

NICTI Alternatives Analysis

Purpose and Need Report

Prepared for:



*Northern Illinois
Commuter Transportation Initiative*

Northern Illinois Commuter Transportation Initiative
Rockford Area Transportation Study

& TranSystems

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Section 1: Introduction to the Project

The NICTI Alternatives Analysis Study (Elgin to Rockford AA) considers a range of alternatives capable of establishing a transit connection linking the vibrant Greater Rockford and Belvidere area with the rapidly growing service and employment centers of the Chicago suburbs, and the City of Chicago.

The Elgin to Rockford AA is being prepared under the direction of the Northern Illinois Commuter Transportation Initiative (NICTI) in accordance with Federal Transit Administration (FTA) guidelines for identifying, evaluating, and selecting transportation improvements.

Overall, the Elgin to Rockford AA will examine in three screening phases a full range of modal technologies and corridor alignments for the study area by incrementally narrowing down the range of possibilities through a process of progressively more detailed analysis and evaluation on planning and engineering criteria. At the end of this process, a Locally Preferred Alternative (LPA) can be selected by the Rockford Area Transportation Study Policy Committee.

1.1 Organization of the Purpose and Need

The Purpose and Need report is organized as follows: an introduction to the study is contained in Section 1. Section 2 provides a description of the region and study area. Section 3 describes the purpose of the Rockford to Elgin Alternatives Analysis. Section 4 describes the study area in detail. Section 5 presents the goals and objectives linked to the project purpose and that will serve as the guiding principles for the study, and a basis to compare and evaluate transportation corridors and modal technologies. The broader transportation-planning context of the study area is discussed. Section 6 --Existing and Future Study Area Conditions -- describes the existing transportation system and statistics related to the study area.

A series of technical appendices have been prepared to support each of these sections and present background data and supplemental information to the overall report. Appendix A contains information on the Transportation System; Appendix B provides detailed information and statistics on population, household and employment characteristics; Appendix C contains information on land use and activity centers; and Appendix D presents a summary of pertinent plans and studies consulted in developing the Purpose and Need report.

Section 2: Regional and Study Area Background

The Elgin to Rockford Project study area is undergoing major transformation, changing from a generally rural area to a suburban environment with the coming of new residential, commercial, and industrial development. This trend is addressed in positive terms in past and recent Long Range Transportation Plans of the Rockford Area Transportation Study (RATS) Rockford region and the Comprehensive Plans and development plans of many other jurisdictions within the study area. Collectively, the region and associated Rockford region jurisdictions are termed as the *Rockford region* for the purposes of this Alternatives Analysis.

A call to action by area elected leaders, key area stakeholders, planning technicians, and the public is the next critical step in defining problems, needs, and effective solutions. NICTI is a subcommittee of the Rockford Area Transportation Study (RATS), which is the Metropolitan Planning Organization (MPO) responsible for coordinating the transportation plans, projects, and services for the Rockford region. Its makeup consists of representatives from county and municipal governments and related agencies of the Illinois North Central Region. As its primary object, NICTI focuses on implementing strategic improvement of the transportation network linking the Rockford region with the Chicagoland Region.

The coordinated efforts of the Rockford Area Transportation Study and the Chicago Metropolitan Agency for Planning (CMAP) are to articulate the relationship between positive community and economic growth and an efficient transportation system. Collectively and individually, each entity has successfully solicited continued support from the public, community leaders, and elected officials at the local, state, and federal levels. The positive and continuing activities and transportation analysis of this long-term situation by both entities are described in the following sections. Their planning efforts form the basis of understanding for the Elgin to Rockford Project study area.

2.1 Chicago Metropolitan Agency for Planning (CMAP)

The Northeastern Illinois region consists of Cook, DuPage, Kane, Lake, McHenry, and Will Counties that form the greater Chicago metropolitan area. The six-county region, according to 2000 U.S. Census and CMAP estimates, included over 8 million residents and 4 million jobs in 2000. The largest city in the region is Chicago, which is also the largest city in Illinois and the third largest in the United States according to the 2000 Census. The Chicago metropolitan area's leading economic sectors include financial services, electrical machinery and equipment, insurance, pharmaceuticals, and retailing. In addition, 6 county governments, 272 cities and villages, and nearly 1,000 schools, park, and many other special-purpose districts provide public services.

In addition, more than half of the world's top 100 companies are located within the Chicago area. By 2030, the region is projected to experience population and employment increases, growing to over 10 million people (24 percent increase over 2000) and 5.6 million jobs (28 percent increase) by 2030. (Source: NIPC 2040 Plan)

Much of the region's growth is occurring along highway corridors outside Chicago. One of the most important and rapidly changing areas in Northwest Illinois is the I-90 Tollway corridor between Chicago, City of Rockford, and areas to the west. This corridor consists of a variety of

suburban cities, residential communities, office and industrial complexes, retail centers, and a mix of education, recreation, and leisure facilities.

Regional travel patterns in northwestern Illinois have changed significantly over time. As compared to the traditional suburb-to-center-city travel market, the travel market not related to center city trips surfaced in the 1980's and has grown more dominant every decade since. This market includes the suburb-to-suburb market as well as the city-to-city regional commuter market. This growing work travel market is not well served by the region's existing transit system. Nowhere is this more apparent than along the I-90 corridor between Chicago and Rockford. In demonstration of this trend, a transit investment in the east-west direction of the I-90 Corridor has emerged from the Rockford Area Transportation Study as the top transportation investment for the near future to serve this need.

An example of an under-served market that could be addressed by the Elgin to Rockford AA Study Area is the employment areas near O'Hare International Airport, which is estimated to have 75,000 jobs by the year 2030 (reported by NIPC). Analysis of work travel from the 2000 Census Transportation Planning Package (CTPP) shows that within the study area, existing work travel flows are comparable to existing work travel flows from the Rockford region to the Chicago area and vice versa. This comparison is significant. It demonstrates that potential transit travel markets already are evident in the I-90 corridor. Coupled with the continued growth expected in this part of the region, both the need and the potential for a major transit investment linking the Rockford region and Chicago are well supported.

The surface transportation network in the Elgin to Rockford Study Area and along the I-90 Tollway Corridor has been placed under increasing strain by the changes in travel patterns. Although travel markets currently exist that could support a major transit improvement in the Metra Commuter Rail network, these markets are not fully developed, because options are limited by the lack of a high capacity east-west connection between the existing termini of Metra service and the Rockford region. Continued residential and employment growth which is projected to continue, will exacerbate current conditions along I-90.

The distribution of forecast growth in the study area will add to this problem. The eastern and western portions of the study area will have the highest population growth, approaching 50% of the total study area population by 2030. Significant employment growth is forecast for most parts of the I-90 corridor, but even so, the study area east of Rockford will have slightly more than 50% of total study area employment in 2030. With more residents drawn to housing in the southern portions, and jobs concentrated in the central and northeastern portions, north-south travel within the corridor will become increasingly problematic. The corridor's increasingly transit supportive densities, and the need to improve linkages between concentrations of jobs and housing in different parts of the corridor, further support the value and need for a major transit improvement.

These changes in travel also complicate Chicago's air quality situation. Northeastern Illinois is a moderate ozone non-attainment area, and is nonconforming with respect to particulate matter (PM 2.5) as well. With the spread of development, and accompanying increases in automobile vehicle miles of travel, air quality improvement becomes problematical without the availability of alternative, lower polluting modes.

Metra and other transportation agencies in the region recognize that increasing travel demand should be addressed with a package of transportation improvements targeted to maintain and

improve the environmental as well as enhance the mobility aspects of the area's quality of life. The goals and objectives developed to guide this process reflect that intent. As a component of the region's long range transportation plan, the proposed STAR Line is part of the region's efforts to reduce highway travel and thus ozone criteria pollutants by providing an attractive transit alternative.

2.2 Rockford Area Transportation Study Area

Planning for the transportation needs of the Rockford region is an ongoing process that has been performed by the Rockford Area Transportation Study (RATS) for the past 40 years. RATS is the Metropolitan Planning Organization (MPO) and its governing Policy Committee consist of representatives from the City of Rockford, the City of Loves Park, the City of Belvidere, the Village of Machesney Park, the County of Boone, County of Winnebago and the State of Illinois Department of Transportation.

The 2035 Long Range Transportation Plan (LRTP) was adopted on July 28, 2005. The overall goal of the 2035 LRTP Plan is to promote a safe and efficient transportation system for people and goods in the ROCKFORD Metropolitan Statistical Area (MSA). The intent is to provide a balanced multi-modal transportation system that minimizes costs and impacts to the taxpayer and to the environment. The Plan adopts the following goals in meeting federal guidelines for the Transportation Equity Act for the 21st Century (TEA-21):

- Support the economic vitality of the Rockford MSA, especially by enabling global competitiveness, productivity and efficiency.
- Increase the safety and security of the transportation system for motorized and non-motorized users.
- Increase the accessibility and mobility options available to people and freight.
- Protect and enhance the environment, promote energy conservation, and improve the quality of life.
- Integrate and connect the transportation modes for people and freight.
- Promote efficient system management and operation.
- Efficiently preserve the existing transportation system.

During the 1990's and subsequent to the 2000 Census, the population of the Rockford MSA increased at an average annual rate exceeding 1.1%. This represents an increase from the annual growth of 0.29% experienced in the 1970's and 0.17% in the 1980's. Population estimates increased 5.9% and 18,974 in population from the 2000 U.S. Census through 2005. (Source US Census).

Among the 102 Illinois counties, Winnebago and Boone ranked 7th and 9th, respectively, in total population growth during the period 2000-2004. For the last year of this period, Winnebago maintained its 7th rank and Boone's rank improved to 8th. Preceding the rank of these two counties, in terms of numeric population growth, are Will, Kane, Lake, McHenry, DuPage and Kendall Counties, which are member jurisdictions of CMAP

A significant portion of the growth in the Rockford MSA that did take place during the 1990's and continued after 2000 has occurred in the area between the cities of Rockford and Belvidere along the I-90 corridor. This is illustrative of the planned and orderly development of industries including DaimlerChrysler Belvidere Assembly Plant, I-90 Technology Park, and other employment centers. Additional growth areas are located south of US-20 and north of Rockford to the Wisconsin boundary.

Section 3: Purpose of the NICTI Alternatives Analysis

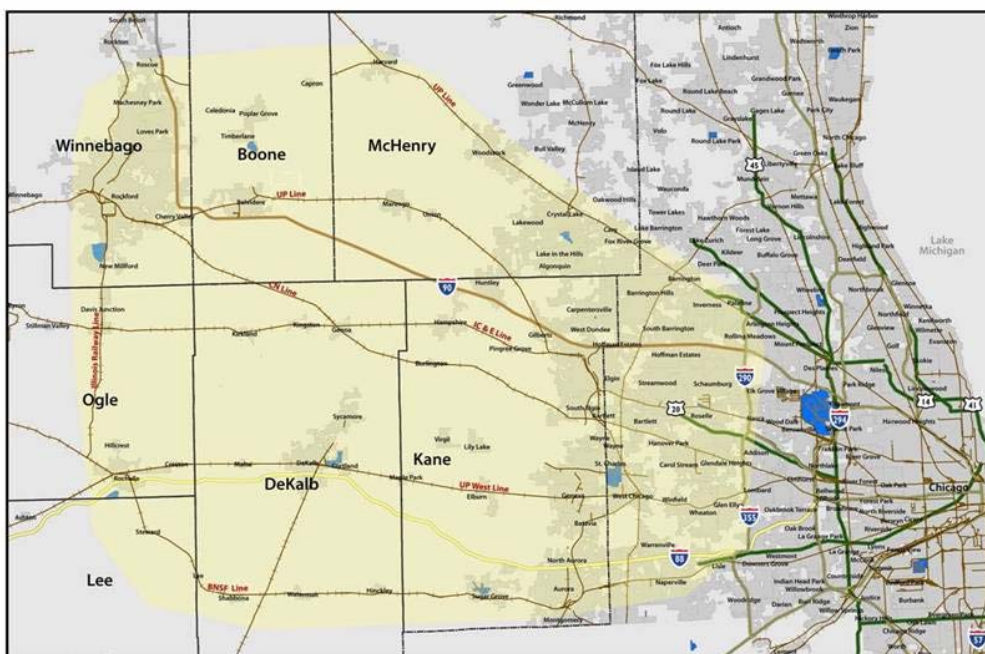
The purpose of the Elgin to Rockford Alternatives Analysis is to address the current and projected growth of Rockford region and its effect on development and travel patterns in northwestern Illinois. This document introduces, explains, and substantiates the benefits that can be derived and the problem(s) that can be solved by the Locally Preferred Alternative (LPA). This Purpose and Need Report serves as the basis from which alternatives believed capable of achieving the project's purpose will be defined and evaluated.

The Elgin to Rockford Alternatives Analysis is being implemented in a manner that recognizes and focuses on optimizing changes in development and travel patterns that have occurred over the preceding decades between the two major population and business centers in the study area. The Alternatives Analysis identifies, evaluates, and recommends transportation improvements that accomplish this goal by improving connectivity between activity centers while avoiding or minimizing adverse community and environmental impacts.

Section 4: NICTI Alternatives Analysis Study Area

The Elgin to Rockford study area, as shown in Figure 4.1, is defined as the east-west travel corridor extending 90-miles to the City of Rockford, from the Elgin and Schaumburg areas of Northwest Cook County. The Study area encompasses portions of Winnebago County, Boone County, Ogle County, northeastern Lee County, southwestern McHenry County, northern Kane and DeKalb Counties, and northwestern Cook County. The study area is contiguous to the fringe of the Chicago metropolitan area and is undergoing rapid growth and development.

Figure 4.1 Study Area



Population in Winnebago County and Boone County is projected to grow 29.0 and 24.6 percent between 2000 and 2030 respectively. Within the study area, the most significant percent change in population is projected to be almost 70.0 percent in McHenry County and Kane County (IL Dept. of Commerce). Appendix B provides detailed information and statistics on population, household and employment characteristics.

Level of service (LOS) is an additional measure of growth and development in the study area. LOS defines a roadway's capacity to manage traffic congestion on a given segment of road at a given time, such as the AM and the PM peak periods. An A through F LOS rating system describes the degree of traffic congestion. LOS A is free-flowing traffic. LOS F denotes traffic at a standstill. The traffic analysis that is a key component of this Alternatives Analysis confirms that without capital intensive transportation improvements, such as a major transit project, 2030 morning eastbound traffic on I-90 will function at a Level of Service that will have frequent periods of high congestion and stop-and-go traffic in the peak direction.

The robust Chicago Region and the resultant growth in north central Illinois jurisdictions should

result in the need to sustain an efficient means of transportation to serve this growing transportation market. The I-90 Tollway corridor leading from Chicago's northwest suburbs through Rockford and Belvidere located in the Rockford Region, once considered to predominantly support interstate traffic, and now facilitates daily traffic between Chicago and the Rockford Region. Daily traffic is projected to substantially increase beyond 2030.

Analyzing all facets of transportation improvements linking the City of Chicago, its northwest suburbs with Rockford, Belvidere and other jurisdictions in the Rockford Region is analogous in purpose to construction of a balanced transportation infrastructure linking the City of Chicago with its suburban areas decades ago. The goal of the Elgin to Rockford Alternatives Analysis has a similar intent -- provide an alternative way of traveling between the Rockford Region and the Chicago Region's suburbs and the City of Chicago.

The continuing growth in inter-regional traffic is comprised of commercial traffic generated by economic development gains by attracting national and regional manufacturing plants, industrial parks and warehousing to locate in the Rockford Region. Additionally, daily commuting between the two regions has increased significantly, resulting from the increased growth in affordable single-family housing to meet the demand by Chicagoland families taking advantage of considerably lower prices for new housing. This results in the Chicago and Rockford Regions functioning as "regional-pairs" -- an origin and a destination for commercial, commuter, and general traffic.

4.1 Transportation Needs

The Elgin to Rockford Alternatives Analysis defines, evaluates, and, selects the most promising and affordable mobility improvement to further the economic position of the greater Rockford Region. It will improve the quality of life for residents and workers in Rockford, provide transportation choices, and expand the job market and employee base. Overall, the benefits derived from an improved transportation network between the Rockford Region and the Chicago metropolitan region provides opportunity for positive growth both for the near-term and in the future.

Several inter-related conditions and trends exhibited in the study area contribute to the need for improvements in the transportation system. These include:

- **Growth in Population and Employment.** The study area is projected to experience robust growth in population and employment. Future job growth in the study area is projected to substantially and steadily increase between 2000 and the AA's horizon year of 2030; and from 7.5 to 8.9 million residents over the same period. Based on growth expectations, more trips will have origins or destinations in growing regional employment and activity centers located west of the City of Chicago. The potential demand for transit services is expected to increase as growth expands in these surrounding suburbs of Rockford and Chicago. The location of this expansion of population and employment in the study area poses challenges to the efficiency and connectivity of the existing transportation system.
- **Growth in Activity and Employment Centers.** The location of several large activity and employment centers, including concentrations of high-density housing and mixed uses, hospitals and commercial centers generate significant daily trips and attract many visitors from the Rockford Region. These activity centers include the Schaumburg

Convention Center, Woodfield Mall, O'Hare Airport, and growing employment, commercial and entertainment districts in the Northwest suburbs of Chicago. O'Hare employment levels are projected over the 2000 to 2030 period to steadily increase; and in the Schaumburg area employment is projected to steadily increase as well. Currently, transit access to these areas from the Rockford Region is limited to a privately owned shuttle service along I-90. Under these conditions, transit travel time is lengthy, infrequent and does not efficiently accommodate the diverse travel needs of travelers from the Rockford Region. Nor is the service frequent enough to provide commuters with any level of flexibility of travel.

- **Changing Travel Patterns.** As a result of historic travel patterns focused on downtown, Chicago's rail transit network has developed in a radial manner, with multiple lines emanating from a relatively small geographic area within or adjacent to CTA's historic Loop elevated train structure. While this radial network has for more than a century made transit a high quality and efficient mode for accessing the CBD, a growing number of regional trips have origins and/or destinations outside of Chicago. Changes in regional travel patterns and shifting geographic distribution of employment have strained the region's transportation system. These trends have resulted in an increase in city-to-suburb commuting, suburb-to-suburb, and intra-regional commuting. Because of the location of growth in Northern Illinois and corresponding changes in travel patterns, this radial transit network is not effective for serving many of the growing areas in and around Rockford Region.
- **Lack of Efficient Modal Connectivity.** The lack of efficient modal connectivity between transit systems in the vicinity of employment centers in the Rockford Region with employment centers in the Chicago metropolitan area causes lengthy travel times for commuters. In addition to lengthy travel times on the Tollway, the majority of travelers do not transfer to Metra, CTA rail or Pace buses at existing transit stations in the study area. Direct transit connections between Rockford Region could elevate the attractiveness of transit to long-distance commuters and travelers plus reduce travel times, and provide an effective alternative to automobile travel, particularly during the many congestion periods throughout the study area.
- **High Concentration of Transit-Reliant Residents.** Some of the population in the Rockford Region is reliant on transit for mobility and access to jobs, as substantiated in the most recent Rockford Long Range Transportation Plan. Overall, the demographic characteristics of the area point to a need for improved local bus service and the introduction of commuter buses for (typically termed long inter-jurisdictional travel) mobility and accessibility for residents that rely on transit as their primary means to travel to distant employment opportunities and other regional destinations.
- **Increase in Congestion and Travel Times.** Traffic congestion and travel times continue to increase throughout the Chicago and Northern Illinois region. Chicago is ranked third in the nation for lengthy commute time, and is ranked fourth highest in congestion levels with 72% of its freeway and lane miles congested during the peak-periods. The average Chicago commuter spends 50.1 hours additional travel time annually compared to the national average (US Census Travel Time Data). Average commute time for travelers using the I-90 in the vicinity of Rockford Region is worsening which will ultimately result in a lengthening of travel time.

The Rockford to Elgin Alternatives Analysis will identify the most effective and cost efficient means to fully utilize benefits of existing transit infrastructure and services by extending the transit system's reach to the vibrant municipalities to the northwest. Additional expected benefits include:

- Supporting economic growth and expanding development potential throughout the Rockford region of the region by providing better transit access.
- Supporting land use plans for concentrated development.
- Improved travel time into, out of, and within the study area particularly for peak hour commuters. Previous studies by NICTI and Rockford Area Transportation Study indicate that a high quality transit service connecting to the Metra system at Elgin is feasible and could potentially provide travel timesavings significant enough to attract increasing numbers of auto commuters to begin routinely using the transit service.
- Connecting major activity and employment centers as well as all other rail and bus transit lines.
- Providing a cost-effective transit alternative to the general purpose lanes along the I-90 corridor between Chicago and the Rockford Regions.
- Improving travel by providing a transit alternative with broad-reaching utility.
- Proposing transit alternatives that support and enhance access to, and development of, Rockford, Chicago's northwest suburbs, and other activity centers along the I-90 corridor.
- Providing a transit service consistent with environmental goals for the study area.
- Provide access to recreational facilities in Boone and Winnebago Counties for transit users in the Chicagoland area.
- Provide cost effective access to O'Hare Airport from Boone and Winnebago Counties.
- Allow for future connection to Rockford Airport to support low cost carrier options for Chicagoland residents.
- Provide "lifeline" service to transit dependent residents of Boone and Winnebago Counties for access to major medical facilities in the Schaumburg and northwest Cook country area.
- Provide an additional level of corridor/area security.

Section 5: Project Goals and Objectives

The following proposed Alternatives Analysis goals and objectives reflect the transportation needs described above and they are consistent with the goals that are included in the Rockford Area Transportation Study Long-Range transportation plans. These goals and objectives establish the foundation of a framework for the evaluation of transit alternatives, transit corridors and transit technologies.

The six goals identified below relate to the following categories: *mobility, growth patterns, cost-effectiveness, economic development, land use, and the environment* (natural and built) and consistent with the Greater Rockford Region's vision for the future. Associated with each goal is a related list of objectives. Objectives provide guidance for attaining each goal, represent successive levels of achievement in movement toward a goal, and reflect the expected results achieved by a stated point in time (the planning horizon for the project). These goals and objectives serve as criteria against which all alternatives are screened (evaluated), identify those that are most effective, and provide the basis for eventually eliminating all alternatives except for the one alternative that best achieves these goals and objectives in a cost effective manner – the Locally Preferred Alternative.

Goal 1: Enhance Mobility Through and Within the Corridor

- Expand mobility opportunities for all users moving through and within the Elgin to Rockford Corridor.
- Provide access to jobs and job markets in the corridor.
- Provide for growth in travel demand.
- Reduce peak period traffic demands on I-90.
- Provide additional level of corridor/area security specifically relating to evacuation.

Goal 2: Provide Efficient, High Quality Transit Improvements

- Provide high quality modal alternatives.
- Attract new transit riders from lower occupancy vehicles, particularly single-occupancy vehicles.

Goal 3: Develop a Cost-Effective Transportation Solution

- Provide an efficient transit system that minimizes costs per new transit rider.
- Minimizing construction, right-of-way and operating and maintenance costs.
- Leverage federal and state funding.

Goal 4: Support Business, Transportation and Residential Investments

- Support previous business investments in the Elgin to Rockford Corridor.
- Support previous public investment in transportation infrastructure.
- Support public and private investment in residential communities.

- Support connections between major transportation systems and job centers

Goal 5: Support Effective Land Use and Development Patterns

- Promote a reliable transit system that allows efficient, effective land use development patterns and facilitates the highest and best use of properties adjacent to transit facilities.
- Provide consistency with Long Range Transportation Plans and land use plans.
- Encourage economic growth.
- Discourage unplanned growth.
- Enhance quality of life.

Goal 6: Provide a Cleaner, Safer Environment

- Support regional goals for: cleaner air and water, more efficient energy use and a safer and healthier environment.
- Increase the safety and security of the transportation system for motorized and non-motorized users.

Section 6: Existing and Future Study Area Conditions

6.1 Overview of Regional Transportation Services

The transportation system in the Elgin to Rockford study area consists of multiple networks and services, including public transit systems, street and highway network, passenger and freight railroads, and several airports. Existing and projected conditions on the transportation network can indicate whether a potential transit improvement may be needed to better meet current and future demand. The following sections describe the existing and planned transportation system. Existing transportation facilities and services in the study area include the I-90 Tollway, arterial streets, public transit provided by the City of Rockford, and non-motorized (bicycle, pedestrian and equestrian) facilities.

I-90 is the primary highway facility located in the study area. It is a major east-west Tollway that extends from Chicago to Wisconsin, yet it does not provide direct access to Rockford. US-20 is a highway and popular freight route that has important economic implications for Northern Illinois. The regional transportation system is shown on Figure 6.x and includes the following:

- Roadway Network
- Existing Transit Network
- Passenger and Freight Railroads
- Airports

Appendix A contains additional detailed information on the Transportation System.

6.1.1 Travel Demand

The projected increase in population and development in the study area is anticipated to worsen traffic congestion on I-90, US-20 and roadways in the Rockford Region by 2030. Figure 6.x shows average daily traffic volumes and PM peak levels of congestion for 2005 compared to 2030. As shown in the figure, daily traffic volumes on I-90 are anticipated to more than double along a majority of segments of the freeway within the study area. Daily traffic volumes would also increase dramatically on major east-west roadways connecting to US-20.

Congestion levels are anticipated to worsen on roadways throughout the study area contributing to increased traffic delays and travel times. Severe congestion (in which traffic volumes would be at or greater than available capacity) is expected to occur during PM peak periods on the following routes:

Figure x illustrates the projected Year 2030 trip-making patterns for the study area. Sub-area 1 on Figure 6.x is the Rockford Region. Sub-area 1 on Figure 6.x is the northwest suburbs of Chicago within the Chicago Area Transportation Study.

The Chicagoland Area accounts for the vast majority of the State of Illinois' employment base, and approximately 75 percent of the state's population. The Chicago Metropolitan Area is served by a transportation network that includes highways, commuter and intercity rail, buses, rapid transit, and two international airports. Interstate 90 provides the primary connection

between the City of Rockford and the City of Chicago. Interstate 90 is the longest interstate highway in the United States and is the northern-most east-to-west, coast-to-coast interstate. I-90 enters from Wisconsin north of the City of Rockford and becomes the Northwest Tollway at the U.S. Route 51 Exit. I-90 meets the western end of I-290 in Schaumburg, passes O'Hare International Airport, and continues southeast as the Kennedy Expressway to join with Interstate 94 (Edens Expressway). I-90/94 then passes through Chicago, intersecting the eastern end of I-290 just west of the Chicago Loop. I-90 then runs southeast to the Indiana state line, where it becomes the Indiana Toll Road.

The Rockford Region is connected to the Chicago region via road, air and rail. I-90, US-20, and Highways 76 and 173 serve as the primary road transportation routes in the county.

Interstate 90 is a major *interstate* and *intrastate* transportation route. Currently the only access point from I-90 is the Genoa Road interchange on the south edge of the City of Belvidere. However, the Illinois State Toll Highway Authority is studying the possibility of an interchange in the area of Irene Road/Town Hall Road/Stone Quarry Road. Additional tollway interchanges are located across the Winnebago County line to the west of Boone County at Business 20 and State St. with an additional interchange under construction at Highway 173.

6.1.2 Transit Systems and Services

Public transportation in the study corridor includes bus and paratransit services operated by the Rockford Mass Transit District (RMTD) in the Rockford Region and the Regional Transportation Authority (RTA) in the Chicago metropolitan area. The RTA is the financial oversight and regional planning body for the three public transit operators in northeastern Illinois: the Chicago Transit Authority (CTA), Metra commuter rail and Pace suburban bus. Currently, no public transit service provider connects the Rockford Region to northeastern Illinois.

There is no public transportation service operating between the Rockford region and the Chicagoland area. Several private operators currently provide bus service to Chicago, including service to O'Hare and Midway Airports. Van Galder Bus Company operates 4 trips daily between Rockford and downtown Chicago, 17 trips daily between Rockford and O'Hare Airport, and 8 trips daily between Rockford and Midway Airport. Greyhound operates 2 trips daily to downtown Rockford from Chicago. Other private limousine and shuttle services are also available.

Local transit service in the cities of Rockford and Loves Park and the Village of Machesney Park, is provided by Rockford Mass Transit District (RMTD), which operates both paratransit and fixed route service. RMTD operates 18 fixed bus routes Monday through Saturday, with 6 routes operating in the evenings and on Sunday. RMTD does not provide service outside of the Rockford Region. Demand-response transit service is provided in Boone County by the Boone County Council on Aging.

6.1.3 Passenger and Freight Railroads

Railroads in the Elgin to Rockford Study Area offer potential right-of-way for a new transit alignment, especially for a commuter rail option, that would share tracks or right of way with existing freight services. Three major railroads own rail lines or track rights that traverse the Study Area: Union Pacific (UP), Iowa, Chicago and Eastern (ICE), and Illinois Railway. These railroads support freight rail transportation for local heavy industries through sidings and rail-to-

truck and rail-to-ship intermodal terminals, and serve as an integral component in the interstate freight railroad network. One rail line previously supported the Amtrak Black Hawk route from Chicago. This service was discontinued in 1982 due to low ridership, although Amtrak is currently reevaluating it for new service. Five rail lines in the study area offer potential east-west access between Rockford and Chicago.

6.1.4 Airports

Airports in the study area, especially O'Hare Airport, are activity centers that could be a potential source of transit ridership resulting from the large number of employees and business travelers/visitors accessing the corridor and region. Key airport facilities in the study area are identified below.

- O'Hare Airport, located in the City of Chicago, is the primary air carrier airport serving Northern Illinois, and serves portions of Wisconsin and northwestern Indiana. In 2005, more than 76.5 million passengers passed through O'Hare. O'Hare generates 450,000 jobs and \$38 billion in economic activity for the Chicago region and State of Illinois. The O'Hare Modernization Program (OMP) is a \$6.6 billion Program to reconfigure O'Hare International Airport's intersecting runways into a more modern, parallel layout. The OMP will substantially reduce delays in all weather conditions and increase capacity at the airfield, allowing O'Hare to meet the region's aviation needs well into the future.
- Chicagoland International Airport at Rockford (RFD), located on the southern edge of the City of Rockford, provides commercial air service, air cargo and general corporate aviation. RFD is owned and administered by the Greater Rockford Airport Authority. RFD is located 85 miles northwest of Chicago and encompasses over 3,000 acres. RFD is also home to 30 industrial tenants and the largest regional parcel-sorting facility in the UPS system - the only facility of its type that handles coast-to-coast cargo. RFD is presently ranked as the 24th largest cargo airport in the nation and the 226th largest passenger airport. Currently, Allegiant Air offers non-stop flights to Orlando and Las Vegas; United Airlines flies non-stop to Denver and to over 100 connecting destinations. RFD averages between 21-25 flights a week.

6.2 *Population and Employment*

Areas encompassed by the Elgin to Rockford Project study area are undergoing major transformation, changing from a generally rural area to a suburban environment with the emergence of new residential, commercial, and industrial development. Between 1990 and 2000, there was 23.8 percent overall population growth for six of the seven counties (excluding Cook County), included in the study area, with Boone (35.6 percent), Kane (27.3 percent), and McHenry (42.9 percent) counties exhibiting large increases in county population. These three Illinois counties were on the U.S. Census Bureau's list of the 100 fastest growing counties in the United States between 2000 and 2005. Based on the absolute increase in population between April 2000 and July 2005, Boone County is ranked 78th in the nation.

Table 6.1 1990 - 2000 Population Change

County	Population		Change %
	1990	2000	
Boone	30,806	41,786	+35.6%
Ogle	45,957	51,032	+11.8%
Winnebago	252,913	278,418	+10.1%
DeKalb	77,932	88,969	+14.2%
Kane	317,471	404,119	+27.3%
McHenry	183,241	260,007	+41.9%
Cook	5,105,067	5,376,741	+5.3%

Source: RATS, NIPC and US Census Data

Overall, the study area’s population in 2030 is projected to increase by 18.1 percent from 2000. McHenry and Kane counties are projected to more than double their existing population by 2030. Total study area employment is also forecasted to double by 2030.

These 2030 population and employment forecasts assume no substantial transportation improvements in the study area beyond programmed and fiscally constrained planned projects. The RATS 2025 Long Range Transportation Plan and CATS 2030 Regional Transportation Plan will be used in the travel demand forecasting model to develop 2030 traffic forecasts for the study area.

Table 6.2 Study Area Population and Employment Estimates

Study Area	2000	2030	Change
Population	7,509,541	8,871,092	+18.1%
Employment	←	Waiting for this Data	→

Source: U.S. Census Bureau, U.S. Bureau of Economic Analysis, and the Northeastern Illinois Planning Commission

With this dynamic growth, several stakeholders in the community have expressed support during the early study public involvement process for the coordination of land use and

transportation, and for transportation projects designed to improve the quality of life, promote economic prosperity, and protect environmental and natural resources.

Appendix B detailed information and statistics on population, household and employment characteristics.

6.3 Population and Employment Density

One key population and employment characteristic that influences transit service is *density*. The density of population and employment development in the study area is as important as the magnitude of growth because, as noted above, transit can better serve concentrated areas of population and employment. Areas with a density of three households per acre and/or four jobs per acre have been defined by the Transportation Research Board's Transit Quality of Service Manual as being transit-supportive. Figure x illustrates the transit-supportive areas in the region as identified in the NIPC 2040 regional Framework Plan and the Rockford 2035 Long-Range Transportation Plan. Existing and projected densities at selected activity centers are summarized in Table 6.x.

6.4 Study Area Activity Centers

Several major activity centers are located in the Elgin to Rockford study area (Figure 6.x). These include:

- Downtown Rockford
- Belvidere Industrial Park
- Schaumburg
- Major destinations in the study area
 - Employment Centers
 - Universities and Colleges
 - Medical Centers
 - Major Sport Venues
 - Regional Shopping Centers

6.5 Land Use

Higher density development is located predominantly within the cities of Rockford and Belvidere.

Land use within the study area is defined by municipal and county zoning and land use maps. Historically, the areas outside of the City of Rockford and City of Belvidere were characterized as "rural" communities, with large areas of agricultural and undeveloped lands. Beginning in the 1980's, land use composition changed significantly with residential areas developing on former farmland and orchards. With residential growth came the need for streets and other infrastructure. Retail, commercial and manufacturing employment areas developed along the major roadways between Rockford and Belvidere. Further east of Belvidere, agricultural lands remain along the I-90 approximately to edge of the Elgin urban area. Many parcels are slated

for residential development. As these patterns evolve from the northwest suburbs of Chicago, the area becomes more and more of an extension of the Chicago Metropolitan region.

The most significant change between existing and future land uses in the Rockford region is the creation of designated "Growth Areas" along the I-90 corridor. Appendix C contains information on land use and activity centers.

Growth Areas identified for the study area are also future locations of concentrated higher density mixed-use developments. City of Belvidere and Boone County has planned the Flora Neighborhood Plan. The Flora Neighborhood Plan Project addresses the implementation of a neighborhood development strategy that includes a commuter rail station, Tollway interchanges, travel corridor improvements, industrial and manufacturing components, and general planning for 3000 acres along the I-90 Tollway.

6.6 Existing Plans and Studies

The following studies have been conducted over the last 5 years to consider and more fully develop transit alternatives in the Rockford region:

- Flora Neighborhood Plan (2006)
- Year 2035 Long-Range Transportation Plan (2005)
- NICRI Commuter Rail Feasibility Study (2004)
- Boone County and Winnebago County Transportation Planning Study (2004)
- Boone County Comprehensive Plan (1999, 2006 updated)
- City of Rockford 2020 Plan

Appendix D includes a summary of pertinent plans and studies consulted in developing the Purpose and Need report.