Year 2035 Long-Range Transportation Plan

Rockford Area Transportation Study

YEAR 2035
LONG-RANGE TRANSPORTATION PLAN
for the
ROCKFORD AREA TRANSPORTATION STUDY
METROPOLITAN PLANNING AREA

JULY 28, 2005

This Plan was prepared as a cooperative effort between
Rockford Area Transportation Study
T.Y. Lin International
and
The al-Chalabi Group, Ltd.

POLICY COMMITTEE
Mayor Lawrence J. Morrissey – City of Rockford
Mayor Darryl F. Lindberg – City of Loves Park
Board Chairman Scott H. Christiansen – Winnebago County
President Linda M. Vaughn – Village of Machesney Park
Mayor Frederic C. Brereton – City of Belvidere
Board Chairman Susan L. Anderson – Boone County
Deputy Director Gregory L. Mounts – Illinois Department of Transportation, Region 2

Federal law requires this Plan to be updated every five years. This Plan can be amended or updated at any time. Comments and proposed refinements or changes should be directed as follows.

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RATS

Rockford Area Transportation Study
Metropolitan Planning Organization
City of Rockford, Public Works Department
425 East State Street, Rockford, IL 61104

ROCKFORD AREA TRANSPORTATION STUDY
POLICY COMMITTEE

RESOLUTION 2005-6

RE: YEAR 2035 LONG-RANGE TRANSPORTATION PLAN

WHEREAS the Rockford Area Transportation Study (RATS) is the Metropolitan Planning Organization (MPO) for the Rockford Metropolitan Area, and the RATS Policy Committee is responsible for transportation planning within the area; and

WHEREAS the Transportation Equity Act for the 21st Century (TEA-21) and it predecessor, the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA), require a Long-Range Transportation Plan; and

WHEREAS a comprehensive update to the Long-Range Transportation Plan has been prepared in the interest of promoting, developing and maintaining a safe and efficient multimodal transportation system that will meet the needs of the area's citizens, businesses and industries through the year 2035; and

WHEREAS as part of the MPO planning process, RATS (1) considered a wide range of citizen, community and technical input in accordance with the adopted RATS Public Involvement Process; (2) provided opportunities for public input and comment at all RATS Technical and Policy Committee meetings and other informational meetings; and (3) made the June 22, 2005 draft of the update available for public inspection and comment for a 30-day period via distribution to all persons on the RATS mailing list, including the public libraries and other public places, and posting the draft on the City of Rockford website; and

WHEREAS Appendix A of the Long-Range Transportation Plan summarizes the comments received by the July 25, 2005 public comment period as they pertained to the draft and details the changes and/or responses resulting from said comments (none of which are regarded as substantive enough to warrant an extended public review period); and

WHEREAS the RATS Technical Committee has reviewed the June 22, 2005 draft and the proposed changes as outlined in Appendix A and has recommended incorporation of these changes into a final draft and subsequent adoption by the RATS Policy Committee; and

WHEREAS the above said changes have been incorporated into the July 28, 2005 version of the LRTP and the Policy Committee has reviewed the July 28, 2005 document;

NOW, THEREFORE, BE IT RESOLVED

that the Policy Committee adopts the **Year 2035 Long-Range Transportation Plan (dated July 28, 2005)** for the purpose of coordinating transportation improvements and the delivery of public transportation services over the next 30-year period (Year 2005 – 2035).

Dated this twenty-eighth day of July, 2005.

Darryl F. Lindberg, Chairman - RATS Policy Committee
Mayor,
City of Loves Park

Linda M. Vaughn, Vice-Chairman - RATS Policy Committee
Village President,
Village of Machesney Park

FOR.
Lawrence J. Morrissey
Mayor,
City of Rockford

Scott H. Christiansen,
Winnebago County Board Chairman,
Winnebago County

Frederic C. Brereton,
Mayor,
City of Belvidere

Susan L. Anderson,
Boone County Board Chairman,
Boone County

Gregory L. Mounts,
Deputy Director,
Illinois Department of Transportation, Region 2

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ACRONYMS

AASHTO – American Association of State Highway and Transportation Officials
ADA – Americans with Disabilities Act
ALP – Airport Layout Plan
BCCA – Boone County Council on Aging
BEA – Bureau of Economic Analysis
BJR – Beloit-Janesville-Rockford
BLS – Bureau of Labor Statistics
BRT – Bus Rapid Transit
CHSP – Comprehensive Highway Safety Plan
CMS – Congestion Management System
CN – Canadian National Railroad
CSD – Context Sensitive Design
CSS – Context Sensitive Solutions
CTPP – Census Transportation Planning Packages
EA – Environmental Assessment
EIS – Environmental Impact Statement
FAA – Federal Aviation Administration
FHWA – Federal Highway Administration
FPA – Facility Planning Area
FTA – Federal Transit Administration
FTZ – Foreign Trade Zone
GA – General Aviation
GDP – Gross Domestic Product
GIS – Geographic Information System
GRAA – Greater Rockford Airport Authority
IC&E – Iowa, Chicago and Eastern Railroad
IDES – Illinois Department of Employment Security
IDOT – Illinois Department of Transportation
IR – Illinois Railnet
ISTEA – Intermodal Surface Transportation Efficiency Act
ITS – Intelligent Transportation Systems
LOS – Level of Service
LPTD – Loves Park Transit District
LRTP – Long-Range Transportation Plan
MDW – Midway International Airport
MKE – General Mitchell International Airport
MPA – Metropolitan Planning Area
MPO – Metropolitan Planning Organization
MSA – Metropolitan Statistical Area
NAAQS – National Ambient Air Quality Standards
NEPA – National Environmental Protection Act
NHS – National Highway System
NICRI – Northern Illinois Commuter Rail Initiative
NIPA – National Income and Product Accounts

NIPC – Northeastern Illinois Planning Commission
NPA – NPA Data Services, Inc.
ORD – Chicago O'Hare International Airport
PEA – Planning Emphasis Areas
PPP – Public-Private Partnerships
RATS – Rockford Area Transportation Study
RCTO – Regional Concept for Transportation Organizations
RFD – Northwest Chicagoland International Airport at Rockford
RMTD – Rockford Mass Transit District
ROW – Right-of-Way
RPD – Rockford Park District
RRWRD – Rock River Water Reclamation District
RTA – Regional Transportation Authority
RTM – Revenue Ton Miles
RTMA – Regional Transportation Modeling Area
SES – State Employment Security
SLATS – State Line Area Transportation Study
SRA – Strategic Regional Arterials
STP – Surface Transportation Program
TAZ – Transportation Analysis Zones
TEA-21 – Transportation Efficiency Act for the 21st Century
TIP – Transportation Improvement Plan
TPS – Transportation Planning Study
TSM – Transportation Systems Management
UP – Union Pacific Railroad
UPS – United Parcel Service
WinGIS – Winnebago County Geographic Information System
WPE – Woods & Poole Economics, Inc.

SECTION 1

INTRODUCTION

SECTION 1
INTRODUCTION

1.1 Background

Planning for the transportation needs of the Region is an ongoing process that has been performed by the Rockford Area Transportation Study (RATS) for the past 40 years. This Long Range Transportation Plan (LRTP) reflects the historic work of RATS and suggests how the Region will provide for its transportation needs over the next 30 years. This Plan is based on present laws, trends and knowledge. Even while the Plan is being prepared there are unforeseen events and factors occurring that will inevitably cause changes to the Plan. Things change and that is why it is important to update the LRTP every five years.

Local, state and federal governments have the responsibility of constructing, operating, and maintaining most of the transportation systems in the Rockford Metropolitan Area (MPA). The movement of people and goods is an important function of government. It affects the economic well being of the Region. RATS has the responsibility of planning for the future connectivity and integration of the transportation system. RATS is also known as a Metropolitan Planning Organization (MPO). MPO is a federal designation that is used for government agencies that are responsible for transportation planning in urban areas. MPO and RATS are used interchangeably in this LRTP.

The Plan is divided into three main sections: plan definition, primary elements and refining elements. Plan definition deals with the factors that shape and influence the transportation planning process:

- Federal Guidance
- State Involvement
- The Regional Planning Process
- Socio-Economic Trends
- Land Use Planning
- Technology
- Public Finance
- Public Involvement
- Environmental Justice

The primary elements of the LRTP involve the transportation components of the Region. While the emphasis is on the roadway system, the Plan addresses all transportation components and stresses the integration and connectivity of these components. These elements include:

- **Section 3** – *Public Funding*
- **Section 4** – *Airports*
- **Section 5** – *Bicycle/Pedestrian*
- **Section 6** – *Rail*
- **Section 7** – *Roadway*
- **Section 8** – *Transit*
- **Section 9** – *Regional Economic Development*

Section 10, *Plan Refinement* discusses the refining elements of the Plan. The refining elements are policy and emerging issues that will influence the transportation planning process in the future:

- Air Quality
- Congestion Management Systems
- Context Sensitive Solutions
- Human Service Transportation
- Intelligent Transportation Systems
- Linking Planning and Operations
- Planning and the National Environmental Protection Act
- Public-Private Partnerships
- Safety and Security
- Smart Growth
- Strategic Regional Arterials

1.2 Goal and Objectives

The overall goal of this Plan is to promote a safe and efficient transportation system for people and goods in the RATS MPA. The intent is to provide a balanced multi-modal system that minimizes costs and impacts to the taxpayer, society and the environment. The Plan is a cooperative venture of RATS, all area local governments, the Illinois Department of Transportation and the public and private transit providers. The Plan adopts the following goals in meeting federal guidelines for transportation planning:[1]

- Support the economic vitality of the Rockford MPA, especially by enabling global competitiveness, productivity and efficiency (see **Section 9**).
- Increase the safety and security of the transportation system for motorized and non-motorized users (see **Section 10.9**, *Safety and Security*).
- Increase the accessibility and mobility options available to people and freight. Accessibility and mobility is discussed throughout this LRTP. Emphasis is placed on linking low-income households with employment opportunities, community services and community amenities through public transit. Transportation is a problem for low-income persons. They simply cannot afford to own, maintain and operate automobiles to the degree higher-income persons can. Low-income persons are typically public-transit dependent.
- Protect and enhance the environment, promote energy conservation, and improve the quality of life. These goals are discussed throughout the LRTP (see **Sections 5** and **10**).
- Integrate and connect the transportation modes for people and freight. Integration and connectivity is a major theme that is discussed throughout this LRTP.
- Promote efficient system management and operation. Again, the promotion of an efficient transportation system is a theme throughout this LRTP (see **Section 10.6**, *Linking Planning and Operations*).
- Efficiently preserve the existing transportation system. It is important that the existing system is maintained and used to the fullest and most cost-effective manner before funds are used on new transportation facilities. Funding priority is assigned to maintaining existing facilities.

[1]Transportation Equity Act for the 21st Century [1203(f)].

SECTION 2

PLAN DEFINITION

SECTION 2
PLAN DEFINITION

This section explains the elements that define the Long Range Transportation Plan (LRTP), including federal guidance, state guidance, the planning process of the Rockford Area Transportation Study (RATS), socio-economic trends and forecasts, local land use planning, transportation modeling, public funding, public involvement, and environmental justice.

2.1 Federal Guidance

The federal government has a distinct and important role in the overall transportation planning process for the Rockford Metropolitan Planning Area (MPA). The federal government is the primary provider of funding for transportation planning and capital improvements.[2] The Intermodal Surface Transportation Efficiency Act of 1991 and the 1998 Transportation Efficiency Act for the 21st Century (TEA-21), requires that the Rockford urbanized area, as a condition of federal financial assistance, have a continuing, cooperative and comprehensive transportation planning process. These laws provide policy and funding directives for multiple modes of transportation including aviation, automobiles, bicycles, pedestrian, rail, transit, and trucks.

TEA-21 officially expired at the end of 2004, but the federal government has enacted a temporary extension. A new federal transportation act is still in the approval process. This new act is expected to continue to address congestion and inter-modal connectivity, as well as new challenges in the areas of safety, security, and timely project delivery.

The federal government provides ongoing guidance for the transportation planning process. For example, the Federal Highway Administration (FHWA) and the Federal Transit Administration annually identify transportation Planning Emphasis Areas (PEA) for local organizations like RATS. These PEA promote priority themes for consideration, as appropriate, in metropolitan transportation planning programs. The PEA for fiscal year 2005 are listed below:

1. Consideration of safety and security in the transportation planning process (see **Section 10.9**, *Safety and Security*).
- Linking the planning and National Environmental Protection Act (see **Section 10.7**, *Planning and the National Environmental Protection Act*).
- Consideration of management and operations within the planning processes (see **Section 10.6**, *Linking Planning and Operations*).
- Illinois Department of Transportation (IDOT) consultation with RATS (see **Section 2.2**, *State Guidance*).
- Coordination of human service transportation (see **Section 10.4**, *Human Service Transportation*).

The FHWA conducts certification reviews of the RATS transportation planning process. The most recent review, dated December 2003, requested that RATS put more emphasis on the following:

[2]During the three years 2005-2007, $86.9 million is programmed throughout the Rockford Metropolitan Planning Area for roadway improvements. 55.3 million or nearly 61% of this is from federal sources. That is an average of $18 million per year. An additional $1-2 million dollars of federal funds are also appropriated to the area for public transit uses.

- More involvement should be sought from IDOT District 2 with a focus on involving RATS in the development of Illinois' Five-Year Program (see **Section 2.2**).
- Safety conscious planning (see **Section 10.9**).
- Update the public involvement process policy documents (see **Section 2.8**, *Public Involvement*).
- Ensure that the Rockford Metropolitan Planning Organization (MPO) website is operational by December 2004 (see **Section 2.8**).
- Publish "citizen-oriented" guides to transportation planning.
- The LRTP should emphasize safety conscious planning, integrating planning and environmental processes, and congestion management systems (see **Sections 10.2,** *Congestion Management Systems*, **10.7** and **10.9**).
- Submit the draft Environmental Justice/Title VI Considerations report to the RATS Policy Committee for review, analysis, and approval (see **Section 2.9,** *Environmental Justice*).

2.2 State Guidance

IDOT has responsibility for planning, construction and maintenance of its extensive transportation network, which encompasses, highways, bridges, airports, public transit, rail freight and rail passenger systems. As such, IDOT has the following roles in transportation planning:

- IDOT is a voting member on both the RATS Policy and Technical Committees.
- IDOT reviews and comments on the planning documents prepared by RATS including the LRTP, the Unified Work Program and the Transportation Improvement Plan (TIP).
- Illinois is actively involved in the funding of transportation projects in the MPA (see **Section 3**, *Public Funding*).
- IDOT is responsible for the operation and maintenance of its roads in the Rockford MPA.
- The IDOT Bureau of Design and Environment Manual establishes uniform policies and procedures for the location, design and environmental evaluation of highway construction and reconstruction projects on the state highway system. While this manual is directed towards the state highway system, it provides standards that are used for many local roadways projects.

The federal government has indicated that RATS should get more involved in the development of Illinois' multi-year program. Each year, IDOT develops a Proposed Highway Improvement Program that is released in the spring and distributed for public comments. The program identifies the projects that are scheduled for the upcoming fiscal year (July 1-June 30) and the following six years. This program sets priorities for specific highway improvements in each of the nine IDOT Districts. The Rockford MPA is in District 2, which encompasses 12 counties in Northern Illinois.

2.3 The Regional Planning Process

The transportation planning process is required for the Region to obtain federal funding for transportation projects. This section will explain how RATS undertakes this task.[3]

2.3.1 Rockford Area Transportation Study

[3]Federal planning grants are passed through the Illinois Department of Transportation. For fiscal year 2005, $385,000 was budgeted for transportation planning activities in the Rockford Metropolitan Planning Area. 80% federal, 20% local.

RATS is an organization of officials, planners, engineers and citizens that meet on an ongoing basis to study transportation needs and formulate transportation plans and programs. The laws of the Illinois allow multiple government jurisdictions to contract together for the purpose of carrying out the federally mandated planning duties. The authority of RATS and its responsibilities and duties are set forth in a Cooperative Agreement dated July 24, 2003.[4] The government jurisdictions that are signatories to the Cooperative Agreement make up the RATS Policy Committee. The Policy Committee is responsible for directing the activities and procedures of RATS. The government jurisdictions and their representatives are listed in **Table 2-1**.

Table 2-1
RATS Policy Committee

City of Belvidere – Mayor
Boone County – Board Chairman
Illinois Department of Transportation – Deputy Director, Region 2 Engineer
City of Loves Park – Mayor
Village of Machesney Park – Village President
City of Rockford – Mayor
Winnebago County – Board Chairman

The Cooperative Agreement also calls for a Technical Committee that provides advice and recommendations to the Policy Committee. **Table 2-2** lists the representatives that make up the Technical Committee.

Table 2-2
RATS Technical Committee

Voting Members	
Belvidere Public Works Department	Machesney Park Planning Department
Belvidere – Boone County Planning Department	Rockford Community Development Department
Boone County Highway Department	Rockford Mass Transit District
Village of Cherry Valley	Rockford Public Works Department
Greater Rockford Airport Authority	Village of Roscoe
Illinois Department of Transportation, District 2	Winnebago County Highway Department
Loves Park Community Development Department	Village of Winnebago
Loves Park Public Works Department	Winnebago County Planning and Economic Development Department
Non-Voting Members	
Boone County Council on Aging	Illinois Department of Transportation, Division of Public Transportation
Federal Highway Administration, Illinois Division	Illinois Department of Transportation, Division of Urban Program Planning
Illinois Environmental Protection Agency	Ogle County Highway Department
Illinois Tollway	State Line Area Transportation Study

The Rockford Public Works Department personnel are assigned to RATS to perform day-to-day transportation planning staff functions.

2.3.2 The Study Area

[4]The Rockford Area Transportation Study was first established in the early 1960's. Similar agreements have been in effect since that time.

The area where RATS performs transportation planning is called the Rockford MPA. The Rockford MPA has three parts:

- The urbanized area, as defined by the U.S. Bureau of the Census.
- The adjusted urbanized area includes other small areas that round off the irregular boundaries of the urbanized area. It also includes additional lands that are likely to be developed within the next five years and other abutting or nearby already developed lands.
- The forecasted area, which is expected to become included in the urbanized area in the next 30 years (through 2035). This area is determined through a consensus of the RATS Technical and Policy Committee members and is based on growth trends, local land use plans and general planning judgment.

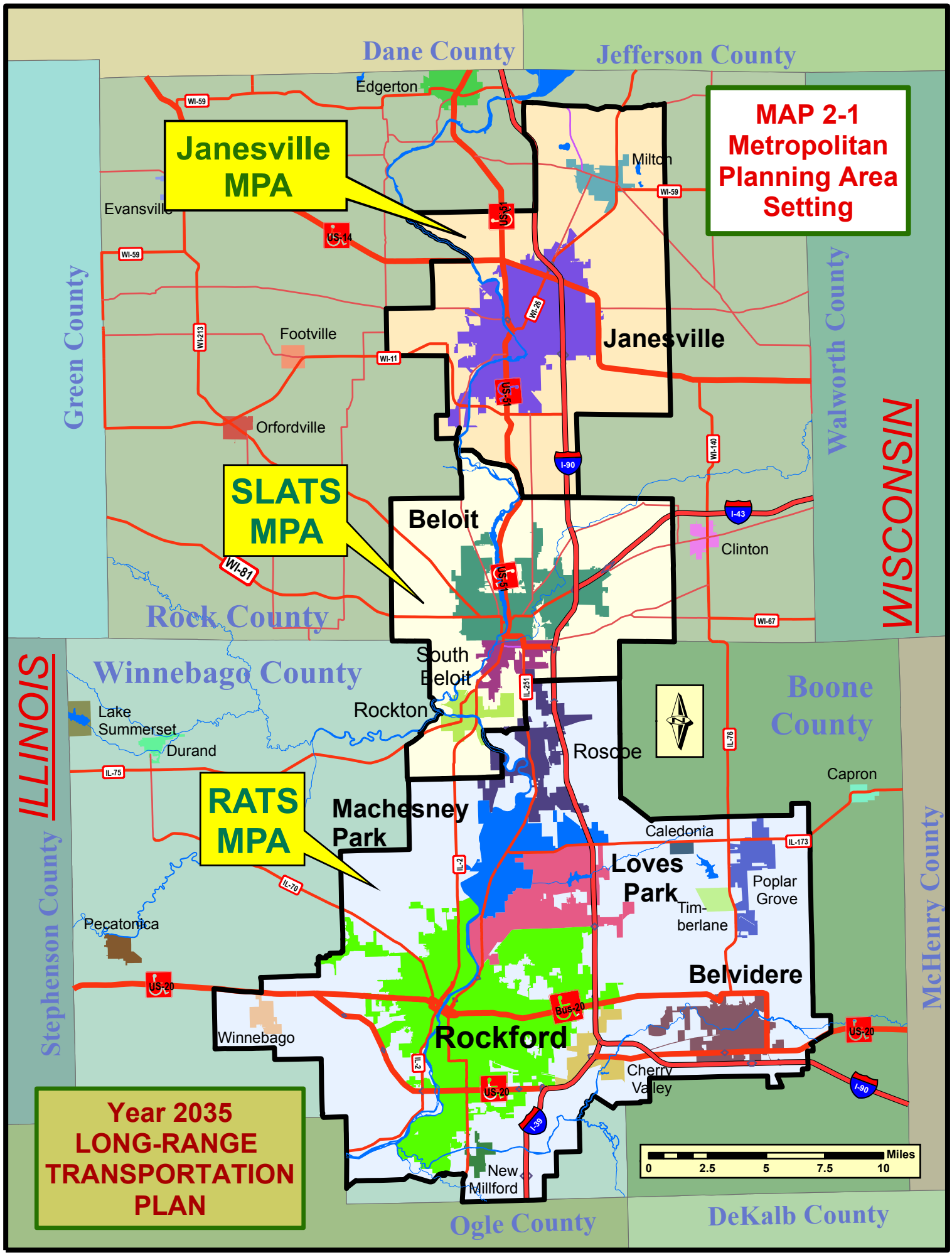
The Rockford MPA is smaller than the boundaries of Winnebago and Boone Counties (see **Map 2-1**). However, to a limited extent, RATS coordinates planning and transportation improvement activities throughout both counties. This occurs voluntarily via the communication and cooperation of the Boone and Winnebago County officials serving on the RATS Policy and Technical Committees.

2.3.3 Significant Changes in the Planning Process

Since adoption of the 2000 LRTP, the following significant changes have occurred in the RATS planning process:

- The Year 2000 census data from the U.S. Bureau of the Census resulted in changes to the RATS planning area. The Rockford MPA was expanded to include areas in Boone County, larger areas in Winnebago County, most of Belvidere, Roscoe, Winnebago and Timberlane. The population of the Rockford MPA grew from 238,846 in 1990 to 280,082 in Year 2000 (a 17.3% increase). In addition, the Rockford MPA increased 87.6 square miles to correspond with the larger urbanized area.
- There was discussion about whether RATS and the State Line Area Transportation Study (SLATS) should be combined. SLATS is a federally designated MPO like RATS for the Beloit urbanized area. **Map 2-1** shows the Rockford MPA boundaries of both RATS and SLATS and the boundaries of the municipalities. The decision was made to reconsider the issue of combining the two MPOs until after the 2010 Census. In the interim, the two MPOs are to make concerted efforts to coordinate planning activities.[5]
- The U.S. Bureau of the Census shifted parts of Roscoe from the Beloit urbanized area into the Rockford urbanized area and, this area is now in the Rockford MPA.
- The Cooperative Agreement that forms and empowers RATS was revised on July 24, 2003. The revised agreement expanded the representation on the RATS Policy Committees to include Boone County and Belvidere.

[5]This issue is discussed in more detail in the Rockford Area Transportation Study report titled, *Transportation Planning in the Rockford-Beloit Area Issues Related to Changes in Organization and Structure*, August 22, 2002.



Map based on Year 2000 Census & data from RATS, SLATS & Janesville MPOs

- A computerized transportation simulation model was completed for the region. This model is discussed in more detail in **Section 2.6**, *Transportation Model*. A comprehensive update of the RATS public involvement process was completed. (See **Section 2.8**.)
- RATS prepared several reports on the topic of environmental justice in the transportation planning process. (See **Section 2.9**.)

2.4 Socio-Economic Profile

The socio-economic factors that primarily affect transportation are population, households or dwelling units, and employment. The jurisdictions within the Rockford MPA and their respective populations are listed in **Table 2-3** along with the population increase from 1990-2000. The Rockford MPA has had significant population increase; this is due to population growth and expansion of the Rockford MPA boundaries. The ethnic and age profile of the population in the Rockford MPA is shown in **Table 2-4**. Attention to minority and low-income population distribution is important and the locations of those areas are shown in **Maps 2-2** through **2-6.** Population, households and employment are essential inputs to determine regional transportation impacts and future needs. **Table 2-5** shows the forecast of population, dwelling units and employment for the Rockford Metropolitan Statistical Area (MSA).

Table 2-3
Rockford Metropolitan Planning Area Population by Jurisdiction

Jurisdiction	1990	2000	Change	Percent
Rockford	142,815	150,115	7,300	5.1%
Unincorporated	NA	54,474	NA	NA
Machesney Park	19,042	20,759	1,717	9.0%
Loves Park	15,457	20,142	4,685	30.3%
Roscoe	2,079	6,241	4,162	200.2%
Winnebago	1,840	2,958	1,118	60.8%
Cherry Valley	1,615	2,191	576	35.7%
New Milford	463	541	78	16.8%
Belvidere	16,049	20,860	4,811	30.0%
Poplar Grove	743	1,368	625	84.1%
Timberlane	NA	234	NA	NA
Caledonia	NA	199	NA	NA
Total:	**238,846**	**280,082**	**41,236**	**17.3%**

The Rockford MSA is designated by the U.S. Bureau of the Census and includes all of Winnebago and Boone Counties. As shown in **Map 2-1**, the Rockford MSA is larger than the Rockford MPA. In comparison, the population of the Rockford MPA was 87.2% of the MSA in the Year 2000. For forecasting purposes, the MSA data provides a better tool since most forecasts are done on a county basis. The forecasts are then allocated to smaller transportation analysis zones for the purpose of using the transportation model to determine impact and needs on the transportation systems. (See **Section 9**, *Regional Economic Development.*)

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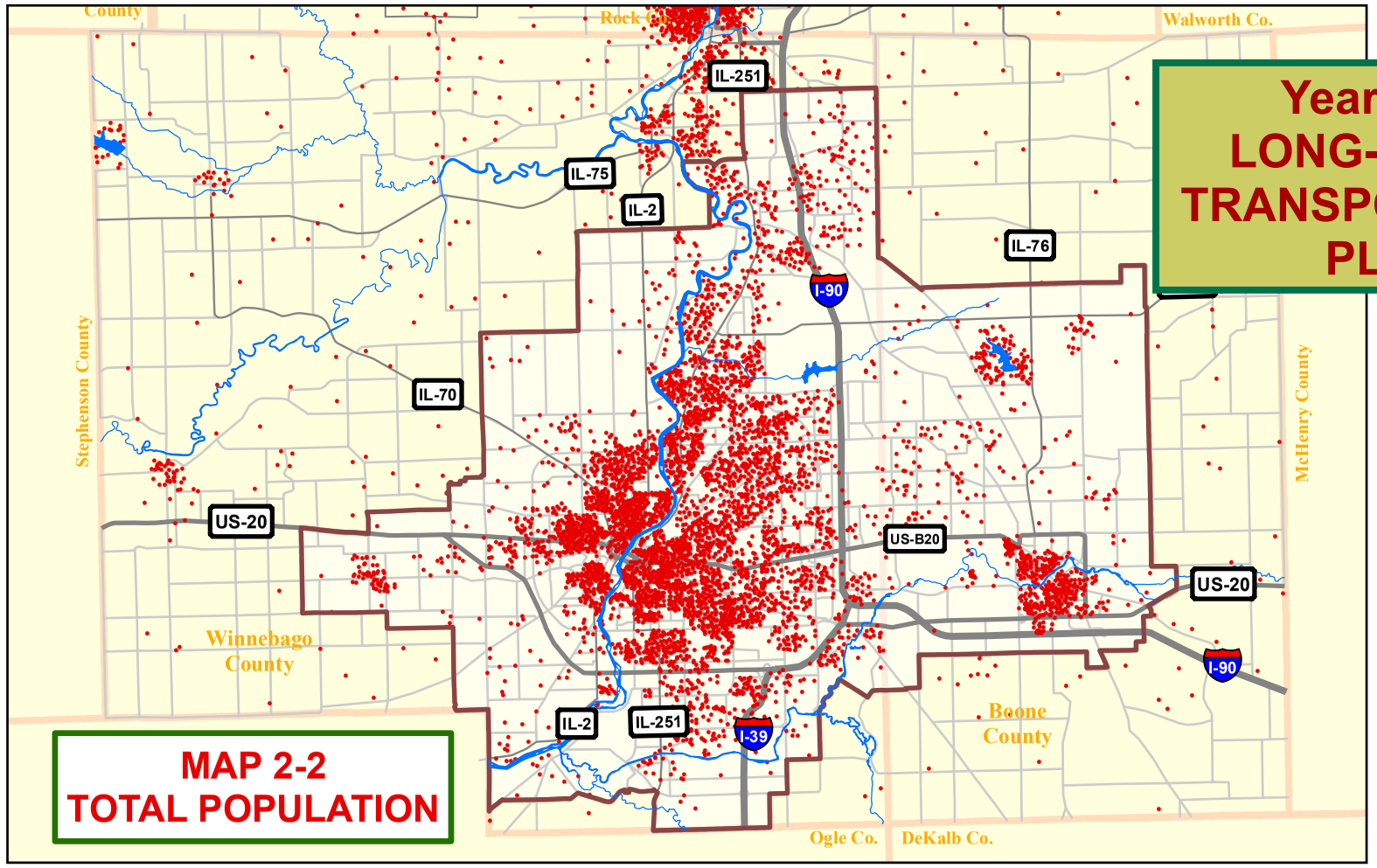
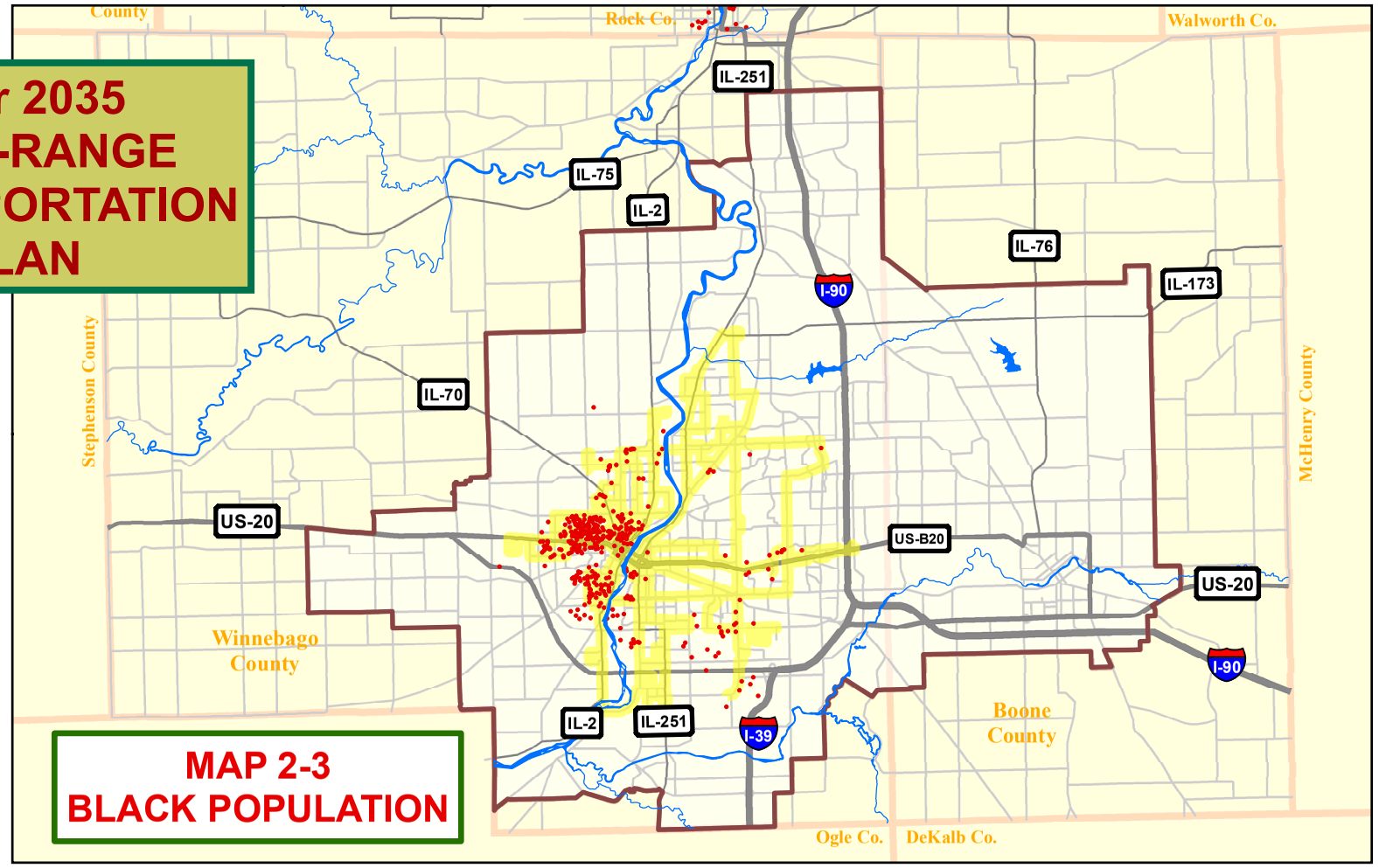
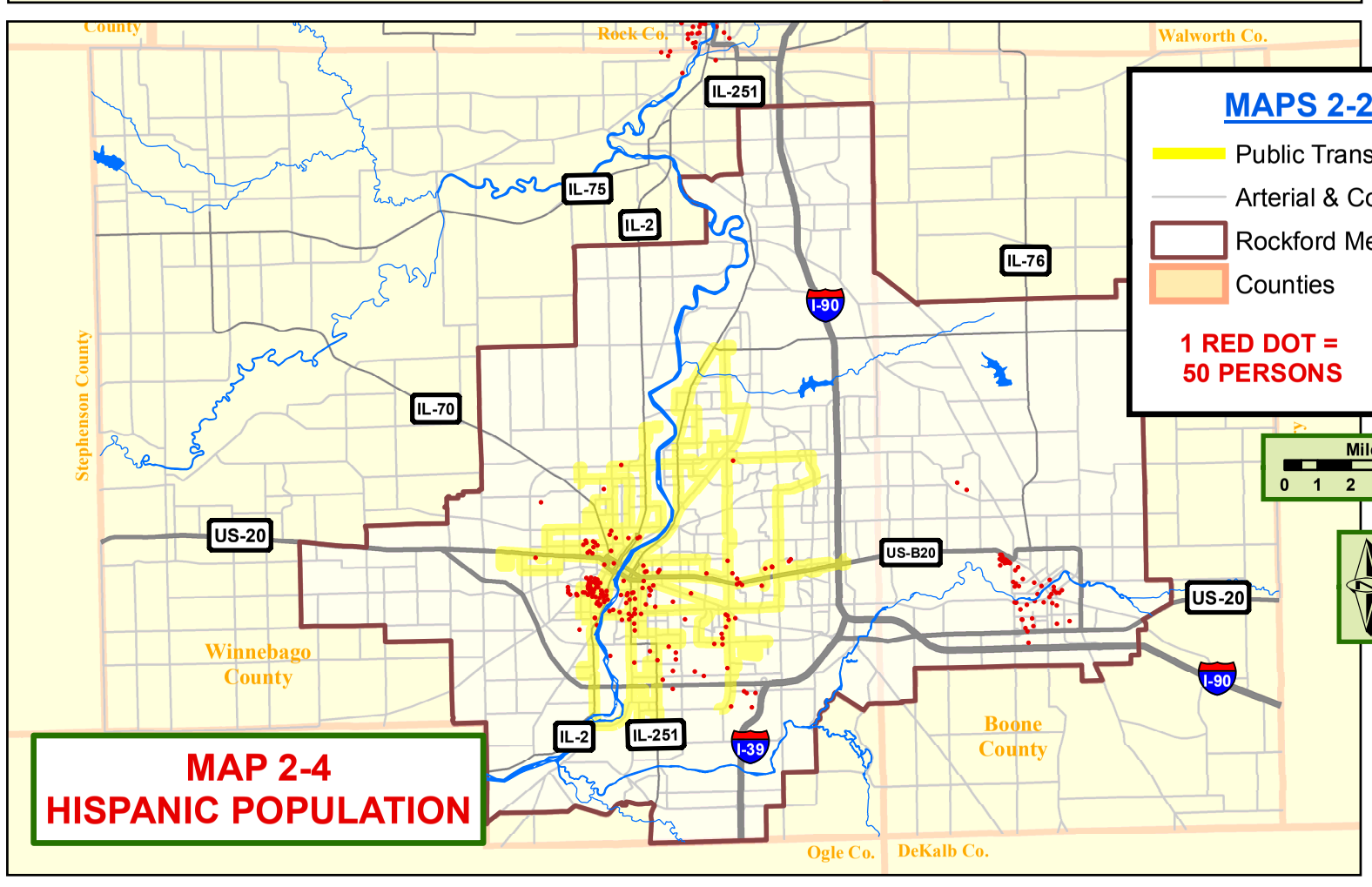
Year 2035 LONG-RANGE TRANSPORTATION PLAN



MAP 2-2
TOTAL POPULATION



MAP 2-3
BLACK POPULATION



MAP 2-4
HISPANIC POPULATION

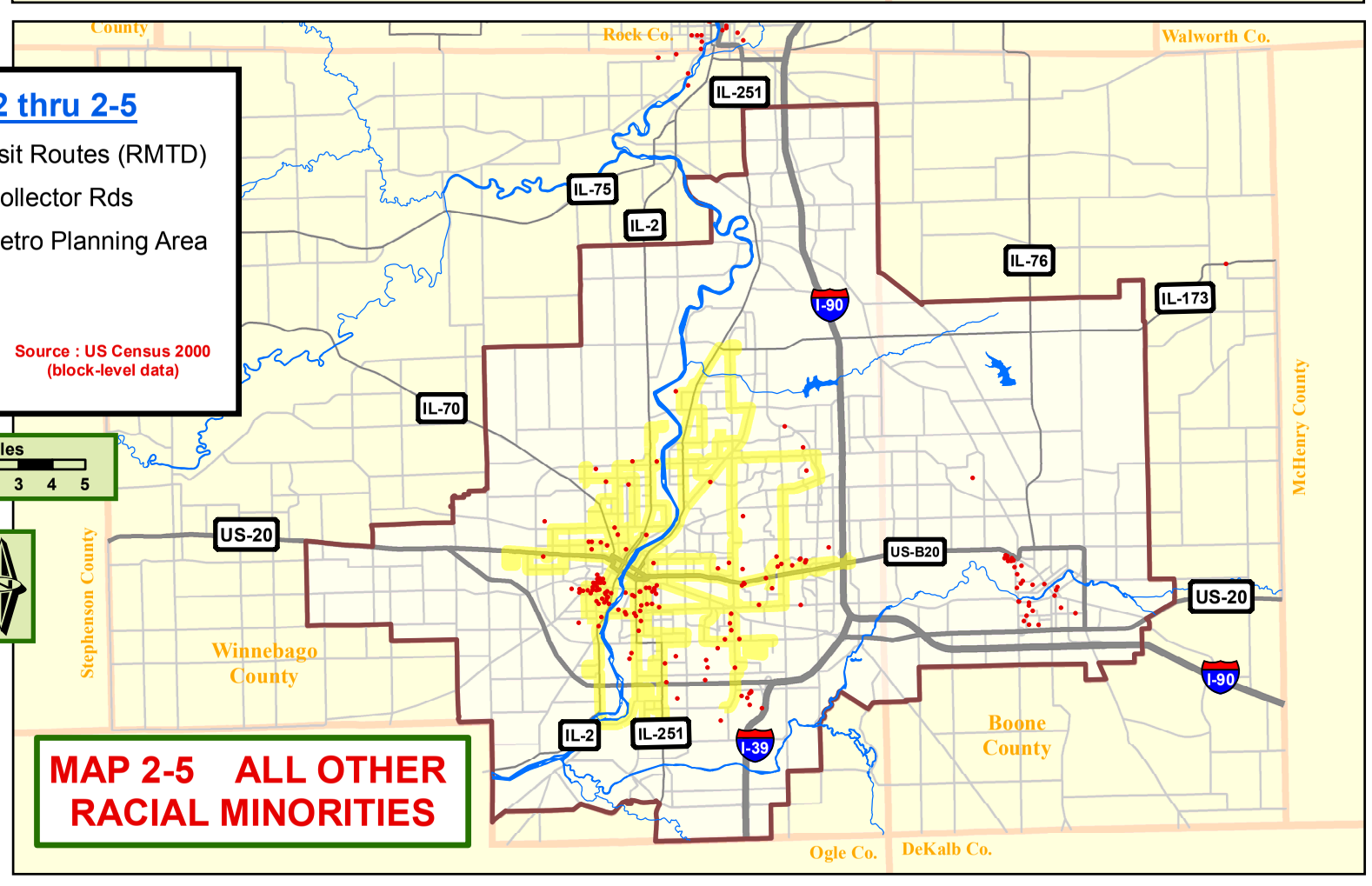
MAPS 2-2 thru 2-5

- Public Transit Routes (RMTD)
- Arterial & Collector Rds
- Rockford Metro Planning Area
- Counties

1 RED DOT = 50 PERSONS

Source : US Census 2000 (block-level data)

Miles
0 1 2 3 4 5



MAP 2-5 ALL OTHER RACIAL MINORITIES

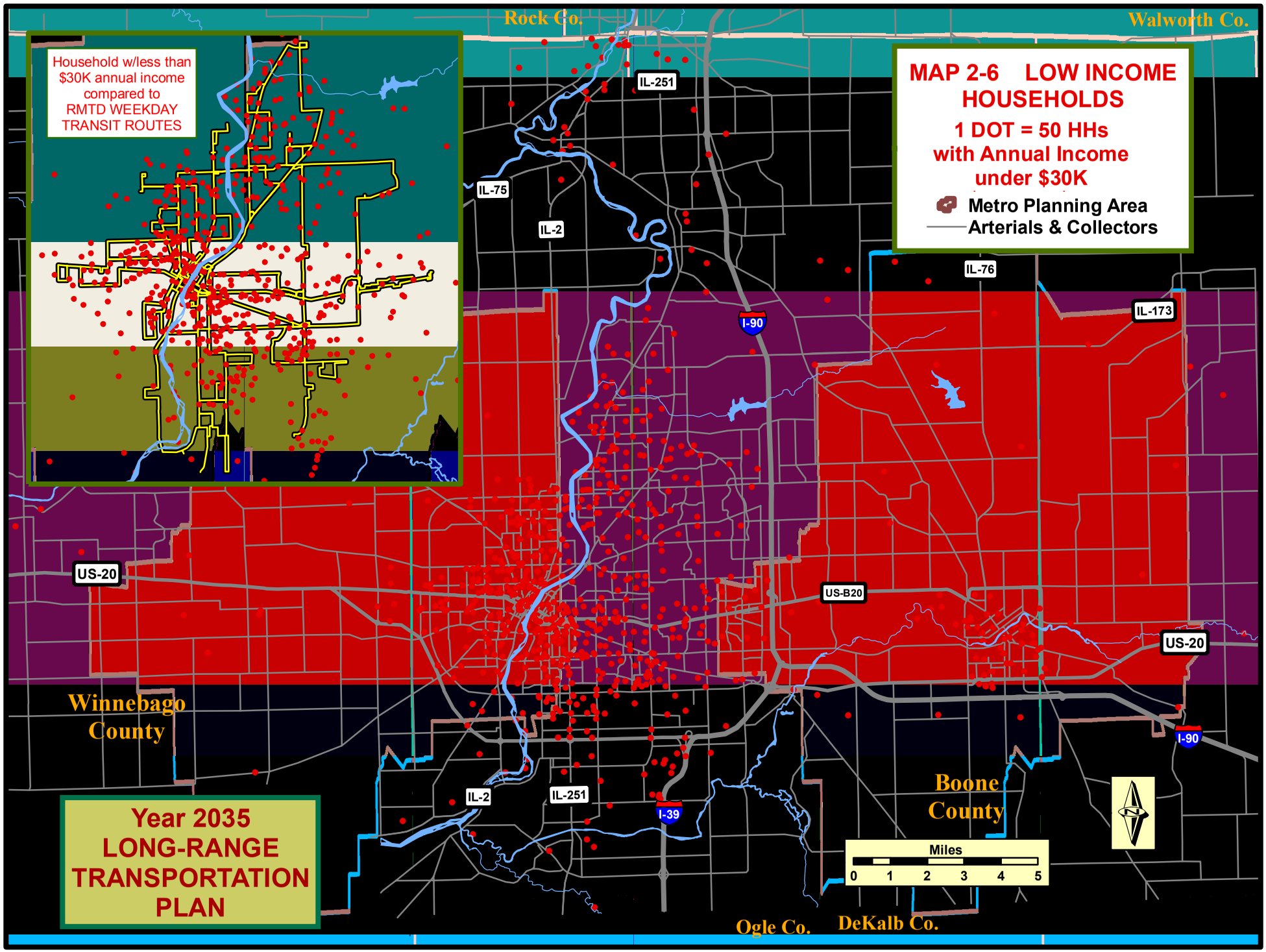

Household w/less than $30K annual income compared to RMTD WEEKDAY TRANSIT ROUTES
MAP 2-6 LOW INCOME HOUSEHOLDS
1 DOT = 50 HHs with Annual Income under $30K
Metro Planning Area
Arterials & Collectors
Rock Co.
Walworth Co.
IL-251
IL-75
IL-2
IL-76
IL-173
I-90
US-20
US-B20
Winnebago County
Boone County
IL-2
IL-251
I-39
I-90
Miles
0 1 2 3 4 5
Ogle Co.
DeKalb Co.
Year 2035 LONG-RANGE TRANSPORTATION PLAN

Table 2-4 Rockford Metropolitan Planning Area Population Profile		
Total	**Population**	**Percent of Total**
	286,442	
Ethnic Groups		
White	235,071	82.1%
African American	29,248	10.2%
Hispanic	23,208	8.1%
Asian	4,839	1.7%
Other	11,802	4.1%
Age Groups		
Youth (under 17)	76,838	26.8%
Elderly (65 and over)	35,909	12.5%

Table 2-5 Population, Households And Employment Forecast For Rockford Metropolitan Statistical Area						
	2000	**Forecast**			**Increase**	**Percent**
		2010	**2025**	**2035**	**2000–2035**	
Population	321,090	348,570	393,750	429,130	108,040	33.6%
Households	123,030	136,910	154,030	165,930	42,900	34.9%
Employment	195,770	207,501	219,840	280,850	85,080	43.4%

Future land use is used to allocate where the future dwelling units and employment will occur. This information is assigned to the transportation-modeling program along with existing land use to determine future transportation impacts and needs. Where this growth will occur will be dependent on the land use practices of the various government agencies in the Region. **Maps 2-7a** through **2-10b** illustrate the Year 2000 dwelling units and employment and where the Year 2025 forecasted growth in dwelling units and employment will occur.

It is important to note that **Maps 2-7a** through **2-10b** only illustrate growth out to the Year 2025. This LRTP raises several issues about future growth that are being reviewed by RATS. Most of the new development has occurred in the outlying edges of the urban area. However, the Year 2035 LRTP anticipates that redevelopment will begin to show an increase in employment and dwelling units in the urban core. Also, different growth patterns than what is shown for the Year 2025 are expected. The Region is witnessing a greater growth rate than has been seen in the past. From 1970-1980, the population in the Rockford MSA grew 3.0% and from 1980-1990 grew only 1.7%. However, from 1990-2000 the growth rate accelerated to 12.8%. This accelerated growth rate is expected to continue through 2035. RATS is in the process of reviewing how and where growth will occur. (See **Section 9**.) Maps showing the Year 2035 growth will be prepared at a later date and amended into the LRTP.

The growth occurring in the Region will place a strain not only on the transportation system but on other municipal infrastructure as well. Municipal and county land use regulations will impact how and where growth will occur. The various land use practices of the government agencies in the Region will play an important part in this growth. It is important that consideration be given to linking land use and transportation.

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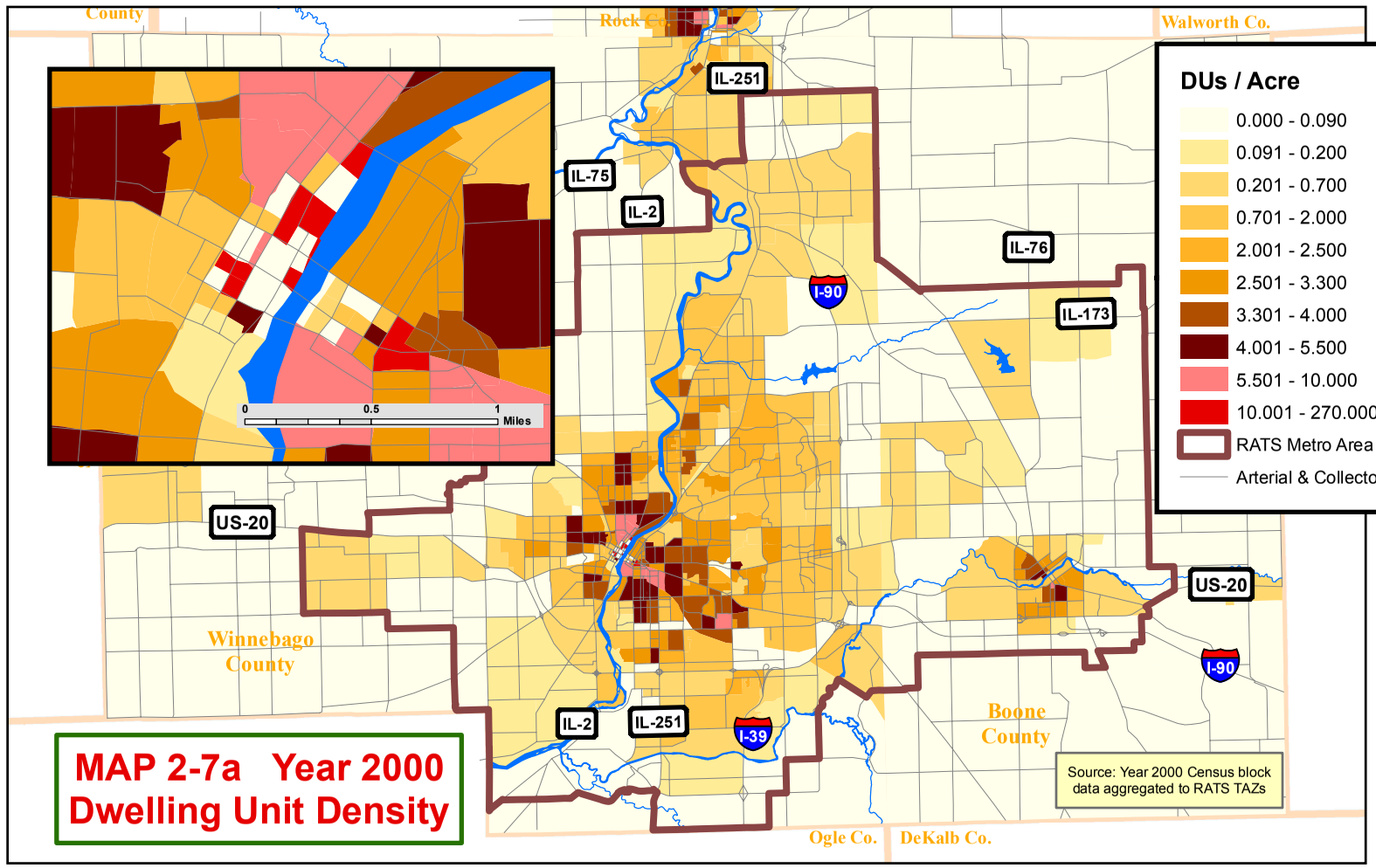
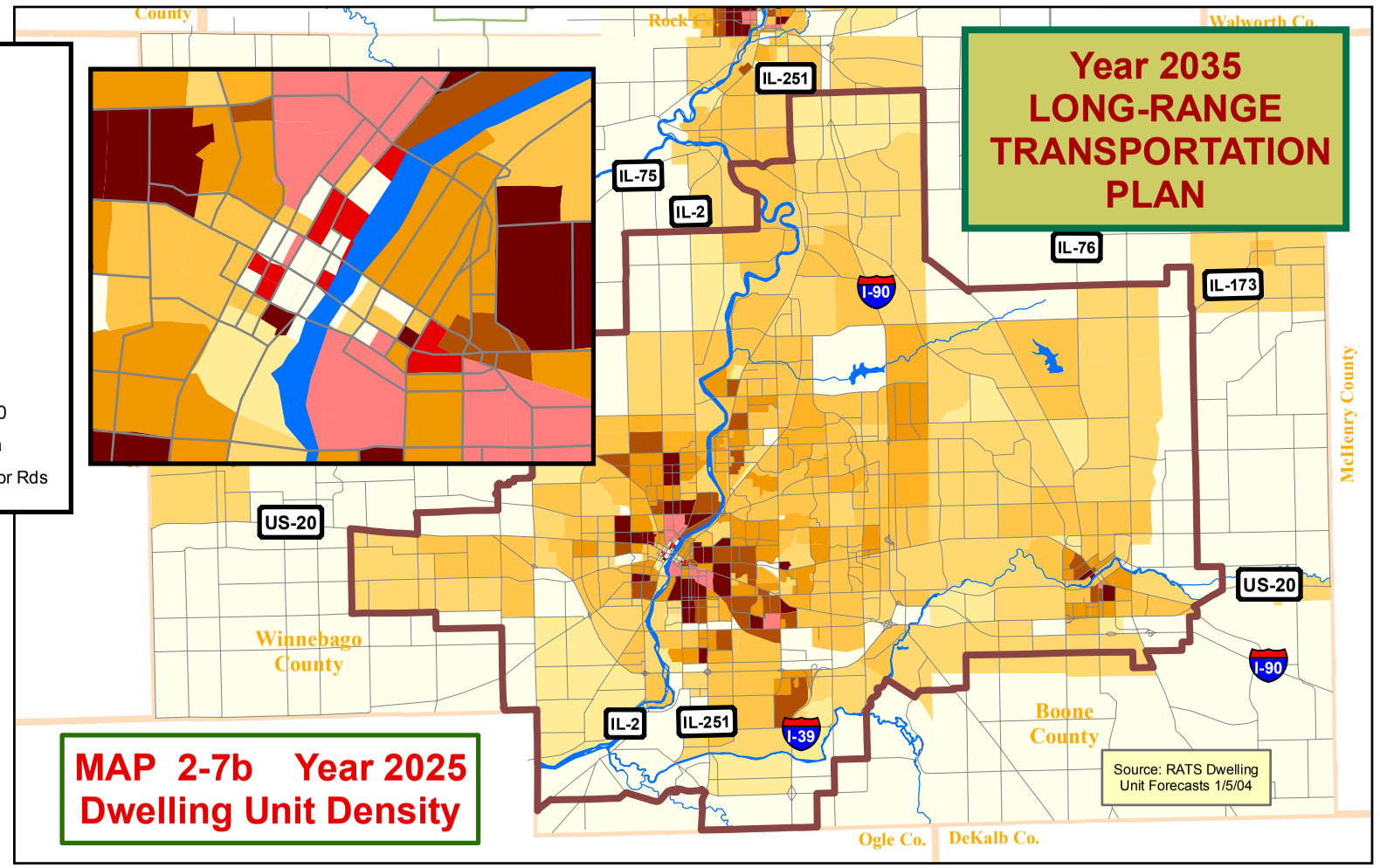
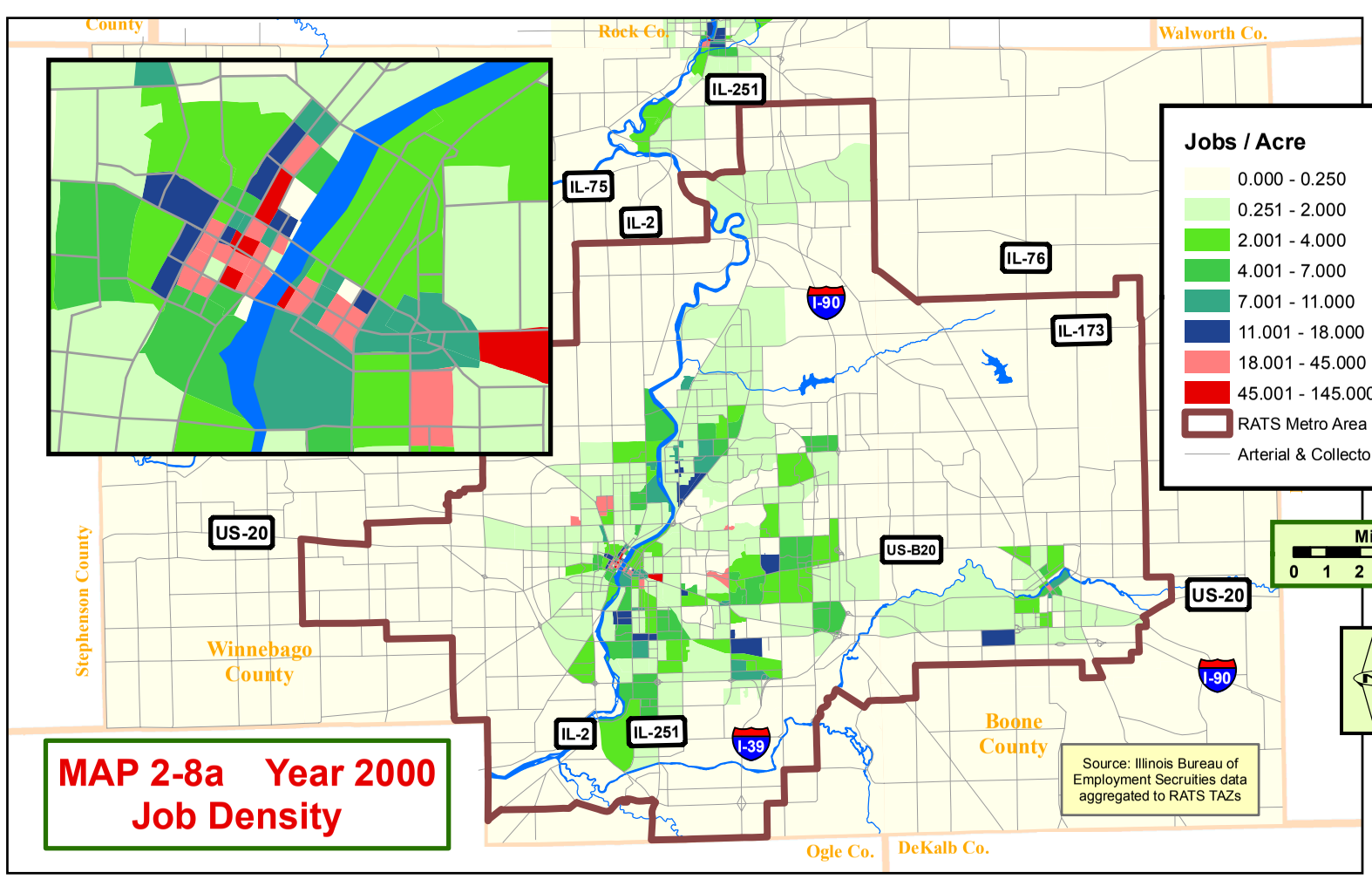


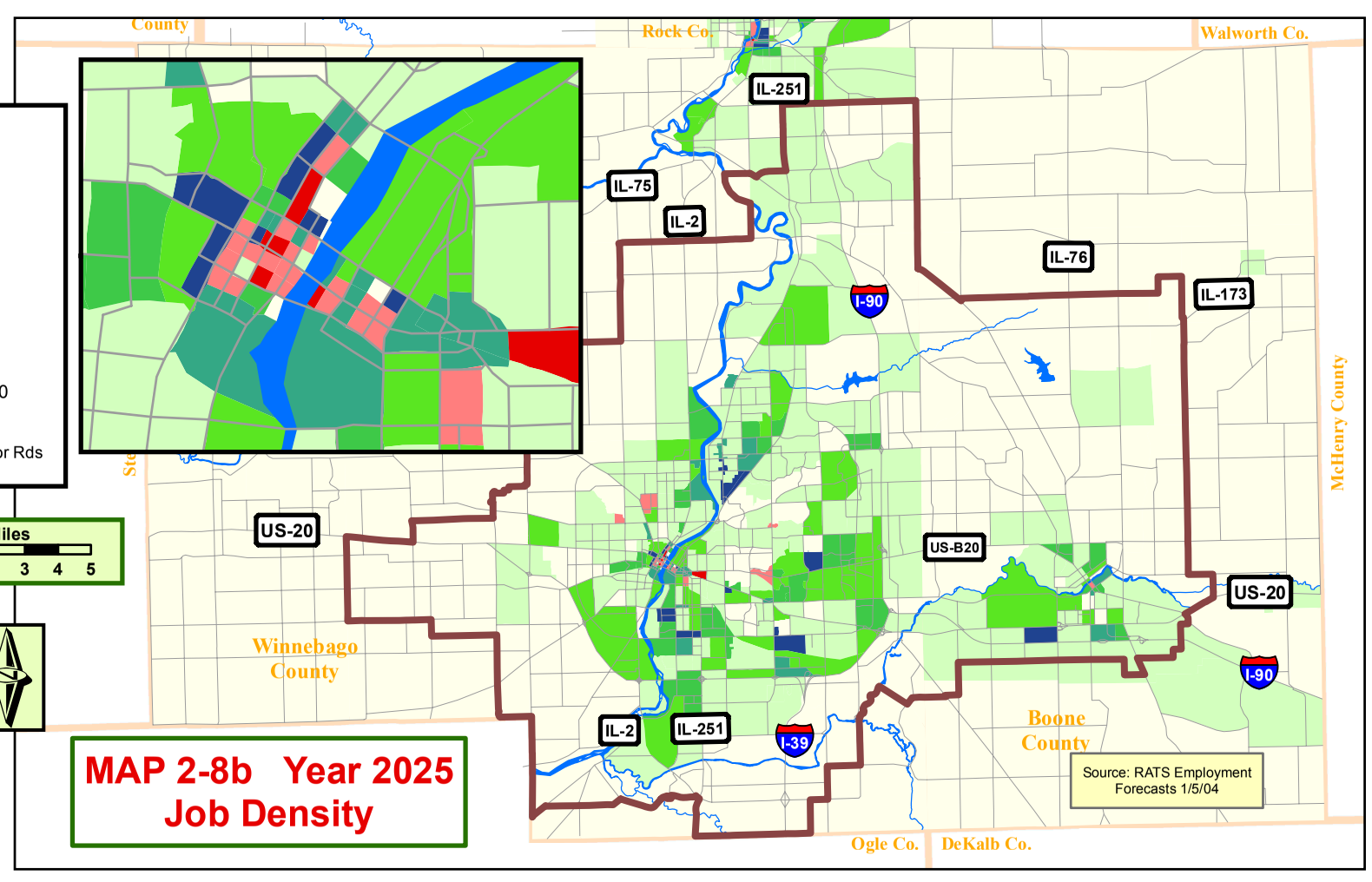
MAP 2-7a Year 2000
Dwelling Unit Density



MAP 2-7b Year 2025
Dwelling Unit Density

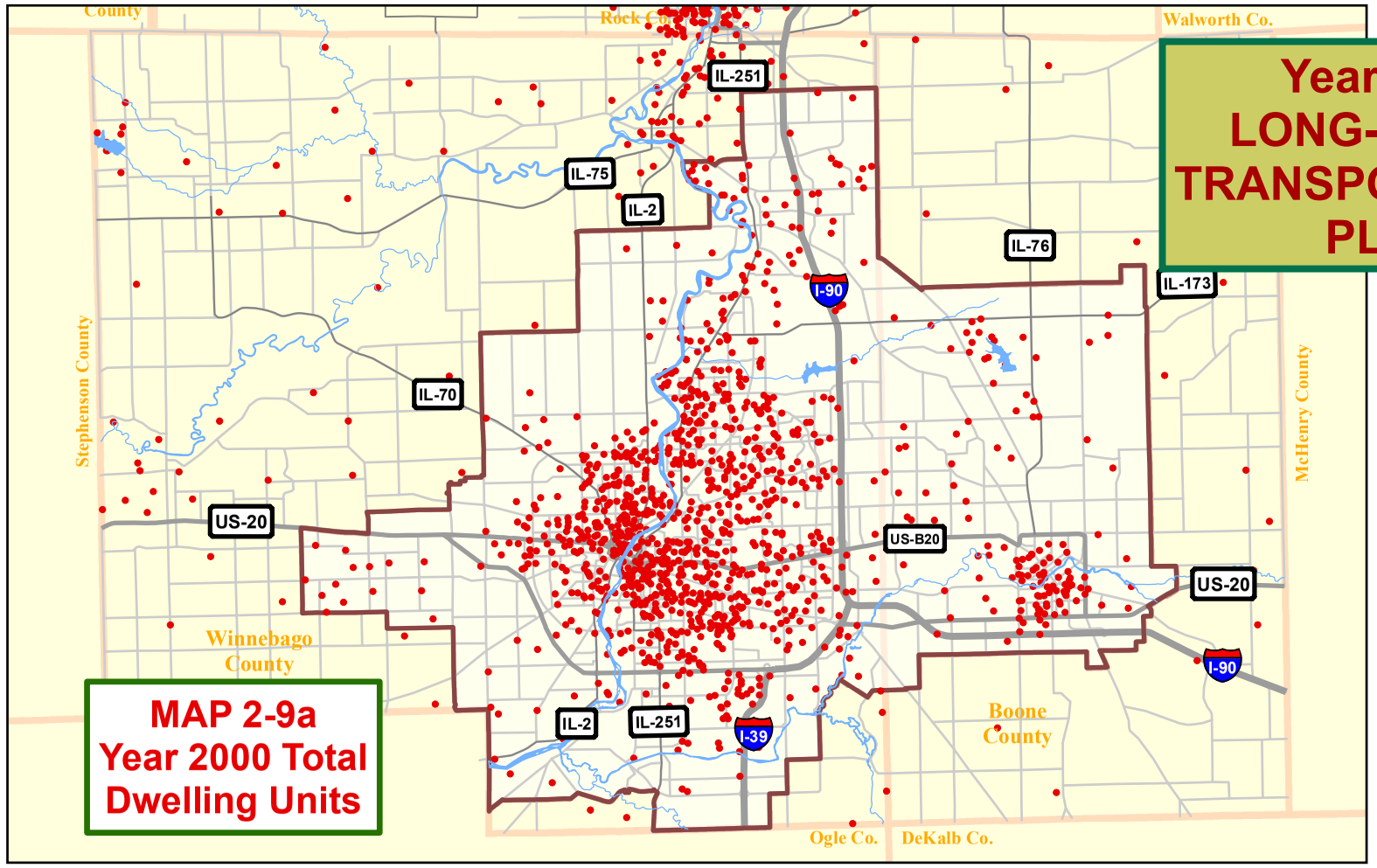


MAP 2-8a Year 2000
Job Density

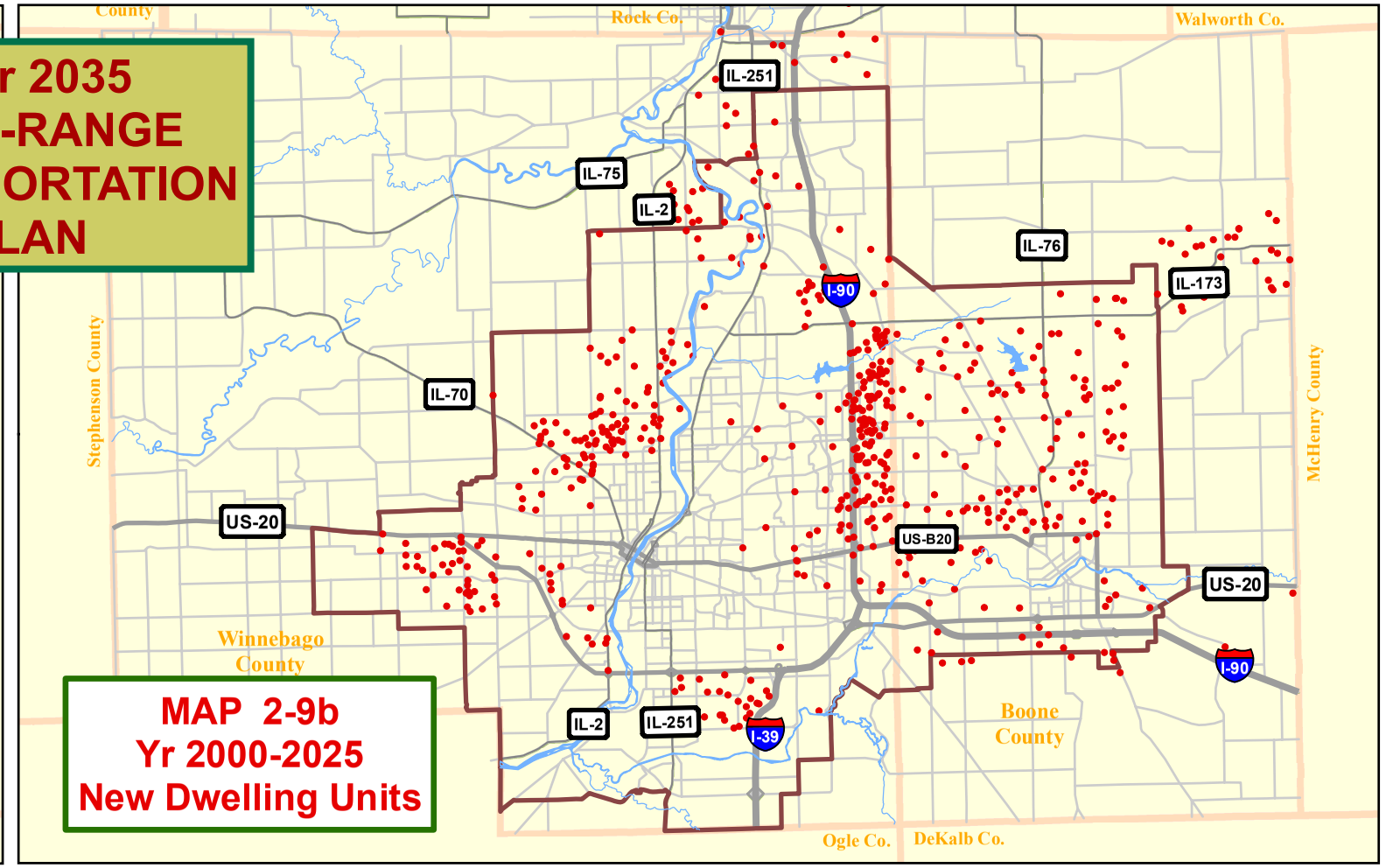


MAP 2-8b Year 2025
Job Density

Year 2035 LONG-RANGE TRANSPORTATION PLAN

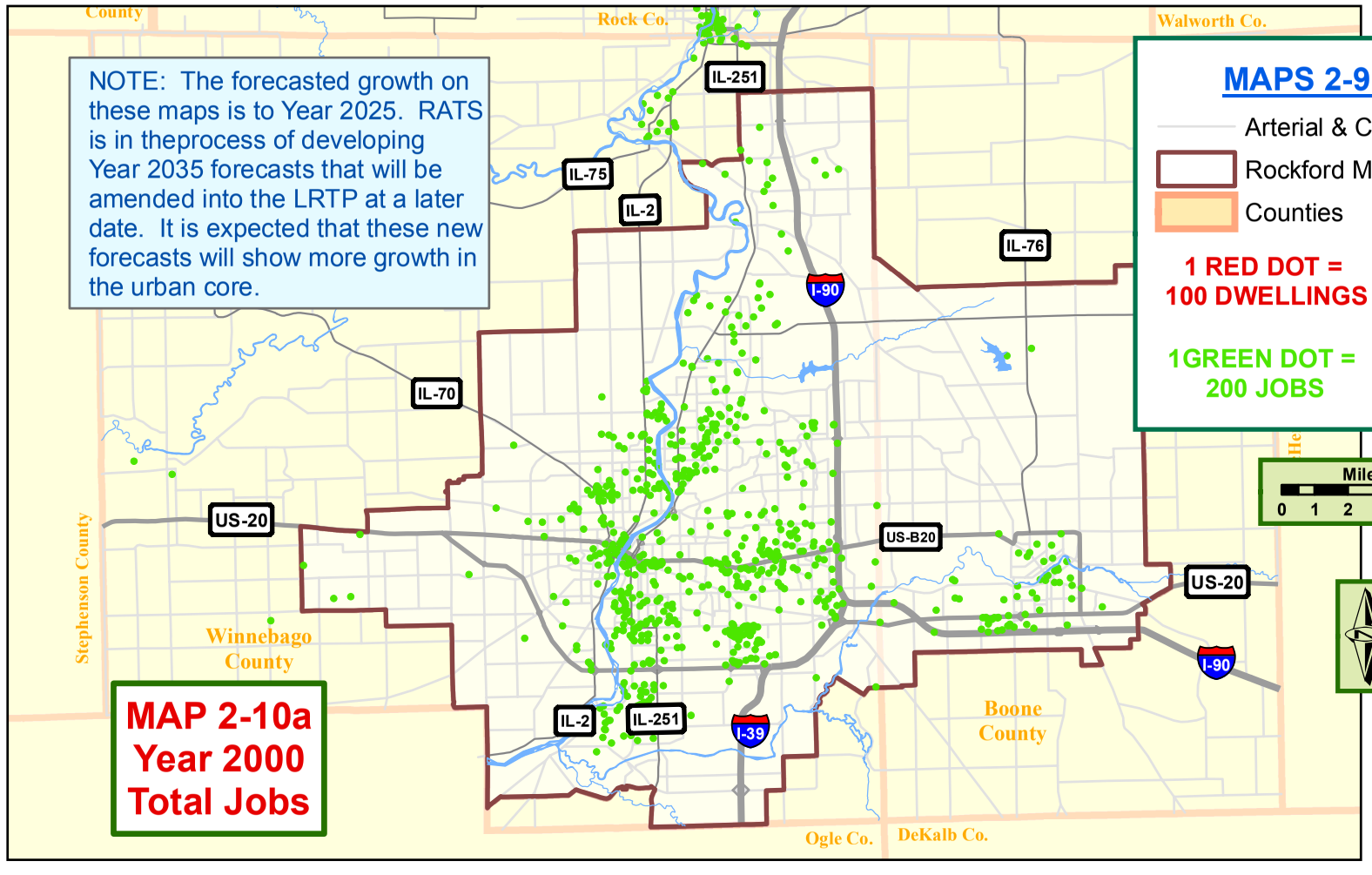


MAP 2-9a
Year 2000 Total Dwelling Units



MAP 2-9b
Yr 2000-2025 New Dwelling Units

NOTE: The forecasted growth on these maps is to Year 2025. RATS is in theprocess of developing Year 2035 forecasts that will be amended into the LRTP at a later date. It is expected that these new forecasts will show more growth in the urban core.



MAP 2-10a
Year 2000 Total Jobs

MAPS 2-9 thru 2-10

Arterial & Collector Rds

Rockford Metro Planning Area

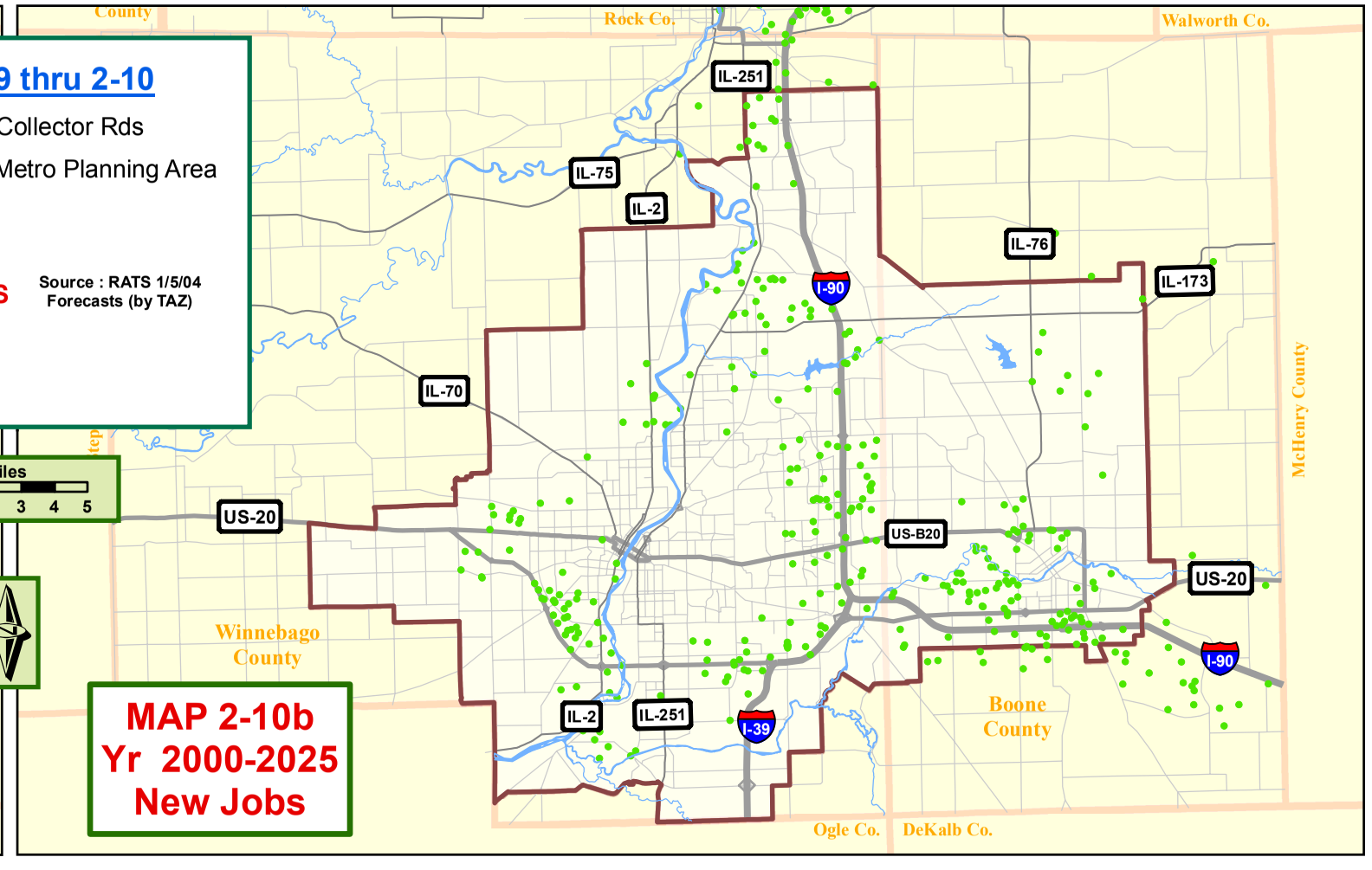
Counties

1 RED DOT = 100 DWELLINGS

1GREEN DOT = 200 JOBS

Source : RATS 1/5/04 Forecasts (by TAZ)

Miles
0 1 2 3 4 5



MAP 2-10b
Yr 2000-2025 New Jobs

2.5 Land Use Planning and Urban Form

The process of urban growth and transportation are inexorably linked. Transportation systems are affected by where people live and work. Transportation improvements can speed travel time and encourage new development. On the other hand, new development can result in putting more demands on transportation systems that cause the need for more transportation improvements. One aspect of this LRTP is to make a connection between land use and transportation. Land use, more than any other factor, affects the transportation system. Consequently, the transportation system has more impact on the urban form than any other factor.

It is important that the transportation plan recognize the importance of access to significant facilities such as airports, commercial facilities, cultural facilities, freight distribution facilities, industry, hospitals, government facilities, parks, retirement homes, and schools. Access via public transit is particularly important, and efforts should also be continued to provide non-motorized (pedestrian/bicycle) access to significant facilities (see **Maps 2-11** through **2-13**).

The transportation improvements in this LRTP are derived from land use forecasts. These forecasts are, in turn, used to estimate the number of vehicle trips that will be generated and to design and size the transportation system to accommodate those trips. Stated another way, the area's land use plans provide a starting point for determining the future dwelling units and jobs that provide a basis for assessing future transportation demand.

It is important that the counties and municipalities work together on land use plans. Some jurisdictions have overlapping land use planning authority. In Illinois, municipalities have authority to impose their plans in unincorporated areas up to one and one-half miles beyond their corporate limits. This is known as extraterritorial jurisdiction. This can result in two communities overlapping an area with differing plans. This potential conflict is generally resolved with boundary agreements. The communities of Cherry Valley, Loves Park, Machesney Park, Rockford and Roscoe have boundary agreements with each other. However, as these communities extend their municipal limits to the east there is a need for boundary agreements with the communities in Boone County. The communities within Boone County have a cooperative land use plan that is prepared by Boone County. Still, boundary agreements between the municipalities of Caledonia, Garden Prairie and Timberlane are recommended so that these communities remain true to the Boone County Plan. The communities in Boone County work cooperatively with each other and Boone County government officials on their land use planning efforts. Winnebago County only has a land use map that serves as a guide for proposed land use and two communities, New Milford and Winnebago, do not have land use plans; they negotiate land use development on a case-by-case basis.

It is important that government land use plans be updated on a regular basis. The private sector is responsible for much of the financial investment and the decisions on how development will occur. Private sector land use and development decisions change to reflect needs of the public. The values and desires of communities change. Communities should update plans to reflect changing patterns, needs and community objectives. Communities experiencing growth should update and amend their plans every 5-10 years to reflect the changing needs of the private sector and the community. **Table 2-6** summarizes the status of formal land use planning efforts in the Rockford MPA.

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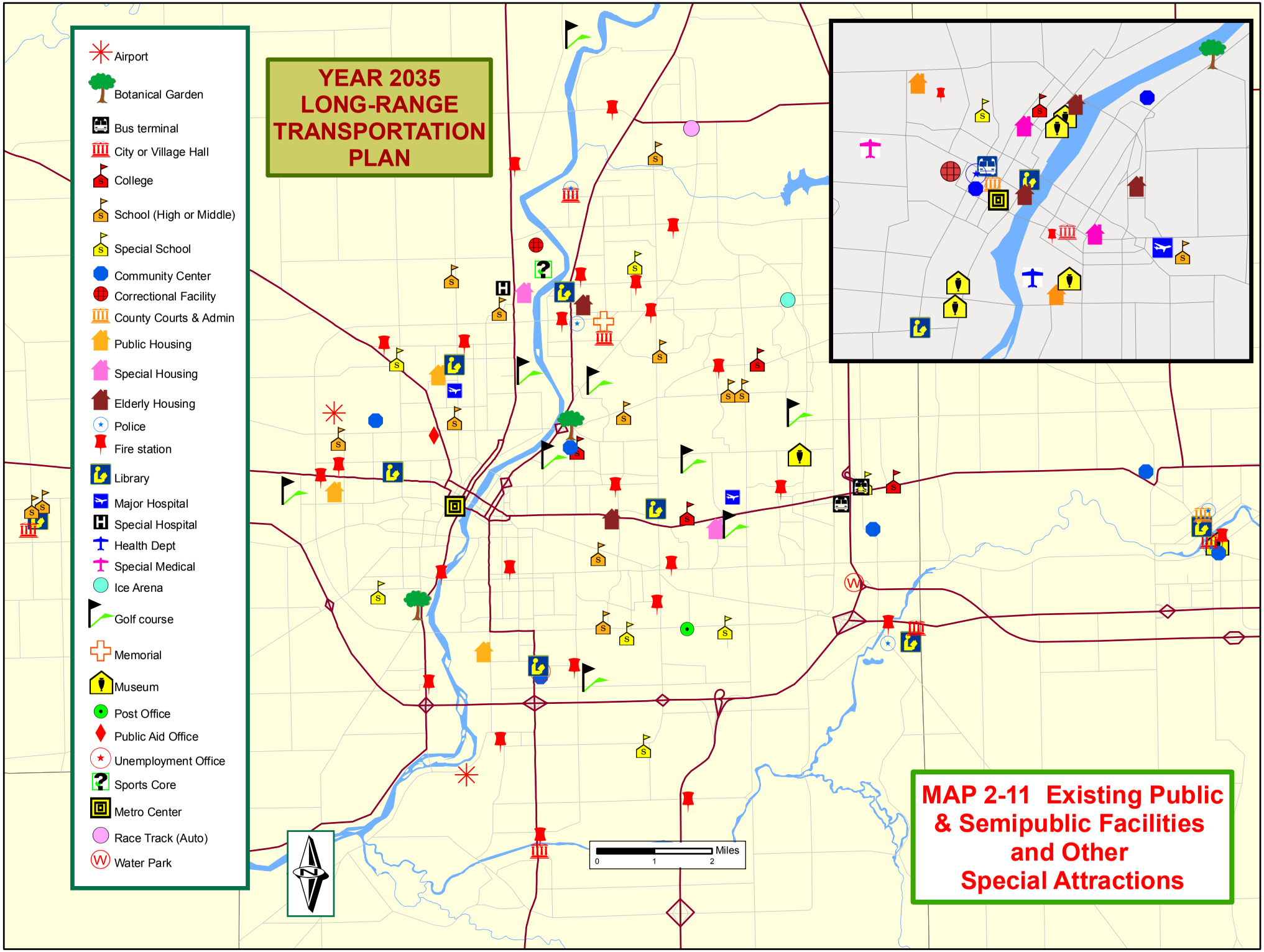
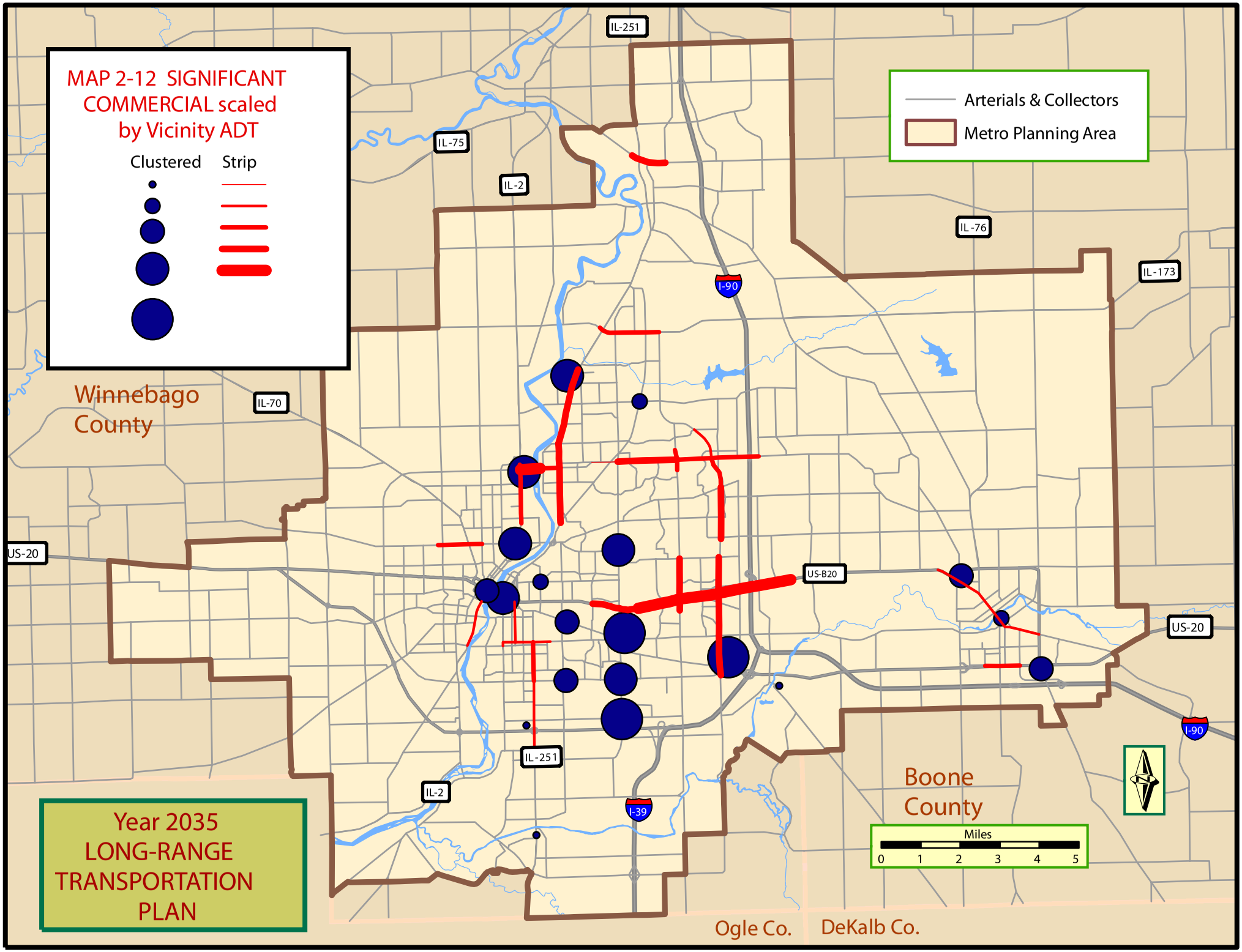
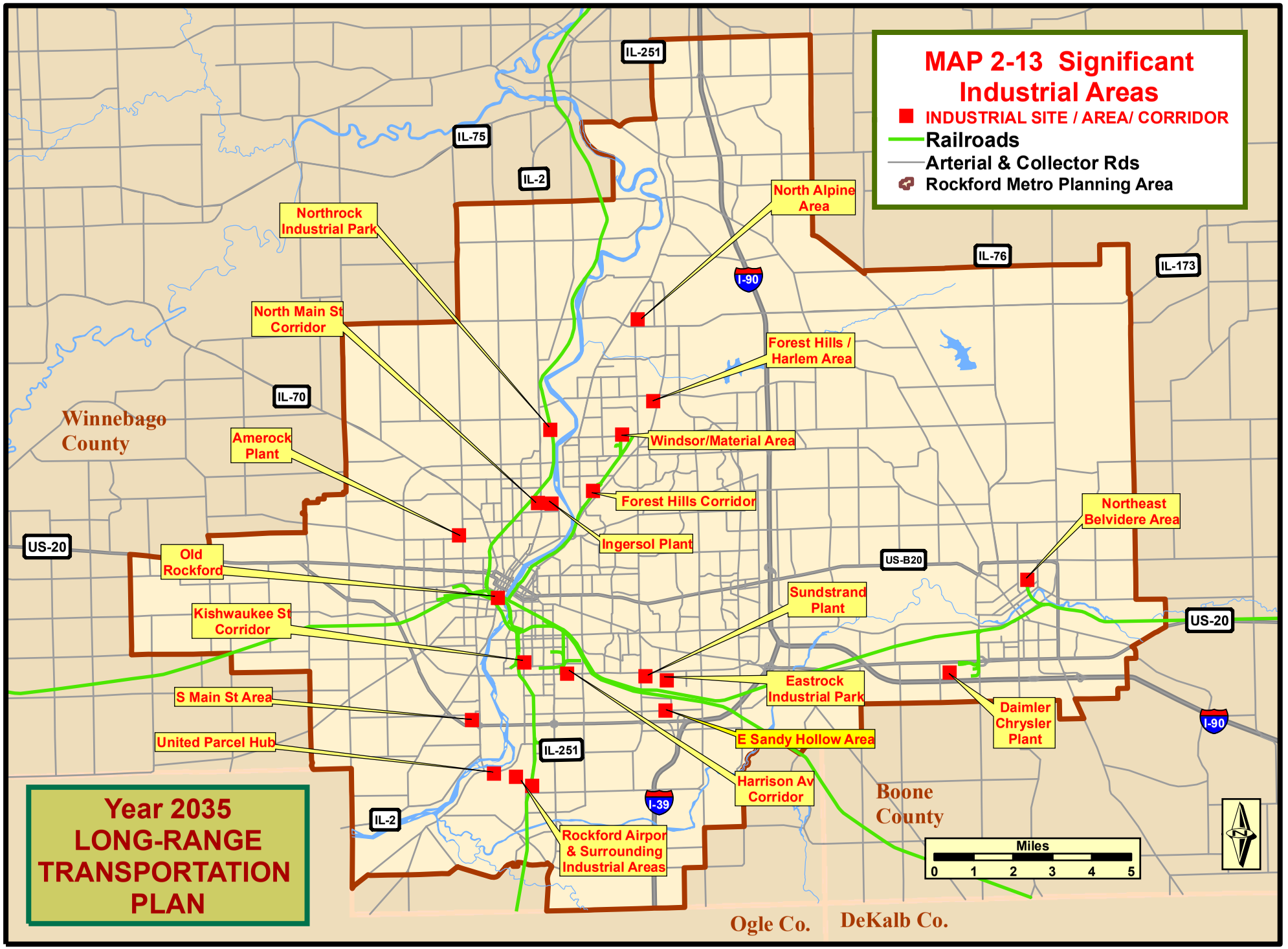

YEAR 2035
LONG-RANGE
TRANSPORTATION
PLAN
Airport
Botanical Garden
Bus terminal
City or Village Hall
College
School (High or Middle)
Special School
Community Center
Correctional Facility
County Courts & Admin
Public Housing
Special Housing
Elderly Housing
Police
Fire station
Library
Major Hospital
Special Hospital
Health Dept
Special Medical
Ice Arena
Golf course
Memorial
Museum
Post Office
Public Aid Office
Unemployment Office
Sports Core
Metro Center
Race Track (Auto)
Water Park
Miles
0
1
2
MAP 2-11 Existing Public & Semipublic Facilities and Other Special Attractions


MAP 2-12 SIGNIFICANT COMMERCIAL scaled by Vicinity ADT
Clustered
Strip
Arterials & Collectors
Metro Planning Area
Winnebago County
Boone County
Ogle Co.
DeKalb Co.
IL-251
IL-75
IL-2
IL-76
IL-173
I-90
IL-70
US-20
US-B20
I-39
Miles
0 1 2 3 4 5
Year 2035 LONG-RANGE TRANSPORTATION PLAN


MAP 2-13 Significant Industrial Areas
INDUSTRIAL SITE / AREA/ CORRIDOR
Railroads
Arterial & Collector Rds
Rockford Metro Planning Area
Year 2035 LONG-RANGE TRANSPORTATION PLAN
Northrock Industrial Park
North Alpine Area
North Main St Corridor
Forest Hills / Harlem Area
Windsor/Material Area
Amerock Plant
Forest Hills Corridor
Ingersol Plant
Northeast Belvidere Area
Old Rockford
Sundstrand Plant
Kishwaukee St Corridor
Eastrock Industrial Park
S Main St Area
Daimler Chrysler Plant
E Sandy Hollow Area
United Parcel Hub
Harrison Av Corridor
Rockford Airpor & Surrounding Industrial Areas
Winnebago County
Boone County
Ogle Co.
DeKalb Co.
IL-251
IL-75
IL-2
IL-76
IL-173
I-90
IL-70
US-20
US-B20
I-39
Miles
0 1 2 3 4 5

Open space land protection also has an impact on urban growth and the transportation system. The Rockford MPA has an extensive system of public parks and forest preserves. The Rockford Park District, the Winnebago County Forest Preserve District and the Boone County Conservation District play major roles in acquiring and holding open space (see **Map 2-14**).

Future transportation decisions should not encroach upon these areas but, instead, should enhance public access so that the public can enjoy and appreciate these areas. The region's natural features also affect the transportation system. The Rockford MPA is dissected by an extensive array of surface waterways and flood plains, including the Rock and Kishwaukee Rivers and numerous tributaries. These waterways and their adjacent floodplains and sensitive lands are important to the area's ecosystem. Efforts should be made to minimize the impact of transportation facilities and developments as they cross or traverse these natural areas.

Table 2-6
Status of Formal Land Use Planning Efforts

Jurisdiction	Date of Plan	Transportation Component	Notes on Land Use Coordination
Municipal			
Cherry Valley	2004	Yes	Boundary agreement with Rockford. Potential plan conflicts with Boone County plans. Potential plan conflicts with Belvidere.
Loves Park	1997	Yes	Boundary Agreement with Rockford and Machesney Park. Potential plan conflicts with Caledonia and Timberlane.
Machesney Park	1994	Yes	Boundary agreements with Loves Park, Roscoe, and Rockford.
New Millford	N/A	No	
Rockford	2004	Yes	Boundary agreements with Cherry Valley, Loves Park and Machesney Park
Rockford (continued)	2004	Yes	Potential plan conflicts with Boone County plan and with Belvidere.
Roscoe	2001	Yes	Boundary agreement with Machesney Park. Potential plan conflicts with South Beloit and Rockton.
Winnebago	N/A	No	
County			
Boone	1999	Yes	Belvidere, Caledonia, Popular Grove and Timberlane are addressed in the Winnebago County Greenway Plan. Potential conflicts with Cherry Valley, Loves Park and Rockford Plans.
Winnebago	N/A	No	

The availability of sanitary sewers and municipal water also has an important affect on land use planning and metropolitan growth patterns. All of the municipalities require sewer and water with new development. Boone and Winnebago Counties may allow development on private well and septic systems in unincorporated areas. However, these developments generally are low density or small-scale in keeping with the agricultural or rural nature of the unincorporated areas.

The ability to provide utilities has an impact on both the type and location of new development. A variety of governmental units provide sanitary sewer and municipal water in the Rockford MPA.

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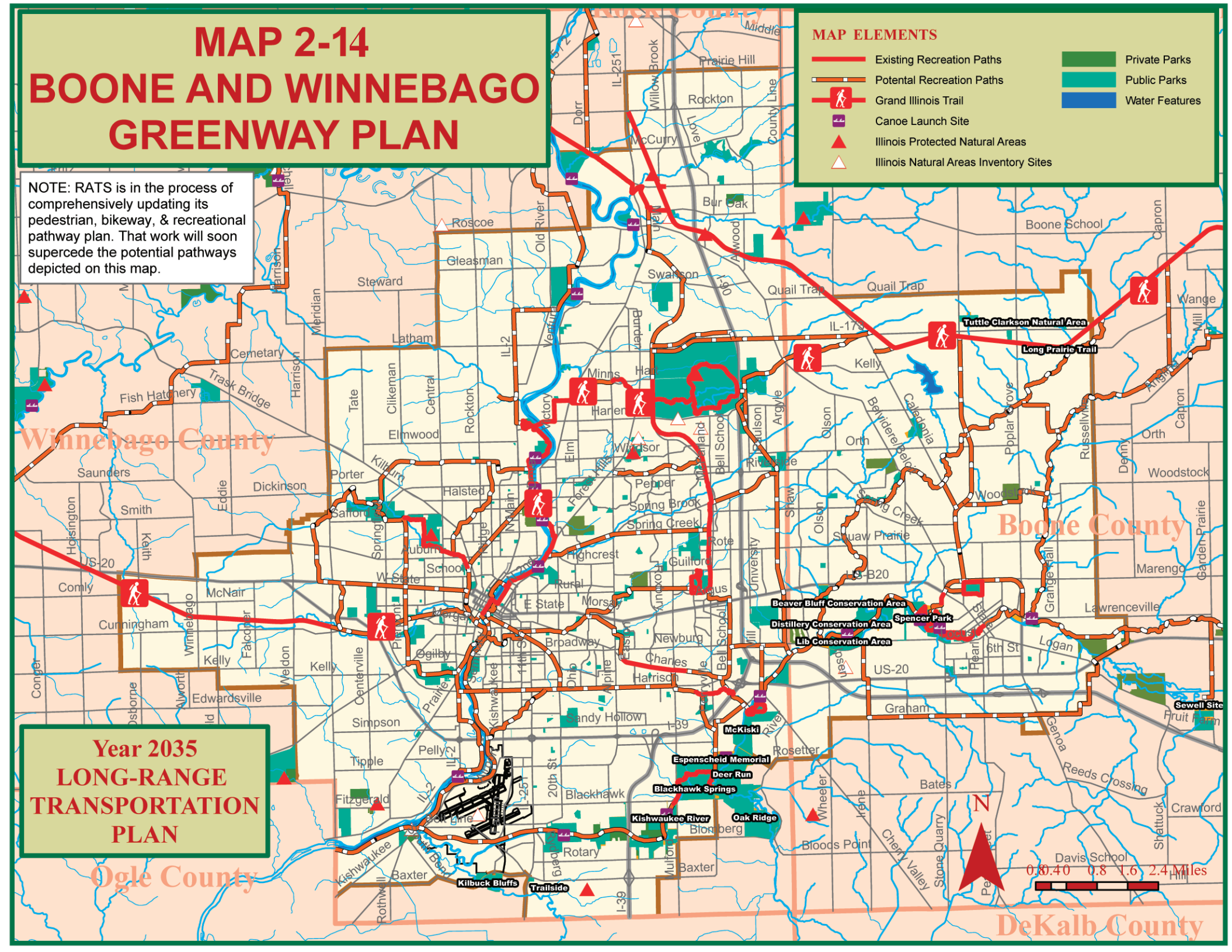
MAP 2-14
BOONE AND WINNEBAGO GREENWAY PLAN

NOTE: RATS is in the process of comprehensively updating its pedestrian, bikeway, & recreational pathway plan. That work will soon supercede the potential pathways depicted on this map.



These governmental units are summarized in **Table 2-7**. The largest and most important is the Rock River Water Reclamation District (RRWRD). The RRWRD provides sanitary sewer services for much of the Rockford MPA. The Illinois Environmental Protection Agency requires wastewater treatment districts to set up "Facility Planning Areas" (FPA). An FPA is the geographic area expected to be served by a treatment facility based on the capacity of the treatment facility, the intensity of development forecasted in the area, the anticipated volume and composition of the waste stream (see **Map 2-15**).

Table 2-7
Municipal Units That Provide Sanitary Sewer or Water

Unit	Sanitary Sewer	Water	Notes
Belvidere	X	X	
Capron	X	X	
Loves Park		X	
North Park Water District		X	Provides water to Machesney Park, Roscoe, parts of Loves Park and some unincorporated areas.
Popular Grove	X	X	
Rock River Water Reclamation District	X		Services Cherry Valley, Loves Park, Machesney Park, Rockford and some unincorporated areas.
Rockford		X	
Rockton	X	X	
South Beloit	X		Water is provided by South Beloit Water, Gas and Electric.

2.6 Transportation Model

RATS utilizes a computerized transportation model to analyze street and intersection congestion and forecast the need for future roadway improvements. RATS also performs transportation modeling for SLATS in an effort to coordinate planning activities between the two agencies. **Map 2-16** illustrates the Regional Transportation Modeling Area (RTMA). Note that the RTMA includes Winnebago and Boone Counties as well as those parts of SLATS.

The computerized transportation model that RATS uses is called TMODEL™. RATS recently used the model to develop a Year 2025 transportation system.[6] It was intended that the transportation planning modeling program would be used in developing the Year 2035 transportation system. Unfortunately, it was not possible to utilize the transportation-modeling program in time for this 2035 LRTP. The roadway projects listed in **Section 7**, *Roadway*, are based on the results of the Year 2025 modeling effort. The transportation-modeling program will be used in the near future and the results will be amended into the Year 2035 LRTP.

The transportation model involves numerous mathematical equations to analyze large amounts of data. The model is a mathematical representation of the transportation process used to forecast where travel will occur and determine what roadways improvements will be needed. Demographic and land use forecasts are a major source of data input for the model.

[6] *Boone County and Winnebago County Transportation Planning Study* prepared for Rockford Areas Transportation Study and Stateline Area Transportation Study, March 2003.

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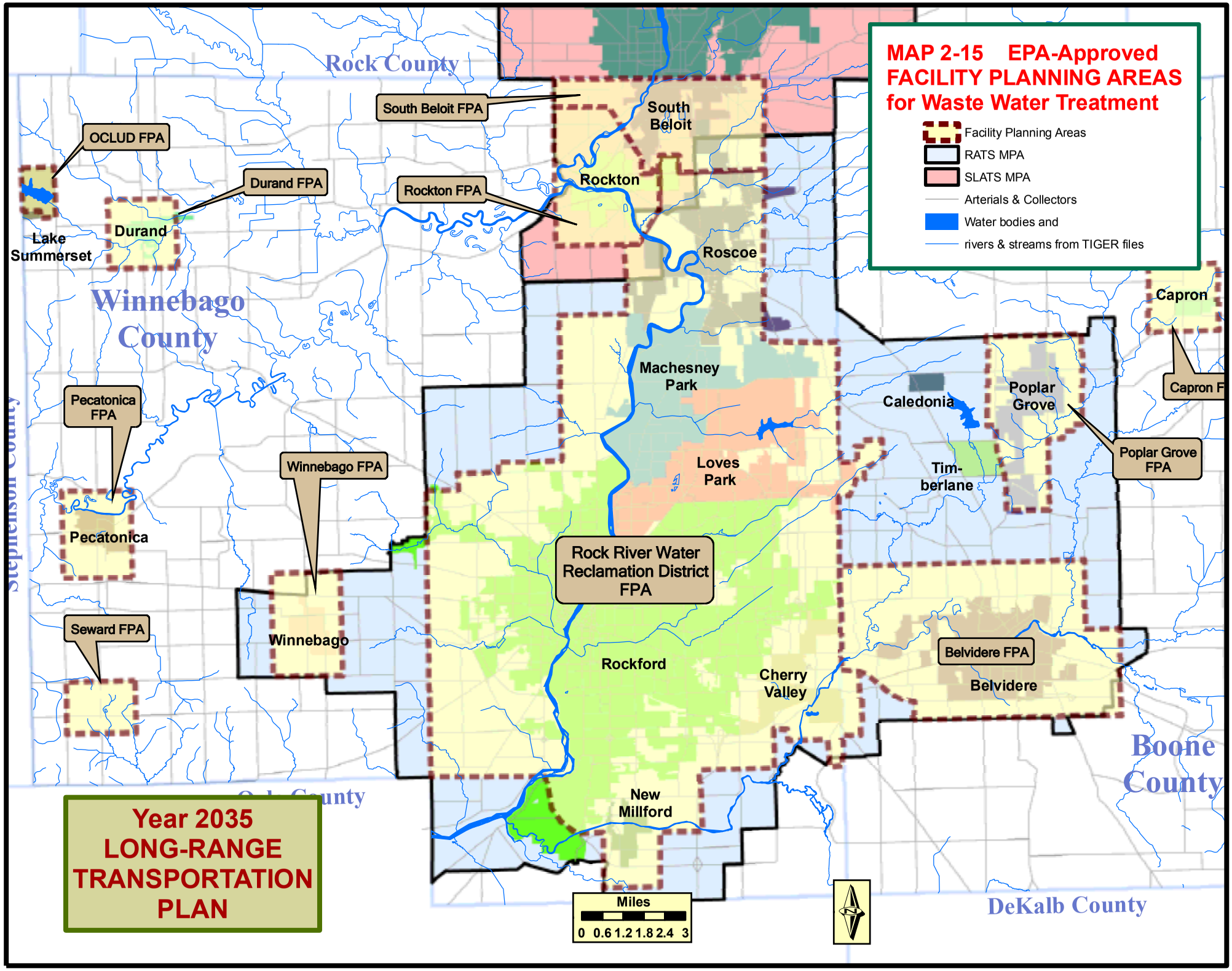
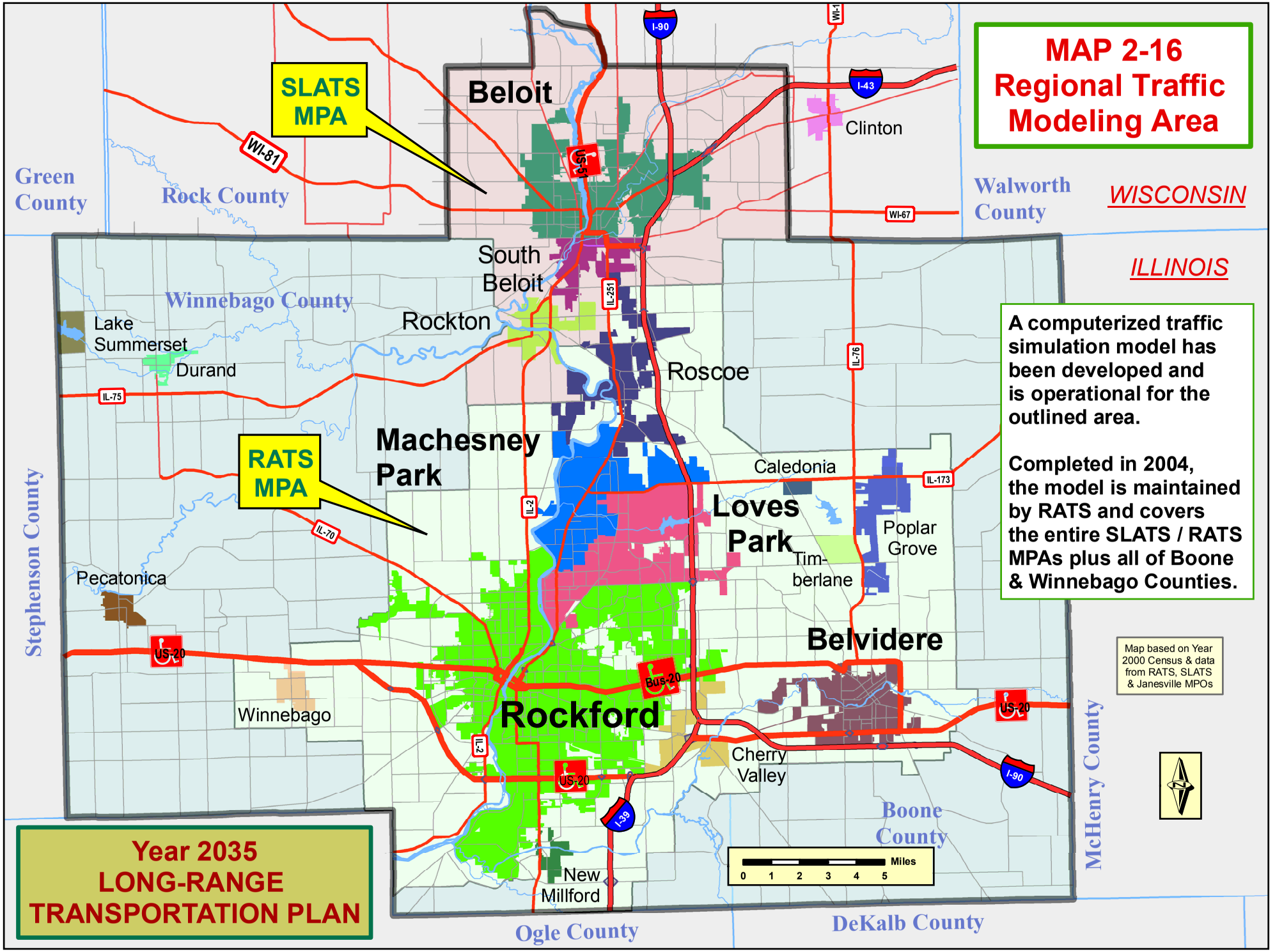

MAP 2-15 EPA-Approved FACILITY PLANNING AREAS for Waste Water Treatment
Facility Planning Areas
RATS MPA
SLATS MPA
Arterials & Collectors
Water bodies and
rivers & streams from TIGER files
Rock County
South Beloit FPA
South Beloit
OCLUD FPA
Durand FPA
Rockton FPA
Rockton
Lake Summerset
Durand
Roscoe
Winnebago County
Capron
Capron F
Machesney Park
Pecatonica FPA
Caledonia
Poplar Grove
Poplar Grove FPA
Winnebago FPA
Loves Park
Tim-berlane
Pecatonica
Rock River Water Reclamation District FPA
Seward FPA
Winnebago
Rockford
Cherry Valley
Belvidere FPA
Belvidere
Boone County
New Millford
Year 2035 LONG-RANGE TRANSPORTATION PLAN
Miles
0 0.6 1.2 1.8 2.4 3
DeKalb County


MAP 2-16
Regional Traffic
Modeling Area
SLATS
MPA
RATS
MPA
Beloit
South
Beloit
Rockton
Roscoe
Machesney
Park
Loves
Park
Belvidere
Rockford
Winnebago
Pecatonica
Lake
Summerset
Durand
Caledonia
Poplar
Grove
Tim-
berlane
Cherry
Valley
New
Millford
Clinton
Green
County
Rock County
Walworth
County
WISCONSIN
ILLINOIS
Winnebago County
Stephenson County
Boone
County
McHenry County
Ogle County
DeKalb County
A computerized traffic simulation model has been developed and is operational for the outlined area.
Completed in 2004, the model is maintained by RATS and covers the entire SLATS / RATS MPAs plus all of Boone & Winnebago Counties.
Map based on Year 2000 Census & data from RATS, SLATS & Janesville MPOs
Miles
0 1 2 3 4 5
Year 2035
LONG-RANGE
TRANSPORTATION PLAN

Forecasted population and employment is tied into future land use to determine how the population, dwelling units and employment will be distributed in the study area. The study area is divided into zones for the purpose of the modeling effort and utilizes trip generation, trip distribution and trip assignment in the modeling process.

Trip generation is a prediction of the number of person trips that are generated by and attracted to each defined zone. Residential land uses "produce" trips, and the non-residential land uses "attract" trips. There are certain variables that are used to forecast the trip production. These include such socioeconomic variables as the number of households, household size, number of automobiles owned, and income. As the number of households, automobiles and income increase, so does the trip production. On the other hand, the type of non-residential land use (e.g. industrial, commercial, office, or education) will attract different numbers of trips.

Trip distribution, connects the zones that "produce" with the zones that "attract" trips. In other words, for each trip that originates in a zone, a destination zone is found. The trip distribution part of the model is determined by "attractiveness" between the zones. Most of the trips produced in a given zone will be attracted to a surrounding or nearby zone; some will be attracted to moderately distant zones; and a small number will be attracted to very distant locations. The type of trip also influences attractiveness, that is, work trips are generally longer than non-work trips. The long journeys are relatively few in number and most trips are relatively short (see **Figure 2-1**).

Trip assignment assigns the trips to specific roadway routes and determines the resulting highway volumes. The roadway choice decision is based on the travel times involved in the trips. It is also based on the general assumption that people minimize their travel times and traveling is perceived negatively. Roads have functional classifications: freeways, arterials, collectors and local roadways.

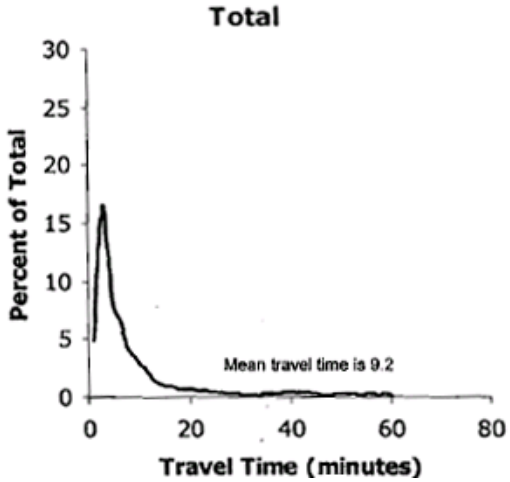


Figure 2-1 – Trip Duration Distribution

The classification is a function of the travel speed and vehicle capacity of the roadway. The functional classification is also used to determine an impedance function. The impedance function describes the opposition to handle traffic flow. For example, a freeway has much faster travel speeds and can handle a much greater volume of traffic than a collector street. Trips are assigned to the roadway network based on the impedance function of the roadway. In other words, the trips are assigned based on the least time or distance involved in the trip.

In addition to the above trips that begin and end inside the limit of the study area, there are external trips from outside the study area. There are three variations on external trips: external-external, external-internal and internal-external. External-external trips pass through the study area without stopping. Internal-external trips originate in the study area and travel outside the study area. External-internal trips originate outside the study area and travel to the study area. The number of external trips is derived from traffic counts taken on roadways entering the study area. These trips

are distributed and assigned to the study area. The external trips that are attracted to or produced in the study area are assigned to zones.

Finally, commercial vehicle travel is included in the model. Commercial vehicles are those other than passenger cars. The present model accounts for commercial vehicle trips by developing adjustment factors based on roadway classification. The adjustment factor assigns a certain volume of commercial traffic based on the passenger traffic.

2.7 Public Finance

The LRTP must be based on reasonable financial commitments and constrained based on the available public funding. Four steps are taken in order to fulfill this:

- Projections are made of future funding sources that are expected to be available for transportation uses.
- Estimates are made of the cost of constructing, maintaining and operating the total (existing plus planned) transportation system over the period of the plan.
- Projects are prioritized.
- Only projects that are can meet the financial constraint are listed; this is in accord with federal guidance on financial constraints.[7]

The constrained approach is applied at two levels – Transportation Improvement Plan (TIP) and LRTP. The TIP, which is updated annually, is a much more precise method of applying the financial constraint. As would be expected, projecting funding sources and estimating project costs for a 30-year period is difficult at best. It should also be noted that projects, which cannot be funded with the 30-year forecasted revenues may still be listed in this Plan, but will be programmed more than 30 years from the present.

The projection of future funding sources is provided in **Section 3**. Various sections of the LRTP discuss the transportation mode elements: aviation, bikeways/pedestrian, rail, roadways and transit. Each one of these sections discusses the proposed projects, estimates the associated project costs, prioritizes the projects and determines the projects that can be funded within the 30-year timeframe of the LRTP.

2.8 Public Involvement

Public involvement is an integral part of the transportation planning process in the Rockford MPA. Securing input from the public is an important means of obtaining feedback on the transportation system. Obtaining public input, however, is not an easy task. An agency such as RATS cannot assume that the public will provide feedback. The public needs to be provided with the opportunity to comment on transportation plans and programs. The Rockford MPO has prepared a document that outlines the public involvement process.[8] The preparation of this LRTP provides another opportunity to secure input from the public on the transportation systems in the Rockford MPA. The following public involvement activities have been followed in the preparation of this LRTP.

[7] 23 CFR 450.322.
[8] *Public Involvement Process* dated April 24, 2003.

- Main Mailing List – The Rockford MPO maintains a mailing list of more than 150 people who have expressed interest in the transportation planning process. These people were notified that the LRTP would be updated prior to the start of the process. They were also provided notification when the LRTP was in draft format and available for review and comments.
- Rockford MPO Policy and Technical Meetings – These are open meetings where the public is encouraged to attend and provide input. The meeting agendas and notices are annotated with the comment that "Opportunities for public comment will be afforded." The agenda and meeting notices are sent to all those on the Rockford MPO mailing list. The mailing list includes community organizations and newspapers.
- Public Notice – Annually, the Rockford MPO publishes a public notice in the Rock River Times announcing the planning activities for the year. Specific mention was made at the beginning of 2004 describing the initiation of the LRTP process. In the beginning of 2005, the public notice mentioned that this LRTP process was underway and invited the public to provide input on the plan.
- Website – The Rockford MPO has developed a website that provides extensive information about transportation planning activities in the region. The website address is: http://www.ci.rockford.il.us/government/works/index.cfm?section=planning&id=405. The LRTP is posted on the website.
- Four public information open houses were conducted on the draft LRTP. These open houses were used to discuss the LRTP and solicit comments from the general public. On July 6, 2005, they were held at the Rockford Public Library and the North Suburban Library in Roscoe. On July 7, 2005, they were held at the Loves Park City Hall and the Belvidere Community Building.
- Response to Public Input – The Rockford MPO policy is to explicitly respond to all public input received during the planning and program development process. The public comments and responses are compiled in an Addendum to this LRTP.

During the course of the development of the LRTP, specific attention was paid to obtaining input from the public on bicycle facilities in the region. A mailing list specific to the bicycling community was developed. The mailing list was developed through several community contacts and through articles in the newspaper that provided notification about the Rockford MPO planning activities. The mailing list was used to notify people about public workshops that were conducted on bike facility planning. The workshops served as forums to obtain input from the public on existing and proposed bike facilities (see **Section 5**, *Bikeway/Pedestrian*).

2.9 Environmental Justice

Environmental justice refers to federal guidance pertaining to non-discrimination in regard to transportation improvements. The intent of the federal guidance and rules are to allow all members of society full participation in any program or activity receiving federal financial assistance. It is also intended to ensure that federal programs, policies and activities do not have an adverse impact on minority and low-income populations.

The Rockford MPO has a long-standing tradition of applying the environmental justice doctrine to the transportation planning process. Since the last long-range plan, the Rockford MPO completed

two documents that describe the efforts to ensure environmental justice is applied to transportation in the Rockford MPA.[9] Their activities can be summarized as follows:

- Determine where minority and low-income populations are located.
- Provide a bus transit system that can serve low-income persons.
- Determine during the planning stage of any projects, programs or regulations that effect these populations.
- Support projects with regional significance as opposed to just neighborhood significance.
- Ensure that minority and low-income areas receive a proportionate share of transportation funding based on population.
- Ensure that minority and low-income areas do not receive an inappropriate share of the adverse impacts of transportation projects.
- Make every attempt to involve minority and low-income groups during the public involvement process.
- Periodically review and analyze past actions to determine if, in fact, all groups are being treated equitably.

As previously stated, an important part of the environmental justice process involves determining the location of minority and low-income populations. **Maps 2-3** through **2-5** show the locations of minority persons and **Map 2-6** shows the location of low- income persons. The maps also show the routes of the transit system. The maps help to illustrate that these populations are adequately served by the transit system.

[9]*Environmental Justice & Title VI Considerations Related to Transportation Planning and Transportation Improvements in the Rockford Metropolitan Planning Area,* September 2003 and *Title VI & Environmental Justice Assessment of the Public Transit Services Provided by the Rockford Mass Transit District in the Rockford Urbanized Area,* March 2004.

SECTION 3

PUBLIC FUNDING

SECTION 3
PUBLIC FUNDING

This section discusses the funding revenue sources for the various transportation modes. Expenditure of the public funds is discussed in the individual sections of the Long Range Transportation Plan (LRTP). At the time of the preparation of this LRTP, the U.S. Congress was still at work in approving legislation that would renew the nation's surface transportation laws. This renewal bill will impact federal funding of transportation projects. The renewal is expected to have the following affects:

- A strong funding commitment to the core programs established under the Intermodal Surface Transportation Efficiency Act of 1991 and the 1998 Transportation Efficiency Act for the 21st Century.
- A new "Safe Routes to School" initiative.
- Funds for a "Small Starts" program to support small capital projects for rail transit.
- Increased funding commitment to Metropolitan Planning Organizations (MPO).

3.1 Airports

There is one publicly owned airport in the Metropolitan Planning Area (MPA) – Northwest Chicagoland International Airport at Rockford (RFD). RFD is owned and administered by the Greater Rockford Airport Authority. A 30-year estimate of funding for RFD was not undertaken. It needs to be pointed out that airports operate under planning guidelines imposed by the Federal Aviation Administration (FAA). This LRTP is prepared under guidelines established the Federal Transit Administration (FTA) and Federal Highway Administration. Airport planning efforts are very different from roadway and transit planning. While airports do undertake a Transportation Improvement Plan (TIP) similar to one that is prepared by the Rockford Area Transportation Study (RATS), it is done at the state level as opposed to the MPO level. In addition, airports do not prepare a long-range plan similar to this one. Still, roadway improvements that might be undertaken at or around RFD are coordinated as part of the overall RATS planning efforts. In addition, for the purpose of integration of the transportation system some discussion of public funding of airport improvements is provided below.

The RFD website indicates that over the past few years more than $170 million has been invested in infrastructure improvements and facilities and the airport is in the midst of a $13 million airport improvement program. Airport improvements are funded by federal, state and local funds. The federal funds are provided from the Airport Improvement Program, which is generated from taxes and user fees collected from the various segments of the aviation community. State funds are provided from Series B aeronautics Bonds and General Revenue Funds. Local funds come from a variety of sources.

Federally eligible projects are funded with 90% federal, 5% state and 5% local funds. RFD is classified as a Primary Airport by the Illinois Department of Transportation (IDOT) and thus receives entitlement funds based on the number of passengers enplaned. In recent years, RFD received the minimum annual appropriation, $1 million. However, RFD has recently witnessed an increase in commercial activity. As the number of passengers grows, the entitlement funding should increase.

RFD also receives entitlement funds as a cargo airport. The most recent annual entitlement was $2.3 million. RFD has also been the recipient of discretionary funds from the FAA; however, the amount of these funds was not provided.

IDOT also administers a state-local funding program; the purpose of this program is to fund airport improvements that have difficulty competing for federal funds. These projects are generally divided 80% state and 20% local. RFD has received these funds, but recent funding levels were not provided. RFD also has several sources of funds that are generated locally. Details on these historic funding amounts were not provided.

3.2 Bikeway/Pedestrian

Generally, funding for bikeway/pedestrian improvements is included with roadway improvements. For this reason, it is difficult to forecast the total amount of funds that will be available for bikeway/pedestrian improvements. Funding of many bicycle/pedestrian improvements comes from the Surface Transportation Program (STP) – Enhancement. It is expected that the use of STP-Enhancement Funds will continue in this fashion. In addition, some bicycle paths, lanes and routes are expected to be constructed along or parallel to roadways when the roadways are improved. Funding for these projects will most likely be taken from same source that is used for the roadway improvement.

In the last few years, Loves Park has annually allocated $20,000 per year for sidewalk and curb construction and Rockford has annually allocated $150,000 for sidewalk and curb construction and $50,000 annually to curb construction for Americans with Disability Act compliance. If this trend continues, over the course of the 30-year period of this LRTP, these two agencies would allocate $6.6 million to pedestrian improvements.

3.3 Rail

Historically, there has been no public funding of rail projects, since this has been the purview of the private sector. However, **Section 6,** *Rail***,** discusses the recent *Rail Consolidation Study*. Under federal guidelines this LRTP must be financial constrained. This means that projects cannot be listed unless potential funding is available. For planning purposes the *Rail Consolidation Study* is addressed for planning purposes, but is not included as a project within the reach of the date of this LRTP – Year 2035. If financing becomes available the project can be amended into the LRTP.

3.4 Roadways

3.4.1 Capital Funding Sources

Table 3-1 lists and describes the public funding sources that have been recently used for roadway improvements. **Table 3-2** illustrates the funds that were expended from each of these funding sources over the last five years. The numbers are adjusted to Year 2005. For example, $1 in 2001 had the buying power of $1.08 in 2005. Therefore, the Year 2001 funds were multiplied by 1.08 to convert to Year 2005. Similarly, $1 in 2003 had the buying power of $1.04 in 2005. This table

shows that the average annual public funding for roadway improvements was $65.5 million over the last five years. The numbers in **Table 3-2** are taken from the last five Transportation Improvement Plans (TIP) prepared by RATS. The revenue projections are provided in Year 2005 dollars. Likewise, the expenditure estimates are based on Year 2005 dollars. Adjustments for inflation and increased funding are taken into account in this fashion. It is assumed that the cost of goods due to inflation and the increased funding levels will balance each other out.

Tables 3-3 and **3-4** illustrate how these funds were used (types of projects) and which agencies had lead agency responsibility. It should be noted that 21% of the funding was dedicated to capacity expansion, new construction and right-of-way acquisition. This number shows how roadway funding is used primarily to preserve the existing transportation system.

Table 3-1
Roadway Public Funding

Source	Description
Federal	
Bridge Replacement & Rehabilitation Program	Bridge improvements
High Priority Project	Special projects.
Major Bridge Fund	Major or serious bridge repair projects
National Highway System	Funding authorized for improvements on specially designated roadways of national significance
Railroad Safety Funds	Funding available for rail crossings
Surface Transportation Program	STP funds are separated as shown below.
STP-Enhancement	Projects which enhance the beauty of a roadway project improve non-motorized transportation opportunities mitigate for the adverse impacts of more traditional roadway projects or other qualified projects
STP-Hazard Elimination and Safety funds	Projects that improve safety
STP-State	Allocated to Illinois for use on state marked or unmarked routes or other qualified projects at the state's discretion
STP-Urban	Qualified projects at the discretion of Rockford Area Transportation Study and the Rockford Metropolitan Planning Area
State	
Illinois Department of Transportation	Illinois General Funds
Illinois Department of Natural Resources	Roadway and bike path improvements in conjunction with park recreation and natural areas
Local	
General Funds	Unspecified local funding source, usually the jurisdiction's general funds. It could also include County and Township 9123 Bridge Funds.
General Obligation Bonds	Authorized through local government for capital improvements
Motor Fuel Tax	Taxes on gasoline and fuel oil to be used by the state or local governments for roadway improvements. This is also the source for State Bridge Funds
Tax Increment Financing	Funds from Tax Increment Financing Districts set up by local jurisdictions.
Other Local Funds	Miscellaneous sources
Illinois Commerce Commission	Authorized for railroad crossing improvements
Truck Access Route	Funds from Illinois

Table 3-2
Roadway Funding (1,000s) Five Year (2000-2005) Annual Average*

Year	2001	2002	2003	2004	2005	Average	Percent
Federal							
HBRRP	2,017	4,228	2,122	286	2,112	2,172	
HPP	786	0	374	0	0	232	
Major Bridge	0	0	0	0	0	0	
NHS	3,253	21,218	2,080	0	7,740	6,891	
RR-Safety	1,109	840	936	459	0	670	
STP-Enhancement	0	1,829	0	2,285	2,240	1,274	
STP-HES	0	62	851	1,713	383	602	
STP-State	7,776	1,716	458	0	240	2,040	
STP-Rural	1,020	1,292	0	587	0	581	
STP-Urban	11,154	2,906	0	0	5,974	4,011	
Subtotal	27,116	34,151	6,820	5,328	18,689	18,473	28%
State							
IDOT	6,288	13,208	10,971	9,313	9,827	9,921	
IDNR	0	95	0	286	280	132	
Subtotal	6,288	13,303	10,971	9,598	10,107	10,053	15%
Local							
General Funds	17,548	13,843	12,782	20,864	17,899	16,608	
GOB	6,322	8,140	13,190	836	17,065	9,123	
MFT	3,592	4,297	4,113	6,169	10,247	5,690	
TIF	0	0	0	0	700	140	
Other local	1,671	0	8,391	3,560	0	2,724	
ICC	648	0	0	1,267	3,690	1,121	
TAR	0	260	0	0	310	114	
Subtotal	30,126	26,540	38,476	40,223	49,911	37,095	57%
Total	**63,529**	**73,895**	**56,267**	**55,149**	**78,707**	**65,509**	
Winnebago County Highway Department adjustment						**<7,269>**	
Revised Total						**58,240**	
All numbers are inflation adjusted to Year 2005							

Table 3-3
Roadway Expenditures by Project Type Five-Year (2000-2005) Annual Average

Work Type	(1,000's)	Percent
Resurfacing	25,229	39%
Reconstruction	12,831	20%
New Construction	8,305	13%
Intersection Improvement	4,984	8%
Right-of-Way Acquisition	4,983	8%
Engineering	3,457	5%
Rehabilitation	2,248	3%
Other	1,820	3%
Enhancement	1,116	2%
Green Light	453	1%
Utility	83	0%
Winnebago County Highway Department adjustment	<7,269>	
Total	**58,240**	**100%**

Table 3-4 Roadway Expenditures by Jurisdiction Five-Year (2000-2005) Annual Average		
Jurisdiction	**(1000's)**	**Percent**
Rockford	19,516	34%
Illinois Department of Transportation	19,080	33%
Winnebago County	10.169	17%
Tollway Authority	3,486	6%
Boone County	2,295	4%
Belvidere	1,320	2%
Machesney Park	948	2%
Loves Park	495	1%
Winnebago	631	1%
Cherry Valley	300	0%
Total	**58,240**	**100%**

It should be noted that adjustment in the total have been made for Winnebago County. The forecasts need to be based on expenditures as opposed to planned or programmed dollars. This is due to the financial constraints on the transportation planning process. During the last few years Winnebago County has submitted planned costs as opposed to expenditures.

3.4.2 Capital Funding Forecast

The average annual expenditure number ($58.2 million) is used to forecast funding for the roadway system. Over the 30-year period of the LRTP, $1.747 billion will be available for roadway improvements. This becomes the fiscal constraint for roadways for project forecasting and planning purposes. Of note, the annual average roadway funding used in the Year 2000 LRTP was $47.4 million (adjusted to Year 2005). Average annual roadway funding has increased 22.8% in the last five years.

Making funding estimates for next year, let alone the next 30 years, is a difficult task. There are unforeseen factors that can cause these sources to change. Near term forecasts are always more accurate than long-term forecasts. Past funding levels may not be a good predicator of future funds. Indeed, in the five years since the last LRTP was prepared the funding levels have gone up. The changing nature of funding helps to explain the need to update the LRTP every five years. Still, using the sum total of the average expenditures over the last five years is considered the most believable tool for forecasting.

The funding projection is based on the average annual sum total of all funding over the last five years. The average annual sum total is used as opposed to forecasting the individual funding sources, since funding of individual sources is sporadic from year to year. A review of **Table 3-1** will show that there are very few line items that show a good year-to-year trend. In addition, especially with the federal sources, funding that is ample may become nonexistent at some point in the future. Likewise, other funding sources may develop in the future. By averaging all the funding sources, it is assumed that the funds that will increase or decline will balance each other out. The last five years are used in making the average as opposed to a longer period. Recent trends are considered as a better predictor of future funding levels.

Funding projections can be based on past averages or trends. With this LRTP it was decided to forecast based on the sum total average. As previously mentioned, funding is sporadic from year to year. As previously stated, with the individual funding sources, it is difficult to see a consistent year-to-year trend. The total roadway funding does show an increasing trend. However, a projection using trends analysis would show much higher funding amounts in the later years. This would result in an overestimation of the available funding. Thus, it was decided to use sum total average in making the future projection.

Finally, the Illinois State Tollway Authority (Tollway) has begun a long-range effort to modernize and rebuild much of the Tollway system in Illinois. The Tollway funding is not included in the above funding projections since this is a one-time major expenditure that should not be applied to annual average estimates. The Northwest Tollway improvements will begin in 2005 and continue through 2011. The total expenditure amount in the Rockford MPA is estimated at $462 million. This would bring the 30-year public funding total for the Region to $2.2 billion.

3.4.3 Operating Funds

RATS has not historically reviewed and made forecast of roadway system operation and maintenance costs due to the complexity of undertaking such an effort. There are varied and numerous things that would have to be considered with operation and maintenance costs, including:

- Highway patrol and related law enforcement
- Accident investigation and management
- Traffic data collection and analysis
- Street sweeping
- Pothole repair
- Striping and lane marking
- Signal maintenance and timing
- Roadway signing
- Sidewalk and alley repair
- Maintenance and administration
- Storm sewer and detention pond construction/maintenance
- Snow removal
- Mowing and weed control
- Trash and debris pickup/disposal

Undertaking a review of all these costs and performing a forecast of future funding needs is beyond the scope of this LRTP. Subjectively, however, judging from the professional opinion of local public works officials and local public attention and complaint levels, the existing transportation system within the Rockford MPO planning boundaries is being adequately operated and maintained with the revenue sources that are provided through federal, state and local jurisdictions. Adequate maintenance means two things:

- The system is, at all times, being maintained from the standpoint of safety.
- The efforts are being put forth in a conscientious and timely manner so as to extend the useful life of the system and its components.

3.5 Transit

The Rockford Mass Transit District (RMTD) is the main provider of transit services in the Rockford MPA. Several private non-profit organizations receive federal and state funding for providing demand response service, but; the amounts are generally very small and not covered in this LRTP.

3.5.1 Fund Sources

RMTD funding is primarily funded through a combination of federal and state subsidies. Local subsidies are also received from the Rockford, Loves Park, Machesney Park, Belvidere and Boone County. RMTD also generates revenues from transit fares and advertising on the buses. Funding sources are separated for capital and operating sources. **Tables 3-5** and **3-6** show the capital (i.e. buses, equipment and structures), operating funds and funding sources for the Years 2001-2005.

3.5.1.1 Federal

The FTA administers the federal funding programs.[10] The main source of federal financial support for capital funds has been the Section 5307 program that provides urbanized area formula grants. This program allocates subsidies to eligible public transit agencies based on a formula that divides congressional apportionments according to population, population density, and the total revenue vehicle miles of public transit service provided in the area.

Section 5309 funds have been awarded for unique capital equipment or facilities need. These funds are awarded on a discretionary basis, that is, no apportionment formula is used like the Section 5307 funds. The RMTD must compete with other transit agencies in an effort to obtain these funds. The funds are awarded only for well-documented needs that cannot be met from other sources. Support from the IDOT Division of Public Transportation is needed to secure these funds.

Section 5310 funds are formula grants and loans for special need of elderly individuals and individuals with disabilities. These funds are available to RMTD and public or private not-for-profit agencies serving those people whom, for reasons of age or disability, cannot be adequately service by regular transit. RMTD has benefited from several 5310 grants over the last two decades, but has not made use of this funding in recent years.

3.5.1.2 State

IDOT provides considerable funding for local transit. In past years, IDOT has funded over 50% of the transit operating funding. IDOT has also provided most of the local match (usually 20%) required for capital projects. IDOT also administers the FTA Section 5310 and provides large parts of the matching funds for those awards.

3.5.1.3 Local

RMTD receives local subsidies, primarily for operating expenses, but sometimes for limited capital

[10]CFR Title 49, Transportation, Chapter 53, Mass Transportation.

needs. Rockford, Loves Park and Machesney Park provide funding to RMTD in exchange for services within their respective corporate limits. Local funding has no set formula or share proportion but is appropriated based on need and in the interest of maintaining existing service levels. In addition, fare box revenue creates a funding source for the RMTD.

3.5.2 Capital Funding Forecast

Table 3-5 shows the capital funding sources for the RMTD for the period 1995-2004 adjusted to Year 2005 dollars. They represent funds received during the fiscal year as opposed to expenditures. On average, the federal government has contributed 70.5% of the capital needs of the RMTD while the state and local sources have contributed 29.5%. As with roadways, the historic average is used to determine the capital funding availability for the next 30 years. Over the next 30 years the RMTD will have $38.6 million in capital funds available.

This average is used to project future funding levels for the next 30 years. It should be obvious that funding is highly dependent on the federal and state governments. Still, this provides a valid number for financial planning purposes. However, given that it is a forecast, it is important to recognize the importance of updating the LRTP every five years.

In July 2000, RMTD took over service that was previously provided by the Loves Park Transit District (LPTD). LPTD ceased operation and the RMTD took over transit operations in Loves Park and Machesney Park. The RMTD also took over responsibility of the LPTD capital program (not reflected in the above table).

Table 3-5
Rockford Mass Transit District Capital Fund Sources (1995-2004)

Year	Federal				IDOT	Municipal	Total
	Sec. 5309	Sec. 5307	Other FTA	Subtotal			
1995	1,798,686	399,234		2,197,920	643,932		$2,841,852
1996	0	95,558	0	95,558	23,500	28,925	147,982
1997	179,200	353,405	0	532,604	85,332	1,747	619,684
1998	0	84,499	200,323	284,821	78,235	13,207	376,263
1999	845,556	1,838,686	0	2,684,241	867,376	1,541	3,553,158
2000	581,684	370,965	0	952,650	1,579,470	28,432	2,560,551
2001	0	170,900	0	170,900	89,401	4,703	265,005
2002	0	0	0	0	23,295	2,135	25,430
2003	0	0	75,228	75,228	88,395	1,150	164,773
2004	0	1,993,924	85,489	2,079,413	213,775	15,507	2,308,695
			Averages:	**907,334**	**369,271**	**10,816**	**1,286,339**
			Percent:	**70.5%**	**28.7%**	**0.8%**	

Source: Rockford Mass Transit District Form 103. Amounts are based on a fiscal year, July to June, and adjusted to 2005 dollars.

3.5.3 Operation Funding

Table 3-6 illustrates the RMTD operating funding sources and amounts received over the last ten years. Several things are of note. IDOT is the most important source of operating funds. Rockford, Loves Park and Machesney Park continue to be strong supporters of the RMTD. As mentioned

above, the RMTD took over the LPTD program in 2000. The table shows operating funds have increased after 2000. This appears to be a result of an increase in funding from the federal government and, to a lesser extent, additional funds received from Loves Park and Machesney Park. The operating funds that were previously apportioned to the LPTD are not included in the table.

Table 3-6
Rockford Mass Transit District Operating Funds Sources (1995-2004)

	Rockford Mass Transit District Generated			Federal			IDOT	Local	Total
Year	Passenger Fares	Directly Generated	Subtotal	Section 5309	Section 5307	Subtotal			
1995	885,941	447,342	1,333,283	983,803	0	983,803	2,821,638	1,422,698	6,561,421
1996	1,014,746	214,844	1,229,590	498,281	0	498,281	2,786,407	1,739,210	6,253,488
1997	1,054,742	144,569	1,199,311	489,976	0	489,976	2,765,693	1,245,114	5,700,094
1998	1,038,402	138,905	1,177,307	89,411	372,428	461,839	2,818,543	1,368,088	5,825,778
1999	1,022,941	134,080	1,157,021	0	580,258	580,258	3,037,296	1,199,550	5,974,125
2000	974,770	115,926	1,090,696	0	415,140	415,140	3,279,963	1,419,497	6,205,296
2001	1,031,220	126,228	1,157,448	0	608,688	608,688	3,795,231	1,352,917	6,914,284
2002	1,035,225	105,254	1,140,479	672,721	101,712	774,433	4,217,067	1,650,858	7,782,837
2003	1,056,167	61,195	1,117,361	958,250	358,181	1,316,431	4,533,987	1,578,190	8,545,969
2004	987,560	61,692	1,049,252	0	917,125	917,125	4,659,003	1,619,423	8,244,803
		Average:	**1,165,175**			**704,597**	**3,471,483**	**1,459,555**	**6,800,809**
		Percent:	**17.1%**			**10.4%**	**51.0%**	**21.5%**	

A forecast of operating needs is not included in this LRTP. No major initiatives are planned for the RMTD. It is expected that the RMTD will continue to operate similar to the past, and sound fiscal management will be implemented. Therefore, as long as the federal and state funding is provided the RMTD should be able to provide service as it has in the past. The east side transfer facility may provide an opportunity to expand service. However, the expansion of service on the east side of Rockford and into Boone County remains unknown at this point.

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SECTION 4

AIRPORTS

SECTION 4
AIRPORTS

4.1 Introduction and Background

There are three airports located in the Rockford Metropolitan Planning Area (MPA): Northwest Chicagoland International Airport at Rockford (RFD), Poplar Grove and Cottonwood. In addition, there are three airports located within two-hours driving time from the Rockford MPA that serve the residents of the MPA.

4.1.1 Northwest Chicagoland International Airport at Rockford

RFD is a commercial passenger and cargo airport that serves the Rockford MPA, as well as Northern Illinois. It is situated on 2,900 acres located in the southern part of Rockford. RFD is municipally-owned and operated by the Greater Rockford Airport Authority (GRAA). The GRAA is led by a Board of Commissioners with seven members appointed as listed below. Commissioners are appointed for a term of five years.

- Mayor of Rockford – three members
- Winnebago County Board Chairman – two members
- Mayor of Loves Park – one member
- Village President of Machesney Park – one member

RFD has two runways that allow instrument landings as described in **Table 4-1** and is a major airport that provides cargo, commercial, general aviation, and maintenance services. Aircraft based at RFD include 52 single-engine, 25 multi-engine, 15 jets and one helicopter for a total of 93. Year 2003 operations involved 11,472 carrier; 4,017 taxi; 24,050 General Aviation (GA) local; 39,895 GA iterant and 4,385 military for a total of 83,819 operations.

Table 4-1
Northwest Chicagoland International Airport at Rockford Runways

Description[1]	Dimensions	Instrument Landing System
1/19	8,200’ x 150’	Category I
7/25	10,000’ x 150’	Category III

Commercial passenger service at RFD recently has begun to expand. Air passenger enplanements grew during the late 1980’s; reached a peak of 110,503 in 1991; and then began to decline. In Year 2000, there was only one commercial airline, Northwest Airlink (an affiliate of Northwest Airlines) with 26,524 passenger enplanements. The Year 2003 enplanements declined to 16,982 and Northwest Airlink left RFD. Shortly after, however, TransMeridian Airline initiated service.

Subsequently, several additional commercial airlines have begun operations to the destinations as shown in **Table 4-2**. The commercial service has been related primarily to vacation and charter service. Recently, the growth has been dramatic. Year 2004 passengers are expected to be approximately 100,000 (50,000 enplanements); and by year-end 2005 this number is expected to

[1]The description refers to compass headings. A compass has 360 degrees with 0 degree being north and 180 degree being south. Runway 01/19 would be approached from either 10 degrees or 190 degrees.

increase to 200,000 (100,000 enplanements). (See **Section 4.2.2.3**, *Activity/Enplanement Forecasts*.)

Table 4-2
Commercial Airlines Serving Northwest Chicagoland International Airport at Rockford

Airlines	Direct Connections
TransMeridian	Las Vegas, Orlando, San Juan and Puerto Rico (seasonal)
Vacation Express	Charter service to Caribbean, Costa Rica and Mexico
Hooters Air	Atlanta, Denver and Las Vegas
SunShip 1	Cancun (seasonal) and Puerto Vallarta (seasonal)
Northwest Airlines	Detroit

RFD has an important role as a cargo facility that continues to show signs of growth. In 2003, RFD was the 23rd largest cargo airport in the U.S. when measured by landed weight. This is a gain from the 26th position when the Long Range Transportation Plan was updated in Year 2000. This cargo role comes primarily from the presence of United Parcel Service (UPS). RFD accommodates the second-largest sorting facility in the UPS system. Other cargo carriers and parcel distribution firms include, Airborne Express, BAX Global, Federal Express, Emery Worldwide Air Charter and Landstar Inway. Forecasts are described in **Section 4.2.1.6**, *Rockford Cargo Forecasts*.

RFD is home to Foreign Trade Zone (FTZ) 176 and is a U.S. Customs Port of Entry. An FTZ is a specially designated area, in or adjacent to a U.S. Customs Port of Entry, which is considered to be outside the Customs Territory of the U.S. Within this designated area, foreign and domestic merchandise may be stored, repackaged, manipulated, manufactured, destroyed or otherwise altered or changed and re-exported without the usual formal customs entry procedures and payment of duties and taxes.

4.1.2 General Aviation Airports

Poplar Grove Airport is a GA public-use airport that is privately owned by Steve R. Thomas. This airport has witnessed some dramatic growth in the last 10 years. In 1994 there were 45 aircraft based at the airport. Year 2003 statistics indicate that airport had the following aircraft: 427 single-engine, 23 multi-engine and two helicopters. Year 2003 operations involved 48,000 GA local, 18,000 GA iterant for a total of 66,000 operations. The Poplar Grove Airport has three runways, as listed in **Table 4-3**. In Year 2004, 58 new hangars were constructed. In the next few years, the paved runway will be resurfaced and the runway lighting upgraded. The airport includes an adjacent airpark known as "Bel Air Estates" with 140 residential sites that will be expanded by 180 residential sites in the near future. Many of the sites have access to the airport via taxiways. The airport includes a museum called "Vintage Wings and Wheels Museum", which was established to preserve history and educate youth about the significant contributions made by winged and wheeled vehicles.

Cottonwood Airport is a GA airport that is privately owned by Cottonwood Corporation but is a public use facility. It is located in northwest Rockford and has one 2,540-foot turf runway (18/36) that is lighted. Aircraft based at Cottonwood include 35 single-engine, two helicopters and six ultra-lights. Year 2003 operations involved 6,000 GA local and 3,000 GA iterant for a total of 9,000 operations.

Table 4-3 Popular Grove Airport Runways		
Description	**Dimensions**	**Surface**
12/30	3,773' x 50'	Asphalt/Lighted
9/27	2,709' x 200'	Turf
17/35	2,467' x 150'	Turf

4.1.3 Other Major Airports

The MPA is located within a two-hour drive of three major airports: O'Hare International Airport (ORD) and Midway International Airport (MDW) in Chicago and General Mitchell International Airport (MKE) in Milwaukee. Based on Year 2003 statistics, these airports were ranked 2nd, 26th and 49th (respectively) based on passenger enplanements, in the U.S. The precise number of Rockford MPA residents that utilize these three airports is not known. However, ORD is the closest of the three to the MPA and provides direct and connecting service, with great frequency, to many parts of the world. As such, it has an important economic and transportation impact and most likely attracts the preponderant share of Rockford MPA passengers.

4.2 Northwest Chicagoland International Airport at Rockford

4.2.1 Air Cargo

Air cargo traffic consists of domestic and international freight, express and mail. In general, the demand for air cargo is derived from production, trade and economic activity. The recent rapid growth of global trade and production has accelerated that demand. Air cargo is transported, primarily, by two means: in the bellies of passenger aircraft; and in dedicated all-cargo aircraft. Service is both scheduled and non-scheduled.

4.2.1.1 Air Cargo Industry Structure

The attacks of September 11 were a time of great upheaval for the cargo industry. Predictions about the industry's recovery were mixed. But many of the industry changes that were forced by September 11 already were underway. Major factors include:

- Belly cargo was declining due to the increased use of narrow-body passenger aircraft.
- All-cargo airlines were increasing share and volume of cargo carried.
- Increased global trade and just-in-time delivery of production parts had created conflicts at many of the larger hub airports with constrained capacity.
- The cargo industry was expanding at secondary airports.

4.2.1.2 National Trends and Forecasts

According to the latest aerospace forecasts (2005-2006) of the Federal Aviation Administration (FAA), "the recovery in U.S. cargo activity occurred somewhat earlier and has been stronger than that of passenger traffic…U.S. air carrier cargo revenue ton miles (RTM) increased 4.8% in 2004, 3.8% in domestic markets and 5.5% in international markets". 67% of this cargo activity was transported by all-cargo carriers in 2004. All-cargo carriers transported 75.9% of domestic RTM

and 59.7% of international RTM. This was a rapid rise from the 70.0% and 49.3%, respectively, in 2000.

Both total RTM and all-cargo carrier share forecasts are considerably larger than forecast for the same period (2013) only three years ago. Total RTM will be 15.2% greater than previously forecast; and all-cargo share will be 68.8% versus the 62.8% of the earlier forecast. This rapid recovery from the devastating attacks of September 11 attests to the strength and increasing volume of the air cargo market. Much of the recovery is attributable to the industry move to all-cargo carriers, a move that minimizes the dampening effects of increased security procedures that affect air passenger movements.

Table 4-4 is a copy of Table 21 from the latest FAA forecasts; it shows recent data (1999-2004) and forecasts for 2005-2016 for all-cargo, passenger carrier and total cargo RTM for the nation. Over the 11-year forecast period, total RTM grow by 5.1% per year, from 35.1 billion tons in 2004 to 63.8 billion tons by 2016. This forecast amount nearly doubles the current (2004) RTM.

4.2.1.3 National Trends and Comparable Supplemental Airports

The nation's major air cargo airports are its coastal cities (Los Angeles, New York, Miami, Newark, and Atlanta) and its mid-continental entry and transfer points (Chicago, Louisville, Memphis, Indianapolis, Cincinnati). The former airports are gateways to airlines that carry cargo, both in all-cargo aircraft, and in belly space in passenger planes. The latter airports include hubs for hub-and-spoke operations of major package integrators (Federal Express, UPS and DHL). ORD is unique because it provides both gateway and hub-and-spoke operations for passenger and cargo traffic.

Chicago's exceptional location and attraction as both an entry and hub and spoke center for both passenger and cargo has brought its major airport, ORD, to capacity. Flight delays, runway conflicts and expansions of passenger operations into traditional nighttime cargo operations, have caused a shift in those cargo operations to smaller, less-crowded airports in the Midwest. RFD, along with Indianapolis, Louisville and Cincinnati, were major beneficiaries of this transfer. Between 1993-1998, RFD grew from an airport that went from being ranked 651st to 30th in the U.S. in cargo transport; making it the fastest growing cargo airport in the U.S. In 2003 and 2004, its rank hovered between 23rd and 26th, when nearly all of its 175,000 tons of cargo was carried in all-cargo carriers.

The move to smaller airports within large markets has become a significant trend, over the past several years, as capacity constraints and conflicts increased and cargo traffic growth accelerated. RFD was a logical supplemental facility to the Northern Illinois market. Both Oakland and Ontario Airports have grown, recently, to supplement the major airports of San Francisco and Los Angeles, respectively. In July 2004, the expansion of Brussels-based DHL, a competitor to Federal Express and UPS, involved the development of the Wilmington Air Park, a former Air Force Base, approximately 46 miles northeast of Cincinnati. Consolidation and relocation of its operations from the Cincinnati Airport, in DHL's words, would "free DHL from sharing runways with other organizations' planes, as well as paying airport fees".

Table 4-4
Federal Aviation Administration Forecast Table 21 – United States Mainline Air Carriers Air Cargo Revenue Ton Miles[2]

Fiscal Year	All-Cargo Carriers (millions)			Passenger Carriers (millions)			Total (millions)		
	Domestic	International	Total	Domestic	International	Total	Domestic	International	Total
1999	9,756.7	7,328.1	17,084.8	4,218.2	6,798.8	11,017.0	13,974.9	14,126.9	28,101.8
2000	10,283.5	7,568.2	17,851.7	4,415.3	7,789.6	12,204.9	14,698.8	15,357.8	30,056.6
2001	9,992.3	7,370.4	17,362.7	3,941.7	7,176.6	11,118.3	13,934.0	14,547.0	28,481.0
2002	9,629.9	8,202.1	17,832.0	3,337.4	6,594.0	9,931.4	12,967.3	14,796.1	27,763.4
2003[3]	10,450.7	11,766.8	22,217.5	3,819.1	6,775.1	10,594.2	14,269.8	18,541.9	32,811.7
2003[4]	11,153.3	11,766.8	22,920.1	3,819.1	6,775.1	10,594.2	14,972.4	18,541.9	33,514.3
2004	11,789.6	11,682.8	23,472.4	3,752.0	7,884.0	11,636.0	15,541.6	19,566.8	35,108.4
2005	12,301.6	12,535.2	24,836.8	3,841.5	8,345.8	12,187.3	16,143.1	20,881.0	37,024.1
2006	12,788.6	13,427.8	26,216.4	3,917.9	8,819.8	12,737.7	16,706.5	22,247.6	38,954.1
2007	13,273.3	14,356.8	27,630.1	3,988.6	9,302.8	13,291.4	17,261.9	23,659.6	40,921.5
2008	13,777.6	15,346.3	29,123.9	4,060.1	9,809.6	13,869.7	17,837.7	25,155.9	42,993.6
2009	14,291.8	16,403.6	30,695.4	4,129.3	10,343.1	14,472.4	18,421.1	26,746.7	45,167.8
2010	14,817.3	17,539.9	32,357.2	4,196.5	10,909.2	15,105.7	19,013.8	28,449.1	47,462.9
2011	15,361.2	18,744.4	34,105.6	4,263.6	11,499.2	15,762.8	19,624.8	30,243.6	49,868.4
2012	15,918.1	20,017.2	35,935.3	4,328.9	12,111.9	16,440.8	20,247.0	32,129.1	52,376.1
2013	16,484.9	21,379.9	37,864.8	4,391.4	12,758.6	17,150.0	20,876.3	34,138.5	55,014.8
2014	17,071.9	22,869.3	39,941.2	4,453.7	13,459.3	17,913.0	21,525.6	36,328.6	57,854.2
2015	17,679.1	24,415.5	42,094.6	4,515.5	14,170.5	18,686.0	22,194.6	38,586.0	60,780.6
2016	18,307.0	26,037.7	44,344.7	4,576.8	14,902.0	19,478.8	22,883.8	40,939.7	63,823.5

*Source: Form 41, United States Department of Transportation.

Table 4-5 shows comparative freight data for RFD and several comparable airports that have grown or expanded rapidly in cargo operations over the past decade. These airports include:

Table 4-5
Comparative Freight Data All-Cargo Data

Year	Freight (tons)	Freight and Mail	Landed Weight
Rockford (RFD)			
1993	NA	NA	NA
1994	NA	NA	183,455,125
1995	NA	NA	611,693,820
1996	1,163	1,174	879,887,385
1997	25,740	25,745	1,247,241,695
1998	121,516	121,533	1,258,872,945
1999	124,832	124,832	1,286,642,730
2000	200,000	219,832	NA
2001	200,000	213,901	1,361,433,007
2002	190,000	194,042	1,260,688,390
2003	170,000	176,500	1,242,390,680
2004	170,000	175,500	1,271,605,264
Huntsville			
1994	NA	22,953	237,606,032
1995	NA	28,512	193,412,145

[2]Includes freight/express and mail Revenue Ton Miles.
[3]Domestic figures from 1999 through this line exclude Airborne Express, Inc. International figures for 2003 and beyond include new reporting of contract service by United States carriers for foreign flag carriers.
[4]Domestic figures from this line and beyond include Airborne Express, Inc.

Table 4-5 – continued			
Year	**Freight (tons)**	**Freight and Mail**	**Landed Weight**
Huntsville – continued			
1996	NA	28,211	160,173,284
1997	NA	38,900	272,252,516
1998	NA	47,656	351,738,490
1999	NA	53,173	459,673,789
2000	NA	66,620	NA
2001	NA	64,462	488,596,254
2002	NA	66,782	496,612,012
2003	NA	60,504	436,937,165
2004	NA	60,504	NA
Louisville			
1993	8,192	22,231	NA
1994	10,573	27,901	6,944,578,000
1995	8,768	29,924	6,890,901,500
1996	10,565	30,606	6,903,008,000
1997	181,723	201,407	6,940,291,000
1998	733,379	752,273	7,155,575,000
1999	783,034	796,760	7,614,762,500
2000	834,870	851,994	NA
2001	1,153,045	1,207,575	8,052,720,760
2002	893,342	937,236	8,403,069,500
2003	NA	NA	8,344,890,140
Toledo			
1993	113,872	119,734	NA
1994	109,567	110,917	1,668,339,200
1995	48,491	49,694	1,707,054,455
1996	211,866	212,118	1,688,755,887
1997	190,729	192,683	1,918,697,320
1998	179,492	181,974	2,097,561,023
1999	133,294	135,961	1,962,509,440
2000	104,095	105,444	NA
2001	74,441	86,755	1,152,676,580
2002	84,387	89,888	945,003,900
2003	NA	NA	921,464,100
Oakland			
1993	122,621	138,029	NA
1994	139,191	171,866	2,598,214,771
1995	NA	NA	2,911,682,180
1996	183,502	227,010	3,184,492,460
1997	NA	NA	3,472,115,680
1998	250,730	357,562	3,566,844,010
1999	NA	NA	3,537,913,672
2000	251,515	334,661	NA
2001	NA	NA	3,277,540,330
2002	278,199	340,687	3,492,727,930
2003	NA	NA	3,389,205,000
Ontario			
1993	17,205	32,014	NA
1994	21,907	39,208	1,821,654,540
1995	NA	NA	2,131,339,570
1996	6,201	56,886	2,330,573,670
1997	NA	NA	2,435,375,890

Table 4-5 – continued			
Year	**Freight (tons)**	**Freight and Mail**	**Landed Weight**
Ontario – continued			
1998	217,981	259,153	2,523,343,702
1999	NA	NA	2,502,806,850
2000	214,947	262,730	NA
2001	NA	NA	2,582,804,587
2002	287,204	367,623	2,887,626,050
2003	NA	NA	2,675,116,110

4.2.1.4 The Relationship to Chicago O'Hare International Airport

From 1990-2000, domestic and international freight and mail tonnage handled by ORD grew by 50.1%; the national growth was 81%. The recovery of the cargo industry, nationally (from 2000-2004) was better than expected, at 16.8%. Growth, over the same period, at ORD, was much lower, at 6.6%. This lower growth rate reflects the capacity challenges of ORD for accommodating the Region's historic share of domestic and international freight and mail. **Table 4-6** shows the growth of domestic and international freight and mail tonnage at ORD from 1990-2004. The cargo growth at ORD is used as a surrogate for the Northern Illinois Region.

Table 4-6 Chicago O'Hare International Airport Freight and Mail Tonnage				
Year	**Domestic**	**International**	**Total**	**% of United States**
1990	738,350	349,493	1,087,843	6.67%
1991	706,318	382,195	1,088,513	NA
1992	839,374	390,080	1,229,454	6.90%
1993	840,718	423,362	1,264,080	5.32%
1994	863,509	521,104	1,384,613	6.67%
1995	819,972	542,341	1,362,313	5.86%
1996	824,956	564,084	1,389,040	5.17%
1997	882,687	668,919	1,551,606	5.45%
1998	896,655	693,012	1,589,667	5.62%
1999	890,559	797,358	1,687,917	5.71%
2000	816,447	824,077	1,640,524	5.46%
2001	611,796	802,038	1,413,834	4.96%
2002	601,836	834,550	1,436,386	5.17%
2003	689,331	912,405	1,601,736	4.78%
2004	629,020	1,056,788	1,685,808	4.76%
Sources: City of Chicago, Landrum & Brown (1990-2000)				

Due to its capacity constraint, ORD has opted to prioritize it's handling of international cargo. It has kept pace with or exceeded the national growth of international cargo, both in the decade 1990-2000, and in the subsequent four-year period. On the other hand, its ability to handle domestic cargo has eroded sharply, particularly since 1999 and 2000. **Table 4-7** shows the growth rates for domestic and international cargo for the U.S. and at ORD for 1990-2000 and 2000-2004.

Table 4-7
Growth in Cargo Tonnage for the United States and Chicago O'Hare International Airport (in percent)

Type	Total 1990-2000	Annual Rate	Total 2000-2004	Annual Rate
United States				
Domestic	63	5	6	1.5
International	110	7.7	27	6.4
Total	84	6.3	17	4
Chicago O'Hare International Airport				
Domestic	11	1	-23	-6.3
International	136	9	28	6.4
Total	51	4.1	7	1.7

4.2.1.5 Rockford Cargo Growth

If ORD had been able to accommodate domestic cargo at the national rate, during the 1990-2000 period, it would have grown from 738,350 tons to 1,203,510 tons, a growth of 465,160 tons; instead it grew by only 78,100 tons. The implication is that 387,060 tons was not accommodated. Over the same period, RFD freight and mail tonnage grew from nothing to 220,000 tons. RFD growth helped staunch the loss of air cargo service in Northern Illinois; it accommodated nearly 57% of the cargo growth that would have gone unaccommodated and eventually would have gone elsewhere.

The UPS air hub is the driving force behind the growth of RFD. The air hub was constructed in 1994 as a key component in the global UPS network. As the largest regional air hub in the country, RFD is the only facility of its type that handles cargo going coast to coast. RFD permits round-the-clock operations. In addition to UPS, RFD is served by several other parcel distribution services:

- Emery Worldwide Air Charter
- Landstar Inway
- Airborne Express
- BAX Global
- Federal Express

Since 2000, RFD has not recovered quite as well as ORD has in total cargo tonnage. Recently, however, RFD was "in the running for a new UPS sorting hub that could bring up to 1,000 new jobs".[5] This was due to UPS closing its sorting hub at Dayton. In spite of the considerable advantages of RFD, including a central U.S. location, available space, and being UPS's second largest hub in terms of cargo freight handled, UPS has decided to relocate the largest part of its hub operation to Louisville; the deciding factor may be the $20 million in incentives that Kentucky was willing to invest in the $82.5 million UPS facility. However, UPS has decided to split the remainder of its activities among five airports with existing UPS facilities. The fact that a sizable portion of the UPS facility is to be relocated to RFD is a good indication of the strength of RFD.

Consequently, the factors that made RFD a strong candidate for UPS's sorting facility remain. A 70,000 square-foot heavy freight (over 150 pounds) facility both from the Dayton relocation and as an expansion will come to RFD in 2006, along with 50-75 jobs. Furthermore, the RFD location and

[5]Rockford Register Star, 2/25/05.

site advantages are significant for additional air cargo development. For instance, Northwest Airlines passenger service, beginning May 2, 2005, also will bring air cargo to RFD; a new air cargo apron is being built to handle it. Other incentives for cargo development include: a U.S. Customs Port of Entry, an FTZ (176), and public warehousing. In addition, the rail freight facilities (Global III) of Rochelle, Illinois (20 miles to the south) give RFD an excellent multi-modal potential. Rochelle, Illinois, with its Center Point Development, is a major destination for trucks and has FTZ status from RFD.

4.2.1.6 Rockford Cargo Forecasts

Over the coming 25-year period, the consultants for the ORD expansion have estimated that ORD will be unable to accommodate, not only its past share, but also its current share of national air cargo. As air cargo shifts increasingly to all-cargo aircraft, ORD will see larger portions of its cargo unaccommodated. This unaccommodated cargo tonnage is likely to be predominantly all-cargo-carried domestic freight that can be distributed, like express packages, by truck; as overall all-cargo operations expand, international cargo will become a larger part of the mix, with distribution by both truck and rail. However, even international growth at ORD is constrained or limited. The GRAA has indicated that a major international cargo company at ORD currently is considering a development at RFD, where landside, as well as airside capacities exists.

Table 4-8 shows the existing and forecast all-cargo carried tonnage at an unconstrained ORD. It is assumed that a portion of the past-unaccommodated tonnage from ORD has gone to RFD. As the unaccommodated tonnage grows, some will be lost; but two major airports serving the central Region will carry much of the growth. The estimate of unaccommodated cargo has been divided into two segments: that destined to the North Region (Rockford); and that destined to the South Region (South Suburban). Because construction of the South Suburban Airport is not expected to be complete before 2008, RFD alone will accommodate the excess.

Table 4-8
Existing and Forecast All-Cargo-Carried Tonnage* at an Unconstrained Chicago O'Hare International Airport

Year	Tons	Ops	Tons	Ops	Tons	Ops
	Domestic		International		Total	
1990	196,372	11,318	NA	3,522	196,372	14,840
1995	331,238	16,339	NA	1,999	331,238	18,338
2000	452,860	17,870	141,455	6,106	594,315	23,976
2001	347,125	15,222	178,641	5,883	525,766	21,105
2002	389,340	13,638	193,386	7,152	582,726	20,791
2003	440,765	13,493	211,888	7,763	652,653	21,257
2004	435,806	13,111	255,761	8,301	691,567	21,412
2008	661,672	20,000	451,503	14,600	1,113,175	34,600
2010	671,500	24,450	500,100	18,160	1,171,609	42,610
2012	787,742	28,678	531,744	19,309	1,319,486	47,987
2015	936,870	33,200	735,610	26,040	1,672,480	59,240
2020	1,113,350	37,490	1,039,400	34,860	2,152,750	72,350
2025	1,541,700	48,300	1,840,000	52,600	3,381,700	100,900
2030	1,809,430	56,700	2,352,270	67,210	4,161,700	118,910

Table 4-8 – continued

Year	Tons	Ops	Tons	Ops	Tons	Ops
	Unaccommodated		South Region		North Region: Rockford	
1990	NA	NA	NA	NA	NA	NA
1995	NA	NA	NA	NA	439	22
2000	NA	NA	NA	NA	219,832	11,000
2001	NA	NA	NA	NA	213,901	10,700
2002	NA	NA	NA	NA	194,042	10,500
2003	NA	NA	NA	NA	176,512	9,800
2004	NA	NA	NA	NA	175,520	9,800
2008	155,700	5,190	104,300	3,475	226,900	8,500
2010	162,000	5,400	110,000	3,650	279,000	9,800
2012	309,000	10,230	210,000	7,000	378,000	13,000
2015	662,000	18,480	450,000	12,500	484,000	16,000
2020	1,143,000	31,600	760,000	21,200	675,000	18,750
2025	2,372,000	60,140	1,600,000	40,000	1,060,000	26,500
2030	3,152,000	78,140	2,100,000	52,000	1,575,000	39,000
2035	NA	NA	NA	NA	2,100,000	51,000

* Enplanes plus deplaned cargo.

Sources:

- 1990-2000 ORD data based on City of Chicago statistics and Landrum and Brown estimates.
- 2000-2004 Northwest Chicagoland International Airport at Rockford supplied data, unaccommodated based on forecast minus actual.
- 2001-2004 data based on City of Chicago statistics and ACG estimates.
- 2002-2012 tonnage forecasts based on Federal Aviation Administration 12-year national forecasts, maintained City of Chicago share of national cargo; blended forecast of Federal Aviation Administration and City of Chicago all cargo growth; operations based on past trends and extrapolations of gauge and lift.
- 2008-2015 South Region based on assumptions of 67% of unaccommodated, with balance added to Northwest Chicagoland International Airport at Rockford forecasts; 2015-2030, one-half balance added to Northwest Chicagoland International Airport at Rockford.
- 2008-2030 unaccommodated based on Chicago O'Hare International Airport capacity at 170%.
- 2015-2025 freight and express tonnage forecasts based on Federal Aviation Administration long-range forecasts adjusted to 2002-2013 forecasts and extrapolated to 2030; maintained City of Chicago share; extrapolated all cargo growth; operations based on extrapolation of gauge and lift.

Note: In 2000, Northwest Chicagoland International Airport at Rockford handled approximately 135,000 or 220,000 (depending on sources) tons of all-cargo freight and is forecasted to grow, with growth independent of the Chicago market. In 2004, Northwest Chicagoland International Airport at Rockford handled approximately 175,500 tons of all-cargo freights.

The forecast shows RFD doubling in tonnage carried by 2012 and more than tripling by 2015. Operations will increase by 33%, by 2012 and by 66% by 2015, due to the use of larger freighters (see **Figure 4-1**).

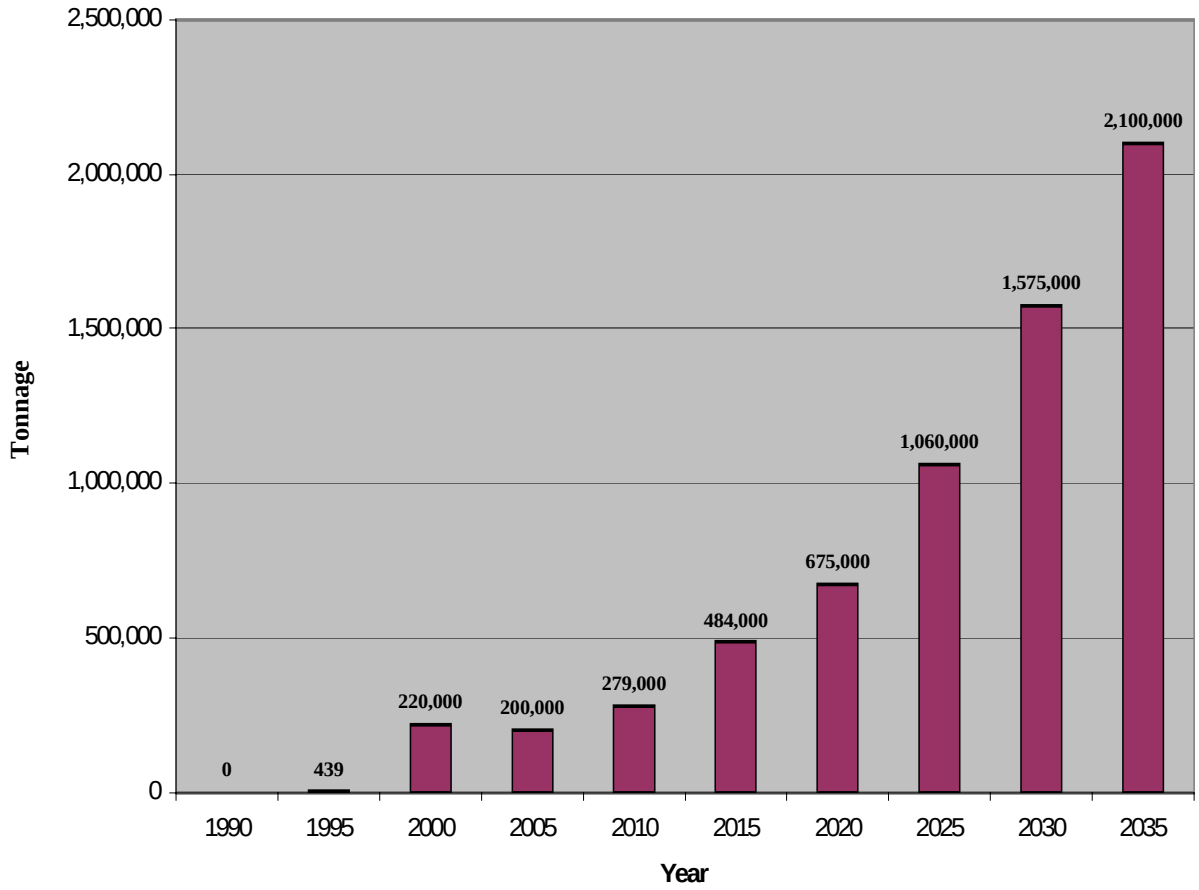


Figure 4-1 - Existing and Forecast Air Cargo Tonnage at Northwest Chicagoland International Airport at Rockford.

4.2.1.7 Rockford Global Trade Park

The Rockford Global Trade Park is an industrial redevelopment planning area located, primarily, in the southwestern portion of Rockford. It extends beyond, but adjacent to, RFD and two existing Tax Increment Financing districts. It is composed primarily of "older industrial properties" and vacant parcels "that have failed to attract new development."

The growth of RFD, as a major air cargo and sorting hub, plus the development of the intermodal rail facility (Global III) at Rochelle, can be major inducements to development both of freight handling and of just-in-time industrial developments. The availability of developable land, well-located in respect to these facilities, as well as to the overall central location of goods movements in the U.S. and Canada, can be a significant incentive for related development to locate in the Rockford Global Trade Park.

4.2.1.8 Existing and Needed Infrastructure Improvements

Existing runway facilities include two runways that allow instrument landing: one at 10,000 feet; a second at 8,200 feet; these were described in **Section 4.1.1**. Runway 7/25 was extended to 10,000

feet recently to accommodate a rapidly growing air cargo activity, including UPS, Airborne Express and BAX Global. Lands End Outlet, located in Dodgeville, Wisconsin, is a major client of the airport; it requires express mail and just-in-time deliveries to the U.S. and the world. Its Dodgeville distribution center is the "size of 16 football fields," according to its website, with over 80,000 packages shipped per day.

Discussions with GRAA personnel indicate recent improvements, including runway extension to 10,000 feet, perimeter highway relocation, and FTZ 176, are adequate for the foreseeable future. Bridges on the highways to Rochelle will require improvement as truck traffic between RFD and Global III increases. Ramp space and exits at the airport will be added as necessary. There is midfield space (RFD owns 3,000 acres) available for hangar and maintenance facilities. The current RFD Airport Layout Plan (ALP) shows a proposed parallel Runway 7/25.

The assumptions that facilities at the airport are adequate are correct for the short-term future. However, if cargo demand in the Northeastern Illinois Region grows as forecasted, it is likely that substantial additional facilities will be required. This will include both warehousing and distribution facilities and the ramps and truck access to them. Provision also should be considered for substantial truck queuing and security services. **Map 4-1** shows the future ALP for RFD; with the future additions and improvements, as shown, there is adequate capacity to meet forecast demand.

4.2.2 Commercial Passenger Activity

4.2.2.1 Introduction

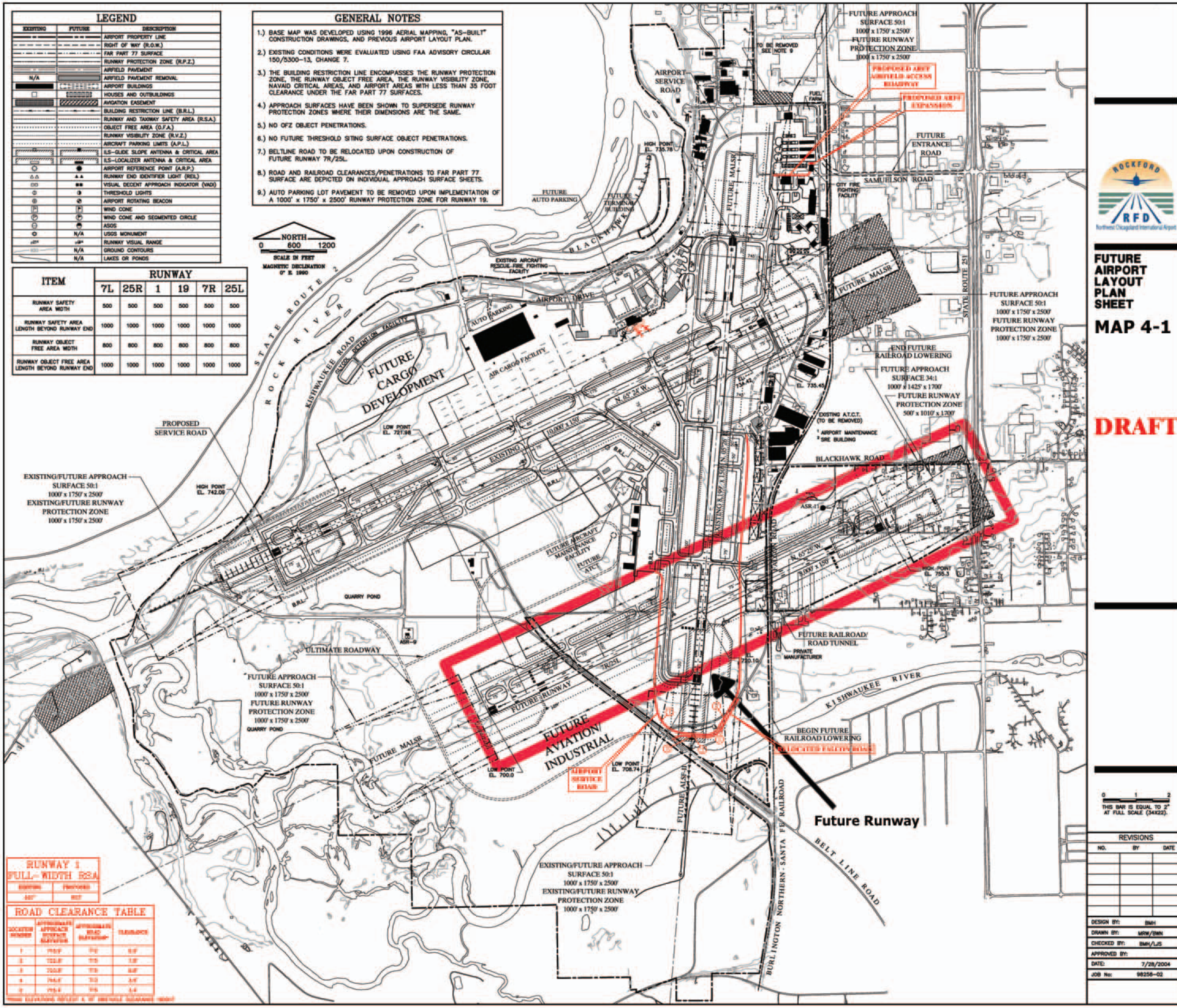
Rockford has generated and continues to generate substantial local enplanements, and has supported its own regional airport with passenger traffic. However, the proximity of the Rockford MPA to ORD has resulted in passenger growth eclipsing capacity at RFD.

For many years, RFD provided commuter service, by air, into ORD. By 1995, that connection was provided by an airline bus. As capacity constraints grew at ORD and congestion increased, RFD lost all commercial passenger operations in 2002, as well as the airline bus to ORD.

This decline and loss was not due to a reduction in demand for air travel by residents of the Rockford Region. Instead, the decline was due to marketing decisions by American and United Airlines to discontinue air operations and to introduce highly subsidized fares through ORD if the trip included an airport bus segment from RFD. The airfares from RFD to ultimate destinations were significantly lower, with these bus rides, than directly from ORD. This bus pricing policy discouraged, and eventually eliminated, competition. Initiatives by the GRAA and its business leaders, along with the elimination of subsidized airport buses, led to the return of air service.

Table 4-9 shows Office of Aviation Policy and Terminal Area Forecast enplanement data for RFD for 1976-2004 and forecast data to 2020.[6] The FAA prior to the resumption of low-cost carrier service prepared this forecast; that is the reason for the minimal forecasts.

[6]Office of Aviation Policy and Terminal Area Forecast Plans and Management Analysis.



LEGEND
EXISTING
FUTURE
DESCRIPTION
AIRPORT PROPERTY LINE
RIGHT OF WAY (R.O.W.)
FAR PART 77 SURFACE
RUNWAY PROTECTION ZONE (R.P.Z.)
AIRFIELD PAVEMENT
AIRFIELD PAVEMENT REMOVAL
AIRPORT BUILDINGS
HOUSES AND OUTBUILDINGS
AVIGATION EASEMENT
BUILDING RESTRICTION LINE (B.R.L.)
RUNWAY AND TAXIWAY SAFETY AREA (R.S.A.)
OBJECT FREE AREA (O.F.A.)
RUNWAY VISIBILITY ZONE (R.V.Z.)
AIRCRAFT PARKING LIMITS (A.P.L.)
ILS-GLIDE SLOPE ANTENNA & CRITICAL AREA
ILS-LOCALIZER ANTENNA & CRITICAL AREA
AIRPORT REFERENCE POINT (A.R.P.)
RUNWAY END IDENTIFIER LIGHT (REIL)
VISUAL DECENT APPROACH INDICATOR (VADI)
THRESHOLD LIGHTS
AIRPORT ROTATING BEACON
WIND CONE
WIND CONE AND SEGMENTED CIRCLE
ASOS
USGS MONUMENT
RUNWAY VISUAL RANGE
GROUND CONTOURS
LAKES OR PONDS
GENERAL NOTES
1.) BASE MAP WAS DEVELOPED USING 1996 AERIAL MAPPING, "AS-BUILT" CONSTRUCTION DRAWINGS, AND PREVIOUS AIRPORT LAYOUT PLAN.
2.) EXISTING CONDITIONS WERE EVALUATED USING FAA ADVISORY CIRCULAR 150/5300-13, CHANGE 7.
3.) THE BUILDING RESTRICTION LINE ENCOMPASSES THE RUNWAY PROTECTION ZONE, THE RUNWAY OBJECT FREE AREA, THE RUNWAY VISIBILITY ZONE, NAVAID CRITICAL AREAS, AND AIRPORT AREAS WITH LESS THAN 35 FOOT CLEARANCE UNDER THE FAR PART 77 SURFACES.
4.) APPROACH SURFACES HAVE BEEN SHOWN TO SUPERSEDE RUNWAY PROTECTION ZONES WHERE THEIR DIMENSIONS ARE THE SAME.
5.) NO OFZ OBJECT PENETRATIONS.
6.) NO FUTURE THRESHOLD SITING SURFACE OBJECT PENETRATIONS.
7.) BELTLINE ROAD TO BE RELOCATED UPON CONSTRUCTION OF FUTURE RUNWAY 7R/25L.
8.) ROAD AND RAILROAD CLEARANCES/PENETRATIONS TO FAR PART 77 SURFACE ARE DEPICTED ON INDIVIDUAL APPROACH SURFACE SHEETS.
9.) AUTO PARKING LOT PAVEMENT TO BE REMOVED UPON IMPLEMENTATION OF A 1000' x 1750' x 2500' RUNWAY PROTECTION ZONE FOR RUNWAY 19.
NORTH
0 600 1200
SCALE IN FEET
MAGNETIC DECLINATION 0° E. 1990
ITEM
RUNWAY
7L 25R 1 19 7R 25L
RUNWAY SAFETY AREA WIDTH 500 500 500 500 500 500
RUNWAY SAFETY AREA LENGTH BEYOND RUNWAY END 1000 1000 1000 1000 1000 1000
RUNWAY OBJECT FREE AREA WIDTH 800 800 800 800 800 800
RUNWAY OBJECT FREE AREA LENGTH BEYOND RUNWAY END 1000 1000 1000 1000 1000 1000
FUTURE APPROACH SURFACE 50:1 1000' x 1750' x 2500' FUTURE RUNWAY PROTECTION ZONE 1000' x 1750' x 2500'
TO BE REMOVED SEE NOTE 9
AIRPORT SERVICE ROAD
PROPOSED ARFF AIRFIELD ACCESS ROADWAY
PROPOSED ARFF EXPANSION
FUEL FARM
FUTURE ENTRANCE ROAD
SAMUELSON ROAD
CITY FIRE FIGHTING FACILITY
HIGH POINT EL. 735.76
FUTURE AUTO PARKING
FUTURE TERMINAL BUILDING
FUTURE MALSR
BLACKHAWK ISLAND
EXISTING AIRCRAFT RESCUE-FIRE FIGHTING FACILITY
AIRPORT DRIVE
AUTO PARKING
AIR CARGO FACILITY
FUTURE CARGO DEVELOPMENT
KISHWAUKEE ROAD
STATE ROUTE 2
ROCK RIVER
STATE ROUTE 251
FUTURE APPROACH SURFACE 50:1 1000' x 1750' x 2500' FUTURE RUNWAY PROTECTION ZONE 1000' x 1750' x 2500'
END FUTURE RAILROAD LOWERING
FUTURE APPROACH SURFACE 34:1 1000' x 1425' x 1700' FUTURE RUNWAY PROTECTION ZONE 500' x 1010' x 1700'
EXISTING A.T.C.T. (TO BE REMOVED)
AIRPORT MAINTENANCE SRE BUILDING
BLACKHAWK ROAD
N. 65°26' W.
10,000' x 150'
EXISTING
LOW POINT EL. 721.98
HIGH POINT EL. 742.09
PROPOSED SERVICE ROAD
EXISTING/FUTURE APPROACH SURFACE 50:1 1000' x 1750' x 2500' EXISTING/FUTURE RUNWAY PROTECTION ZONE 1000' x 1750' x 2500'
B.R.L.
FUTURE AIRCRAFT MAINTENANCE FACILITY
FUTURE ATCT
ASR-11
N. 65°25' W.
HIGH POINT EL. 755.3
QUARRY POND
ASR-9
ULTIMATE ROADWAY
FUTURE RAILROAD/ ROAD TUNNEL
PRIVATE MANUFACTURER
KISHWAUKEE RIVER
FUTURE RUNWAY
FUTURE APPROACH SURFACE 50:1 1000' x 1750' x 2500' FUTURE RUNWAY PROTECTION ZONE 1000' x 1750' x 2500'
FUTURE AVIATION/ INDUSTRIAL
FUTURE MALSR
LOW POINT EL. 700.0
AIRPORT SERVICE ROAD
LOW POINT EL. 708.74
BEGIN FUTURE RAILROAD LOWERING
RELOCATED FALLTH ROAD
FUTURE ALSF-II
BURLINGTON NORTHERN - SANTA FE RAILROAD
BELT LINE ROAD
Future Runway
EXISTING/FUTURE APPROACH SURFACE 50:1 1000' x 1750' x 2500' EXISTING/FUTURE RUNWAY PROTECTION ZONE 1000' x 1750' x 2500'
RUNWAY 1 FULL-WIDTH RSA
ROAD CLEARANCE TABLE
ROCKFORD
RFD
Northwest Chicagoland International Airport
FUTURE AIRPORT LAYOUT PLAN SHEET
MAP 4-1
DRAFT
THIS BAR IS EQUAL TO 2" AT FULL SCALE (34X22).
REVISIONS
NO. BY DATE
DESIGN BY: BMH
DRAWN BY: MRW/BWN
CHECKED BY: BMH/LJS
APPROVED BY:
DATE: 7/28/2004
JOB No: 98258-02

Table 4-9
Office of Aviation Policy and Terminal Area Forecasts Enplanement Data for Northwest Chicagoland International Airport at Rockford; 1976-2004 and Forecast Data to 2020

Year	Air Carrier	Air Taxi	Commuter	U.S. Flag	Foreign Flag	Total Enplanements
1976	8,594	23	NA	NA	NA	8,594
1977	13,258	111	NA	NA	NA	13,258
1978	12,392	771	1,489	NA	NA	13,881
1979	10,249	771	2,934	NA	NA	13,183
1980	12,674	1,511	40	NA	NA	12,714
1981	18,970	267	0	NA	NA	18,970
1982	13,903	293	6,019	NA	NA	19,922
1983	1,227	948	9,295	NA	NA	10,522
1984	13,824	1,188	5,499	NA	NA	19,323
1985	22,157	970	328	NA	NA	22,485
1986	7,607	1,427	NA	NA	3	7,610
1987	1,699	1,554	9,312	NA	NA	11,011
1988	3,748	284	15,338	NA	NA	19,086
1989	3,067	1,269	15,740	NA	NA	18,807
1990	5,735	415	94,759	NA	NA	100,494
1991	5,780	NA	104,608	NA	NA	110,388
1992	4,261	NA	102,228	NA	265	106,754
1993	4,187	NA	98,870	NA	168	103,225
1994	5,477	NA	97,065	NA	NA	102,542
1995	5,952	1,850	67,227	NA	NA	73,179
1996	4,626	1,850	43,407	NA	NA	48,033
1997	9,290	1,850	26,504	324	NA	36,118
1998	3,046	NA	31,502	NA	NA	34,548
1999	3,291	86	29,921	NA	NA	33,212
2000	4,083	86	24,446	151	NA	28,680
2001	2,549	86	12,192	NA	NA	14,741
2002	1,149	320	12,142	NA	NA	13,291
2003	5,315	320	NA	168	88	5,571
2004*	5,439	320	NA	NA	NA	5,439
2005*	5,439	320	NA	NA	NA	5,439
2006*	5,439	320	NA	NA	NA	5,439
2007*	5,439	320	NA	NA	NA	5,439
2008*	5,439	320	NA	NA	NA	5,439
2009*	5,439	320	NA	NA	NA	5,439
2010*	5,439	320	NA	NA	NA	5,439
2011*	5,439	320	NA	NA	NA	5,439
2012*	5,439	320	NA	NA	NA	5,439
2013*	5,439	320	NA	NA	NA	5,439
2014*	5,439	320	NA	NA	NA	5,439
2015*	5,439	320	NA	NA	NA	5,439
2016*	5,439	320	NA	NA	NA	5,439
2017*	5,439	320	NA	NA	NA	5,439
2018*	5,439	320	NA	NA	NA	5,439
2019*	5,439	320	NA	NA	NA	5,439
2020*	5,439	320	NA	NA	NA	5,439

4.2.2.2 Recent Passenger Activity

Recently, RFD has reintroduced leisure and vacation-oriented air service, with public scheduled charter flights to domestic and international destinations (see **Table 4-10**).

Table 4-10
Northwest Chicagoland International Airport at Rockford Airlines and Destinations

Airlines	Destinations
Trans Meridian Airlines	Mexico/Caribbean
Vacation Express	Las Vegas
Hooters Air	Orlando/Fort Lauderdale
Sunship 1 Airlines	Atlanta, Denver, Puerto Vallarta
Casino Express	Myrtle Beach, San Juan

On May 2, 2005, Northwest Airlines began commuter service from RFD to Detroit. This twice-a-day service to a major hub airport on a major hub airline gives RFD substantial domestic access for business, as well as leisure, trips. In fact, RFD already is promoting its service, thorough Northwest, to Baltimore, Cleveland, Hartford, Kansas City, Louisville, Montreal, Pittsburgh and Tampa.

The GRAA, itself, is promoting low-fare flights to the above-listed cities through its Miles Ahead program. Recent data from GRAA staff indicate that passenger traffic for 2004 was 100,000; the forecast made by airport staff for 2005 is 250,000 passengers (see **Table 4-11**)

Table 4-11
Northwest Chicagoland International Airport at Rockford Commercial Passengers

Year	Passengers	Enplanements[7]
2004	100,000	50,000
2005 (forecast)	250,000	125,000

RFD documentation for enplaned passengers for January/February 2005 was 8,115; this would indicate a 60,000-enplanement level, if the typical January/February ratios for Northern Illinois were applied. However, RFD serves a predominantly leisure-oriented group, with above-average winter boardings that would tend to lessen the forecast. On the other hand, service by Northwestern Airlines did not start until May 2005; this service would accelerate enplanement levels. Consequently, the GRAA estimate appears reasonable.

4.2.2.3 Activity/Enplanement Forecasts

In two studies conducted, in 1995 and 1997, for the Illinois Department of Transportation (IDOT), it was determined that the Rockford MPA generated approximately 420,000 originating enplanements, origin/destination, in 1990 and 1993. Of this number, approximately 100,000, or 24%, either enplaned at RFD or boarded airline buses at RFD destined for ORD. The remaining 320,000 enplanements went directly to ORD, MDW, MKE, or other airports. The fact that there are 17 daily buses to ORD from the Rockford area attests to this major flow of traffic.

[7]Enplanements are enplaning passengers. Passengers include enplaning and deplaning. Consequently, passengers are twice the number (in general) of enplanements.

In 1990, the Rockford MPA generated approximately the same number of origin/destination enplanements per person as that generated in the U.S. as a whole. That ratio is 1:20 enplanements per person. The Rockford MPA also had a wealth index that was the same as that for the entire nation. This enplanement number (the 420,000 cited above) represents the total air trips generated locally. However, they originate (fly from) not only RFD but from ORD, MDW and MKE, as well as other airports. Service, flight frequency, destinations offered and fares determine where the flights originate. Rockford MPA trip generation is based on the same factors as those generated nationally. These factors include population size, household numbers, local employment numbers and income.

Using the current or forecasted U.S. ratio of trips (or enplanements) per person and adjusting for income changes (wealth index), we can estimate the total enplanements generated in the Rockford MPA in 2004 and in the forecast year of 2030. The two major factors used for the forecast are the population growths from 346,980 in 1994 to 411,050 in 2030, and the decline in the wealth index from 1.00 in 1990 to 0.96 in 1996 and to 0.88 in 2030. The wealth index is complied and forecast for counties and the Rockford MPA by Woods & Poole Economics (WPE).

The comparison between U.S.-generated enplanements and Rockford MPA-generated enplanements are shown in **Table 4-12**. Also shown, is the potential capture of these enplanements by RFD, assuming a ratio similar to that of 1990-1993, factored by the wealth index, and a capture rate of approximately 24%. Such a rate seems reasonable given the recent growth of low-cost carriers, both nationally and at RFD, and the emerging Northwestern Airlines business/leisure service through Detroit. Enplanements at RFD would be higher if airlines decide to provide additional service to tap a severely underserved region.

Table 4-12
United States Generated, Northwest Chicagoland International Airport at Rockford Generated and Captured Enplanements

Year	United States Generated		Northwest Chicagoland International Airport at Rockford Generated		Northwest Chicagoland International Airport at Rockford Captured	
	Ratio	Enplanement	Ratio	Enplanement	Ratio	Enplanement
1990-1994	1.20	311,809,290	1.20	416,300	0.24	104,000
2004	1.53	430,655,380	1.50	481,000	0.24	115,000
2030	2.42	915,910,200	2.22	912,000	0.24	220,000
2035	NA	NA	NA	NA	NA	260,000

A fairly rapid growth of enplaned passengers from the current of 50,000 (2004) to the forecasted of 100,000 enplanements (200,000 passengers) by 2005 seems reasonable based on prior metro area-generated enplanements and the historic capture rate of RFD. For the same reason, doubling of this number to 220,000 enplanements (440,000 passengers) at RFD also seems reasonable, based entirely on a locally generated enplanement volume (see **Figure 4-2**).

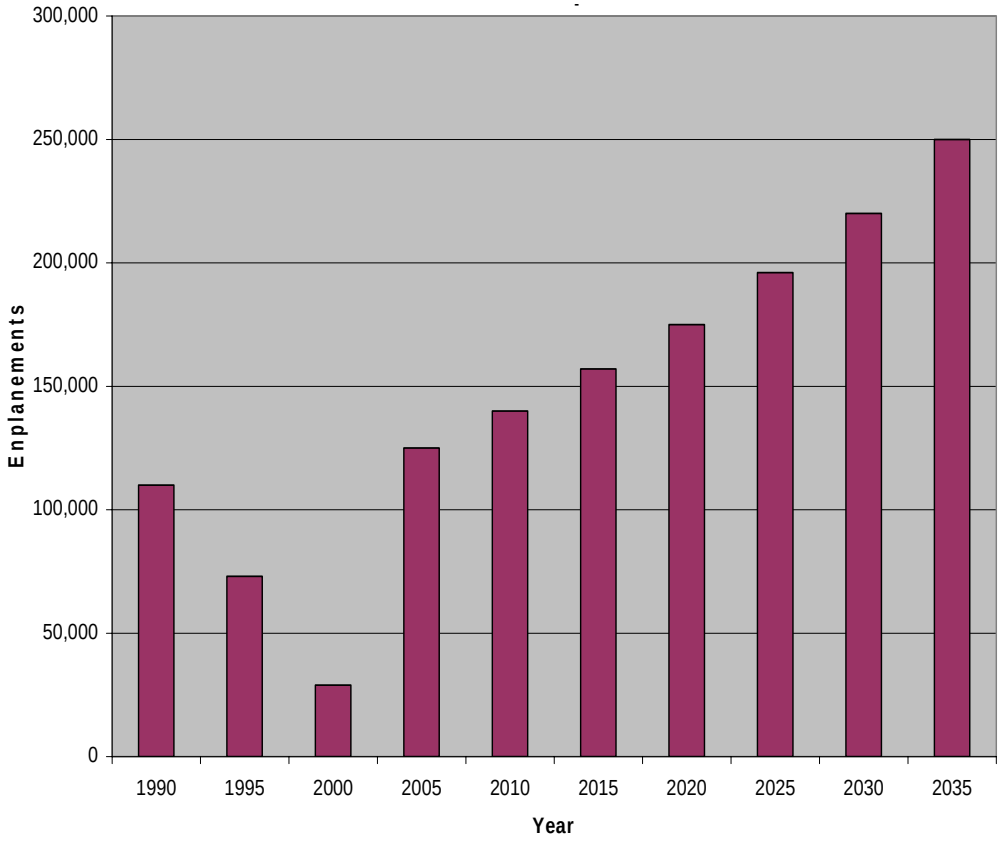


Figure 4-2 - Existing and Forecast Commercial Passenger Enplanements at Northwest Chicagoland International Airport at

4.2.2.4 Passenger Facility Infrastructure: Needed Improvements

As passenger activity grows at RFD and as cargo grows as anticipated, improvements will be required to separate these two activities – both landside and airside. Air passengers need to be buffered from truck queues and cargo security. Terminal facilities also will face expansion needs as enplanements increase beyond the 100,000-150,000 level. And, in keeping with the RFD claim of being a "hassle-free" airport, parking will need to expand as passenger activity does.

4.2.2.5 Rockford Airport as a Major Economic Catalyst

Major commercial passenger airports long have been catalysts for economic development and growth, attracting offices, industries and destination facilities. ORD is a resounding example of this impact. Since the mid-1990's there has been a dramatic rise in the importance of major commercial airports to the economies of the regions they serve. The accelerated growth in global trade and production has made air cargo hubs equally forceful magnets for economic development. RFD has substantial potential for becoming the economic development catalyst for the Rockford MPA. Its air cargo activity can double by 2012 and triple by 2018. With its abundant available land and its access to intermodal rail and truck facilities, considerable distribution-related and just-in-time industries could be attracted. Expanded commercial passenger service would increase the desirability for development even more. Greater detail of the economic potential for the Rockford MPA is discussed in **Section 9**, *Regional Economic Development*.

SECTION 5

BIKEWAY / PEDESTRIAN

SECTION 5
BIKEWAY/PEDESTRIAN

Most of the municipal land use plans in the Rockford Metropolitan Planning Area (MPA) have a transportation component that promotes the development of bicycle and pedestrian systems and encourages a healthy life-style. Providing for pedestrian and bicycle systems is an important part of the transportation plan. For young, old, low-income and disadvantaged persons, these systems may be their only means of transportation.

5.1 Bikeway System

The Region has supported and planned for the development of a bikeway system for many years. The oldest part of this system is the Rock River Recreation Path that was constructed by the Rockford Park District (RPD) in the mid 1970s. Bicycle system planning was initiated with the Regional Bikeway and Pedestrian Plan adopted by the Rockford Area Transportation Study (RATS) on June 27, 1984. The RPD, the Winnebago County Forest Preserve District, Rockford, Loves Park, Machesney Park, Cherry Valley, and Winnebago County also adopted this plan. An extensive bikeway system has also been developed in Boone County through the efforts of the Belvidere/Boone Planning Department and the Boone County Conservation District. Bikeway systems within the Rockford MPA include: Perryville Path, Willow Creek Trail, Mel Anderson Memorial Path, Bauer Bridge Bike Trail, Cherry Valley Path, and Stone Bridge Trail. There are also several bikeway systems that extend beyond the Rockford MPA; the Pecatonica Prairie Path, Hononegah Recreation Path and Long Prairie Trail.

Illinois has been instrumental in promoting the bikeway system in the Rockford MPA. Most notable is the Grand Illinois Trail. This trail is a 475-mile looped bikeway system that runs through the MPA, east to connect to Chicago's Lakefront Trail, turns southwest through Joliet and goes along the Illinois and Michigan Canal and the Hennepin Canal to the Quad Cities, north along the Mississippi River to Galena and then back to the MPA. Within the Rockford MPA, the Grand Illinois Trail is made up of several shared-use paths that include the Pecatonica Prairie Path, the Rock River Recreation Path, the Bauer Bridge Trail, the Willow Creek Trail, and the Long Prairie Trail. The Grand Illinois Trail has informally connected these paths with on-street routes.

In reviewing the bikeway system, attention is brought to the three-tier system as defined by the American Association of State Highway and Transportation Officials (AASHTO):

- Shared-Use Paths – These facilities are completely separated from motor vehicle traffic lanes. They are designed for the exclusive use of bicycles and pedestrians. These are separate from pedestrian sidewalks, which are discouraged for bicycle use.
- Bicycle Lanes – These are restricted rights-of-way, usually abutting and adjacent to other traffic lanes used by motorists, designated for the exclusive use of bicycles.
- Signed Bicycle Routes – These are shared roadways designated only by signs, used by both motorists and cyclists. They serve to provide continuity to other bicycle facilities or to indicate to bicyclists, as with bike lanes, that there are certain advantages to using these routes as compared to alternative routes.

The Region has promoted and developed an off-street shared-use bikeway system. There is only one bicycle lane (Bauer Bridge Bike Trail in Machesney) and no bicycle routes designated only by signs. Other than the Bauer Bridge Bike Trail, which already exists, there are no on-street lanes or routes planned or proposed for the bikeway system. Connectivity of the bikeway system is hindered by the inability to use on-street bikeway facilities. A review of this policy is warranted as discussed below.

On January 20, 2005, the Rockford Metropolitan Planning Organization (MPO) conducted a workshop to encourage public involvement in the bicycle system planning process. This group represented a cross section of bicycle stakeholders from throughout the Rockford MPA. The attendees were requested to review the existing plan, propose new bikeway facilities, or recommend changes to bikeway policy. Any thoughts or ideas in regard to the bikeway system were encouraged. After open discussion, the attendees were asked to rank the planned bikeway system along with new proposed facilities and policies that were discussed (see **Table 5-1**).

Table 5-1
Results from January 20, 2005 Bicycle/Pedestrian Workshop

Rank	Project Description	Score	Connectivity	On-Street	New	Policy
1	Connect Charles Street Path to Perryville Path	28	X	X	X	
2	Connect Rock Cut Trail to Long Prairie Trail	27	X			
3	Riverside Bike Bridge - Improve Grade Separation on westside	27				
4	Use-shared off-street paths or on-street routes to connect existing paths	27	X	X		X
5	Connect Willow Creek Trail to Rock River Path through Machesney Park	25	X	X	X	
6	Connect Rock River Path to Page Park	22	X			
7	Mill Street/Perryville Connection to existing Kishwaukee River Trail	16	X			
8	Perryville Road/State Street - Increase signal crossing times or add an expanded median island on State Street as a refuge during long crossing.	16				
9	Provide designated on-street bike route system	13		X		X
10	Harrison Street Bike Lane from Mulford Rd to Kishwaukee St.	12		X		
11	Roads and intersections should be designed using the AASHTO Guide for the Development of Bicycle Facilities	11				X
12	Connect north-south paths (Perryville Path and Rock River Path) with east-west paths	11	X	X		
13	Kishwaukee River Path East	10				
14	Connect downtown bike path on west side of Rock River to the Rock River Trail on the east side	10	X	X		
15	Connect Riverside Bike Bridge to Mel Anderson Trail	10	X	X	X	
16	Spring Brook Path/Mulford Road – add actuated signals at the intersection to permit pedestrians and bikes to cross Mulford Road.	10			X	
17	Connect Midway Village to Perryville Path by way of Guilford Road	10	X	X		
18	Provide regional bikeway system map	10				X
19	Continuous Bike Path along both sides of the Rock	9			X	

Table 5-1 – continued						
Rank	**Project Description**	**Score**	**Connectivity**	**On-Street**	**New**	**Policy**
20	Identify gaps in sidewalk system and fill in the missing links.	9				X
21	IL 251 in Rockford - crossing in a safe manner	8				
22	Connection of Willow Creek Trail that goes directly west to Rock River and then turns south to connect to existing path	5	X		X	
23	Kishwaukee River Path West	4				
24	Keith Creek Path	2			X	
25	Bike Lane along Kishwaukee Ave. south of Harrison to Ogle County	2		X	X	
26	Applewood Lane Connection between Spring Brook Path and Rock River State Park	1	X		X	
Connectivity refers to projects that promote connect existing bike paths. On street refers to using bike lanes or routes in the roadways. New represents projects not previously identified in the Regional Bikeway Systems Plans. Policy refers to issues that will have to be addressed by the Metropolitan Planning Organization Policy and Technical Committees. Applewood Lane Connection between Spring Brook Path and Rock River State Park						

As it turns out, connectivity of the existing paths, especially in an east-west manner was highly ranked. In addition, the use of on-street lanes or routes as a method of connectivity was also highly ranked. On-street routes/lanes could provide an important and cost-effective means of connecting the existing bikeway system. However, this issue will need to be addressed by the Rockford MPO Technical and Policy Committees. The use of on-street bikeway facilities would be a major change in the bikeway system in the Rockford MPA.

RATS previously developed a bikeway system plan that appeared in the Long Range Transportation Plan (LRTP). However, a comprehensive evaluation of the bikeway system policy and facilities is warranted. The Rockford MPO Technical and Policy Committees should consider the policy in regard to encouraging on-street bike lanes and routes. If recommended, this would cause a major change in the bikeway system plan. In addition, prioritization of bikeway system improvements would have to be reconsidered with the policy change. Project prioritization should proceed after the issue with on-street bike lanes/routes is resolve. Prioritization of bikeway system improvements is not an easy task. There is not a technology tool similar to a transportation model that can be used to identify system needs. Elected officials should accomplish the prioritization process with input from the public, stakeholders and the Rockford MPO Technical and Policy Committees. A bicycle system plan is shown on the Boone and Winnebago Greenway Plan (see **Map 2-14**). However, as stated above, RATS will need to go through a formal process to consider the on-street policy for bicycle lanes and routes and the prioritization of projects. In addition, additional bicycle improvement projects have been identified through the RATS public involvement process.

5.2 Pedestrian System

The Rockford MPA has an extensive pedestrian system. Most municipalities have required sidewalks to be constructed as part of the land subdivision process. However, some parts of the Rockford MPA were developed under regulations where sidewalks were not required or the municipalities waived the sidewalk requirements. One of the most notable examples of lack of sidewalks is the commercial area along East State Street. This area is automobile oriented and does

not allow for safe pedestrian movement. An adequate pedestrian system is especially important for access to bus stops, schools, medical facilities and senior citizen housing.

Providing access to the transit system is an important function of the pedestrian system. In 1992, the Rockford MPO undertook an inventory of the pedestrian system near (within three blocks) of the area's fixed-route bus stops. The inventory found inadequacies in the pedestrian system for disabled persons. These included areas with no sidewalks and sidewalks with deteriorated conditions or slopes that would inhibit wheelchair passage. Along most of the major streets in the older parts of the urbanized area curb cuts (wheelchair ramps) were not available at the intersections. Much has been done to correct these deficiencies. Unfortunately, there was not a quantification of the survey results so the remaining extent of deficiencies is unknown.

Attention to persons with sight disabilities is also of concern. Audible walk signals should be considered at signalized intersections in conjunction with the standard visual walk signals. Braille information can be added to most pedestrian signage, and Braille or audible information can be provided at bus terminals and information kiosks. The Rockford Mass Transit District (RMTD) has already put Braille information on some bus stop signs and audible information on buses.

5.3 Bikeway/Pedestrian Recommendations

RATS has a long history of working to improve the pedestrian and bikeway system in the MPA. The following policies having been encourage by the MPO over the years:

- All new developments of half-acre per lot densities or greater to have a pedestrian system, preferably sidewalks on both sides of the street.
- Programs to add and repair sidewalks.
- Sidewalk and street connection that meet the Americans with Disabilities Act standards.
- Corridor studies that promote pedestrian sidewalks and bicycles paths.
- The overall development and implementation of the Regional Bikeway and Pedestrian Plan.

The positive results of past planning efforts and policies are evident throughout the MPA. However, it has been more than 20 years since the original Regional Bikeway and Pedestrian Plan was adopted. A comprehensive update to the pedestrian/bicycle system plan is in order. A thorough and comprehensive evaluation of where the Region is at, where it should be going, and how it should get there would be a useful process for the communities in MPA.

The public workshop conducted on January 20, 2005 showed a high level of interest from the bicycle community to connect the bicycle system through the use of on-street means. This would require a shift in policy that is not within the bounds of this LRTP. Should this policy be found acceptable, it would take some additional planning and engineering effort to determine how to best implement it.

Additional workshops like the one held on January 20, 2005 would be useful in prioritizing bicycle and pedestrian system improvements. This stakeholder involvement process can provide an excellent forum for feedback on the bikeway system. The comprehensive update should also address the pedestrian system within the Rockford MPA. This process should include public workshops that focus on the pedestrian system.

SECTION 6

RAIL