A detailed map of Illinois showing the proposed 158 Outer Belt route. The map includes major highways such as I-55, I-70, I-155, and I-157. Key cities and towns are labeled, including Granite City, East St. Louis, Farview Hts., Collinsville, O'Fallon, and Shiloh. The proposed route is highlighted with a thick black line.

Illinois 158 Outer Belt Feasibility Study

Final Report

January 2002



Illinois Department of Transportation
Division of Highways / District 8
1102 Eastport Plaza Drive / Collinsville, Illinois / 62234-6198

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ILLINOIS 158 OUTER BELT FEASIBILITY STUDY EXECUTIVE SUMMARY

The Illinois Department of Transportation (IDOT) initiated the Illinois 158 Feasibility Study to determine the need for an "outer belt" highway corridor around the southwestern Illinois metropolitan area. The feasibility study examined existing and future transportation demand, land use and environmental issues in the corridor; identified and evaluated a variety of alternatives; and developed recommendations in conjunction with input from the public.

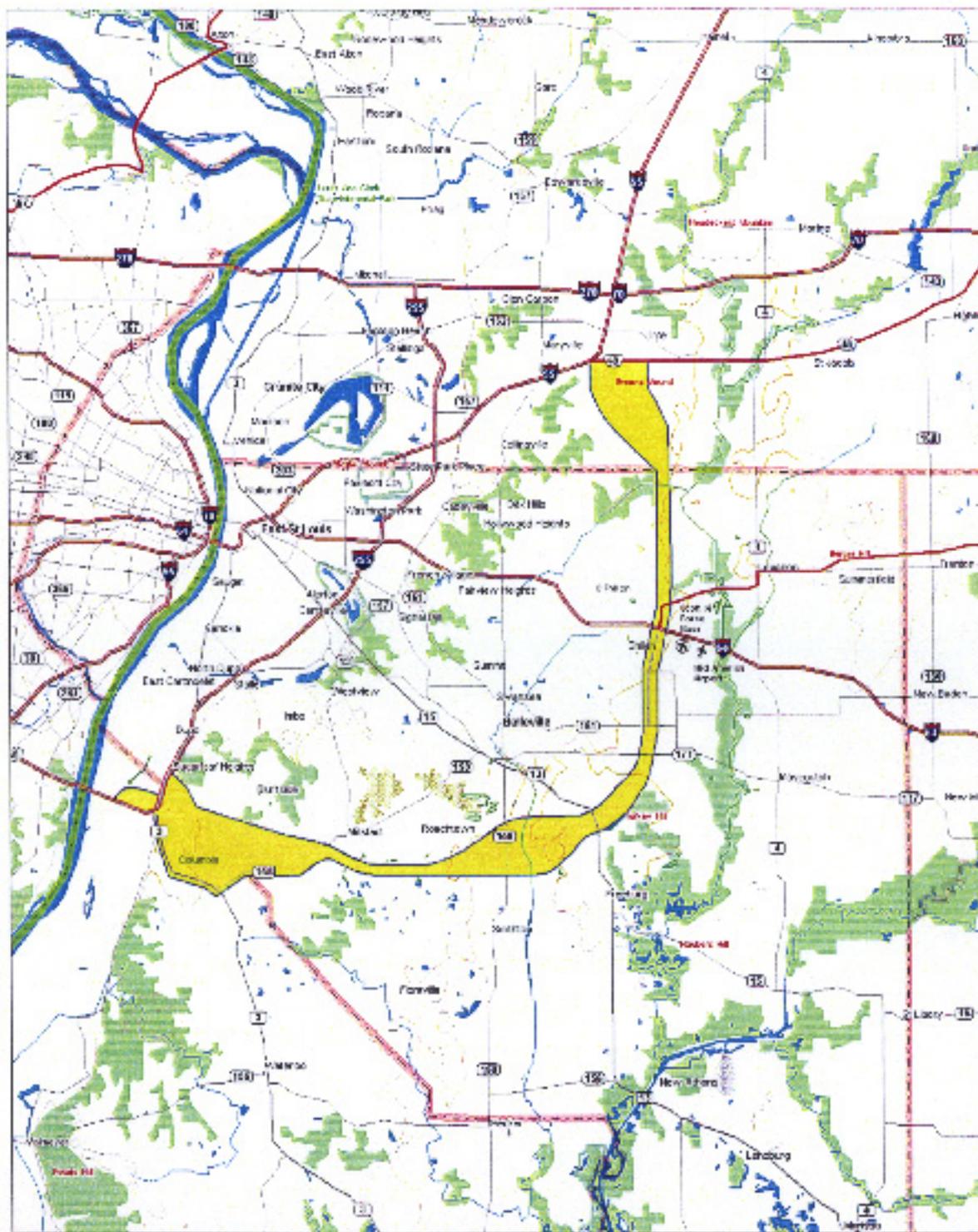
This study initially looked at a broad study area and narrowed the corridor based on the discussions with local officials. The study area, a 37-mile long, reverse 'L' shaped corridor, extends from the I-55/I-70 and US-40 interchange at Troy in Madison County on the north, south and west through St. Clair County, to the I-255/US-50 and IL-3 interchange near the Jefferson Barracks Bridge in Monroe County. The recommended corridor is depicted in Figure ES-1.

To guide the feasibility study and provide technical review, a Study Management Group was formed, with representatives from IDOT; St. Clair, Monroe and Madison counties; and the East-West Gateway Coordinating Council. Several meetings with representatives of municipalities in the study area were also held throughout the course of the study to help refine the corridor. Other federal and state agencies were kept apprised of the study. The general public was also engaged, through three public information meetings held to inform the public of the study and the initial findings.

In defining the study, the Study Management Group identified three goals: improving transportation mobility; supporting economic development; and enhancing the environment. Stakeholder interviews were performed to gain a further understanding of study issues. The main themes resulting from the stakeholder interviews included:

- the project was longer term;
- an interstate-like facility was preferred;
- the need to preserve right-of-way was important, as the area southeast of Belleville is experiencing development pressure;
- the facility needs to provide access from the Jefferson Barracks Bridge to central St. Clair County, including Scott Air Force Base and Mid America Airport; and
- the study should also consider other transportation modes.

Figure ES-1
Recommended Study Corridor



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Population and employment projections through the year 2020 indicated that the study area will grow by 23% and 19% respectively. Currently, the area is mostly farmland interspersed by towns and expanding suburban development. Travel rates in the future are expected to increase as population and employment levels rise.

Initial traffic projections were developed for several alternative corridors, including alternative connections at each terminus, where the proposed facility connects to the existing transportation network. The projected traffic volumes for the proposed facility generally ranged from 16,000 to 45,000 per day. Based on these traffic projections, future travel demand would require a four-lane facility, with six lanes needed in the vicinity of Scott Air Force Base between Interstate 64 and Illinois 161.

In terms of regional transportation mobility improvements, the proposed outer belt highway results in an overall 0.4% improvement in average highway speeds for the entire metropolitan area. Regional vehicle trips and vehicle miles of travel increased slightly, but were more than offset by the reduction in vehicle hours of travel. Lastly, the study analysis determined that 43 percent of the vehicles using the proposed outer belt facility would have both trip ends within Southwestern Illinois.

Conceptual design was completed for the refined corridor, including alternatives for providing intermediate access to the facility (grade-separated interchanges, at-grade intersections, and a mix of interchanges and intersections), and options for connections to I-55/70 and I-255/US-50 at either terminus of the facility. This conceptual design process included developing information on the physical location, facility design type, typical cross sections, community impacts and preliminary cost estimates of the alternatives. These concept designs were based on IDOT design standards.

Conceptual costs were developed for each option using unit cost pricing. These unit costs were based on previous Southwestern Illinois studies and experience from other similar areas. A 25 percent contingency factor was used given the concept level definition of the alternatives and the nature of the uncertainties at this early stage of the implementation process. A 15 percent factor was used for design and construction engineering. This analysis resulted in a range of costs, from a low of \$170 million (with intermediate access provided by at-grade intersections) to a high of \$240 million (with intermediate access provided by grade-separated interchanges) in current dollars. More recent cost estimates developed by IDOT based on recent bid lettings range from \$325 million (with intermediate access provided by at-grade intersections) to \$400 million (with intermediate access provided by grade-separated interchanges) in current dollars. These estimates, as well as the concept designs, will require additional refinement, which will occur during any subsequent engineering study.

Potential environmental issues were identified in this feasibility study (a detailed analysis of the environmental impact that would be encountered was beyond the scope of this feasibility study). These potential environmental issues included the Stemler Cave area, several threatened or endangered species, wetlands, and human development impacts. Many of these potential impacts above will be dependent on the specific alignment of the proposed facility, which will be determined during a subsequent Phase 1 Location Study. However, it appears that it will be difficult to avoid the Stemler Cave recharge area. For the purposes of the feasibility study, a closed drainage system and replacement of groundwater through the recharge area was included in the conceptual cost estimates for the facility.

In addition to studying the proposed outer belt facility, other transportation improvements were considered that would complement a proposed new outer belt facility. These improvements could include enhanced existing intersections, widening selected existing roadway sections, improved traffic signal timing, improved access management, new or enhanced transit services or the use of intelligent transportation systems (ITS). ITS improvements use new technologies to provide information and travel conditions for travelers.

Prior to making any study recommendations, three public information meetings were held to educate, gauge community support for the project and to determine if there were any unknown barriers to further study of the proposed corridor. Held at the end of September 2001 and in locations throughout the study area (with one meeting in each affected county), the public information meetings were attended by 491 individuals. In addition to verbal comments and questions given at the meetings, 73 comment forms were returned. IDOT responded to all written comments.

With the public information meetings completed, the Study Management Group was provided with the study results and preliminary recommendations. These include:

- In meeting the goal of improving transportation mobility, the proposed outer belt highway improves traffic movement and would help accommodate the 20% to 25% growth in traffic generated by the projected 23% population growth and 19% employment growth between 1996 and 2020 in the study area. A four-lane, limited access facility would result in safer transportation operations, since four-lane limited access facilities typically have lower accident rates.
- The proposed outer belt highway would support the goal of improving economic development opportunities. Economic development occurs with increased total output, typically resulting from an increase in the supply of labor, the amount of capital available, improvements in technology, and the level or quality of materials. The proposed outer belt facility would improve access to regional

labor pools and to potential markets by facilitating goods movement through the study area.

- Although there are potential environmental impacts that could result from the implementation of this proposed outer belt highway, the feasibility study did not reveal any "fatal flaws" in the corridor that would preclude continuing further study. Any subsequent Phase 1 Location Study will need to analyze these environmental issues in much greater detail to determine if these impacts can be avoided or mitigated.

In December 2001, the Study Management Group accepted the findings of the feasibility study and recommended that the project advance to the next step, a Phase 1 Location Study.

1. INTRODUCTION

1.1 Study Purpose

The Illinois Department of Transportation (IDOT) initiated the Illinois 158 Corridor Feasibility Study to determine the need for an "outer belt" highway corridor around the southwestern Illinois metropolitan area. The purpose of this feasibility study was to examine the existing and future transportation, land use and environmental issues in the corridor, identify and evaluate a variety of alternatives, and develop recommendations in conjunction with input from the public.

The study area extends from the I-55/I-70 and US-40 interchange at Troy in Madison County on the north, south and west through St. Clair County, to the I-255/US-50 and IL-3 interchange near the Jefferson Barracks Bridge in Monroe County. This study initially looked at a wide corridor and narrowed the study area based on the process discussed in this report.

1.2 Study Organization and Approach

When considering a major new transportation investment, it is important to obtain input from a wide variety of transportation professionals, elected officials, community representatives and other interested and affected parties. A Study Management Group was formed to provide technical review and overall guidance during the study process. Decisions and recommendations formulated by the group were developed through consensus. The group was comprised of representatives from the following agencies or counties:

- IDOT
- St. Clair County
- Madison County
- Monroe County
- East-West Gateway Coordinating Council (EWGCC)

The Study Management Group, working with the consultant team, identified goals and objectives for the study and initial ideas about potential corridors. The analysis of the initial corridors and the refinement of alternatives included the inventory of existing conditions, the development of future travel demand in the corridor, evaluation of physical feasibility, concept facility design and conceptual costing, and general environmental issues. Further description of the study process is described in the remaining sections of this report.

Throughout the study process, the Study Management Group included outreach to a larger group of stakeholders. This larger group included affected municipalities and the general public. Along with involving community representatives, state and federal technical resource agencies were kept apprised of the study in order to provide early input on social, economic and environmental factors, progress and findings. These agencies included:

- IDOT Bureau of Design and Environment
- Federal Highway Administration (FHWA)
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- U.S. Environmental Protection Agency
- Illinois Historic Preservation Agency
- Illinois Department of Natural Resources
- Illinois Environmental Protection Agency

The recommendations resulting from this study will be considered by IDOT and the southwestern Illinois region.

1.3 Goals and Objectives

One of the first tasks of the Study Management Group was to identify goals and objectives for the study. The Study Management Group identified three key goals – transportation mobility, economic development and environment – and a number of associated objectives, listed below:

Transportation Mobility

- Provide for ease of transportation movement
- Improve transportation accessibility from/to the southwest and northern portions of the study area
- Ensure safe transportation operations
- Develop transportation improvements consistent with public support and public policy direction

Economic Development

- Assist economic development goals of Madison, St. Clair and Monroe Counties
- Provide for economic development opportunities engendered by Mid America Airport and Scott Air Force Base
- Identify needed rights of way
- Facilitate goods movements
- Coordinate transportation improvements with desired development patterns

Environmental

- Preserve and enhance the area's natural and cultural resources
- Improve the region's air quality

These goals and objectives served as the policy guidelines for developing the alternatives and other transportation improvement recommendations for the study.

1.4 Report Format

This report describes the results of the Illinois 158 Corridor Feasibility Study planning process. The report details relevant technical information and the public input used to develop and select the recommended transportation improvements. The next section, Section 2, describes the socio-economic, transportation and environmental characteristics of the study area. Section 3 describes the initial alternatives process. Section 4, Alternatives Refinement, details conceptual design issues and costs, as well as the various alternatives that were developed for the corridor. Section 5 summarizes the public involvement process, and Section 6 concludes with a discussion of the recommendations.

Appendix A contains documentation of the technical analyses performed for the study, including travel demand forecasting, environmental analysis, and concept design and costing. The public involvement appendix, Appendix B, documents the public participation efforts for the study, including the stakeholder interviews, study management group meetings, technical resource agency communication, public information meetings and other public involvement efforts.

2. STUDY AREA DESCRIPTION

2.1 Study Boundaries

The Illinois 158 Outer Belt Feasibility Study initially included a study area that extended from the I-55/I-70 and US-40 junction at Troy in Madison County, south and east through St. Clair County to the intersection of I-255/US-50 and IL-3 near Columbia in Monroe County. The corridor resembles a reverse 'L' shape, and covers a distance of approximately 37-miles in the southwestern Illinois region. Figure 2.1 illustrates the initial study area for the Illinois 158 Corridor Feasibility Study.

The study area is part of the Illinois uplands area east of the Mississippi River and its flood plain. The western terminus of the study area is in this flood plain. The remainder of the study area is mostly farmland interspersed by towns and expanding suburban development.

Affected municipalities in or near the study corridor included Belleville, Columbia, Freeburg, Millstadt, O'Fallon, Smithton, Shiloh and Troy. Other key places in or adjacent to the corridor include Scott Air Force Base, Mid America Airport, and Southwestern Illinois College.

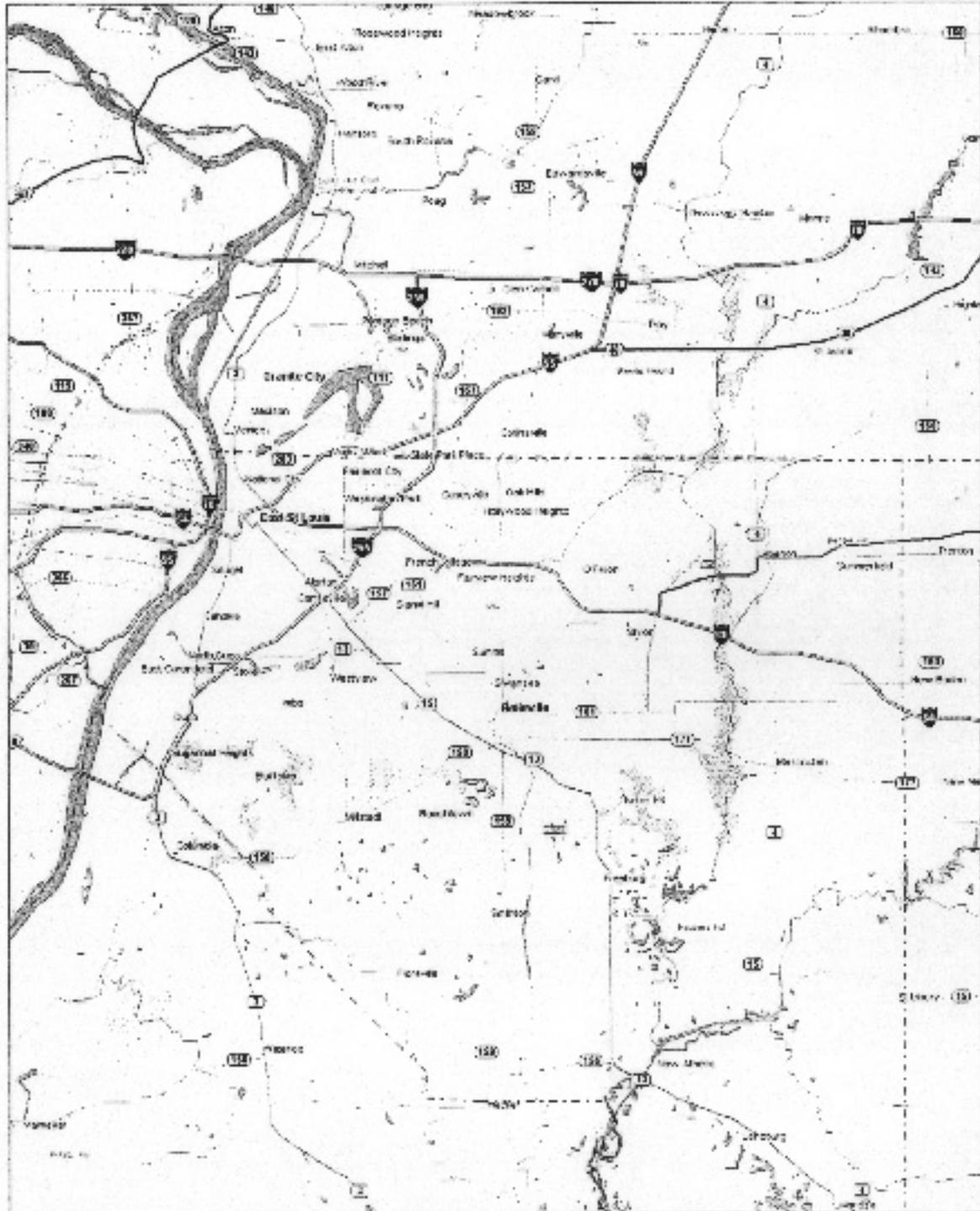
2.2 Socio-Economic Characteristics and Land Use

This section identifies both the demographics and economic conditions that presently exist in the study area and are forecasted for the planning horizon year of 2020. The population and employment forecasts were based on estimated data for 1996. Data from the 2000 census was incorporated into the analysis as it became available.

2.2.1 Population

Historical records show that the population for Madison County dipped in the 1980 Census (from 250,934 in 1970 to 247,691) but has been increasing since that time. The Madison County population estimate for 1996 is 255,000 according to the EWGCC. Monroe County has enjoyed steadily increasing population increases and was estimated to be 25,000 for 1996. For St. Clair County, the population has been decreasing since a high of 285,176 in 1970. The 1996 population estimate is 265,000 according to EWGCC. However, projections show a reversal of that trend, forecasting a seven percent increase in St. Clair County residents by 2020.

Figure 2.1
Initial Study Area



Recently released figures for the year 2000 Census indicate a population of 258,941 for Madison County, 27,619 for Monroe County, and 256,082 for St. Clair County. Table 2.1 presents population racial characteristics for Incorporated Municipalities and Census Defined Places (CDP) within the study area by county. This is the only 2000 Census data available providing a racial breakdown of any part of the study area. The percentage of each racial category is calculated for each county's part of the study area at the bottom of the table.

Population projections for each county and the Illinois 158 travel market are shown in Table 2.2. The 2020 population projections were adopted by EWGCC and are the official population projections for the region. The Illinois 158 travel market represents an approximate 10-mile wide market area where trips using a proposed outer belt facility would likely occur.

**Table 2.2
2020 Population Projections**

County	1996	2020	% Change
Madison	255,000	282,000	10%
Monroe	25,000	36,000	44%
St Clair	265,000	285,000	7%
IL-158 Travel Market	216,000	267,000	23%

As seen in the table, the Illinois 158 travel market is expected to exhibit a 23% increase in population between 1996 and 2020. This illustrates that a significant portion of the population growth occurring in the southwestern Illinois area is occurring in the area that would be served by a proposed outer belt highway. The 1996 population by transportation analysis zone (TAZ) are shown in Figure 2.2. Population projections by zone for 2020 are shown in Figure 2.3.

2.2.2 Employment

While the study area is not considered as an area of high employment, it does have some of the largest employment and education centers in the southwestern Illinois region¹. These facilities include:

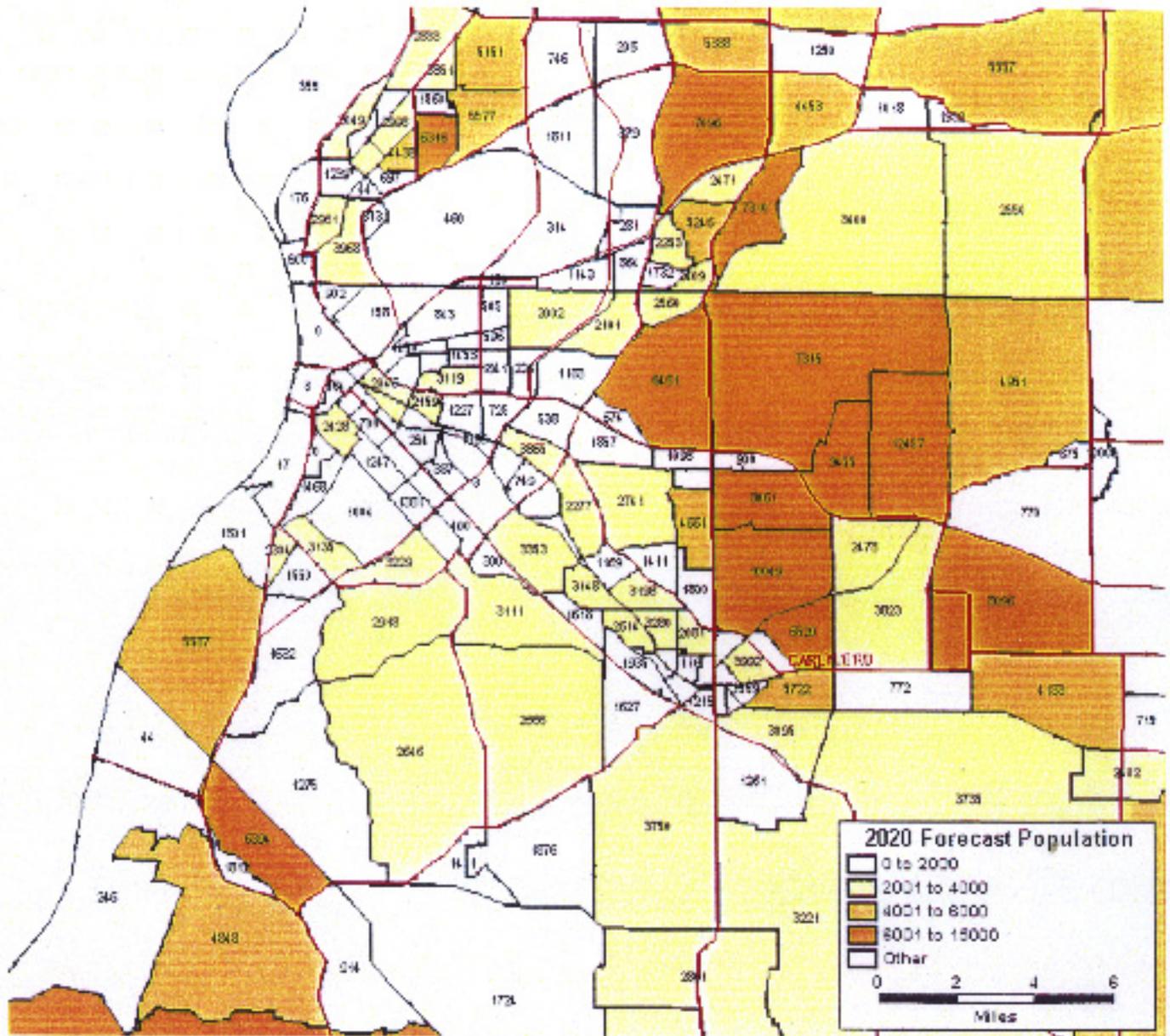
- Scott Air Force Base 9,500 employees
- Memorial Hospital in Belleville 2,200 employees
- St. Elizabeth's Hospital in Belleville 1,700 employees
- Southwestern Illinois College 12,800 students

¹ "2001 Book of Lists", *St. Louis Business Journal*, Volume 21, Number 17, January 1, 2001.

Table 2.1
2000 Census Population Characteristics for the Study Area

Geographic area	Total population	Race									
		One race								Two or more races	Hispanic or Latino (of any race)
		Total	White	Black or African American	American Indian and Alaska Native	Asian	Native Hawaiian, Other Pacific Islander	Some other race			
St. Clair County											
Belleville city	41,410	40,818	33,754	6,421	108	336	28	171	592	677	
Columbia city, St. Clair County Part	25	22	22	0	0	0	0	0	3		
Dupo village	3,933	3,905	3,823	46	12	10	0	14	28	27	
Freeburg village	3,872	3,853	3,816	6	11	8	4	8	19	43	
Millstadt village	2,794	2,779	2,757	0	7	7	0	8	15	21	
O'Fallon city	21,910	21,522	18,113	2,627	51	542	15	174	388	488	
Scott AFB CDP	2,707	2,642	2,136	366	9	80	2	49	65	110	
Shiloh village	7,643	7,517	6,278	1,018	21	137	6	57	126	200	
Smithton village	2,248	2,226	2,191	17	8	9	1	0	22	5	
Sub-Total, St. Clair Co.	86,542	85,284	72,890	10,501	227	1,129	56	481	1,258	1,571	
Madison County											
Troy city	8,524	8,384	8,139	126	27	60	0	32	140	127	
Monroe County											
Columbia city	7,922	7,871	7,805	8	15	27	0	15	51	76	
Monroe County (part)	7,897	7,849	7,783	8	15	27	0	15	48	76	
Study Area Total	102,963	101,517	88,812	10,635	269	1,216	56	529	1,446	1,774	
Percent by County											
St. Clair	84%	84%	82%	99%	84%	93%	100%	91%	87%	89%	
Madison	8%	8%	9%	1%	10%	5%	0%	6%	10%	7%	
Monroe	8%	8%	9%	0%	6%	2%	0%	3%	3%	4%	

Figure 2.3
2020 Forecast Population by TAZ



Other employment in or near the study area is concentrated in the commercial and retail sectors and small manufacturing and warehousing/distribution activities. In 1996, the IL-158 travel market has a total of 86,000² employees or approximately 40% of the total employment in the three counties.

Employment figures for each county and the Illinois 158 initial study area are shown in Table 2.3. Estimated employment figures for 1996 are presented and projections of future employment are shown for the year 2020. The employment projections also reflect the adoption by the East-West Gateway Coordinating Council and are the official employment projections for the area.

Table 2.3
2020 Employment Projections

County	1996	2020	% Change
Madison	110,000	132,000	20%
Monroe	6,000	11,000	72%
St. Clair	99,000	118,000	19%
IL-158 Travel Market	86,000	103,000	19%

As seen in the table, the Illinois 158 travel market is expected to increase by 19% between 1996 and 2020. Employment locations are dispersed throughout the area with the largest concentrations in the vicinity of Scott Air Force Base, Belleville and East St. Louis.

The 1996 and 2020 employment by transportation analysis zone are depicted in Figures 2.4 and 2.5. Employment information from the 2000 Census are not yet available.

2.2.3 Land Use

Agricultural land is prevalent, especially in the southern portion of the study area. However, the study area also has urban uses of all types. Development – residential and commercial – is rapidly replacing the farm fields. Commercial concentrations are located within the business districts' of the communities within the study area. St. Clair Square Shopping Center is one of the largest enclosed malls in the region with 1,500,000 square feet of space. Other commercial concentrations include the US-50/Lincoln Highway corridor through Fairview Heights and O'Fallon, and the IL-159 corridor from St. Clair Square south to downtown Belleville.

² Regional Transportation Model, East-West Gateway Coordinating Council, 2001.

Residential use continues to be strong in the central part of the study area between I-64 and IL-13/IL-15. The development patterns exhibit what may be considered decentralization, with the conversion of farmland and orchards to single family residential subdivisions. This type of development is more prevalent in parts of O'Fallon and Shiloh and the eastern edges of Belleville that are in the study area.

Recreation paths, parks, and public and private facilities exist throughout the study area, providing readily accessible recreational opportunities for residents and visitors.

Figure 2.6 shows the land use from the most recent Comprehensive Plans for the three counties. The defining legend is taken from the St. Clair County plan since most of the study area is within that county.

Because of these conditions, the proposed transportation facility's type and placement within the landscape must be done carefully. For this study, the 2020 Land Use was used.

Figure 2.4
1996 Estimated Employment by TAZ

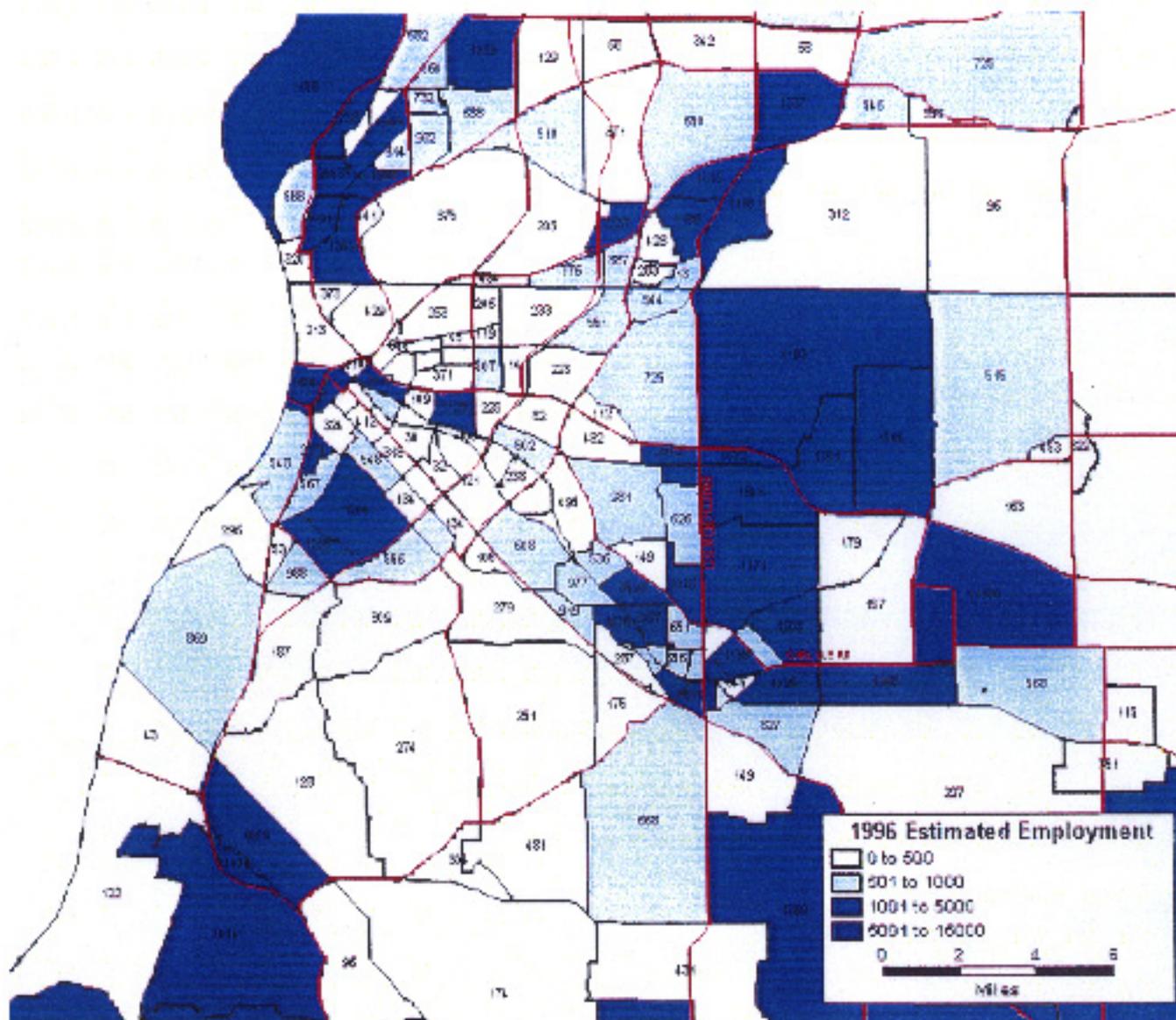


Figure 2.5
2020 Forecast Employment by TAZ

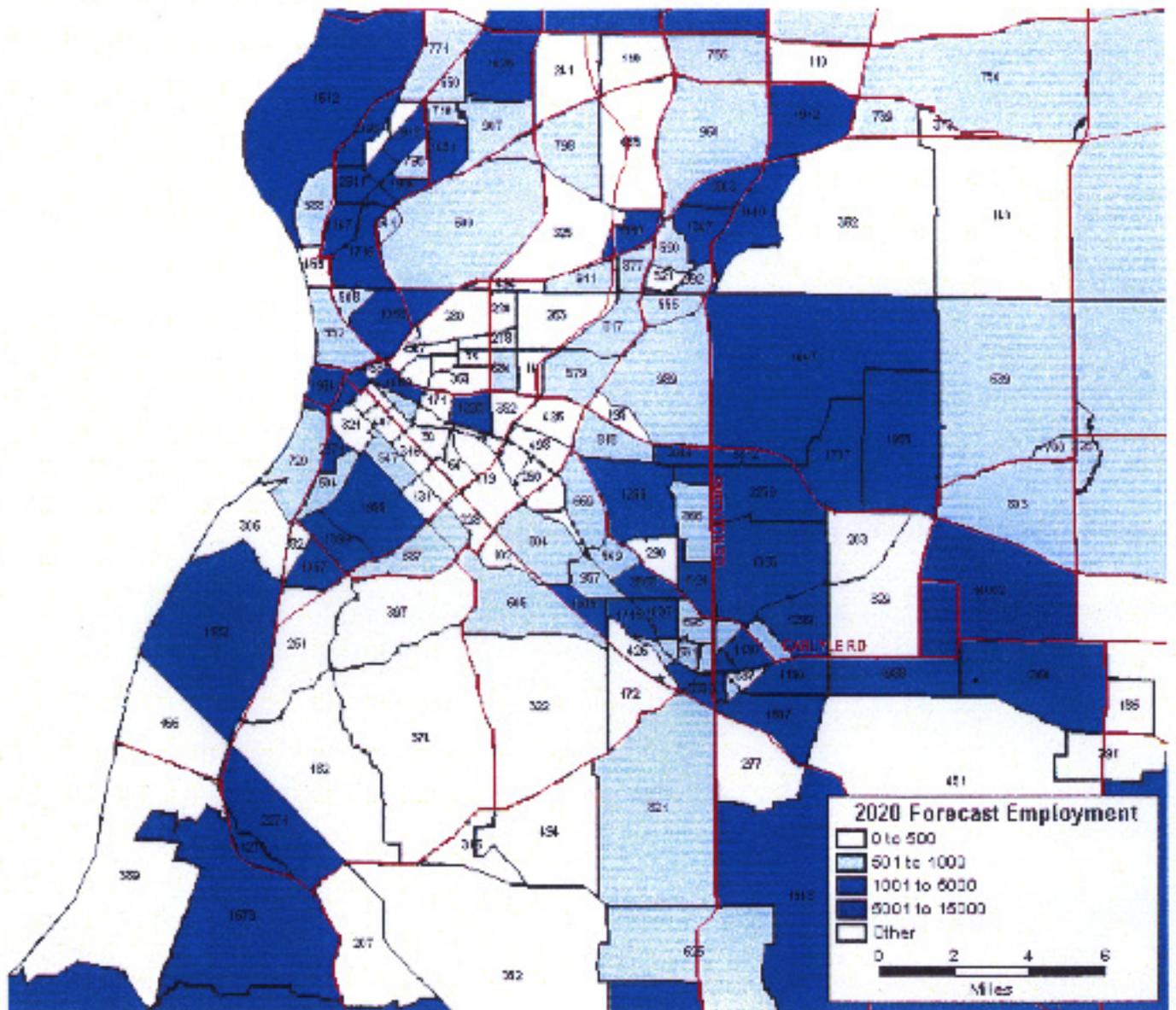
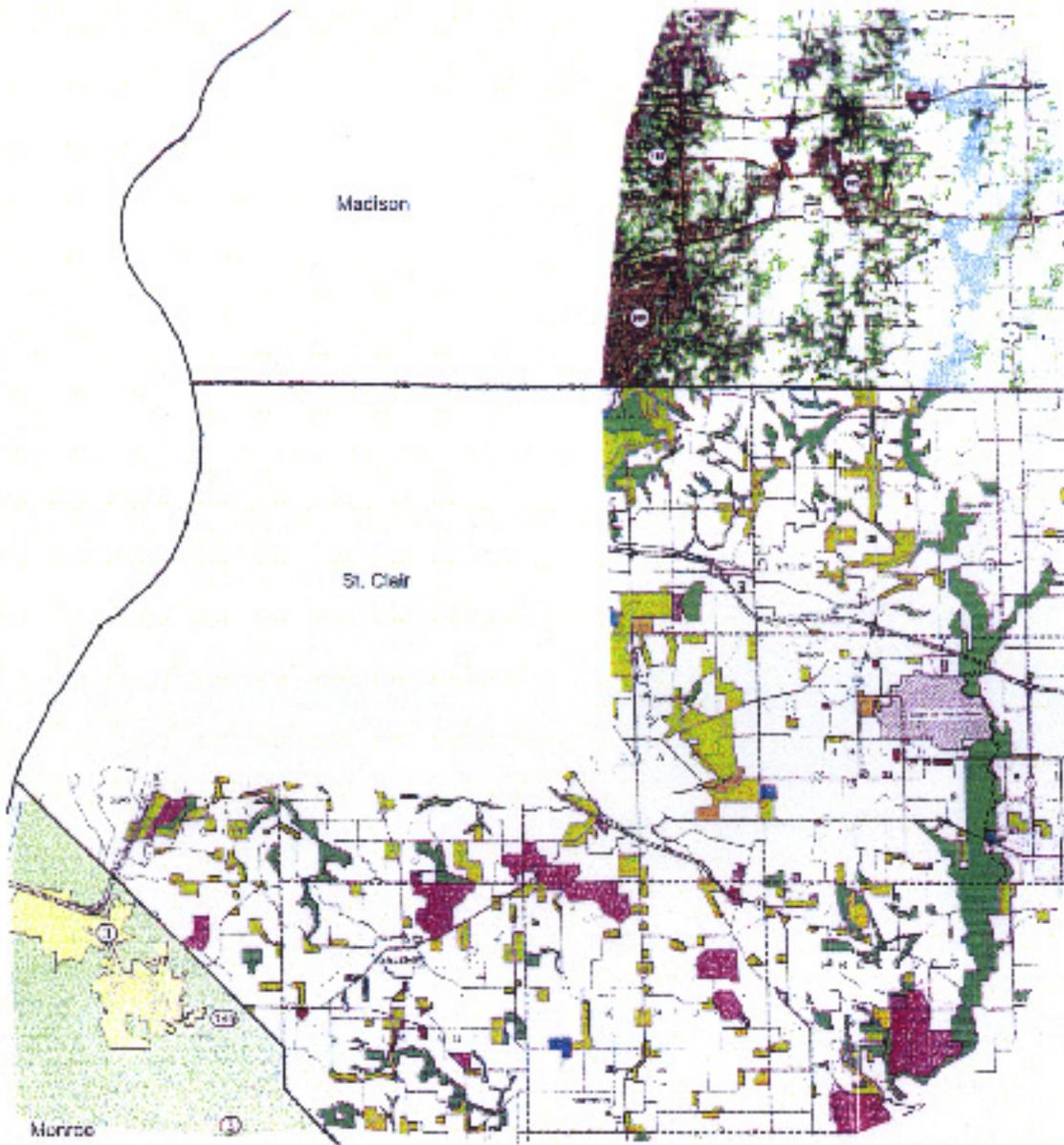


Figure 2.6
Land Use



Existing Land Use

LEGEND

-  Single Family Residential
-  Multi-Family Residential
-  Commercial
-  Public
-  Heavy Industrial
-  Light Industrial
-  Mining
-  Open Space/Recreation
-  Agriculture



Scale in miles



2.3 Transportation System

Understanding what the existing transportation network provides is important to determine how the network of transportation services supports the existing and developing land use. This section describes some of the key transportation services in the study area and region.

2.3.1 Highway Network

Southwestern Illinois is served by an extensive network of roadways. Interstate highways and primary roadways, such as I-55, I-64, I-70, US-40, US-50 and Illinois Routes 3, 13, 15, and 161 generally radiate out from East St. Louis and provide regional and national access to all four corners of the compass. I-255 and I-270 provide a bypass loop around the most densely developed parts of the southwestern Illinois area. Illinois Routes 4, 157 and 159 provide for north-south travel.

The study area is served by several multilane highway facilities, including I-255, I-64, I-55, I-70, IL-3, IL-13/IL-15, and IL-158 (in the vicinity of I-64). Other primary roadways serving the study include IL-163, IL-159, IL-177, IL-161, and IL-4. Current and forecasted 2020 traffic volumes on some of the primary state roads and interstates are also shown in Figure 2.7.

2.3.2 Transit, Ride Share and Non-Motorized Transportation

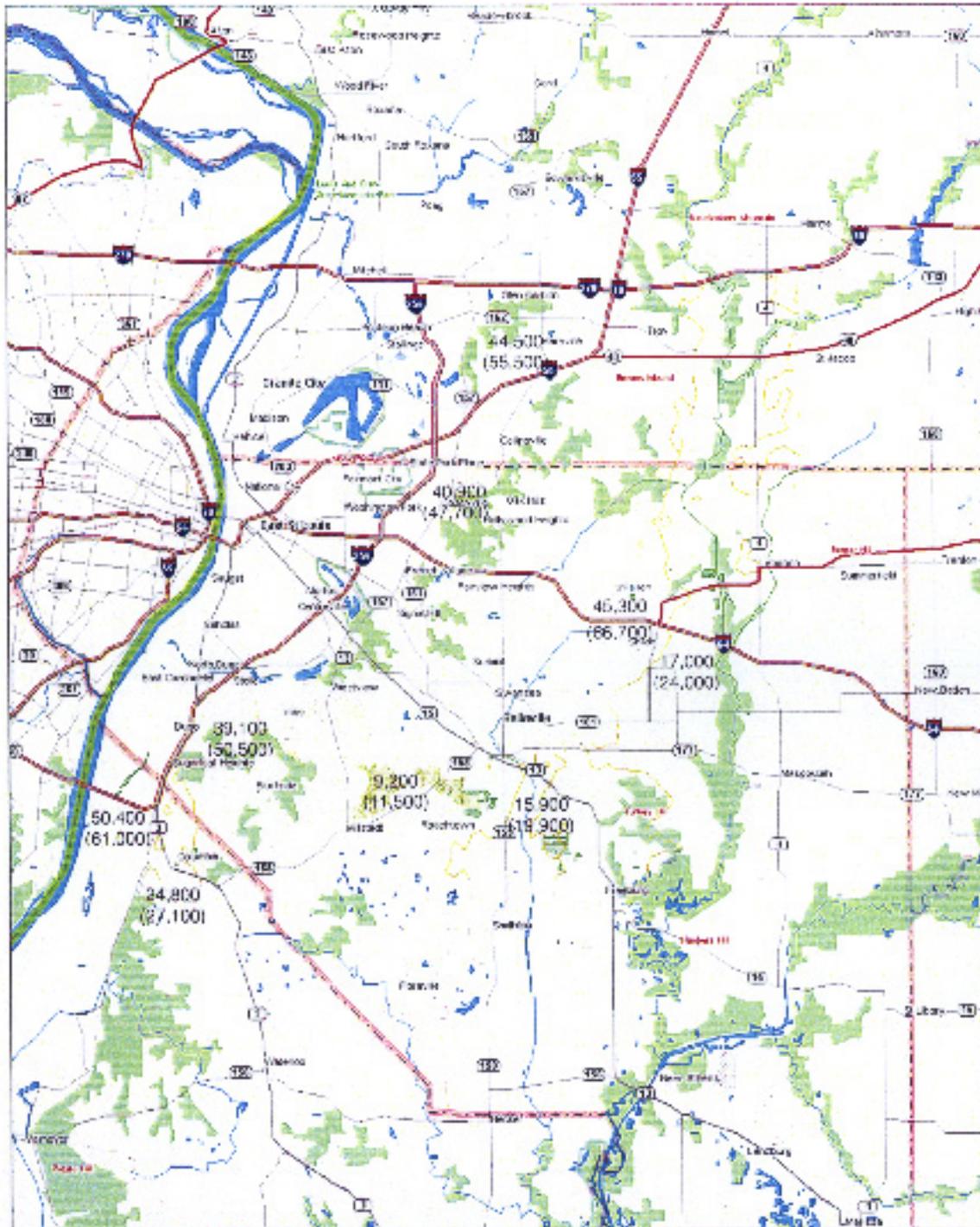
Transit

Public transit service within the study area is provided by two agencies: Madison County Transit (MCT) and the St. Clair County Transit District (SCCTD). MCT has its own fleet of vehicles and staff along with a maintenance facility to provide public transit service. SCCTD contracts with the regional transit provider, Bi-State Transit, to supply the vehicles, personnel, operations and maintenance for its service. Figure 2.8 shows the transit system for the region and Appendix A list web links and phone numbers for the providers.

MCT operates a local route system within Madison County and directly serves downtown St. Louis with several express routes. Other routes connect to the MetroLink station in East St. Louis, providing connectivity to the region's light-rail line.

In May 2001, SCCTD and Bi-State Transit opened a 17.4-mile extension of the MetroLink light-rail system in St. Clair County. The new MetroLink line operates from the original 5th & Missouri Station to the new College Station at Southwestern Illinois

Figure 2.7
Existing and Future Traffic Volumes



XX - 1998 Data (XX) - 2020 Projected

College (SWIC, previously known as Belleville Area College). The extension passes through the communities of East St. Louis, Washington Park, Fairview Heights, Swansea and Belleville and terminates near the intersection of IL 161 and Green Mount Road. This light rail transit extension added eight new stations, with seven of these eight stations having park-and-ride lots. Ridership on this extension during the first month of operation has averaged between 10,000 – 12,000 passengers per weekday, which was greater than the initial estimate of 7,500 passengers per weekday.

With the inception of the MetroLink extension, SCCTD modified its bus system to act as a feeder to the light-rail line. New service was added and the bus routes modified so that each route serves at least one MetroLink Station. The only exception is the O'Fallon Shuttle, Route 22, which only serves that city and Scott Air Force Base. At the present time, only Route 10 (Waterloo – Columbia) serves Monroe County.

As of October 2000, Bi-State Transit instituted a "guaranteed ride home" program for commuters who use transit or bicycle to work. This program assures commuters of the ability to respond to emergency situations in a timely manner.

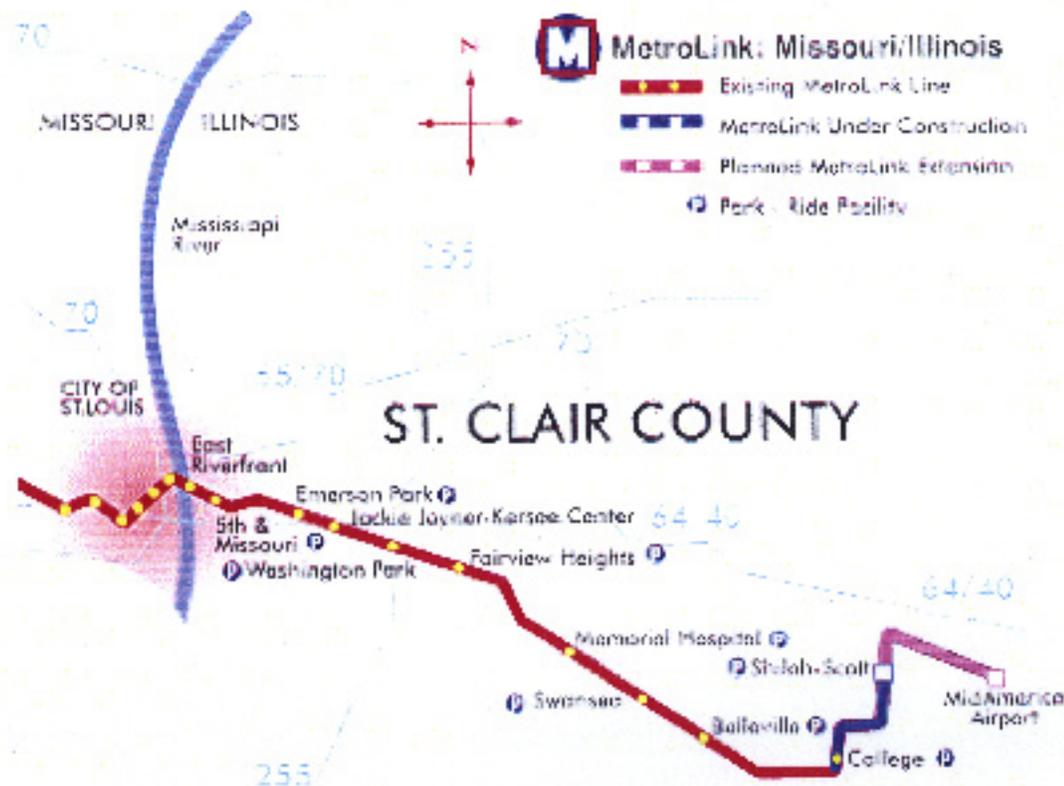
Ride Share

In addition to providing transit service, MCT also coordinates the region's rideshare program. Called RideFinders, this service provides commuters with alternatives to driving to work alone. With on-line registration and match lists, a program for employers, a guaranteed ride home program for registered carpool or vanpool participants, and an extensive network of 27 park-and-ride lots, RideFinders provides another alternative for commuters to get to work.

Non-Motorized Transportation

There is a growing network of non-motorized facilities, including multi-use paths, bicycle-friendly roads, and connectivity to transit. In the study area, there are a number of roads and trails that IDOT has identified as being suitable for bicycle travel (see Figure 2.9). The East Belleville Bikeway offers bicyclists and pedestrians a dedicated facility. A new bikeway is currently being designed to parallel the MetroLink extension from East St. Louis to Southwestern Illinois College, and eventually to Scott Air Force Base. Bicyclists can also board MetroLink at selected locations and bring their bike along, or can lock the bicycle at any of the stations, as all stations have some type of stationary bike rack.

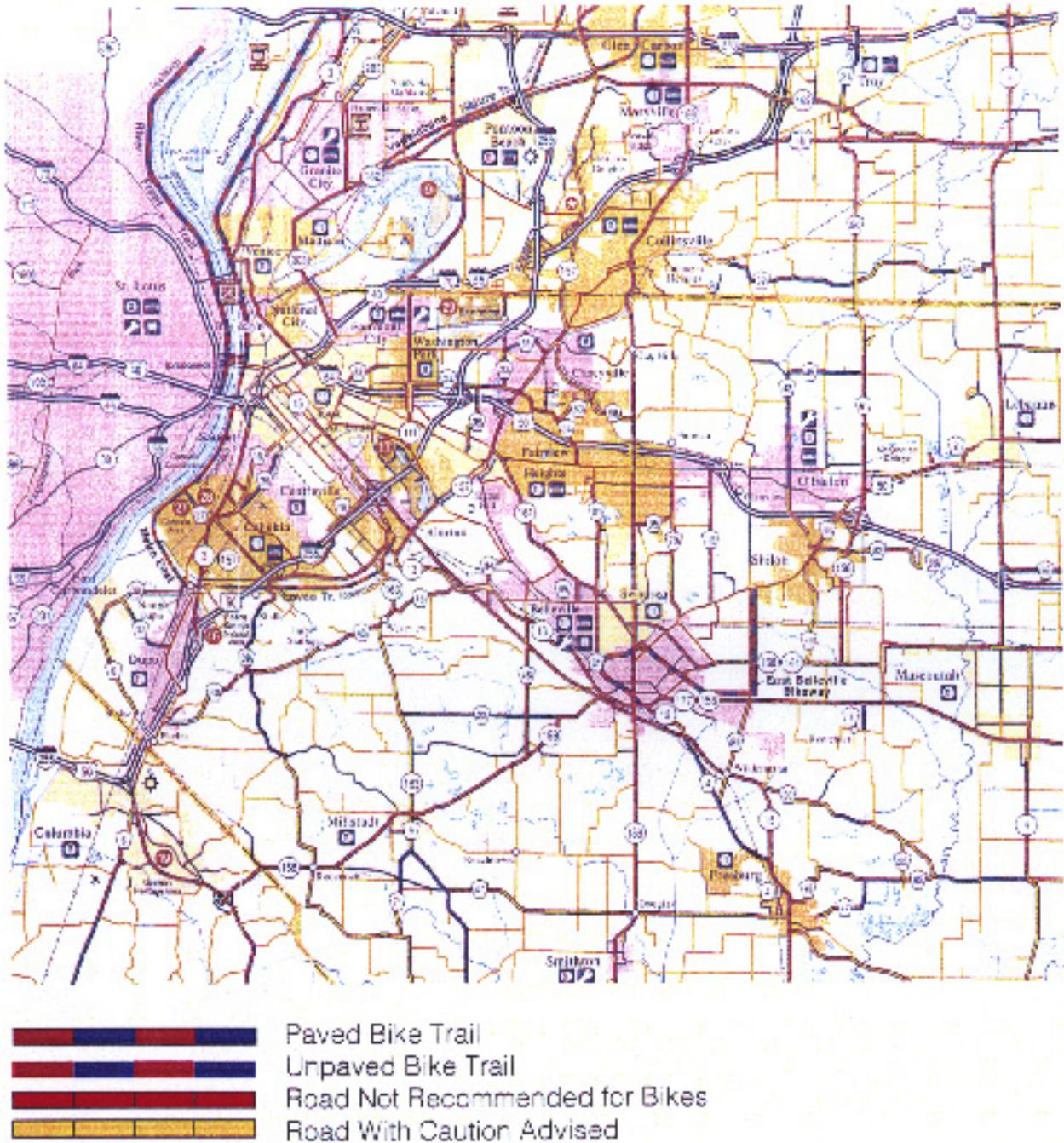
Figure 2.8
MetroLink Network



Bus Lines (Route Number and Name)

4	19 th and Central	23	New Baden
8	Alta Sita	22	O'Fallon-Scott-Mascoutah
16	Blue Line	14	Orange Line
20	Brown Line	15	Purple Line
2	Cahokia	17	Red Line
7	Emerson Park	21	Scott Air Force Base
6	Fairmount - Cahokia Mounds	24	Shrine Shuttle
19	Gold Line	12	Silver Line
18	Green Line	1	State Street
30	ML King - Centreville	9	Washington Park
11	Main Street	10	Waterloo - Columbia
5	Missouri Ave./Jackie Joyner-Kersey		

Figure 2.9
Non-Motorized Network



Source: Free Illinois Official Bicycle Map, Southwestern Illinois, Map 8
Illinois Department of Transportation, July 1995.
Write: IDOT, Map Sales - Room 121, 2300 S. Dirksen Parkway, Springfield, Illinois, 62764

2.3.3 Railroad and Air Service

Railroad service within the Southwestern Illinois region generally consists of radial routes emanating from the two Mississippi River bridges crossings into St. Louis. Virtually all of these rail routes pass through the study area on their way to the eastern and southern parts of the country. There is one north-south line acting as a belt distributor that connects the radial rail lines. Other than the Amtrak service between Chicago, Alton and St. Louis, all other rail service is for freight goods movement.

There are four airports within the study area. The airports in Columbia and Troy serve general aviation; Scott Air Force Base only serves military flights; Mid America Airport, opened in 1996 and co-located with Scott AFB between Belleville and Mascoutah offers commercial service. Pan American Airlines had provided passenger service from Mid America, but ceased operations at Mid America on December 3, 2001. Airfreight service is available at Mid America Airport.

2.3.4 Plans and Programs

There are a variety of transportation improvements that have been identified for the Southwestern Illinois region. Table 2.4 presents the major proposed study area highway projects that have been programmed by IDOT, Madison County, Monroe County, and St. Clair County, which are contained in the most recently developed regional Transportation Improvement Program (TIP) prepared by the EWGCC.

Design work is currently underway for the extension of MetroLink from Southwestern Illinois College to Scott Air Force Base. This extension is planned to open in 2003. A future extension of MetroLink from Scott Air Force Base to Mid America Airport is also planned.

Table 2.4
 Proposed Highway Improvement Program
 FY 2002 -2006
 Study Area (Edited List)

Street or Route Name (County)	Location and Improvement	Estimated Cost
US-40 (Madison)	At Troy-O'Fallon Rd. (continue project from 1998)	\$302,000
Rueck Rd., Columbia (Monroe) 3 projects	North of Veterans Memorial Parkway to Main St Ramp, road, drainage and sidewalk reconstruct	\$1,016,000
IL-64 (St. Clair)	East of IL 158 to west of IL 4 Resurface 4 lanes pavement and bridges	\$2,525,000
IL-13/IL-15 (St. Clair)	Green Mount Rd. through Freeburg Widen to 4 lanes	\$11,830,000
IL-158 (St. Clair)	At Roachtown Rd. (continue project from 1998)	\$170,000
IL-158 (St. Clair)	Drake Rd. extension south of I-64 (reimbursement)	\$330,000
IL-161 (St. Clair)	Shorman St. (Belleville) to IL 158/161 junction Resurface road, left and right turn lanes	\$2,500,000
IL-177/IL-158 (St. Clair)	Over Loop Creek New bridge deck and widen bridge	\$500,000
Sub-total		\$19,263,000

2.4 Environmental Features

Environmental features are an important consideration when evaluating major new transportation projects. This feasibility study reviewed the environmental characteristics of the study corridor in order to determine the potential for "fatal flaws", which are environmental issues that might prevent the development of the project. A more detailed environmental impact statement would be required as part of any subsequent Phase 1 Location Study to specifically identify the potential environmental impacts and mitigation strategies.

The environmental features of the study area were divided into two main categories: Natural Resources and Human Development. The natural resources discussion includes natural areas, threatened and endangered species, wetlands, floodplains, water quality, waste issues and mines and minerals. Human development addresses the built environment and focuses on cemeteries, churches, hospitals, schools and other institutions.

A general inventory of environmental features was initially performed for the study. The study area contains significant natural resources including Sinkhole Plain, Stemler Woods and Caves, the Silver Creek watershed, abundant limestone and some unique plant and animal species. In addition to the natural environment, there are a number of mines found in or near the study area, along with some solid and special waste situations.

This area of southwestern Illinois also has a long history of civilization, beginning with the Cahokia Indians, and American settlers. Evidence of this long history is found in the number of small cemeteries that dot the entire study area. There may be other areas of archaeological significance that will be found during the Phase 1 study of this corridor. Other considerations of human development include government centers, hospitals and schools and churches, most of which are located outside of the study area.

3. INITIAL ALTERNATIVES

3.1 Initial Alternatives Definition

An initial set of alternative corridors were identified through a collaborative process that considered a wide range of options. These initial alternatives were responsive to the study goals and objectives and input received from the study stakeholders.

The stakeholder input was identified through interviews conducted with officials from IDOT District 8, County Board Chairs and County Engineers from Madison, Monroe and St. Clair Counties, and representatives from the EWGCC. The interviews provided the following findings, grouped under four themes:

Overall Study

- Construction of the new facility is likely to be 15 to 25 years away, but right-of-way preservation needs to be considered now
- Access to Mid America Airport and Scott AFB from the southwest is critical
- Through-truck traffic should be steered to existing facilities
- Breaking the corridor into segments for analysis purposes may be desirable

Facility Type

- An interstate-like facility with restricted access south of the airport is desired
- At minimum, the highway should be a 4-lane facility with at-grade intersections that include traffic signals and turn lanes
- A 5-lane collector road was not supported
- Frontage roads may be required north of I-64 for local access
- A high speed facility is desirable

Facility Alignment

- Access to the area around Belleville is critical due to development pressures
- The Illinois Route 4 alignment is too far east (and thus not feasible for the new facility)
- The alignment could go north or south of Millstadt
- Several alignment options exist in the vicinity of Columbia
- There is a strong need to coordinate with local officials

Other Improvements

- Coordinating with and examining local transportation needs is necessary
- The study should be multi-modal, with transit and non-motorized transportation providing a complementary role in all alternatives
- The study should coordinate with the transit agencies for transit uses

- Mid America Airport could serve as a multi-modal hub if it develops as anticipated
- Coordination also needs to occur regarding rideshare opportunities

3.2 Initial Alternatives Description

In developing the initial corridors for study, all suggestions were considered, resulting in roughly 13 corridors. All options assumed a new, four-lane limited access highway facility. The most eastern corridor followed IL-4, connecting to IL-158 via IL-177. The most southern corridor followed IL-159 and IL-158, and connecting to IL-3/I-255 via Bluff Road, County Road 6. Other corridors were located north of Columbia and Millstadt and west along the existing roads including County Roads 50 and 61 and IL-158 from Troy to Belleville. The initial alternative corridors are shown in Figure 3.1.

3.3 Initial Traffic Analysis

One of the key technical components that were examined in the review of the initial alternatives was future traffic volumes. The travel demand forecasting model developed by the East-West Gateway Coordinating Council was utilized by the consultant for this study to develop traffic projections for several of the alternative corridors. Figures 3.2 through 3.5 illustrate the projected 2020 traffic volumes for the various corridors that were examined.

As shown on the maps, the projected traffic volumes did not vary significantly between alternative corridor options. A key area of interest is at the western terminus of the facility, where the new road would connect to the existing roadways. The variations in volumes shown for that location relate primarily to the location of the linkage at Columbia and to how the alignment would be routed around Millstadt.

The number of lanes needed to accommodate the projected traffic volumes is shown in Table 3.1. This table shows that a four-lane facility would be needed to serve the future traffic throughout the approximately 37-mile length of the corridor, with the exception of the section between I-64 and IL-161. The projections show that six lanes may be needed to accommodate the future traffic along that segment.

Table 3.1
Projected 2020 Traffic Volumes with Lane Requirements

From	To	Distance in Miles	Preliminary 2020 ADT	Two-Way DHV (12% of ADT)	One-Way DHV	Lanes Needed for 2020
I-55 / I-70 /						
US 40	US 50	10.28	16,000	1920	960	4 *
US 50	I-64	0.73	35,000	4200	2100	4 **
I-64	IL-161	3.80	43,000	5160	2580	6 **
IL-161	IL-177	1.04	25,000	3000	1500	4 *
IL-177	IL-13 / IL-15	3.23	26,000	3120	1560	4 *
IL-13 / IL-15	IL-159	4.10	15,000	1800	900	4 *
IL-159	IL-158	7.57	15,000	1800	900	4 *
IL-158	I-255	6.17	11,000	1320	660	4 **
Total miles		36.93				

* For 4-Lane:

Rural Expressways (New) - One-Way DHV Under 2050
Rural Expressways (Recon.) - One-Way DHV Under 1925

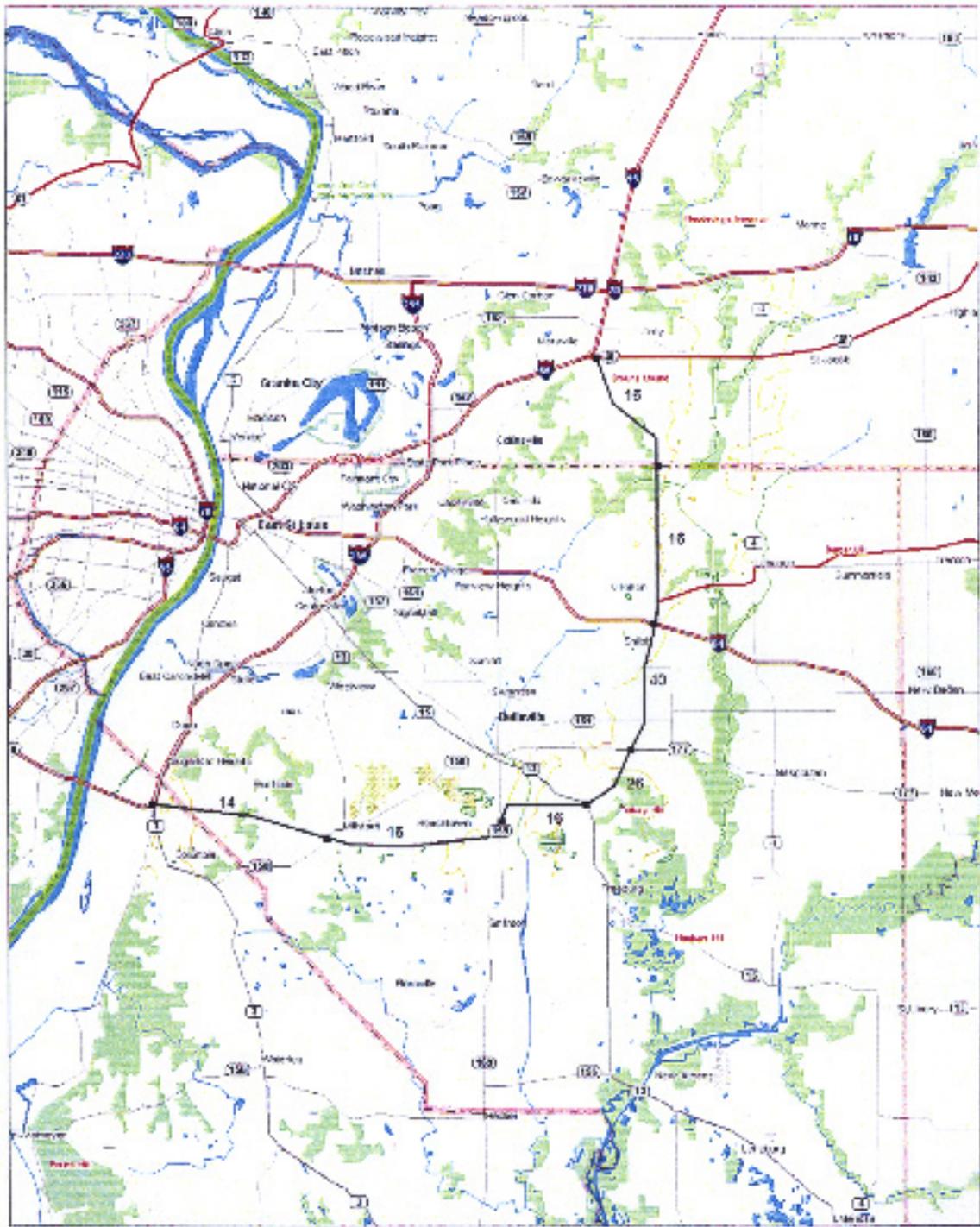
Rural Minor Arterials (New) - One-Way DHV Under 2525
Rural Minor Arterials (Recon.) - One-Way DHV Under 2375

** For 4-Lane:

Urban Expressways (New) - One-Way DHV Under 1900
Urban Expressways (Recon.) - One-Way DHV Under 1900

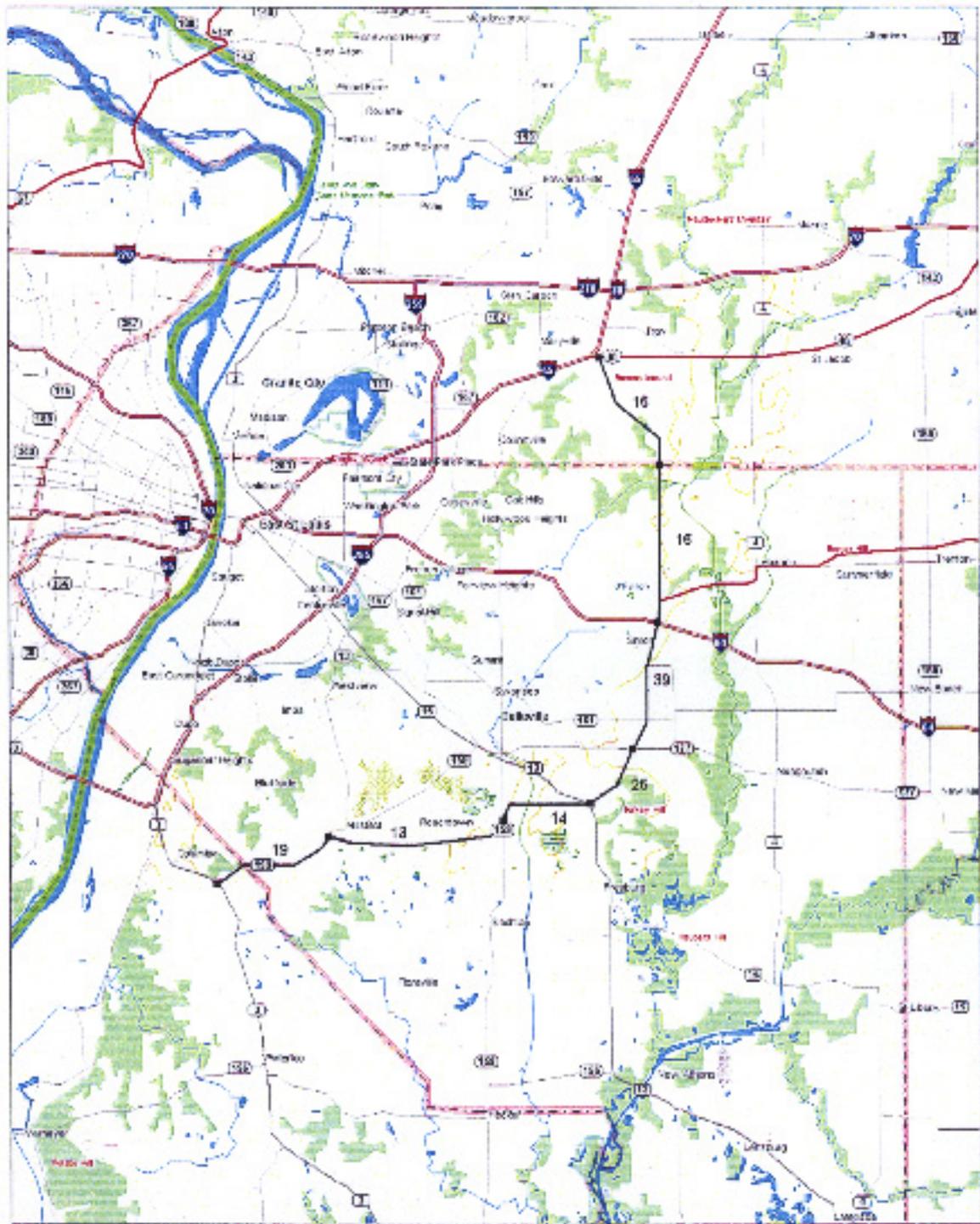
Suburban/Urban Arterials (New) - Two-Way DHV Under 2050
Suburban/Urban Arterials (Recon.) - Two-Way DHV Under 2050

Figure 3.2
2020 Traffic Projections Initial Alt 1



XX – Projected Average Daily Traffic, Thousands

Figure 3.3
2020 Traffic Projections Initial Alt 2



XX – Projected Average Daily Traffic, Thousands

4. ALTERNATIVES REFINEMENT

4.1 Alternatives Refinement Approach

Refining the number of potential study corridors to focus future studies on a more manageable area was one of the desired recommendations from the feasibility study. This study narrowed the 13 possible corridors down to one general study corridor. This general corridor should not be construed as a specific alignment where the highway would be located. A recommendation for a specific alignment would result from any subsequent Phase 1 Location Study.

Refining the alternatives to one general corridor required both technical and community considerations. Technical information, such as general topography, environmental features, and traffic projections, as well as discussions with affected communities and the Study Management Group to ascertain political support and a better understanding of future community goals and development plans were required to refine the alternatives.

Community input was obtained through both group and individual municipal meetings. General public input was obtained through three public information meetings. The preferred corridor is shown in Figure 4.1. This corridor reflects the needs and desires of the local communities through which it passes, is responsive to public input, and is sensitive to environmental conditions.

Refined traffic projections, concept designs, and conceptual costs were developed for the corridor. The conceptual design and costing assumed three alternative intersection/interchange designs and several alternative connections to the existing highway network at either end of the corridor.

4.1.1 Refined Traffic Analysis

A refined set of traffic projections was developed for the corridor. To improve the accuracy of the traffic projections, several of the EWGCC transportation analysis zones in the corridor were subdivided into smaller zones. This approach is commonly used for subarea studies based on regional travel models.

The resulting traffic projections are shown in Figure 4.2. These refined traffic projections are similar to the initial traffic projections for this study. Traffic volumes for the proposed facility increased slightly in the vicinity of Columbia and Scott Air Force Base.

In terms of regional transportation mobility improvements, the proposed outer belt highway results in an overall 0.4% improvement in average highway speeds for the

metropolitan area. Regional vehicle trips and vehicle miles of travel increased slightly, but were more than offset by the reduction in vehicle hours of travel.

In addition, a select link analysis for the proposed outer belt facility was performed. A select link analysis uses the regional travel model to identify the origins and destinations of travelers using the proposed facility. As seen in Figure 4.3, approximately 3,400 vehicles per day (1,832 + 1,582) would travel between Missouri and Zone 1 using the proposed outer belt facility, and 2,500 vehicles per day would be through trips. The largest single travel market using the proposed outer belt facility would be travel between Zone 1 and Zone 2, with nearly 4,500 vehicles per day (2,265 + 2,193). Overall, 43 percent of the vehicles using the proposed outer belt facility would have both trip ends within Southwestern Illinois.

4.1.2 Conceptual Design and Costs

Conceptual design was completed for the preferred corridor and the options for connections to other roads. This conceptual design process included developing information on the physical location, facility design type, community impacts and preliminary cost estimates of the alternatives.

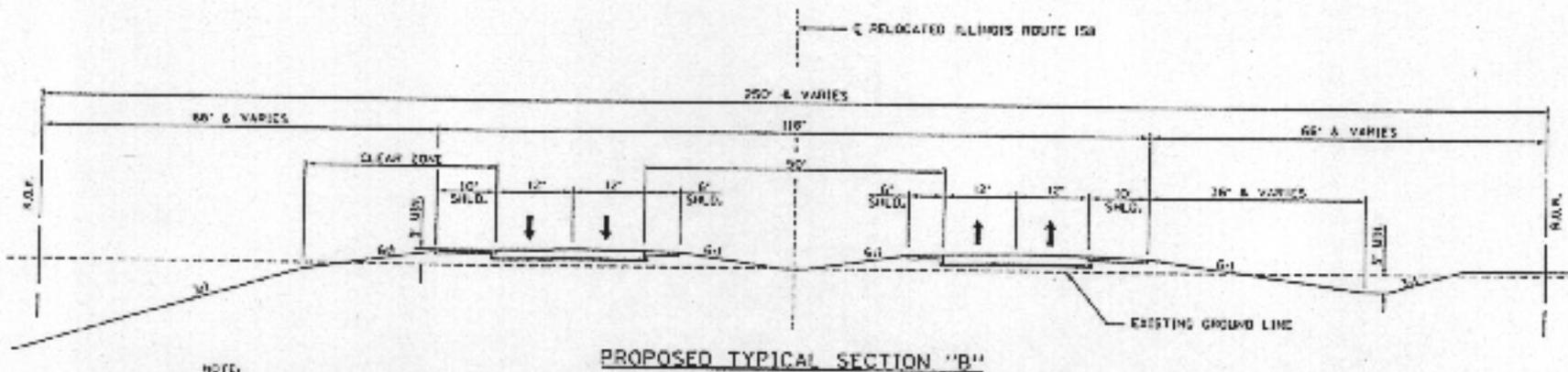
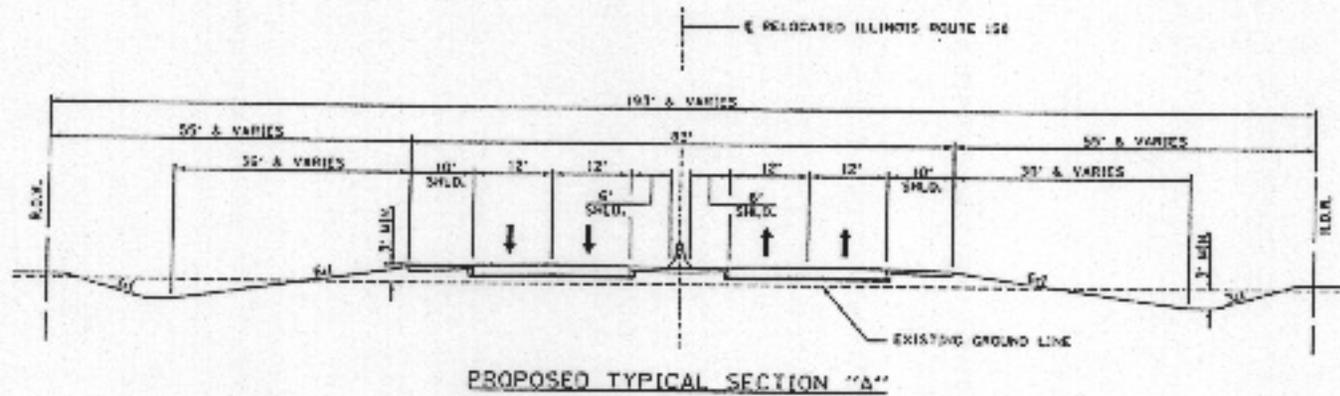
The conceptual design for the proposed outer belt facility was based on IDOT's general physical design standards. Typical cross-sections, shown in Figure 4.4, were prepared for the corridor. These typical cross-sections include a general 250-foot cross-section that includes two 12-foot lanes in each direction separated by a 50-foot grass median. For more constrained rights-of-way, a narrower cross-section would be used with two 12-foot lanes in each direction separated by a concrete median barrier.

Table 4.1 presents some of the general design standards used for this study. This information was used in the development of the concept design for the proposed outer belt facility. A more complete description of the design standards is included in Appendix A.

**Table 4.1
GENERAL DESIGN STANDARDS**

Design Speed	70 MPH
Access Control	Partial (limited curb cuts or access to road)
Traffic Lanes	4
Minimum Right-of-Way Width	250' or 193' (with Concrete Median Barrier)
Median Width	50'
Shoulder Width: Main Lanes	10' right full paved; 6' left with 4' paved
Shoulder Width: Ramp	8' right with 6' paved; 6' left with 4' paved
Maximum Grade	3% Level, 4% Rolling

Figure 4.4
Typical Cross-Sections



NOTE:
ROADWAY FILL SHOULD BE
CONSTRUCTED A MINIMUM
OF 3" ABOVE SURROUNDING
GROUND LINE.

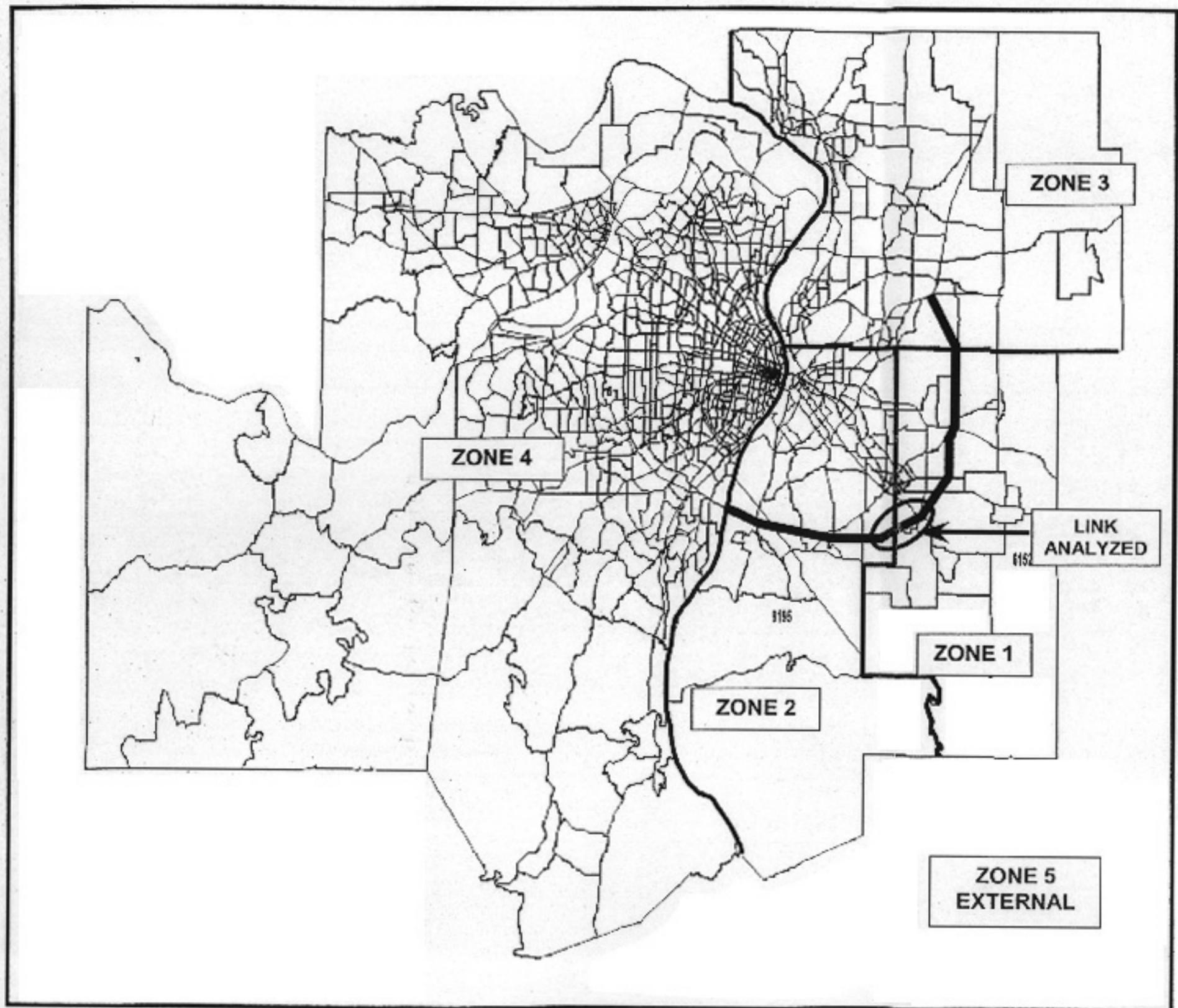


Figure 4.3

**IL-158 FEASIBILITY STUDY
SELECT LINK ANALYSIS
SUMMARY**

ORIGIN ZONE	DESTINATION ZONES					OUTPUT TOTAL
	1	2	3	4	5	
1	1752	2193	587	1582	623	6737
2	2265	2	469	120	378	3234
3	652	479	229	427	306	2093
4	1832	241	353	407	344	3177
5	681	417	251	875	2510	4734
TOTAL	7182	3332	1889	3411	4161	19975

INPUT TOTAL: 19,975
OUTPUT TOTAL: 19,975

For the development of conceptual costs, unit cost pricing was utilized for each option. Typical unit costs included bridges, pavement, shoulders, medians, excavation, embankment, utility, right-of-way and engineering, appropriate for Southwestern Illinois conditions, based on previous studies and experience from other similar areas. A 25 percent contingency factor was used given the concept level definition of the alternatives and the nature of the uncertainties at this stage of the implementation process. A 15 percent factor was used for design and construction engineering.

4.2 Interchange/Intersection Alternatives

Three alternatives for the proposed outer belt facility were analyzed. These alternatives are characterized by the type of connection to the cross roads provided by the outer belt facility: interchanges, interchanges/intersections, and intersections. Interchanges are grade separated from cross roads and have on and off ramps that are single direction, sloping roadways. Intersections are controlled by traffic signals with turn lanes provided where warranted.

It should be emphasized that in all cases, the proposed intersections and interchanges identified in this feasibility study were for illustrative purposes and should be considered as placeholders. Any subsequent Phase 1 Location Study would determine the exact location of the intersections and/or interchanges.

4.2.1 Interchange Alternate

This alternate assumes a limited-access four-lane facility with 10 new intermediate interchanges, as well as an interchange connection at either end of the proposed facility. Figure 4.5 depicts a representative example of the alternate, showing potential interchange locations. This alternate would provide the highest travel speeds and the most capacity. Frontage roads would be required in some sections to provide local access.

The conceptual cost for the interchange alternate is estimated to be nearly \$240 million in current dollars. A more recent cost estimate developed by IDOT based on recent bid lettings is approximately \$400 million in current dollars.

4.2.1 Interchange and Intersection Alternate

This alternate assumes a partially limited access four-lane facility with 10 new intermediate interchanges, 10 new intersections, as well as an interchange connection at either end of the proposed facility. Figure 4.6 depicts a representative example of the alternate, showing potential interchange and intersection locations.

This alternate would provide a lower travel speeds and capacity, but would provide a substantial increase in access points as compared to the interchange alternate.

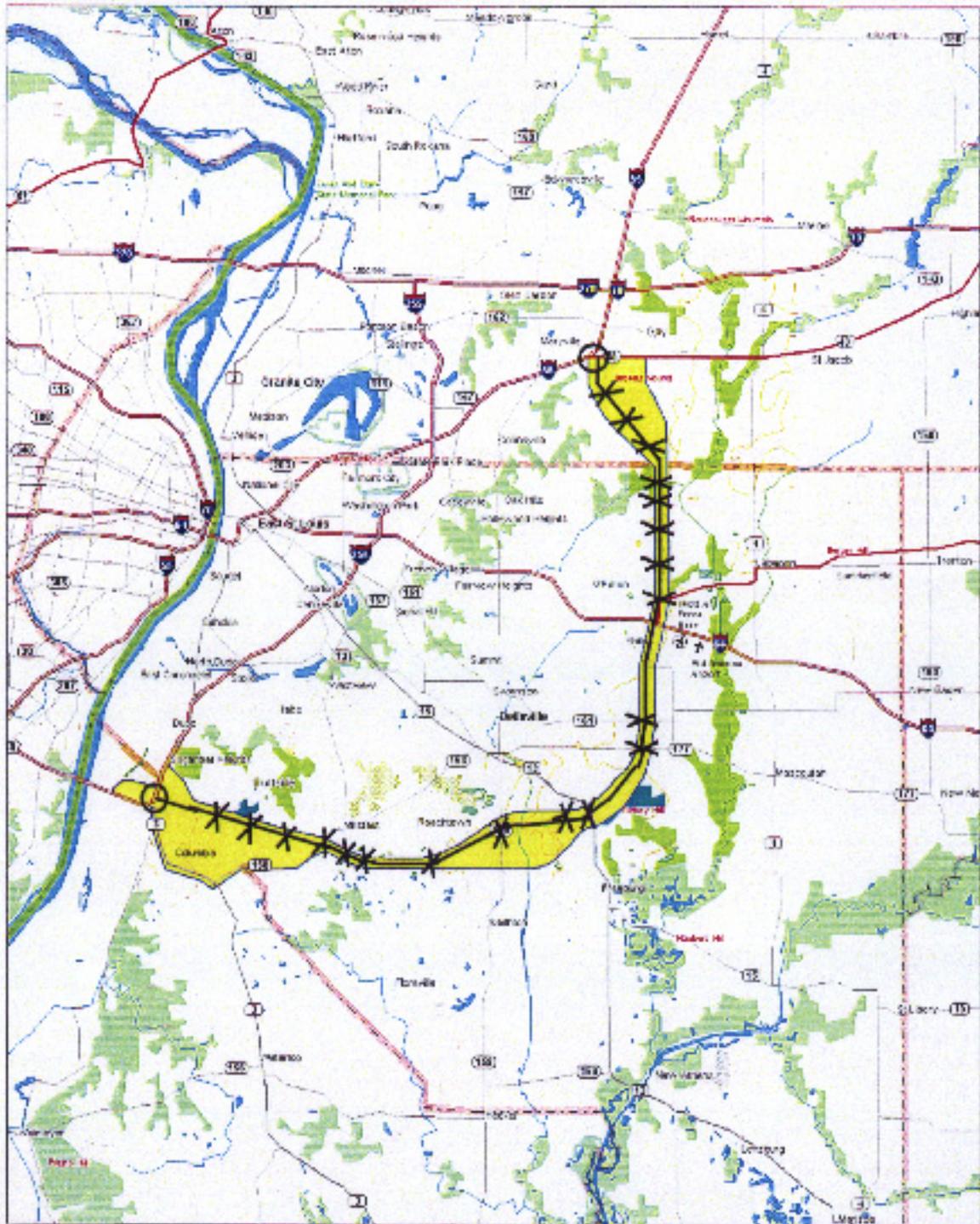
The conceptual cost for the interchange/intersection alternate is estimated to be \$220 million in current dollars. This cost estimate assumes some use of existing roadways and structures and less frontage roads, resulting in a lower cost estimate than the interchange alternate. A more recent cost estimate developed by IDOT based on recent bid lettings ranges between \$325 million and \$400 million in current dollars.

4.2.3 Intersection Alternate

This alternate assumes a partially limited access four-lane facility with 20 new intermediate intersections, as well as an interchange connection at either end of the proposed facility. Figure 4.7 depicts a representative example of the alternate, showing potential intersection locations. The intersection alternate would provide the lowest travel speeds and capacity of the three alternates.

The conceptual cost for the intersection alternate is estimated to be \$170 million in current dollars. This alternate is the least costly because of the lack of interchanges, which require more costly structures. A more recent cost estimate developed by IDOT based on recent bid lettings is approximately \$325 million in current dollars.

Figure 4.7
Intersection Alternate



X - Potential Intersection

4.3 Alternative Connections

The feasibility study examined three alternative connections at the north end of the corridor in the vicinity of Troy, and five alternative connections, plus an additional connection option, at the west end of the corridor in the vicinity of Columbia. These alternative connections are presented in Figure 4.8. Each of these alternative connections is assumed to be an interchange. It should be emphasized that these alternative connections are for illustrative purposes to demonstrate the feasibility of a connection to the existing highway system. Any subsequent Phase 1 Location Study would determine the exact location of the connections to the existing highway system at both ends of the proposed outer belt facility.

4.3.1 North End: Connecting to I-55 / I-70 / US-40

Alternates 1 and 2 would connect directly into a new reconstructed I-55/I-70/US-40 interchange, while Alternate 3 connects to US-40 east of the I-55/I-70/I-40 interchange.

Alternate 1: I-55/I-70/US-40 Interchange Connection

- Continuity to I-55/I-70 and I-55/I-70 mainline will remain in place
- Single-exit design provided on I-55/I-70 and all right-hand ramps
- Removal of all existing ramps and bridges
- Exit to US-40 will be closed during construction
- Conceptual cost estimate in current dollars: \$28 million

Alternate 2: I-55/I-70/US-40 Interchange Connection 2

- Continuity to I-55/I-70 and I-55/I-70 mainline will remain in place
- Ramp N-E, ramp E-W and bridge over I-55/I-70 will remain
- All right-hand ramps
- Inconsistent pattern of exits for I-55/I-70 southbound
- Conceptual cost estimate in current dollars: \$27 million

Alternate 3: US-40 Connection

- No work will occur at I-55/I-70/US-40 interchange
- No freeway-to-freeway connection
- Greater community disruption
- Conceptual cost estimate in current dollars: \$11 million

4.3.2 West End: Connecting to I-255 / US-50 / IL-3

Alternate 1 would connect directly to I-255/US-50/IL-3 via a new reconstructed interchange. Alternate 2 would utilize the existing Quarry Road interchange with IL-3 just south of the I-255/IL-3 interchange. Alternate 3 would connect to I-255 north

of the I-255/IL-3 interchange at Davis St. Ferry Road. Alternate 4 would include an overpass of I-255 at Davis St. Ferry Road heading west to a connection to I-255 at a new Fish Lake interchange from the north. Alternate 5 follows existing IL-158 south of Columbia and uses the existing IL-3/IL-158 interchange. In addition, a sixth option was examined that follows existing IL-158 over IL-3 and to the west and north, connecting to I-255 at a new Fish Lake interchange from the south.

Alternate 1: I-255/US-50/IL-3 Connection

- New interchange required
- Freeway-to-freeway connection
- All right-hand proposed ramps
- Estimated cost of construction: \$18 million

Alternate 2: IL-3/Quarry Road Connection

- Utilize Quarry Road interchange
- No work will occur at existing interchange
- Requires relocation of Quarry/Ghent and Palmer/Ghent intersections
- No freeway-to-freeway connection
- Estimated cost of construction: \$1 million

Alternate 3: I-255/US-50/IL-3/Davis St. Ferry Road Connection

- Utilize Davis St. Ferry Road bridge with widening needed
- All right-hand proposed ramps
- No freeway-to-freeway connection
- Northbound exit and entrance ramps connect to and from Old Illinois Route 3
- Estimated cost of construction: \$4 million

Alternate 4: I-255/US-50/Fish Lake North Connection

- Utilize Fish Lake Bridge with widening needed
- No freeway-to-freeway connection
- Southbound I-255 to eastbound IL-158 traffic will be required to travel west, pass the I-255 / US-50 interchange, turn back and cross over I-255, then return east with a total loop distance of approximately 2.8 miles
- Estimated cost of construction: \$14 million

Alternate 5: IL-3/IL-158 Connection

- Utilize existing IL-158/IL-3 interchange
- Freeway-to-freeway connection
- Additional traffic on IL-3
- Save construction cost for IL 158, as IL 3 will be utilized
- Interchange located on the south side of Columbia, requiring an additional 1.9 miles through Columbia to existing I-255 / US 50 / IL-3 interchange
- Estimated cost of construction: \$0.5 million

In addition, a sixth option was examined. This option would utilize existing IL-158 and would extend over IL-3 to the west, over the Union Pacific Railroad and connect to I-255 from the south at a new Fish Lake Interchange. The estimated cost for this option is \$50 million.

4.4 Potential Environmental Impacts

A detailed analysis of the environmental impacts of the proposed facility was beyond the scope of this feasibility study. An extensive analysis of the impacts will take place during any subsequent Phase 1 Location Study, as the environmental impact statement is developed. Some of the potential impacts that were identified during this feasibility study include:

Natural Areas

- Dupo Hill Prairie
- Sugar Loaf Hill Prairie
- Stemler Cave
- Stemler Cave Woods
- Pruitt Sinkholes
- Falling Spring
- Fosterburg Woods
- Silver Creek Bottomland Forest

Threatened/Endangered Species

- Common Moorehen – known from one locality (old strip mine) in close proximity to corridor
- Illinois Cave Amphipod – historically found in Stemler Cave system
- Indiana Bat – maternal colonies associated with caves and trees with loose/exfoliating bark and/or cavities
- Decurrent False Aster – Mississippi River floodplain

Wetlands/Floodplains

- Primarily Palustrine forested wetlands associated with stream corridors/valleys
- Other isolated areas may also be associated with sinkholes, farm ponds, etc.

Water Quality

- No significant issues for surface water
- Groundwater
 - Karst area in vicinity of Columbia/Millstadt is sensitive
 - Close linkage between surface activities and transmittal of pollutants to groundwater

- Stemler Cave recharge area defined and extends well into study area

Mines/Minerals

- Quarries
- Coal mines: strip, drift, shaft located variously within study area, primarily in Millstadt area

Waste Issues

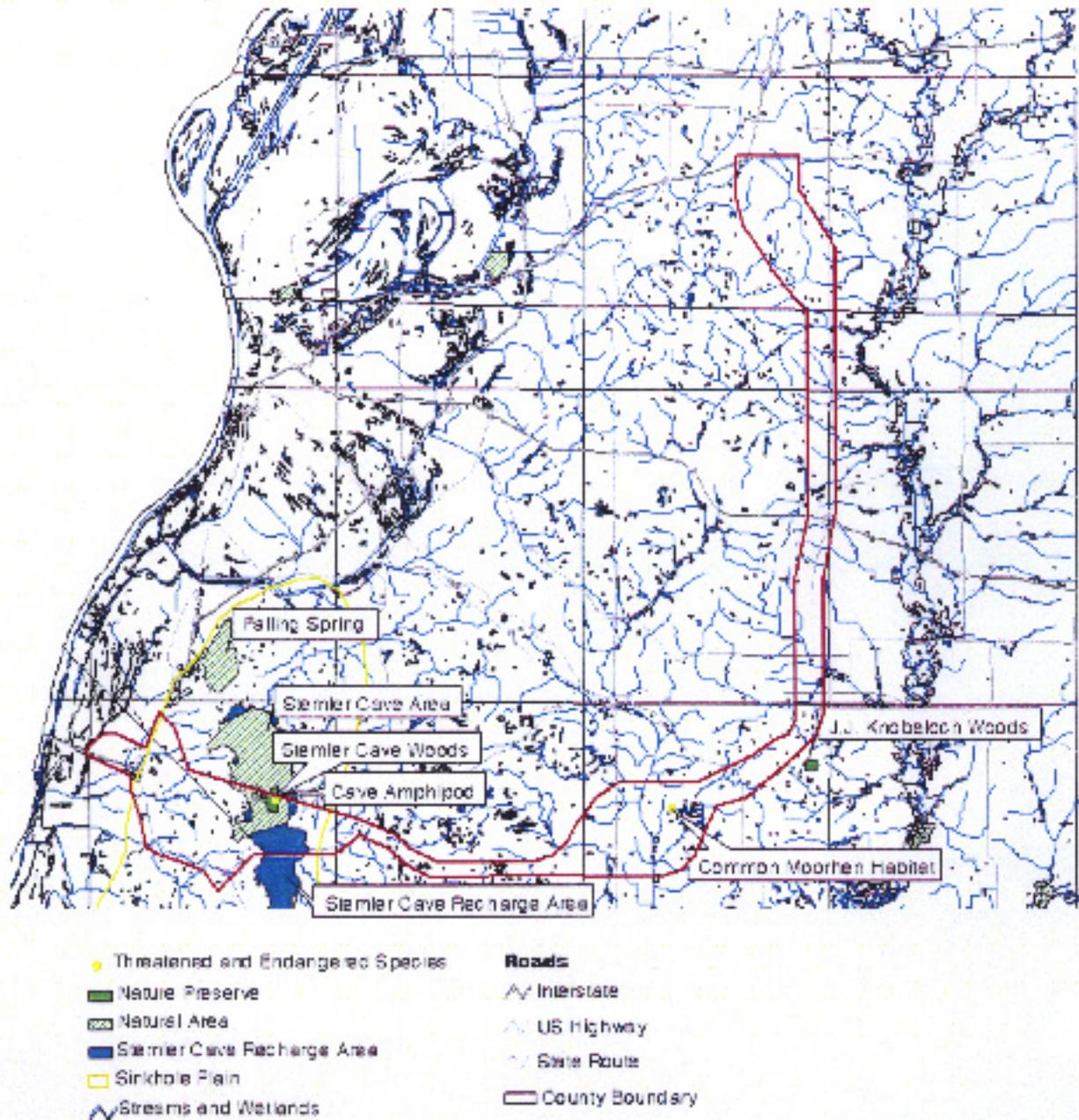
- Solid waste landfills located in vicinity of corridor
- UST, LUSTs located in vicinity of corridor
- CERCLIS sites
- Corrective action sites
- State equivalent CERCLIS sites

Human Development

- Prime farmland areas primarily in the vicinity of southern and northern portions of corridor
- Prehistoric cultural material in vicinity of corridor
- Potential residential and business displacement(s)
- Potential church displacement
- Cemeteries primarily in the vicinity of the northern portion of the corridor
- Potential historic sites in vicinity of corridor

Many of the potential impacts above will be dependent on the specific alignment of the proposed facility, which will not be determined until any subsequent Phase 1 Location Study. However, for the feasibility study, it appears that it will be very difficult to avoid the Stemler Cave recharge area. For the purposes of the feasibility study, a closed drainage system through the recharge area was included in the conceptual cost estimates for the facility. This was included for illustrative purposes and should not be construed as a commitment, since the exact alignment, impacts, and mitigation measures have not been determined. Figure 4.9 reflects some of the natural resources in and near the corridor.

Figure 4.9
Natural Resources



4.4 Other Transportation Improvements

To further address the goals and objectives of the study, other shorter-term transportation improvements were considered. Such improvements would complement a proposed new outer belt facility. These improvements could include improvements to existing intersections in the corridor, widening selected existing roadway sections, improved traffic signal timing, and improved access management.

Other potential transportation improvements include additional transit service and the use of Intelligent Transportation Systems (ITS). Transit improvements would include new or modified bus routes, shuttle buses to and from the MetroLink stations or Scott Air Force Base, or increasing vanpooling options for commuters.

ITS improvements include the use of new technologies to provide real-time traffic information for travelers, adjust signals to and follow current traffic conditions, or to improve incident management. These types of improvements work best with a larger system, rather than in individual instances.

5. PUBLIC INVOLVEMENT

Public involvement is a key element when developing a new major transportation improvement. Public involvement should consist of proactive agency, community, business, and elected or appointed official involvement throughout the project planning, design, and implementation process. Public involvement increases the prospects for consensus and, if a build alternative should be selected, the chances for ultimate implementation. Public involvement also greatly reduces the probability of project delays and litigation and inevitably leads to improved planning. Finally, it enhances the legitimacy of the planning process.

IDOT District 8 is committed to public involvement and listening and responding to public comments and concerns. For this study, the formation of the Study Management Group was critical to providing guidance for the study's direction and final recommendations. As described in Section 1.2, the Study Management Group was comprised of a selected number of public representatives and transportation professionals. Throughout the study, this group and other public representatives received a number of process briefings and the study direction was altered based on their comments.

Most important though is direct contact with the public, especially affected land-owners, residents and employers. Three public meetings were held near the end of study to educate the public on the study, gauge acceptance for the project and determine if there were any unknown barriers to further study and potential implementation.

The meetings were held in locations throughout the study area with one meeting in each affected county. Held at the end of September 2001, 491 people signed in at these meetings, with a few more informed about the study through the distribution of the study brochure. IDOT District 8 actively promoted these meetings, through the use of notices, print/radio/television media, and the use of variable message signs at a number of locations throughout the affected area.

The meetings were held in an open-house format, which allows for one-on-one interaction between the public and transportation professionals. A number of exhibits were prepared, to facilitate discussion. In addition to verbal comments and questions given at the meetings, 73 comment forms were returned.

Each meeting location resulted in a variety of opinions, usually pertaining to the corridor area nearest to the public meeting location. The first meeting was held at Southwestern Illinois College. From the verbal and written comments received at this location, there is generally strong support from community residents for this project. Traffic projections in this area are also the highest in the corridor, with 2020

traffic volumes predicted to range from 26,000 to 43,000 vehicles per day. One commenter had concerns about the facility encouraging "urban sprawl" and another commenter suggested that the facility be placed at north and west as possible to support existing development.

The second meeting was held at the Columbia Municipal Building. This meeting was the most well attended. Comments from these attendees showed mixed support for the project, with strong resistance to some of the potential connections of the proposed new outer belt highway to I-255. Residents were concerned about the use of Quarry Road as a approach, citing the amount of residential development in the area and the fact that truck traffic is already perceived to be problematic. Other comments included the desire for the study to consider a connection to I-255 from the south at a new Fish Lake interchange. There was no identifiable support for any one approach and connection. Environmental issues were a concern to one commenter at this location.

The final public involvement meeting was held at Triad High School in Troy. In general, there was strong resistance to the project. There was strong concern about farmland being destroyed, as well as some apprehension about the road fostering "urban sprawl" as this area is primarily agricultural, yet faces ongoing development pressure. Other comments addressed the fact that the connection to US-40 would parallel and impact existing and proposed residential development.

The issue of potential displacements of affected residents and businesses due to construction of the proposed outer belt highway was prevalent throughout the public involvement meetings. This feasibility study only defined a general corridor, so comments on specific displacement issues are premature. Any subsequent Phase 1 Location Study would identify a proposed alignment for the facility and identify right-of-way requirements.

Additional details on the meetings as well as responses to the comments are found in Appendix B.

6. CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to examine the feasibility of building a new four-lane, limited access "outer-belt" highway in the eastern portion of the Southwestern Illinois area. The study reviewed the existing transportation, land use and environmental features in the project area, identified and evaluated several alternatives, and developed a refined corridor for the proposed outer belt highway. As described above, a proactive public involvement process was included in this study.

Based on the results of this study, the Southwestern Illinois region would benefit from a new 37-mile outer belt highway facility. The proposed outer belt highway addresses the goals and objectives developed for this study (see Section 1). In terms of transportation mobility, the proposed outer belt highway improves traffic movement and would help accommodate the 20% to 25% growth in traffic generated by the projected 23% population growth and 19% employment growth between 1996 and 2020 in the study area. The projected 2020 traffic for the proposed outer belt highway ranges between 16,000 and 45,000 vehicles per day, with the highest volumes occurring in the vicinity of I-64 and Scott Air Force Base. This demonstrates that transportation accessibility is improved to the central part of the study area from the north and southwest portions of the study area. The traffic projections also indicate that a four-lane facility would be required. A four-lane, limited access facility was evaluated in this study. This type of facility would result in safer transportation operations, since four-lane limited access facilities typically have lower accident rates.

In terms of economic development, the proposed outer belt highway would support this goal. Economic development occurs with increased total output, typically resulting from an increase in the supply of labor, the amount of capital available, improvements in technology, and the level or quality of materials. The proposed outer belt facility would improve access to regional labor pools and to potential markets by facilitating goods movement through the study area. This feasibility study has resulted in early coordination between land use and transportation investments. The early coordination with affected municipalities in the study area resulted in the identification of a proposed corridor that included consideration of proposed development plans.

Although there are potential environmental impacts that could result from the implementation of this proposed outer belt highway, including potential impacts to threatened and endangered animal and plant species, the Stierler Cave recharge area, potential prehistoric cultural material, numerous small cemeteries, potential residential and business displacements, a church displacement, and prime farmland displacement, the feasibility study did not reveal any "fatal flaws" in the corridor that would preclude continuing further study. Any subsequent Phase 1

Location Study will need to analyze these environmental issues in much greater detail to determine if these impacts can be avoided or mitigated.

It is the conclusion of this study that the proposed new outer belt highway is feasible and warrants further study. The traffic forecasts demonstrate the need for a four-lane highway, with the highest traffic volumes and greatest need for the facility in the central portion of the corridor (between I-64 and IL-15). The conceptual design demonstrates the physical feasibility of constructing a new outer belt highway. From an environmental perspective, there are no fatal flaws. However, there are environmentally sensitive areas in the western portion of the corridor.

On December 6, 2001, the Study Management Group accepted the findings of the feasibility study and recommended that this project advance to the next step, a Phase 1 Location Study.