

Gateway Connector Corridor Protection Report Madison, St. Clair and Monroe Counties



**Prepared for:
Illinois Department of Transportation**



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Table of Contents

<u>Section</u>	<u>Page</u>
1.0 Introduction	1-1
1.1 Background and History	1-1
1.2 Location of Study Area	1-3
2.0 Purpose and Need	2-1
2.1 Population Trends Analysis	2-2
2.1.1 Trend Analysis Methods	2-2
2.1.2 Historical Population Trend Results.....	2-3
2.1.3 Future Population Projections.....	2-12
2.2 Traffic	2-14
2.2.1 Projected Impact of Land Use Changes on Travel Demand	2-15
2.2.2 Projected Travel Patterns within the Gateway Connector Corridor	2-15
2.2.3 Forecasted No-Build Traffic Conditions	2-16
2.2.4 Forecasted Attractions to the Gateway Connector Corridor	2-18
3.0 Alternative Development and Analysis.....	3-1
4.0 Environmental Conditions and Potential Consequences	4-1
4.1 Project Area/Existing Road Network	4-1
4.2 Social and Economic Environment.....	4-2
4.2.1 Demographics.....	4-2
4.2.2 Community Facilities.....	4-5
4.3 Land Use and Zoning	4-5
4.4 Cultural Resources	4-6
4.4.1 Archaeological Resources	4-7
4.4.2 Historical Architecture.....	4-7
4.4.3 Cemeteries	4-8
4.5 4(f)/6(f) Properties	4-8
4.5.1 Historic Sites.....	4-9
4.5.2 Park Lands.....	4-9
4.5.3 Publicly Owned Nature Preserves	4-9
4.5.4 Existing and Proposed Bike Trails	4-10
4.6 Agricultural Resources	4-10
4.6.1 Agricultural Land and Operations	4-10
4.6.2 Prime and Unique Farmland.....	4-10
4.6.3 Centennial Farms	4-11
4.7 Geology/Mineral Resources	4-11
4.7.1 Geologic Resources	4-11
4.7.2 Groundwater Resources.....	4-13
4.7.3 Geotechnical (mines, shafts, stability)	4-17
4.8 Aquatic and Terrestrial Ecosystems	4-17
4.8.1 Terrestrial Ecology.....	4-17
4.8.2 Aquatic Ecology	4-23
4.8.3 Water Quality	4-24
4.9 Floodplains	4-25
4.10 Wetlands and Waters of the United States.....	4-26

Table of Contents (continued)

4.11	Sensitive Species and Natural Areas	4-27
	4.11.1 Threatened and Endangered Species	4-27
	4.11.2 Natural Areas	4-30
4.12	Hazardous Materials/Solid Waste	4-33
4.13	Air Quality	4-35
4.14	Noise	4-36
4.15	Visual Environment	4-37
5.0	Agency Coordination	5-1
6.0	Public Involvement	6-1
6.1	Communication Protocols	6-2
6.2	Summary of Public Feedback	6-2
6.3	Outreach Activities	6-3
	6.3.1 Study Management Group (SMG)	6-3
	6.3.2 Public Officials	6-4
	6.3.3 Public Information Meetings	6-5
	6.3.4 Public Hearing	6-8
	6.3.5 Small Group and Individual Meetings	6-9
	6.3.6 Group and Individual Opposition	6-10
6.4	Outreach Tools	6-12
	6.4.1 Website and E-Mail	6-12
	6.4.2 Comment Line	6-12
	6.4.3 Newsletters and Business Cards	6-13
	6.4.4 Frequently Asked Questions (FAQ)	6-13
6.5	Study Modifications Resulting from Public Input	6-13
6.6	Media Relations	6-14
7.0	Summary and Recommendations	7-1
8.0	List of Preparers and Contributors	8-1
9.0	References	9-1

List of Appendices

Appendix A	Section 4-510 Illinois Highway Code 605 ILCS 5/
Appendix B	Analysis and Evaluation of Alternative Corridors, Engineering and Environmental Review
Appendix C	Public Involvement Log

**Table of Contents
(continued)**

List of Tables	<u>Page</u>
Table 2-1 Total Population and Percent Change for Counties Located in the Gateway Connector Study Area	2-3
Table 2-2 Total Population and Percent Change for Cities Located in the Gateway Connector Study Area	2-3
Table 2-3 Population Data for Cities Located Outside the Gateway Connector Study Area	2-9
Table 2-4 Population Data for Census Tracts within the Study Area	2-12
Table 2-5 County and Regional Population Projections, 2000-2025	2-12
Table 2-6 Future Population Projections for Analysis Areas, 2000-2025	2-12
Table 2-7 Future Population Projections for O’Fallon and Columbia, Illinois.....	2-13
Table 2-8 Future Population Projections for Troy, Illinois	2-13
Table 2-9 Projected Increases in Traffic Volumes within Study Corridor Under the No Build Condition	2-16
Table 2-10 Reductions in Forecasted Traffic Volumes Due to Additional Transportation Facility, Gateway Connector Study Corridor	2-18
Table 3-1 Cost Estimate for the Preferred Corridor	3-6
Table 4-1 Total Population and Percent Change for Counties and Municipalities Located in the Gateway Connector Study Area.....	4-2
Table 4-2 Age and Racial Characteristics, 2000.....	4-3
Table 4-3 Housing Characteristics, 2000.....	4-3
Table 4-4 Per Capita Personal Income.....	4-4
Table 4-5 Home Value and Poverty Level Characteristics, 2000	4-4
Table 4-6 Potential Land Use Impacts.....	4-6
Table 4-7 Mammal Species Potentially Occurring within the Gateway Connector Study Area	4-20
Table 4-8 Common Amphibians and Reptiles Likely to Occur within the Gateway Connector Study Area	4-21
Table 4-9 Representative Bird Species Likely Occur in the Gateway Connector Study Area	4-21
Table 4-10 Primary Creeks Crossed (from North to South) by the Preferred Corridor	4-23
Table 4-11 Floodplain and Floodway Impacts Associated with the Preferred Alternative.....	4-26
Table 4-12 Potential Sites for Special Waste within Proximity of the Preferred Corridor.....	4-35
Table 4-13 National Ambient Air Quality Standards	4-35
Table 4-14 Noise Abatement Criteria Hourly A-Weighted Sound Level (dBA)	4-36
Table 7-1 Summary of Impacts of the Preferred Corridor.....	7-3

**Table of Contents
(continued)**

List of Figures	<u>Page</u>
Figure 1-1 Initial and Final Study Areas	1-2
Figure 2-1 Total Population Change per County.....	2-4
Figure 2-2 Population Percentage of Change per County	2-5
Figure 2-3 Total Population Change per Municipality	2-6
Figure 2-4 Population Percentage of Change per Municipality	2-7
Figure 2-5 Total Population Change per Tract.....	2-10
Figure 2-6 Total Percentage of Change per Tract	2-11
Figure 2-7 East-West Gateway Areas of Population Analysis	2-13
Figure 2-8 Existing and Projected Traffic Volumes (No Build)	2-17
Figure 3-1 Gateway Connector Sections	3-2
Figure 3-2 Preliminary 1,000-foot Wide Corridors.....	3-5
Figure 3-3 Final Alternative Corridors	3-7
Figure 3-4 Gateway Connector Preferred Corridor	3-8
Figure 3-5 Preferred Corridor Projected Traffic Volumes (2025)	3-9
Figure 4-1 Stemler Cave Recharge Area.....	4-14
Figure 4-2 High Sinkhole Densities Columbia and Waterloo Karst Areas	4-15
Figure 4-3 Natural Divisions of Illinois for the Gateway Connector Study Area	4-18
Figure 4-4 Nature Preserves in the Stemler Cave Recharge Area	4-32

Table of Contents (continued)

List of Abbreviations and Acronyms

APZ	Accident Potential Zone
AST	aboveground storage tank
CWA	Clean Water Act
dBA	decibels (A-weighted)
East-West Gateway	East-West Gateway Council of Governments
FAQ	frequently asked question
FEMA	Federal Emergency Management Agency
FE	federally endangered
FHWA	Federal Highway Administration
FT	federally threatened
IDOT	Illinois Department of Transportation
IDNR	Illinois Department of Natural Resources
IHPA	Illinois Historic Preservation Agency
ITARP	Illinois Transportation Archaeological Research Program
L _{eq}	energy-equivalent sound level (transportation)
LOS	level of service
LUST	leaking underground storage tank
LWCF	Land and Water Conservation Fund
NAC	Noise Abatement Criteria
NAGPRA	Native American Graves Protection and Repatriation Act
NHPA	National Historic Protection Act
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
SAFB	Scott Air Force Base
SMG	Study Management Group
ST	state threatened
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
UST	underground storage tank
vpd	vehicles per day

1.0 Introduction

1.1 Background and History

In 2001, the Illinois Department of Transportation (IDOT) concluded a transportation Feasibility Study designed to evaluate the need for an “outer belt” transportation corridor around the southwestern Illinois metropolitan area of the St. Louis region (Figure 1-1). The purpose of the Feasibility Study was to examine the existing and future transportation demand, land use, and environmental conditions in the corridor; identify and evaluate a variety of alternatives; and develop recommendations in conjunction with input from the public. The Feasibility Study is available upon request at IDOT’s District 8 office in Collinsville or on the project website.

The Feasibility study process was formulated by conducting an inventory of existing conditions, developing an understanding of future travel demand in the corridor, assessing physical feasibility and potential costs, and developing a general understanding of environmental issues and constraints within the study area. Additionally, initial corridors were defined and refined by incorporation of input from a Study Management Group (SMG) to identify goals and objectives for the study. Representatives of the SMG included individuals from IDOT, St. Clair, Madison, and Monroe counties, Federal Highway Administration (FHWA), and East-West Gateway Council of Governments (East-West Gateway). Additional input was obtained from elected officials, community representatives, natural resource and regulatory agencies, other interested or potentially affected parties, and the general public.

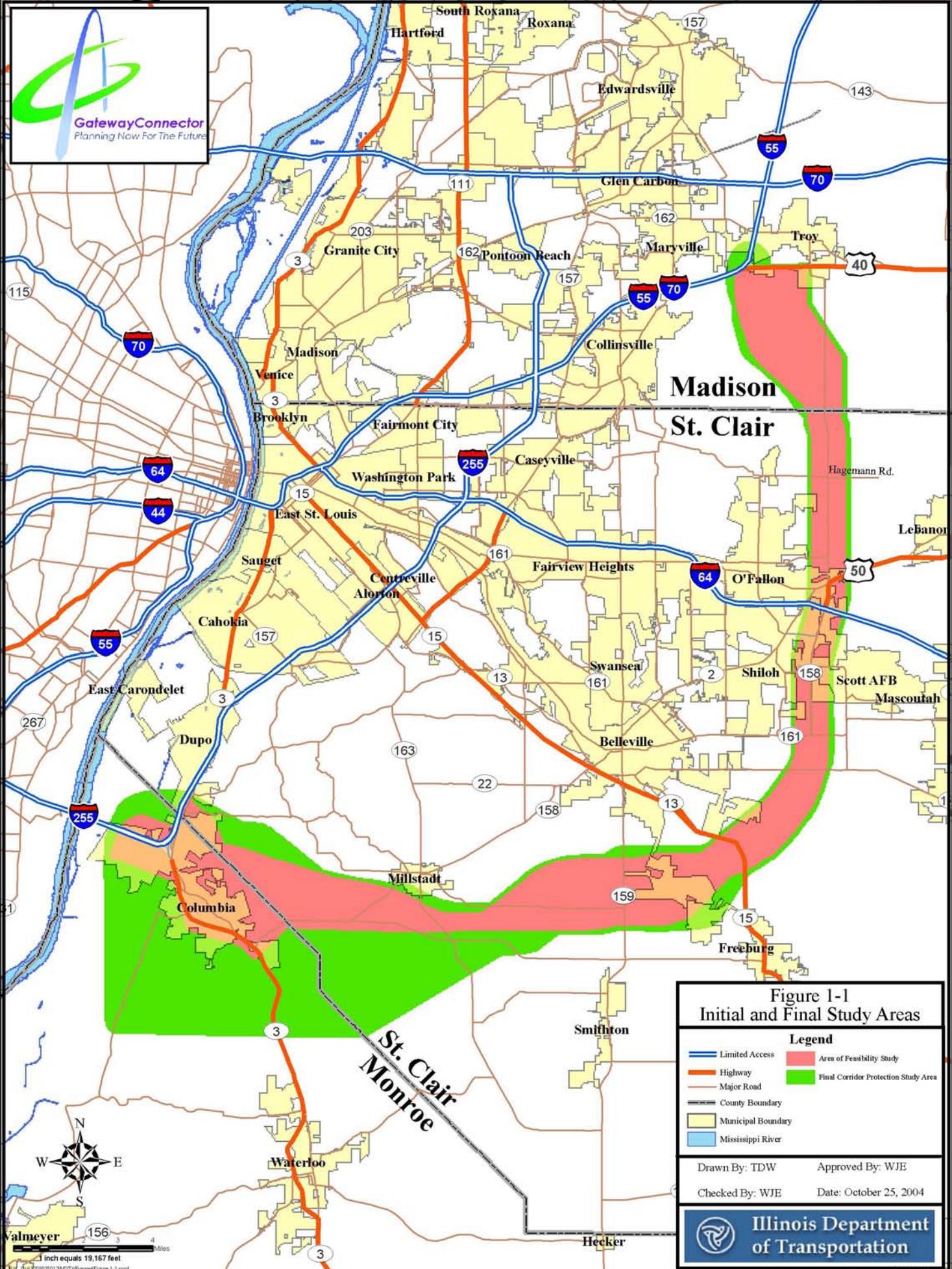
Overall goals and objectives of the Feasibility Study were developed by the SMG to address the following:

- Transportation Mobility,
- Economic Development, and
- Environmental Protection.

Based on the findings of the Feasibility Study, it was determined that a new 37-mile outer belt transportation facility would be feasible and would benefit the region. Such a facility would address transportation mobility issues by accommodating the future traffic and population growth within the area. Additionally, with projections of increased population, improvements to the transportation infrastructure would be required to enhance overall safety and reduce accidents.

The Feasibility Study also concluded that such a transportation facility would support economic development by improving access to regional labor pools and by facilitating the movement of goods and services through the study area.

Environmental issues identified as a result of the Feasibility Study included Stemler Cave and the sensitive features of the Sinkhole Plain, potential prehistoric cultural resource sites, potential residential and commercial impacts, and potential prime farmland and agricultural resources impacts. However, no “fatal flaws” were identified that would preclude the consideration of potential future transportation improvements. As a result, it was concluded that such a transportation system could be developed without serious impacts to environmental resources.



**Figure 1-1
Initial and Final Study Areas**

Legend	
	Limited Access
	Highway
	Major Road
	County Boundary
	Municipal Boundary
	Mississippi River
	Area of Feasibility Study
	Final Corridor Protection Study Area

Drawn By: TDW Approved By: WJE
 Checked By: WJE Date: October 25, 2004

Illinois Department of Transportation

1 inch equals 19,167 feet
 0 1 2 3 4 Miles

Subsequent to the completion of a recent study evaluating the feasibility of a new transportation corridor in the Metro East, it was recognized that the same factors supporting the need for such a facility (i.e., high population growth and projected degradation of the transportation infrastructure) represented a potential problem for future transportation planning. In other areas of the state, the failure to “get ahead” of the expanding residential and commercial development has limited the land area available for future transportation facilities, resulting in greater environmental and social disruption and elevated project costs. Corridor preservation represents an opportunity to establish a preliminary corridor that may be used for future transportation needs while minimizing environmental impacts and project costs. This legal option is afforded the IDOT through a corridor protection statute that states:

“The Department may establish presently the approximate locations and widths of rights of way for future additions to the state highway system to inform the public and prevent costly and conflicting development of the land involved.”
Section 4-510 Illinois Highway Code 605 ILCS 5/ (provided in Appendix A).

In consideration of the future need as indicated in the Feasibility Study, IDOT initiated a process to establish the approximate rights of way that would meet this need. This corridor became known as the Gateway Connector due to its functional importance in connecting communities of the southeastern Metro East with each other and to the region with a reliable, efficient transportation system. The planning history and the study area encompassed by the Gateway Connector are described below.

1.2 Location of Study Area

The Gateway Connector study area comprises a total of 93.7 square miles and encompasses parts of Madison, St. Clair and Monroe counties. This study area was initially identical to that of the Feasibility Study (Figure 1-1). However, the Gateway Connector study area was revised as needed (minimum of 1-mile wide) to consider a more complete range of alternatives that responded to potential transportation needs, existing and projected land use, and environmental constraints. The additions to the study area that encompassed these revisions are also depicted in Figure 1-1.

The Gateway Connector study area begins in Madison County along U.S. Route 40 from the I-55/70 interchange to the Troy-O’Fallon Road intersection. At this point, it is 2.2 miles wide. It then proceeds southerly to the Madison-St. Clair County line where it narrows to 1 mile wide. From there, it remains 1 mile wide and continues southerly and centered along Troy-O’Fallon and Scott-Troy Roads, past I-64 and Scott Air Force Base (SAFB) to Illinois Route 161 southeast of Belleville. From this location, the study area proceeds southwesterly to Illinois Route 13 just north of Freeburg and remains 1 mile wide. At Illinois Route 13, it widens to 2.3 miles wide and crosses Illinois Route 159 south of Belleville. It continues westerly and proceeds south of Millstadt where it narrows to 1.4 miles wide. Just south of Millstadt, the study area expands to a triangular shape encompassing Columbia and its surrounding area. The study area ends roughly at the I-255/Fish Lake Road interchange near the Jefferson Barracks Bridge in Monroe County.

2.0 Purpose and Need

The overall purpose of this project is to establish and preserve a corridor to be used for anticipated future transportation needs. The corridor should be located so that a future transportation facility is safe, efficient, environmentally sound and cost-effective, and responsive to the local and regional needs. Several factors are frequently used to evaluate and establish the purpose and need of a proposed transportation facility. Among others, these include:

1. System Linkage (within the overall transportation network);
2. Need for Additional Capacity (within the existing transportation network);
3. Transportation Demand;
4. Legislative Mandate;
5. Social Demands or Economic Development;
6. Modal Interrelationships;
7. Need for Enhanced Safety; and
8. Roadway Deficiencies.

These factors often are based on a thorough understanding of the deficiencies of the existing transportation system and are used to identify and evaluate needed improvements. Additionally, these factors also have a direct bearing on the kind of facility and the nature of the improvement.

At this early planning stage, some of these needs are clearly understood:

- **System Linkage.** Developing areas of the Gateway Connector study area currently utilize a system of collector roadways and primary arterial roadways to access regional interstate systems. The Gateway Connector will provide for needed linkage between the interstate systems of I-55/70, I-64, and I-255.
- **Roadway Capacity** – Based on projected growth in population and traffic, primary arterials will become congested and will exhibit a reduced level of service (LOS). Increased roadway system capacity will be needed in accordance with the projected travel demands to improve the general operating conditions.
- **Traffic Safety** – Future degradation of LOS on arterial and secondary roadways will increase crash rates and reduce overall safety. Accordingly, there will be a need to reduce the number and severity of traffic-related crashes.
- **Economic Development** – Commercial business development has expanded markedly in the Gateway Connector study area and is expected to continue in the future. The development of a safe and efficient transportation system to serve those businesses will be an important future need.

However, the purpose of this corridor protection process is not to define the ultimate facility type or to fully assess the deficiencies of the existing transportation network. Such an analysis will more appropriately be conducted during more detailed Phase I studies and will result in the identification of more specific transportation needs. Rather, the purpose of this corridor protection study is to accomplish the following:

1. Identify a future corridor that will accommodate a range of transportation improvements that can address identified needs;
2. Preserve a future transportation corridor that will minimize impacts to the human and natural environment; and
3. Minimize costs associated with the development of a future transportation facility.

As is discussed in Section 1.1, the previously conducted Feasibility Study established a need for a future transportation facility within the study area based on existing and projected traffic levels and population growth (IDOT, 2002). An updated analysis of residential development and population growth within the corridor was conducted to establish an understanding of future growth in traffic and, consequently, needs for improvement in the regional transportation network. The population growth patterns in and around the study corridor were also examined to identify population shifts that subsequently result in shifts in travel patterns. Such alterations in traffic patterns may result in a greater demand on the transportation infrastructure within the area.

Population growth is recognized as an important basis for needed expansion of a transportation network. This factor, coupled with an analysis of the travel and traffic patterns within the study area was used to further substantiate the basic need for the Gateway Connector as established by the Feasibility Study. The following sections present that analysis.

2.1 Population Trends Analysis

2.1.1 Trend Analysis Methods

In order to properly assess both historic and future demographic shifts, U.S. Census Data from 1980, 1990 and 2000 were analyzed. Only total population data (as opposed to racial composition or age characteristics, etc.) were evaluated given the fact that population growth patterns were of primary importance. Population data were gathered at the county, city, and census tract level for each of the three census years in order to assess demographic trends within the study area as well as the larger region of interest. This was necessary to evaluate which areas specifically have experienced a net gain in population over the last 20 years, and which areas, if any, lost residents during that same time period. In addition to past population shifts, published reports of projected future population trends in the region were also utilized in an effort to assess future demographic trends which will affect demands on the transportation infrastructure in and around the study area. These published reports provide projected population trends to the year 2025.

Due to changes to tract boundaries over this 20-year period, there were inconsistencies in the tracts which affected the manner in which comparable geographic regions were assessed over time. In some instances, a single tract that existed in 1980 was subsequently split prior to the 1990 or 2000 census (i.e., one tract was split into two tracts). In other areas, two tracts in 1980 or 1990 were merged into one large tract in subsequent census years. In most cases, these changes occurred along identical tract boundaries; in other cases, the two new tracts had slightly different outer boundaries than the original tract. As a way to remedy these discrepancies, census tract groupings were created by combining more than one census tract to create a new geographic entity. In such cases, the population data for each census tract were added to obtain a population total for the newly created census tract grouping. This geographic entity, made up of multiple census tracts, constituted a constant geographic region over the 20-year period and allowed for an accurate comparison of population within that region across the three census years (1980, 1990 and 2000).

In addition to discrepancies in census tract boundaries over this 20-year period, there were also instances where municipality boundaries were likewise altered across this period of time.

2.1.2 Historical Population Trend Results

Counties

Figures 2-1 and 2-2 and Table 2-1 present changes in populations of the three counties in the study area. St. Clair County experienced a net decrease in total population between 1980 and 1990 and also from 1990 to the year 2000 (-1.7 and -2.6 percent, respectively).

Table 2-1. Total Population and Percent Change for Counties Located in the Gateway Connector Study Area

County	1980	1990	2000	% Change 1980-1990	% Change 1990-2000	% Change 1980-2000
Madison	247,691	249,238	258,941	0.6	3.9	4.5
St. Clair	267,531	262,852	256,082	-1.7	-2.6	-4.3
Monroe	20,117	22,422	27,619	11.5	23.2	37.3

Source: U.S. Census Bureau, 2000.

Prepared/Date: CDD/9-01-04
Checked/Date: WJE/9-17-04

Madison County experienced a marginal increase in population between 1980 and 1990 (0.6 percent) and a moderate increase from 1990 and 2000 (3.9 percent). In contrast, Monroe County experienced a 11.5 percent rise in population between 1980 and 1990 and a 23.2 percent increase from 1990 to 2000.

Municipalities

Most communities within the study area experienced an increase in population during the 20-year period from 1980 to 2000, except for Millstadt (1980-1990), Belleville (1990-2000), and SAFB (see Figures 2-3 and 2-4). The cities of O'Fallon, Troy, Shiloh, Freeburg and Columbia all experienced a significant increase in population; each having grown by at least 29 percent from 1980 to 2000 and by at least 24 percent from 1990 to 2000 (Table 2-2).

Table 2-2. Total Population and Percent Change for Cities Located in the Gateway Connector Study Area

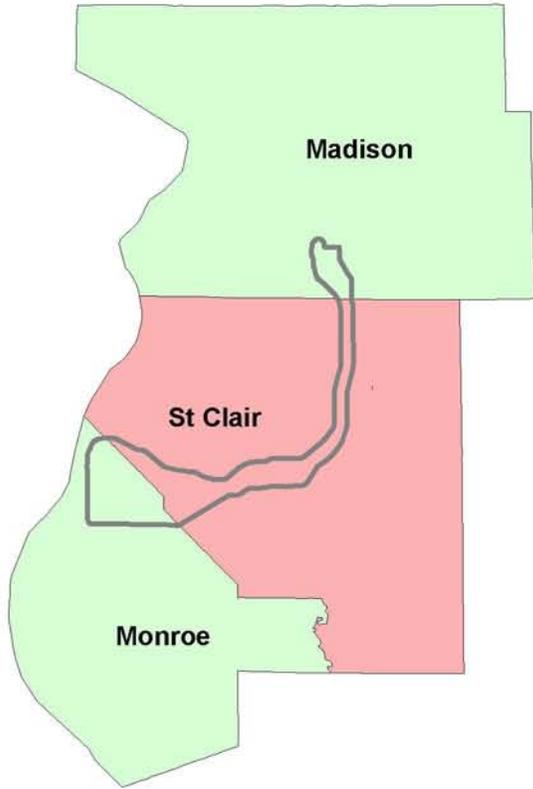
City	1980	1990	2000	% Change 1980-1990	% Change 1990-2000	% Change 1980-2000
Belleville	41,580	42,785	41,410	2.9	-3.2	-0.4
Columbia	4,269	5,524	7,922	29.4	43.4	85.6
Freeburg	2,989	3,115	3,872	4.2	24.3	29.5
Millstadt	2,736	2,566	2,794	-6.2	8.9	2.1
O'Fallon	12,241	16,073	21,910	31.3	36.3	79.0
Shiloh	1,045	2,655	7,643	154.1	187.9	631.4
Troy	3,772	6,046	8,524	60.3	41.0	126.0

Source: U.S. Census Bureau, 2000.

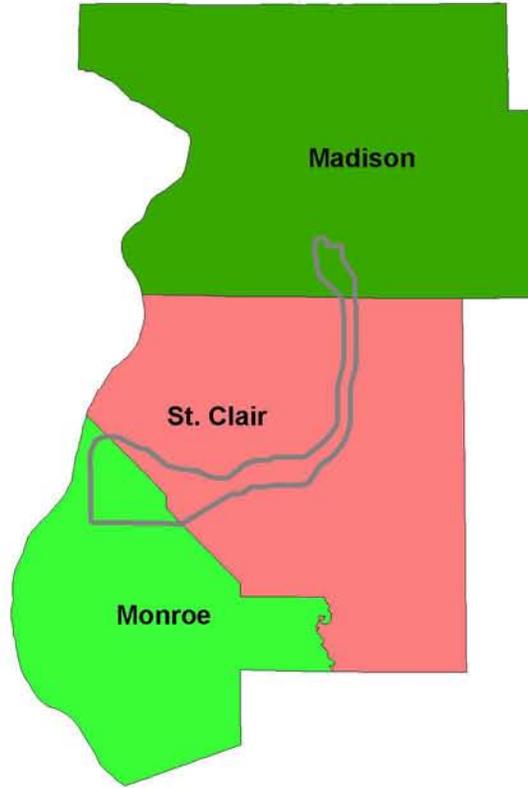
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Checked/Date: WJE/9-17-04

O'Fallon – The city of O'Fallon, which is located directly west of the study area, experienced an increase in population that averaged more than 79 percent per year from 1980 to 2000. This growth has been accelerating as evidenced by growth of an average of 383 people per year from 1980 to 1990, 493 people per year from 1990 to 1998, and an estimated 700 people per year between 1998 and 2000 (O'Fallon Comprehensive Plan, 2001). Between 1980 and 2000, the population within the city of O'Fallon rose 79 percent from 12,241 to 21,857 persons.

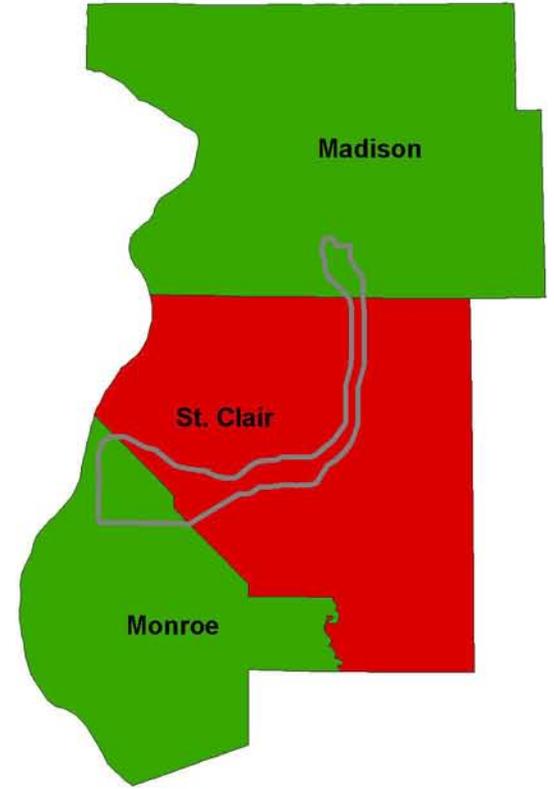
1980-1990



1990-2000



1980-2000



LEGEND

- -11500 - -7500
- -7500 - -5000
- -5000 - -2500
- -2500 - 0
- 0 - 2500
- 2500 - 5000
- 5000 - 7500
- 7500 - 11500

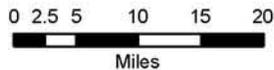


Figure 2-1
Total Population Change per County

** Data Sources: U.S. Census Bureau & U.S. Department of Commerce*

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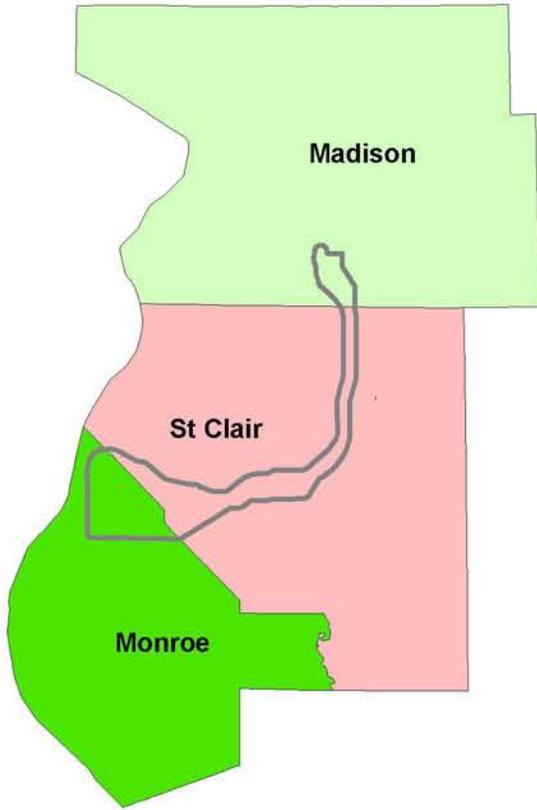
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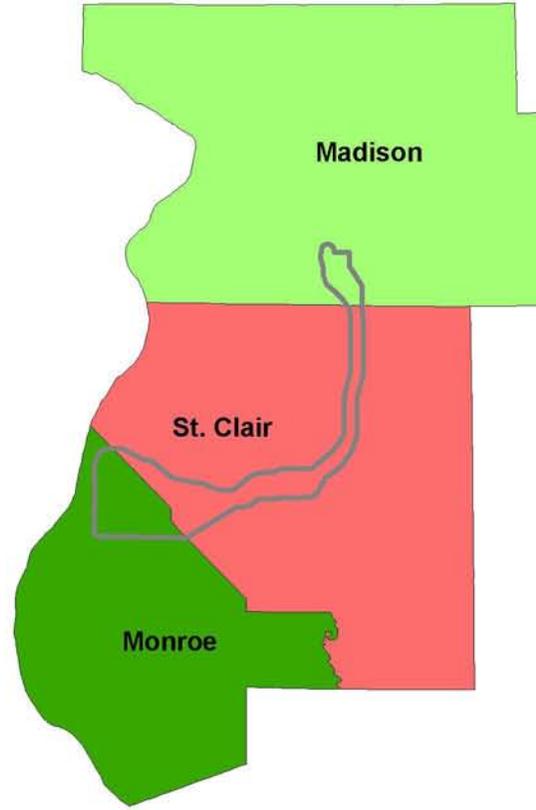
Date: September 20, 2004



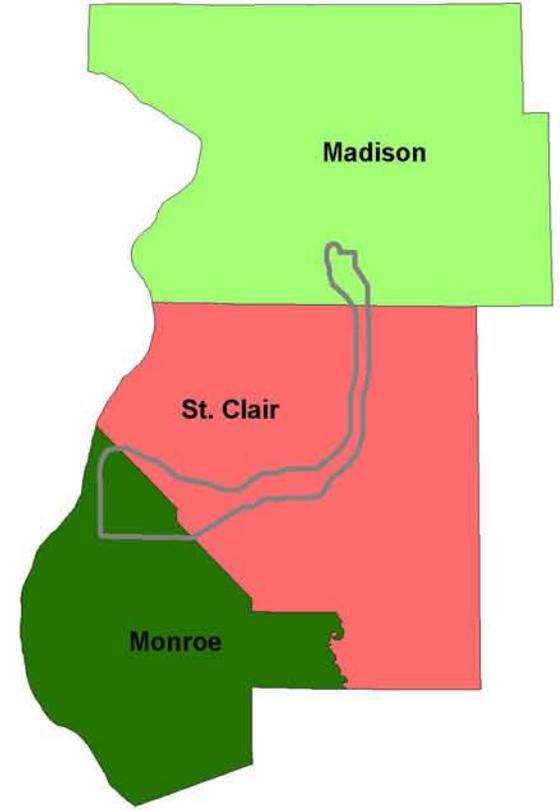
1980-1990



1990-2000



1980-2000



LEGEND

- 5 to -2.5 Percent
- 2.5 to 0 Percent
- 0 to 2.5 Percent
- 2.5 to 5 Percent
- 5 to 10 Percent
- 10 to 15 Percent
- 15 to 25 Percent
- 25 to 40 Percent

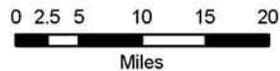


Figure 2-2

Population Percentage of Change per County

** Data Sources: U.S. Census Bureau & U.S. Department of Commerce*

Drawn By: TDW

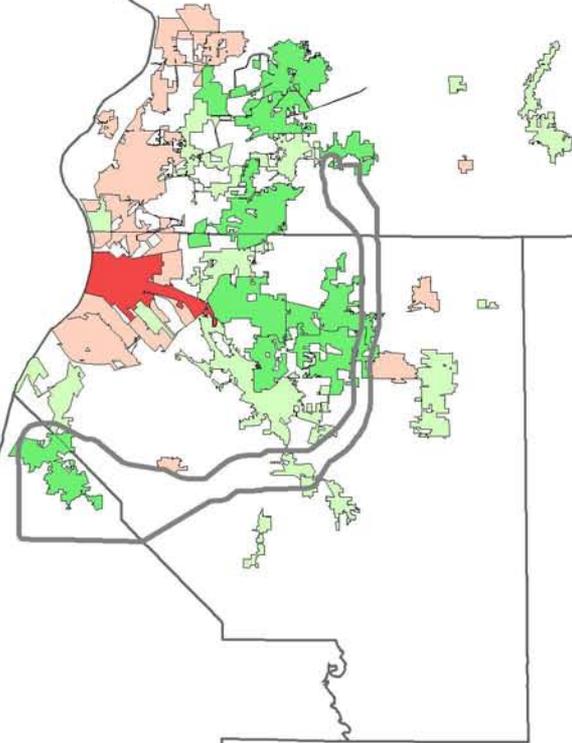
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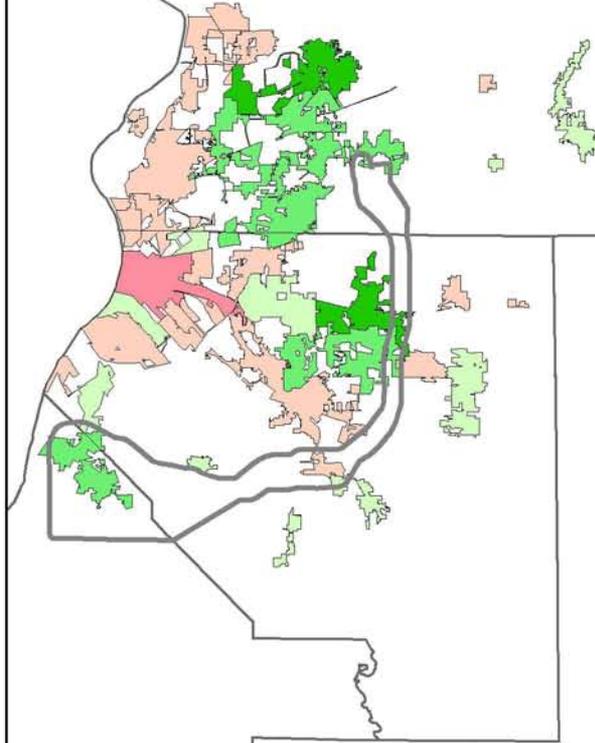
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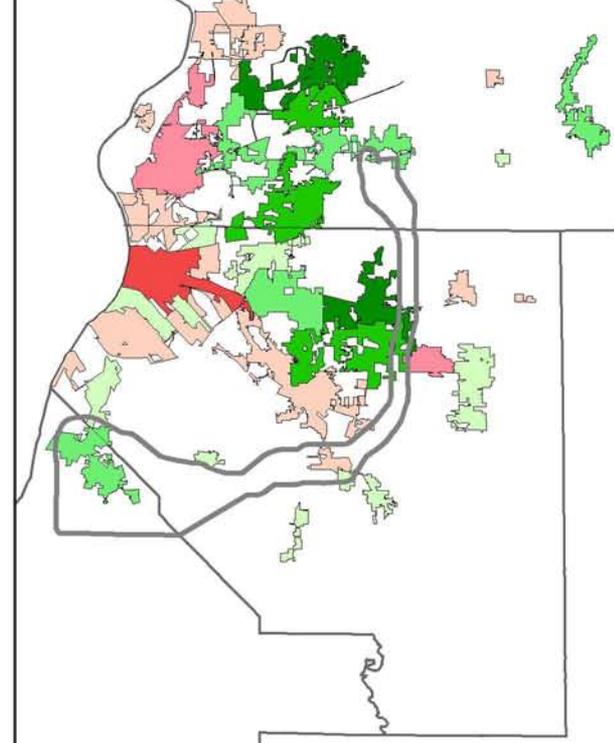
1980-1990



1990-2000



1980-2000



* Note: Municipal boundaries for all years (1980, 1990, 2000) reflect current (2000) geographic limits

LEGEND

- 23670 to -10000
- 9990 to -5000
- 4999 to 0
- 0 to 1250
- 1251 to 5000
- 5001 to 7500
- 7501 to 10000

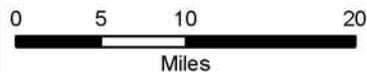


Figure 2-3

Total Population Change per Municipality

* Data Sources: U.S. Census Bureau & U.S. Department of Commerce

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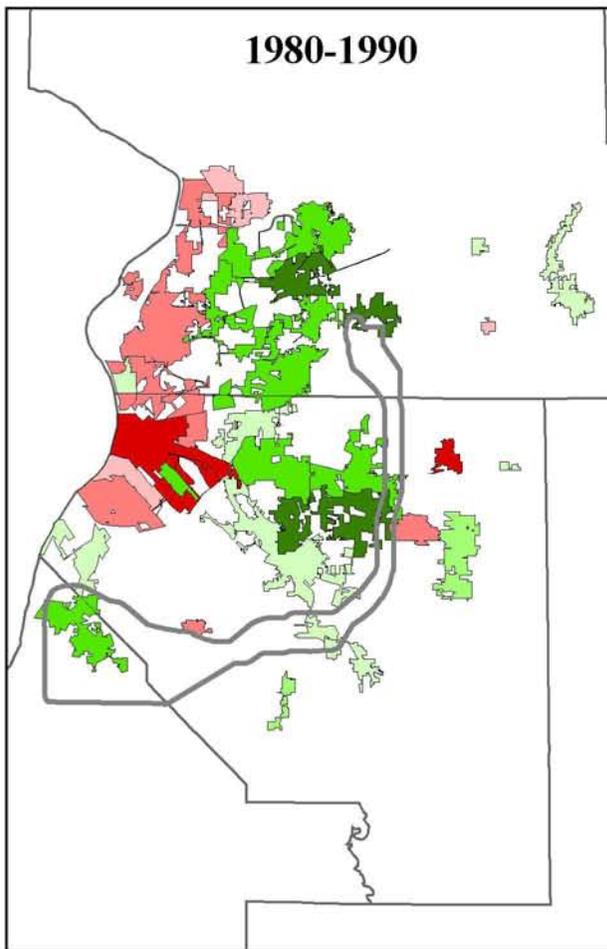
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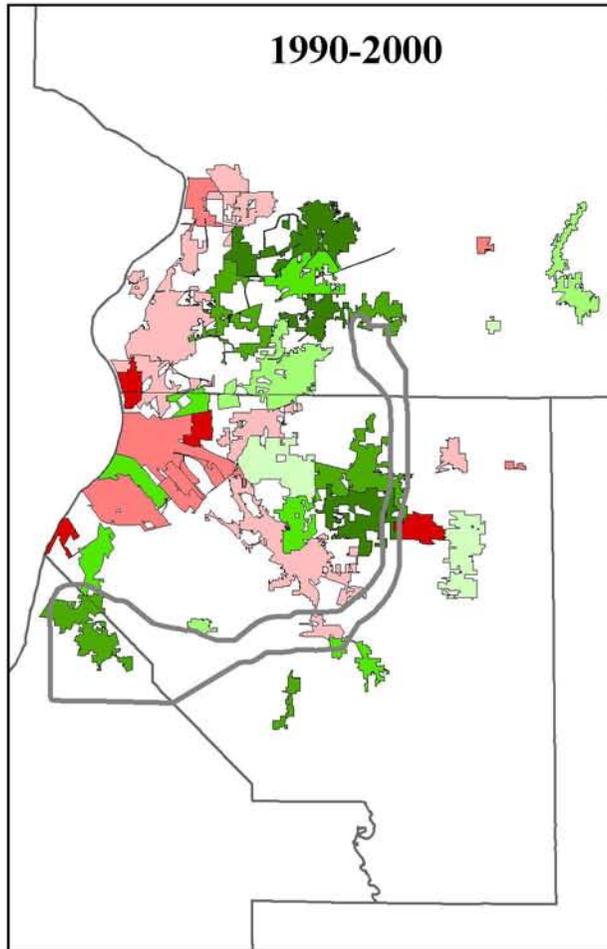
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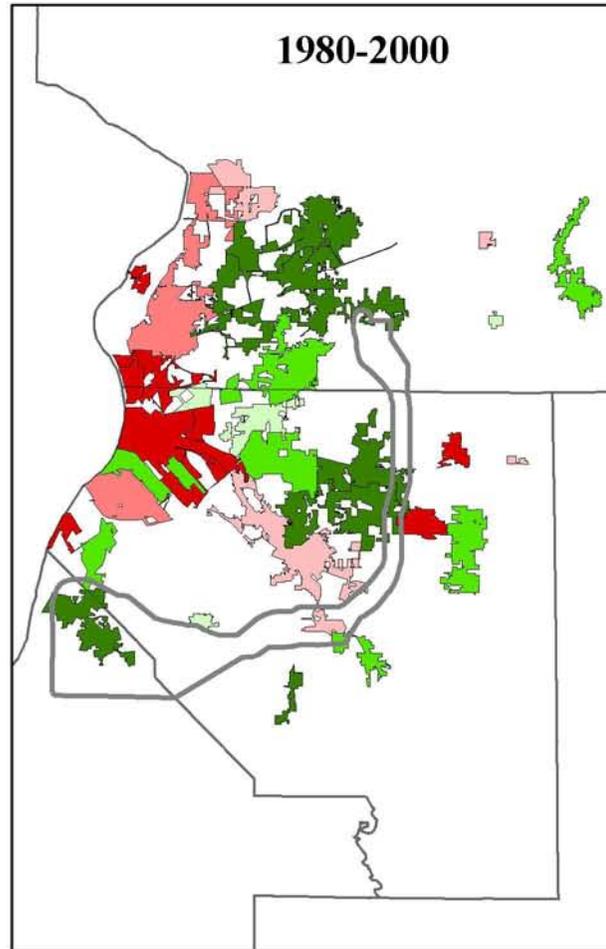
1980-1990



1990-2000



1980-2000



* Note: Municipal boundaries for all years (1980, 1990, 2000) reflect current (2000) geographic limits

LEGEND

- -69.0 to -23.0 Percent
- -23.0 to -6.0 Percent
- -6.0 to 0.0 Percent
- 0.0 to 8.0 Percent
- 8.0 to 13.0 Percent
- 13.0 to 35.0 Percent
- 35.0 to 45.0 Percent
- 45.0 to 650.0 Percent

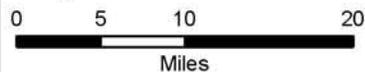


Figure 2-4

Population Percentage of Change per Municipality

* Data Sources: U.S. Census Bureau & U.S. Department of Commerce

Drawn By: TDW

Approved By: WJE

Checked By: WJE

Date: September 20, 2004



Troy – Like many other communities in and around the project study area, the city of Troy has experienced tremendous growth. The city's population has grown nearly sixfold from 1,260 to 7,329 persons between 1950 and 1995 (Growth Management Plan for Troy, Illinois, 1999). Between 1980 and the year 2000, the city of Troy experienced a 126 percent increase in population (from 3,772 to 8,524 persons during that 20-year period). During that same 20-year period, Madison County experienced a population rise of only 4.5 percent illustrating the disproportionate population increase in Troy when compared with other municipalities within the county.

Shiloh – Of all the municipalities located in and around the study area, Shiloh experienced, by far, the greatest increase in population from 1980 to 2000. The population during that 20-year period increased from 1,045 to 7,643 persons, which is more than a 600 percent increase. One of the reasons for its tremendous growth may be due to the fact that Shiloh is ideally situated to accommodate residents who commute to St. Louis given its proximity to I-64. Shiloh is also situated in proximity to SAFB and may provide housing to support staff who works at the base. This increase in population is striking when compared with the 4.3 percent decline in population that occurred in St. Clair County during that same 20-year time period.

Freeburg – Compared with other municipalities in and around the study area, Freeburg experienced a moderate increase in population from 1980 to 2000 with a 29 percent increase. The population rose from 2,989 to 3,872 during that 20-year period.

Millstadt – Although the village of Millstadt experienced a decline in population of 6 percent between 1980 and 1990, the number of residents increased by 8.9 percent from 1990 to 2000. Historically, Millstadt has experienced a steady rise in population; from 1960 to 1970, the number of residents increased by 18 percent and from 1970 to 1980 the increase was 26 percent (Village of Millstadt Comprehensive Community Plan Update, 2002).

Columbia – The population in Columbia has nearly doubled between 1980 and 2000. The number of residents increased from 4,269 to 7,922, which represents more than a 85 percent rise in population. The population within Monroe County grew by 37 percent during that same 20-year period.

Belleville – The city of Belleville experienced a slight population decrease from 1980 to 2000. The number of residents increased from 41,580 in 1980 to 42,785 in 1990 but decreased to 41,410 in 2000.

Communities Outside the Study Area

In order to assess population shifts within each county, population data for municipalities located within the three counties, but outside of the study area, were also evaluated. Whereas the vast majority of municipalities within the study area increased in the number of residents between 1990 and 2000, there were numerous communities located outside the study area that experienced a net decrease in residents during that same 10-year period (Table 2-3 and Figures 2-2 and 2-4). Notable decreases in population occurred in East Carondelet (-58 percent), SAFB (-63 percent), Brooklyn (-41 percent), Venice (-29 percent), Washington Park (-28 percent), East St. Louis (-23 percent), and Centreville (-21 percent).

Table 2-3. Population Data for Cities Located Outside the Gateway Connector Study Area

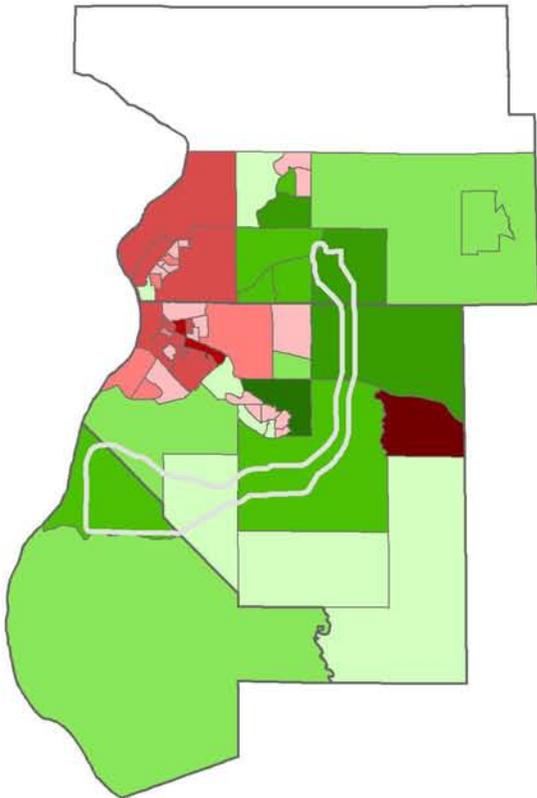
City	1980	2000	% Change 1990-2000
Alorton	2,960	2,749	-7.13
Brooklyn	1,144	676	-40.91
Cahokia	17,550	16,391	-6.60
Caseyville	4,419	4,310	-2.47
Centreville	7,489	5,951	-20.54
Collinsville	22,446	24,707	10.07
Dupo	3,164	3,933	24.30
East Carondelet	630	267	-57.62
East St. Louis	40,944	31,542	-22.96
Edwardsville	14,579	21,491	47.41
Fairmont City	2,140	2,436	13.83
Fairview Heights	14,351	15,034	4.76
Glen Carbon	7,731	10,425	34.85
Granite City	32,862	31,301	-4.75
Hartford	1,676	1,545	-7.82
Highland	6,525	8,438	29.32
Lebanon	3,688	3,523	-4.47
Madison	4,629	4,545	-1.81
Marine	972	910	-6.38
Maryville	2,576	4,651	80.55
Mascoutah	5,511	5,659	2.69
National City	57	0	-100.0
Pierron	554	653	17.87
Pontoon Beach	4,013	5,620	40.04
Roxana	1,562	1,547	-0.96
Sauget	197	249	26.40
SAFB	7,245	2,707	-62.64
Smithton	1,587	2,248	41.65
South Roxana	1,961	1,888	-3.72
St. Jacob	752	801	6.52
Summerfield	509	472	-7.27
Swansea	8,201	10,579	29.00
Venice	3,571	2,528	-29.21
Washington Park	7,431	5,345	-28.07

Source: U.S. Census Bureau, 2000. Prepared/Date: CDD/9-01-04
Checked/Date: WJE/9-17-04

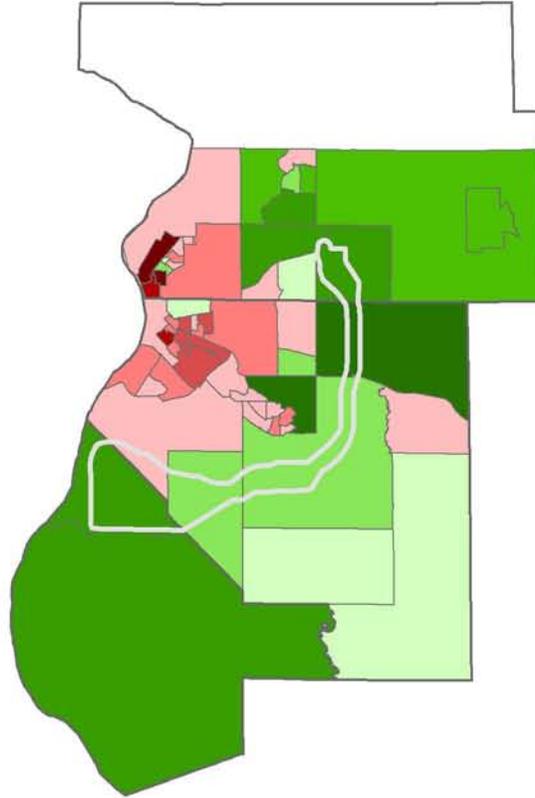
Census Tracts

As was previously discussed, geographic boundaries of some census tracts changed over the 20-year period from 1980 to the year 2000. As a way to alleviate discrepancies, census tract groupings were created in order to enable a constant geographic area to be assessed within that region across the three census years (1980, 1990, and 2000). Figures 2-5 and 2-6 and Table 2-4 present population changes within census tracts within the study area and within the larger context of the Metro East. Notably, growth is evident within the tracts represented by the Gateway Connector project area, whereas population declines are evident within more urbanized centers of St. Clair and Madison counties. Census tract level data, therefore, were determined to reflect a similar trend as that of the municipal level data – that is, population growth in the eastern and southeastern portion of the Metro East is pronounced and does not reflect county-wide population growth trends.

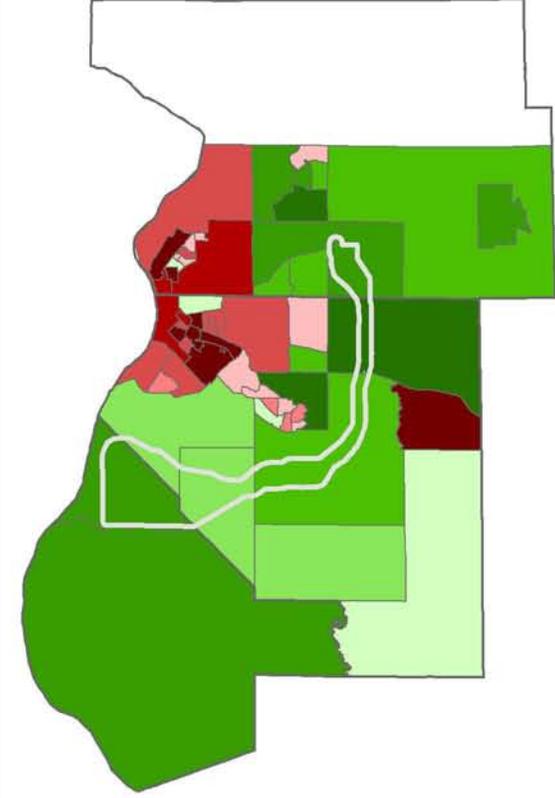
1980-1990



1990-2000



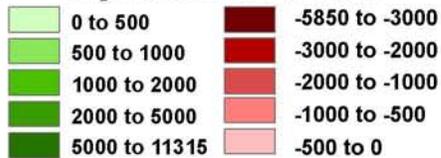
1980-2000



*Data Sources: U.S. Census Bureau & U.S. Department of Commerce

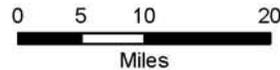
LEGEND

Population Loss & Gain



Actual Population value within tract.

Figure 2-5 Total Population Change per Tract



Notes:

1. The above figures include Census Tract Groupings.
2. Census Tract Groupings have been created to overcome the changes in tract boundaries over the past 20 years.

Drawn By: TDW

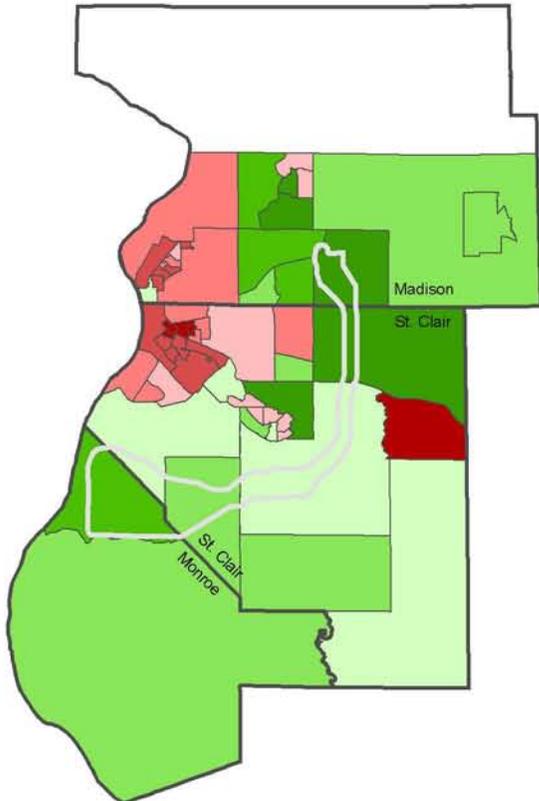
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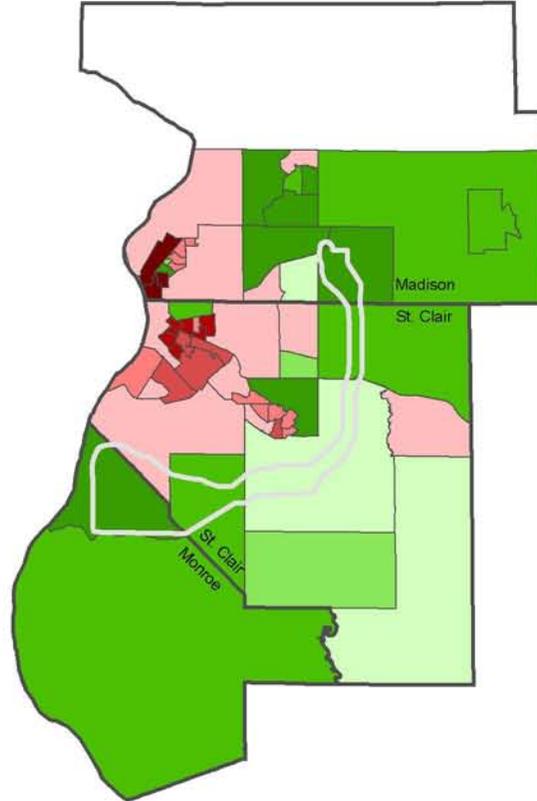
Date: September 20, 2004



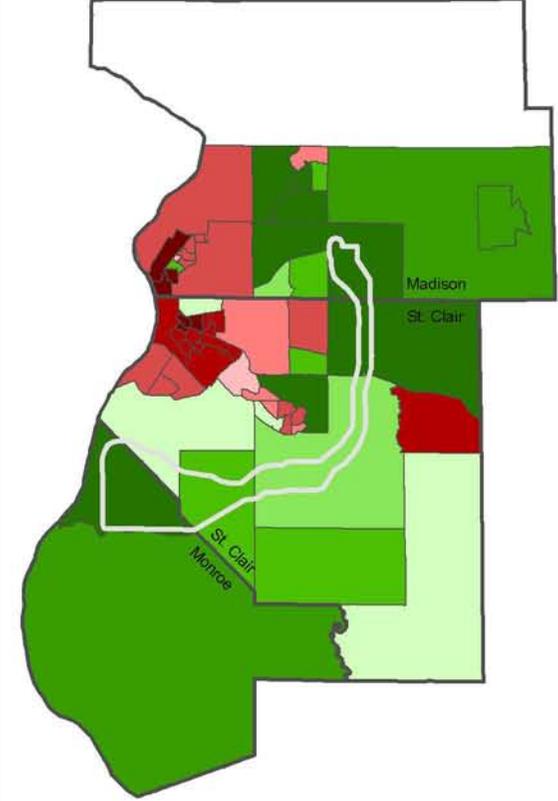
1980-1990



1990-2000



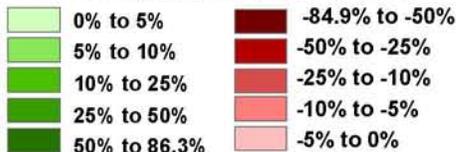
1980-2000



* Data Sources: U.S. Census Bureau & U.S. Department of Commerce

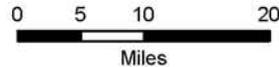
LEGEND

% of Population Gain & Loss



Actual Population value within tract.

Figure 2-6
Total Percentage of Change per Tract



Notes:

1. The above figures include Census Tract Groupings.
2. Census Tract Groupings have been created to overcome the changes in tract boundaries over the past 20 years.

Drawn By: TDW

Approved By: WJE

Checked By: WJE

Date: September 20, 2004



Table 2-4. Population Data for Census Tracts within the Study Area

1980		1990		2000		Percent Change 1980-1990	Percent Change 1990-2000	Percent Change 1980-2000
Tract Number	Population	Tract Number	Population	Tract Number	Population			
4035.01	6,869	4035.01	7,960	4035.01	10,814	15.9	35.9	57.4
4035.03	6,046	4035.03	8,383	4035.31	7,834	38.7	29.7	79.8
				4035.32	3,038			
5031.01	5944	5031.01	6081	5031	7,443	2.7	-1.7	.9
5031.02	1,435	5031.02	1,494					
5032.03	4,674	5032.03	4,979	5032.03	5,493	6.5	10.3	17.5
5038.00	8,648	5038.00	7,245	5038.00	2,707	-16.2	-62.6	-68.7
5039.00	9,640	5039.00	11,328	5039.01	8,751	17.5	45.1	70.5
				5039.02	7,682			
5043.01	10663	5043.05	8,546	5043.52	4,658	-19.9	-23.8	-38.9
				5043.53	1856			
5043.02	5,997	5043.02	6,701	5043.02	6,784	11.7	1.2	13.1
6001	6,065	6001	7,393	6001	9,788	21.9	32.4	61.4

Source: U.S. Census Bureau, 2000. Prepared/Date: CDD/9-01-04
Checked/Date: WJE/9-17-04

2.1.3 Future Population Projections

Long-range county and regional level population projections have also been developed by the Metropolitan Planning Organization, East-West Gateway. As is presented in Tables 2-5 and 2-6, county level growth projections are more modest, ranging from 8.1 percent from 2000 to 2025 for St. Clair County, to 29.3 percent for Monroe County. The large geographic areas represented by these projections however, obscure the regional population growth evident in the project corridor as described in the preceding sections.

Table 2-5. County and Regional Population Projections, 2000-2025

County	2000	2005	2010	2015	2020	2025	% Change 2000-2025
Madison	258,941	265,900	271,900	277,900	283,900	289,900	12.0
St. Clair	256,082	260,700	264,700	268,700	272,700	276,700	8.1
Monroe	27,619	29,700	31,200	32,700	34,200	35,700	29.3
Region	2,482,935	2,546,200	2,603,500	2,653,700	2,689,300	2,714,100	9.3

Source: East-West Gateway. Prepared/Date: CDD/9-01-04
Checked/Date: WJE/9-17-04

Table 2-6. Future Population Projections for Analysis Areas*, 2000-2025

Area	2000	2005	2010	2015	2020	2025	% Change 2000-2025
31	83,497	86,800	89,900	93,000	96,300	99,300	18.9
34	17,915	17,700	17,700	17,700	17,800	18,100	1.0
35	160,661	164,900	167,900	171,000	174,100	176,800	10.0
38	9,788	10,900	11,400	11,900	12,300	12,600	28.7

* See inset Figure 2-7. Prepared/Date: CDD/9-01-04
Source: East-West Gateway Checked/Date: WJE/9-17-04

In contrast, population projections for the local municipalities within the study area demonstrate greater future growth and, therefore, greater need for an expanded future transportation system. For example, the city of O'Fallon indicates that their population is expected to have risen from 21,857 persons in 2000 to between 37,133 and 39,058 persons in 2020 (or an increase of between approximately 70 to 79 percent) (Table 2-7, O'Fallon Comprehensive Plan, 2001).

Similar, but lower projections in population growth for Columbia and Troy are presented in Tables 2-7 and 2-8, reflecting the rapid growth expected in these communities.

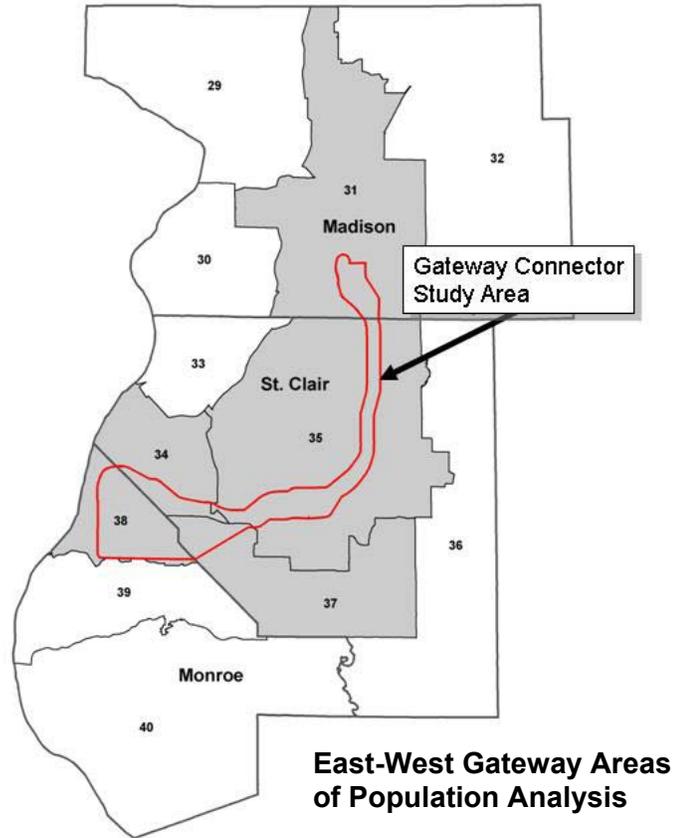


Figure 2-7

Table 2-7. Future Population Projections for O'Fallon and Columbia, Illinois

City	2000	2020	% Change 2000-2020
O'Fallon	21,857	37,133-39,058	69.9-78.7
Columbia	8,012	11,000	37.3

Sources: O'Fallon, Illinois Comprehensive Plan, 2001; Columbia, Illinois Master Plan, 2001.
 Prepared/Date: CDD/9-01-04; Checked/Date: WJE/9-17-04

Table 2-8. Future Population Projections for Troy, Illinois

City	2000	2005	2010	% Change 2000-2010
Troy	8,366	9,403	10,440	24.8

Source: Growth Management Plan, Troy, Illinois, 1999.
 Prepared/Date: CDD/9-01-04; Checked/Date: WJE/9-17-04

Conclusion

When population data are analyzed, it is clear that the residential base within areas in and around the study area has grown and will continue to increase over the next two decades. In contrast, many areas outside the study area (especially to the west in areas like East St. Louis and Granite City) have experienced a decline in population. These population shifts affect the demand upon the local and regional transportation infrastructure. A steady increase in population over the course of 20 or 30 years indicates that there will likely be increased traffic in these areas and a need for an improved transportation infrastructure that is able to keep pace with the growing number of residents.

Results of this analysis may be summarized as follows:

1. County-wide population changes over the period from 1980 to 2000 have ranged from a level of -4.3 percent in St. Clair County to a high of 37.3 percent in Monroe County. Madison County demonstrated a modest growth in population (4.5 percent) over the same time period.
2. Populations of municipalities within the Gateway Connector study area generally demonstrated robust growth during the period from 1980 to 2000. Representative growth of municipalities in the study area included Shiloh at 631 percent, Troy at 126 percent, Columbia at 85 percent, O'Fallon at 79 percent, and Freeburg at 29 percent. Lower rates of change were evident within Belleville (-0.4 percent) and Millstadt (2.1 percent).
3. Population from the more urbanized centers of St. Clair and Madison counties exhibited a reduction in population from 1980 to 2000. Municipalities represented by the trend included Brooklyn (-41 percent), East St. Louis (-23 percent), Venice (-29 percent), Washington Park (-28 percent), and Centreville (-21 percent).
4. Census tract level trends in population mirror the trends at the municipality level – census trends within urbanized centers of St. Clair and Madison counties reflect a declining population trend as compared to a trend of population growth within tracts of the study area.

2.2 Traffic

The need for a transportation corridor around the southeastern portion of the metropolitan area was originally evaluated in the Illinois 158 Outer Belt Feasibility Study, which was completed in January 2002. As part of that study, future land uses and transportation demands were examined, as were several transportation improvement alternatives. Initial vehicular traffic projections for the study corridor(s) ranged from 16,000 to 45,000 vehicles per day (vpd). Based in part on those projections, it was concluded that there is a need for a future transportation facility.

The rapidly developing segments of the Gateway Connector study area (see Section 2.1) currently rely upon arterial and collector roadways to access the regional interstate system. As communities in the region continue to annex land, approve development and grow, a safe and efficient transportation system will be needed to serve new development as well as existing travel demands.

Due to the projected growth in population, employment and traffic, the primary road system will eventually become congested and will exhibit reduced LOS. Continued degradation of operating conditions will result in increased crash rates and reduced overall safety. Accordingly, there will be a need to reduce the number and severity of traffic-related crashes.

Ultimately, increased transportation system capacity will be needed to accommodate projected travel demands and to improve overall operating conditions. The Gateway Connector corridor will also provide needed linkage between the communities in this area and the interstate systems of I-55/70, I-64 and I-255.

As part of the Corridor Protection Study, the analyses of development patterns and population growth within the corridor were revisited to validate the projections of future travel demand and the need for improvements to the regional transportation network. The population growth patterns in and around the study corridor were examined to identify population shifts that would impact travel patterns.

The regional travel demand model maintained by the East-West Gateway, the region's federally recognized Metropolitan Planning Organization, was used to develop future transportation demand projections for the study corridor. In particular, the model, which is based on the traditional four-step process of trip generation, trip distribution, mode split, and trip assignment was used to estimate vehicular traffic levels within the corridor depending upon the type of facility constructed. Though highway alternatives were used to measure travel demand levels, the study did not specifically recommend a facility type for the corridor.

2.2.1 Projected Impact of Land Use Changes on Travel Demand

Travel demand projections were based upon existing and forecasted land use information provided by East-West Gateway (census information, historical trends, and regional forecasts). Population growth (or redistribution) is recognized as one of the most significant causes for needed expansions of a transportation network. The East-West Gateway data shows that, contrary to regional and county-wide trends (population declines were evident within the urbanized centers of St. Clair and Madison counties), communities within the study area have experienced significant increases in population during the 20-year period from 1980 to 2000. Moreover, as presented in Section 2.1, several communities (such as Troy, O'Fallon, Freeburg, Shiloh, and Columbia) had substantial growth with population increases of 29 percent or more, with growth being particularly evident within the tracts located in the Gateway Connector project area.

Long-range (2000 to 2025) growth projections are also significant, demonstrating a legitimate need for an expanded future transportation system. For example, the population of the city of O'Fallon is expected to rise from 21,857 persons in 2000 to between 37,133 and 39,058 persons in 2020 (an increase of approximately 70 to 79 percent). Moreover, East-West Gateway's household and employment estimates for 2000 and 2025 indicate that, to the north of I-64 alone, the area between Route 159 and Route 4 is expected to see an increase in nearly 3,500 households, many of which would be centered along Scott-Troy Road.

This level of development could be expected to generate an additional 35,000 vehicular trips per day, thereby increasing the need for a new or improved transportation facility within the corridor. Likewise, increases in population are also projected for Columbia and Troy, reflecting rapid growth expected in these communities.

2.2.2 Projected Travel Patterns within the Gateway Connector Corridor

The East-West Gateway model was also used to identify prevailing travel patterns within the region. Of interest was the pattern of movements within the study corridor. Specifically, there are relatively low demands from "through" trips traveling all of the way through the region.

Instead, the most prominent patterns were circumferential movements between developing communities (i.e., Troy, O'Fallon and Freeburg) and the freeway network (I-55/70, I-64 and/or I-255) or regional employment centers (such as Belleville or SAFB). These patterns reinforce the need for an improved transportation facility as population increases within the corridor.

2.2.3 Forecasted No-Build Traffic Conditions

The travel demand model was used to estimate future traffic loadings within the corridor if no additional transportation facilities are added. Based on the forecasted population trends, significant increases in traffic volumes are expected to occur for the "no build" condition along the region's primary arterials. A sampling of the projected change in traffic levels is shown in Figure 2-8 and Table 2-9.

Table 2-9. Projected Increases in Traffic Volumes Within Study Corridor Under the No Build Condition

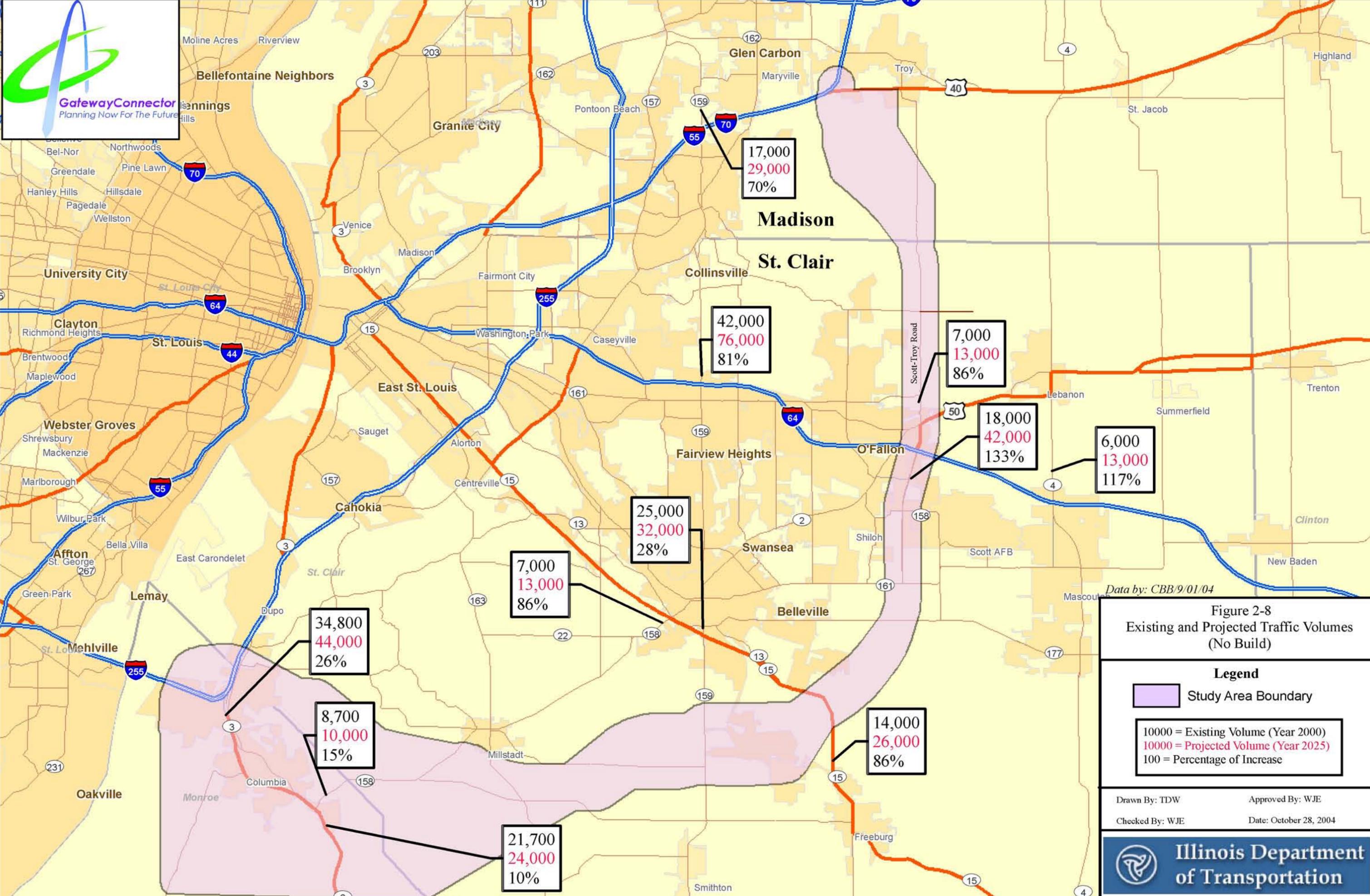
Location	Existing Volume (Year 2000)	Forecasted No Build Volume (Year 2025)	% Increase
Route 159 North of I-64	17,000	29,000	70%
Route 159 North of Route 13-15	25,000	32,000	28%
I-64 East of Route 159	42,000	76,000	81%
Scott-Troy Road North of Hwy 50	7,000	13,000	86%
Route 158 South of I-64	18,000	42,000	133%
Route 158 South of Route 13-15	7,000	13,000	86%
Route 158 East of Route 3	8,700	10,000	15%
Route 13-15 North of Freeburg	14,000	26,000	86%
Route 4 North of I-64	6,000	13,000	117%
Route 3 South of I-255	34,800	44,000	26%
Route 3 South of Route 158	21,700	24,000	11%

Source CBB, 2004. Prepared/Date: CBB/9-01-04
Checked/Date: SCC/9-17-04

Results presented in Table 2-9 indicate that in the absence of the Gateway Connector, several of the existing highways in the region are expected to incur substantial increases in traffic demands, more than doubling in some locations. The most significant increases can be attributed to anticipated growth in population and employment in Freeburg, Millstadt, Troy and other communities.

Perhaps more importantly, the projected traffic levels for these facilities would exceed their existing capacity. Based on Highway Capacity Manual methodologies, it can be estimated that most two-lane highways in rural areas (such as Scott-Troy Road, Route 158 (south of Route 13-15) and Route 4 can carry 6,000 to 11,000 vpd before having unacceptable operating conditions (less than LOS D). Likewise, four-lane facilities can efficiently carry 22,000 to 29,000 vpd.

As shown above, traffic on many of the existing facilities is expected to exceed their estimated capacities, and significant modifications would be required. Under these conditions, motorists would encounter difficulty turning onto and off of many of the existing highways and there would be anticipated increases in accident rates. Hence, the increased travel demands within the corridor provide a clear need for improved or additional transportation facilities.



Data by: CBB/9/01/04

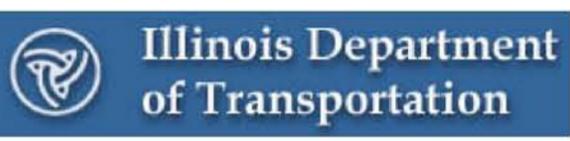
Figure 2-8
Existing and Projected Traffic Volumes
(No Build)

Legend

- Study Area Boundary

10000 = Existing Volume (Year 2000)
 10000 = Projected Volume (Year 2025)
 100 = Percentage of Increase

Drawn By: TDW Approved By: WJE
 Checked By: WJE Date: October 28, 2004



2.2.4 Forecasted Attractions to the Gateway Connector Corridor

The travel demand model was also used to estimate future traffic loadings for various facility types within the corridor. These forecasts indicated that the corridor would be expected to serve 27,000 to 32,000 vpd in the northern segments, 45,000 to 48,000 vpd in the central segments, and 15,000 to 20,000 vpd in the southern or western segments (not including bypasses of Columbia that would attract up to 41,000 vpd). Accordingly, the corridor would clearly justify the development of a new transportation facility, while also serving the purpose of meeting the region's transportation needs.

In addition, a transportation facility in this corridor would be expected to provide meaningful relief to many of the other existing highways. The forecasted differences between the No Build and Build conditions are provided in Table 2-10. These results demonstrate that 2,000 to 11,000 vpd would be diverted from many of the existing facilities, with the most significant relief along Illinois Routes 4, 13/15, and 159. In other areas, the existing highways would effectively be replaced by the new facility.

Table 2-10. Reductions in Forecasted Traffic Volumes Due to Additional Transportation Facility, Gateway Connector Study Corridor

Location	Forecasted No Build Volume (Year 2025)	Forecasted Build Volume (Year 2025)
Route 159 north of I-64	29,000	25,000
Route 159 north of Route 13-15	32,000	30,000
I-64 east of Route 159	76,000	73,000
Scott-Troy Road north of Route 50	13,000	29,000
Route 158 south of I-64	42,000	47,000
Route 158 south of Route 13-15	13,000	11,000
Route 158 east of Route 3	10,000	28,000
Route 13-15 north of Freeburg	26,000	15,000
Route 4 north I-64	13,000	4,800
Route 3 south of I-255	44,000	48,000
Route 3 south of Route 158	24,000	28,000
<i>Source: CBB, 2004.</i>		<i>Prepared/Date: CBB/9-01-04 Checked/Date: SCC//9-17-04</i>

Depending upon its alignment, a new facility would also provide significant relief to Illinois Route 3 in Columbia, where forecasted volumes could decrease to as little as 5,000 vpd. The creation of a bypass around Columbia could effectively divert a significant amount of through-traffic from the community, most of which is generated further to the south in Waterloo, by providing a much faster and less congested travel alternative. Hence, a bypass around Columbia would also have independent utility to serve the forecasted 19,000 vpd traveling to or from the south.

Likewise, the ability to provide shorter travel times or distances and improved connectivity to the region or the freeway system would provide relief to Illinois Route 4. Potential diversions from this highway would approach nearly 50 percent of the traffic to the north of U.S. Route 50, including many trips that would be attributed to new growth in the area that would be centered along Scott-Troy Road. In addition, a new transportation facility would have the ability to provide incremental relief to other major facilities (i.e., Illinois Route 159, I-55 and I-64), thereby providing benefit to the region as a whole.