

The Strategic Role of the Illiana Expressway

Report to the Illinois Department of Transportation

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Abstract

Will County has experienced very rapid population growth that is projected to continue into the coming decades. To bring the county into balance with the number of local jobs the county needs to also grow and in numbers larger than in the previous decades. It is essential that this growth be managed so that livable and environmentally sound communities develop through sustainable transportation systems. Sustainable transportation may be defined as having minimal impacts on people's health or the natural environment. In addition sustainable transportation strategies help achieve the planning objectives of improving the economic and social well being. One of the key elements to sustainable economic growth is to provide the transportation and infrastructure to attract employers of all stripes. Commercial enterprises that will service the population will develop in response to the growing population by attracting basic (export) industries is vital to producing livable communities. The Illiana Expressway and other transportation improvements can be a major part of the package that would attract major employers and shape the pattern of growth to encourage sustainable development. Together with the South Suburban Airport (SSA), the pieces should be in place to make Will County a magnet for future employers. Importantly, communities in Will County have been historically supportive of highway and transportation expansions as witnessed by the local support for the I-355 south extension.

1.0 INTRODUCTION

Will County is growing at a rapid rate with nearly 175,000 residents added just this decade (2000-2008). During this period it accounted for more than one-third of the population increase in the State of Illinois. It is rapidly gaining on Lake County, the second-most populated county in suburban Chicago. While the growth rate has declined in recent years, it may well return to the pace found at the beginning of this millennium. Regardless, Will County will remain an affordable housing market and will likely remain near the top in homeownership rates among large counties (populations over 250,000). To accommodate part of this growth an expressway is proposed through southern Will County that would connect Indiana with I-55. A facility of this scope can have effects on land uses in the immediate area and could shape growth and development through much of the county. It has the potential to increase accessibility for both residents and workers and could make the county more attractive for employers. It can also provide an alternative routing for truck traffic on I-80/94.

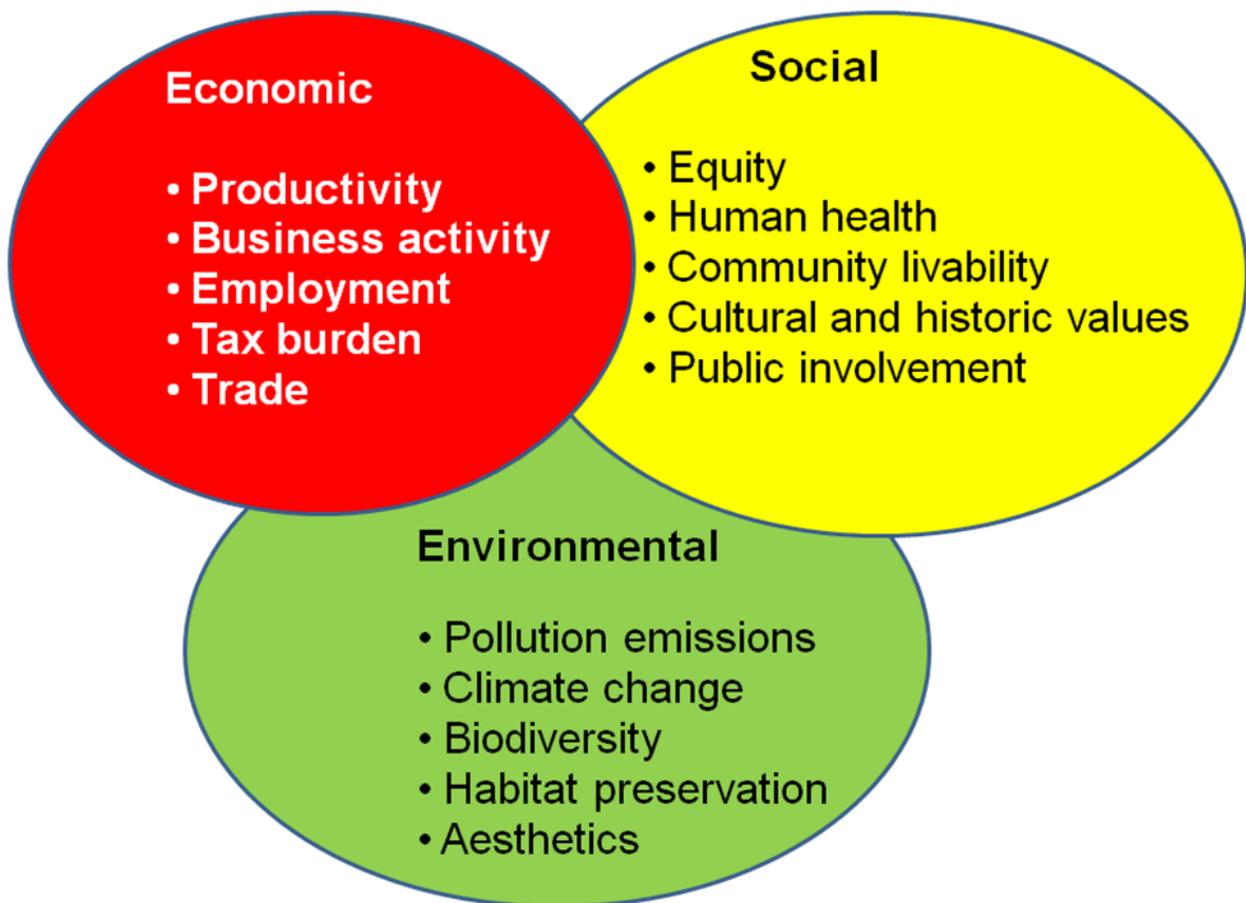
The purpose of this report is to develop, during this continuing period of growth, strategies to support sustainability in Will County. These strategies could promote a sustainable local economy, a sustainable environment and enhance the social well-being of Will County residents. The report will also demonstrate the role of the Illiana

Expressway in supporting livable communities in Will County by shaping the growth in the county. The expressway is expected to draw employment to its corridor permitting residential areas to develop in areas buffered from the expressway.

Sustainability in the context of Will County may be divided into three issues, economic, social and environmental issues (Figure 1). These issues often prompt multi-dimensional challenges that can only be addressed with integrated solutions (Litman, 2009).

Figure 1

Sustainability Issues

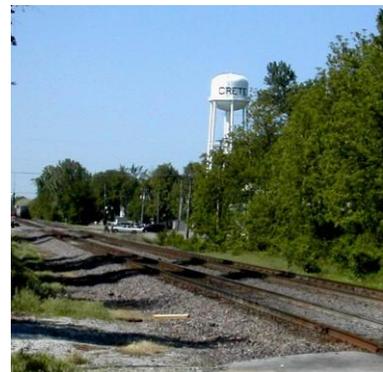


Source: Litman, 2009, p. 7.

Sustainable transportation may be defined as transportation impacts that are so low that they no longer provide reason for concern about people's health or the natural environment. In addition, sustainable transportation strategies help achieve the planning objectives of improving the economic and social well-being. Sustainable transportation issues can be grouped in the following categories: economic, environmental and social.

- **Economic:** The economic benefits of sustainable transportation include increased business activity, trade, employment and tax income to the local economy. Of particular importance to Will County is the balance of employment with the population growth that has been occurring in the previous two decades. The strategy to balance jobs and housing is key to developing transportation links to employment, reducing highway congestion and attracting transportation, logistics and warehousing jobs. It also achieves the objective of shaping development in the region.
- **Environmental:** Sustainable transportation allows for the basic needs of individuals to be met safely and in a manner consistent with human and ecosystem health in an equitable manner. It limits emissions and waste, minimizes the consumption of natural resources, improves safety, and enhances the quality of life while respecting the environment. It also develops a process to obtain input from local constituents regarding local issues and concerns.
- **Social:** The goal of social well-being is to promote smart growth by proactive planning to incorporate land-use into transportation planning. Promoting high-density housing around public transit facilities and limiting industrial and office development to expressway interchanges improves the livability to residents and employees. Providing multi-modal transportation alternatives improves mobility and accessibility to employment, shopping, education, medical and recreation opportunities. Constructing pedestrian and bicycle facilities provide the opportunity for improved health and recreation.

In addressing the objectives of this report the necessary historical background will be provided to understand the previous growth trends in Will County focusing principally on population trends, employment growth, commuting patterns and homeownership rates and how they compare to other counties. In previous decades, the growth has largely been around Joliet and the northeastern tier, but new developments elsewhere have added to population in the county that has the largest land area among the suburban counties in the Chicago region. Then the prospects of employment growth will focus on the intermodal facilities currently under development as well as future development opportunities. The report will also consider the effects of the new South Suburban Airport (SSA) near Peotone. This employment growth is essential to the development of livable communities.



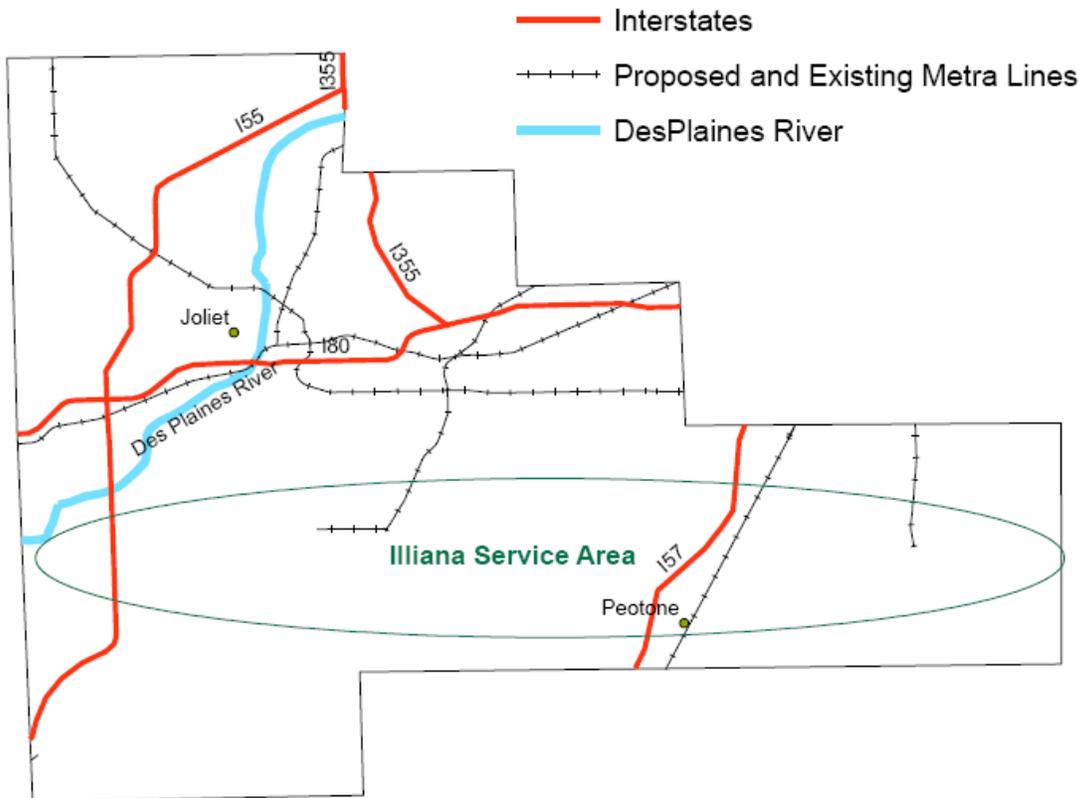
The report will then begin to consider the strategies and policies that would lead to more livable communities during the anticipated growth over the next several decades. This will include the developmental prospects around the emerging Metra corridors and

stations, particularly the Southwest Service and the Metra Electric to Peotone as well as the proposed Southeast Service through Crete (shown on the right) and Beecher.

2.0 ISSUE 1: STRATEGIES TO PROMOTE A SUSTAINABLE LOCAL ECONOMY

The construction of the Illiana expressway will connect I-55 south of Joliet to I-65 near Lowell Indiana traversing Will County (Figure 2). The area in the oval is the general location of the Illiana Expressway. The current highways and rail system are generally in a north-south orientation indicating a need for an east-west highway. The facility has been proposed to provide access to Will County's burgeoning freight and logistics

Figure 2
Proposed and Existing Transportation Facilities in Will County



Source: Adapted from CMAP's "2010 Proposed Major Capital Projects"

centers and serve its increased residential population, as well as serve as an alternate to the highly traveled I-80 corridor (CMAP, 2010). The presentation below discusses how the construction of the Illiana expressway has the potential to:

- Service the continuing population growth
- Create employment to balance jobs with housing

- Establish key multimodal transportation links including park-and-ride and transit and bicycle transportation
- Attract transportation, logistics and warehousing, and manufacturing jobs and shape development
- Integrate with the South Suburban Airport and
- Promote ancillary employment to serve the local industry

2.1 Illiana Can Service Population Growth

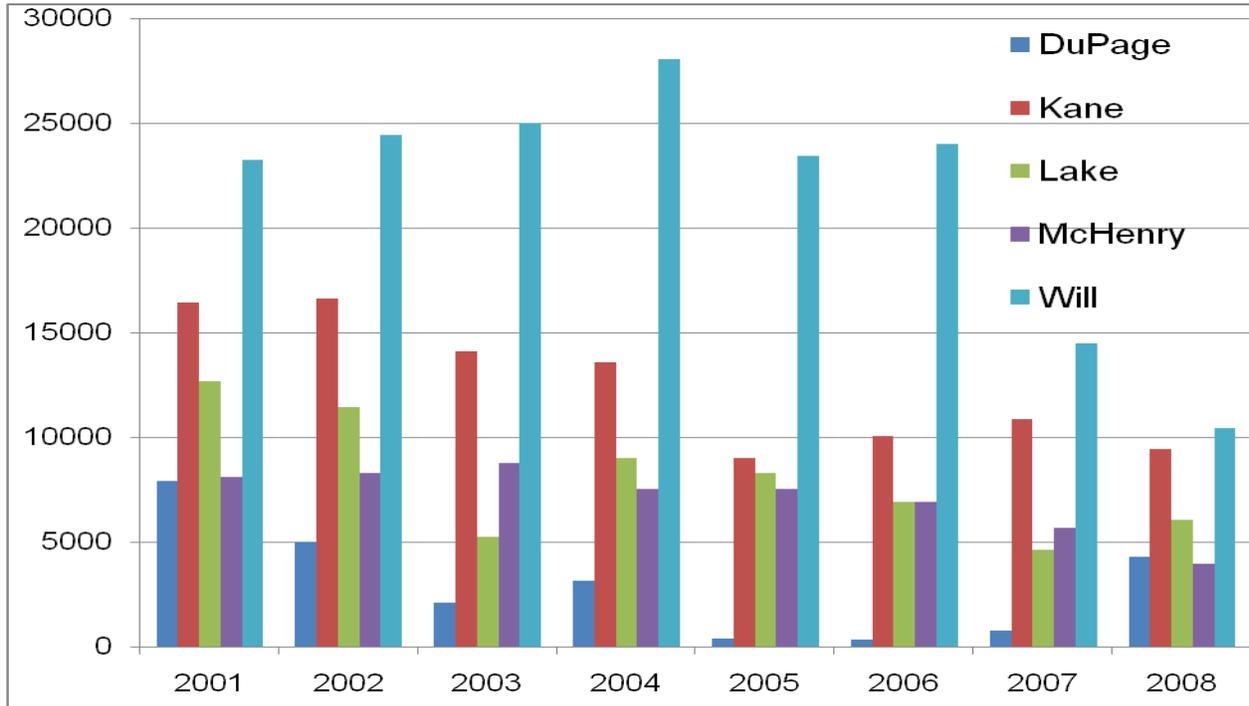
In the 1990s Will and McHenry Counties were recognized as the fastest growing counties in Illinois. While McHenry County had a slightly larger percentage increase, the largest absolute growth was in Will County. The approximately 150,000 population increase was far greater than for any of the other counties.

Will County's population increase in the 1990s was likely replicated during the following decade (2000-2010). In the first eight years of this decade the absolute growth has already exceeded the increase in the 1990s (150,000 versus 175,000).

Will County's standing as the fastest growing county in Illinois remains intact. From 2000 to 2005 Will County accounted for 47 percent of the population increase in the state of Illinois (124,144 population increase for Will County vs. 266,175 population increase in Illinois). We can see the growth in this decade more distinctly in Figure 3. Will County has been the dominant county throughout this decade. Kane County has remained as the closest challenger particularly in the most recent years for which we have data (2007-2008). The 2008-2009 data, not yet available, may well provide us with critical clues as to the impact of the housing downturn on population growth in suburban counties.

Figure 3

Annual Population Increase by County



Cook County is excluded from this analysis because its population overwhelms the suburban counties and, perhaps more importantly, it lost population in the first eight years of this decade. Also note that DuPage County, the largest suburban county in population and number jobs had only minimal growth over a three-year period (2004 to 2007).

Will County now has approximately 175,000 more residents than it did in 2000. DuPage by contrast has grown by less than 25,000. DuPage's proximity to Chicago contributes to the high cost of land; therefore houses are moderately expensive. Further, with nearly a million people in a land area less than half the size of Will County many of the DuPage communities have little available land for development.

By contrast Will County has much more open space contributing to lower costs and larger properties. Those households seeking large parcels find Will County has much more to offer than other suburban counties. Consequently Will County is approaching the population size of Lake County and also DuPage County.

Even though Will County has a high population its overall size, exceeding other suburban counties, gives it a density that currently is relatively low. Will's density is similar to the density in Kane, both with just over a thousand per square mile -- note that

the definition of an urbanized area is a contiguous area with at least one thousand inhabitants per square mile. They are, moreover, rather similar in that they both have relatively higher densities in the areas closest to Chicago and large tracts of low-density agricultural land elsewhere in the county.

2.2 Illiana Can Create Employment to Balance Jobs with Housing

We can see from Table 1 that employment in Will County has increased in thirty years by approximately 85,000. This is a growth of over one-hundred percent. If the same percentage holds for the next thirty years (2000-2030) there will be an increase of another 200,000 employees. This is plausible for two reasons. First, suburbs are initially slow in developing an employment base but once they are established then employment begins to grow more rapidly, attracting basic employment.

Table 1

Changes in Within and Between County Commuting, 1970–2000

County	Year	Total Jobs	Work within County	Import of Workers	Export of Workers	Commuting Balance
DuPage	2000	534,551	277,934	256,617	191,439	65,178
	1990	433,250	244,898	188,352	180,386	7,966
	1980	267,977	178,473	89,504	156,487	-66,983
	1970	141,661	97,226	44,435	100,050	-55,615
Will	2000	160,833	107,456	53,377	134,431	-81,054
	1990	110,231	78,614	31,617	91,631	-60,014
	1980	92,460	75,175	17,285	60,183	-42,898
	1970	74,150	63,957	10,193	28,266	-18,073
Total	2000	3,847,661	2,851,553	996,108	874,429	121,679
	1990	3,569,758	2,785,016	784,742	701,739	83,003
	1980	3,166,192	2,680,365	485,827	478,973	6,854
	1970	2,806,746	2,492,602	314,144	324,919	-10,775

Sources: Chicago Area Transportation Study (1993), and U.S. Census Bureau (2003b).

Second, over thirty years DuPage County has added almost 400,000 jobs (Table 1). While this is not likely in Will County, half that total should be within reach in 2030. Note also that Will is a much larger county (603 square miles versus DuPage County's 332 square miles) and three Metra extensions plus the STAR Line are currently being planned or seriously considered in Will County. Note also the similarity in the data for DuPage in 1970 and Will in 2000 – the numbers for Will are slightly higher in each case.

Our assumptions about population and employment forecasts seem to be supported by the 2030 forecasts endorsed by the Chicago Metropolitan Agency for Planning (CMAP). CMAP's forecasts anticipate a 575,000 population growth for Will County between 2000 and 2030, a 114 percent increase (CMAP 2006a). At the same time employment is expected to grow by 250,000 or 151 percent. Essentially, CMAP forecasts 44 workers added for every 100 additional residents.

Despite the lack of local employment, the reason why most residents have moved to the county appears to be affordable housing. The median home values in Will County have traditionally been lower than in other major suburban counties. House values in 2004 were 35% higher in DuPage County and again a third higher in 2008. For many buyers, Will County provides a choice of large lots or large homes. A more affluent home buyer can afford both. In Manhattan, for example, a new 4000 square-foot home on seven acres is currently on the market for \$550,000. While this price may be too high for many home buyers, it would be hard to find such a listing in DuPage County.

2.3 Illiana Can Establish Key Transportation Links

The Illiana Expressway can be a key transportation link proposed to provide access to Will County's burgeoning freight and logistics centers (e.g., BNSF Logistics Park and CenterPoint Intermodal Center) and serve its increased residential population, as well as serve as an alternate to the highly traveled I-80 corridor.

2.3.1 Park-and-Ride

Given the current job/housing imbalance, transportation options need to be offered to the commuters that leave the county for work. Those that commute out of the county can be encouraged to carpool by using designated lots at freeway interchanges such as the one on I-55 in Joliet (Figure 4). These types of carpool lots target long-distance commuters.

Figure 4
Park-and-Ride Facilities



2.3.2 Transit and Bicycle Links

Transit links to major employers and shopping centers can provide alternative means to accessing destinations and promote transit-oriented development. In addition, bicycle links (Figure 5) can promote a more active lifestyle that would enhance the social well-being of area residents.

Figure 5
Bicycle Bridge



Source: I-355 South Extension, Environmental Considerations, ISTHA

2.4 Illiana Can Attract Transportation, Logistics, Warehousing and Manufacturing Jobs and Shapes Development

The Illiana expressway is anticipated to trigger gains in income and employment as new businesses are attracted to Will County, as local firms obtain a competitive advantage (due to improved travel times) and as workers find the county a more attractive place to locate because of higher accessibility to jobs. Moreover, dollars invested in the construction, operation, and maintenance of the expressway will result in numerous direct full-time jobs; and each of these jobs will spur additional indirect and ancillary jobs as new income is spent and re-spent in the local economy. Direct jobs, in particular, include only jobs held by workers employed at the highway construction site itself. These jobs include all onsite laborers, specialists, engineers, and managers involved with specific highway improvement projects, such as new construction, reconstruction, major widening, restoration and rehabilitation, resurfacing, and bridge replacement.

Generally speaking, one out of three new jobs is a direct job. Past research has revealed that federally aided highway construction and maintenance work is one of the most labor-intensive construction activities studied and, therefore, investment in

highways may result in net employment gains over public investment in alternative construction activities.

Moreover, the Illiana Expressway can be an attractive alternative to I-80/94, which is one of the most congested road sections in the country. The Illiana Expressway is expected to have numerous benefits, two of which are highlighted here. First, it can provide access to the land within Will County that may be attractive to the businesses to locate the supply chain and logistics related facilities such as warehouses and terminals (Figures 6 and 7) and can shape the development reflecting local needs.

Figure 6
Logistics Parks



Figure 7
The BNSF Logistics Park in Chicago



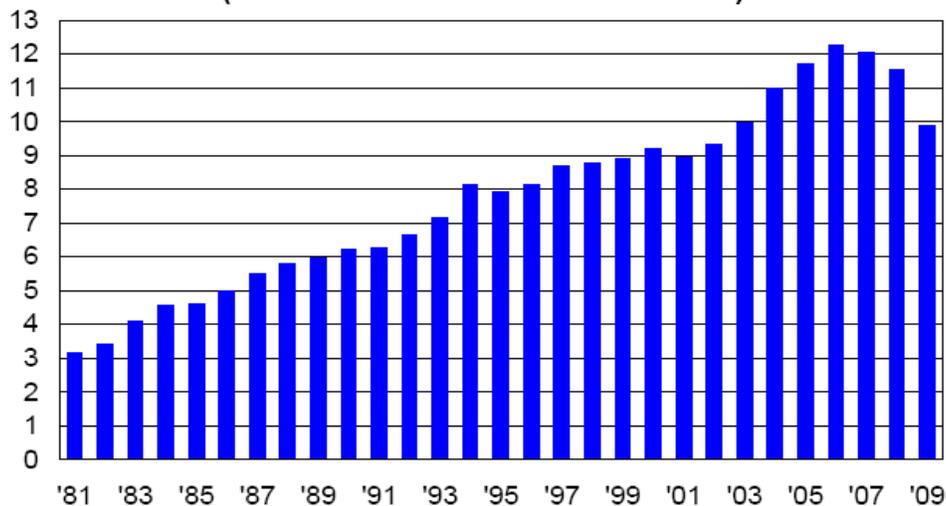
Numerous terminals are still located within Chicago where the physical design of the roads and viaducts are often not adequate to accommodate truck traffic. Congestion is a major concern as well. Although locating such facilities far from the urban core area

may raise the concern for sprawl, it is doubtful that impeding transportation access will stop the broader pattern of migration that has been occurring nationwide. For example, opening of Burlington Northern Santa Fe's Logistics Park at the Joliet Arsenal in 2002 shifted a large portion of the cargo that had been processed at Corwith Terminal, located at the 43rd Street in Chicago. Another large-scale facility, called UP Logistics Park and Intermodal Center near Elwood, is planned for completion in June 2010. This new facility is located close to the I-55/I-80 interchange several miles north of the BNSF Logistics Park Chicago. These facilities are far more efficient and accessible than the older terminals located in crowded urban spaces. To remain competitive, businesses will continue to relocate urban freight facilities to suburban and ex-urban areas. The key planning challenge is to minimize the impacts by providing adequate transportation infrastructure, rather than denying a well-planned access to those facilities.

The second benefit is that the Illiana Expressway can help alleviate negative impacts of truck traffic that will be generated by the projected economic growth in Will County.

Containerized intermodal transportation, mostly rail-truck combination, accommodated the growth in international trade as shown in Figure 8 below. The figure also reveals that the recent economic recession has led to a decrease in the intermodal container movement activities.

Figure 8
U.S. Rail Intermodal Traffic: 1980-2009
 (Millions of Trailers and Containers)



Source: Association of American Railroads. The Economic Impacts of America's Freight Railroads, February 2010

Most experts expect freight flow to return to the path of robust growth in the next few years. At the Annual TRB meeting, held in January 2010, there were extensive

discussions of the impacts of the recession on the projected growth in freight. Consensus is that the growth will likely be delayed by several years, e.g., the anticipated 2020 volume will be achieved by 2024, but it will not result in the reduction of congestion at key freight bottlenecks. The vice president of IHS Global Insight noted that by 2014 at the latest, the volume will be back up to the pre-recession level. A recent economic projection made by the International Monetary Fund supports that notion¹.

2.5 Illiana Can Integrate with the South Suburban Airport

There is a common view that good airline service is an important factor in urban economic development. Frequent service to a variety of destinations, reflected in a high level of passenger enplanements, facilitates easy face-to-face contact with businesses in other cities, attracting new firms to the metro area and stimulating employment at established enterprises. The proposed South Suburban Airport (SSA) in Peotone, about 40 miles south from downtown Chicago along I-57, is anticipated to meet the growing passenger and air-cargo needs of the south suburban Chicago region including Indiana while at the same time providing a stimulus for employment growth and economic development.

The employment growth in the vicinity of O'Hare Airport provides a few relevant insights regarding the future of the new SSA airport. The area around O'Hare Airport almost rivals downtown Chicago in terms of number of jobs. Data from the Northeastern Illinois Planning Commission (now CMAP) show that there were about 800,000 jobs located within five miles of downtown Chicago in 2000. More than 400,000 jobs were located within five miles of O'Hare in 2000, and about 950,000 jobs in the suburbs were located within a ten-mile radius of O'Hare Airport.

The economic impacts of the SSA may be substantial. The current summary baseline estimates of the projected impacts in 2030 are (Murtha and Palzer, 2007):

JOBS

- All-Sector Jobs: 7,737 direct jobs; 50,476 total jobs, including indirect and induced jobs.
- Commercial Passenger Operations: 4,267 direct jobs; 42,130 total jobs, including indirect and induced jobs.
- Air Freight Operations: 3,424 direct jobs; 8,154 total jobs, including induced jobs.
- General Aviation: 46 direct jobs; 192 total jobs, including indirect and induced jobs.

Source: ACG (1)

¹ International Monetary Fund. World Economic Outlook, 1/26/2010

2030 ANNUAL EXPENDITURES AND INCOME (2007 DOLLARS)

- Value added: \$3.6 billion (including labor Income of \$2.5 billion)
- Change to gross regional product: \$6.2 billion (including total visitor expenditures of \$1.3 billion)

Source: ACG (1), BLS

ANNUAL ILLINOIS STATE TAX REVENUES (SELECTED TAXES, 2007 DOLLARS)

- Total 2030 Illinois Taxes: \$157.0 million
- Income Tax: \$67.7 million
- Sales Tax (Illinois residents): \$31.7 million
- Sales Tax (visitor expenditures): \$57.6 million

Source: ACG (1)

The South Suburban Airport has many advantages for the air freight industry that may make the airport attractive:

- Substantial airside capacity;
- Substantial terminal development potential; and
- Substantial landside capacity, with improved highway facilities and additional access planned

One major interstate highway, Interstate 57, currently serves the site of the proposed SSA as a north-south route. No interstates provide east-west access, although several state routes serve large numbers of commercial trucks on two and four lane east-west highways. Truck traffic is much heavier on these routes than the State average on similar roadways. Because the state routes travel through communities and residential areas, two lane highways and rural roads experience the brunt of the truck traffic. The development of the Illiana Expressway through Will County could create an interchange with I-57 with access to the airport. Depending on the corridor chosen this may contribute to a new concentration of activity somewhat analogous to the urban activity near O'Hare Airport (Figure 9). The large number of hotels and office buildings in the O'Hare Complex are there in large part because it represents a location that has direct expressway access to a number of other activity centers such as Schaumburg, Oak Brook and downtown Chicago. Since the intersection of I-57 and the Illiana would not have the same degree of accessibility it is not expected to have the same amount of urban development. Still it represents a major point of connectivity and since there is ample developable land, the prospects for substantial urban development are in clear sight.

Indeed, the general consensus is that an interstate/major east-west transportation corridor is vital to the future quality of life for Will County residents. The proposed Illiana

Expressway could provide such a desired east-west access to handle major truck traffic caused by the congestion on Interstate-80 and the increasing development of the CenterPoint Distribution Center near Elwood, south of Joliet. The additional east-west capacity can also mitigate vehicle to vehicle and vehicle to truck conflicts thereby enhancing safety.

Figure 9

Expressway Interchange, Airport and Commercial Activities



The SSA is expected to bring new convenience to south suburban residents who now have to travel long distances to air terminals. For residents south of a line from Southeast Chicago through the Palos area to Lockport, the SSA would be a quicker trip than a trip to Midway [ACG (2)]. These benefits of a nearby airport have been or are expected to be enhanced by a number of surface transportation improvements in the south suburbs. These highway and rail improvements include (Murtha and Palzer, 2007):

- I-80/94 Kingery Expressway Reconstruction/Additional Lanes (Completed)
- I-294 Tri-State Reconstruction/Additional Lanes from 95th to I-94 (Under Construction)
- I-80 Additional Lanes from I-55 to US 45 (Planned)
- I-355 Extension to I-80 (Completed)
- I-57 Additional Lanes (Planned)
- IL-394 Upgrade and Additional Lanes (Planned)
- Illiana Expressway with IL-394-I-57 Connector (Planned)

- South Suburban Tollway I-80 to I-57 (Planned)
- Metra Southeast Service to Beecher (Planned)
- Metra Southwest Service to Manhattan (Completed)
- Metra Electric Service Extension to Peotone/SSA (Planned)
- STAR Line Elgin Joliet and Eastern Service (Planned)
- Kankakee County Commuter Rail (Planned)

2.6 Ancillary Employment Would Serve Local Employers

Typically, as population grows retailing and local services respond. Subsequently, basic (export) employment develops relying on the availability of local labor, e.g., intermodal yards and manufacturing. Finally, ancillary employment evolves to service basic employers.

2.7 Summary

Section 2 discussed strategies to promote a sustainable local economy as a means to promote livability in Will County. The discussion covered the reality of significant future population growth and the need to create employment to balance jobs with housing. The construction of the Illiana Expressway is seen as a key transportation link that could shape the spatial distributions of the population, employment and economic growth. Potential sprawling effects can be counterbalanced with park and ride facilities and transit and bicycle links as well as livable communities centered on passenger rail stations. In addition to new construction jobs, the expressway is expected to attract transportation, logistics, warehousing and manufacturing jobs. Further integration with the proposed SSA has the potential to attain a sustainable local economy.

3.0 ISSUE 2: STRATEGIES TO PROMOTE A SUSTAINABLE ENVIRONMENT

3.1 Illiana Can Help the Jobs/housing Balance

With the rapid increase in population, the growing economic base of the county is not keeping pace; there are not enough jobs for the workers residing in the county. Will County today is where DuPage was in 1960 – only 44 percent of its workers were employed in the county (Table 2). In DuPage County the employment began to grow in the 1960s and the proportion working within the county rose. Initially retailing and other functions that serviced the local population arrived, providing jobs for the local population. In time other employment evolved, mainly basic (export) industries.

Table 2
Percent of Workers Who Work in the County of Residence, 1960-2000

County	1960	1970	1980	1990	2000
Cook	98%	95%	94%	91%	88%
DuPage	44%	49%	53%	58%	59%
Kane	85%	74%	70%	60%	56%
Lake	79%	73%	69%	63%	67%
McHenry	73%	63%	59%	51%	51%
Will	77%	69%	56%	46%	44%

Sources: Chicago Area Transportation Study (1993), and U.S. Census Bureau (2003b).

Illiana can facilitate the promotion of a host of strategies to attract employment to Will County including: Reducing travel times for people and freight, reducing wasted time and congestion, saving energy, improving air quality, and improving safety by taking trucks off local roads, and implementing an Intelligent Transportation Systems (ITS) 'Smart' highway.

3.1.1 Illiana Can Reduce Travel Times (People and Freight)

Due to the jobs and workers imbalance, Will County residents find employment in other counties and therefore have relatively high average travel times to work (Table 3). Moreover, the county also had the largest population increase since 1990.

Table 3
**Changes in Mean Travel Times for all Workers
 by County and CMSA, 1990-2000**
 (travel times in minutes)

Place	1990	2000	Change
Cook	29.4	32.6	3.2
DuPage	27.3	29.0	1.7
Kane	23.5	27.3	3.8
Lake	26.4	30.1	3.7
McHenry	28.8	32.2	3.4
Will	27.3	32.0	4.7
Chicago CMSA	27.9	31.0	3.1
New York CMSA	30.0	34.0	4.1
Los Angeles CMSA	26.4	29.1	2.7
National mean	22.4	25.5	3.1

Source: U.S. Census Bureau 1990 and 2000 Census of Population and U.S. Department of Transportation (2003, p. 3-5).

As employment in Will County grows average county travel time to work will stabilize and may even decline. Figure 10 represents one of the many employers already in the county.

Figure 10
The Citgo Plant in Will County



3.1.2 Illiana Can Reduce Wasted Time and Congestion

As early as 2003, there was a broad recognition that in order to address the present and future capacity needs to transport goods this nation needs a multimodal freight transportation system.² Depending on the alignment, Illiana could cross the mainlines of most Class I railroads in Chicago including CSX, Norfolk Southern, Union Pacific, and CN (Figure 11). It is a distinct possibility that the Illiana could be used by the railroads to exchange cargo. If that were to happen, the volume of freight coming into the congested rail system in Chicago as well as overall intra-regional truck traffic congestion will be reduced.

² AASHTO, Invest in America- Freight Rail Bottom Line Report. American Association of State Highway and Transportation Officials, January 2003.

Figure 11
Regional Rail Network



3.1.3 Illiana Can Save Energy

By attracting employment to balance jobs with housing the residents' commute time and distance can be reduced. This will result in a reduction in gasoline consumption. Further reductions in fuel consumption could be achieved by a more efficient flow of truck traffic. The proposed Illiana Expressway has the potential to facilitate such energy savings.

3.1.4 Illiana Can Improve Air Quality

Illiana can be a catalyst in reducing vehicle miles traveled, gasoline consumption and reduced congestion. This will result in fewer auto emissions and improved air quality.

3.1.5 Illiana Can Improve Safety by Taking Trucks off Local Roads

Some of the arterials in Will County already experience heavy truck traffic for their class. Laraway Road (County Highway 74), for example, is a 2-lane road that runs

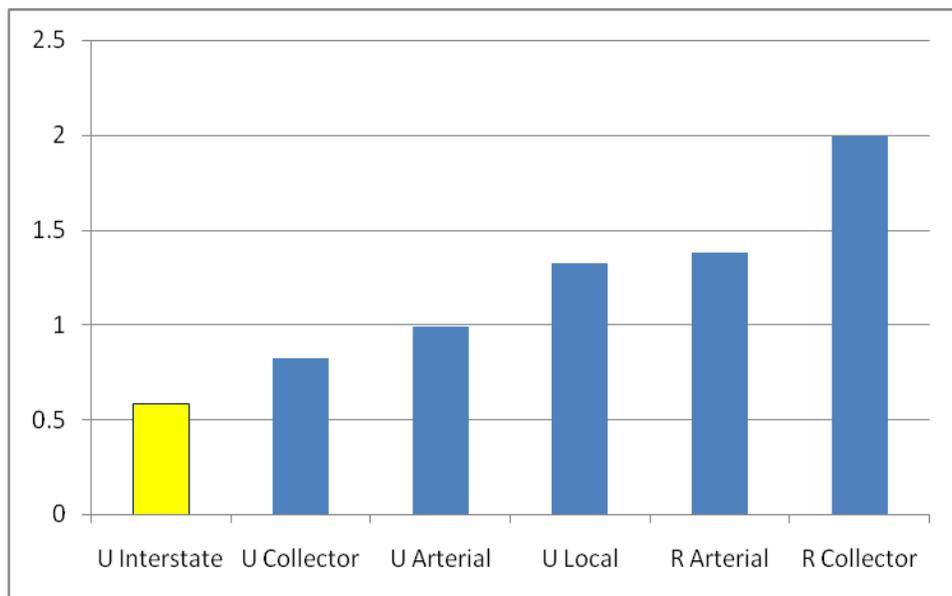
approximately 2 miles south of I-80. The data compiled by CMAP³ show that there have been several accidents, some of them fatal, involving tractor-trailers on local arterials. Many of these serious accidents seem to have occurred in the general corridor considered for the Illiana Expressway along the southern boundary of the county. A traffic count taken in November of 2009 showed that of the 7430 vehicles counted during a 24-hour time period, 12.7% or 944 were heavy vehicles, of which 523 were multi-unit trucks. Other arterials in Will County carry a high volume of heavy vehicles for their class (Figure 12).

³ <http://www.cmap.illinois.gov/cmp/safety.aspx>; accessed April 2010.

CMAP is currently developing a freight plan for the region. The recommended capital projects include the Illiana Expressway as well as improvements to the arterials. As the employment in the county increases, truck traffic will increase further. According to CMAP, most parts of Will County will experience more than 100% growth in freight truck traffic between 2007 and 2040. The Illiana Expressway can help consolidate truck traffic that will otherwise use local arterials, thereby improving the livability for the residents of Will County.

Importantly, fatality rates on urban interstates are proportionately lower compared to other types of roads. Indeed national data seem to indicate that rural collectors have almost four times the fatality rate of urban interstates (Figure 13). The Illiana expressway is therefore expected to reduce the number of serious road accidents that are currently occurring in the local rural and urban network in the corridor.

Figure 13
**2007 Fatality Rates
 by Road Classification**
 (per 100 million Vehicle Miles Traveled)
 U – Urban, R – Rural



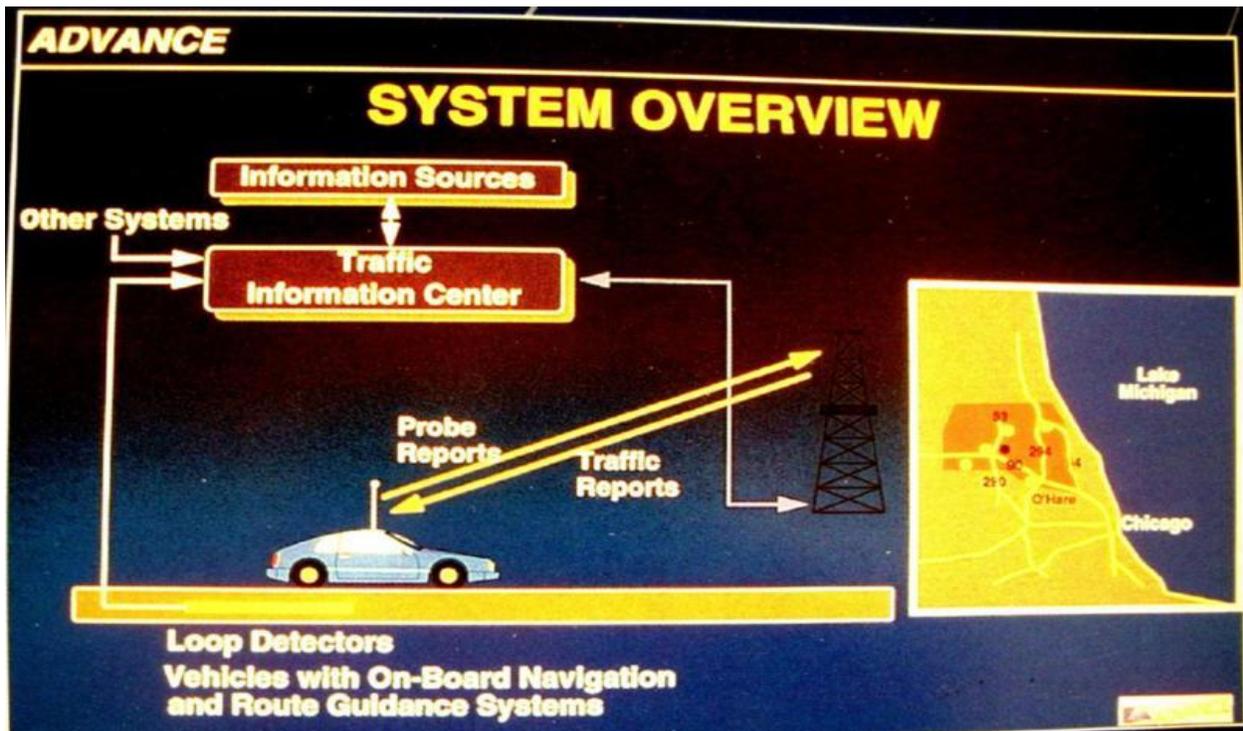
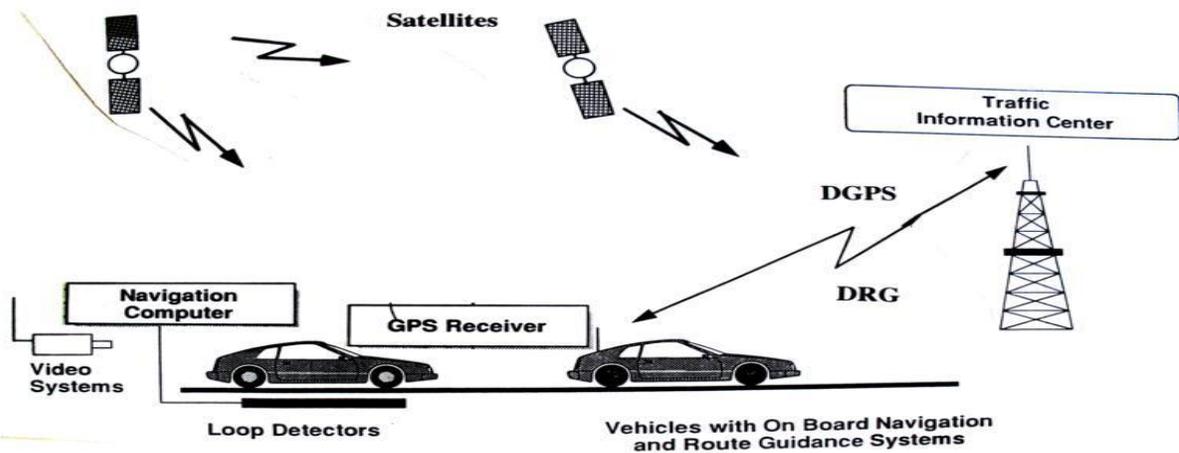
Source: http://safety.fhwa.dot.gov/speedmgt/data_facts/docs/fataltbl2007.pdf

3.1.6 Illiana Can Implement ITS ‘Smart’ Highway

Intelligent Transportation Systems (ITS) apply well-established technologies of communications, control, electronics and computer hardware and software to the surface transportation system in order to improve safety, reduce congestion, increase

and provide higher quality mobility, reduced environmental impact, improved energy efficiency, and improve economic productivity (Figure 14). The construction of the new Illiana expressway offers a unique opportunity to implement a host of ITS user services with numerous functionalities.

Figure 14
Functionalities of a Smart Highway



Travel and traffic management user services, for example, will offer pre-trip travel information, en-route driver information, route guidance, ride matching and reservation traveler services information, traffic control, incident management, travel demand management, emissions testing and mitigation, and highway-rail intersection

monitoring. Additional public transportation management user services will offer public transportation management, en-route transit information, personalized public transit, and public travel security.

Moreover, electronic payment services can provide travelers with a common electronic payment medium for all transportation modes and services (e.g., parking lots, tollways, congestion pricing), ease passenger transfers among bus, rapid transit, and commuter rail systems and can be integrated with credit and debit cards and other financial transactions. In addition, commercial vehicle-operations, user services can offer commercial vehicle electronic clearance, automated roadside safety inspection, on-board safety and security monitoring, commercial vehicle administrative process, hazardous materials security and incident response, and freight mobility.

Illiana can also implement emergency management user services for emergency notification and personal security, emergency vehicle management, and disaster response and evacuation. Finally, maintenance and construction management user services will monitor/track vehicle location, support enhanced routing, scheduling, and dispatching functions, and use on-board diagnostic systems to assist in vehicle operation and maintenance activities as well as monitor traffic, road surface, and weather conditions, perform hazardous road conditions remediation, and have the ability to alert of changes in these conditions.

It is possible that Illiana has the potential to become a test bed for the convergence, integration and deployment of such ITS technologies to improve transportation safety, relieve congestion, and enhance productivity in the corridor.

3.2 Illiana Can Establish Process to Protect Environment and Incorporate Local Input

The Illiana Expressway can establish a process to protect the environment and incorporate local input (Figure 15). Environmental teams will need to successfully address issues such as wetland mitigation, species migration and research, regional multi-use trail connections as well as identify new ways to coordinate and communicate issues along the corridor.

Experiences from other similar projects in the region could be very helpful in this regard. During the I-355 south extension, for example, environmental team building was achieved by: (1) requesting key agency staff to be assigned to various projects, (2) developing a flexible project schedule, (3) clearly explaining the project's objectives to stakeholders, (4) coordinating early and often, (5) highlighting project's uncertainty regarding budgets, schedules, etc., (6) listening to agency concerns and working to

address them, (7) visualize the project during frequent field visits, (8) demonstrating system-wide and project-wide stewardship, and (9) trying new avoidance, mitigation and protection techniques⁴.

Figure 15

Environmental Issues and Local Input



Dragonfly preservation



Source: I-355 South Extension, Environmental Considerations, ISTHA

3.3 Illiana Can Utilize Context Sensitive Solutions

IDOT mission is “to provide cost-effective transportation in Illinois in ways that enhance quality of life, promote economic prosperity and demonstrate respect for our environment”. The Illiana construction has the potential to reflect surroundings, or “context”, obtain input from stakeholders, address local concerns, seek multimodal solutions, and improve safety and mobility (Source: CSS Guide, IDOT, <http://www.dot.state.il.us/css/cssguide.pdf> - accessed April 2010).

Context Sensitive Solutions (CSS) principles applied to the planning and design of transportation projects facilitate the successful completion of such projects by addressing real or perceived incompatibility with surroundings; community impacts; emphasis on mobility without consideration of other community values; disproportionate spread of benefits or impacts (environmental justice); and lack of stakeholder education and participation throughout the planning and design processes.

a Porte, A. *Integrating Environmental Concerns with the Planning and Construction of the South Extension of Interstate 355 into Will County Illinois*. ISTHA, private communication February 2010.

Common tenets of CSS solutions include:

- (1) Balance safety, mobility, community and environmental goals in all projects;
- (2) Involve the public and stakeholders early and continuously throughout the planning and project development process;
- (3) Use an interdisciplinary team tailored to project needs;
- (4) Address all modes of travel; and
- (5) Apply flexibility inherent in design standards; and Incorporate aesthetics as an integral part of good design.

4.0 ISSUE 3: STRATEGIES TO ENHANCE SOCIAL WELL-BEING

4.1 Illiana Can Engage Communities and Stakeholders

The process for planning the Illiana Expressway can engage communities and stakeholders to address various issues and concerns, such as the impact on property owners, land use and other impacts regarding construction of the new facility (Figure 16). Municipalities and townships within the affected corridor of the Illiana facility would be invited to participate.

Stakeholders within the Illiana corridor would address several issues regarding smart growth:

- *Spatial distribution of affordable housing:* Given the right economic conditions, the Illiana corridor will likely attract new development in fast growing areas where jobs will be increasingly concentrated.
- *Adapt to regional diversity:* Illiana will traverse numerous localities in the Chicago metropolitan area, each one vested with the power to make critical decisions over land use, zoning and taxation. Eventual differences in growth patterns, governmental fragmentation and political organization will set the basic context for smart growth responses and, by necessity, will require different approaches.
- *Growth management:* Emphasis could be given to land-use coordination on the local, county and regional levels by granting funding priority to localities that plan collaboratively so that localities could transfer development rights within and between municipalities to where development is desired.

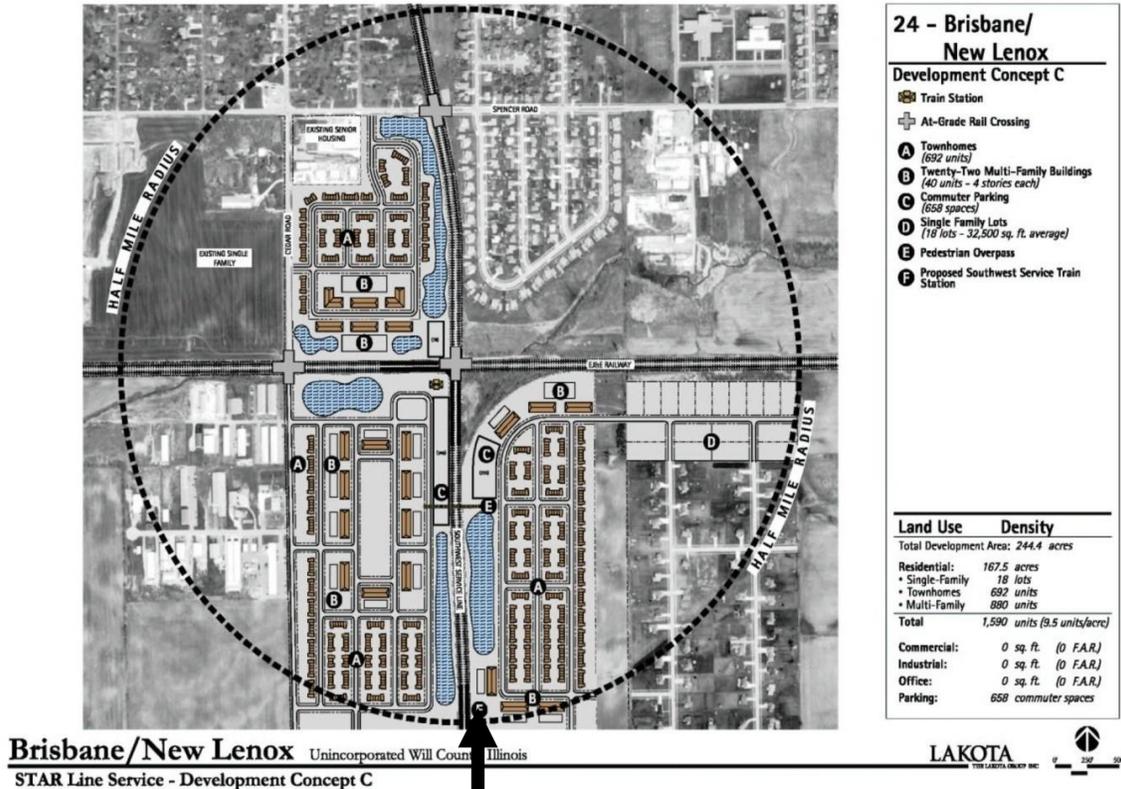
Figure 16
Stakeholders Input



4.2 Illiana Can Develop High Density, Multi-use and Infill around Transportation Facilities

Communities within the Illiana corridor would be encouraged to develop comprehensive plans for land use around transportation focal points (stations, terminals, etc.). For example, the Metra STAR Line Land Use Study met with communities in south Cook and west Will counties to develop comprehensive plans around the proposed stations. Local communities developed three concept plans (one of which is shown in Figure 17) with different densities, residential and commercial mixes. In most cases, plans included significant multi-family, town homes and higher density than typical suburban development. It is envisioned that a similar process would obtain municipal input into the zoning and design of the growth resulting from the infrastructure investment.

Figure 17
 Concept C 18 single family, 692 townhomes and 880 multi-family units



4.3 Illiana: Potential (or Prospects) for Transit-oriented Development and Traditional Neighborhood Design

Given the availability of open land at and in close proximity to many of the new and proposed Metra stations a development analogous to Prairie Crossing may be practical (Figure 18). Prairie Crossing is located in Lake County at a unique nexus where two Metra lines meet with two stations, one on each line.

Figure 18
Prairie Crossings: Transit-oriented Development



On their web site Prairie Crossings is described as a “conservation community.... was designed to combine the preservation of open land, easy commuting by rail, and responsible development practices. It is now considered a national example of how to plan our communities to enhance the environment and support a better way of life.”

It is characterized by large tracts of open land with numerous retention ponds and small lakes. There are large playgrounds and places for outdoors activity. It has many trails that encourage active living.

The focal point of the community is the retailing complex on Illinois 137. Across the highway is the Milwaukee Road Metra Station (Figure 18). The retail complex has housing on the top two floors and ample parking. There is a day care center and a restaurant, the types of facilities that relate to commuters.

The Prairie Crossing concept could potentially be repeated at either or both Manhattan and Laraway Road Metra Stations on the Southwest Service.

4.4 Illiana Can Shape Development by Targeting Interchanges for Industrial and Office Uses

As employment in Will County grows, interchanges between Illiana and major north-south highways are expected to attract employment centers that need highway access. The Exxon/Mobil refinery near Joliet (Figure 19) is one such example.

Figure 19
Exxon Mobil Refinery: Joliet



This does not preclude employment activity elsewhere in the county such as the Operating Engineers facility near Symerton. Like other major employers it is some distance from residential neighborhoods in places where ample land is available for expansion.

Figure 20
Operating Engineers Building near Symerton



An improved highway network that leads to growth in the local economy can also bring higher wages for workers, greater net income for owners of local businesses and increased taxes to municipalities. It is expected that economic activity will migrate to Will County in response to its improved transportation infrastructure as with the new roads that are planned to service the new intermodal facilities at the former arsenal, both the BNSF Logistics Park and the CenterPoint Intermodal Center (Figure 21).

Figure 21
Road Access, Logistics Centers and I-55



4.5 Illiana Can Develop Multi-modal Transportation Alternatives

As seen earlier, the Illiana can offer opportunities to develop multi-modal transportation alternatives. Four proposed Metra improvements can provide commuter rail alternatives. Likewise, park-and-ride lots located at expressway interchanges could promote ridesharing and carpooling. Additionally, walking paths and bicycle trails can provide a healthful alternative mode of travel.

Pace Route 511 between downtown Joliet and the Arsenal Development provides service to the BNSF Intermodal yard and CenterPoint Development, and also passes the Elwood city hall (Figure 22). This route would intersect the Illiana corridor and provide an opportunity to develop a multi-modal connection. Several of the routes in south and west Joliet may also have potential for an Illiana connection, depending on the highway alignment and location of interchanges.

Figure 22
Bus Transit to Access Various Destinations
(Elwood Village Hall at the bottom)



In addition, several Pace routes, 358, 362 and 367 serve southern Cook and northern Will County. Extensions of these routes to the Illiana Expressway interchanges would be considered if the demand warranted. Pace also provides van pools for large employers as an incentive to reduce single occupant auto use.

4.6 Illiana Can Improve Mobility to Residents

Illiana has the potential to enhance the mobility of Will County residents as well as residents from other areas to major destinations such as shopping, education, medical and the Balmoral Park racetrack, Lewis University, the Chicagoland Speedway (Figure 23).

Figure 23
**Large Venues (top to bottom): Balmoral Park, Lewis University, Chicagoland
Speedway, New Retail Shops in Elwood**



4.7 Illiana Can Promote Active, Healthy Living: Walking and Bicycling

One of the communities in Will County that has already developed a commercial district that is pedestrian friendly is Plainfield (Figure 24). The use of brick pavers and street furniture that makes walking and strolling attractive is a key to making pedestrians recognize that the district is intended for their use not just for cars. The use of low barriers, as seen on both photographs below, in Plainfield makes pedestrians feel safer and they realize that this is clearly their space. Trees and other plantings add to the

appeal of this area as well as the stylish lamp posts and traffic signs. These features contribute to an overall aesthetic that is inviting and a pleasant place to linger.

Figure 24
Pedestrian Friendly Plainfield



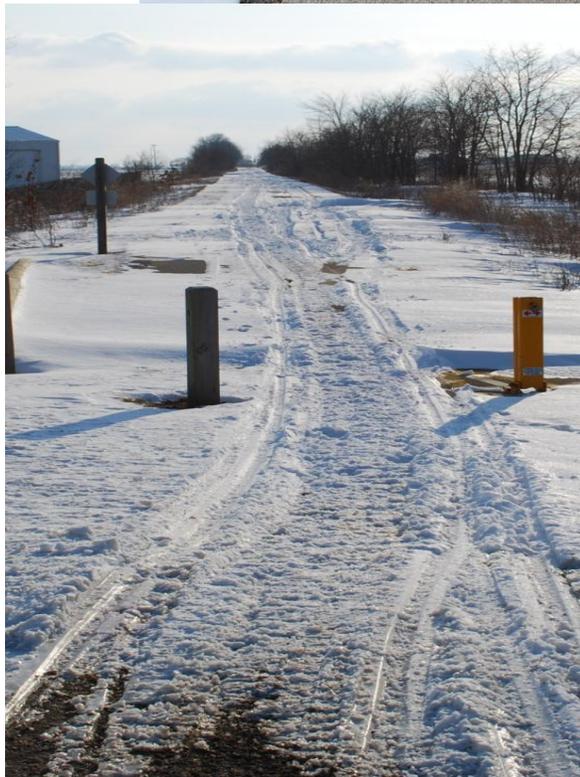
The livability of neighborhoods can be enhanced by including pedways as part of a development. This encourages physical activity and adds to the aesthetics of the neighborhood. These pedways, when they are sufficiently wide, as in the area near Manhattan (top of Figure 25), may be suitable for bicycling and snow sports in the winter.

Long-distance trails can also add to the livability of Will County. A good example is the Wauponsee Glacial Trail (bottom of Figure 25). It extends over twenty miles from I-80 at the north end to the Illinois River at the south end. Along the way it passes the eastern border of the Midewin National Tallgrass Prairie (former arsenal).

Currently this is the only major trail through this part of Will County. A potential trail along the Illiana Expressway to augment this trail would substantially add to its practicality. With another east-west axis it would substantially add to the trail network. In a graph-theory context the complexity of the trail system would be enhanced by changing it from a mere one route system to one that allows for considerable more exploration and destinations.

In many European settings bicycle trails parallel major highway facilities partly because the acquisition of a modest additional real estate is practical. Seeing the bicycling along the expressway may also be a visual encouragement for motorists to bicycle more frequently.

Figure 25
 Walking Paths and Bicycle Trails near Manhattan (top) and Wauponcee Glacial Trail (bottom)



5.0 SUMMARY

Will County will continue its trend of population growth that began decades ago. A key strategy for the future is to attract employment to help the jobs/housing balance. The Illiana Expressway has the potential to act as a catalyst to attract employment in the transportation, distribution and light manufacturing industries. Equally important, the Illiana can provide an opportunity to shape the growth to achieve livable communities. It can also attract basic employment along the corridor, mainly at interchanges and attract traffic to the expressway that might otherwise use arterials near residential areas.

The Illiana Expressway can support community sustainability and livability in Will County by facilitating the following strategies:

- Promoting a sustainable economy by attracting employment, providing transportation links and shaping employment along the corridor.
- Promoting a sustainable environment by balancing jobs with housing, reducing travel times, wasted time and fuel, improving safety and air quality while protecting the environment.
- Enhancing the social well-being by engaging the community, developing sound transportation and land-use policies, providing multi-modal transportation alternatives that improve mobility and a healthy life style to its residents.

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