

2030-II Transportation Plan

Technical Report
Fort Wayne-New Haven-Allen County
Metropolitan Planning Area
as Amended

September 2010



Northeastern Indiana Regional Coordinating Council

RESOLUTION

A RESOLUTION OF THE NORTHEASTERN INDIANA REGIONAL COORDINATING COUNCIL, CERTIFYING THAT THE 2030-II TRANSPORTATION PLAN AS AMENDED FOR THE FORT WAYNE-NEW HAVEN-ALLEN COUNTY METROPOLITAN PLANNING AREA, ALLEN COUNTY, INDIANA CONFORMS TO THE REQUIREMENTS SET FORTH IN THE 1990 CLEAN AIR ACT (CAAA)

WHEREAS, The Northeastern Indiana Regional Coordinating Council is the Metropolitan Planning Area representing the Fort Wayne Urbanized areas, as well as Allen, DeKalb and Wells Counties in Indiana.

WHEREAS, Allen County is currently designated as a maintenance area for ozone by operation of the law under the 1990 Clean Air Act,

WHEREAS, The Northeastern Indiana Regional Coordinating Council is designated as the Lead Agency for air quality planning as it relates to transportation planning and mobile source emissions,

THEREFORE BE IT RESOLVED, that the Northeastern Indiana Regional Coordinating Council herewithin certifies that the 2030-II Transportation Plan as Amended conforms to the broad intentions of achieving and maintaining the National Ambient Air Quality Standards (NAAQS).

That the 2030-II Transportation Plan as Amended conformity determinations is based upon the most recently available estimates of emissions and which have been determined from the most recently available population, employment, travel and congestion estimates as determined by the NIRCC using its Travel Demand Forecasting Model and VMT estimation procedures.

That a list of exempt and non-exempt projects in the 2030-II Transportation Plan as Amended has been circulated to the Interagency Consultation Group and there is concurrence on the project exempt/non-exempt status.

That no project in the 2030-II Transportation Plan as Amended will cause delay in the implementation of any required and identified TCM.

That the 2030-II Transportation Plan as Amended for the Fort Wayne-New Haven-Allen County Transportation Management Area contributes to the annual emission reductions consistent with sections 182(b) (1) and 187 (1) and 187 (a) (7) of the 1990 Clean Air Act.

That the MPO is aware of no goal, directive, recommendation, or project identified in the 2030-II Transportation Plan as Amended which contradicts in a negative manner any specific requirements or commitments of the applicable state implementation plan (SIP) for the plan.

THEREFORE BE IT RESOLVED, that the Northeastern Indiana Regional Coordinating Council Urban Transportation Advisory Board on July 13, 2010, find the 2030-II Transportation Plan as Amended to conform in all aspects to the requirements of the 1990 Clean Air Act Amendment and 40 CFR Parts 51 and 93.

RESOLVED THIS 13TH DAY OF July, 2010.

THE NORTHEASTERN INDIANA REGIONAL COORDINATING COUNCIL



Daniel S. Avery, Executive Director

Table of Contents

Chapter 1 -Introduction	1
Historical Background	1
SAFETEA-LU Broad Transportation Planning Areas	7
Goal of the Transportation Plan	19
Study Process	19
Report Organization	20
Chapter 2 -Base and Planning Year Socioeconomic Data	23
Base Year 2000 Estimates	27
Population	28
Dwelling Units	28
Automobile Ownership	28
Employment	28
Planning Year 2030 Projections	29
Population	31
Dwelling Units	35
Automobile Ownership	35
Employment	35
Summary	36
Chapter 3 -Travel Forecast:2030 Travel Demands	37
Travel Forecasting Process	37
Analysis of Regional Activity Forecasts	39
Trip Generation	42
Trip Distribution	43
Evaluation of the Transportation System	44
Existing plus Committed Highway System	44
Transit System	45
Conclusion	49
Chapter 4 -Evaluation of Alternative Transportation Sketch Plans	53
Alternative Network Testing	54
Roadway Design Standards	54

Highway Alternatives	54
Transit Alternatives	57
Chapter 5 -Selection of the Recommended Plan _____	63
Documentation of Public Participation.....	63
Environmental Justice.....	66
Defining and Identifying Minority and Low -Income Populations	67
Public Involvement Strategies for Engaging Minority and Low-Income Populations	68
Measures for Evaluating Benefits and Burdens of Transportation Plans and Projects	76
Factors Influencing Plan Selection.....	79
Livable Communities	80
Financial Analysis	82
Chapter 6 -The Selected Plan _____	83
Goal of the Transportation Plan	83
The Recommended Plan	87
Highway Policies.....	92
Transit Improvements.....	92
Public Transit Policies	93
Public Transit Improvement Projects.....	94
Specific Improvemens from Transit Development Plan	96
Identified Transportation Strategies	96
Bicycle, Pedestrian and Enhancement Improvements	96
Financial Plan	97
Highway	97
Local.....	98
Transit.....	100
Federal Funding	100
State Funding.....	101
Local Funding.....	101

Summary of Financial Plan	101
Other Transportation Modes	102
Bicycle and Pedestrian Plan.....	102
Design Classification for Routes	106
Transportation Enhancement Activities	117
Intelligent Transportation System(ITS).....	118
ITS Completed and Planned Improvement Projects	118
Summary of Selected Plan.....	120
Chapter 7 -Safety Management in Transportation Planning_____	121
Introduction.....	121
Source of Data	121
Quality of Data	121
Analysis of Data	122
Use of Data	123
Project Selection and Prioritization	128
Existing Project Analysis	129
Transit Safety.....	129
Conclusion.....	130
Chapter 8 -Environmental Mitigation_____	131
Methodology	131
Common Environmental Issues	132
Other Environmentally Sensitive Sites	147
Transportation Plan Analysis Summary.....	147
List of Consulting Agencies.....	150
Environmental Document Data Citations.....	151
Input on the 2030-II TP by the Consulting Agencies.....	156
Chapter 9 -Freight _____	159
Freight Movement in Allen County.....	159
Rail	159
Air.....	162
Roadways.....	164

Chapter 10 -FutureEfforts and Implementation_____	169
Status of Previous Transportation Plans.....	169
Current 2030 Transportation Plan.....	171
Future Efforts.....	175
Congestion Management System.....	175
Access Management.....	176
Alternative Travel Methods.....	176
Corridor, Site Impact, Intersection Analysis and Feasibility Studies.....	176
Security.....	177
Implementation.....	177

Figures

Figure 1 : Railroad System and Rivers in the Metropolitan Planning Area_____	4
Figure 2 : Fort Wayne/New Haven/Allen County Metropolitan Planning Area_____	6
Figure 3 : Employment Locations_____	24
Figure 4 : Employment Changes for 2010_____	25
Figure 5 : Traffic Analysis Zones_____	26
Figure 6 : Floodplains_____	32
Figure 7 : Industrial Parks and Sites_____	33
Figure 8 : Travel Forecasting Procedure _____	38
Figure 9 : Existing Network plus Completed Projects from the current 2030 Plan _____	46
Figure 10:Existing Transit System_____	50
Figure 11:Transit System Accessibilty _____	51
Figure 12:Network Deficiencies if no Projects were Completed_____	52
Figure 13:Network Deficiencies after 2030-II Funded Projects_____	58
Figure 14:Network Deficiencies after 2030-II Funded & Illustrative Projects _____	59
Figure 15:Location of Citizen Participation Meetings _____	65
Figure 16:Minority Population Profile _____	69
Figure 17:Hispanic Population Profile _____	70
Figure 18:Low-Income Population Profile _____	71

Figure 19:Combined Environmental Justice Population Profile _____	72
Figure 20:Transit Routes 1/2 Mile Buffer _____	73
Figure 21:Neighborhood Associations _____	75
Figure 22: Implementation of Transportation Plans (1971-present) _____	78
Figure 23:Recommended 2030-II Transportation Plan _____	84
Figure 24:Recommended 2030-II Transit System _____	85
Figure 25:Recommended 2030-II Bicycle and Pedestrian Plan _____	86
Figure 26:Comprehensive Bicycle and Pedestrian Plan _____	104
Figure 27:Northeast Indiana Regional Bicycle and Pedestrian Plan _____	109
Figure 28:Recommended 2030-II Bicycle and Pedestrian Plan _____	110
Figure 29:Current Trail System _____	114
Figure 30:Water Features _____	134
Figure 31:Potential Wetlands _____	135
Figure 32:Water Features and Impaired Streams _____	136
Figure 33:Watersheds _____	137
Figure 34:Flood Control _____	138
Figure 35:Parks and Significant Protected Natural Areas _____	143
Figure 36:Historic Features _____	144
Figure 37:Kessler Plan - Park and Boulevard System _____	145
Figure 38:Land Fills, Brownfields, and Superfund Sites _____	148
Figure 39:Transportation Infrastructure _____	160
Figure 40:Major Modal Activity Centers _____	161
Figure 41:Railroad Destinations _____	163
Figure 42:Regional Hub _____	165
Figure 43:Truck Route System _____	166
Figure 44:Truck Volumes _____	168
Figure 45:Implementation of Transportation Plans (1971-present) _____	170
Figure 46:Allen County NHS and Hospitals _____	178
Figure 47:Allen County NHS and Fire Stations _____	179

Tables

Table 1 : Summary of Regional Socioeconomic Variables_____	40
Table 2 : Summary of Regional Socioeconomic Variables-Air Quality Years_____	40
Table 3 : Travel Demand Forecast Regional Summary_____	43
Table 4 : Basic Lane Capacities_____	45
Table 5 : VMT and VHT Comparison_____	56
Table 6 : VMT Per-Capita_____	56
Table 7 : Urban Transportation Advisory Board Meetings_____	64
Table 8 : Citizen Participation Meetings_____	64
Table 9 : Bicycle -Pedestrian Projects_____	115
Table 10:Impaired Waters in Allen County_____	139
Table 11:Summary of # of Projects within Enviromental Points of Interest_____	149

Chapter 1

INTRODUCTION

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. This report is the culmination of a process that has resulted in the update of the current 2030 Transportation Plan which effectively responds to these changing needs. The update is titled the 2030-II Transportation Plan and this technical report summarizes the work performed and the recommendations developed in the preparation of the transportation plan update. A 2030-II Transportation Plan Brochure is also available for distribution.

Historical Background

The Fort Wayne Urbanized Area's geographical location is of prime importance to its significant role in providing a comprehensive transportation system. Located in the northeastern corner of Indiana, the urbanized area serves as the major transportation center for northeastern Indiana, northwestern Ohio and southern Michigan.

The importance of Fort Wayne's location was understood by the earliest settlers who took advantage of the access afforded them by the junction of three major rivers - the St. Mary's, St. Joseph, and Maumee. The early development of the transportation system in Fort Wayne focused on the utilization of the three rivers as the primary means of travel. The eventual development of canals through Fort Wayne in the early 1840's further solidified the transportation importance of this area. The river and canal systems attracted businesses and industries in search of affordable accessibility to existing and expanding markets.

When railroads were developed during the period from 1850 to 1870, they added a new dimension to travel. The use of the rivers and canals for transportation declined. The railroads began to take over as the major factor affecting commercial and industrial development as well as the growth of the urban area itself. During this period of the city's history, its population was growing by 35 percent every 10 years.

Although the central city was growing rapidly, the road network as developed in its earliest days remained basically the same, with transportation movement within the city aided by a light rail system. In the city's earliest days the river and rail systems were an asset to its growth and development, but with the introduction of the automobile and truck, the very facilities which had once aided travel now hampered it with structures built for an earlier era.

The post-World War II era saw the establishment of federal loan mortgage insurance programs. The city then began to expand outward, pushing away from the solidarity of the central city. One response to the city's increasing size was to construct a bypass around the northern edge in the 1950s. The bypass re-routed US 30, a historically important route originally developed as the Lincoln Highway. This route remains critically important not only to the local area, but also serves as a regionally significant corridor.

The bypass attracted many commercial and industrial developments north of the central city. This highway is known locally as Coliseum Boulevard (SR 930). Rural roads in the north quickly turned into major thoroughfares for residential and commercial traffic. This trend continues, although at a reduced pace.

The transportation plan for the Fort Wayne-New Haven-Allen County Transportation Planning Area is designed around a "bypass plus arterial" highway network and expansion of the radial transit system. In previous transportation plans, a major highway improvement project was proposed to develop a "bypass" around the eastern portion of the urbanized area. This project, now known as Interstate 469, was completed in 1995. The completion of Interstate 469 has significantly improved traffic flow around the urbanized area. The "arterial" component includes various improvements to the primary arterials such as Hillegas Road, Ardmore Avenue, Maplecrest Road and Adams Center Road.

In 2009, the Fort Wayne urbanized area continues to be faced with a variety of transportation problems associated with the growth of the past few decades. The street system within the urbanized area is located on narrow rights-of-way. An insufficient number of bridges combined with a predominantly radial thoroughfare system result in a majority of traffic traveling through the central business district of Fort Wayne.

The radial system also has created hazardous diagonal intersections with acute entry angles. There is a lack of continuity for many of the major arterials flowing north to south and east to west. Narrow bridges and narrow railroad underpasses have served to restrict traffic flow in the urbanized area. Acknowledged to be a major industrial center, Fort Wayne has a large number of heavy trucks and trucking terminals. The area is also emerging as a warehousing and distribution center. These types of facilities place additional burdens on the transportation system. Figure 1 displays the current railroad system and rivers that affect mobility in the Metropolitan Planning Area.

Several major socioeconomic changes have occurred in the community during the 1970's and 1980's. The closing of two International Harvester production facilities that for years served as a major employment base for the Metropolitan Planning Area seriously affected the economic base. The International Harvester facility was a major anchor to the East End Industries located between the Cities of Fort Wayne and New Haven. In the mid 1980's, General Motors built a light duty truck assembly plant in southwest Allen County near the interchange of Interstates 69 and 469. This location was in an area where farming and other agriculturally related land uses were dominant. The 1.8 million square foot assembly plant and accessory developments quickly altered the surrounding landscape and impacted the transportation system.

The City of Fort Wayne has also, and continues to redevelop the downtown area through an Allen County / City of Fort Wayne Comprehensive Plan. Beginning in the early 1980's Fort Wayne's skyline changed with the construction of Summit Square, a multi-story office building. The downtown redevelopment efforts have gained additional momentum in the past few years. The Grand Wayne Convention Center and Allen County Public Library both underwent major expansion projects in downtown Fort Wayne. The Harrison Square project is currently underway developing an area downtown, constructing a new hotel, condominiums, commercial shops, and a new major league Class A baseball stadium. Renaissance Pointe is a housing project currently under development just south of the downtown area. Additional projects to attract housing and commercial developments are currently in the planning phase.

Other significant developments within the Metropolitan Planning Area have also affected socioeconomic growth and travel patterns. The Allen County War Memorial Coliseum and Exhibition Center continues to expand in the number of events held each year. The Indiana University Purdue University at Fort Wayne and Ivy Tech campuses continue to expand their facilities and educational programs. A major regional retail center that includes Jefferson Pointe, Apple Glen and Park West located at the intersection of Jefferson Road and Illinois Road, west of the Fort Wayne Central Business District, has developed into a major traffic generator.

The construction of new housing in southwest and northern Allen County has been significant. New industrial parks have developed in several areas including northwest Fort Wayne and Allen County, the City of New Haven, and around the Fort Wayne International Airport. Commercial and retail development has proliferated along the Interstate-69 and continues

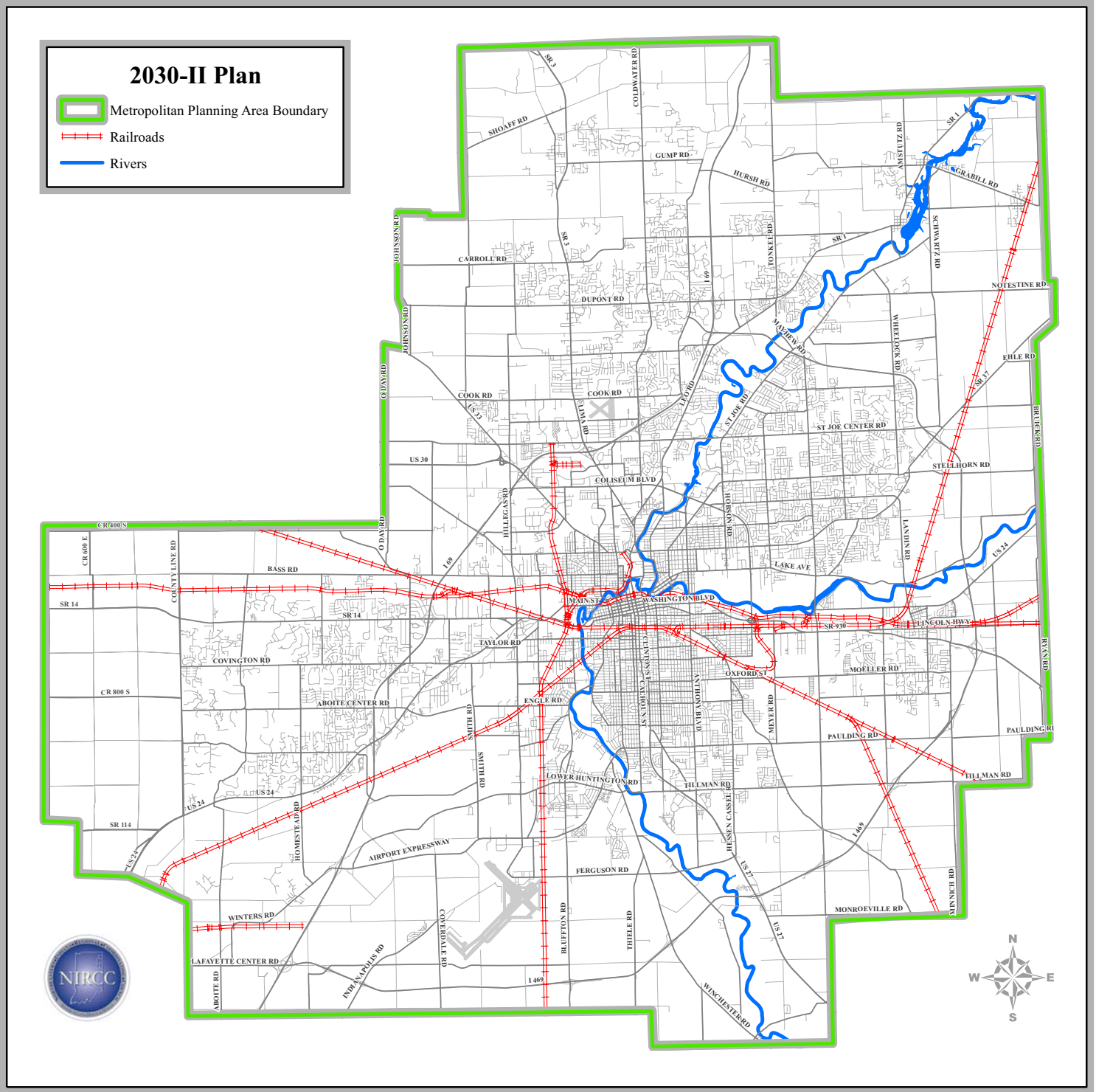


Figure 1
Railroad System and Rivers in the Metropolitan Planning Area

to develop. A substantial commercial and retail area along Coliseum Boulevard (SR 930), Coldwater Road and Clinton Street, that includes Glenbrook Square, Northcrest, Coldwater Crossing, Glenbrook Commons and other shopping centers, continues to be a major shopping, entertainment, and employment destination. A major medical center at the Interstate-69 and US 24 interchange has had a major impact on traffic and serves as a catalyst for future growth. Several large medical facilities have also been completed around the Interstate-69 and Dupont Road (SR 1) Interchange. These medical facilities and related medical support services are expected to substantially expand in the area surrounding these two interchanges.

The Community's vibrant growth and socioeconomic change fosters the need to reconsider and re-evaluate the future needs of the transportation system. A transportation plan serves as the dynamic tool necessary to guide decision making concerning project selection, implementation, and community growth. Therefore, it must be flexible enough to accommodate change, yet provide a solid base as decisions are made about our present and future transportation system. The long range transportation planning process, as administered for the Fort Wayne/New Haven/Allen County Metropolitan Planning Area, strives to achieve such a balance between flexibility and commitment (see Figure 2).

The reality that limited resources and environmental concerns will not support massive highway improvement projects is a recognized concept of the transportation planning process. The emphasis on maximizing the efficiency of the existing system is evident in the policies and programs resulting from such a process. The development and implementation of the Year 2030-II Transportation Plan seriously considers transportation policies that reduce congestion and improve system efficiency through non-traditional measures. Policies aimed at reducing congestion through better management of traffic operations, access management, bicycle\pedestrian facilities, and enhanced transit services were formulated. These policies are components of the Congestion Management System.

A complete and comprehensive review of previous transportation plans was undertaken as a component of the 2030-II Transportation Plan update. Each project was scrutinized on its own merit as well as its ability to contribute to the efficiency of the overall plan. The plan represents a cooperative effort by the state, local governments, public transportation, and area residents. We are proud to present the "2030-II Transportation Plan."

SAFETEA-LU Broad Transportation Planning Areas

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) established new guidelines for the development and content of metropolitan transportation plans. These areas are incorporated into the transportation planning process for the Fort Wayne-New Haven-Allen County Metropolitan Planning Area. The inclusion of these areas helps to ensure the metropolitan planning process establishes a cooperative, continuous, and comprehensive framework for making transportation investment decisions. The broad areas are discussed below.

1) The metropolitan transportation planning process shall include the development of a transportation plan addressing no less than a 20-year planning horizon as of the effective date. In non-attainment and maintenance areas, the effective date of the transportation plan shall be the date of a conformity determination issued by the FHWA and FTA.

The 2030-II Transportation Plan was approved by the NIRCC board in 2009 establishing a 20-year planning horizon.

2) The transportation plan shall include both long-range and short-range strategies/actions that lead to the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods in addressing current and future transportation demand.

The 2030-II Transportation Plan includes both long- and short-range policies and projects integrating highway, transit, bicycle and pedestrian facilities. The integration of air travel, motor freight and rail transportation is recognized by the transportation planning process and addressed in the Transportation Plan. Products of the planning process such as the congestion management program and transit development plan and their strategies, policies and projects are included as components of the Transportation Plan. Policies such as access management and transit coordination are on-going implementation activities. See chapter 6 for the highway, transit, bicycle and pedestrian facilities, and chapter 9 for the discussion of freight.

3) The MPO shall review and update the transportation plan at least every four years in air quality non-attainment and maintenance areas and at least every five years in attainment areas to confirm the transportation plan's validity and consistency with current and forecasted transportation and land use conditions and trends, and to extend the forecast period to at least a 20-year planning horizon.

The 2030-II Transportation Plan was approved in 2009. The majority of the Metropolitan Planning Area is located in Allen County, and Allen County is an air quality maintenance area. The 2030 Transportation Plan was originally approved in 2005. The plan was updated in 2007 to meet SAFETEA-LU requirements and amended in 2008. The plan update meets the four year requirement.

4) In metropolitan areas that are in non-attainment for ozone or carbon monoxide, the MPO shall coordinate the development of the metropolitan transportation plan with the process for developing transportation control measures (TCMs) in a State Implementation Plan (SIP).

Allen County is a maintenance area for the pollutant ozone. The Transportation Plan is able to meet conformity without the implementation of transportation control measures.

5) The MPO, the State(s), and the public transportation operator(s) shall validate data utilized in preparing other existing modal plans providing input to the transportation plan. In updating the transportation plan, the MPO shall base the update on the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity. The MPO shall approve transportation plan contents and supporting analyses produced by a transportation plan update.

The transportation planning process including the development of the Transportation Plan includes participation by the State through representatives of the Indiana Department of Transportation and by the public transportation operator through representatives of the Fort Wayne Public Transportation Corporation. Representatives of these agencies are members of the Urban Transportation Advisory Board, the Board that oversees the metropolitan transportation planning process and development of the Transportation Plan. The development of the 2030-II Transportation Plan incorporates the latest available information for population, land use, travel, employment, congestion, and economic activity. The planning assumptions and socioeconomic data are well documented in the Plan. The MPO approved the planning assumptions as part of the development of the Transportation Plan. See chapter 5.

6) The metropolitan transportation plan shall, at a minimum, include:

a) The projected transportation demand of persons and goods in the metropolitan planning area over the period of the transportation plan.

The 2030-II Transportation Plan utilizes land use development assumptions to develop transportation demands of persons and goods in the metropolitan planning area to the horizon year of the Plan, 2030. The demands are projected through a traditional travel demand forecasting model. Projects and strategies are developed to address future transportation demands within the requirements of fiscal constraint. See chapter 6 for the list of recommended projects and appendix F for project costs.

b) Existing and proposed transportation facilities (including major roadways, transit, multimodal and intermodal facilities, pedestrian walkways and bicycle facilities, and intermodal connectors) that should function as an integrated metropolitan

transportation system, giving emphasis to those facilities that serve important national and regional transportation functions over the period of the transportation plan.

The 2030-II Transportation Plan includes existing and proposed highway, transit, pedestrian and bicycle facilities to provide an integrated metropolitan transportation plan. Emphasis is placed on facilities that serve national and regional functions. Access to intermodal sites and intermodal connectors are addressed in the development of projects and strategies. See chapter 6.

c) Operational and management strategies to improve the performance of existing transportation facilities to relieve vehicular congestion and maximize the safety and mobility of people and goods.

The transportation planning process and development of the transportation plan includes provisions to promote efficient system management and operation. The process includes intelligent transportation strategies for both highway and transit systems, pavement management, transit operations and alternate transit service options, safety management, congestion management and access management programs.

The intelligent transportation system strategies include motorist information sites, traffic operation improvements, and transit vehicle locator system with planned internet connectivity. The motorist alert dynamic message signs have been strategically placed on Interstate 69 to provide motorist advanced warning of pending traffic congestion so that they may alter their route to avoid lengthy delays. The City of Fort Wayne recently completed a major upgrade of their traffic signal operating system to improve efficiency. Projects continue to be developed to improve traffic flow through signal interconnection and intersection improvement. These types of projects promote transportation system efficiency and operation. See chapter 5.

The management systems including pavement, bridge, safety and congestion all lend to improved system efficiencies. The Transit Development Plan, which serves as a transit management system, is a tool used to maximize system efficiency and improve transit operations. These programs are either administered directly through activities of the Metropolitan Planning Organization or conducted by the member local governments. The management systems attempt to maximize the efficiency of available resources by monitoring the condition of the transportation system, developing strategies to mitigate problems, and implementing solutions. The safety management system program, congestion management system and Transit Development Plan are two examples of how these systems improve efficiency.

The Congestion Management Process (CMP), and companion access management program, develop and implement strategies to mitigate congestion and maximize the efficiency of the existing system. The CMP includes conducting corridor studies

and developing corridor protection plans. The congestion management strategies identified in these plans may include traffic operation and intersection modifications, transit usage, access management, and other transportation improvements. The access management program maintains transportation system travel efficiency and corridor preservation. See appendix A.

The transit improvements identified through the Transit Development Plan accommodate the investigation of various types of transit service. Reviewing options for providing and expanding transit service allows for the evaluation of the most efficient method. Citilink has recently initiated service frequency improvement on selected routes and investigates methods to provide service to outlying suburban medical facilities and shopping centers. Citilink will continue to explore transit service provision options to improve transit service levels and maximize transit efficiency.

The safety management program monitors crash data and identifies hazardous locations through a process that incorporates both frequency and crash rates to identify and rank hazardous locations. Locations are reviewed by local officials, engineers, technical committees, and law enforcement officers. Safety improvements are identified and projects are initiated including the consideration of low-cost and/or short term solutions. Scheduled improvements are also reviewed to ensure safety strategies are included. See chapter 7.

These programs implement transportation improvements and investigate new approaches to solving transportation problems by engaging technological advances. Through the implementation of the management systems, transit improvements, and intelligent transportation technology, the transportation plan and planning process promotes safe and efficient system management and operation. See chapter 10.

d) Consideration of the results of the congestion management process in TMAs that meet the requirements of this subpart, including the identification of SOV projects that result from a congestion management process in TMAs that are non-attainment for ozone or carbon monoxide.

The results of the congestion management process are considered in the development of the Transportation Plan. The corridor protection plans and corridor studies help to determine project need and project scope. Operational improvements are considered prior to added capacity. Single Occupancy Vehicle analysis was conducted on added capacity projects as part of the 2030-II Transportation Plan. The Metropolitan Planning Area and Allen County were re-designated to “attainment” status in 2007.

e) Assessment of capital investment and other strategies to preserve the existing and projected future metropolitan transportation infrastructure and provide for multimodal

capacity increases based on regional priorities and needs. The metropolitan transportation plan may consider projects and strategies that address areas or corridors where current or projected congestion threatens the efficient functioning of key elements of the metropolitan area's transportation system.

The development of the Transportation Plan and selected projects include analyzing alternatives to determine the best capital investment. Operation and management strategies including ITS, traffic operation improvements, bridge management, pavement management, and transit operations are continually evaluated through the transportation planning process. Elements of this evaluation are incorporated into the Transportation Improvement program and Transportation Plan. Access management, bicycle and pedestrian facilities, transit service improvements and traffic operation improvements are examples of strategies and capital investments, decided by representatives throughout the Metropolitan Planning Area, based on regional priorities and needs. Land use development patterns and economic development activities directly influence the decision making process. Commitments by local and state governments and transportation agencies to maintain and preserve existing infrastructure (i.e. bridge management, pavement management, transit fleet replacement, etc.) support the preservation of existing and projected infrastructure.

The focus of this plan includes discussion on a wide array of strategies for alleviating future congestion in addition to the traditional solutions of new road construction and widening projects. The new strategies include scaled-down widening projects, such as adding a third or fifth lane for left-turning traffic instead of widening to four or six lanes. Access control measures and congestion management techniques are additional tools addressed as components of this plan. The inclusion of management systems projects and efforts to combine highway, land use and transit service together to relieve congestion and improve efficiency, represent additional strategies considered in the development of this plan, and are components of the planning process.

f) Design concept and design scope descriptions of all existing and proposed transportation facilities in sufficient detail, regardless of funding source, in non-attainment and maintenance areas for conformity determinations under the EPA's transportation rule (40 CFR part 93). In all areas (regardless of air quality designation), all proposed improvements shall be described in sufficient detail to develop cost estimates.

All transportation projects in the 2030-II Transportation Plan are defined in sufficient detail to perform the necessary analyses for conformity determinations and develop cost estimates.

g) A discussion of types of potential environmental mitigation activities and potential areas to carry out these activities, including activities that may have the greatest potential to restore

and maintain the environmental functions affected by the metropolitan transportation plan. The discussion shall be developed in consultation with Federal, State, and Tribal land management, wildlife, and regulatory agencies. The MPO may establish reasonable timeframes for performing this consultation.

The 2030-II Transportation Plan includes Chapter 8 that addresses potential environmental mitigation activities that allowed for consultation with Federal, and State land management, wildlife, and regulatory agencies. This activity will be an on-going component of the transportation planning process.

h) Pedestrian walkway and bicycle transportation facilities in accordance with 23 U.S.C. 217(g);

The Transportation Plan includes an illustrative Bicycle and Pedestrian Plan that supports the expansion of trails, sidewalks, and other bicycle facilities including the development of bike lanes. See chapter 6.

i) Transportation and transit enhancement activities, as appropriate.

The transportation planning process incorporates transportation and transit enhancement activities. NIRCC has prepared and documented a bicycle and pedestrian plan that provides the planning support to implement transportation enhancement activities. NIRCC supported the Transit Development Plan and incorporates the identified strategies and projects into the Transportation Plan. When practical, identified enhancement activities are incorporated with other transportation improvements. The Transportation Improvement Program includes enhancement activities including bicycle and pedestrian projects, transit improvements, and highway projects.

j) A financial plan that demonstrates how the adopted transportation plan can be implemented;

i) For purposes of transportation system operations and maintenance, the financial plan shall contain system-level estimates of costs and revenue sources that are reasonably expected to be available to adequately operate and maintain Federal-aid highways (as defined by 23 U.S.C. 101(a)(5) and public transportation (as defined by title 49 U.S.C. Chapter 53).

Local governments predominantly rely on Motor Vehicle Highway (MVH), Local Roads and Streets (LRS), and local wheeltax funds for highway maintenance, administration, and construction expenditures. Additional funds such as Economic Development Income Tax (EDIT) and County Option Income Tax (COIT) are also used for highway maintenance and construction projects. The construction expenditures fund local construction and reconstruction projects, and provide local-matching funds for federally funded

projects. The remaining funds are for operation, administration, and maintenance costs.

A forecast of federal funding available to the Fort Wayne urbanized area for the next 20 years was also completed at this time. This estimate was based on historical federal funding practices. Currently, the Fort Wayne urbanized area receives approximately 8.9 million dollars in federal funds each year. This equates to approximately 290 million dollars in federal funds for the urban area throughout the span of the transportation plan.

Local governments including Allen County, City of Fort Wayne, and City of New Haven have annual revenues of 22.1 million dollars dedicated to transportation operations, maintenance, and construction. In addition, Economic Development Income Taxes generate millions of dollars each year of which a substantial portion is dedicated to highway construction projects. The amount of these funds spent on transportation projects varies from year to year. On average, local governments spend at least 10 million dollars a year on construction and reconstruction projects. This equates to approximately 281 million dollars for the twenty year period of the plan. The majority of available funds 12.1 are utilized for maintenance and operation. These funds are sufficient to adequately maintain the existing and future infrastructure.

- ii) For the purpose of developing the metropolitan transportation plan, the MPO, public transportation operator(s), and State shall cooperatively develop estimates of funds that will be available to support metropolitan transportation plan implementation, as required under § 450.314(a). All necessary financial resources from public and private sources that are reasonably expected to be made available to carry out the transportation plan shall be identified.

NIRCC, Citilink, and the Indiana Department of Transportation work cooperatively on the development of the Transportation Plan. This includes the estimation of available funds and projects that can reasonably be implemented. A major component of the 2030-II Transportation Plan is a list of projects on the INDOT system based on revised project costs and revenue projections.

- iii) The financial plan shall include recommendations on any additional financing strategies to fund projects and programs included in the metropolitan transportation plan. In the case of new funding sources, strategies for ensuring their availability shall be identified.

The financial plan for the 2030-II Transportation Plan utilizes traditional sources of highway and transit revenues. Non-traditional funding sources of additional financing strategies are not currently contemplated as revenue sources for the transportation projects identified in the Plan.

- iv) In developing the financial plan, the MPO shall take into account all projects and strategies proposed for funding under title 23, U.S.C., title 49, U.S.C., Chapter 53, or with other Federal funds; State assistance; local sources; and private participation. Starting December 11, 2007, revenue and cost estimates that support the metropolitan transportation plan must use an inflation rate(s) to reflect “year of expenditure dollars” based on reasonable financial principals and information, developed cooperatively by the MPO, State(s), and public transit operator.

The financial plan for the 2030-II Transportation Plan includes all proposed projects and strategies. The financial plan for the 2030-II Transportation Plan identifies specific costs for each project and related phase of project development. The project costs and available revenues are developed utilizing current dollars. This process is considered understandable, reasonable and defensible when compared to a financial plan that attempts to speculate future project costs and estimate future available revenues. The financial plan developed for future transportation plans will consider alternative revenue and cost estimation procedures that use an inflation rate(s) to reflect year of expenditure project costs and anticipated revenues.

- v) For the outer years of the metropolitan transportation plan (i.e., beyond the first 10 years), the financial plan may reflect aggregate cost ranges/cost bands, as long as the future funding sources(s) is reasonably expected to be available to support the projected cost ranges/cost bands.

The financial plan for the 2030-II Transportation Plan identifies specific costs for each project and related phase of project development. Projects under local governmental jurisdictions were identified and the cost of each project was developed. Costs were estimated for preliminary engineering, right-of-way acquisition, and construction activities. Projects were banded for the years of 2009 through 2015, 2016 through 2020, and 2021 through 2030. Project cost estimates for the years 2009 through 2015 are based on current costs, developed for the Transportation Improvement Program (TIP) utilizing a 3% annual inflation rate to the year of expenditure. Projects cost estimates for the years 2016 through 2030, were adjusted based upon an average annual growth rate of 2.8 percent for each band. The rate is based on a historical trend for construction cost developed by the American Road and Transportation Builders Association, a leading source of transportation construction market research.

- vi) For non-attainment and maintenance areas, the financial plan shall address the specific financial strategies required to ensure the implementation of TCMs in the applicable SIP.

The Metropolitan Planning Area is a maintenance area. The State Implementation Plan does not include any specific TCMs for Allen County negating a need for addressing any specific financial strategies for implementation.

- vii) For illustrative purposes, the financial plan may (but is not required to) include additional projects that would be included in the adopted transportation plan if additional resources beyond those identified in the financial plan were to become available.

The 2030-II Transportation Plan includes a list of illustrative projects and these projects are not included in the financial plan.

- viii) In cases that the FHWA and the FTA find a metropolitan transportation plan to be fiscally constrained and a revenue source is subsequently removed or substantially reduced (i.e., by legislative or administrative actions), the FHWA and the FTA will not withdraw the original determination of fiscal constraint; however, in such cases, the FHWA and the FTA will not act on an updated or amended metropolitan transportation plan that does not reflect the changed revenue situation.

This situation is not currently applicable to the 2030-II Transportation Plan.

7) The MPO shall consult, as appropriate, with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan. The consultation shall involve, as appropriate:

- (1) Comparison of transportation plans with State conservation plans or maps, if available; or
- (2) Comparison of transportation plans to inventories of natural or historic resources, if available.

The SAFETEA-LU regulations expand the environmental factor to “Protect and enhance the environment, promote energy conservation, improve the quality of life, and promote consistency between transportation improvements and State and local planned growth and economic development patterns.” The goal of the 2030-II Transportation Plan is to achieve an efficient and safe transportation system for the movement of people and goods while simultaneously improving the economic and environmental conditions of the community. The implementation of such a system

will minimize energy consumption and reduce air pollution. Reductions in vehicle hours of delay, vehicle miles of travel, accident rates, and accident severity are measures by which the system can be evaluated. Energy conservation, protection of the environment and quality of life considerations are standard principles that guide project development and the decision-making process that's part of the transportation planning process. Engaging local land use planning and economic development agencies, and ensuring consistency with land use and economic development plans, is established in the planning assumptions that serves as the foundation of the Transportation Plan. The consultation process and environmental mitigation strategies will build upon these relationships.

The Northeastern Indiana Regional Coordinating Council has developed a Participation Plan that includes a process for consulting with State and local agencies responsible for land use management, natural resources, environmental protection, conservation, and historic preservation concerning the development of the transportation plan. The development of Transportation Plans has always included consultation with local land use management agencies and in consistent alignment with comprehensive plans. Transportation Plans have also been developed with due consideration for natural resources, environmental protection, conservation and historic preservation. The planning process has been expanded to include opportunities for consultation and a documented discussion of environmental mitigation strategies. The environmental mitigation process includes the comparison of transportation plans with maps of conservation areas, inventories of natural and historic resources, and other potential environmental areas. The Participation Plan is documented in appendix H in the 2030-II Transportation Plan. The Environmental Mitigation process is discussed in Chapter 7.

8) The metropolitan transportation plan should include a safety element that incorporates or summarizes the priorities, goals, countermeasures, or projects for the MPA contained in the Strategic Highway Safety Plan required under 23 U.S.C. 148, as well as (as appropriate) emergency relief and disaster preparedness plans and strategies and policies that support homeland security (as appropriate) and safeguard the personal security of all motorized and non-motorized users.

The SAFETEA-LU regulations separate transportation safety and security into two distinct factors: 1) increase the safety of the transportation system for motorized and non-motorized users; and 2) increase the security of the transportation system for motorized and non-motorized users. NIRCC has initiated the separation of these factors in the transportation planning process.

The Northeastern Indiana Regional Coordinating Council maintains a Safety Management System/Process that collects and monitors crash information to develop strategies that improve transportation safety. The safety process is discussed in the 2030-II Transportation Plan. See Chapter 7. The Safety Management System/Process is consistent with the Indiana Strategic Highway Safety Plan. The Indiana Strategic

Highway Safety Plan contains statewide priorities and goals but does not identify specific priorities, goals, countermeasures, or projects for the Metropolitan Planning Area. NIRCC has developed a solid working relationship with the Indiana Department of Transportation on safety programs and implementing safety projects and policies.

The transportation planning process has consistently championed safety as a major concern. The Safety Management System routinely reviews hazardous locations on the transportation system through cooperative efforts with local governments. Highway crash data is also obtained from the Indiana Department of Transportation to review and identify hazardous locations. Accident data is compiled from throughout the metropolitan area to determine high hazard locations. Accident studies are conducted for the high hazard locations, solutions developed, and recommendations are made to improve safety. Hazard elimination and safety funds (HSIP) are sought for the appropriate projects.

The SMS program also monitors rail-highway grade crossings and maintains an inventory of pertinent data for each location. This information supports the Indiana Department of Transportation rail-highway improvement program. Selected rail-highway crossing improvements in the metropolitan area are annually included in the Transportation Improvement Program. New rail-highway grade separation projects are also included in the transportation plan. These projects will improve safety for transit passenger, children riding school buses, passenger vehicles, pedestrians, and bicyclists.

The transportation planning process acknowledges the importance for improving pedestrian and bicycle safety. Projects developed in the Pedestrian and Bicycle Plan is designed to improve the safety for these modes of transportation. The recently completed projects at the Parnell Street Bridge and the Historic Wells Street Bridge provide pedestrians and bicyclists new pathways eliminating the need to cross and travel along high volume roadways. Proposed pedestrian/bicycle projects will promote safety in similar fashion. A project proposed to extend the River Greenway from Johnny Appleseed Park to Shoaff Park will provide a safe pathway linking activity centers including parks, residential housing, Memorial Coliseum, Memorial Stadium, Indiana University Purdue University Fort Wayne, and athletic\soccer fields to each other and existing pedestrian\bicycle paths.

Safety improvements to the highway system have corresponding safety benefits to the transit system. In addition, Citilink addresses safety issues concerning the transit system and is aware of the importance safety plays in overall passenger comfort. Several projects currently under construction are designed to improve security and customer safety at the transfer facility. The perception of a safe transit system is a great marketing tool. Citilink strives to maintain a safe transit system.

The Northeastern Indiana Regional Coordinating Council has established a working relationship with the Fort Wayne-Allen County Office of Homeland Security. The Fort Wayne-Allen County Office of Homeland Security is in the process of preparing

evacuation plans and identifying critical transportation infrastructure. NIRCC will provide assistance as requested and incorporate emergency relief and disaster preparedness plans and strategies as appropriate into the Transportation Plan and planning process.

NIRCC has identified the National Highway System (NHS) and Strategic Highway Network (STRAHNET) within the Metropolitan Planning Area. The National Highway System includes all primary routes that will likely be used for evacuation purposes. Interstate 69 is the only highway facility in the MPA on the Strategic Highway Network. Due to the importance of these primary routes, they are adequately addressed in the Transportation Plan.

9) The MPO shall provide citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan using the participation plan developed under § 450.316(a).

The Northeastern Indiana Regional Coordinating Council maintains an open planning process that encourages citizens, affected public agencies, representatives of public transportation employees, freight shippers, providers of freight transportation services, private providers of transportation, representatives of users of public transportation, representatives of users of pedestrian walkways and bicycle transportation facilities, representatives of the disabled, and other interested parties with a reasonable opportunity to comment on the transportation plan. The Participation Plan documents the process NIRCC will follow in administering the Metropolitan Transportation Planning Process including the development of the Transportation Plan and Transportation Improvement Program. All groups and interested parties are encouraged to attend and special efforts are directed at the identified groups above to ensure they are notified of opportunities to participate and comment. See chapter 9.

10) The metropolitan transportation plan shall be published or otherwise made readily available by the MPO for public review, including (to the maximum extent practicable) in electronically accessible formats and means, such as the World Wide Web.

The 2030-II Transportation Plan is available in electronically accessible formats and posted on the NIRCC website. Maps and other supporting documents are also posted on the site. These documents, including the 2030-II Transportation Plan, are posted in a manner that allows them to be easily downloaded.

11) A State or MPO shall not be required to select any project from the illustrative list of additional projects included in the financial plan under paragraph (f) (10) of this section.

The illustrative list of projects in the 2030-II Transportation Plan is intended to demonstrate transportation need and gain public comment. The State or MPO will not be required to select and implement any project from the list.

12) In non-attainment and maintenance areas for transportation-related pollutants, the MPO, as well as the FHWA and the FTA, must make a conformity determination on any updated or amended transportation plan in accordance with the Clean Air Act and the EPA transportation conformity regulations (40 CFR part 93).

The Northeastern Indiana Regional Coordinating Council has prepared an air quality conformity analysis for the 2030-II Transportation Plan. A conformity determination has been made in accordance with the Clean Air Act and the EPA transportation conformity regulations (40 CFR part 93). See appendix B.

Goal of the Transportation Plan

The goal of the transportation plan is to achieve an efficient and safe transportation system for the movement of people and goods while simultaneously improving the economic and environmental conditions of the community. The implementation of such a system will minimize energy consumption and reduce air pollution. Reductions in vehicle hours of delay, vehicle miles of travel, accident rates, and accident severity are measures by which the system can be evaluated.

As part of our goals and objectives we have included several performance measures to help insure the 2030-II Transportation Plan continues to meet the SAFETEA-LU and Air Quality standards. These measures include:

1. VMT per Capita-See Chapter 4, Table 6
2. Link Level of Service-see Chapter 10
3. Transit Accessibility-Chapter 6 & See Appendix G
4. Network Mobility-Chapters 4, 5, and 9(Freight)

Study Process

The study process used to develop the long-range transportation plan update was based upon the following work phases.

1. Forecast of Socioeconomic Data - Year 2030
2. Forecast Year 2030 travel Demand
3. Develop and Evaluate Alternative Projects
4. Refine the Selected Plan
5. Selection of the Recommended Plan

An inventory and analysis was conducted of existing and future socioeconomic data necessary to set the stage for plan development. The projected socioeconomic data allowed for the forecasting of future travel demands. These demands were analyzed on the transportation system as adopted in the current 2030 Transportation Plan and ultimately on the transportation system as proposed by the selected 2030-II Transportation Plan.

As a result of these analyses, several projects were identified which would eliminate or significantly improve problems with the existing road and transit networks. The list of projects were reviewed and screened by the Urban Transportation Advisory Board (UTAB). Alternative plans and concepts were developed and evaluated. Based upon the findings of this evaluation and the planning, policy, and engineering judgments of the Urban Transportation Advisory Board, Transportation Technical Committee, and Transit Planning Committee, a final plan was selected.

The technical work phases of the 2030-II Transportation Plan are documented more thoroughly in the following chapters. This report serves as a guide to, and a summary of, the technical background information produced during the plan update. For a comprehensive review of the long-range transportation planning process as it has evolved for the Fort Wayne/ New Haven/ Allen County area, please consult the *2030 Transportation Plan, 2025 Transportation Plan, Technical Report for the Fort Wayne-Allen County-New Haven Planning Area*, May 2000, *2015 Transportation Plan, Technical Report for the Fort Wayne-Allen County-New Haven Planning Area*, June 1996; *Allen County 2010: A Transportation Plan for the Metropolitan Area*, Technical Report, May 1992; *Fort Wayne/New Haven/ Allen County Long-Range Transportation Study Update(2005 Plan)*, Final Report, June 1986; *Fort Wayne/New Haven/ Allen County Long-Range Transportation Study Update (2000 Plan)*, Final Report, April 1981; and the *Fort Wayne-New Haven-Allen County Transportation Study,(1990 Plan)*, 1971. All of these reports were prepared by the Northeastern Indiana Regional Coordinating Council as part of the metropolitan transportation planning process.

Report Organization

The technical report documents the process for the long-range transportation plan as well as the plan itself. The report is organized into nine chapters:

Chapter 2 – discusses the base year and planning year socioeconomic data used to forecast future transportation needs and to identify improvements to meet those needs.

Chapter 3 – presents the travel forecasting procedures for the year 2030 transportation system. It describes in detail how these travel forecasts were developed and the significance of the findings.

Chapter 4 – documents the evaluation of the alternative transportation sketch plans. This section includes a discussion of new road projects and transit proposals, and the results of the network testing of the alternatives.

Chapter 5 – discusses the public and government agency input obtained throughout the development of the plan update. Factors that affected the selection of the recommended plan are presented. This chapter includes sections on public participation, environmental justice, SAFETEA-LU broad areas, and livable communities.

Chapter 6 – presents the selected 2030-II long-range transportation plan and recommended policies and improvements. This chapter includes the Pedestrian and Bicycle Plan and a discussion on Intelligent Transportation System technology for the metropolitan area.

Chapter 7 – Safety Management

Chapter 8 – Environmental Mitigation

Chapter 9 – Freight Management

Chapter 10 – presents some future implications and effects of the long-range transportation plan, status of previous plan implementation, and discusses new strategies for managing urban congestion.

Appendix A – Congestion Management Program

Appendix B – Air Quality Transportation Conformity Analysis/Determination

Appendix C – 2000 Socioeconomic Data

Appendix D – 2030 Socioeconomic Data

Appendix E – Roadway Design Standards

Appendix F – Local Project Cost

Appendix G – Coordinated Public Transit-Human Services Transportation
Plan for Allen County

Appendix H – Public Participation – Comments and Responses

Appendix I – Pedestrian component of the Transportation Plan\Bicycle
Parking Recommendation Policy

Chapter 2

BASE AND PLANNING YEAR SOCIOECONOMIC DATA

Reliable data for the base year (2000) and estimates of the planning year (2030) socioeconomic data are essential to the transportation planning effort. The travel demand models were initially tested and calibrated utilizing 1979 data. The model was subsequently re-evaluated for accuracy utilizing 1980, 1985 and 1995 socioeconomic conditions. As part of the development of the 2030-II Transportation Plan, the model was evaluated using the 2000 base year data. Reasonable results were obtained from modeling the 2000 data.

The planning year estimates were used to forecast future transportation needs and to identify transportation improvements necessary to meet those needs. The socioeconomic data developed for this study included estimates of population, dwelling units, auto ownership, and employment. Existing and projected land uses are an important input to the transportation plan due to the close relationship between land use and travel demands. The growth and location of future employment was determined utilizing existing employment as a template. The location of employment is one of the critical pieces of demographic information used for transportation planning purposes. The location of 2000 employment from census data is shown in Figure 3. Figure 4 illustrates the anticipated change in employment from 2000 to 2010.

The aggregate socioeconomic estimates were made for small areas within the Metropolitan Planning Area for planning purposes. These areas are referred to as traffic analysis zones (TAZs). Traffic analysis zones are designed to represent similar land uses and are utilized for travel demand forecasting. The traffic analysis zones are displayed in Figure 5. There are a total of 413 traffic zones in the Metropolitan Planning Area (MPA). In addition, there are 51 external stations that which represent points of entry and exit around the perimeter of the MPA. See figure 5.

The structure of the traffic analysis zones was based upon the following criteria:

1. The location and concentration of population and employment.
2. The availability of demographic, economic, land use and natural resource data.
3. The ability of the traffic zone boundary alignment to conform to major street alignments.

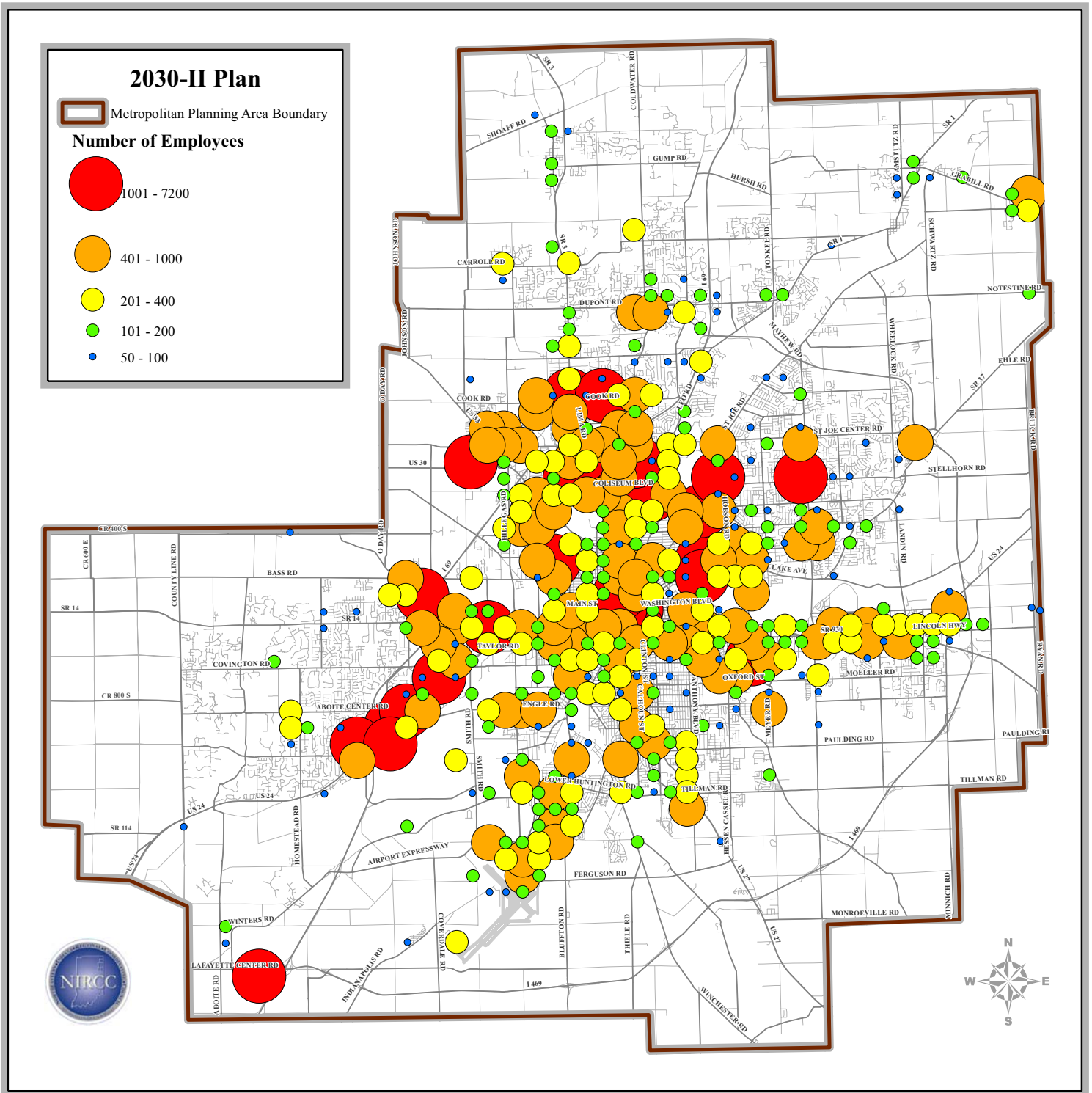


Figure 3

Employment Locations

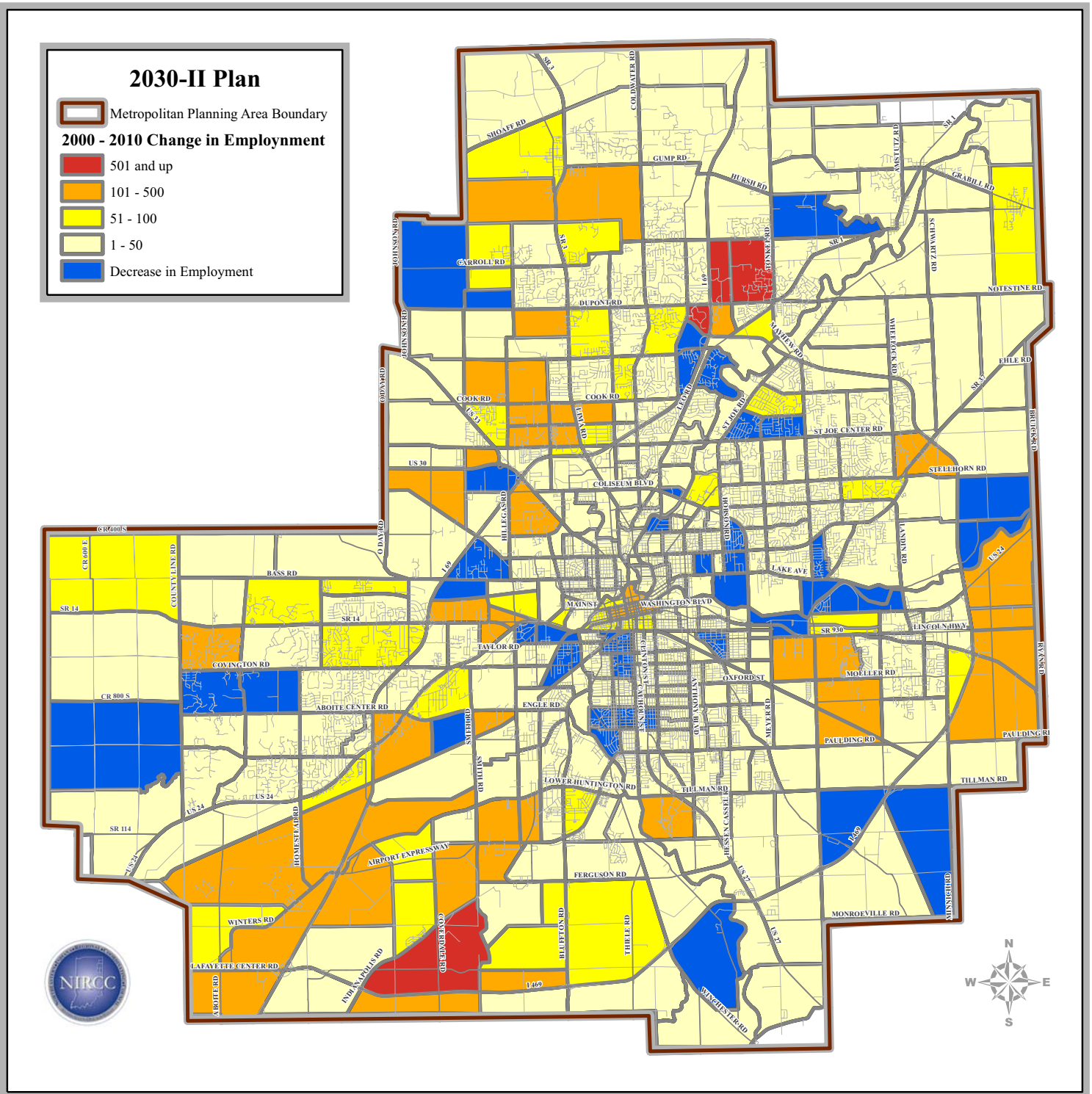


Figure 4

Employment Changes for 2010

4. The direct allocation of complete census block data without a need for splitting census data.

The accuracy and level of detailed socioeconomic estimates ensure that reliable and efficient transportation service plans can be provided to meet future needs of the metropolitan area.

Base Year 2000 Estimates

The year 2000 was established as the base year for this transportation plan update. Comprehensive socioeconomic data including population, housing units, automobile ownership, and employment data was established for 2000. The socioeconomic data has been collected and monitored since the early 1970's based upon Census information and other data sources. This information is useful in monitoring recent trends and projecting future socioeconomic conditions.

The 2000 Census information provides the most comprehensive and accurate population and housing data available. Based on Census Tract and Census Block statistics, data for both Allen County and the Metropolitan Planning Area can be obtained. The MPA is primarily within the geographical area of Allen County and is mainly influenced by the development activity in Fort Wayne and Allen County. The portion of the Metropolitan Planning Area in Allen County includes approximately 95% of the total population and housing units residing within Allen County.

The 2000 Census information indicated that the Fort Wayne Urbanized Area in Allen County had expanded west to the boundary with Whitley County. In addition, Census criteria designated a small portion of Huntington County in the Fort Wayne Urbanized Area. This area is actually very rural in nature but due to the population density and proximity to the adjacent urban area, it was defined as urban. Therefore portions of Whitley and Huntington County have been included in the MPA for analysis purposes.

Census data served as the foundation for developing reliable population, housing and automobile ownership estimates for the 2000 base year. Recent trends in population growth estimated by the U.S. Census Bureau shows Allen County with a 2000 population of 331,849, and increase of 31,013 from the 300,836 population in 1990. This represents a 10.3% increase over the ten-year period and correlates to an average annual growth rate of approximately one- percent.

The 2000 Census reported 138,905 housing units in Allen County. This represents an increase of 15,982 new housing units over the ten-year period from 1990. This represents a 13% increase that correlates to an average annual growth rate of 1.01 percent. The overwhelming majority of housing growth was in new suburban subdivisions and apartment complexes within the MPA. The estimates of the 2000 socioeconomic variables for each traffic zone are presented in Appendix C. The methodology used for preparing these estimates is discussed in the following narrative.

Population

The population figures for base year 2000 were derived from 2000 census block statistics for the Metropolitan Planning Area. The 2000 census block statistics were aggregated to represent the population of individual traffic zones within the Metropolitan Planning Area.

Dwelling Units

The primary source for base year dwelling-unit data for the Metropolitan Planning Area was the 2000 census block information. This data was compiled exactly like the population figures to determine the extent of housing activity within each traffic zone.

Automobile Ownership

Vehicle ownership information for metropolitan area was obtained from the Indiana Bureau of Motor Vehicles for the 2000 base year. The number of automobiles per traffic zone was calculated using vehicle per household ratios based on historical data and census information. The ratios were reviewed and refined based on the relationship of household incomes specific to individual traffic zones and automobile ownership. Each zone was evaluated and compared to an aggregate control total to ensure a fair distribution of vehicles.

Employment

The primary source of 2000 employment data was information obtained from the Indiana Department of Workforce Development. The Indiana Department of Transportation assisted in obtaining this information for planning purposes. The employment locations were allocated to the proper traffic zone. A list of employment by category and by traffic zone was derived from this inventory for the Metropolitan Planning Area.

The employment data was further stratified by Standard Industrial Classification (SIC) Codes. Based on these codes, employment was grouped into three major categories: industrial, retail and other. Industrial employment includes construction, manufacturing, warehousing,

and wholesale trades. The retail category includes: food, bakery, and dairy stores; eating and drinking establishments; general merchandise retailing; motor vehicle retailing; service stations and repair services; and other retail trades. All remaining employment classifications are included in the “other employment” category such as medical and legal services, banking and investment institutions, and numerous other types of businesses and services.

Planning Year 2030 Projections

General planning assumptions based upon current and historical trends are developed to guide the projected socioeconomic conditions for the horizon year, 2030. Planning assumptions were utilized in estimating the socioeconomic conditions for all previously developed Transportation Plans. Similar assumptions have been developed to predict how the metropolitan area will grow and change through the year 2030.

The Northeastern Indiana Regional Coordinating Council transportation planning staff met with various planning groups and reviewed demographic data to assist in drafting the planning assumptions. Areas of discussion and review included: downtown Fort Wayne re-development efforts; area housing plans and neighborhood revitalization efforts; economic development activities, issues and target areas; socioeconomic forecasts; utility infrastructure plans; housing and business development trends; floodplain, wetland, and ground water concerns; and land use development strategies. The comprehensive development plans, re-development plans, and economic development plans were reviewed as part of this process and provided direction in the distribution of socioeconomic data. This process helps to reinforce and/or re-write the planning guidelines and assumptions for the transportation plan. The following narrative describes the basic assumptions governing the anticipated growth and change in the metropolitan area during the next 20 years.

1. Information released from the U.S. Bureau of the Census indicates that nationally, the average number of persons per dwelling unit has steadily decreased over the last thirty years. As the nation slows in population growth, it is assumed that the ratio will level off and remain fairly constant. According to 1970 census data, the ratio of people per dwelling unit for the City of Fort Wayne was 2.9 and for the remaining portion of Allen County was 3.55. The 1980 census indicated a decrease in this ratio to 2.61 and 3.18 respectively. The 1990 census revealed a continuing decline for this ratio with the City of Fort Wayne reporting in at 2.24, the City of New Haven at 2.64, and the remaining portion of Allen County at 2.81. The 2000 census shows the ratio for Fort Wayne at 2.26, New Haven at 2.41, and the remaining portion of Allen County at 2.59. It is anticipated that the persons per dwelling unit ratio is beginning to stabilize. The average ratio for Allen County is estimated to be 2.48 in 2030. The

ratio for the Metropolitan Planning Area will be slightly lower. The persons per dwelling unit ratio for the year 2030 will be approximately 2.32 for the Metropolitan Planning Area.

2. Planning efforts within Allen County including the Cities of Fort Wayne and New Haven will be able to influence the direction and magnitude of development. The communities of Grabill, Huntertown, and Leo-Cedarville will also impact development in the Metropolitan Planning Area. The majority of all development will occur in, or immediately adjacent to the urban area. This pattern of urban development will serve to limit sprawl and help preserve prime agricultural land. Development will take place in areas with suitable soil types.
3. Population growth within the current corporate limits of Fort Wayne will occur primarily in areas currently undeveloped and zoned for residential use. Moderate population growth is also anticipated in neighborhoods where revitalization actions are implemented. It is assumed that all usable residentially zoned property currently within Fort Wayne will be developed by the year 2030.
4. Downtown Fort Wayne revitalization efforts will continue throughout the central business district and surrounding area. The Fort Wayne Downtown Development Plan provides the blueprint for how new and revitalized development will occur. Residential development and re-development will be encouraged in specific areas of the central business district and central city. The New Haven downtown business district will continue to provide business and limited retail opportunities.
5. A decline in population and housing due to federal restrictions on construction and reconstruction in floodplains will affect areas adjoining the rivers. Local floodplain management activities will conform to the federal specifications. Limited development will occur in floodplain areas. A floodplain map is displayed on Figure 6.
6. The limited amount of available land in St. Joseph Township will be developed for residential and commercial purposes. Aboite Township will continue to grow with new residential and limited commercial development in the western portion of Allen County. Cedar Creek and Perry Townships in the northern and northwestern sections of the urban area are expected to experience intense development through the year 2030. Residential development will also occur in the southern portion of Lake Township.
7. The majority of new industrial development will occur in designated Industrial Parks, identified Industrial Sites, and Economic Development Areas. This includes significant industrial development on available land adjacent to and surrounding the Fort Wayne International Airport. Other areas where significant industrial development is anticipated to occur include: southeast of the east-end industries along Adams Center Road; northwest of Interstate-69 in the Huguenard Road/Cook

Road area; and east of New Haven and Interstate 469 along the Dawkins Road Corridor. The Metropolitan area will continue to attract new industry; however growth will also occur from the expansion of existing facilities. Industrial Parks and Industrial Sites are displayed on Figure 7.

8. People will be energy and environmentally conscious and purchase vehicles that yield higher mile per gallon fuel efficiency ratios and lower emissions. The national average ratio of automobiles per household increased significantly throughout the 1980's and 1990's. It is expected that this ratio will soon stabilize and remain fairly constant. The current ratio for the Metropolitan Planning Area as a whole is approximately 1.8 vehicles per household. The anticipated ratio for the year 2030 will remain basically the same.
9. The urbanized area will continue to be the focal point for residential, commercial and industrial growth. It is anticipated that the urban area population will continue to grow at a higher rate than the surrounding rural portions of Allen County. Population statistics show that in 1970, 91 percent of Allen County's population lived in the Metropolitan Planning Area. This statistic has increased over time to approximately 92 percent in 1990 and 93 percent in 2000. The urban area share of total population will continue to increase slightly through the year 2030.
10. Development will occur along Interstate 469, with concentrations of intense development near the major interchanges. The accessibility afforded by Interstate 469 is attractive for business development. The projected development along this corridor is associated with interstate type facilities. Development will also occur along the Airport Expressway corridor and near the Fort Wayne International Airport. Development will be attracted to this area to take advantage of the Airport and Interstate accessibility.

The 2030 socioeconomic conditions for the Metropolitan Planning Area were developed following these basic assumptions. The preliminary projections of future conditions were developed for the planning period with a horizon year of 2030. Control totals were established as reasonable ceilings for socioeconomic variables such as population, dwelling units, and employment. The projections were adjusted to reflect the characteristics of individual areas within the Metropolitan Planning Area. The methodology for preparing these projections is contained in the following discussion. A table displaying the year 2030 socioeconomic data is provided in Appendix D.

Population

The history of establishing population control totals for the transportation plans provides some insight into the methods and modifications that have transcended from plan to plan.

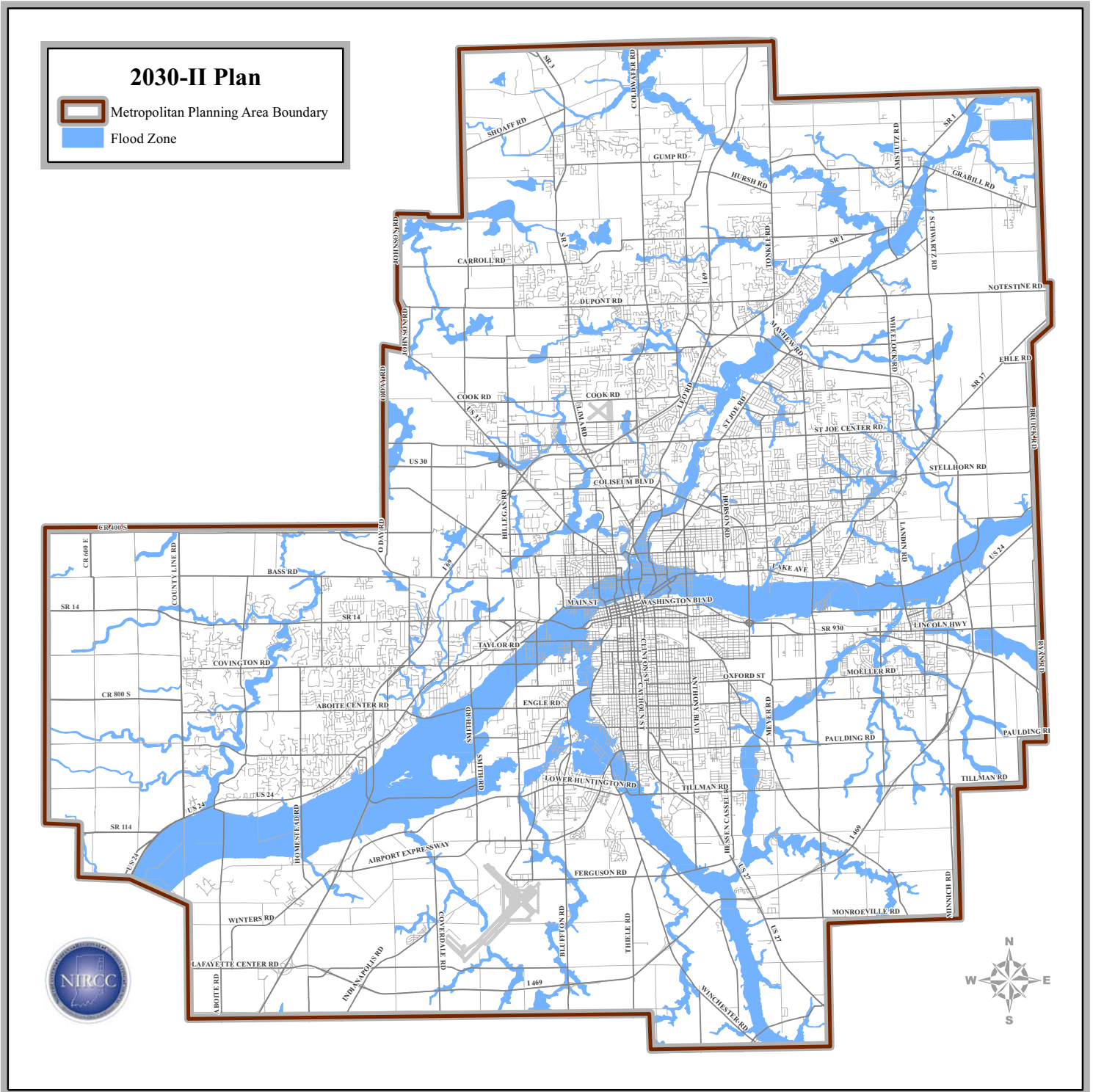


Figure 6

Floodplains

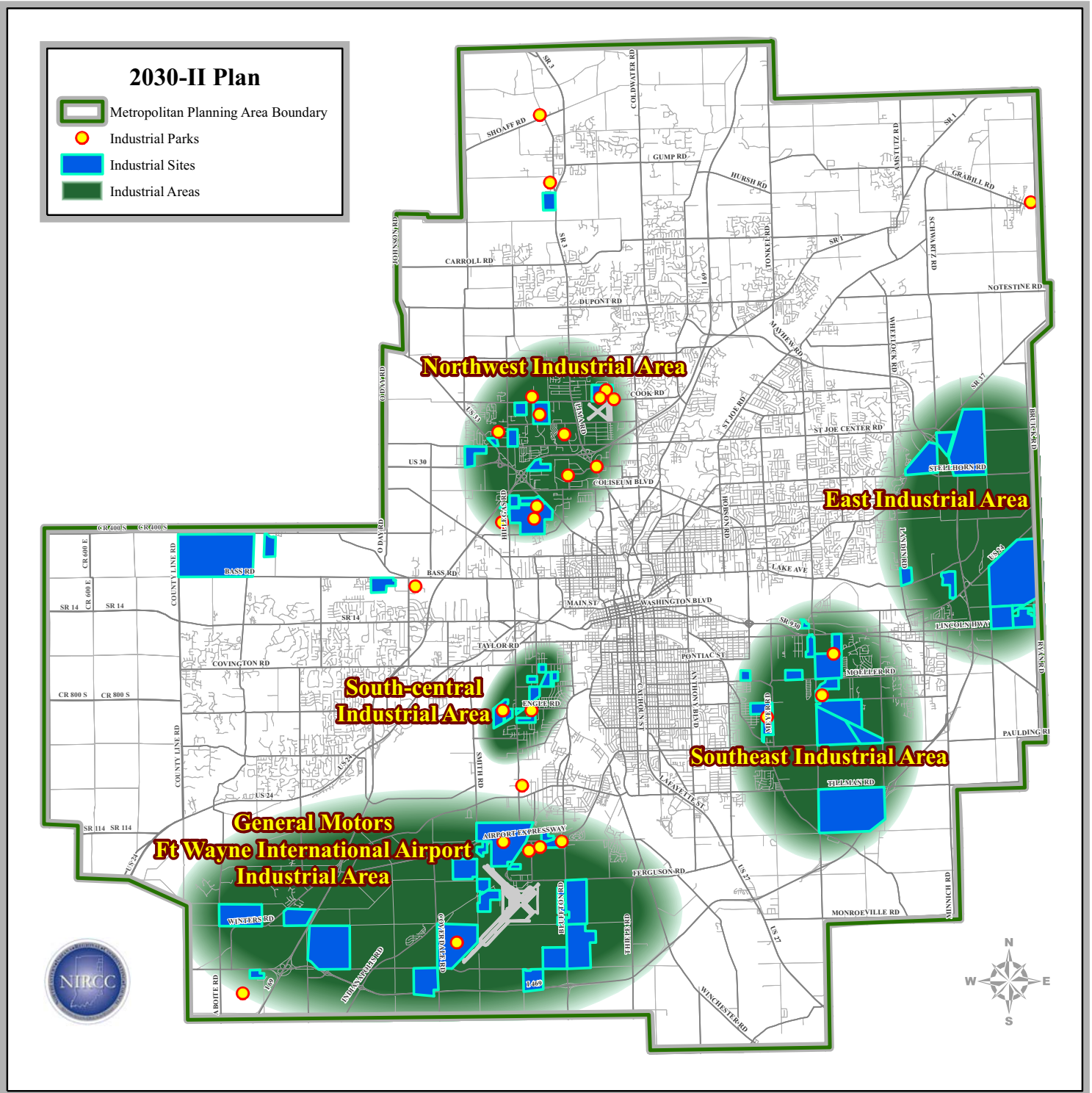


Figure 7

Industrial Parks and Sites

The development of a population control total for the Year 2000 Plan was conducted using the Cohort Survival method. This process was jointly completed in the late 1970's by the Allen County Plan Commission, Fort Wayne Community Development and Planning Department, and Northeastern Indiana Regional Coordinating Council. Through these efforts, a year 2000 population control total of 388,953 was established for the metropolitan area. Upon completion of the 1980 census, the population projection was revised due to less than anticipated growth. The control total was scaled down to 338,313.

A population control total of 340,492 was developed in 1986 for preparation of the Year 2005 Transportation Plan. This figure was considered somewhat conservative at this time estimating an average yearly population growth of approximately 1.3 percent. The 1990 census information indicated population growth in the metropolitan area had diminished further than anticipated. In 1992, the need to further scale down future population projections led to the development of a year 2010 population control total of 315,289 for the Metropolitan Planning Area. The population control total of 333,724, set for 2015, followed the assumption of moderate growth. This assumption provided for a relatively stable conservative growth rate of less than one percent per year.

The population projection for the 2030-II Transportation Plan employed the same basic assumption that resulted in a fairly conservative estimate. After the release of actual 2000 Census population numbers, a review of the MPA population indicated that it was approximately 311,000. This represented more population growth than what had been anticipated, over a ten-percent increase from 1990. For purposes of estimating the population growth to the 2030 horizon year, a 0.84% annual growth rate was derived from historical trend data and population estimates. This represents a relatively consistent and conservative rate. The established population control total for 2030 is 399,641.

Population projections for individual traffic zones within the MPA were developed by first comparing current demographic data based upon housing growth from 1990 to 2000. The recent housing growth was then compared to the current 2030 traffic zone population estimates. Through assistance from staff of the land-use division of the Allen County Department of Planning Services and Fort Wayne Community Development and Planning Department, zones were individually analyzed for their development potential. Each zone was judged for its suitability for development based upon criteria such as utility availability (water, sewer, etc.), current rates of development, density thresholds, soil types, and topography.

This analysis yielded the expected number of new dwelling units to be constructed by the year 2030 for each zone. The persons per dwelling unit factors were applied to calculate the additional population per zone for the entire metropolitan area. The additional population figures were added to the base year 2000 figures to gain a 2030 projected population total for each traffic zone. Final adjustments were made to match the population projections with the control total. Special attention was placed on traffic zones which may reach their density thresholds, and individual zones with unusual characteristics such as floodplain zones, central business district zones, and zones in high growth townships.

Dwelling Unit

Dwelling unit figures were determined through a similar process as described for the population estimates. Each zone was individually analyzed for its residential development potential based upon criteria such as available land, public and private water/sewer utilities, and current housing development. Once estimated dwelling units were established, a ratio of persons per households was used to help establish zonal population figures and then checks were made against control totals. Adjustments were made and figures were rechecked until a balance of dwelling unit and population estimates was obtained. In general, the average ratio of 2.2 was used for city zones and 2.5 for the zones outside the City of Fort Wayne.

Automobile Ownership

Automobile ownership projections were derived by applying ratios of automobiles per dwelling unit to the 2030 dwelling unit figures. The assumption was made that these ratios would remain fairly constant through the year 2030 in the Metropolitan Planning Area. An average ratio of 1.8 automobiles per dwelling unit was used as a guide, with certain zones receiving a higher or lower value depending on individual characteristics and historical information. The 2000 census data, including vehicles per household and average household income, guided the allocation of vehicles for each traffic analysis zone.

Employment

A land-use estimation process was used to derive the projections of employment for each zone in the metropolitan area. The staff of the Allen County Department of Planning Services, Fort Wayne Economic Development, Fort Wayne Re-Development and Alliance evaluated the Metropolitan Planning Area for development potential. Based upon this information, each zone was analyzed for potential commercial development and employment growth. The employment projections were divided into three major categories: industrial, retail, and other.

The estimations were based upon past development trends and specific characteristics of each zone. Soil type, topography, zoning restrictions, access to utilities, and surrounding land uses were the major criteria used to evaluate the potential for development. The control guide for estimating future land development was based upon the assumptions discussed earlier in this chapter. Control totals for employment estimates were based on employment projections conducted by the U.S. Department of Commerce, Bureau of Economic Analysis and a study conducted by Woods & Poole Economics for Allen County.

The 2000 employment data served as the base for the zonal employment estimates. The 2000 data was obtained through the Indiana Department of Workforce Development and allocated to traffic zones. The additional employment figures were added to the base 2000 figures to derive zonal employment data for the year 2030.

Summary

The socioeconomic data for the base year coupled with historic trends provides for reliable estimates of the 2030 horizon planning year socioeconomic activity. The planning year estimates were used to forecast future transportation needs and to identify transportation improvements necessary to meet those needs. The socioeconomic data developed for this study included estimates of population, dwelling units, auto ownership, and employment. Existing and projected land uses are an important input to the transportation plan due to the close relationship between land use and travel demands.

The 2000 base year socioeconomic data and the projected 2030 data provided for the interpolation of socioeconomic data necessary for air quality analysis. The socioeconomic data for the baseline 2002 and analysis years 2010 and 2020 were interpolated based on in fill and contiguous growth scenarios consistent with the Comprehensive Plan. The individual variables including population, dwelling-units, automobiles, and employment data were interpolated for each traffic analysis zone. This information was used to forecast travel for the analysis years and develop vehicle miles of travel.

Consideration of available housing, land use, redevelopment, recreation, and economic development plans and efforts supports the comprehensive approach encompassed throughout the development of this transportation plan. This atmosphere sets the stage for the formulation of planning assumptions guiding the transportation planning process and development of the plan. The forecast of future travel demands is built upon this foundation of solid socioeconomic guidelines.

Chapter 3

TRAVEL FORECAST: 2030 TRAVEL DEMANDS

The principal function of the year 2030-II transportation plan update is to develop forecasts of the 2030 travel demands in the Fort Wayne-New Haven-Allen County region. The travel forecasting process loaded the 2030 travel demands on the existing plus committed transportation system to assess deficiencies. The travel demands are based upon the projected socioeconomic data representing future activity within the Metropolitan Planning Area.

The 2030 socioeconomic projections were input to generate travel demands on the existing plus committed transportation network. The purpose of analyzing the existing plus committed system with 2030 demands was to evaluate additional deficiencies beyond those addressed in the current Transportation Plan. The current Transportation Plan recommended highway and transit improvements needed to meet projected travel needs. The evaluation of 2030 travel demands on the existing plus committed transportation system allowed for the review of those highway and transit projects and assumptions, and to develop additional improvements and policies to address the identified deficiencies. Through this series of analyses, future deficiencies were analyzed and evaluated, and project justification was developed.

Travel Forecasting Process

The methodology used to forecast travel demands for the year 2030 is similar to that which was used for all previous Transportation Plans. Figure 8 displays a flow chart that schematically describes the forecasting process. The forecasting or modeling process used for this study and all previous studies follows a standard transportation/planning forecasting approach.

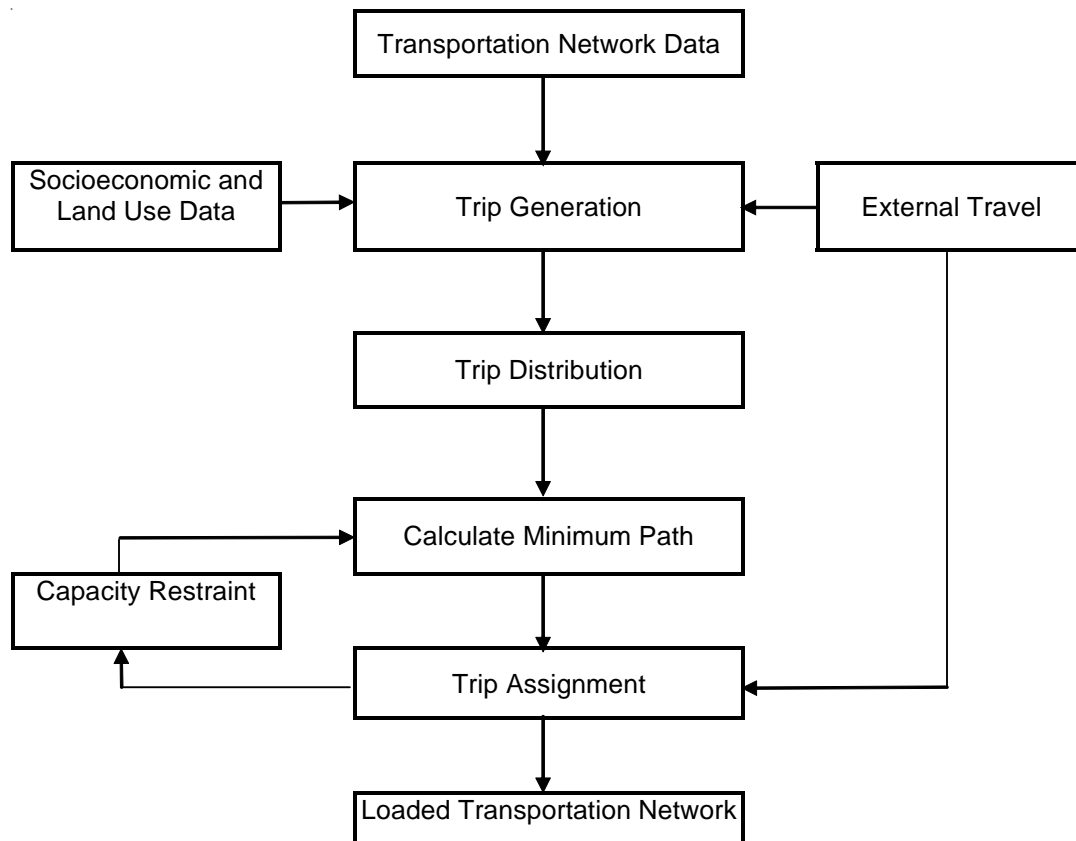


Figure 8
Travel Forecasting Procedure

The travel demand-forecasting model used for the Metropolitan Planning Area follows standard guidelines, yet it is specially tailored for this area. Trips are loaded onto the highway system with a capacity restraint trip assignment procedure. This procedure replicates how drivers choose an alternative route when their preferred route becomes congested. Only the general approach to the modeling process will be described in this section to set the context for discussions regarding results of the travel forecasting procedure.

The travel forecasting procedure is composed of a series of sequential mathematical models that describe the separate but related aspects of travel patterns. A trip generation model is used to estimate the number of trips starting and ending at various locations in the region. This model develops trip estimates for seven different types of trips including: home-based work; home-based business; home-based social; non home-based; truck; external local; and external to external. These are referred to as trip purposes and represent virtually all types of trips people make on a normal day.

The trip distribution models connect the trip origin and destinations. The pattern of distribution is accomplished by allocating trip origins among available destinations according to the *gravity concept*. The gravity concept states that the number of trip movements (origins) distributed to a given destination is proportional to the size of the trip destination and inversely proportional to the time (or distance) separating the origin and destination. This means that their respective proximity, accessibility, and degree of attractiveness relate trip origins and destinations to one another.

The trip assignment procedures follow trip generation and trip distribution models completing the forecasting process. The trip assignment model allocates trips to the highway system based on minimum travel time paths between origin and destination. As trips are loaded on the highway system, the trip assignment model recalculates traveling speed based upon the level of congestion, and re-selects minimum paths of travel.

The initial travel demand forecasts for the year 2030 were prepared from activity based upon the future socioeconomic estimates as described in Chapter 2. The trips generated by this urban activity forecast were distributed to obtain travel patterns and split among the available modes. This forecast was assigned to the year 2030 transportation system. This process permitted the assessment of how well the level-of-service and capacity provision of the existing plus committed system performed under the strain of the 2030 travel demands. The assigned trips on the highway system were examined to evaluate the deficiencies on various portions (links and corridors) of the system.

Preliminary sketch plans were developed as a result of this process. The sketch plans were developed as solutions to address specific deficiencies or clusters of deficiencies on the transportation system. The solutions, identified as improvement projects, were reviewed by the community at numerous public sessions and by the Northeastern Indiana Regional Coordinating Council's advisory committees. The revisions proposed during this review were included in the evaluation process for development of a final plan.

Analysis of Regional Activity Forecasts

Regional control totals were established for each variable as the first step in the projection of year 2030 socioeconomic conditions. Table 1 compares base year (2000) and forecast year (2030) regional control totals for each of the key variables influencing travel demands. Socioeconomic data was interpolated from these forecasts to establish the socioeconomic variables for the analysis years needed for the air quality analysis. Table 2 provides the interpolated socioeconomic conditions for the analysis years 2002, 2010, 2020 and 2030.

The socioeconomic projections reveal modest increases in all the major socioeconomic variables for the Metropolitan Planning Area. The projections for population and dwelling units indicate relatively steady and comparable growth. The projected population growth slightly out-paces the housing growth. This is due primarily to new housing starts growing at a faster rate than the population in the MPA from 1990 to 2000. It is assumed that these growth rates will stabilize.

Table 1. Summary of Regional Socioeconomic Variables

Socioeconomic Variable	2000 Base Year	2030 Forecast Year	Percent Increase	Annual Percent Rate
Population	311,288	399,641	28.38	0.84
Dwelling Units	131,801	172,314	30.74	0.90
Automobiles Ownership Per Household	239,389 1.82	310,208 1.80	29.58	0.87
Employment				
Retail	47,460	68,357	44.03	1.22
Industrial	63,950	78,929	23.42	0.70
Other	81,558	109,780	34.60	1.00
Total	192,968	257,066	33.22	0.96

Table 2. Summary of Regional Socioeconomic Variables-Air Quality Analysis Years

Socioeconomic Variable	2002 Baseline Year	2010 Analysis Year	2020 Analysis Year	2030 Horizon Year
Population	316,924	340,251	369,572	399,641
Dwelling Units	134,137	146,769	159,603	172,314
Automobiles Ownership Per Household	243,613 1.82	263,838 1.80	287,733 1.80	310,208 1.80
Employment				
Retail	48,852	53,864	60,218	68,357
Industrial	65,007	68,510	73,140	78,929
Other	83,429	90,681	99,819	109,780
Total	197,288	213,055	233,177	257,066

The overall population and housing assumption reflects a stabilization of average persons per household. Population growth has gradually slowed since 1970 within the Metropolitan Planning Area. Housing growth has remained fairly consistent with some short periods of slow growth during the past twenty years. Since 1985 the area has experienced active housing development. The 2000 Census indicated that the ratio of persons per dwelling unit was 2.36 for the Metropolitan Planning Area. The 2030 persons per dwelling unit ratio is 2.32 indicating the stabilization of this value.

In the late seventies and early eighties assumptions concerning auto ownership, based on recent fuel shortages, anticipated that limited energy resources and increasing costs would induce a reduction in automobile ownership. This phenomenon never occurred. Automobiles became more fuel-efficient and their size was reduced. Fuel prices dropped and stabilized. Auto ownership continued to rise. It is anticipated that this trend will stabilize in the near future as we reach saturation levels of vehicles per household and as households decrease in size. The forecasted automobile ownership values for 2030 are consistent with the existing ratio of automobiles per household.

Retail and service industry employment has been the fastest growing source of employment in the Fort Wayne area since the 1970's. A steady growth rate in these employment categories is expected to continue but will level off and begin to increase more gradually. The 2000 employment figures indicate continued growth in both retail and service industry employment.

Overall employment growth slowed during the early 1980's impacted by the departure of International Harvester and economic recession. Employment data for 1985 indicated a reduction in both retail and industrial employment from 1980. In the mid to late 80's, the local economy began to rebound and show signs of solid employment growth.

The industrial employment has remained fairly consistent over time with a conservative growth pattern. The loss of International Harvester and related industrial employment in the early eighties was partially offset by the new General Motors assembly plant and associated manufacturing facilities built in the mid nineteen-eighties. Warehousing and distribution centers have also contributed to continued growth in this category.

The "Other" employment category has remained fairly consistent with respect to its rate of growth over the years. This category is expected to rival the retail sector for new growth in upcoming years. The information service and high technology trades are represented by this category.

The general growth patterns of the socioeconomic variables indicate that existing travel corridors will remain important to the basic travel patterns of the year 2030. The northeast and southwest areas of the region will remain active in terms of socioeconomic growth. The northwest will be placed under more intense development pressure, a trend already underway. The areas around major interchanges of Interstate 469 remain attractive for development. Major housing and retail developments have been constructed near the Interstate 469 and SR 37/Maysville Road Interchange.

The new residential and employment centers will intensify the travel demands on existing corridors and create the need for managing congestion through traffic operation improvements, widening facilities, extending new roads, improving transit service, implementing intelligent transportation system strategies, and controlling access more efficiently. It is apparent that travel will become less oriented to the central urban core as major suburban activity centers continue to be developed. Travel patterns will become less dependent on the radial highway system.

Trip Generation

The trip generation model used population, dwelling unit, employment and automobile ownership forecasts for the year 2030 to estimate the number of trips starting and ending (trip ends) in each zone. The socioeconomic data utilized for trip generation is provided in Appendix D. Trip ends were estimated for five different internal purposes: home-based work, business, and social; non home-based; and truck trips.

Special generator analysis is also a component of the trip generation model. Special trip generation is applied to traffic zones with unique trip-making characteristics. Normal trip generation equations do not adequately reflect the travel desires to and from these zones. These zones are those which may contain hospitals, universities, and major retail developments.

Table 3 summarizes the regional level results of the application of the trip generation models to the projected socioeconomic characteristics. The productions and attractions by trip purpose are provided for the years 2010, 2020, and 2030. The relative proportion of trips by purpose show little change between the forecasted years.

The number of trip productions and attractions for 2030 are logically higher than those forecasted for 2010 and 2020. This increase in trips is directly attributed to the increase in socioeconomic variables. The primary variables affecting the increased number of trips include dwelling units, automobile ownership, and employment.

Table 3. Travel Demand Forecast Regional Summary

Trip Purpose	2010 Trips	2010 Percent	2020 Trips	2020 Percent	2030 Trips	2030 Percent
HBW	311,092	24.4	339,789	24.4	366,884	24.2
HBB	177,300	13.9	193,734	13.9	209,205	13.8
HBS	349,244	27.4	381,782	27.4	412,421	27.2
NHB	357,266	28.1	393,095	28.2	434,804	28.6
TRK	78,598	6.2	86,481	6.1	95,657	6.2
Total	1,273,500	100.0	1,394,881	100.0	1,518,971	100.0

Attractions

Trip Purpose	2010 Trips	2010 Percent	2020 Trips	2020 Percent	2030 Trips	2030 Percent
HBW	311,092	24.4	339,789	24.4	366,884	24.2
HBB	177,300	13.9	193,734	13.9	209,205	13.8
HBS	349,244	27.4	381,782	27.4	412,421	27.2
NHB	357,266	28.1	393,095	28.2	434,804	28.6
TRK	78,598	6.2	86,481	6.1	95,657	6.2
Total	1,273,500	100.0	1,394,881	100.0	1,518,971	100.0

HBW= Home-Based Work Trips
HBB= Home-Based Business Trips
HBS= Home-Based Social Trips

NHB= Non Home-Based Trips
TRK= Truck Trips

Trip Distribution

The production and attraction trip-ends, estimated for each traffic zone for the year 2030, were matched using a trip distribution model. The model gives the second dimension to travel patterns by connecting trip productions and attractions (trip ends) to form trips. The model works zone by zone, allocating trips produced in one zone to trip attractions in other zones. The distribution is generally based upon the number of attractions of a zone and the distance between zones. The general form of the model is:

$$T_{ij} = P_i \frac{A_j F_{ij}}{\sum_j A_j F_{ij}}$$

Trips from zone i to zone j are calculated by proportioning all trips produced in zone i (Pi) according to the accessibility ratio in which Aj is the total trip attractions in zone j and the

separation between zone i and j is represented by F_{ij} . The separation is a function of the distance, time or cost to travel between zone i and j, raised to a variable power:

$$\text{Separation} = (\text{distance, time or cost})^n$$

where: $n = f(\text{distance, time or cost})$ and is usually negative

The ratio of $A_j F_{ij}$ for a given zone j to that for all zones ($A_i F_{ij}$) is generally treated as the relative accessibility of the given zone j, and trips are prorated according to relative accessibility. This formulation is generally called a “gravity model” because it is similar to Newton’s principle, defining attractiveness as proportional to mass ($A_j P_i$) and inversely proportional to a power of separation between bodies (zones).

The results of the 2030 trip distribution of forecasted travel desires indicate an increase over the current distribution. This is expected due to the increase in socioeconomic activity. The general trends appear similar with suburban to suburban activity continuing to increase. The attractiveness between suburban areas and the central urban core will remain important and increase proportionately with redevelopment activity.

Evaluation of the Transportation System

The year 2030 travel desires were assigned to the existing plus committed transportation system. The existing plus committed transportation system includes all improvements identified in the current 2030 Transportation Plan that have been completed or are currently under construction. A number of these improvements have either been implemented or are currently under construction.

Existing plus Committed Highway System

The existing plus committed highway system utilized for evaluation included the existing highway system plus the completed improvements identified in the current 2030 Transportation Plan. The existing plus committed highway system is displayed in Figure 9. The 2030 travel demands were assigned to the existing plus committed highway system using a capacity restraint feature of the modeling process. The capacity restraint feature allocates trips to the highway network through three iterations of peak hour restraint. This provides a final assignment reflective of capacity limitations and simulates route selection decision-making processes.

The capacity restraint feature requires as input the practical capacity per hour for each travel lane of a road or highway. The relationship of facility type (i.e. freeway, arterial, collector,

etc.) and geographic area (i.e. central business district, suburban, rural, etc.) are important determinates of lane capacity, and categories were developed based upon these criteria.

The *practical* capacity for a given lane was defined at *Level-of-Service D*. Table 4 contains the basic lane capacities used for the capacity restraint assignment. Exceeding the *level-of-service D* lane capacities (defined as a ratio of volume to capacity greater than 1.0) indicates situations of *level of service “E” or “F”* representing severe congestion and failure of the system to efficiently meet travel demands. These lane capacities are consistent with the Congestion Management System.

Table 4. Basic Lane Capacities

Geographic Area	Freeway	Expressway	Two-Way Arterial	One-Way Arterial	Collector
Central Business District	1,800	745	605	650	480
CBD Fringe Area	1,800	790	715	715	575
Outlying Business District	1,800	790	715	715	575
Suburban Area	1,800	865	715	805	575
Rural Area	1,800	820	590	N/A	540

Working Memorandum, Capacity Table, Barton-Aschman Assoc. Inc., 1978

The lane capacities as noted in Table 4 represent vehicles per hour per lane (VPHPL) for the various facility types. The use of vehicles in this situation includes a mixture of passenger cars, light-duty trucks, heavy-duty trucks, tractor-trailers, buses, and recreational vehicles. The capacities established represent travel characteristics within and near urban areas.

The assignment of 2030 travel demands through the capacity restraint process allows for analysis that identifies highway corridors where capacity problems will arise. These locations will be referred to as capacity deficient or deficient corridors. Simply stated this translates into congestion and congested corridors. This evaluation is conducted using a link-by-link analysis. The results of this evaluation will be discussed in the conclusion of this chapter.

Transit System

The transit system was not included as part of the travel forecasting process for this transportation plan update. The transit system currently carries less than seven thousand trips per day. This accounts for less than one percent of the total trips. At this performance level, the modeling procedures cannot be accurately calibrated to replicate transit usage. Meaningful results from the forecasting procedures for transit trips are difficult to attain and their value is questionable.

The evaluation of the transit system and recommendations for future improvements are based upon historical trends and recent transit studies. The existing transit system and route structure serves as the base for the evaluation process. Recommended improvements are derived from the results of the transit studies and surveys. These studies identify deficiencies of the transit system, assess the level of unmet needs, and include comments and suggestions for transit improvements. This process is documented in the *Citilink Transit Development Plan* Final Report prepared in Fiscal Year 2004 and the *Coordinated Public Transit – Human Services Transportation Plan for Allen County* completed in 2007. The projects identified in the Transportation Development Plan and the strategies identified in the Coordinated Plan are included as a component of this plan.

Currently there are urban and rural transit systems operating within the MPA. Fort Wayne Public Transportation Corporation (dba Citilink) is the urban transit provider. Their current service area is the incorporated boundaries of the City of Fort Wayne and the City of New Haven. There are three rural transit providers within the MPA. The Allen County Council on Aging (dba Countilink) is the rural transit provider in Allen County. Countilink will provide service anywhere within Allen County as long as the trip origin or destination is outside the incorporated boundaries of the Cities of Fort Wayne and New Haven. The Whitley County Council on Aging (dba Whitley County Transit (WCT)) is the rural transit provider in Whitley County. Their service area includes all of Whitley County, including a small portion on the western edge of the MPA. The Huntington County Council on Aging (dba Huntington County Transportation (HAT)) is the rural transit provider in Huntington County. Their service area includes all of Huntington County, including a small portion on the southwestern edge of the MPA. Citilink and Countilink are the primary transit providers within the MPA.

The current Citilink transit system has nineteen routes. Most of these routes utilize the Fort Wayne Central Business District as a hub and transfer point. Two point-deviation routes currently operate to provide access to suburban medical and retail facilities. The existing Citilink transit route network is displayed in Figure 10. Until recently (summer of 2008), the majority (eleven of nineteen) of the routes ran on thirty-minute headways, however funding issues resulted in six of the routes reducing service frequency to headways to sixty-minutes. Currently, fourteen routes run on sixty-minute headways, and five run on thirty-minute headways. Citilink intends to restore the thirty-minute service as funding is made available to provide more frequent service on heavily used routes.

Countilink service was new as of January 2009. The current Countilink transit system is a demand response system. The system operates Monday through Friday from 6:00 am to 6:00 pm. It is estimated that the service will provide 6,000 one-way trips per year initially. The new system will be monitored for performance. As demand for the service increases, increased hours of operation and fixed routes will be considered.

Citilink's service area (incorporated boundaries of the City of Fort Wayne and the City of New Haven) currently contains approximately 85% of all dwelling units, 83% of the population, and 89% of the employment opportunities within the MPA. By 2030 it is estimated that these numbers will decrease to account for approximately 74% of all dwelling units, 72% of the population, and 80% of the employment opportunities within the MPA. Citilink transit routes do not fully serve their entire service area including areas in the northeast, southwest, and surrounding the Fort Wayne International Airport. An analysis of Citilink service indicates that approximately 74% of all dwelling units, 71% of the population, and 85% of employment opportunities are currently within a ½ mile of a transit route. Utilizing the current route network, a similar analysis for socioeconomic conditions projected for 2030, approximately 70% of all dwelling units, 68% of the population, and 83% of the employment opportunities will be located within ½ mile of a transit route. Recommended expansion of the Citilink service area will help to address this service reduction.

The service area of the rural transit providers within the MPA (which is primarily served by Countilink) currently contains approximately 15% of all dwelling units, 17% of the population, and 11% of the employment opportunities within the MPA. By 2030 it is estimated that these numbers will increase to approximately 26% of all dwelling units, 28% of the population, and 20% of the employment opportunities. Since Countilink, WCT, and HAT all operate a demand response systems, transit service is available to 100% of their service area including those portions within the MPA.

Collectively, the four transit providers currently provide transit service to approximately 78% of all dwelling units, 76% of the population, and 87% of the employment opportunities within the MPA. These numbers are projected to remain relatively constant for the projected 2030 socioeconomic conditions with transit reaching approximately 78% of all dwelling units, 77% of the population, and 86% of the employment opportunities. The coverage area of transit service within the MPA is displayed in Figure 11.

Conclusion

The evaluation of the existing plus committed transportation system allowed the identification of roadway corridors that will exhibit deficiencies when burdened with the 2030 travel demands. This analysis in essence represents the “do-nothing” alternative. The resulting analysis of the existing plus committed highway system capacity deficiencies is displayed in Figure 12.

The locations identified in Figure 12 represent major deficiencies of available capacity established for a level-of-service “D”. The deficiencies are established on peak hour volume to capacity ratios greater than 1.25. A ratio of 1.0 represents capacity saturation at level-of-service “D”. As the ratio increases, so does the intensity of the congestion it represents. In this analysis, a ratio greater than 1.25 indicates the corridor is at or exceeding level-of-service “E”. Levels “E” and “F” represent significant congestion and vehicle delay, with level “F” the more severe. These levels represent undesirable traveling conditions.

The analysis of the travel demand forecast indicates that additional improvements are necessary to meet the projected 2030 travel demands. Highway and transit system improvements will need to be implemented to mitigate congestion and maintain desirable traveling conditions. This analysis sets the stage for developing and analyzing alternative strategies for improving the deficient corridors. The evaluation of the existing plus committed transportation system establishes the foundation for developing alternative scenarios of highway and transit improvements designed to maintain acceptable levels-of-service and meet the projected year 2030 travel desires.

Chapter 4

EVALUATION OF ALTERNATIVE TRANSPORTATION SKETCH PLANS

Chapter 4 discusses the development and evaluation of alternative transportation sketch plans for the target year 2030. The highway and transit alternatives considered as the 2030-II plan evolved are presented along with the results of the analytical evaluations. The evolution and evaluation of the alternative plans were formulated through extensive interaction between the public, the Urban Transportation Advisory Board, Transportation Technical Committee, Transit Planning Committee, and Northeastern Indiana Regional Coordinating Council staff members. The result of this process is the selection of a fiscally constrained transportation plan that effectively responds to the regional travel needs and desires for the year 2030.

The recommended Transportation Plans for the Fort Wayne-New Haven-Allen County Metropolitan Area have been based upon a combined arterial roadway improvement concept with a high-level bypass facility. The transit component of these plans has been developed and recommended as a radially-oriented bus route network. These two systems were designed to complement each other through improvements to the existing highway system and the level of transit service provided.

The development and testing of the transportation alternative sketch plans were based on these previously adopted plans and policies. The completion of Interstate 469 (the high-level bypass facility) in 1995 has shifted the highway planning focus for development of the 2025 and 2030 transportation plans away from the bypass concept. The new highway oriented focus is on improving the arterial system. The transit planning effort has also been tempered to establish realistic strategies and levels of service for the 2030 target year. The priority for transit is focused on improving service for transit dependent populations while maintaining reliable and efficient service to the urbanized area. Consideration is given to identifying transit corridors that will provide a higher level of transit service through amenities and travel speed. The transit provider, Citilink, is also exploring non-traditional non-fixed route service delivery strategies to improve service. These suppositions guided the formation of the sketch plans.

Alternative Network Testing

The evaluation of the existing plus committed transportation system under 2030 travel demands provided for the selection of specific alternatives aimed at relieving deficient corridors and increasing transit ridership. The deficient corridors (see Figure 12) were identified through link analysis targeting roads where volume to capacity ratios exceeded 1.25 for service level “D”.

Transit improvements were directed at reinforcing current strengths of the local transit system and developing strategies to enhance service efficiency. The evaluation process included a review of the current 2030 Transportation Plan recommendations to assess their continued viability.

Roadway Design Standards

The roadway design standards documented in previous Transportation Plans were modified in conjunction with the revision of the Access Standards Manual utilized for the Congestion Management System Access Management Program. The revised standards were maintained in the development of this plan and are provided in Appendix E. The roadway design standards have been formulated to meet future highway requirements.

Highway Alternatives

The highway alternatives, as developed through a consorted effort of public participation and decisions of the Urban Transportation Advisory Board, were intended to improve mobility, accessibility, and/or alleviate congestion on the highway system. The alternatives evolved as packages of specific projects aimed at meeting these objectives. The improvements were stratified into project categories including system modifications, congestion management strategy implementation, and other highway improvements. The project categories do not represent independent improvement strategies, but are complementary towards maximizing efficiency on the highway system and mitigating congestion.

The identification of deficient corridors stimulated discussion of strategies to meet the future travel demands. The system modifications category represents projects that enhance mobility through new road construction or capacity expansion through road widening projects. The congestion management strategy implementation projects represent improvements to the existing highway system to improve safety and mitigate congestion. These include projects that preclude expansion type projects such as center turn lanes, intersection improvements, road realignment, and intelligent transportation system projects. Railroad grade separation

projects and interchange construction/modification are included in the other highway improvement category.

The focus of this plan includes discussion on a wide array of strategies for alleviating future congestion in addition to the traditional solutions of new road construction and widening projects. The new strategies include scaled-down widening projects, such as recommending an additional fifth lane for left-turning traffic instead of widening to six lanes, or similarly a three lane road project instead of a four lane facility. Access control measures and congestion management techniques are additional tools addressed as components of this plan. The inclusion of management systems projects and efforts to combine highway, land use and transit service together to relieve congestion and improve efficiency, represent additional strategies considered in the development of this plan, and are components of the planning process.

The evaluation of the current 2030 transportation system identified additional deficiencies on the highway network. Viable solutions and strategies were developed to address selected deficiencies. In addition, suggested improvements from citizens, local elected officials and appointed officials were considered during the testing and evaluation of alternatives.

The evaluation considered the entire proposed current 2030 Plan projects to determine if they remained practical under the 2030 travel demands. Remaining deficiencies from the 2030 travel demands on the existing plus committed system were identified. Solutions were developed and reviewed, including policies and projects, to determine feasible options addressing the remaining deficiencies. As a result of this process, scenarios were developed, tested, and evaluated. Several current 2030 Plan projects were modified as a result of policy changes or changes in travel demands.

Extensive testing of the arterial system was evaluated and re-evaluated as the process moved toward preparing a final list of highway modifications to provide congestion relief. Three, four, five, and six lane highway improvements were considered to determine their ability to solve the corridor deficiencies. Strategies such as access control and congestion management solutions (i.e. intersection improvement, traffic operation improvements, intelligent transportation system improvements, etc.) were also considered. These types of strategies, when implemented properly can solve congestion problems along specific corridors and avoid the need for widening projects. A complete list of the highway projects is provided in Chapter 6.

A comparison of the existing plus committed transportation system and the recommended 2030-II transportation system yields positive results. The comparison utilizes the 2030 travel demands. Table 5 presents a comparison of the two systems. The data is reported for the federal functional class system only. The existing plus committed transportation system will carry an estimated 11.4 million vehicle miles of travel (VMT) on a daily basis. Under the identical travel demands, the recommended 2030-II system will carry an estimated 11.3 million vehicle miles of travel.

Equally important is the comparison of vehicle hours of travel for the two systems. The existing plus committed transportation system will induce an estimated 444,050 vehicle hours of travel (VHT) on a daily basis. The same estimate for the recommended 2030-II system is 423,855 vehicle hours. Table 6 shows the Federal Functional Classification VMT per-capita for the existing/committed network and the 2030 analysis year.

Table 5. VMT and VHT Comparison

Transportation System	Weekday Vehicle Miles of Travel	Yearly Weekday Vehicle Miles of Travel	Weekday Vehicle Hours of Travel	Yearly Weekday Vehicle Hours of Travel
Existing /Committed Network	11,398,782	2,963,683,320	444,050	115,453,000
Recommended 2030-II Plan	11,321,176	2,943,505,760	423,855	110,202,387

Table 6. VMT Per-Capita

Transportation System	Existing /Committed Network	2030
VMT	11,398,782	11,321,176
Population	399,641	399,641
VMT/Capita	28.52	28.33

The amount of vehicle miles of travel and vehicle hours of travel can directly relate to a community's standard of living and quality of life. The most significant ramification of the transportation system performance is the impacts on safety, air quality, and energy consumption. Air quality is directly affected by the level-of-service and extent of congestion on the highway system.

Carbon monoxide, hydrocarbons (which convert to ozone), and nitrous oxides are pollutants emitted from automobiles. As the amount of vehicle miles of travel and vehicle hours of travel increase, pollution becomes more severe and air quality deteriorates. It becomes easy to understand

the related air quality benefits of the recommended 2030-II system through the significant reduction in vehicle hours of travel and slight reduction in vehicle miles of travel. The air quality conformity analysis provided in Appendix B presents the formal air quality analysis and conformity determination.

As the recommended 2030-II plan began to solidify, testing continued to reveal deficiencies for which feasible solutions are difficult to develop. Previous plans had similar difficulties, partially due to narrow rights-of-way and a reluctance to disturb viable neighborhoods. In certain cases, solutions are difficult or too expensive to be practical. The primary area of such deficiencies occur in the Fort Wayne Central Business District, the north central section of Fort Wayne, and the intense concentration of commercial and retail development along certain sections of Coliseum Boulevard (SR 930). Traffic operation improvements, intelligent transportation systems, and improved transit service may help alleviate some travel pressure in this area. These areas will continue to be studied to determine what are the most feasible solutions. Figure 13 shows the remaining deficiencies after the 2030-II funded projects are in place, and Figure 14 shows the remaining deficiencies after the 2030-II funded and illustrative projects are constructed.

The deficient locations on the recommended 2030-II plan will require further analysis to determine if viable solutions can be developed to help mitigate congestion. It is of course apparent, that the transportation system is not likely to ever be totally congestion free. A certain level of congestion is expected, and will have to be tolerated. The objective is to reduce congestion to acceptable levels and provide for a safe and efficient system.

The final result of the highway alternative evaluation process is a comprehensive list of system modification projects, congestion management strategy implementation, other highway improvements, and policy options. With these tools, the community has the planning support necessary to implement projects and administer policies that will provide for an efficient transportation system for future travel demands within the limitations of fiscal constraint.

Transit Alternatives

Transit alternatives were developed and evaluated through a concerted effort of public participation, Fort Wayne Public Transportation Corporation (dba Citilink) staff, Transit Planning Committee, and the Urban Transportation Advisory Board. Many of the proposed projects are recommendations from the Citilink Transportation Development Plan completed in 2004. The intentions are to improve mobility and accessibility on the transit system through

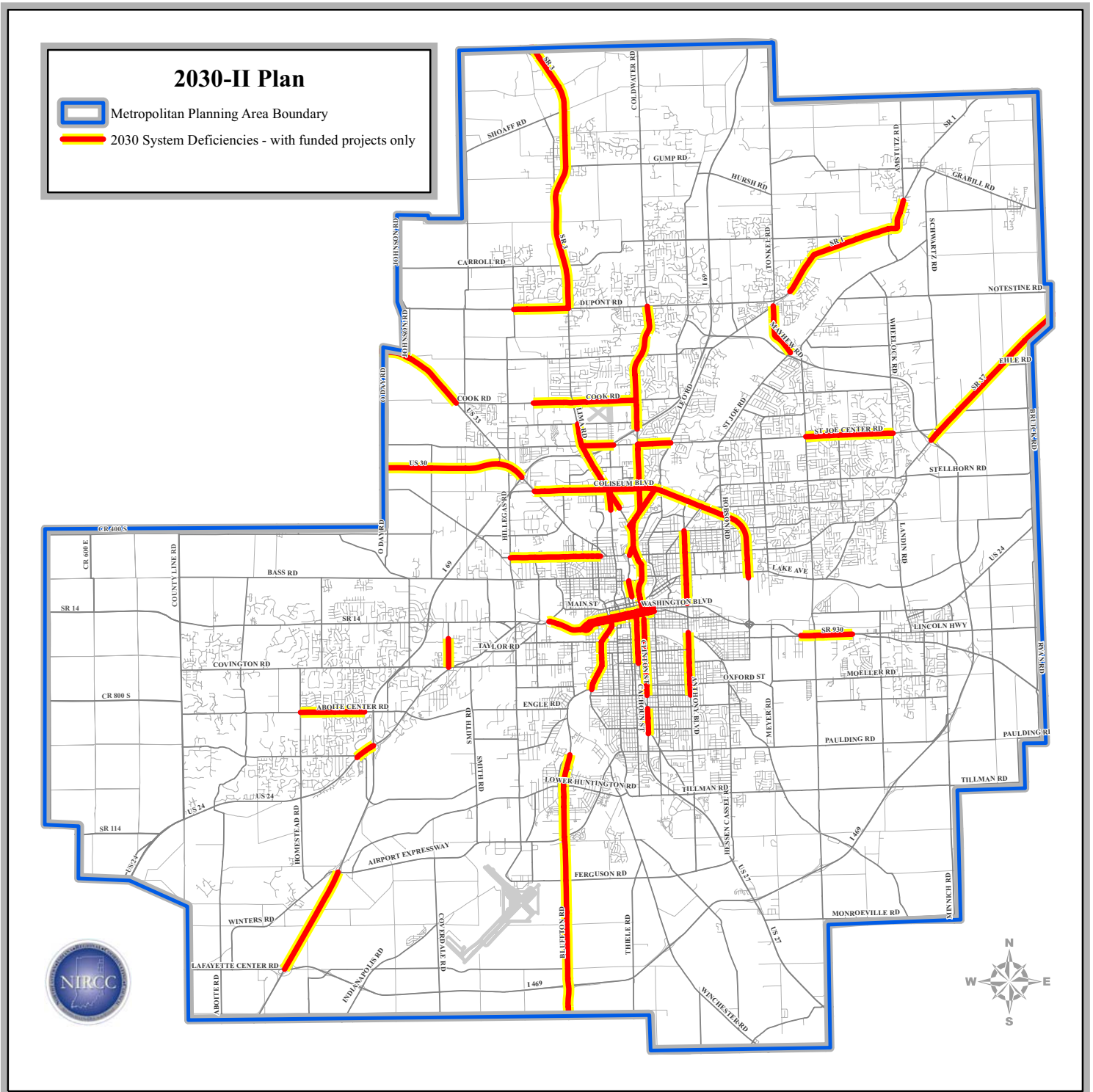


Figure 13

Network Deficiencies after 2030-II Funded Projects

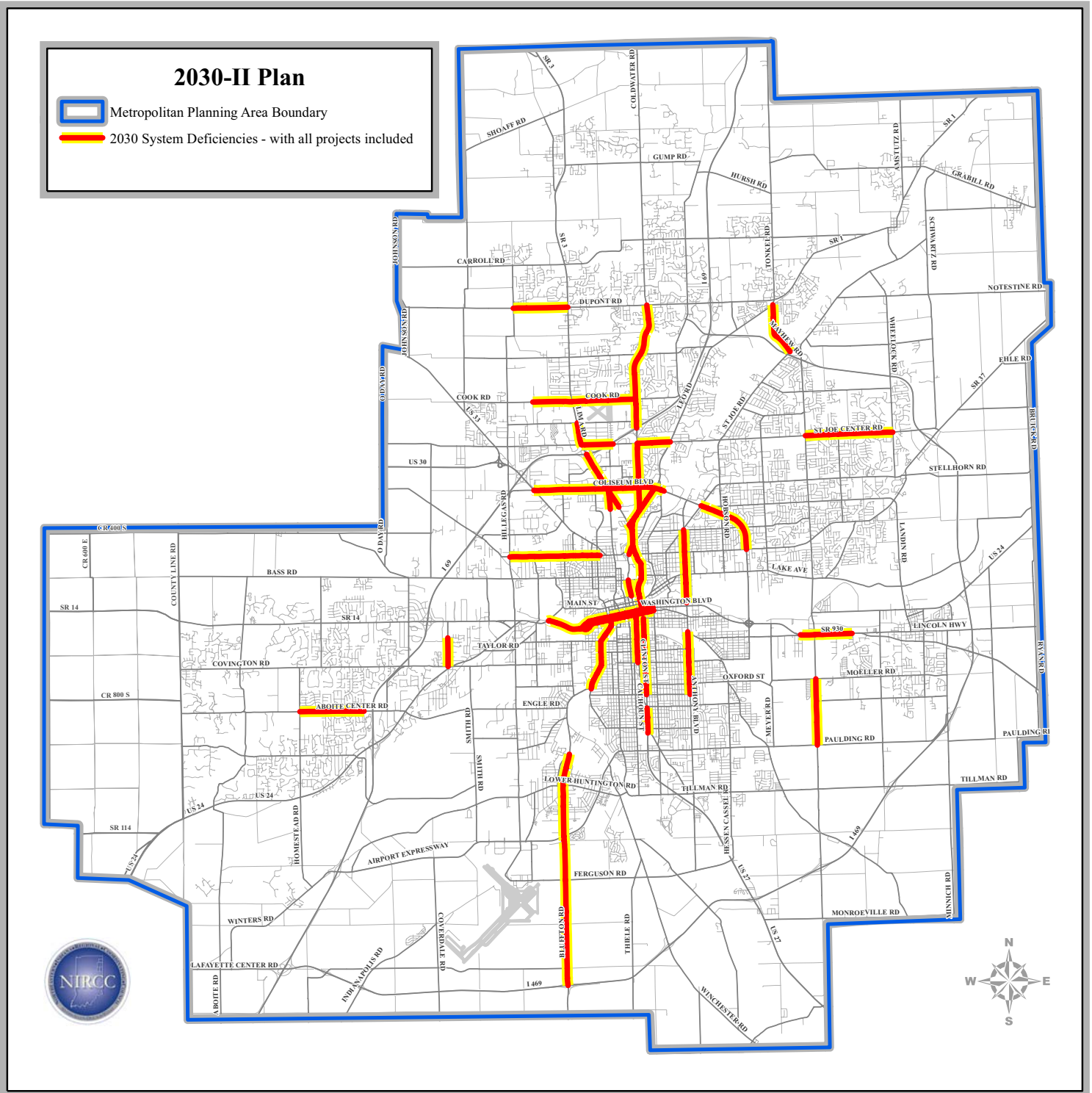


Figure 14

Network Deficiencies after 2030-II Funded and Illustrative Projects

improved transit service. The highway and transit systems are complementary and mutually dependent. Highway system improvements increase transit mobility and efficiency. Improving transit mobility and efficiency increases transit ridership. Increased transit ridership reduces demands on the highway system helping to mitigate congestion.

The fixed-route transit service is based upon a radially-oriented configuration of transit routes. This type of system is often described by comparing its design to a wagon wheel. The Fort Wayne Central Business District represents the hub of the wheel and the transit lines radiate out from the CBD like spokes. The transit alternatives concerning route expansion and modifications are based upon general assumptions for potential improvements. Areas in the Metropolitan Planning Area have been identified where housing and commercial growth indicates the potential for expanding transit service. These areas will be monitored for their transit propensity. The effect of the aging population, access to education and employment centers, and reverse commute issues will guide transit expansion in the Metropolitan Planning Area.

In addition to the Transit Development Plan, a Coordinated Public Transit – Human Services Transportation Plan for Allen County was completed in 2007 (Appendix G). The plan was required to satisfy funding requirements for three Federal Transit Administration programs vital to transit and human service transportation in the Metropolitan Area. The programs included the Section 5310 Elderly Individuals with Disabilities Program, the Section 5316 Job Access and Reverse Commute (JARC) Program and the Section 5317 New Freedom Program. All projects selected for funding from these FTA programs must be derived from this coordinated plan and be competitively selected. The plan developed strategies to address the identified transportation needs and gaps within Allen County (listed below). Local projects must meet at least one of the strategies identified for each program.

Section 5310 Strategies:

- Maintain existing service / fleets
- Maintain and increase coordination / efficiency between all transportation providers
- Expand existing service / fleets
- Increase public awareness of available services and programs offered by providers that are available to them.

Section 5316 Strategies:

- Provide transportation to destinations outside of the current service area
- Provide transportation within and in particular outside of the current service schedules
- Facilitate multiple destination trips from a single service provider. (ie. daycare/job)

- Inform the public about transportation services available in the community and train them to use the services to get to work, job training, and child care as efficiently as possible

Section 5317 Strategies:

- Provide transportation above and beyond existing complimentary paratransit service
- Provide transportation outside current service areas
- Provide transportation within and outside current service schedules

Several capital improvements for transfer centers are more specific in nature. Citilink anticipates developing a centralized transfer facility with potential links to childcare, retail, and job training/education centers. Citilink has two transfer facilities located on northern and southern fringe of the Fort Wayne Central Business District. Currently, only the northern transfer facility is being utilized to maintain sixty-minute headways. To further assist in the reduction of headways and improve the convenience of transit a single centralized transfer facility is desirable and is incorporated in the 2030-II transit system.

Citilink continues to improve transit service by implementing strategies identified in the *Transit Development Plan*. These improvements include reducing headways from sixty minutes to thirty minutes on selected routes and extending service hours. These modifications have improved service and provide a more flexible operating system. Additional headway reductions for selected routes are under consideration. Through improved transit service, ridership is anticipated to increase. The increase in estimated ridership will correlate to an improved level of transit service and enhanced mobility for the entire community.

Citilink completed the Hanna Creighton Neighborhood Transit Facility in 2005 to serve as a satellite bus stop facility with a customer waiting area in conjunction with a neighborhood redevelopment project in the Hanna Creighton Neighborhood. In addition to this project, Citilink continues to upgrade bus shelters, benches, and other customer amenities throughout their service area. Other capital improvements include the replacement of transit coaches, para-transit coaches, and support/service vehicles as part of a regular vehicle replacement program.

In addition to the transit service and capital improvements, policies were adopted by the Urban Transportation Advisory Board in support of improving transit service in the metropolitan area. These policies are presented in Chapter 6. The transit improvements are derived from the policies. Augmenting these policies will include continued efforts to explore a wide realm of transit options

and incorporate land use and highway design features that compliment transit service. The future transportation system will efficiently serve the community through cooperative and complementary highway and transit networks.

The financial constraint requirement also effects the selection of viable transit solutions. Proposed improvements to the transit system must indicate the financial support for implementation. Due to the uncertainty of transit funding some of the proposed solutions as outlined in this plan may result in trade-offs from service modifications. In essence, this means that less efficient service may be replaced with efforts aimed at improving ridership and mobility with minimal increases in overall operating cost.

Chapter 5

SELECTION OF THE RECOMMENDED PLAN

The Northeastern Indiana Regional Coordinating Council has delegated the responsibility for selecting the transportation plan that best meets the future travel needs of the Fort Wayne-New Haven-Allen County Metropolitan Planning Area to the Urban Transportation Advisory Board (UTAB). The development of the plan involved a magnitude of local, state and federal governmental agencies plus considerable public participation. The factors and events that led to the selection of the plan are the subject of discussion within this chapter. The final adoption of the transportation plan is made by the Northeastern Indiana Regional Coordinating Council.

Documentation of Public Participation

Public officials and local citizens of the metropolitan area have historically provided valuable and comprehensive input throughout the development of transportation plan updates. The development of the 2030-II transportation plan also proactively encouraged public input and participation. Local elected and appointed officials were included in meetings and discussions concerning the transportation plan. Presentations were made to the Urban Transportation Advisory Board, and input from the Transportation Technical Committee and Transit Planning Committee was incorporated into the transportation plan. Discussion at these meetings is intended to inform, stimulate participation, and obtain policy guidance at all stages of plan development. A list of the Urban Transportation Advisory Board meetings where topics concerning the plan update were discussed is provided in Table 7. These meetings are open to the public. Notices are sent to all interested persons including the media, the local Chapter of the NAACP, the Fort Wayne Urban League, and the Benito Juarez Cultural Center.

The Urban Transportation Advisory Board began discussing the merits of the current Year 2030 Transportation Plan in mid 2008 in preparation of the 2030-II update. This discussion familiarized the members to the planning process for developing a transportation plan. Subsequent meetings involved productive dialogue between members and staff, and exceptional policy formulation throughout the evolution of the 2030-II plan update. The Transportation Technical Committee, Feasibility Subcommittee, and Transit Planning Committee were also involved in the development of the plan. Through their assistance, a comprehensive plan was developed to meet the future transportation needs of the community.

Table 7. Urban Transportation Advisory Board Meetings*

April 1, 2008
May 13, 2008
June 3, 2008
July 8, 2008
September 2, 2008
November 18, 2008
December 2, 2008
January 6, 2009
February 3, 2009
March 3, 2009
April 7, 2009

*These meetings were all open to the public

Participation meetings were conducted to inform area residents of the planning process and status of the plan development. More important, however, was the opportunity through these meetings for discussing and exchanging ideas concerning the future transportation system. Questions, comments and information were exchanged at these meetings. Valuable information was shared and the quality of the plan was enhanced through the community involvement. A list of the meetings is provided in Table 8. See Figure 15 for a map of the locations. A number of the citizen meetings were directed to neighborhood representatives throughout the region including low income and minority neighborhoods. The meetings were held at locations convenient to the representatives near their respective neighborhoods. This process is in accordance with the Public Involvement Policy as adopted and revised.

Table 8. Citizen Participation Meetings

Date	Location
July 22, 2008	City-County Building
September 8, 2008	City-County Building
October 15, 2008	Taylor University
November 12, 2008	Calvary Third Presbyterian Church
November 13, 2008	Good Shepherd United Methodist Church
March 19, 2009	Northridge Baptist Church
March 31, 2009*	City-County Building

*Scheduled

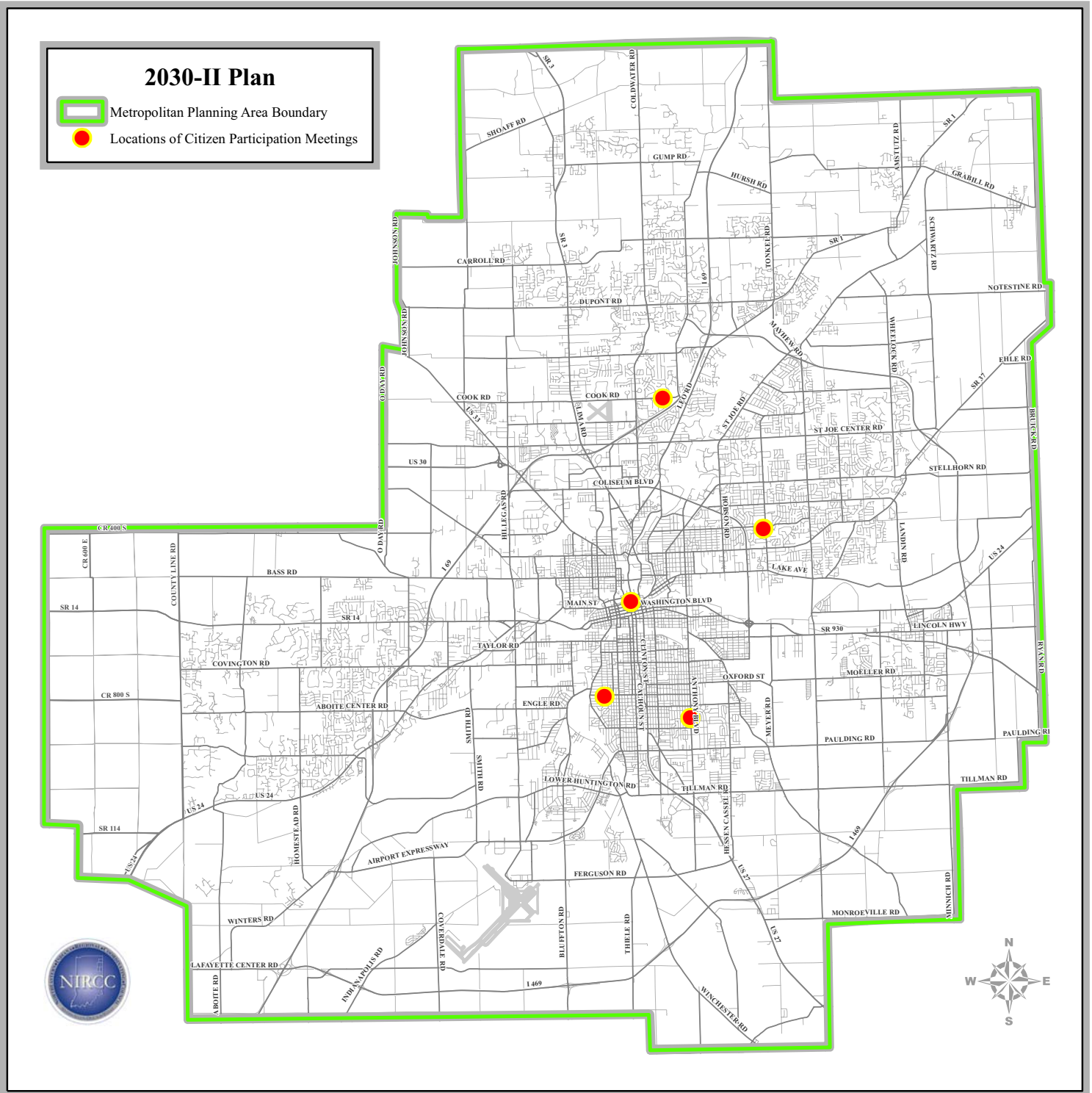


Figure 15

Location of Citizen Participation Meetings

In addition, numerous other efforts were made to inform and involve the public in developing the 2030-II plan update. Citizens are encouraged to visit the office, mail in comments, or contact us by telephone to discuss development of the plan and provide suggestions. Planning materials are also routinely posted on the NIRCC Website at NIRCC.com for review and informational purposes. The planning process received coverage by local news media including television, radio, and newspaper. Presentations were also made to groups and committees associated with the Greater Fort Wayne Chamber of Commerce as part of an on-going working relationship with the business community.

The comments received from the participation meetings were documented. The comments are combined with those received by telephone, mail, or e-mail. The comments are reviewed by the Urban Transportation Advisory Board and related subcommittees. The staff, working with the Board, prepared responses to the citizen comments. The comments received as part of the development of the 2030-II Transportation Plan along with the responses are provided in Appendix H.

Environmental Justice

The concept of environmental justice refers to the goal of identifying and avoiding disproportionate adverse impacts on minority and low-income individuals and communities. The provisions of Title VI of the Civil Rights Act of 1964, Executive Order 12898 on Environmental Justice, and other statutes, orders, policies, and guidelines affect planning and project decisions undertaken by Metropolitan Planning Organizations (MPO), public transportation agencies, State Departments of Transportation (DOT), and other transportation providers. Executive Order 12898 on Environmental Justice amplifies the provisions of Title VI of the 1964 Civil Rights Act that states “No person in the United States shall, on the grounds of race, color, or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance.”

There are three fundamental principals at the core of environmental justice:

To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects including social and economic effects, on minority populations and low-income populations.

To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.

To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.

The implementation of Environmental Justice Order in the transportation planning process should assure public involvement of low-income and minority groups in planning activities and decision-making, prevent disproportionately high and adverse impacts of decisions on minority and low-income populations, and assure low-income and minority populations receive a proportionate share of transportation benefits.

The Northeastern Indiana Regional Coordinating Council, the Metropolitan Planning Organization of the Fort Wayne-New Haven-Allen County Urban Area, has developed a process for addressing environmental justice issues in transportation planning activities and plan development. The process includes defining and identifying minority and low-income populations, public involvement strategies to engage minority and low-income groups and individuals in the transportation planning process, and measures for evaluating the benefits and burdens of transportation plans and projects.

Defining and Identifying Minority and Low-Income Populations

In order to identify the location of low-income and minority populations, a demographic profile of the Metropolitan Planning Area was developed based upon 2000 Census information. Three separate profiles were developed that identify minority, Hispanic, and low-income populations by census tract. Separate maps have been prepared for each profile.

The minority population is obtained by combining the Census categories of Black, American Indian, Asian, Hawaiian, other, and two or more races. The Hispanic population is obtained directly from a Census category identifying Hispanic population. The information was determined by Census Tract. Identifying these two environmental justice populations was fairly straightforward.

Identifying the low-income population group is a little more difficult and subjective based on various acceptable methods. Information was obtained from 2000 Census data and is based upon household income. Several methods for identifying low-income populations using household income data were evaluated. One method used 2000 Census poverty income criteria for various household sizes, which is very similar to the U.S. Department of Health and Human Services 2000 poverty guidelines. This provided data on the number of persons considered low-income by Census poverty definitions. A second similar approach identified

households, rather than population, that met the Census poverty guidelines. A third and simpler approach established a \$15,000 threshold for household income based upon Health and Human Services 2000 poverty guidelines and Census poverty definitions. Any household under the \$15,000 annual income level was identified as low-income. The three methods of identifying low-income populations yielded similar demographic profiles. The third approach was utilized for its simplicity and reasonable results.

The process used to identify concentrations of environmental justice populations was based upon establishing threshold levels for minority, low-income, and Hispanic populations. The thresholds are based on the Metropolitan Planning Area regional average established through 2000 Census data. The regional averages for the environmental justice populations are 18.28 percent for minority populations, 4.47 percent for Hispanic populations, and 13.11 percent for low-income populations. A map was developed for each population group identifying census tracts where data indicates the population characteristic exceeds the threshold level. Figures 16, 17, and 18 display this information. Figure 19 combines the minority population, Hispanic population, and low-income population census tracts that exceed the respective threshold levels. As a performance measure we looked at the transit system coverage area. Staff determined that approximately 90% percentage of poverty level households, population, and employment fell within a 1/2mile of a transit route. See Figure 20.

Public Involvement Strategies for Engaging Minority and Low- Income Populations

The transportation planning process for the Fort Wayne-New Haven-Allen County has a long established public participation program that has evolved since the development of the first transportation plan in the late 1970's. The current public participation program involves a variety of strategies to inform citizens of transportation planning issues and encourage their participation. These strategies include public meetings, open board meetings, transportation planning briefs, press releases to local media, and information exchanged through telephone calls, mail, e-mail and visits to our offices.

Meetings of the Urban Transportation Advisory Board are open to the public. This is the policy body for the transportation planning process. Meeting notices and agendas are provided to groups representing minority and low-income populations such as the Fort Wayne Urban League, local Chapter of the NAACP, and Benito Juarez Cultural Center.

Public meetings are conducted at various times throughout the year to solicit citizen input to the transportation planning process and on specific improvement projects. One public

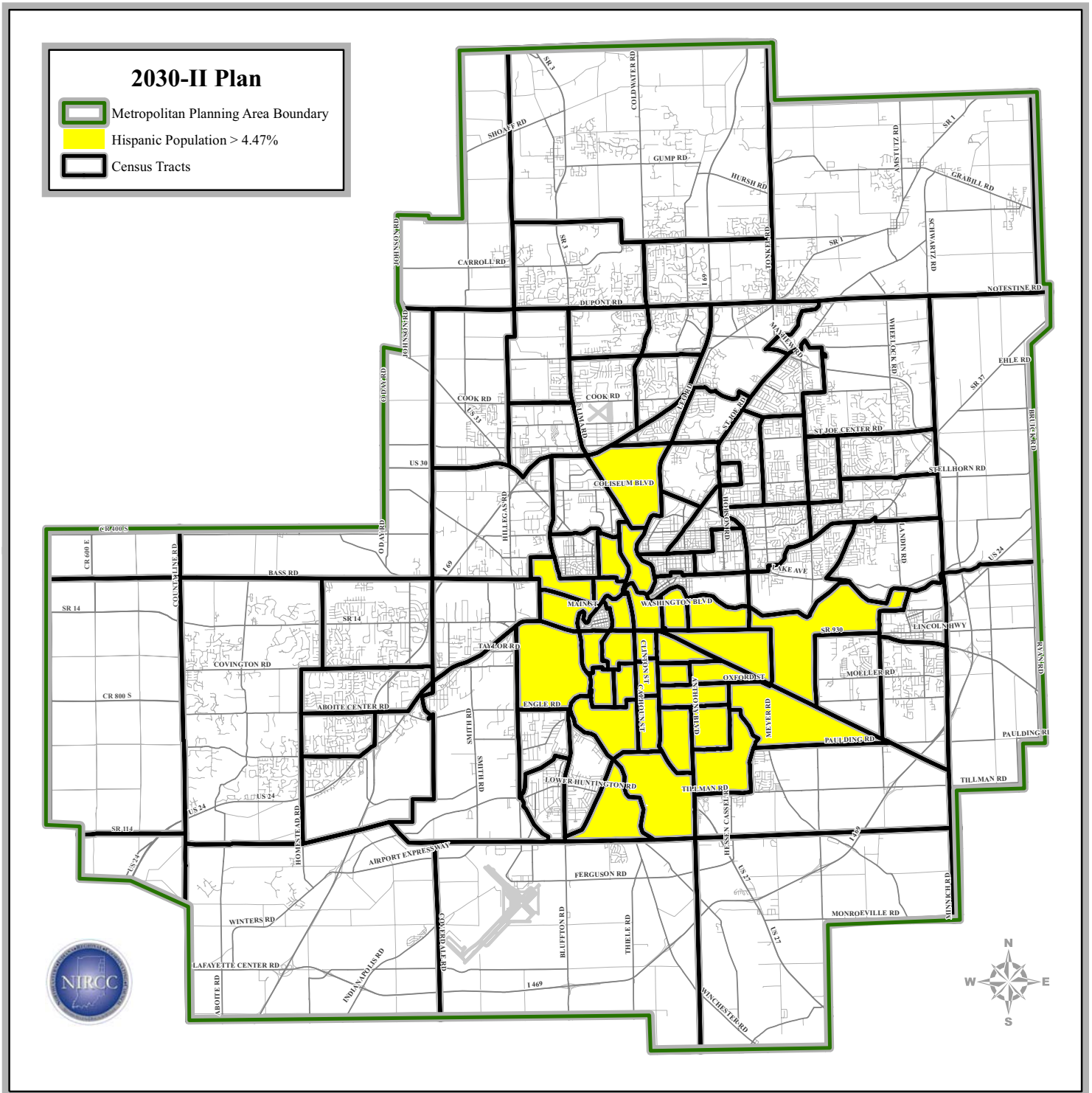


Figure 17

Hispanic Population Profile

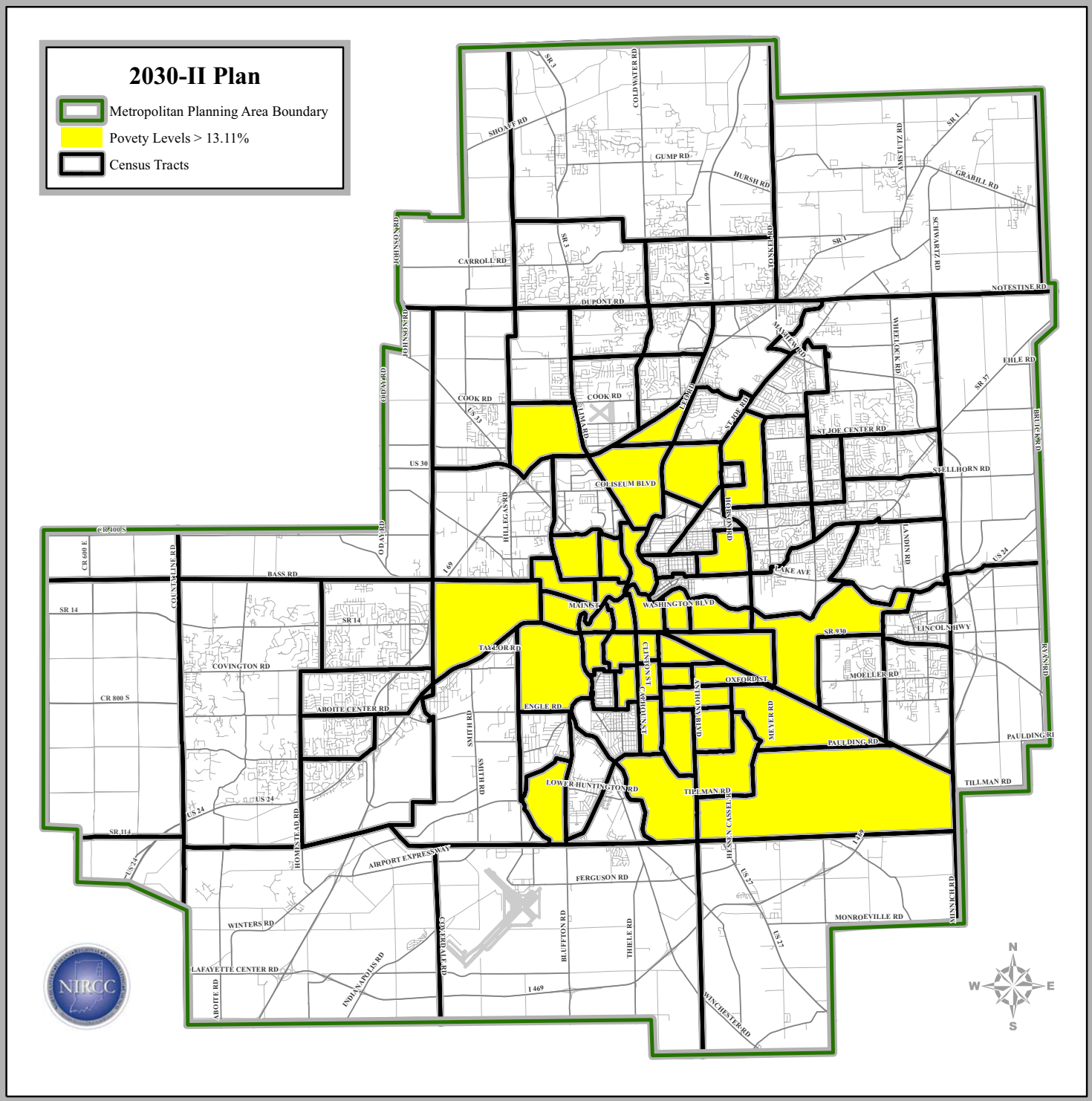


Figure 18

Low-Income Population Profile

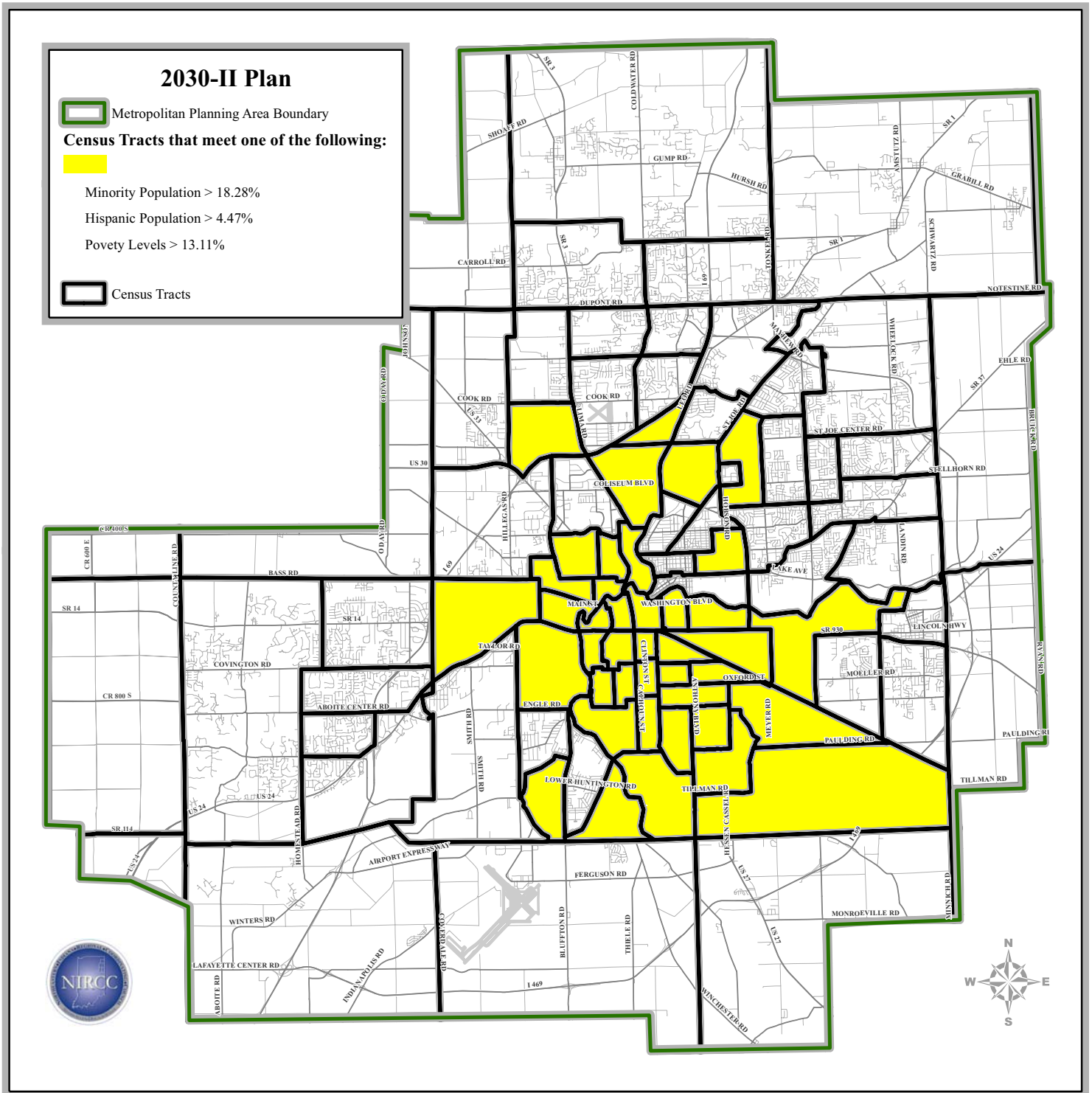


Figure 19

Combined Enviromental Justice Population Profile

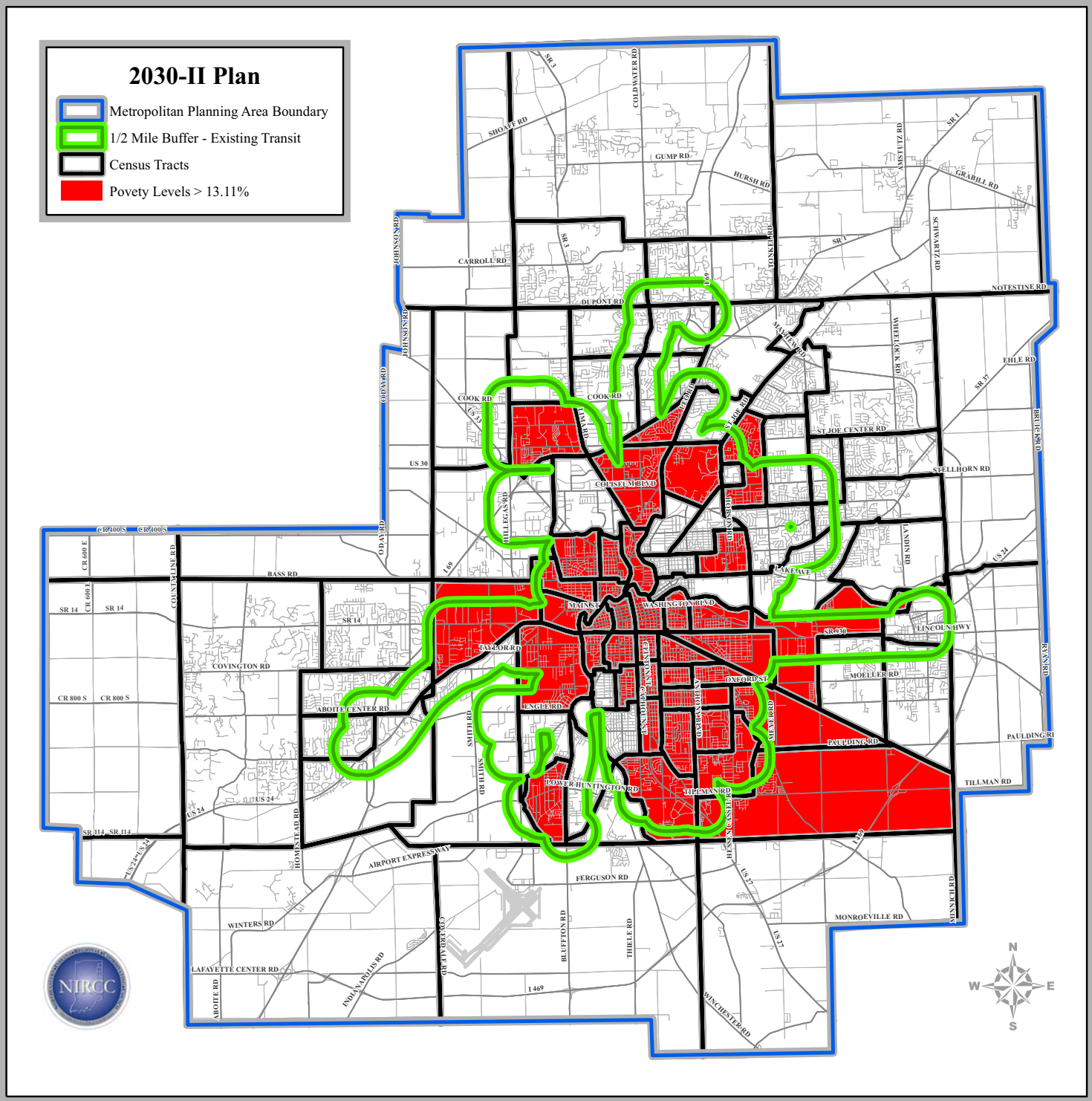


Figure 20

Transit Routes 1/2 mile buffer

meeting always coincides with the development of the Transportation Improvement Program. This meeting is used to present the proposed improvement program and gain citizen feedback. All comments are welcome at this meeting.

Notices for the public meetings are mailed to all known neighborhood association presidents or representatives. The neighborhood association representatives are well dispersed throughout the metropolitan area including areas where high concentrations of low-income, minority, and Hispanic populations have been identified. Figure 21 displays the location of neighborhood associations. In addition, a separate mailing is made for any other interested citizens or group that has expressed an interest in participating. This includes organizations representing low-income and minority groups, environmental groups, business groups, and other interested citizens. The news media is also notified to help publicize the meetings. The meetings are held at accessible sites and at times convenient for the public.

The meeting notices include a comment form that is designed to be easily returned to the NIRCC office. Comments are encouraged through use of the form, telephone calls, e-mails, office visits, or through attending the public meetings. The citizen comments presented at the public meetings and through the other various channels are documented by planning staff. The comments are presented to the policy board. The staff works with the policy board and related subcommittees to prepare responses to the comments. Once prepared, the comments and responses are sent to those who attended the citizen meeting. In addition, staff attends meetings of special groups when requested.

The Transportation Plan and planning process were presented to the public at meetings held throughout the metropolitan area. These meetings are sponsored by the local governments to address issues related to the delivery of government services. These forums provided the opportunity for NIRCC staff to present the transportation plan and discuss the highway, transit and bicycle/pedestrian components. The meetings are well attended by neighborhood groups representing all areas in the Metropolitan Planning Area. Various solutions and strategies were discussed to reduce congestion and improve mobility. A public meeting was also held during the Public Review and Comment Period to discuss the Transportation Plan and corresponding Air Quality Conformity Analysis.

The series of six meetings with the neighborhood groups occurred during the development of the Transportation Plan and were held at five different locations throughout the Metropolitan Planning Area. Locations are selected to geographically cover the entire MPA.

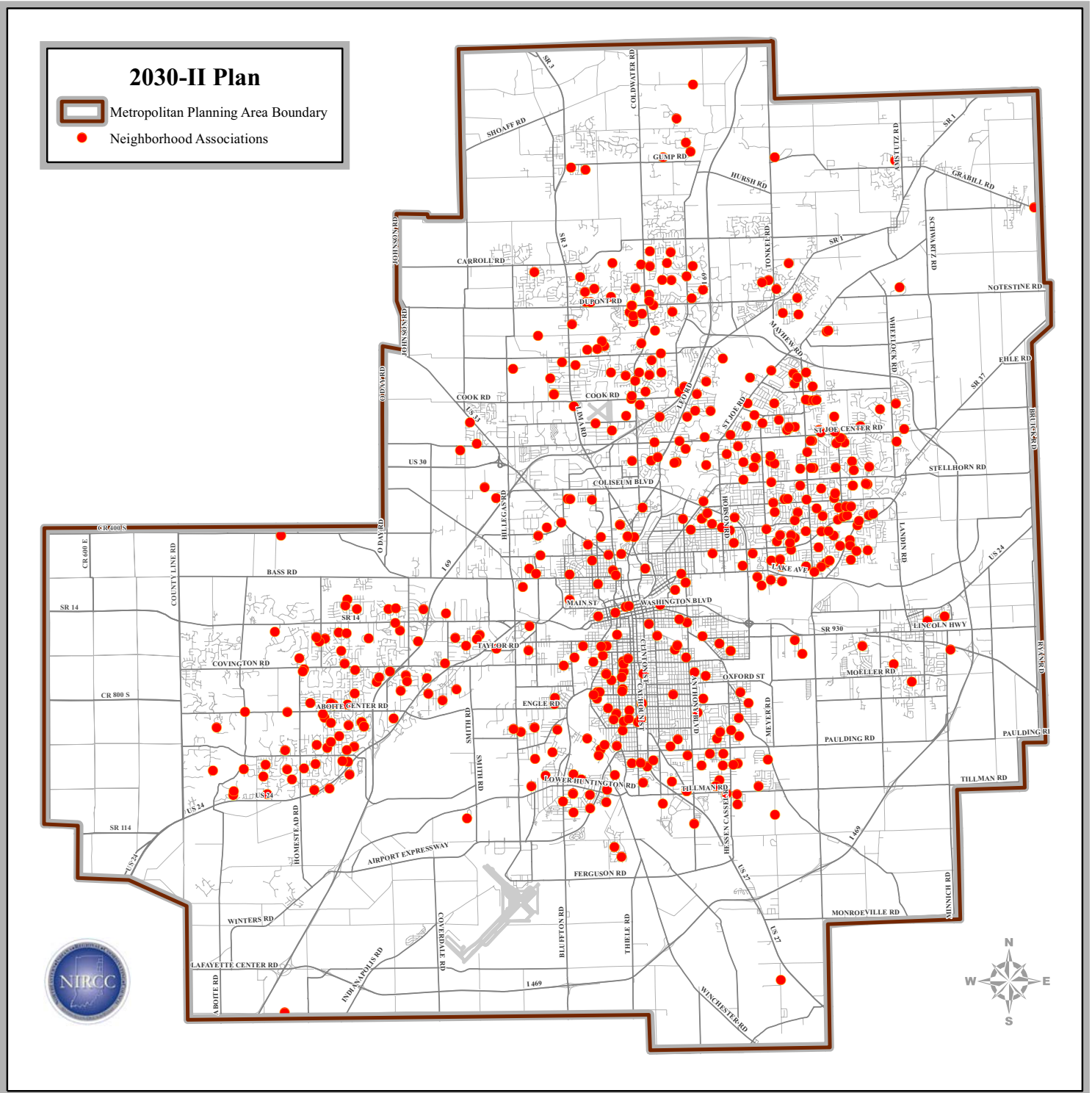


Figure 21

Neighborhood Associations

Comments from all citizen involvement meetings are documented, and responses are prepared to ensure all comments are considered as input to the transportation planning process.

A total of seven citizen meetings were held in 2008/2009 to discuss the development of the 2030-II Transportation Plan. The meetings allowed for the exchange of information and generated many good ideas. Through these meetings as part of the transportation planning process, issues have been raised regarding accessibility and mobility in the southeast central neighborhoods including recommendations for transit improvements. The concerns include mobility issues, intersection improvement, transit improvements, and bicycle/pedestrian safety. A specific mobility concern involves the Anthony Boulevard at grade railroad crossing between Wayne Trace and Lewis Street. Improvement projects for these problem areas were developed and are included in the Transportation Plan. These projects represent the responsive nature of the transportation planning process for all areas of the community, including low-income and minority areas.

Measures for Evaluating Benefits and Burdens of Transportation Plans and Projects

The evaluation of benefits and burdens is conducted at both a Transportation Plan level and a project level basis. The planning process, including development of the Transportation Plan, utilizes a total assessment of the transportation system for the entire Metropolitan Planning Area. Data collection and analysis is performed on the entire system utilizing uniform performance standards and analytical tools. The transportation plan is developed through an analytical process of identifying existing and future deficiencies of the transportation system. The quantitative analysis that is a part of this process is applied consistently and unilaterally to the transportation system. This ensures that the entire Metropolitan Planning Area is treated equitably in the deficiency assessment process. The deficiency assessment process drives the development of transportation policies and projects.

The quantitative measures include volume to capacity ratios, level of service, travel time and delay, transit headways, and transit service routes. See Appendix A: "Congestion Management Process". These criteria provide performance measures for evaluating the efficiency of the highway and transit systems. Factors affecting evaluation of highway performance utilizing volume to capacity ratios, level of service, and travel time and delay are based on area type and facility type regardless of the socioeconomic variables of the surrounding population. Performance measures of the transit system using headways and location of service routes also provide a unilateral evaluation tool unbiased to the environmental justice populations (See earlier in Chapter 5).

A qualitative evaluation of the Transportation Plan and associated transportation planning process is also utilized to measure benefits. A qualitative assessment identifies the distribution of the proposed projects and corresponding benefits. As part of this evaluation, the location of deficient areas as defined by quantitative analysis procedures must be considered. Improvements planned for the highway system are identified and overlaid on maps that identify the locations of the environmental justice populations. The transit route system and other system improvements identified in the Transportation Plan are also overlaid on maps identifying locations of environmental populations. Headways, route saturation, and improvement projects can be measured for equitable distribution (See earlier in Chapter 5).

A historical look at the implementation of projects through the transportation planning process has shown a fair distribution of projects and benefits throughout the entire metropolitan planning area. See Figure 22. The transit system is extremely sensitive to the needs of low-income and minority groups. The transit system has concentrated a number of routes in low-income neighborhoods based upon identified transit needs and transit propensity. Recent transit modifications by Citilink concentrated on improvements in the south central section of Fort Wayne. Service was improved and headways were reduced to thirty minutes on several of heaviest traveled routes through this area. The standard headway for Citilink routes is sixty minutes. Decisions to improve transit service are based upon anticipated increases in ridership and where increased service will maximize public benefit. This is typically in the low-income neighborhoods.

The proposed improvements in the Transportation Plan are designed to improve safety, mitigate congestion, increase accessibility and mobility, and support economic growth through feasible strategies which minimize impacts on residential neighborhoods and are environmentally sensitive. Individual projects are designed to meet one or more of these objectives and their corresponding benefits measured. The regional benefits of the transportation plan are measured in vehicle miles of travel and vehicle hours of delay. These assessments are evaluated on the total package of projects proposed in the transportation plan.

Individual projects are also evaluated for burdens and benefits on environmental justice populations as part of the community and environmental analysis studies conducted as part of project development. The primary concern at the project level is identifying adverse impacts such as noise, traffic, and relocations. Mitigation strategies are included in the project development and design to minimize adverse impacts to all population groups,

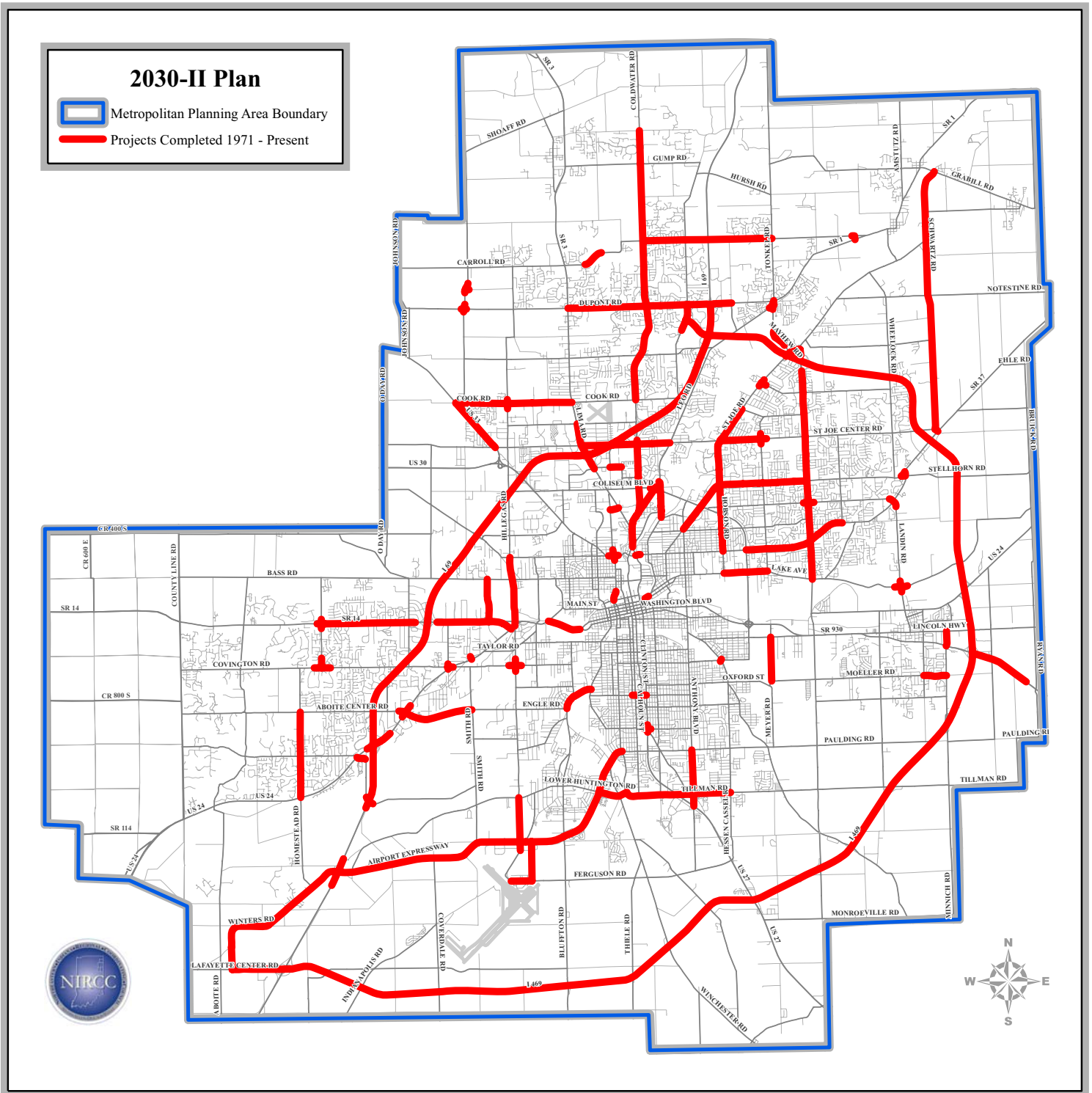


Figure 22

Implementation of Transportation Plans (1971-present)

including low-income and minority populations. Context-sensitive design practices are beginning to be incorporated in the project development activities.

The transportation planning process includes assessment techniques through the development of the Transportation Plan and related improvement projects. The primary goal of a transportation plan is to achieve an efficient and safe transportation system for the movement of people and goods, while simultaneously improving the economic and environmental conditions of the community. The desire for an efficient transportation system includes accountability for environmental and social costs. The result is a plan that preserves neighborhood tranquility, minimizes environmental disruption, and is sensitive to its effect on minority and low-income populations.

Factors Influencing Plan Selection

The development of the Year 2000 Transportation Plan included the establishing of evaluation methodology for comparing alternative transportation plans. The ideals and concepts of this methodology have remained throughout the development of the 2005, 2010, 2015, 2025, 2030 and the 2030-II plans. These concepts continuously guide transportation planning decisions within the metropolitan area. Three of the major factors influencing such decisions include reduced congestion, economic advantages, and land use concerns.

Reducing traffic congestion within the Metropolitan Planning Area will result in a number of distinct advantages. Less congestion equates to reductions in noise, air pollution, travel times, energy consumption and accident rates. Reducing accident rates and improving safety has always been the highest priority influencing transportation decisions. Reduced congestion also improves accessibility, provides safer streets, and improves the response time of essential emergency services such as medical, fire, and police.

Economic advantages of a well-designed transportation plan include enhanced regional accessibility, especially to areas zoned for future industrial and commercial developments. An efficient transportation system minimizes the travel times required to transport goods and services providing a direct economic benefit to area businesses. Improved accessibility significantly assists economic development activities for the Fort Wayne area, stimulating the economy and generating new employment opportunities.

Land use concerns were also considered throughout the development of the transportation plan. Protecting prime agricultural land and rural areas while providing sufficient access to

commercial and industrial developments is a delicate procedure necessary to balance all interests involved. The outcome of this process is a transportation plan that promotes orderly growth and protects prime agricultural land.

The collaborative effort among local residents; public officials; federal, state, and local governmental agencies; and local boards, commissions, and committees, was the solidifying and driving force behind the 2030-II transportation plan. The update incorporates positive impacts such as safety and efficiency on the transportation system with less congestion and improved accessibility. The plan serves as a guide for directing and establishing transportation policy and policy decisions to ensure that the transportation system meets the travel demands of future generations.

Livable Communities

The Livable Communities is a federal initiative designed to provide communities with tools, information, and resources they can use to enhance their quality of life, ensure their economic competitiveness, and build a stronger sense of community. The transportation planning process and resulting transportation plan incorporates many transportation-related activities associated with the Livable Communities initiative. The transportation plan has as its goal to **achieve an efficient and safe transportation system for the movement of people and goods while simultaneously improving the economic and environmental conditions of the community.** The implementation of such a system will minimize energy consumption and reduce air pollution. Reductions in vehicle hours of delay, vehicle miles of travel, accident rates, and accident severity are measures by which the system can be measured. Achieving this goal will enhance quality of life in the Metropolitan Planning Area and ensure that it remains as a “Livable Community.”

In pursuit of this goal, the transportation plan and planning process have identified improvement strategies and projects designed to improve the quality of life for area residents and people visiting the community. Including a variety of travel modes as components of the transportation system improves accessibility and mobility while reducing the dependency on the private automobile. Promoting and expanding transit service in the metropolitan area is an important policy objective of the plan. Improving and extending the pedestrian and bicycle pathway system to reach more neighborhoods and activity centers will be achieved through the implementation of the transportation plan. These types of projects encourage the use of alternative travel modes.

The transportation plan includes many transit related projects and policy guidance to improve transit service within the community. Reducing headways, expanding service hours, and providing service on Sundays are transit service level improvements designed to increase the attractiveness of the transit system. To ensure transit issues are considered as new development occurs in the community, the transportation plan recommends that land use policies address transit needs for accessibility to private developments through street and subdivision design. It further states that the land use planning approval process should include pedestrian and public transit issues. Incorporating these policies into the land use planning process will be an objective of the transportation planning process.

The pedestrian\bikeway plan is another component of the transportation planning process that will encourage walking and bicycling and support the livable community agenda. This plan includes interconnecting the New Haven bicycle and pedestrian trail system with the Fort Wayne River Greenway system. The combining of these two systems will improve accessibility and mobility on both systems. Additional projects to expand the system and develop new trails will further improve pedestrian/bicycle opportunities in the Metropolitan Planning Area. The pedestrian\bicycle plan also supports the requirements for sidewalks in all new developments and ensuring they interconnect with adjacent developments. This process will ensure a growing network of sidewalks throughout the community.

The transportation planning process includes a traffic-calming program initiated by the City of Fort Wayne. Through this process, neighborhood associations can request that a study be conducted to develop traffic calming strategies. Through a collaborative process, the Metropolitan Planning Organization collects data and provides information to the Fort Wayne Traffic Engineering Department to assist in the study. The Fort Wayne Traffic Engineering Department makes the final decision and implements the selected strategy. The MPO staff provides similar assistance to other local governments upon request.

The access management program, a component of the congestion management program, is an extremely successful program enhancing the community's quality of life. The access management program controls driveway and public street connections to the roadway system. The access management process utilizes access standard design and access control to minimize traffic impacts to the transportation system from new developments. The access management program supports corridor preservation, leads to air quality improvements, prolongs the functional life of existing highways, maintains travel efficiency for economic prosperity, saves lives by reducing the frequency of accidents, applies uniform standards

and promotes fair and equal application to the development community, and requires cooperation among all agencies that make land use and transportation decisions thereby achieving improved planning and transportation integration. These benefits, of a well developed and administered access management program, directly support the many facets of the “Livable Communities” initiative.

Financial Analysis

An important factor affecting the selection of the 2030-II Transportation Plan is the financial revenues available to support the implementation of the improvement projects. The plan is required to include a financial analysis that demonstrates the consistency of proposed transportation investments with available and projected sources of revenue. The plan selection was developed within this framework. The selection of proposed transportation investments for inclusion in the plan occurred after financial analysis was complete and projected revenue was earmarked for project implementation. Only those projects, for which funding is reasonably expected to be available, were included in the plan.

Chapter 6

THE SELECTED PLAN

The culmination of the long range planning process is the selected transportation plan titled “2030-II Transportation Plan.” The plan is a combination of transportation improvement projects and policies for the highway, transit, and pedestrian/bicycle systems. The proposed highway improvements are displayed in Figure 23. A complete highway improvement project listing is provided as a part of this chapter. The transit system, including potential areas for future transit service, is displayed in Figure 24. The Pedestrian and Bicycle Plan are displayed in Figure 25. Potential areas for future transit service are also identified and discussed in this chapter. Collectively, these distinctive yet mutually dependent systems form the transportation plan.

Specific projects and capital improvements form one component of the plan, and equally important, is the set of policies directed at preserving the integrity of the transportation system through the encouragement of wise decision-making. These policies aspire to promote highway, transit, and pedestrian/bicycle efficiency including specific strategies incorporating each system. The policies address non-traditional strategies for mitigating congestion including interchange reviews, access management, project implementation and transit recommendations.

Goal of the Transportation Plan

The goal of the transportation plan is to achieve an efficient and safe transportation system for the movement of people and goods while simultaneously improving the economic and environmental conditions of the community.

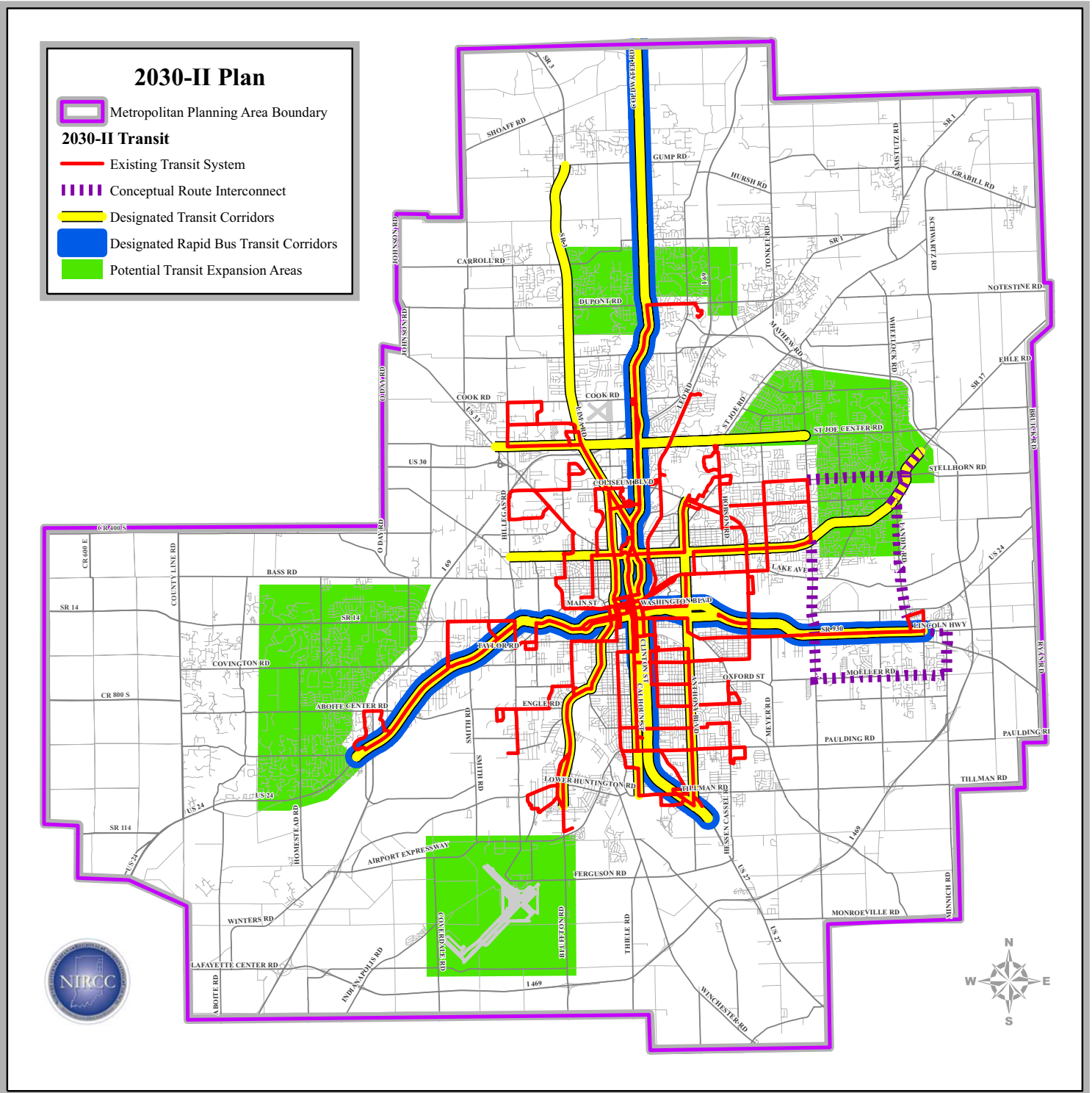


Figure 24

Recommended 2030-II Transit System

The Recommended Plan

The recommended plan is a comprehensive list of transportation projects and policies carefully developed to meet future travel demands. The policies and projects were selected on their potential for mitigating congestion and improving mobility throughout the metropolitan area. A safe and efficient transportation system is the primary goal of the recommended plan.

Highway Improvements

New Construction

These projects enhance the mobility of drivers in areas that become increasingly important as the community grows. A more efficient system allows the traveler to take a quicker route reducing vehicle miles of travel, air pollution, energy consumption and travel delay.

New four-lane construction

Maplecrest Road from Lake Avenue to State Road 930

New two-lane construction

Coombs Street from Maumee Avenue to Wayne Street
Paul Shaffer Drive from California Road to Clinton Street
Spring Street from Wells Street to Spy Run Avenue

Widening Projects

Widening projects improve the accessibility of the area, add to street continuity and provide relief in congested areas. Relieving congestion also equates to a reduction in travel time, lower accident potential and improved air quality. Widening projects expand the capacity of the selected roadway by providing additional travel lanes. Added travel lanes are considered when less evasive congestion management strategies can no longer satisfy the travel demands.

Widen to six lanes

Clinton Street from Parnell Avenue to Auburn Road
Crescent Avenue from Sirlin Drive to Coliseum Boulevard
Jefferson Boulevard from Illinois Road South to Main Street
Jefferson Boulevard from Interstate 69 to Illinois Road South
Illinois Road from Getz Road to Thomas Road
State Road 3/Lima Road from Ludwig Road to Dupont Road
State Road 930/Coliseum Boulevard from Parnell Avenue to Crescent Avenue

Widen to four lanes

Adams Center Road from State Road 930 to Moeller Road
Aboite Center Road from Coventry Lane to Jefferson Boulevard

Ardmore Avenue from Jefferson Boulevard to Taylor Street
Ardmore Avenue from Covington Road to Engle Road
Ardmore Avenue from Engle Road to Lower Huntington Road
Bluffton Road from Winchester Road to Old Trail Road
Bass Road from Hillegas Road to Scott Road
Clinton Street from Auburn Road to Wallen Road
Clinton Street from Wallen Road to Dupont Road/State Road 1
Dupont Road from Coldwater Road to Lima Road/State Road 3
Goshen Avenue from State Boulevard to Coliseum Boulevard/State Road 930
Hillegas Road from s/o Bass Road to Washington Center Road
Huguenard Road from Washington Center Road to Cook Road
Lake Avenue from Reed Road to Maysville Road
Maplecrest Road from Lake Avenue to State Boulevard
Maysville Road/Stellhorn Road from Maplecrest Road to Koester Ditch
State Boulevard from Maysville Road to Georgetown North Boulevard
State Boulevard from Spy Run Avenue to Clinton Street
State Boulevard from Clinton Street to Cass Street
State Road 1/Dupont Road from Interstate 69 to Tonkel Road
State Road 14/Illinois Road from Scott Road to West Hamilton Road
State Road 930 from Minnich Road to Brookwood Drive
Tonkel Road from Dupont Road/State Road 1 to Union Chapel Road
Washington Center Road from Lima Road/State Road 3 to US 33
Wells Street from State Boulevard to Fernhill Avenue

Congestion Management Strategy Implementation

Congestion Management Strategies include improvements aimed at maximizing existing highway capacity. The construction of a center turn lane to allow left-turning vehicles to exit the busy through lanes resulting in less traffic conflicts and reduced accident potential. This category of projects may also include a turn lane extension for intersection or ramp movements where congestion is occurring. The extended turn lanes allow turning traffic to exit the through lanes improving flow and maximizing capacity. Intersection reconstruction projects improve intersection capacity and flow, negating the need to widen long sections of roadway. These projects may include adding turn lanes or realigning intersections to improve traffic flow. The reconstruction and realignment of roadway segments will improve safety and traffic flow. Certain roadway sections have varying lane configurations due to egress lanes, left turn lanes, and passing blisters. These projects will establish a consistent roadway design reducing motorist confusion and improving traffic flow. This category of projects also includes intelligent transportation system improvements such as signal modernization/interconnection and motorist information systems.

Center Turn Lane Improvement

Auburn Road from Cook Road to Interstate 469 Exit Ramp (3-lane)
Auburn Road from Dupont Road to Hursh Road (3-lane)
Coldwater Road from Mill Lake Road to Union Chapel Road (3-lane)
Cook Road from Auburn Road to Coldwater Road (3-lane)
Covington Road from Scott Road to Homestead Road (3-lane)
Covington Road from Interstate 69 to Scott Road (3-lane)
Engle Road from Bluffton Road to Smith Road (3-lane)
Gump Road from State Road 3 to Coldwater Road (3-lane)
Gump Road from Coldwater Road to Auburn Road (3-lane)
Hadley Road from Illinois Road/State Road 14 to Bass Road (3-lane)
Hadley Road from Illinois Road/State Road 14 to Covington Road (3-lane)
Liberty Mills Road from Falls Drive to Homestead Road (3-lane)
Maysville Road from State Boulevard to Stellhorn Road (3-lane)
Saint Joe Center Road from Clinton Street to River Run Trail (5-lane)
Saint Joe Road from Evard Road to Mayhew Road (3-lane)
Saint Joe Road from Maplecrest Road to Eby Road (3-lane)
Union Chapel Road from Auburn Road to Tonkel Road (3-lane)
Wayne Trace from Oxford Street to Pontiac Street (3-lane)

Turn Lane Extension

Jefferson Boulevard from Interstate 69 Ramp to Lutheran Hospital Entrance

Bridge Reconstruction/Modification

Covington Road over Interstate 69
Spring Street Bridge over Norfolk Southern railroad
US 27/Clinton Street Bridge over St. Mary's River w/Pedestrian Treatment

Intersection Reconstruction

Auburn Road and Cook Road/Auburn Road and Clinton Street
Clinton Street and Washington Center/Saint Joe Center Road
Coliseum Boulevard and Pontiac Street Intersection
Coverdale Road, Winters Road and Indianapolis Road
Covington Road and Dicke Road/Covington Road and Hadley Road
Dartmouth Drive and Washington Center Road
Flaugh Road and Leesburg Road
Hadley Road, Bass Road and Yellow River Road
Homestead Road and US 24
Ryan Road and Dawkins Road
State Road 1/Leo Road and Amstutz Road
State Road 14/Illinois Road and Allen/Whitley County Line Road

Reconstruction and Realignment

Adams Center Road From State Road 930 to Interstate 469
Allen County/Whitley County Line Road from US 24 to State Road 14

Amstutz Road from Hosler Road to State Road 1/Leo Road
Carroll Road from w/o Corbin Road to Corbin Road
Cook Road from Fritz road to O'Day Road
Coverdale Road from Indianapolis Road to Airport Expressway
Flutter Road from Schwartz Road to Saint Joe Road
Lake Avenue from Anthony Boulevard to Coliseum Boulevard
Landin Road from North River Road to Maysville Road
Maplecrest Road from State Boulevard to s/o Stellhorn Road
Moeller Road from Green Road to Hartzell Road
Moeller Road from Hartzell Road to Adams Center Road
Ryan Road from Harper Road to Bremer Road
Saint Joe Center Road from Reed Road to Maplecrest Road
Till Road from Lima Road to Dawson Creek Boulevard
Wallen Road from Hanauer Road to Auburn Road
Witmer Road/Second Street from Page Road to Main Street
Witmer Road from Schwartz Road to Page Road
US 27/Clinton Street from State Boulevard to Elizabeth Street

Other Highway Improvements

This category of highway improvements includes the construction and reconstruction of railroad grade separations, interchange construction and modifications, and the Congressional high priority corridor improvement for US 24 between Fort Wayne and Toledo (Fort to Port). These improvement projects will increase mobility and accessibility for transit, freight movement, and passenger vehicles.

New Railroad Grade Separation

Airport Expressway and Norfolk Southern Railroad
Anthony Boulevard and Norfolk Southern Railroad

Reconstruct Railroad Grade Separation

Anthony Boulevard and CSX Railroad
US 27/Lafayette Street and Norfolk Southern/CSX Railroads

Congressional High Priority Corridor Improvement

US 24 from Interstate 469 to Bruick/Ryan Road
US 24 from State Road 101 to Indiana/Ohio State line (including interchange @101)
(outside MPA)
US 24 from Bruick Road/Ryan Road to Webster Road (including interchange @ Webster
Road) (outside MPA)
US 24 from Webster Road to State Road 101 (outside MPA)

Interchange-New Construction

Interstate 69 at Hursh Road
Interstate 69 at Union Chapel Road (includes intersections @ Auburn Rd and Diebold Rd)

Interchange-Modification

Interstate 69 and State Road 1/Dupont Road
Interstate 469 and US 30 Interchange
US 30/US33 Interchange

Additional Projects for Illustrative Purposes**Widening Projects - six lanes**

Interstate 69 from Interstate 469 to US 24
Interstate 69 from Dupont Road/State Road 1 to Hursh Road
Interstate 469 from Maplecrest Road to Interstate 69
State Road 3 from Dupont Road to Gump Road
State Road 3 from Gump Road to Allen County Line
US 24 from Interstate 69 to Homestead Road
US 30 from Interstate 69 to US 33
US 30 from US 33 to Flaugh Road
US 30 from Flaugh Road to O'Day Road

Widening Projects - four lanes

State Road 1/Leo Road from Tonkel Road to Union Chapel Road
State Road 1/Leo Road from Union Chapel Road to Grabill Road
State Road 1/Bluffton Road from Interstate 469 to State Road 116/124
State Road 14/Illinois Road from W. Hamilton Road to Allen/Whitley County Line
State Road 37 from Doty Road to Interstate 469
US 33 from Cook Road to O'Day Road
US 33 from O'Day Road to State Road 205

Turn Lane Extension

State Road 3 from Interstate 69 to Washington Center Road (south bound)

Reconstruction and Realignment

State Road 37 from Doty Road to Cuba Road

Interchange – Modification

Interstate 69 and Coldwater Road Interchange - Ludwig Road
Interstate 69 and US 30/33/State Road 930 Interchange
Interstate 469 and State Road 1/Bluffton Road Interchange
Interstate 469 and US 27 Interchange
Interstate 469 and US 24 Interchange
US 30 and US 33 Interchange

Bridge Reconstruction/Modification

Bass Road over Interstate 69
Hillegas Road over Interstate 69
US 27/Spy Run Avenue Bridge over St. Mary's River w/Pedestrian Treatment

Interchange-New Construction

US 24 at Bruick/Ryan Road

Highway Policies

Interchange Review

As areas adjacent to interchanges on Interstates 69 and 469 develop, access at these locations must be carefully planned in order to preserve the ability of the interchanges to function safely and efficiently. It is recommended that the Northeastern Indiana Regional Coordinating Council, local government, and Indiana Department of Transportation carefully review these developments and their corresponding impacts on the interchange. In addition, as traffic volumes increase at interchange locations, the interchange performance should be periodically reviewed to determine if modifications are necessary to maintain acceptable levels of service.

Access Management Policies

The lack of access management of the roadway system is a major contributor to accidents and has been a leading cause behind the functional deterioration of our region's roads. As new accesses are built and traffic signals installed, speed and capacity on roadways decrease, and congestion and hazards increase. NIRCC will continue its access management program following guidelines as established in the Access Standards Manual and Site Impact Analysis Guide. The access management guidelines will be implemented to help preserve the integrity of the region's road system. Corridors will continue to be identified where access management guidelines should be used and specific techniques and strategies will be developed for each corridor.

Right of Way Acquisition Policies

The acquisition of right of way is an important part of meeting future travel needs. As travel patterns change, corridors and intersections must be upgraded to handle new demands. Local efforts will continue to identify locations where sufficient right of way should be acquired to accommodate future increases in travel demand.

Planning Process Policies

In order to insure that the long-range goals of the community are realized, it is necessary that there exist an interaction between transportation planners and the implementing agency during project design. Efforts will continue to formalize the coordination between transportation planning and project implementation.

Transit Improvements

All transit improvements have been derived from the public transit policies that guide future transit growth, methods of service delivery, and transit efficiency. The public transit

improvements are listed in one category titled system modifications. This category of transit improvements includes route modifications, capital projects, and service modifications designed to increase transit efficiency and improve transit service. Reducing headways, providing Sunday service, potential transit expansion areas, and developing a downtown intermodal transportation center are examples of these projects. Specific improvements from the *Citilink Transit Development Plan* and the identified strategies from the *Coordinated Public Transit – Human Services Transportation Plan for Allen County* have also been included.

Public Transit Policies

**Policies are numbered for identification purposes only, not by priority*

- Policy 1** In the urbanized portion of the Metropolitan Planning Area where fixed route transit service is the most efficient means of providing public transit, Citilink fixed route transit service will remain as the service of choice. In the rural portion of the Metropolitan Planning Area where demand response transit service is the most efficient means of providing public transit, Countilink (5311 Rural Transit Provider) will be the service of choice. Where fixed route and demand response transit service cannot meet established performance standards, other types of transit service will be investigated. Opportunities for service coordination and connectivity should be explored by Citilink and Countilink.
- Policy 2** As the urbanized area grows; transit service should be expanded to meet the transit demands of the community. Decrease headways where demands warrant.
- Policy 3** Enhance public transportation to support clean air strategies, energy conservation, congestion management, transportation choice and meet the needs of transit dependent populations.
- Policy 4** Land use policies should address the transit need for accessibility to private development through street and subdivision design. The land use planning approval process should include pedestrian and public transportation issues and recommendations from appropriate providers and committees.
- Policy 5** Citilink should have a role in urban core redevelopment. Transfer facilities and redevelopment efforts can be mutually supportive. Specific projects such as a downtown intermodal transfer/transportation center and the recently completed Hanna/Creighton community center can compliment and encourage redevelopment activities.

- Policy 6** Citilink should continue to implement appropriate nontraditional transit services and evaluate vehicle type, design, and propulsion when purchasing new capital equipment. This may include the investigation and promotion of additional transportation services such as telecommuting, ridesharing, and van pools. Providers should also be encouraged to explore hybrid-propulsion and bio-diesel fuel technology, as well as other propulsion technologies as they become available.
- Policy 7** Citilink, Community Transportation Network, Allen County Council on Aging, and other providers should be partners in the provision of specialized transportation services and access all potential financial resources to meet these specialized transportation needs.
- Policy 8** Investigate the possibility of the provision of non-fixed route transportation services in the Metropolitan Planning Area.
- Policy 9** Transportation policies should continue to be developed with opportunities for involvement by taxi and other private sector providers.
- Policy 10** Transportation services should be coordinated with all providers (public and private) to maximize efficiency and utilize all available resources
- Policy 11** Evaluate alternative route structures to improve transit service efficiency.

Public Transit Improvement Projects

**Projects are numbered for identification purposes only, not by priority*

- Project 1** Expanded transit service in the growing urbanized area. Potential locations include the Fort Wayne International Airport and surrounding area, Parkview North and surrounding area, Chapel Ridge and surrounding area, and Aboite, Perry, and Cedar Creek Townships. Types of service will be determined based upon projected demands and proposed service levels.
**Policies 2, 7, 8, 9, 10, & 11*
- Project 2** Design and construct a downtown intermodal transfer/transportation center.
**Policy 5*
- Project 3** Replacement of transit coaches and service vehicles as necessary to maintain a dependable transit fleet.
**Policies 1 & 6*
- Project 4** Install and upgrade bus shelters, benches, and other customer amenities. Placement of shelters (Bus Huts) should be consistent with Citilink service, accessible, and have sidewalk connectivity.
**Policies 1 & 5*

- Project 5** Reduce headways on selected routes where ridership levels warrant.
**Policies 2 & 3*
- Project 6** Expand service hours into the evening and provide Sunday service through fixed route and other types of transit services.
**Policies 2 & 3*
- Project 7** Provide customer access to automatic vehicle locator (AVL) information for the transit system through Internet connections.
**Policy 3*
- Project 8** Design and construct a satellite transfer center to serve the northern portion of the service area.
**Policy 2*
- Project 9** New Haven route and Georgetown route interconnect with extension of service to the Stellhorn Village and Chapel Ridge area.
**Policies 2 & 11*
- Project 10** Encourage the construction of accessible pedestrian facilities to and from bus stop locations, within developments, and in areas where pedestrian facilities currently do not exist (sidewalk placement and connectivity).
**Policies 1, 4, & 5*
- Project 11** Designate corridors to include amenities that allow busses to safely pull off the corridor to load and unload as well as provide safe pedestrian facilities. These corridors should include Broadway, Wells Street, Lima Road, Calhoun Street, Lafayette Street / Spy Run Avenue, Clinton Street, Anthony Boulevard, Washington Boulevard, Jefferson Boulevard / Maumee Avenue, State Boulevard, and Washington Center Road.
**Policy 3*
- Project 12** Designate “Rapid Bus Transit” corridors that may use dedicated transit lanes and signal preemption.
**Policy 3*
- Project 13** Review and update the Transit Development Plan on a four-year cycle.
- Establishing Evaluation Markers
 - Establishing Performance Measures
 - Providing continuous monitoring and evaluation
- *Policies 1, 2, 3, 4, 5, & 6*
- Project 14** Transit circulator between IPFW / Ivy Tech / Innovation Center
**Policies 1, 3, 9, 10*

Specific Improvements from the Transit Development Plan

- Increased service frequency – route 1, 2, 3, 4, 6, 9, and 10
- Extend evening hours – route 2, 4, 7, and 8
- Implement 1 hour headway Sunday service – route 2, 4, and 8
- Implement new cross-town route between Glenbrook and the I-469 / Maysville area
- Design and construct a downtown intermodal transfer/ transportation center
- Update Transit Development Plan

Identified Transportation Strategies from Coordinated Transit Plan

Strategies Applicable to All Programs and Providers:

1. Identify new revenue sources to increase operating budgets necessary to expand and maintain services and fleets
2. Keep costs low / maintain affordable rates

Section 5310 Elderly and Individuals with Disabilities Program Strategies:

1. Maintain existing service / fleets
2. Maintain and increase coordination / efficiency between all transportation providers
3. Expand existing service / fleets
4. Increase public awareness of available services and programs offered by providers that are available to them

Section 5316 Job Access Reverse Commute Program Strategies:

1. Provide transportation to destinations outside of the current service area
2. Provide transportation within and in particular outside of the current service schedules
3. Facilitate multiple destination trips from a single service provider. (ie. daycare/job)
4. Inform the public about transportation services available in the community and train them to use the services to get to work, job training, and child care as efficiently as possible

Section 5317 New Freedom Program Strategies:

1. Provide transportation above and beyond existing complimentary paratransit service
2. Provide transportation outside current service areas
3. Provide transportation within and outside current service schedules

Bicycle, Pedestrian and Enhancement Improvements

Current Proposed Enhancement Projects

New Haven

- New Haven Depot and Corridor Project – Restore train depot next to Moser Park and improve sidewalk and trail connections.

Aboite New Trails-Allen County-Fort Wayne

- Trail along Covington Road from W. Hamilton Road to w/o I-69.
- Towpath Trail Phase 4 from Engle Road to Jefferson Boulevard at the Lutheran Hospital Entrance.

Greenway Consortium-Fort Wayne

- Johnny Appleseed Park to Shoaff Park Trail.
- Pufferbelly Trail from Lawton Park to Franke Park and Fernhill Avenue.
- Six Mile Creek Trail from Southtown Center to Lemar Drive (entire trail will continue to Moser Park in New Haven).

Northwest Allen Trails-Fort Wayne

- NY Central Railroad Corridor

Indiana University Purdue University Fort Wayne

- Bridge over St. Joseph River.

Financial Plan

The financial plan demonstrates the ability of local and state governments to maintain the existing transportation system and implement improvements to meet future travel demands. This financial component of the transportation plan compares the estimated revenue from existing and proposed funding sources, which are reasonably expected to be available for transportation expenditures, to the estimated costs of constructing, maintaining, and operating the total transportation system. The financial plan covers the twenty year period of the transportation plan. The most important aspect of implementing the 2030-II Transportation Plan is securing the necessary funding for project completion. The plan was developed to be fiscally reasonable based on the projected amount of available local and federal funding for the next 20 years. The plan's implementation depends on both the Indiana Department of Transportation and the funding resources of the local jurisdictions in the Metropolitan Planning Area.

Highway

Assuring fiscal constraint of the Transportation Plan is based on a reasonable estimation of both federal and local revenues dedicated to operating, maintaining and improving the transportation system. The first step was to prepare an estimate of the amount of funds available for the next 20 years. This was done for Allen County and the cities of Fort Wayne and New Haven. These three units of government are the primary jurisdictions responsible for the local highway system. The estimate was based on each jurisdiction's historical funding practices for operations, maintenance and construction activities. Concurrent with the

financial resources forecast, all of the projects in the plan were identified and the type of improvement necessary was determined. These include all the highway projects incorporated in the Transportation Plan that are the responsibility of local governments to implement.

The projects in the plan that are the responsibility of the Indiana Department of Transportation are consistent with State of Indiana 2030 Long-Range Transportation Plan. It is assumed that the State of Indiana and the Indiana Department of Transportation will have sufficient funds to implement projects on State Roads, US Routes, and Interstates as identified in this plan. The Indiana Department of Transportation and Northeastern Indiana Regional Coordinating Council collaborated on the proposed project list. Projects that cannot be assured funding are identified in a separate illustrative list.

The highway system under INDOT's jurisdiction is an integral part of the transportation system in the Metropolitan Planning Area. In order for the state to assist local government in the implementation of the transportation plan, it is incumbent on the state to develop a long-range strategy addressing the construction and maintenance of the transportation system. This strategy should be independent, yet complementary of federal funding policies. Such a strategy will contribute to economic health and development of communities within the state. Areas should receive a fair share of state and federal funds proportional to their population, vehicle ownership, and tax contributions.

Projects under local governmental jurisdictions were identified and the cost of each project was developed. Costs were estimated for preliminary engineering, right-of-way acquisition, and construction activities. Projects were banded for the years of 2009 through 2015, 2016 through 2020, and 2021 through 2030. Project cost estimates for the years 2009 through 2015 are based on current costs, developed for the Transportation Improvement Program (TIP) utilizing a 3% annual inflation rate to the year of expenditure. Projects cost estimates for the years 2016 through 2030, were adjusted based upon an average annual growth rate of 2.8 percent for each band. The rate is based on a historical trend for construction cost developed by the American Road and Transportation Builders Association, a leading source of transportation construction market research.

Local Funding

Local governments predominantly rely on Motor Vehicle Highway (MVH), Local Roads and Streets (LRS), and local wheeltax funds for highway maintenance, administration, and construction expenditures. Additional funds such as County Economic Development Income

Tax (CEDIT) and County Option Income Tax (COIT) are also used for highway maintenance and construction projects. The construction expenditures fund local construction and reconstruction projects, and provide local matching funds for federal-aid projects. The remaining funds are for operation, administration, and maintenance costs.

An estimate of federal funds available to the Urbanized Area for the 20 year plan was developed. The forecast of available federal funds was based on historical federal funding revenues to the Urban Area. Currently, the Urban Area receives approximately 8.9 million dollars annually in federal funds to support highway construction projects. Federal funds allocated to the Urban Area have increased at an annual rate of 11% over the past twenty-years, and 7% over the past thirty-years when the annual allocation was approximately one million dollars. The fiscal analysis assumes that it is reasonable that federal funds allocated to the Urban Area will increase throughout the duration of the Transportation Plan. The difficulty lies in predicting the rate in which such funds will increase. Based on the current uncertainty of the Federal Highway Trust Fund, and the understanding that it will take time to implement strategies necessary to replenish and expand the fund, the forecast of federal revenues were held constant for the years 2009 through 2012. Based on historical growth and cautious optimism a conservative annual growth rate of 4% was applied to forecast federal revenues for years 2013 through 2030. Based on these revenue forecasting assumptions and currently available federal funds, the total federal resources total approximately 290 million dollars over the life of the Plan.

Local governments including Allen County, City of Fort Wayne, and City of New Haven collectively have annual revenues of 22.1 million dollars dedicated to transportation operations, maintenance, and construction. In addition, Economic Development Income Taxes generate millions of dollars each year of which a substantial portion is dedicated to highway construction projects. The amount of these funds spent on transportation projects varies from year to year, but on average, local governments currently spend at least 10 million dollars a year on construction and reconstruction projects. Adjusted for inflation and conservative growth, local funds available for project implementation totals approximately 281.2 million dollars over the twenty-year period of the Transportation Plan.

The estimated combined federal and local dollars available for supporting the local projects in the plan is over 570 million dollars. A list of the local projects and their estimated costs for preliminary engineering, right-of-way and construction is provided in Appendix F. The total estimated cost for the preliminary engineering, right-of-way acquisition, and construction

phases for the local projects, adjusted to year of expenditure, 512.2 million dollars. This indicates that the highway projects included in the 2030 Transportation Plan can be funded through the combination of federal and local funds. The highway component of the 2030-II Transportation Plan is financially feasible.

Transit

The key to understanding sources of revenue available to Citilink (formerly the Fort Wayne Public Transportation Corporation-FWPTC) in the future is to comprehend the current funding available and what the growth has been of these funds in the past. Citilink receives operating and capital subsidies from three primary sources: the Federal Transit Administration; the State of Indiana's Public Mass Transportation Fund (PMTF); and local funds including taxes and miscellaneous revenues.

Federal Funding

Since 1995, operating and capital funds allocated at the federal level have fluctuated. Federal operating funds allocated in 1995 were 955,204 dollars. In 1998, the last year Citilink received Federal operating assistance, they received 92,844 dollars. Since 1998, Citilink has not received any Federal operating assistance. The apportionment of Federal capital assistance funds has fluctuated from a high of 2.85 million dollars in 2008, to a low of 642,613 dollars in 1995. The combination of Federal operating and capital subsidies under the Section 5307 (formerly Section 9) have generally increased since 1995. Citilink received a total of 1.6 million dollars in 1995, and currently receives 2.85 million in Federal funds for capital equipment and capitalization activities. This represents an increase of 4.55% each year.

It is anticipated that Citilink will continue to receive Federal Capital assistance and the amount will increase slightly each year by approximately 3 percent. Citilink currently has a carry-over balance of approximately 0.5 million dollars. Over the duration of the 20-year Transportation Plan, Citilink will have approximately 92.5 million dollars in federal assistance for capital projects. Assuming the 80:20 percent ratio of federal to local funds remains, 23.13 million dollars in local matching funds will be needed. These local matching funds will come primarily from the cumulative capital fund, local tax dollars and funds raised from the sale of obsolete equipment. The combination of federal and local dollars for capital projects totals 115.63 million dollars.

State Funding

The State of Indiana Public Mass Transportation Funds (PMTF) can be used for capital or operating assistance. The source of these funds is a fixed percentage of the Indiana State sales tax. The current fixed percentage is approximately 0.64 percent. These funds are allocated based on a performance-based formula with an emphasis on system efficiency.

Citilink has historically used state funding for operating purposes. The allocation of State funds has increased over time from 1.25 million dollars in 1995 to 1.98 million dollars in 2008. This represents an annual increase of 3.5% per year. State funding is expected to remain relatively stable over the next few years and then begin to increase as the economy recovers. During the twenty year period of the plan, the state funds will provide approximately 54 million dollars for operating expenses.

Local Funding

The FWPTC receives local funds from the following sources: local taxes, municipal garage, fare box, miscellaneous income, demand response, and bus lease. Revenue from these sources utilized for general-operating costs was approximately 6.2 million dollars in 2008. These funds, primarily obtained from property taxes, and due to recent legislative mandates to local units of government, the ability of these funds to increase over time is currently under assessment. However, as the community grows it is expected that revenues from local sources will increase at a modest rate and innovative financing methods and cost efficiencies will need to be employed. For these reasons, a conservative annual increase of 2% throughout the duration of the Transportation Plan was utilized to estimate local revenues. At this rate, Citilink will have access to approximately 158 million dollars over the twenty year period of the plan. These funds will be used primarily for operating funds.

A local cumulative capital fund deriving revenue from a dedicated portion of the local property tax is utilized for matching federal capital assistance. This fund currently provides 350,000 dollars annually. Citilink generally carries a balance of approximately 500,000 dollars. This local capital fund should provide an estimated 7.5 million dollars over the next twenty years.

Summary of Financial Plan

The majority of the transit improvements proposed in this Transportation Plan are relatively minor modifications to the existing system. The downtown intermodal transfer/transportation center is the only major capital improvement project proposed in the 2030 Transportation

Plan. The total costs for this project are uncertain at this time. Additional financing for this project has been secured from discretionary funds. The remaining improvements can be financed through current operating and capital revenue sources. The anticipated primary capital investment over the duration of the Transportation Plan will be fleet replacement. The anticipated revenue stream coupled with cost containment will provide the necessary resources to finance these improvements. The Citilink will be able to maintain transit service for the duration of the Transportation Plan.

Other Transportation Modes

Pedestrian Walkway and Bicycle Transportation Facilities

The transportation planning process administered by NIRCC has over the years included pedestrian and bicycle transportation facilities. These components were typically included as part of the Transportation System Management Program or covered under specific projects and programs. The 2015 Transportation Plan was the first transportation plan to formally include pedestrian walkway and bicycle facilities. The transportation planning efforts have continued and improved for pedestrian and bicycle facilities as a component of the planning process. The 2030-II Transportation Plan supports these efforts with a significant emphasis on pedestrian and bicycle facilities.

Bicycle and Pedestrian Plan

Major bicycle and pedestrian systems within the metropolitan planning area provide unique opportunities for alternative modes of travel. Historically, with the exception of pedestrian corridors within the Fort Wayne Central Business District, the existing pedestrian and bikeway systems have been primarily used for recreation purposes. The existing and proposed systems do have the potential to serve other trip purposes as well. These and other existing facilities have been identified and will continue to be evaluated to determine their potential for accommodating all types of pedestrian and bicycle trips.

Major pedestrian corridors in the Fort Wayne Central Business District have been identified by the Fort Wayne Redevelopment Commission as part of their overall Redevelopment Plan. Surface sidewalks primarily fronting on city streets and second story skywalks linking buildings and parking facilities serve these corridors. The City of New Haven is actively improving their pedestrian corridors with sidewalk and trail improvements. They have developed a master plan identifying existing and proposed sidewalks, pedestrian walkways, and trails throughout their downtown and beyond.

Sidewalks throughout the Metropolitan Planning Area have recently been a subject of significant debate. The bicycle/pedestrian component of the Transportation Plan addresses sidewalks as a general policy (Appendix I) identifying streets by classification that are recommended for pedestrian accommodations. Along with this policy a bicycle parking recommendation policy (Appendix I) was made to provide guidance for types of bicycle racks and the distribution of these facilities by development type. In addition, the bicycle/pedestrian component addresses recommended bicycle treatments throughout Allen County including trails, bike lanes, wide curb lanes, paved shoulders, and bike routes.

The four county region represented by NIRCC has many individuals and organizations advocating improvements to the existing bicycle-pedestrian transportation system. To coordinate these efforts, NIRCC sponsored the Northeastern Indiana Regional Bicycle and Pedestrian Forum made up of governmental parks, planning and highway agencies, advocacy groups, and special project organizations. The task force was designed to develop and maintain the bicycle and pedestrian 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. Since the inception of the Forum in 2002 a great deal of staff effort has been devoted to assembling the database for bicycle and pedestrian planning efforts and to using the information to develop a set of GIS maps. Upon request, staff makes these maps available to the public to assist in bicycle-pedestrian projects and planning.

The bicycle/pedestrian component of the Transportation Plan is referred to as the “Comprehensive Bicycle-Pedestrian Transportation Plan” (figure 26). The Comprehensive Bicycle-Pedestrian Transportation Plan was developed by the Northeastern Indiana Regional Coordinating Council (NIRCC) in conjunction with the Northeastern Indiana Regional Bicycle and Pedestrian Forum. The Forum had met from May of 2002 until August of 2007. One of the goals for creating the Forum was to develop a bicycle-pedestrian transportation plan for the region. The Forum began this effort early in calendar year 2003 by focusing on the region’s rural areas. By the end of Fiscal Year 2005 the Forum had completed the planning process for the Fort Wayne area, the rural areas of Allen County, and the connectivity with surrounding counties such as Adams, DeKalb, and Wells.

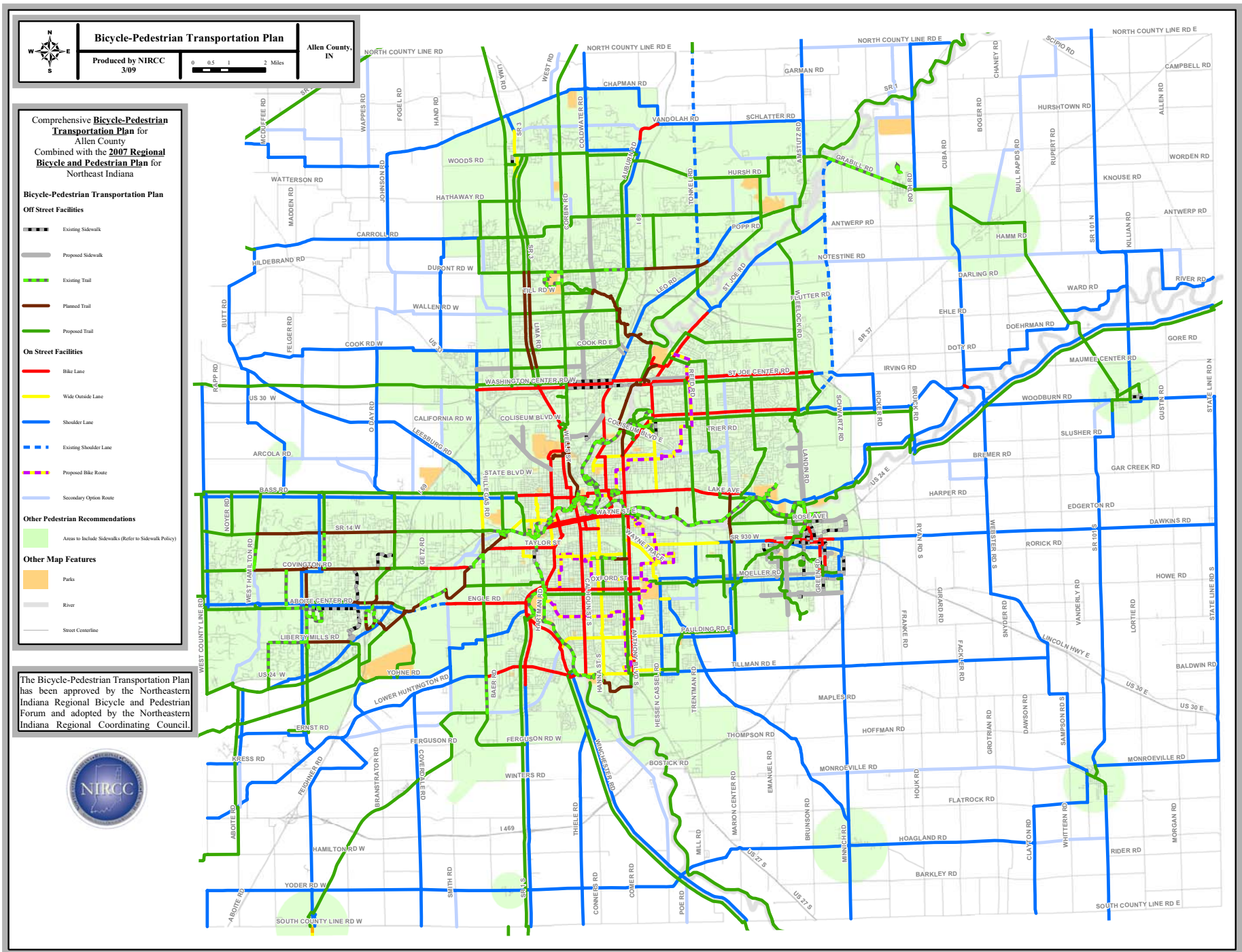


Figure 26

The concept for creating a bicycle-pedestrian transportation plan was to develop a planning tool for planners and highway officials by identifying a prioritized set of routes based on an analysis of significant destinations within the region. Once these routes were identified NIRCC, along with the forum, recommended them for enhancement and protection by assigning classifications for them. This classification system provides planners and highway officials design standards to follow as they coordinate them with present and future road projects. By mapping out these design classifications the bicycle-pedestrian transportation plan assures the appropriate continuity throughout the prioritized route system.

The Comprehensive Bicycle-Pedestrian Transportation Plan represents a combination of plans completed by local groups (Aboite New Trails, Greenway Consortium, Northwest Allen Trails, Little River Wetlands, Fort Wayne, and New Haven) and selected routes identified by the forum. The identified routes that the forum added to the plan are on street routes that are in need of bicycle treatment. These selected routes are based on an analysis of significant destinations and points of interest within the region, local bicycling activity, existing roadway and trail conditions, and proposed roadway and trail conditions. These routes have been prioritized and recommended for enhancement and protection.

The Forum created a design classification system from the Proposed Allen County Road Specifications and Standards 2004 manual and AASHTO's (American Association of State Highway and Transportation Officials) 1999 guide for the development of bicycle facilities for designing the identified routes on the bicycle-pedestrian transportation plan. This design classification system gives planners and highway officials design standards to follow as they coordinate them with present and future road projects. By mapping out these design classifications the bicycle-pedestrian transportation plan will be assured of having the appropriate continuity throughout the prioritized route system.

The design classification system used for the on street component of the plan consists of four different design classifications along with the identification of secondary option routes. The secondary option routes are treated as alternative routes to the ones identified with a design classification. The other on street routes that are identified include classification types such as bike lanes, wide outside curb lanes, shoulder lanes, and bike routes. The off street design classification system consists of trails and sidewalks. The forum has added the local plans mentioned above for the off street proposed system. Besides the local group efforts that are, for the most part, geared toward off street systems, the forum developed a

sidewalk policy (Appendix I) to add to the comprehensive bicycle and pedestrian plan. The design classifications NIRCC used for the plan are listed below.

Design Classification for Routes

Trail: A separate paved multipurpose trail for the principal use of bicycles, pedestrians, and other non-motorized modes. Bike paths are 10 feet wide except in high usage areas where they should be 12 feet wide.



Example of a Trail

Bike Lane: A portion of the road that is designated by pavement striping for exclusive bicycle use. Bicycle lanes may be signed as part of a directional route system. Bicycle lanes are five feet wide on a curbed road and minimum four feet wide as a shoulder bike lane.



Example of a Bicycle Lane

Wide Curb Lane: A road that provides a widened paved outer curb lane of about 14 feet wide to accommodate bicycles in the same lane as motor vehicles. The lane width should not be greater than 14 feet wide as it may encourage two motor vehicles to travel in the same lane.



Example of a Wide Curb Lane

Shoulder Lane: A lane contiguous to the traveled way but separated by a stripe. It's most common in rural areas or on rural designed roadways and typically shared with pedestrians and occasional emergency vehicle access. The minimum width of a shoulder lane is 4 feet wide.



Example of Shoulder Bike Lanes

Bike Route: A signed shared roadway which has been designated by signing as a preferred route for bicycle use. Vehicles and bicycles share and occupy the same portion of roadway.

Shared Roadway: All roads not categorized above where bicycles share the roadway with motor vehicles.

In 2006 the Indiana Department of Natural Resources (IDNR) in partnership with the Indiana Department of Transportation (INDOT) unveiled The Indiana State Trails, Greenways, and Bikeways Plan. With the recent push by public and private groups across the region to create a regional trail system, two trail corridors were identified as priorities on the state wide trail plan in northeast Indiana. The Upstate Indiana Trail from Oabache State Park to Pokagon State Park is listed as a state priority and the Wabash River / Maumee River corridor is listed as a potential state priority.

In order to provide planning support for assessing transportation enhancement projects and ensuring the coordination and connectivity throughout the region for bicycle and pedestrian projects, NIRCC initiated the process of developing a regional system for northeast Indiana. As the state priority trails are major priorities for northeast Indiana, there are many other trail opportunities throughout the region that public and private groups are advocating for. A regional bicycle and pedestrian plan helps coordinate these trail opportunities and ensure that the implementation of them strengthen the overall regional system.

In Fiscal Year 2007 NIRCC and Region III-A Economic Development District and Regional Planning Commission began the regional bicycle and pedestrian planning effort for 11 counties in northeast Indiana. These counties included Adams, Allen, Dekalb, Grant, Huntington, Lagrange, Noble, Steuben, Wabash, Wells, and Whitley. In July of 2006 staff began planning and organizing “The Northeast Indiana Regional Trails and Greenways Charrette” for the purpose of producing a regional bicycle and pedestrian plan for northeast Indiana. The Bicycle-Pedestrian Transportation Plan for Allen County served as a hub for the regional bicycle and pedestrian plan and planning effort.

The charrette took place on November 17, 2006 at the World War II Victory Museum in Auburn, Indiana. There were over 100 people who participated and had input on what was to become the “2007 Regional Bicycle and Pedestrian Plan for Northeast Indiana” (figure 27). The Bicycle-Pedestrian Transportation Plan for Allen County was fully integrated into the 2007 Regional Bicycle and Pedestrian Plan. The regional plan was adopted by NIRCC as well as Region III-A Economic Development District and Regional Planning Commission.

During Fiscal Year 2009 NIRCC, along with the Fort Wayne Greenways Manager, asked local trail advocacy groups and governmental agencies to prioritize their trail 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 28 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.

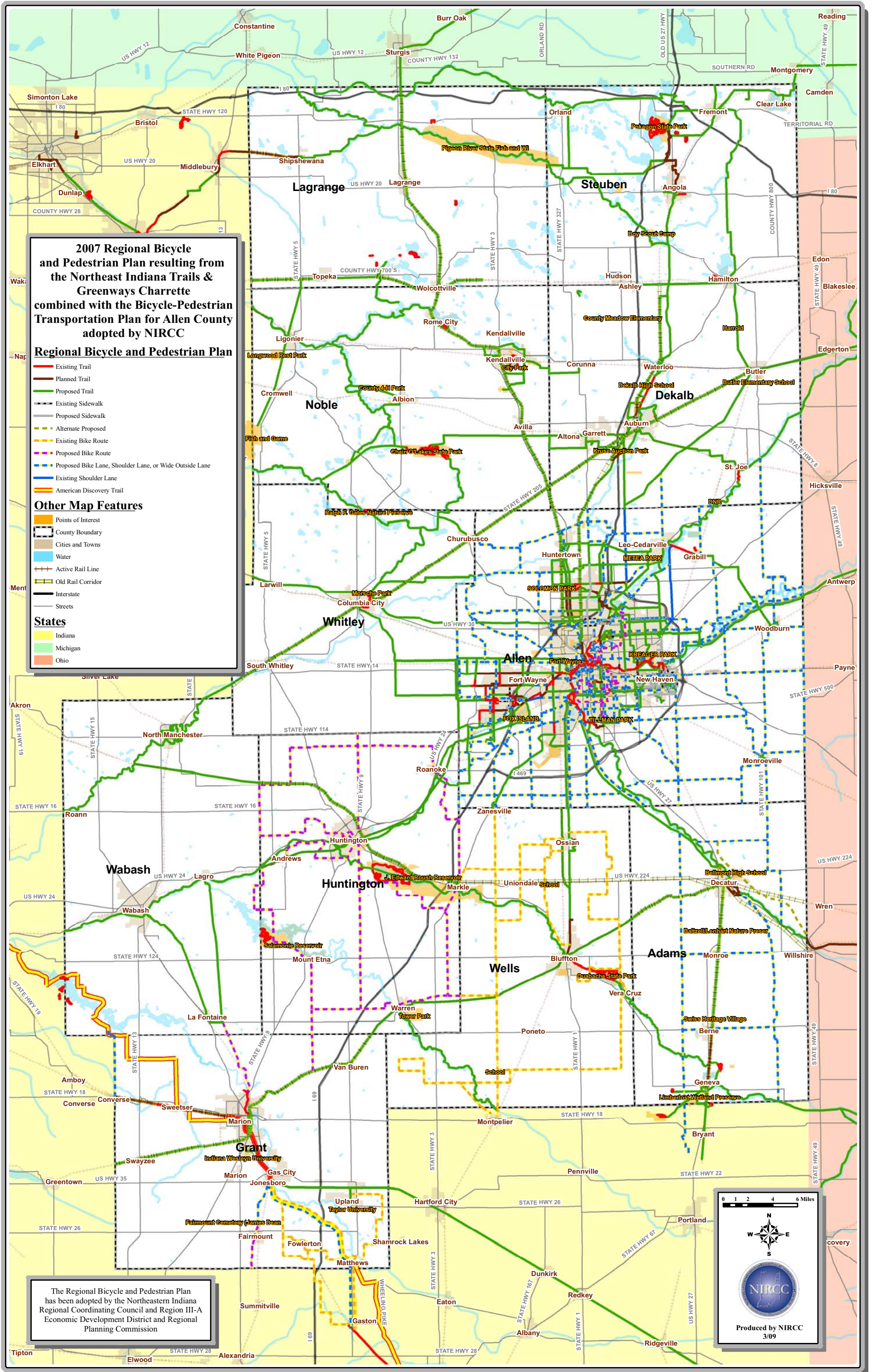


Figure 27

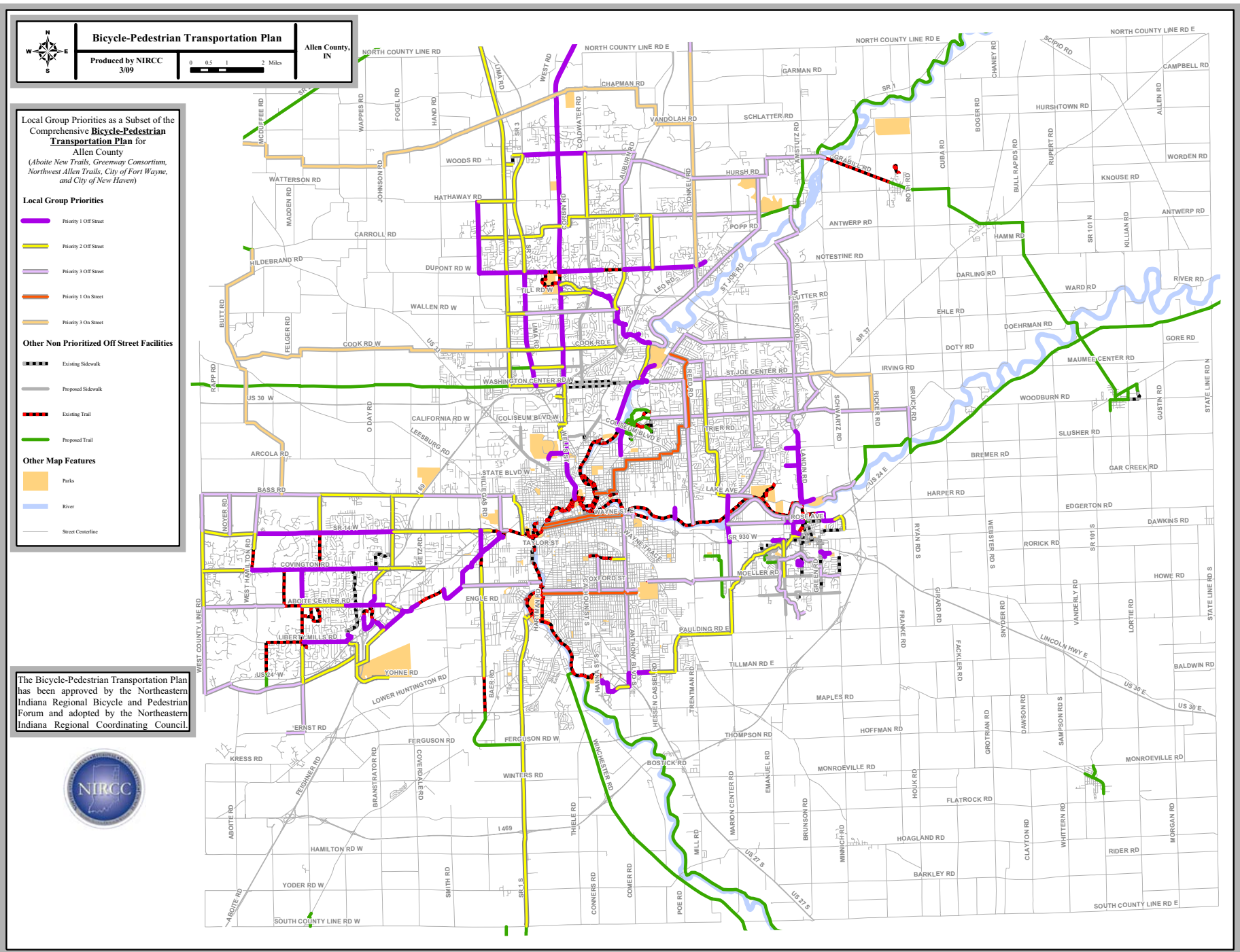


Figure 28

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.

The remaining off street corridors that are identified as proposed sidewalks or trails either do not fall into the areas covered by local group plans or may be outside the scope of what the local groups feel they may be able to accomplish. These corridors are conceptual in nature much like corridors identified as a priority 3. While these corridors have not been identified as a priority by one of the local advocacy groups, these corridors are still significantly important to the community as a whole and possibly have regional significance.

Numerous maps and data sources were utilized in developing the bicycle and pedestrian plans for Allen County and the regional plan. This information formed the basis from which decisions on route selections were derived. A substantial level of effort and resources were dedicated to developing and reviewing the information. The list below provides the type of information included in this process. Some of this information is limited to Allen County, some to only NIRCC's four county area, and some is inclusive of the entire region.

Geographic Characteristics

- Water features
- Existing railroad
- Abandoned railroad
- Highways
- Local roads
- Gravel roads
- Sidewalks
- City / town boundaries
- County Boundaries
- AEP transmission lines
- Population characteristics and distributions

Local, National, & Club Bike Routes

- ACD Parade Safari Bike Route
- WBNI Bike Route
- N.E.A.T. (Northeast Allen Tour)

- Three Rivers Velosport Routes
- Bikecentennial (Adventure Cycling Association) national bike route
- Flat 50 Bike Routes
- Suggested Routes By Charlie Meyer

Points of Interest

- Attractions, Bike Shops/Sales, Fitness Centers, Hotels, Ice Cream Shops, Libraries, Schools, Universities/Colleges, Shopping Centers, sites of historical significance, airports, parks, and recreation areas.

Traffic Characteristics

- Average Daily Traffic Volumes
- Truck % by Daily Traffic Volume
- Speed Limits(only Allen County)
- Functional Classification System
- Stop Signs, Yield Signs, Traffic Signals, Railroad Crossings, Bridges / Culverts
- Crash data and bicycle-pedestrian accidents
- Transit Data

Local Plans

- Greenway Consortium Plan
- Aboite New Trails Plan
- New Haven Comprehensive Trails and Pedestrian Walkways Master Plan
- Northwest Allen Trails Plan
- Little River Wetland Project
- Maumee Valley Heritage Corridor
- Current TIP
- County Plans
- Park Plans

Proposed or Existing Bicycle, Pedestrian, and Trail Facilities for 11 Counties

- Adams, Allen, Dekalb, Grant, Huntington, Lagrange, Noble, Steuben, Wabash, Wells, and Whitley.

In addition to the proposed bicycle and pedestrian system, excellent trail systems have been established in the Cities of Fort Wayne, New Haven, and Allen County. The larger backbone of the trail systems, and part of Fort Wayne's original trail system, is referred to as the Rivergreenway. This system connects the downtown to many parks and other points of interest by means of Fort Wayne's river system. New Haven also has an impressive system that connects parks and community facilities along with its newest connection to Fort Wayne's Rivergreenway. While expansion of the Rivergreenway has not reached outside city limits,

local groups and governmental agencies have begun to expand the Allen County trail system along streets as well as plan for future trail expansions from the Rivergreenway.

The current trail systems (figure 29) have increased in recent years. There are over 36 miles of trails in Fort Wayne now. Allen County has over 7 miles of trails, and there are approximately 2 miles of trails that now exist in New Haven along with sidewalk improvements from their comprehensive trails and pedestrian walkways master plan. Planned additions to these trail systems will add about 29 miles of trails to the Fort Wayne area and over 4 miles of trails to Allen County. These planned additions are trail projects that have been committed to, partly constructed, already have sources of funding, or are partly finished and are scheduled for an approximate completion date.

Table 9 gives a summary of projects that are in some stage of implementation or have been completed in recent years. These projects utilize a variety of local, state, and federal fund types as well as combinations of the three. Some projects get funded along with road projects while others may receive their funding from local advocacy groups and foundations, local government agencies, or various types of federal funds.

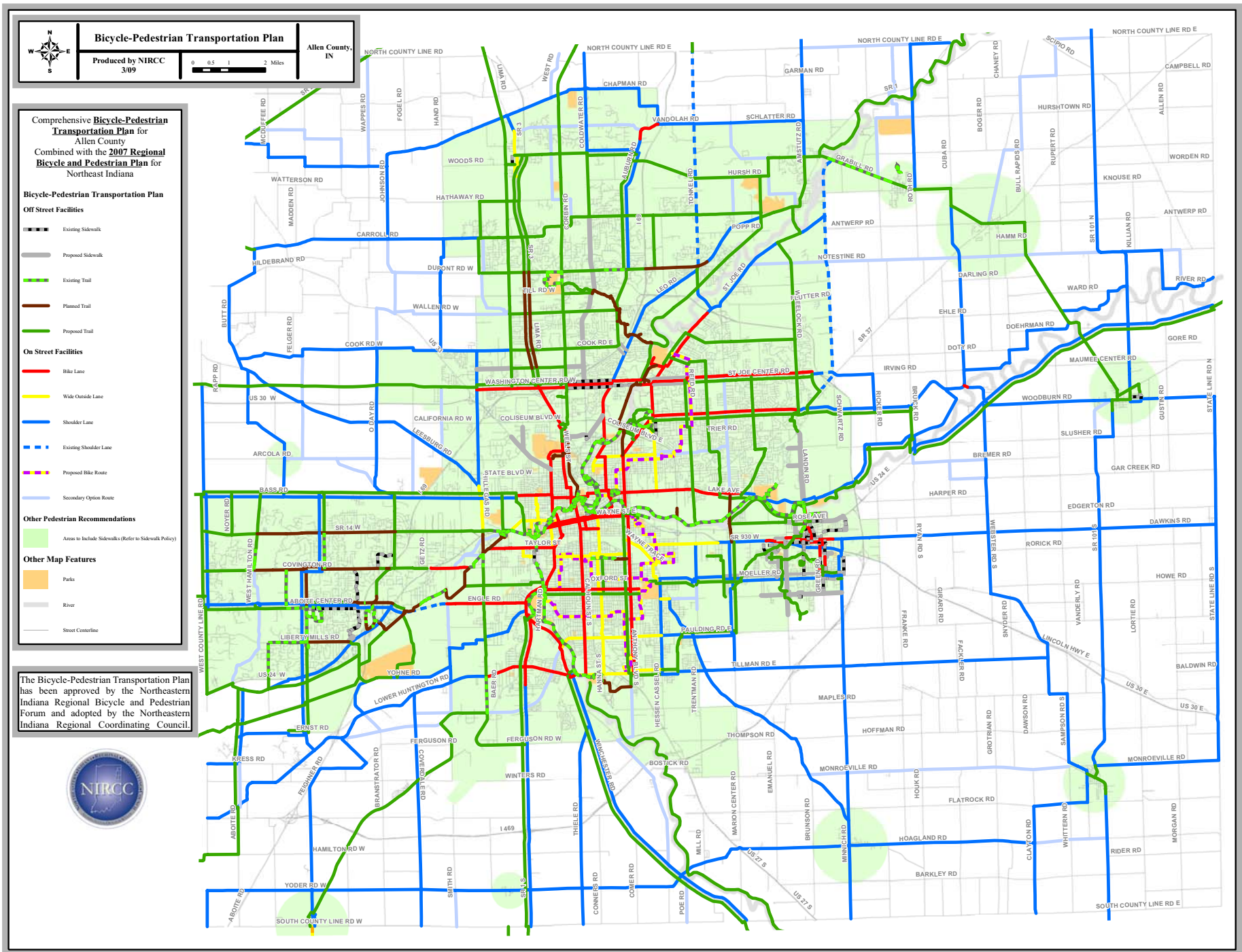


Figure 29

Table 9. Bicycle-Pedestrian Projects

Bicycle-Pedestrian Facility	Description	Status
*Aboite Center Rd Trail	1100 ft w/o Coventry Ln to Jefferson Blvd	Construction 2009
*Amber Rd Trail	Liberty Mills Rd to Ivanhoe Ln; just north of US 24	Completed 2008
*Ardmore Ave Extension Trail	Lower Huntington Rd to Indianapolis Rd	Completed 2006
*Ardmore Ave Trail	Covington Rd to north of Taylor St	Completed 2009
*Ardmore Ave Trail	North of Taylor St to Jefferson Blvd	Completion in 2009 or 2010
*Bass Rd Trail	Hillegas Rd to Hadley Rd	Preliminary Engineering 2009
Beckett's Run Trail	Along the Beckett's Run creek from St Joe River to Salomon Farm	1st Phase in late 2009 or early 2010
Coliseum Blvd Trail Spur	The Rivergreenway to Carrington Field baseball diamond	Construction 2009
Covington Rd Trail Phase 1	Scott Rd to Eggeman Rd	Construction 2009
**Covington Rd Trail Phase 2	West Hamilton Rd to Eggeman Rd	Construction 2011
**Covington Rd Trail Phase 3	Scott Rd to Ladue Ln	Construction 2009
*Dupont Rd Trail	Pine Mills Rd to just west of Auburn Rd	Completed 2007
Dwenger Ave Trail	Trail in front of the Water Pollution Control Facility	Completed 2008
Eggeman Rd (Vann Family Trail)	Covington Rd to Aboite Center Rd	Completed 2007
**Fort Wayne Urban Trails Project Phase 1	Barr St from Wayne St to Main St	Completed 2008
Homestead Rd Trail	Liberty Mills Rd to Summit Middle School	Completed 2008
Homestead Rd Trail	Aboite Center Rd to Covington Rd	Construction 2009
**IPFW Bridge	Pedestrian Bridge over St Joe River at IPFW	Completion in 2009
*Jefferson Pointe Trail Spur Phase 1	Lindenwood Ave to Illinois Rd	Completed 2007
**Johnny Appleseed to Shoaff Park Trail Phase 1A	Johnny Appleseed Park to the eastern side of the new IPFW pedestrian bridge	Construction 2009
**Johnny Appleseed to Shoaff Park Trail Phase 1B	Western side of the new IPFW pedestrian bridge to Upper St Joe Center Rd	Preliminary Engineering 2008
Johnny Appleseed to Shoaff Park Trail Phase 2	Upper St Joe Center Rd to Shoaff Park	Construction 2009
Liberty Mills Rd Trail	Amber Rd to Homestead Rd	Completed 2007
Lutheran Loop Trail	Hospital Loop, Connects the Aboite Trails with the Towpath Trail	Completed 2008
*Maplecrest Rd Trail	Lake Ave to SR 930	Construction in 2009 or 2010
**New Haven Depot and Corridor Project	Restore Train Depot next to Moser Park and improved sidewalk/trail connections	Construction in 2009 or 2010

* Project that is combined with a road improvement project.

** Project utilizes Transportation Enhancement Funds (TEFunds).

Table 10 Continued next page...

Table 9. Bicycle-Pedestrian Projects Continued

Bicycle-Pedestrian Facility	Description	Status
New Haven Pedestrian Walkways 3 & 5	Sidewalks along Rose Ave, West St, & Main St to Moser Park and sidewalk along SR 930 between Isenbarger Plaza and Delmart Plaza	Construction 2010
North Anthony Blvd Trail	Crescent Ave to the "Johnny Applesseed to Shoaff Park trail" at Coliseum Blvd	Construction 2009
**NY Central Railroad Corridor Trail	Washington Center Rd to Wallen Rd	Right-of-Way 2009
**Pufferbelly Trail Phase 1	Lawton Park to Franke Park and Fernhill Ave to the Zoo	Preliminary Engineering 2009
Renaissance Pointe Trail	Lafayette St to Hanna St and Hanna St to Bowser St (Eventually Anthony)	Completed 2008
Safe Routes to School sidewalks (State Blvd / Maysville Rd / Lahmeyer Rd)	State Blvd and Maysville Rd from Arrowwood Dr to Sandarac Ln / Lahmeyer Rd from State Blvd to Antebellum Blvd	Construction 2010
Salomon Farm Trail	Trail along Dupont Rd and around Salomon Farm and YMCA	Completed 2007
Scott Rd Trail	SR 14 to Covington Rd	Completed 2007
**Six Mile Creek Trail phase 1	From Southtown Centre to Lemar Dr (entire trail will be from Southtown Centre to Moser Park)	Preliminary Engineering 2009
Southtown Centre Rivergreenway extension Phase 1	Tillman Park to public safety academy	Construction 2009
*SR 1 Trail	I-69 to east of Tonkel Rd	Construction 2010
*SR 14 Trail	I-69 to Scott Rd	Construction 2009
*SR 14 Trail	Scott Rd to West Hamilton Rd	Construction 2012
*SR 3 Trail	North of Ludwig Rd to south of Dupont	Construction 2009
Towpath Trail Phase 1	Rockhill Park to Ardmore Ave @ Taylor St	Construction 2009
Towpath Trail Phase 2	Ardmore Ave @ Taylor St to Smith Rd	Partial Completion 2008 / Construction 2009
Towpath Trail Phase 3	Smith Rd to north of Engle Rd	Partial Completion 2007 / Construction 2009 (small section)
**Towpath Trail Phase 4	North of Engle Rd to Jefferson Blvd @ Lutheran Hospital Entrance	Construction 2009

* Project that is combined with a road improvement project.

** Project utilizes Transportation Enhancement Funds (TE Funds).

Transportation Enhancement Activities

Transportation enhancement activities represent non-traditional highway and transit projects for which special funding was originally authorized under the Intermodal Surface Transportation and Efficiency Act (ISTEA). The transportation enhancement activities have been continued with support from the Transportation Equity Act for the 21st Century (TEA-21) and the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). Such projects can include bicycle paths, roadside landscaping, water run-off mitigation, and historic preservation of transportation facilities. The Northeastern Indiana Regional Coordinating Council continues to work with area citizens and various departments of New Haven, Fort Wayne, and Allen County to identify and develop viable transportation enhancement activities.

Since the passage of SAFETEA-LU, a number of enhancement projects have been identified and implemented. A number of other projects are under construction or have pending grant applications. The current status of enhancement projects is provided in Table 9 and identified by two asterisk symbols. Staff will continue to work with community groups and local government agencies to identify potential projects, incorporate selected projects into the transportation plan, and pursue implementation of selected projects. Many of these projects are components of the Bicycle-Pedestrian Transportation Plan and the Northeastern Indiana Regional Bicycle and Pedestrian Plan.

Beginning in 2008, the Transportation Enhancement (TE) award process changed. The Indiana Department of Transportation (INDOT) divided the total amount of money allocated for enhancement projects by urban area populations for their respective INDOT districts. The Metropolitan Planning Organizations (MPOs) that are located in each INDOT district have been given a percentage of this money to distribute as they see fit for qualified enhancement projects within their urban areas. For areas outside the MPOs' urban areas the local INDOT district is responsible for allocating the remaining funds.

In the past INDOT has always received applications for Transportation Enhancement projects from all over the state. With only a certain amount of funds available, a competitive process was implemented to rank applications and distribute money accordingly. A committee had been formed to score and prioritize enhancement projects for the entire state. Now local INDOT districts and MPOs have been allocated the money to distribute locally with their own scoring or ranking process.

With about \$20 million to divide up throughout the state, the Allen County-Fort Wayne-New Haven urban area will receive about \$880,000 for its enhancement projects annually. The Fort Wayne INDOT District, which covers about 19 counties, will receive about \$1.7 million to distribute to its LPAs (Local Public Agencies) annually. With this new process for funding TE projects, NIRCC has the ability to provide a constant annual distribution of funds for enhancement type projects. It also provides opportunities for NIRCC to phase projects that may exceed the total enhancement fund allocation for a single year.

Intelligent Transportation System (ITS) - architecture

The Intelligent Transportation System (ITS) represents the modernization of the transportation system through the application of new technology. The new technology includes the latest in computers, electronics, communication, and safety systems. ITS can be applied to the transportation infrastructure including highways, streets, and bridges. Technology is also being developed for vehicles including cars, buses, trucks, and trains. The information and computer technologies can be used to better manage the transportation system. The Fort Wayne-New Haven-Allen County Metropolitan Planning Area has completed the regional ITS architecture. A document titled “Allen County Regional ITS Architecture” was first completed in 2005 and updated in 2008. This document covers a ten year period and serves as the planning tool for ITS programs and projects in the Metropolitan Planning Area.

The Northeastern Indiana Regional Coordinating Council sponsored several special sessions of the Transportation Technical Committee to discuss ITS options. During the development and update of the architecture, meetings were held to familiarize the members with ITS strategies and begin discussing coordination issues between the traffic-engineering specialist from local government and the District office of the Indiana Department of Transportation. As new technology becomes available, and strategies have been identified to improve the transportation system. ITS will play an increasing role for traffic management in the metropolitan area. The Transportation Technical Committee will continue to review strategies and work to refine a coordinated intelligent transportation system for the metropolitan planning area.

ITS Completed and Planned Improvement Projects

Four primary project areas have been identified for ITS strategy implementation for the transportation system in the metropolitan area. These project areas include dynamic message signs (DMS), surveillance and detection, signalization, and automatic vehicle location (AVL) systems for transit.

One project area includes the installation and maintenance of dynamic message signs (DMS) on major corridors in the metropolitan area. Two DMSs have been installed on Interstate 69, one north of Dupont Road/SR 1 interchange (mile 117.1) and one south of the Interstate 469/Lafayette Center Road interchange (mile 94.2). Four additional DMSs have been proposed for the metropolitan area: two along Interstate 69, one north of the Coldwater Road interchange (mile 113.4) and one north of the Airport Expressway interchange (mile 100.3); and two along Interstate 469, one east of the Maplecrest Road interchange (mile 27.0) and one east of the Indianapolis Road interchange (mile 3.7). These signs alert motorist coming into the metropolitan area to possible delays on the highway system. Motorist will then have the option of selecting an alternate route to circumvent the congestion. The Indiana Department of Transportation is responsible for installing and operating this project.

Another project area includes the installation of CCTV cameras and vehicle detection devices along Interstate 69 and Interstate 469 within the metropolitan area. The CCTV cameras and vehicle detection devices will be located along Interstate 69 from Yoder Road to the Allen / DeKalb County line and Interstate 469 from Feighner Road to $\frac{3}{4}$ mile east of Leo Road. The CCTV cameras and vehicle detection will be monitored at the Borman Traffic Management Center. Traffic images will be available to other centers, agencies, and the public via INDOT's Traffic Wise website. The CCTV cameras and vehicle detection devices will be a vital tool in addressing congestion management and incident management along Interstate 69 and Interstate 469.

Another project area includes signalization activities. The City of Fort Wayne operates a computerized traffic control system to monitor and communicate with several hundred traffic control signals. The system is currently hard-wired but is capable of upgrading to fiber optics. The system has sufficient capacity for expansion to include additional signals. The system is also capable of adding video surveillance to assist in congestion management and incident management. This project will improve the ability of local traffic engineers to manage traffic control devices to maximize traffic flow.

Citilink has adapted ITS technology for the transit fleet. The transit operator has equipped all transit coaches with automatic vehicle locators (AVL). This project has provided the transit dispatchers with the ability to track each vehicle throughout the system. This information will assist in dispatching vehicles, monitoring performance, and improving system efficiency. A planned expansion of this program will allow the vehicle location information to be sent to the Internet through Citilink's website to provide transit customers

with real time information on the status of the transit bused. Transit customers will be able to more efficiently determine when to meet their bus and minimize wait time.

The transportation planning process will continue to explore and coordinate ITS strategies. As new technology becomes available, feasible strategies will be implemented to improve the efficiency of the transportation system. Highway and transit systems will both benefit from ITS applications. The ITS architecture will be reviewed and revised on a periodic basis.

Summary of Selected Plan

The plan represents a dynamic process whereby evaluation and analysis is a continuous effort of fine tuning and harmonizing the various components. The implementation of the plan requires a constant level of initiative among government agencies, local businesses, and area residents. The plan requires cultivation and considerable attention to ensure the improvements and policies are achieved. Chapter 10 will address particular activities necessary to strengthen the plan and achieve the stated objectives for the community.

Chapter 7

Safety Management in Transportation Planning

Overview - the Safety Management System

Introduction

Transportation planning activities involve numerous components of traffic data and analyses. Incorporating safety as a component of planning requires detailed information to be effective in the process. The primary element in safety management is the identification of problem areas or types. To be successful in this objective accurate data is the required. With this information it is possible to identify problem areas and work toward finding solutions to mitigate or eliminate crashes. The Northeastern Indiana Regional Coordinating Council (NIRCC) has established a safety management system structured around accurate data. The system has been designed to provide a variety of informational data sets to various users from planners, engineers, law enforcement agencies and even social advocacy groups.

Source of Data

NIRCC obtains all crashes that occur in Allen County on an annual basis from the Automatic Record Information Exchange System (ARIES). This database contains all crashes that occur in the state of Indiana. Crash reports from all law enforcement agencies are required to be provided and included to the Indiana State Police through this system. In February of each year NIRCC retrieves all the data reported in Allen County and saves the data in a database for analysis.

Quality of Data

The first step performed by planners with the data is to perform a quality check. This step is the most time consuming part of the safety management process. Planners review all crash locations to ensure that once mapped, the locations are accurate and unique in their description. Locations are often misspelled or have multiple names. It is critical that all crashes occurring at a specific geographical location are named identically for future analyses. A significant amount of time is devoted to inputting these unique crash locations descriptions and verifying the accuracy of the data.

Crashes that do not occur at intersections (within 33 feet) require planners to assign mid-block address locations. This task requires geographic information systems and relies on

accurate information from the reporting officers. Each crash that occurs 34 or more feet from an intersection is assigned an address if not already provided in the report.

Private property crashes have also created quality concerns with where crashes are reported. Planners work to identify crashes reported on a public roadway that occur on private property such as in parking lots. Crash reports require officers to provide the address of a crash on private property. This address is then reflected as a “private property” crash by another input item. This step is often omitted by the reporting officer. An inverse problem also is checked where a vehicle leaves a public roadway and collides with a fixed object or parked car located on private property. Since the crash involved a vehicle that left a public roadway it should be included as a “non-private property crash”. However the collision itself occurred on private property and occasionally is reported in that manner.

NIRCC works directly with the law enforcement agencies in Allen County to address these issues and provide suggestions on how to improve the reporting process. Information is shared with patrol officers and special investigation units such as the Fatal Alcohol Crash Team to improve the data before it is submitted in final form.

Analysis of Data

A complete data set for one calendar year is saved into a database and information related to the “unique” location for each crash is geo-coded into a geographic information system (GIS) for analysis. The GIS software gives planners the ability to evaluate crash data in an infinite number of ways. NIRCC provides each jurisdiction within Allen County an annual “Crash Summary Report” which is provided to the respective law enforcement agencies, engineering departments, elected officials and used for statistical purposes by planners. The report summarizes crashes by location, types, contributing circumstances, individual information, environmental impacts and a variety of other data items.

High crash locations are often defined as locations that are most “hazardous. NIRCC worked with law enforcement agencies and engineers to define “hazardous” locations. Safety in transportation planning often defines high crash locations by frequency of crashes because of the impacts on the transportation network resulting in congestion and excessive delay. For other users high crash locations are those where more crashes occur per million vehicles. NIRCC developed a process to identify high crash locations or, hazardous locations, which considers and balances both of these definitions. NIRCC’s process was developed through a cooperative effort with FHWA, INDOT and the Transportation Technical Committee (TTC).

The process incorporates both frequency and crash rates to identify and rank hazardous locations in a fair and responsive manner. A listing of crash locations is review that includes the crash frequency of the locations. Locations from this listing that meet or exceed seven crashes in a single year are then given a crash rate. A second listing is then created that includes only the locations identified from the frequency standards. This procedure is the most cost efficient and accurate method at this time. The principle of using a minimum frequency threshold and a RMV is a simple method to determine the safety of a location.

The next evaluation step is to incorporate crashes resulting in injuries or fatalities (I/F). The percentage of I/F is used to identify locations where severity is greater than expected. There are two processes that are followed to evaluate two strata of data. Crash locations with an annual frequency equal to or greater than 7 will be reviewed in one stratum and crash locations with an annual frequency greater than to and less than 6 follow a second process.

Process for locations with frequency >2; < 6 crashes per year

1. A density analysis will be completed using a 250’ radius to identify crash locations.
2. Crash locations with a frequency of 6, 5, 4 or 3 must have a minimum of one I/F crash to be included in the listing.
3. Locations then must meet one of the following two criteria;

A.	<u>Frequency</u>	<u>Percentage of I/F</u>
	6	100% to 33 %
	5	100% to 40%
	4	100% to 50%
	3	100 % to 66%

B. Locations with a RMV equal or greater than 1.00 will be included in the analysis.

Process for locations with FREQUENCY > 7 crashes per Year

1. A density analysis will be completed using a 250’ radius to identify crash locations.
2. All crash locations with a RMV > 2.00 will be selected.
3. All locations with a RMV between 1.00 and 1.99 and have a percent of I/F between 100% and 66%.

Uses of Data

NIRCC uses the data for various planning activities in addition to providing crucial information to other agencies and users. The use of the data supports the Indiana Strategic Highway Safety Plan. The data is used in conjunction with data from previous years. Analysis of crash data for planning purposes relies on data from three or more years to support most decisions. The primary use of the data is the identification of high crash locations or hazardous

crash locations. It provides planners the necessary resource to aid local officials in addressing citizen comments to education of drivers. As the program continues to grow the various uses of the data also increases.

The Indiana Strategic Highway Safety Plan identifies 13 emphasis areas listed below. This report provides components of NIRCC's Safety Management Program that support this effort.

Driver Behaviors

Emphasis Area 1: Develop Safer Young Drivers

Emphasis Area 2: Increase occupant protection

Emphasis Area 3: Reduce impaired drivers

Special Users/Vehicles

Emphasis Area 4: Improve motorcycle safety

Emphasis Area 5: Reduce large truck crashes

Emphasis Area 6: Reduce bicycle and pedestrian crashes

Serious Crash Types/Locations

Emphasis Area 7: Reduce "High Risk" rural road crashes

Emphasis Area 8: Minimize the possibility and consequences of leaving the roadway

Emphasis Area 9: Improve safety at intersections

Emphasis Area 10: Reduce crashes at highway railroad crossings

Crash Management

Emphasis Area 11: Enhance emergency services response to traffic crashes

Emphasis Area 12: Expedite crash clearance to reduce secondary crashes and congestion

Emphasis Area 13: Improve the quality of the data used to make safety improvement decisions

Driver Behaviors

(1) Develop Safer Young Drivers

NIRCC provides crash data to advocacy groups for education of young drivers in Allen County. The "Drive Alive" campaign works with parents and teens to promote safe driving practices through education. The campaign provides parents with tools to help them talk to their teen including a parent/teen contract. Various partner's have contact NIRCC for data related to crash locations near schools, statistics of crashes involving drivers by age, crash types most common to young drivers, and contributing factors of crashes involving young drivers.

Crash data will continue to be provided to this group, other local groups and elected officials to encourage education of young drivers. The information will also be a tool to monitor the effectiveness of the programs and efforts by all those involved.

(2) Increase Occupant Protection

Crash records that are summarized by NIRCC provide local agencies information from crashes that occur in each jurisdiction. This information can be used to monitor the impacts of legislation and education aimed at occupant protection. Use of seatbelts and helmets are available to the agencies. This information can be used to target enforcement or evaluate educational efforts.

(3) Reduce Impaired Drivers

The reduction of impaired drivers has been an important issue for all motorists for many years. Crash statistics provided by NIRCC to local officials and law enforcement agencies the necessary tools to identify areas where impaired drivers are involved in crashes. This serves as a portion of the information needed. Traffic arrests are also used in determining areas for enforcement. Educational activities are also supported with crash data to inform motorists of the dangers in driving while impaired.

Special Users/Vehicles

(4) Improve Motorcycle Crashes

Motorcycle crashes have a high rate of injury and fatality per mile traveled compared to motor vehicles. NIRCC provides an annual summary of crashes by vehicle type. The data is mapped in a manner that allows planners to geographically analyze where crashes involving specific vehicle types such as motorcycles. Areas or roadways that have a concentrated number of crashes higher than that expected are identified and discussed with transportation engineers and law enforcement. Helmets are not required in Indiana which makes education of drivers more crucial. Identified crash locations involving motorcycles can provide law enforcement the ability to target enforcement efforts.

(5) Reduce Large Truck Crashes

Commercial vehicle crashes are identified by crash type. NIRCC reviews the frequency of crashes involving commercial vehicles with traffic data also collected and maintained by NIRCC. The percentage of trucks on a location or corridor can be used to evaluate the number of crashes occurring at that location. The data can aid local officials and planners with identification of needed improvements.

(6) Reduce Bicycle and Pedestrian Crashes

Planning activities for bicycle and pedestrian facilities are conducted by NIRCC and the Indiana Department of Transportation for local and regional plans. The participation in both activities by NIRCC provides a great benefit to the process. Crash statistics can be reviewed when planning efforts for specific projects are proposed. Crash statistics are also used to identify needed bicycle and pedestrian facilities. In recent years a significant amount of work has been devoted in identification of all existing sidewalks, needed greenway expansions, connectivity

projects, and new construction to provide safe bicycle and pedestrian facilities.

Local advocacy groups continue educational efforts geared at sharing the roads. Crash records can the effort by providing the number of annual crashes involving bicyclists and pedestrians. This information can increase the awareness of the severity of the issue and result in safer motorists.

Serious Crash Types/Locations

(7) Reduce “High Risk” Rural Road Crashes

The metropolitan planning area for NIRCC includes areas in cities of Fort Wayne and New Haven and a portion of Allen County which are defined as urban areas. The planning efforts for the Long Range Transportation Plan focus on projects within this urban area. The Safety Management Program for NIRCC however includes data for the entire county. The intent of this information is to provide law enforcement agencies that respond to crashes throughout the urban areas and rural areas the tools necessary to respond to crashes in a timely manner and identify enforcement areas. This information is reviewed as previously stated in a manner that considers the rural areas. The crashes outside the urbanized area are mapped and reviewed based on frequency while considering traffic volumes and roadway characteristics.

NIRCC has reviewed potential system wide improvements to mitigate crashes in rural areas. Though these type projects may not be part of a long range plan, they can serve the residents by identifying improvements that may be made by local government agencies while reducing overall crash costs to the public.

Rural crash data is also reviewed for DeKalb and Wells County. NIRCC has provided three-year crash summaries for these counties to provide local officials with necessary information in addresses safety in each jurisdiction. The data is mapped to provide an easy method to identify high crash locations in each county. The data also provides the counties with information to respond to inquiries about crash frequencies at specified locations. Periodic review of this data will aid NIRCC in assessing safety at identified locations in each county.

(8) Minimize the Possibility and Consequences of Leaving the Roadway

Annual reports provide a summary of crashes involving vehicles that leave the roadway. The data provided by NIRCC can identify all crash types to evaluate roadways that experience a greater than expected number of off road collisions. This information is provided to local agencies for consideration of improvement projects. NIRCC continues to encourage system wide improvements such as installation of guardrails on curves, clear zone improvements, and speed evaluations where problems are identified.

(9) Improve Safety at Intersections

The strength of NIRCC's safety management process is that all crash locations are accurately identified through unique location names. Each intersection is identified by one name where various alternatives exist. This process greatly increases the level of confidence in reviewing crashes at intersections. Current requirements for law enforcement agencies reporting crashes define intersection crashes as those that occur within 33 feet of the intersection. Planners analyze all crashes reported at intersections by reviewing the crashes reported at all approaches in addition to those within the 33 feet of the crossroads. This process ensures planners that crashes related to the intersection such as rear ends are identified and examined to determine what countermeasures can be implemented to mitigate future crashes.

NIRCC dedicates a significant portion of time to examining high crash or hazardous intersections. This element of the program results in the most number of identified projects that are pursued by local public agencies. Improvements to existing intersections identified as hazardous can often provide the most effective benefit in reduction of crashes and severity of crashes. Continual review of these locations from year to year will provide planners and local public agencies with the necessary information to prioritize improvement projects.

(10) Reduce Crashes at Highway Railroad Crossings.

Railroad crossing information is maintained and updated regularly by NIRCC. Traffic volumes are collected at all at-grade railroad crossings in Allen County as part of the traffic count program. In addition to this data planners collect other information regarding warning devices, sight distance, roadway lane widths, train speed, and trains per day. Photographs of crossings are also collected and maintained to review potential safety issues.

Crashes at railroad crossings are identified by NIRCC and also the Indiana Department of Transportation. Planners review the data reported by the state to ensure records are accurate. In recent years full protection at many of the railroad crossings in Allen County have been installed including lights and gates. Annual crash summary reports identify all crashes involving motor vehicles and trains in order to identify potential improvements.

Crash Management

(11) Enhance Emergency Services Response to Traffic Crashes

(12) Expedite Crash Clearance

NIRCC participates in activities with local and state agencies to improve emergency services and quick clearance. These activities have motivated legislators to consider new laws to improve these issues. Crash data can assist emergency service providers in determining where crashes are occurring more than others. These decisions can help in responding to emergencies to aid victims and improve quick clearance of crash locations.

(13) Improve Quality of the Data Used to Make Safety Improvement Decisions

Reporting crash data has significantly improved in Indiana in the past years. All of the law enforcement agencies in Allen County utilize the electronic reporting software. This automatic reporting of crashes provides information to planners in a timely manner. The data provided is in a more usable format than in past years. As previously stated NIRCC extracts all the crashes from the Indiana database for annual analysis. NIRCC updates all crash locations to ensure consistency and accuracy.

Through to process of updating crash locations and mapping the data, NIRCC has identified issues that can be improved by the State of Indiana and the officers reporting the data. NIRCC works closely with the local law enforcement agencies to address these issues and improve the quality of the data reported.

Project Selection and Prioritization

The process of selecting projects encompasses a variety of contributing factors. Locations identified through NIRCC's evaluation process and deemed "hazardous", are carefully reviewed to determine what solution or action to implement. The review process of annual data is reviewed by planners by using the new data in combination with the previous two years resulting in a listing of locations identified from three years of data. This listing of locations is provided to a committee of local engineers called the Transportation Technical Committee (TTC). TTC reviews the listing to inform planners of issues regarding specific locations they have already addressed or have plans to address. Potential causes for problems at the identified locations are also discussed and documented. This information is then forwarded to the local Transportation Safety Forum for further review.

The Transportation Safety Forum is comprised of representatives from each local law enforcement agency and engineering agency. Attendees include representatives from the following agencies; Indiana Department of Transportation, Indiana State Police, Allen County Highway Department, Allen County Sheriff's Department, Fort Wayne Engineering Department, Fort Wayne Police Department, New Haven Engineering Department, and New Haven Police Department. The safety forum provides a unique opportunity for law enforcement representatives and engineers to share with one another important issues regarding the locations identified. NIRCC facilitates the meetings, providing the data and documenting the issues shared by each of the representatives. Law enforcement representatives see the crashes first hand and are able to provide invaluable information that cannot always be documented in individual reports. Local engineering department representatives can share potential improvement ideas with law enforcement representative to get feedback on the potential effectiveness. The forum has benefited the safety process in

Allen County by improving communication between various stakeholders and provided each of the participating agencies insight to what one another is doing to improve the safety of the roadways in Allen County.

The listing of project identified by NIRCC is updated again with the comments from the Transportation Safety Forum. Planners review the locations where specific improvements were suggested. The projects identified from the listing are then forwarded to the local public agency responsible for the location for further consideration. Locally approved projects are then pursued by the local engineering departments for implementation of the construction process or forwarded to NIRCC for consideration of federal funding. NIRCC provides the listing of identified hazardous locations and the specific projects selected by local agencies for improvements to the Urban Transportation Advisory Board. This board approves projects for federal funding based on the benefit of each project and available funding. Larger projects may be approved for future funding if current conditions do not permit programming of the project. Smaller projects are often funded with local funds.

Existing Project Analysis

The ability to easily obtain crash records has allowed planners a new opportunity to review existing roadway projects being developed for construction. Projects that are in their infancy of preliminary design are reviewed to identify all safety deficiencies. This information serves to provide the designers of the project necessary information to ensure the deficiencies are addressed. Planners also provide this review to elected officials to support the needs of the project. The analysis may also warrant safety funding that can assist in the cost of the project.

Transit Safety

Safety of residents that utilize the local transit safety is very important to the success of the service. Safety improvements to the highway system have corresponding safety benefits to the transit system. The safety management system is structured in a manner that provides planners the ability to track elements of safety other than locations. Crash types involving pedestrians and buses can be identified and reviewed to address existing issues. The data can also support bus stop safety to assist the transit provider in route selections.

In addition to the efforts NIRCC provides, Citilink addresses safety issues concerning the transit system and is aware of the importance safety plays in overall passenger comfort. Several projects to improve security on buses and customer safety at the transfer facility

have been made. Drivers are also provided training to address safety, terrorism, and security. The perception of a safe transit system is a great marketing tool. Citilink strives to maintain a safe transit system.

Conclusion

NIRCC has progressed in the development of a useful safety management program and continues to look for ways to improve data and expand the use of the information. The process of evaluating crash locations continues to evolve with the introduction of new unique situations and challenges. The information serves in meeting the goal of safer and more efficient roadways in our area.

Chapter 8

Environmental Mitigation

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) specifies that metropolitan transportation plans must include a discussion of potential environmental mitigation activities, to be developed in consultation with Federal, State and Tribal wildlife, land management, and regulatory agencies. The mitigation activities are to be at the policy and/or strategic-levels, not project specific. The Northeastern Indiana Regional Coordinating Council has prepared this chapter in consultation with the appropriate federal, state, and local agencies to address the environmental mitigation activities. This document maps the common environmental issues, discusses mitigation strategies, and includes some analysis of the number of specific projects near various features.

The Northeastern Indiana Regional Coordinating Council (NIRCC) is the lead agency for the development of the Transportation Plan for the Fort Wayne-New Haven-Allen County Metropolitan Planning Area. As part of the Participation Plan for the transportation planning process, NIRCC has identified environmental and cultural resource agencies that have been invited to consult on the environmental mitigation discussion. The agencies have been provided access to the 2030-II Transportation Plan and proposed plan modifications. The additional information and discussion in this chapter has been provided to the resource agencies and the public for review and comment. NIRCC will consult with the agencies further to address any issues that may arise.

Methodology

There are three components to NIRCC's methodology to address the SAFETEA-LU environmental mitigation requirement. First, through consultation with various agencies and staff review of published materials, maps of the most common environmental features have been developed. Second, a discussion of these is provided including general strategies that are applied when a project is implemented that impacts a particular environmental resource or feature. Third, in aggregate, the number of projects that could impact the various resources have been summarized. It should be noted that the projects are very conceptual at the Transportation Plan stage and specific environmental mitigation strategies will occur as part of the environmental review and preliminary engineering activities. As projects advance to implementation, additional study and design will be conducted. For projects that use state or federal funds, environmental studies in compliance with NEPA and other state and federal requirements will be performed.

Common Environmental Issues

NIRCC has identified four common environmental issues for discussion in this 2030 Transportation Plan appendix. The environmental issues include:

- Streams and Wetlands
- Threatened and Endangered Species
- Section 4(f) Land
- Cultural Resources

The following sections provide a brief description of each of these issues, map the items for the NIRCC Metropolitan Planning Area, and discuss mitigation when projects may impact the environmental feature.

Streams and Wetlands

The NIRCC Metropolitan Planning Area (MPA) includes numerous water resources including rivers, streams and potential wetlands as shown in Figures 30 and 31. Two streams in the NIRCC MPA are identified on the Indiana Listing of Outstanding Rivers and Streams. The Cedar Creek in Northern Allen County is on the list as a Scenic River and is considered to have outstanding ecological importance with high quality water. The Little River, as a tributary to the Wabash River, is part of the Wabash River Heritage Corridor. These waterways are designated on Figure 30.

The Indiana Department of Environmental Management (IDEM) maintains a list of impaired waters. Figure 32 displays the surface waters in Allen County identified by IDEM as impaired and Table 10 includes a listing with the cause of impairment. Many transportation projects may cross or run alongside a stream or river or touch a wetland area. In these cases the goal is to avoid, to the fullest extent practicable, any activity that adversely impacts streams or wetlands during the design, construction, or maintenance of the transportation facility to protect water quality. As nearly all of the projects in the Transportation Plan will use state or federal funds, project design will follow state and federal design procedures and strive to achieve this goal.

Project design will take the appropriate action to avoid, minimize, and mitigate impacts as required by federal, state, and local law. In the event that impacts to streams and wetlands are unavoidable, a wide variety of mitigation strategies will be considered beginning with on-site mitigation opportunities. Once on-site opportunities are exhausted, the search for mitigation strategies will shift to off-site locations. Mitigation strategies may include but are not limited to: mitigation banking; stream and wetland creation; sediment/run-off control and water quality monitoring; restoration; and/or preservation. In general, the Indiana Department of Environmental Management requires that impacted wetlands be replaced with wetlands of the same type at specific mitigation ratios. Applicants may be allowed to create or restore a

different type of wetland if it provides better water quality and/or habitat value. Where practical, wetland mitigation/replacement will occur close to the original site and within the same Hydrologic Unit Watershed (see Figure 33).

Impact analysis and mitigation are integral parts of the project development process. Early review and analysis of projects alternatives by regulatory and resource agencies combined with effective inter-office coordination are required to develop successful transportation projects. Projects will follow guidelines for the development of mitigation as required by the U.S. Army Corps of Engineers (USACE) and Indiana Department of Environmental Management (IDEM). The USACE mitigation guidelines are outlined in the latest USACE Regulatory Guidance Letter (RGL) 02-02, dated December 24, 2002. The US Army Corps of Engineers requested recognition of the flood control projects within the MPA. Transportation projects will be reviewed to insure they have no adverse effects on the flood control projects or affect water levels in the flood control project area. The flood control projects are displayed in Figure 34.

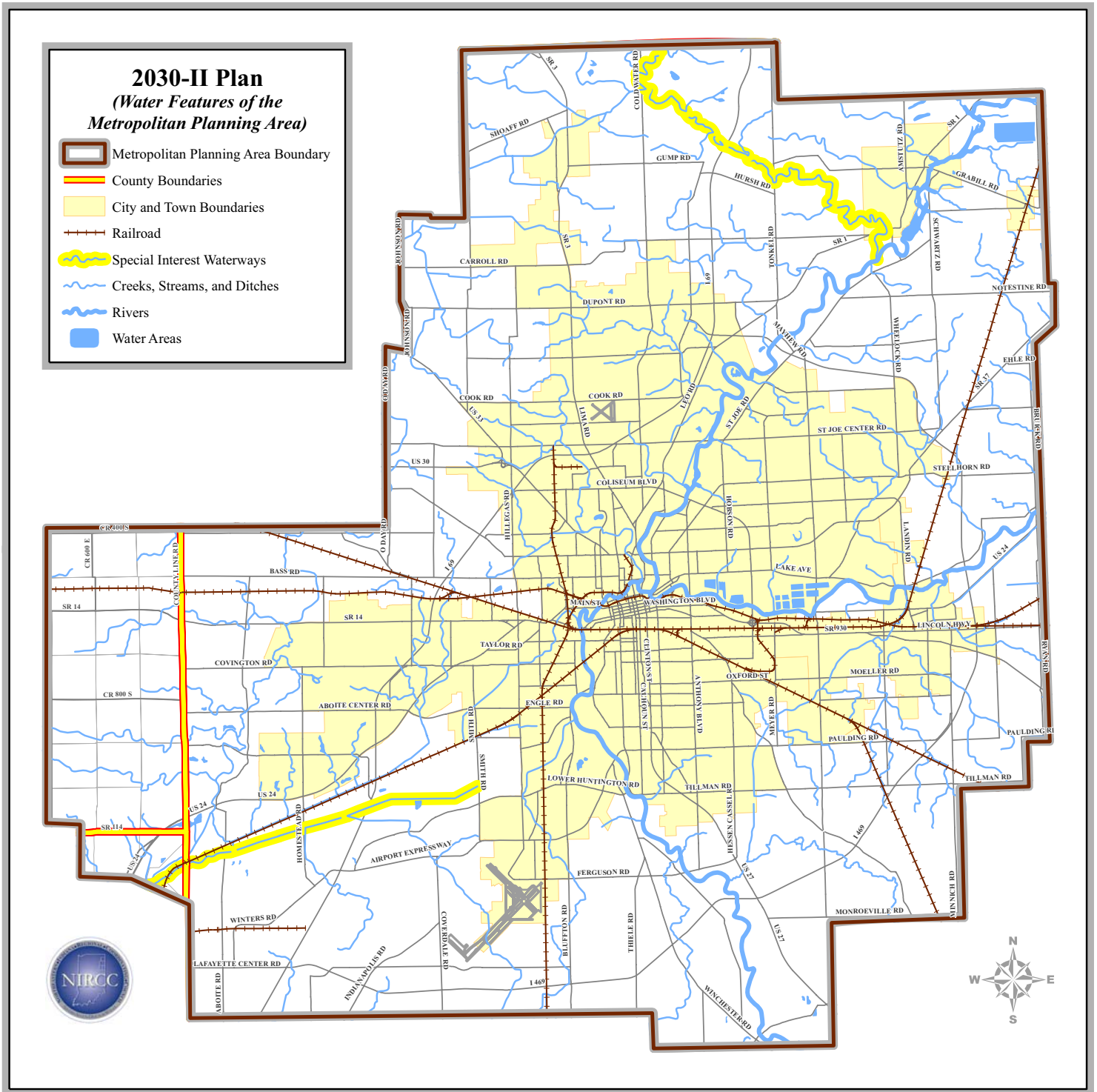


Figure 30

Water Features

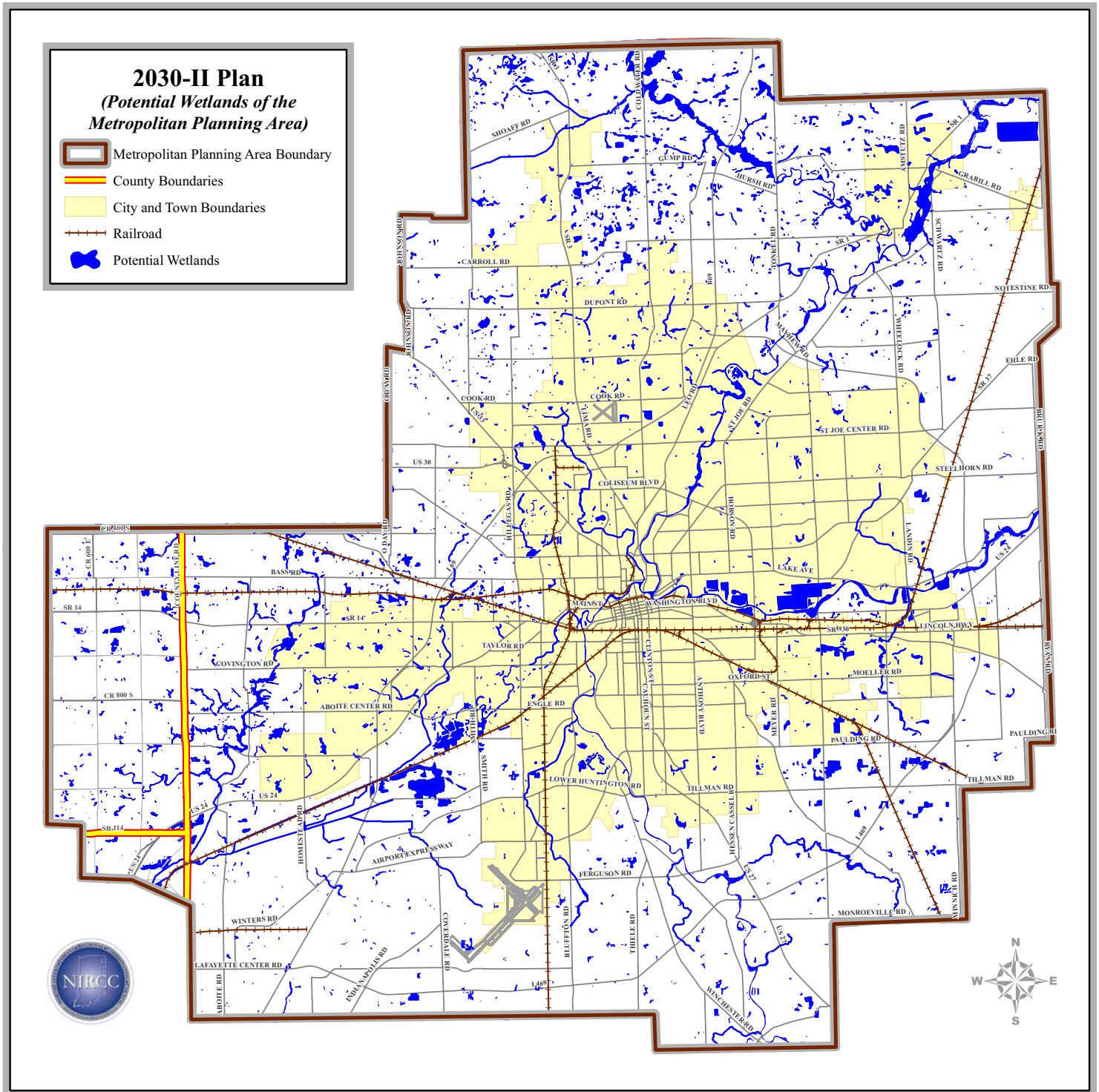


Figure 31

Potential Wetlands

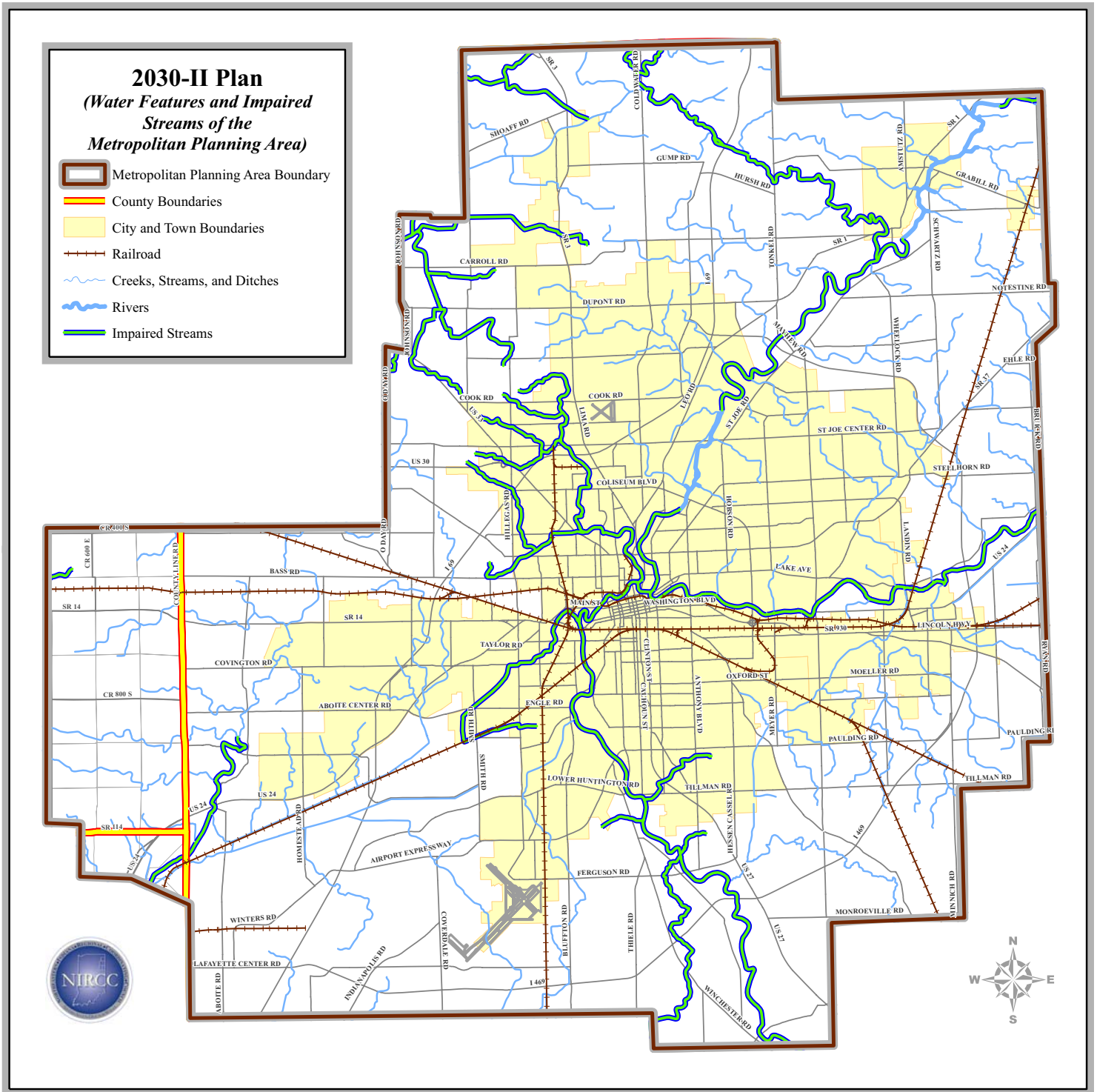


Figure 32

Water Features and Impaired Streams

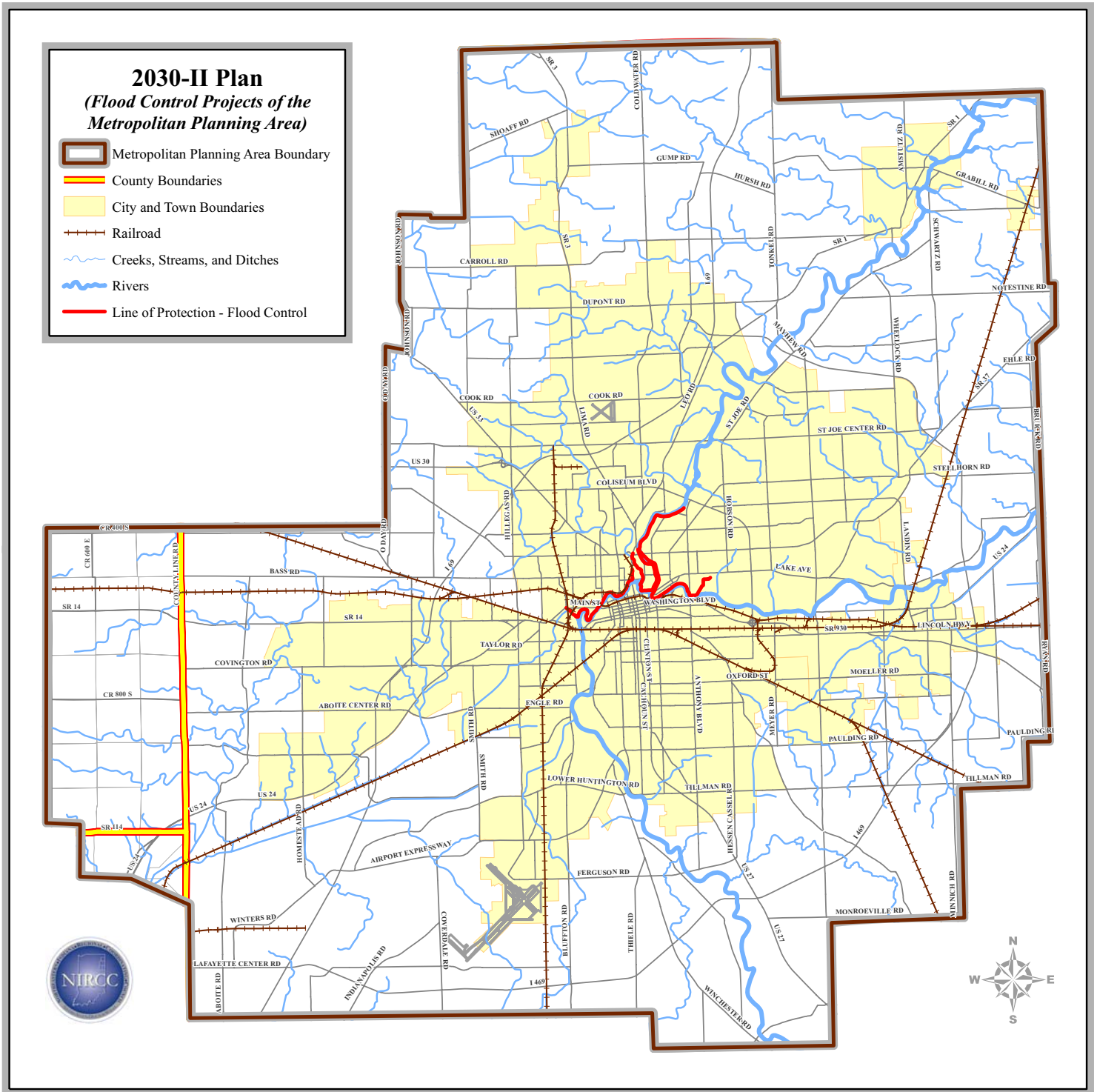


Figure 34

Flood Control Projects

Table 10. Impaired Waters in Allen County

MAJOR BASIN	ASSESSMENT UNIT NAME	CAUSE OF IMPAIRMENT	TMDL DATE
Great Lakes	St Joseph River (Upstream of Metcalf Ditch)	E. Coli	2013
Great Lakes	St Joseph River (Downstream of Metcalf Ditch)	E. Coli	2013
Great Lakes	Cedar Creek	E. Coli	2011
Great Lakes	Cedar Creek	PCBs in Fish Tissue	2021
Great Lakes	Willow Creek and Tributaries	E. Coli	2017
Great Lakes	Cedar Creek	E. Coli	2011
Great Lakes	Cedar Creek	Mercury in Fish Tissue	2011
Great Lakes	Cedar Creek	PCBs in Fish Tissue	2021
Great Lakes	St. Joseph River	Mercury in Fish Tissue	2011
Great Lakes	St. Joseph River	PCBs in Fish Tissue	2011
Great Lakes	St. Joseph Reservoir	Mercury in Fish Tissue	2021
Great Lakes	St. Joseph Reservoir	PCBs in Fish Tissue	2021
Great Lakes	Cedarville Reservoir	Algae	2017
Great Lakes	Cedarville Reservoir	E. Coli	2017
Great Lakes	Cedarville Reservoir	Taste and Odor	2021
Great Lakes	Cedarville Reservoir	PCBs in Fish Tissue	2021
Great Lakes	St. Joseph Reservoir	Algae	2013
Great Lakes	St. Joseph Reservoir	E. Coli	2013
Great Lakes	St. Joseph Reservoir	Mercury in Fish Tissue	2013
Great Lakes	St. Joseph Reservoir	PCBs in Fish Tissue	2013
Great Lakes	St. Marys River	E. Coli	2013
Great Lakes	St. Marys River	Impaired Biotic Communities	2017
Great Lakes	St. Marys River	Nutrients	2017
Great Lakes	St. Marys River	Nutrients	2013
Great Lakes	Junk Ditch and Other Tributaries	Mercury in Fish Tissue	2021
Great Lakes	Junk Ditch and Other Tributaries	PCBs in Fish Tissue	2021
Great Lakes	St. Marys River	Nutrients	2013
Great Lakes	St. Marys River	Mercury in Fish Tissue	2013
Great Lakes	St. Marys River	PCBs in Fish Tissue	2013
Great Lakes	St. Marys River	Nutrients	2017
Great Lakes	St. Marys River	Mercury in Fish Tissue	2017
Great Lakes	St. Marys River	PCBs in Fish Tissue	2017
Great Lakes	Maumee River	Nutrients	2013
Great Lakes	Maumee River	Mercury in Fish Tissue	2013
Great Lakes	Maumee River	PCBs in Fish Tissue	2013
Great Lakes	Maumee River	Nutrients	2013
Great Lakes	Maumee River	Mercury in Fish Tissue	2013
Great Lakes	Maumee River	PCBs in Fish Tissue	2013
Great Lakes	Maumee River	PCBs in Fish Tissue	2013
Great Lakes	Maumee River	PCBs in Fish Tissue	2013
Great Lakes	Maumee River	PCBs in Fish Tissue	2013
Great Lakes	Black Creek (Harlan, IN)	Algae	2017
Great Lakes	Black Creek (Harlan, IN)	E. Coli	2017
Great Lakes	Black Creek (Harlan, IN)	Impaired Biotic Communities	2017
Great Lakes	Black Creek (Harlan, IN)	Nutrients	2017
Great Lakes	Oberhaltzer Ditch	E. Coli	2017

Table 11 Continued next page...

Table 10. Impaired Waters in Allen County Continued

MAJOR BASIN	ASSESSMENT UNIT NAME	CAUSE OF IMPAIRMENT	TMDL DATE
Great Lakes	Reichelderfer Ditch	E. Coli	2017
Great Lakes	Ward Lake Ditch	E. Coli	2017
Great Lakes	Maumee River	Nutrients	2013
Great Lakes	Maumee River	PCBs in Fish Tissue	2013
Great Lakes	Maumee River	Nutrients	2013
Great Lakes	Maumee River	PCBs in Fish Tissue	2013
Great Lakes	Ham Interceptor Ditch	Impaired Biotic Communities	2017
Great Lakes	Ham Interceptor Ditch	Nutrients	2017
Great Lakes	Flatrock Creek (Upstream of Monroeville, IN)	E. Coli	2017
Great Lakes	Flatrock Creek (Downstream of Monroeville, IN)	E. Coli	2017
Great Lakes	Flatrock Creek (Downstream of Monroeville, IN)	Impaired Biotic Communities	2017
Great Lakes	Flatrock Creek - Unnamed Tributary (Illinois)	E. Coli	2017
Great Lakes	Flatrock Creek - Unnamed Tributary	E. Coli	2017
Great Lakes	Flatrock Creek - Unnamed Tributary	E. Coli	2017
Great Lakes	Brown Ditch	E. Coli	2017
Great Lakes	Brown Ditch	Impaired Biotic Communities	2017
Great Lakes	Brown Ditch - Unnamed Tributary	E. Coli	2017
Great Lakes	Brown Ditch - Unnamed Tributary	E. Coli	2017
Great Lakes	Scoff Ditch	E. Coli	2017
Great Lakes	Gromeaux Ditch	Impaired Biotic Communities	2017
Upper Wabash	Geller Ditch	Impaired Biotic Communities	2021
Upper Wabash	Benward Ditch	Impaired Biotic Communities	2021
Upper Wabash	Shoaff Dawson Ditch	Impaired Biotic Communities	2021
Upper Wabash	Bobay Ditch	Impaired Biotic Communities	2021
Upper Wabash	Benward Ditch – unnamed tributary	Impaired Biotic Communities	2021
Upper Wabash	Johnson Ditch	Impaired Biotic Communities	2021
Upper Wabash	Johnson Drain (Upstream of Churubusco Branch)	Impaired Biotic Communities	2021
Upper Wabash	Eel River	Impaired Biotic Communities	2021
Upper Wabash	Eel River	Mercury in Fish Tissue	2021
Upper Wabash	Eel River	PCBs in Fish Tissue	2021
Upper Wabash	Johnson Ditch – Unnamed Tributary	Impaired Biotic Communities	2021
Upper Wabash	Duglay Ditch	Impaired Biotic Communities	2021
Upper Wabash	Churubusco Branch - Unnamed Tributary	Impaired Biotic Communities	2021
Upper Wabash	Churubusco Branch	Impaired Biotic Communities	2021

Threatened and Endangered Species

The State of Indiana harbors a great diversity of wildlife and plant communities. Many species receiving federal or state protection are tied closely to their habitats. Land-use change has been the most common cause for decline in species range and diversity. Contamination and degradation of natural waters has also contributed to loss of habitat. The Indiana Natural Heritage Data Center lists over 50 species as endangered, threatened or rare within Allen County. These species include a variety of mammals, birds, reptiles, amphibians, mollusks, insects, fishes and plants. Species listed as endangered in Allen County include the White Cat's Paw Pearly Mussel, Northern Riffleshell Mussel, and Clubshell Mussel. The Eastern Massasauga and Rayed Bean Mussel are species that are candidates for potential future listing as either threatened or endangered. Due to the sensitive nature of identifying locations of threatened and endangered species, maps of these specific habitats are not provided. In general, small stream corridors with well developed riparian woods, upland forested areas, wetlands and portions of the St. Joseph River have been identified as potential habitat sites to threatened and endangered species.

Projects going through the development process are planned and designed to comply with the National Environmental Policy Act, Endangered Species Act, Clean Water Act and appropriate Indiana rules and regulations. In the early coordination phase of a project, potential impacts to specific endangered or threatened species will be assessed. Avoidance and mitigation strategies will be developed for specific projects as needed. The mitigation strategies may include but are not limited to: restricting clearing of trees and vegetation; relocation of listed mussel and plant species from the construction site; strict erosion control; measures to allow terrestrial species to pass unharmed through construction areas; seasonal construction restrictions; limit construction noise; and limit hours of construction activity.

Section 4(f) Mitigation

Section 4(f) of the Department of Transportation Act of 1966 requires that special effort be made to preserve public park and recreation land, wildlife and waterfowl refuges, and historic sites. In general, Section 4(f) specifies that federally-funded transportation projects requiring the use of land from a public park, recreation area, wildlife and waterfowl refuge or land of significant historical value can only occur if there is no feasible and prudent alternative. Using Section 4(f) land requires all possible planning to minimize harm. The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), provided the first substantive revision to Section 4(f) to simplify the process and approval of projects that have only de minimis impacts on lands impacted by Section 4(f). Under the new provisions, once the US DOT determines that a transportation use of Section 4(f) property results in a de minimis impact, analysis of avoidance alternatives are not required and the Section 4(f) evaluation process is complete.

The NIRCC Metropolitan Planning Area contains a number of local parks; wildlife and waterfowl refuges and sites listed on the national registry and are identified on Figures 35 and 36. Additional historic locations including local districts and the Wabash-Erie Canal alignment are also identified on Figures 36 and 37. It is important to acknowledge that the identification of historic and cultural resources is a dynamic process and is therefore impossible to identify an exhaustive list of sites. These sites are important to the environmental integrity and heritage of our communities. However, there are times when transportation projects impact Section 4(f) resources and require measures to minimize potentially adverse impacts. The development and implementation of such measures involve close coordination with officials that have jurisdiction of the specific resources.

Investigation of Section 4(f) resources and investigation of potential impacts occur throughout the project planning and development. The intent of evaluating resources near project development sites helps guide projects toward practical solutions while minimizing impacts. This also applies to situations where no feasible or prudent alternative exists. The availability of detail during the project development of the preferred alternative allows for closer examination of the potential for Section 4(f) impacts and a clearer determination of how impacts should be processed. Once this is known, project sponsors and officials that own the resources can follow a process for mitigation.

The development process for the Transportation Plan is cognizant of and accounts for regional Section 4(f) resources that are important for preservation and community cohesion. Other resources may not be well known, but are afforded the same protection under Section 4(f). While the transportation planning process can account for well known Section 4(f) resources that would pose a significant loss if impacted, it is premature to analyze individual impacts from projects at this stage in the planning process.

In cases where projects do have Section 4(f) impacts and there is no feasible and prudent alternative to avoid use of the resource, the project development process requires consideration of all possible actions to minimize harm. Minimization of harm may entail both alternative design modifications that lessen the impact and mitigation measures that compensate for residual impacts. Minimization and mitigation measures should be determined through consultation with the official or agency owning or administering the resource. Neither the Section 4(f) statute nor regulation requires the replacement of Section 4(f) resources used for transportation projects, but this option is appropriate as a mitigation measure for direct project impacts.

Mitigation measures involving public parks, recreation areas, or wildlife and waterfowl refuges may involve a replacement of land and/or facilities of comparable value and function, or monetary compensation, which could be used to enhance the remaining land. Mitigation of historic sites usually consists of those measures

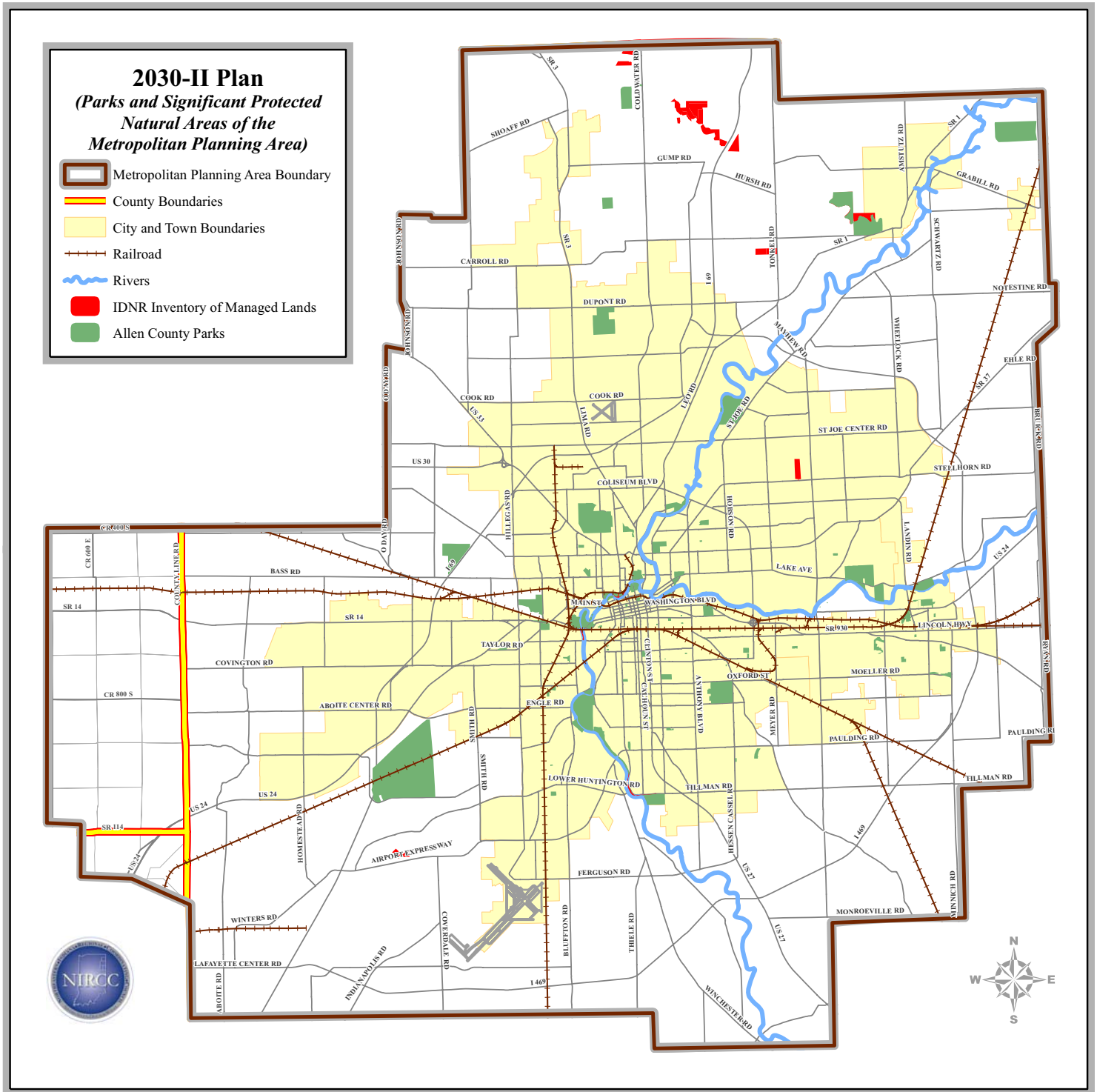
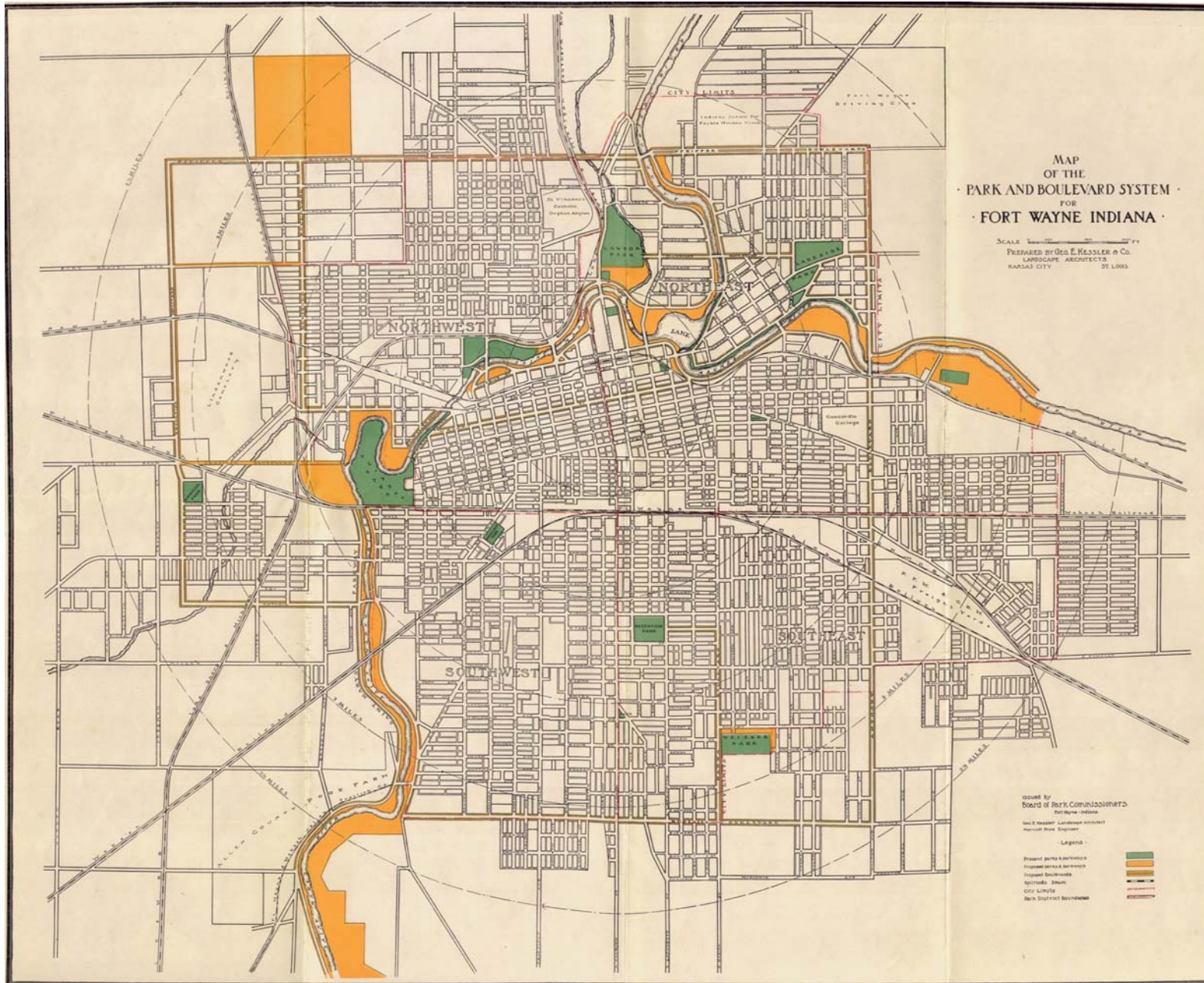


Figure 35

Parks and Significant Protected Natural Areas



Attachment

2

Multiple Property Document

Map of the
Park and Boulevard System
City of Fort Wayne, Indiana
George Kessler, 1912

PREPARED BY:
**TINA JONES
CHRISTOPHER BAAS
MALCOLM CAIRNS**

PREPARED FOR:
ARCH
437 EAST BERRY
STREET, SUITE 204
FORT WAYNE,
INDIANA 46802
(260)426-5117



Figure 37

necessary to preserve the historic integrity of the site. In any case, the cost of mitigation should be a reasonable public expenditure in light of the severity of the impact on the Section 4(f) resource in accordance with Federal requirements. Mitigation for common Section 4(f) resource impacts may include: landscaping or other screening techniques; context sensitive design refinements; maintenance of traffic accommodations to minimize impacts; minimize noise and/or limit duration of construction; and direct compensation for improvements to on-site resources.

Cultural Resources

Cultural resource reviews during the project development phase are designed to comply with the National Environmental Policy Act, the National Historic Preservation Act, the Department of Transportation Act and applicable Indiana codes and regulations. These laws and regulations require that cultural resources be considered during the development of transportation projects. An element of that consideration involves consulting with various entities including the Federal Highway Administration (FHWA), Advisory Council on Historic Preservation (ACHP), State Historic Preservation Office (SHPO), local historic preservation groups, local public officials, and the public.

Mitigation measures developed through a Section 106 Memorandum Of Agreement (MOA) consultation process provide ways to avoid, minimize, or mitigate adverse effects to historic properties impacted by projects. Historic properties include those listed, or are eligible for listing in the National Register of Historic Places (NRHP). These mitigation measures are carried through as environmental document commitments and must be completed and accounted for with SHPO and FHWA. The MOA will not be closed until all stipulations are fulfilled. A failure to meet all stipulations can potentially jeopardize a project sponsor's funding or other agreements or projects.

A plan for mitigating an adverse effect is site/property specific and requires a separate research design or approach for each historic property impacted by the project. It should be based on the context development and refinement through the environmental assessment and preliminary project design/engineering.

Mitigation measures may involve a variety of methods including, but not limited to: aesthetic treatments; avoidance; archaeological data recovery; creative mitigation; salvage and re-use of historic materials; informing/educating the public; and Historic American Buildings Survey (HABS)/Historic American Engineering Record (HAER) documentation. Approaches vary widely depending on the type of historic property, the qualities that enable the property to meet the NRHP Criteria of Eligibility, the location of the historic property with respect to the project and other criteria specific to the site. Mitigation plans are developed in consultation with Indiana Department of Transportation, State Historic Preservation Office, Federal Highway Administration, local public officials, local historic preservation groups, and the

public. In special circumstances consultation may include the Advisory Council on Historic Preservation.

Other Environmentally Sensitive Sites

The Northeastern Indiana Regional Coordinating Council has identified other potential sites that have varying degrees of environmental sensitivity and may impact project development. These sites include active and inactive land fills, brownfields, superfund sites, and wellhead protection areas. Figure 38 displays the major sites where the potential for land contamination is likely from land fill, brownfield, and superfund sites. These locations will be treated on a project by project basis by avoidance or mitigation strategies. Projects impacting these sites will incur additional expense to dispose or treat contaminated soils and materials.

Public water source wellhead protection/influence areas are not displayed due to security issues. Several methods are available for evaluating potential impacts from specific projects or groups of projects. Based on historical public well field information, NIRCC can identify most sites within the Metropolitan Planning Area. NIRCC is also working with the Indiana Department of Environmental Management to evaluate major projects in the 2030 Transportation Plan. Appropriate mitigation activities will be implemented in wellhead influence areas as deemed necessary by IDEM. Mitigating, controlling and containing highway run-off and potential hazardous roadway spills are examples of strategies to protect wellhead sites.

Transportation Plan Analysis Summary

The maps provided in this document show the locations of various environmentally sensitive sites within the NIRCC Metropolitan Planning Area. The 2030 Transportation Plan includes 98 individual projects throughout the region. This section summarizes how many of these projects are near the environmentally sensitive locations. This information is only provided to show how common it is that an environmental issue is expected to be addressed and mitigated as projects from the Transportation Plan progress through the project development process.

The following method was used to summarize the number of projects near common environmental issue locations. Buffers were developed around the transportation projects at 100 feet and 500 feet to identify those that are near parks and significant natural areas, historic sites, potential wetlands, brownfields, landfills, and superfund sites. Buffers were developed around the transportation projects at 100 feet and 1,000 feet to identify those that are near high capacity wellheads and special interest waterways. The 1,000 foot buffer was selected, as opposed to a 500 foot buffer, for high capacity wellhead influence areas and special interest waterways due to the limited certainty of wellhead influence area boundaries and the environmental sensitivity of special interest waterways.

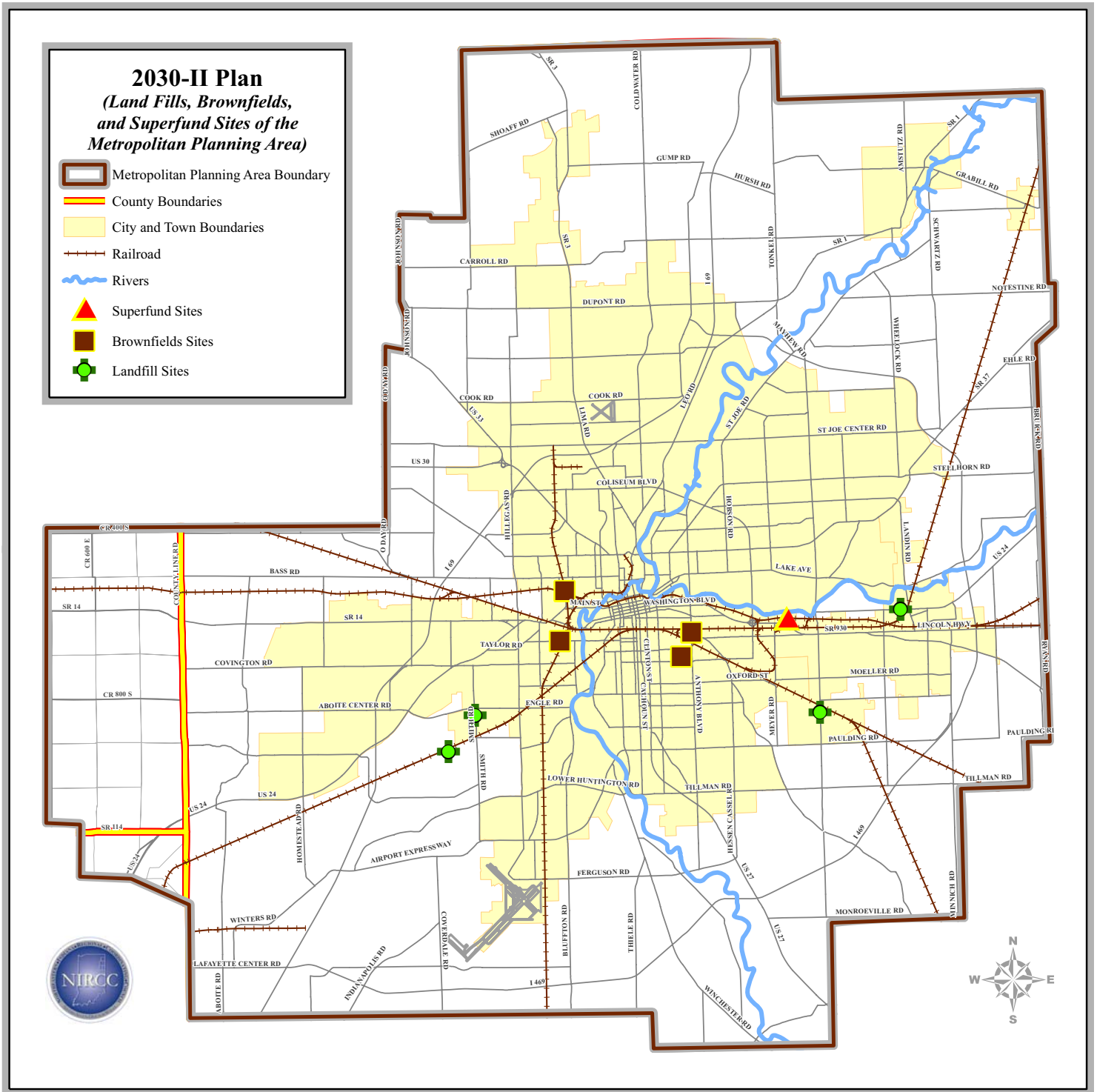


Figure 38

Land Fills, Brownfields, and SuperFund Sites

Table 11 summarizes the number of projects from the 2030 Transportation Plan as amended that are near each type of environmental issues area within the selected buffer criteria.

Table 11. Summary of number of Projects within Environmental Points of Interest

Environmental Points of Interest Near Transportation Projects	Number of Projects within 100 ft	Number of Projects within 500 ft
Parks and Significant Protected Natural Areas	10	19
Local, State, and National Historic Sites and Districts	11	13
Potential Wetlands	45	66
Brownfield, Landfill, and Superfund Sites	0	1

Environmental Points of Interest Near Transportation Projects	Number of Projects within 100 ft	Number of Projects within 1,000 ft
High Capacity Well Influence Areas	7	17
Special Interest Waterways	0	0
Impaired Waterways	12	24

List of Consulting Agencies

Division of Historic Preservation and Archaeology

Fort Wayne Community Development-Historic Preservation

ARCH - Historic Preservation

Allen County Soil and Water Conservation District

Maumee River Basin Commission

INDOT Fort Wayne District

U.S. Fish and Wildlife Service

Natural Resources Conservation Services

Indiana Geological Survey

Regional Director of National Park Service-U.S. Department of Interior

Federal Highway Administration-Indiana Division

Indiana Department of Natural Resources- Division of Fish and Wildlife

Indiana Department of Environmental Management

U.S. Department of Housing and Urban Development

Detroit District, Corps of Engineers- Environmental Analysis Branch

U.S. Environmental Protection Agency

Indiana Department of Natural Resources-Division of Nature Preserves

U.S. EPA-Region V-Superfund

Federal Transit Administration-Region V

Environmental Document Data Citations

Ft Wayne/Allen County Parks

Originator: Allen County iMap

Last Updated: 20070516

Title: GISData.SDE.Parks

Publication_Place: Fort Wayne, IN

Publisher: Allen County iMap

DNR Managed Lands

Originator: Indiana Natural Heritage Data Center

Publication_Date: 20040723

Title: Managed_Lands_IDNR_IN: Managed Lands in Indiana (Indiana Department of Natural Resources, 1:24,000, Polygon Shapefile)

Publication_Place: Indianapolis, Indiana

Publisher: Indiana Natural Heritage Data Center, Indiana Department of Natural Resources

Other_Citation_Details:

Contains managed land areas in Indiana, provided by personnel of the Indiana Natural Heritage Data Center, Indiana Department of Natural Resources (INHDC-IDNR) as of July 6, 2004. The data set provided by INHDC-IDNR was in an ESRI shapefile format and was named "Indiana Natural Heritage Data Center - Managed Areas."

Online_Linkage: <http://igs.indiana.edu/arcims/statewide/download.html>

Potential Historic Canal Structures

Originator: Bernardin-Lochmueller & Associates

Publication_Date: 20000403

Title: CANALS_HISTORIC_STRUCTURES_IN: Historic Canal Structures in Indiana (Bernardin-Lochmueller & Associates, Point Shapefile)

Geospatial_Data_Presentation_Form: Vector digital data

Publication_Place: Evansville, Indiana

Publisher: Bernardin, Lochmueller and Associates, INC

Other_Citation_Details:

This data set was provided to personnel of Bernardin, Lochmueller and Associates, Inc. (BLA) by the Stan Schmidt. The data was originally provided in hard copy format and then digitized into an ESRI shapefile format, and was named CANALS_HISTORIC_STRUCTURES_SW. As part of the development of the State Wide GIS of Indiana, this file was expanded to include additional areas that were not part of the SW Indiana GIS and renamed Canal_Historic_Structures_IN.

Online_Linkage: <http://igs.indiana.edu/arcims/statewide/download.html>

Historic Canals

Originator: Bernardin-Lochmueller & Associates

Publication_Date: 20000729

Title: CANALS_HISTORIC_ROUTES_IN: Historic Canal Routes in Indiana
(Bernardin-Lochmueller & Associates, Line Coverage)

Geospatial_Data_Presentation_Form: Vector digital data

Publication_Place: Evansville, Indiana

Publisher: Bernardin, Lochmueller and Associates, INC

Other_Citation_Details:

This data set was provided to personnel of Bernardin, Lochmueller and Associates, Inc. (BLA) by Stan Schmitt. The data was originally provided in hard copy format and then digitized into an ESRI shapefile format, and was named CANALS_HISTORIC_ROUTES_SW. As part of the development of the State Wide GIS of Indiana, this file was expanded to include additional areas that were not part of the SW Indiana GIS and renamed Canal_Historic_Routes_IN.

Online_Linkage: <http://igs.indiana.edu/arcims/statewide/download.html>

Historical Sites, Areas, or Districts

Fort Wayne Local Historic Districts. Fort Wayne's Historic Preservation Commission, Division of Community Development

Indiana State Register of Historic Places. Indiana Division of Historic Preservation and Archaeology

The National Register of Historic Places. Administered by The National Park Service with the assistance of the Indiana DNR-Division of Historic Preservation and Archaeology and the City of Fort Wayne as a Certified Local Government (CLG)

Historic American Buildings Survey/Historic American Engineering Record. Library of Congress

National Historic Landmark. The National Park Service

Landfill Sites

Originator: Indiana Department of Environmental Management, Office of Land Quality

Publication_Date: 20050425

Title: ACTIVE_PERMITTED_SW_SITES

Publication_Place: Indianapolis, Indiana

Publisher: Indiana Department of Environmental Management, Office of Land Quality

Credit: [WASTE_SOLID_ACTIVE_PERMITTED_IDEM_IN: Active Permitted Solid Waste Sites in Indiana (Indiana Department of Environmental Management, Point Shapefile)]

Other_Citation_Details:

Data set is provided by Indiana University, Indiana Geological Survey.

Brownfield Sites

Originator: Indiana Department of Environmental Management, Office of Land Quality

Publication_Date: 20070124

Title: BROWNFIELDS_IDEM_IN: Brownfield Locations in Indiana (Indiana Department of Environmental Management, Point Shapefile)
Publication_Place: Indianapolis, Indiana
Publisher: Indiana Department of Environmental Management, Office of Land Quality
Other_Citation_Details:
This data set was provided to personnel of the Indiana Geological Survey (IGS) by Indiana Department of Environmental Management, Office of Land Quality personnel. The data set provided was in an ESRI geodatabase format, and was named "GPSDATA_UPDATES.MDB."
Online_Linkage: <http://igs.indiana.edu/arcims/statewide/download.html>

Superfund Sites – GIS Data

Originator: Indiana Department of Environmental Management, Office of Land Quality
Publication_Date: 20050425
Title: Superfund_Sites
Publication_Place: Indianapolis, Indiana
Publisher: Indiana Department of Environmental Management, Office of Land Quality
Credit: [SUPERFUND_IDEM_IN: Superfund Program Facilities in Indiana (Indiana Department of Environmental Management, Point Shapefile)]
Other_Citation_Details:
Data set is provided by Indiana University, Indiana Geological Survey.

Floodplain

Originator: Allen County iMap
Publication_Date: 20040101
Title: GISData.SDE.FLOODPLAIN
Publication_Place: Fort Wayne, IN
Publisher: Allen County iMap
Other_Citation_Details:
This dataset was originally developed using FEMA DFIRM data to provide a visual display of the floodplain in Allen County IN for planning applications.

Water Features – areas - hydrography poly nhd in.shp

Originator: (creation): US Geological Survey and the US Environmental Protection Agency
Originator: (compilation): Bernardin, Lochmueller and Associates
Publication_Date: 20021200
Title: HYDROGRAPHY_POLY_NHD_IN: Canals, Lakes, Streams, and Swamps in Indiana (United States Geological Survey, 1:100,000, Polygon Shapefile)
Edition: National Hydrography Dataset, 2002
Publication_Place: Evansville, IN
Publisher: Bernardin, Lochmueller and Associates
Other_Citation_Details: This dataset is derived from the National Hydrography Dataset created by the US Geological Survey and the US Environmental Protection Agency; <<http://nhd.usgs.gov/>> Dataset is one layer in the Indiana Statewide GIS Database funded by Indiana Department of Transportation.

Water Features - Hydrography Line NHD IN.shp

Originator: (creation): US Geological Survey and the US Environmental Protection Agency

Originator: (compilation): Bernardin, Lochmueller and Associates

Publication_Date: 20030513

Title: HYDROGRAPHY_LINE_NHD_IN: Streams, Rivers, Canals, and Ditches in Indiana (United States Geological Survey, 1:100,000, Polygon Shapefile)

Edition: National Hydrography Dataset, 2002

Publication_Place: Evansville, IN

Publisher: Bernardin, Lochmueller and Associates

Other_Citation_Details:

This dataset is derived from the National Hydrography Dataset created by the US Geological Survey and the US Environmental Protection Agency; <http://nhd.usgs.gov/> Dataset is one layer in the Indiana Statewide GIS Database funded by Indiana Department of Transportation.

Special Interest Waterways

Title: Outstanding Rivers List for Indiana

Prepared by: The Division of Outdoor Recreation of the Department of Natural Resources and adopted by the Natural Resources Commission. (DIN: 20070530-IR-312070287NRA)

Continental Divide - Watersheds HUC06 USGS IN

Originator: (creation): US Geological Survey

Originator: (compilation): Bernardin, Lochmueller and Associates

Publication_Date: 20021100

Title: WATERSHEDS_HUC06_USGS_IN: 6-Digit Accounting Units, Hydrologic Units, in Indiana, (Derived from US Geological Survey, 1:24,000 Polygon Shapefile)

Publication_Place: Evansville, IN

Publisher: Bernardin, Lochmueller and Associates

Other_Citation_Details:

This dataset is derived from the Digital Dataset of 14-digit hydrologic units in Indiana created by the US Geological Survey and Natural Resources Conservation Service; <http://in.water.usgs.gov/> Dataset is one layer in the Indiana Statewide GIS Database funded by Indiana Department of Transportation.

Online_Linkage: <http://igs.indiana.edu/arcims/statewide/download.html>

Watersheds - Watersheds HUC11 USGS IN

Originator: (creation): US Geological Survey

Originator: (compilation): Bernardin, Lochmueller and Associates

Publication_Date: 20021100

Title: WATERSHEDS_HUC11_USGS_IN: Watersheds, 11-digit Hydrologic Units, in Indiana, (Derived from US Geological Survey, Polygon Shapefile)

Publication_Place: Evansville, IN

Publisher: Bernardin, Lochmueller and Associates

Other_Citation_Details:

This dataset is derived from the Digital Dataset of 14-digit hydrologic units in Indiana created by the US Geological Survey and Natural Resources Conservation Service; <http://in.water.usgs.gov/> Dataset is one layer in the Indiana Statewide GIS Database funded by Indiana Department of Transportation.

Online_Linkage: <http://igs.indiana.edu/arcims/statewide/download.html>

Wetland Streams – GIS Data

Originator: U.S. Fish and Wildlife Service, National Wetlands Inventory

Last Updated: 20070720

Title: Wetlands_Streams

Publication_Place: St. Petersburg, Florida

Publisher: U.S. Fish and Wildlife Service, National Wetlands Inventory

Wetland Area

Originator: U.S. Fish and Wildlife Service, National Wetlands Inventory

Last Updated: 20070927

Title: Wetlands_Poly

Publication_Place: St. Petersburg, Florida

Publisher: U.S. Fish and Wildlife Service, National Wetlands Inventory

Flood Control Project – Line of Protection

Department of the Army, Detroit District, corps of Engineers

Environmental Analysis Branch

Data was received per consultation with Department of the Army, Detroit District, corps of Engineers Environmental Analysis Branch 3/10/09

Input on the 2030-II Transportation Plan by the Consulting Agencies

Opportunity to comment on the Environmental Mitigation Activities was afforded to the consulting agencies on two separate occasions. Input from this process was use to modify and improve this section of the Transportation Plan. Comments were received from the United States Environmental Protection Agency, Region 5, Office of Enforcement and Compliance Assurance; Indiana Geological Survey; Architecture and Community Heritage; United States Department of Army, Detroit District, Corps of Engineers; and Natural Resources Conservation Service. The comments and reactions to the comments are provided below.

United States Environmental Protection Agency, Region 5, Office of Enforcement and Compliance Assurance

Comment:Include impaired stream and water body information with Total Maximum Daily Load (TMDL) information available for each impaired stream.

Response:The impaired stream and water body information has been included in the Plan. Total Maximum Daily Load (TMDL) information was not available for the impaired streams but the year for which the information is planned to be available was added to Table 10.

Comment:Cite sources and dates of the information provided in the Environmental Mitigation section.

Response:The sources and dates of information are listed prior to these comments.

Comment:In the "Streams and Wetlands" section the word "run-off" is misspelled.

Response:The word "run-off" was modified to be spelled correctly.

Comment:Check with the United States Department of Army, Corps of Engineers for the status of latest version of USACE mitigation guidelines that apply to the NIRCC planning area.

Response: Responses from the United States Department of Army, Corps of Engineers did not reference the USACE mitigation guidelines.

Comment:Check with the United States Fish and Wildlife Service for the latest information regarding threatened and endangered species.

Response:The United States Fish and Wildlife Service did not respond to the requests for input. The threatened and endangered species data was updated based on information obtained from the Indiana Department of Natural Resources.

Indiana Geological Survey

Comment:There are no unusual or problematic geological features in the area of the Transportation Plan.

Response:Thank you for the comment.

Architecture and Community Heritage (ARCH)

Comment: Recognize that the identification of historical and cultural resources is a dynamic process and it is impossible to establish an exhaustive definitive list.

Response: The dynamic process of identifying historical and cultural resources has been noted in the Environmental Mitigation Chapter.

Comment: ARCH encourages early coordination and ongoing communication with local historic preservation groups.

Response: NIRCC has established communication with local historic preservation groups and intends to provide information as projects develop through the Transportation Improvement Program.

United States Department of Army, Detroit District, Corps of Engineers

Comment: Be advised that part of the Transportation Plan is within the boundary of the Louisville District, Corps of Engineers and part is in the Detroit District.

Response: The continental divide was added to the Waterways Map that separates the jurisdiction of the Louisville District and Detroit District.

Comment: Transportation projects will need to be reviewed by the Corps to ensure there are no adverse effects on the flood control projects or affect water levels in the flood control project area.

Response: A map has been added that displays the flood control projects. Transportation projects will be submitted for review by the Corps as part of the environmental review and permitting process.

Comment: Coordinate with the Indiana Department of Natural Resources regarding the applicability of floodplain permits to ensure compliance with floodplain management regulations.

Response: Transportation projects will be submitted to IDNR for review as part of the environmental review and permitting process.

Natural Resources Conservation Service

Comment: The Natural Resources Conservation Service can not comment on the Long-Range Transportation Plan. When specific plans and locations have been selected, please submit the information along with a Farmland Conservation Impact Form AD-1006.

Response: Thank you for the comment.

Chapter 9

FREIGHT

Freight Movement in Allen County

The Northeastern Indiana Regional Coordinating Council (NIRCC) recognizes the importance of freight transportation in contributing to the economic vitality of Allen County. Freight movement in Allen County occurs over a number of transportation modes including rail, air and truck. Figure 39 illustrates the transportation infrastructure and facilities located in Allen County.

The term multimodal indicates that freight is moved using a variety of modes, which may include trucks, trains and planes using roadways, railways and air facilities. Most freight is moved across the country and around the world using some combination of these modes. Defining strategies for improving the effectiveness of these modal interactions, and evaluating and implementing these strategies to enhance the overall performance of the transportation system is essential to the process. NIRCC has identified the major modal activity centers and connectors to ensure access and mobility issues are considered as a component of the transportation planning process, see Figure 40.

Transportation staff works with the Fort Wayne Chamber of Commerce; Pavers, Excavators, Truckers and Suppliers (PETS); and other freight companies to identify problems, address safety concerns and issues affecting the business community with a special emphasis on trucking and freight distribution. Together, solutions are developed and viable projects are incorporated into the planning process. Transportation facilities and major industrial sites are scrutinized to ensure access to these areas is safe and efficient. The transportation planning process continues to pursue projects conceived to improve access and connectivity. These projects will benefit travel for the distribution and mobility of goods and services throughout the region.

Rail

Allen County is served by three railroad lines. Figure 41 illustrates the railroad lines in Allen County. The three lines are The Chicago Fort Wayne & Eastern Railroad (CFE), the Maumee & Western Railroad (MAW) and the Norfolk Southern Railroad (NS). The Chicago Fort Wayne & Eastern Railroad runs from Tolleston, Indiana (west of Gary, Indiana) to Crestline, Ohio (north central Ohio). CSX leases the line to CFE, which has permission to

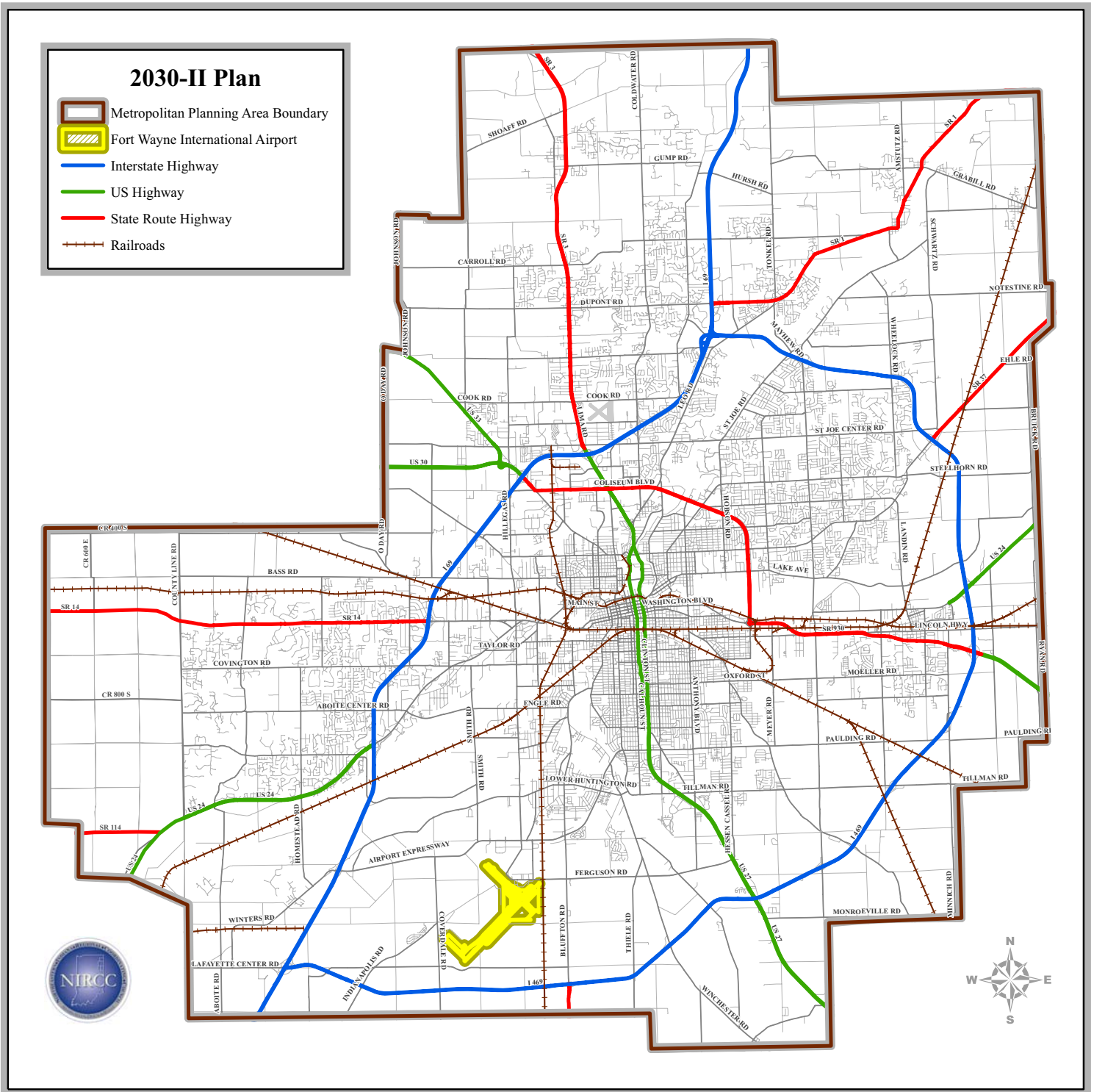


Figure 39

Transportation Infrastructure

run as many as 10 trains per day, but typically does not run more than a couple of trains a week.

The Maumee & Western Railroad operates 51 route miles between Woodburn, Indiana, and Liberty Center, Ohio via Defiance, Ohio. MAW operates 3.1 miles within Indiana. In 2000, MAW handled a total of 3,300 carloads, including traffic at stations in Ohio. Principal products shipped include grain, plastics, and minerals. MAW interchanges with Norfolk Southern at Woodburn and CSXT at Defiance, OH. (Indiana Rail Plan, page 21)

The Allen County area is also served by the Norfolk Southern Railroad. It has three lines that cross the county. The east-west line connects to Chicago and east to Ohio, this line carries approximately 350 carloads a day. The line that runs northeast connecting Allen County to Toledo handles approximately 650 carloads a day. The NS line running southwest to Central Illinois carries approximately 320 carloads a day. The last line going to southwest Ohio handles about 215 carloads a day. (Freight Flows of Indiana, page 108) Norfolk Southern also operates an automotive distribution facility in Allen County at the General Motors Plant. This plant is located in the southwest part of the county adjacent to Interstate 69.

Norfolk Southern has an intermodal facility located on the east side of Fort Wayne. The Norfolk Southern Triple Crown Facility uses roadtrailers, which are highway truck trailers with interchangeable wheel sets. Roadtrailers combine truck and rail line haul movement. The Triple Crown Service (TCS) has a fleet that consists of 5,500 trailers that are 53 feet long and 102 inches wide. A typical train size is 73 units, but the Federal Railroad Administration has authorized the operation of trains of up to 155 units. There are a total of eleven origin-destination pairs from Fort Wayne, including sites in Canada and Mexico. The principal commodity market is automotive parts, and the highest origin-destination to Fort Wayne is to and from Atlanta, Georgia; Kansas City, Missouri; and Harrisburg, Pennsylvania. Other commodities served by TCS include appliances, paper, and food. (Freight Flows of Indiana, page 47)

Air

The Fort Wayne International Airport is owned and operated by the Fort Wayne-Allen County Airport Authority. Fort Wayne International Airport (FWA) is considered a medium sized airport, and between 2001 and 2003, it handled an average of 360 million tons of cargo. The

Air Trade Center located on Coverdale Road at the end of the southwest runway of the airport offers 450 acres of industrial space. It also has ten T-hangars available to small single or light twin engine planes. In 2003, the Fort Wayne International Airport was ranked 36th in the US in all-cargo landed weight, handling over 374,000 tons of cargo. (Freight Flows of Indiana, page 48)

The construction of Airport Expressway from Dalman Road to Huntington Road in the late 1990's made the connection of FWA to Interstate 69 more accessible. With the addition of the Air Trade Center additional road projects have been scheduled. Improvements to Coverdale Road, which includes two bridge projects, will begin construction in the near future.

Roadways

Trucks are economically important because most consumer goods, such as food, furniture, automobiles and appliances are brought into and out of the community and distributed by trucks. It is easy to understand how significant Allen County is to truck freight movement since it is located within a 250 mile radius of 17% of the total United States population and within a day's drive of half of the nation's population, see Figure 42. In addition Allen County is centrally located and nearly equal distance to 6 major cities, Chicago, Cincinnati, Cleveland, Columbus, Detroit and Indianapolis.

A truck route system has been established in Allen County, see Figure 43. Truck routes are designated roads for trucks through jurisdictions to avoid unnecessarily clogging and deteriorating streets used by non-truck traffic. Through truck movement is restricted to designated truck routes because the weight and bulk of trucks can degrade streets, create safety concerns (because of longer stopping distances), and impede traffic flow (due to slower acceleration).

NIRCC is responsible for transportation planning in Allen County, and strives to continually improve truck freight movement accessibility. Freight mobility is monitored and analyzed through data collection efforts that include truck volumes, identifying freight activity centers, and meeting with business groups engaged in trucking and distribution. Several tools are employed to achieve this, including corridor studies, intersection and arterial analysis and road improvement projects. The analysis of this information receives special attention to ensure mobility and accessibility needs are met for freight movement. Corridors that have seen improvement in the past using these tools include Airport Expressway, Anthony Boulevard and State Boulevard.

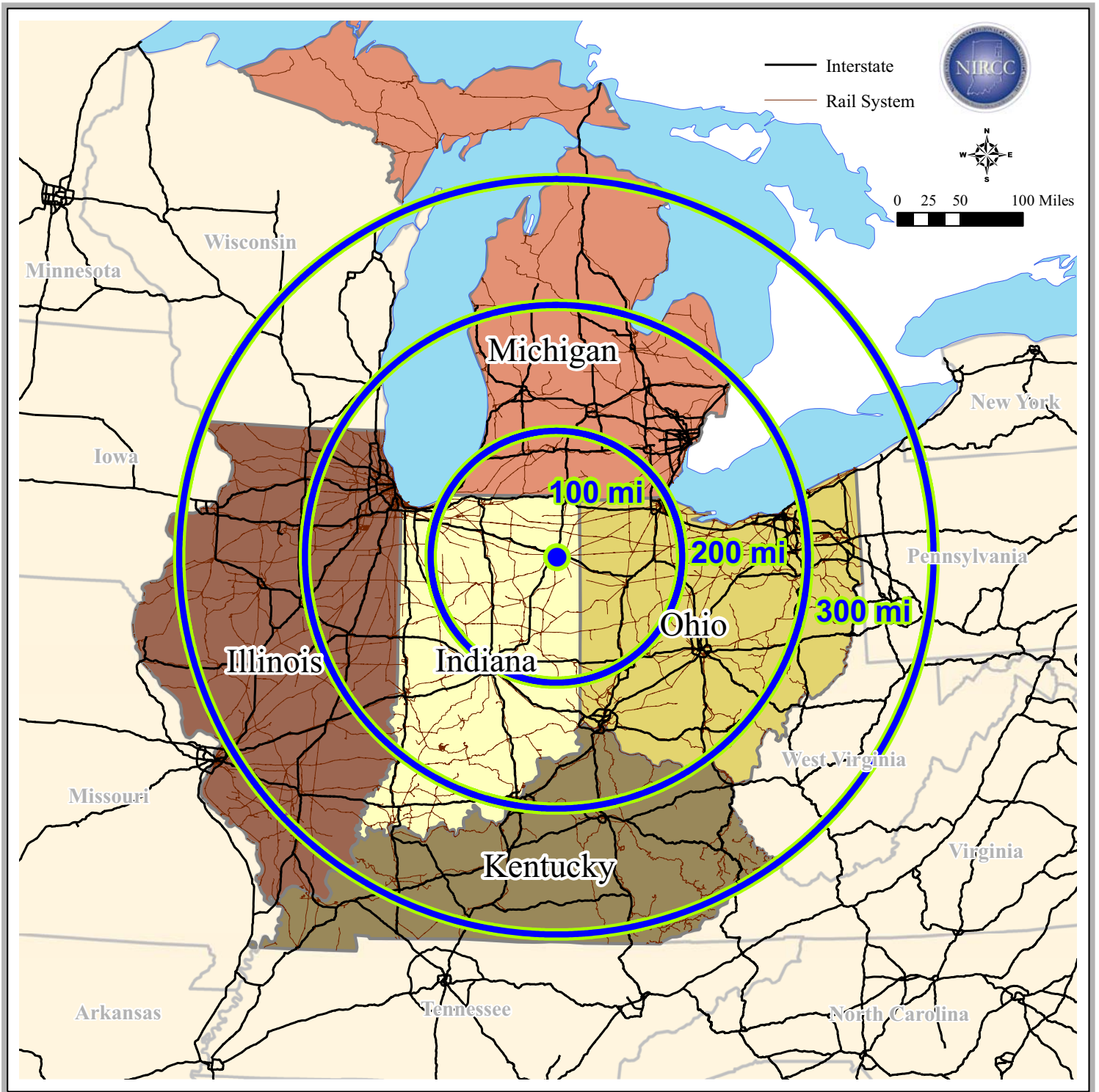


Figure 42

Regional Hub

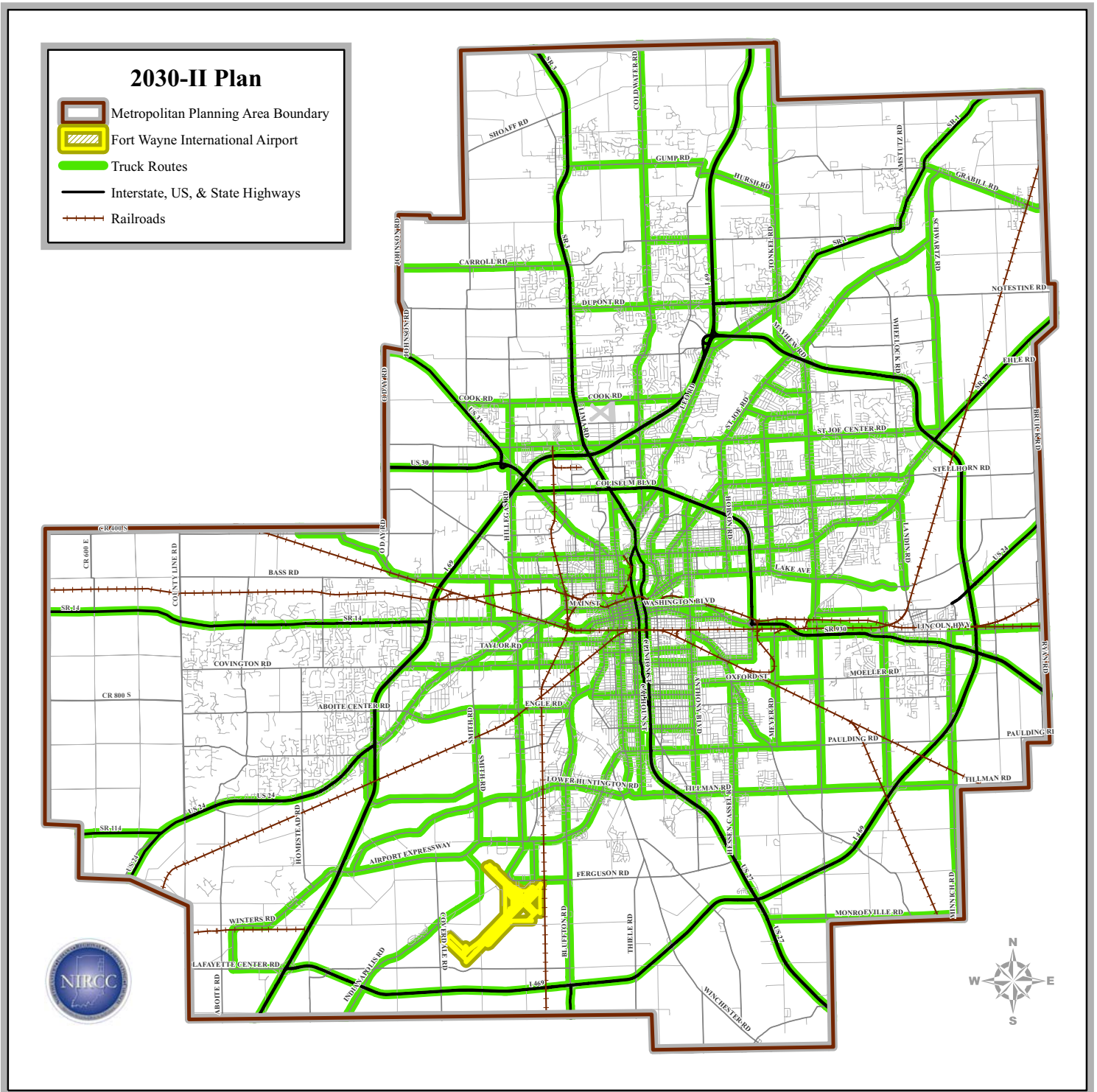


Figure 43

Truck Route System

An element that is used to help determine which corridors need improvement or should be addressed to facilitate truck freight movement are the truck volumes that are collected, see Figure 44. Trucks are competing with passenger vehicles for capacity on major roadways, particularly in urban areas. As displayed on the truck volumes map the interstates and some US routes have very high truck volumes. One of the reasons for constructing Interstate 469 was to divert truck traffic around Fort Wayne rather than the trucks going through the urban core. This also helps to alleviate congestion through Fort Wayne. Other projects that were programmed to facilitate truck freight traffic include the added travel lanes to I-69, realigning of US 24 East, signalization of US 30 ramp and construction of Airport Expressway.

The freight profile of the Allen County area provides an assessment of current freight movement practices, including highway, railway and air infrastructure, principal manufacturing facilities and industrial parks. Networks of railroads and roadways along with facilities such as the Fort Wayne International Airport, truck terminals and the Triple Crown Facility support the efficient movement of raw materials and finished goods throughout the area. The NIRCC staff will continue to monitor freight movement in Allen County and seek ways to improve the overall system.

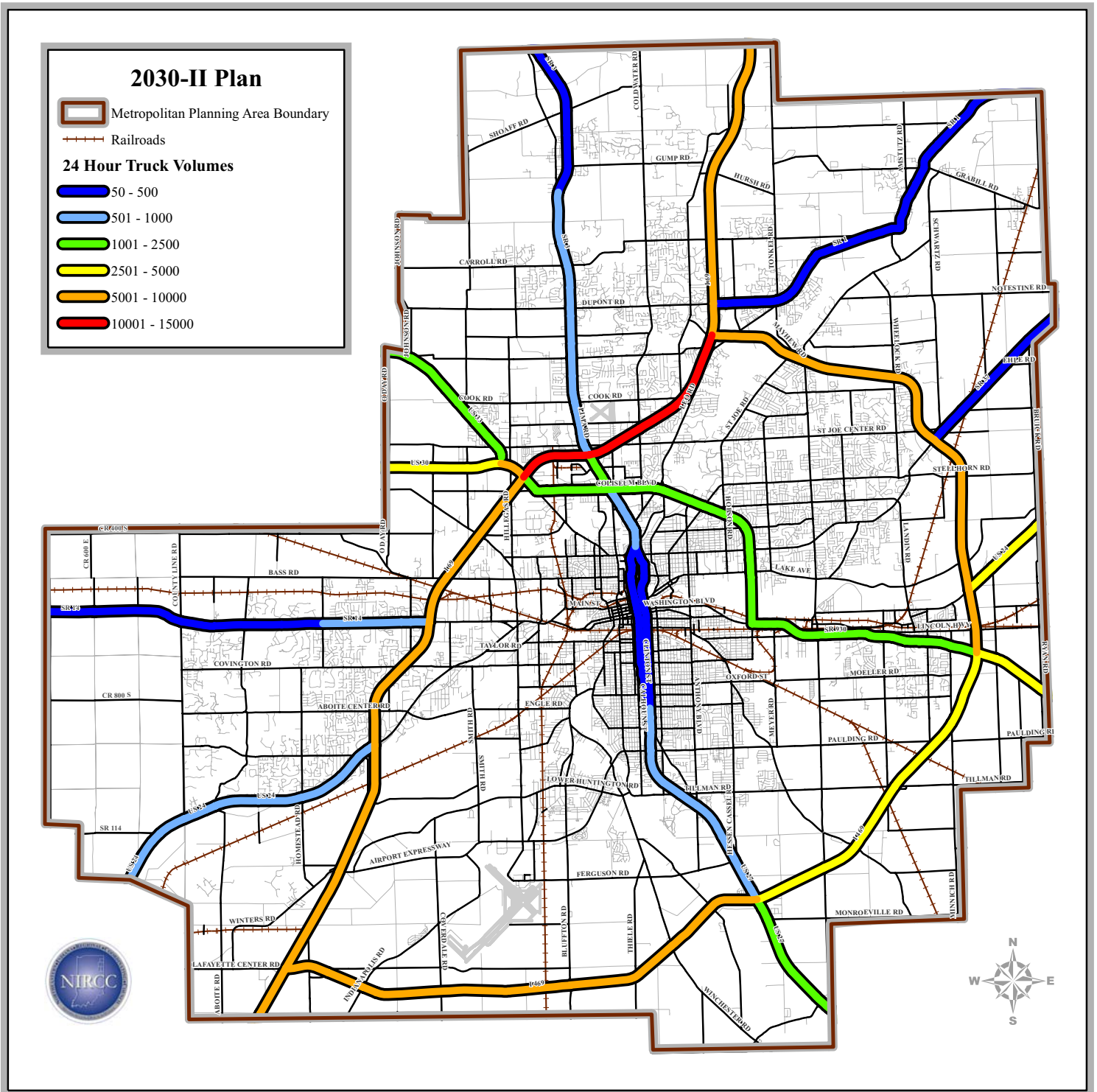


Figure 44

Truck Volumes

Chapter 10

FUTURE EFFORTS AND IMPLEMENTATION

The dynamic characteristic of a transportation plan necessitates the continuous implementation, re-evaluation, and assessment of its policies and improvement projects. This process is probably the most important aspect of the plan, otherwise it quickly becomes obsolete. Continual attention to the plan by the community, the Urban Transportation Advisory Board, the Cities of Fort Wayne and New Haven, Allen County, and the State of Indiana, is essential to meet the desired objectives. In this manner, the plan will guide transportation investment and service decisions in support of a transportation system that will meet existing and future travel desires.

The implementation of transportation policies and improvement projects documented in the transportation plan require a consorted interest and level of commitment necessary to make them reality. In support of this approach, there are several specific endeavors that will be pursued to ensure the policies and improvement projects are gradually implemented. These areas include but are not limited to some of the following plans and studies aimed at supporting the objectives of the transportation plan.

Status of Previous Transportation Plans

The transportation planning process was initiated in the late 1960's for the Fort Wayne-New Haven-Allen County Metropolitan Planning Area. Since the inception of the transportation planning process, numerous highway and transit improvements have been implemented based upon the recommendations of transportation plans. Completed highway improvements are shown in Figure 45. Many transit improvements have also been made which increase the mobility of area citizens.

The current 2030 Transportation Plan was adopted in May 2005. In the four years since adoption, numerous highway and transit projects have been implemented or are ready for implementation. The following list provides a status report on the recommended transportation improvements from the current 2030 Transportation Plan. Following each project is an indication of the project status. Projects that have not been started and remain as projects in the 2030-II Transportation Plan are followed by a (2030-II Plan).

Current 2030 Transportation Plan

New two-lane construction

Ardmore Avenue from Airport Expressway to Lower Huntington Rd (completed)
Coombs Street from Maumee Avenue to Wayne Street (2030-II Plan)
Maplecrest Road from Lake Avenue to State Road 930 (2030-II Plan)
North Glendale Drive from Jefferson Boulevard to North Bend Drive (completed)
Spring Street from Wells Street to Spy Run Avenue (2030-II Plan)

Widen to six lanes

Clinton Street from Parnell Avenue to Auburn Road (2030-II Plan)
Interstate 69 from s/o Leesburg Road to s/o Coldwater Road (completed)
Interstate 69 from s/o Coldwater Road to Dupont Road/State Road 1 (completed)
Interstate 69 from US 24 to Interstate 469 (listed as illustrative project)
Interstate 69 from Dupont Road/State Road 1 to Hursh Road (listed as illustrative project)
Interstate 469 from Maplecrest Road to Interstate 69 (listed as illustrative project)
Jefferson Boulevard from Illinois Road to Main Street (portions completed) (2030-II Plan)
State Road 3/Lima Road from Ludwig Road to Dupont Road (2030-II Plan)
State Road 3/Lima Road from Dupont Road to Gump Road (listed as illustrative project)
State Road 14/Illinois Road from Interstate 69 to Hadley Road (completed)
State Road 930\Coliseum Boulevard from Parnell Avenue to Crescent Avenue (listed as illustrative project)
US 24 from Interstate 69 to Homestead Road (listed as illustrative project)
US 30 from Interstate 69 to US 33 (listed as illustrative project)
US 30 from US 33 to Flaugh Road (listed as illustrative project)
US 30 from Flaugh Road to O'Day Road (listed as illustrative project)

Widen to four lanes

Adams Center Road from State Road 930 to Moeller Road (2030-II Plan)
Aboite Center Road from Coventry Lane to Jefferson Boulevard (2030-II Plan)
Ardmore Avenue from Jefferson Boulevard to Taylor Street (2030-II Plan)
Ardmore Avenue from Covington Road to Engle Road (2030-II Plan)
Ardmore Avenue from Engle Road to Lower Huntington Road (2030-II Plan)
Bass Road from Hillegas Road to Scott Road (2030-II Plan)
Clinton Street from Auburn Road to Dupont Road/State Road 1 (2030-II Plan)
Dupont Road from Coldwater Road to Lima Road/State Road 3 (2030-II Plan)
Goshen Avenue from State Boulevard to Coliseum Boulevard (2030-II Plan)
Hillegas Road from s/o Bass Road to Washington Center Road (2030-II Plan)
Huguenard Road from Washington Center Road to Cook Road (2030-II Plan)
Lake Avenue from Coliseum Boulevard to Reed Road (completed)
Lake Avenue from Reed Road to Maysville Road (2030-II Plan)
Maysville Road/Stellhorn Road from Maplecrest Road to Koester Ditch (2030-II Plan)
Saint Joe Center Road from Saint Joe Road to Reed Road (completed)
State Boulevard from Maysville Road to Georgetown North Boulevard (2030-II Plan)

State Boulevard from Spy Run Avenue to Clinton Street (2030-II Plan)
State Boulevard from Clinton Street to Cass Street (2030-II Plan)
State Road 1/Dupont Road from Interstate 69 to Tonkel Road (2030-II Plan)
State Road 1/Leo Road from Tonkel Road to Union Chapel Road (listed as illustrative project)
State Road 1/Bluffton Road from Interstate 469 to Allen/Wells County Line (listed as illustrative project)
State Road 14/Illinois Road from Hadley Road to Scott Road (completed)
State Road 14/Illinois Road from Scott Road to West Hamilton Road (2030-II Plan)
State Road 14/Illinois Road from West Hamilton Road to Allen/Whitley County Line (listed as illustrative project)
State Road 37 from Doty Road to Interstate 469 (listed as illustrative project)
State Road 930 from Minnich Road to Brookwood Drive (2030-II Plan)
Tonkel Road from Dupont Road to Union Chapel Road (2030-II Plan)
US 33 from Washington Center Road to Cook Road (completed)
US 33 from Cook Road to O'Day Road (listed as illustrative project)
US 33 from O'Day Road to State Road 205 (listed as illustrative project)
Washington Center Road from Lima Road (SR 3) to US 33 (2030-II Plan)
Wells Street from State Street to Fernhill Avenue (2030-II Plan)

Center Turn Lane Improvement

Auburn Road from Cook Road to Interstate 469 Exit Ramp (3-lane) (2030-II Plan)
Auburn Road from Dupont Road to Hursh Road (3-lane) (2030-II Plan)
Bass Road from Hillegas Road to Scott Road (3-lane) (2030-II Plan)
Coldwater Road from Mill Lake Road to Union Chapel Road (3-lane) (2030-II Plan)
Cook Road from Auburn Road to Coldwater Road (3-lane) (2030-II Plan)
Covington Road from Scott Road to Homestead Road (3-lane) (2030-II Plan)
Covington Road from Interstate 69 to Scott Road (3-lane) (2030-II Plan)
Engle Road from Bluffton Road to Smith Road (3-lane) (2030-II Plan)
Gump Road from State Road 3 to Auburn Road (3-lane) (2030-II Plan)
Hadley Road from Illinois Road/State Road 14 to n/o Covington Road (3-lane) (2030-II Plan)
Jefferson Boulevard from Illinois Road to South Bend Drive (5-lane) (2030-II Plan)
Liberty Mills Road from Falls Drive to Homestead Road (3-lane) (2030-II Plan)
Maysville Road from State Boulevard to Stellhorn Road (3-lane) (2030-II Plan)
Saint Joe Center Road from Clinton Street to River Run Trail (5-lane) (2030-II Plan)
Saint Joe Road from Evard Road to Mayhew Road (3-lane) (2030-II Plan)
Saint Joe Road from Maplecrest Road to Eby Road (3-lane) (2030-II Plan)
Union Chapel Road from Auburn Road to Tonkel Road (3-lane) (2030-II Plan)
Wayne Trace from Oxford Street to Pontiac Street (3-lane) (2030-II Plan)

Turn Lane Extension

Jefferson Boulevard from Lutheran Hospital Entrance to Interstate 69 Ramps (2030-II Plan)
State Road 3 from Interstate 69 to Washington Ctr Rd southbound (illustrative project)

Intersection Reconstruction

Auburn Road and Cook Road/Auburn Road and Clinton Street (2030-II Plan)
Clinton Street and Coliseum Boulevard (completed)
Clinton Street and Washington Center/Saint Joe Center Road (2030-II Plan)
Coliseum Boulevard and Pontiac Street Intersection (2030-II Plan)
Cook Road and Huguenard Road (completed)
Coverdale Road/Winters Road and Indianapolis Road (2030-II Plan)
Covington Road and Dicke Road/Covington Road and Hadley Road (2030-II Plan)
Covington Road and Jefferson Boulevard/Covington Road and Getz Road/Getz Road and Jefferson Boulevard (completed)
Dartmouth Drive and Washington Center Road (2030-II Plan)
Goshen Road and Lillian Avenue and Sherman Boulevard (Removed)
Hadley Road, Bass Road and Yellow River Road (2030-II Plan)
Homestead Road and US 24 (2030-II Plan)
Jefferson Boulevard, Rekeweg Road and North Bend Drive (Removed)
Leo Road and Mayhew Road (completed)
Ryan Road and Dawkins Road (2030-II Plan)
State Road 1/Leo Road and Amstutz Road (2030-II Plan)
State Road 14/Illinois Road and Allen/Whitley County Line Road (2030-II Plan)
Union Chapel Road and Leo Road/State Road 1 (completed)

Intersection Realignment

Fritz Road/Hand Road and Dupont Road (completed)
Hand Road and Baird Road (completed)

Reconstruction and Realignment

Allen/Whitley County Line Road – US 24 to SR 14 (2030-II Plan)
Carroll Road from State Road 3 to Corbin Road (phase 1 complete, phase 2 2030-II Plan)
Carroll Road from Corbin Road to Coldwater Road (removed)
Coverdale Road from Indianapolis Road to Airport Expressway (2030-II Plan)
Dupont Road from Pine Mills Road to Auburn Road (completed)
Flutter Road from Schwartz Road to Saint Joe Road (2030-II Plan)
Lake Avenue from Anthony Boulevard to Coliseum Boulevard (2030-II Plan)
Landin Road from North River Road to Maysville Road (2030-II Plan)
Maplecrest Road from Lake Avenue to s/o Stellhorn Road (2030-II Plan)
Moeller Road from Green Street to Hartzell Road (2030-II Plan)
Moeller Road from Hartzell Road to Adams Center (2030-II Plan)
Ryan Road from Harper Road and Bremer Road (2030-II Plan)
Saint Joe Center Road from Reed Road to Maplecrest Road (2030-II Plan)
State Road 37 from Doty Road to Cuba Road (listed as illustrative project)
Till Road from Lima Road to Dawson Creek Boulevard (2030-II Plan)
Wallen Road from Hanauer Road to Auburn Road (2030-II Plan)
US 27/Clinton Street from State Boulevard to Elizabeth Street (2030-II Plan)

New Railroad Grade Separation

Anthony Boulevard and Norfolk Southern Railroad (2030-II Plan)
Airport Expressway and Norfolk Southern Railroad (2030-II Plan)

Reconstruct Railroad Grade Separation

Anthony Boulevard and CSX Railroad (2030-II Plan)
US 27/Lafayette Street and Norfolk Southern/CSX Railroads (2030-II Plan)

Congressional High Priority Corridor Improvement

US 24 from Interstate 469 to Bruick/Ryan Road including interchange (2030-II Plan)
US 24 from State Road 101 to Indiana/Ohio State line including interchange (outside MPA)
US 24 from Bruick/Ryan Road to e/o Webster Road including interchange (outside MPA)

US 24 from Webster Road to w/o State Road 101 (outside MPA)

Interchange-New Construction

Interstate 69 at Hursh Road (2030-II Plan)

Interchange-Modification

Interstate 69 and Coldwater Road Interchange-Ludwig Road (listed as illustrative project)
Interstate 69 and US 30/33/SR930 Interchange (listed as illustrative project)
Interstate 469 and State Road 1/Bluffton Road (listed as illustrative project)
Interstate 469 and US 24 Interchange (listed as illustrative project)
Interstate 469 and US 27 Interchange (listed as illustrative project)
Interstate 469 and US 30/SR 930 Interchange (2030-II Plan)
US 30 and US 33 Interchange (listed as illustrative project)

Bridge Reconstruction/Modification

Bass Road over Interstate 69(listed as illustrative project)
Covington Road over Interstate 69(listed as illustrative project)
Hillegas Road over Interstate 69(listed as illustrative project)
US 27/Spy Run Avenue over St. Marys River with pedestrian treatment (listed as illustrative project)

Transit Improvements

System Modifications

Expand transit service in the growing urbanized area. Potential locations include the Fort Wayne International Airport and surrounding area, Aboite Township, Perry Township, and Cedar Creek Township. Type of service will be determined based upon projected demands and proposed service levels. (Partially implemented-included in 2030 Plan)

Design and construct a downtown intermodal transfer/transportation center. (Design Stage-included in 2030 Plan)

Design and construct a major bus stop facility to include a transit customer waiting facility with the potential for park and ride and transfer opportunities. This project will compliment a redevelopment effort near Wallace Street and Creighton Avenue. (complete)

Replacement of transit coaches and service vehicles necessary to maintain a dependable transit fleet. (complete and on-going-included in 2030 Plan)

Install and upgrade bus shelters, benches, and other customer amenities. (Complete and on-going-included in 2030 Plan)

Reduce headways on selected routes where ridership warrants. (Partially complete and on-going-included in 2030 Plan)

Expand service hours and provide Sunday service through fixed route and/or other types of transit service. (Partially complete and on-going-included in 2030 Plan)

Implement automatic vehicle locator (AVL) technology for the transit system and provide customer access to AVL information through Internet connections. (Partially complete and on-going-included in 2030 Plan)

New Haven route and Georgetown route interconnect. (Included in 2030 Plan)

The status report indicates that the Fort Wayne-New Haven-Allen County Metropolitan Planning Area follows through with their plan implementation. Many projects have been completed or are in a phase of implementation.

Future Efforts

Congestion Management System

A Congestion Management Process (CMP) has been developed and adopted for the Metropolitan Planning Area and is designed to support the efforts of the transportation plan. The congestion management process is a program or process that identifies strategies relevant to the transportation system (highway and transit) for mitigating existing congestion and preventing future congestion. The strategies consider both the supply and demand sides of urban travel, land use policies, transit operations, traffic operations, intelligent transportation systems, bicycle/pedestrian facilities and engineering improvements. The CMP represents a multi-jurisdictional approach with a regional perspective including both public and private sector involvement. The Congestion Management Process Plan is provided in Appendix A.

As previously mentioned, the program focuses on mitigating existing congestion and averting future impediments to efficient corridor and transit performance. The products of the CMP process include strategies, policies, and improvement projects. These products are implemented as components of the transportation plan. One important policy of the CMP that is applicable to the entire system is the access management program.

Access Management

The access management program has been in force for a number of years in the metropolitan planning area. The program has emphasized driveway (street access) and site plan review since the mid 1960's. Through the administration of this program, a number of accessory plans and studies have been developed and implemented. In the 1980's a frontage road plan was developed. This plan identified corridors in the Metropolitan Planning Area where access roads should be implemented to preserve the corridor performance. The activities of this program have included the development of an Access Standards Manual as well as several revisions. The program has also developed interchange and corridor protection plans identifying Congestion Management Strategies for specific corridors. The program will continue to support these activities, strengthen their enforcement, and investigate new strategies for access management. This program has become a major tool for preserving the integrity and efficiency of the arterial highway system.

Alternative Travel Methods

The transportation plan cannot and does not address every transportation problem that will affect system efficiency. Traffic congestion, increased commute times, and air quality problems will continue to afflict transportation systems of the future. Communities facing these challenges must find creative means to reduce low occupancy automobile usage. Actions and ideas will be explored to reduce automobile usage. These strategies will be evaluated for their feasibility of use in the metropolitan area. Alternative transit services will be a focus of this endeavor.

Corridor, Site Impact, Intersection Analysis and Feasibility Studies

The transportation plan deals with the transportation system at a macroscopic level. Corridor, site impact, intersection analysis, and feasibility studies examine specific areas of the system at more refined levels. The emphasis of corridor studies is to estimate travel demands and develop alternative strategies for mitigating congestion from new developments. Site impact analyses are a component of the access management program and evaluate the traffic impacts from specific developments on the transportation system. Intersection analyses evaluate

the performance or level of service of intersections. Based upon the analysis, problems are identified and solutions tested to recommend improvement projects. Feasibility studies assist in the decision making process by evaluating alternatives and determining the most viable solution. The integration of these studies provides for continuous evaluation of the system with special attention to potential problem areas.

Security

NIRCC has been working with the Fort Wayne/ Allen County Office of Homeland Security on planning efforts. The Fort Wayne/ Allen County Office of Homeland Security priority has been more directed to the development of a disaster response document that doesn't connect directly with the transportation network. Although they have worked with the local transit and para-transit providers to determine the number of available vehicles in case an emergency evacuation is necessary. See Figures 46 & 47 for locations of Hospitals, Fire Stations and critical infrastructures.

Implementation

The transition from a selected plan of recommended transportation policies and improvements to implemented services and facilities requires cooperation and commitment from the entire community. This includes federal, state, and local governments with "grass roots" support of the local residents. The planning process represents the first stage of implementation.

Following the planning process, implementation for specific improvements are introduced to the Transportation Improvement Program (TIP). The TIP is a four-year capital improvement plan for highway, transit, and enhancement projects. Improvement projects are selected from the transportation plan including the various Management Systems for inclusion in the TIP.

Planning support must accompany each project in the TIP for it to be eligible for state and federal assistance. The TIP tracks projects through various stages of implementation including preliminary engineering, right-of-way acquisition, and construction. The TIP is a valuable tool governing project implementation. Its status is gaining importance due to recent federal legislation.

Implementation will be assisted through a process of phasing large-scale transportation projects. This process simply segments large improvements into several manageable projects

National Highway System: Allen County Hospitals

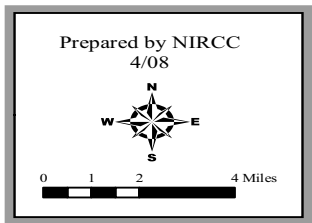
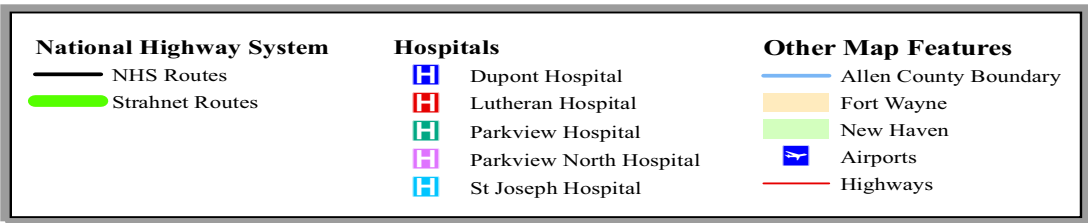
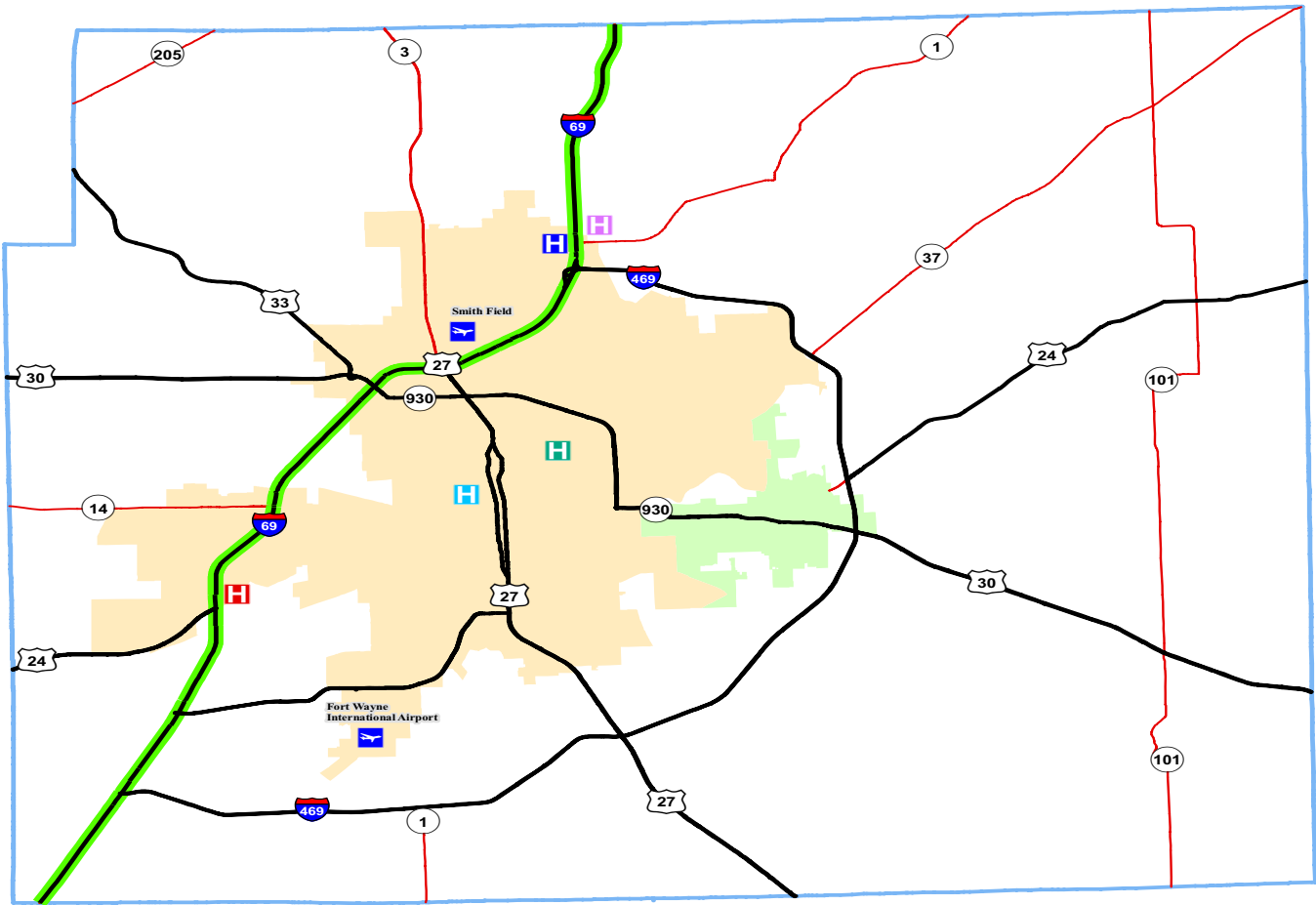


Figure 46

Allen County NHS and Hospitals

National Highway System: Fire Stations within Allen County

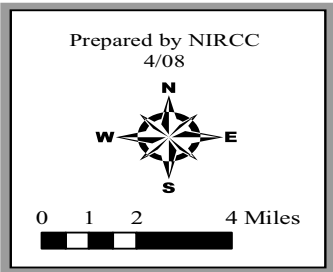
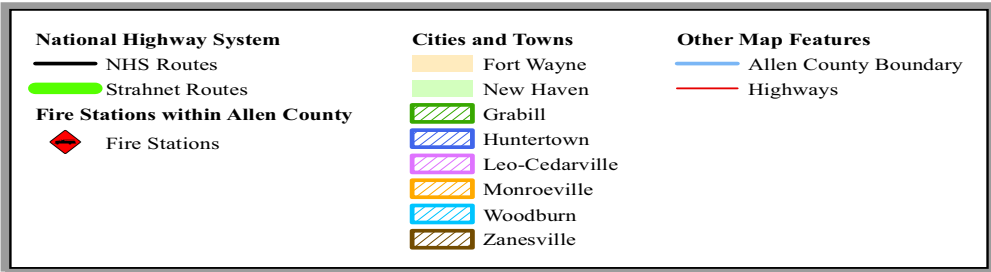
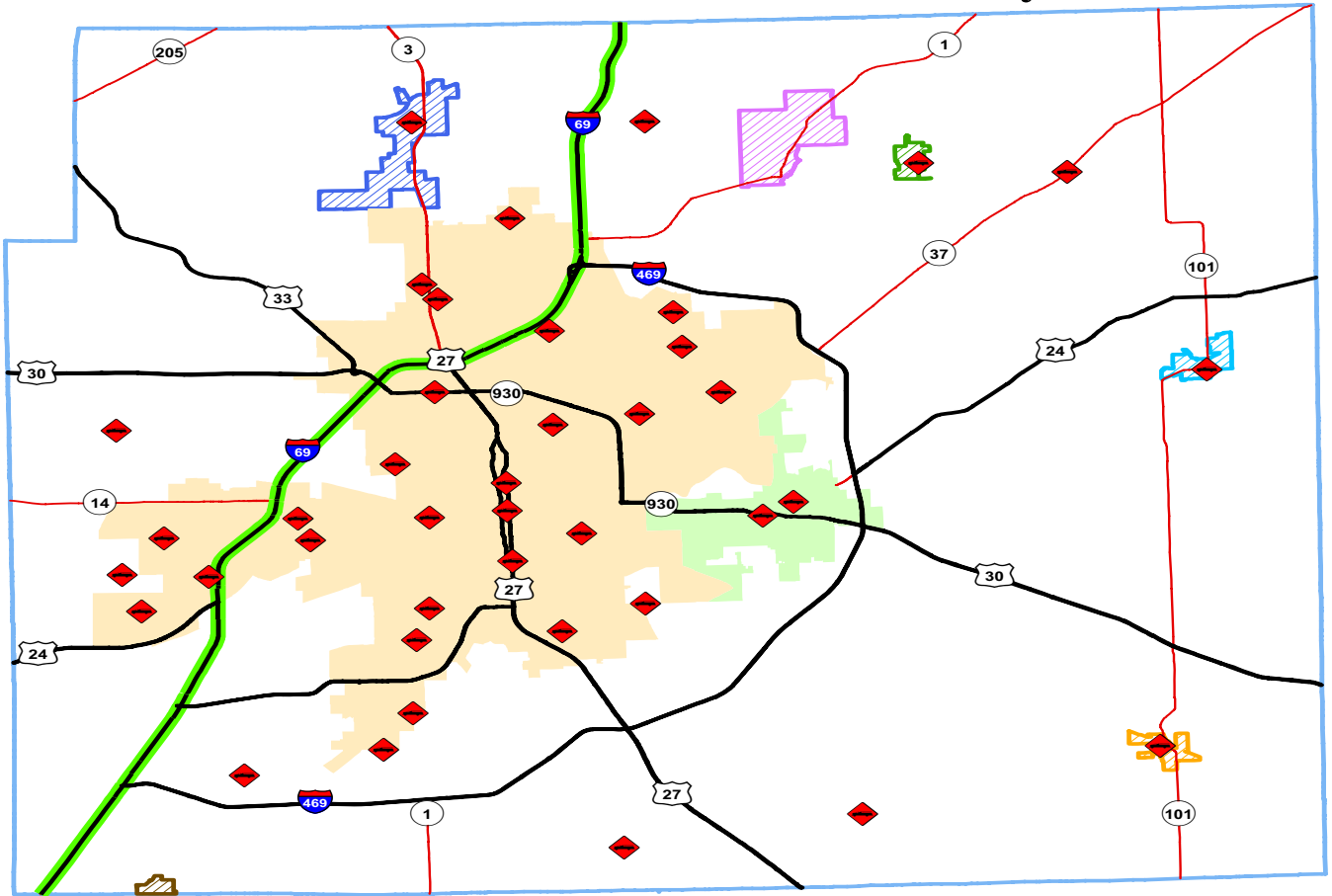


Figure 47

Allen County NHS and Fire Stations

allowing the gradual disbursement of resources. While this practice has not been used extensively in the past, it will become necessary in this area for implementing capital intensive projects.

The transportation planning process included participation from citizens, local implementing agencies, and state and federal officials. This participation process is an on-going activity conducted by NIRCC as part of the transportation planning process. The implementation process requires the same collaborative commitment. This consolidated effort at every phase of the planning process has established a solid platform from which implementation of the selected plan can begin. The plan will serve as a guide for transportation investments and service decisions shaping the future transportation system.