Appendix B: Transportation

Northwest Indiana's Congestion Management Process

May, 2009 - April 2011 and Beyond

May 6, 2011

Table of Contents

I. Introduction and Background

This report documents the Northwestern Indiana Regional Planning Commission's (NIRPC) efforts to implement a Congestion Management Process (CMP). As part of a conditional certification following the certification review on May 11-13, 2009, two corrective actions were issued by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA). One of the corrective actions called for NIRPC to implement a CMP in compliance with federal planning requirements. This document is a status report of what has been accomplished. NIRPC has worked to implement this requirement in conjunction with the development of the 2040 Comprehensive Regional Plan (CRP). NIRPC formed a CMP committee and integrated the CMP into NIRPC's CRP project selection process. This report documents the CMP work to date, which should demonstrate that NIRPC's CMP meets the federal CMP requirements, and that the incorporation of the CMP into the planning process is well underway to full integration.

The main objective of the congestion management process is to determine the solution to reduce congestion and single-occupancy vehicle travel that is most feasible. Once congestion is identified, alternative strategies, other than expanding the roadway network, must be considered. The first criteria of alternatives that are considered is demand management strategies, which are intended to reduce that amount of single-occupancy vehicle travelers. If demand management strategies do not relieve congestion, then transportation systems, intelligent transportation systems, growth management and transit strategies should be considered. These are various strategies, described in sections X and XI, which help relieve congestion without increasing roadway capacity. If all possible strategies have been exhausted and congestion is still present, the roadway capacity expansion strategies may be considered.

II. NIRPC's Step-by-Step process

This section documents the process for creating and refining the NIRPC congestion management process. Due to time constraints and the availability of data, the traditional order of the steps in the congestion management process is altered.

Step 1: Establish a congestion management subcommittee- The subcommittee should consist of -but not be limited to:

- Indiana Department of Transportation – INDOT's participation is essential in that most project evaluations will take place on many state-jurisdiction roads, including major arterials, highways and interstates.
- FHWA, FTA, EPA – Involvement is necessary to provide advice and monitor to assure that the requirements are being followed.
- Local elected officials and municipal and county highway engineers – Scenario planning and project selection will impact the local units of government.
- Transit Service Providers – Transit systems are obviously a part of the travel network, and can be part of the solution to congestion.
- Interested Citizens – Public involvement is necessary for the congestion management process to be understood and effective.

These stakeholders form the Congestion Management Subcommittee, which is a subcommittee of the Transportation Policy Committee. The elected officials in the subcommittee and TPC will carry recommendations to the N IRPC board. The subcommittee meets at least bi-monthly, either at NIRPC or the INDOT Borman Traffic Management Center in Gary.

Step 2: Collect Data- Data relevant to the congestion management process has been collected within the region. Data collection includes traffic crashes, travel time, traffic counts, and roadway configuration. Other database fields were added, including termini descriptions, county area, functional class, direction, congestion threshold, lane capacity and associated traffic count station numbers. In regards to Volume/Capacity ratio, the majority of the data in the region has been collected. The gap in the NIRPC data was travel time, which was resolved with the purchase of and use of devices to record travel time in the field on selected corridors.

Step 3: Develop Congestion Management Objectives –Objectives are derived from the vision and goals articulated in the NIRPC CRP. Objectives may address: traffic incident management, travel information, work zones, freeway management, roadway weather, electronic payment services, freight management or traffic signal coordination.

Examples of objectives relating to a goal of congestion reduction:

- Over the next three to five years, reduce the clearance time of traffic incidents on freeways and major arteries in the region from a current average of X minutes to an average of Y minutes.
- Over the next three to five years, reduce the variability in travel time on freeways and major arteries in the region such that 95% of trips (19 out of 20) have travel times no more than 1.5 times the average travel time for a specific time of day.
- By 2012, enhance connectivity among transit services so that transfers between transit modes (rail, bus) and operators are seamless and can occur with one "smart card."

Step 4: Identify Area of Application – The Congestion Management Plan is applied to a specific geographic area and network of transportation facilities. The area is the NIRPC region, which consists of Lake, La Porte and Porter counties.

Step 5: Define System/Network of Interest – The Congestion Management Plan network should identify the characteristics of the surface transportation network under consideration. The CMP should be multi-modal. The networks that are analyzed in the NIRPC CMP are the roadways, (the arterials and highways more-so than the local roads) and the South Shore commuter rail service. Observing the roadways will allow the evaluation of bus congestion in addition to auto and truck congestion because they all share the same roadways.

Step 6: Develop Performance Measures – Performance measures are used to access the effectiveness and efficiency of the transportation network. The performance measures should fit the "SMART" criteria, meaning that it should be **S**pecific, **M**easurable, **A**greed, **R**ealistic and **T**ime-Bound. There are two performance measures on which this process focused.

Step 7: Evaluate growth and development scenarios to identify future congestion problems in the context of the CRP- Scenario modeling is conducted in the context of congestion for the CRP. Four scenarios were evaluated and discussed with the public, which were extrapolation of trends; build-out of local plans; population and employment concentrated in livable centers; and urban core revitalization and infill.

Step 8: Institute System Performance Monitoring Plan – The performance monitoring plan should monitor both highway and transit. The primary way to monitor the system is to continue to collect data. Types of data will depend on the types of performance measures used, and the data should be relevant to the area, available, timely, reliable, consistent and susceptible to forecasting. The likely agents for monitoring for this congestion management plan would be traffic counts and travel time, which are what NIRPC collects.

Step 9: Identify/Evaluate Strategies – The congested areas of the region have been identified and strategies evaluated for their potential impact on congestion relief. A criterion for evaluating the potential strategies is selected. The key here is to follow the process and only recommend implementation of an expansion of the roadway system if necessary. Categories for strategies include:

- Demand Management
- Access Management
- Intelligent Transportation Systems
- Transit Service
- Growth Management
- Adding Capacity as a Last Resort

Step 10: Incorporate strategies into the CRP and Transportation Improvement Program (TIP) – The CMP will be a part of the 2040 CRP. Projects included in the TIP will be based on the goals and strategies outlined in the CRP, including the CMP.

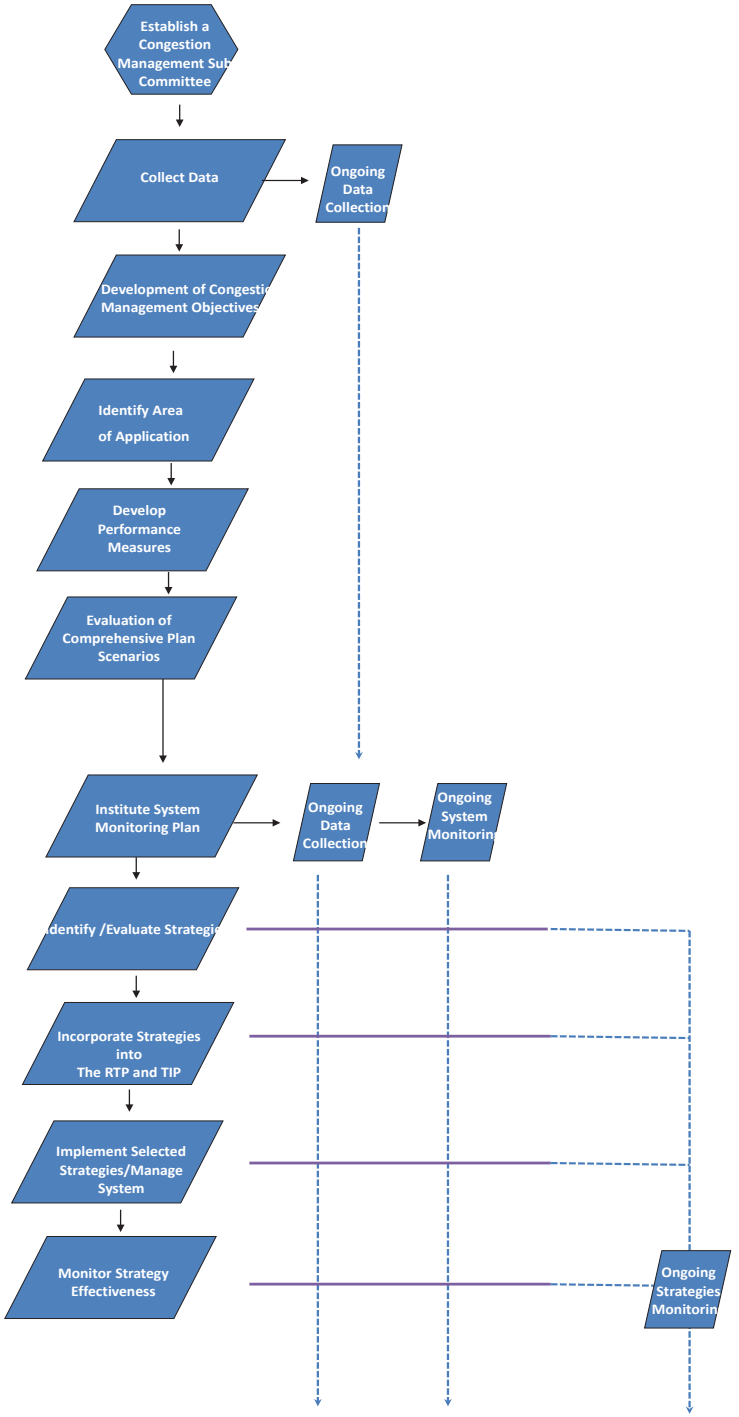
Step 11: Implement Selected Strategies/-Manage System – Implementation and continued management take place at this step. During this step, the congestion relief strategies are implemented by the project sponsors. This step ensures a link between the Congestion Management Process and funding decisions. System management is ongoing.

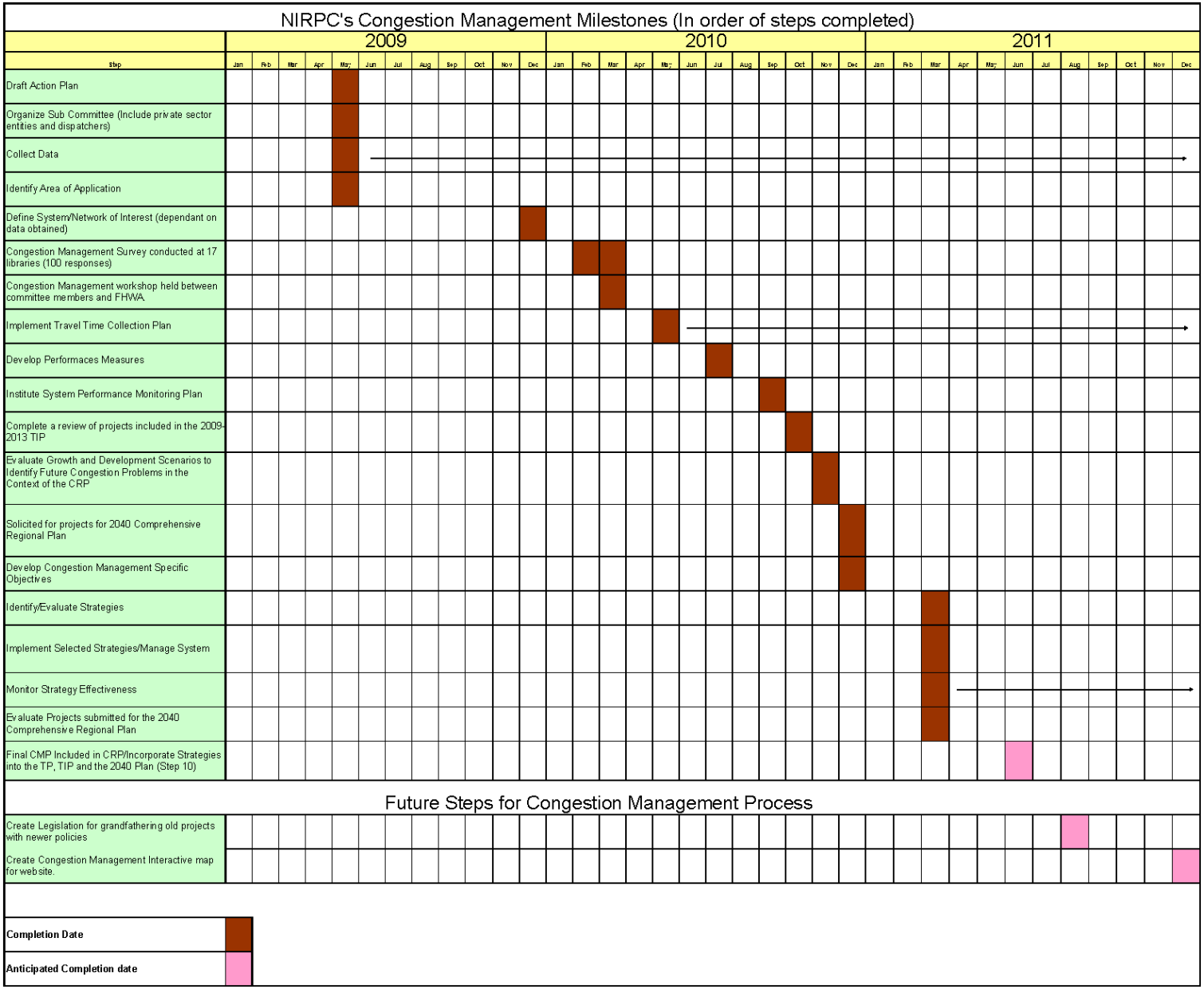
Step 12: Monitor Strategy Effectiveness – The effectiveness and strategies of the CMP should be periodically evaluated. Performance measures should be used to develop the effectiveness of the strategies. Evaluation criteria may be needed to compare how well strategies work. The congestion management process is ongoing.

III. Milestones achieved

The following table, NIRPC's Congestion Management Milestones, displays the major steps and achievements of the congestion management process since 2009. There is a slight difference between the traditional process steps above and the Milestones chart below. In NIRPC's case, timing was an issue and some steps should be completed before others. Also, certain steps were temporarily delayed because of a lack of data at the time.

Diagram of Traditional Congestion Management Process Steps




NIRPC's Congestion Management Milestones (In order of steps completed)
2009
2010
2011
Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec
Draft Action Plan
Organize Sub Committee (Include private sector entities and dispatchers)
Collect Data
Identify Area of Application
Define System/Network of Interest (dependant on data obtained)
Congestion Management Survey conducted at 17 libraries (100 responses)
Congestion Management workshop held between committee members and FHWA
Implement Travel Time Collection Plan
Develop Performaces Measures
Institute System Performance Monitoring Plan
Complete a review of projects included in the 2009-2013 TIP
Evaluate Growth and Development Scenarios to Identify Future Congestion Problems in the Context of the CRP
Solicited for projects for 2040 Comprehensive Regional Plan
Develop Congestion Management Specific Objectives
Identify/Evaluate Strategies
Implement Selected Strategies/Manage System
Monitor Strategy Effectiveness
Evaluate Projects submitted for the 2040 Comprehensive Regional Plan
Final CMP Included in CRP/Incorporate Strategies into the TP, TIP and the 2040 Plan (Step 10)
Future Steps for Congestion Management Process
Create Legislation for grandfathering old projects with newer policies
Create Congestion Management Interactive map for website.
Completion Date
Anticipated Completion date

IV. Congestion Management Process Objectives

NIRPC's congestion management objectives are derived from the goals and objectives that were determined and adopted by the 2040 CRP Steering Committee. Several workshops that solicited public input helped determine the vision for the CRP and its goals and objectives. The objectives that were selected for the CMP were refined into "**SMART**" objectives (Specific, Measurable, Achievable, Realistic and Time-Oriented in **bold** below). The final refined objectives were presented, revised and approved by the Congestion Management Subcommittee.

NIRPC'S Goals and Objectives for Congestion Management

CRP Vision Theme: *Accessible Region – connected people and opportunities*
Goal: **A safe and secure transportation system**

CMP Objectives & "**SMART"** Objectives

Reduce the number and severity of motor vehicle collisions

- **Reduce the crash rate by .25 (10 percent) and death/injury rate by .19 (15 percent) by the year 2040**

Improve the safety of non-motorized transportation through education, enforcement, engineering, design and construction

- **Reduce the Bike/Ped crashes by 17 (5 percent) by the year 2040**

Reduce emergency response times on major expressways

- **Reduce incident clearance time by 35 percent by the year 2040**

Improve the safety and security of transit facilities including stations, stops and vehicles

- **Reduce incidents per 100,000 trips by 40 percent by the year 2040**

CRP Vision Theme: *Accessible Region – connected people and opportunities*
CRP Goal: **Increased mobility, accessibility and transportation options for people and freight**

CMP Objectives:

Integrate local, regional and national transportation systems to facilitate movement of people and freight between modes

- **Increase mode sharing among region by 15% by the year 2040**

Improve system accessibility for people with special transportation needs including persons with disabilities, the elderly, the young and low-income populations

- **Increase the environmental justice (low-income population, minority population) served in the region from highway projects and public transportation by 10% by the year 2040**

Increase access to and improve the reliability of public mass transit

- **Increase Route Coverage -by 30% and raise on-time performance by 50% by the year 2040**

CRP Vision Theme: *Accessible Region – connected people and opportunities*
CRP Goal: **Adequate transportation funding and efficient use of resources**

CMP Objectives:

Protect previous investments through maintenance and improvements to existing transportation infrastructure, operations and services.

Devote sufficient resources to address reconstruction and maintenance needs

- **Increase funding for maintenance and reconstruction projects by 30% by the year 2020**

V. Performance Measures Methods to Monitoring Multimodal Performance

The performance measures were initially selected by NIRPC staff members, and discussed with and approved by the Congestion Management Subcommittee. Many of these performance measures currently are being used by other Metropolitan Planning Organizations and transportation agencies. These performance measures have been or will be used in the future to evaluate potential regionally significant projects and determine where congestion is located within the region.

Highway Performance Measures

Volume/Capacity Ratio (V/C Ratio)

V/C Ratio is a universal performance measure that is used to gauge the density of a highway facility. This is a performance measure that has been used by NIRPC for many years and the data is readily available. The capacity of a transportation facility is determined by NIRPC's travel demand forecast model.

V/C Ratio = Traffic Volume of a Transportation Facility divided by the Physical Capacity of a Transportation Facility

Travel Time & Travel Time Index

Travel time is the average time it would take for a vehicle to travel from one point of a specific corridor to another. Travel time index is a performance measure that is used to compare travel time in peak periods versus travel time in free flow periods. In order to calculate travel time index, travel time data will need to be collected in peak and off peak hours. Travel time and travel time index can be represented in numerical and level of service form. Travel time index example: Example: TTI of 1.2 means that the average travel time is 20% longer than free flow travel times.

Travel Time Index= Peak Period Travel Time divided by Free Flow Travel Time

Average Speed

Average speed can be displayed both in numerical form and with congestion scans. Average speed also can be derived from travel time data. With average speed, it will be easy to identify congestion by time of day and location. Average speed also can be displayed in indexed form by comparing with the posted speed of a road.

Delay

Delay is a performance measure that can be derived from average speed on expressways and arterials. Delay can be calculated by finding out how long it takes for traffic to move one mile. Delay can be measured in seconds per corridor by time of day. Travel time index also may be used to calculate delay for a corridor.

Safety Performance Measures

Crash Rate

Crash rate measures the number of crashes of a certain type normalized over the number of vehicles along a specific link in the network. This, in effect, "normalizes" the crash rate by the exposure to vehicles traveling in a certain location. Units of measure for crash rate are crashes/million vehicle miles traveled along links. Crashes are a significant source of non-recurring delay, and can drastically affect the operation of a system. Reducing crashes can have a ripple effect in reducing the delay in a transportation network.

Average Incident Clearance Time

This performance measure indicates the average clearance time of a roadway after an incident has occurred until the last vehicle leaves the scene. Longer clearance times usually increase the chances of a secondary crash due to obstructions on the road. NIRPC is unsure whether this data is readily available from sources, such as INDOT, and has not used this performance measure.

Transit Performance Measures

Load Factor

Load factor is an accurate way of measuring how much capacity is being used in a transit system. This performance measure not only affects the availability of room on a transit system, but the comfort of a ride as well.

Load Factor= Ridership/Capacity, where ridership is the number of riders on a given transit system and capacity in this region is the number of seats that a transit vehicle has. This performance measure can be measured in both a numerical and level of service form.

On-Time Performance

On-time performance monitors the percentage of transit vehicles that arrive on time for stops. The threshold for this measure is usually a few minutes. This performance can be measured in a level of service form. On-time performance is a suitable performance measure because most of Northwest Indiana's transit networks have longer headways.

Passenger Trips per Vehicle Revenue Hour and Mile

This performance measure compares ridership with the length of time transit service is offered (Vehicle Revenue Hours) or length of travel that transit service is offered (Vehicle Revenue Miles). The amount of hours and miles is counted for each vehicle in service. This measure can be displayed in level of service form.

Passenger Trips per Vehicle Revenue Hour = Passenger Trips/Vehicle Revenue Hour
Passenger Trips per Vehicle Revenue Mile = Passenger Trips/Vehicle Revenue Mile

Vehicle Revenue Hours/Per Capita

Vehicle Revenue Hours/Per Capita are the hours that transit vehicles travel while in revenue service, including layover/recovery time, but excluding deadhead time. The amount of hours is counted for each vehicle in service. Per capita represents the population in the Northwest Indiana region or specific areas, corridors or municipalities depending on the scope of the measure uses.

Vehicle Revenue Hours/Per Capita = Total Vehicle Revenue Hours/Capita of Area

Other Performance Measures

Customer Satisfaction

The use of surveys indicating if transit service is adequate and effective may be distributed in communities where public transit exists. NIRPC has not yet used this measure. Whether NIRPC has the need and the resources to collect this data will be determined. Content and distribution of the surveys is not known at this time.

Vehicle Miles Traveled/Vehicle Hours Traveled

Vehicle Miles Traveled and Vehicle Hours Traveled is a standard performance measure that can be used as a corridor level or regional level measure.

VI. Congestion Pricing

Congestion pricing is a policy tool that is designed to reduce unnecessary driving and encouraging the use of transit into congested areas (i.e. a central business district, or a particular roadway or bridge) by imposing a charge, usually between certain hours of the day. One of the most famous examples of this is the Congestion Charge Zone (CCZ) in London, which was instituted in 2003. Vehicles entering the CCZ between the hours of 7 a.m. and 6 p.m. Monday through Friday must pay a £10 charge. The funds raised are invested back into the city's transportation system.

While this idea has been proposed for cities all over the world, including Manhattan in New York City, it does not necessarily translate to smaller cities. In Northwest Indiana, the major urban centers of Hammond and Gary might appear, on the surface, to be candidates for this congestion-reduction strategy. This must be considered with care, however, as this pricing could have a detrimental effect on revitalization attempts in both cities.

A place like central London is able to offer a concentration of attractions, services, jobs and the like that act as natural trip attractors and provide enough of an incentive for those who choose to drive in at peak times to be willing to pay the toll. Additionally, London is able to offer an extensive transit system as an alternative to access the central city. In Hammond and Gary, these trip attractions either do not exist or are extremely limited. In addition, the transit systems in Gary and Hammond are not very extensive and are not suitable enough alternatives to driving. As a result, congestion pricing could actually end up *discouraging* people from visiting the area and harm revitalization efforts, as the incentives or transportation alternatives do not exist to encourage them to visit despite the charge. Further redevelopment, the addition of jobs, and extensive transit improvements are needed before this is a viable option for an urban center in Northwest Indiana.

The Illinois Tollway has congestion pricing for semi-trucks that use the roadway. During daytime hours (6 a.m. to 10 p.m.), toll rates for these vehicles are higher than during overnight hours (10 p.m. to 6 a.m.). This pricing scheme encourages the larger, slower vehicles to avoid utilizing the tollway during peak hours, with off-peak hours and its lower prices meant to encourage truck traffic

during periods of typically lighter traffic. This is a possible congestion pricing solution that could be considered for the Indiana Toll Road.

VII. Data Collection

Travel Time Collection

NIRPC obtains Travel Time and speed data from NAVTEQ, which collects travel time data from INDOT. The data that is acquired is for the Borman Expressway (I-80/94) west of the Indiana Toll Road (I-90) and I-65 between the Borman Expressway and U.S. 30. NIRPC also collects travel time data in house by conducting data collection runs on the region's arterials. There are currently five corridors that have completed travel time data. NIRPC's goal is to eventually collect data on 69 regional corridors that have been identified.

Data Collection Steps

1. Corridors were ranked and selected based on three criteria: V/C ratio, Average Annual Daily Traffic (AADT) and public input. The Volume/Capacity Ratio is a road's AADT over the total capacity of a road as determined by the NIRPC model. Public input is from the results of a survey that was distributed in January 2010 and February 2010.
2. Congestion Surveys: In order to receive as accurate of a sample as possible, the survey was distributed in both hard copy and on surveymonkey.com. The hard copy versions of the surveys were distributed by displaying them in 17 local libraries. The online version featured a link from NIRPC's website. The survey also was distributed during several public meetings. People indicated locations where they felt there were significant delays, congestion or safety issues.
3. When the corridors were ranked, data collection began on the highest rated corridors. The objective is, as resources allow, to eventually collect travel time data for all 69 corridors in the Northwest Indiana region.
4. Five geographic information system- based Columbus Data Loggers were purchased for the collection of travel time data.
5. Staff members and interns were trained to conduct travel time data. Training included learning the basics of the "floating car" technique, learning how to operate the GPS equipment and conducting test runs to get data collectors used to the process. No data analysis training will be needed, as designated NIRPC staff will handle the actual data.

6. Data collectors were then assigned a certain corridor to collect data for. For each corridor, five runs would be needed at each of the three specified times of the day, which would total to about 15 runs per direction. Field collection occurs only on non-holiday Tuesdays, Wednesdays, and Thursdays. It is preferable that field collection would occur on days there is no precipitation or an accumulation of rain or snow to get an accurate "floating car" run. The times of collection would be morning peak, afternoon peak and off-peak. Five runs would need to be performed for each of these times.
7. Once the runs are completed for each corridor, the data from the GPS units is analyzed.
8. With the Columbus reader, the data is loaded directly in to Google Earth via the KML format. KML is a file format used to display geographic data in an Earth browser, such as Google Earth. The data logs also can be uploaded onto the desktop. The data is converted into Excel, Access and GIS formats. The data then is used for congestion management planning, which feeds into the TIP project review and fund allocation purposes. Some of these uses would include ranking projects for funding or composing maps that would visually show travel time.

The result of the data collection will be data for evaluating projects, regional maps of actual speeds, travel time index and intersection delays and data for use for the comprehensive plan as well as other purposes. This data may also be made available to entities such as municipalities and regional employers, as well.

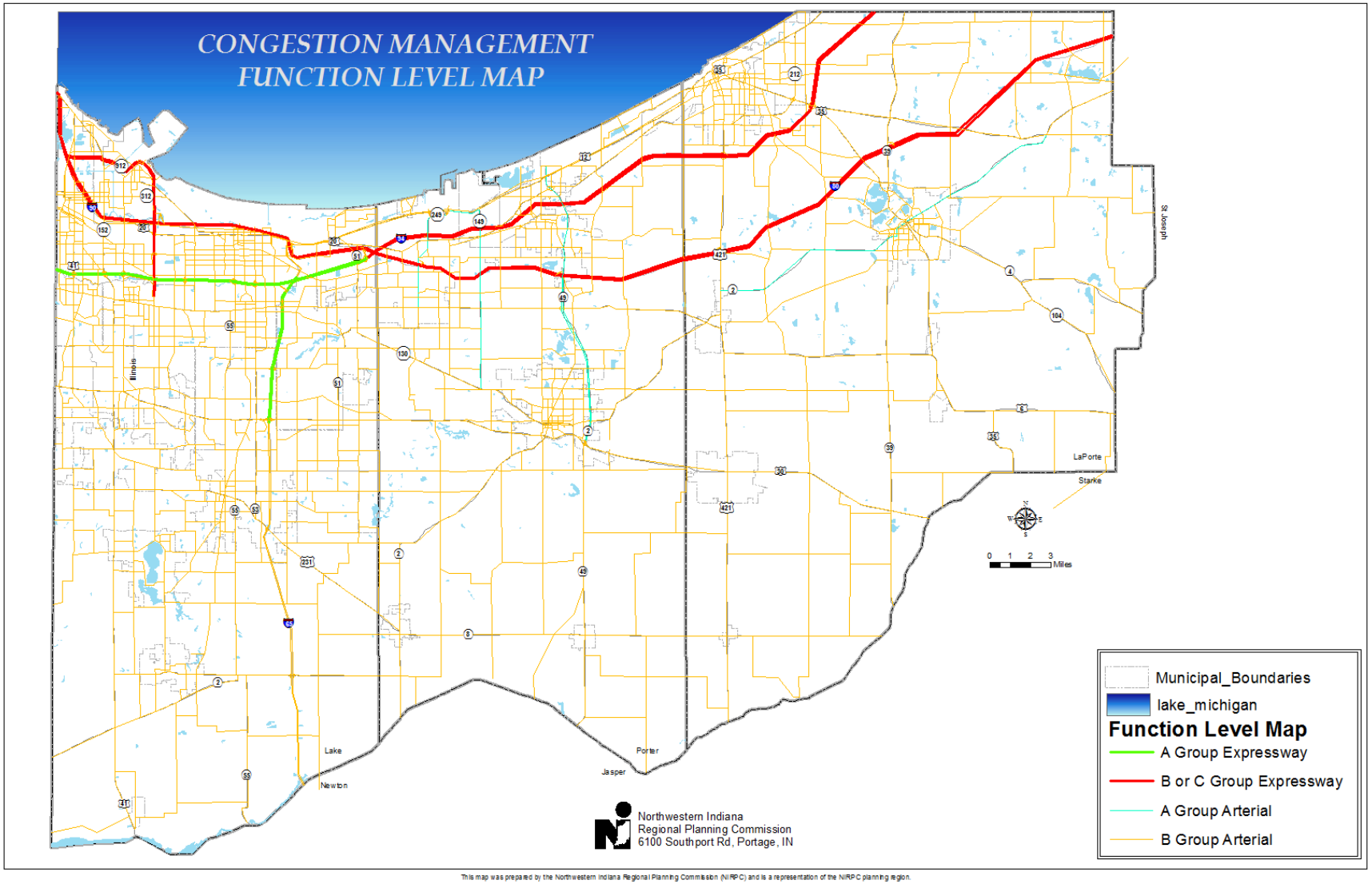
There is currently a total of seven corridors where travel time data has been collected. They are I-65 from I-80/94 to U.S. 30, I-80/94 from the Illinois state line to I-90, U.S. 12 from SR 249 to SR 49, SR 49 U.S. 12 to U.S. 30, SR 240 from U.S. 12 to U.S. 6, SR 149 from U.S. 12 to SR 130 and SR 2 from U.S. 421 to U.S. 20. Presented below are the average speeds from the travel time runs (or Navteq data collected for I-65 and I-80/94) for the A.M., P.M. and off-peak periods. The A.M. period runs from 7 to 10 a.m., the P.M. period runs from 4 to 7 p.m, and the off-peak period is all other times of the day. Data collection runs only are conducted on Tuesdays, Wednesdays and Thursdays.

Volume Capacity Ratio

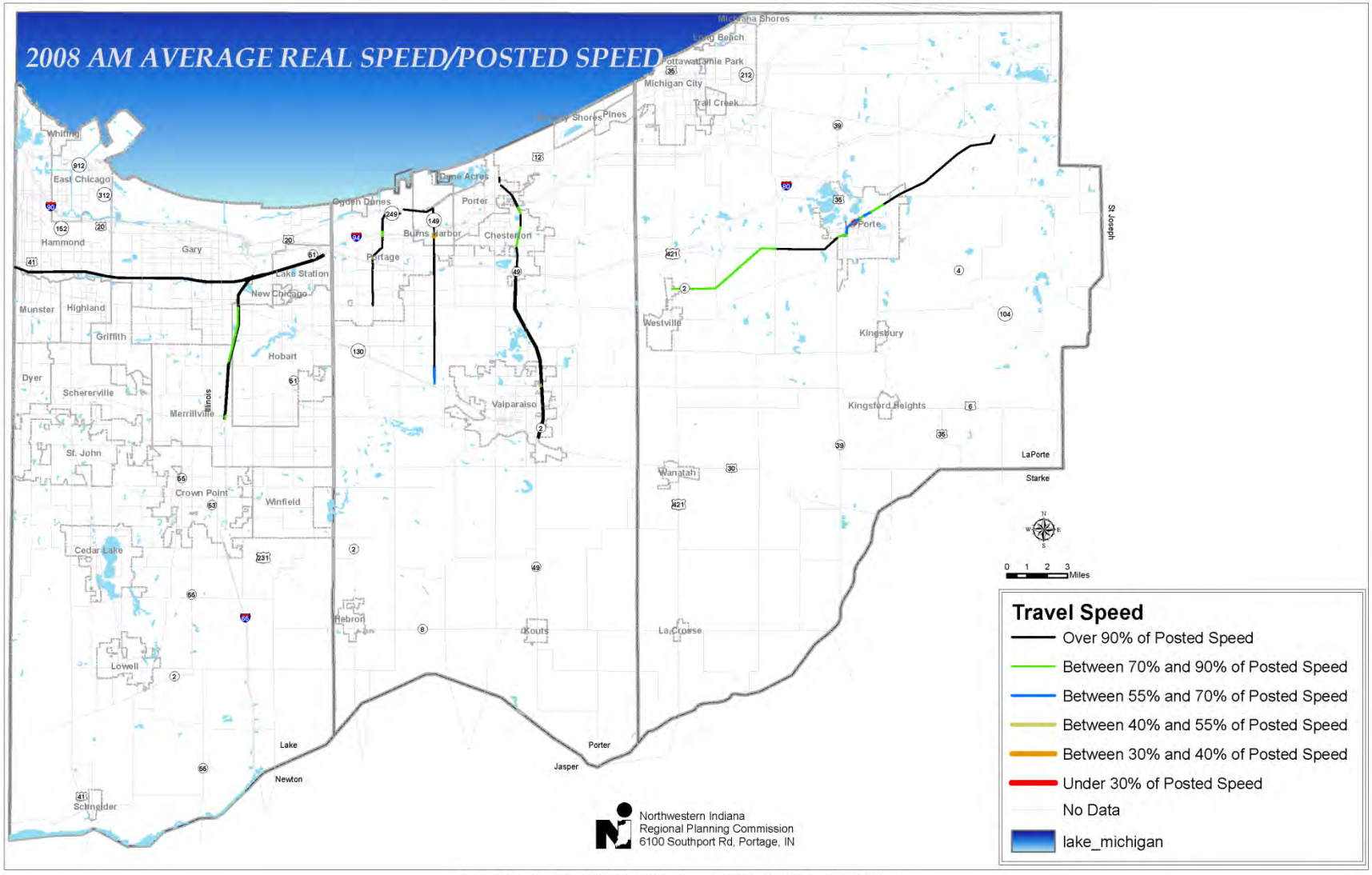
Volume Capacity Ratio data is derived from the transportation model used for the preferred scenario. The model creates a presumed capacity for each link of the roadway network. The model also calculates Average Annual Daily Traffic for each roadway link.

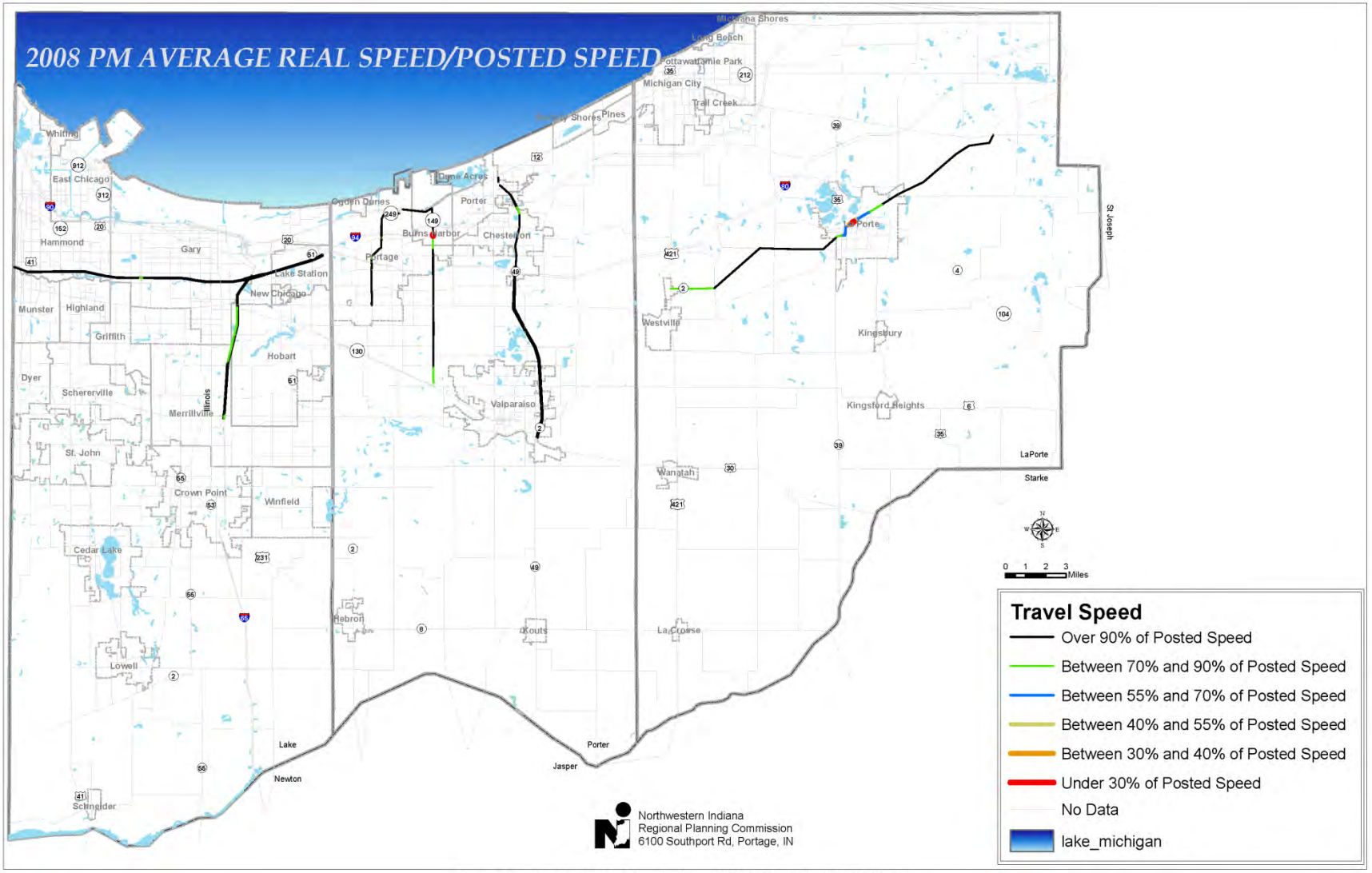
Crash Data

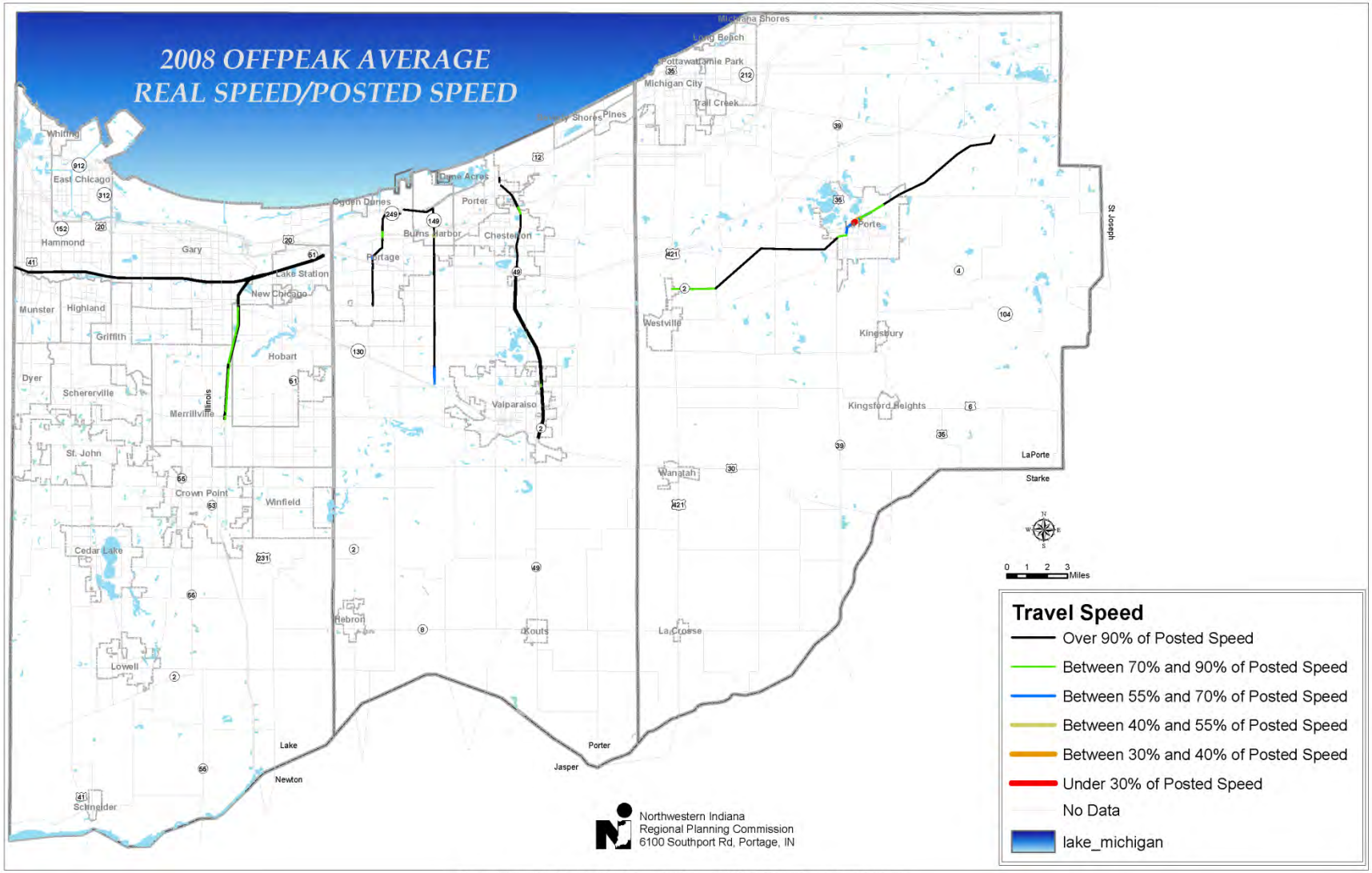
The ARIES (VCRS) site provides source data for the crashes in Northwest Indiana in an Access sheet format. The report sheet includes latitude and longitude data. This data is added as x & y coordinates to a map, then converted to shapefiles. The shapefiles are then projected to the map coordinate system and displayed as points of crash locations. The points are indicated as the location of the crashes. Red points indicate a fatality has occurred in the incident. From this data output, the crash rate of a corridor can be calculated.



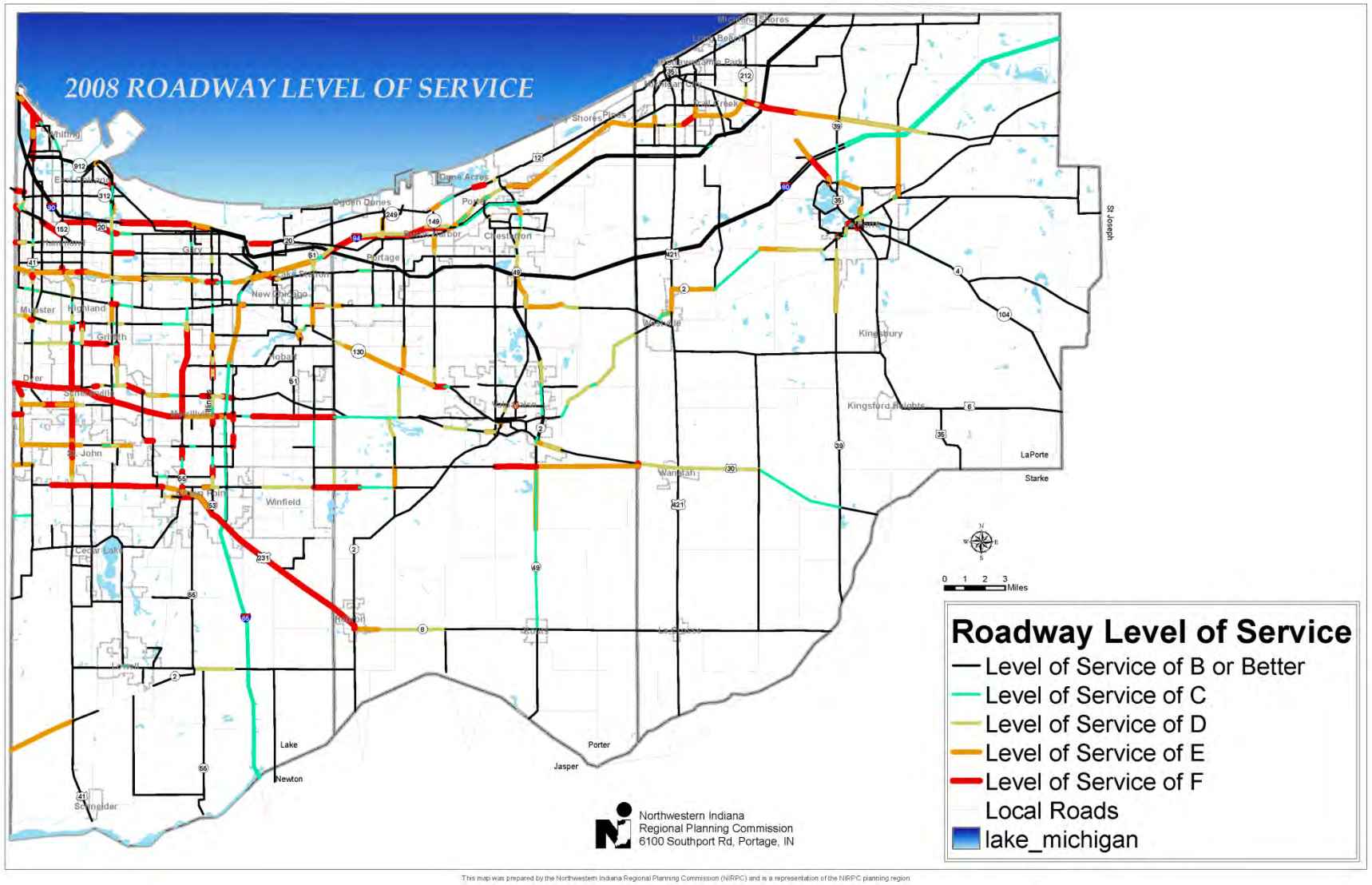
This map shows where NIRPC currently has travel time data. Expressways that have travel time data are indicated in green. Arterials where NIRPC has data are in teal.

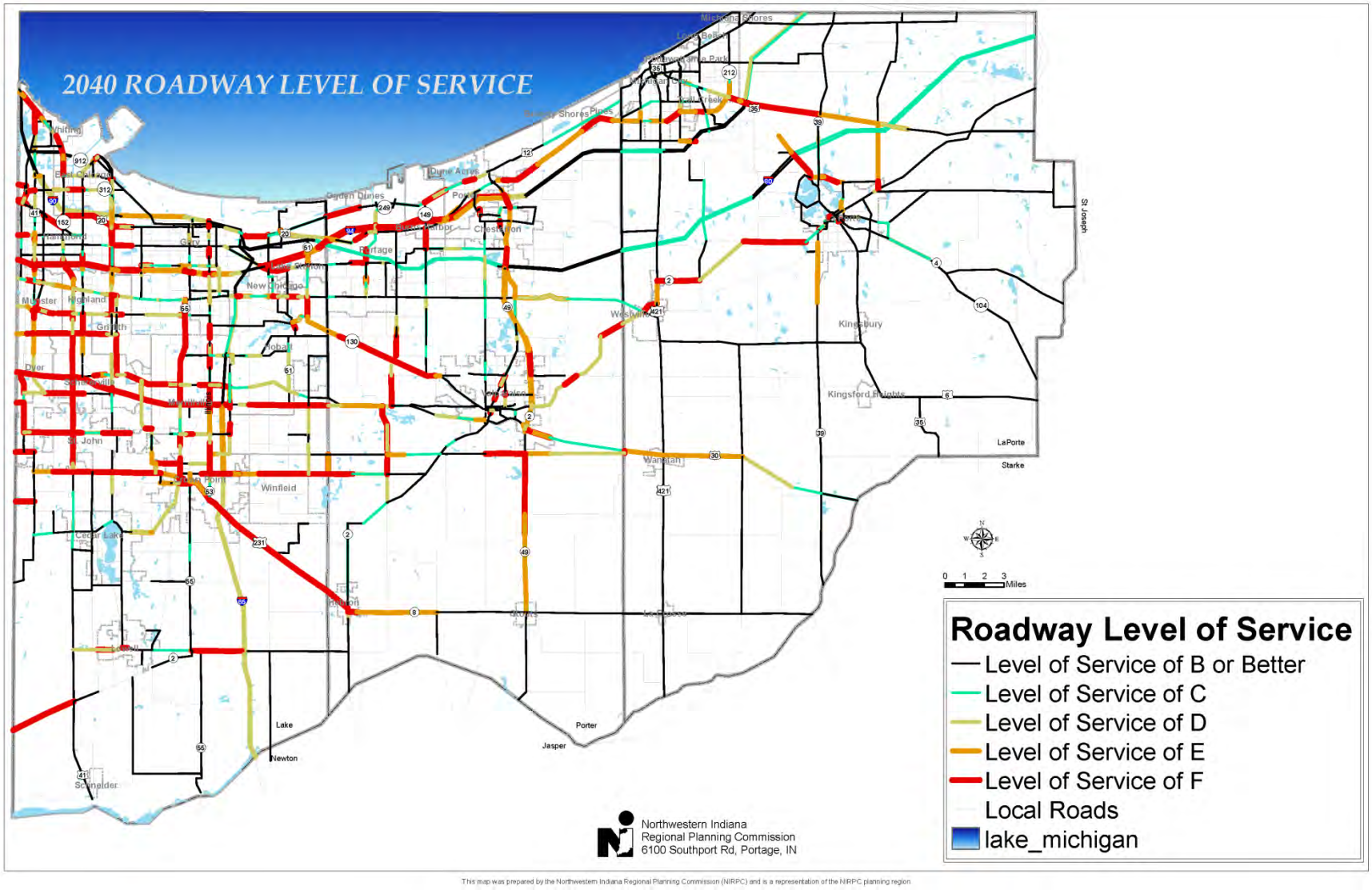

2008 AM AVERAGE REAL SPEED/POSTED SPEED
Michiana Shores
Long Beach
Pottawattamie Park
Michigan City
Trail Creek
Pines
Whiting
East Chicago
Dune Acres
Ogden Dunes
Porter
Burns Harbor
Chesterton
Portage
Hammond
Gary
Lake Station
New Chicago
Munster
Highland
Griffith
Hobart
Dyer
Schererville
Merrillville
Illinois
Valparaiso
St. John
Crown Point
Winfield
Cedar Lake
Lowell
Hebron
Kouts
La Crosse
Lake
Porter
Jasper
Newton
Schneider
Westville
Kingsbury
Kingsford Heights
LaPorte
Starke
Wanatah
St Joseph
0 1 2 3 Miles
Travel Speed
Over 90% of Posted Speed
Between 70% and 90% of Posted Speed
Between 55% and 70% of Posted Speed
Between 40% and 55% of Posted Speed
Between 30% and 40% of Posted Speed
Under 30% of Posted Speed
No Data
lake_michigan
Northwestern Indiana
Regional Planning Commission
6100 Southport Rd, Portage, IN
This map was prepared by the Northwestern Indiana Regional Planning Commission (NIRPC) and is a representation of the NIRPC planning region


2008 PM AVERAGE REAL SPEED/POSTED SPEED
Travel Speed
Over 90% of Posted Speed
Between 70% and 90% of Posted Speed
Between 55% and 70% of Posted Speed
Between 40% and 55% of Posted Speed
Between 30% and 40% of Posted Speed
Under 30% of Posted Speed
No Data
lake_michigan
0 1 2 3 Miles
Northwestern Indiana
Regional Planning Commission
6100 Southport Rd, Portage, IN
This map was prepared by the Northwestern Indiana Regional Planning Commission (NIRPC) and is a representation of the NIRPC planning region
Michiana Shores
Long Beach
Pottawattamie Park
Michigan City
Trail Creek
Beverly Shores
Pines
Whiting
East Chicago
Dune Acres
Ogden Dunes
Porter
Burns Harbor
Chesterton
Portage
Hammond
Gary
Lake Station
New Chicago
Munster
Highland
Griffith
Hobart
Dyer
Schererville
Merrillville
Illinois
Valparaiso
Westville
Kingsbury
Kingsford Heights
Porter
St Joseph
LaPorte
Starke
Wanatah
St. John
Crown Point
Winfield
Cedar Lake
Hebron
Kouts
La Crosse
Lowell
Lake
Newton
Porter
Jasper
Schneider


2008 OFFPEAK AVERAGE
REAL SPEED/POSTED SPEED
Travel Speed
Over 90% of Posted Speed
Between 70% and 90% of Posted Speed
Between 55% and 70% of Posted Speed
Between 40% and 55% of Posted Speed
Between 30% and 40% of Posted Speed
Under 30% of Posted Speed
No Data
lake_michigan
0 1 2 3 Miles
Northwestern Indiana
Regional Planning Commission
6100 Southport Rd, Portage, IN
This map was prepared by the Northwestern Indiana Regional Planning Commission (NIRPC) and is a representation of the NIRPC planning region

VIII. Congestion in Northwest Indiana




2040 ROADWAY LEVEL OF SERVICE
Roadway Level of Service
Level of Service of B or Better
Level of Service of C
Level of Service of D
Level of Service of E
Level of Service of F
Local Roads
lake_michigan
0 1 2 3 Miles
Northwestern Indiana
Regional Planning Commission
6100 Southport Rd, Portage, IN
This map was prepared by the Northwestern Indiana Regional Planning Commission (NIRPC) and is a representation of the NIRPC planning region
Lake
Porter
Jasper
Newton
LaPorte
Starke
St Joseph
Kingsbury
Kingsford Heights
Winfield
St John
Dyer
Munster
Highland
Griffith
Hobart
Portage
Chesterton
Dune Acres
Ogden Dunes
Whiting
Schneider

Roadway congestion within the region is displayed with the level of service maps displayed on the next two pages. The base years that are used for congestion management are 2008 and 2040. The red, orange and gold roadways indicate the worst congestion, and are represented by the grades of F, E and D, respectively. The level of service that is used for creating these maps, as well as evaluating projects was determined by special function class system that classified roadways based on what data was available. From there, performance measures were used based on a weighting system that is indicated in APPENDIX Section 2.

The worst current roadway congestion in the region is located on east-west expressways and arterials, mainly in Lake County. There is a dense concentration of population located in Lake County north of U.S. 30, and that also is where the most congestion is located. These locations in the region are landlocked with little room for roadway expansion. Other alternatives will need to be considered to relieve congestion. In 2040, roadway congestion is expected to be spread throughout southern Lake County and central Porter County, in addition to the urban core communities in Lake County. The cause of the congestion spreading to other central and southern parts of the region is due to the current rapid growth of the municipalities in these areas.

Lake County Congested Corridors

Corridor	From	To	Direction	Length	LOS
U.S. 20, 12, 41	State line	119th St.	E/W	2.05	F
101St. Ave.	State line	White Oak	E/W	2	E
109th Ave.	Colorado St.	Porter County Line	E/W	5.26	F
109th Ave.	State line	U.S. 41	E/W	2	F
173Rd.Ave.	Calumet Ave.	Indianapolis Blvd	E/W	2.13	F
45th Ave.	Calumet Ave.	U.S. 41	N/S	2	D
77th Ave.	Sheffield Ave.	Robinhood Blvd	E/W	3.04	F
93Rd.Ave.	Sheffield Ave.	Cline Ave.	E/W	2.91	E
93Rd.Ave.	Marquette Ave.	Chase St.	E/W	3.42	F
Broad St.	Main St.	Joliet Rd.	N/S	2	F
Calumet Ave.	Indianapolis Blvd	Cline Ave.	N/S	2.25	F
Chicago Ave.	Hohman Ave.	White Oak Ave.	E/W	1.4	F
Cline Ave.	U.S. 12	I-80/94	N/S	4.5	D
Cline Ave.	I-80/94	45th Ave.	N/S	3.25	D
Colfax St.	29th Ave.	41St. Ave.	N/S	1.5	F
Dickey St.	129th St.	Michigan Ave.	N/S	1.11	E
Gostlin St.	State line	Columbia Ave.	E/W	1.3	F
Grand Ave.	U.S. 12	Hemlock Ave.	N/S	1.3	F
HWY Ave.	Ridge Rd.	Cline Ave.	E/W	1.86	F
I-80/94	St.ate Line	I-65	E/W	11.72	F
I-80/94	I-65	I-90	E/W	4.3	E
Indianapolis Blvd	173rd St.	Martha St.	N/S	2.38	E
Klienman Rd.	Ridge Rd.	Main St.	N/S	1	D
Merrillville Rd.	86th Ave.	101St. Ave.	N/S	2.94	F
Michigan St.	Calumet Ave.	Colfax Ave.	E/W	4.5	F
Mississippi St.	SR 330	93rd.Ave.	N/S	2.38	F
Sheffield/Hart St.	213th St.	77th Ave.	N/S	2.14	F
South St.	Whitcomb Ave.	Grant St.	E/W	1.5	F
Southeastern Ave.	Columbia Ave.	175th St.	N/S	1.35	F
SR 330	Junction Ave.	Mississippi St.	E/W	7.14	F
SR 55	Ridge Rd.	U.S. 30	N/S	5.38	F
SR 55	U.S. 30	U.S. 231	N/S	3.72	F
Summer St.	Columbia Ave.	Indianapolis Blvd	E/W	1.2	F
U.S. 20-12 (Dunes hwy)	I-65	Clay St	E/W	1.18	F
U.S. 30	U.S. 41	Mississippi St.	E/W	8.23	F
U.S. 30	St.ate Line	U.S. 41	E/W	2.85	F
U.S. 30	Colorado St.	Porter County Line	E/W	4.01	F
U.S. 41	45th Ave.	U.S. 30	N/S	3.23	F
U.S. 41	U.S. 30	U.S. 231	N/S	4.82	F
U.S.231	U.S. 41	SR 55	E/W	5.5	F
U.S.231	SR 55	E of I-65	E/W	2.83	F
U.S.231	E fo I-65	SR 2	E/W	8	F

Porter County Congested Corridors

Corridor	From	To	Direction	Length	LOS
SR 249	U.S. 12	U.S. 20	N/S	1.91	E
U.S. 6	SR 51	Swanson Rd.	E/W	2.25	E
U.S. 6	Calumet Rd.	400 E	E/W	2.75	D
U.S. 20	I-94	SR 49	E/W	3.25	E
U.S. 20	SR 49	LaPorte County Line	E/W	7.31	E
SR 8	U.S. 231	250 W	E/W	2.81	E
SR 49	600 N	U.S. 30	N/S	5.89	D
SR 49	Division St.	300 S	N/S	3	E
SR 2	SR 49	U.S. 421	E/W	8.7	E
SR 149	U.S.20	875 N	N/S	2.78	E
SR 130	County Line Rd.	250 W	E/W	10.19	E
Meridian Ave.	SR 2	Division St.	N/S	1.5	F
I-94	Lake County Line	U.S. 20	E/W	6.15	F
Division St.	Median rd.	U.S. 30	E/W	7.03	F
Calumet Rd.	U.S. 6	I-90	N/S	1.62	E
500 W	U.S. 30	100 S	N/S	3.55	E
475 W	SR 130	U.S. 30	N/S	2.34	F
450 W	600 N	U.S. 130	N/S	1.3	E

LaPorte County Congested Corridors

Corridor	From	To	Direction	Length	LOS
Fail Rd.	U.S. 20	SR 2	N/S	3.34	E
SR 2	U.S. 421	SR 39	E/W	9.08	E
SR 2	6th Ave.	Boston St.	E/W	1.71	F
SR 39	18th St.	400 S	N/S	3	E
U.S. 20	U.S. 421	U.S. 35	E/W	3.93	F
U.S. 20	SR 212	Fail Rd.	E/W	7.79	F
U.S. 35	U.S. 20	Severs rd.	N/S	4.84	E

IX. Public Transportation

Public Transportation is a strategy that should be considered in some form in any transportation network. Public transportation enables people to move in moderate to massive numbers from residential districts to jobs, services, shopping and entertainment centers, among other uses. Public transportation is environmentally cleaner and more cost effective than single-occupancy vehicle travel. Current public transit in Northwest Indiana mainly consists of the Northern Indian Commuter Transportation District (NICTD), which operates commuter rail from the Northwest Indiana region to Chicago, and several bus operators, including the Regional Bus Authority (RBA), East Chicago Public Transit (ECPT), Gary Public Transportation Corp. (GPTC), Michigan City Municipal Coach, Valparaiso's V-Line and LaPorte Transport. Most of the transit in Northwest Indiana is located within the urban core of the region. Public demand response transit also is available in Lake and Porter counties, where fixed-route service is not provided. The RBA and Valparaiso also offer commuter bus service to Chicago.

Obstacles for transit in Northwest Indiana

The availability of public transportation is a key element of the 2040 CRP and is, in fact, integral to the success of the region. Currently, the people of Northwest Indiana are served by intercity and commuter rail, local bus, demand response and paratransit service. However, the current services can neither be taken for granted, nor considered sufficient to achieve the goals of the 2040 CRP. Only portions of the region are served by fixed route buses while many important centers of activity and employment are un-served. An already deficient system lacks multi-modal transportation connectivity. Further, while there are multiple providers of public-demand response service, the overall capacity of the system is inadequate to meet the needs of the transit-dependent population in the region. To make matters even worse, declining funding subsidies have resulted in service cuts that make regional transit travel an option that is even less convenient, attractive and viable for riders. Compounding these service and subsidy issues is the fact that all of the public transit service providers are hampered by the lack of a dedicated regional or county-wide source of funding that provides stable annual support and can be used as a match for federal and state transit grants. Consequently, expanding services to create a truly regional system that supports Livable Centers is more challenging in Northwest Indiana than many other regions.

Other persistent obstacles that threaten not only current public transportation but also any proposed new transit service include the political climate. The political climate changed with the advent of the property tax cap. Many elected officials believe that because of the difficulties of the economy today, it is best not to propose anything radically new that requires a funding source. Another obstacle is the national affinity Americans have for their cars. Cars have increasingly dominated the transportation landscape since they were invented. The reality is that single occupancy vehicle travel is no longer sustainable or cost effective. Transportation stakeholders in Northwest Indiana will have to work together with elected officials to come up with innovative ways to create funding for transit and other alternatives to expanding roadways.

Another obstacle for public transportation in Northwest Indiana is the lack of centers that are densely populated with residents or jobs. Northwest Indiana is more suburban and rural than the Chicago region. The three-county region lacks a central municipality, which is unusual compared to many regions in the United States. Without a certain amount of density of population or employment, it is very difficult for ridership for a transit system to be at a practical level. As displayed by the map below, there are very few areas within Northwest Indiana that can support bus systems with 60-minute headways, let alone rapid transit.

Analysis of Transit Needs

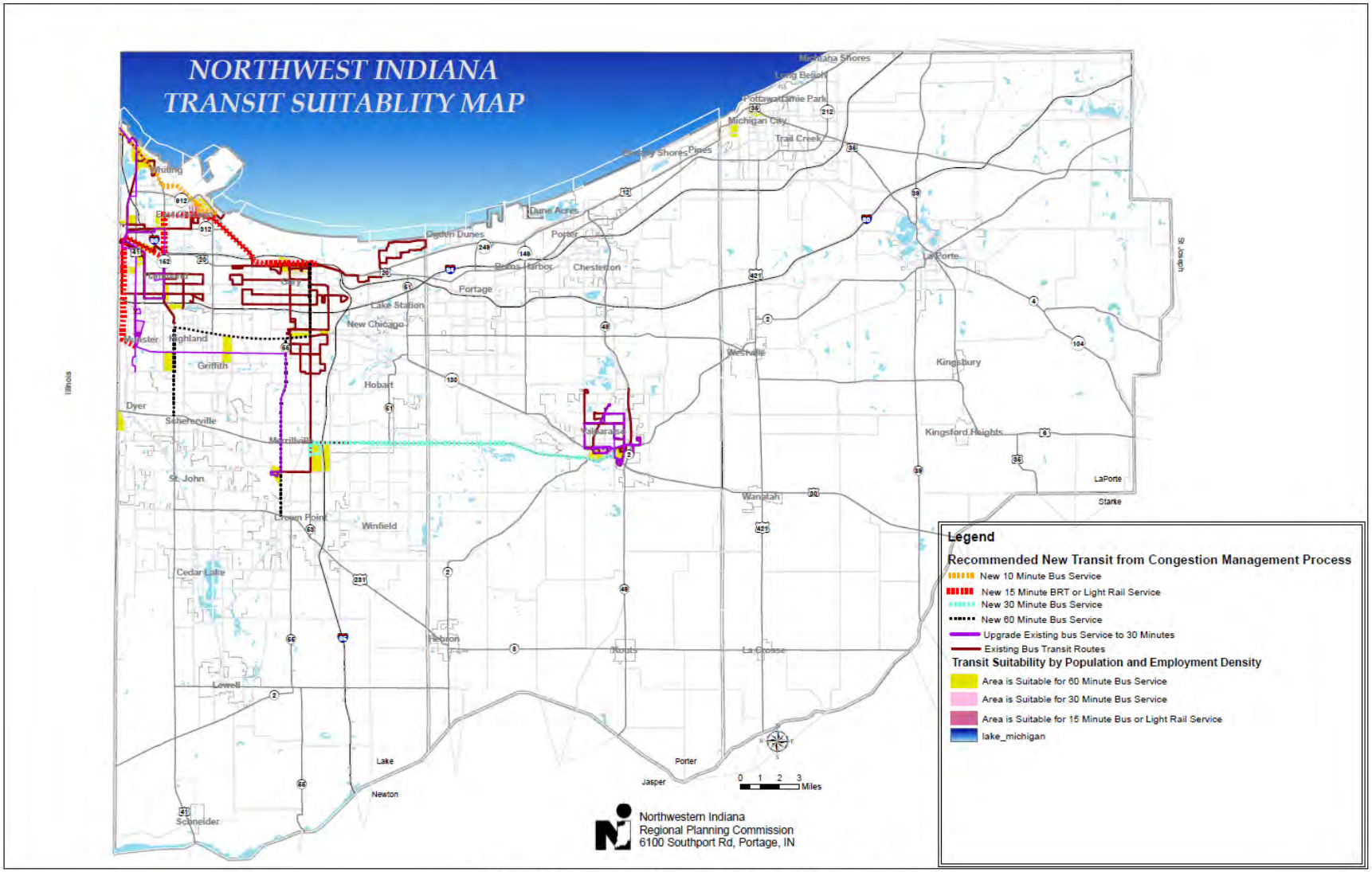
An analysis of the region was conducted to see where transit exists, where transit is needed and how frequently the recommended transit services should operate. The analysis looked at population and employment densities around the region and determined what areas are suitable for public transportation. Then existing public transit routes are overlaid to see what areas have adequate public transit for their density and what area need more or new service. Displayed in the table below are the minimum densities that a specific area should have in order for a mode of transit as a viable strategy. Without the recommended density, a transit system may run the risk of losing a substantial amount of public funds to operating a transit system that may have low ridership. The map below shows areas that are suitable for public transportation. No area within the region is currently suitable for rapid transit or 10 minute headway bus systems. The analysis was conducted by Traffic Analysis Zones.

Minimum Thresholds for Public Transportation*		
Mode	Minimum Pop. Density	Minimum Emp. Density
Bus Service with 60 Minute Headway	6,912 persons/sq mile	6 jobs/acre
Bus Service with 30 Minute Headway	12,096 persons/sq. mile	11 jobs/acre
Light Rail with 15 Minute Headway	15,552 persons/sq. mile	25 jobs/acre
Rapid Transit with 15 Minute Headway	20,736 persons/sq. mile	50 jobs/acre
Bus Service under 10 Minute Headway	25,920 persons/sq. mile	66 jobs/acre
Source: (based on Pushkarev and Zupan 1977)*		

Results of the Transit Analysis

The results of this analysis show that, in order for the entire region to have adequate service, 10 new changes to the transit system will be needed. Five changes included additional service on existing bus routes. Four new bus routes also are recommended. The biggest transit project that would be recommended from this analysis would be the addition of a new rapid-transit system connecting the central portion of Lake County with the urban centers in Hammond, East Chicago and Gary, and should be in the form of either 10-minute bus service, 10 minute-light rail service or bus rapid transit. This map is consistent with NIRPC's transit vision with Livable Centers as it connects the regions densest areas by public transportation. There are, however, many areas within the Northwest Indiana region that do not have the minimum appropriate density to support public transportation. Therefore, in these areas, public transit is not a viable alternative for these locations at this time.

Recommended New Transit Routes from Congestion Management Process					
Route	Mode	Headway	Terminus 1	Terminus 2	Jurisdiction
Gary-East Chicago-Hammond Rapid Transit	Light Rail or BU.S. Rapid Transit	10-15 Minutes	Downtown Hammond	Downtown Gary	RBA, Hammond, East Chicago, Gary
Valparaiso- Merrillville Regional Bus Service	Bus Service	30 Minutes	Valparaiso University	Broadway & U.S. 30	RBA, Valparaiso ,Hobart, Merrillville
State Line- East Chicago Bus Service	Bus Service	10-15 Minutes	State Line	Gary Marina	RBA, Hammond, Whiting, East Chicago, Gary
SR 55 Bus Service	Bus Service	60 Minutes	Downtown Gary	Crown Point	RBA, Gary, Merrillville, Crown Point
Ridge Road/U.S. 41 Bus Service	Bus Service	60 Minutes	Downtown Gary	U.S. 30 & U.S. 41	RBA. Gary, Griffith, Highland, Schererville
RBA Easy Go Red Line	Increase Bus Frequency	30 Minutes (from 60 Minutes)	106th & Ewing	Calumet & Main	RBA, Hammond, Munster, Dyer
RBA Easy Go Brown Line	Increase Bus Frequency, add Weekend Service	30 Minutes (from 90 Minutes)	Community Hospital in Munster	Lake County Government Center Crown Point	RBA, Munster, Highland, Griffith, Merrillville, Crown Point
RBA Easy Go Orange Line	Increase Bus Frequency, add Weekend Service	30 Minutes (From 60 Minutes)	East Chicago Walmart	East Chicago Walmart	RBA, East Chicago
V Line Red Line	Increase Bus Frequency	30 Minutes (From 120 Minutes)	VU Student Union	VU Student Union	Valparaiso
V Line Green Line	Increase Bus Frequency	30 Minutes (From 60 Minutes)	Indiana & Michigan	Indiana & Michigan	Valparaiso



This map was prepared by the Northwestern Indiana Regional Planning Commission (NIRPC) and is a representation of the NIRPC planning region.

X. Congestion Management Strategies Analysis for Congested Corridors

Roadway segments that had a low level of service were grouped into congested corridors. These corridors are determined to be regionally significant and are of at least an arterial functional class. Improvements to congested corridors are identified by the adjustment of the Volume/Capacity Ratio of the corridor as a result of potential strategies. From here, based on public input and staff recommendations, the contributing factors of congestion are determined. The contributing factors are presumed causes of congestion within the roadway corridor.

The first attempt (Step 2 below) to relieve congestion is to look at demand management strategies. The possible demand management solutions for a corridor are telecommuting promotion, carpool promotion, school pool promotion and flextime promotion. The viable strategies in each corridor are indicated in yellow. It is assumed that each demand management highlighted can reduce volume by 1.5 percent with 6 percent being the maximum reduction. This change is applied to each corridor if level of service rises significantly for each corridor. If congestion is relieved by demand management strategies, demand management promotion will be employed for the corridor. If demand management strategies alone do not relieve congestion in this corridor, then additional Transportation Systems strategies are considered.

Transportation systems, intelligent transportation, transit and growth management strategies are reviewed if demand management strategies do not relieve congestion. Refer to Step 3 below. The strategies that are suitable for each corridor are indicated in green. It is assumed that each strategy will add to the capacity that the roadway can handle. These strategies would not however add to the actual roadway capacity. Signal timing, traffic operations improvements and driveway controls strategies would add 5 percent each. Intersection turn lanes would add 7 percent. Median controls, ITS, railroad grade separation, transit and growth management solutions would add 10 percent. The total maximum capacity that can be added by these strategies is 72%. If all recommended strategies do not relieve congestion in a corridor, then adding roadway capacity maybe considered.

Step 1 (Contributing Factors):

Contributing Factors for Congested Corridors											
Roadway	Corridor	S	IT	T	A	M	I	W	RR	D	C
109th Ave.	State Line to U.S. 41										
109th Ave.	Colorado St. to Porter County Line										
15th Ave.	Cline Ave. to Colifax Ave.										
45th Ave.	State Line to U.S. 41										
77th Ave.	Sheffield Ave. to Austin Ave.										
93rd Ave.	Sheffield Ave. to U.S. 41										
93rd Ave./91st Ave.	Cline Ave. to Clark Rd.										
Broad St.	Main St. to Joliet Rd.										
Calumet Ave.	Indianapolis Blvd to SR 912										
Cline Ave.	U.S. 12 to 80/94										
CR 400 N	Woodland Ave. to 600 W										
CR 400 N	Schultz Rd.										
CR 450 W	600 N to SR 130										
Dunes Hwy	I-65 to Clay St.										
Fail Rd.	U.S. 20 to SR 2										
Gostlin St.	State Line to I-90										
Grand St.	Hemlock Ave. to Miller St.										
I-80/94	State Line to I-65										
I-94	Lake County to U.S. 20										
Indianapolis Blvd	173rd Ave. to Ridge Rd.										
Joliet Rd.	Junction Ave. to SR 55										
Joliet Rd.	Merrillville Rd. to Mississippi St.										
Merrillville Rd.	87th Ave. to Summit Ave.										
Michigan St.	Indianapolis Blvd to SR 912										
Severs Rd./200N	SR 39 to 50 W										
Sheffield Ave./Hart St.	U.S. 30 to 93rd Ave.										
South St.	Whitcomb St. to Indiana St.										
SR 130	County Line Rd. to CR 250 W										

Contributing Factor	Abbreviation
Signal Timing	S
Intersection Turns	IT
Traffic Operations	T
Access Points	A
Median Turns	M
Incidents	I
Water/Flooding	W
Railroad Crossings	RR
Development Patterns	D
Lack of Connectivity	C

Contributing Factors for Congested Corridors											
Roadway	Corridor	S	IT	T	A	M	I	W	RR	D	C
SR 149	U.S. 20 to 1050 N										
SR 2	300 N to 400 E										
SR 2	400 E to Old SR 2										
SR 2	Old SR 2 to U.S. 6										
SR 2	U.S. 6 to U.S. 421										
SR 249	Midwest Steel to U.S. 20										
SR 39	18th St. to CR 400 S										
SR 49	Division Rd. to CR 300 S										
SR 53	93rd Ave. to 109th Ave.										
SR 53	57th Ave. to 68th Pl.										
SR 55	Ridge Rd. to U.S. 30										
SR 55	93rd Ave. to Summit St.										
SR 8	SR 2 to 250 W										
SR2	U.S. 421 to 100 S										
SR2	100 S to 18th St.										
SR2	18th St. to SR 39										
Summer St.	Columbia Ave. to Indianapolis Blvd										
U.S. 12/20/41	State Line to 119th St.										
U.S. 20	SR 212 to I-94										
U.S. 20	I-94 to SR 39										
U.S. 20	SR 39 to Fail Rd.										
U.S. 20	I-94 to SR 49										
U.S. 20	SR 49 to LaPorte County										
U.S. 20	U.S. 421 to U.S. 35										
U.S. 231	U.S. 41 to SR 55										
U.S. 231	SR 55 to E of I-65										
U.S. 231	E of I-65 to SR 2										
U.S. 30	State Line to U.S. 41										
U.S. 30	U.S. 41 to Mississippi St.										
U.S. 30	Colorado St. to Porter County Line										
U.S. 35	U.S. 20 to 400 N										
U.S. 35	400 N to Schultz Rd.										
U.S. 35	Schultz Rd. to Severs Rd.										
U.S. 41	U.S. 30 to U.S. 231										
U.S. 6	Calumet Rd. to 400 E										

Contributing Factor	Abbreviation
Signal Timing	S
Intersection Turns	IT
Traffic Operations	T
Access Points	A
Median Turns	M
Incidents	I
Water/Flooding	W
Railroad Crossings	RR
Development Patterns	D
Lack of Connectivity	C

Step 2

Viable Demand Management Strategies for Congested Corridors						
	Factors for demand management strategies:		-1.50%	-1.50%	-1.50%	-1.50%
Roadway	Corridor	Demand Adjustment Factor	Telecommuting	Carpooling	School Pool	Flextime
109th Ave.	State Line to U.S. 41	100%				
109th Ave.	Colorado St. to Porter County Line	100%				
15th Ave.	Cline Ave. to Colifax Ave.	100%				
45th Ave.	State Line to U.S. 41	95.5%				
77th Ave.	Sheffield Ave. to Austin Ave.	98.50%				
93rd Ave.	Sheffield Ave. to U.S. 41	98.50%				
93rd Ave./91st Ave.	Cline Ave. to Clark Rd.	100%				
Broad St.	Main St. to Joliet Rd.	100%				
Calumet Ave.	Indianapolis Blvd to SR 912	97%				
Cline Ave.	U.S. 12 to I-80/94	97%				
CR 400 N	Woodland Ave. to 600 W	100%				
CR 400 N	600 W. to Schultz Rd.	100%				
CR 450 W	600 N to SR 130	100%				
Dunes Hwy	I-65 to Clay St.	97%				
Fail Rd.	U.S. 20 to SR 2	100%				
Gostlin St.	State Line to I-90	98.50%				
Grand St.	Hemlock Ave. to Miller St.	98.50%				
I-80/94	State Line to I-65	95.5%				
I-94	Lake County to U.S. 20	95.5%				
Indianapolis Blvd	173rd Ave. to Ridge Rd.	100%				
joilet Rd.	Junction Ave. to SR 55	98.50%				
Merrillville Rd.	87th Ave. to Summit Ave.	97%				
Michigan St.	Indianapolis Blvd to SR 912	98.50%				
Severs Rd./200N	SR 39 to 50 W	100%				
Sheffield Ave./Hart St.	U.S. 30 to 93rd Ave.	98.50%				
South St.	Whitcomb St. to Indiana St.	98.50%				
SR 130	County Line Rd. to CR 250 W	100%				

Viable Demand Management Strategies for Congested Corridors

	Factors for demand management strategies:		-1.50%	-1.50%	-1.50%	-1.50%
Roadway	Corridor	Demand Adjustment Factor	Telecommuting	Carpooling	School Pool	Flextime
SR 149	U.S. 20 to 1050 N	100%				
SR 2	SR 49 to U.S. 421	100%				
SR 2	300 N to 400 E	100%				
SR 2	400 E to Old SR 2	100%				
SR 2	Old SR 2 to U.S. 6	100%				
SR 2	U.S. 6 to U.S. 421	100%				
SR 249	Midwest Steel to U.S. 20	95.5%				
SR 39	18th St. to CR 400 S	100%				
SR 49	Division Rd. to CR 300 S	98.50%				
SR 53	93rd Ave. to 109th Ave.	97%				
SR 53	57th Ave. to 68th Pl.	97%				
SR 55	Ridge Rd. to U.S. 30	98.50%				
SR 55	93rd Ave. to Summit St.	100%				
SR 8	SR 2 to 250 W	100%				
SR2	U.S. 421 to 100 S	100%				
SR2	100 S to 18th St.	100%				
SR2	18th St. to SR 39	100%				
Summer St.	Columbia Ave. to Indianapolis Blvd	98.50%				
U.S. 12/20/41	State Line to 119th St.	98.50%				
U.S. 20	SR 212 to Fail Rd.	100%				
U.S. 20	I-94 to SR 39	100%				
U.S. 20	SR 39 to Fail Rd.	100%				
U.S. 20	I-94 to SR 49	100%				
U.S. 20	SR 49 to Laporte County	100%				
U.S. 20	U.S. 421 to U.S. 35	100%				
U.S. 231	U.S. 41 to SR 55	100%				
U.S. 231	SR 55 to E of I-65	98.50%				
U.S. 231	E of I-65 to SR 2	100%				
U.S. 30	State Line to U.S. 41	98.50%				
U.S. 30	U.S. 41 to Mississippi St.	94%				
U.S. 30	Colorado St. to Porter County Line	95.5%				
U.S. 35	U.S. 20 to 400 N	100%				
U.S. 35	400 N to Schultz Rd.	100%				
U.S. 35	Schultz Rd. to Severs Rd.	100%				
U.S. 41	U.S. 30 to U.S. 231	98.50%				
U.S. 6	Calumet Rd. to 400 E	100%				

Step 3

Improvements (Includes, Access Management, Intelligent Transportation Systems, Transit, and Growth Management Strategies)											
Roadway	Corridor	CAF	S	IT	T	D	M	ITS	RR	TR	GM
		CAF	*1.05*	*1.07*	*1.05*	*1.05*	*1.1*	*1.1*	*1.1*	*1.1*	*1.1*
109th Ave.	State Line to U.S. 41	117%	⊖		⇆	‡	⟲	⟲	RR	Đ	
109th Ave.	Colorado St. to Porter County Line	122%	⊖			‡	⟲	⟲	RR	Đ	
15th Ave.	Cline Ave. to Colifax	127%				🚶	⟲	$$		Đ	€
45th Ave.	State Line to U.S. 41	135%		⤵⤴			⟲	$$			€
77th Ave.	Sheffield Ave. to Austin Ave.	122%				🚶	⟲	⟲			€
93rd Ave.	Sheffield Ave. to U.S. 41	120%		⤵⤴				⟲	RR	Đ	€
93rd Ave./91st. Ave.	Cline Ave. to Clark Rd	122%	⊖		⇆		⟲	⟲		Đ	
Broad St.	Main St. to Joliet Rd.	132%	⊖			🚶	⟲	⟲		Đ	€
Calumet Ave.	Indianapolis Blvd to SR 912	115%		⤵⤴		‡	⟲	⟲	RR		€
Cline Ave.	U.S. 12 to 80/94	110%	⊖	⟲	⇆	‡	𝕀		RR	Đ	€
CR 450 W	600 N to SR 130	117%				‡	⟲	⟲	RR	Đ	&
Dunes Hwy	I-65 to Clay St.	115%		⤵⤴		‡	𝕀		RR		€
Fail Rd.	U.S. 20 to SR 2	117%				🚶	⟲	⟲	RR	Đ	&
Gostlin St.	State Line to I-90	115%		⤵⤴		‡	⟲	⟲	RR		€
Grand St.	Hemlock Ave. to Miller St.	122%			⇆	‡	⟲		RR	Đ	€
I-80/94	State Line to I-65	100%	⊖	⟲	⇆	‡	𝕀	⟲	RR		€
I-94	Lake County to U.S. 20	110%	⊖	⟲	⇆	‡	𝕀		RR	Đ	&
Indianapolis Blvd	173rd Ave. to Ridge Rd.	110%		⤵⤴		‡	𝕀		RR		€
joilet Rd.	Junction Ave. to SR 55	112%				🚶	⟲	⟲	RR	Đ	€
joilet Rd.	Merrillville Rd. to Mississippi St.	110%		⤵⤴	⇆		⟲	⟲	RR	Đ	€
Merrillville Rd.	87th Ave. to Summit Ave.	127%				🚶	⟲	⟲	RR	Đ	
Michigan St.	Indianapolis Blvd to SR 912	132%				‡			RR		€
Severs Rd./200 N	SR 39 to 50 W	132%					⟲	⟲		Đ	
Sheffield Ave./Hart St.	U.S. 30 to 93rd Ave.	105%		⤵⤴		🚶	⟲	⟲	RR	Đ	€
South St.	Whitcomb St. to Indiana St.	127%	⊖	⤵⤴		🚶	⟲	$$	RR	Đ	
SR 130	County Line Rd. to CR 250 W	112%				‡	⟲	⟲	RR	Đ	&
SR 149	U.S. 20 to 1050 N	125%		⤵⤴		‡	⟲	⟲			&

Reason Alternative is not Viable	
⊖	No Signals Present or Needed
⇆	No Traffic Operations Issues
‡	No Driveways Present
𝕀	Median Controls are Perfect
$$	Alternative Not Finiancially Feasible
RR	Railroad Not Present
Đ	Density Too low to Support Alternative
€	Growth Management is Satisfactory
💻	Intelligent Transportation Systems is Satisfactory
⤵⤴	Intersection Turn Lanes Present
⟲	Alternative will not affect congestion
&	Rural area growth not anticipated
🚶	Shoulder is Adequate for driveways
◘	No Room for Alternative

Improvement	Abbreviation
CAF	Capacity Adjustment Factor
S	Signal Timing
IT	Intersection Turn Lanes
T	Traffic Operations Improvements
D	Driveway Controls
M	Median Controls
ITS	Incident Mgmt/ITS
RR	Railroad grade seperation
TR	Transit
GM	Growth Management

Improvements (Includes, Access Management, Intelligent Transportation Systems, Transit, and Growth Management Strategies)

Roadway	Corridor	CAF	S	IT	T	D	M	ITS	RR	TR	GM
		CAF	*1.05*	*1.07*	*1.05*	*1.05*	*1.1*	*1.1*	*1.1*	*1.1*	*1.1*
SR 149	U.S. 20 to 1050 N	125%		↴↱		ǂ	⟲	⟲			&
SR 2	300 N to 400 E	107%	⊖		⇆	ǂ	][	$$	~~RR~~	~~🚇~~	&
SR 2	400 E to Old SR 2	107%	⊖		⇆	ǂ	][	$$	~~RR~~	~~🚇~~	&
SR 2	Old SR 2 to U.S. 6	107%			⇆	ǂ	][	$$	~~RR~~	~~🚇~~	&
SR 2	U.S. 6 to U.S. 421	117%			⇆		][	$$	~~RR~~	~~🚇~~	€
SR 249	Midwest Steel to U.S. 20	130%		↴↱		ǂ		⟲	~~RR~~	~~🚇~~	
SR 39	18th St. to CR 400 S	112%			⇆	🚶	⟲	⟲	~~RR~~	~~🚇~~	&
SR 49	Division Rd. to CR 300 S	122%				🚶	⟲	⟲	~~RR~~	~~🚇~~	
SR 53	93rd Ave. to 109th Ave.	127%			⇆	🚶		⟲	~~RR~~		
SR 53	57th Ave. to 68th Pl.	125%		↴↱	⇆	🚶	⟲	⟲			€
SR 55	Ridge Rd. to U.S. 30	122%				🚶	][	⟲	~~RR~~		€
SR 55	93rd Ave. to Summit St.	115%		↴↱		🚶	][	⟲	~~RR~~		
SR 8	SR 2 to 250 W	107%			⇆	🚶	⟲	⟲	~~RR~~	~~🚇~~	&
SR 2	U.S. 421 to 100 S	122%					⟲	⟲	~~RR~~	~~🚇~~	&
SR 2	100 S to 18th St.	112%	⊖			ǂ	⟲	⟲	~~RR~~	~~🚇~~	&
SR 2	18th St. to SR 39	122%	⊖		⇆			⟲	~~RR~~	~~🚇~~	€
Summer St.	Columbia Ave. to Indianapolis Blvd	122%	⊖			ǂ	⟲	$$	~~RR~~		€
U.S. 12/20/41	State Line to 119th St.	125%		■		ǂ		⟲	~~RR~~		€
U.S. 20	SR 212 to Fail Rd.	105%	⊖	↴↱		ǂ	][	💻	~~RR~~	~~🚇~~	€
U.S. 20	I-94 to SR 39	127%			⇆			⟲	~~RR~~	~~🚇~~	&
U.S. 20	SR 39 to Fail Rd.	112%			⇆	ǂ	][	⟲	~~RR~~	~~🚇~~	&
U.S. 20	I-94 to SR 49	117%	⊖				⟲		~~RR~~	~~🚇~~	&
U.S. 20	SR 49 to LaPorte County	122%	⊖			🚶	⟲	⟲		~~🚇~~	&
U.S. 20	U.S. 421 to U.S. 35	127%			⇆	🚶		⟲	~~RR~~	~~🚇~~	
U.S. 231	U.S. 41 to SR 55	122%				🚶	⟲	⟲	~~RR~~	~~🚇~~	
U.S. 231	SR 55 to E of I-65	122%				🚶	⟲	⟲	~~RR~~	~~🚇~~	
U.S. 231	E of I-65 to SR 2	122%				ǂ	⟲	⟲	~~RR~~	~~🚇~~	
U.S. 30	State Line to U.S. 41	130%		↴↱		ǂ	][		~~RR~~		€
U.S. 30	U.S. 41 to Mississippi St.	140%		↴↱	⇆				~~RR~~		€
U.S. 30	Colorado St. to Porter County Line	145%		↴↱					~~RR~~	~~🚇~~	
U.S. 35	U.S. 20 to 400 N	132%					⟲	⟲		~~🚇~~	&
U.S. 35	400 N to Schultz Rd.	117%	⊖				⟲	⟲	~~RR~~	~~🚇~~	&
U.S. 35	Schultz Rd. to Severs Rd.	120%		↴↱		ǂ		⟲	~~RR~~	~~🚇~~	&
U.S. 41	U.S. 30 to U.S. 231	120%		↴↱		🚶			~~RR~~	~~🚇~~	&
U.S. 6	Calumet Rd. to 400 E	107%			⇆	🚶	⟲	⟲	~~RR~~	~~🚇~~	&

Reason Alternative is not Viable	
⊖	No Signals Present or Needed
⇆	No Traffic Operations Issues
ǂ	No Driveways Present
][	Median Controls are Perfect
$$	Alternative Not Finiancially Feasible
~~RR~~	Railroad Not Present
~~🚇~~	Density Too low to Support Alternative
€	Growth Management is Satisfactory
💻	Intelligent Transportation Systems is Satisfactory
↴↱	Intersection Turn Lanes Present
⟲	Alternative will not affect congestion
&	Rural area growth not anticipated
🚶	Shoulder is Adequate for driveways
■	No Room for Alternative

Improvement	Abbreviation
CAF	Capacity Adjustment Factor
S	Signal Timing
IT	Intersection Turn Lanes
T	Traffic Operations Improvements
D	Driveway Controls
M	Median Controls
ITS	Incident Mgmt/ITS
RR	Railroad grade seperation
TR	Transit
GM	Growth Management

The last step if no other strategies relieve congestion is to add roadway capacity. As stated in the table below (Step 4), the amount of capacity added depends on the amount of lanes of the original roadway. Adding capacity in most cases is not encouraged and only should be added in the worst instances of congestion where there is no other viable solution.

Step 4:

Adding Capacity		
From	To	Capacity Increase
2 lane roadway	4 lane roadway	100%
4 lane roadway	6 lane roadway	50%
6 lane roadway	8 lane roadway	33%
8 lane roadway	10 lane roadway	25%

The table below shows level of service improvement from strategies implementation. The first column is the level of service from NIRPC's model. The second column shows the improved level of service from demand management. The third column shows the level of service improvement from incorporating viable Transportation Systems, ITS, Transit and Growth Management strategies into the corridor. The fourth column shows the improved level of service with added travel lanes and demand management strategies. The last column shows the improved level of service if capacity is added and all strategies are incorporated.

Impacts:

Potential Impacts of Congested Corridors						
Roadway	Corridor	LOS 2008	LOS With Demand Management	LOS with Demand Management & Improvements	With DM and Added Travel Lanes	With Added Travel lanes , Demand Management & Improvements
SR 2	300 N to 400 E	D	D	C	B	A
109th Ave.	State Line to U.S. 41	F	F	E	B	B
109th Ave.	Colorado St. to Porter County Line	F	F	E	D	D
20/12/41	State Line to 119th St.	F	F	E	E	D
45th Ave.	State Line to U.S. 41	E	E	D	N/A	N/A
77th Ave.	Sheffield Ave. to Austin Ave.	F	E	E	B	B
93rd Ave.	Sheffield Ave. to U.S. 41	E	E	D	B	B
93rd Ave./91st Ave.	Cline Ave. to Clark Rd	E	E	D	B	B
Broad St.	Main St. to Joliet rd.	F	F	D	B	B
Calumet Ave.	Indianapolis Blvd to SR 912	F	F	D	D	C
Cline Ave.	U.S. 12 to 80/94	D	D	D	B	B
CR 450 W	600 N to SR 130	F	F	D	B	B
Fail Rd.	U.S. 20 to SR 2	F	F	D	B	B
Gostlin St.	State Line to I-90	F	F	F	E	C
I-80/94	State Line to I-65	F	F	N/A	N/A	N/A
I-94	Lake County to U.S. 20	F	D	D	C	B
Indianapolis Blvd	173rd Ave. to Ridge Rd.	E	E	D	B	B
Joliet Rd.	Junction Ave. to SR 55	F	E	E	B	B
Joliet Rd.	Merrillville Rd. to Mississippi St.	F	F	D	B	B
Michigan St.	Indianapolis Blvd to SR 912	F	E	D	B	B
Sheffield Ave./Hart St.	U.S. 30 to 93rd Ave.	F	E	E	B	B
SR 130	County Line Rd. to CR 250 W	F	F	F	B	B
SR 149	U.S. 20 to 1050 N	E	E	B	B	A
SR 2	U.S. 421 to 100 S	E	E	C	B	B
SR 2	100 S to 18th Ave.	E	E	A	A	A
SR 249	Midwest Steel to U.S. 20	E	D	B	B	B
SR 39	18th St. to CR 400 S	E	E	C	B	B
SR 49	Division Rd. to CR 300 S	E	C	B	B	B
SR 53	57th Ave. to 68th Place	F	E	D	B	B
SR 55	Ridge to U.S. 30	F	F	E	D	B
SR 55	93rd Ave. to Summit St.	F	F	F	D	D
SR 8	SR 2 to 250 W	E	E	D	B	B
SR2	Old SR 2 to U.S. 6	D	D	D	B	B
SR2	400 E to Old SR 2	D	D	D	B	B
SR2	U.S.6 to U.S. 421	E	E	B	B	A
Summer St.	Columbia Ave. to Indianapolis Blvd	F	F	D	B	B
U.S. 20	SR 212 to I-94	F	F	F	E	E
U.S. 20	I-94 to SR 39	F	F	C	B	B
U.S. 20	SR 39 to Fail Rd.	E	E	C	B	B
U.S. 20	I-94 to SR 49	E	E	C	B	B
U.S. 20	SR 49 to Laporte County	F	F	D	B	B
U.S. 20	U.S. 421 to U.S. 35	F	F	C	B	B
U.S. 30	State Line to U.S. 41	F	F	F	E	D
U.S. 30	U.S. 41 to Mississippi St.	F	F	F	E	C
U.S. 30	Colorado st. to Porter County Line	F	F	E	E	B
U.S. 41	U.S. 30 to U.S. 231	F	E	D	D	C
U.S. 6	Calumet Rd. to 400 E	E	E	C	B	B

As a result of this analysis, NIRPC is able to recommend projects to stakeholders into the region. In these corridors, there has been significant congestion identified and the recommended projects below would help relieve congestion.

Results:

Recommended Projects for Congested Corridors						
Corridor	From	To	Capacity Expansion	Nature of Work	Old LOS	New LOS
U.S. 231	U.S. 41	SR 55	Yes	Added Travel Lanes, Intersection Improvements, Relocation of Utilities, School Pool Promotion, Signal Improvements	F	C
U.S. 231	SR 55	I-65	Yes	Added Travel Lanes, Intersection Improvements, Relocation of Utilities, School Pool Promotion, Signal Improvements	F	C
Merrillville Rd.	87th Ave.	Summit Ave.	No	Intersection Improvements, New Traffic Signal, Removal of parking, School Pool Promotion, Carpool Promotion	F	D
SR 53	93rd Ave.	109th Ave.	Yes	Intersection Improvements, Added Center Turn Lane, School Pool Promotion, Carpool Promotion	F	D
South St.	Whitcomb Ave.	Indiana St.	Yes	Added Travel Lanes, Added Sidewalks, School Pool Promotion	F	B
Grand St.	Miller St.	Hemlock Ave.	No	Signal Improvements, ITS Improvements, Intersection Improvements, School Pool Promotion	F	D
U.S. 20/12	I-65	Clay St.	No	More Bus Service, Repavement	F	E
15th Ave.	SR 912	Colifax Ave.	No	Signal Improvements, New Pavement, Intersection Improvements, Railroad Grade Seperation	F	D
SR 2	300 N	U.S. 6	No	Intersection Improvements	F	C/D
SR 2	U.S. 6	U.S. 421	No	Intersection Improvements, Signal Synchronization, Shoulder Improvements	F	B
U.S. 20	SR 212	I-94	Yes	Add One Travel Lane in each directon, fix geometorics in corridor	F	E
U.S. 20	I-94	Fail Rd.	No	Intersection Improvements, Signal Synchroization, New Median, Shoulder Improvements	F/E	C/C
SR 2	U.S. 421	18th Ave.	No	Intersection Improvements, Signal Synchroization , Shoulder Improvements, Added Lane Width	E/E	C/A
U.S. 35	U.S. 20	Severs Rd.	Yes	Added Travel Lanes, Shoulder Improvements, Intersection Improvements	F/F	E/B
U.S. 20/12/41	State Line	119th st.	Yes	Carpool Promotion, Remove Parking, Add Center Turn Lane, Sidewalk Improvements, Striping, More Bus Service	F	E
Calumet Ave.	U.S. 20/12/41	Cline Ave.	No	More Bus Service, Carpool Promotion, School PoolPromotion, Striping, Complete Streets	F	D
Gostin Ave.	State Line	I-90	No	New Bus Service, Carpool Promotion, New Sidewalks, ADA Improvements, Striping	F	F
Michigan St.	Indianapolis Blvd	Cline Ave.	Yes	Intersection Improvements, Added Center Turn Lanes, Restriping, Complete Streets, Signal Timing, ITS Improvements	F	D
Summer St.	Columbia Ave.	Indianapolis Blvd	NO	Intersection Improvements, Removal of Parking, New Sidewalks, New Bus Service	F	D
Indianapolis Blvd	173rd Ave.	Ridge Rd.	NO	Roadway Improvements, New Striping	E	D
SR 249	Midwest Steel	U.S. 20	NO	Carpool Promotion, Flextime Promotion, Telecommuting Promotion, Increased Law Enforcement, Sidewalks, Complete Streets, Smart Growth Promotion	E	B
SR 149	U.S. 20	1050 N	NO	Railroad Grade Seperation	E	B
SR 55	Ridge Rd.	U.S. 30	Yes	Added Travel Lanes, Signal Synchronization, Carpool Promotion, Intersection Improvements, Sidewalks, Striping	F	B
SR 55	93rd Ave.	Summit Ave.	No	Complete Streets	F	F

Recommended Projects for Congested Corridors

Corridor	From	To	Capacity Expansion	Nature of Work	Old LOS	New LOS
U.S. 41	U.S. 30	U.S. 231	Yes	Added Center Turn Lane, Signal Synchronization, New Sidewalks, School Pool Promotion	F	D
109th Ave.	State Line	U.S. 41	No	Intersection Improvements, Smart Growth	F	E
109th Ave.	Colorado Ave.	Porter Co. Line	No	Lane widening, Intersection Improvements	F	E
Broad St.	Main St.	Joliet Rd.	No	Railroad Grade Seperation	F	D
SR 53	57TH Ave.	68th Pl.	No	School Pool Promotion, Carpool Promotion, Railroad Grade Seperation, New Transit Service	F	D
Joliet Rd.	Junction Ave.	SR 55	Yes	Added Travel Lanes, Carpool Promotion, Intersection Improvements, New Sidewalks, Signal Timing	F	B
Joliet Rd.	Merrillville Rd.	Mississippi St.	No	Signal Timing, Shoulder Improvements	F	D
Cline Ave.	U.S. 12	I-80/94	Yes	Add One Travel Lane, ITS Improvements	D	B
I-80/94	State Line	I-90	No	Carpool Promoton, Telecommuting Promotion, Flextime Promotion	F	F
U.S. 30	State Line	U.S. 41	Yes	Added Travel Lanes, New Sidewalks, New Transit Line, ITS Improvements, Carpool Promotion	F	D
U.S. 30	U.S. 41	Mississippi St.	Yes	Upgrade entire corridor to six thru lanes, removal of access points, Signal Timing, Median Improvements, ITS Improvements, New Transit Line, Carpool Promotion, School Pool Promotion, Flextime Promotion, Telecommuting Promotion, Complete Streets	F	C
U.S. 30	Colorado Ave.	Porter Co. Line	No	Removal of access points, Signal Timing Median Improvements, ITS Improvements, Carpool Promotion, Flextime Promotion, Telecomuting Promotion, Compete Streets, Smart Growth	F	E
93rd Ave.	Sheffield Ave.	U.S. 41	Yes	New Center Turn Lane, Shoulder Improvements, Carpool Promotion, Signal Timing	E	D
Sheffield Ave./Hart St.	U.S. 30	93rd Ave.	No	Complete Streets, Carpool Promotion	F	E
77th Ave.	Sheffield Ave.	Austin Ave.	Yes	Added Travel Lanes, Intersection Improvements, Carpool Promotion, Complete Streets, Signal Improvements	F	B
45th Ave.	State Line	U.S. 41	No	Railroad Grade Seperation, New Sidewalks, Signal Timing, Shoulder Improvements, Carpool Promotion, Telecommuting Promotion, Flextime Promotion	E	D
I-94	Lake County	U.S. 20	No	Carpool Promotion, Telecommuting Promotion, Flextime Promotion, ITS Improvements	F	D
SR 130	Lake County	CR 250 W	Yes	Added Travel Lanes, Intersection Improvements, Signal Improvements	F	B
SR 8	SR 2	CR 250 W	No	Intersection Improvements	E	D
U.S. 20	I-94	SR 49	No	Shoulder Improvements, Intersection Improvements	E	C
U.S. 20	SR 49	LaPorte County	No	Intersection Improvements, Railroad Grade Seperation	F	D
U.S. 6	Calumet Rd.	400 E	No	Intersection Improvements	E	C
CR 450 W	600 N	SR 130	Yes	Add One Travel Lane, Signal Improvements, Intersection Improvements	F	B
SR 49	Division Rd.	CR 300 S	No	School Pool Promotion, Intersection Improvements, Smart Growth	E	C
U.S. 20	U.S. 421	U.S. 35	Yes	Added Center Turn Lane, Intersection Improvements, Smart Growth	F	C
SR 39	18th Ave.	CR 400 N	No	Signal Improvements, Intersection Improvements	E	C
Fail Rd.	U.S. 20	SR 2	No	Signal Timing, Intersection Improvements, Lane widening	F	C

Traffic Operations Project Recommendations		
Roadway	Corridor	Traffic Operations Recommendations
U.S. 20	SR 212 to Fail Rd.	Shoulder Improvements
SR 2	U.S. 421 to 100 S	Shoulder Improvements, Lane Widening
SR 2	100 S to 18th St.	Shoulder Improvements, Lane Widening
U.S. 35	U.S. 20 to 400 N	Shoulder Improvements
U.S. 35	400 N to Schultz Rd.	Shoulder Improvements
U.S. 35	Schultz Rd. to Severs Rd.	Shoulder Improvements, fix Intersection geometry with Severs Road
U.S. 231	U.S. 41 to SR 55	Utilities Relocation, Vegatation Relocation, fix Geometry
U.S. 231	SR 55 to E of I-65	Utilities Relocation, Vegatation Relocation, fix Geometry
U.S. 231	E of I-65 to SR 2	Utilities Relocation, Vegatation Relocation, fix Geometry
Merrillville Rd.	87th Ave. to Summit Ave.	Parking Removal
South St.	Whitcomb Ave. to Indiana St.	Vegatation Relocation, New Sidewalks
U.S. 12/Dunes Hwy	I-65 to Clay St.	Repavement
15th Ave.	Cline Ave. to Colifax St.	Repavement
U.S. 12/20/41	State Line to 119th St.	Parking Removal, Striping, Complete Streets
Calumet Ave.	Indianapolis Blvd to SR 912	Striping, Complete Streets
Gostlin St.	State Line to I-90	New Sidewalks, ADA Compliance, Paint Markings, fix geometry
Michigan St.	Indianapolis Blvd to SR 912	Complete streets, Utilities relocation, Striping
Summer St.	Columbia Ave. to Indianapolis Blvd	New Sidewalks, Parking Removal, Fix Geometry
Indianapolis Blvd	173rd Ave. to Ridge Rd.	Pavement Markings, Fix geometry of overpass
SR 55	Ridge Rd. to U.S. 30	Striping, New Sidewalks
SR 55	93rd Ave. to Summit St.	Complete Streets
U.S. 41	U.S. 30 to U.S. 231	Sidewalks
109th Ave.	Colorado St. to Porter County Line	Lane Widening
Broad St.	Main st. to Joliet rd.	Lane Widening
joilet Rd.	Junction Ave. . to SR 55	New sidewalks
U.S. 30	State Line to U.S. 41	New sidewalks
U.S. 30	Colorado st. to Porter County Line	Complete Streets
93rd Ave.	Sheffield Ave. to U.S. 41	Vegatation Relocation, Fix intersection geometry, Shoulder Improvements
Sheffield Ave./Hart St.	U.S. 30 to 93rd Ave.	Complete Streets
77th Ave.	Sheffield Ave. to Austin Ave.	Complete Streets, Remove Vegetation
45th Ave.	State Line to U.S. 41	New Sidewalks, Shoulder Improvements
SR 249	Midwest Steel to U.S. 20	Complete Streets, Law Enforcement
SR 149	U.S. 20 to 1050 N	Lane Widening
SR 130	County Line Rd. to CR 250 W	Fix Intersection Geometry
U.S. 20	I-94 to SR 49	Shoulder Improvements
U.S. 20	SR 49 to Laporte County	Intersection Geometry

XI. Project Evaluation Process

This section explains how submitted expansion projects are evaluated for the Comprehensive Regional Plan and the Transportation Improvement Program. A Congestion Management evaluation form is filled out for every expansion project with information about the project, the project's corridor's level of service and the possible alternatives that were considered. This form determines if the project passes the congestion management process and is eligible to be included in the CRP, the TIP and eventually eligible for federal funding. **The following is an example of a completed form of a project in the town of Merrillville.**

Explanation of Evaluation Forms for Capacity Adding TIP Projects

Project Title: The Name of the project with the type of construction performed indicated.

Sponsor Name: Stakeholder who submitted the project of funding

Funding Fiscal Year: Year funding is requested for.

Estimated Total Funding Cost: Total cost of project

Federal Funding Share: Total amount of federal funds requested

Local Funding Share: Amount of the local funds to match federal funds

Project Scope: Type of construction work being performed

Number of lanes added to roadway: Added Roadway Capacity

Project Title:

Mississippi St Reconstruction (83rd Ave to 101st Ave): Added Travel Lanes

Sponsor Name	*Merrillville*
Funding Fiscal Year	*2011-2015*
Total Funding Cost	*$4,302,941*
Federal Funding Share	*$3,442,353*
Local Funding Share	*$860,588*
Project Scope	*Added Travel Lanes, Reconstruction*
Number of Lanes Added to Roadway	*Two Added Travel Lanes*

Project Location Description: A description of the physical project boundaries.

Description of the project: Background on the project and explanation of why the project is needed.

Project Location Description:

This project will be located on Mississippi Street between US-30 and 101st avenue.

Description of Project:

The intent of this project is to reconstruct Mississippi Street and add one travel lane in each direction, bringing up the total amount of travel lanes to four. Intersection turn lanes will be provided as needed. The intersection on 83rd Avenue and Mississippi Street will be redesigned as well. A new signal will be introduced at 89th Avenue.

Congestion Analysis for Project Corridor: The following table provides a quantitative analysis of the corridor of the project in Merrillville. The corridor will be determined to be congested or not based on the level of service grade from this table. The Level of Service grade must be a C or lower within the project corridor to pass the congestion management process unless there is an identified safety issue.

		Level of Service
Project length	2.50	
Total V/C Ratio for Corridor	1.56	F
AM V/C Ratio	1.28	F
PM V/C Ratio	1.81	F
OP V/C Ratio	1.60	F
Projected Total V/C Ratio for 2040	1.78	F
Projected AM V/C Ratio for 2040	1.50	F
Projected PM V/C Ratio for 2040	1.96	F
Projected OP V/C Ratio for 2040	1.88	F
Average Speed/Posted Speed 2008	26%	F
Average Speed/Posted Speed 2040	28%	F
Crash Rate (2007) Fatalities (2005-2009)	2.15 0	B
Total VMT Change for Network	+15820	
Total Level of Service		F

Is capacity expansion project located within any of the following?: Is this project physically located within the part of the region that is determined to have a transportation importance priority over the rest of the region, as determined by the Comprehensive Regional Plan. The choices are revitalization area, Livable Center, Economic Center, or Growth Area.

Does this project align with the goals and the preferred scenario of the Comprehensive plan?: The preferred scenario is the direction that the region elects to take between now and 2040. Does this project agree with the comprehensive plans goals and scenario?

Is capacity expansion project located within the any of the following?

☐Revitalization Area ☐Livable Center ☒Economic Center ☐ Growth Area ☐None of the Above

Does this project align with the goals and the preferred scenario of the Comprehensive plan? Please explain.

☒Yes ☐No

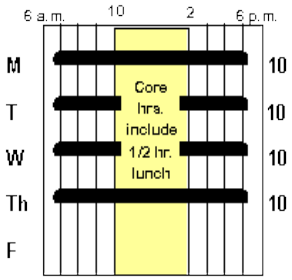
Yes because it relieves congestion in an area where other alternatives would not improve traffic conditions

Recommendation and alternatives that should be considered: This is the alternative analysis section of the form. This determines if enough alternatives were reviewed other than expanding capacity. Based on research from documents such as local plans, design studies, etc. it will be determined if the project sponsor reviews an adequate number of alternatives. The sections are as follows:

Demand Management Strategies: Telecommuting promotion, flex work schedule promotion, carpool and vanpool promotion, school pool promotion, alternative travel mode incentives and alternative travel mode events.

Telecommuting Promotion

This encourages employers to implement a program or policies that encourage an employee to work from home or other remote location. For example, the employee would be allowed to work from home via his or her computer.



Flex Work Schedule Promotion

Encouraging employers to implement a program or policies whereby employees can work a compressed work week and take a day off. For example, employees could work 40 hours in four days, thereby eliminating a trip to and from work one day each week.

Carpool and Vanpool Promotion

Carpool and vanpool programs can be used to promote two or more people sharing a ride. These can be operated by both public (agency set up to provide vanpool service) and private sector entities (individual workplaces, office parks, and/or residential areas).

School Pool Promotion

This is the same idea as carpools/vanpools, meant to serve areas with large numbers of students not served by school busses.

Alternative Travel Mode Incentives

Entities, both public and private, can provide incentives to employees to start or continue using alternative forms of transportation for their commutes.

Alternative Travel Mode Events

This can include any number of events that promote and educate people on the use of alternative travel modes. These can be annual one-day events such as Bike to Work Day, or events that promote transit services and other available incentives.

Transportation Management/ Access Management Strategies: Courtesy patrols, roadway signage improvements, added bike lanes, ramp meters, intersection turn lanes, acceleration/deceleration lanes, railroad crossing grade separation, HOV/HOT managed lanes, roundabouts, separation of truck traffic, continuous turn lanes, intersection grade separation, new stop signs, new sidewalks, added travel lanes to parallel roadways, new interchange and lane widening.

Courtesy Patrols

Courtesy patrols are a service that is provided in heavily traveled expressways, as well as corridors with narrow shoulders or major construction zones. These patrols assist with vehicle breakdowns, and crashes in order to minimize traffic disruptions, especially in congested areas. The INDOT Hoosier Helper is an invaluable example of aid to stranded motorists and assistance with incidents, such as crashes. This service is available on I-80/94 from the Illinois state line to mile marker number 19, which is the Port of Indiana exit in Porter County, plus I-65 from its northern terminus in Gary south to Crown Point.

Roadway Signage Improvements

Roadway signage improvements can include additional signage that facilitates way-finding and enhances decision-making by roadway users as well as signs that are made clearer and more legible from greater distances.

Add Bike Lanes

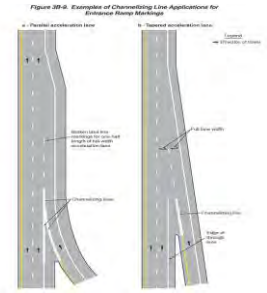
Bike lanes allow for a safer, more comfortable way for people to use bicycles as an alternative form of transportation, helping to alleviate congestion by removing cars from the same routes.

Ramp Meters

Ramp meters are traffic signal devices that regulate the flow of traffic entering an expressway. Meters help regulate the impact of large volumes of traffic entering highways that already are heavily traveled. They have been used in Northwest Indiana during Borman Expressway reconstruction.

Intersection Turn Lanes

Intersection turn lanes provide additional lanes to separate traffic that is turning left or right from through traffic.



Acceleration/Deceleration Lanes

An acceleration lane provides an opportunity on expressways and arterial streets for vehicles to gain speed to more easily and safely merge into the flow of traffic. Deceleration lanes are on expressways just before exit ramps to allow for traffic to decelerate before exiting safely removed from the flow of through traffic.

Railroad Crossing Grade Separation

Railroad crossing grade separation is when a road overpass or underpass is used at intersections with railroad lines.

HOV, HOT Managed Lanes

High-occupancy vehicle (HOV) and high-occupancy/toll (HOT) lanes are ways to encourage carpooling as well as bus usage by requiring a minimum number of people in vehicles that use the lane. Allowed users of

HOT lanes can expand to those who are willing to pay a toll to use them with less than the minimum number of riders. HOV/HOT lane usage also can be used to incentivize the usage of low-emission and hybrid vehicles.

Roundabouts

Roundabouts are a type of intersection that do not use traffic signals or stop sign traffic controls. Instead, cars continuously move around a circular roadway, using specific lanes to enter and exit.

Separation of Truck Traffic

Separation of truck traffic involves separating semi-truck and other commercial traffic from light-duty automobile traffic. This can include grade separation, dedicated lanes and roads for truck traffic, and truck-only ramps.

New Stop Signs

New stop signs can make intersections safer and operate more efficiently when the intersection becomes congested due to one direction not having to stop. Intersections also can be made safer as stopped drivers do not have to pull out into moving traffic.

Sidewalks

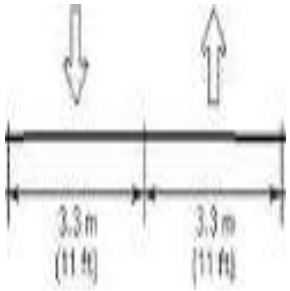
Sidewalks allows for pedestrians to safely travel along a roadway, separate from other traffic.

New Interchange

The construction of a new interchange and provision of additional entry/exit points along a highway. Additionally, it can help alleviate congestion at existing interchanges by providing more options for traffic entering or exiting the highway.

Add Travel Lanes to Parallel Road

Instead of adding lanes to a smaller road nearby or to an already large and congested roadway, additional travel lanes can be added to a road that runs parallel to the existing larger roadway.



Lane Widening

Lane widening can help increase the safety of a roadway by allowing more room, especially at bends in the road where vehicles will use more of the travel lane to negotiate the bend and increase the chance of a head-on collision. On straight road sections, wider lanes reduce the chances of a sideswipe crash by allowing more room for vehicles to navigate

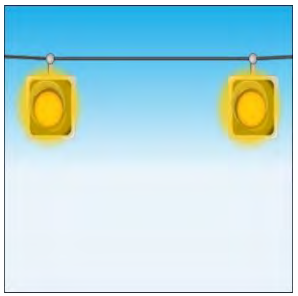
Intelligent Transportation Systems: New traffic signal, traffic signal timing and coordination, traffic signal equipment modernization, incident management plans, dynamic messaging system.

New Traffic Signal

A new traffic signal can help an intersection to function more efficiently than signage alone. It also can improve the safety of an intersection by helping the traffic flow more smoothly.

Traffic Signal Timing and Coordination

Traffic flow can be improved and the number of vehicle stops decreased if traffic signal timing and coordination and equipment at intersections are enhanced.



Traffic Signal Equipment Modernization

Modernization of traffic signal equipment can allow for a more efficient flow of traffic by providing the opportunity to use signals that can immediately respond to real-time traffic needs at the intersection, as opposed to pre-timed intervals. Modern signals also can provide immediate notification of signal malfunctions and can be used to extend a green light and give priority to bus transit that is approaching the intersection.

Incident Management Plans

Incident management plans (IMPs) are operational plans for agencies and personnel defining the roles, rules, procedures, traffic diversion routes, and protocols to be followed in the event of a traffic incident.

Dynamic Messaging System

A dynamic messaging system is a system of electronic signs placed on heavily traveled corridors that provide real-time information to roadway users regarding traffic movements, accident and alternative route information, and other types of pertinent information to allow for a more informed driving decisions.

Potential Transit Strategies: New Public Transit Guideway System, Public Transit Capacity Expansion, Public Transit Route Extension, New Transit Route Transit Signal Priority.

New Public Transit Guideway System

These systems involve guideways for light rail and commuter rail systems and on-street travelways for bus rapid transit (BRT) systems. These systems increase the amount of people who can travel a congested corridor at a given time while reducing the number of vehicles necessary to move them.

Public Transit Capacity Expansion, Public Transit Route Extension or New Transit Route

Public transit capacity expansion involves the creation of new bus routes, extension of existing bus routes, and/or increase of the frequency (headways) of buses-on existing routes.

Transit Signal Priority

Transit signal priority provides a separate signal that gives busses a head start in order to merge into traffic or reach a stop, especially when lanes for general traffic must be crossed in order to do so.

Potential Growth Management Strategies: Promote more high density, promote more transit-oriented development (TOD), promote more cargo-oriented development, improve land use patterns, urban growth boundary, tax incentive policies.

Promote More High density

Promoting greater density allows for the creation of more transit- and pedestrian-friendly communities. With proper density and walkability, people will need to drive less, thereby reducing dependence on automobiles and the congestion resulting from their use.

Cargo Oriented Development

Cargo oriented development (COD) is a similar concept to TOD. It concentrates manufacturing and distribution businesses at a location where they have easy and quick access to multiple modes of freight transportation. Other key elements to a successful COD are access to complimentary businesses and an industrial workforce.

Promote More Transit Oriented Development

Transit oriented development provides for more compact, livable, and walkable communities that are based around mass transit. Generally, densities are higher the closer to the transit stop the development is.

Improvement of Land Use Patterns

Better land use patterns are ones that don't create uncontrolled development and decrease the need for, and dependence on, automobiles, while making transit a more viable option.

Urban Growth Boundary

Urban growth boundaries set a limit for where higher density urban growth can take place. Within the boundary, urban development can occur, while outside the boundary land is meant to have lower density and less development. Urban growth boundaries are a tool that can be used to combat urban sprawl.

Tax Incentive Policies

Tax incentive policies apply, in this case, to the revitalization of urban centers. Tax incentives could be used to encourage infill development and redevelopment of urban centers while discouraging development on the urban fringe.

Other Strategies: Implementation of Bikeways and Pedways, Traffic Calming Techniques, Complete Streets, Congestion and Parking Pricing.

Implementation of Bikeways and Pedways

Implementation of bikeways and pedways would expand the number of viable transportation options, enabling people to get to their destination with alternative forms of transportation. This would reduce the number of vehicles and amount of congestion on roadways.

Traffic Calming Techniques

Traffic calming techniques help to create travel corridors that are more inviting and safer for other forms of transportation, especially bicyclists and pedestrians. By making travel corridors more comfortable and safer, people will be more encouraged to utilize alternative forms of transportation.

Complete Streets

Complete streets is a concept that encourages the use of various methods to create roadways that are safer, more livable, and welcoming for all users, not just motorists.

Congestion and Parking Pricing

Congestion pricing involves designating a specific congested area and then charging those who drive into it, either at certain times of day or when congestion conditions warrant a charge. This discourages driving at times of high congestion, encouraging people to seek out other forms of transportation. Parking pricing can be used to discourage automobile usage by making the cost to park in congested areas unappealingly high.

Recommendations and Alternatives that should be considered

Potential Demand Management Strategies:

Sponsors Considerations for project		NIRPC's recommended solutions
☐	Telecommuting Promotion	☒
☐	Flex Work Schedule Promotion	☒
☐	Carpool and Vanpool Promotion	☒
☐	School Pool Promotion	☐
☐	Alternative Travel Mode Incentives	☐
☐	Alternative Travel Mode Events	☐

Score: 0/6

Potential Transportation Management/ Access Management Strategies:

Sponsors Considerations for project		NIRPC's recommended solutions
☐	Courtesy Patrols	☐
☐	Roadway Signage Improvements	☐
☐	Add bike lanes	☐
☐	Ramp Meters	☐
☒	Intersection Turn Lanes	☐
☐	Acceleration/Deceleration lanes	☐
☐	Railroad crossing grade separation	☐
☐	HOV, HOT managed lanes	☐

☐	Roundabout	☐
☐	Separation of Truck Traffic	☐
☐	Continuous turn lanes	☐
☐	Intersection grade separation	☐
☐	New stop sign	☐
☐	Sidewalks	☐
☐	Add Travel Lanes to parallel road	☐
☐	New Interchange	☐
☐	Lane widening	☐

Score: 2/2

Potential Intelligent Transportation Systems Strategies:

Sponsors Considerations for project		NIRPC's recommended solutions
☒	New Traffic signal	☐
☒	Traffic Signal Timing and Coordination	☐
☐	Traffic Signal Equipment Modernization	☐
☐	Incident Management Plans	☐
☐	Dynamic Messaging System	☐
☐	Wildlife Alert Signal	☐

Score: 4/4

Potential Transit Strategies:

Sponsors Considerations for project	NIRPC's recommended solutions

☐	New Transit Route	☐
☐	Transit Signal Priority	☐

Score: 2/2

Potential Growth Management Strategies:

Sponsors Considerations for project		NIRPC's recommended solutions
☐	Promote More High Density	☐
☐	Promote more transit oriented development	☐
☐	Promote more Cargo Oriented Development	☐
☐	Improvement of land use patterns	☒
☐	Urban Growth boundary	☐
☐	Tax incentive policies	☐

Score: 0/2

Other Strategies:

Sponsors Considerations for project		NIRPC's recommended solutions
☐	Implementation of Bikeways and Pedways	☐
☐	Traffic calming techniques	☐
☒	Complete Streets	☒
☐	Congestion and parking pricing	☐
☐	Increased law enforcement	☐

Alternatives Analysis scoring: There is a maximum score for each that is based on the amount of alternatives that are offered. Two points are awarded for each alternative that the sponsor considers and/or each alternative that already exists within the corridor of the project. However, 1 point is subtracted if no consideration has been made for each alternative that was recommended by NIRPC. The minimum score for each category is 0 if no alternatives are considered and 1 if any alternative is considered within the category. If there are no recommendations or considerations for a category, then the category is not considered for the final score. The alternatives analysis score will be based on a percentage.

Mississippi St.	
LOS 2008	F
LOS With Demand Management	F
LOS with Demand Management & Improvements	F
With DM and Added Travel Lanes	E
With Added Travel lanes , Demand Management and Improvements	B

Alternative Analysis LOS Improvement Evaluation: The above table only applies to projects that wish to add capacity to existing roadways. LOS 2008 is the current level of service for the project corridor. LOS with demand management shows the improved level of service if viable demand management strategies are implemented to the project corridor. LOS with Demand Management & Improvements shows improvement of level of service that if every viable strategy that doesn't add capacity is incorporated. DM with Added Travel Lane show the improved level of service if Demand Management is implemented and capacity also is added. Added

Travel Lanes, Demand Management and Improvements looks at the improved level of service if all strategies are incorporated and capacity is added.

Does capacity expansion project pass congestion management evaluation? If the project does not pass the congestion management evaluation, then it may be denied federal funding until any discrepancies are resolved.

XII. Project Evaluation Results

The following chart displays the contributing factors of congestion for the project corridors. If the projects purpose is to build a new roadway, then the strategies analysis would be conducted on the nearest parallel arterial roadway.

Contributing Factors For Project Locations

Project Location	From-To	Signal Timing	Intersection Turns	Traffic Operations	Access Points	Median Turns	Incidents	Water/Flooding	Railroad Crossings	Development Patterns	Lack of Connectivity
Mississippi St.	83rd Ave. to 101st Ave.	■	■	■		■				■	
101st Ave.	SR 53 to Mississippi St.			■							
Division Rd.	SR 2 to U.S. 30		■	■						■	
U.S. 20	Woodland Ave. to Johnson Rd.					■	■		■		
18th Ave.	SR 39 to U.S. 35	■	■	■			■				
45th Ave.	Colfax Ave. to Cleveland St.		■	■		■					
61st Ave.	Arizona St. to SR 51					■	■				
Boyd Blvd	SR 2 to U.S. 35					■	■				
Boyd North (Park St.)	SR 2 to Severs Rd.		■	■							■
133rd Ave.	U.S. 41 to Parrish Ave.					■	■				
County Line Rd.	U.S. 12 to U.S. 20	■	■	■			■		■		
County Line Rd.	37th Ave. to SR 130			■		■	■				
Cline Ave. Realignment	Along Riley Rd. and Dickey Rd.	■	■	■					■		
Severs Rd. (For ED Corridor)	SR 39 to Fail Rd			■					■		■
Main St. Ext.	State Line to Columbia Rd.						■				■
Kennedy Ave.	Main St. to U.S. 30		■				■		■		■
Marina Access Rd.									■		■
Willowcreek Rd.	700 N to U.S. 30			■							■
Springland Ave.	Karwick Ave. to SR 212								■		■
SR 2	At I-65	■	■	■		■					
SR 49	At Vale Park Rd.						■				
U.S. 421	F SR 2 S to SR 2 N					■					
Vale Park Rd.	Calumet Rd. to Silhavy Rd.		■	■			■				
SR 149	SR 130 to U.S. 30						■			■	
Airport Rd.	E of Porter County Airport									■	

The following chart displays the viable demand management strategies in the corridors for which regionally significant projects were submitted. Within this region, there are few options for demand management strategies. In the corridors where demand management is possible, there was not a significant change in congestion to warrant implementing the strategies by themselves. However, there are some corridors where demand management strategies would work well in combination with other strategies.

Viable Demand Management Strategies for Project Locations

Project Location	From-To	Telecommuting	Carpooling	School Pool	Flextime
Mississippi St.	83rd Ave. to 101st Ave.				
101st Ave.	SR 53 to Mississippi St.				
Division Rd.	SR 2 to U.S. 30				
U.S. 20	Woodland Ave. to Johnson Rd.				
18th Ave.	SR 39 to U.S. 35				
45th Ave.	Colfax Ave. to Cleveland St.				
61st Ave.	Arizona St. to SR 51				
Boyd Blvd	SR 2 to U.S. 35				
Boyd North (Park St.)	SR 2 to Severs Rd.				
133rd Ave.	U.S. 41 to Parrish Ave.				
County Line Rd.	U.S. 12 to U.S. 20				
County Line Rd.	37th Ave. to SR 130				
Cline Ave. Realignment	Along Riley Rd. and Dickey Rd.				
Severs Rd. (For ED Corridor)	SR 39 to Fail Rd				
Main St. Ext.	State Line to Columbia Rd.				
Kennedy Ave.	Main St. to U.S. 30				
Marina Access Rd.					
Willowcreek Rd.	700 N to U.S. 30				
Springland Ave.	Karwick Ave. to SR 212				
SR 2	At I-65				
SR 49	At Vale Park Rd.				
U.S. 421	F SR 2 S to SR 2 N				
Vale Park Rd.	Calumet Rd. to Silhavy Rd.				
SR 149	SR 130 to U.S. 30				
Airport Rd.	E of Porter County Airport				

The viable strategies are indicated in green. If the cell is not highlighted, then the strategy is not feasible for that project corridor.

Viable Transportation Systems Management Strategies for Project Locations

Project Location	From-To	Signal Timing	Intersection Turn Lanes	Traffic Operations Imp	Driveway Controls	Median Controls	Incident Mgmt/ITS	Railroad grade seperation	Transit	Growth Management
Mississippi St.	83rd Ave. to 101st Ave.			⇆	‡	⟲	$$	~~RR~~		
101st Ave.	SR 53 to Mississippi St.		⟲		‡	⟲	$$	~~RR~~	~~D~~	
Division Rd.	SR 2 to U.S. 30			⇆	‡	⟲	$$	~~RR~~	~~D~~	
U.S. 20	Woodland Ave. to Johnson Rd.	⌯	⟲	⇆	▮				~~D~~	€
18th Ave.	SR 39 to U.S. 35			⇆	◘			~~RR~~	~~D~~	€
45th Ave.	Colfax Ave. to Cleveland St.				‡		$$	~~RR~~		€
61st Ave.	Arizona St. to SR 51	⌯	⅂⅂		‡			~~RR~~	~~D~~	€
Boyd Blvd	SR 2 to U.S. 35	⌯	⅂⅂		‡		$$	~~RR~~	~~D~~	&
Boyd North (Park St.)	SR 2 to Severs Rd.	⌯			‡	⟲	$$	~~RR~~	~~D~~	&
133rd Ave.	U.S. 41 to Parrish Ave.				▮		$$	$$	~~D~~	€
County Line Rd.	U.S. 12 to U.S. 20				‡	⟲	$$		~~D~~	€
County Line Rd.	37th Ave. to SR 130	⌯			▮		$$	~~RR~~	~~D~~	&
Cline Ave. Realignment	Along Riley Rd. and Dickey Rd.				‡	⟲	$$			€
Severs Rd. (For ED Corridor)	SR 39 to Fail Rd	⌯	⅂⅂		‡	⟲	$$		~~D~~	&
Main St. Ext.	State Line to Columbia Rd.	⌯	⅂⅂	⇆	‡	⟲	$$		~~D~~	
Kennedy Ave.	Main St. to U.S. 30	⌯		⇆	▮	ⅡⅠ	$$	~~RR~~		€
Marina Access Rd.		⌯	⅂⅂	⇆	‡	ⅡⅠ	$$			
Willowcreek Rd.	700 N to U.S. 30	⌯	⅂⅂		‡	⟲	$$	~~RR~~	~~D~~	
Springland Ave.	Karwick Ave. to SR 212	⌯	⅂⅂	⇆	▮	⟲	$$		~~D~~	€
SR 2	At I-65			⇆	▮		⟲	~~RR~~	~~D~~	
SR 49	At Vale Park Rd.	⟲	⅂⅂		▮	ⅡⅠ	⟲	~~RR~~	~~D~~	€
U.S. 421	F SR 2 S to SR 2 N	⟲	⅂⅂	⇆	▮		⟲	~~RR~~	~~D~~	&
Vale Park Rd.	Calumet Rd. to Silhavy Rd.				▮	ⅡⅠ	$$	~~RR~~		
SR 149	SR 130 to U.S. 30	⌯			‡	⟲	$$	~~RR~~	~~D~~	
Airport Rd.	E of Porter County Airport	⌯			‡	⟲	$$	~~RR~~	~~D~~	

Reason Alternative is not Viable	
⌯	No Signals Present or Needed
⇆	No Traffic Operations Issues
‡	No Driveways Present
ⅡⅠ	Median Controls are Perfect
$$	Alternative Not Finiancially Feasible
~~RR~~	Railroad Not Present
~~D~~	Density Too low to Support Alternative
€	Growth Management is Satisfactory
💻	Intelligent Transportation Systems is Satisfactory
⅂⅂	Intersection Turn Lanes Present
⟲	Alternative will not affect congestion
&	Rural area growth not anticipated
▮	Shoulder is Adequate for driveways
◘	No Room for Alternative

Alternatives Analysis Results & Impacts for Submitted Projects					
Project Location	LOS 2008	LOS With Demand Management	LOS with Demand Management & Improvements	With DM and Added Travel Lanes or New Roadway	With Added Travel lanes or New Roadway, Demand Management and Improvements
Mississippi St.	F	F	F	E	B
101st Ave.	C	C	C	B	B
Division Rd.	F	F	E	C	A
U.S. 20	E	E	C	N/A	N/A
18th Ave.	C	C	A	A	A
45th Ave.	E	E	C	N/A	N/A
61st Ave.	A	A	A	A	A
Boyd Blvd Exp.	B	B	A	A	A
Boyd North (Park St.)	E	E	D	C	B
133rd Ave.	B	B	A	N/A	N/A
County Line Rd. Gary	B	B	A	A	A
County Line Rd. Hobart	D	D	C	N/A	N/A
Cline Ave. Realignment	E	E	C	N/A	N/A
LED Corridor	E	E	E	D	D
Main st./Joe Orr Rd.	C	C	C	A	A
Kennedy Ave.	C	C	C	A	A
Marina Access Rd.	A	A	A	A	A
Willowcreek Rd.	E	E	E	E	B
Springland Ave.	C	C	C	A	A
SR 2	E	E	E	B	A
SR 49	C	C	C	N/A	N/A
U.S. 421	E	E	D	N/A	N/A
Vale Park Rd.	D	D	D	B	A
SR 149	C	C	A	A	A
Airport Rd.	C	C	B	A	A

The following table indicates the results of the evaluation and selection of regionally significant expansion projects. Projects for the 2040 CRP were solicited in December, 2010. The evaluation was completed in April, 2011 and approved by the Congestion Management Subcommmittee on March 31, 2011.

Projects That Passed NIRPC's Congestion Management Process

	Sponsor	Name	Improvement Type	Functional Class (FC)	From	To	Length	Lanes Before	Lanes After	Regionally Significant?	OTT Year	LOS Grade	LOS Pass	Alt. Analysis Grade	Alt. Analysis Pass?	Reduction of Scope?/Comments	Does this project agree with the goals and objectives of the 2040 CRP?
1	Cook County, IL/Munster, IN	Joe Orr Rd Extension/Main St	New Roadway and Added Travel Lanes on Existing Roadway	Minor Arterial	IN/IL State Line	Calumet Ave	0.8 in IN	0	3	Yes	2016	C	Yes	50%	Yes	No	Yes because it is a bi-state project that will provide a better connection to Chicago's south suburbs
2	Gary	Marina Access Rd, Phase II, Segment 3	New Roadway Segment w/ Pre-existing Segment(s)	Minor Arterial	About 800' E of SR 912	About 920' SW of Parking Garage	0.5	0	4	Yes	2015	A	No	100%	Yes	No	This project has economic development potential. This project is also underway. This project is also a part of the Marquette Plan.
3	Gary	Marina Access Rd, Phase III	New Roadway	Collector	About 940' E of Parking Garage	About 600' NE of Parking Garage	0.4	0	2	Yes	2014	A	No	100%	Yes	No	This project has economic development potential. This project is also underway. This project is also a part of the Marquette Plan.
4	Lake County	45th Ave	Added Travel Lanes on Existing Roadway	Minor Arterial	Cleveland St	Colfax St	2.75	2	3	Yes	2012-2018	E	Yes	100%	Yes	No	Yes as it provides a connection between two communities.
5	LaPorte	Economic Development Corridor (NE Quadrant)	New Roadway	Minor Arterial	SR 2	SR 39 North	4.5	0	2	Yes	2020	E	Yes	75%	Yes	No	No, as this project does demand too much major greenfield development
6	Merrillville	101st Ave	Added Travel Lanes on Existing Roadway	Minor Arterial	Broadway (SR 53)	Mississippi St	1	2	4	Yes	2014	C	Yes	60%	Yes	No	No, as it involves adding lanes to a roadway that is surrounded by a greenfield.
7	Merrillville	Mississippi St	Added Travel Lanes on Existing Roadway	Minor Arterial	83rd Ave	101st Ave	1	2	4	Yes	2011-2015	F	Yes	56%	Yes	No	Yes because it relieves congestion in an area where other alternatives would not improve traffic conditions
8	Porter County	Willowcreek Rd Extension	New Roadway	Minor Arterial	US 30	Porter CR 700N	4.5	0	2	Yes	2013-2017	E	Yes	100%	Yes	No	Yes, as it facilitates growth contiguous to existing development, and improves north-south connectivity in Porter County, and it should relieve congestion on US 30 from Valparaiso to I-65.
9	Schererville	Kennedy Ave Reconstruction	Added Travel Lanes on Existing Roadway	Minor Arterial	Main St	US 30	2.25	2	4	Yes	2013-2018	C	Yes	100%	Yes	No	Yes, as it supports redevelopment and infill of existing community. This project also provides a valuable missing connection in Northwest Indiana's roadway network.
10	Valparaiso	Division Rd	Added Travel Lanes on Existing Roadway	FC Change from Collector to Minor Arterial	SR 2	US 30	6.95	2	4	Yes (Conditional)	2011	F	Yes	100%	Yes	No	No as it promotes sprawl and greenfield development.

Projects That Passed NIRPC's Congestion Management Process

	Sponsor	Name	Improvement Type	Functional Class (FC)	From	To	Length	Lanes Before	Lanes After	Regionally Significant?	OTT Year	LOS Grade	LOS Pass	Alt. Analysis Grade	Alt. Analysis Pass?	Reduction of Scope?/Comments	Does this project agree with the goals and objectives of the 2040 CRP?
11	Valparaiso	Vale Park East	Added Travel Lanes on Existing Roadway	Minor Arterial (Needs FC Map Change from Collector)	Calumet Ave	Silhavy Rd	1	2	4	Yes	2015	D	Yes	100%	Yes	No	Yes as it relieves congestion and improves connectivity in an existing community
12	INDOT	US 421 Added CFL (Westville)	Added Travel Lane (Aux)	Principal Arterial	SR 2 West	SR 2 East	1.1	2	3	Yes	2012	E	Yes	50%	Yes	No	Yes because it improves connection by relieving an congested roadway.
13	INDOT	SR 49 at I-94 400N (Valpo)	New Interchange	Collector	n/a	n/a	n/a	n/a	n/a	Yes	2013	E	Yes	75%	Yes	Project will pass due to safety issues as stated in Indiana's 5% report	Yes as it improves access management and safety in a major transportation corridor.
14	INDOT	US 20 E FL (Mich City)	Added Travel Lane (Aux)	Principal Arterial	Woodland Ave	1,500' W of Johnson Rd	1.1	4	5	Yes	2015	E	Yes	50%	Yes	No	Yes, as it improves accessibility within an urban community. This project will also improve safety as well
15	INDOT	Cline Ave Realignment*	Road Reconstruction with Interchange Modifications	Expressway	SR 912 at Dickey Rd	Riley Rd at Existing SR 912	n/a	n/a	n/a	Yes	2011-2013	F	Yes	72%	Yes	No	Yes as it fixes a missing connection within the transportation network
16	Hobart	61st Ave	Added Travel Lanes on Existing Roadway	Principal Arterial	Colorado St	SR 51	1.75	2	3	Yes	2014	A	No	100%	Yes	Passed due to safety concerns	Yes as it will provide a connection to Merrillville and I-65 from Hobart
17	INDOT	SR 2 at I-65 (DES 9706420)	Intersection Improvements with Added Travel Lanes	Minor Arterial	From 0.8 mile W of I-65	To 0.9 mile E of I-65	1.7	2	5	Yes	2015	E	Yes	50%	Yes	No	No as it contributes to development outside the urbanized area. There are also environmental concerns as there is a lot of green space and agricultural land near the project site.
18	Cedar Lake	133rd Ave	Added Travel Lanes on Existing Roadway	Principal Arterial	US 41	Industrial Rd	0.46	2	3	No	2013	B	No	80%	Yes	Not Regionally Significant. Congestion Management evalution not needed.	Yes as this project considers both NIRPC's and the town of Cedar Lake's comprehensive plans into consideration. This project will improve connections and accessibility along a major corridor in Cedar Lake. This project is located in a livable center

*Preferred route has not been identified as the NEPA process is not yet complete. INDOT is reviewing two solutions for Cline Ave: the ground route alternative utilizing Riley and Dickey roads, and a four-lane bridge alternative.

Projects that Passed NIRPC's Congestion Management Process Pending a Reduction in Scope

	Sponsor	Name	Improvement Type	Functional Class (FC)	From	To	Length	Lanes Before	Lanes After	Regionally Significant?	OTT Year	LOS Grade	LOS Pass	Alt. Analysis Grade	Alt. Analysis Pass?	Reduction of Scope?/Comments	Does this project agree with the goals and objectives of the 2040 CRP?
1	Gary	Lake-Porter County Line Rd	Added Travel Lanes on Existing Roadway	Minor Arterial	US 20	Nat Lakeshore Entrance	1.4	2	4	Yes	2014	B	No	56%	Yes	Intersection improvements, Signal improvements. No added travel lanes is necessary	Yes, as this project provides access to the Lakefront. This project also corresponds with the Marquette Plan too.
2	LaPorte	18th St	Added Travel Lanes on Existing Roadway	FC Change from Collector to Minor Arterial	SR 39	US 15	1.8	2	4	Yes	2016	C	Yes	75%	Yes	No added travel lanes or center turn lane. Intersection improvements, new Traffic signals are recommended instead.	No, as this project consists of potentially overbuilding a roadway
3	LaPorte	Boyd Blvd North Extension	New Roadway	Minor Arterial	SR 2	Severs Rd	0.8	0	4	Yes	2020	D	Yes	50%	Yes	Two travel lanes is recommended rather than four	No as it consists mainly of greenfield development
4	LaPorte	Boyd Blvd Expansion	Added Travel Lanes on Existing Roadway	Minor Arterial	SR 2	US 35	3.25	2	4	Yes	2016	B	NO	50%	Yes	Center Turn Lane is recommended instead of added travel lanes	Yes because it utilizes infrastructure that already exists and improves connections.
5	Michigan City	Springland Ave Extension	New Roadway	Minor Arterial	Kenwick Rd	Royal Rd	0.8	0	4	Yes	2015	C	Yes	82%	Yes	Should be built as a two lane road only	No, as it potentially includes greenfield development. This project does provide a new connection between neighborhoods.

Projects Not Selected

	Sponsor	Name	Improvement Type	Functional Class (FC)	From	To	Length	Lanes Before	Lanes After	Regionally Significant?	OTT Year	LOS Grade	LOS Pass	Alt. Analysis Grade	Alt. Analysis Pass?	Reduction of Scope?/Comments	Does this project agree with the goals and objectives of the 2040 CRP?
1	Crown Point	Mississippi Parkway	New Roadway	Minor Arterial	101st	109th	1	0	2	Yes	2020	A	NO	0%	No	Project did not relieve congestion off surrounding roadways	No, as this project promotes sprawl and greenfield development
2	Hobart	Lake-Porter County Line Rd	Added Travel Lanes on Existing Roadway	Minor Arterial	SR 130	37th Ave	1.75	2	4	Yes	2030	D	Yes	0%	No	Sponsor withdrew project because the project is in early stages and alternatives haven't been considered yet	Yes, as it improves access and safety to driveways along County Line road. This project will also provide access to County Line Orchard as well
3	Valparaiso	Airport Pkwy	New Roadway	FC Change from Collector to Minor Arterial	SR 2	US 30	2.63	0	2	Yes (Conditional)	2015	C	Yes	100%	Yes	Project will not appear in plan until airport study is completed.	No, it promotes sprawl into prime agricultural land
4	Valparaiso	SR 149 Extension	Construct New Roadway (1.6m)	Minor Arterial	SR 130	US 30	2.3	0	2	Yes	2014	E	Yes	100%	Yes	There isnt that much congestion in this area. A better solution would be to improve CR 250 W and even resign it as SR 149 if necessary. Corridor should be protected. The Willowcreek road Extension is determined to be a more viable project	No, it promotes sprawl into unincorporated Porter County.

APPENDIX

APPENDIX: Section 1 Congestion Management Variable Function Class Discription

See section VIII for Function Class Map

Group-A Expressways

Group-A designated expressways are expressways that have Real-Time Travel Time Data available.

Examples:

- Interstate 65 from Interstate 80/94 to US 30
- I-80/94 from state line to the Indiana Toll Road (I-90)

Group-A Expressway Performance Measures

- Travel Time Index
- Average Speed
- Delay
- Volume to Capacity Ratio
- Crash Rate
- Average Incident Clearance Time*

Group-B Expressways

Group-B expressways are expressways that do not have real time travel data available, but have been selected for limited travel time data collection. Less sample data will be available for Travel Time Index, Average Speed and Delay than Group-A Expressways.

Examples:

To be determined

Group-B Expressway Performance Measures

- Travel Time Index
- Average Speed
- Delay
- Volume to Capacity Ratio
- Crash Rate
- Average Incident Clearance Time*

Group-C Expressways

Group-C Expressways are expressways that will not have travel time data available. Its level of service will be monitored based on NIRPC's existing performance measures.

Examples:

To be determined

Group-C Expressway Performance Measures

- Volume to Capacity Ratio
- Crash Rate
- Average Incident Clearance Time*

Group-A Arterials

Group-A Arterials are arterial roadways that have been selected for travel time data collection. There will be five to 10 collection runs for each of the three major commuting times.

Group-A Arterials Performance Measures

- Travel Time Index
- Average Speed
- Crash Rate
- Volume to Capacity Ratio
- Signal Delay

Group-B Arterials

Arterials that were not chosen to have travel time data collected on. NIRPC's existing performance measures would be used for the Level of Service.

Group-B Arterials Performance Measures

- Crash Rate
- Volume to Capacity Ratio

APPENDIX Section 2: Level of Service Weights

Weights for Level of Service

These are the weights to determine the final Level of Service of a specific corridor. The weights will vary by function class.

Volume/Capacity Ratio Level of Service Rating		
V/C Ratio	LOS	Description
0.0-0.2	A	Free Flow
0.2-0.4	B	Reasonably Free Flow
0.4-0.7	C	Stable Flow
0.7-0.8	D	Approaching Unstable Flow
0.8-1.0	E	Unstable Flow
> 1.0	F	Forced or Breakdown Flow

Travel Time Index Level of Service Rating	
TTI	LOS
< 1.3	A
1.3-1.4	B
1.4-1.5	C
1.5-1.6	D
1.6-1.7	E
> 1.7	F

Average Speed/Posted Speed Level of Service Rating (Expressways)	
AS/PS (% Under Speed Limit)	LOS
0-14%	A
14-18%	B
18-20%	C
20-30%	D
30-50%	E
> 50%	F

Average Speed/Posted Speed Level of Service Rating (Arterials, Collectors)	
AS/PS (% Under Speed Limit)	LOS
0-10%	A
10-30%	B
30-45%	C
45-60%	D
60-70%	E
> 70%	F

Crash Rate (Crashes per million vehicle miles traveled)	
Crash Rate	LOS
< 1.25	A
1.25-2.25	B
2.25-2.75	C
2.75-4.35	D
4.35-7.45	E
> 7.45	F

Weights by function class

Group A Expressways	
Performance Measure	Weight
V/C Ratio	**3**
Projected V/C Ratio	1
2040 Model Average Speed/Posted Speed	1
Crash Rate*	1
Average Speed/Posted Speed	**5**
Travel Time Index	1
Total Weight Points	12

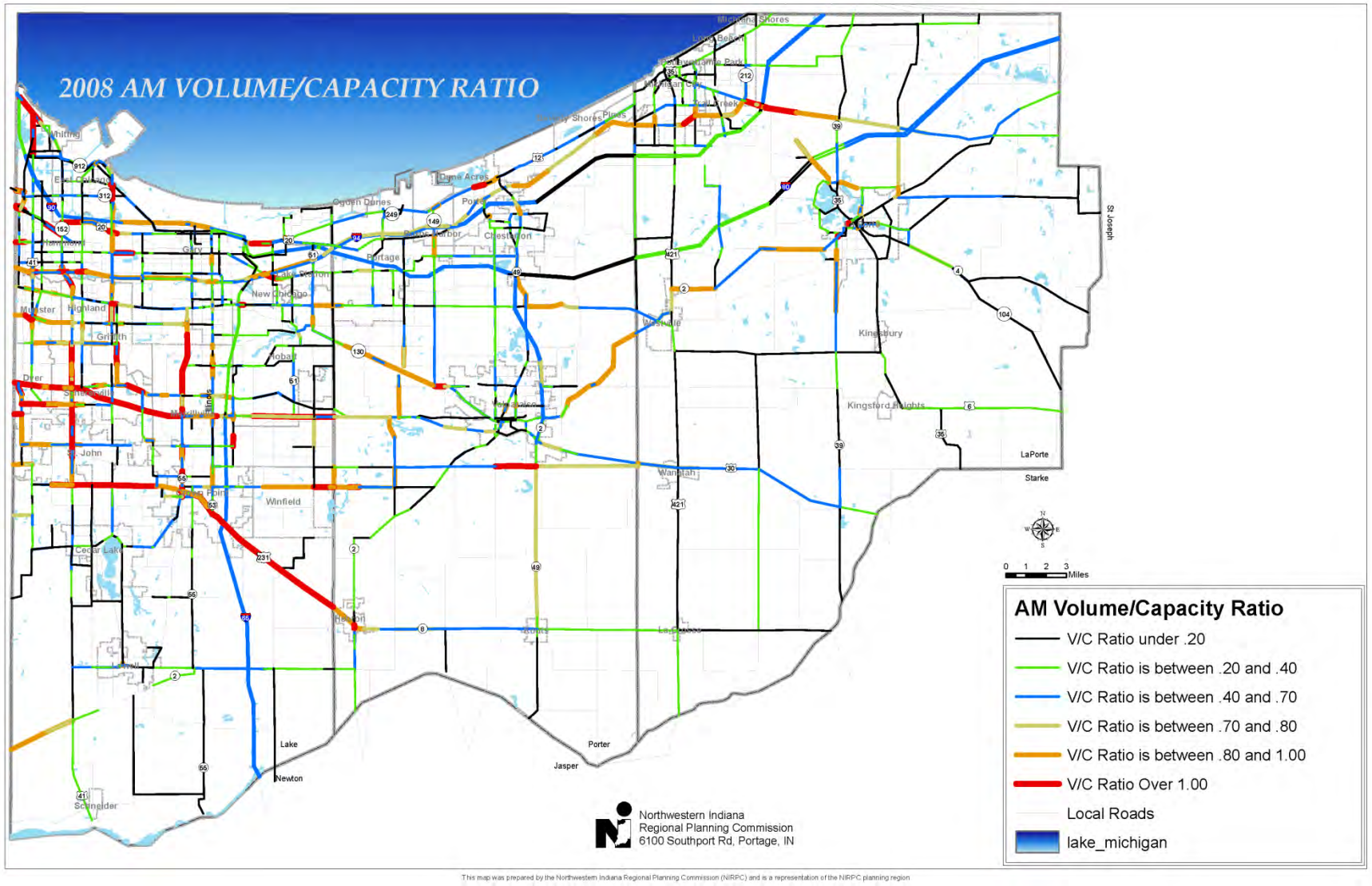
Group B Expressways	
Performance Measure	Weight
V/C Ratio	**3**
Projected V/C Ratio	1
2040 Model Average Speed/Posted Speed	1
Crash Rate*	1
Average Speed/Posted Speed	**5**
Travel Time Index	1
Total Weight Points	12

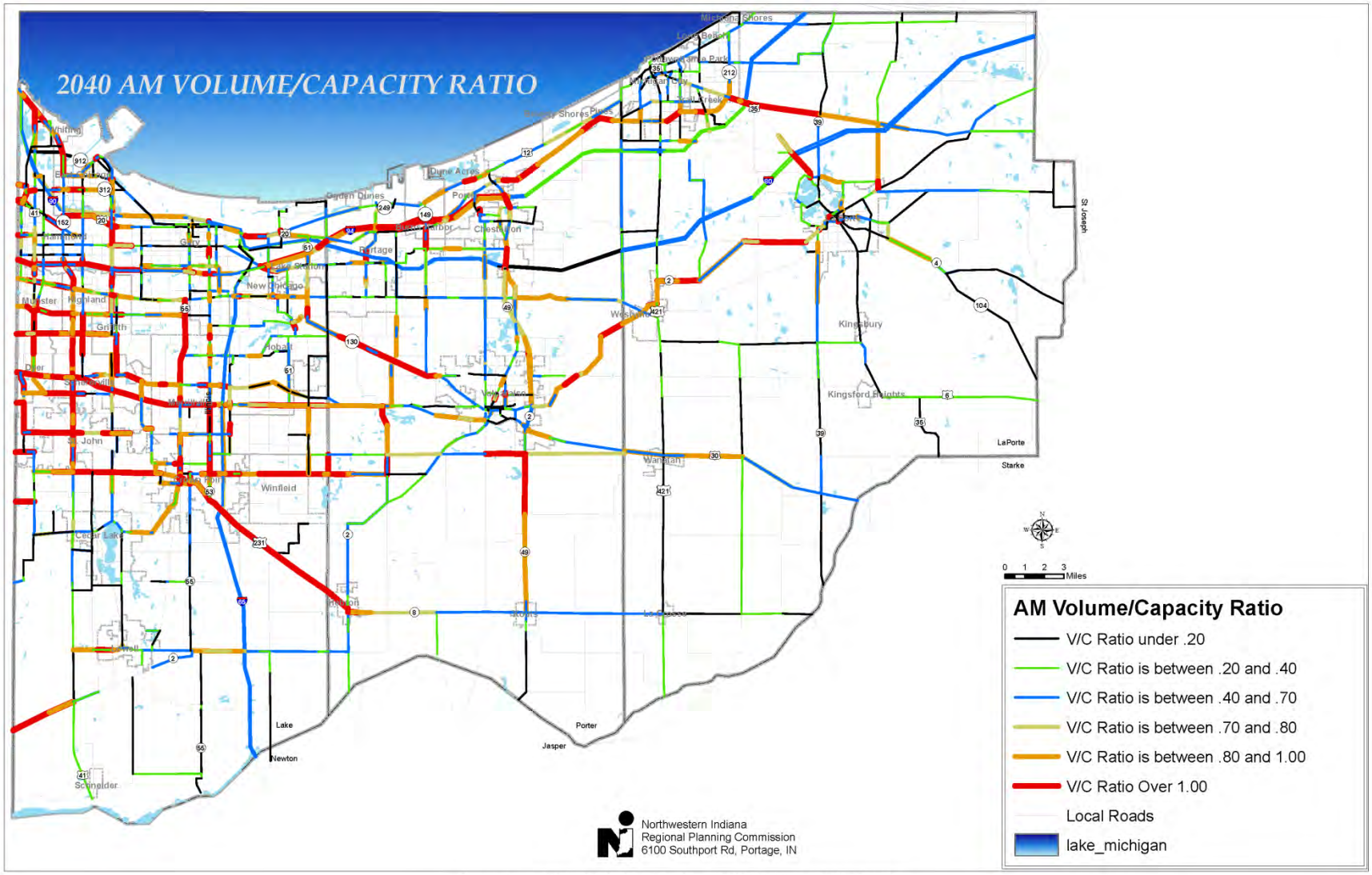
Group C Expressways	
Performance Measure	Weight
V/C Ratio	**6**
Projected V/C Ratio	1
2040 Model Average Speed/Posted Speed	1
Crash Rate*	1
Model Average Speed/Posted Speed	1
Total Weight Points	10

Group A Arterials	
Performance Measure	Weight
V/C Ratio	**3**
Projected V/C Ratio	1
2040 Model Average Speed/Posted Speed	1
Crash Rate*	1
Average Speed/Posted Speed	**5**
Intersection Delay	**2**
Travel Time Index	1
Total Weight Points	14

Group B Arterials	
Performance Measure	Weight
V/C Ratio	**6**
Projected V/C Ratio	1
2040 Model Average Speed/Posted Speed	1
Crash Rate*	1
Model Average Speed/Posted Speed	1
Total Weight Points	*10*

APPENDIX Section 3: Performance Measures Maps





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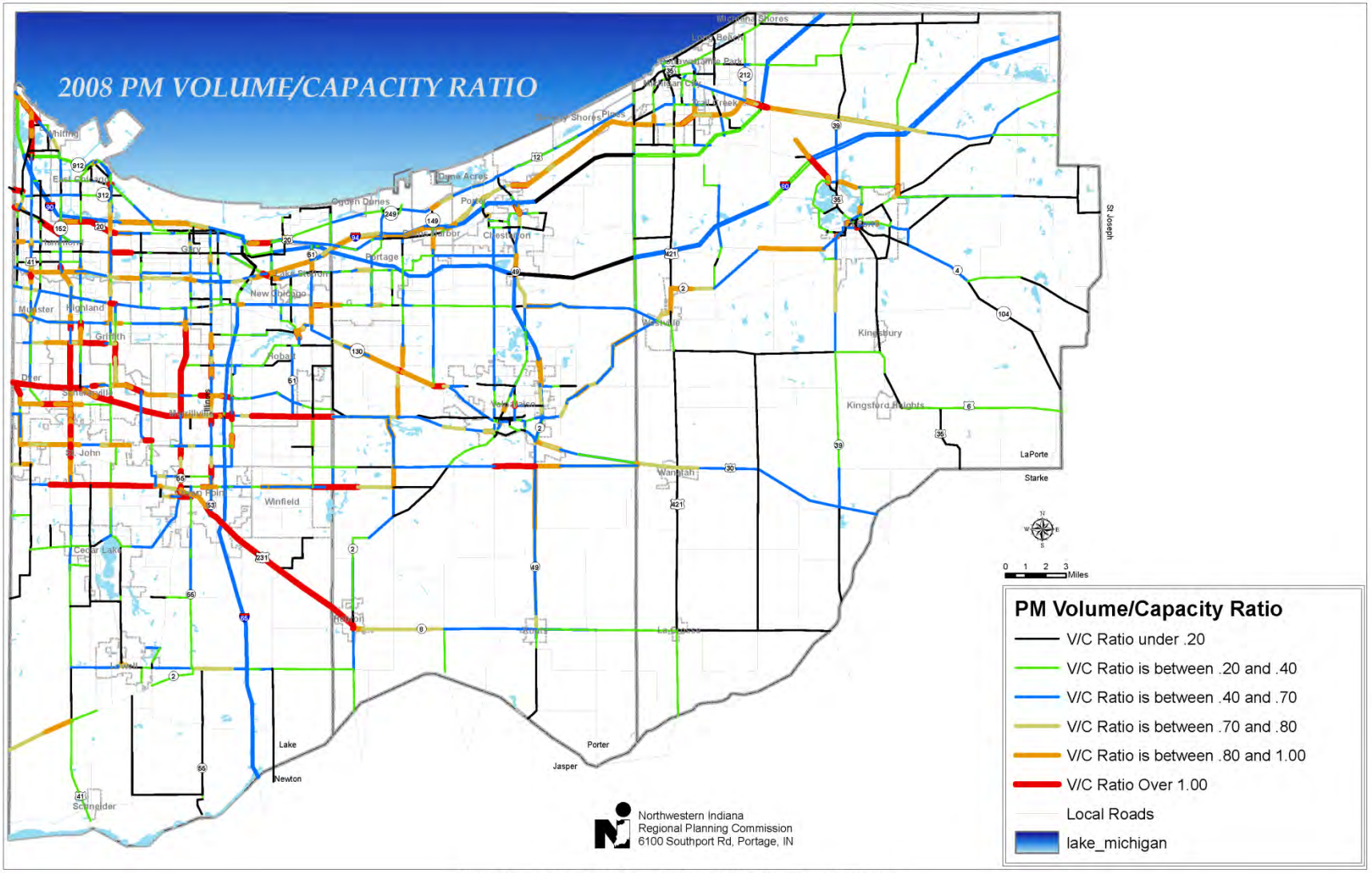

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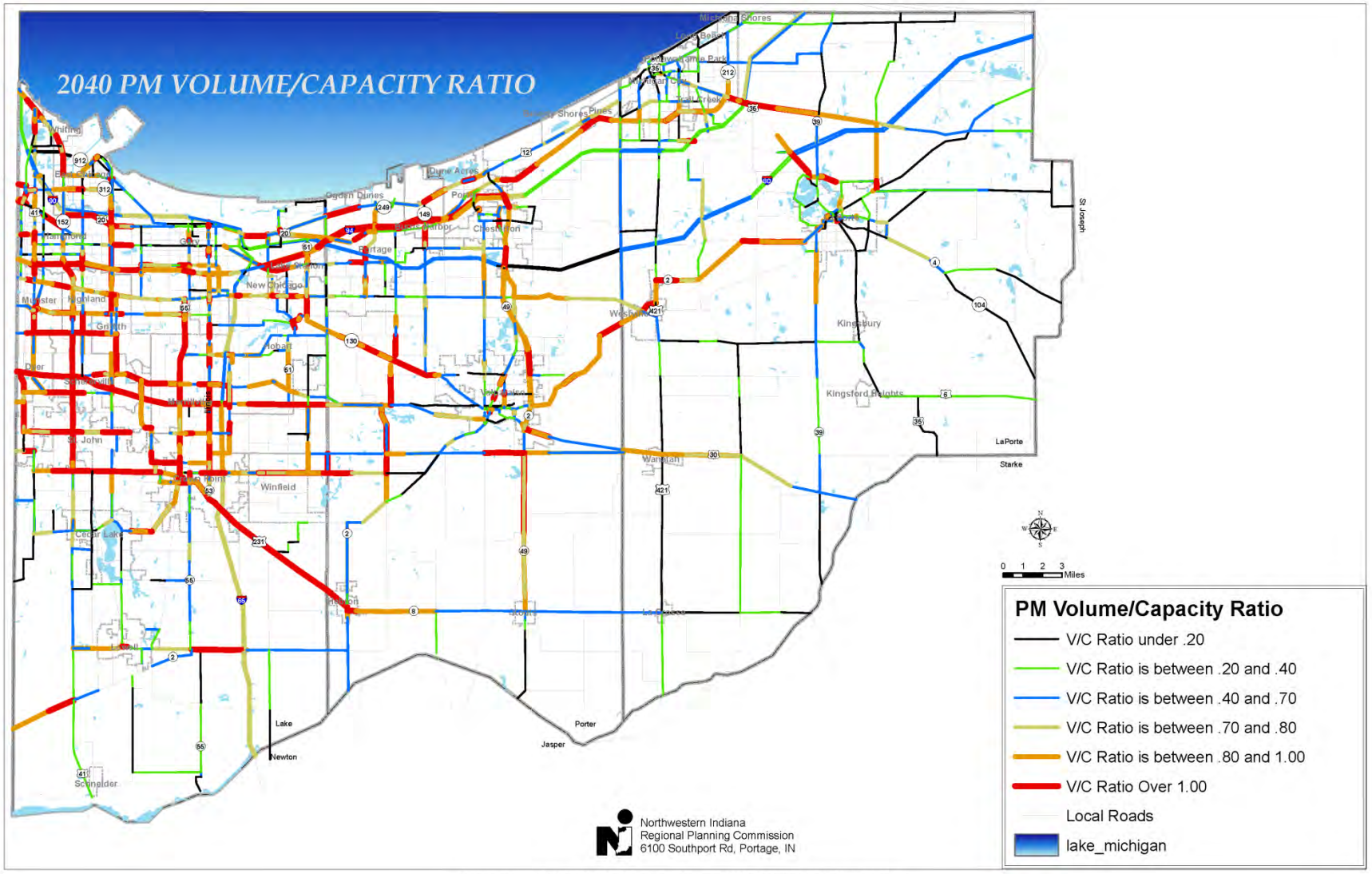
Appendices



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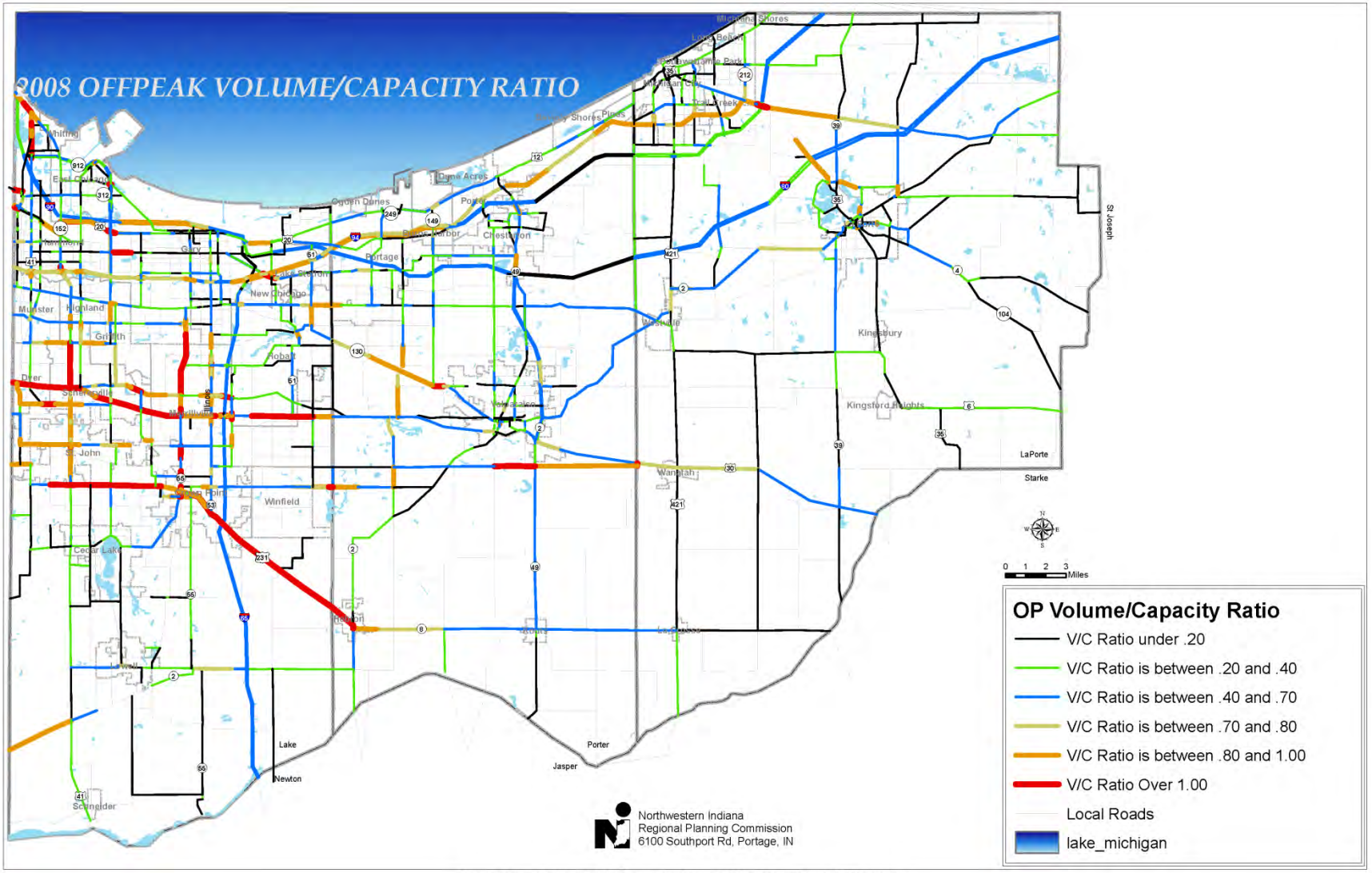
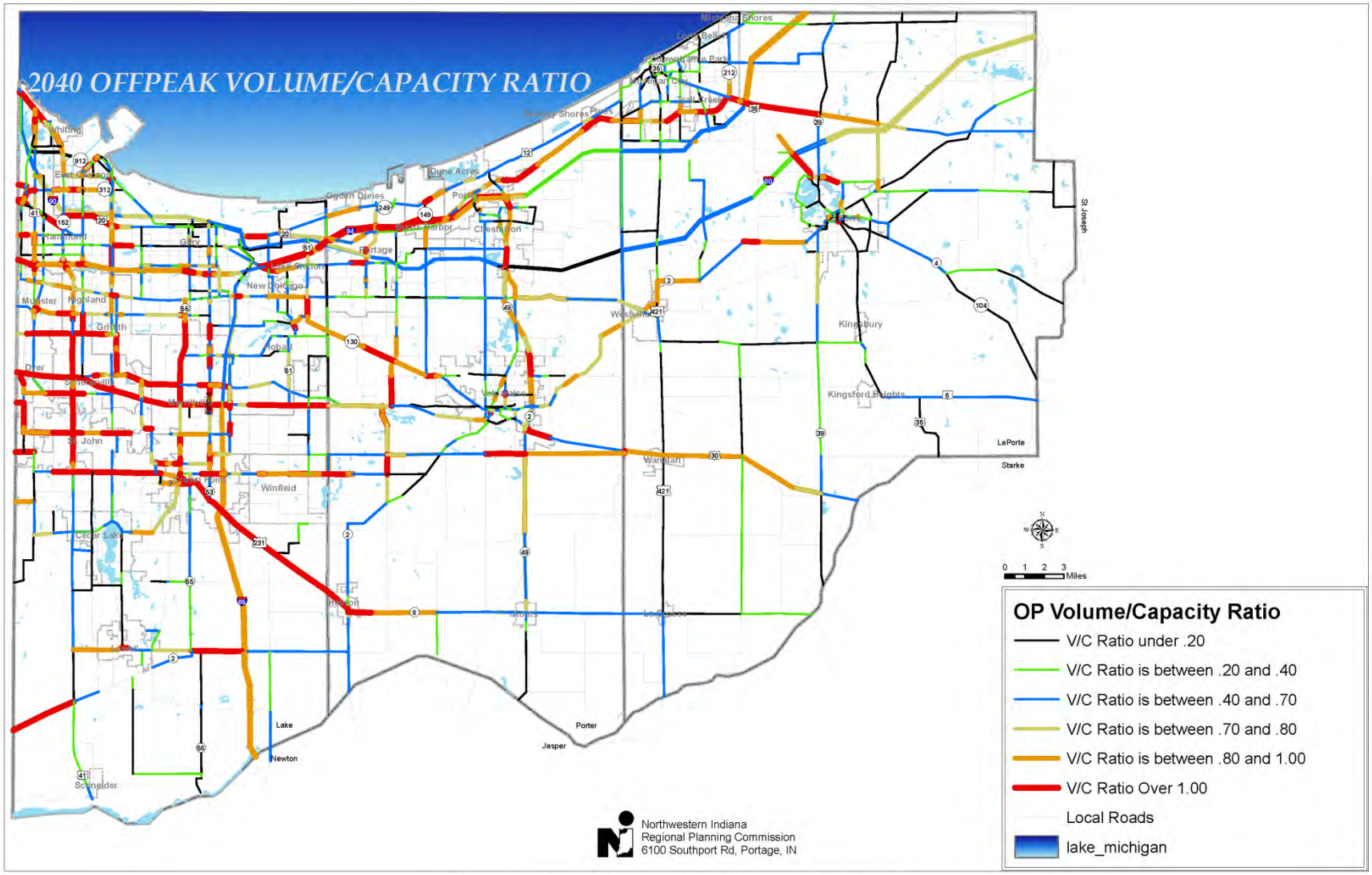

2008 OFFPEAK VOLUME/CAPACITY RATIO
Whiting
East Chicago
Gary
Ogden Dunes
Dune Acres
Portage
Chesterton
Burns Harbor
Pines
Michigan City
La Porte
New Chicago
Lake Station
Merrillville
Hobart
Griffith
Highland
Munster
Dyer
St. John
Schererville
Winfield
Cedar Lake
Lowell
Schneider
Lake
Newton
Jasper
Porter
Valparaiso
Westville
Kingsbury
Kingsford Heights
Wanatah
LaPorte
Starke
St Joseph
0 1 2 3 Miles
OP Volume/Capacity Ratio
V/C Ratio under .20
V/C Ratio is between .20 and .40
V/C Ratio is between .40 and .70
V/C Ratio is between .70 and .80
V/C Ratio is between .80 and 1.00
V/C Ratio Over 1.00
Local Roads
lake_michigan
Northwestern Indiana
Regional Planning Commission
6100 Southport Rd, Portage, IN
This map was prepared by the Northwestern Indiana Regional Planning Commission (NIRPC) and is a representation of the NIRPC planning region



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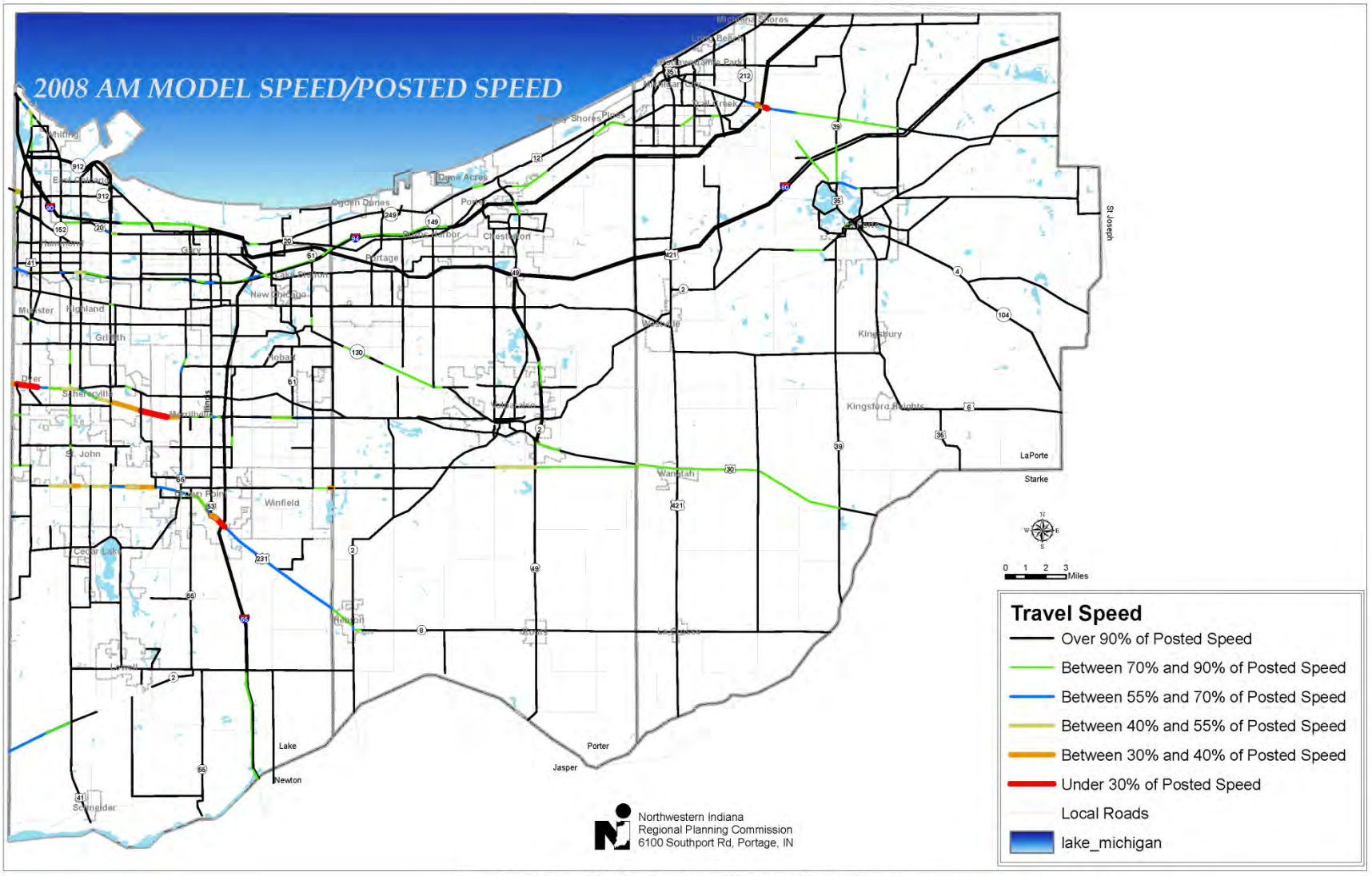
2008 AM MODEL SPEED/POSTED SPEED
Travel Speed
Over 90% of Posted Speed
Between 70% and 90% of Posted Speed
Between 55% and 70% of Posted Speed
Between 40% and 55% of Posted Speed
Between 30% and 40% of Posted Speed
Under 30% of Posted Speed
Local Roads
lake_michigan
0 1 2 3 Miles
Northwestern Indiana
Regional Planning Commission
6100 Southport Rd, Portage, IN
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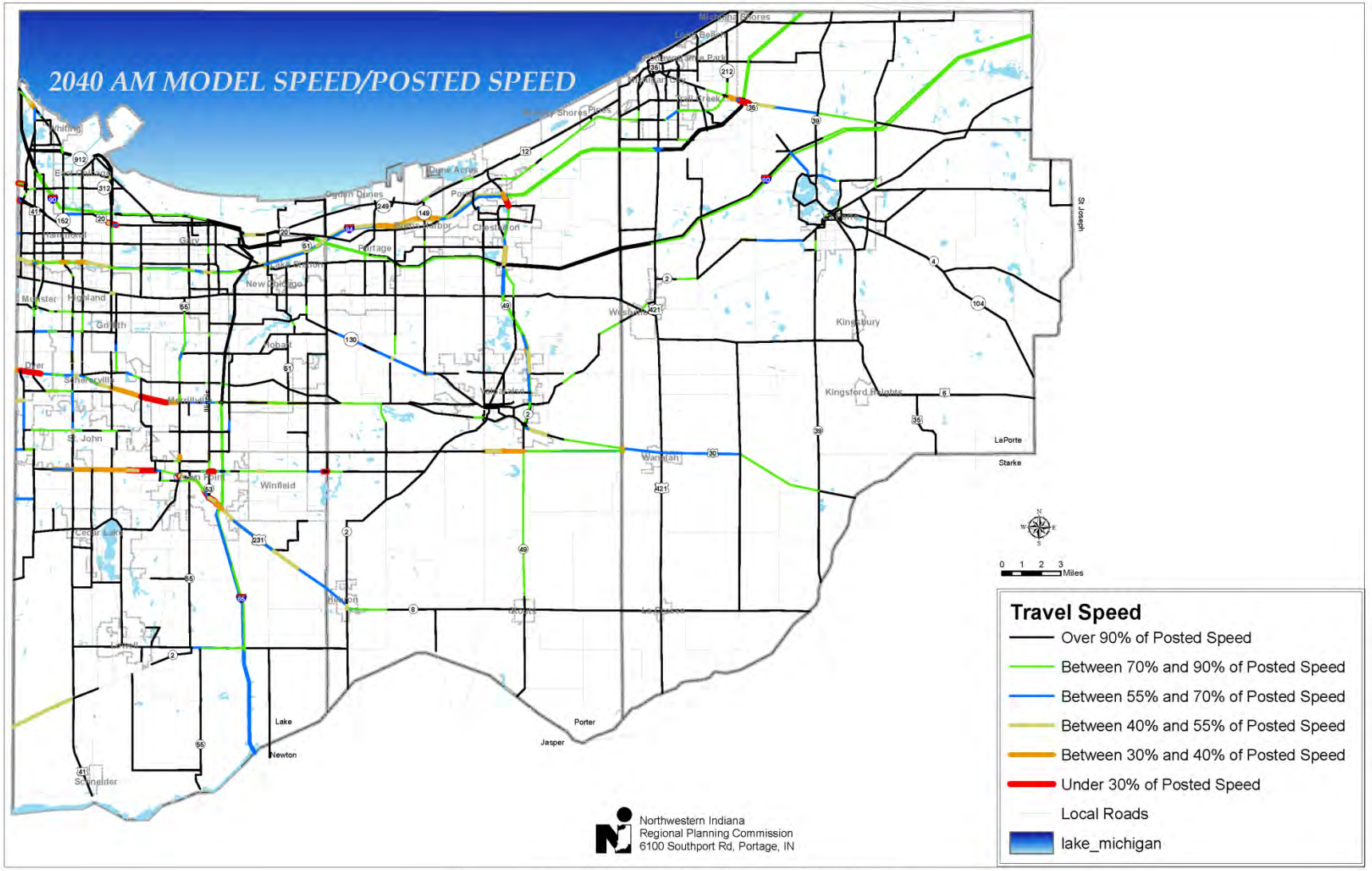
Lake
Porter
Jasper
Newton
LaPorte
Starke
St Joseph
Winfield
Cedar Lake
Schneider
Dyer
St. John
Munster
Highland
Griffith
Hobart
Portage
Gary
Chesterton
Dune Acres
Ogden Dunes
Whiting
Michiana Shores
Kingsbury
Kingsford Heights
Wanatah
Hebron
Lowell
Schererville
Merrillville


2040 AM MODEL SPEED/POSTED SPEED
Travel Speed
Over 90% of Posted Speed
Between 70% and 90% of Posted Speed
Between 55% and 70% of Posted Speed
Between 40% and 55% of Posted Speed
Between 30% and 40% of Posted Speed
Under 30% of Posted Speed
Local Roads
lake_michigan
0 1 2 3 Miles
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Kingsbury
Kingsford Heights
Portage
Gary
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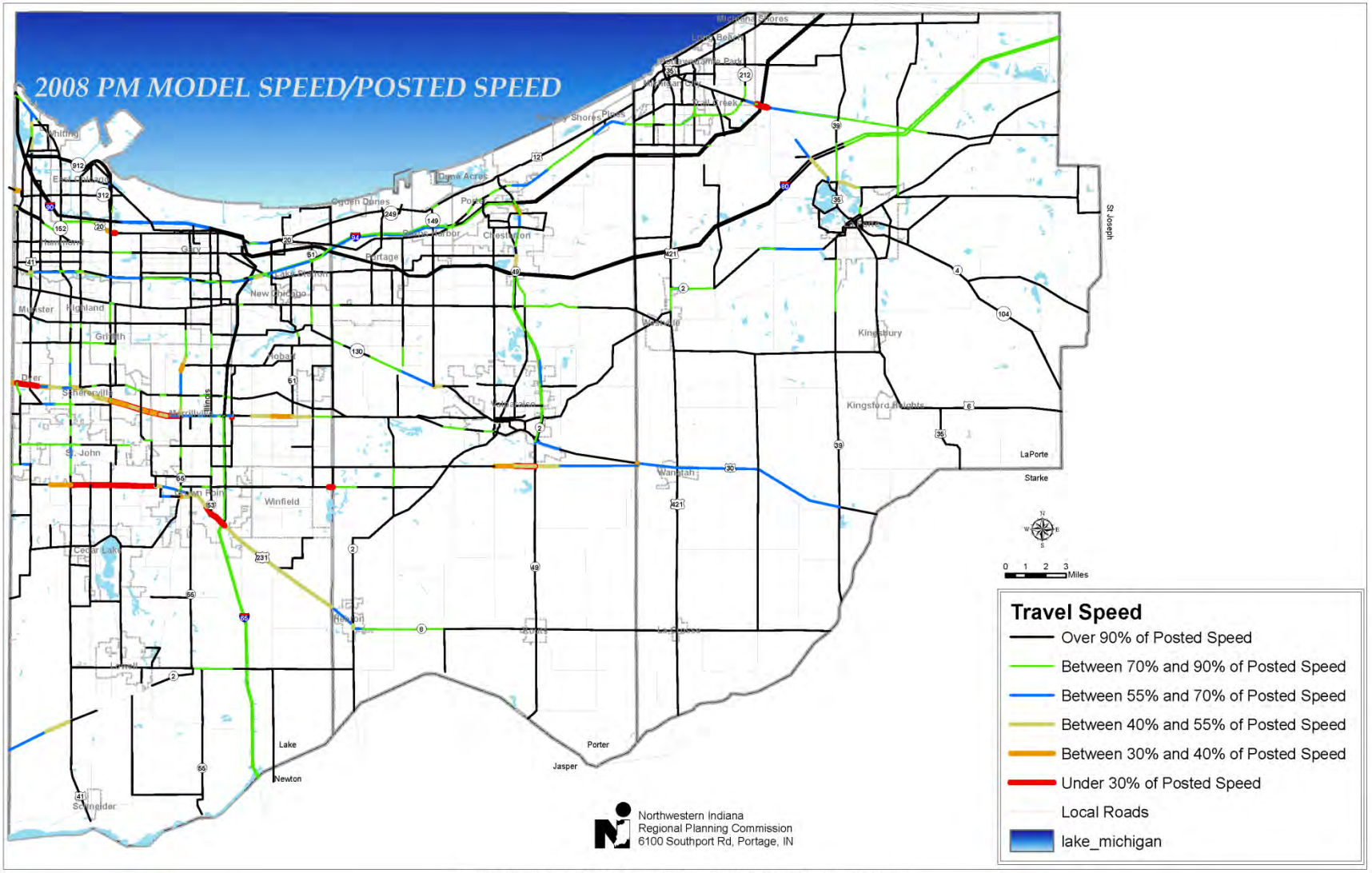
Griffith
Highland
Munster
Dyer
Schererville
Merrillville
Crown Point
Cedar Lake
Lowell
Schneider
Ogden Dunes
Dune Acres
Chesterton
Michigan City
Wanatah
Westville
New Chicago
Lake Station
St. Joseph


2008 PM MODEL SPEED/POSTED SPEED
Travel Speed
Over 90% of Posted Speed
Between 70% and 90% of Posted Speed
Between 55% and 70% of Posted Speed
Between 40% and 55% of Posted Speed
Between 30% and 40% of Posted Speed
Under 30% of Posted Speed
Local Roads
lake_michigan
0 1 2 3 Miles
Northwestern Indiana
Regional Planning Commission
6100 Southport Rd, Portage, IN
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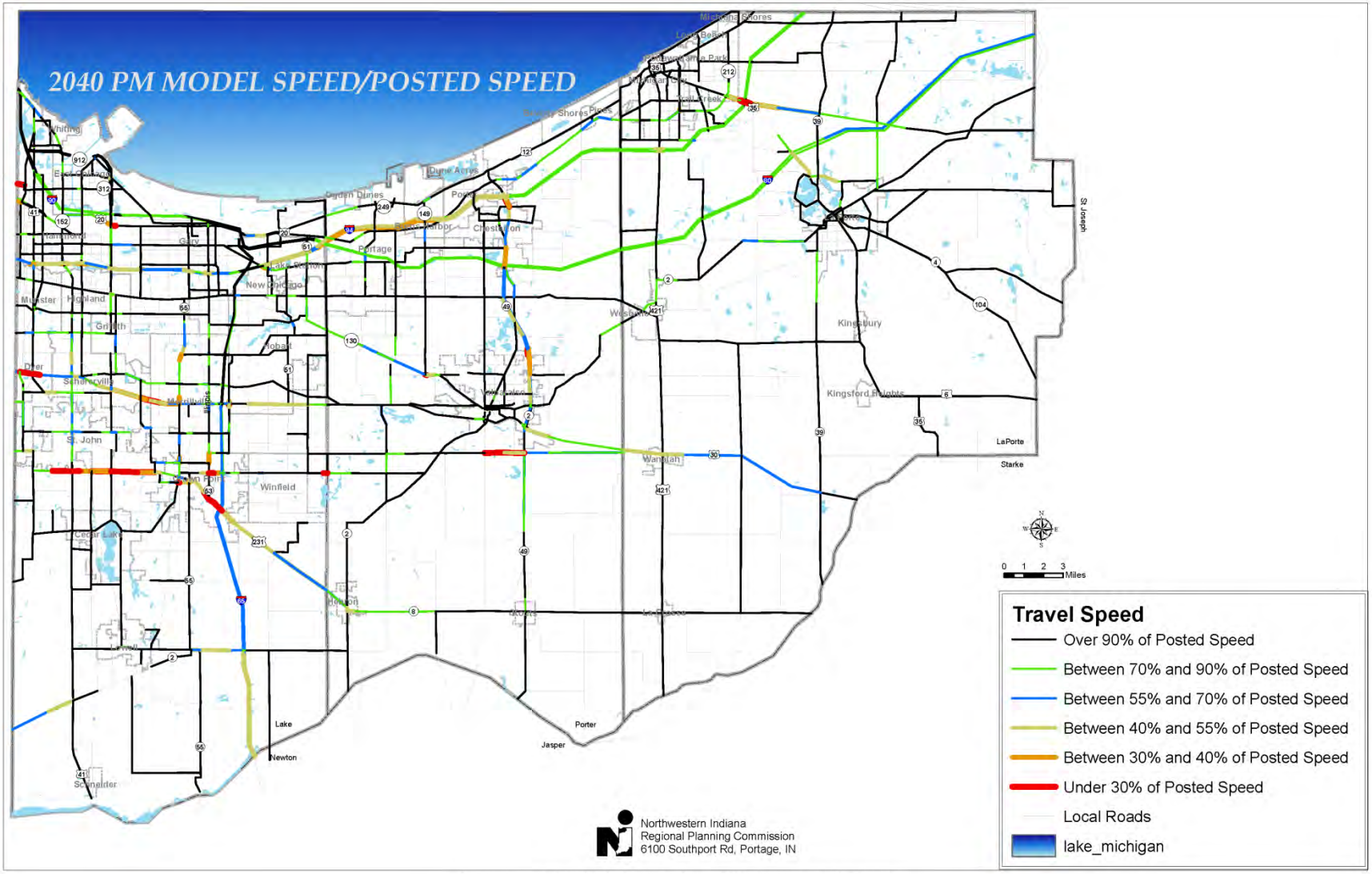
Porter
Jasper
Newton
LaPorte
Starke
St Joseph


2040 PM MODEL SPEED/POSTED SPEED
Travel Speed
Over 90% of Posted Speed
Between 70% and 90% of Posted Speed
Between 55% and 70% of Posted Speed
Between 40% and 55% of Posted Speed
Between 30% and 40% of Posted Speed
Under 30% of Posted Speed
Local Roads
lake_michigan
0 1 2 3 Miles
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Regional Planning Commission
6100 Southport Rd, Portage, IN
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Lake
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Gary
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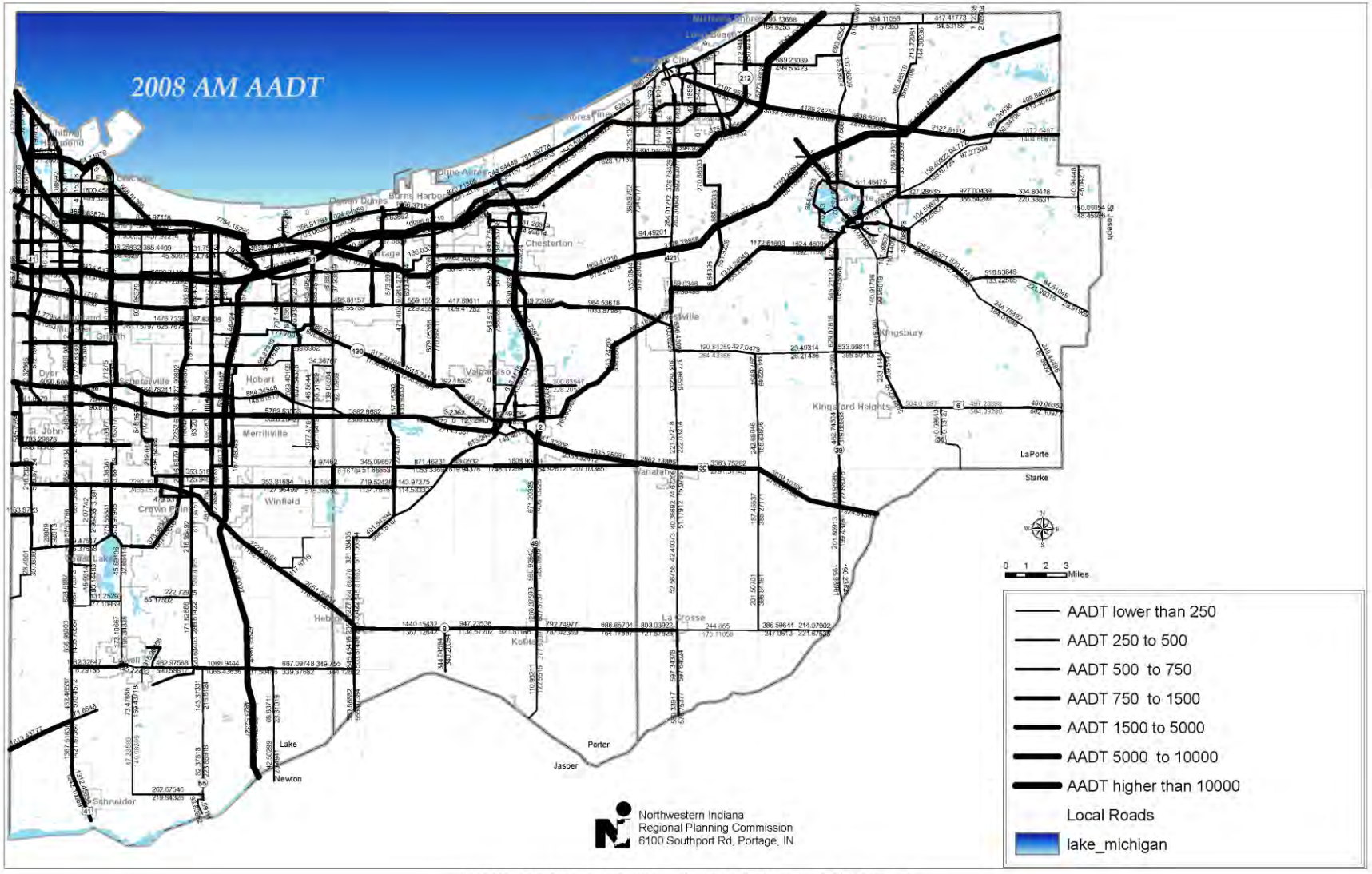
Ogden Dunes
Michigan City
St Joseph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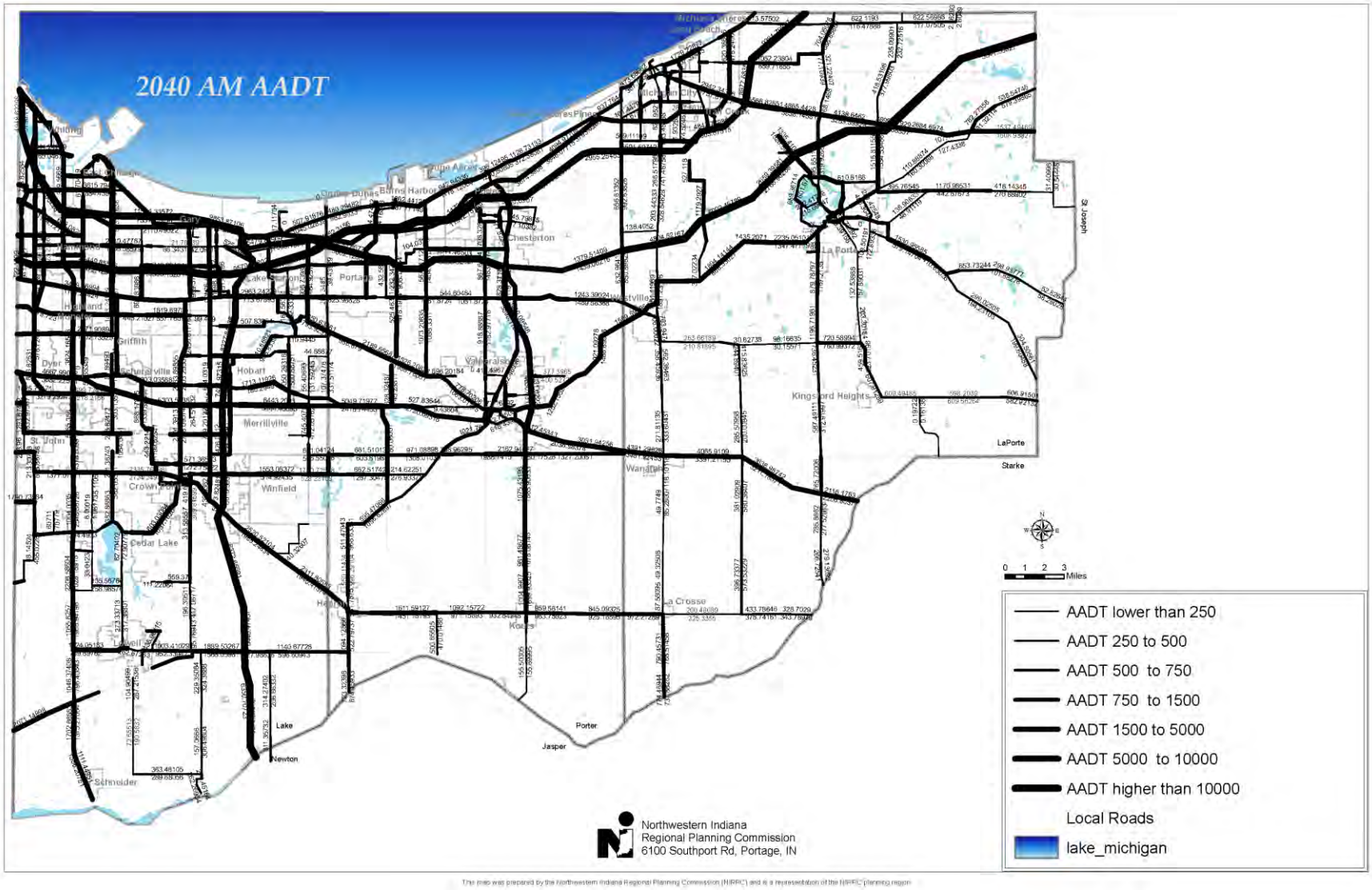
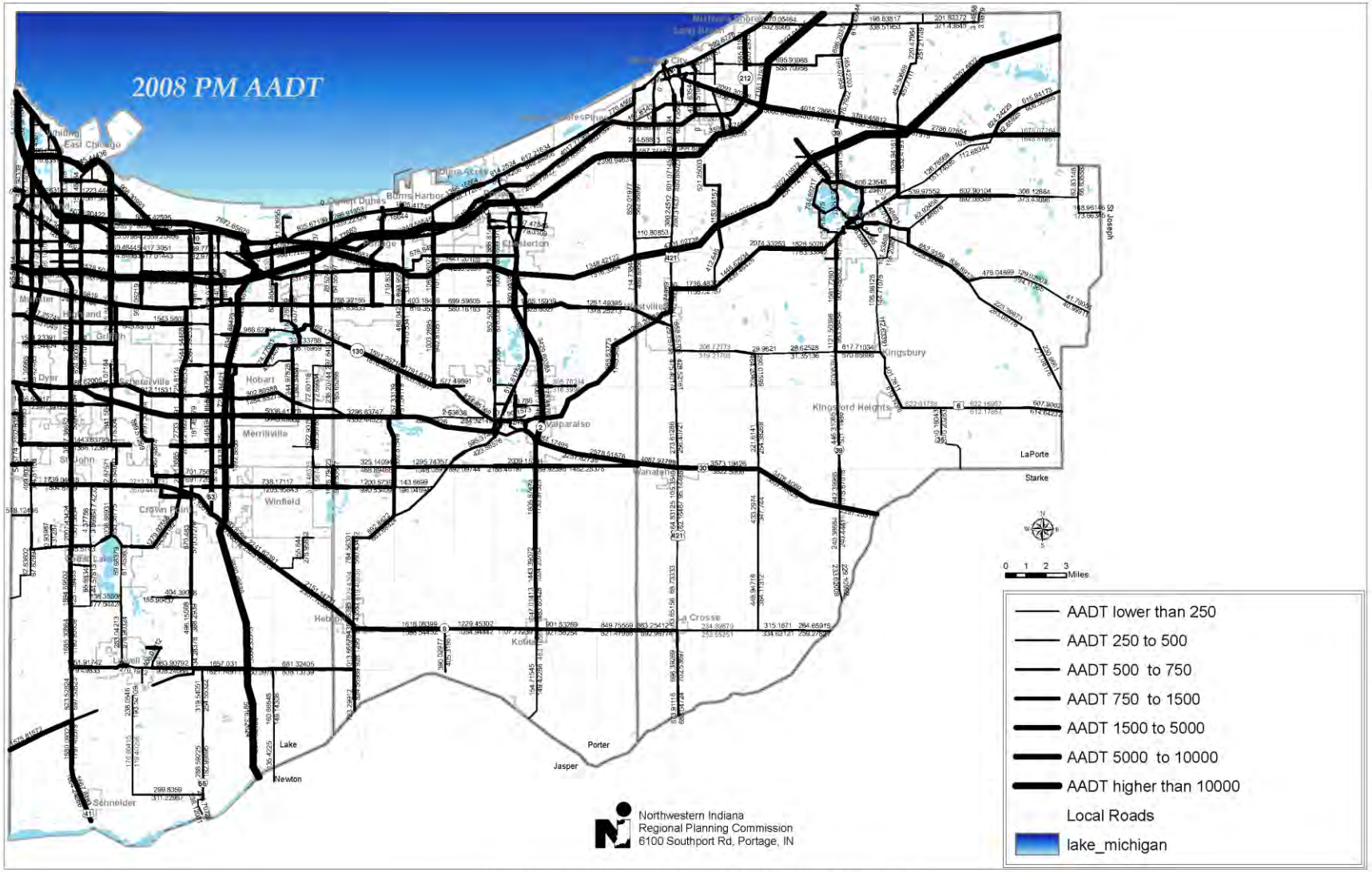
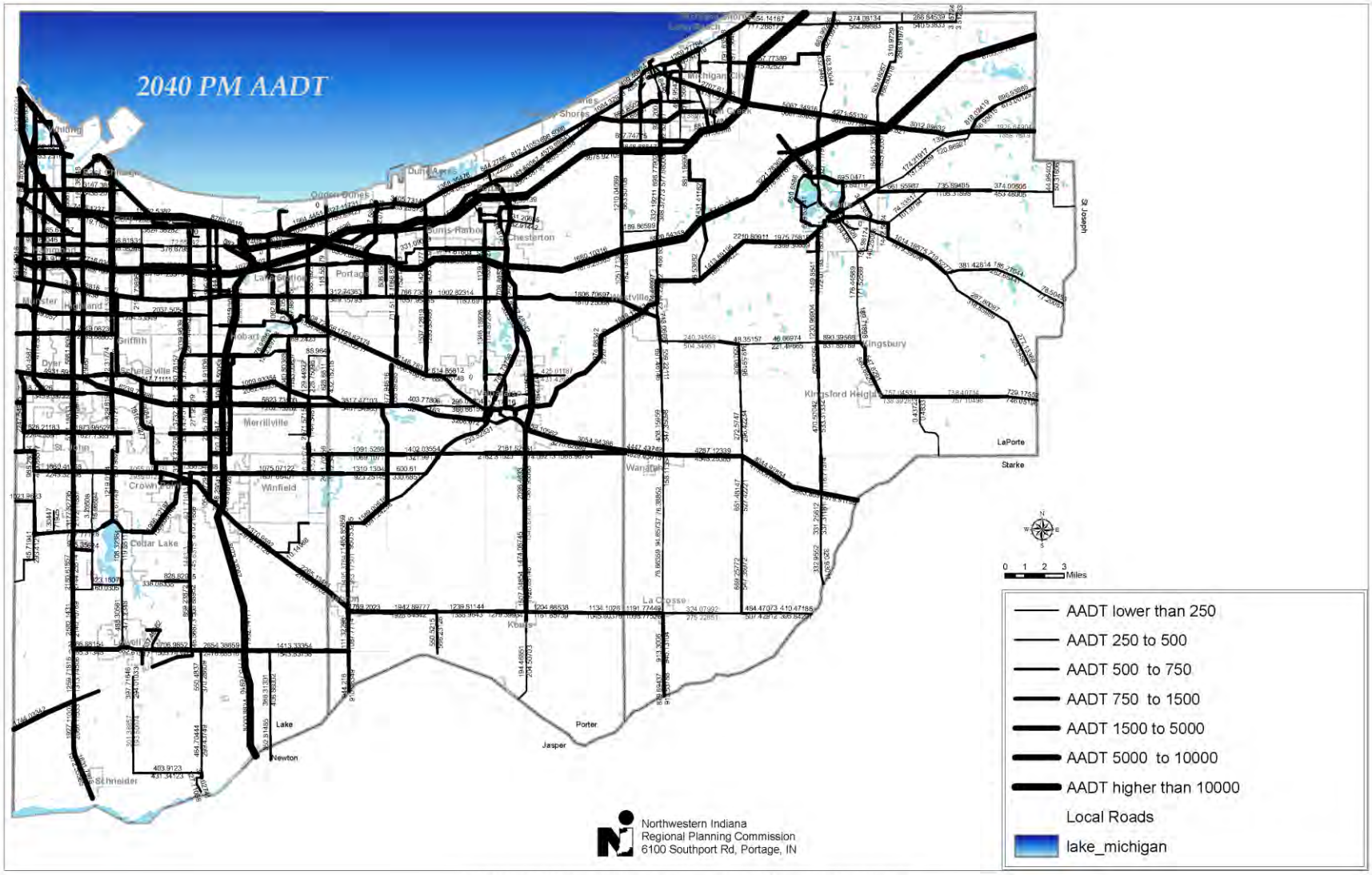
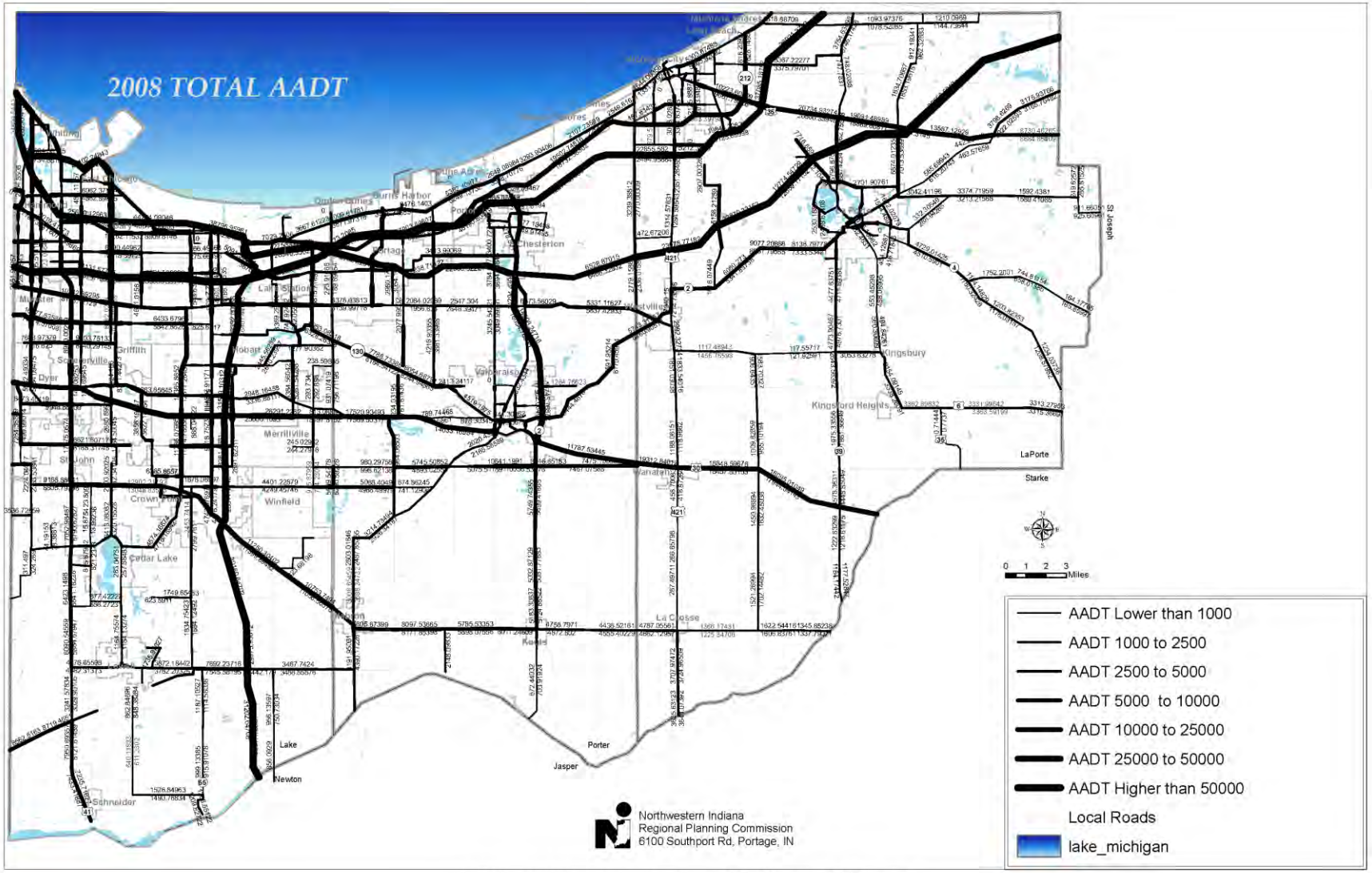
Chesterton
Valparaiso
Merrillville
Hobart
Winfield
Crown Point
Lowell
Schneider
Kingsford Heights
LaPorte
Starke
Porter
Jasper
Newton
Lake
0 1 2 3 Miles
AADT lower than 250
AADT 250 to 500
AADT 500 to 750
AADT 750 to 1500
AADT 1500 to 5000
AADT 5000 to 10000
AADT higher than 10000
Local Roads
lake_michigan
Northwestern Indiana
Regional Planning Commission
6100 Southport Rd, Portage, IN


2040 AM AADT
Northwestern Indiana
Regional Planning Commission
6100 Southport Rd, Portage, IN
0 1 2 3 Miles
AADT lower than 250
AADT 250 to 500
AADT 500 to 750
AADT 750 to 1500
AADT 1500 to 5000
AADT 5000 to 10000
AADT higher than 10000
Local Roads
lake_michigan


2008 PM AADT
East Chicago
Burns Harbor
Chesterton
Valparaiso
Merrillville
Hobart
Dyer
St John
Crown Point
Winfield
Hebron
Kouts
La Crosse
Kingsford Heights
Kingsbury
LaPorte
Starke
St Joseph
Lake
Porter
Jasper
Newton
Schneider
0 1 2 3
Miles
AADT lower than 250
AADT 250 to 500
AADT 500 to 750
AADT 750 to 1500
AADT 1500 to 5000
AADT 5000 to 10000
AADT higher than 10000
Local Roads
lake_michigan
Northwestern Indiana
Regional Planning Commission
6100 Southport Rd, Portage, IN


2040 PM AADT
Northwestern Indiana
Regional Planning Commission
6100 Southport Rd, Portage, IN
0 1 2 3
Miles
AADT lower than 250
AADT 250 to 500
AADT 500 to 750
AADT 750 to 1500
AADT 1500 to 5000
AADT 5000 to 10000
AADT higher than 10000
Local Roads
lake_michigan



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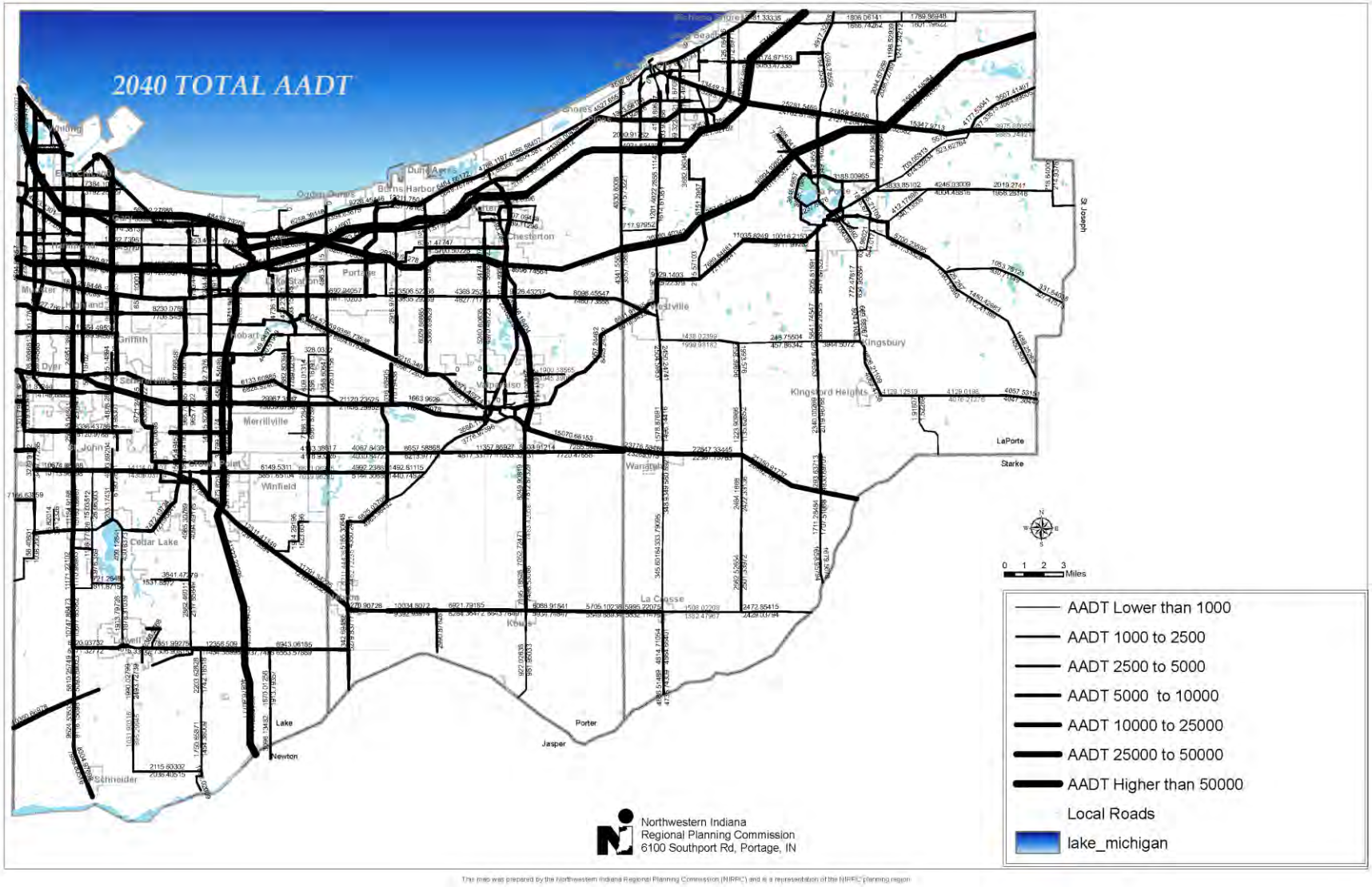
2040 TOTAL AADT
Northwestern Indiana
Regional Planning Commission
6100 Southport Rd, Portage, IN
0 1 2 3
Miles
AADT Lower than 1000
AADT 1000 to 2500
AADT 2500 to 5000
AADT 5000 to 10000
AADT 10000 to 25000
AADT 25000 to 50000
AADT Higher than 50000
Local Roads
lake_michigan

APPENDIX Section 4: Corridors Selected for Data Collection

Final Corridor Prioritization for Travel Time Data Collection

Ranking	Corridor	Function	From	To	Direction	Length (Miles)	County	AADT	AADT Rank	AADT Points	V/C Ratio	V/C Rank	V/C Points	Survey responses	Survey Points	Survey Rank	Avg Rank	Final Score
1	Calumet Ave.	Principal Arterial	77th Ave.	Indianapolis Blvd	N/S	14.75	Lake	20320	10	3	0.988	18	3	20	4	4	10.7	13
2	Indianapolis Blvd	Principal Arterial	Lake Co. Line	Illinois State Line	N/S	37.25	Lake	26752	6	3	0.983	20	3	44	4	1	9.0	13
3	Ridge Rd. /U.S. 6	Principal Arterial	Illinois State Line	U.S. 421	E/W	33	Lake, Porter, LaPorte	25912	9	3	1.26	6	3	22	4	3	6.0	13
4	U.S. 30	Principal Arterial	Illinois State Line	County Line	E/W	44.25	Lake, Porter, LaPorte	45516	2	3	1.386	1	3	41	4	2	1.7	13
5	U.S. 35	Principal Arterial	Starke County Line	Johnson Rd.	N/S	18.25	LaPorte	18729	11	3	1.039	13	3	6	3	9	11.0	12
6	SR 2	Principal Arterial	U.S. 421	U.S. 20	E/W	18.75	LaPorte	17818	12	3	1.381	2	3	6	3	8	7.3	12
7	SR 312/Chicago Ave.	Principal Arterial	Hohman Ave.	U.S. 12	E/W	5	Lake	14411	20	3	0.96	21	3	2	2	21	20.7	11
8	SR 130/Lincolnway	Principal Arterial	250 W	Washington St.	E/W	3.5	Porter	12426	28	2	1.209	8	3	7	3	7	14.3	11
9	Broadway Ave.	Principal Arterial	U.S. 231	Indiana Toll Rd./I-80/I-90	N/S	14.26	Lake	16756	14	3	1.342	3	3	5	2	10	9.0	11
10	Central Ave.	Minor Arterial	Willowdale Rd.	McCool Rd.	E/W	3.26	Porter	11016	35	2	1.006	16	3	5	2	11	20.7	10
11	U.S. 12	Principal Arterial	Indianapolis Blvd	U.S. 20	E/W	6.5	Lake	11456	30	2	1.116	10	3	3	2	17	19.0	10
12	Central Ave.	Minor Arterial	15th Ave.	Willowdale Rd.	E/W	9.5	Lake, Porter	13748	22	3	1.33	4	3	1	1	28	19.0	10
13	SR 55	Principal Arterial	133rd Ave.	Ridge Rd.	N/S	12.25	Lake	11988	29	2	1.166	9	3	4	2	12	16.7	10
14	Michigan Rd./U.S. 20	Principal Arterial	U.S. 12	SR 2	E/W	16.75	LaPorte	26734	7	3	1.084	12	3	1	1	27	15.3	10
15	SR 149	Principal Arterial	SR 130	U.S. 12	N/S	8.75	Porter	9787	43	2	0.952	23	3	1	1	31	32.3	9
16	Airport Rd./500 W	Minor Arterial	600 N	Central Ave.	N/S	3.75	Porter	10114	40	2	0.984	19	3	1	1	30	29.7	9
17	U.S. 20	Principal Arterial	U.S. 12	U.S. 35	E/W	26.25	Lake, Porter, LaPorte	13102	23	3	0.637	45	2	3	2	19	29.0	9
18	Crisman Rd /Willowcreek Rd./SR 249	Minor Arterial	U.S. 6	U.S. 12	N/S	5.75	Porter	16354	16	3	0.795	32	2	2	2	22	23.3	9
19	I-65	Expressway	Lake County Line	U.S. 30	E/W	18.25	Lake	31998	4	3	0.631	46	2	3	2	18	22.7	9
20	Kennedy Ave./Hush St.	Minor Arterial	Junction Ave.	Chicago Ave.	N/S	9	Lake	15862	17	3	0.77	34	2	4	2	14	21.7	9
21	U.S. 421	Principal Arterial	County Line	8th St.	N/S	31.5	LaPorte	12652	24	2	1.234	7	3	1	1	29	20.0	9
22	45th Ave.	Minor Arterial	Calumet Ave.	Broadway Ave.	E/W	9.5	Lake	15147	18	3	0.908	24	2	4	2	13	18.3	9
23	Mississippi st.	Minor Arterial	101st Ave.	61st Ave.	N/S	5	Lake	26319	8	3	1.28	5	3	0	0	38	17.0	9
24	400 N	Minor Arterial	Porter/LaPorte Co. Line	I-94	E/W	3.5	LaPorte	9799	42	2	0.953	22	3	0	0	43	35.7	8
25	Joliet Rd./SR 330	Minor Arterial	U.S. 30	U.S. 30	E/W	14	Lake, Porter	10212	39	2	0.993	17	3	0	0	42	32.7	8
26	Burr St.	Minor Arterial	Ridge Rd	U.S. 20	N/S	3.75	Lake	12496	26	2	0.643	42	2	2	2	23	30.3	8
27	SR 2	Principal Arterial	SR 130	U.S. 421	E/W	11.25	Porter, LaPorte	11177	34	2	1.035	14	3	0	0	41	29.7	8
28	U.S. 12	Principal Arterial	U.S. 20	Tremont Rd.	E/W	13	Lake, Porter	11295	31	2	1.014	15	3	0	0	40	28.7	8
29	Broad St.	Minor Arterial	Joliet Rd.	Ridge Rd.	N/S	4	Lake	11205	33	2	1.09	11	3	0	0	39	27.7	8
30	Grant St.	Minor Arterial	Ridge Rd.	U.S. 20	N/S	4	Lake	16530	15	3	0.86	28	2	1	1	32	26.0	8
31	Cline Ave./SR 912	Expressway	I-80/I-94	Indiana Toll Rd./I-80/I-90	N/S	N/A	Lake	39888	3	3	0.61	48	1	10	3	5	18.7	8
32	I-94	Expressway	Lake/Porter Co. Line	Michigan State Line	E/W	29.26	Porter, LaPorte	45708	1	3	0.631	47	1	8	3	6	18.0	8
33	Campbell St./Meridian Rd.	Minor Arterial	Lincolnway	600 N	N/S	3.75	Porter	6771	53	1	0.658	41	2	2	2	24	39.3	7
34	U.S. 20/U.S. 12	Principal Arterial	U.S.12/4th Ave.	U.S. 12/Melton Rd	E/W	5	Lake	17003	13	3	0.64	44	2	0	0	46	34.3	7
35	Hobart Rd./Ripley St.	Principal Arterial	Lake/Porter Co line.	U.S. 20	N/S	5.5	Lake	10244	38	2	0.798	30	2	1	1	33	33.7	7
36	15th Ave	Minor Arterial	Calumet Ave	Central Ave.	E/W	9.75	Lake	14305	21	3	0.797	31	2	0	0	45	32.3	7
37	61st Ave.	Principal Arterial	SR 55	SR 51	E/W	5.5	Lake	15144	19	3	0.88	26	2	0	0	44	29.7	7
38	U.S. 231	Principal Arterial	U.S. 41	Delaware St.	E/W	8	Lake	9421	44	2	0.764	35	2	0	0	50	43.0	6
39	165th Ave.	Minor Arterial	Hohman Ave.	Kennedy Ave.	E/W	3.25	Lake	10410	37	2	0.758	36	2	0	0	49	40.7	6
40	U.S. 12	Principal Arterial	Porter/LaPorte Co Line	Michigan State Line	E/W	8.5	LaPorte	9879	41	2	0.558	54	1	2	2	26	40.3	6
41	U.S. 20	Principal Arterial	Indianapolis Blvd	U.S. 12	E/W	5.5	Lake	8900	46	2	0.866	27	2	0	0	48	40.3	6
42	93rd Ave./91st Ave.	Minor Arterial	Sheffield Ave.	Chase St.	E/W	7.75	Lake	9104	45	2	0.886	25	2	0	0	47	39.0	6
43	SR 49	Principal Arterial	U.S. 30	Dunes State Park	N/S	16.5	Porter	12430	27	2	0.604	49	1	2	2	25	33.7	6
44	Indiana Toll Rd./I-80/I-90	Expressway	State Line	St. Josephs County Line	E/W		Lake, Porter, LaPorte	30660	5	3	0.602	50	1	1	1	34	29.7	6
45	Georgia Ave./ Virginia Ave.	Minor Arterial	Ridge Rd	U.S. 20	N/S	3.75	Lake	6589	54	1	0.641	43	2	0	0	57	51.3	5
46	Lake Shore Drive	Minor Arterial	Franklin St.	Michigan State Line	E/W	4.75	LaPorte	6912	52	1	0.672	40	2	0	0	56	49.3	5
47	Lenburg Rd./1050 N	Minor Arterial	McCool Rd.	100 E	E/W	5.25	Porter	7051	51	1	0.686	39	2	0	0	55	48.3	5
48	County Line Rd.	Minor Arterial	Joliet Rd.	Central Ave.	N/S	6.75	Lake	4495	64	1	0.437	64	1	4	2	16	48.0	5
49	77th Ave	Minor Arterial	Hart St	Cline Ave	E/W	4.5	Lake	7265	50	1	0.707	38	2	0	0	54	47.3	5
50	SR 2	Principal Arterial	U.S. 41	U.S. 231	E/W	14	Lake, Porter	7862	49	1	0.747	37	2	0	0	53	46.3	5
51	Earl Rd./Coolspring Ave.	Minor Arterial	Porter/LaPorte Co Line	Johnson Rd.	E/W	4.5	LaPorte	5588	59	1	0.548	57	1	3	2	20	45.3	5
52	Morse St./Clark St.	Minor Arterial	SR 2	155th Ave.	N/S	4.25	Lake	7990	48	1	0.777	33	2	0	0	52	44.3	5
53	Columbia Ave.	Minor Arterial	Calumet Ave.	Chicago Ave.	N/S	6.25	Lake	10756	36	2	0.523	61	1	1	1	35	44.0	5
54	Hitchcock St./Willard Ave.	Minor Arterial	400 N	Michigan St.	N/S	3.5	LaPorte	8267	47	1	0.604	29	2	0	0	51	42.3	5
55	SR 39	Minor Arterial	U.S. 35	Michigan State Line	N/S	9	LaPorte	6097	55	1	0.556	55	1	4	2	15	41.7	5
56	25th Ave.	Minor Arterial	Burr St.	SR-53	E/W	3.5	Lake	4947	62	1	0.481	62	1	1	1	37	53.7	4
57	U.S. 6	Minor Arterial	U.S. 421	St. Joseph County Line	E/W	21.25	LaPorte	5985	56	1	0.546	58	1	1	1	36	50.0	4
58	93rd Ave.	Minor Arterial	Chase St.	Mississippi St.	E/W	3	Lake	11268	32	2	0.548	56	1	0	0	59	49.0	4
59	Sheffield Ave./Hohman Ave	Minor Arterial	Ridge Rd	Calumet Ave	N/S	7.5	Lake	12587	25	2	0.536	59	1	0	0	58	47.3	4
60	Parrish St.	Minor Arterial	161st Ave.	117th Ave.	N/S	4.5	Lake	2054	69	1	0.2	69	1	0	0	69	69.0	3
61	Grand Blvd	Principal Arterial	U.S. 30	10th St.	N/S	3.5	Lake	2063	68	1	0.202	68	1	0	0	68	68.0	3
62	Joliet Rd.	Minor Arterial	U.S. 30	U.S. 130	E/W	3.75	Porter	2527	67	1	0.251	67	1	0	0	67	67.0	3
63	Boyd Blvd	Minor Arterial	U.S. 35	SR 2	N/S	3.25	LaPorte	3064	66	1	0.298	65	1	0	0	66	65.7	3
64	SR 212	Principal Arterial	U.S. 20/U.S. 35	U.S. 12	N/S	3.25	LaPorte	5295	61	1	0.257	66	1	0	0	65	64.0	3
65	133rd Ave./ Lake Shore Drive	Principal Arterial	White Oak Ave.	Morse St.	E/W	4	Lake	4758	63	1	0.463	63	1	0	0	64	63.3	3
66	SR 4	Principal Arterial	U.S. 35	200 E	E/W	3.25	LaPorte	5431	60	1	0.528	60	1	0	0	63	61.0	3
67	SR 8	Minor Arterial	575 W	U.S. 421	E/W	16	Porter, LaPorte	4028	65	1	0.579	51	1	0	0	62	59.3	3
68	173rd Ave	Minor Arterial	Hohman Ave.	Kennedy Ave.	E/W	3.25	Lake	5890	58	1	0.573	53	1	0	0	61	57.3	3
69	Sheffield Ave./Hart st.	Minor Arterial	161st Ave.	U.S. 30	N/S	4.25	Lake	5935	57	1	0.577	52	1	0	0	60	56.3	3