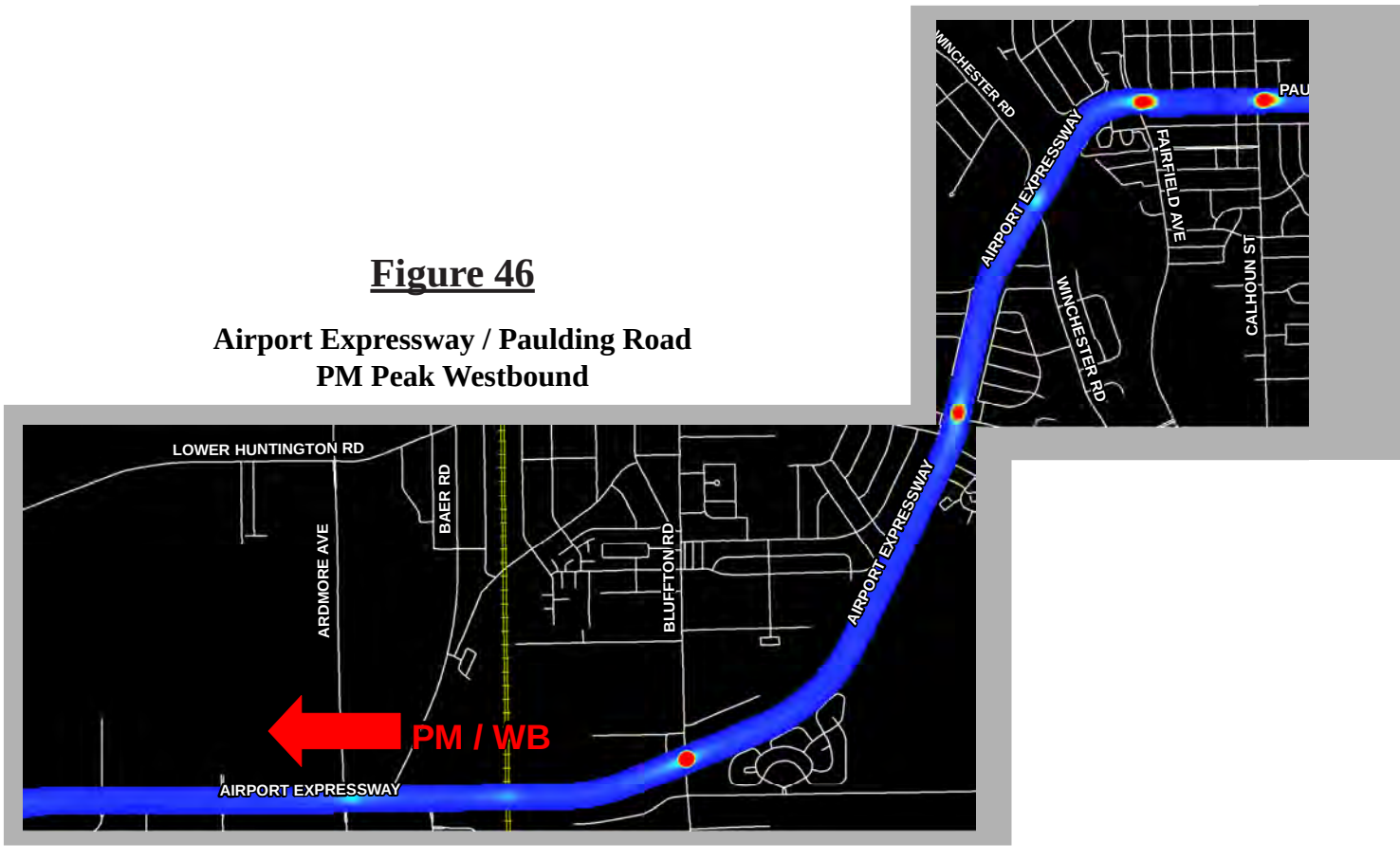
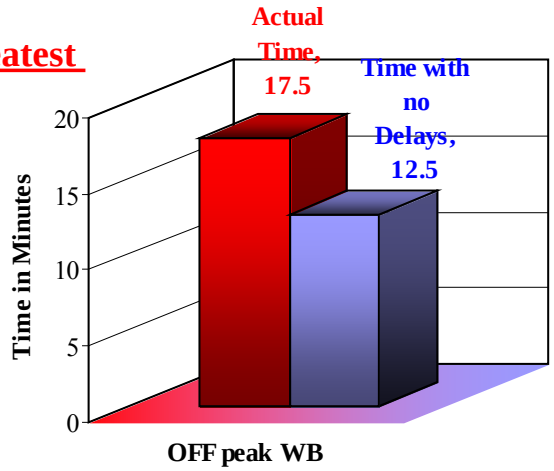


Figure 46

Airport Expressway / Paulding Road
PM Peak Westbound

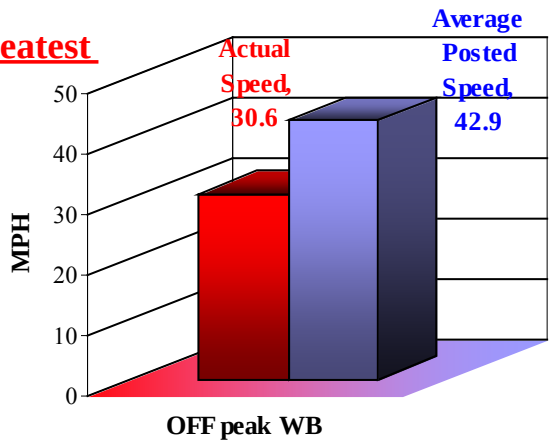
Travel Time with the Greatest Amount of delay

*Off Peak Travel Times are not shown graphically.

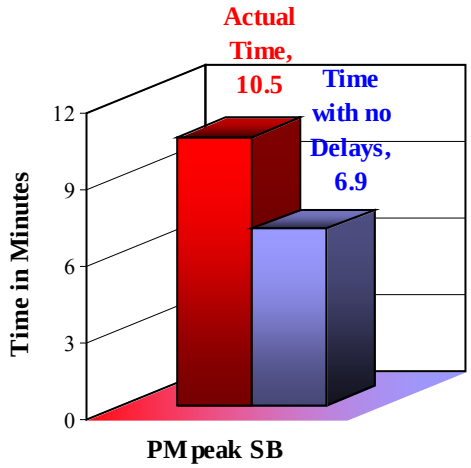


Travel Speed with the Greatest Amount of delay

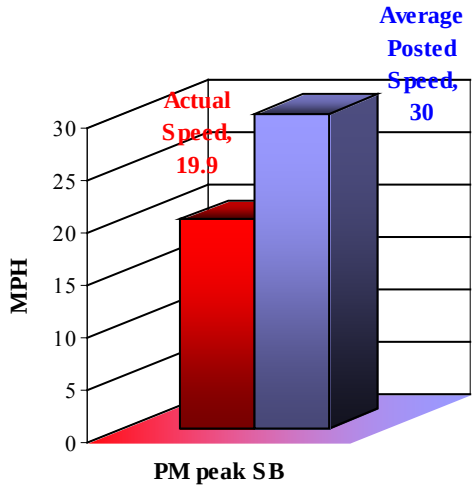
*Off Peak Travel Times are not shown graphically.



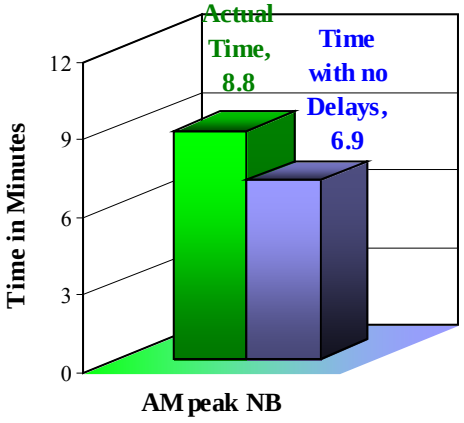
Travel Time with the Greatest Amount of delay



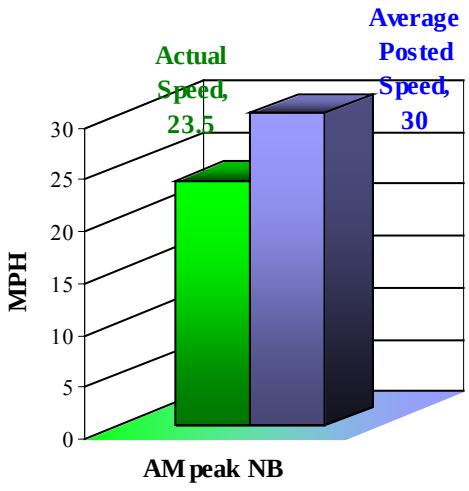
Travel Speed with the Greatest Amount of delay



Travel Time with the Least Amount of delay



Travel Speed with the Least Amount of delay



Due to technical difficulty only the PM density map for Calhoun Street is available for display.

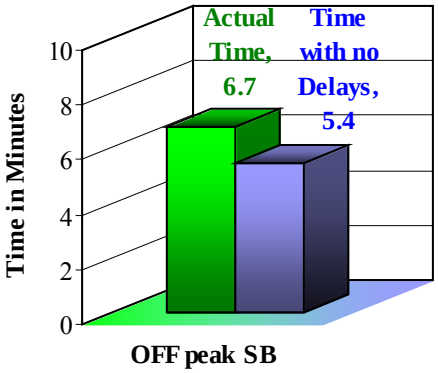
Figure 47

Calhoun Street
PM Peak

Figure 48

Parnell Avenue / St Joe Boulevard
AM Peak

Travel Time with the Least delay



*Off Peak Travel Times are not shown graphically.

Travel Speed with the Least delay

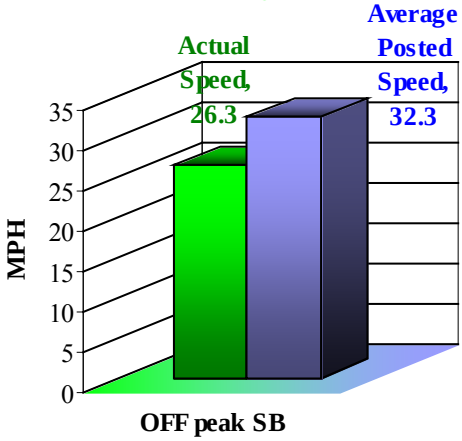
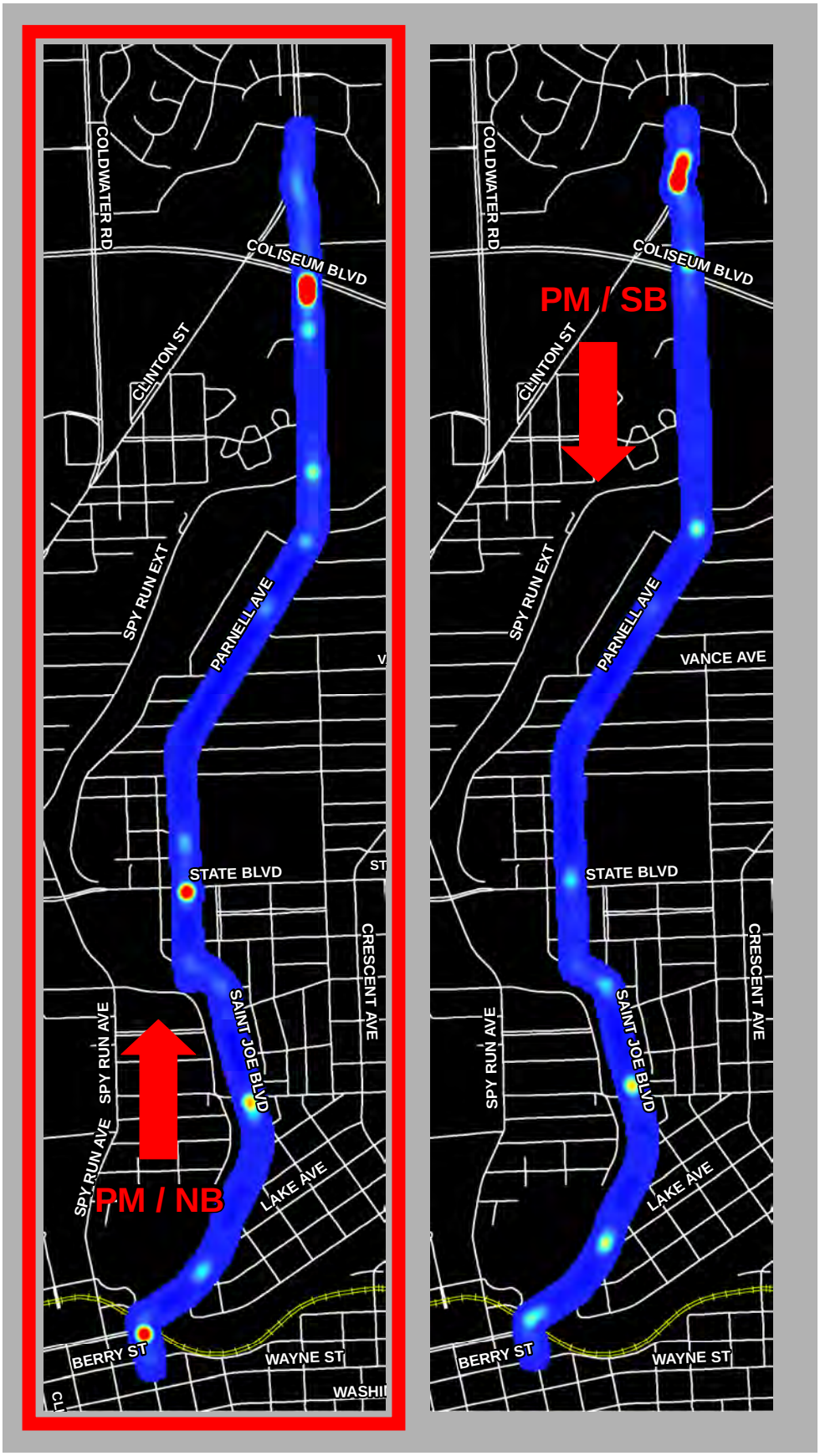
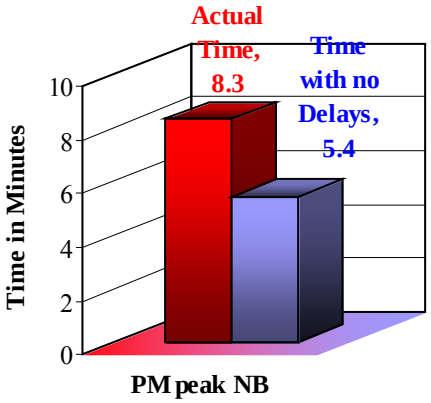


Figure 49

Parnell Avenue / St Joe Boulevard
PM Peak



Travel Time with the Greatest Amount of delay



Travel Speed with the Greatest Amount of delay

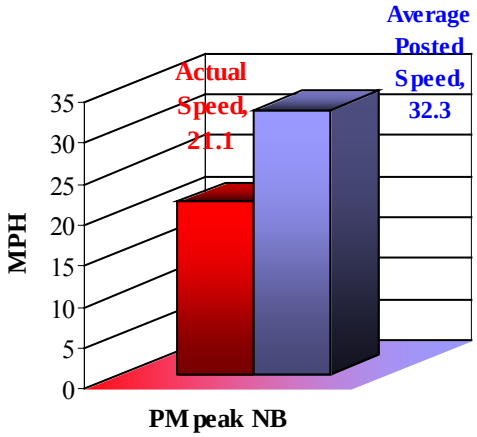
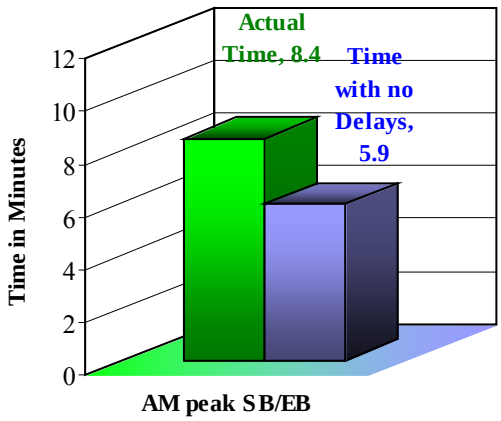


Figure 50

Old Mill Road / Pettit Avenue
AM Peak

Travel Time with the Least delay



Travel Speed with the Least delay

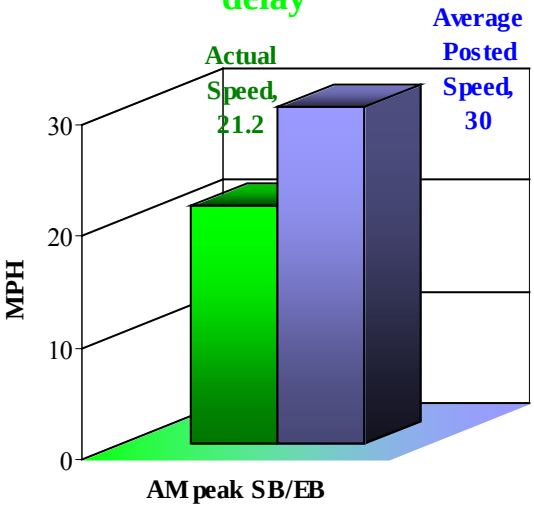
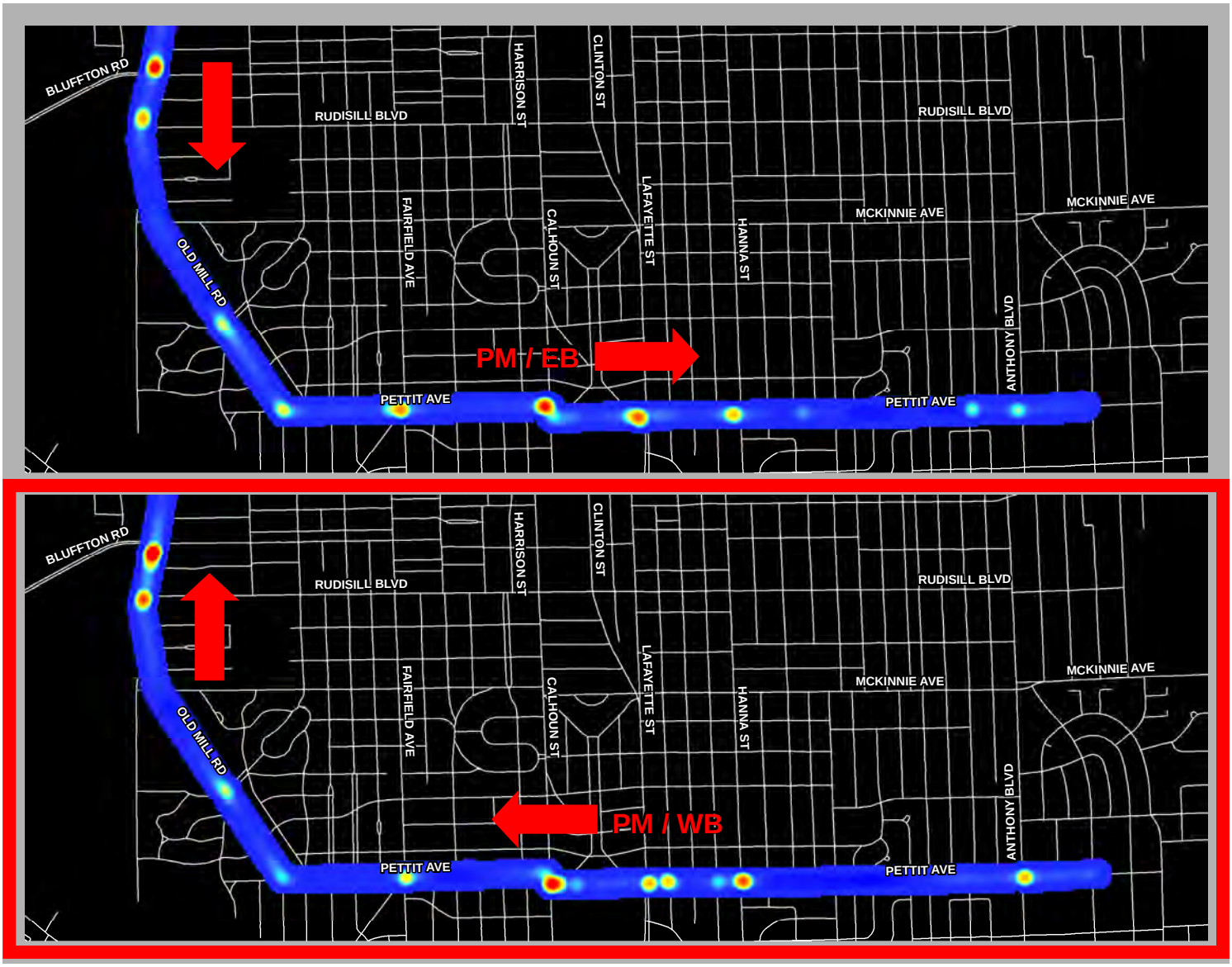
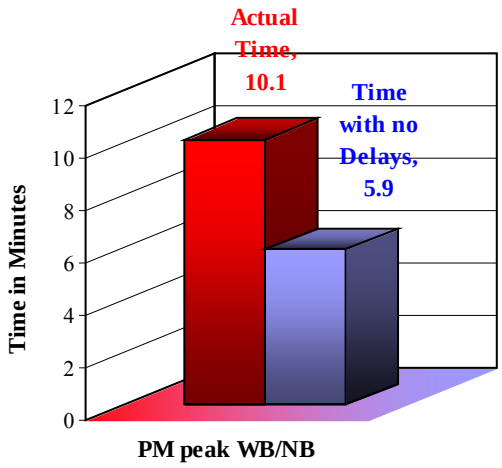


Figure 51

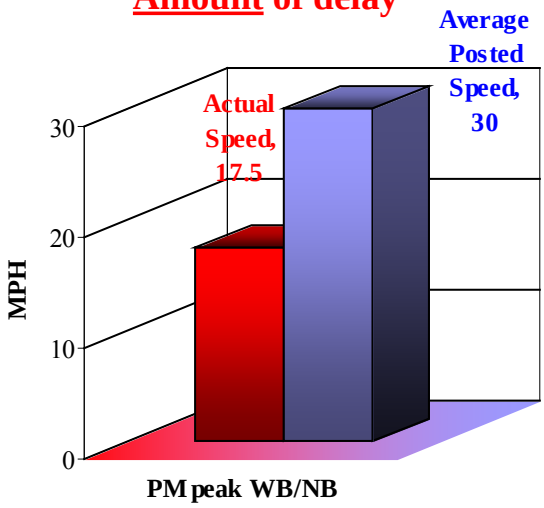
Old Mill Road / Pettit Avenue
PM Peak



Travel Time with the Greatest Amount of delay



Travel Speed with the Greatest Amount of delay



Transportation Improvement Program

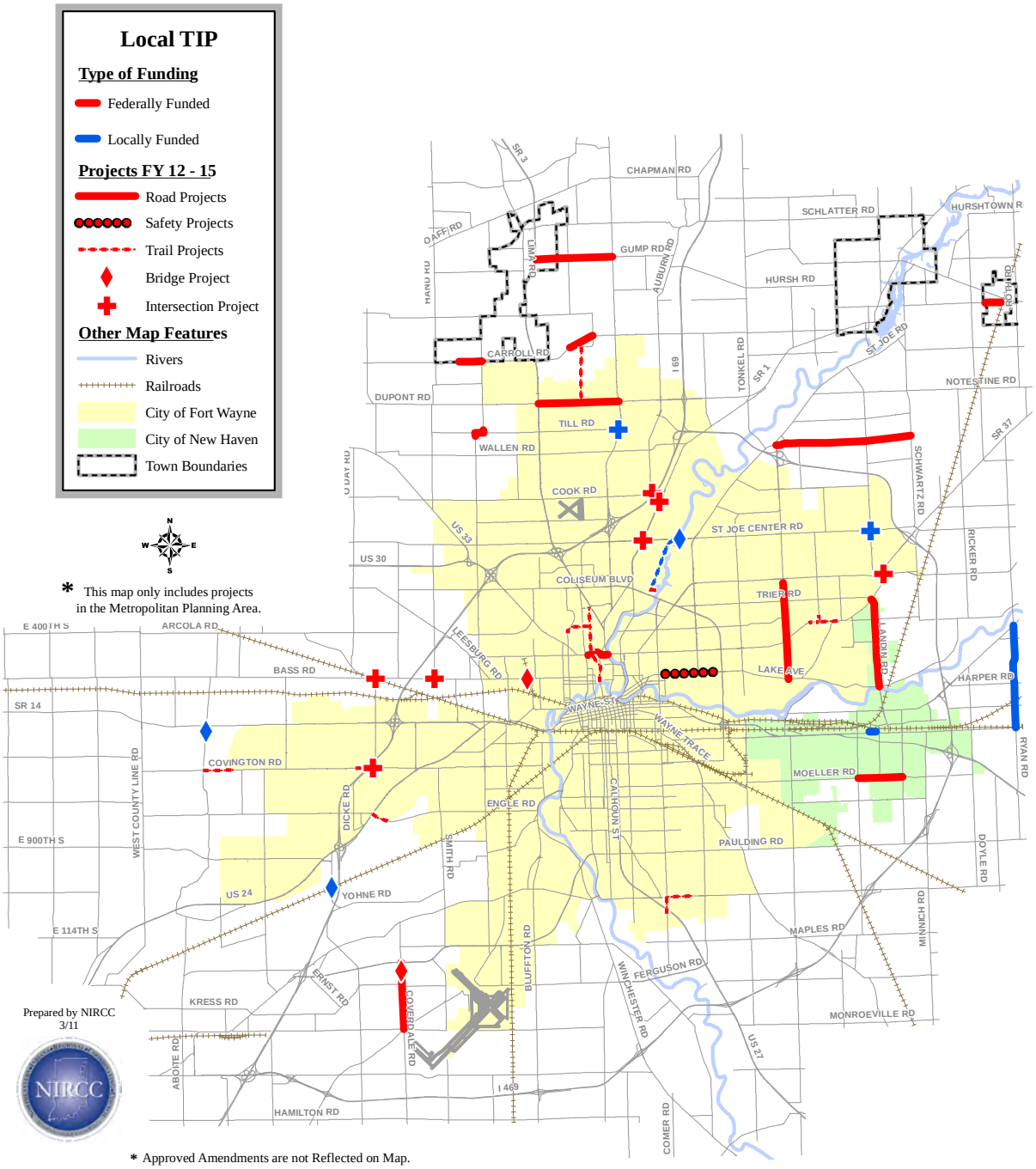
Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2011

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROJECTS

NIRCC prepared the Fiscal Year 2012-2015 Transportation Improvement Program. NIRCC has published a Transportation Improvement Program each year since 1977. The TIP is a multi-year capital improvements program documenting highway and transit projects, which will serve the needs of the Fort Wayne-New Haven-Allen County Metropolitan Planning Area. The TIP is updated yearly and is used to guide the expenditure of federal funds in our area. Short range and long range (2030-II) transportation plans including the Indiana Department of Transportation's Capital Improvements Program are used to formulate the TIP. The TIP includes commitments of the City of Fort Wayne, Fort

Figure 52



Wayne Public Transportation Corporation, City of New Haven, and Allen County to utilize and match federal funds. The Indiana Department of Transportation projects listed in the TIP represents commitments that the State makes to improve the transportation system in the Metropolitan Planning Area.

Figure 53

Each project typically goes through three different phases before construction completion. These phases include preliminary engineering (PE), right-of-way engineering and acquisition (RW), and construction (CN). The preliminary engineering includes development of construction plans. Right-of-way engineering and acquisition includes the determination and actual purchase of the right-of-way needed for the project. The construction stage is the actual construction of the project. Each of the projects listed will go through one or more of the phases during the four-year period.

Figure 54

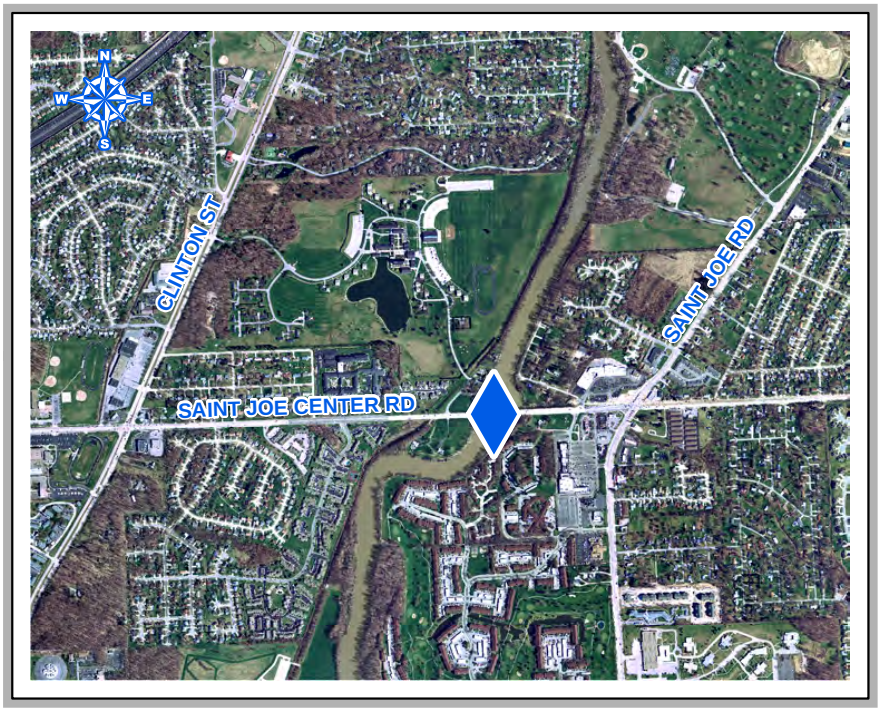


Figure 52 shows the locations of local TIP projects throughout the Metropolitan Planning Area. The local TIP map identifies projects that fit into two different categories. The projects that are colored blue identify projects that utilize only local funds whether it is City of Fort Wayne, City of New Haven, or Allen County. The projects colored red identify projects that utilize matching local funds with federal aid funds. Figures 53 and 54 provide aerial views to show examples of a project utilizing federal aid and a locally funded project. The following pages provide a listing of projects for each fiscal year and the phase for each project. Highway projects are listed on pages 71 through 73, and transit funding is listed on pages 74 through 76.

TRANSPORTATION IMPROVEMENT PROGRAM (TIP) PROJECTS LISTED

FUNDING CLASSIFICATIONS

CMAQ - Congestion Mitigation and Air Quality
HES - Hazard Elimination and Safety
HSIP - Highway Safety Improvement Program
JARC – Job Access Reverse Commute
RTP - Recreation Trails Program
SRTS - Safe Routes to School
STP - Surface Transportation Program
TE - Transportation Enhancement

FY 12 TIP Local Highway Projects

ROAD PROJECTS-AREA OVER 200,000

Project	Phase	LPA	Funding Type
2nd Street - Shoal Ln to Main St	RW	GB	Group IV
Auburn Rd - Cook Rd & Clinton St	CN	FW	CMAQ
*Bass Rd & Hadley Rd	RW	AC	CMAQ
Carroll Rd - Corbin Rd to .5 mi w/o Corbin Rd	PE	AC	CMAQ
Carroll Rd - Preserve Blvd to Bethel Rd	RW	HT	Group IV
Clinton St & Washington Center Rd	PE	FW	CMAQ
Coverdale Rd - Indianapolis Rd to Airport Exp	CN	AC	Group IV
Coverdale Rd - Bridge #231 over Robinson-Brindle Ditch	CN	AC	Group IV - BR
Covington Rd Trail - Ladue Ln to I-69	RW	FW	CMAQ
Covington Rd Trail - Beal-Taylor Ditch to West Hamilton Rd	RW	FW	TE
Covington Rd Trail - Beal-Taylor Ditch to West Hamilton Rd	CN	FW	TE
*Dawkins Rd - Bridge #187 over Litzenburg Drain	CN	AC	Group IV - BR
Engle Rd Trail - Jefferson Blvd to Towpath Trail	RW	FW	CMAQ
Flutter Rd - Schwartz Rd to Maplecrest Rd	CN	AC	STP
Flutter Rd - Schwartz Rd to Maplecrest Rd	CN	AC	CMAQ
Fort Wayne CBD - Pedestrian Signal Indicators (Phase I)[1]	CN	FW	HSIP
Fort Wayne CBD - Pedestrian Signal Indicators (Phase II)[1]	CN	FW	HSIP
Fort Wayne CBD - Special Pavement Markings (Piano Key)	CN	FW	HSIP
Johnny Appleseed Park to Shoaff Park Trail (Phase 1B)	CN	FW	TE
Lake Ave - Anthony Blvd to Stanley Avenue	CN	FW	HSIP
Landin Rd - North River Rd to Maysville Rd	RW	NH	STP
Maplecrest Rd - Lake Ave to State Blvd	RW	FW	STP
Moeller Rd - Green Rd to Hartzell Rd	CN	NH	STP
Pufferbelly Trail - Fourth St to Fernhill Ave	RW	FW	TE
Signal Controller Upgrade-283 intersections	CN	FW	CMAQ
Six Mile Creek Trail	RW	FW	TE
State Blvd - Spy Run Ave to Cass	RW	FW	STP
State Blvd, Lahmeyer Rd & Maysville Rd Sidewalk	CN	FW	SRTS

**Denotes an Amendment or Modification to Project*

FY 13 TIP Local Highway Projects

ROAD PROJECTS-AREA OVER 200,000

Project	Phase	LPA	Funding Type
Bass Rd & Hadley Rd	CN	AC	CMAQ
Bass Rd & Kroemer Rd	RW	AC	STP
Bethel Rd / Huguenard Rd / Till Rd	RW	AC	CMAQ
Carroll Rd - Corbin Rd to .5 mi w/o Corbin Rd	RW	FW	CMAQ
Clinton St & Washington Center Rd	RW	FW	CMAQ
Covington Rd & Dicke Rd	CN	FW	CMAQ
Dupont Rd - Lima Rd (SR 3) to Coldwater Rd	RW	FW	STP
Engle Rd Trail - Jefferson Blvd to Towpath Trail	CN	FW	CMAQ
Gump Rd - SR 3 to Coldwater Rd	CN	AC	STP
Maplecrest Rd - Lake Ave to State Blvd	CN	FW	STP
*Maplecrest Rd - State Blvd to Stellhorn Rd	PE	FW	STP
*Pufferbelly Trail - Fourth St to Fernhill Ave	CN	FW	TE
Pufferbelly Trail - Dupont Rd to Carroll Rd	CN	FW	RTP
Six Mile Creek Trail	CN	FW	TE
State Blvd - Spy Run Ave to Clinton St (Phase 1)	CN	FW	STP
Wireless Vehicle Detection-68 intersections	CN	FW	CMAQ

FY 14 TIP Local Highway Projects

ROAD PROJECTS-AREA OVER 200,000

Project	Phase	LPA	Funding Type
2nd St (Grabill): Shoal Ln to Main St	CN	GR	Group IV
Bethel Rd / Huguenard Rd / Till Rd	CN	AC	CMAQ
Carroll Rd - Corbin Rd to .5 mi w/o Corbin Rd	CN	FW	CMAQ
Carroll Rd - Preserve Blvd to Bethel Rd	CN	HT	Group IV
Clinton St & Washington Center Rd	CN	FW	STP
Covington Rd Trail - Ladue Ln to I-69	CN	FW	CMAQ
Maysville Rd & Stellhorn Rd	PE	FW	CMAQ
State Blvd - Clinton St to Cass St (Phase 2)	CN	FW	STP
State Blvd - Clinton St to Cass St (Phase 2 - bridge)	CN	AC	STP
State Blvd - Clinton St to Cass St (Phase 2)	CN	FW	HSIP
State Blvd - Clinton St to Cass St (Phase 2 - ped bridge)	CN	FW	CMAQ

**Denotes an Amendment or Modification to Project*

FY 15 TIP Local Highway Projects

ROAD PROJECTS-AREA OVER 200,000

Project	Phase	LPA	Funding Type
Dupont Rd - Lima Rd (SR 3) to Coldwater Rd	CN	FW	STP
Dupont Rd - Lima Rd (SR 3) to Coldwater Rd	CN	FW	STP
Landin Rd - North River Rd to Maysville Rd	CN	NH	STP

**Denotes an Amendment or Modification to Project*

Federal Transit Administration

Section 5307 / Section 5309 - Funds

Fort Wayne Public Transportation Corporation

FY 2012

Capital Equipment Purchases (Section 5307 Funds)

- Eight (8) Replacement Minibuses (body on chassis)
- Rehab/Renovate Admin/Maintenance Facility
- AVL/Communication Hardware/Subscription Cost
- Other Maintenance Equipment
- Computer/Office Equipment

Additional Operating Funds

- CMAQ - University Shuttle
- CMAQ - Discount Pass Program
- JARC
- New Freedom

Operating Funds and Preventative Maintenance Expenses

- Capitalization of Maintenance Costs (Section 5307)
- Complimentary Paratransit Costs (Section 5307)

Federal Transit Administration

Section 5307 / Section 5309 - Funds

Fort Wayne Public Transportation Corporation

FY 2013

Capital Equipment Purchases (Section 5307 Funds)

- One (1) Replacement Minibus (Body on Chassis)
- Three (3) Replacement modified minivan Supervisor vehicles
- One (1) Replacement maintenance truck
- Rehab/Renovate Admin/Maintenance Facility
- AVL/Communication Hardware/Subscription Cost
- Other Maintenance Equipment
- Computer/Office Equipment

Additional Operating Funds

- JARC
- New Freedom

Operating Funds and Preventative Maintenance Expenses

- Capitalization of Maintenance Costs (Section 5307)
- Complimentary Paratransit Costs (Section 5307)

**Denotes an Amendment or Modification to Project*

Federal Transit Administration

Section 5307 / Section 5309 - Funds

Fort Wayne Public Transportation Corporation

FY 2014

Capital Equipment Purchases (Section 5307 Funds)

Four(4) Heavy Duty Replacement Hybrid Buses
Computer/Office Equipment
AVL/Communication Hardware/Subscription Cost
Other Maintenance Equipment

Additional Operating Funds

JARC - Low incomeTransportation to and from work
New Freedom - Transportation Above & Beyond ADA Requirements

Operating Funds and Preventative Maintenance Expenses

Capitalization of Maintenance Costs (Section 5307)
Complimentary Paratransit Costs (Section 5307)

Federal Transit Administration

Section 5307 / Section 5309 - Funds

Fort Wayne Public Transportation Corporation

FY 2015

Capital Equipment Purchases (Section 5307 Funds)

Four(4) Heavy Duty Replacement Hybrid Buses
Four (4) Replacement Minibus (Body on Chassis) FLEX Route
Five (5) Replacement Minibus (Body on Chassis) ACCESS
Computer/Office Equipment
AVL/Communication Hardware/Subscription Cost
Other Maintenance Equipment

Additional Operating Funds

JARC - Low incomeTransportation to and from work
State PMTF
New Freedom - Transportation Above & Beyond ADA Requirements
Local Share

Operating Funds and Preventative Maintenance Expenses

Capitalization of Maintenance Costs (Section 5307)
Complimentary Paratransit Costs (Section 5307)

**Denotes an Amendment or Modification to Project*

Federal Transit Administration - Section 5310 Funds

FY 2012

2011 Funding Cycle

1. **Community Transportation Network**

   One (1) Medium Transit Vehicle w/Lift

2. **Community Transportation Network**

   One (1) Low-Floor Mini-Van w/Ramp

Update Transportation Plan and Travel-Forecasting Model

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2011

UPDATE TRANSPORTATION PLAN AND TRAVEL-FORECASTING MODEL

The maintenance of the Transportation Plan involves many different activities associated with development, support and implementation of the plan. These activities include but are not limited to: special analyses of recommended improvements and policies; review of the Federal Functional Classification Network, Urbanized Area, and Metropolitan Planning Area; integration of land use policies, comprehensive plans, economic development and redevelopment strategies; and transit related policies, network modifications and associated impacts on urban travel. These activities are integrated in the transportation planning process to support the overall development and implementation of the Transportation Plan.

In order to update, maintain, and amend the Transportation Plan as needed, staff must continue to review and evaluate the travel-forcasting model so that simulations and trip distributions throughout the transportation system remain as realistic as possible. Data is collected, analyzed, and utilized to improve the forecasting capabilities as the model continues to be calibrated and evaluated. This type of review and evaluation helps support the use of the travel-forecasting model in developing and maintaining the Transportation Plan.

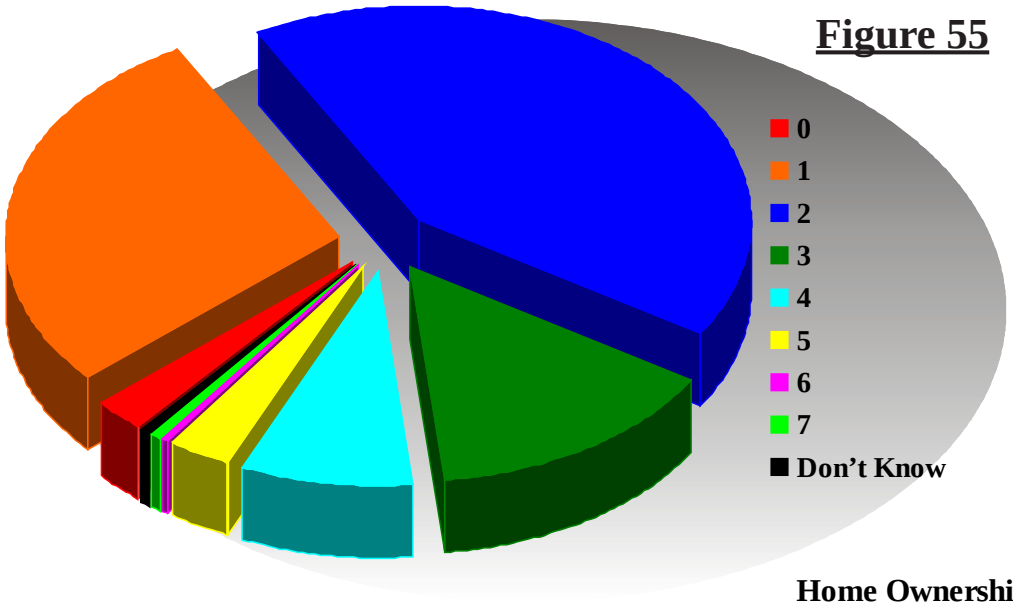
As part of the review and evaluation process, NIRCC has taken steps to update the Travel Demand Model. Part of this process has included performing a Household Travel Survey and an On-board Transit Survey. As changes occur in the Fort Wayne-New Haven-Allen County Metropolitan Planning Area, the transportation system must be improved to respond to new and increasing travel demands. The Community's vibrant growth and socioeconomic change fosters the need to reconsider and re-evaluate the future needs of the transportation system.

In 2011 NIRCC conducted two surveys; a Household Travel Survey and an On-board Transit Survey. The Household Travel Survey collected travel and behavior data from approximately 200 households in Allen County, Indiana to supplement the travel data already collected in the county during the 2009 National Household Travel Survey (NHTS). Each household member aged 16 or older was asked to complete an interview about their travel for one specific travel date. The Household Travel Survey was conducted on weekdays over a two week period in May, 2011. The On-board Transit Survey was conducted by surveyors who rode each Citilink bus in four hour shifts centered on either the morning or afternoon peaks. The survey collected information about rider demographics, income, automobile availability, transit trip purpose, transit origin and destination, transfer activity, etc. The following charts shown in Figures 55 - 66 give a summary of some of the data collected from both, the Household Travel Survey and the On-board Transit Survey. The charts on pages 80 and 81 are generated from the Household Travel Survey and the charts on pages 82-84 are generated by the On-board Transit Survey.

Household Travel Survey Charts

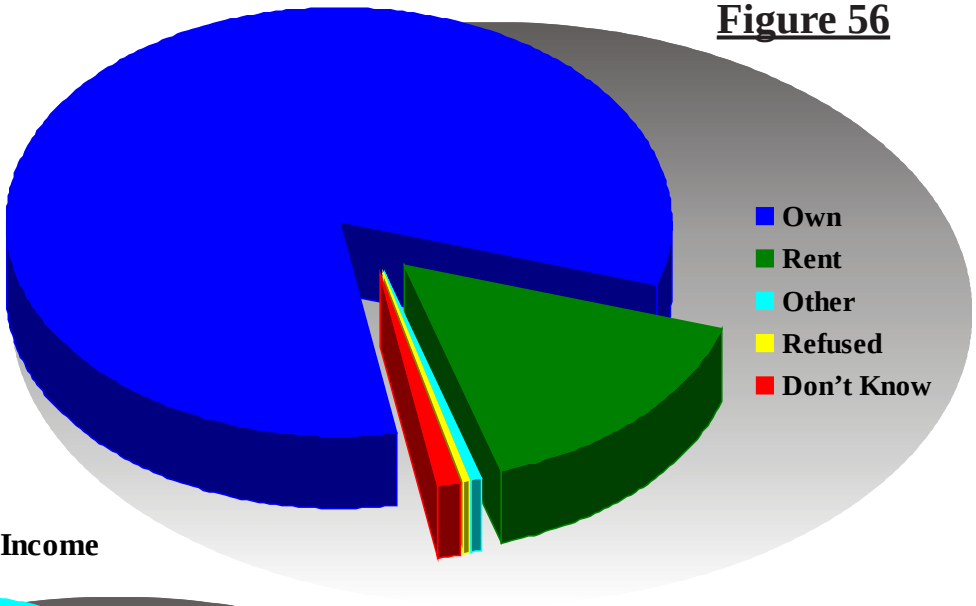
Number of Vehicles Per Household

Figure 55



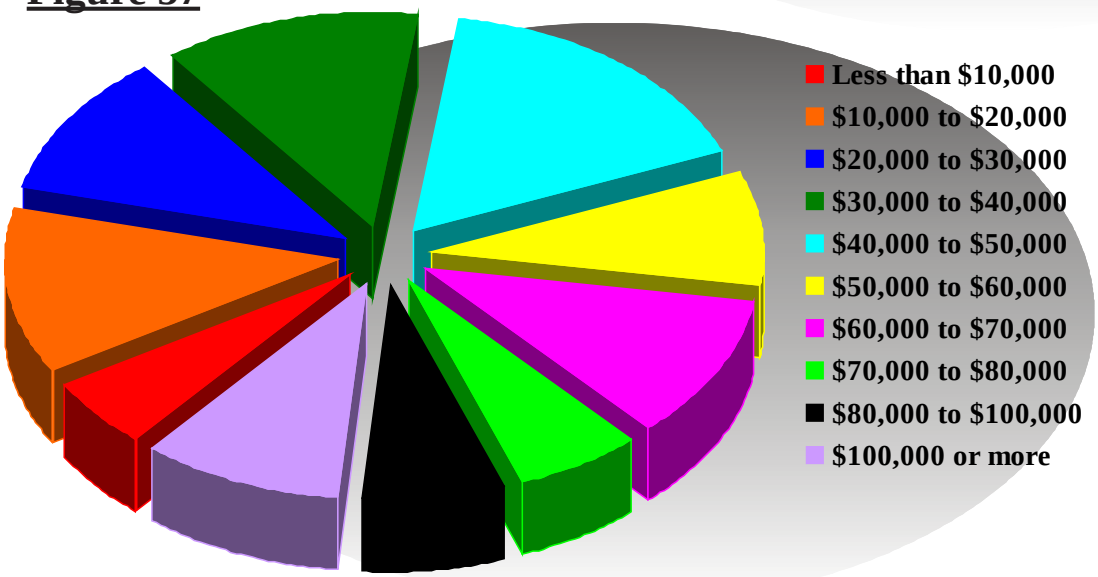
Home Ownership

Figure 56



Household Income

Figure 57



Household Travel Survey Charts

Figure 58

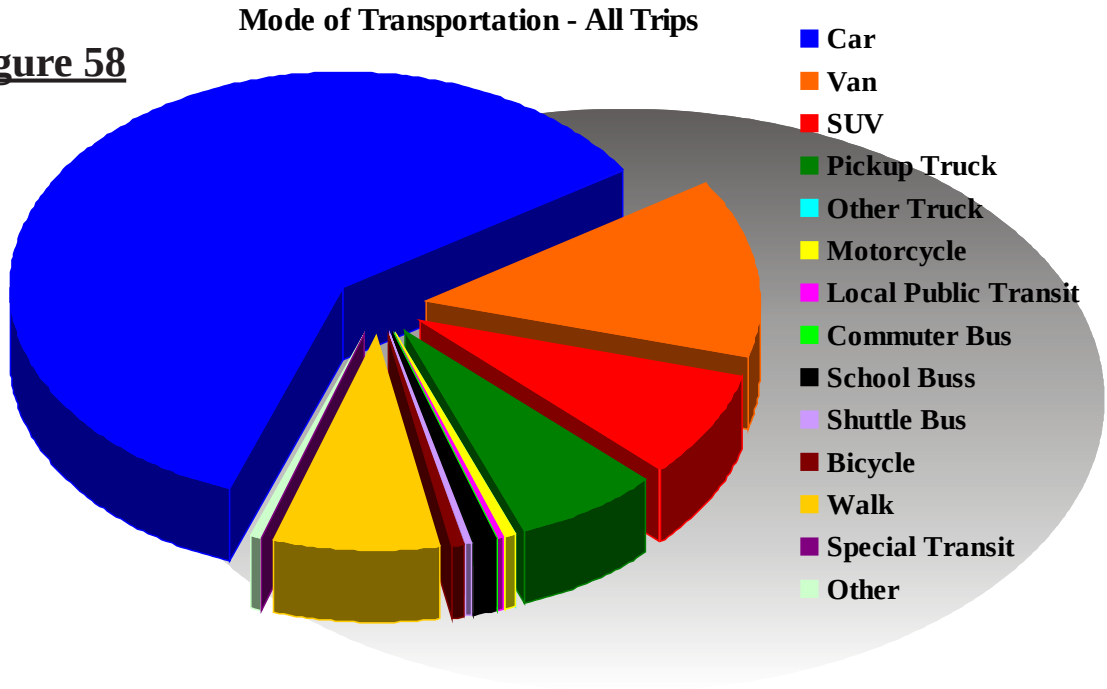
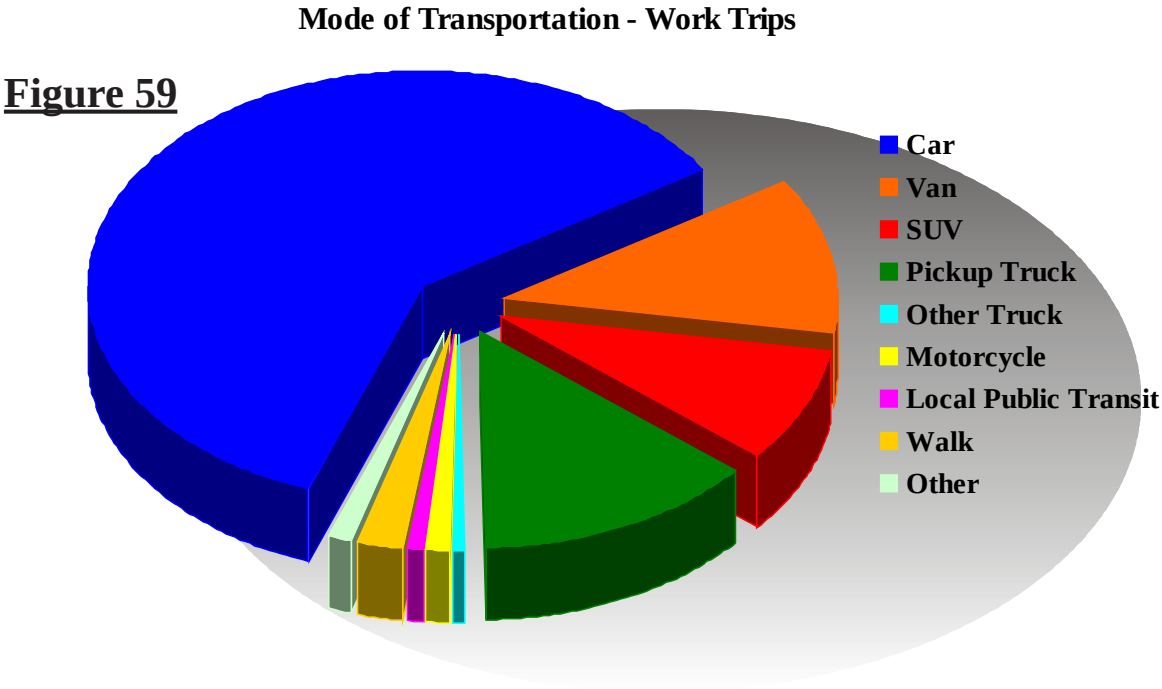


Figure 59



On-board Transit Survey Charts

Figure 60

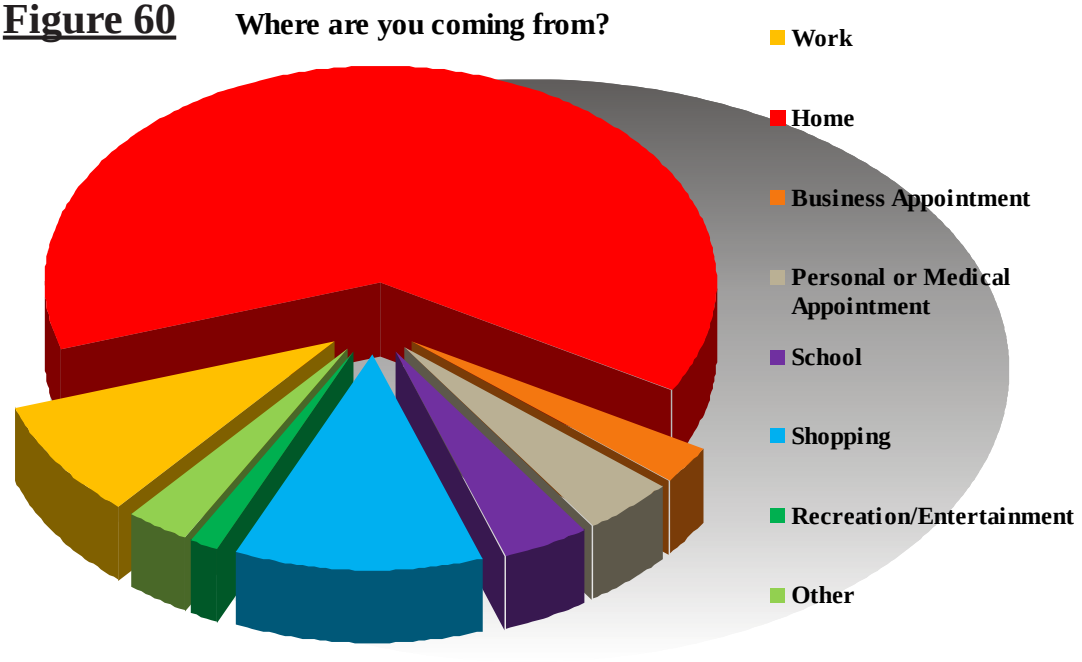


Figure 61

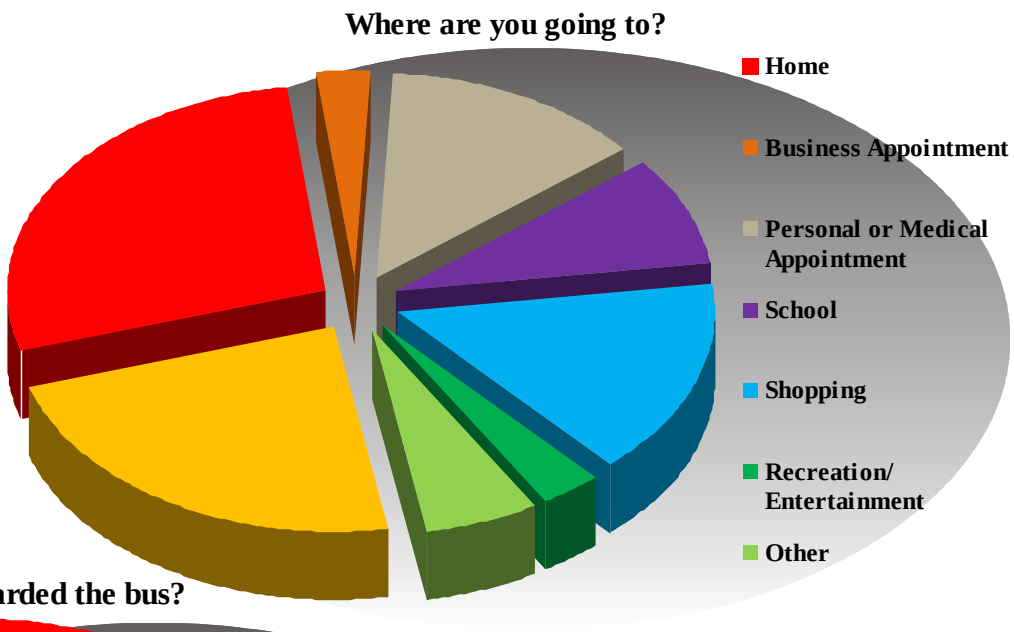
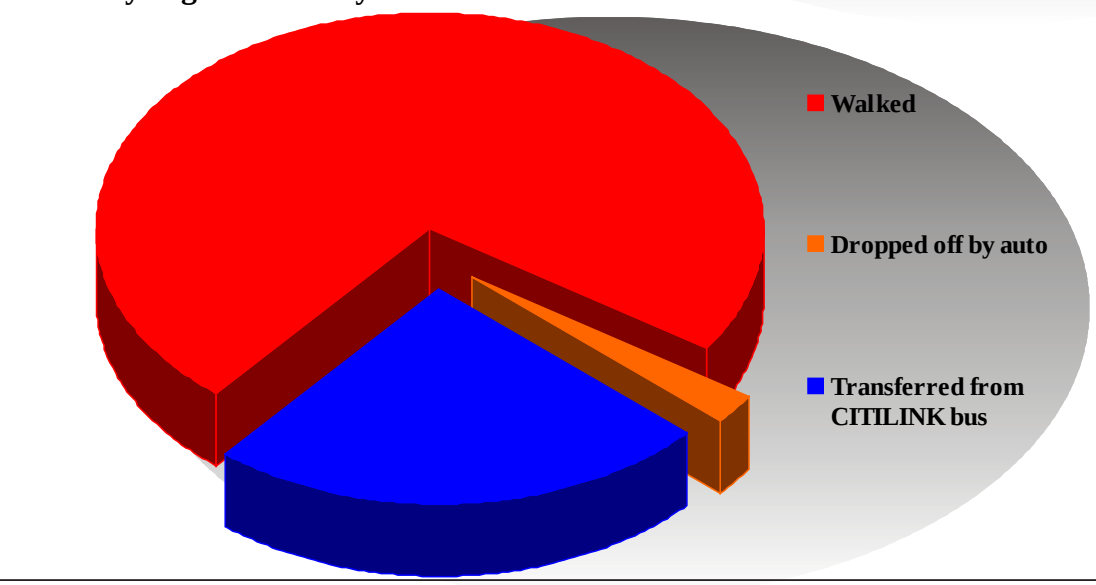


Figure 62



On-board Transit Survey Charts

Figure 63

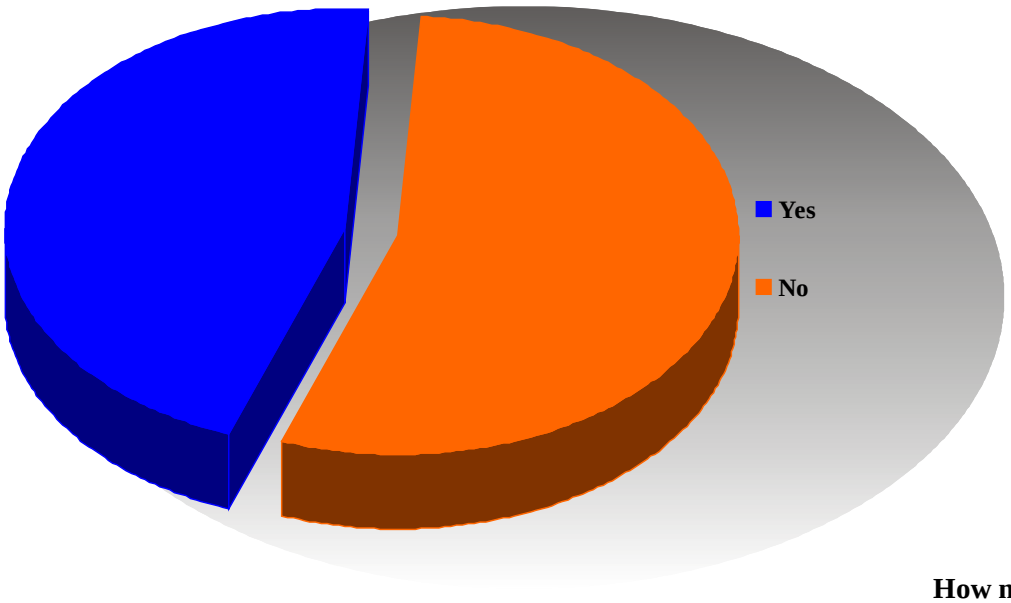


Figure 64

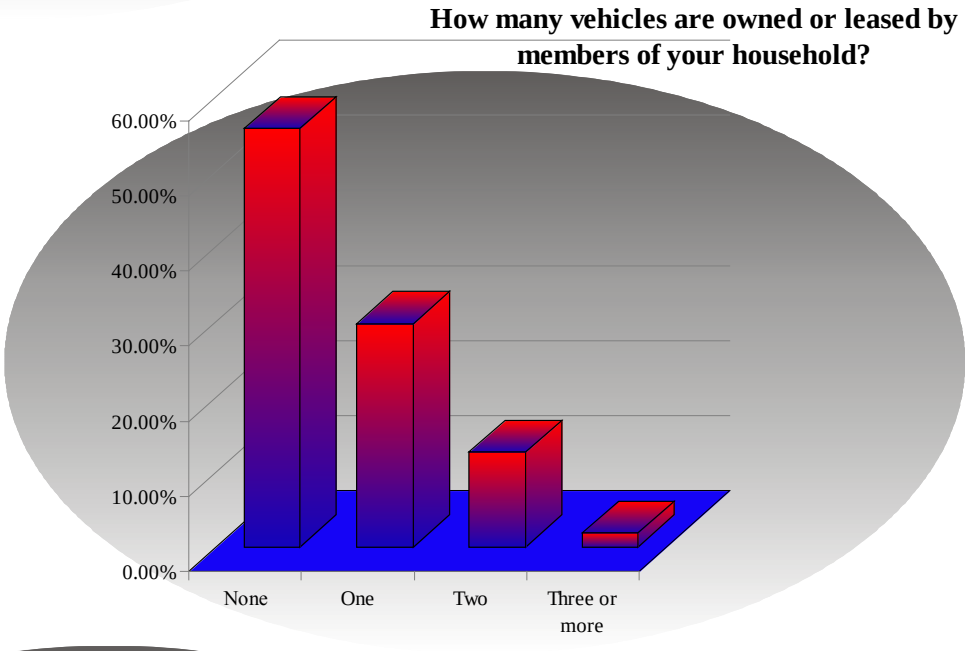
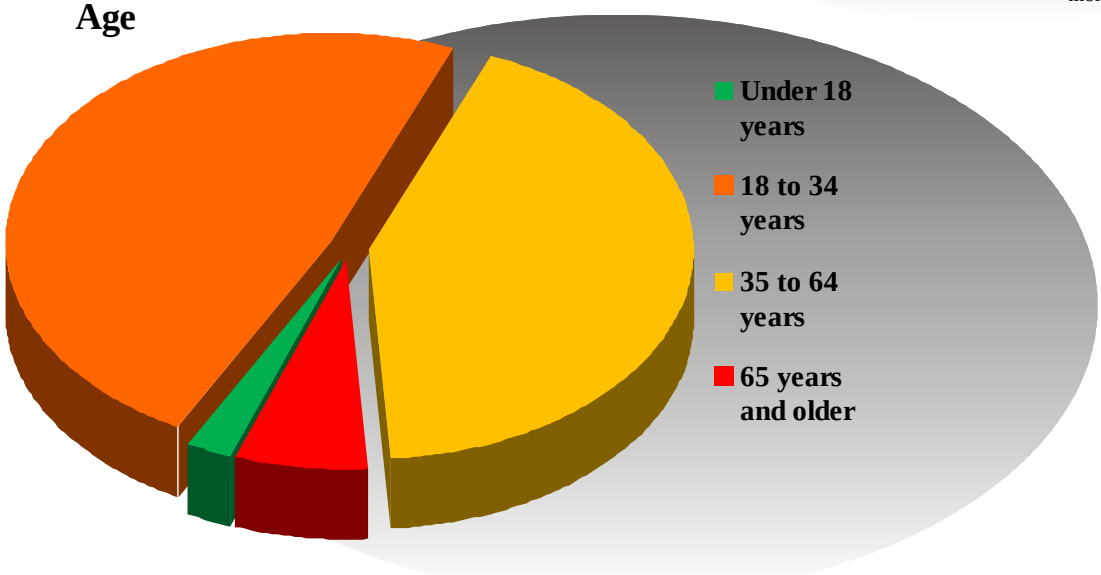
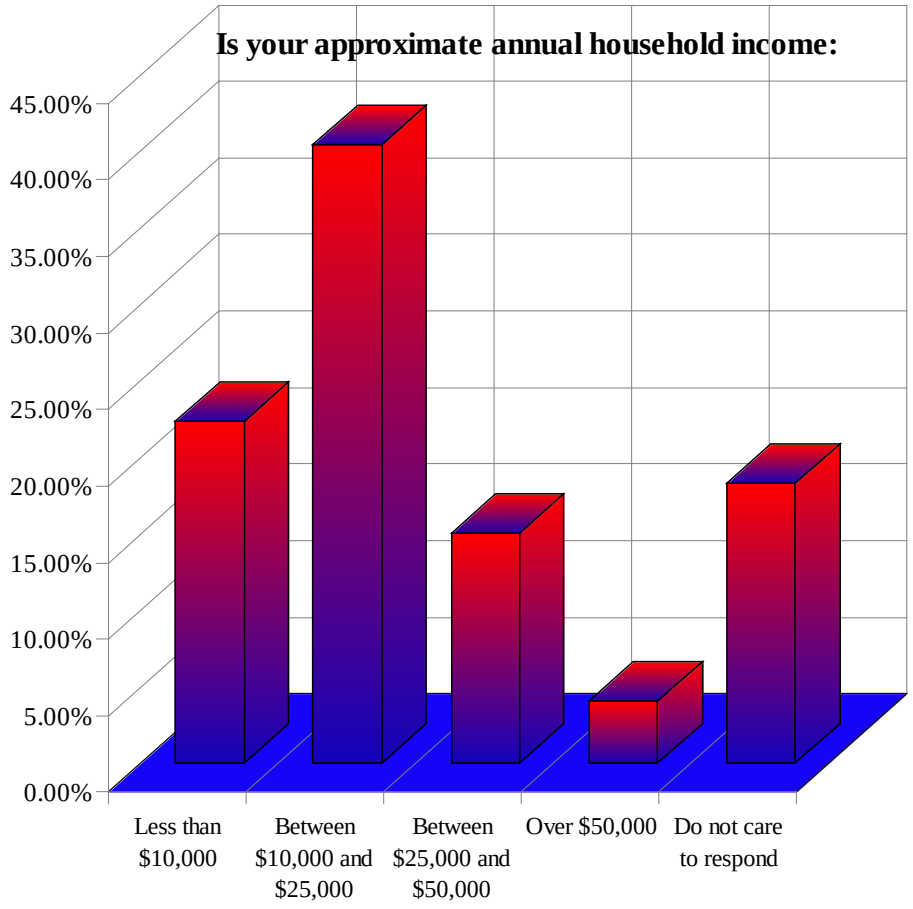


Figure 65



On-board Transit Survey Charts

Figure 66



Safety Management System

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2011

SAFETY MANAGEMENT SYSTEM

NIRCC maintains a Safety Management System (SMS) for the entire Allen County Area. A SMS is a systematic process that has the goal of reducing the number and severity of traffic accidents by ensuring that all opportunities to improve safety (i.e. highway planning, design, construction, maintenance, and operation) are identified, considered, implemented where appropriate, and evaluated.

Safety in transportation planning and project development is a high priority. The increase in available funds for safety improvements supports the importance of safety projects. Improved crash information sources and new analytical tools have created better evaluation tools to identify problematic areas. NIRCC is responding to these changes with additional resources applied to crash data analysis and GIS applications. The goal for transportation planners is to find where the problems exist, make recommendations for improvements and seek funding to implement projects. The first step is often the most difficult, which is to identify what locations are most hazardous within the community.

In fiscal year 2011 NIRCC obtained all crash records that occurred in Allen County during 2010. The data was extracted from the Indiana State Police database ARIES (Automated Reporting Information Exchange System). Staff worked to "code" each crash location with like descriptions to ensure that all crashes occurring at a specific site were grouped together. Crash descriptions were reviewed for spelling and alphabetical order resulting in a listing of crashes that could be summarized to identify a total number of crashes at various geographical points. All crash information is included in the database to aid in various types of analysis. The final summary for each year is provided to local technical representatives to aid in review of locations and to respond to citizen requests for improvements at a location for safety reasons. Officials can review the data provided to determine the crash experience and other variables that may be present.

Once staff completed the "coding" process for the 2010 crash data and included it in the crash database, NIRCC combined the 2010 crash data with the 2008 and 2009 crash data to create a three year comparison. These crashes were also input into mapping software to be used with GIS (Geographical Information Systems). Figures 67, 68, and 69 display the densities of crash frequencies for the Fort Wayne, New Haven, and Allen County area.

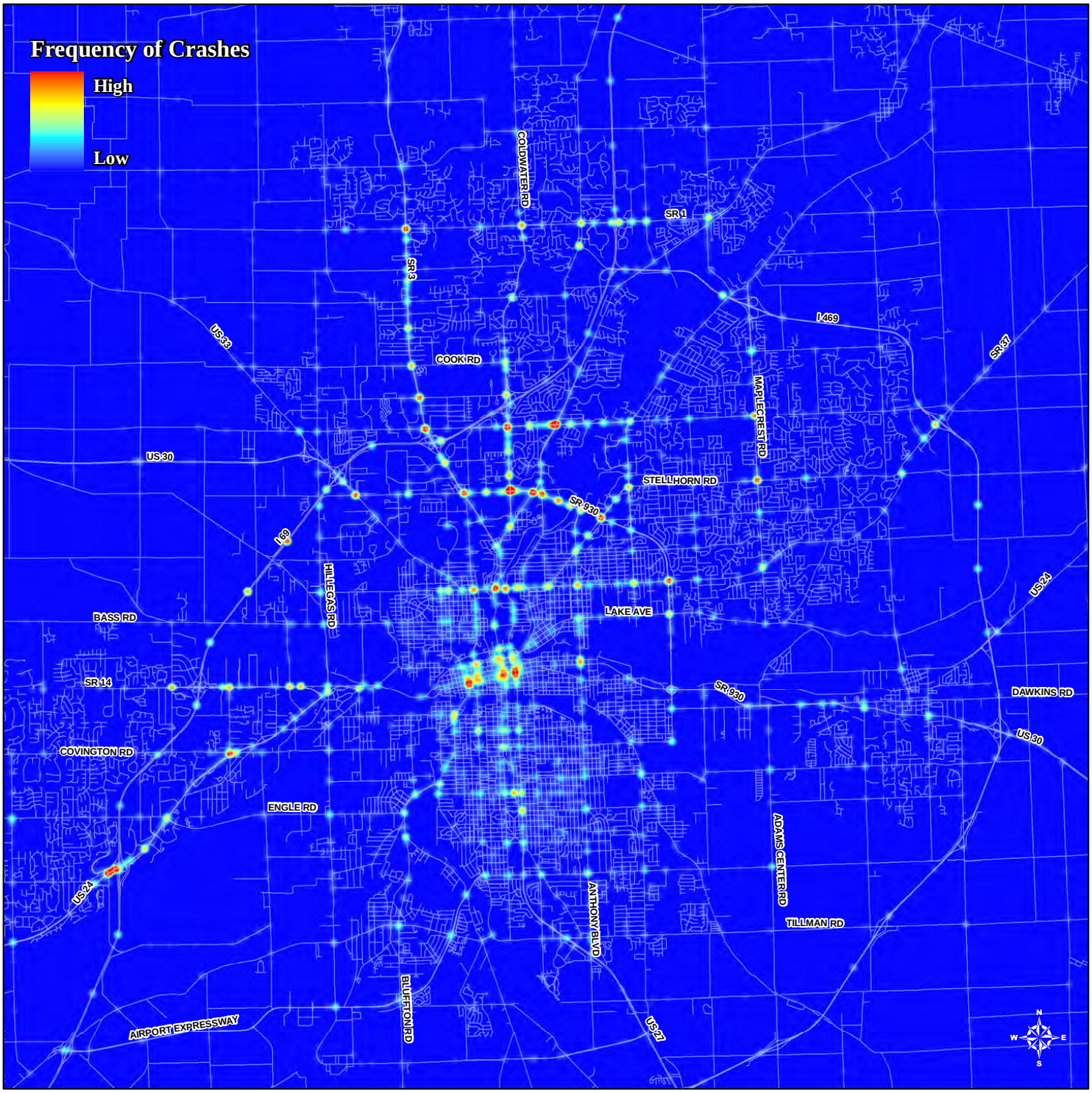
Annual Summary and Listing of Crash Locations

The annual crash record database is first used to provide an annual crash summary report for local jurisdictions (Allen County - all cities and towns, Fort Wayne, and Allen County - outside incorporated areas). The summaries include statistical data that focuses on detailed crash information from the crash reports. The information provides engineers,

planners and law enforcement with a summary of information from the crash reports. The information includes specific data about the circumstances involved with crashes including environmental circumstances, driver information, vehicle information and other important data for all the annual crashes.

The second product from annual crash data is a summary or listing of the hazardous crash locations from the previous year. Every year staff utilizes two procedures to identify crash locations with a higher frequency of crashes and another

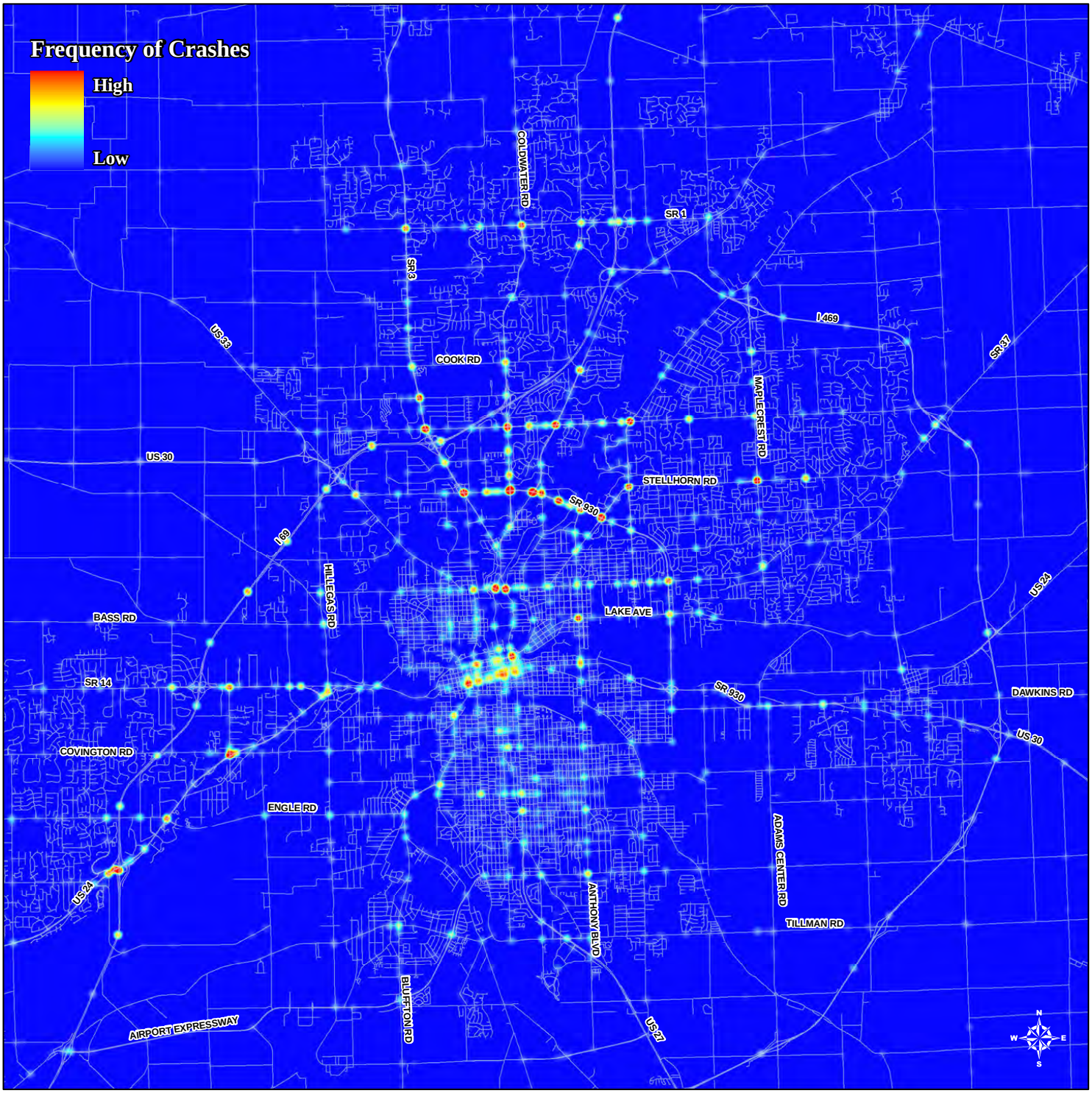
Figure 67 - 2010 Crash Data



for locations with a lower crash frequency. Identification of crash frequency is provided through use of GIS software that creates buffers around intersection crash locations. The buffers are created using a 250 foot radius around each crash location and grouping all crashes within itself. This process resulted in crash locations that reflect crashes that occurred at approaches to intersections in addition to crashes within an intersection.

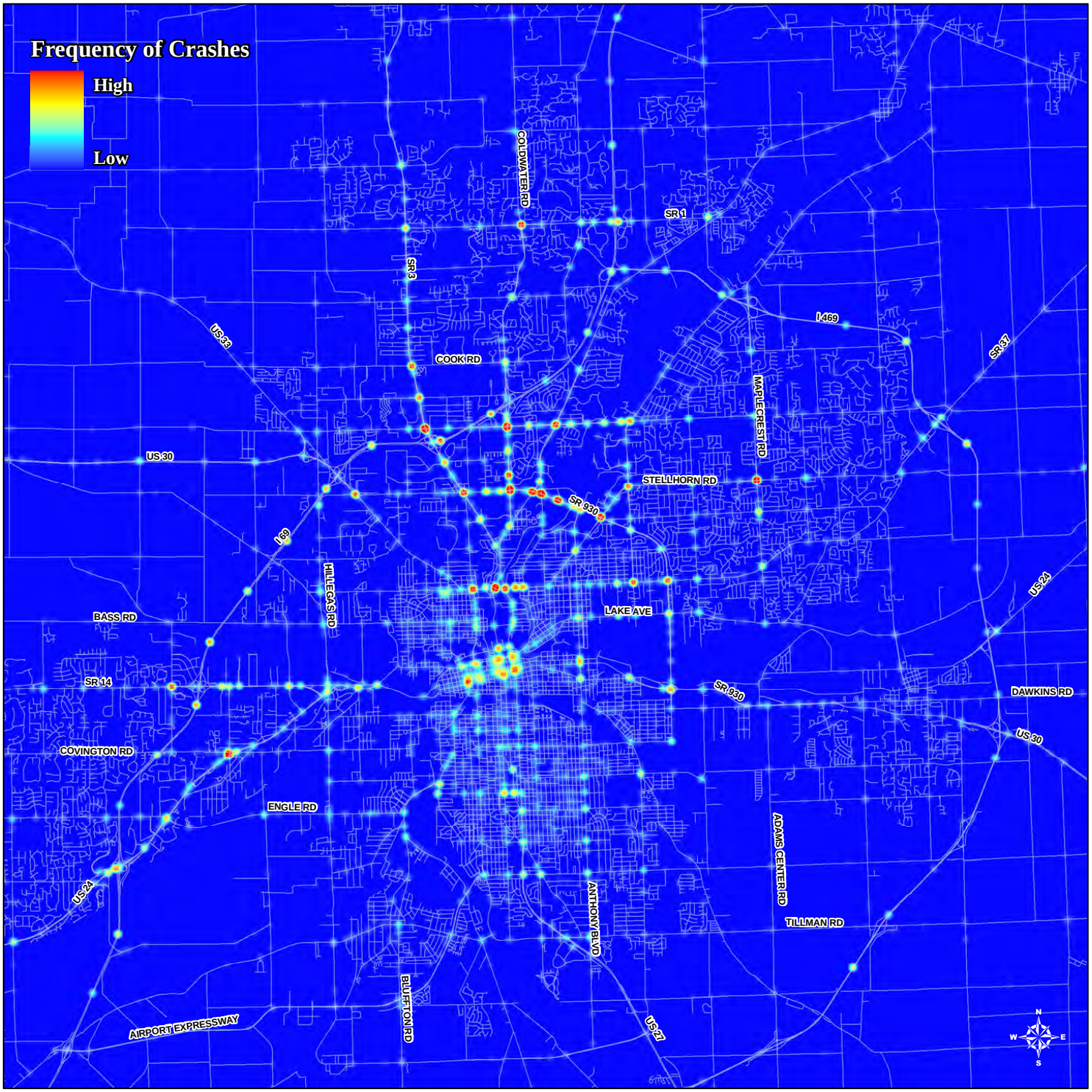
High frequency crash locations were defined as those with an annual crash frequency greater than or equal to seven (7).

Figure 68 - 2009 Crash Data



Locations identified with this frequency are listed and traffic volumes are applied to each of the locations to determine the RMV (rate per million entering vehicles). The RMV value is then used to sort locations. Locations that have a RMV greater than or equal to 2.00 for one year remain in the listing for further review. Additional locations are also added to the listing of crashes with a frequency greater than or equal to seven (7) if they are locations with a high crash severity or result in a high percentage of injuries or fatalities.

Figure 69 - 2008 Crash Data



Staff reviewed crash locations and recorded the total number of crashes that resulted in injury or fatality. This information was used to determine the percentage of total crashes at each location that were property damage only and the percentage that resulted in injury or fatality. Staff and the Transportation Technical Committee agreed to include any location that experienced an injury or fatality percentage greater than 66% in the annual list for further review.

A process to review crash locations with a lower crash frequency was also established to ensure that locations with a low volume of traffic are not experiencing a consistently high percentage of crashes based on the number of vehicles using a location. The lower crash frequency crashes were also included where the percentage of injury or fatal crashes was higher. Crash locations with an annual crash frequency of 6, 5, 4, or 3 were included in the annual listing of locations for further review if the rate per million entering vehicles was greater than or equal to 1.00 and the percentage of injuries and fatalities exceeded the following thresholds;

Frequency	Percentage of I/F
6	100% to 33 %
5	100% to 40%
4	100% to 50%
3	100 % to 66%

Hazardous Location Identification

In Fiscal Year 2011 staff reviewed all the crash location listings created for 2008, 2009, and 2010 based on the approved process described above. In the past, staff worked with TTC to determine the most accurate manner to identify hazardous locations from data collected for a three year period. TTC members and staff agreed that crash locations identified annually were not necessarily hazardous unless the location experienced similar patterns over the previous two years. Staff created a listing of locations that met the hazardous criteria for 2008, 2009, and 2010. These locations were then reviewed using crash rates and HAT (Hazard Analysis Tool) software developed by the Indiana Department of Transportation and Purdue University.

HAT software considers the total number of crashes, traffic volume, total number of injury/fatal crashes, facility type and location type (US Route, State Route, Rural or Urban). The software was developed to compare the number of crashes and severity of the crashes at a location being reviewed to other locations that are similar throughout the state. A crash frequency index and crash cost index is determined with the software to determine if a location is operating above or below what is anticipated. Locations with an index greater than or equal to 1.00 are considered to be operating below an acceptable level.

The final step in identifying the hazardous locations was to determine how to select locations from the listing for further review. Representatives from TTC provided input to staff on methods to screen the final listing of the three years.

Staff will review the locations selected to determine the cause of all the crashes and provide collision diagrams to TTC to determine what course of action to take to mitigate crashes at each location. The listing of locations will be updated annually to review trends and previously identified hazardous locations. Additional locations that meet the approved criteria will also be added.

Intermodal Management System

Studies completed by the Northeastern Indiana Regional Coordinating Council

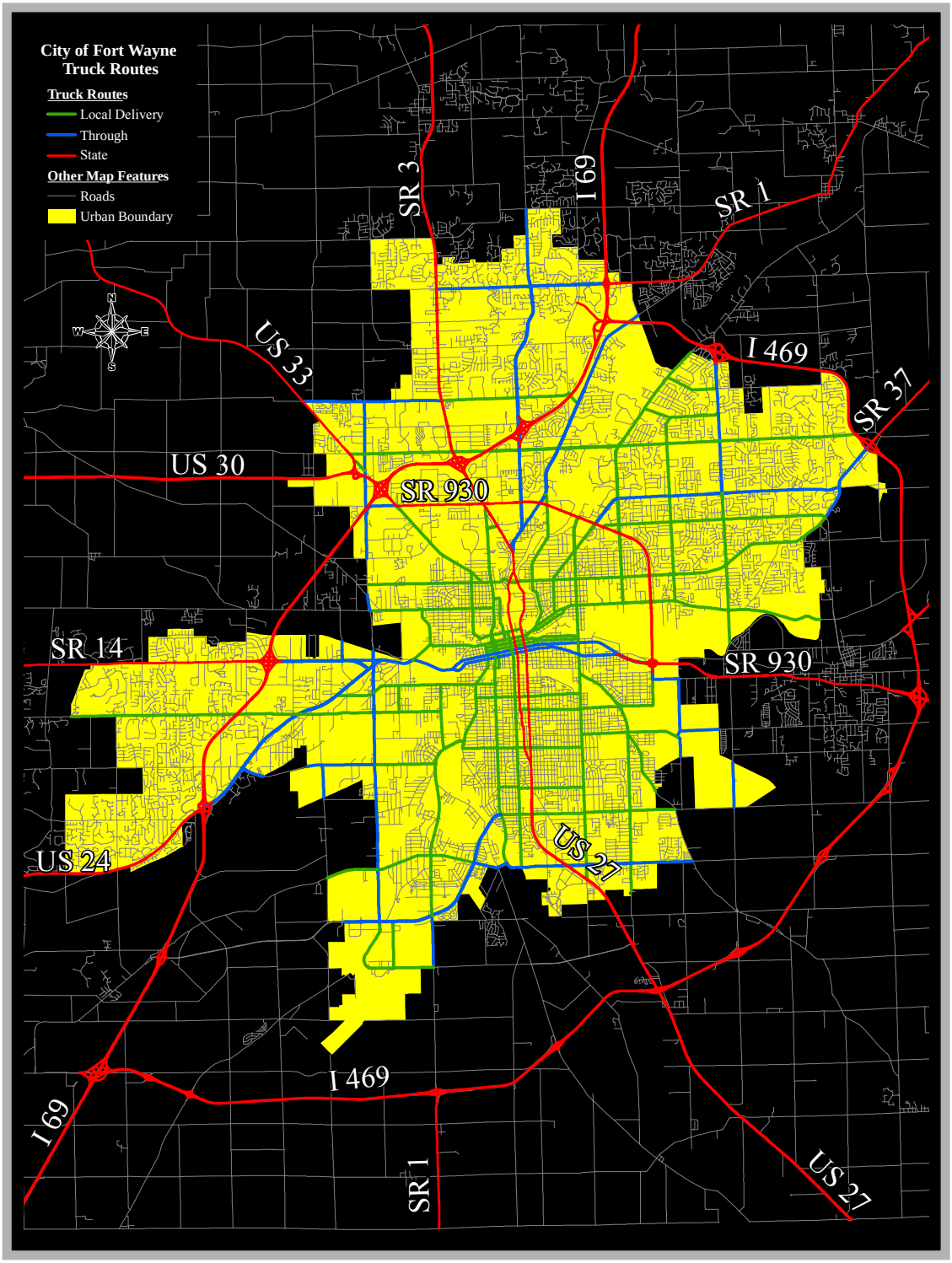
Transportation Summary Report Fiscal Year 2011

INTERMODAL MANAGEMENT SYSTEM

An Intermodal Management System (IMS) is a systematic process of identifying key linkages between one or more modes of transportation where the performance or use of one mode will affect another, defining strategies for improving the effectiveness of these modal interactions, evaluating and implementing these strategies to enhance the overall performance of the transportation system.

Figure 70

The Council staff is working with local agencies to update and verify the truck routes throughout Allen County. At this point in time the City of Fort Wayne's truck routes have been completed which have resulted in changes being made to their ordinance concerning which streets are considered to be truck routes. However, the truck routes that run through the county's jurisdiction will continue to be updated and completed in the upcoming fiscal year.



Bicycle and Pedestian Planning

Studies completed by the Northeastern Indiana Regional Coordinating Council

Transportation Summary Report Fiscal Year 2011

BICYCLE AND PEDESTRIAN PLANNING

NIRCC has a significant involvement in area bicycle and pedestrian planning activities. The need and desire for bicycle and pedestrian facilities has dramatically increased over recent years. The four county region represented by NIRCC has many individuals and organizations advocating improvements to the existing bicycle-pedestrian transportation system as well as expanding the system in the future. The Fort Wayne, New Haven, and Allen County area has been at the forefront for local advocacy groups to begin their planning efforts. Local government has began taking a more active role in their planning efforts to include bicycle and pedestrian amenities.

To better coordinate local efforts, NIRCC began sponsoring the Northeastern Indiana Regional Bicycle and Pedestrian Forum which met from 2002 to 2007. This forum represented a task force comprised of governmental parks, planning and highway agencies, advocacy groups, and special project organizations. The forum increased the communication and coordination between these groups. In addition, the forum played an integral part in developing and completing the Allen County Comprehensive Bicycle-Pedestrian Transportation Plan in 2006. This plan (shown in Figure 71) was included in the 2030 Long Range Transportation Plan and is now included in the 2030-II Transportation Plan. Since 2007 NIRCC has relied on the Greenway Coalition for guidance as well as governmental and public input towards bicycle and pedestrian planning. The coalition is also made up of governmental parks, planning and highway agencies, advocacy groups, and special project organizations. The coalition has been meeting since April of 2005. Staff continues to update the plan annually. The plan is also available on the NIRCC website at www.nircc.com.

Throughout the year NIRCC periodically updates the Comprehensive Bicycle and Pedestrian Transportation Plan for Allen County as well as the Northeast Indiana Regional Bicycle and Pedestrian Plan. Local trail groups are continually planning and completing their trail projects. Also, new opportunities develop and some corridors may need to slightly shift their priorities to create the most practical options for developing a realistic and cost effective bicycle and pedestrian system. The most current plans for Allen County and the region can be seen in Figures 71 and 72.

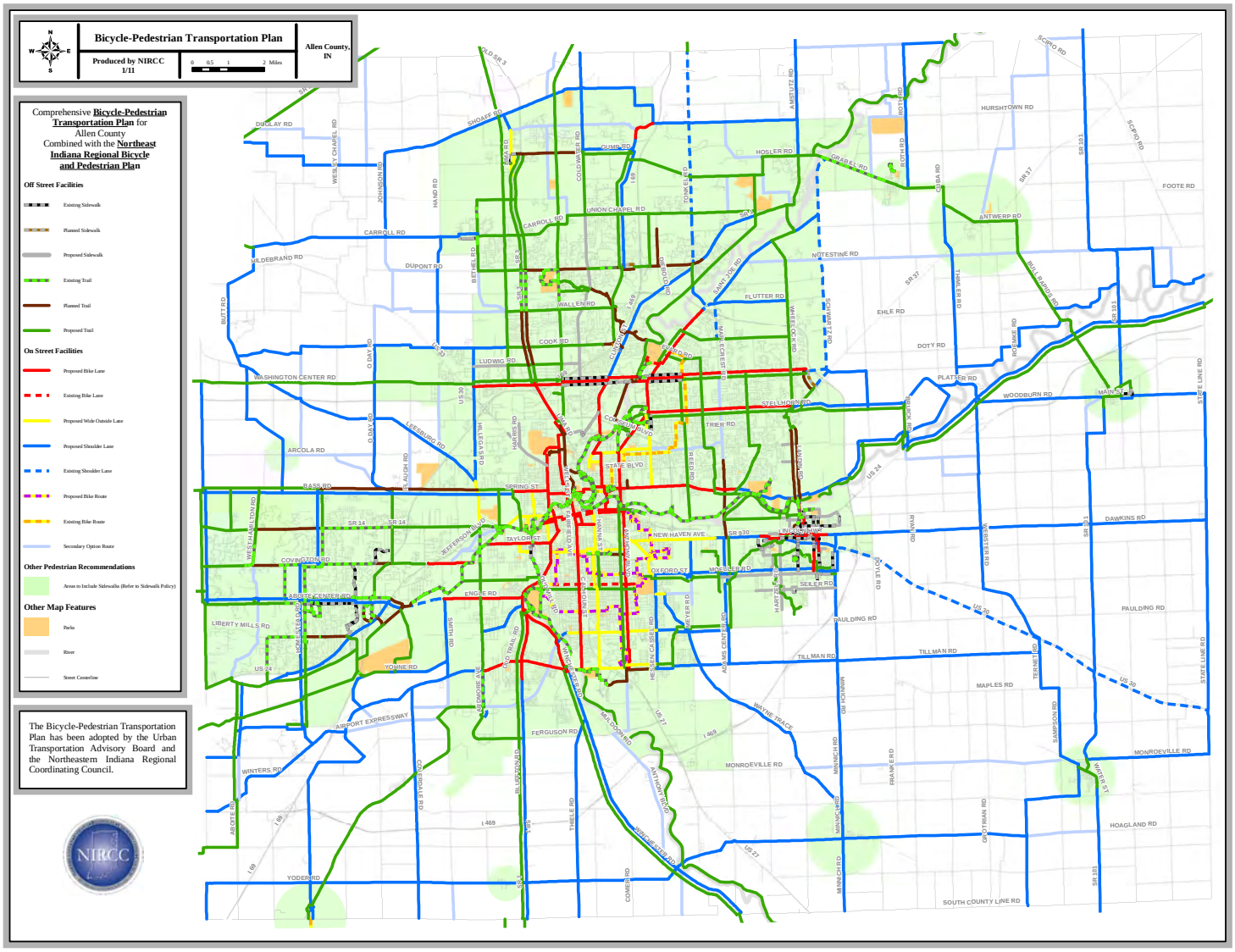
During the last transportation plan update NIRCC enhanced the bicycle and pedestrian plan with a prioritization of local planning efforts. NIRCC, along with the Fort Wayne Greenways Manager, asked local trail advocacy groups and governmental agencies to prioritize their planning efforts to give a better idea of what may be accomplished in the next 10 to 15 years. The local advocacy groups and governmental agencies consulted during this process included Aboite New Trails, Greenway Consortium, Little River Wetlands Project, Northwest Allen Trails, City of Fort Wayne, and City of New Haven Parks Department. Figure 73 shows the priorities set by the appropriate group or agency for corridors identified in their plans with a priority level of 1, 2, or 3.

Priority 1 is identified by a dark purple color for the off street facilities and an orange color for the on street facilities. Priority 1 corridors represent the highest priority for local groups or agencies to complete. These trails may already be partly constructed, partially funded, fully funded, and/or design has already begun in some capacity. These are corridors that local groups and governmental agencies are pursuing with completion goals that range from the near future to within the next 10 to 15 years.

Priority 2 corridors, identified in yellow, are the next highest priority. There is currently no funding and/or no design for these proposed corridors. These are corridors that are of significant importance to the local groups and agencies but they are not the current focus of their efforts. These are corridors that will likely be identified as priority 1 once some of the current priority 1 projects are complete.

Figure 71

The Comprehensive Bicycle-Pedestrian Transportation Plan



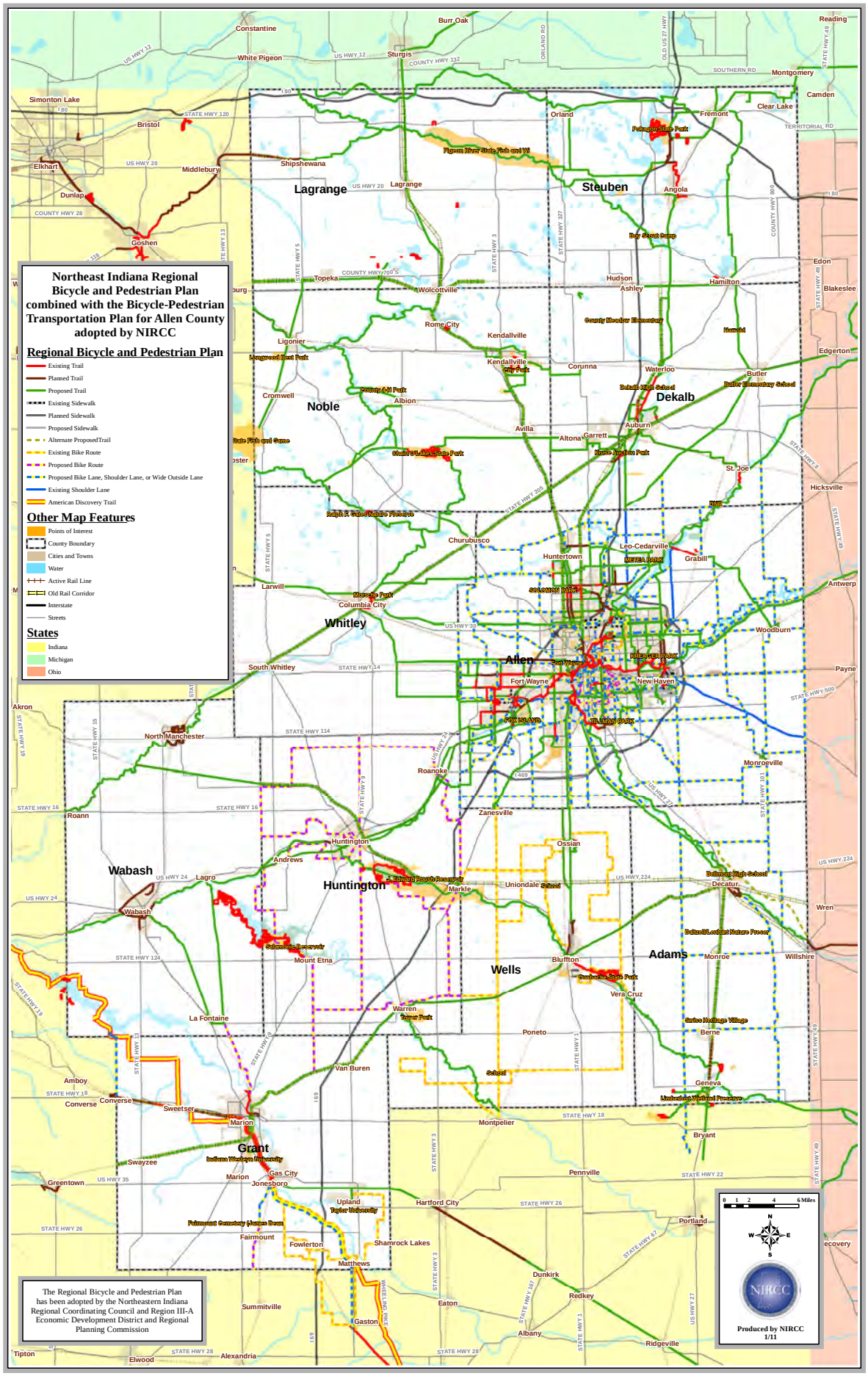
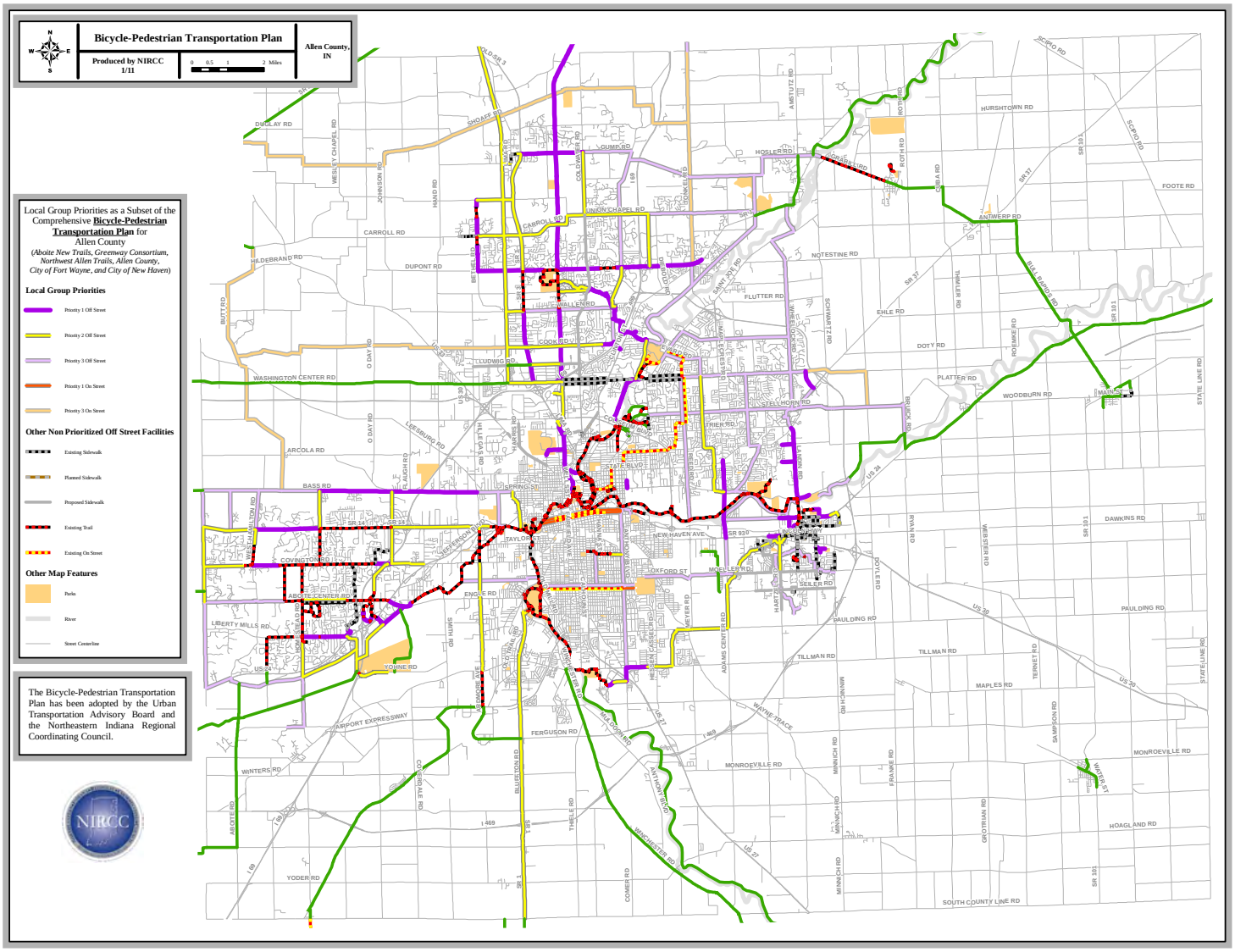


Figure 72

Regional Bicycle and Pedestrian Plan

Figure 73

Local Group Priorities of The Comprehensive Bicycle-Pedestrian Transportation Plan



Priority 3 corridors, identified by the light purple color for the off street facilities and the light orange color for the on street facilities, are the lowest priority. These corridors are more conceptual in nature. These corridors are identified on local group and governmental agency plans but there is no foreseeable source of funding for completing them. If opportunities arise, these are corridors that may change in priority levels. At this point these corridors are not being actively pursued.

This past fiscal year NIRCC has participated in two planning efforts lead by the City of Fort Wayne. NIRCC staff is on the Bicycle Planning Team which is charged with developing the Bike Fort Wayne plan for the City of Fort Wayne and the Sidewalk Planning Team which is charged with developing the Walk Fort Wayne Plan for the City of Fort Wayne.

SUMMARY

The Transportation Summary Report provides an overview of some of the transportation planning activities performed by the Northeastern Indiana Regional Coordinating Council (NIRCC) during Fiscal Year 2011. The Summary Report highlights a majority of the transportation planning activities conducted and the products produced by NIRCC during Fiscal Year 2011. The document provides a basic overview of the transportation planning activities, data and products produced as part of the transportation planning process. Various types of traffic data integral to the planning process are collected and processed. Traffic volume and classification data are two examples of this basic information. The vehicle miles of travel provides a mechanism for assessing travel demand growth within the region.

Traffic studies help monitor the transportation system, identify problem areas and assist in the development of viable solutions. Crash analyses, intersection analyses, and different types of corridor studies serve to improve safety and efficiency. Through a cooperative and coordinated process the cities of Fort Wayne and New Haven, Allen County, Citilink, and the State of Indiana review the information and recommend improvements. The multimodal nature of the planning process includes public transit, para-transit, bicycle and pedestrian travel. The projects listed in the Fiscal Year 2012-2015 Transportation Improvement Program (TIP) represent the improvements selected for implementation. The Fiscal Year 2012-2015 TIP can be found on NIRCC's website

The staff of the Northeastern Indiana Regional Coordinating Council will continue to monitor the transportation system striving to provide a complete transportation system. A system that enhances efficiency, promotes safety, and maintains a conscious regard for the quality of life. For this goal to become a reality, constant monitoring of the existing system must occur. Staff is continually collecting data on the existing system to support the short-range planning process and to identify the challenges and opportunities of the future.

The primary purpose of this report is to familiarize the readers with the techniques used by NIRCC and the resulting products to promote a more functional transportation process in our community. However, this report only provides a summary of the wide variety of activities conducted by NIRCC and its staff. NIRCC is constantly striving to provide relevant information to the public and communities it serves to support a decision-making process that improves the transportation system.

If you would like additional information concerning the studies and reports referenced in this document or have questions regarding the transportation planning process, please contact NIRCC staff at (260) 449-7309. NIRCC also maintains a website that contains many of the transportation planning documents and products at www.nircc.com. The site also contains an amended Transportation Improvement Program (TIP), 2030-II Transportation Plan, and many other documents and staff contact information.

Transportation Summary Report Fiscal Year 2011

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