

SECTION 5

Existing Transportation Facilities and System Performance

Existing Transportation Facilities and System Performance

5.1 Introduction

An important prerequisite to transportation planning is an understanding of the components and performance of the existing transportation system. A compilation of existing transportation facilities in Will County was made and reported previously in the Will County 2030 Transportation Plan's *Existing Transportation Systems Report*, finalized November 2005. This report, which is summarized in this section, provides a detailed compendium of information pertaining to the existing Will County roadway network and the performance of its components.

5.2 Existing Highway System

The Will County highway network is predominately a grid system with roads oriented north-south and east-west, but there are also some roadways oriented southwest to northeast as part of a larger radial system centralized in downtown Chicago. The northern, more urbanized, portions of the county have a denser roadway system with a higher concentration of arterial streets. The rural southern portions of the county are dominated by local two-lane roads, with the exception of the area surrounding the old Joliet Arsenal. The Kankakee and Des Plaines Rivers both serve as a natural obstacle for east/west travel with a limited number of river crossings.

Major freeways serving Will County include I-55, I-355, I-57, and I-80. Traffic service is also provided by U.S. Highways 6, 30, 45, and 52 and State Highways 1, 7, 50, 53, 59, 102, 113, 126, 171, and 394.

There are roughly 620 route miles of highway (excluding local roads) in Will County, 270 of which are on the county highway system. **Figure 5-1** is a map of the existing highway system showing jurisdictional classification (Interstate [including tollways], U.S. Highway, Illinois State Highway, and Will County Highway). Table 5-1 summarizes the mileage of existing highways in each jurisdictional classification.

TABLE 5-1
Mileage of Highways in Will County by Jurisdictional Classification—2004

Jurisdictional Classification	Route Miles	Lane Miles
Interstate (ISTHA, IDOT)	100	400
U.S. Highway (IDOT)	100	250
State Highway (IDOT)	150	440
County Highway (Will County)	270	600
Total	620	1,690

Functional classifications as defined in Section 4-1 include freeways and principal arterials (primarily providing for traffic mobility), minor arterials, collectors, and local streets

(primarily providing access to abutting land uses). **Figure 5-2** depicts the functional classification of highways in Will County, and Table 5-2 shows the existing mileage of highways by functional classification. The functional class of Will County highways and associated mileage are shown in Table 5-3.

The SRA system has been developed to serve as a second tier to the freeway system with a focus on through vehicles. The system is planned to be a comprehensive transportation network that can accommodate long distance regional traffic. Parts of the highway system that are also designated as an SRA are shown in **Figure 5-3** and listed in **Table 5-4**.

Along with the state-selected SRA routes, the county includes a classification of county freeway. County freeways have similar characteristics as SRAs in that they can accommodate long distance regional travel and have further access management regulations to provide limited conflicts to through movements. The roadways with the County Freeway designation are shown in **Figure 5-3**.

Roads designated as truck routes, by type, are shown in **Figure 5-4**. All interstates, U.S. highways, and most state routes are classified as either Class I or Class II truck routes. The predominate direction for the truck routes is north-south given I-55, I-57, and IL 53, IL 59, U.S. 45, Governor's Highway, and Dixie Highway. East-west truck movements are served by U.S. 30/U.S. 52, I-80, and IL 7. Improvements have been made to additional roadways to enhance truck movements in and around large multimodal facilities such as the Center Point development near Elwood.

5.3 Public Transportation

Public transportation in Will County consists of commuter rail, fixed-route buses, paratransit/dial-a-ride, and vanpools. Service is provided by Metra and Pace, operating divisions of the Regional Transportation Authority (RTA).

5.3.1 Commuter Rail

Metra operates commuter rails throughout the Chicago region, with all of its routes extending radially from the City of Chicago. Three Metra lines – the Metra Electric District (MED), Rock Island District (RID), and Heritage Corridor (HC) – have had stations in Will County for a number of years. The SouthWest Service (SWS) line was extended into Will County in early 2006.

TABLE 5-2
Mileage of Highways in Will County by Functional Class—2004

Functional Class	Route Miles	Lane Miles
Freeways and Ramps	100	390
Principal Arterials	270	750
Minor Arterials	240	580
Collector	320	660
Locals	860	1,720
Total	1,790	4,100

TABLE 5-3
Mileage of Will County Highways by Functional Class—2004

Functional Class	Route Miles	Lane Miles
Principal Arterials	80	200
Minor Arterials	60	140
Collector	80	160
Local	50	100
Total	270	600

TABLE 5-4
SRA Routes and County Freeways in Will County

SRA Route	From	To
Bell Road	Illinois 7	Will-Cook County Line
Illinois 1	Will-Cook County Line	Will-Kankakee County Line
Illinois 7 (159th Street)	Cedar Road	Will-Cook County Line
Illinois 53	I-80	Wilmington-Peotone Road
Illinois 59	I-55	Will-DuPage County Line
Illinois 394 (Calumet Exp)	Illinois 1	Will-Cook County Line
Larkin Avenue	Weber Road	I-80
Wilmington-Peotone Road	I-55	Illinois 1
Caton Farm Road	Will-Kendall County Line	Illinois 53
Bruce Road	State Street	Cedar Road
Cedar Road	Bruce Road	Illinois 7
U.S. 30 (Lincoln Hwy)	I-80	Will-Cook County Line
U.S. 45	Will-Cook County Line	Will-Kankakee County Line
Weber Road	Boughton Road	Larkin Avenue
119th Street	Will-Kendall County Line	Weber Road
Boughton Road	Weber Road	I-355
Manhattan-Monee Road	U.S. 45	Governors Highway
Governors Highway	Crete-Monee Road	Manhattan-Monee Road
Crete-Monee Road	Governors Highway	Illinois 1
Illinois 43	Will-Cook County Line	U.S. 30
County Freeway	From	To
Arsenal/Manhattan Road	I-55	U.S. 52
Gougar Road	U.S. 6	Laraway Road
Laraway Road	U.S. 52	Harlem Avenue
Center Road	Laraway Road	Wilmington-Peotone Road

Source: IDOT and WCDH

The following Metra stations currently exist in Will County:

- University Park (MED)
- Hickory Creek (RID)
- Mokena (RID)
- New Lenox (RID)
- Lockport (HC)
- Joliet Union Station (RID and HC)
- Laraway Road (SWS) *opened Summer 2006*
- Manhattan (SWS) *opened January 2006*

In addition, customer survey data indicates that numerous commuters from Will County use stations just across the county border in Cook and DuPage Counties. In many cases,

these stations are the closest commuter rail option for Will County residents. These include stations on the four lines mentioned above, as well as the Metra/BNSF Line in DuPage County. The following 14 stations have been included in the study area due to their proximity to Will County and usage by County residents:

- Richton Park (MED)
- Matteson (MED)
- 211th Street/Lincoln Highway (MED)
- 80th Avenue/Tinley Park (RID)
- Tinley Park (RID)
- 179th Street/Orland Park (SWS)
- 153rd Street/Orland Park (SWS)
- 143rd Street/Orland Park (SWS)
- Lemont (HC)
- Route 59 (Metra/BNSF)
- Naperville (Metra/BNSF)
- Lisle (Metra/BNSF)
- Belmont (Metra/BNSF)
- Downers Grove/Main Street (Metra/BNSF)

The breakdown by line, county, and levels of service are shown in Table 5-5.

TABLE 5-5
Commuter Rail Ridership and Service Levels

	Number of Stations	Weekday Boardings	Weekday Trains		Weekend Service?
			Total	Express	
Metra Electric District	4	4,746	61	11	Yes
Will County	1	1,004			
Cook County	3	3,742			
Rock Island District	6	7,144	46	0	Yes
Will County	4	3,654			
Cook County	2	3,490			
Heritage Corridor	3	1,023	6	0	No
Will County	2	616			
Cook County	1	407			
SouthWest Service	5	919	29	0	No
Will County	2	n/a*			
Cook County	3	919			
Metra/BNSF	5	14,760	71	33	Yes
Will County					
DuPage County	5	14,760			

Source: Commuter Rail System Boarding/Alighting Counts, Fall 2002

*Ridership data unavailable (two Will County SWS stations open in 2006 with four trains per weekday)

5.3.2 Bus Service, Paratransit, and Vanpools

Pace, the RTA’s suburban bus division, operates a family of services including fixed-route bus service, paratransit service, dial-a-ride service and vanpool/rideshare services, all of which are in operation in Will County (see **Figure 5-5** for a map of existing public transportation facilities).

Fixed-route bus service in Will County is primarily provided by eight bus routes that are based in and around the City of Joliet by Pace’s Heritage Division. In addition, there are four Pace south division routes that operate primarily in southern Cook County but briefly cross over into Will, eight privately contracted feeder routes that access the Metra/BNSF stations in southern DuPage County, and three express bus routes that shuttle riders from Will County to specific destinations such as the Chicago CBD, Midway Airport, and Yorktown Mall. Table 5-6 lists the Pace Routes in Will County.

Pace is also responsible for three other kinds of transit services in the County: ADA paratransit, dial-a-ride, and vanpools. These services are described briefly below.

- ADA Paratransit:** This is a prearranged curb-to-curb operation for persons with disabilities. The eligibility for service is determined by a regional certification process. Pace’s ADA Paratransit Service operates in all suburban areas that are within 0.75 miles of Pace’s regular fixed routes, during the same hours and days as the regular fixed route service. Fares are half of the regular basic fare, and Pace funds 100 percent of the operating deficit.

TABLE 5-6
Pace Routes in Will County

Route #	Route name	Route type
South Division		
354	Harvey—Tinley Park	Local bus
358	Torrence	Local bus
362	South Park Forest	MED feeder bus
367	University Park	Local bus/feeder bus
Heritage Division		
501	Forest Park—West Jefferson	Local bus
502	Cass/Marquette	Local bus
503	Black Road/Raynor Park	Local bus
504	South Joliet	Local bus
505	Rockdale/Lidice	Local bus
506	East Washington/East Lenox	Local bus
507	Plainfield	Local bus
511	Joliet-Elwood-Deer Run	Joliet Union Station feeder bus
BNSF Feeders (privately contracted routes)		
675	Route 59 Express	Metra/BNSF feeder bus
680	Naperville—Knoch Knolls	Metra/BNSF feeder bus
683	Naperville—Ashbury	Metra/BNSF feeder bus
686	Naperville—Old Farm	Metra/BNSF feeder bus
678	Naperville—Carriage Hill	Metra/BNSF feeder bus
787	Naperville—Midday	Metra/BNSF feeder bus
824	East Bolingbrook—Lisle	Metra/BNSF feeder bus
825	Central Bolingbrook—Lisle	Metra/BNSF feeder bus
Express Buses		
831	Joliet—Midway	Express Bus
834	Joliet—Yorktown	Express Bus
855	I-55 Flyer	Express Bus

- **Dial-a-Ride:** These services are operated by townships or local municipalities under contract with Pace. Only partial funding is provided for these services; local governments are required to support a portion of the net service costs. Five such services operate in the study area. Dial-a-ride services use vans and small buses to provide prearranged trips to and from specific locations within the service area. Service is provided to individuals determined eligible based on local requirements; local sponsors set the fares. Because the service was originally established to extend public transportation to areas without traditional service, it is not always exclusive to disabled persons.
- **Vanpools:** Pace manages the Vanpool Incentive Program (VIP) in Will County whereby the agency subsidizes vans for use by employers, employees, municipalities, and other organizations. In this way, the vanpool program supplements the other Pace services such as commuter buses and special service (ADA) shuttles. The VIP offers vans for various uses, including not only traditional, user-operated vanpools, but also employer shuttles, special use vans for human service agencies, and non-emergency medical vehicles.

5.4 Non-motorized Travel

A number of dedicated bicycling and pedestrian trails have been built in Will County. These trails are built and managed by a variety of public agencies at the federal, state, and local level. [Figure 5-6](#) shows the bicycle/pedestrian trails in Will County.

Many bicycle and pedestrian trails are purely recreational, traveling in loops through forest preserves or parks, for example. But there are also several longer, regional trails that connect Will County communities to one another and to recreational opportunities. Joliet is the starting and ending point for some of these trails; many stop on the outer parts of the city and certain streets have been designated as routes for biking.

For the purposes of this plan, the focus will remain on the major branches of the county-wide bicycle/pedestrian network, which can serve as a transportation resource for linking one community with another as well as to various recreational opportunities.

The major existing pedestrian/bicycle trails in Will County identified in the plan are as follows:

- **Old Plank Road Trail**— A 21-mile trail that runs east-west along an abandoned rail right-of-way through northern Will and southern Cook Counties.
- **I&M Canal Trail(s)**— A collection of trails that run along the Illinois and Michigan Canal, and has been designated as a National Heritage Corridor that stretches from Chicago to LaSalle in downstate Illinois.
- **University Park Trail(s)**— A set of paved trails that run from the University Park Metra Station through Governor’s State University and into and around the community of University Park.
- **Wauponsee Glacial Trail**— A 26-mile trail along an abandoned rail right-of-way is currently under construction, but the first segment from Joliet past Manhattan to the eastern edge of the Midewin Tallgrass Prairie is currently in use.

- **Joliet Junction Trail**— A 4-plus-mile trail between the community of Crest Hill and the I&M Canal Trail south of Joliet. The trail primarily runs north-south along Larkin Avenue.
- **Rock Run Trail**— A trail that extends 7 miles from Theodore Marsh to the I&M Canal Trail.

5.5 Travel Demand Model

5.5.1 Background

A travel demand model of the Will County transportation system was developed to assist in the determination of future traffic patterns and infrastructure needs. The model was built and calibrated as described in the Will County 2030 Transportation Plan technical memorandum titled *Development, Calibration and Validation of the Will County Travel Demand Model*, August 2005. This section of the report is a brief synopsis of information presented in detail in the technical memorandum.

5.5.2 Methodology

The travel demand model is a traditional four-step model incorporating trip generation, trip distribution, mode choice, and trip assignment.

Trip generation determines the total number of trips produced by and attracted to each zone in the study area. The trip generation relationships are built on travel characteristics determined in the CATS Chicago Area Household Survey. As a prerequisite to the trip generation analysis, certain basic decisions were reached:

- Trips would be stratified by purpose as follows:
 - Home Based Work (HBW)
 - Home Based Shop (HBSh)
 - Home Based Other (HBO)
 - Non-Home Based (NHB)
 - Truck
 - Internal-External (IE)
 - External-Internal (EI)
 - External-External (EE)
- Truck trips and external travel would be analyzed in vehicle trips
- All other trips (i.e., all internal trips except for trucks) would be analyzed in person trips

The zone system developed for the study area was broken into three categories: internal zones, which are located wholly within Will County boundaries; buffer zones, which extend a minimum of 3 miles outside the county border; and external points of entry (POE), which are located at the planning area boundary. There are 1,068 internal traffic analysis zones (TAZ), 48 buffer zones, and 20 POE external stations. See [Figure 5-7](#) for a map of the Will County zone structure.

Trip productions and attractions were determined utilizing a system of cross classification and regression analysis based on detailed socioeconomic data. The CATS 2005 regional

travel forecast was the basis for estimating external (IE, EI, and EE) trips. Special generator and truck volumes were calculated separately and incorporated into the model.

Trip distribution determines how many trips would travel from each origin zone to each destination zone within the study area. The gravity model was the primary vehicle used in trip distribution, with Fratar (successive approximations) modeling used to distribute external-external trips. The Will County travel demand model was run in three time periods: a 2-hour AM peak period, a 2-hour PM peak period, and the remainder of the day summed to a single off peak period. Time of day factors from CATS were applied by trip purpose.

Mode choice is the process of determining the mode of travel for persons traveling within the study area. Due to the relatively small percentage of public transportation trips in the county, mode choice was restricted to application of auto occupancy to person trips. Auto occupancy factors were also taken from CATS.

Trip assignment procedures are used to determine the number of trips that would utilize each roadway segment. The highway network was taken from the 911 road layer provided by the Will County Geographic Information Systems Department. Capacities were taken from the Highway Capacity Manual (HCM) and initial speeds were based on posted speed limits. The assignment process includes the calculation of the least time path from each point to the next. When a road becomes congested and a shorter path can be found, the trip is rerouted to the shorter path. The process endeavors to reach “equilibrium” with regard to network travel time.

The basic outputs of the travel demand modeling process are estimated traffic volumes on each segment of the road network. These volume estimates may then be used to indicate whether the transportation system can adequately serve present and/or future demand.

The model is calibrated to match existing traffic volumes in Will County. Daily model-generated trips were compared to ground-counted volumes at 12 screen lines across the study area. Model parameters were adjusted until the comparison of modeled and actual traffic volumes passed recommended validity tests.

5.5.3 Existing Travel Demand

According to the travel demand model, a total of approximately 918,000 internal vehicle trips (autos and trucks) were made daily in Will County in 2004. Travel between Will County and places outside the county boundaries (external-internal and internal-external) amounted to approximately 578,000 trips per day. In addition, approximately 288,000 trips were made daily crossing the study area without a stop within the study area (external-external). Total daily vehicle trips for the study area in 2004 were 1,784,000 trips.

5.6 Existing Travel Characteristics

An understanding of the characteristics of travel is helpful in uncovering existing problems and determining future needs. Two travel characteristics that are particularly useful in understanding Will County’s requirements are commuter travel patterns and the orientation of present travel desires.

5.6.1 Commute Trips

As reported by the U.S. Census Bureau, just 45 percent of the work trips by Will County residents have a destination within the county. The majority of residents commute outside of the county for work, mostly traveling to DuPage and Cook Counties. In contrast, a smaller percentage, 31 percent, of the total employee trips to work in Will County are made by persons from outside the county, with a majority of the trips originating in Cook or DuPage Counties. Job growth in Will County exceeds population growth and the number of Will County employees commuting to a place of work within the county has increased significantly. Continued job growth, therefore, would create a better balance between population and employment with more county residents working in Will County.

Figure 5-8 illustrates the commute patterns between Will County and the surrounding areas. Table 5-7 shows the daily work trip flow between counties, including work trips made wholly within Will County.

TABLE 5-7
Will County Daily Work Trip County to County Flows*

County of Residence	Work County	Work Trips	Percent to Other Counties
Will County to Chicago Area Counties Work Flows			
Will County, IL	Cook County, IL	76,574	58.2
Will County, IL	DuPage County, IL	43,498	33.1
Will County, IL	Kane County, IL	3,432	2.6
Will County, IL	Lake County, IL	1,128	0.9
Will County, IL	Kankakee County, IL	1,352	1.0
Will County, IL	Kendall County, IL	1,097	0.8
Will County, IL	Grundy County, IL	2,702	2.1
Will County, IL	Lake County, IN	1,658	1.3
Will County, IL	Will County, IL	107,456	
	Total Work Trips	238,897	100
Chicago Area Counties to Will County Work Flows			
Cook County, IL	Will County, IL	24,432	50.2
DuPage County, IL	Will County, IL	9,197	18.9
Kane County, IL	Will County, IL	1,840	3.8
Lake County, IL	Will County, IL	389	0.8
Kankakee County, IL	Will County, IL	3,564	7.3
Kendall County, IL	Will County, IL	1,737	3.6
Grundy County, IL	Will County, IL	5,869	12.1
Lake County, IN	Will County, IL	1,591	3.3
Will County, IL	Will County, IL	107,456	
	Total Work Trips	156,075	100

*Number of Workers 16 years and Over in the Commuter Flow.

Source: U.S. Census Bureau
Release data: March 6, 2003

5.6.2 Travel Desires

Examination of travel desires is especially useful in planning transportation facilities. This analysis technique considers the travel desires of motorists regardless of the underlying traffic network. By assigning traffic to a network resembling a spider web that is unconstrained in terms of roadway availability and capacity, the trips follow a direct path from origin to destination. The travel desires are shown as bands with the width of the band proportional to the traffic volume on that link.

Existing travel desire bands in Will County are shown in **Figure 5-9**. The prominent travel desire is concentrated in the northern urbanized portions of the county. The primary travel desire patterns in the northern half of Will County are north–south in the vicinity of Joliet, Plainfield, Romeoville, Bolingbrook, and Naperville and east–west through the central part of the county including Joliet, Frankfort, and New Lenox. Both of these trip patterns include trips destined to Will County and trips traveling through the county. In the southern portions of the county, the predominant travel desire pattern is north–south in the proximity of the interstate corridors.

5.7 Performance Measures

Performance measures are established to assess the ability of the roadway system and its components in meeting performance goals. This type of technical evaluation will be used to evaluate system conditions in the 2004 study base year and for the forecast year 2030.

Traffic performance measures fall into three categories that are used to evaluate adequacy of operations of the transportation system, and are listed as follows:

- Traffic Service Measures
- Congestion Measures
- Traffic Safety Measures

The basic tool used in calculating the performance measurements for both the existing and future transportation networks is the travel demand model.

5.7.1 Traffic Service Measures

Traffic service measures match a calculated performance value such as speed or travel time to a corresponding level of congestion. One measure relates average operating speed to a determined desirable speed for different functional classes of roadway and different time periods. Desirable speed is the maximum speed for the functional class under uncongested conditions. In the traffic assignment process, this is the initial speed assigned to each link when establishing the network. Travel time, and hence, congested speed, is obtained from the output of each traffic model assignment. Another measure of both traffic service and congestion is delay or the time difference between the uncongested travel time and the congested travel time. The delay function, vehicle hours of delay (VHD), can be calculated for each link. The system-wide delay can be calculated by summing the delays for all links. Separate summaries may also be produced by functional classification or by individual routes.

5.7.2 Congestion Measures

Congestion is usually measured in terms of LOS. For roadway segments, average delay and speed enter into the LOS determination along with other factors. LOS measures the quality of traffic service, and may be determined for each roadway segment on the basis of delay, congested speed, volume to capacity (v/c) ratio, or vehicle density by functional class. The various levels of service for roadway segments, LOS A through LOS F, have been described in Section 4.2 of this report.

In this analysis, congestion is simplified into uncongested segments or congested segments. A congested segment would be any segment of roadway that would operate at approximately LOS D, E, or F. This congestion level would correspond to a v/c ratio greater than 0.66.

5.7.3 Traffic Safety Measures

Traffic safety is another universally accepted transportation performance criteria. A quantitative index or measure of safety performance is appropriate, therefore, as one of the basic performance measures for the Will County transportation system.

Safety is often discussed only in general or qualitative terms. To include safety as a more useful performance measure, it is desirable to quantify safety in readily understandable terms. Of course, any effort to quantify safety must be fully supportable. Highway safety can best be characterized by the number of highway crashes and the resulting injuries and fatalities that might occur or be expected to occur over a given time period. Developing a highway safety performance measure thus becomes an exercise in relating basic transportation system features and attributes to an expected number of highway crashes. There are a number of basic, well established principles relating highway safety to elements of the highway. These include 1) the relationship of vehicular traffic volume to crash frequency, and 2) differences in the safety performance of different highway types.

5.7.4 Public Transportation Measures

The evaluation of the public transportation system will focus on the usage and efficiency of the existing service:

- **Existing ridership trends:** Metra and Pace track ridership information on a recurring basis, and station and line-level data were collected on existing Will County service. Any available statistics on customer preferences and usage patterns were also collected.
- **Service efficiency and productivity:** Public transportation services operate based on the demand for services during certain time periods. Most public transportation in Will County is limited to the weekday morning and evening peak work travel periods. Selected Metra and Pace services also operate during the off-peak and weekend time periods. For rail, the productivity and efficiency of service can be measured in part by the capacity utilization of trains and parking facilities. For Pace buses, productivity can be measured by the number of passengers boarding per revenue hour, a statistic that is tracked by Pace.

The existing public transportation system in Will County was evaluated according to the above factors.

5.8 Existing Performance Analysis

5.8.1 Existing Travel Demand

Figure 5-10 shows existing (2004) Average Daily Traffic (ADT) on highways in Will County. The 2004 ADT values were based on automatic recording traffic counts made at crossings of 12 screen lines in Will County. These data were supplemented with additional counts provided by the IDOT Office of Planning and Programming. Higher volume highways are located predominantly in the northwest portion of the county north of I-80. The heaviest traveled routes include I-55, I-80, I-57, IL 59, IL 53, and Weber Road.

5.8.2 Existing Traffic Service Measures

The traffic service measures of vehicle miles of travel (VMT), vehicle hours of travel (VHT), and vehicle hours of delay (VHD), stratified by functional classification on all highways and county roads only, are summarized in Table 5-8. In examining the traffic performance of all highways, principal arterials, which account for only approximately 15 percent of the lane miles within the county, were found to carry a large percentage of traffic (approximately 32 percent of VMT) and experience approximately 55 percent of VHD. The same trend applies even further when looking exclusively at the county roadway network. For county highways alone, principal arterials were only approximately 25 percent of the system, but carried approximately 41 percent of traffic and experienced 58 percent of the delay.

TABLE 5-8
Traffic Performance 2004

Functional Class	VMT		VHT		VHD	
	Miles	%	Hours	%	Hours	%
2004 All Highways						
Freeways and Ramps	4,790,100	38.7	102,260	33.6	3,370	28.8
Principal Arterials	3,891,590	31.4	102,180	33.6	6,480	55.4
Minor Arterials	1,868,840	15.1	48,010	15.8	1,210	10.4
Collectors	1,184,620	9.6	32,590	10.7	530	4.5
Locals	643,310	5.2	19,080	6.3	110	0.9
Total	12,378,460		304,120		11,700	
2004 County Highways						
Principal Arterials	743,990	42.1	18,440	43.3	930	61.6
Minor Arterials	502,540	28.5	12,060	28.3	420	27.8
Collectors	419,270	23.7	9,960	23.4	150	9.9
Locals	99,730	5.7	2,120	5.0	10	0.7
Total	1,765,530		42,580		1,510	

5.8.3 Existing Congestion Measures

The level of congestion on all highways in 2004, as determined from the daily traffic assignment, is illustrated in [Figure 5-11](#). Only roadway segments that were found to be operating at congested levels are shown.

When considering all highways in Will County, only approximately 7 percent of route miles and 9 percent of lane miles were classified as congested. For just county roads, only approximately 15 percent of route miles and 14 percent of lane miles were deemed to be congested with a concentration of these roadways in the northwest portion of the county, north of I-80.

TABLE 5-9
Congestion—2004

Level of Service	Route Miles		Lane Miles	
	Miles	%	Miles	%
2004 All Highways				
Uncongested	1,650	93	3,700	91
Congested	130	7	360	9
Total	1,780		4,060	
2004 County Highways				
Uncongested	230	88	480	87
Congested	30	12	70	13
Total	260		550	

Table 5-9 shows the length and percentage of route miles and lane miles which are either congested or uncongested.

5.8.4 Existing Safety Measures

Safety was analyzed with data collected from IDOT and the Will County Sheriff's Department office. The number of incidents per year by county for Will County, the surrounding counties, and the state average were normalized by population. The results show that Will County performed better than the statewide rate and better than the surrounding counties with the exception of Kankakee County and Kendall County ([Figure 5-12](#)).

5.8.5 Existing Public Transportation System Performance

Transit service and transit usage in Will County are lower than in the larger Chicago region. In 1999, roughly 83 percent of Will County commuters drove alone to work, a proportion significantly higher than that of the Chicago region as a whole (69 percent). Transit usage for work trips, meanwhile, is roughly three times less common in Will County.

Commuter Rail (Metra)

- Ridership trends:** The commuter rail system is the most widely used form of public transportation in the county. On an average weekday in 2002, the seven commuter rail stations in Will County served 5,274 boarding passengers. Considering the set of stations outside of Will County but within the larger study area, another 14 stations served 23,318 boarding passengers daily. A 2002 survey¹ suggests that nearly 20 percent of the AM peak period passengers boarding at these 14 stations are made by commuters claiming to live in Will County. This means that, in 2002, the number of people leaving Will County to board trains was roughly equivalent to the number of boarding trains in Will County.

¹ 2002 Origin-Destination Survey, Metra

Table 5-10 shows that ridership in the study area has increased markedly over the past decade, and particularly at the Will County stations. For all of the stations in the study area, weekday passenger boarding levels have increased nearly 35 percent. The amount of passengers boarding the entire Metra system, by comparison, experienced 5.2 percent growth during this period.

TABLE 5-10
Metra Ridership in Study Area (1993 vs. 2002)

	Stations	Weekday Boardings (1993)	Weekday Boardings (2002)	Change (%)
Will County	1993: 7 2002: 7	3,204	5,274	+64.6
Southern Cook	1993: 8 2002: 9	7,122	8,588	+20.2
Southern DuPage	1993: 5 2002: 5	10,900	14,760	+35.4
Study Area Total	1993: 20 2002: 21	21,226	28,592	+34.7

Source: Commuter Rail System Boarding/Alighting Counts, Fall 2002

- **Service efficiency and productivity:** The study area includes some of the busiest stations in the Metra system; in fact, in 2002, five of the six busiest stations in the entire Metra system, in terms of daily boarding levels, were in the study area. Four of these were along the Metra/BNSF Line.
- Because most Metra commuters in the study area drive to and park at their boarding station, this high usage of train facilities requires parking lots with a large capacity. Indeed, even lots in the area with more than 1,000 parking spaces are at or near capacity. This may indicate a need to encourage usage of other stations in the system, or to increase the proportion of other modes of access.

For most of the lines serving Will County, relatively few trains operate at or above full capacity. For the purposes of this study, trains approaching full capacity (at or above 85 percent) have been noted. The RID line is the only line that operates a majority of its peak period trains at or near full capacity. This is likely less of a problem for passengers during the morning peak, as Will County residents are among the first to board the train. But during the PM peak period, RID riders from Will County are quite often faced with full trains.

Fixed-Route Bus Service (Pace)

- **Ridership trends:** Pace's fixed route buses carried over 28 million riders in 2003 and averaged between 90,000 and 100,000 unlinked trips per weekday.² Two of its operating divisions (South and Heritage) manage multiple routes in and around Will County, and there are a number of privately contracted bus lines that serve Will County as well. The

² Pace 2003 Ridership Data

ridership on these buses is noted in Table 5-11. Taken together, these routes account for 5 to 6 percent of the overall weekday ridership on Pace’s system.

Weekday ridership on this group of services did not grow from 2002 to 2003; in fact, there was a slight decrease in ridership levels. This trend is relatively consistent across Pace bus lines, as each generally have a stable customer base without the strong growth seen in commuter rail ridership in the county. This suggests that most new residents of Will County are more likely to be commuter rail users than bus users.

TABLE 5-11
Pace Fixed-Route Ridership on Will County Buses

	Routes	Weekday Ridership	
		2002	2003
South Division	4	1,363	1,309
Heritage Division (Joliet)	8	2,583	2,544
Metra/BNSF Feeder Routes	8	794	839
Express Routes	3	993	964
Total	22	5,733	5,656

Source: Pace Ridership Data (2003)

- Service efficiency and productivity:**

The ridership and efficiency levels vary according to individual bus route. Table 5-12 shows the productivity of the Pace buses that operate primarily in Will County (not including those routes that primarily operate in Cook or DuPage County). Productivity is determined by the amount of boarding customers divided by the number of hours that the bus is in service.

TABLE 5-12
Productivity of Pace Routes that Operate Primarily in Will County

Weekday Service	Productivity ^a
824 East Bolingbrook/Lisle	37.6
825 Central Bolingbrook/Lisle	31.6
507 Plainfield	29.0
503 Black Road/Raynor Park	27.8
504 South Joliet	25.0
855 I-55 Flyer	19.9
501 Forest Park – West Jefferson	19.8
506 East Washington/New Lenox	19.4
505 Rockdale/Lidice	18.7
502 Cass/Marquette	18.5
834 Joliet – Yorktown	16.0
367 University Park	14.6
831 Joliet – Midway	10.8
511 Joliet – Elwood – CenterPoint	1.2

Source: Pace Ridership Data (2005)

^aPassengers Per Revenue Hour

The Forest Park – West Jefferson route is used by the most riders in the county, in part because it is the bus that operates the most hours per day in the county. This is also a popular route on the weekends, as is the Plainfield bus which runs from downtown Joliet northwest along the Lincoln Highway to the Joliet Louis Mall.

The most productive buses in the system are the Bolingbrook feeder buses that operate during the peak periods taking passengers to and from the Lisle BNSF station. These buses operate on a set schedule that is coordinated with the Metra timetables.

SECTION 5

Figures

Figure 5-1
Jurisdictional Classification
Of Existing Highways
2004 Baseline

WILL COUNTY
2030 TRANSPORTATION PLAN

Legend

Jurisdictional Class

-  Interstate
-  Tollway
-  US Highway
-  State
-  County
-  Local



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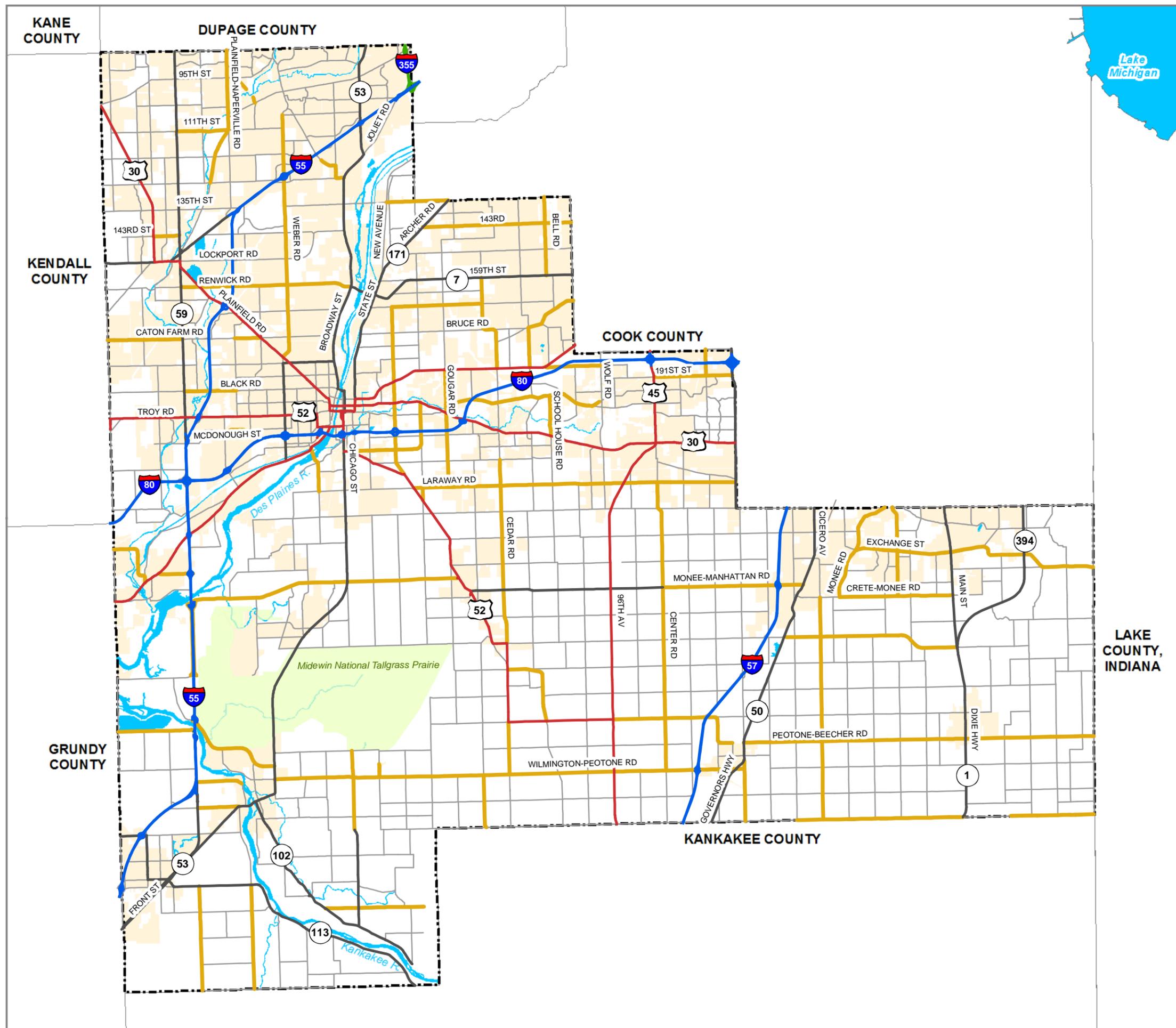


Figure 5-2
Functional Classification
Of Existing Highways
2004 Baseline

WILL COUNTY
2030 TRANSPORTATION PLAN

Legend

Functional Class

-  Interstate
-  Principal Arterial
-  Minor Arterial
-  Collector
-  Local Road or Street

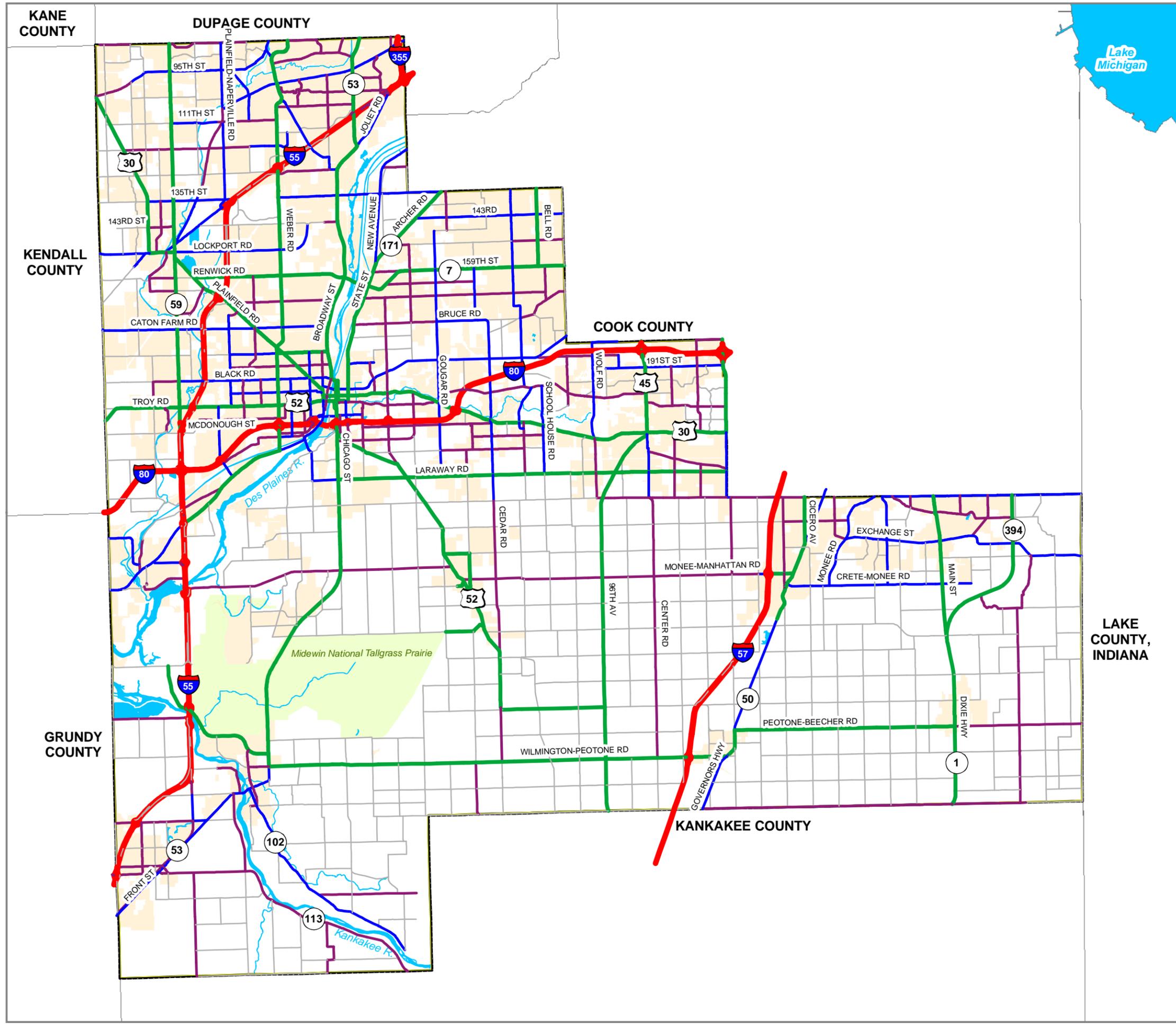
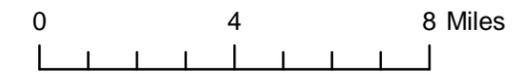


Figure 5-3
Strategic Regional Arterials
& County Freeways
2004 Baseline

WILL COUNTY
2030 TRANSPORTATION PLAN

Legend

 Strategic Regional Arterial or County Freeway

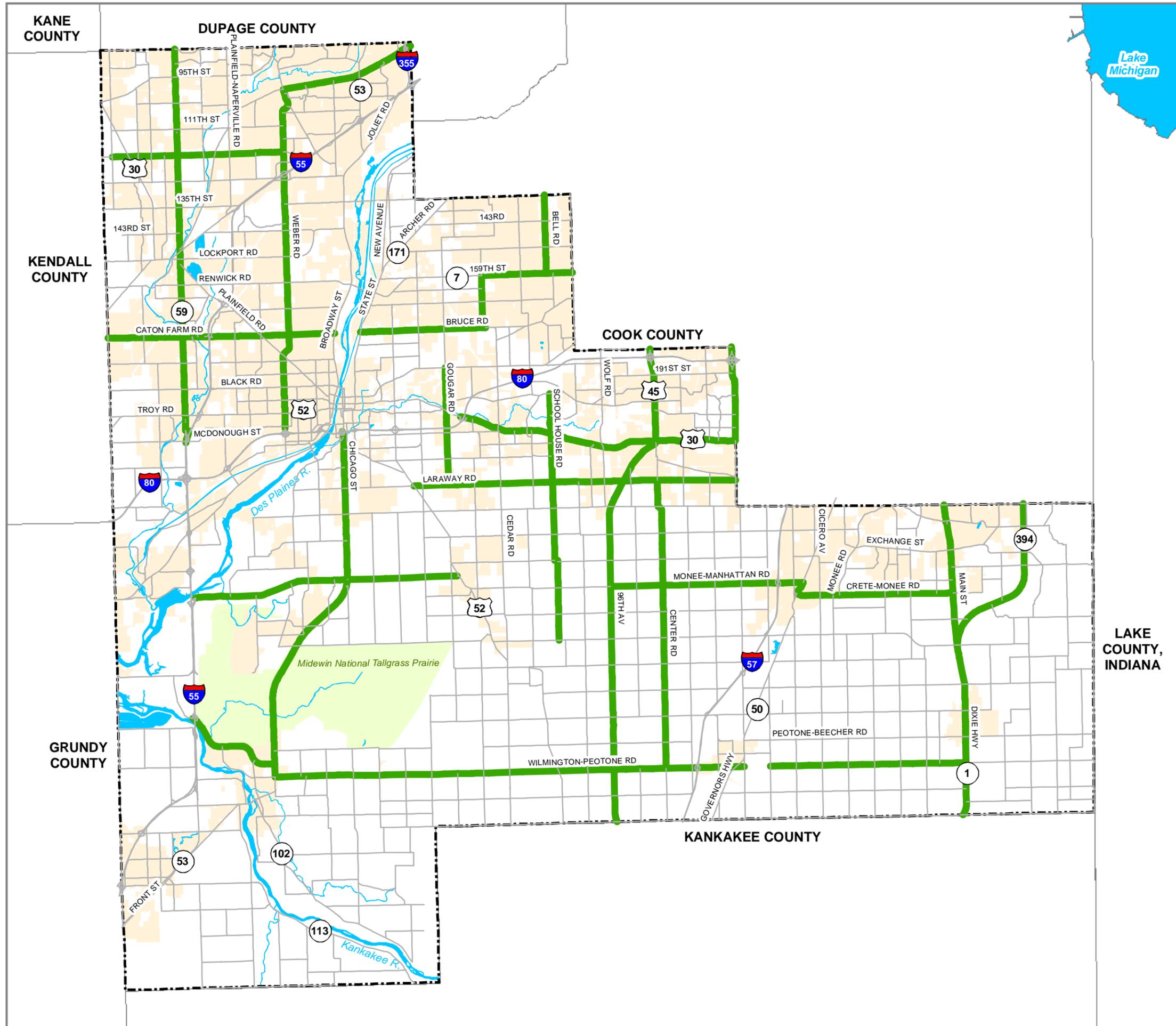


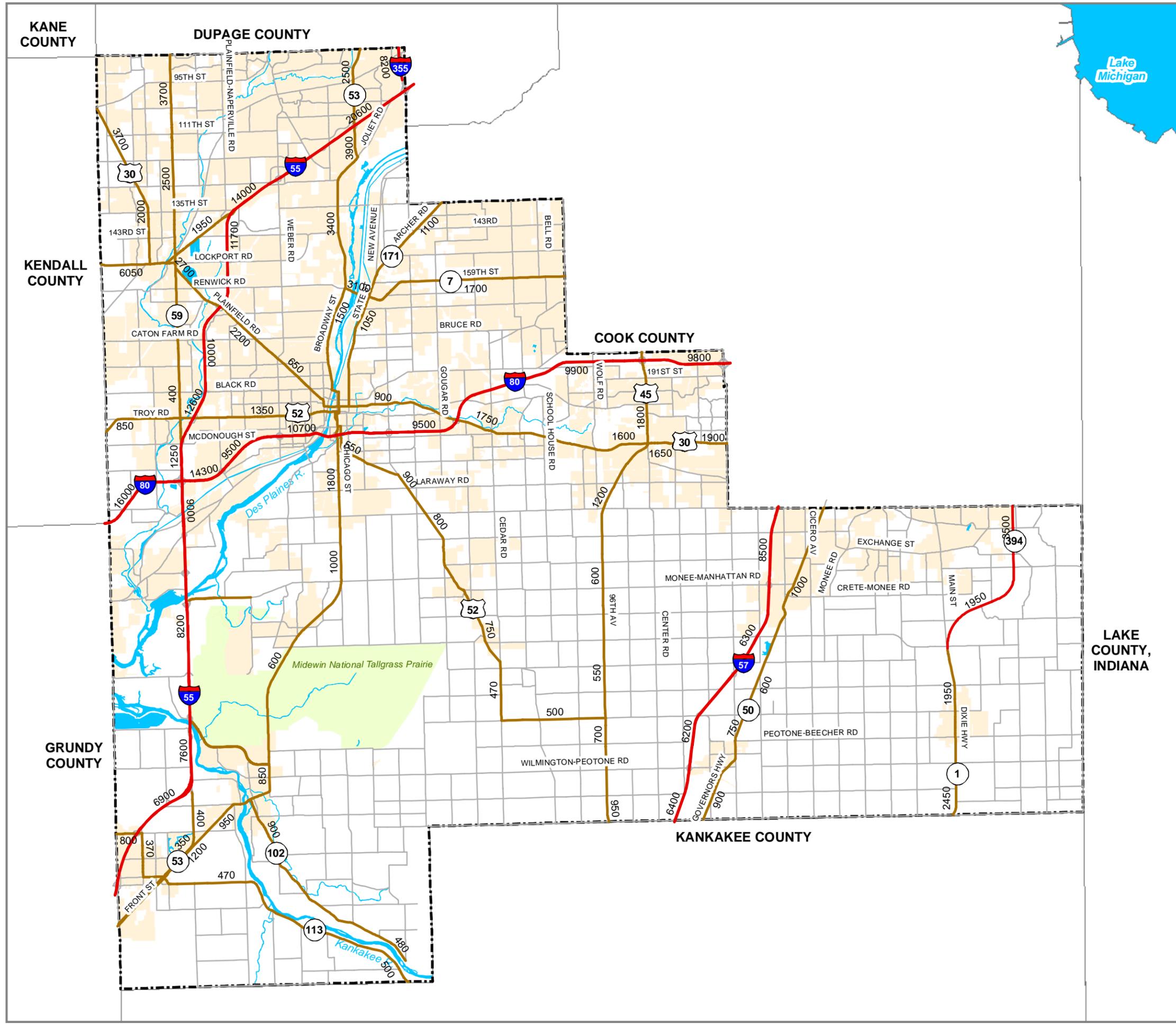
Figure 5-4
2004 Truck Routes and Daily Volumes
2004 Baseline: IDOT Counts

WILL COUNTY
2030 TRANSPORTATION PLAN

Legend

Truck Routes

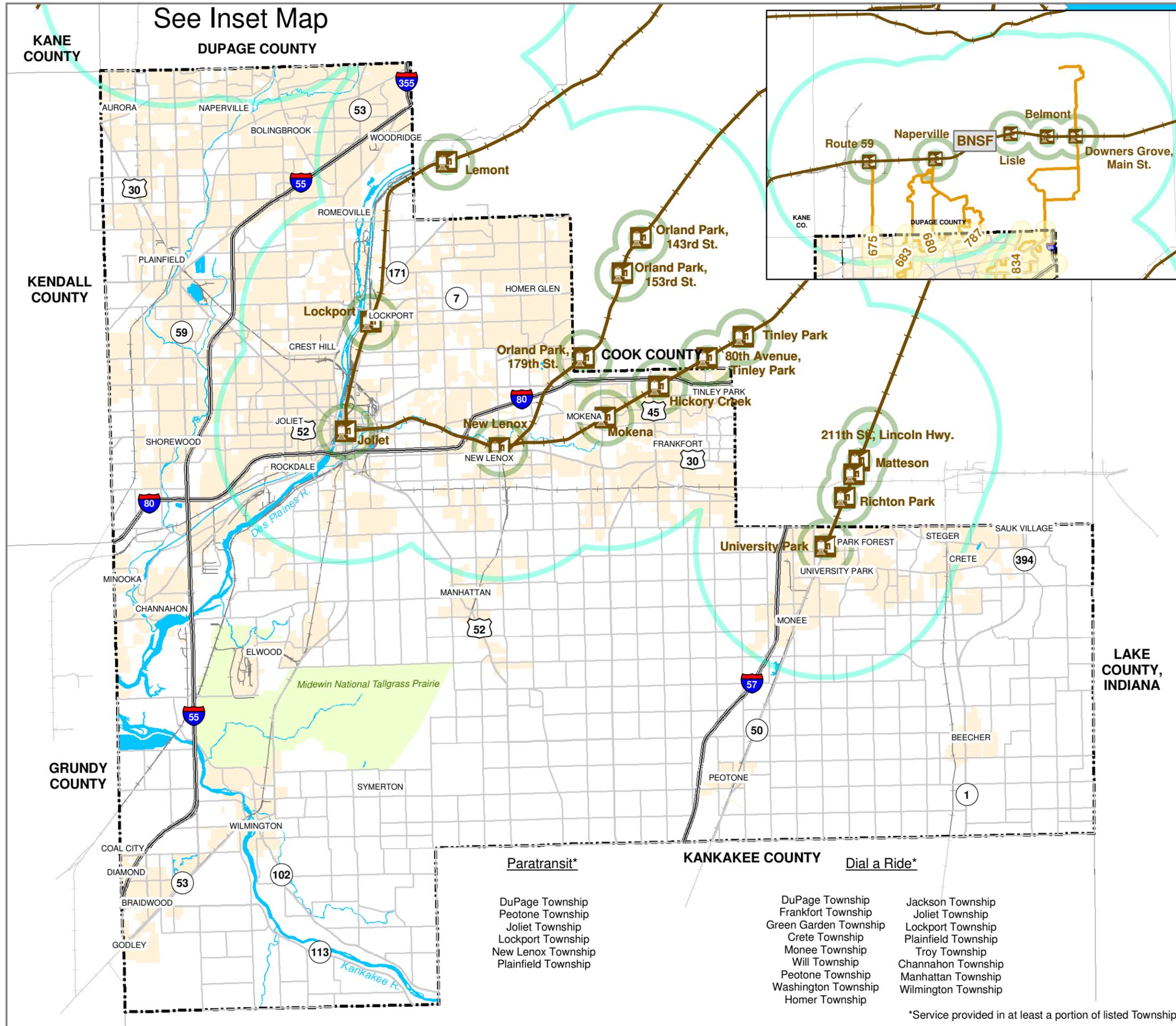
- IDOT Class 1
- IDOT Class 2
- XXXX Average Daily Truck Travel



See Inset Map

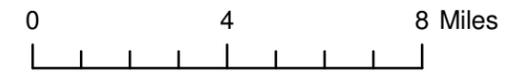
Figure 5-5
Existing Public Transportation
2004 Baseline

WILL COUNTY
2030 TRANSPORTATION PLAN



Legend

- Metra Commuter Rail Station
- Metra Commuter Rail Service
- Metra Commuter Rail Service Area (Miles)**
- 0.5
- 1
- 5
- Railroad
- Electric Line
- Burlington Northern Santa Fe Line
- Rock Island Line
- Southwest Line
- Heritage Corridor Line



Paratransit*

DuPage Township
Peotone Township
Joliet Township
Lockport Township
New Lenox Township
Plainfield Township

Dial a Ride*

DuPage Township
Frankfort Township
Green Garden Township
Crete Township
Monee Township
Will Township
Peotone Township
Washington Township
Homer Township

Jackson Township
Joliet Township
Lockport Township
Plainfield Township
Troy Township
Channahon Township
Manhattan Township
Wilmington Township

*Service provided in at least a portion of listed Township

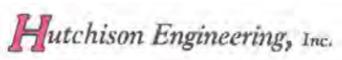
Figure 5-6
Bicycle/Pedestrian Trails
 2004 Baseline

WILL COUNTY
 2030 TRANSPORTATION PLAN

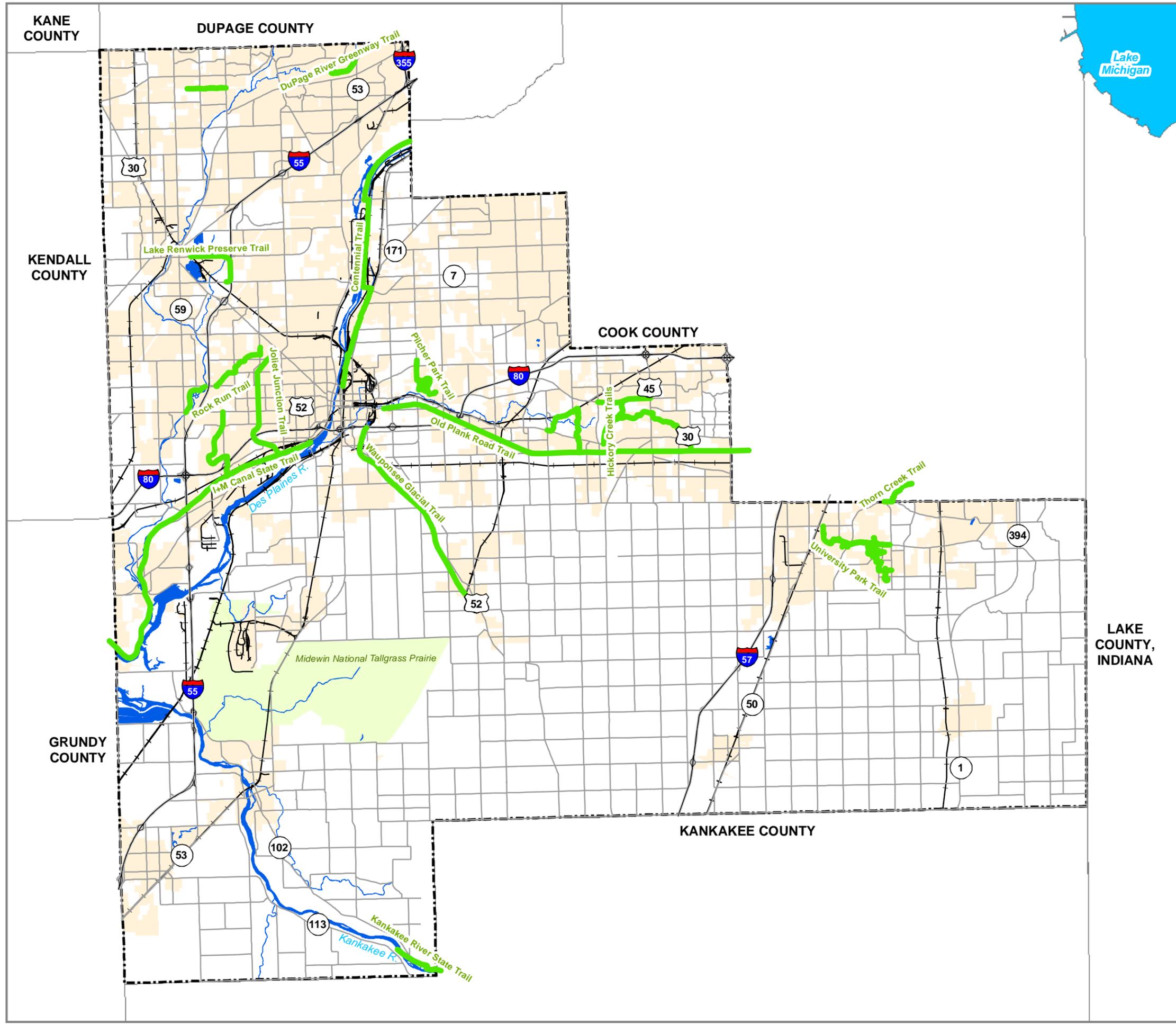
Legend

 Regional Bicycle or Pedestrian Trail



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**Figure 5-7
Will County Points of Entry and
Travel Demand Zone Structure**

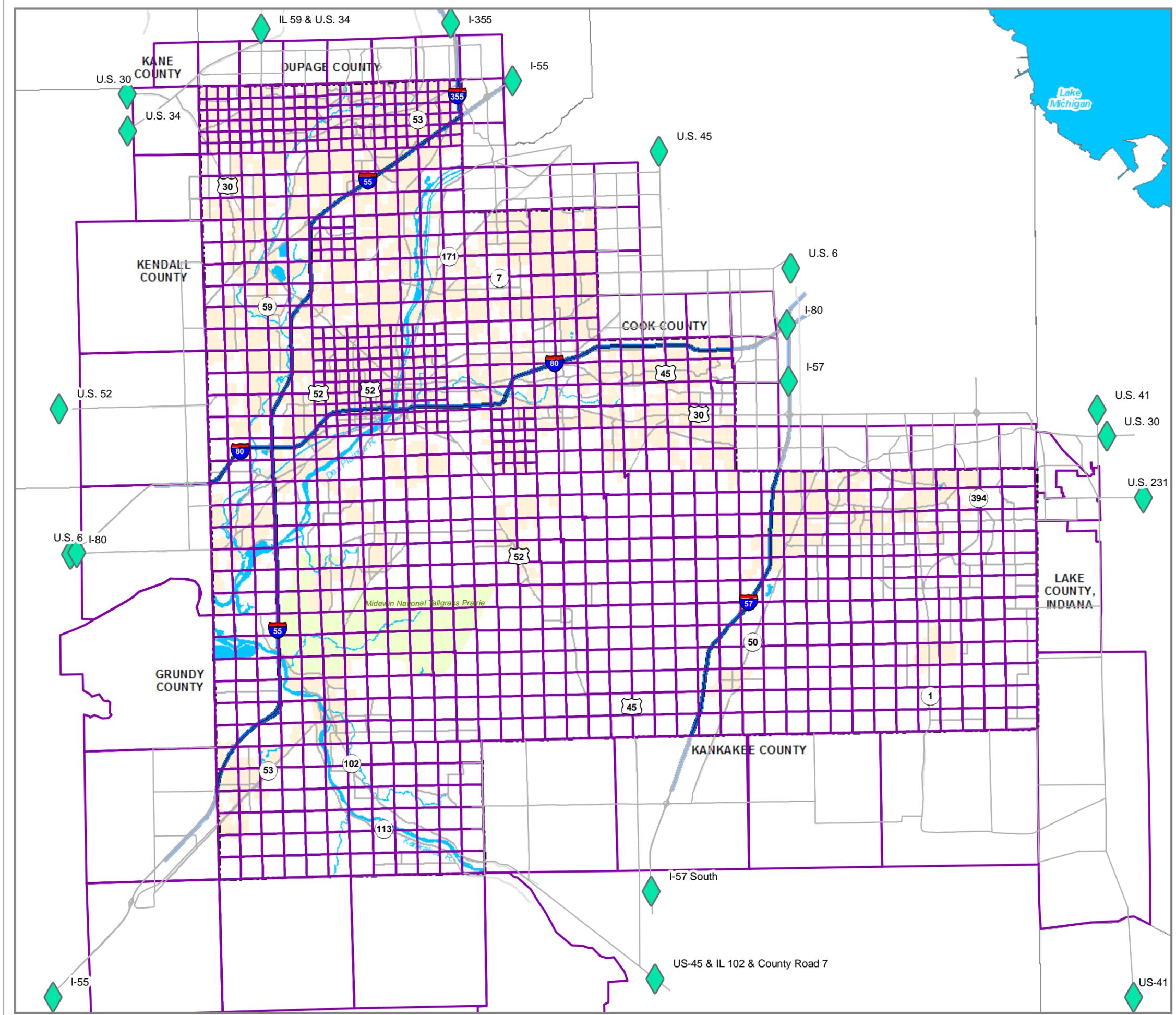
**WILL COUNTY
2030 TRANSPORTATION PLAN**

Legend

-  Point of Entry
-  Traffic Analysis Zone
-  Interstate
-  Other Road

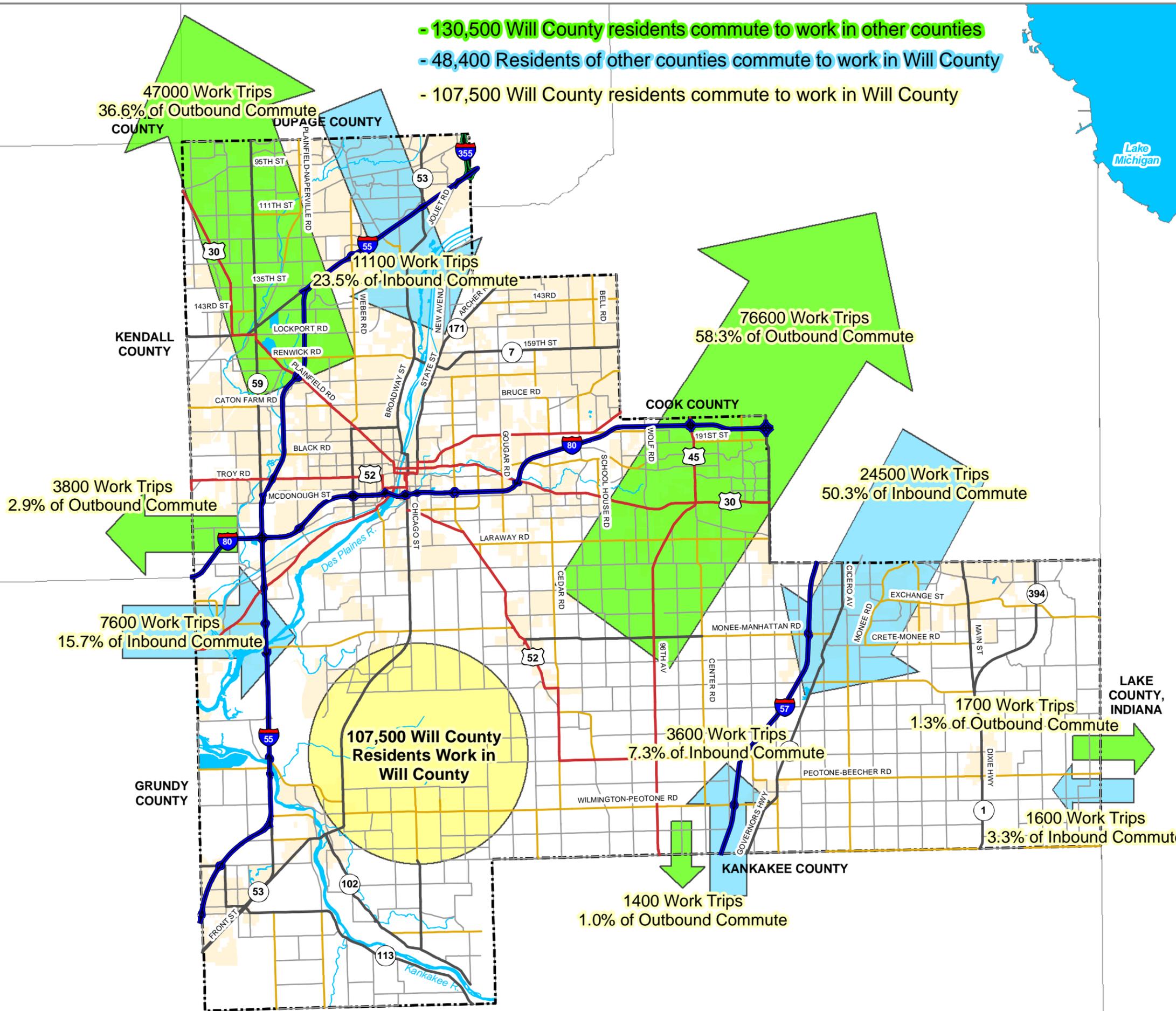


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**Figure 5-8
Commute Patterns
2004 Baseline**

**WILL COUNTY
2030 TRANSPORTATION PLAN**



Legend

Jurisdictional Class

- Interstate
- Tollway
- US Highway
- State
- County
- Local



Figure 5-9
Daily Travel Desire
2004 Baseline

WILL COUNTY
2030 TRANSPORTATION PLAN

Legend

 Township Boundaries

← Scale →

 50,000 Vehicles per Day
 100,000 Vehicles per Day
 200,000 Vehicles per Day

0 4 8
 Miles



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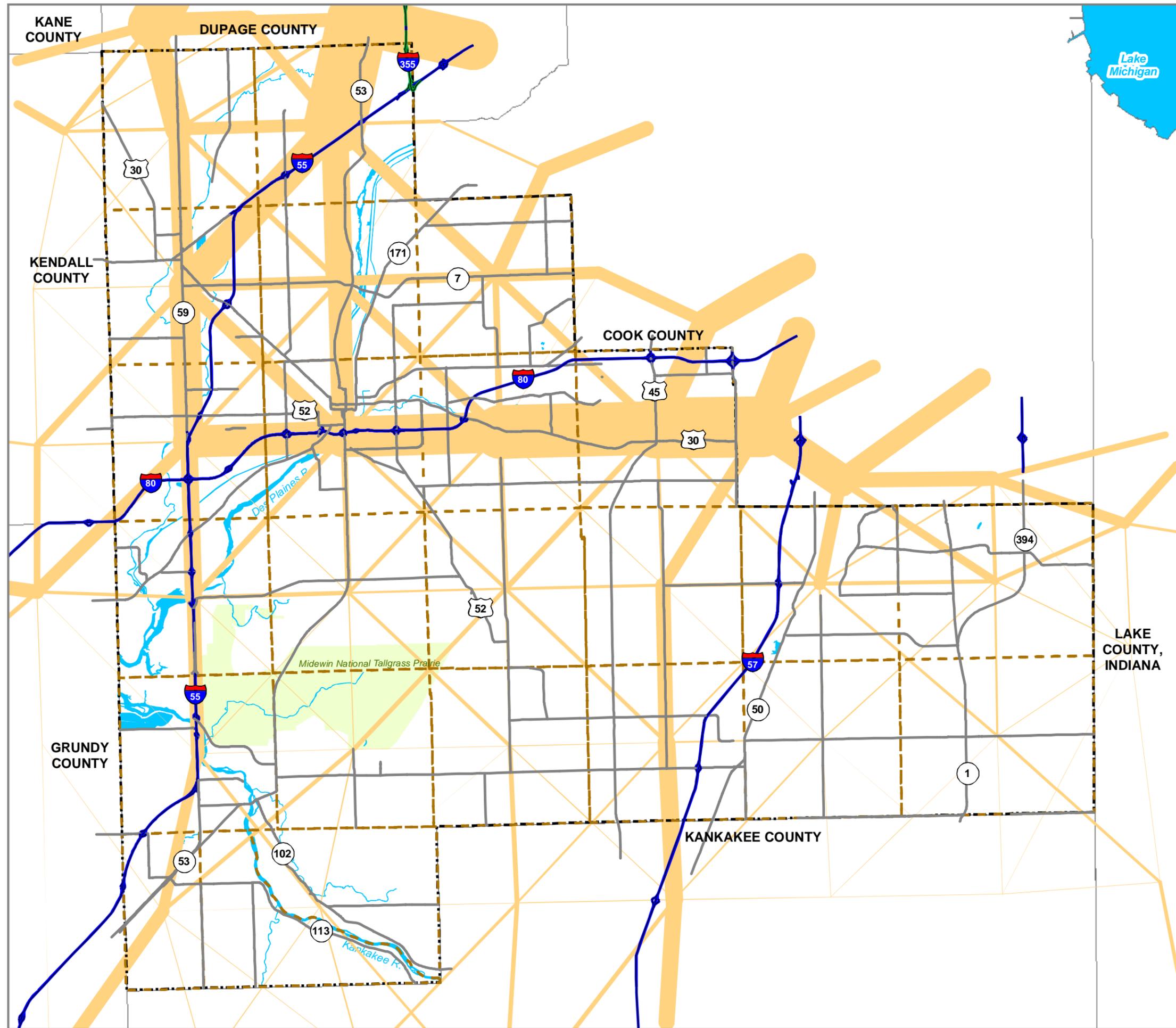


Figure 5-10
Average Daily Traffic
2004 Baseline

WILL COUNTY
2030 TRANSPORTATION PLAN

Legend

Jurisdictional Class

-  Interstate
-  Tollway
-  US Highway
-  State
-  County
-  Local
-  Average Daily Traffic

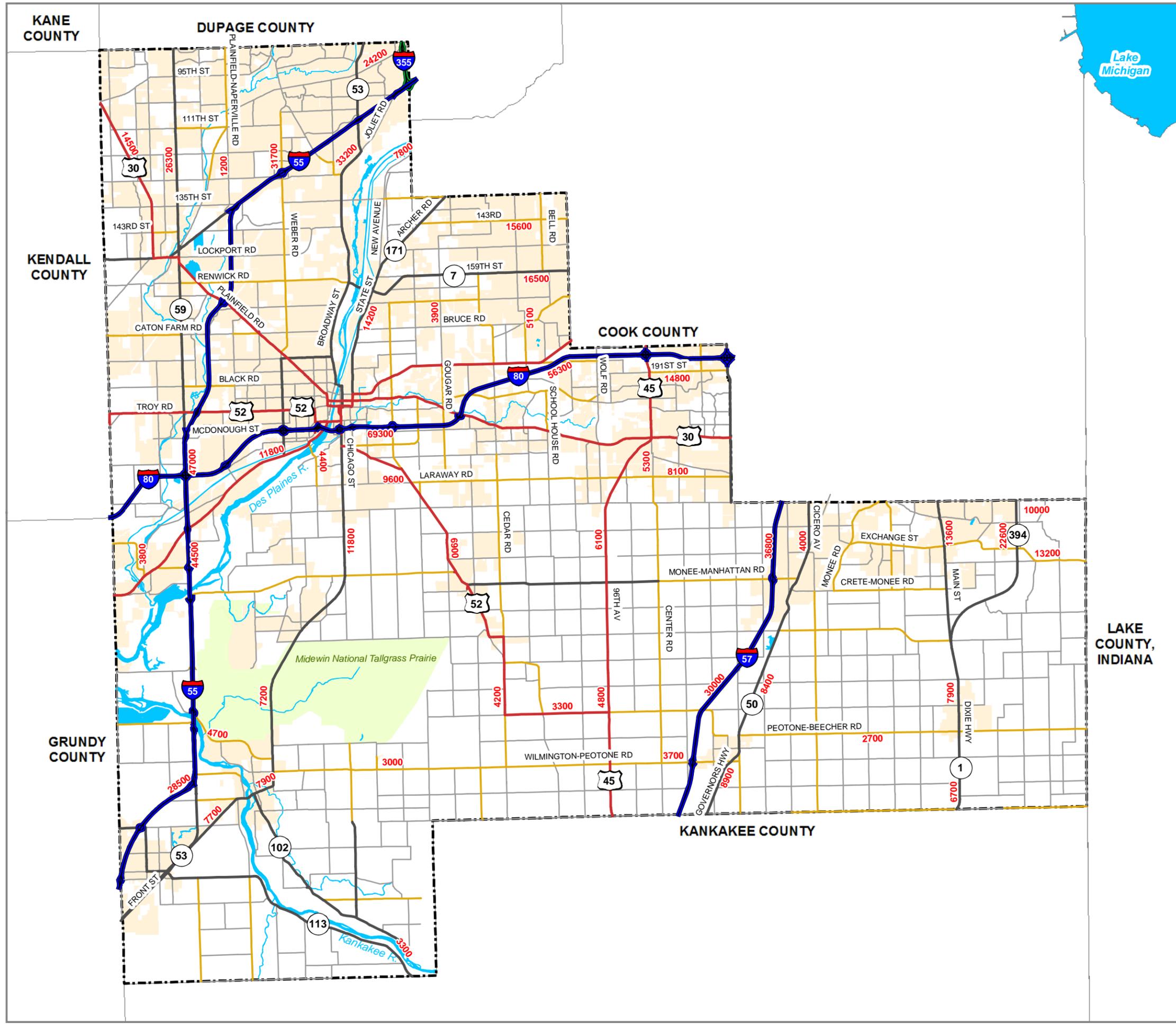


Figure 5-11
Congested Roadway Segments
 Based on Average Daily Traffic
 2004 Baseline

WILL COUNTY
 2030 TRANSPORTATION PLAN

Legend

 Congested Roadway

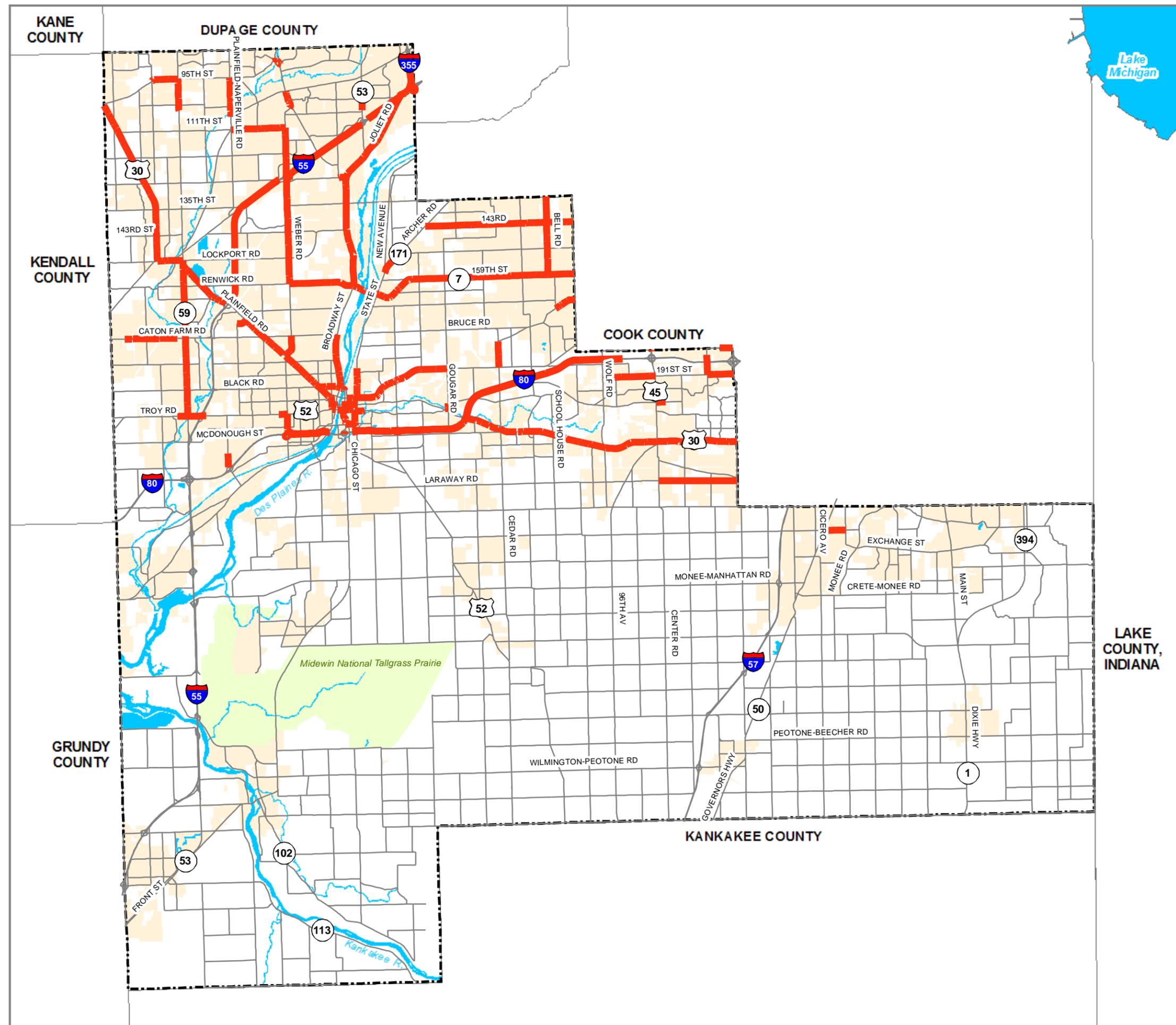
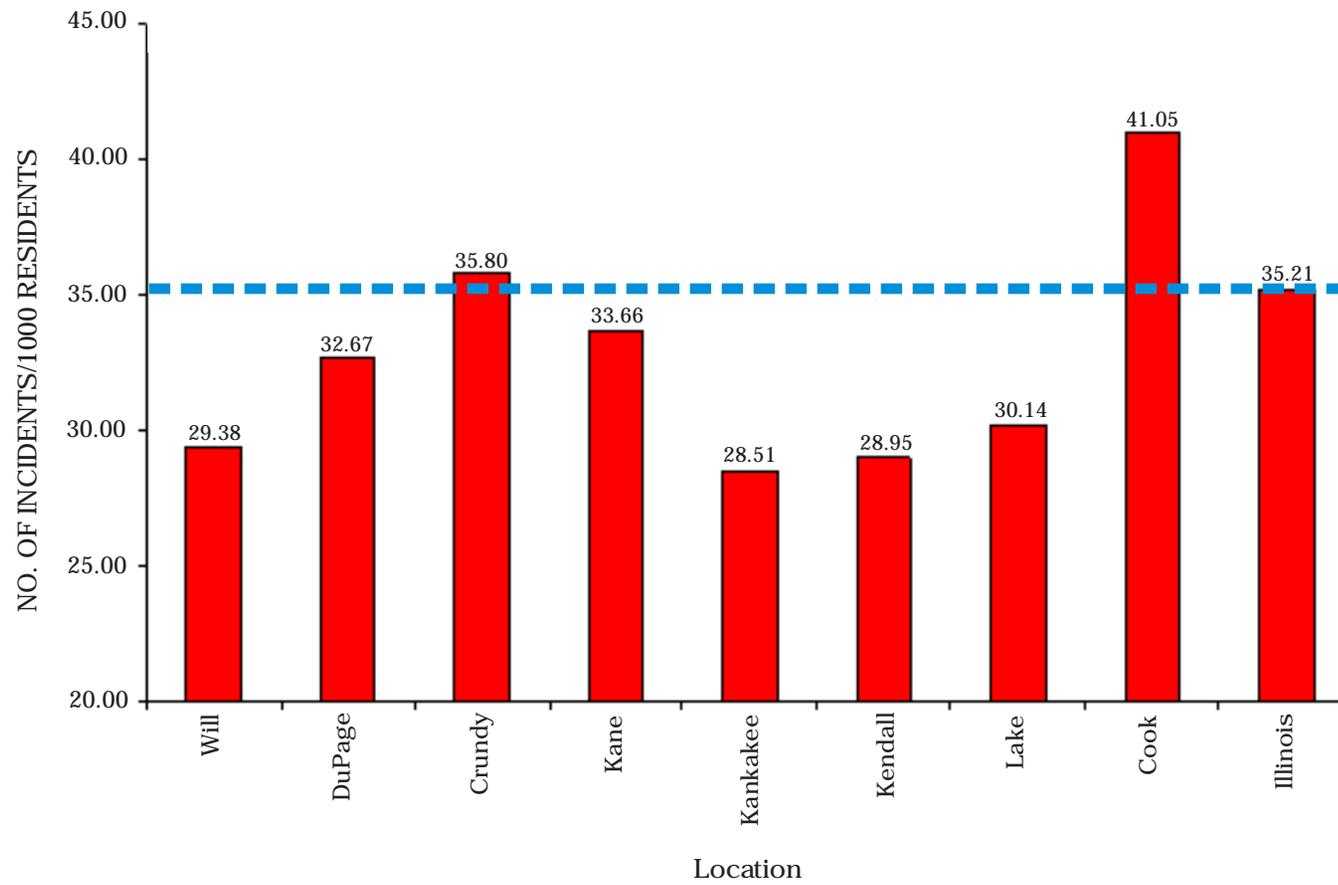


FIGURE 5-12
County Comparison of
Safety Performance

WILL COUNTY
2030 TRANSPORTATION PLAN



Illinois Statewide Average

