

## **VI. Roadway Conditions**

### **A. Roadway Network**

The roadway network of McHenry County includes US highways, state routes, county roads, and local roads that form a connected system. Generally the volumes, sizes, and density of the roadways follow the overall socio-demographic pattern, with the higher volumes and capacity located on the eastern side of the county.

#### **1. Interstate Routes**

Only one interstate route intersects McHenry County in the southwestern corner. Highway I-90 enters McHenry at the far northwesterly part of Kane County and exits into the southern part of Boone County for a total of 9.01 miles. There are no exits within McHenry County. Access to I-90 is from northern Kane County at IL 31, Randall Road, IL 47<sup>1</sup>, and US 20.

#### **2. Arterial Roadways**

Arterial roadways are major highways or streets that function within the network to connect longer-distance travel between municipalities or other activity centers. Within McHenry County, the arterial roadways generally follow a grid pattern with a few diagonal routes primarily composed of the US highways. Consistent with land use patterns, more arterial roadways are found within the eastern half of the county.

Generally the arterial roadways are two lanes wide in the western half and northeastern quarter of McHenry County. Portions of US 14, IL 31, IL 62 / Algonquin Road<sup>2</sup>, Randall Road, and other routes in and around McHenry, Algonquin, Crystal Lake, and Woodstock are four lanes or wider. The western arterials are primarily undeveloped, serving as key connectors for regional and county travel. The Illinois Department of Transportation (IDOT) designates roadways that are critical for supplementing the expressway system for long-distance, high-volume traffic within the Chicago metropolitan area as part of the Strategic Regional Arterial Network (SRA). Within McHenry County, IDOT has designated US 20, US 14, US 12, IL 23, IL 31, IL 47, IL 120, IL 173, IL 176, and Randall Road as SRAs.

#### **3. Collector Roadways**

Collector roadways are secondary roads that provide access from arterials to residential and commercial areas and local roads. Within McHenry County, they are classified as Collectors (Urban) and Major / Minor Collectors (Non-Urban). Typically the Collector Roadways in non-urban areas are County owned, with those in incorporated areas being major streets under the local jurisdiction.

<sup>1</sup> Currently the interchange at IL 47 is only to and from the east. Illinois State Toll Highway Authority (ISTHA), with county support, anticipates completing a \$16.5m project in 2016 to add the western ramps to the interchange.

<sup>2</sup> Algonquin Road from IL 31 to IL 47 is designated as a “freeway” per Section 8 of the Illinois Highway Code to preserve the corridor right-of-way for transportation needs.

The collector roadways provide infill for the arterial roadways for more municipal to municipal or locality to locality travel. As major commercial areas tend to be located off of collector roads, they also serve as primary corridors for destinations within McHenry County.

With a few small exceptions in major urban areas, all collector roadways are two lanes wide.

#### **4. Local Roadways**

Local roadways, both urban and non-urban, are the basic residential streets and township roads that serve to connect to people's homes. Most are under the jurisdiction of the local municipality or township; however a few are county routes. All are two lane roads that provide a lower speed and scale suitable for higher pedestrian and bicycle activity.

Refer to Figure 26 for the functional classification of the roadway system.

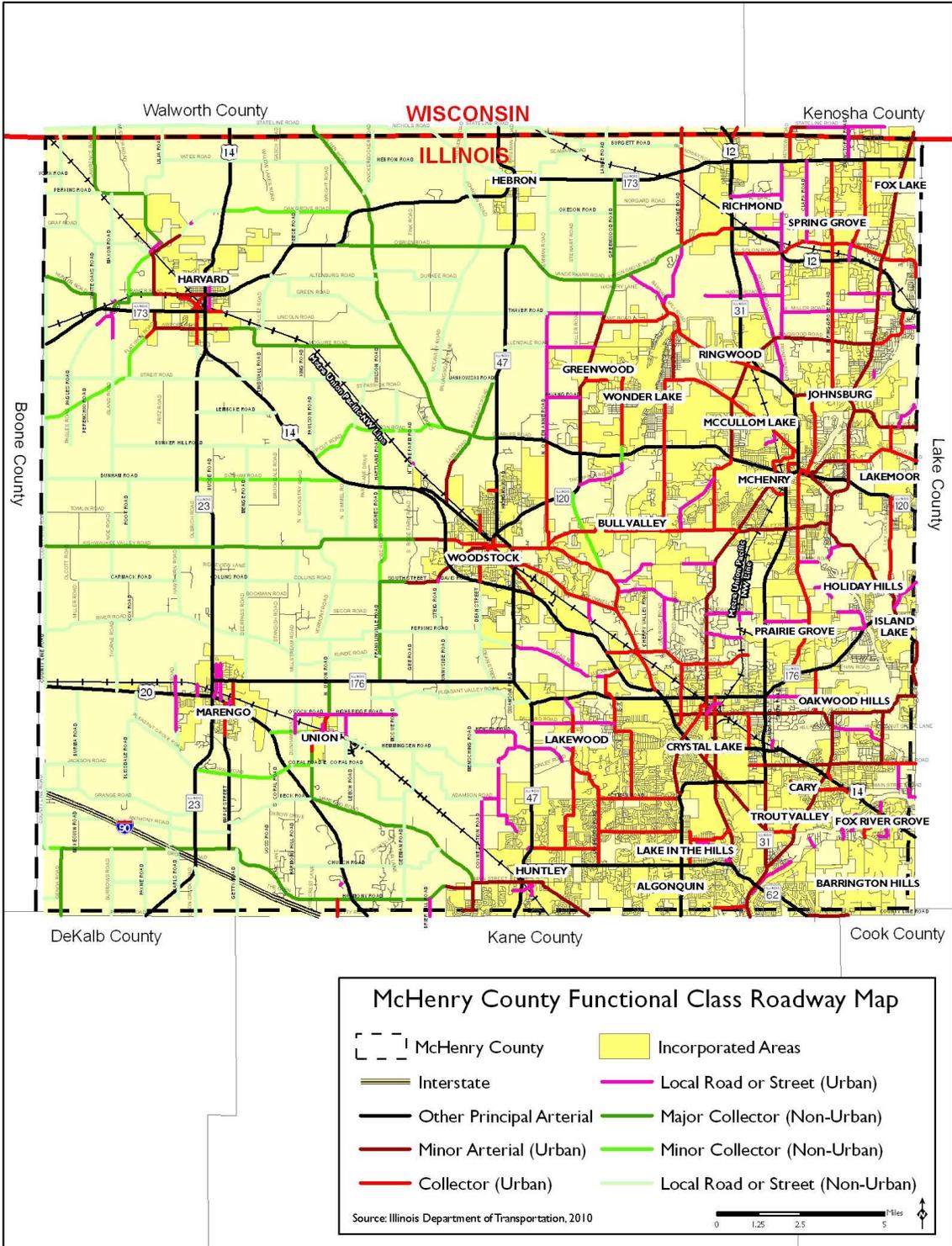


Figure 26

## **B. Traffic Volumes**

Traffic volumes in McHenry County generally reflect the density patterns with the highest volumes heading on the arterial roadways from McHenry County towards the Chicago area. Traffic tends to be directional in nature, with the morning commute out of the county and the afternoon the reverse. Shown in the Figure 27 are Average Annual Daily Traffic (AADT) counts compiled by IDOT for McHenry County. The highest volumes are on Randall Road from the County Line to Ackman Road with over 41,000 vehicles per day. This is nearly equivalent to the volumes passing thru McHenry County on I-90. Volumes above 20,000 vehicles per day are observed on US 14, IL 120, IL 31, IL 47 and Algonquin Road, primarily where they enter the county and through downtown areas. The rest of the arterials within the southeastern portion of McHenry typically have volumes exceeding 12,000 vehicles per day. In the remainder of the county, volumes tend to range between 2,000 and 8,000 vehicles per day.

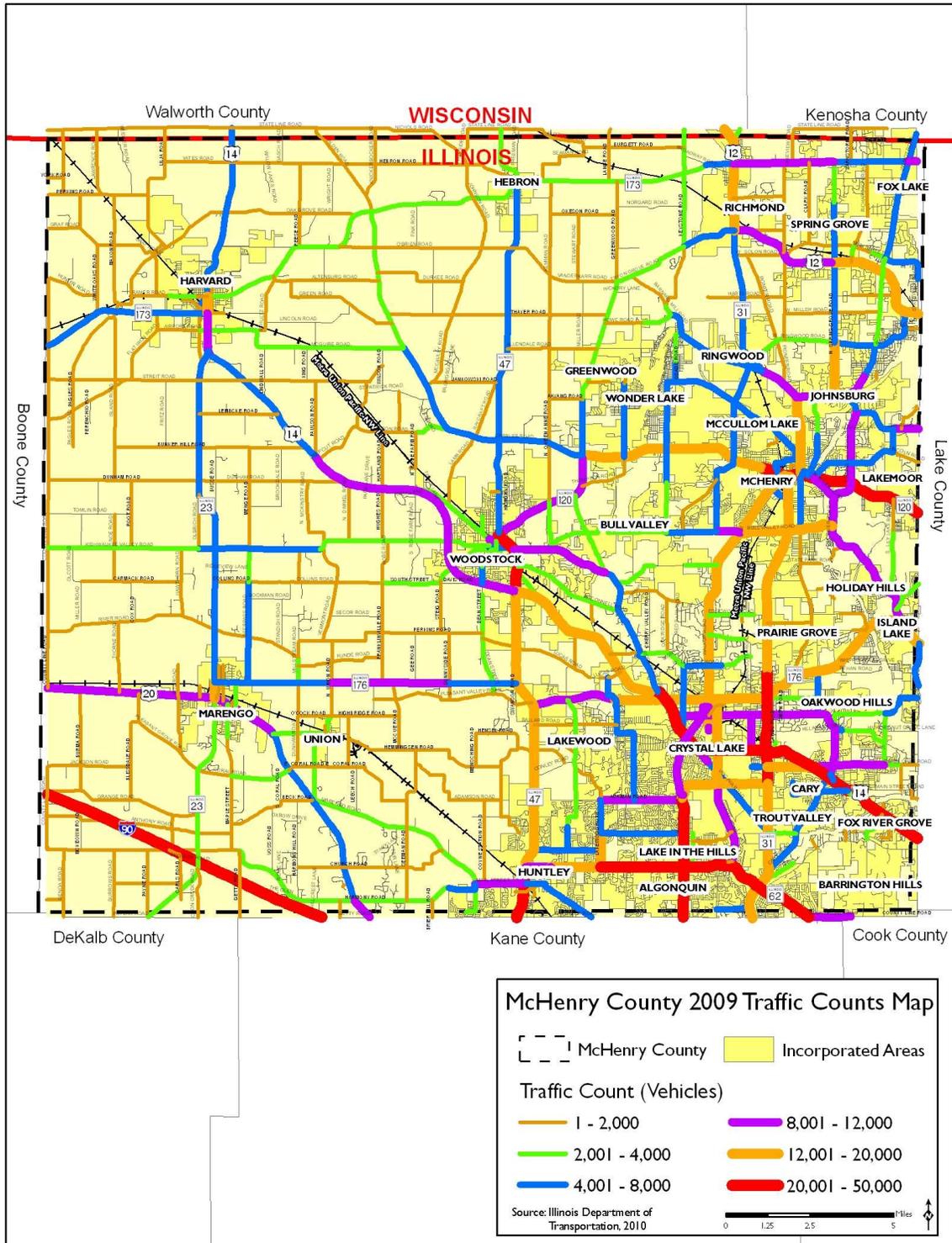


Figure 27

The higher volume areas with the heavy peaking caused by commuting are prone to congestion issues. Most of these roadways were originally farm routes and have various degrees of expansion and coordination. More recently, the congestion patterns seen in the southeast have also been experienced in the northern part around US 12 with the increase in commuting to Wisconsin and Lake County. Based on the 2008-2010 American Community Survey (ACS) 3-Year Estimates compiled by the US Census Bureau, only 50.8% of workers were employed within McHenry County.

The McHenry County 2030 Comprehensive Plan predicted that rush hour drives could take up to 88% longer than non-rush hour drives in 2030 if no improvements were made.<sup>3</sup> Any future transit improvement should be cognizant of the potential for traffic delays in the peak direction on the urban arterials within McHenry County and planned accordingly. A map showing congestion in vehicle miles of delay during peak period in 2030 is in Figure 28.

A few of the most congested highways in the County are most congested during weekday lunch hours and Saturdays. These areas include IL 47 in Woodstock and Randall Road. This marks a change in McHenry County as this type of traffic is more consistent with traditional commercial office and entertainment zones.

## **C. Future Roadway Improvements**

As discussed above, roadway improvements are performed within the jurisdiction of the maintaining authority. The following discussion includes project on the proposed highway improvement programs for IDOT and MCDOT as well as a listing of priority projects established by the McHenry County Council of Governments (MCCG).

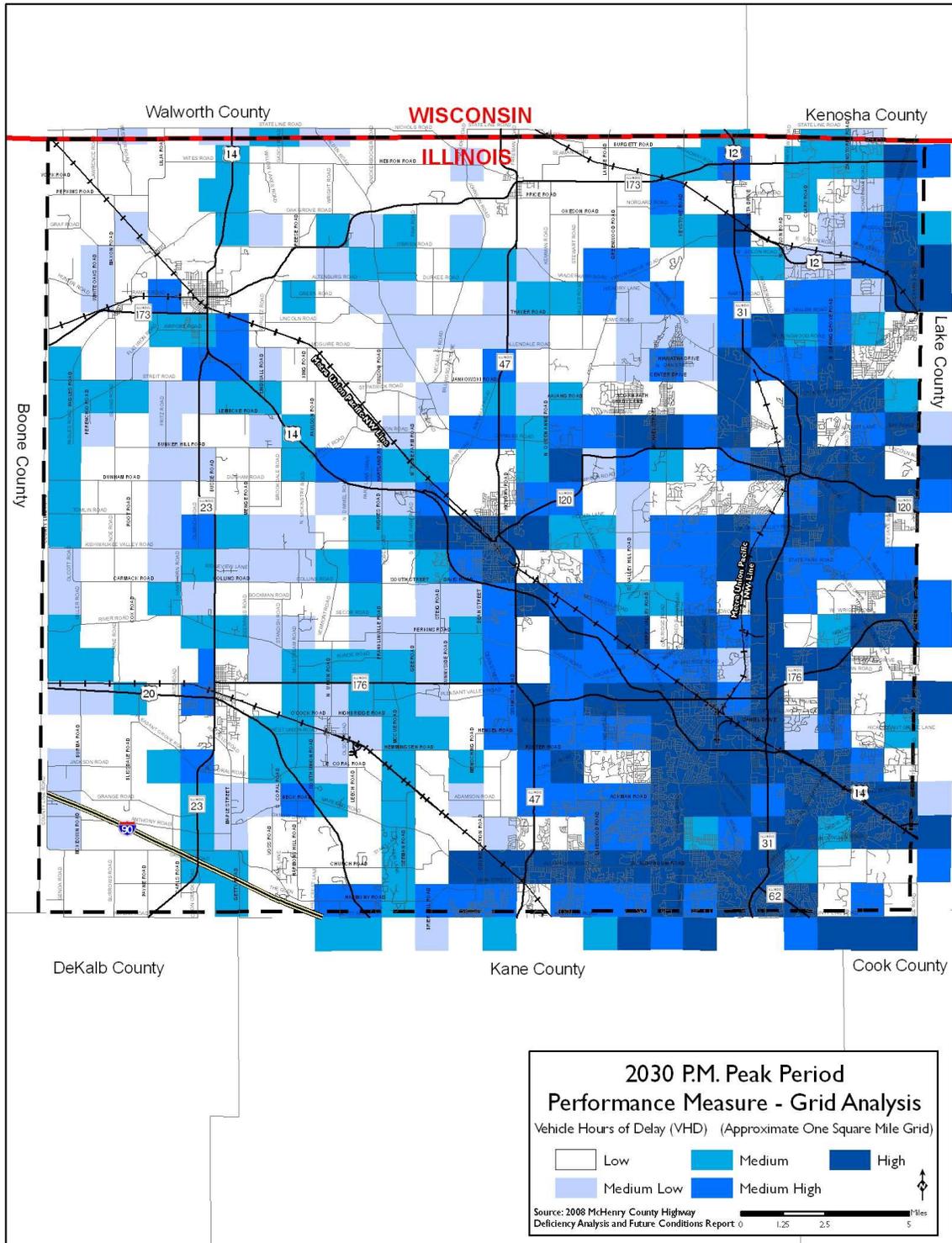
For both IDOT and MCDOT, the programs are primarily focused on state-of-good repair, such bridge replacements and roadway resurfacing. These projects are excluded from the discussion below, which only focuses on major improvements that would improve capacity or enhance traffic flow.

### **I. IDOT FY 2012-2017 Proposed Highway Improvement Program (McHenry County)**

The following table, Table 21 is from the proposed FY 2012-2017 Program for McHenry County. Associated improvements may occur in adjacent counties that would have beneficial effects for McHenry.

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<sup>3</sup> *McHenry County 2030 Comprehensive Plan*, pg 106.



(Source: 2008 McHenry County Highway Deficiency Analysis and Future Conditions Report)  
**Figure 28**

**Table 21: Proposed FY 2012-2017 Program**

Route	Location	Improvements
US 14	W Lake Shore Drive to Lucas Road Woodstock	Additional Lanes
US 14 / Virginia Street	Lucas Road to Crystal Lake Avenue Crystal Lake	Additional Lanes
US 20 / Grant Highway	Prospect Street Marengo	Intersection Reconstruction
US 20 / Grant Highway	Marengo - Beck Road / South Union Road Coral Township	Channelization, Horizontal Realignment, Signalization
US 20 / Grant Highway	Harmony Road Coral Township	Channelization, Signalization
IL 23	Coral Road / Pleasant Grove Road Riley Township	Intersection Improvement
IL 31 / Richmond Road (IDOT Participation)	South of McCullom Lake Road to IL 120 McHenry	Additional Lanes, Intersection Reconstruction
IL 31	Ames Road & Edgewood Road Prairie Grove	Intersection Improvement
IL 31	IL 176 & Terra Cotta Road Nunda Township	Intersection Reconstruction
IL 31 / Richmond Road	Rakow Road to Algonquin Bypass Lake in the Hills	Additional Lanes (Budget Shortfall for Const)
IL 120	Fleming Road Greenwood Township	Intersection Improvement, Signalization
IL 173	Wilmot Road Burton Township	Channelization, Signalization
IL 176 (IDOT Participation)	Briarwood / Ohnstad Road Grafton Township	Intersection Improvement
IL 176 / Terra Cotta Road (IDOT Participation)	Walkup Road Crystal Lake	Intersection Improvement, Turning Lanes
IL 176	Smith Road Algonquin Township	Channelization, Signalization
IL 176	Nish Road Algonquin Township	Channelization, Signalization
Algonquin Bypass (Illinois Jobs Now!)	IL 31 Bypass Algonquin	New Construction

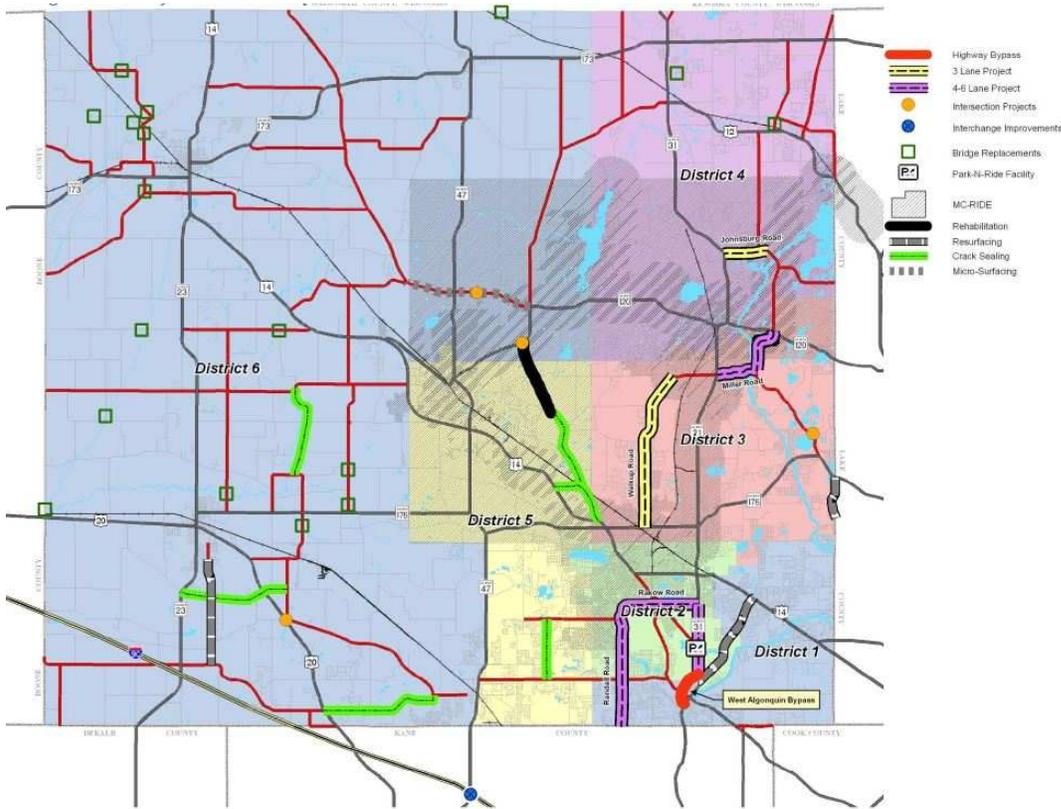
Of the above projects, the major improvement will be the construction of the first phase of the Algonquin Bypass to alleviate a major congestion point at the intersection of IL 62. The Illinois Jobs Now! bill funded this phase of the project. The full design includes extension up to Rakow Road, which is currently not funded. The other two larger projects are the additional lane construction on US 14.

## 2. McHenry Division of Transportation 2011-2015 Highway Improvement Program

Consistent with the density of traffic and overall patterns, improvement projects in McHenry County are concentrated on the arterial roadways located in the eastern half of the county. See Table 22 and Figure 29.

**Table 22: 2011-2015 Highway Improvement Program**

<b>Route</b>	<b>Location</b>	<b>Improvements</b>
Johnsburg Road (Construction)	IL 31 to Chapel Hill Road Johnsburg	Intersection Improvements, Center Turn Lane
Walkup Road (Construction)	IL 176 to Chrystal Springs Road Crystal Lake	Continuous Left Turn Lane, Bike Path
Virginia Road (Construction)	IL 31 Lake in the Hills	Intersection Realignment, Turning Lanes
Charles Miller Road (Construction)	IL 31 to River Road McHenry and Nunda Township	Additional Lanes, Turning Lanes, Intersection Improvements, Bike Path
River Road (Engineering Only)	Charles Miller Road to IL 120 Nunda Township	Additional Lanes, Turning Lanes, Intersection Improvements, Bike Path
Randall Road (Engineering Only)	County Line to Ackman Road Algonquin, Lake in the Hills	Additional Lanes, Intersection Improvements
James R. Rakow Road (Construction)	Ackman Road to IL 31 Crystal Lake, Lake in the Hills	Additional Lanes, Intersection Improvements



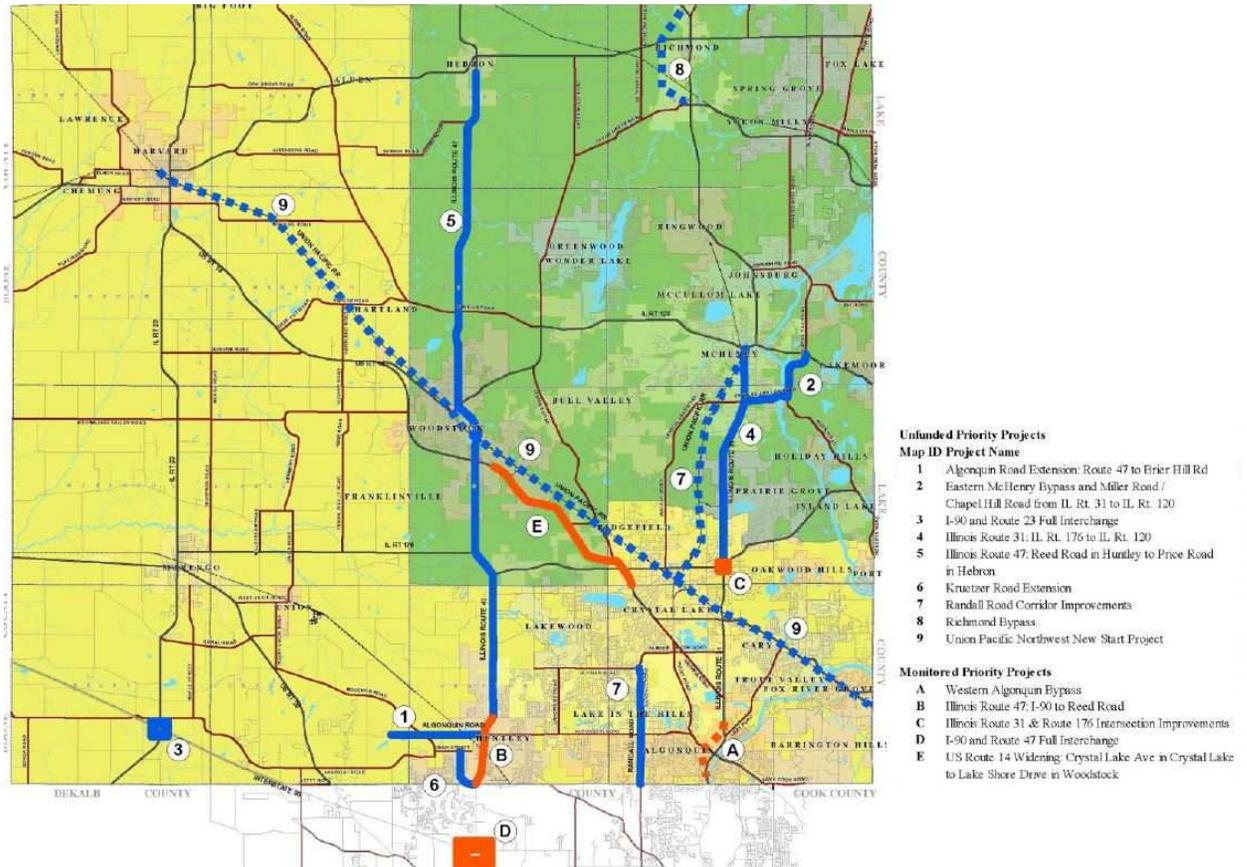
**Figure 29**  
 Source: MCDOT 2011-2015 Highway Improvement Plan, pg 10

### 3. McHenry County Council of Governments 2011 Transportation Priority Projects

An annual agenda prepared to inform state and federal government of priority transportation projects prepared by local government participants; the MCCG 2011 Transportation Priority Projects include two lists. The first list is for projects that are programmed into the Governor’s Capital Bill and the 2010-2015 IDOT Highway Improvement Program which require monitoring. These are projects included in the above listings for IDOT or MCDOT. The second list is unfunded priority projects. Both lists reflect the need for transportation enhancements that will improve quality of life and economic development potential through reduction in traffic congestion with associated air pollution, expanded public transit, or increasing access to locations in the county. Priority unfunded projects, shown in Table 23 and in Figure 30 include:

**Table 23: COG 2011 Transportation Priority Projects**

<b>Route</b>	<b>Location</b>	<b>Improvements</b>
Algonquin Road	IL 47 to Brier Hill Road Johnsburg	New Construction (Extension)
Mc Henry Bypass (Funded Partial Const / Engineering by MCDOT)	IL 31 to IL 120 McHenry and Nunda Township	Additional Lanes, Turning Lanes, Intersection Improvements, Bike Path
IL 31	IL 176 to IL 120 Prairie Grove, McHenry	Additional Lanes
IL 47 (Funded Engineering by IDOOT)	Reed Road to Price Road Huntley, Woodstock, Hebron and various townships	Various widening, realignments, intersection improvements, and frontage roads
I-90 / IL 23	I-90 / IL 93 Riley Township	New Interchange
Kreutzer Road	Main Street to IL 47 Huntley	New Construction (Extension)
Randall Road (Funded Engineering by MCDOT)	County Line to Ackman Road Algonquin, Lake in the Hills	Additional Lanes, Intersection Improvements
Richmond Bypass / US 12 (Funded Engineering by various entities)	US 12 Richmond, Richmond Township	New Construction (Bypass)



**Figure 30 MCCG Unfunded and Monitoring Priority Projects**  
 Source: McHenry County Council of Governments 2011 Transportation Priority Projects

## VII. Public Involvement

Extensive public involvement is included in the McHenry County 2040 Long Range Transportation Plan. As of December 2011, over 1100 people participated in the outreach process. This outreach includes traditional public meetings in addition to a variety of innovative strategies.

Collaborative maps on display boards are located at six libraries throughout the county. Residents are encouraged to stop at the display boards and place stickers on the maps to identify transportation improvements they would prefer.

A website includes information about the plan and ways that residents can participate. The website includes a blog, online surveys, and a contact form to submit comments. Visitors can subscribe to a newsletter to keep up-to-date on the project. It also has an online interactive community map in which website visitors can add markers to state needs and solutions. The website even provides links to the plan's activities on Flickr, Facebook, and Twitter.

The outreach also includes a series of “pop-up” meetings across the county. The purpose of a “pop-up” meeting is to build awareness among the County’s stakeholders about the project and to obtain general input on how they would like to see transportation improved in the County. Participants at each “pop-up” meeting were asked how they would spend money on transportation in McHenry County and to provide staff with their one big idea for improving transportation in the area. “Pop-up” meetings were held at the McHenry County Fair, the Crystal Lake and Algonquin Farmers Markets, the Hearthstone Centegra Senior Fair, the McHenry County College, among other places.

As one example, the “Piggy-Bank” results from the county fair August 3-6, 2011 are shown in Figure 31. With approximately 350 participants, residents showed that they valued bicycle facilities, public transportation, and pedestrian improvements over road improvements. These results are just one sample and will be added to all public input to get a complete sense of the community’s desires.

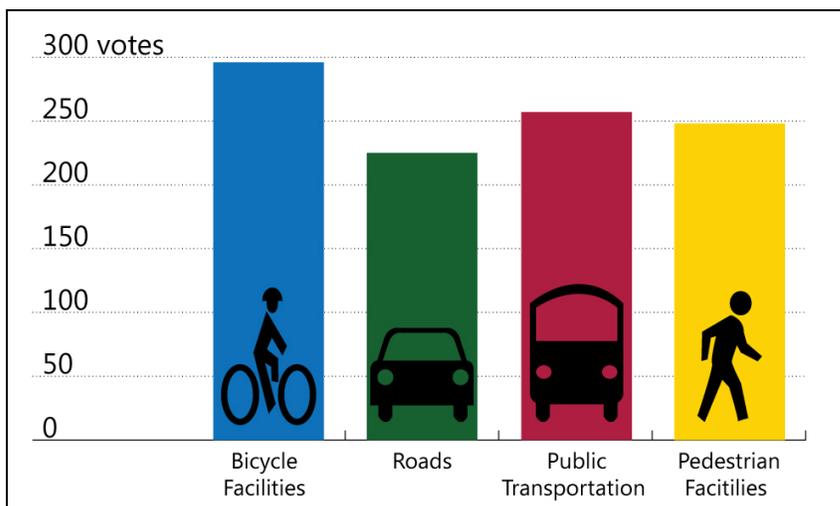


Figure 31

The variety of input from the community will inform the analysis and recommendations of the plan. As the planning process continues, additional public involvement will be sought to ensure that recommendations have support from the community. As part of this Transit Plan, focus group meetings and stakeholder meetings will be held to help gauge the support for public transit and the changes that are necessary given the existing transit services in the county.

## Appendix

### A. Metra Passenger Origin Tables

**Table A1**

<b>Origins of Riders Using Harvard Station (2006)</b>		
(w eighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	17	7%
ARLINGTON HEIGHTS	1	0%
BARRINGTON	1	0%
BEAVER DAM	2	1%
BELVIDERE	4	2%
BUFFALO GROVE	1	0%
CAPRON	3	1%
CHICAGO	4	2%
CRYSTAL LAKE	2	1%
DARIEN	2	1%
DEERFIELD	2	1%
DELAVAN	13	6%
ELKHORN	2	1%
FONTANA	10	4%
HARVARD	71	30%
HEBRON	1	0%
LAKE GENEVA	4	2%
LOVES PARK	1	0%
MACHESNEY PARK	6	2%
MADISON	4	2%
MARENGO	1	0%
MILTON	2	1%
MOUNT PROSPECT	1	0%
POPLAR GROVE	10	4%
ROCKFORD	11	5%
ROCKTON	2	1%
ROLLING MEADOWS	1	0%
ROSCOE	18	8%
SAUK VILLAGE	1	0%
SHARON	2	1%
SOUTH BELOIT	6	2%
VERONA	2	1%
WALWORTH	6	2%
WARREN	1	0%
WAUKEGAN	1	0%
WESTERN SPRINGS	1	0%
WHITWATER	3	1%
WILLIAMS BAY	8	3%
WINNEBAGO	1	0%
WOODSTOCK	1	0%
Total:	233	100%

**Table A2**

<b>Origins of Riders Using Woodstock Station (2006)</b>		
(w eighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	14	4%
BELVIDERE	8	2%
BULL VALLEY	8	2%
CRYSTAL LAKE	3	1%
GARDEN PRAIRIE	2	0%
HARVARD	11	3%
HEBRON	9	2%
HEBRON TOWNSHIP	2	0%
HUNTLEY	2	0%
LAKE GENEVA	15	4%
MARENGO	11	3%
POPLAR GROVE	3	1%
ROCKFORD	5	1%
UNION	2	0%
WALWORTH	2	0%
WONDER LAKE	15	4%
WOODSTOCK	267	71%
Total:	375	100%

**Table A3**

<b>Origins of Riders Using McHenry Station (2006)</b>		
(w eighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	9	9%
CRYSTAL LAKE	1	1%
ELKHORN	1	1%
JOHNSBURG	3	3%
LAKEMOOR	1	1%
MCHENRY	74	74%
RICHMOND	1	1%
RINGWOOD	1	1%
TWIN LAKES	1	1%
WONDER LAKE	4	4%
WOODSTOCK	3	3%
Total:	100	100%

**Table A4**

<b>Origins of Riders Using Crystal Lake Station (2006)</b>		
(w eighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	83	7%
ALGONQUIN	29	3%
BELVIDERE	1	0%
BUFFALO GROVE	1	0%
BULL VALLEY	7	1%
CARPENTERSVILLE	1	0%
CARY	6	1%
CHICAGO	6	1%
CRYSTAL LAKE	592	51%
FONTANA	1	0%
FOX LAKE	1	0%
FOX RIVER GROVE	1	0%
GENOA CITY	1	0%
GLENVIEW	1	0%
HARVARD	4	0%
HILLSIDE	1	0%
HUNTLEY	26	2%
ISLAND LAKE	3	0%
JOHNSBURG	1	0%
KENOSHA	1	0%
LAKE GENEVA	1	0%
LAKE IN THE HILLS	124	11%
LAKE VILLA	1	0%
LAKEWOOD	39	3%
MARENGO	13	1%
MCHENRY	86	7%
POPLAR GROVE	1	0%
PRAIRIE GROVE	10	1%
RIDGEFIELD	1	0%
ROCKFORD	4	0%
SHARON	1	0%
SOUTH BELOIT	1	0%
SUGAR GROVE	1	0%
UNION	6	1%
WILLIAMS BAY	1	0%
WILMINGTON	1	0%
WONDER LAKE	22	2%
WOODSTOCK	64	6%
Total:	1,153	100%

**Table A5**

<b>Origins of Riders Using Pingree Road Station (2006)</b>		
(w eighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	32	6%
ALGONQUIN	42	8%
BULL VALLEY	3	1%
CARY	6	1%
CRYSTAL LAKE	225	45%
DUNDEE	1	0%
HARVARD	1	0%
HUNTLEY	15	3%
ISLAND LAKE	7	1%
JOHNSBURG	1	0%
LAKE IN THE HILLS	79	16%
LAKEMOOR	6	1%
LAKWOOD	7	1%
MCHENRY	38	8%
PORT BARRINGTON	1	0%
PRAIRIE GROVE	7	1%
WOODSTOCK	26	5%
Total:	499	100%

**Table A6**

<b>Origins of Riders Using Cary Station (2006)</b>		
(w eighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	61	7%
ALGONQUIN	90	10%
BARRINGTON	2	0%
CARY	536	61%
CHICAGO	6	1%
CRYSTAL LAKE	52	6%
FOX RIVER GROVE	3	0%
GARY	6	1%
HUNTLEY	9	1%
ISLAND LAKE	12	1%
LAKE IN THE HILLS	43	5%
LAKEWOOD	2	0%
MCHENRY	8	1%
OAKWOOD HILLS	24	3%
PORT BARRINGTON	6	1%
PRAIRIE GROVE	8	1%
TROUT VALLEY	6	1%
Total:	873	100%

**Table A7**

<b>Origins of Riders Using Fox River Grove Station (2006)</b>		
(w eighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
Unincorporated / Unknown	34	9%
ALGONQUIN	46	13%
BARRINGTON	17	5%
BARRINGTON HILLS	12	3%
CARPENTERSVILLE	5	1%
CARY	37	10%
CHICAGO	3	1%
CRYSTAL LAKE	2	0%
FOX RIVER GROVE	138	38%
HUNTLEY	2	0%
ISLAND LAKE	14	4%
LAKE BARRINGTON	20	6%
LAKE IN THE HILLS	3	1%
LAKE ZURICH	3	1%
MARENGO	2	0%
NORTH BARRINGTON	3	1%
PORT BARRINGTON	14	4%
WAUCONDA	10	3%
WEST DUNDEE	2	0%
Total:	368	100%

**Table A8**

<b>Origins of Riders Using Fox Lake Station (2006)</b>		
(w eighted by ridership)		
<b>Municipality</b>	<b>Number</b>	<b>%</b>
FOX LAKE	142	26%
SPRING GROVE	80	15%
Unincorporated / Unknown	46	8%
JOHNSBURG	46	8%
MCHENRY	33	6%
RICHMOND	27	5%
TWIN LAKES	20	4%
ANTIOCH	19	3%
BURLINGTON	16	3%
LAKE GENEVA	16	3%
GENOA CITY	12	2%
CHICAGO	11	2%
LAKE VILLA	11	2%
ROUND LAKE	8	1%
LAKEMOOR	7	1%
WONDER LAKE	5	1%
NORTHBROOK	4	1%
DEERFIELD	3	0%
GLENVIEW	3	0%
GRAYSLAKE	3	0%
ISLAND LAKE	3	0%
PELL LAKE	3	0%
SALEM	3	0%
WHITEWATER	3	0%
ELKHORN	1	0%
ELMWOOD PARK	1	0%
HEBRON	1	0%
HILLSIDE	1	0%
LIBERTYVILLE	1	0%
MILWAUKEE	1	0%
MORTON GROVE	1	0%
MUNDELEIN	1	0%
PISTAKEE HIGHLANDS	1	0%
RINGWOOD	1	0%
ROUND LAKE HEIGHTS	1	0%
SILVER LAKE	1	0%
SPRINGFIELD	1	0%
VOLO	1	0%
WAUCONDA	1	0%
WAUKEGAN	1	0%
WILDWOOD	1	0%
WILMOT	1	0%
WOODSTOCK	1	0%
Total:	546	100%

## B. Metra Passenger Origin Maps

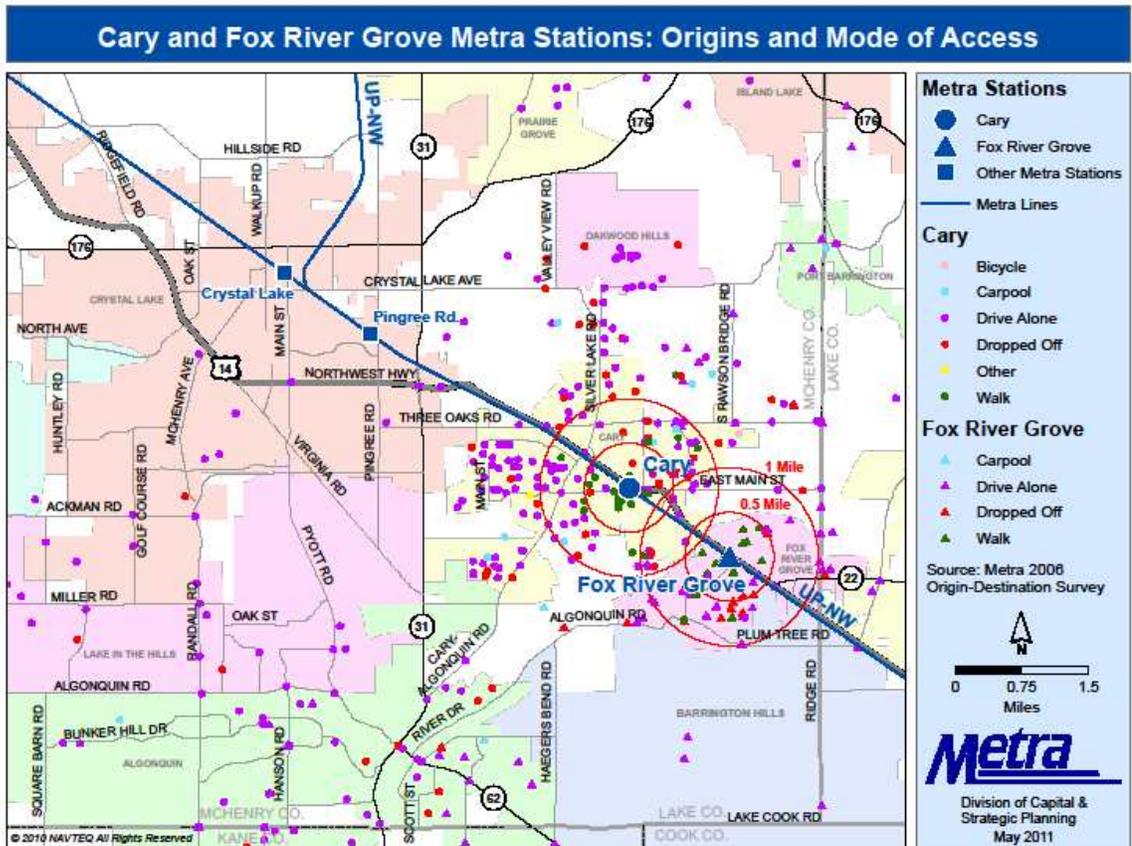


Figure A1

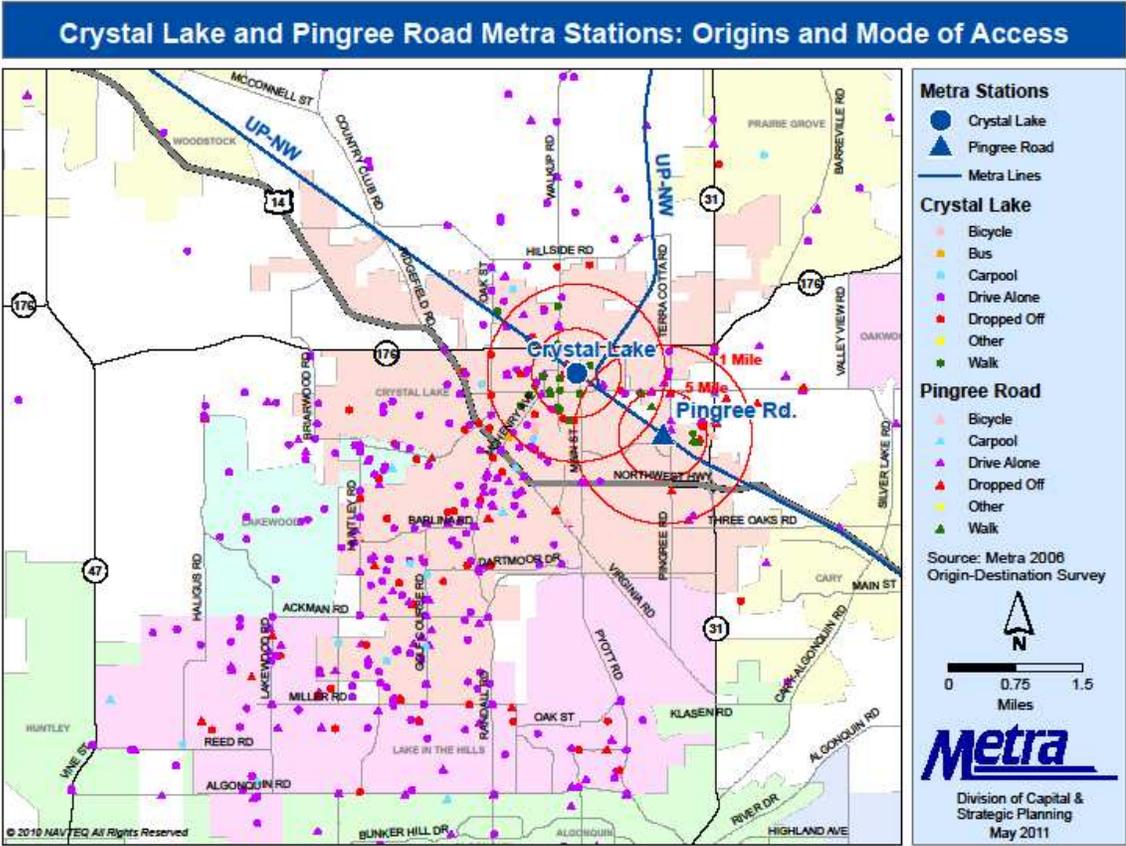


Figure A2

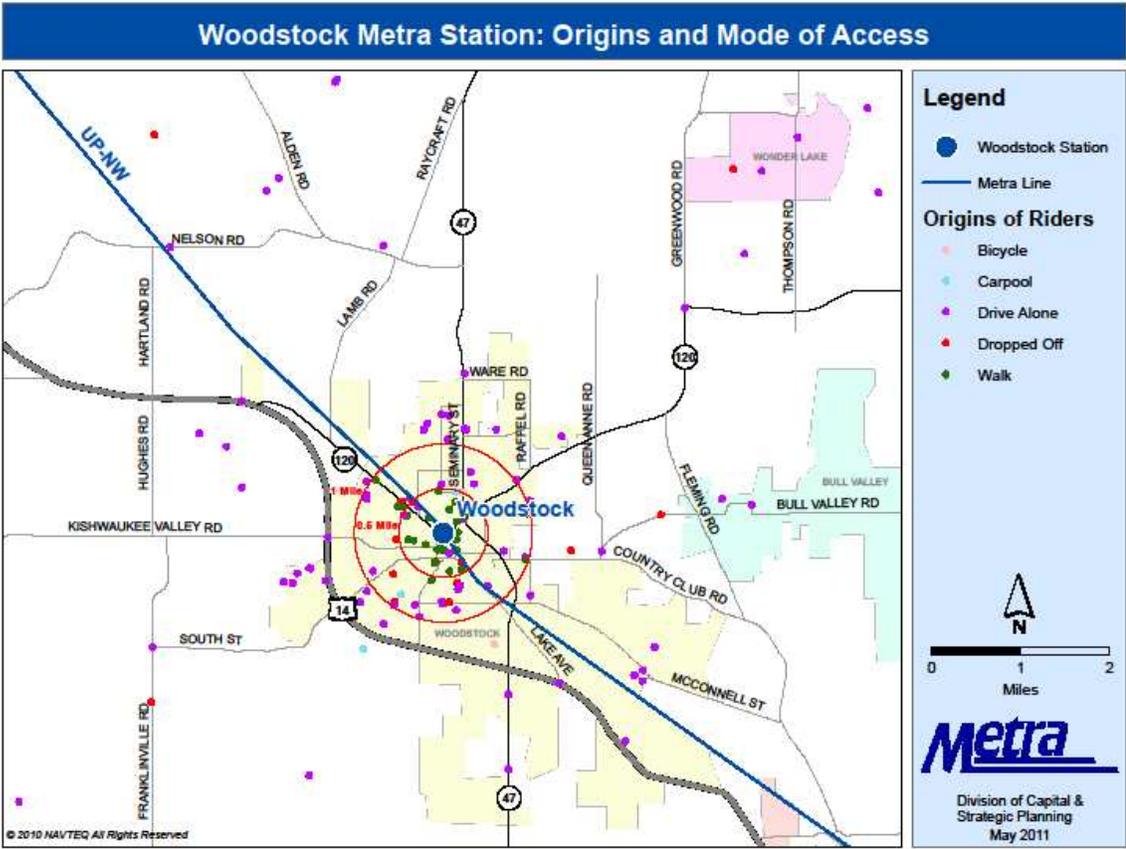
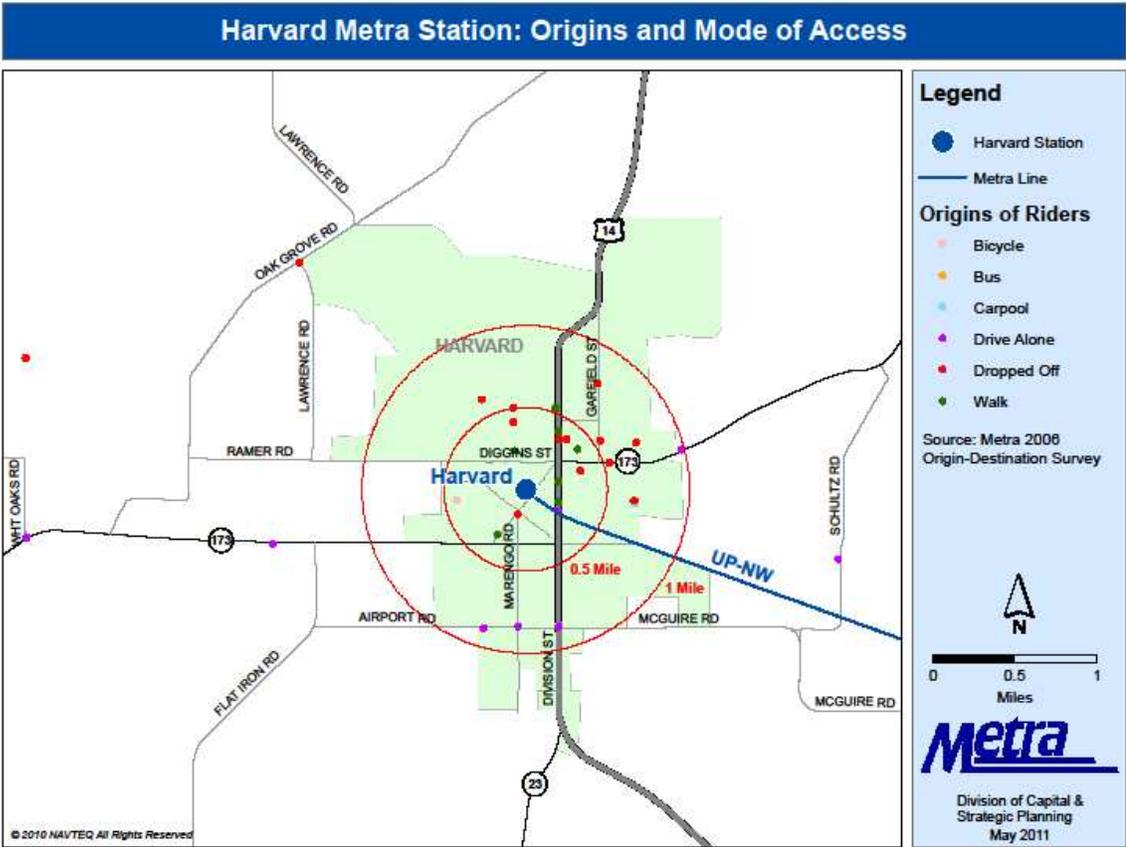
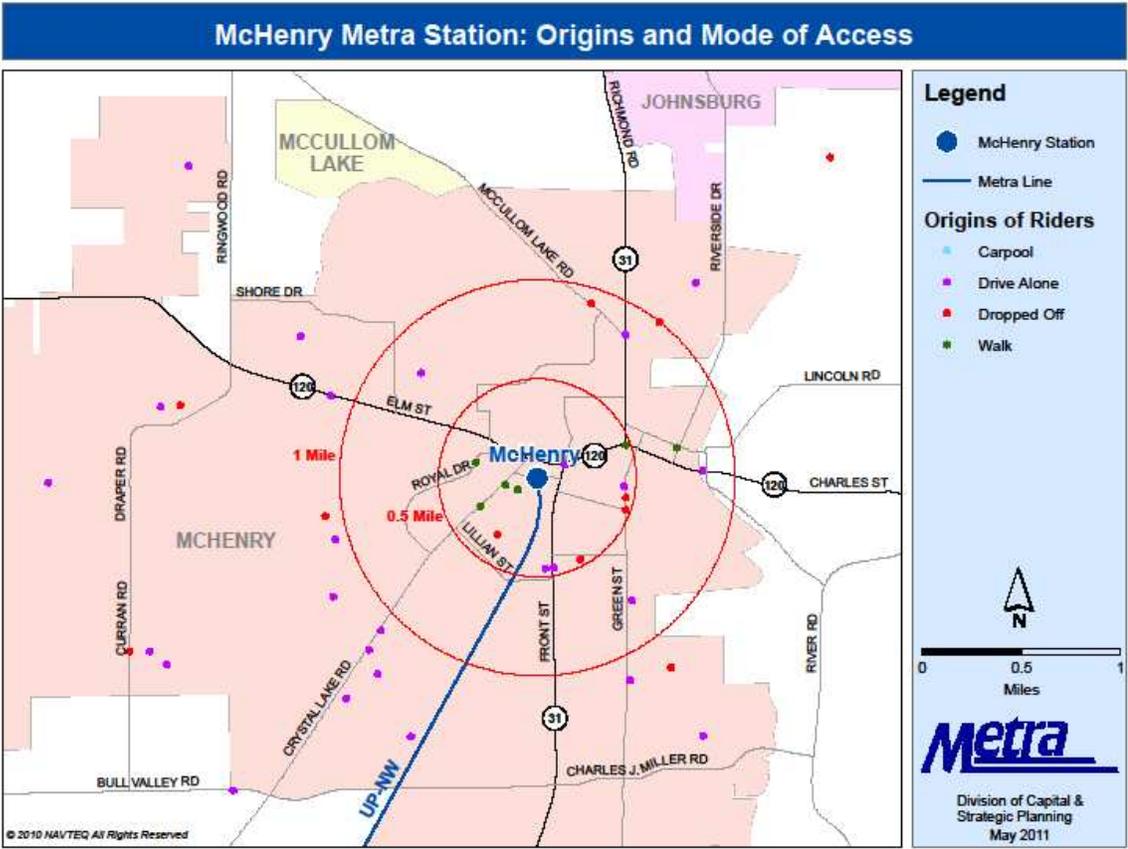


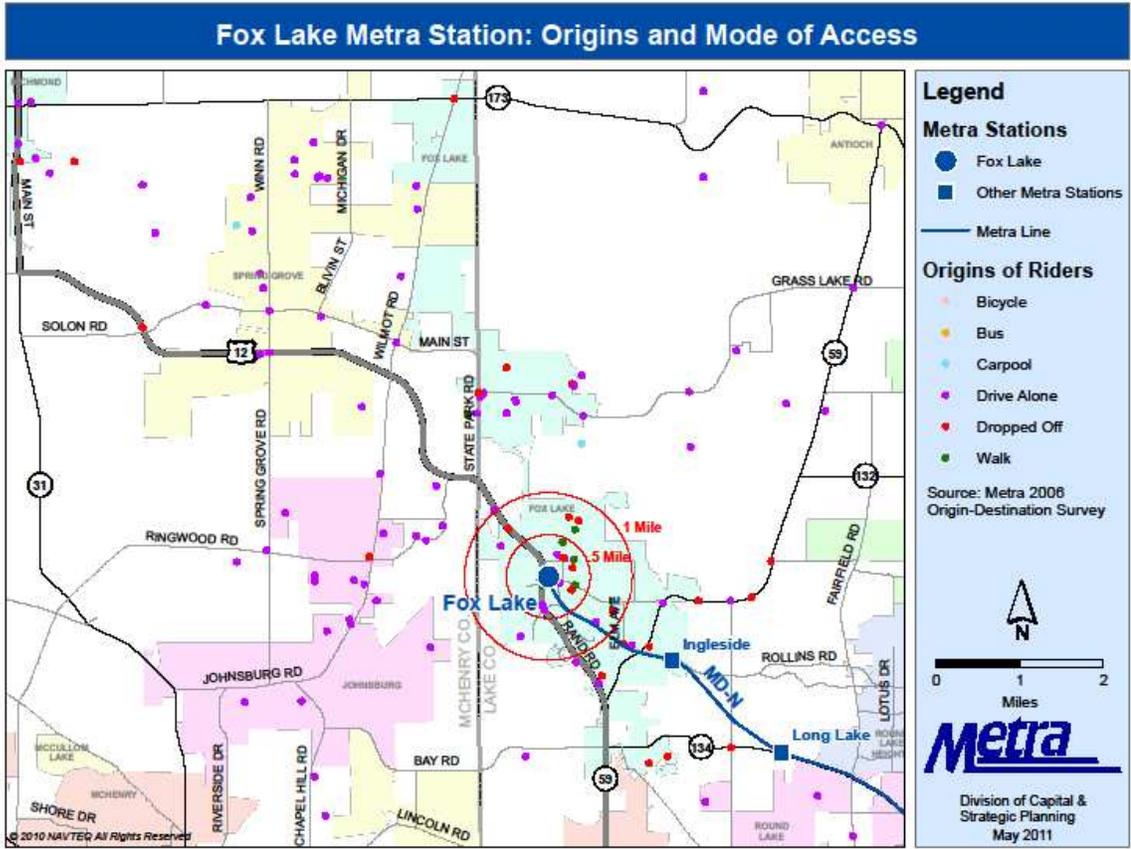
Figure A3



**Figure A4**



**Figure A5**



**Figure A6**