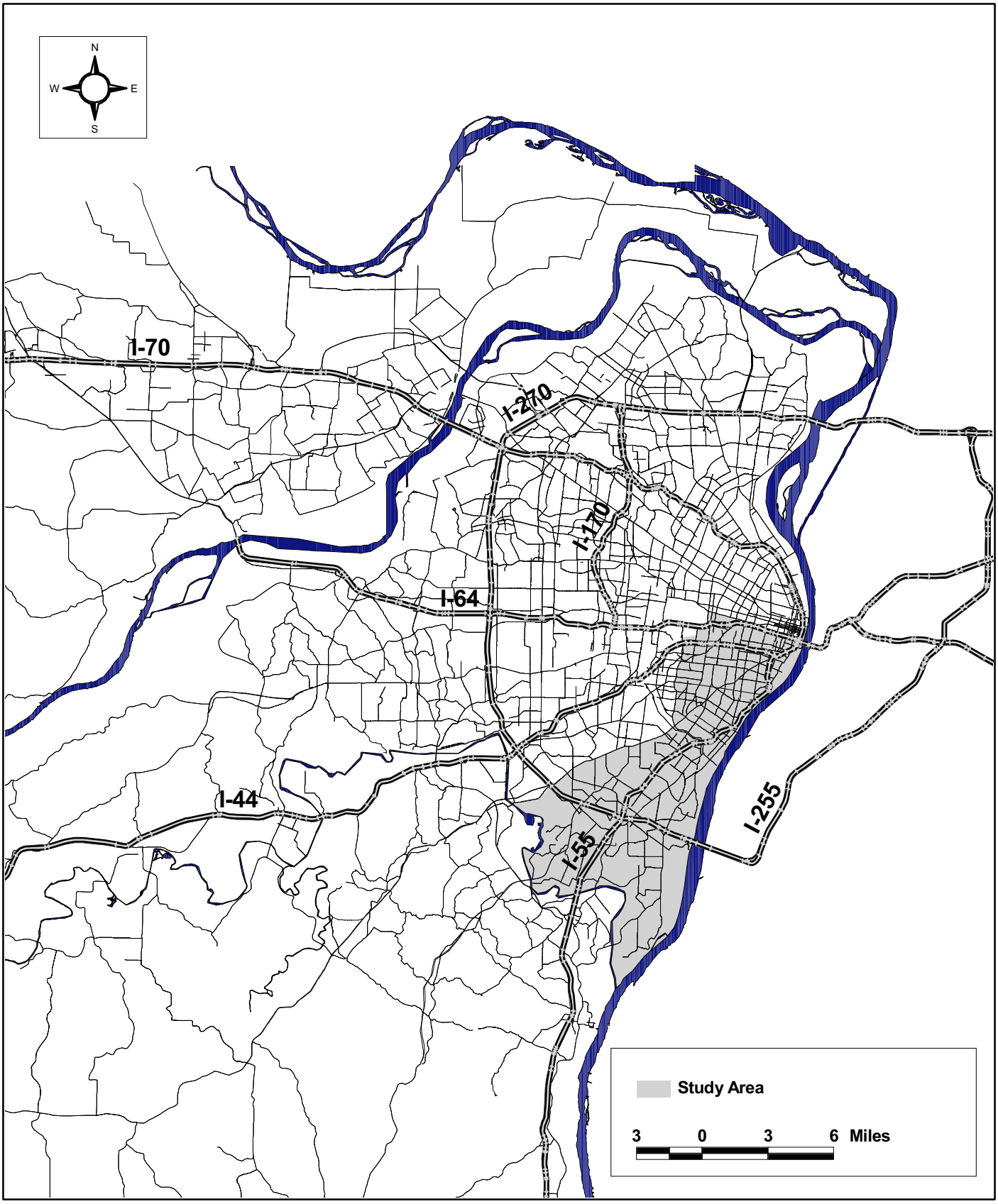
1.0 INTRODUCTION

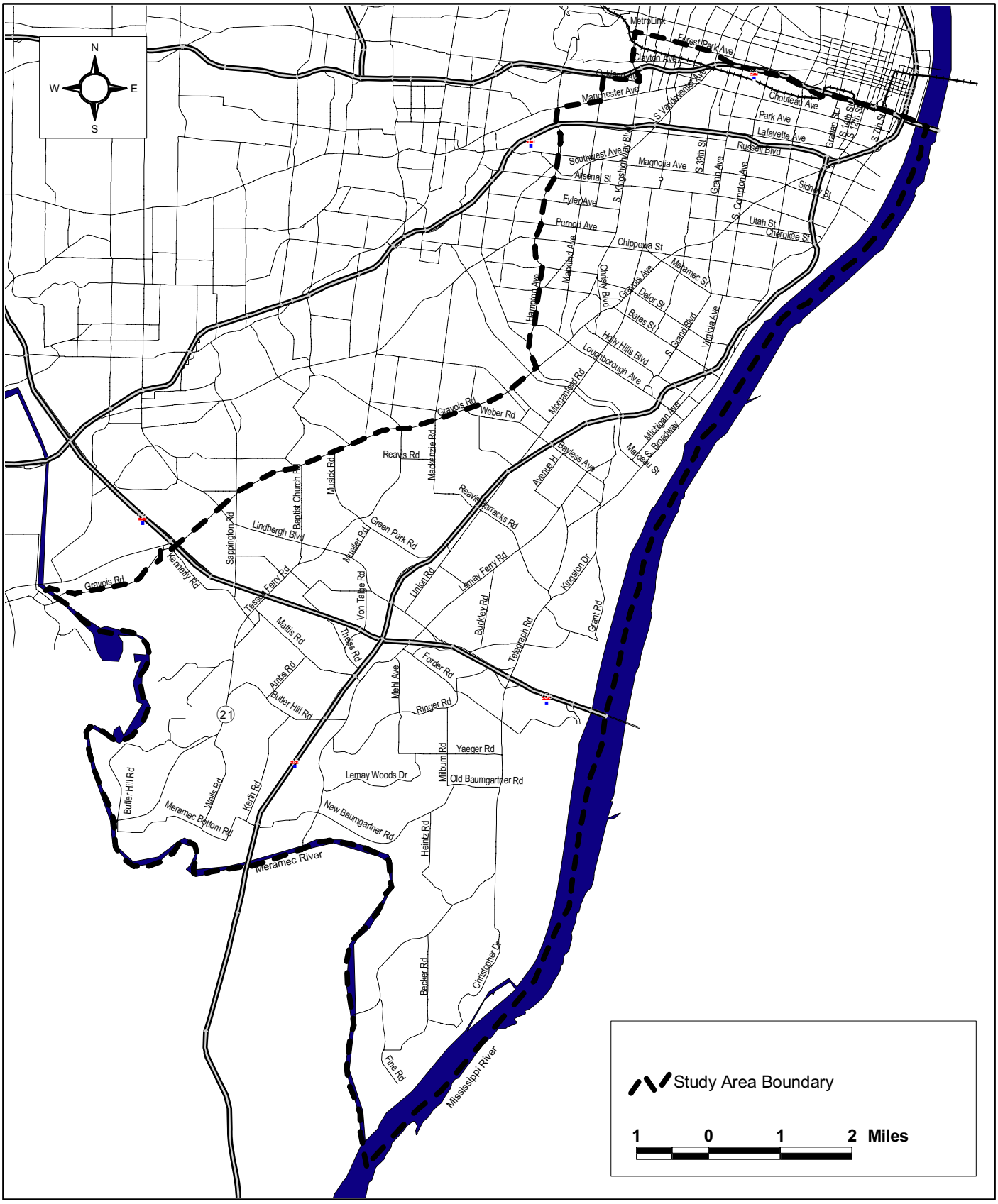
This report provides information about existing conditions in the Southside Study Area for both the recent past as well as projections to the year 2020. This information is organized into sections covering land use, demographics, travel patterns, the environment and characteristics of the surface transportation system in the Study Area. This information will be used to assist the study team in developing a detailed understanding of transportation related issues in the Study Area through the year 2020, the planning horizon for the Major Transportation Investment Analysis (MTIA) being conducted for this Study Area.

The Southside Study Area lies in the south and southeast portion of the City of St. Louis and St. Louis County (see Figure 1.0-1) and is roughly bounded by the Mississippi River on the East, Interstate 64 on the North, Gravois Road and Hampton on the West and the Meramec River on the South (see Figure 1.0-2), comprising an area of approximately 85 square miles. Seven municipalities lie wholly, or in part, within the Study Area as well as a portion of unincorporated St. Louis County. Over thirty percent of the Study Area lies within the City of St. Louis.



Source: East-West Gateway Coordinating Council, November 1998.

Figure 1.0-1
Study Area Region



Source: East-West Gateway Coordinating Council, November 1998.

Figure 1.0-2
Study Area

2.0 LAND USE

This chapter discusses existing land use, recent land use changes, regional plans and policies, utility corridors, trends in land value, and a Study Area summary.

2.1 EXISTING LAND USE

The Southside Study Area encompasses almost all of the southern one-half of the City of St. Louis and all of south St. Louis County east of Gravois Road (Mo Route 30) to the Mississippi River on the east and the Meramec River on the south. Following are descriptions of each of the land use types found within the Study Area and presented in Figure 2.1-1. Acreage by type of land use data is not available from the City and so a table illustrating such information for the Study Area could not be developed.

2.1.1 Residential Land Use

Estimating from information shown in Figure 2.1-1, in the City of St. Louis, residential land use covers about 60 percent of the total land area with that percentage almost evenly split between single family and two- to four-family "flats" located mainly in the eastern part of the Study Area. In St. Louis County, single family housing covers approximately 70 percent of the Study Area with very little multi-family housing.

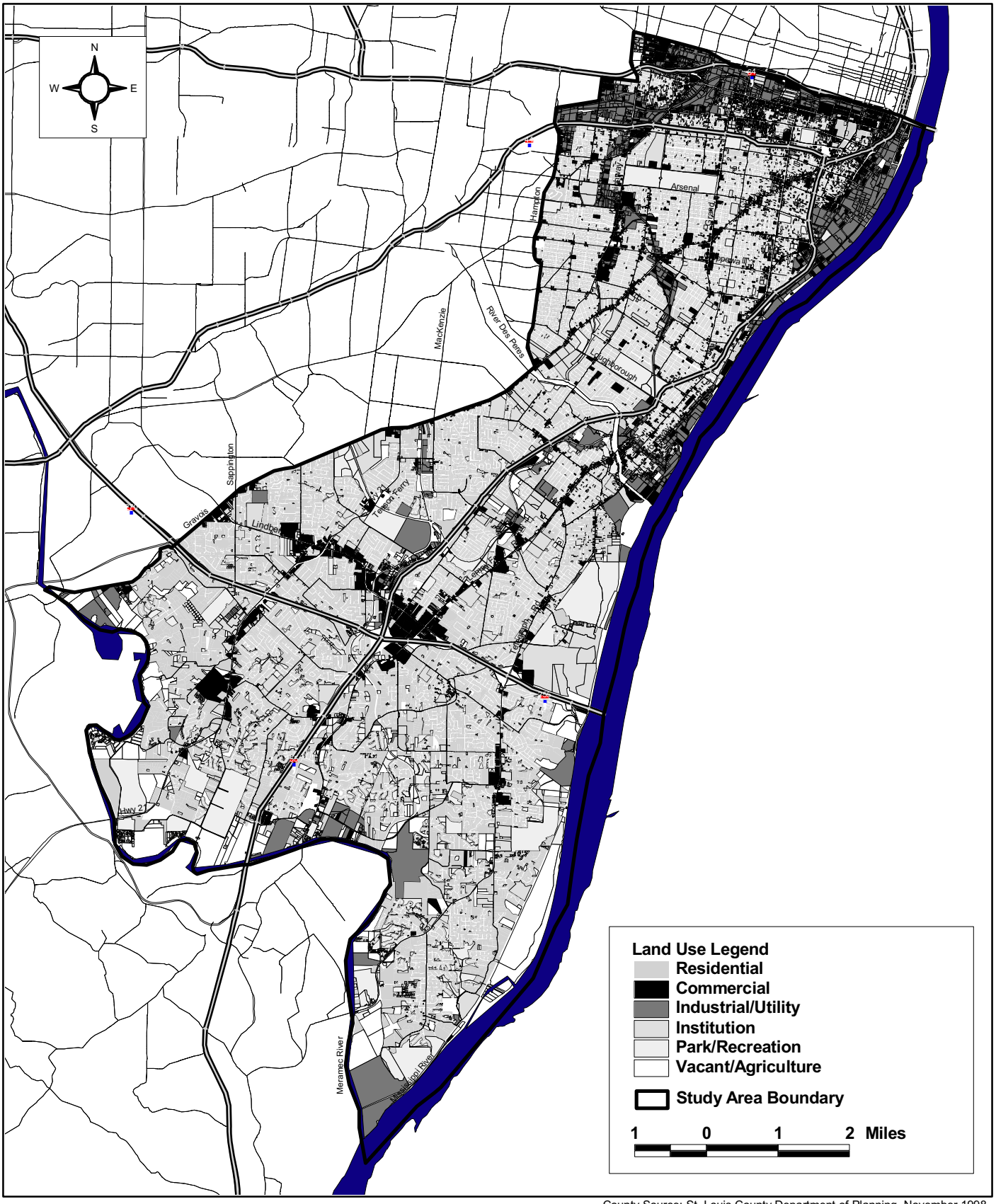
Housing prices vary greatly in both the City and in St. Louis County. In some areas of the City such as Lafayette Park, Soulard, Compton Heights, Flora Place, and Holly Hills north of Carondelet Park, there are many rehabilitated homes that reach $500,000 or more in price. In other areas of the City, housing prices are much lower. Pockets of depressed housing values can be found in the northern portions of the Southside Study Area, whereas more moderate housing prices, ranging from $150,000 to $250,000, are located in areas such as Carondelet Park and along the western boundary of the Study Area. In December 1998, Area Resources for Community and Human Resources (ARCHS), the Regional Housing and Community Development Alliance (RHCDA), 18 banks and the states of Missouri and Illinois launched Sustainable Neighborhoods, a partnership to revitalize nine neighborhoods in the region. Three of these neighborhoods, Forest Park Southeast, Gravois Park/Benton Park West/Fox Park/McKinley-Fox in the City of St. Louis, and LeMay in St. Louis County are located in the Southside Study Area. This program involves the 18 financial institutions pledging $751 million in investments and loans in these neighborhoods for new and rehabilitated housing, new business development and job creation. Neighborhood planning, led by residents, is scheduled to be completed by summer 1999 and will involve setting short-term and long-range goals for neighborhood improvement. In St. Louis County, a similar pattern exists with housing prices as low at $30,000 in the Lemay area just south of the City/County border to well over $500,000 in the southern part of the county near both the Mississippi and Meramec Rivers (St. Louis Post-Dispatch, Real Estate Section, February 7, 1999).

2.1.2 Commercial Land Use

This section discusses the following three types of commercial land use within the Study Area: office, retail, and hotel.

Office Land Use

In both the St. Louis City and St. Louis County portions of the Southside Study Area, there are few areas with office activities. Those that are present are mainly located along I-270 west of I-55 at its interchanges with Tesson Ferry Road (Mo Route 21) and Gravois Road (Mo Route 30). The largest concentration of office use in the City is along Chouteau Avenue just south of the northern Study Area boundary where AmerenUE and Ralston Purina have their corporate headquarters. Smaller amounts of office space also exist along Chippewa Street, Watson Road and Hampton Avenue within the City of St. Louis. The largest office concentration in the St. Louis County portion of the Study Area is the operations center for General American Life Insurance Company located on the west side of Tesson Ferry Road at its intersection with Butler Hill Road.



County Source: St. Louis County Department of Planning, November 1998.
City Source: City of St. Louis, Budget Division, November 1998.

Figure 2.1-1
Existing Land Use

Retail Land Use

Within the City of St. Louis, retail land use is located along the major streets, especially at their intersections with other major streets, and on the edges of the industrial development areas on the eastern and northern boundaries of the Study Area. While there are no large shopping centers within the City portion of the Study Area, those over 400,000 square feet of rental space, many small ones exist centered on a large, 60,000 to 70,000 square foot, supermarket or discount department store. Some of these include Hampton Village at the intersection of Hampton Avenue and Chippewa Street, Gravois Plaza at Gravois and Gustine Avenues, and Schnucks Plaza between Grand and Gravois Avenues south of Cherokee Street. Soulard Market, the oldest continuously operating public open-air market west of the Mississippi River, is located just south of downtown between Seventh and Ninth Streets along Lafayette Avenue. Downtown, itself, with its St. Louis Centre and Union Station Marketplace, is just north of the Study Area and serves the commercial needs of the residents.

A retail area has emerged along South Grand Boulevard between Arsenal Street on the north and Utah Place on the south. This area has become the center of many shops catering to the recently arrived Vietnamese and Chinese immigrants. Several blocks of Cherokee Street, east of Jefferson Avenue, are the center of the antique business in the region.

A similar pattern exists in St. Louis County with retail areas focused along major streets, usually at intersections or interchanges with other major streets or freeways. South St. Louis County does have a regional shopping center, South County Center, a 723,000 square foot enclosed mall located in the area bounded by Lindbergh Boulevard on the north, I-255 on the south, Lemay Ferry Road on the east, and I-55 on the west. In this same general area are located several “Power Centers” with discount department stores, home improvement stores, etc. In effect, this area acts as the retail center of south St. Louis County and attracts customers from Jefferson County, the next county to the south, since there is no regional shopping center in that county. In fact, the closest regional mall to the south is in Cape Girardeau, Missouri, a community of about 40,000 population, approximately 100 miles to the south. Therefore, South County Center is likely the main destination for shopping trips originating as much as 50 miles to the south.

Hotel Land Use

There is little hotel land use in the Southside Study Area, mainly due to the lack of significant office land use that would support hotels. What hotels are present are located along Lindbergh Boulevard, both east and west of South County Center and north and south at interchanges along I-55.

2.1.3 Industrial/Utility Land Use

Within the City of St. Louis portion of the Southside Study Area, the industrial/utility land uses are focused in three areas; along the eastern boundary on the Mississippi River, along the Burlington Northern Sante Fe and Union Pacific Railroads on the northern boundary, and along the Oak Hill Branch Line of the Union Pacific railroad running generally north-south through the center of the Study Area. Most of the “heavy” industrial uses are along the Mississippi including Nooter Corporation, Anheuser-Busch, and Ethyl Corporation. These types of industries were present at one time in the other two Study Areas, but virtually all of those industries have left the area. In other instances, the land use has remained industrial, but the type of the use has changes from manufacturing to warehousing or light assembly of products.

Within St. Louis County, industrial/utility land use is also found along the Mississippi and Meramec Rivers as well as the railroad lines. At the southern point of St. Louis County where the Meramec River joins the Mississippi River, AmerenUE, the local electric power utility, has a large coal-fired generation plant. This facility is the only power generation facility in the Study Area. Other industrial uses include quarries and cement production plants along the rivers as well as smaller manufacturing and assembly companies along the two railroad lines which parallel the Mississippi River and I-55 through the St. Louis County portion of the Study Area.

2.1.4 Institutional Land Use

This section discusses institutional land uses such as schools, hospitals, libraries, churches, nursing homes, and other uses.

Schools

Within the City of St. Louis, the public and private schools include both St. Louis University's Medical School on Grand Boulevard between Chouteau and Park Avenues and Washington University's Medical School at the northwest corner of the Study Area on Kingshighway Boulevard along the east side of Forest Park to public elementary schools scattered throughout the Study Area. The high schools within the City include Roosevelt High School, the Cleveland Military Academy Magnet School, St. Louis University High School and St. Mary's High School for boys, St. Elizabeth's Academy for girls, and St. John's High School for both boys and girls. Adjacent to the Study Area's western boundary along Hampton Avenue is Bishop DuBourg High School for both boys and girls and the Forest Park Campus of the St. Louis Community College District in the southwest corner of Oakland and Macklind Avenues.

The schools in the St. Louis County portion of the Study Area include both private and public high through elementary schools. There are no college or university level schools in this part of St. Louis County. The private high schools include Cor Jesu and Notre Dame High Schools for girls and Lutheran High School for both boys and girls. The public high schools include Affton, Bayless, Hancock Place, Lindbergh, and Mehlville and Oakville as well as the offices for the Affton, Bayless, Hancock Place, Lindbergh, and Mehlville School Districts. These districts are shown in Figure 2.1-2

Hospitals

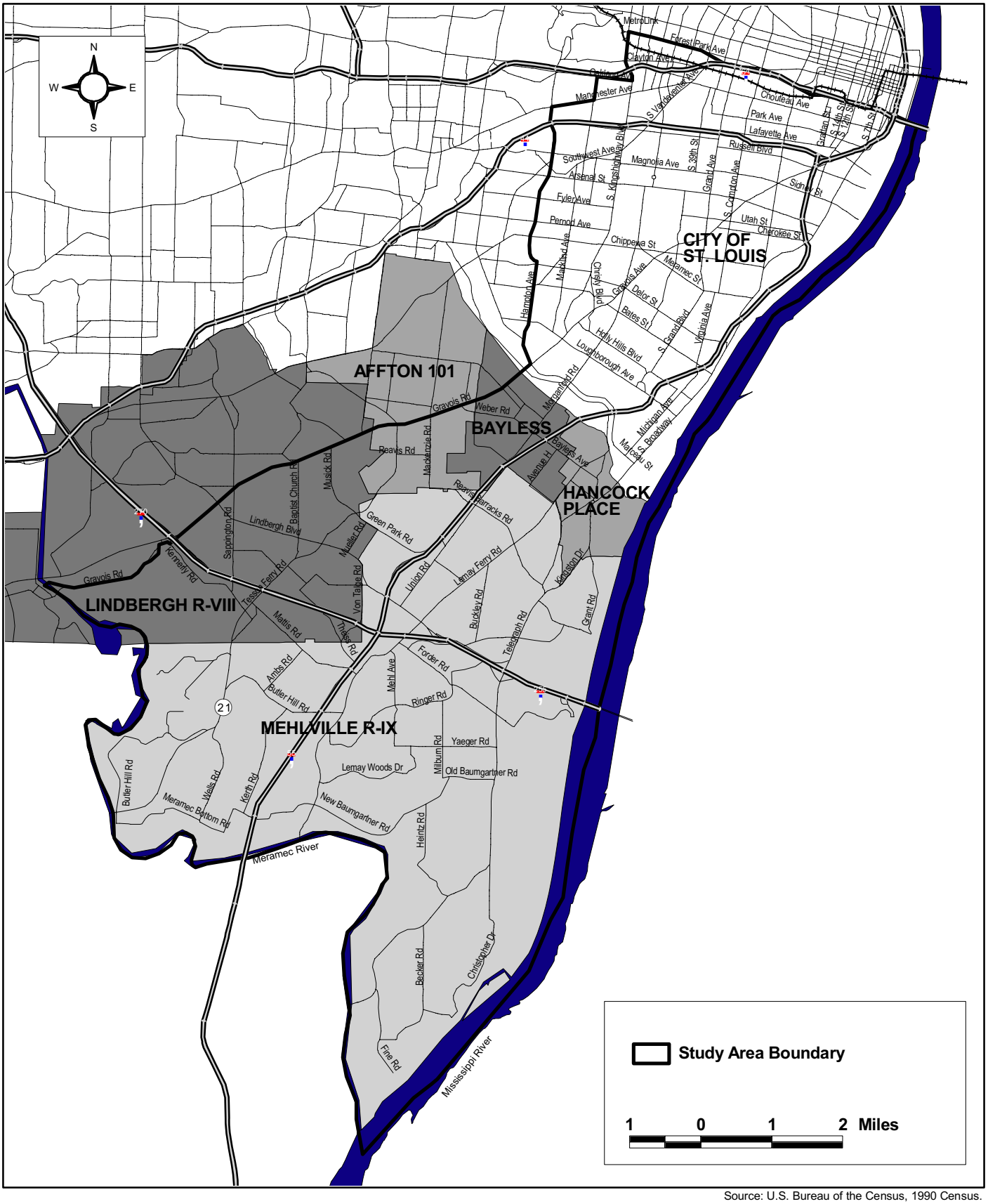
Both St. Louis University and Washington University have their medical schools located in the Southside Study Area. In addition to the two medical schools, the City portion of the Study Area includes the St. Louis State Hospital on Arsenal Street at Brannon Avenue, Alexian Brothers Hospital on South Broadway at Osage Street, the Lafayette-Grand Hospital, Lutheran Medical Center on South Jefferson at Miami Street, SSM Cardinal Glennon Childrens Hospital at Grand Boulevard and Park Avenue, and Bethesda General Hospital on Vista Avenue west of Grand Boulevard. These last two facilities are within the St. Louis University Medical School campus. In the County portion of the Study Area, the U.S. Veteran Administration's Koch Hospital is located just north of I-255 west of the Mississippi River. St. Anthony's Medical Center on Tesson Ferry Road south of I-270 is the only other hospital facility in the County portion of the Study Area.

Libraries

Within the St. Louis County portion of the Southside Study Area there are three branches of the St. Louis County Library System: The Cliff Cave Branch on Telegraph Road (Mo Route 231) approximately one mile south of I-255, the Tesson Ferry Branch on Lin-Ferry Road near the intersection of Lindbergh Boulevard (US Routes 61/67) and Tesson Ferry Road (Mo Route 21), and the Weber Road Branch on Weber Road near Bayless High School approximately equidistant from both I-55 on the east and Gravois Road (Mo Route 30) on the west. None of the incorporated municipalities in the Study Area have their own library facility.

In the City of St. Louis' portion of the Southside Study Area, there are five library branches. These facilities are listed below along with their address:

- Barr Branch — 1701 S. Jefferson Avenue
- Buder Branch — 4401 Hampton Avenue
- Carondelet Branch — 6800 Michigan Avenue
- Carpenter Branch — 3309 South Grand Boulevard
- Lashley Branch — 4537 West Pine Boulevard



Source: U.S. Bureau of the Census, 1990 Census.

Figure 2.1-2
School Districts

Churches

As would be expected in any large metropolitan, there are many churches of various denominations located throughout the St. Louis region. Within the Southside Study Area, the mixture of churches and their denominations generally follow the region's mix as a whole. An itemization of the churches and their denominations will not be completed at this point in the overall MTIA study process, but will be completed at a later stage when specific corridors and alignments have been identified for transportation investments.

Nursing Homes

Similar to churches, there are numerous nursing homes, both skilled and intermediate care facilities throughout the Study Area and they are too numerous to list in this report. They will be examined in more detail when the overall study process has identified more specific corridors and/or alignments for further study.

Other Institutional Land Uses

Within the City of St. Louis' portion of the Southside Study Area, there are several other institutional land uses including such cemeteries as Concordia, Picker, St. Matthew, Sts. Peter and Paul, and Gatewood Gardens. All but Concordia Cemetery are adjacent to Gravois Avenue south of Bates Street to the southern City Limits. Two other institutional land uses are in this portion of the City: the Defense Mapping Agency's facility at Arsenal and Second Street and the Second District of the US Coast Guard at the foot of Holly Hills Avenue at the Mississippi River.

In the St. Louis County portion of the Study Area, the largest institutional land use is the Jefferson Barracks National Cemetery along the north side of I-255 between the Mississippi River and Telegraph Road. Other cemeteries in this portion of St. Louis County include Mount Hope, Mount Olive, Oak Dale, New Mount Sinai, Park Lawn, Sunset Burial Park, and New St. Trinity

2.1.5 Parks and Recreational Land Use

The following parks, and their size in acres, are located in the City of St. Louis portion of the Study Area:

- Tower Grove Park — 275 acres
- Carondelet Park — 180 acres
- River Des Peres Park & Extension — 156 acres (some parkland not in the Study Area)
- Wilmore Park — 106 acres (immediately west of the Study Area)

In addition to these larger parks, there are approximately 25 other parks and playgrounds within this portion of the City. Some of these include Bellerive Park on bluffs overlooking the Mississippi River, Benton Park, Cherokee Park, Clifton Park, Compton Hill Reservoir Park, Francis Park, Gravois Park, Lindenwood Park, Marquette Park, and Tilles Park. The other major recreational land use in the City's portion of this Study Area is the 80-acre Missouri Botanical Garden, locally known as Shaw's Garden, located along the west side of Tower Grove Avenue from the north side of Tower Grove Park on Magnolia Avenue north to Shaw Boulevard. The "Garden" is also one of the largest and most complete plant research facilities in the world working with pharmaceutical companies to identify and develop new drugs from plants from all parts of the world.

In the St. Louis County portion of the Study Area, there are several large public parks including the following:

- Jefferson Barracks Park — 426 acres — On Mississippi River, full facilities
- Lower Meramec Park — 271 acres — Undeveloped
- Kennedy Recreation Complex — 269 acres — Full facilities including golf, trails, etc
- Cliff Cave Park — 221 acres — On Mississippi River, cave, climbing
- Bee Tree Park — 198 acres — On Mississippi River, museum, etc.

- Clydesdale Park 117 acres Full facilities including ball fields
- Robert Winter Park 115 acres On Meramec River, undeveloped

In addition to these larger parks, there are 15 additional County Parks ranging in size from Suson Park with 99 acres, full facilities, and fee fishing lakes to Linear Park South at 0.6 acres of undeveloped land. Grant's Farm is located adjacent to the Study Area on the west side of Gravois Road just west of Laclede Station Road. Grant's Farm is owned by the August A. Busch family and contains a children's petting zoo and free-roaming herds of bison and other exotic animals.

Since the five municipalities within this portion of the County are very small in both geographic size and population, none of them have any parkland. There are also no private country clubs within this part of St. Louis County.

2.1.6 Vacant/Agricultural Land Use

Within the City of St. Louis' portion of the Study Area, there are no agricultural land uses. Vacant land is found in many of the redevelopment areas, such as The Gate District, Tiffany and McRee Town Neighborhoods, where some new housing and light industrial development has taken place in the past 10 years. The vacant land fans out to the southwest from the Downtown area and goes from large lots near Downtown to individual lots farther out toward the city limits.

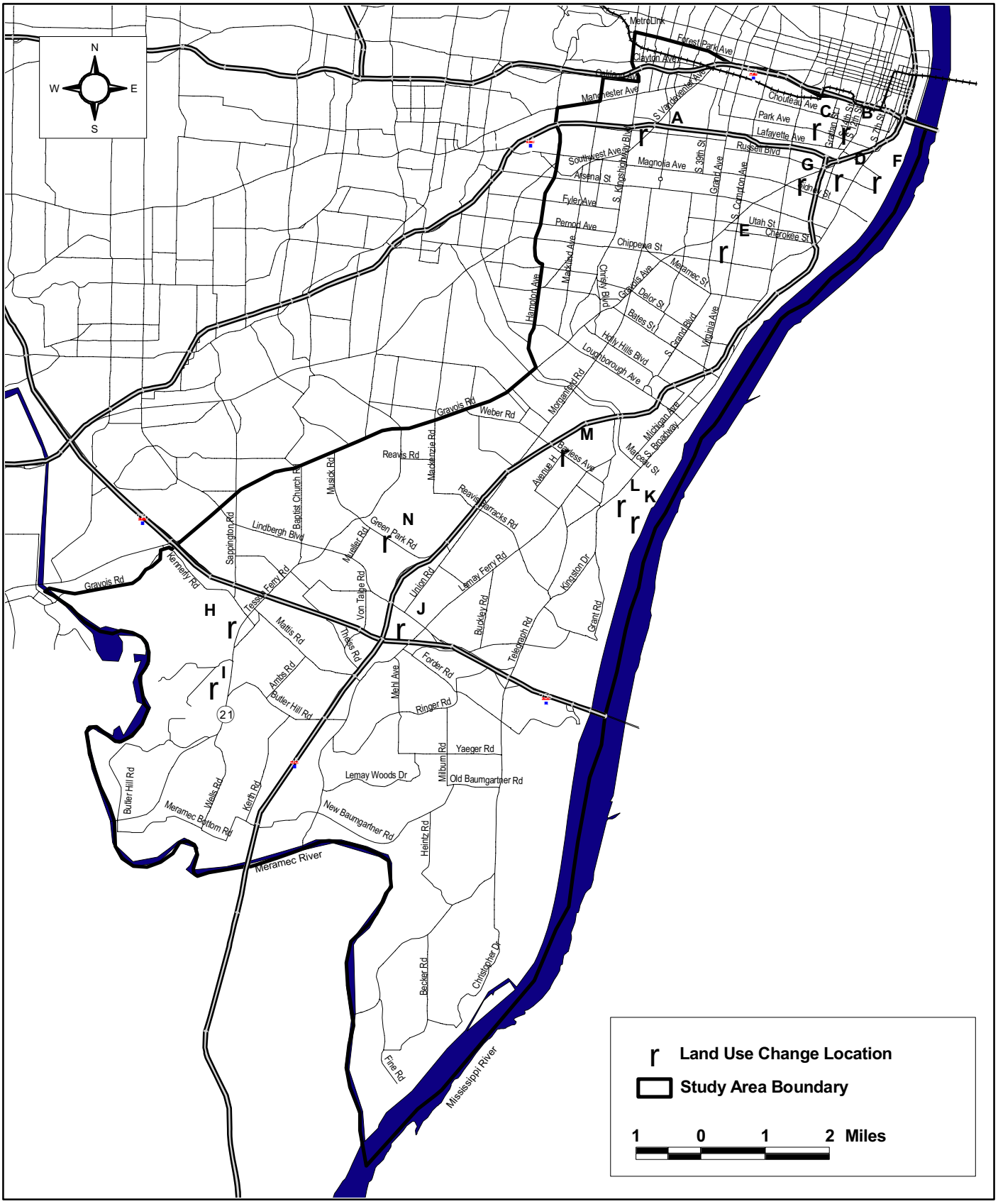
Within the St. Louis County's portion of the Study Area, there is very little agricultural land use and what is present will most likely be developed as residential and retail land uses in the near future if recent development history is followed. The vacant land use areas are mainly along both the Mississippi and Meramec Rivers in their flood plains. The northeastern quadrant of the newly incorporated city of Green Park is also vacant. Gravois Creek and the right-of-way of a Union Pacific Railroad branch line bound this area on the north, Green Park Road on the south, I-55 on the east, and Clydesdale Park on the west.

2.2 RECENT AND PLANNED MAJOR DEVELOPMENT

The significant changes in land use are presented in text below and identified alphabetically in Figure 2.2-1 and listed in Table 2.2-1.

Within the City portion of the Study Area, outside of the downtown segment south of I-64/U.S. 40, only minor land use changes have taken place. The Missouri Botanical Garden has developed a research facility in the southwest corner of Shaw and Vandeventer Avenues (A) that is approximately one block west of their main facility. The City has proposed a major redevelopment of the Darst-Webbe public housing and City Hospital property (B) located general in a "V"-shaped area bounded by Chouteau Avenue on the north, Tucker Boulevard on the east and Dolman Street/proposed Grattan Parkway on the west. The southern "point" is the I-55/I-44 interchange with Tucker Boulevard/Gravois Avenue. The redevelopment includes new market-rate housing, office and retail uses, new elderly housing, a new community center, and low-income housing. Housing rehabilitation continues in the Lafayette Square (C) and Soulard (D) neighborhoods as well as other neighborhoods within the Study Area. One of these new housing developments was recently announced by Pyramid Construction to build 30 single-family homes (E) on the site of a long-closed Sears store at Grand Boulevard and Chippewa Street (St. Louis Post-Dispatch, South Section, February 25, 1999). Likewise, sporadic new development/redevelopment is taking place in the Kosciusko industrial area (F). The old Falstaff brewery complex at Lemp Street and Shenandoah Avenue is being recycled for office, warehouse and light industry (G) (St. Louis Post-Dispatch, March 5, 1999).

The St. Louis County part of the Study Area could be considered a bedroom suburb due to its predominance of residential land use and the supporting nature of the other land uses, especially commercial and institutional. The only large employment centers are St. Anthony's Medical Center (H), the General American Life Insurance Company's Operation Center (I), and the South County Center Mall and surrounding retail facilities (J). There are no major concentrations of office parks or industrial parks that could be considered major destinations for residents living outside the Study Area.



Source: St. Louis County Data Book, 1999.

Figure 2.2-1
Recent and Planned Development

TABLE 2.2-1
RECENT AND MAJOR PLANNED DEVELOPMENT

Map Designation	Development Description
A	Missouri Botanical Garden Research Facility
B	Darst-Webbe/City Hospital Redevelopment
C	Lafayette Square Housing Rehabilitation
D	Soulard Housing Rehabilitation
E	Grand and Chippewa Single-Family Housing
F	Kosciusko Continued Redevelopment
G	Falstaff Brewery Redevelopment
H	St. Anthony's Medical Center
I	American Life Insurance Co. Operations Center
J	South County Mall and Surrounding Retail
K	National Lead Co. Site Redevelopment
L	New Park in Lemay along River Des Peres
M	Proposed Annexation by Bella Villa
N	City of Green Park Incorporation

Because of this characteristic, land use changes in this Study Area are not large enough to be considered "significant". They are relatively small and follow the land uses that presently exist. The only large-scale activity that has been announced is the possible redevelopment of South County Center Mall through the use of Tax Increment Financing (TIF). This possible redevelopment has "been in the works" for several years, but nothing to date has happened. No formal redevelopment plan or request for a TIF designation has been submitted to St. Louis County within the past two years during which this potential redevelopment was announced (telephone discussions with St. Louis County Planning Department staff).

St. Louis County has indicated that it would like to redevelop the National Lead Company site (K) on South Broadway at the River Des Peres along the St. Louis City Limits into a recreational center with a marina, RV Park, etc. This project has not yet started. The county has also purchased land in the Lemay area along the River Des Peres that flooded in 1993 (L) and plan to make this area a recreation facility. The purchase was completed under the Federal Emergency Management Agency's buyout program for property that is susceptible to repeated flooding (telephone discussions with St. Louis County Planning Department staff).

The 6th District County Councilman, who represents virtually all of this Study Area, requested that the St. Louis County Planning Department conduct a study of his District to prepare the area for the future by identifying its problem areas, its potential, and a means of getting to that potential within the area's fiscal ability. That study is ongoing and is still in its initial stages (telephone discussions with St. Louis County Planning Department staff).

According to staff at the St. Louis County Planning Department (February 3, 1999), the small community of Bella Villa (M) is considering annexing some unincorporated land adjacent to its boundaries, but the community has not officially started the process. The only other annexation/incorporation that occurred in

the past five years was the incorporation of the City of Green Park (N) in 1995. Every few years, a movement to incorporate other parts or all of this Study Area arises, but to date, nothing has become of these attempts of implementing the incorporation.

2.3 PLANS AND POLICIES/INSTITUTIONAL CONSTRAINTS

2.3.1 Plans and Policies

The new city of Green Park is the only one of the five municipalities within the County portion of the Study Area that has a Comprehensive Plan, but it is not complete and available to review. Due to the very low number of incorporated municipalities in the St. Louis County portion of the Study Area, planning for the area is done by the St. Louis County Department of Planning usually on a "by request" basis of the residents of an area or by the Councilman from the area. As noted previously, the 6th District Councilman has requested such a study be made of his District, which includes virtually the entire St. Louis County portion of the Study Area. That study should provide direction to the area taking advantage of its strengths and attempting to correct the weaknesses. Unfortunately, no firm timetable has been set for its completion (discussion with St. Louis County Planning Department staff, February 3, 1999).

2.3.2 Institutional Constraints

This Study Area does not suffer the degree of decentralization that is present in other parts of St. Louis County. There are only five municipalities, five school districts, and three fire protection districts along with several countywide or regional taxing bodies plus the City of St. Louis. While this Study Area may have a relatively small number of taxing entities compared to other parts of the region, it is still not as "clean" or simple as it could be due to school, utility and special purpose (e.g., street lighting) taxing districts. Even these taxing bodies result in some difficulties when trying to develop planning policies for the Study Area.

2.4 NEIGHBORHOOD IDENTIFICATION

The part of St. Louis County within this Study Area is different from any other part of the County in that there are only five incorporated municipalities, with the majority of the County portion being unincorporated. In order to address "neighborhood" comparisons, Census Tract data was used instead of data for each incorporated municipality. This part of the County has a total of 18 Census Tracts and the data for each is shown in Table 2.4-1 on the following page. Similar comparative data for the portion of the City of St. Louis within the Study Area is contained in Table 2.4-2 and covers information about the 35 City Neighborhoods within the Southside Study Area.

2.4.1 St. Louis County

Figure 2.4-1 shows the Census Tracts for St. Louis County and the five incorporated cities and Figure 2.4-2 shows the City of St. Louis Neighborhoods.

The value of housing reflects the movement away from the core City with the median values of units increasing as the distance from the City of St. Louis increases and only tracts south of Lindbergh Boulevard had median housing values greater than $100,000 in 1989. A similar pattern exists for median rental unit values. The average number of persons per household falls within a range between a low of 2.18 persons to a high of 3.04. Again, the general pattern is one of larger households existing farther away from the City of St. Louis. Per capita income falls within a fairly narrow range with a low of $10,367 and a high of $20,057. This narrow range may explain the very low percentage of people living below the poverty income level as defined by U.S Bureau of the Census. Only one Census Tract, 2202, located at the far northeast corner of the County portion of the Study Area adjacent to the City of St. Louis on the north and the Mississippi River on the east, has a percentage of persons below the poverty income level that is higher than ten percent. This is the same area that was flooded in 1993 and most of the low-income housing has been removed as part of the federal buyout program implemented after the flood. The next highest rate of poverty level income is 6.6 percent, or almost 40 percent less than the Tract with the highest level.

TABLE 2.4-1
COMMUNITY COMPARISONS - ST. LOUIS COUNTY

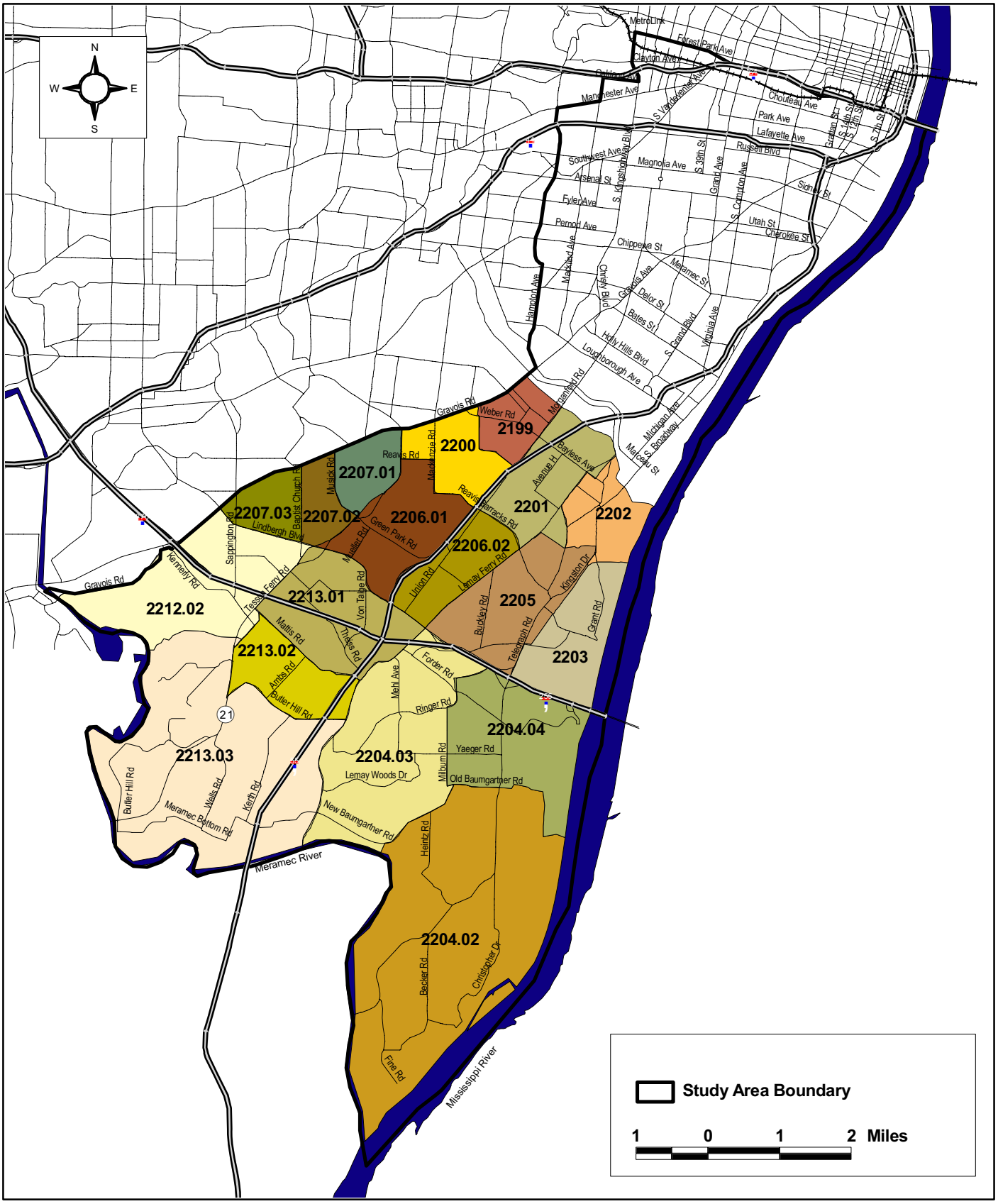
Census Tract	Census Population 1990	Percent Population Change 1980-1990	Percent of Population - 1990		1990							1989		
			White	Black	Total Housing Units	Single-family Units	Multi-family Units	Percent Owner Occupied	Median Value Owner Occupied Units	Median Contract Rent	Average Household Size	Median Household Income	Per Capita Income	Percent Persons Below Poverty
2199	5,976	-10.20%	99%	1%	2,531	2,367	151	88.3%	$ 70,400	$ 308	2.44	$ 31,448	$ 15,110	3.7%
2200	8,590	-10.00%	100%	0%	3,980	2,915	1,006	82.7%	$ 71,800	$ 387	2.24	$ 32,066	$ 15,755	3.9%
2201	825	-10.30%	99%	1%	3,880	2,550	1,237	76.7%	$ 65,600	$ 365	2.20	$ 28,973	$ 14,257	5.7%
2202	6,871	-8.30%	99%	1%	2,658	2,348	273	75.3%	$ 41,600	$ 279	2.67	$ 25,593	$ 10,367	10.7%
2203	1,601	-8.01%	88%	12%	581	115	464	21.7%	$ 66,500	$ 353	2.18	$ 27,070	$ 11,518	3.2%
2204.02	17,365	64.50%	98%	1%	5,873	4,792	1,057	83.1%	$ 113,700	$ 411	3.04	$ 49,693	$ 16,966	1.8%
2204.03	13,330	34.90%	98%	2%	5,145	3,166	1,956	72.3%	$ 112,700	$ 454	2.71	$ 43,130	$ 17,710	2.4%
2204.04	11,948	-3.20%	99%	1%	4,266	3,600	654	85.1%	$ 90,300	$ 416	2.86	$ 43,668	$ 16,770	1.4%
2205	13,144	-5.20%	98%	2%	5,735	4,099	1,613	72.7%	$ 77,700	$ 368	2.42	$ 32,624	$ 15,176	6.6%
2206.01	4,695	-13.70%	98%	2%	1,974	1,561	405	79.3%	$ 77,700	$ 366	2.48	$ 37,293	$ 16,335	2.2%
2206.02	5,374	-9.60%	99%	1%	2,341	1,634	698	74.3%	$ 84,100	$ 314	2.35	$ 34,317	$ 18,062	2.8%
2207.01	2,933	-5.70%	99%	1%	1,327	722	601	57.9%	$ 86,400	$ 380	2.29	$ 33,077	$ 15,881	2.3%
2207.02	3,890	-11.20%	99%	1%	1,587	1,377	203	89.3%	$ 85,200	$ 374	2.50	$ 36,681	$ 15,484	1.6%
2207.03	2,985	-8.70%	100%	0%	1,131	996	131	91.5%	$ 95,700	$ 382	2.73	$ 45,977	$ 16,670	1.8%
2212.02	5,951	-0.10%	98%	2%	2,560	1,503	980	74.1%	$ 126,400	$ 503	2.29	$ 38,275	$ 20,057	0.9%
2213.01	7,418	1.60%	99%	1%	3,057	2,221	819	79.7%	$ 111,900	$ 413	2.54	$ 42,704	$ 18,815	2.8%
2213.02	6,865	1.80%	99%	1%	2,914	1,737	1,171	63.7%	$ 104,900	$ 380	2.57	$ 37,890	$ 18,838	3.8%
2213.03	11,498	33.10%	98%	2%	4,385	3,027	1,330	77.1%	$ 115,400	$ 387	2.72	$ 46,381	$ 18,882	1.3%

Source: 1980 and 1990 Census of Population and Housing.
Research and Statistics Division, St. Louis County Department of Planning.

TABLE 2.4-2
COMMUNITY COMPARISONS - CITY OF ST. LOUIS

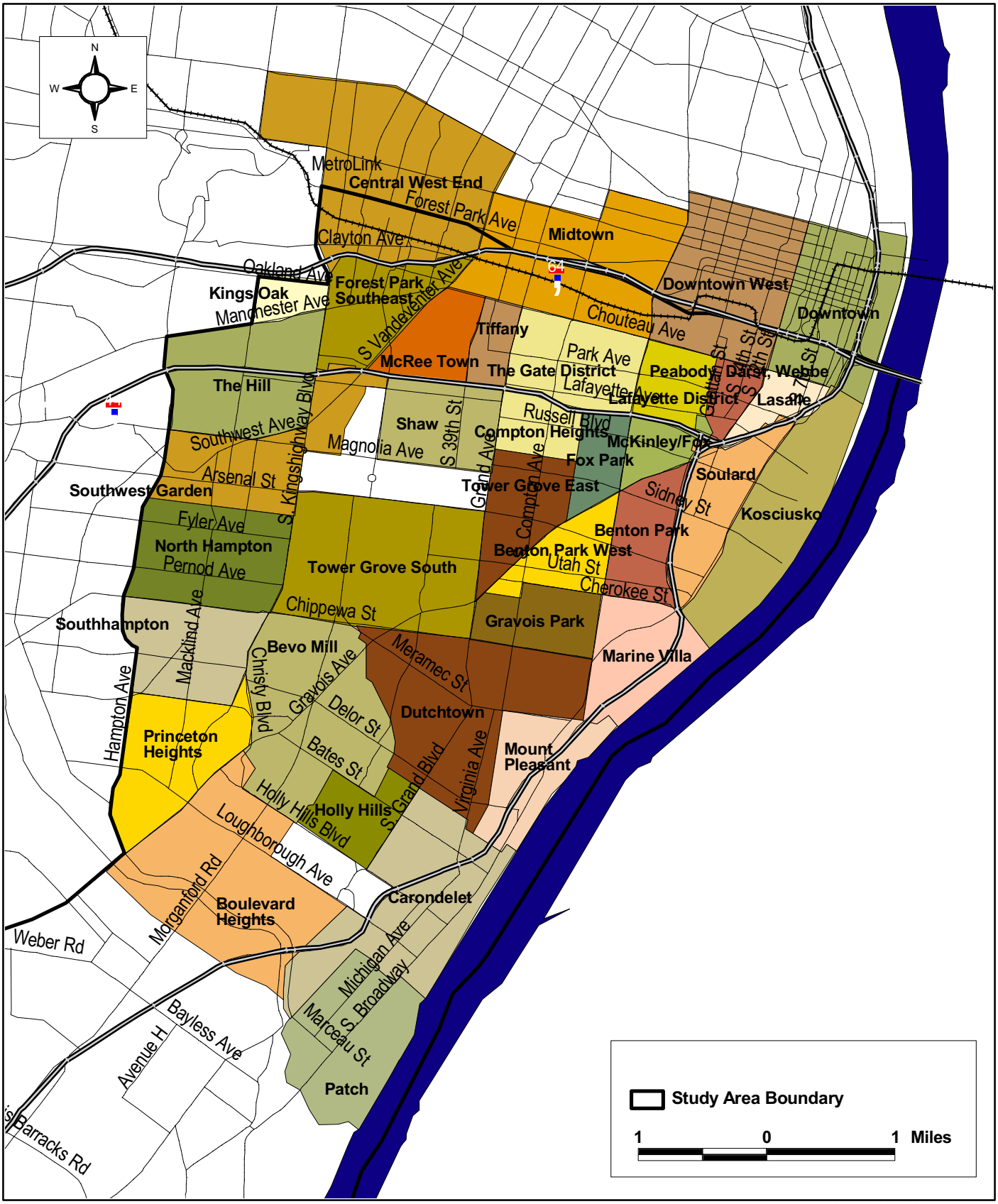
Neighborhood		Census Population 1990	Percent Population Change 1980-1990	Percent of Population - 1990		1990							1989		
Number	Name			White	Black	Total Housing Units	Single-family Units	Multi-family Units	Percent Owner Occupied	Median Value Owner Occupied Units	Median Contract Rent	Average Household Size	Median Household Income	Per Capita Income	Percent Persons Below Poverty
1	Carondelet	9,417	-13%	94%	4%	4,697	2,134	2,507	50%	$48,883	$339	2.29	$21,262	$11,105	2%
2	Patch	3,464	-13%	96%	3%	1,679	853	785	48%	$32,250	$335	2.47	$17,763	$983	3%
3	Holly Hills	3,213	-23%	99%	1%	1,615	666	940	54%	$71,320	$351	2.08	$28,233	$15,017	1%
4	Boulevard Heights	9,226	-14%	99%	0%	4,227	3,811	405	86%	$63,150	$381	2.25	$30,054	$14,255	0%
5	Bevo Mill	13,179	2%	98%	1%	6,287	4,260	1,962	66%	$50,373	$344	2.24	$24,887	$12,332	1%
6	Princeton Heights	8,029	-5%	99%	0%	3,895	2,602	1,268	69%	$70,420	$390	2.17	$29,991	$16,669	0%
7	South Hampton	8,854	8%	98%	1%	4,432	2,502	1,901	62%	$74,750	$387	2.13	$30,240	$17,336	0%
12	The Hill	2,971	-10%	99%	1%	1,552	1,132	393	67%	$51,613	$352	2.05	$20,416	$12,918	1%
13	Southwest Garden	5,203	-23%	82%	16%	2,807	886	1898	37%	$56,137	$389	2.09	$24,824	$15,769	1%
14	North Hampton	7,708	-16%	97%	3%	4,184	1,945	2,221	51%	$64,150	$402	1.96	$27,505	$15,770	1%
15	Tower Grove South	14,703	-10%	91%	6%	7,409	2,810	4,548	47%	$50,041	$344	2.23	$22,408	$11,877	1%
16	Dutchtown	17,943	-3%	90%	7%	9,393	2,890	6,411	42%	$45,823	$325	2.18	$19,947	$10,943	17%
17	Mount Pleasant	5,144	1%	95%	4%	2,486	696	1,762	33%	$39,180	$332	2.30	$17,266	$9,562	2%
18	Marine Ville	3,624	-9%	80%	17%	2,015	567	1,423	36%	$36,780	$287	2.30	$16,173	$8,387	3%
19	Gravois Park	5,183	-19%	81%	13%	2,631	549	2,062	34%	$40,244	$306	2.36	$16,804	$9,662	3%
21	Soulard	3,771	24%	85%	13%	2,525	599	1,901	25%	$72,271	$410	1.94	$28,074	$15,897	1%
22	Benton Park	4,396	-18%	82%	15%	2,510	695	1,788	41%	$44,438	$318	2.31	$18,885	$10,410	3%
23	McKinley/Fox	1,989	-21%	61%	35%	1,063	142	912	27%	$49,600	$354	2.44	$16,207	$10,284	5%
24	Fox Park	5,092	-1%	53%	41%	2,618	559	2,045	31%	$40,600	$377	2.61	$13,741	$6,400	3%
25	Tower Grove East	7,600	-7%	71%	23%	3,627	777	2,827	36%	$57,450	$367	2.43	$21,175	$11,029	2%
26	Compton Heights	1,868	4%	69%	29%	811	395	413	58%	$147,100	$380	2.73	$33,800	$15,479	0%
27	Shaw	7,579	-16%	59%	38%	3,841	981	2,846	36%	$73,138	$374	2.40	$21,428	$10,639	2%
28	McRee Town	3,152	12%	15%	82%	1,409	236	1,169	21%	$27,725	$324	3.16	$12,696	$5,936	5%
29	Tiffany	1,355	-15%	16%	75%	620	168	446	24%	$52,733	$324	2.57	$19,115	$9,477	5%
30	Benton Park West	5,202	11%	78%	17%	2,617	599	1,982	35%	$35,720	$321	2.42	$14,486	$7,539	4%
31	The Gate District	3,403	-31%	15%	84%	1,557	490	1,022	31%	$51,333	$351	2.63	$17,441	$8,754	5%
32	Lafayette Square	1,962	34%	75%	24%	1159	556	592	60%	$107,150	$427	2.15	$44,779	$19,778	1%
33	Peabody, Darst, Webbe	1,698	-48%	11%	88%	869	87	776	7%	$91,067	$343	3.04	$24,577	$10,031	76%
34	LaSalle	2,017	-20%	19%	80%	1,241	217	1006	16%	$107,100	$354	2.22	$32,187	$17,096	6%
35	Downtown	115	3%	66%	32%	124	1	88	1%	N/A	$456	1.28	$24,672	$19,886	3%
36	Downtown West	254	-35%	59%	39%	196	1	96	3%	N/A	$940	1.64	$22,741	$10,213	13%
37	Midtown	441	-26%	31%	66%	318	76	236	1%	N/A	$1,942	2.03	$25,473	$12,134	2%
38	Central West End	1,656	0%	59%	38%	1,030	145	853	23%	$167,622	$341	1.88	$33,660	$17,504	2%
39	Forest Park Southeast	4,087	-11%	32%	71%	1,979	572	1377	34%	$28,700	$329	2.67	$20,306	$7,686	3%
40	Kings Oak	587	-2%	68%	30%	245	175	70	65%	$32,500	$385	2.67	$9,814	$6,578	2%

Source: 1980 & 1990 Census of Population, US Bureau of the Census, Department of Commerce, Washington, DC, 1982 & 1992.
Note 1: The neighborhoods showing 0% for the percentage of population actually have less than 0.5% of that category's population.
Note 2: Data shown for Neighborhoods 35 - 38, inclusive, is 10% of that neighborhood's total for each category. Data shown for Median House Value, Median Rent, Average Household Size, Median Household Income, Per Capita Income, and Percentage Below Poverty Level Income is for the entire Neighborhood.



Source: East-West Gateway Coordinating Council, November 1998.

Figure 2.4-1
Census Tracts



Source: City of St. Louis, 1999.

Figure 2.4-2
City Neighborhoods

2.4.2 City of St. Louis

Housing values have a very wide range from over $167,000 per unit in the Central West End to just under $28,000 in McRee Town (located north of I-44 to Chouteau Avenue between Tower Grove/Vandeventer Avenues on the west and 39th Street on the east). In addition to the Central West End, there are three other Neighborhoods which had median home values of over $100,000; Compton Heights at $147,100, Lafayette Square at $107,150, and LaSalle at $107,100. Only Compton Heights is not a redevelopment area. Household and per capita Incomes generally follow the housing values with higher incomes found in the Neighborhoods with the higher home values. Poverty levels in the Study Area are very low with only three Neighborhoods having over ten percent of their population living below a poverty level income as defined by the U. S. Bureau of the Census. The highest level, 76 percent, is in the Peabody, Darst, Webbe Neighborhood, which is mostly comprised of public housing.

Overall, the data indicates that the Southside Study Area is a mixture of middle income, mainly white residents with a few neighborhoods that are wealthier. The highest and the lowest Median Value of housing units are found in the City of St. Louis portion of the Study Area, while Census Tracts in the St. Louis County portion are more homogeneous in household incomes than the City of St. Louis Neighborhoods. Likewise, the Per Capita Income levels in the St. Louis County portion of the Study Area are also more homogeneous than those in the City Neighborhoods.

2.5 MAJOR UTILITY CORRIDORS

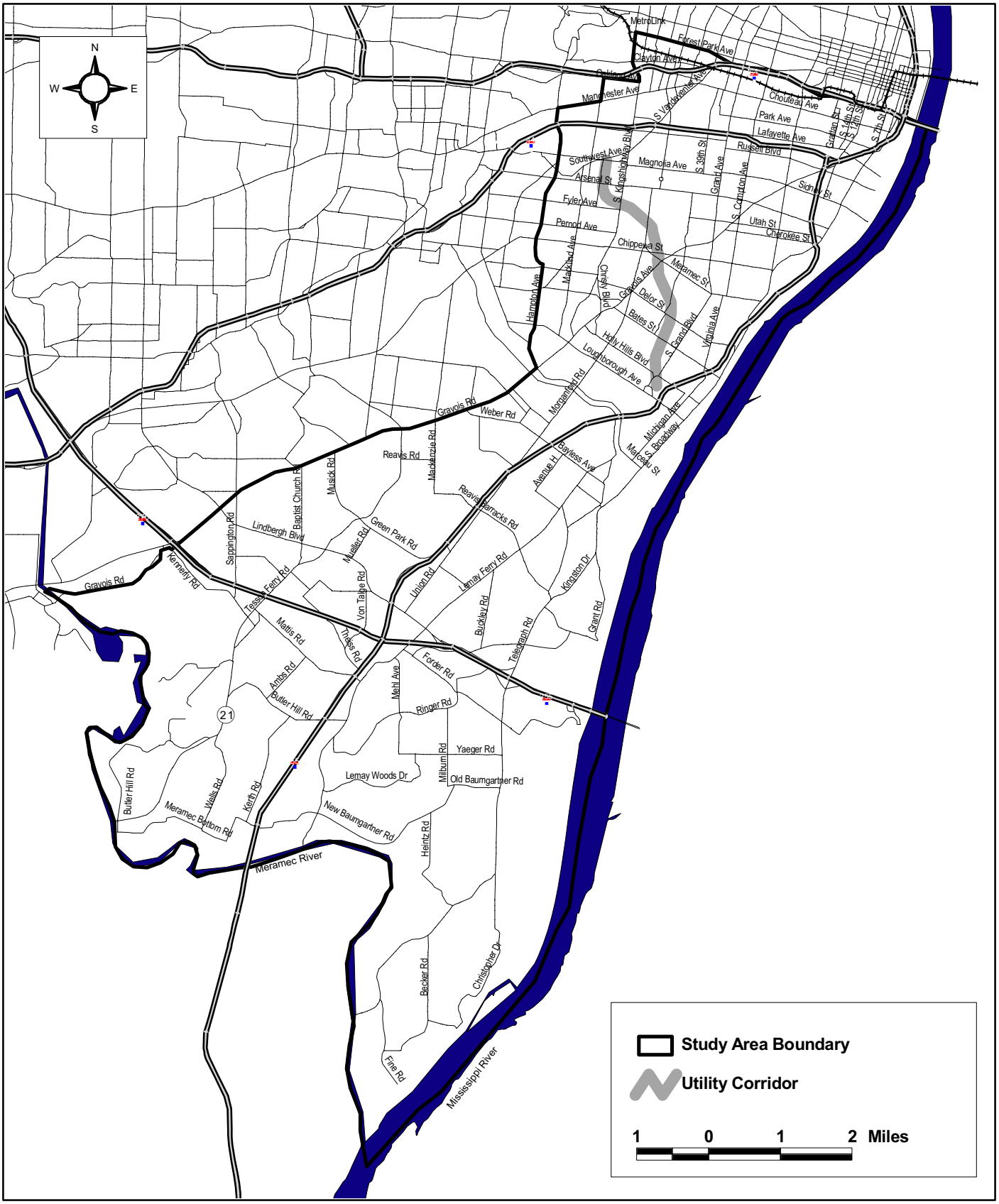
The Southside Study Area has only one utility corridor that can be identified using parcel and parcel owner information. At an approximate width of 100 feet, this corridor is adjacent to and shares the Union Pacific Railroad right-of-way from approximately Tower Grove Park south to near Carondelet Park. The ownership of the corridor, which is partially shared with Union Pacific, is not known at this time. Other major utility parcels do exist in the Study Area, particularly along the Mississippi River, but are not contiguous enough to be considered a corridor (Figure 2.5-1).

2.6 TRENDS IN LAND VALUE

One of the best indicators of a community's stability is its aggregate assessed value over time. In order to determine this stability, housing prices and appraisals were used from the City of St. Louis and St. Louis County. This was the only data available for both jurisdictions that could be compared. In St. Louis County, the Average Single-Family Home Appraisal, by Census Tract, was used to determine land value stability. In the City of St. Louis, the Average Home Sale Price was used to determine land value stability on a neighborhood basis. Both sets of data were examined for the years 1993 and 1997. Table 2.6-1 presents the Average Single-Family Home Appraisal by Census Tract for the St. Louis County portion of the Study Area. Table 2.6-2 presents the Average Home Sale Price by Neighborhood for the City of St. Louis portion of the Study Area.

2.6.1 St. Louis County

The data in the table indicates that in every census tract within the St. Louis County portion of the Study Area the appraised value of single-family homes increased between 1993 and 1997. These increases ranged from six percent in the area called Lemay, adjacent to the City of St. Louis which was inundated by floodwaters in 1993, to a high of 20 percent in the Concord Village area which is generally between Lindbergh Boulevard and the Meramec River north and south and Tesson Ferry Road and I-55 west and east. In fact, all Census Tracts that touch the Meramec River have increased home appraisals of 18 to 20 percent, the highest in the Study Area due to the housing units being the newest in the Study Area.



Land Use Source: St. Louis County Department of Planning, November 1998.

Figure 2.5-1
Existing Utility Corridors

In terms of absolute dollar amounts, the smallest increase, $1,856 occurred in the Lemay area and the highest, $29,306, in Census Tract 2212.02, the area called Sappington. The lowest average home appraisal in 1997 was in the Lemay area with a value of $34,525 while the highest home appraisal in 1997 was in the Sappington area with a value of $184,101.

TABLE 2.6-1
AVERAGE SINGLE-FAMILY HOME APPRAISALS – ST. LOUIS COUNTY

Census Tract	Local Place Name	1993 Average Home Appraisal	1997 Average Home Appraisal	Changes 1993 to 1997	
				$ Value	Percentage
2199	Affton	$70,284	$76,545	$6,261	9%
2200	Affton	$71,536	$77,246	$5,710	8%
2201	Lemay	$61,379	$65,589	$4,210	7%
2202	Lemay	$32,669	$34,525	$1,856	6%
2203	Mehlville	$64,060	$68,591	$4,531	7%
2204.02	Oakville	$120,770	$142,242	$21,472	18%
2204.03	Oakville	$114,333	$137,469	$23,136	20%
2204.04	Oakville	$91,657	$103,998	$12,341	13%
2205	Mehlville	$75,635	$82,344	$23,136	20%
2206.01	Concord Village	$91,630	$102,678	$11,318	12%
2206.02	Mehlville	$84,722	$95,478	$10,756	13%
2207.01	Concord Village	$90,730	$99,276	$8,546	9%
2207.02	Concord Village	$85,636	$100,245	$14,609	17%
2207.03	Sappington	$98,179	$112,336	$14,157	14%
2212.02	Sappington	$154,795	$184,101	$29,306	19%
2213.01	Concord Village	$112,030	$127,439	$15,419	14%
2213.02	Concord Village	$109,936	$126,236	$16,300	15%
2213.03	None	$128,275	$151,973	$23,698	18%

Source: St. Louis County Assessor's File. Prepared by the Research and Statistics Division, St. Louis County Department of Planning.

2.6.2 City of St. Louis

Unlike St. Louis County, Single-Family Home Prices did not increase in all of the 32 neighborhoods that had such housing in the City's portion of the Study Area. A total of 14 neighborhoods experienced a decrease in single-family home sale prices between 1993 and 1997 with this decrease ranging from a high of $31,073, or 17 percent, in the Central West End Neighborhood to a low of $64, or zero percent, in the Princeton Heights

Neighborhood. The greatest percentage decrease, 43 percent, occurred in the McRee Town Neighborhood with the smallest measurable decrease, two percent, occurring in the Bevo Mill Neighborhood.

The remaining 18 neighborhoods saw increases in the average home sale price. This increase ranged from a low of $2,365, or 5 percent, in the Carondelet Neighborhood to a high of $39,425, or 75 percent, in The Gate District Neighborhood. In terms of absolute dollars, average 1997 home sale prices ranged from a low of $15,000 in the McRee Town Neighborhood to a high of $155,826 in the Compton Heights Neighborhood.

It must be noted that comparisons of average housing values and prices in this Study Area against a regional or combined St. Louis County/St. Louis City value is impossible because St. Louis County uses a maximum appraised value of $500,001 for all homes whose appraised value is at that level and above.

2.7 STUDY AREA SUMMARY

Based on the previously presented information about the Southside Study Area, the following comments can be made:

- Most of the Study Area is residential and contains mainly single-family units with only a few scattered multi-family uses along the major arterial roadways, near activity centers, and at major roadway intersections.
- Industrial land use is clustered along both the Union Pacific and Burlington Northern Santa Fe railroad lines and the Mississippi and Meramec Rivers along the eastern and southern border of the Study Area. The largest concentration of industrial use is located in the City of St. Louis along the Mississippi River south of Downtown and along the east-west Union Pacific and Burlington Northern Santa Fe railroad corridor west of Downtown.
- Overall there is very little office and hotel land use in this Study Area. What is present is located near the northern border along Chouteau Avenue and at interchanges along both I-55 and I-270/I-255.
- Retail land use is concentrated around the South County Shopping Center, in ”Power Centers”, and in strip centers anchored by large grocery stores. Very little retail remains along the major streets within the City of St. Louis.
- Land value trends, in the form of Single-Family Home Appraisals in St. Louis County and Home Sale Prices in the City of St. Louis, indicate that values are increasing in all parts of St. Louis County within the Study Area, but that land value changes are very sporadic within the City of St. Louis.

TABLE 2.6-2
AVERAGE HOME SALE PRICE COMPARISON - CITY OF ST. LOUIS

		1993 Average Home Prices		1997 Average Home Prices		Changes 1993 to 1997			
Neighborhood		Single-family	Multi-family	Single-family	Multi-family	Single-family		Multi-family	
Number	Name					Number	Percentage	Number	Percentage
1	Carondelet	$45,222	$50,019	$47,587	$40,155	$2,365	5%	($9,864)	-20%
2	Patch	$23,363	$15,500	$32,094	$31,196	$8,731	37%	$15,696	101%
3	Holly Hills	$89,180	$81,527	$83,332	$77,718	-$5,848	-7%	($3,809)	-5%
4	Boulevard Heights	$62,548	$94,000	$66,501	$69,357	$3,953	6%	($24,643)	-26%
5	Bevo Mill	$46,369	$60,963	$45,553	$56,654	($816)	-2%	($4,309)	-9%
6	Princeton Heights	$63,844	$74,254	$63,780	$79,500	($64)	0%	$5,246	7%
7	South Hampton	$67,419	$77,473	$71,292	$80,606	$3,873	6%	$3,133	4%
12	The Hill	$51,183	$23,000	$50,125	$44,336	($1,058)	-2%	$21,336	93%
13	Southwest Gardens	$57,258	$58,540	$53,822	$55,455	($3,436)	-20%	($3,085)	-5%
14	North Hampton	$80,093	$77,100	$71,433	$70,273	($8,660)	-11%	($6,827)	-9%
15	Tower Grove South	$54,318	$50,376	$52,864	$58,056	($1,454)	-3%	$7,680	15%
16	Dutchtown	$40,725	$42,533	$38,591	$42,201	($2,134)	5%	($332)	1%
17	Mount Pleasant	$39,381	$44,867	$42,509	$49,353	$3,128	8%	$4,486	10%
18	Marine Ville	$28,447	$21,154	$34,891	$36,629	$3,444	12%	$15,475	73%
19	Gravois Park	$24,511	$31,977	$21,833	$30,643	($2,678)	-11%	($1,334)	-4%
21	Soulard	$87,661	$68,786	$90,209	$76,820	$2,548	3%	$8,034	12%
22	Benton Park	$38,236	$30,057	$60,115	$37,515	$21,879	57%	$7,458	25%
23	McKinley/Fox	$48,500	$38,975	$53,893	$33,424	$8,093	18%	($5,551)	-14%
24	Fox Park	$40,178	$43,058	$63,378	$34,969	$23,200	58%	($8,089)	-19%
25	Tower Grove East	$74,626	$41,001	$71,102	$57,949	$3,524	-5%	$16,948	41%
26	Compton Heights	$144,791	$35,000	$155,826	$81,375	$11,035	8%	$46,375	133%
27	Shaw	$95,766	$45,148	$85,422	$55,139	($10,344)	-11%	$9,991	22%
28	McRee Town	$26,000	$22,750	$15,000	$24,992	($11,000)	-42%	$2,242	-10%
29	Tiffany	$63,250	$27,500	$54,857	$50,500	($8,393)	-13%	$23,000	84%
30	Benton Park West	$22,026	$27,470	$24,951	$31,749	$2,925	13%	$4,279	16%
31	The Gate District	$52,251	None	$94,676	None	$39,425	75%	N/A	N/A
32	Lafayette Square	$82,668	$103,306	$95,191	$107,567	$12,523	15%	$4,261	4%
33	Peabody, Darst, Webbe	$77,000	$81,000	$55,900	$74,000	($21,000)	-27%	($7,000)	-5%
34	LaSalle	$81,283	$68,100	$88,214	$81,750	$6,931	9%	$13,650	20%
35	Downtown	None	None	None	None	N/A	N/A	N/A	N/A
36	Downtown West	None	None	None	None	N/A	N/A	N/A	N/A
37	Midtown	None	None	None	None	N/A	N/A	N/A	N/A
38	Central West End	$184,945	$79,283	$153,872	$122,144	($31,073)	-17%	$42,861	54%
39	Forest Park Southeast	$28,109	$27,622	$38,987	$38,466	$10,878	39%	$10,844	39%
40	Kings Oak	$61,000	None	$58,012	None	($2,988)	-5%	N/A	N/A

Source: City of St. Louis Community Development Agency.

3.0 DEMOGRAPHICS

This section describes past, current and future projections of demographic information of the Southside Study Area. These factors include population, age, race, income distribution, housing, car ownership, and employment. An analysis of this information provides a basis for determining trends and factors which could influence the need for and type of transportation improvements for the Southside Study Area.

3.1 POPULATION

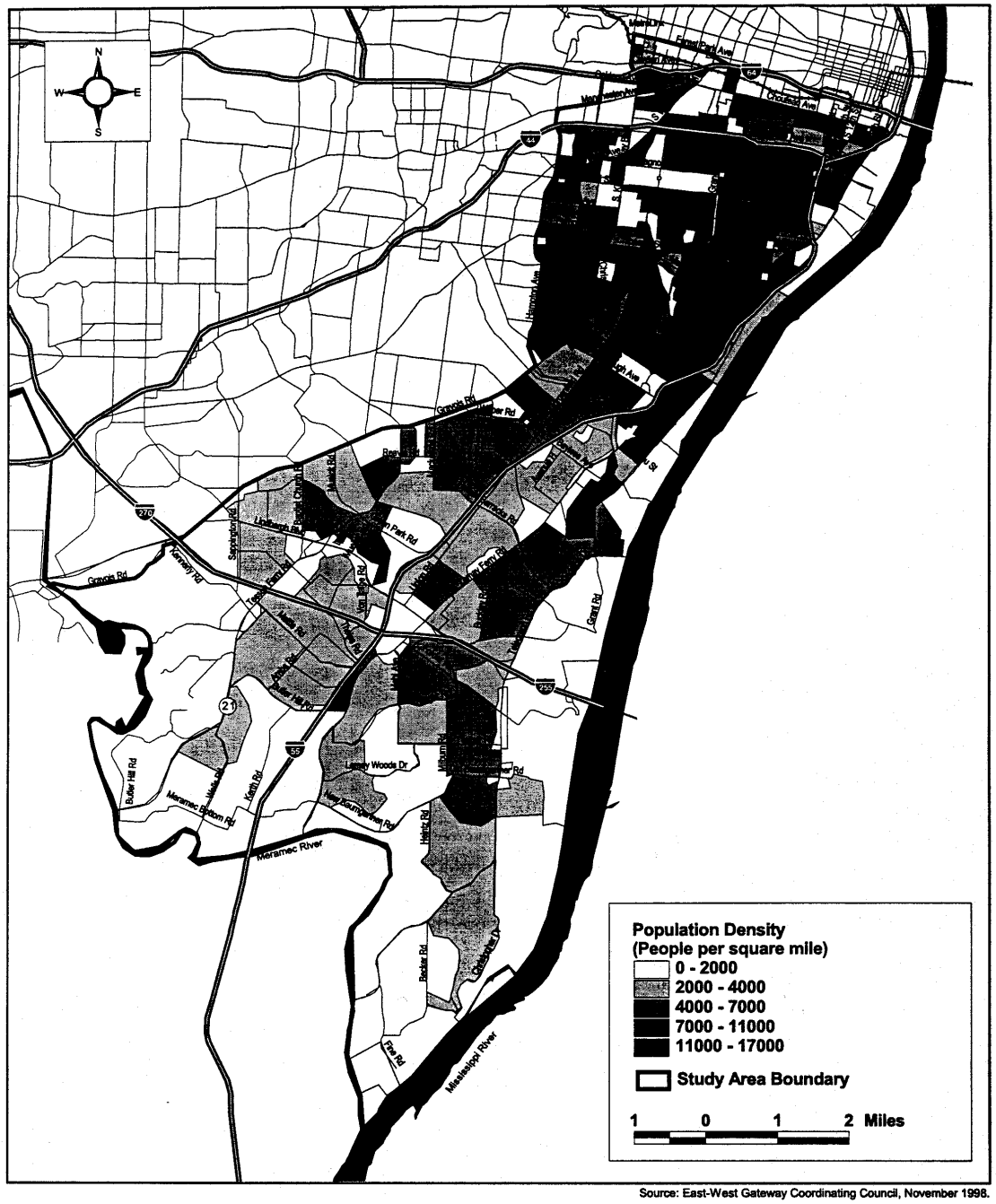
Table 3.1-1 displays the total population of the Southside Study Area, the City of St. Louis portion of the Study Area, and the St. Louis County portion of the Study Area from 1980 to 2020. The 1980 and 1990 figures are based upon decennial census tabulations. The 1996 estimates are based upon demographic data compiled since the 1990 census, whereas 2020 estimates are based upon projections developed by the East-West Gateway Coordinating Council (EWGCC), in cooperation with the local jurisdictions, such as St. Louis County. Note that total Study Area population has decreased by over 12,400 people between 1980 and 1996, a 3.9 percent decrease. The population in the City of St. Louis portion of the Study Area declined by 23,700 while the population of the St. Louis County portion of the Study Area increased by 11,300. Year 2020 projections indicate a continued decline in total Southside population of about 5,500 persons, a 1.8 percent decrease from 1996. This projection assumes a further decline in population in the City of St. Louis portion of the Study Area of almost 11,000 and an increase in population in the County portion of almost 5,500. This projection is based upon the assumption that there will continue to be an out-migration of population to the outer counties of the region, as well as a continued decline in average household size due to both smaller family sizes as well as life-cycle changes of households (e.g. “empty nest”).

TABLE 3.1-1
TOTAL POPULATION

Year	Southside Total	Percent Change from 1980	City of St. Louis Portion	St. Louis County Portion
1980	317,527	--	185,370	132,157
1990	313,447	-1.3%	175,324	138,123
1996	305,093	-3.9%	161,692	143,401
2020	299,615	-5.6%	150,978	148,637

Source: 1990 Census (Data File STF3A); East-West Gateway Coordinating Council, 1999.

Figures 3.1-1 and 3.1-2 display the year 1996 and 2020 population density in persons per square mile for the Southside Study Area. The City of St. Louis portion of the Study Area has the higher population densities, generally greater than 4,000 persons per square mile while the County’s portion of the Study Area predominantly has population densities lower than 4,000 persons per square mile. These densities are forecast to remain essentially the same through the year 2020 planning horizon. Higher population densities tend to encourage transit use as a more concentrated population are easier to serve with transit as more people live within walking distance of transit stops. Conversely, lower population densities tend to encourage automobile use and discourage transit use as households that are dispersed are more difficult to serve effectively with fixed route transit services.


N
W
E
S
Population Density
(People per square mile)
0 - 2000
2000 - 4000
4000 - 7000
7000 - 11000
11000 - 17000
Study Area Boundary
1 0 1 2 Miles
Meramec River
Mississippi River
Gravois Rd
Kennerly Rd
Butler Hill Rd
Meramec Station Rd
Lemay Ferry Rd
Grant Rd
Heinz Rd
Becker Rd
Fine Rd
Lemay Woods Dr
Gravois Ave
Carondelet Ave
Mary Ann Dr
Final Park Ave
Mary Ann Ave
Hampton Ave
Ivory Ave
Reagan Dr
Hawk Rd
Separation Rd
Lindbergh Rd
Bayless Church Rd
Ivory Rd
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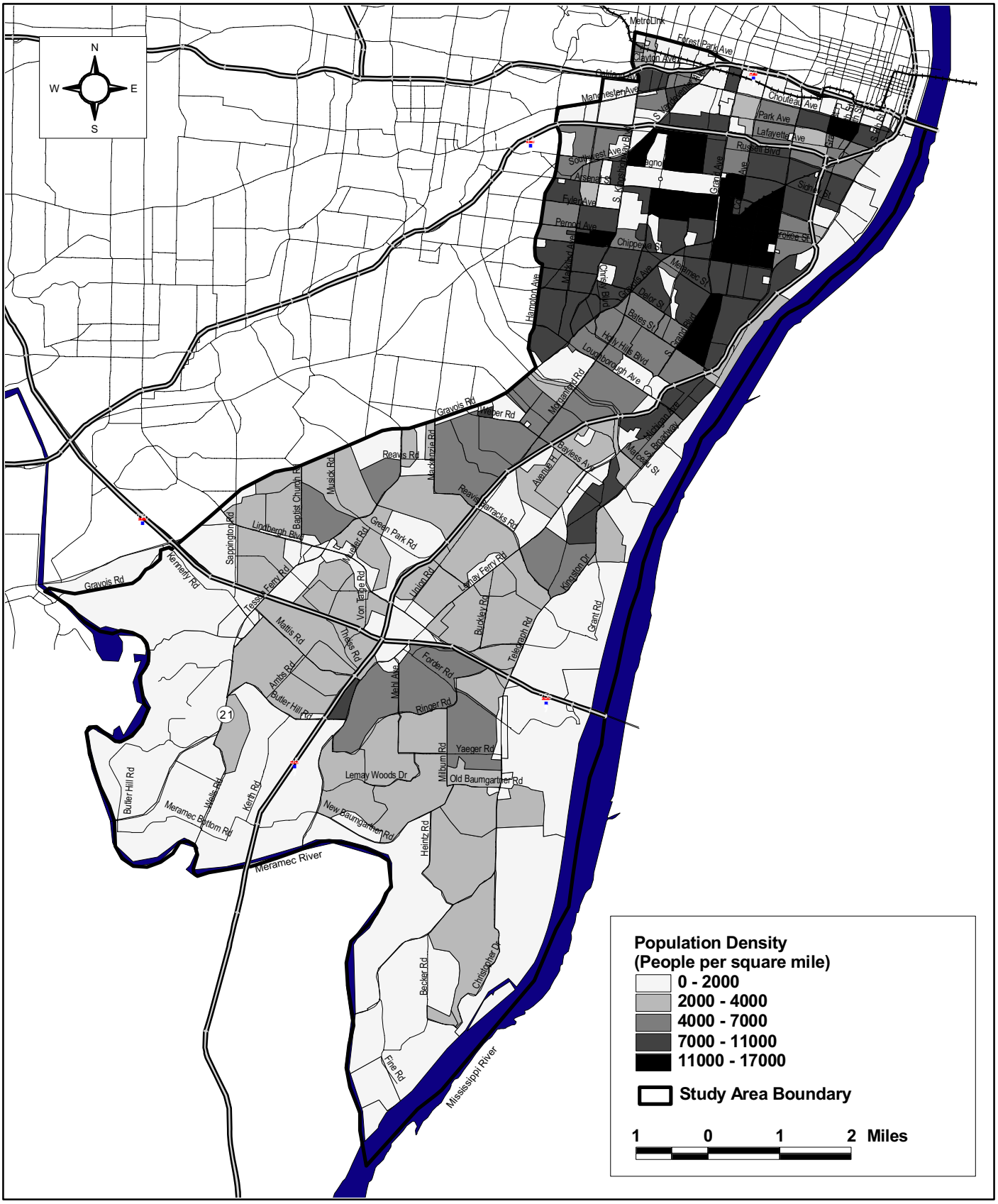


Source: East-West Gateway Coordinating Council, November 1998.

Figure 3.1-2
Population Density (2020)

3.2 AGE DISTRIBUTION

Table 3.2-1 shows the percentage distribution of the population by age group for the Southside Study Area based on the 1990 census, both for the Study Area in total, as well as broken out into the City portion and County portion. The distributions in the City of St. Louis and St. Louis County in total are also presented for comparison. The age distributions are very similar between the two portions of the Study Area and compare closely to the age distributions for the total City and total County. Note that 37.2% of the Study Area population was either under the age of 16 or over the age of 65, which indicates a need to provide transportation options for these potentially mobility deficient age groups.

TABLE 3.2-1
PERCENT POPULATION BY AGE GROUP

Age Group	Southside Total	City of St. Louis Portion	St. Louis County Portion	City of St. Louis Total	St. Louis County Total
0-15	21.5%	21.7%	21.2%	22.8%	22.0%
16-24	11.5%	11.6%	11.3%	12.7%	11.5%
25-34	18.6%	20.6%	15.9%	18.4%	17.1%
35-44	14.3%	13.0%	15.8%	12.8%	15.9%
45-59	13.7%	11.6%	16.4%	12.0%	15.6%
60-64	4.8%	4.4%	5.3%	4.6%	4.8%
65+	15.7%	17.0%	14.1%	16.7%	13.1%

Source: 1990 Census (Data File STF3A).

3.3 RACE

Table 3.3-1 illustrates the ethnic breakdown within the Southside Study Area, the City of St. Louis and St. Louis County, based on 1990 Census data. According to this table, the Southside Study Area is predominantly White, with African-American being the second largest ethnic group in the Study Area. However, Table 3.3-1 also shows that the Southside Study Area has a larger White population and fewer African-Americans relative to the City and County of St. Louis as a whole.

TABLE 3.3-1
ETHNIC BREAKDOWN

	Southside Total	City of St. Louis Portion	St. Louis County Portion	City of St. Louis Total	St. Louis County Total
White	88.9%	81.3%	98.5%	51.0%	84.2%
African-American	9.3%	16.4%	0.5%	47.4%	14.0%
American Indian/Eskimo	0.3%	0.4%	0.2%	0.3%	0.2%
Asian Pacific Islander	1.0%	1.3%	0.7%	0.9%	1.4%
Other	0.4%	0.6%	0.1%	0.4%	0.2%

Source: 1990 Census (Data File STF3A), East-West Gateway Coordinating Council, 1999.

3.4 INCOME DISTRIBUTION

Table 3.4-1 presents the percentage distribution of population by household income based upon the 1990 census for both the Southside Study Area in total as well as both the City of St. Louis and St. Louis County portions of the Study Area and the City and County total distributions. The distribution of the City and County portions of the Study Area are very similar to the overall distributions for the City and County. Note that the income levels in the City portion of the Study Area were significantly below those in the County portion of the Study Area, with over 47 percent of households in the City portion earning less than $20,000 per year in 1990 compared with 21 percent in the County portion. In fact, the median annual household income for the City portion of the Study Area was $17,000 below the County portion. This indicates that residents of the City portion of the Study Area likely have fewer transportation options than the County portion as lower incomes correlate with lower vehicle ownership and operation (refer to next section).

TABLE 3.4 -1
POPULATION DISTRIBUTION BY INCOME RANGE - 1990

Annual Income	Southside Total	City of St. Louis Portion	St. Louis County Portion	City of St. Louis Total	St. Louis County Total
0-$20k	36.3%	47.2%	20.7%	51.1%	21.6%
$20k-$40k	32.7%	32.7%	32.6%	29.9%	31.0%
$40k-$60k	18.3%	13.4%	25.2%	12.1%	23.1%
$60k-$75k	7.0%	3.9%	11.5%	3.6%	10.1%
$75k-$100k	3.9%	1.9%	6.7%	2.0%	7.2%
$100-$125K	1.1%	0.5%	1.9%	0.6%	2.9%
$125k-$150k	0.4%	0.2%	0.8%	0.3%	1.2%
$150k +	0.4%	0.2%	0.7%	0.5%	2.8%
Median Household Annual Income	$28,976	$21,967	$38,960	$20,300	$41,242

Source: 1990 Census (Data File STF3A).

3.5 HOUSING

Table 3.5-1 displays the total number of households in the Southside Study Area from 1980 to 2020. The 1980 and 1990 figures are based upon decennial census tabulations. The 1996 estimates are based upon demographic data compiled since the 1990 census, whereas 2020 estimates are based upon projections developed by East-West Gateway Coordinating Council (EWGCC), in cooperation with the local jurisdictions. The number of households in the Study Area have increased by approximately 3,400 between 1980 and 1996, a 2.7 percent increase, compared to the 3.9 percent population decrease cited above, indicating a decline in the average number of persons per household over that time period. Similar to the population trends, the number of households has decreased in the City portion of the Study Area and increased in the County portion. Projections for the year 2020 estimate a small, additional increase of 1,500 in the number of households in the Study Area over 1996. This contrasts with the projected decrease in total Study Area

population. Again this projection assumes a continued decline in the number of persons per household due to fewer children per family and increased numbers of childless households. This trend is projected to be greater in the St. Louis County portion of the Study Area compared to the City portion.

TABLE 3.5-1
TOTAL HOUSEHOLDS

Year	Southside Total	Percent Change from 1980	City of St. Louis Portion	St. Louis County Portion
1980	124,524	--	78,678	45,846
1990	129,472	4.0%	76,292	53,180
1996	127,928	2.7%	72,018	55,910
2020	129,445	3.9%	69,442	60,003

Source: 1990 Census (Data File STF3A); East-West Gateway Coordinating Council, 1999.

Table 3.5-2 shows the housing statistics for the Southside Study Area as well as the City of St. Louis and St. Louis County as a whole. Occupancy rates are higher in the County portion of the Study Area compared to the City portion of the Southside Study Area. This pattern is consistent with housing trends observed throughout the St. Louis region. The Southside Study Area has slightly higher occupancy rates and lower vacancy rates compared to other areas in the City of St. Louis and St. Louis County. In addition, nearly 60 percent of the housing in the Southside Study Area is owner-occupied, while a little over 40 percent of the housing in the corridor is occupied by renters. The majority of these renters live in the City portion of the Study Area.

TABLE 3.5-2
HOUSING STATISTICS

	Southside Total	City of St. Louis Portion	St. Louis County Portion	City of St. Louis Total	St. Louis County Total
Housing Units	144,048	88,123	55,925	194,881	401,877
Occupied	90.2%	86.7%	95.6%	84.6%	94.6%
Vacant	9.9%	13.4%	4.4%	15.4%	5.4%
Owner-Occupied	59.6%	47.4%	77.1%	45.1%	73.9%
Renter-Occupied	40.4%	52.6%	22.9%	54.9%	26.1%

Source: 1990 Census (Data File STF 3A), East-West Gateway Coordinating Council, 1999.

3.6 CAR OWNERSHIP

Table 3.6-1 presents the distribution of households by number of vehicles owned/operated by members of the household based upon the 1990 census for the Southside Study Area in total, as well as for both the City and County portions of the Study Area and City and County total. Both portions of the Study Area have somewhat higher auto ownership compared to the City or County overall. However, the City portion of the Southside Study Area has significantly lower auto ownership than the County portion, with almost one quarter of the households in the City portion not having an auto available compared to only five percent in the County portion. This indicates that the mobility available to households in the City portion of the Study Area is measurably less than the County portion due to the greater lack of access to automobiles. Conversely, the

County portion of the Study Area is more auto dependent and alternative transportation modes will need to be competitive with auto travel times to attract users.

TABLE 3.6-1
DISTRIBUTION OF VEHICLES PER HOUSEHOLD

Number of Vehicles Per Household	Southside Total	City of St. Louis Portion	St. Louis County Portion	City of St. Louis Total	St. Louis County Total
0	16.4%	24.2%	5.2%	29.1%	6.0%
1	38.9%	44.0%	31.7%	42.9%	33.0%
2	33.3%	25.4%	44.6%	21.8%	43.4%
3	8.4%	4.8%	13.6%	4.6%	13.1%
4	2.3%	1.2%	3.8%	1.2%	3.5%
5+	0.7%	0.3%	1.2%	0.3%	1.0%
Average per Household	1.43	1.16	1.83	1.07	1.78

Source: 1990 Census (Data File STF3A).

3.7 EMPLOYMENT

Table 3.7-1 displays the total employment in the Southside Study Area by year. The 1990 data is from the decennial census (1980 data is unavailable). The 1996 data is an estimate based upon the 1990 census and state and county trends). Year 2020 is a projection by EWGCC based upon information provided by state and local agencies. As can be seen in the table, employment in the Study Area has been decreasing during the past decade and is projected to continue to decrease through the study planning horizon of 2020. Total Study Area employment is forecast to decrease by approximately 6,500 jobs between 1996 and 2020, a 4.4 percent decrease over the 24 year projection, indicating a relatively small employment loss. However, this projected decrease is comprised of an almost 11,000 job loss in the City portion of the study area compared to a 4,200 job increase in the County portion of the Study Area. The Study Area's proportion of total City employment is forecast to remain at about 37 percent and its proportion of total County employment is projected to remain at about seven percent.

TABLE 3.7-1
TOTAL EMPLOYMENT BY YEAR

Year	Southside Total	Percent Change from 1990	City of St. Louis Portion	St. Louis County Portion
1990	156,854	--	120,570	36,284
1996	149,202	-4.9%	113,339	35,863
2020	142,698	-9.1%	102,652	40,046

Source: 1990 Census (Data File STF3A); East-West Gateway Coordinating Council, November 1998.

Table 3.7-2 displays a distribution of employment by type of employment for the Southside Study Area overall as well as the City and County portions of the Study Area and the distribution for the entire City and County. The most predominant employment category in the Study Area overall is Administrative Support/Clerical and it is also the most predominant category in both the City and County portions of the Study Area. "White collar" employment categories made up about 30 percent of the total employment in the Southside Study Area.

TABLE 3.7-2
1990 EMPLOYMENT BY TYPE

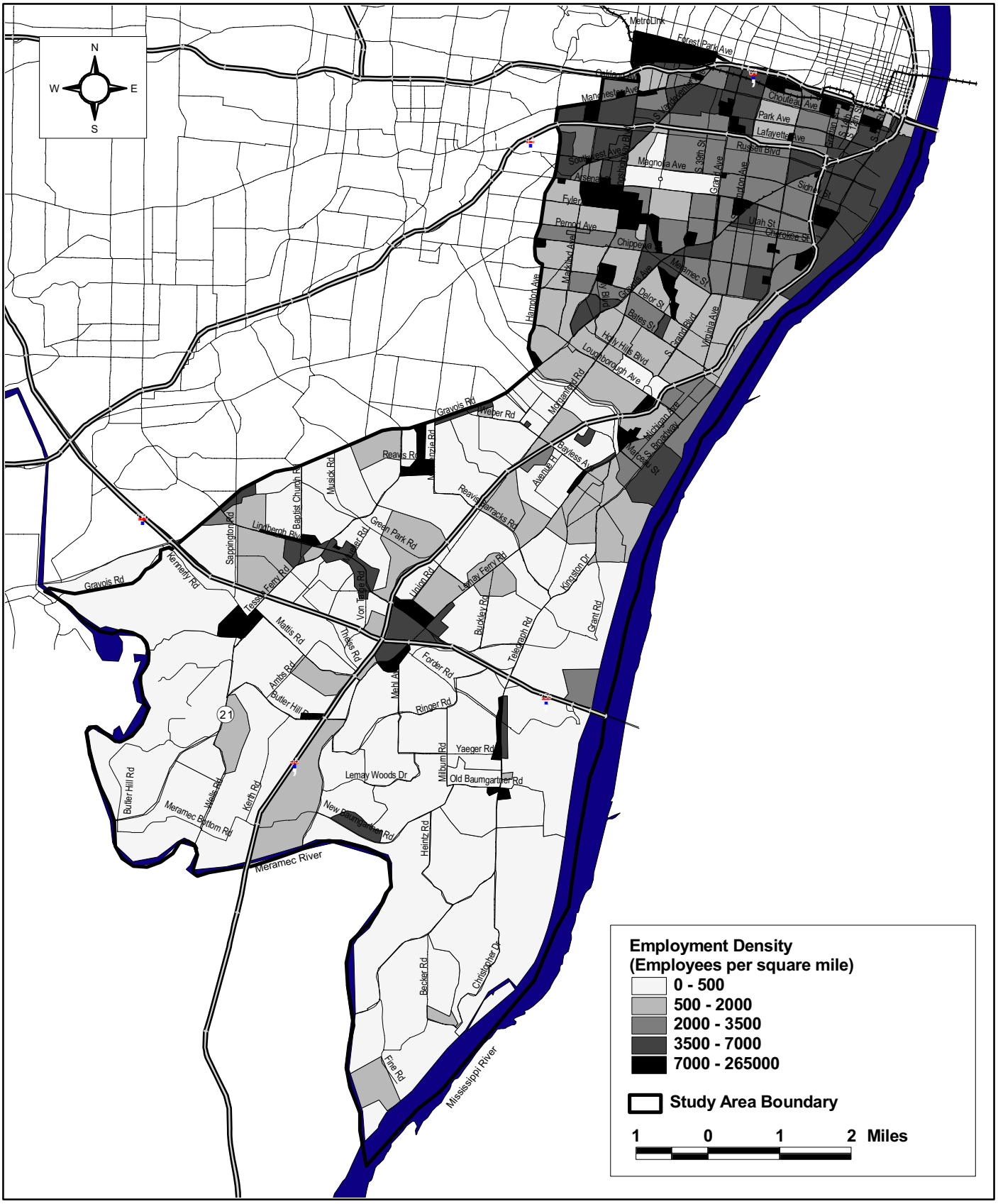
Type of Employment	Southside Total	City of St. Louis Portion	St. Louis County Portion	City of St. Louis Total	St. Louis County Total
Executive, administrative & managerial	12.3%	10.0%	14.8%	9.7%	15.7%
Professional specialty	13.0%	13.2%	12.9%	13.6%	18.0%
Technical/support	4.4%	4.1%	4.7%	4.0%	4.3%
Sales	12.1%	10.6%	13.7%	9.6%	14.0%
Administrative support, clerical	20.0%	19.1%	21.0%	19.0%	18.1%
Service, private household	0.2%	0.3%	0.2%	0.7%	0.2%
Protective service	1.8%	2.4%	1.2%	2.5%	1.2%
Service (except protective & household)	12.1%	14.6%	9.5%	16.8%	9.4%
Farming, forestry and fishing	0.7%	0.8%	0.7%	0.7%	0.6%
Precision production, craft and repair	9.9%	9.2%	10.6%	7.7%	8.5%
Operators, fabricators and laborers	6.0%	7.2%	4.7%	7.2%	4.2%
Transportation and material moving	3.4%	3.7%	3.1%	3.8%	2.8%
Handlers, equipment cleaners, helpers & laborers	4.0%	4.9%	3.1%	4.6%	3.0%

Source: 1990 Census (Data File STF3A).

Figures 3.7-1 and 3.7-2 display the employment density in employees per square mile for 1996 and 2020 for the Southside Study Area. The highest employment densities are generally found in the northern portion of the Study Area, including the BJC Medical Center Complex, Cardinal Glennon Hospital Complex, Ralston Purina, Anheuser Busch and the Kosciusko Industrial Area. The highest employment densities in the central/southern portion of the Study Area include the South County Shopping Center and surrounding commercial areas clustered around the interchanges of I-55, Lindbergh Boulevard and I-255. The employment projections anticipate relatively stable locations of these higher density employment areas, with some decreases in employment densities in the northwest portion of the Study Area.

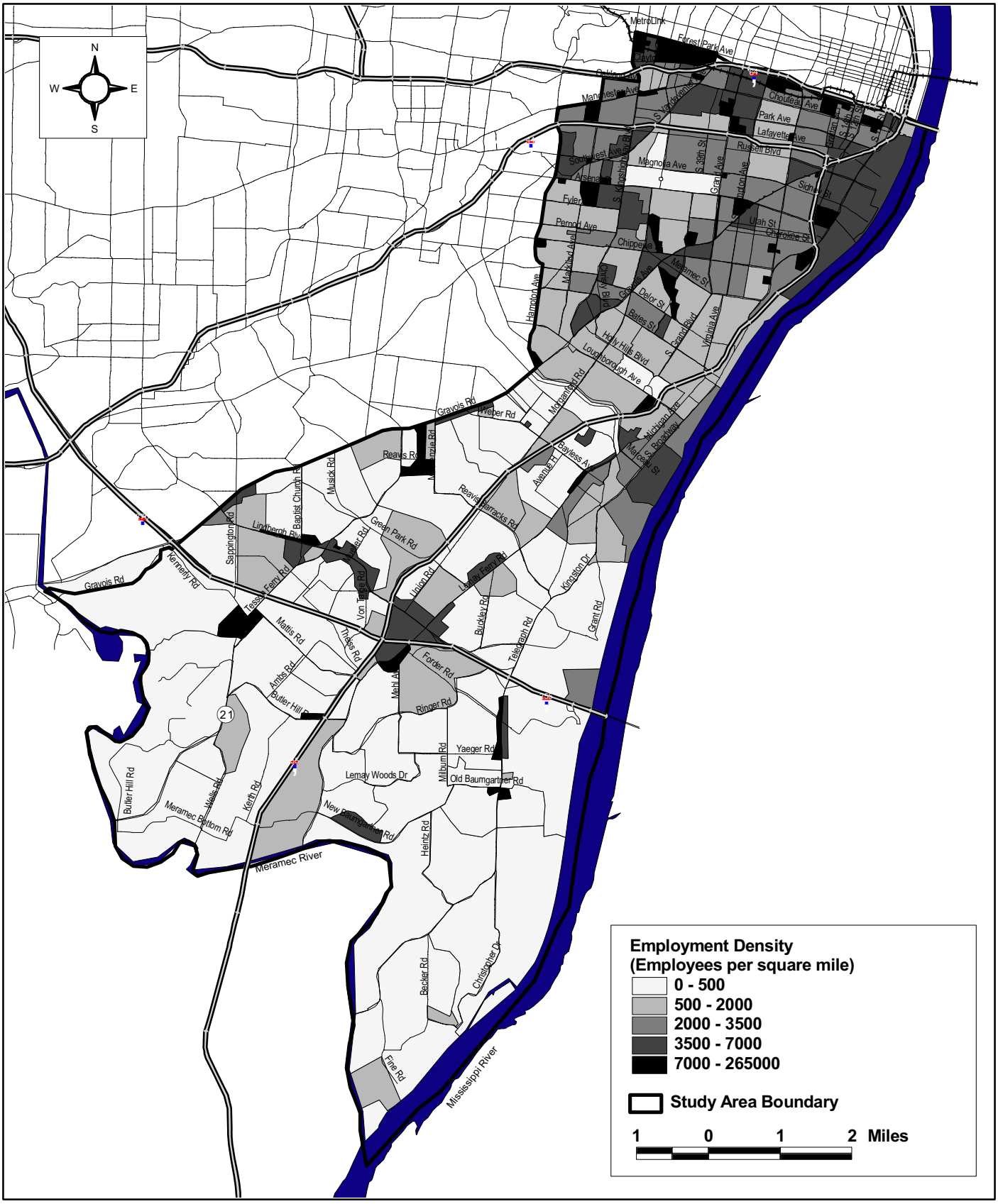
3.8 CONCLUSION

The summary of this demographic data shows that the Southside Study Area is forecast to have somewhat declining population and employment, household incomes and car ownership levels close to regional averages, and a full range of population and employment densities from low to high. The City portion of the Study Area has and is forecast to have declining population, households and employment and lower than average household incomes and auto ownership levels while the County portion has and is forecast to have somewhat increasing population, households and employment and near average household incomes and auto ownership levels. These demographic characteristics will be taken into account when developing and evaluating transportation improvement alternatives.



Source: East-West Gateway Coordinating Council, November 1998.

Figure 1.0-1
Employment Density (1996)



Source: East-West Gateway Coordinating Council, November 1998.

Figure 3.7-2
Employment Density (2020)

4.0 TRAVEL PATTERNS

This section describes the travel characteristics of the Southside Study Area for both the base year of 1996 and the forecast year of 2020. Some of these travel characteristics are presented for the St. Louis metropolitan area as a whole as they are not currently available at a disaggregate level for analysis.

4.1 MAGNITUDE OF TRAVEL

Table 4.1-1 displays the estimated average daily trips produced by or attracted to the Southside Study Area in 1996 and 2020 and the forecast change in trips between these two years. Note that the trips to or from the downtown St. Louis Central Business District (CBD) have been isolated from the Southside Study Area in order to better understand travel to or from this major regional activity center of the Study Area. Total average daily trips produced in the Study Area are estimated to increase by 1.6 percent between 1996 and 2020, while total trips attracted to the Study Area are forecast to slightly increase by 0.1 percent. These changes are consistent with the estimated changes in population, households and employment in the Study Area discussed in Section 3.0 of this report. Note that home-based work trips produced in the Study Area are forecast to decline slightly between 1996 and 2020 due to the forecast decline in Study Area population. Forecast home-based non-work trips produced in the Study Area are forecast to increase slightly due to a slight increase in the number of households. However, forecast work and non-work trips attracted to the Study Area are forecast to decrease by about three and one percent respectively as a result of the forecast decrease in employment in the Study Area and increases elsewhere in the region.

4.2 TRAVEL PATTERNS

Tables 4.2-1 and 4.2-2 display the estimated pattern of average daily total person trips produced by or attracted to the Study Area to/from other areas of the St. Louis region for the years 1996 and 2020. The St. Louis CBD portion of the Study Area has again been separated in these tables. Note that total daily person trips produced in the Study Area are forecast to increase by about 14,000 between 1996 and 2020, only a 1.6 percent increase, consistent with projected changes in population, households and employment in the Study Area. Similarly, daily trips attracted to the Study Area are forecast to slightly increase by about 1,000, a 0.1 percent increase. The majority of trips in both years are estimated to both start and end within the Study Area, with 49.3 percent in 1996 and 48.0 percent in 2020 of the trips <u>produced</u> estimated to remain in the Study Area, and 56.8 percent in 1996 and 56.0 percent in 2020 of the trips <u>attracted</u> estimated to come from locations within the Study Area. The second largest location of trip productions in both years to the Study Area is the rest of St. Louis County as it is also the second largest location of trip attractions for trips produced in the Southside Study Area. Slightly less than ten percent of the total person trips produced by the Study Area are attracted to the St. Louis CBD in 1996 and this is estimated to decline to 8.7 percent of trips in 2020.

Tables 4.2-3 and 4.2-4 display the estimated pattern of average daily person work trips produced by or attracted to the Study Area for the years 1996 and 2020. These trips are estimates of the daily trips that are made directly between a person's residence and place of work, and are most likely to occur during peak commuting times (i.e., "rush hour"). Work trips are estimated to be approximately 28 percent of total daily trips produced in the Study Area in 1996 and 27 percent in the year 2020. As shown in Tables 4.2-3 and 4.2-4, the majority of work trips produced in the Study Area in both years are attracted to work locations within the Study Area. The second largest attractor of Study Area work trips in both years is the rest of St. Louis County. However, 15.5 percent of estimated 1996 Study Area work trips produced in the Study Area and 13.8 percent of estimated 2020 work trips produced in the Study Area are attracted to the St. Louis CBD, the third largest destination for work trips produced by the Study Area. Looking at work trips attracted to the Study Area, it can be seen that the majority in both 1996 and 2020 are estimated to be produced within the Southside Study Area itself, while the second largest producer of work trips attracted to the Study Area in both years is the rest of St. Louis County.

TABLE 4.1-1
AVERAGE DAILY TOTAL PERSON TRIPS - 1996 AND 2020

Produced/ Attracted		1996				2020				Percent Change			
		HBW	HBNW	NHB	Total	HBW	HBNW	NHB	Total	HBW	HBNW	NHB	Total
Southside	P*	249,985	441,121	215,966	907,072	247,278	447,096	227,159	921,533	-1.1%	1.4%	5.2%	1.6%
(excluding CBD)	A*	197,691	373,307	216,996	787,994	191,589	368,935	228,369	788,893	-3.1%	-1.2%	5.2%	0.1%
CBD	P*	2,563	3,634	78,334	84,531	2,859	4,649	81,435	88,943	11.5%	27.9%	4.0%	5.2%
	A*	173,274	109,210	78,873	361,357	158,469	101,720	82,000	342,189	-8.5%	-6.9%	4.0%	-5.3%
Region Totals		1,867,083	3,321,157	2,046,091	7,234,331	2,048,169	3,632,617	2,432,482	8,113,268	9.7%	9.4%	18.9%	12.1%

Source: East-West Gateway Coordinating Council, February, 1999.
Notes: *P=trips produced from the Study Area; A=trips attracted to Study Area
HBW=home-based work trips (e.g. from home to place of work)
HBNW=home-based non-work trips (e.g. from home to shopping)
NHB=non-home based trips (e.g. from workplace to grocery store)

TABLE 4.2-1
AVERAGE DAILY TOTAL PERSON TRIPS - 1996

	Attracted To												
Produced By	**Central Business District**	**Daniel Boone**	**Northside**	**Southside**	**R/O St. Louis County**	**R/O St. Louis City**	**Jefferson**	**Madison**	**St. Clair**	**Monroe**	**St. Charles**	**Franklin**	**Total**
Central Business District	30,744	4,065	19,361	**15,551**	6,499	2,303	396	1,479	3,722	61	334	16	84,531
Daniel Boone	16,832	431,794	31,738	**21,409**	193,471	12,736	1,613	1,175	1,522	79	18,171	53	730,593
Northside	88,295	72,575	424,357	**63,837**	188,360	28,142	995	18,971	8,270	166	15,491	44	909,503
Southside	**88,405**	**62,399**	**82,325**	**447,395**	**139,275**	**36,657**	**30,718**	**3,821**	**10,471**	**2,134**	**2,642**	**830**	**907,072**
R/O St. Louis County	51,427	378,072	151,312	**102,904**	912,662	40,549	14,665	9,242	4,775	524	54,039	343	1,720,514
R/O St. Louis City	11,774	24,654	27,852	**28,271**	34,763	25,342	586	526	1,012	49	951	20	155,800
Jefferson	10,741	20,892	8,853	**62,341**	66,776	4,129	194,303	1,511	2,281	616	1,262	4,158	377,863
Madison	19,860	9,597	34,958	**10,689**	26,012	2,235	2,303	564,839	66,256	2,488	3,073	770	743,080
St. Clair	34,428	10,495	25,533	**21,886**	17,253	3,190	1,001	70,953	593,184	6,667	2,752	895	788,237
Monroe	846	774	720	**3,426**	1,963	215	332	3,025	6,402	18,607	65	432	36,807
St. Charles	6,336	66,273	16,105	**4,675**	117,182	1,763	210	2,277	5,974	98	509,167	821	730,881
Franklin	1,669	1,916	1,117	**5,610**	4,366	426	6,458	1,503	5,027	2,118	1,554	17,686	49,450
Total	361,357	1,083,506	824,231	**787,994**	1,708,582	157,687	253,580	679,322	708,896	33,607	609,501	26,068	7,234,331

Source: East-West Gateway Coordinating Council, December 1998.

TABLE 4.2-2
AVERAGE DAILY TOTAL PERSON TRIPS - 2020

	Attracted To												
Produced By	**Central Business District**	**Daniel Boone**	**Northside**	**Southside**	**R/O St. Louis County**	**R/O St. Louis City**	**Jefferson**	**Madison**	**St. Clair**	**Monroe**	**St. Charles**	**Franklin**	**Total**
Central Business District	30,327	4,535	18,871	**15,636**	6,821	2,140	491	3,188	6,364	118	417	35	88,943
Daniel Boone	15,382	445,239	30,751	**24,922**	209,031	11,838	3,301	1,792	2,628	217	26,298	141	771,540
Northside	75,978	70,057	399,378	**57,482**	187,452	23,645	1,117	25,412	14,966	268	16,251	67	872,073
Southside	**80,447**	**75,715**	**76,137**	**442,100**	**145,281**	**32,552**	**34,356**	**8,017**	**17,128**	**3,387**	**5,133**	**1,280**	**921,533**
R/O St. Louis County	42,650	392,170	144,011	**100,077**	976,706	35,270	19,956	12,488	7,675	805	66,991	563	1,799,362
R/O St. Louis City	9,648	24,202	24,633	**25,433**	34,369	22,015	651	957	1,631	63	1,235	26	144,863
Jefferson	11,618	35,336	9,819	**69,330**	85,037	4,146	256,876	3,205	4,052	1,095	3,563	6,911	490,988
Madison	25,738	9,383	35,770	**12,762**	24,207	2,244	2,536	654,934	82,731	3,087	3,116	1,221	857,729
St. Clair	40,202	12,382	30,025	**22,467**	19,054	3,178	952	86,416	675,694	9,654	3,555	1,260	904,839
Monroe	1,447	1,237	1,087	**4,112**	2,282	234	462	4,320	10,288	32,447	155	751	58,822
St. Charles	6,651	99,290	18,384	**7,337**	159,721	2,342	649	3,310	6,833	208	822,691	1,110	1,128,526
Franklin	2,101	3,125	1,438	**7,235**	5,801	457	10,662	2,326	6,277	3,118	1,752	29,758	74,050
Total	342,189	1,172,671	790,304	**788,893**	1,855,762	140,061	332,009	806,365	836,267	54,467	951,157	43,123	8,113,268

Source: East-West Gateway Coordinating Council, December 1998.

TABLE 4.2-3
AVERAGE DAILY TOTAL PERSON WORK TRIPS - 1996

	Attracted To												
Produced By	**Central Business District**	**Daniel Boone**	**Northside**	**Southside**	**R/O St. Louis County**	**R/O St. Louis City**	**Jefferson**	**Madison**	**St. Clair**	**Monroe**	**St. Charles**	**Franklin**	**Total**
Central Business District	1,341	151	411	**381**	155	57	2	18	38	-	9	-	2,563
Daniel Boone	10,921	87,522	9,186	**6,244**	39,490	3,016	91	287	351	7	2,434	-	159,549
Northside	38,452	25,415	77,301	**21,395**	51,293	7,024	92	7,674	1,878	45	3,853	6	234,428
Southside	**38,823**	**23,964**	**27,270**	**92,562**	**46,114**	**8,951**	**6,018**	**1,402**	**3,485**	**697**	**596**	**103**	**249,985**
R/O St. Louis County	33,984	119,017	42,884	**30,453**	206,890	10,768	1,767	3,875	1,529	149	9,645	20	460,981
R/O St. Louis City	5,766	7,136	7,099	**6,388**	7,836	4,035	50	165	273	13	227	1	38,989
Jefferson	6,390	8,194	3,889	**18,456**	25,879	1,516	38,199	581	959	243	539	602	105,447
Madison	13,070	5,073	15,584	**5,416**	12,556	1,170	686	122,089	14,308	599	1,195	178	191,924
St. Clair	17,833	5,100	10,514	**10,108**	9,312	1,229	413	19,031	124,525	1,829	923	220	201,037
Monroe	523	428	328	**1,412**	1,022	106	98	929	1,603	2,548	32	77	9,106
St. Charles	5,089	24,938	5,764	**2,782**	44,882	783	30	905	1,757	41	112,312	156	199,439
Franklin	1,082	865	537	**2,094**	1,945	184	1,535	440	1,295	465	328	2,865	13,635
Total	173,274	307,803	200,767	**197,691**	447,374	38,839	48,981	157,396	152,001	6,636	132,093	4,228	1,867,083

Source: East-West Gateway Coordinating Council, December 1998.

TABLE 4.2-4
AVERAGE DAILY TOTAL PERSON WORK TRIPS - 2020

	Attracted To												
Produced By	**Central Business District**	**Daniel Boone**	**Northside**	**Southside**	**R/O St. Louis County**	**R/O St. Louis City**	**Jefferson**	**Madison**	**St. Clair**	**Monroe**	**St. Charles**	**Franklin**	**Total**
Central Business District	1,402	182	443	**430**	182	59	1	60	91	1	8	-	2,859
Daniel Boone	9,388	87,395	8,095	**5,908**	40,862	2,611	151	429	552	32	2,420	3	157,846
Northside	31,218	23,718	73,009	**17,952**	50,921	5,739	82	9,680	3,423	52	3,478	7	219,279
Southside	**34,170**	**26,233**	**23,957**	**91,734**	**46,016**	**7,693**	**7,005**	**2,710**	**5,608**	**1,171**	**822**	**159**	**247,278**
R/O St. Louis County	27,161	119,197	39,653	**26,851**	224,913	8,937	2,274	5,140	2,329	204	9,256	40	465,955
R/O St. Louis City	4,511	6,690	5,883	**5,310**	7,593	3,224	45	292	418	13	237	-	34,216
Jefferson	7,013	12,275	4,454	**19,983**	31,564	1,454	53,557	1,567	1,815	422	1,273	1,108	136,485
Madison	15,760	4,685	14,224	**6,063**	10,247	1,105	514	138,521	17,248	627	1,021	280	210,295
St. Clair	20,356	5,982	11,555	**9,517**	9,117	1,185	261	21,507	141,018	2,384	1,070	274	224,226
Monroe	887	548	432	**1,489**	993	103	105	1,270	2,718	5,381	61	142	14,129
St. Charles	5,243	37,651	6,664	**3,868**	62,664	1,090	89	1,478	2,180	79	193,959	249	315,214
Franklin	1,360	1,101	629	**2,484**	2,226	184	2,986	727	1,672	814	474	5,730	20,387
Total	158,469	325,657	188,998	**191,589**	487,298	33,384	67,070	183,381	179,072	11,180	214,079	7,992	2,048,169

Source: East-West Gateway Coordinating Council, December 1998.

Table 4.2-5 displays the estimated traffic volumes for 1996 and 2020 for cutlines in the Southside Study Area. A cutline is an imaginary line along which all traffic on roadways crossing the line is summarized to present a picture of total travel movements at that location. Figure 4.2-1 displays the location of the five cutlines established by the study team to summarize travel patterns in the Southside Study Area. Cutlines one through three summarize north-south travel volumes, while cutlines four and five summarize east-west travel volumes. Among the three north-south cutlines, cutline SL-1, the most southern, has the highest volume of traffic for both 1996 and 2020, while SL-2, the middle one, has the lowest volume of traffic in both years. In addition, the southern most cutline (SL-1) is forecast to have the greatest percentage increase in traffic volumes between 1996 and 2020, reflecting the proportionately higher growth in travel demand in the southern portion of the study area as well as in Jefferson County to the south of the study area. The two cutlines, SL-4 and SL-5, summarizing east-west traffic volumes, show a greater forecast increase in east-west traffic volumes in the southern portion of the Study Area (SL-4) than the northern portion of the Study Area (SL-5). This reflects a consequence of the demographic forecasts, which forecast higher growth in the southern portions of the study area and in neighboring Jefferson County, than in the northern portion of the study area and the St. Louis CBD. It also reveals a significant east-west travel market, particularly in the southern portion of the Study Area that will need to be addressed in the development of alternatives for the Study Area.

TABLE 4.2-5
CUTLINE VOLUMES

Cutline	1996 Volume	2020 Volume	Change	Percent Change
SL-1	221,500	300,500	79,000	35.7%
SL-2	160,700	185,800	25,100	15.6%
SL-3	216,100	224,400	8,300	3.8%
SL-4	178,700	207,400	28,700	16.1%
SL-5	241,200	250,800	9,600	4.0%

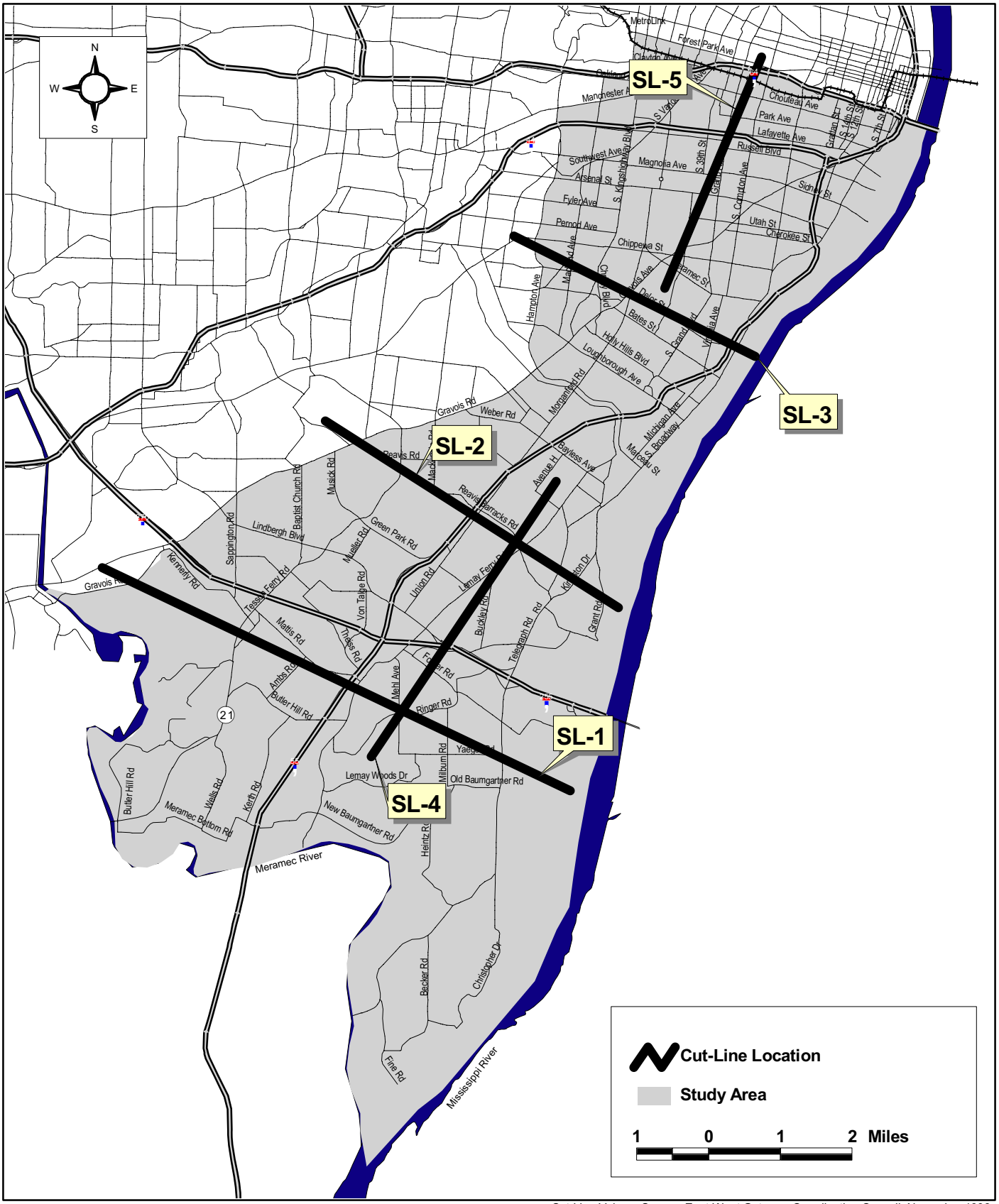
Source: East-West Gateway Coordinating Council, December 1998.
Note: Average annual weekday two-way traffic volume.

4.3 REGIONAL TRAVEL STATISTICS

While estimates of average trip length by Study Area are not available, regional estimates show that daily average trip lengths are forecast to increase from 8.9 miles per trip in 1996 to 9.8 miles in 2020. This reflects a forecast continuation of the trend of dispersal of households and employment throughout the out areas of the region, particularly in outlying areas, requiring longer distances to be traveled, on average to reach the daily variety of travel destinations.

Similarly, regional average trip duration is forecast to increase from 16 minutes in 1996 to 19 minutes in 2020. This reflects a forecast of longer distances per trip, as described above, along with somewhat slower speeds per trip due to forecast increases in the amount and duration of traffic congestion on the region's roadways. Both these factors are expected to affect the Southside Study Area in a similar fashion to the rest of the region.

Regional vehicle occupancies for total trips are estimated to decline slightly from 1996 to 2020. Average regional work trip occupancies are estimated to decline slightly from 1.11 persons per vehicle in 1996 to 1.10 persons per vehicle in 2020. Similarly, home-based non work trip vehicle occupancies are estimated to decline slightly from 1.335 persons per vehicle in 1996 to 1.326 persons per vehicle in 2020 and non-home based trip occupancies are forecast to decline from 1.236 (year 1996) to 1.228 (year 2020) persons per vehicle.



Cut-Line Volume Source: East-West Gateway Coordinating Council, November 1998.

Figure 4.2-1
Volume Cutlines

4.4 TRANSIT SHARES

Table 4.4-1 displays the county to county fraction of total daily work person travel that is estimated to be taken by public transit in 1996 and 2020. Shares for travel to/from work are presented as these trips primarily occur during peak travel times of the day and because they comprise the highest percentage of the trips made on public transit. These transit shares are not yet able to be calculated for the Southside Study Area separately from the remainder of St. Louis County. The projected year 2020 shares assume the completion of the St. Clair County MetroLink extension currently under construction and all three segments of the Cross-County Corridor MetroLink line between Forest Park, Clayton and I-270/I-70 in the north and Butler Hill Road in the south in St. Louis County, along with associated improvements to Bi-State bus routes to provide feeder service to the new MetroLink stations. The data in Table 4.4-1 shows that the transit share of work trips produced by households in St. Louis County in 1996 are estimated to be 1.9 percent, increasing to 2.3 percent of trips in 2020 (see Table 4.4-2). The transit share of work trips produced by households in St. Louis City in 1996 is estimated to be 10.1 percent, slightly decreasing to 9.7 percent in 2020. The transit share in the City is significantly higher than St. Louis County due to the lower levels of car ownership in the City and corresponding higher levels of transit service. Similarly, the transit share of work trips attracted to jobs located in St. Louis County in 1996 is estimated to be 0.9 percent, increasing to 1.3 percent of trips in 2020. The transit share of work trips attracted to St. Louis City is estimated to be 5.7 percent in 1996, increasing slightly to 6.2 percent in 2020. The highest transit share from both St. Louis County and St. Louis City in both years is estimated to be for those trips destined to the St. Louis CBD, with a 9.9 percent share of County work trips and a 22.0 percent share of City work trips in 1996, increasing to a 12.7 percent share from the County and remaining at a 22.0 percent share from the City in 2020. The increase in share from St. Louis County is most likely due to the assumed implementation of MetroLink service in the Cross-County Corridor.

TABLE 4.4-1
WORK TRIP TRANSIT SHARE - 1996

Origin	Destination									Total
	Franklin	Jefferson	Madison	Monroe	St. Charles	St. Clair	St. Louis Co.	St. Louis City	CBD	
Franklin	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Jefferson	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.6%	0.0%
Madison	0.0%	0.0%	0.4%	0.0%	0.0%	1.2%	0.4%	2.9%	13.2%	1.4%
Monroe	0.0%	0.0%	0.0%	0.2%	0.0%	0.6%	0.1%	1.4%	11.5%	0.9%
St. Charles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	1.7%	9.2%	0.4%
St. Clair	0.0%	0.0%	0.6%	0.0%	0.0%	3.3%	0.9%	4.5%	16.5%	4.0%
St. Louis Co.	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	0.8%	3.6%	9.9%	1.9%
St. Louis City	0.0%	0.0%	0.4%	0.0%	0.0%	3.5%	4.0%	9.7%	22.0%	10.1%
CBD	0.0%	0.0%	0.0%	0.0%	0.0%	2.6%	6.4%	13.3%	9.5%	10.3%
Total	0.0%	0.0%	0.4%	0.1%	0.0%	3.0%	0.9%	5.7%	13.8%	2.8%

Source: East-West Gateway Coordinating Council, February 1999.

TABLE 4.4-2
WORK TRIP TRANSIT SHARE - 2020

Origin	Destination									Total
	Franklin	Jefferson	Madison	Monroe	St. Charles	St. Clair	St. Louis Co.	St. Louis City	CBD	
Franklin	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Jefferson	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.6%	3.2%	8.8%	1.0%
Madison	0.0%	0.0%	0.4%	0.0%	0.0%	1.7%	0.7%	3.2%	13.3%	1.6%
Monroe	0.0%	0.0%	0.1%	0.2%	0.0%	0.8%	0.4%	2.1%	11.8%	1.0%
St. Charles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.4%	1.9%	8.6%	0.3%
St. Clair	0.0%	0.0%	0.7%	0.0%	0.0%	4.0%	1.6%	5.3%	19.5%	4.9%
St. Louis Co.	0.0%	0.0%	0.0%	0.0%	0.0%	1.1%	1.1%	4.7%	12.7%	2.3%
St. Louis City	0.0%	0.0%	0.3%	0.0%	0.0%	4.7%	4.6%	9.4%	22.0%	9.7%
CBD	0.0%	0.0%	3.2%	0.0%	0.0%	4.3%	4.3%	10.8%	7.9%	8.1%
Total	0.0%	0.0%	0.4%	0.2%	0.0%	3.6%	1.3%	6.2%	15.5%	2.8%

Source: East-West Gateway Coordinating Council, February 1999.

5.0 ACTIVITY CENTERS

The following four categories define the various activity centers that are located within the Southside Study Area: A) recreational/cultural/parks, B) major employers/employment centers, C) retail shopping, and D) educational institutions. The most significant of these activity centers are described in the following text. It is important that these centers of activity (whether recreational, educational, employment or retail), be understood within the context of this MTIA. A map illustrating the location of these centers is provided in Figure 5.0-1.

It should be noted that although Forest Park and Downtown St. Louis are located on the periphery of the Southside Study Area, they are, nevertheless, centers of activity that will influence traffic and transportation within the corridor. As such, these centers of activity are included in this analysis.

5.1 RECREATIONAL/CULTURAL/PARKS

As noted in the description of recreational, cultural and park activity centers associated with the Northside Study Area, Forest Park, though only touching the northwest edge of the Southside Study Area, is one of the area's most treasured resources. Located within easy access of most of the region's residents, the park has neighborhood, community and area-wide significance. More than ten million people come to the park each year to visit major cultural institutions, participate in active and passive recreational pursuits or to attend special events.

And just as Forest Park is recognized of the region's cultural and recreational center, Downtown St. Louis is viewed by many as the business, financial and professional sports center of the region. According to recently published estimates the St. Louis Central Business District (CBD) annually hosts more than 150 professional and collegiate sporting events. In addition, when combined, attractions such as the Jefferson National Expansion Memorial (Gateway Arch), Americas Center, Laclede's Landing and City Museum, annually draw millions of visitors to the St. Louis CBD. Again, just as with Forest Park, special events within the St. Louis CBD will impact traffic along major and minor roadways in the northern portion of this corridor.

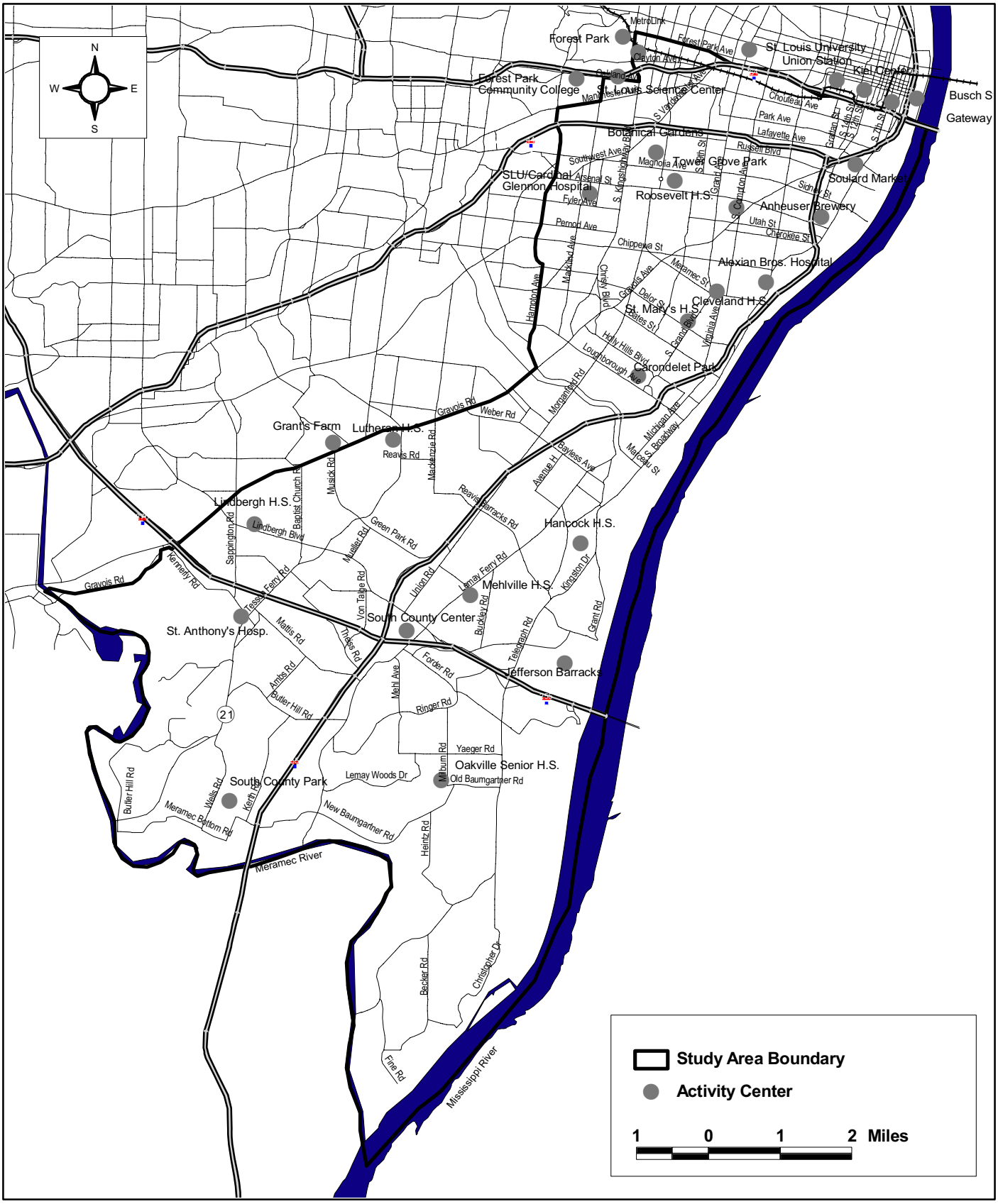
While Forest Park and Downtown St. Louis are certainly not the only centers of recreational and cultural facilities either within or adjacent to the Southside Study Area, they are, nevertheless, dominant centers that impact both this Study Area and the region. The significance of these activity centers is derived from the fact that they are located adjacent to the northern limits of the Study Area and there are no similar concentrations of activity centers in any other part of this Southside Study Area or, for that matter, within the region.

5.1.1 Recreational

Recreational activity centers located within or adjacent to the Southside Study Area vary considerably and include a national park, professional sport facilities, locally funded public facilities and privately operated golf courses. The most notable of all these facilities are:

Adjacent to the Southside Study Area:

- Jefferson National Expansion Memorial (Gateway Arch)
- Busch Stadium
- TWA Dome
- Kiel Center
- Union Station
- Forest Park – Golf Course, Triple A Golf Club, Zoo, Science Center, Steinberg Skating Rink



Source: St. Louis County Department of Planning, November 1998.

Figure 5.0-1
Activity Centers

Within the Southside Study Area:

- Grant's Farm
- Quail Creek Golf Club
- Southmoor Golf Course

Located adjacent to the northern edge of the Southside Study Area, the St. Louis CBD provides employment for approximately 91,000 people. It is also home to six major facilities that, in 1997/1998[1] drew nearly 15-million people to Downtown St. Louis. Those activity centers and their annual reported visitation / attendance are:

Union Station		5,100,000
Jefferson National Expansion Memorial		3,915,166
St. Louis Cardinals Baseball Club		2,655,917
Americas Center		1,871,000
St. Louis Blues Hockey Club		689,079
St. Louis Rams Football Club		599,345
	Total	14,862,341

Although Forest Park only abuts the northwestern edge of the Southside Study Area, it is a major center of activity that influences traffic and transit facilities within this corridor. Of the numerous attractions within the park, five major facilities collectively drew more than a total of 5-million people[1] in 1997. Those facilities and their estimated 1997 attendance are:

St. Louis Zoo		2,569,727
St. Louis Science Center		1,466,886
St. Louis Art Museum		645,738
St. Louis Municipal Opera		500,000
St. Louis History Museum		137,000
	Total	5,313,351

5.1.2 Cultural

There are four major cultural centers that are located within or adjacent to the Southside Study Area. As a result of their importance within the region, they do, on occasion, influence traffic and transit in the Southside Study Area. A listing of the most important cultural facilities and/or centers.

- Missouri Botanical Gardens (800,000 visitors annually)
- Forest Park – Art Museum, Municipal Opera, Science Center, History Museum, Jewel Box
- Jefferson Barracks National Cemetery and Historic Areas (attendance not available)
- Grant's Farm (582,000 visitors annually)

5.1.3 Parks

As with the Northside and Daniel Boone Study Areas, the Southside Study Area has an established system of parks. Consisting primarily of municipally and county owned and operated facilities, the area also benefits from the inclusion of the Jefferson National Expansion Memorial, a National Park located along the riverfront in Downtown St. Louis but outside of the Study Area. A listing of major parks (over 20 acres in size) located within or adjacent to the Southside Study Area is provided below, followed by a description of the most notable parks:

[1] Visitation/attendance estimates are for either a twelve-month period or season that occurred between calendar years 1997 and 1998.

- Jefferson National Expansion Memorial (94 acres)
- Forest Park – St. Louis (1,293 acres)
- Tower Grove Park – St. Louis (289 acres)
- Compton Hill Reservoir Park – St. Louis (36 acres)
- Tilles Park – St. Louis (29 acres)
- Carondelet Park – St. Louis (180 acres)
- Willmore Park – St. Louis (106 acres)
- River Des Peres Park – St. Louis (156 acres)
- Olendorf County Park (47 acres)
- Jefferson Barracks County Park (426 acres)
- Sylvan Springs County Park (70 acres)
- Union County Park (65 acres)
- Clydesdale Park (117 acres)
- Cliff Cave County Park (221 acres)
- Lower Meramec County Park (271 acres)
- Suson County Park (99 acres)
- Bee Tree County Park (119 acres)

Jefferson National Expansion Memorial Park

The Jefferson National Expansion Memorial is a 93.6 acre national park, that is located along the riverfront in Downtown St. Louis. The park, as a result of the presence of the 630 foot Gateway Arch, the nations tallest manmade monument, is an internationally recognized symbol of St. Louis. Two theaters and a Museum of Westward Expansion are features that attract visitors to the Arch grounds. Perhaps the greatest attraction of the Arch, however, is the ability of visitors to ride to the top for panoramic views of large portions of the St. Louis Metropolitan Area. Again, this facility attracts nearly 4-million visitors annually. In addition, the National Park Service annually opens the park for Fair St. Louis, a three-day Independence Day celebration of national interest. Though impossible to accurately determine, those associated with the Fair estimate that the three day event draws between 600,000 and 800,000 people from throughout the region and beyond.

Forest Park

Forest Park, another major park of both national and international significance, is located at the northwestern edge of the Study Area. The St. Louis Zoo is one of several world class facilities located within the park. With over 6,000 animals, the Zoo provides such Natural habitat areas as Big Cat Country, Jungle of the Apes and the new Children's Zoo. The St. Louis Art Museum, The Fine Arts Palace of the 1904 Word's Fair of 1904, is among the leading art museums in the country. In addition to these facilities, Forest Park offers numerous active and passive recreation opportunities throughout its 1,293 acres.

Jefferson Barracks County Park

Jefferson Barracks County Park is located along the Mississippi River in south St. Louis County. It is a 426-acre facility that has been designated as a National Historic Place. This designation results form the fact that Jefferson Barracks was a U.S. Army post from 1826 to 1946, and several of the original stone buildings are still in use today. It is also noteworthy that the Jefferson Barracks National Cemetery is adjacent to the park.

Many other parks are located throughout the Southside Study Area, both in St. Louis City and County. These facilities provide area residents with opportunities for active and passive recreation activities. In addition, the Southside Study Area provides local golf enthusiasts with opportunities to enjoy the sport at two nine and one eighteen hole courses in Forest Park and three private clubs in the south county area.

5.2 MAJOR EMPLOYERS/EMPLOYMENT CENTERS

Included among the major employers and/or employment centers located within or adjacent to the Southside Study Area are, among others, BJC Medical Center and Washington University School of Medicine, the St. Louis CBD, Anheuser-Busch, Inc., the Kosciusko industrial area, and South County Shopping Center.

Major employers:

- Ralston Purina
- BJC Health Center
- Cardinal Glennon Children's Hospital
- Anheuser-Busch, Inc.
- Bethesda General Hospital
- Lafayette Grand Hospital
- St. Louis State Hospital
- Defense Mapping Agency
- St. Louis Community College, Forest Park Campus
- St. Anthony's Hospital
- General American Life Insurance

Major employment centers:

- St. Louis Central Business District
- South County Shopping Center
- Kosciusko Industrial Park

A description of selected major employers and/or employment centers is provided below.

St. Louis Central Business District

The St. Louis CBD is generally bounded by Cass Avenue on the north, the Mississippi River on the east, Chouteau Avenue on the south, and Jefferson Avenue on the west. The St. Louis CBD is located adjacent to the northeastern boundary of the Study Area.

Current planning initiatives spearheaded by Downtown Now! and St. Louis 2004 have generated a renewed interest and enthusiasm about the future of downtown St. Louis. Area residents and downtown business interests are encouraged by the preparation of the City of St. Louis Downtown Development Action Plan, a document which proposes a billion dollar investment over a six-year period. In addition to dealing with the entire downtown area, the plan provides detailed district plans for the Washington Avenue Loft District, the Gateway Mall and Arch Grounds Open Space Area, the Old Post office Square, and Lacledes Landing/ Riverside District.

A recent survey of business owners and operators within the St. Louis CBD indicates that the region's center of business and finance is growing. The 1998 survey was conducted by the Downtown St. Louis Partnership and provided an opportunity for comparing similar data collected in 1996. According to the 1996 survey, Downtown St. Louis had 1,538 businesses and government entities, which employed 88,087 people. By 1998, the area had 1,658 businesses and government entities (a net gain of 120 businesses, or 7.2 percent) and 91,338 employees (a net gain of 3,251 employees, or 3.6 percent).

Building vacancy rates within Downtown St. Louis between 1993 and 1998 indicate a slight decrease. The following table illustrates the changes in vacancy rates that have occurred during this six-year period.

TABLE 5.2-1
DOWNTOWN ST. LOUIS VACANCY RATES BY CLASS OF OFFICE SPACE

	1993	1998	Net Change
Class A[1]	12.8%	9.7%	-3.1%
Class B[2]	27.4%	14.7%	-10.0%
Class C[3]	56.0%	72.8%	16.8%
Overall (A, B, C)	25.9%	23.3%	-2.6%

[1]During this period, the CBD absorbed 200,000 square feet of Class A office space.
[2]The absorption rate for Class B office space was 340,000 square feet between 1993 and 1998.
[3]Although Class C office space had a negative absorption rate of –710,000 square feet, about 600,000 square feet of this space was demolished between 1993 and 1998.

Source: Downtown St. Louis Partnership, Survey of Businesses in Downtown St. Louis, February 1999.

In view of the apparent trends outlined above and as a result of recent announcements for several new major developments, the probability of continued growth within the St. Louis CBD should not be overlooked. Included among the new developments are:

- Redevelopment of the now largely vacant Cupples Station warehouse complex into a mixed use complex on a twelve acre site and involving ten historic turn-of-the century warehouses. This complex of buildings will incorporate the Busch Stadium MetroLink Station. The first phase of the redevelopment will encompass approximately one million square feet of buildings (old and new) with a total investment of more than $95 million. The development will provide about 370,000 square feet of Class A office space and a parking garage. It will also include a 220 room Westin Hotel with corresponding restaurants, a health club and transit oriented retail development at the light rail station. Construction is expected to begin in 1999.
- The Breckenridge Hotel / Condominium Development is among the largest single-site adaptive reuse project in the City of St. Louis. Its two-acre site is a prime downtown St. Louis location near City Hall, Union Station, and Kiel Center. This development will also be adjacent to the Kiel Triangle Park and MetroLink Station. This massive structure and grounds will be converted for the following purposes:
  - a new 292-suite luxury hotel
  - 76 condominium living units
  - two restaurants, a health club and a mini-mart
  - 500 parking spaces (430 inside)
- The construction of a proposed $200-million convention headquarters hotel near America's Center on Washington Avenue will add 1,073 rooms to downtown St. Louis. The project includes the rehabilitation of two decaying national historic designated structures currently owned by the City of St. Louis and construction of a new 40-story tower. Though financing for this project has not been solidified, it has been approved by the City of St. Louis. It is anticipated that this project will begin in 1999 and will be completed in 2001.
- The Drury Inn hotel development plan proposes a total renovation of three major buildings in Downtown that were previously slated for demolition. When completed, the facility will include approximately 300 suites, 300 parking spaces, two restaurants, a rooftop pool, and meeting facilities. This is a privately financed $27-million renovation that is slated for completion during the first quarter of 2000.
- The Marquette Building is currently undergoing a $15-million renovation. The developer plans to transform the building into a luxury apartment space with 130 apartments and 10 penthouse apartments. Shops and restaurants are expected to move into first floor space by the spring of 2000. In addition, the City Treasurer's Office has started construction of a new $8,000,000 parking garage that is also located on site.

BJC Medical Center

BJC Health System is one of the largest integrated healthcare delivery systems in the United States. Two of BJC's hospitals – Barnes-Jewish Hospital and St. Louis Children's Hospital – serve as teaching hospitals for Washington University School of Medicine and are ranked among the best hospitals in the nation. These hospitals provide 1,677 licensed beds. Although the BJC Health System employs more that 24,000 people in the St. Louis Metropolitan Area, approximately 14,450 people are employed at Barnes-Jewish and Children's Hospitals within the Southside Study Area.

Anheuser-Busch Co., Inc.

Anheuser-Busch is a Fortune 500 Company located at One Busch Place in the Southside Study Area. The brewery began in 1860 and, after nearly 140 years of operation, it is the world's largest producer of beer. The firm employs approximately 5,800 people at its St. Louis brewery and world headquarters offices. The production of beer is a twenty-four hour, seven days a week operation.

Ralston Purina Company

Headquartered in the Southside Study Area on Chouteau Avenue, Ralston Purina Company consists of two leading businesses in global industries: Ralston Purina Pet Products and Everready Battery Company. Ralston Purina is a Fortune 500 Company and the worlds largest producer of dry dog food, dry cat food and soft-moist cat food. The firm employees nearly 2,000 people in St. Louis, most of whom are located within the Study Area.

5.3 RETAIL SHOPPING

One major regional shopping mall and twelve smaller shopping centers are located within the Southside Study Area. Also, St. Louis Center in Downtown St. Louis is adjacent to the Study Area and Union Station, a major retail and entertainment center, is also nearby.

Regional Malls	Area Under Roof
• St. Louis CBD – St. Louis Center,	1,250,000 square feet
• St. Louis CBD – Union Station	950,000 square feet[1]
• South County Shopping Center	723,000 square feet

[1] Includes 500,000 square feet of hotel space, 160,000 square feet of leasable retail space, 164,000 square feet of restaurant and entertainment uses, and 80,000 square feet of indoor public space.

Major Shopping Centers	Area Under Roof
• Butler Hill Center	100,000 square feet
• Central City South	187,000 square feet
• Grasso Plaza	100,000 square feet
• Hampton Village	249,000 square feet
• Lemay Plaza	159,000 square feet
• Lindbergh Plaza	184,000 square feet
• Marshall's Plaza	109,000 square feet
• Oakville Center	134,000 square feet
• Ronnie's Plaza	148,000 square feet
• South Lakeview Plaza	157,000 square feet

- Southfield Plaza 113,000 square feet
- Telegraph Plaza 141,000 square feet
- Venture Plaza 176,000 square feet

With the exception of St. Louis Center and Union Station, none of these shopping centers represent major areas of employment.

5.4 EDUCATIONAL INSTITUTIONS

Major institutions of higher education that are located within the Southside Study Area are concentrated in or adjacent to the northern limits of the study area. The names of these institutions and their enrollments for the 1998/1999 academic year are provided below. In addition to colleges and universities, the Southside Study Area encompasses all or portions of the following school districts: St. Louis, Affton, Bayless, Hancock Place, Mehlville, and Lindbergh. All of these districts provide elementary and secondary education services for area residents. In addition, the St. Louis County Special School District provides services for educationally challenged students throughout St. Louis County. Finally, it should be recognized that parochial and private schools also provide educational services to residents from throughout the Southside Study Area. A listing of the larger public and private high schools is also provided below.

Colleges and Universities	Enrollment (1998/1999 School Year)
Washington University Medical School	480
St. Louis College of Pharmacy	850
St. Louis University Medical School	650
St. Louis Community College, Forest Park Campus	6,500
St. Louis University[1]	10,998
Harris Stowe State College[1]	1,735

[1] Although these institutions are not located within the Study Area, they are immediately adjacent to its northern boundary.

High Schools	Enrollment (1998/1999 School Year)
St. Louis University High School	1,027
St. Elizabeth Academy	231
Roosevelt High School	1,698
St. Mary's High School	470
St. John's High School	N/A
Bishop Du Bourg High School	852
Bayless High School	410
Lutheran High School South	685
Lindbergh High School	1,700
Mehlville High School	1,921
Hancock High School	390
Notre Dame High School	490
Cor Jesu Academy	535

6.0 ENVIRONMENTAL CONSIDERATIONS

This section provides an initial overview of the environmental considerations. It characterizes the types of environmental concerns that may be encountered within the 88 square mile Southside Study Area. This level of analysis will identify "environmental fatal flaws" and other potential environmental constraints. A greater depth of environmental analysis will be conducted in a later phase of the MTIA. The sources of information for this section were limited to general data that was readily available to the public from the Missouri Department of Natural Resources (MDNR), the East-West Gateway Coordinating Council (EWGCC), the Bi-State Development Agency (BSDA), the U.S. Environmental Protection Agency (EPA), the Federal Emergency Management Agency (FEMA), the Natural Resource Conservation Service (NRCS), the Archaeological Survey of Missouri (ASM) and the United States Fish and Wildlife Service (USFWS).

6.1 WATER/WETLANDS

The Southside Study Area is located within the watersheds of two rivers, the Mississippi River and the Meramec River. The major tributaries traversing the study area are: Gravois Creek, Mattese Creek, Des Peres Drainage Channel, Sugar Creek and Martigney Creek.

All cities within the Study Area participate in the FEMA program. The one hundred year and the five hundred year floodplains (see Figure 6.1-1) have been identified by FEMA as being associated with the following creeks and rivers: Gravois Creek, Mattese Creek, Des Peres Drainage Channel, Sugar Creek and Martigney Creek, and the Mississippi and Meramec Rivers. FEMA requires each community to designate floodways to avoid the possibility of significantly increasing upstream flood elevations. Each community in the Study Area must prohibit development within the designated floodway that would cause any additional rise in base flood elevations. Federal regulations require that facilities constructed within the 100-year floodplain must not increase flood levels by more than one foot.

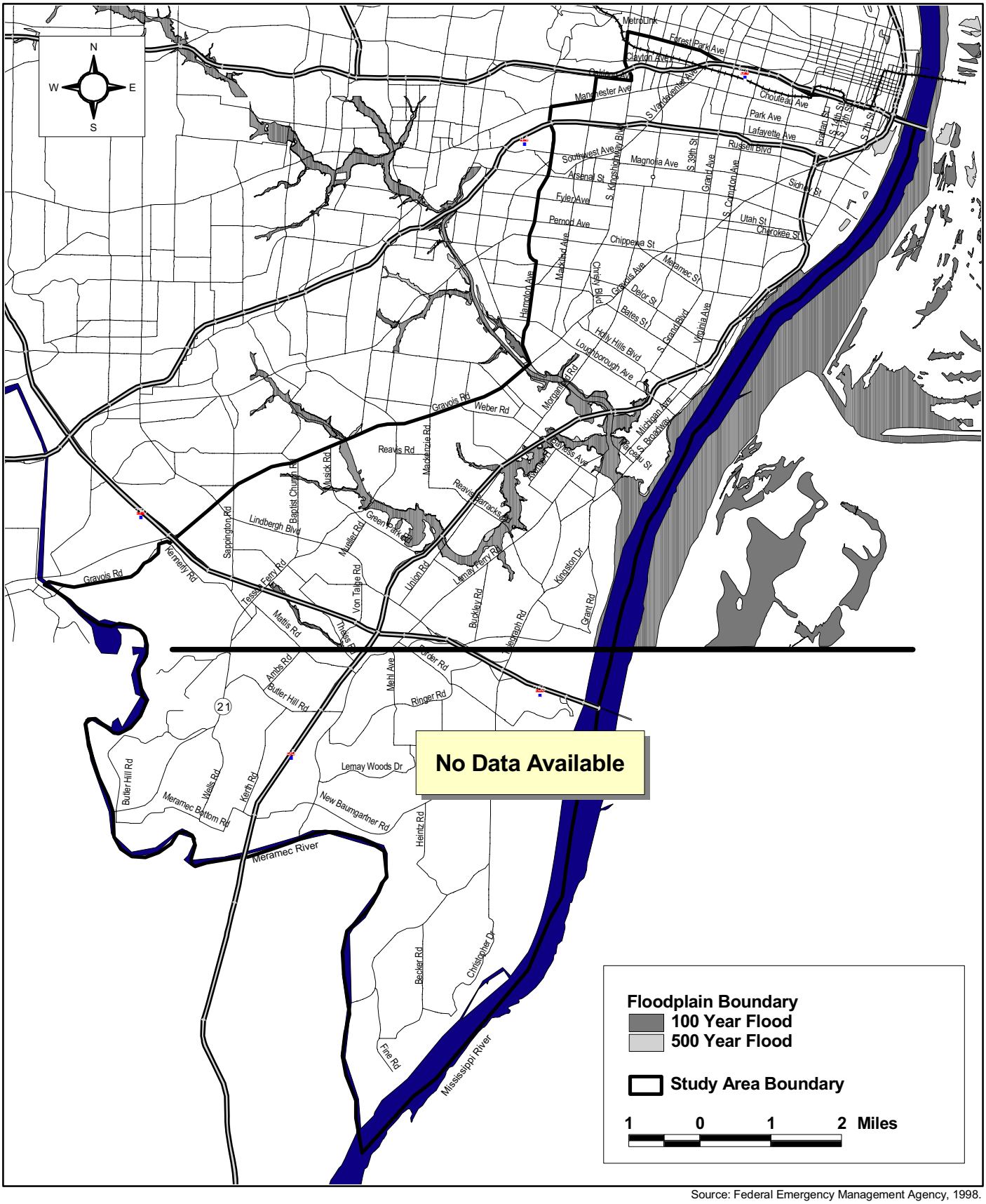
A review of the National Wetland Inventory Maps (NWI) indicates over 95 wetlands within the Study Area. A majority of these wetlands are associated with the tributaries listed above and are widely dispersed throughout the Study Area (see Figure 6.1-2). Only the U.S. Army Corps of Engineers (USACE) or the NRCS can make determinations as to whether a potential wetland is in fact a jurisdictional, or regulated, wetland. No jurisdictional determinations have been made at this time.

The wetland classes within the Study Area are identified as palustrine or riverine on the NWI maps. Palustrine wetlands are those wetlands which are associated with ponds (less than twenty acres), marshes, depressions and other areas which hold or trap water or have a high water table.

The different types of palustrine systems found within the Study Area include forested wetlands, scrub shrub wetlands, emergent wetlands, and unconsolidated bottom. Most of the forested wetland areas are associated with the reservoirs, ponds and lakes found throughout the Study Area and typically represent the seasonally saturated bottomland areas of rivers, streams or creeks. Emergent wetlands in the Southside Study Area typically consist of cattail marshes which fringe open water and lacustrine habitat. Scrub shrub wetland habitat in the Study Area consists of secondary growth of succession species such as willows. Unconsolidated bottom habitat types are unvegetated mud flats, sandbars and gravel beds.

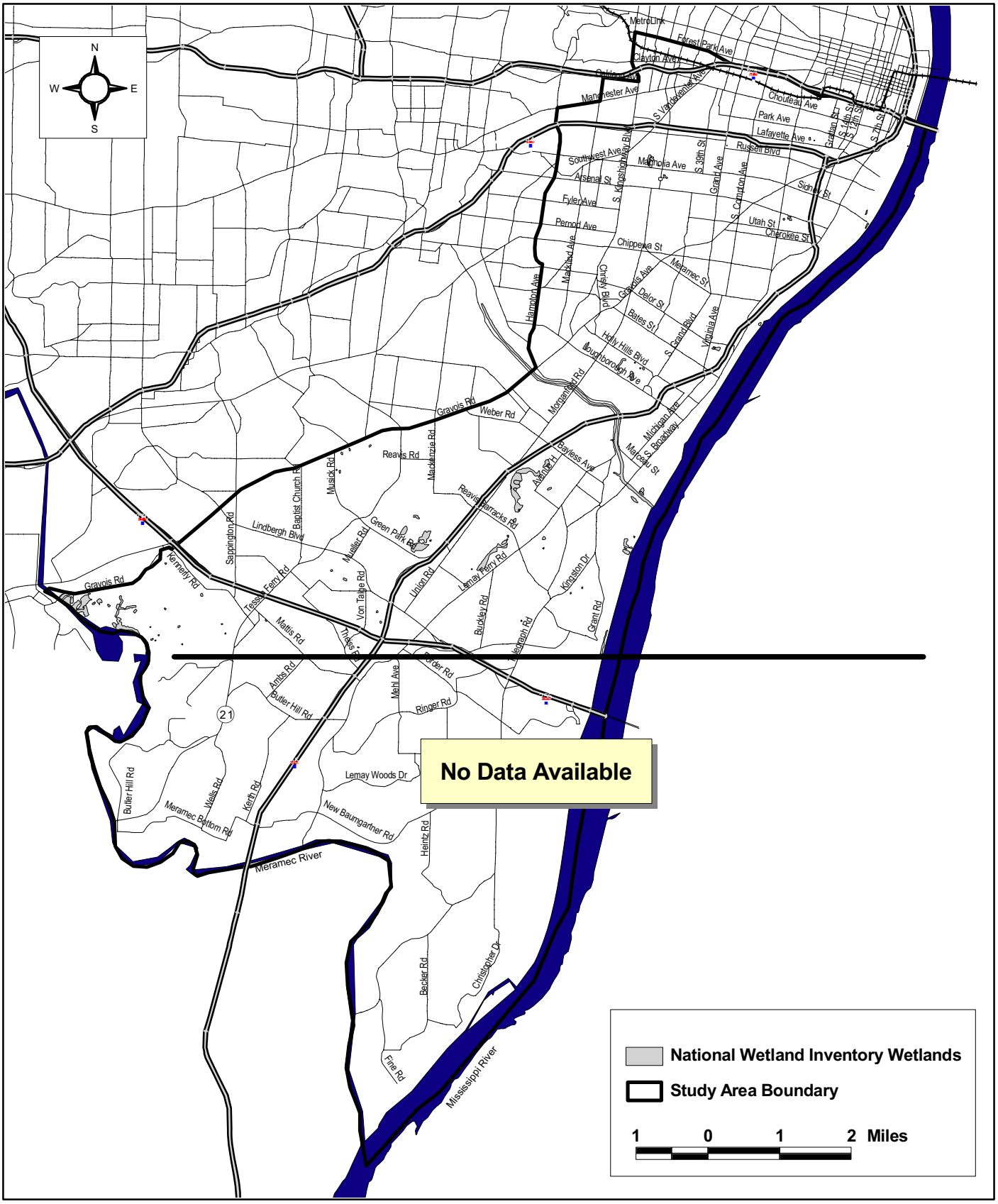
Riverine habitats are those areas contained within a channel. This wetland class includes excavated ditches and drainageways found throughout the Study Area and lined tributaries.

The USACE regulates impacts to wetlands under Section 404 of the Clean Water Act (CWA). In addition to the requirements of the CWA, the USACE must also comply with other federal laws in the evaluation of an application. These include the following:



Source: Federal Emergency Management Agency, 1998.

Figure 6.1-1
Floodplain Boundaries



Source: National Wetland Inventory Maps, 1993

Figure 6.1-2
Wetlands

- The Fish and Wildlife Coordination Act requires federal agencies to coordinate with the USFWS, the National Marine Fisheries Service (NMFS) and the appropriate state wildlife resource agencies.
- The Endangered Species Act requires federal agencies to coordinate with the USFWS or NMFS to insure that the federal action does not jeopardize any threatened or endangered species.
- The National Historic Preservation Act of 1966 requires coordination with the appropriate agencies regarding eligible resources for listing on the National Register of Historic Places.
- Section 401 of the Clean Water Act requires a state certification of water quality.

Wetland impacts must be avoided, minimized or replaced according to current regulations. Minimization of wetland involvement would be an important component of the development of transportation improvement alternatives in the Study Area.

6.2 HAZARDOUS MATERIALS AND WASTE

A review of the MDNR database was conducted to identify properties containing hazardous materials, hazardous waste, and solid waste. The database identified 53 properties containing hazardous materials and waste in the Study Area. See Figure 6.2-1, Hazardous Materials and Waste Sites. The majority of these sites are located in the City of St. Louis. It is important to note, however, that the database review does not represent a Phase I – Preliminary Site Investigation, therefore, the status or level of risk associated with each of these sites is unknown at this time.

6.3 THREATENED/ENDANGERED SPECIES

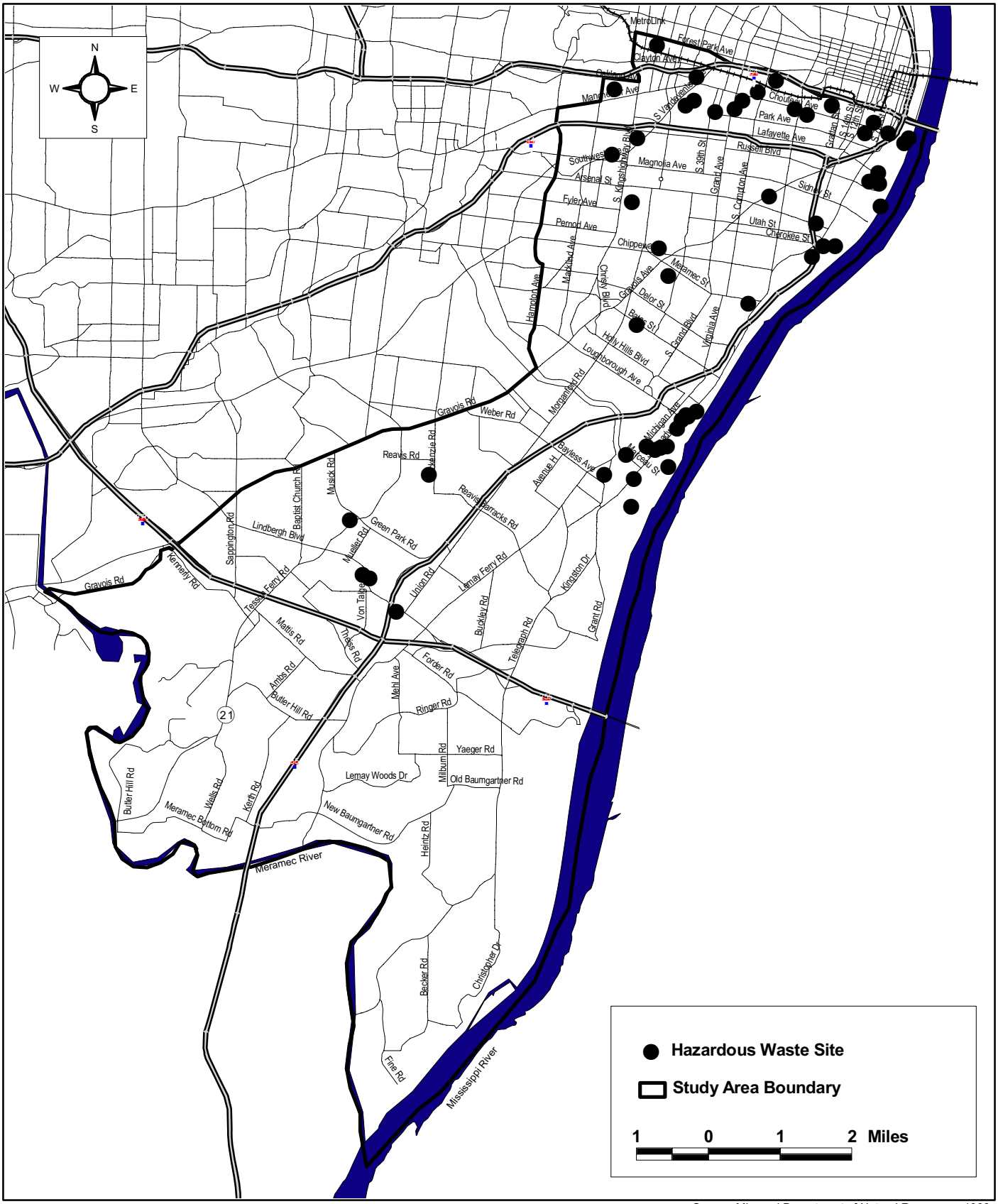
Natural heritage resources are defined as the habitat of rare, threatened or endangered species, unique or exemplary natural communities and significant geologic formations. Avoiding the disturbance of threatened or endangered species is mandatory in the development of transportation improvement alternatives.

A total of 25 threatened and endangered species are known to exist in the vicinity of the Study Area. The listed threatened and endangered species include: the gray bat, the Indiana bat, the ozark big-eared bat, the bald eagle, the American peregrine falcon, the piping (Interior) plover, the least (interior population) tern, the pallid sturgeon, the fat pocketbook clam, the pink mucket pearly mussel, the winged maple leaf mussel, the curtis' pearly mussel, the higgin's eye pearly mussel, the decurrent false aster, the Missouri bladderpod, the running buffalo clover, the minimum geocarpon, the western prairie fringed orchid, the mead's milkweed, and the pondberry. The Proposed and Candidate species include: the Arkansas darter, the sturgeon chub, the sicklefin chub, the topeka shiner, and the tumbling creek cavesnail. It is important to note that only an on-site inspection could verify the absence or existence of these species. The area of greatest concern exists near and within the Mississippi, Missouri and Meramec Rivers and associated tributaries. No protected natural heritage sites have been identified within the Study Area.

6.4 AIR QUALITY

Section 107 of the 1977 Clean Air Act Amendments (CAAA) requires the EPA to publish a list of all geographic areas in compliance with the National Ambient Air Quality Standards (NAAQS), as well as those not attaining the NAAQS. Areas not in compliance with the NAAQS are termed non-attainment areas. Areas which have insufficient data to make a determination are unclassified, and are treated as being attainment areas until proven otherwise. The designation of an area is made on a pollutant-by-pollutant basis.

As required by the Clean Air Act, NAAQS have been established for the six major air pollutants. The "primary" standards have been established to protect the public health. The "secondary" standards are intended to protect the nation's welfare and account for air pollutant effects on soil, water, visibility, materials, vegetation, and other aspects of the general welfare.



Source: Missouri Department of Natural Resources, 1998.

Figure 6.2-1
Hazardous Materials and Waste Sites

The CAAA of 1990 direct the EPA to implement strong environmental policies and regulations that would ensure cleaner air quality. According to Title I, Section 101, Paragraph F of the Amendments, "No federal agency may approve, accept or fund any transportation plan, program or project unless such plan, program or project has been found to conform to any applicable State Implementation Plan (SIP) in effect under this act."
Currently, St. Louis County and the City of St. Louis are listed by the EPA as a "moderate" non-attainment area. The area failed to meet the November 1996 attainment deadline. According to the Missouri Department of Natural Resources, the possibility remains for the EPA to reclassify St. Louis to a "serious" non-attainment area resulting in greater regulatory controls.

All transportation improvement alternatives must be subject to an air quality analysis and conformity determination as required by the Federal Clean Air Act Amendments of 1990. It must be demonstrated that transportation improvement alternatives do not adversely affect attainment of the NAAQS for the region and the Study Area, or they cannot be implemented.

6.5 NOISE/SENSITIVE RECEPTORS

A review of land uses was made to identify land uses and sites sensitive to noise impacts within the Study Area. A noise impact occurs when a transportation improvement alternative generates noise levels which substantially exceed existing noise levels. Sensitive receptors are those where serenity and quiet are of extraordinary significance and serve an important public need, and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.

Sensitive receptors include facilities such as schools, hospitals, day care centers, places of worship, and nursing homes. The Study Area (see Figure 6.5-1) contains:

- 6 Retirement Homes/Orphanages
- 88 Nursery Schools/Schools
- 76 Hospitals/Medical Facilities
- 233 Churches/Temples

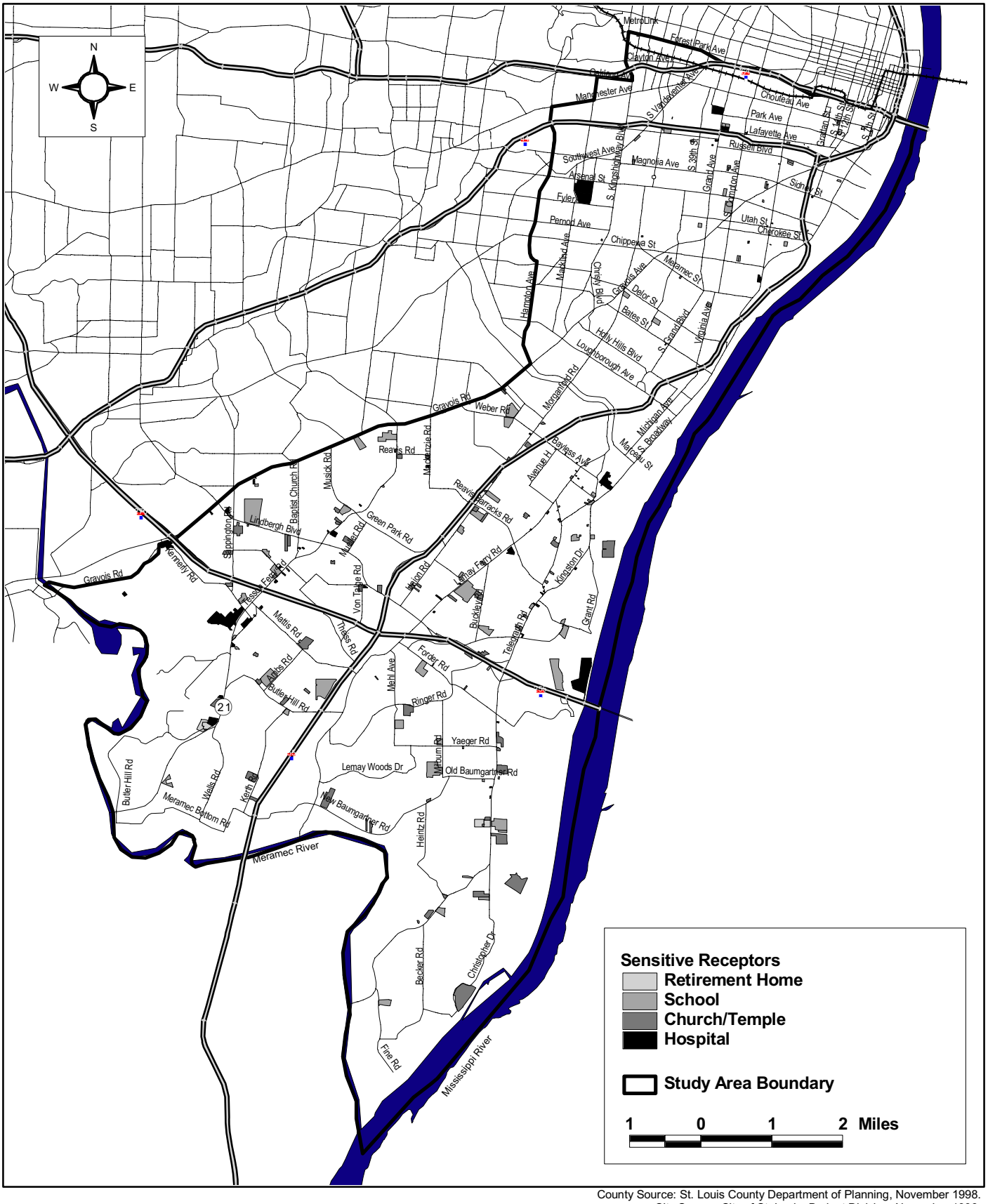
These facilities are primarily concentrated in the southernmost portion of the Study Area (see Figure 6.5-1).

While EPA provides a broad direction, a more explicit statutory basis for mitigating adverse noise impacts is contained in the Federal Transit Laws. Before approving a construction grant under Section 5309, the Federal Transit Administration (FTA) must make a finding that "…the preservation and enhancement of the environment, and the interest of the community in which a project is located, were considered; and no adverse environmental effect is likely to result from the project, or no feasible and prudent alternative to the effect exists and all reasonable steps have been taken to minimize the effect."

The FTA impact assessment procedures advise that alternative locations for a proposed transportation project should be evaluated before consideration is given to other measures to mitigate anticipated impacts if the identified impacts are considered to be "severe." For adverse but not "severe" impacts, the FTA procedures recommend that mitigation measures be considered if it is feasible and reasonable to do so.

Similarly, the Federal Highway Administration (FHWA) has established Procedures for Abatement of Highway Traffic Noise and Construction Noise, as published in the Code of Federal Regulations, Volume 23, Part 772, August, 1982. These procedures allow for the acoustical impact of a proposed action to sensitive noise receptors to be assessed and the need for abatement measures to be determined.

A detailed noise analysis should be completed as part of future studies on a locally preferred alternative. If a transportation improvement is selected, mitigation measures to noise impacts, if required, would be defined at that time. Public participation should be part of the decision-making process.



County Source: St. Louis County Department of Planning, November 1998.
City Source: City of St. Louis, Budget Division, November 1998.

Figure 6.5-1
Sensitive Receptors

6.6 GEOLOGY AND LANDFORM

The Southside Study Area has several major landform and geological conditions. The area is characterized by rolling topography and hills, occasionally cut by deep ravines. The eastern edge of the corridor includes part of the alluvial plain of the Mississippi River Valley. Relatively steep bluffs periodically cut by deep ravines border the edge of the narrow (on this side of the river) alluvial plain. The bluffs define the edge between the alluvial plain and the rolling hills of the remainder of the rest of the Study Area. The south portion of the corridor contains the alluvial plain of the Meramec River. This area is bordered by steep hills and occasional bluffs.

The generalized geologic characteristics of the Study Area are sequential beds of Pennsylvanian age shales, sandstones, siltstones, and limestones with thin seams of coal and clay. Two layers of glacially derived (wind deposited) loess overlie the bedrock. The upper Peoria loess is a relatively thin, low-clay silt. Below the Peoria is the Roxana loess, which is a high-clay material. The relative thinness of the Peoria loess allows the characteristics of the high-clay Roxana to be expressed.

In the north portion of the study area is the alluvial material that fills the valley of the Mississippi. The alluvium in the Mississippi River valley is over 100 feet thick and consists of stratified sand, silt, and clay with beds of gravel and lenses of organic material.

The most problematic geological units within the study area are the shales in the south quadrant and the alluvial materials in the Mississippi River Valley.

6.7 HISTORIC/ARCHAEOLOGICAL

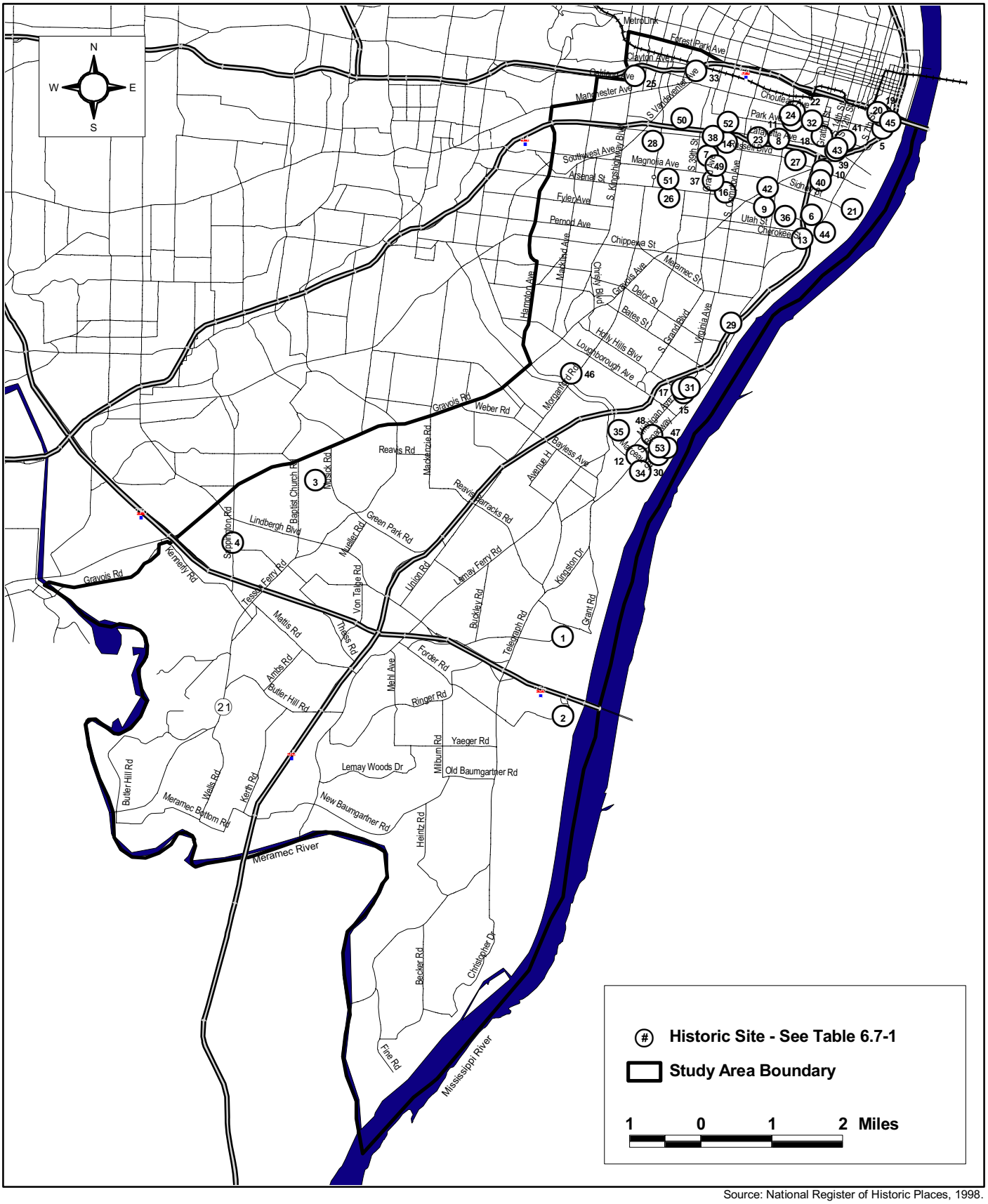
Section 106 of the National Historic Preservation Act of 1966 requires that a federal agency consider the effect of a federally-assisted project on any district, site, building, structure or object listed on, in, or eligible for the National Register of Historic Places (NRHP). The Criteria of Effect and Adverse Effect were established in 36 CFR 800.9. An undertaking is considered to have an adverse effect when the effect on a historic property may diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association. Adverse effects on historic properties include, but are not limited to:

- physical destruction, damage or alteration of all or part of the property
- isolation of the property from or alteration of the character of the property's setting when that character contributes to the property's qualifications for the National Register
- introduction of visual, audible or atmospheric elements that are out of character with the property or alter its setting
- neglect of a property resulting in its deterioration or destruction
- transfer, lease or sale of the property

Section 4(f) of the Department of Transportation Act of 1966 requires that no federally-assisted transportation program or project use land from a significant publicly owned public park, recreation area or wildlife and waterfowl refuge, or any significant historic site, unless a determination is made that (1) there is no feasible and prudent alternative to using that land, and (2) such program or project includes all possible planning to minimize harm to the property resulting from such use.

According to the Archaeological Survey of Missouri, there are 260 recorded archeological/cultural resource sites within the study area.

A state search of the national register information system revealed 53 sites currently listed on the NRHP (see Figure 6.7-1 and Table 6.7-1). These are primarily found in the City of St. Louis, and include sites such as the Joseph Sappington House, the Compton Hill Water Tower, Horace Mann School, the Anton Schmitt House, Shaw Avenue Place, the Jacob Stein House, and Strassberger's Conservatory. There may be historic districts and other sites that are eligible for the NRHP and they will be identified in later phases of the MTIA.



Source: National Register of Historic Places, 1998.

Figure 6.7-1
National Register of Historic Places Sites

TABLE 6.7-1
NATIONAL REGISTER OF HISTORIC PLACES SITES

No.	Historic Site	Address	No.	Historic Site	Address
1	Jefferson Barracks Historic District	Jefferson Barracks Mem. Park	28	Missouri Botanical Gardens	2345 Tower Grove Ave.
2	Robert Koch Hospital	4101 Koch Rd.	29	Mount Pleasant School	4528 Nebraska Ave.
3	Joseph Sappington House	10734 Clearwater Dr.	30	Otzenberger House	7827 Reilly St.
4	Thomas J. Sappington House	1015 Sappington Rd.	31	Quinn Chapel AME Church	227 Bowen St.
5	American Zinc, Lead & Smelting Bldg.	20 S. Fourth St.	32	International Shoe Company	Mississippi & Hickory
6	Anheuser Busch Brewery	721 Pestalozzi St.	33	Rock Spring School	3974 Sarpy Ave.
7	B'Nai El Temple	3666 Flad Ave.	34	Schlichtig House	8402 Vulcan St.
8	Barr Branch Library Historic District	2500 Lafayette Ave.	35	Anton Schmitt House	8000-4 Alaska
9	Benton Park District	Gravois, Broadway at Jefferson St.	36	Schollmeyer Building	1976-82 Arsenal
10	Brown Shoe Company Factory	1201 Russell Blvd.	37	Seventh District Police Station	2800 S. Grand Ave.
11	Rutger Buildings	2327-31 Rutger St.	38	Shaw Avenue Place	De Tonty St., S. Spring, Shaw, and Grand
12	Carlin-Rathberger House	122 Davis St.	39	Soulard-Page District	Soulard, 8th, 12th and LaSalle Sts.
13	Chatillon-DeMenil House	3352 DeMenil Pl.	40	Soulard Neighborhood Historic Dist.	7th, Soulard, Lynch and 12th Sts.
14	Compton Hill Water Tower	Grant and Russell at Lafayette	41	Speck District	S. 11th, Park, Rutger and S. 12th Sts.
15	Sisters of St. Joseph Carondolet	6400 Minnesota Ave.	42	St. Francis de Sales Church	2653 Ohio St.
16	Critteden Historic District	3401 Arsenal, 3400-500 Crittenden	43	St. John Nepomuk Parish Historic Dist.	11th & 12th Sts. between Carroll & Lafay
17	Des Peres School	6307 Michigan Ave. St.	44	St. Louis Air Force Station	2nd & Arsenal Sts.
18	Dolman Row	1424-34 Dolman St.	45	St. Mary of Victories Church	744 S. 3rd St.
19	Eugene Field House	634 S. Broadway	46	Steins Street District	Steins St.
20	Fulton Bag Company Building	612-8 S. Seventh St.	47	Jacob Steins House	7600 Reilly St.
21	C. Hager & Sons Hinge Co.	139 Victor St.	48	Stone Houses	200-04 Steins St.
22	Hickory Street District	LaSalle, Missouri, Rutger & Jefferson	49	Strassberger's Conservatory	2302-06 S. Grand St.
23	Immaculate Conception School	2912 Lafayette	50	Tiffany Neighborhood District	39th, Park, Lafayette, Vandeventer
24	Lafayette Sq. Historic District	Choteau, Dolman, Lafayette & S. 18th	51	Tower Grove Park	Magnolia, Grand, Arsenal, & Kingshighway
25	Lambskin Temple	1054 S. Kingshighway Blvd.	52	Edward Wyman School	1547 S. Theresa
26	Horace Mann School	4047 Juaniata	53	Zeiss Houses	7707-7713 Vulcan St.
27	McKinley Fox District	18th St., I-44, Jefferson & Gravois			

Source: National Register of Historic Places, 1998.

6.8 SECTION 4(f) AND 6(f) EVALUATIONS

Two similar regulatory initiatives have been developed to protect public parks, recreational areas (including pedestrian and bicycle paths), wildlife refuges and historic places prior to a conversion of land use. In accordance with 23 CFR Part 771, the requirements of Section 4(f) must be satisfied prior to the conversion of any of the above mentioned resources by a state Department of Transportation (DOT). In accordance with Section 6(f) of the Land and Water Conservation Fund (LWCF) Act any public land acquired through LWCF monies must adhere to certain property management and land use stipulations. Driven by two separate regulatory requirements, both Section 4(f) and 6(f) requirements must be satisfied for this MTIA.

Section 4(f) has been part of Federal law in some form since 1966. It was enacted as Section 4(f) of the DOT Act of 1966. The intent of the law is to preserve parkland, recreation areas, refuges, and historic sites by limiting the circumstances under which such land can be used for transportation programs or projects. Section 4(f) permits the use of land for a transportation project from a significant publicly owned public park, recreational area, wildlife or waterfowl refuge, or any significant historic site only when the administration has determined that (1) There is no feasible and prudent alternative to such use, and (2) the project includes all possible planning to minimize harm to the property resulting from such use. In order to demonstrate that there is no feasible and prudent alternative to the use of Sections 4(f) land, the evaluation must included a specific purpose and need for the project, address location alternatives and design shifts that avoid the Section 4(f) land and "unique problems" associated with these design shifts.

Section 6(f) (3) refers to the manor to which open space or public recreation areas have been acquired. The LWCF Act requires that property acquired or developed with LWCF assistance, regardless of the extent of that assistance, be retained and used for public outdoor recreation in perpetuity. Such property may not be converted to any other use without prior approval of the Secretary of the U. S. Department of the Interior, working through the Outdoor Recreation Assistance Program (ORAP), Missouri Department of Natural Resources. To obtain the Secretary's approval, a written conversion request and justification of the need for such action must be submitted to ORAP with appropriate documentation. If approval is granted, the property that is converted must be replaced with land and/or facilities of at least equal value and use.

The Southside Corridor contains approximately 71 federal, state, county and/or city parks. The necessity for 4(f) and 6(f) evaluations will be determined in subsequent MTIA planning documents. In the event a property determined to be eligible for the NRHP is affected by the proposed alternatives, a 4(f) and 6(f) evaluation will be required.

6.9 PRIME FARMLAND

Less than five percent of the Study Area would meet criteria as prime farmland, almost all of which occurs on the upland wher small remnant patches of prime farmland occur near major creeks. However, since the Study Area is within an urban developed area with minimal agricultural land use, there are no protected agricultural areas as defined by Section 1540 (c) (1) of the Farmland Protection Act. Therefore, there will be no constraints to the development of transportation improvements alternatives.

7.0 TRANSPORTATION FACILITIES/SERVICES

7.1 ROADWAYS

This section provides an overview of the transportation facilities in the Study Area. It begins with a discussion of the roadways, including existing facilities and planned improvements, operating conditions and safety. This section then reviews transit, covering system description, ridership, planned changes, the Paratransit/Demand Responsive System, and MetroLink Light Rail Transit (LRT). The section concludes with a description of bicycle/pedestrian facilities and movement of goods in the region.

7.1.1 Interstate System

Existing Characteristics

Four interstates can be found in the Southside Study Area. Interstate 64 (I-64/Highway 40/61) runs east-west through the northernmost portion of the Study Area. Interstate 44 (I-44) runs east-west parallel to and south of I-64 in the northern portion of the Study Area. Interstate 55 (I-55) runs north-south along the eastern edge for the length of the Study Area. And Interstate 270/255 runs east-west through the southern portion of the Study Area. Figure 7.1-1 shows the existing Interstate system and remaining roadway classifications within the Southside Study Area.

Interstate 64 bisects only 1.5 miles of the Study Area and then becomes a portion of the northern edge of the study boundary. Within this section it provides three lanes for eastbound and westbound traffic with interchanges located at Kingshighway Boulevard (full interchange) and Grand Boulevard and Boyle (partial interchanges). Some auxiliary lanes are provided between these interchanges.

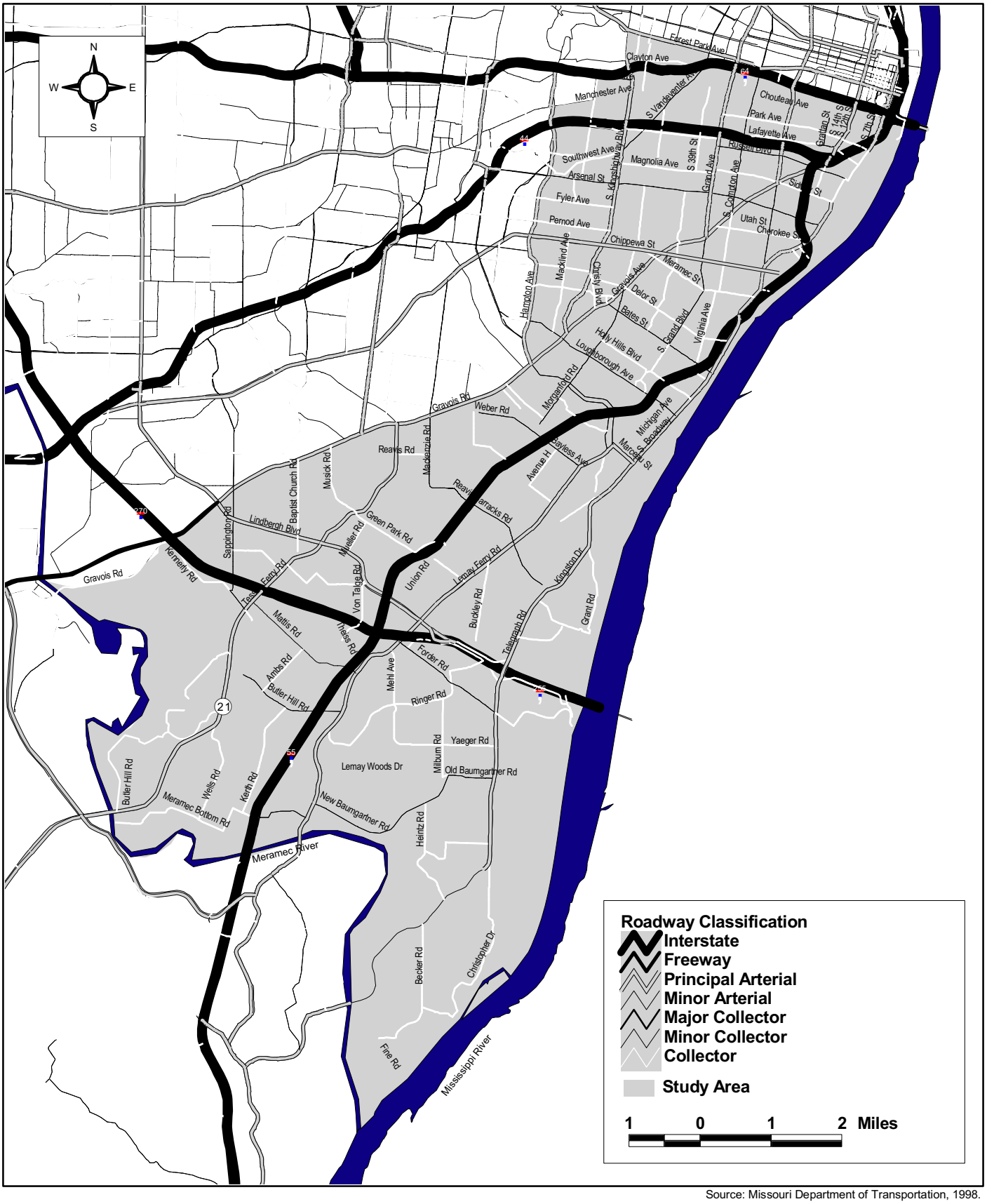
Interstate 44 within the Study Area provides interchanges with Hampton Avenue, Kingshighway/Vandeventer, South Grand Boulevard, South Jefferson Avenue, and I-55. Each of these interchanges is diamond type with the exception of the I-55 interchange, which is fully directional. The I-55 interchange also provides feeder ramps for access to Lafayette Avenue.

Interstate 55, the longest highway segment within the Study Area, provides interchanges with 7th/8th Streets, I-44, Gravois Avenue, Arsenal Street, Gasconade Street, South Broadway, Virginia Avenue, Loughborough, Germania/Carondelet Boulevard, Weber Road, Bayless Road, Union Road, Reavis Barracks Road, South Lindbergh Boulevard, I-270, Butler Hill Road and Meramec Bottom Road. These interchanges are all full or partial diamond type, with the exception of the I-270 and I-44 interchanges which are fully directional.

Interstate 270/255, the regional outerbelt, travels predominantly east-west within the Study Area, providing four lanes in each direction of travel with auxiliary lanes between interchanges. This facility provides interchanges with Gravois Road, Tesson Ferry Road, I-55, Lemay Ferry Road, South Lindbergh Boulevard, Telegraph Road and Koch Road. These interchanges are all diamond type with the exception of the I-55 interchange, which is fully directional.

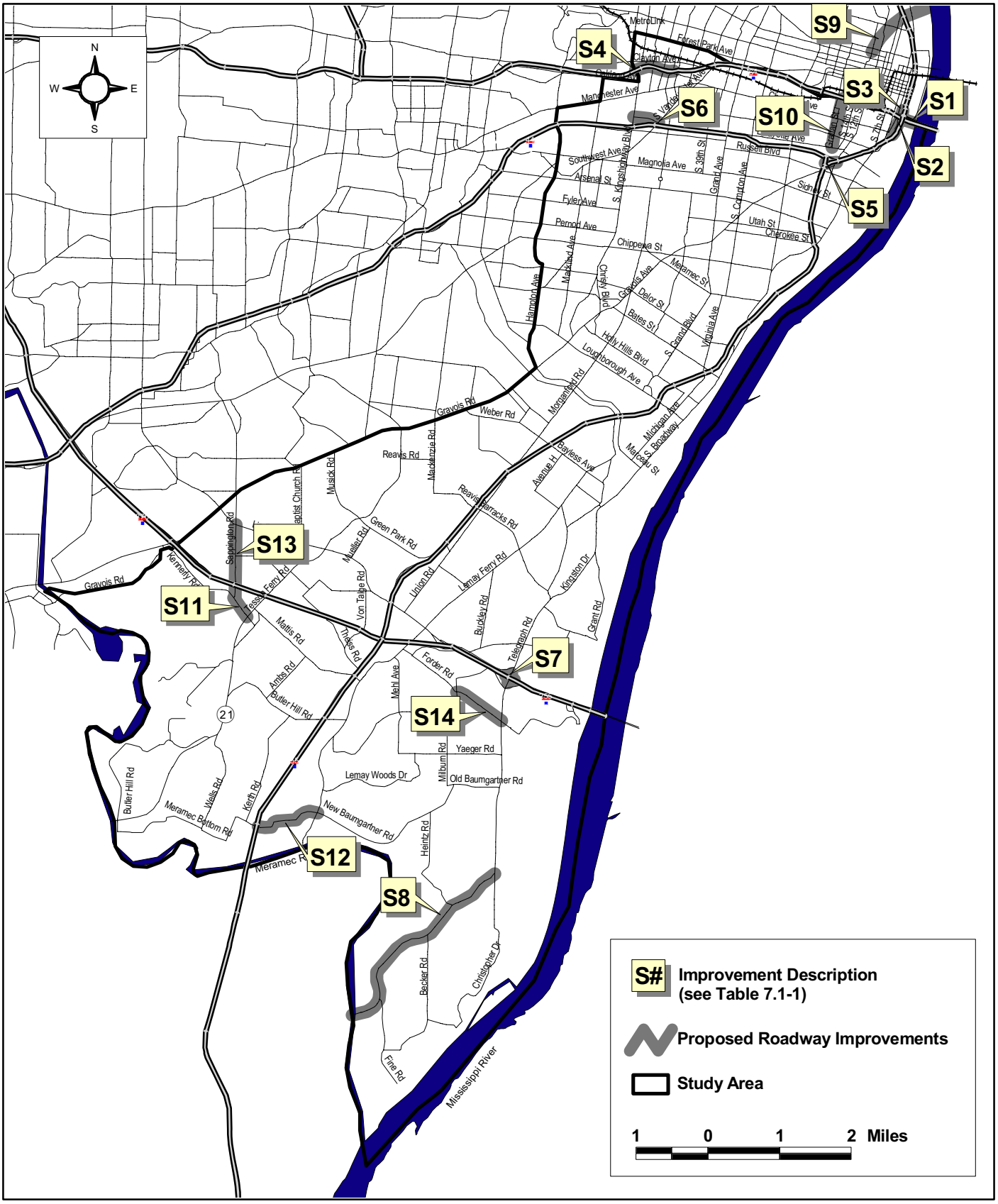
Planned Improvements

Proposed roadway improvements are listed in Table 7.1-1 and shown graphically on Figure 7.1-2. In addition to these improvements, numerous roadway resurfacing and bridge rehabilitation projects are planned.



Source: Missouri Department of Transportation, 1998.

Figure 7.1-1
Existing Roadway Classification



Source: East-West Gateway Coordinating Council, Transportation Redefined II, January 1999.

Figure 7.1-2
Proposed Roadway Improvements

TABLE 7.1-1
PROPOSED ROADWAY IMPROVEMENTS

Number	Roadway	Location	Planned Improvement
S1	I-55	Poplar Street Bridge	Reconfigure ramps
S2	I-70	Poplar Street Bridge and Memorial Drive	Close ramps
S3	I-70	Spruce Street at I-64	New ramps for northbound and southbound I-70
S4	I-64	Kingshighway Boulevard to Tower Grove Road	Interchange improvements and auxiliary lanes
S5	I-44/I-55		Reconfigure I-44 ramps, design improvement on eastbound I-44 bridge at I-55
S6	McRee Avenue	Vandeventer Avenue to Kingshighway Boulevard	Widen from 2 to 4 lanes
S7	I-255	Telegraph Road (Route 231)	Interchange improvement
S8	Telegraph Road/Route 231	Christoper Drive to Meramec River	Widen from 2 to 5 lanes
S9	I-70	North of Laclede's Landing	New Mississippi River Bridge, new ramps at 14th Street and Tucker Boulevard to I-70/bridge
S10	Grattan Street Parkway	18th and Gratiot to Lafayette and I-55	Construct new 4-lane arterial
S11	Kennerly Road	Tesson Ferry Road to Sappington Road	Widen from 2 to 5 lanes
S12	Meramec Bottom Road	I-55 to Lemay Ferry Road	Widen from 2 to 3 lanes
S13	Sappington Road	Kennerly Road to Lindbergh Boulevard	Widen from 2 to 3 lanes
S14	Forder Road	Telegraph Road to Ringer Road	Widen from 2 to 3 lanes

Source: East-West Gateway Coordinating Council, Transportation Redefined II, January 1999.

Usage

Peaking Attributes/Directionality of Travel/Average Vehicle Occupancy (AVO)

The regional peak travel period is identified by the EWGCC as 7:00 to 9:00 a.m. and 4:00 to 7:00 p.m. The estimated peak hour of travel is then taken to be 56 percent of the a.m. peak period volume and 36 percent of the p.m. volume. The regional traffic model maintained by EWGCC shows that the Southside Study area experiences a strong peak distribution in both an east-west and north-south direction. This is due in part to the presence of major east-west and north-south interstates and arterials within the Study Area and to the multi-directional commute of Jefferson County in Missouri and St. Clair and Monroe Counties in Illinois. The

a.m. peak generally shows a strong eastbound and northbound movement, and, to a lesser degree, a p.m. peak movement in the westbound and southbound movement.

The directional distributions of I-64 and I-44 in the a.m. are approximately 60/40 with the heavier movement in the eastbound direction. This translates into approximately 60 percent of the link volume traveling in the eastbound direction, with the remaining volume occupying the westbound lanes. The p.m. distribution, as is typical throughout the region, isn't as directionally biased as in the a.m. period. Portions of I-44 and I-64 within the Study Area typically experience a 50/50 directional split. This can partially be attributed to the facilities' close proximity to the St. Louis Central Business District (CBD) and primary Mississippi River crossings, thus acting as a crossroads to Missouri and Illinois commuters.

Data for I-270/255 indicates an a.m. directional split of approximately 65/35. This split, however, is divided by I-55. To the west of I-55, the heavy movement is eastbound, while to the east of I-55 the heavy movement is westbound. The p.m. distribution shows nearly a 55/45 split for these same segments.

Interstate 55 also has a varying degree of directionality, ranging from 75/25 in the southern portion of the Study Area to 60/40 near the interchange with I-44. This also is an effect caused by Missouri and Illinois commuter patterns and proximity to the St. Louis CBD.

The actual distribution of traffic for interstate segments within the Study Area can be found in Table 7.1-2.

Average Daily Traffic

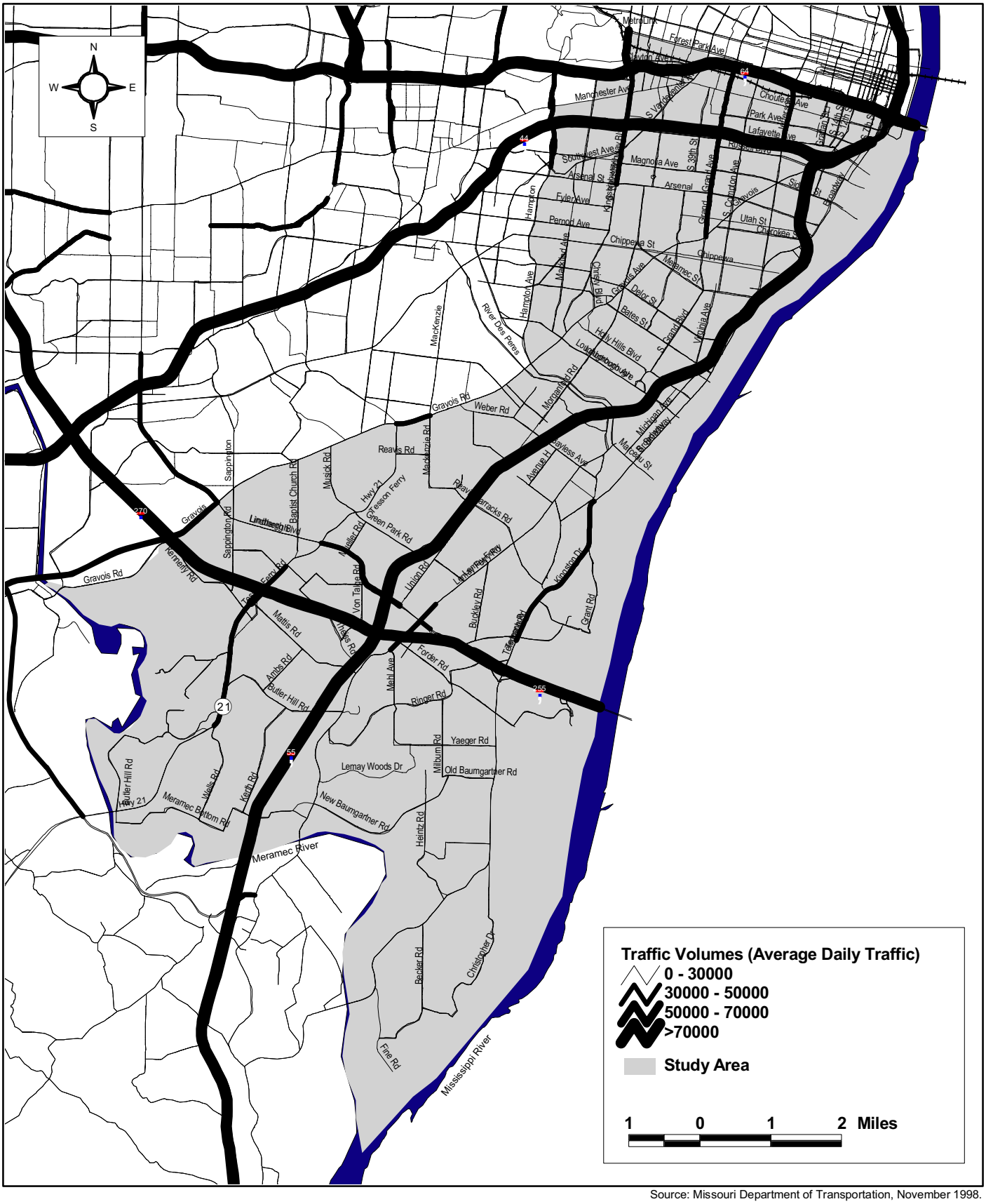
The traffic volumes for 1995 and 2020 can best be summarized graphically. Figure 7.1-3 and Figure 7.1-4 show these volumes respectively. Within the Study Area, I-64 and I-44 currently have an average daily two-way traffic volume ranging from 94,000 to 106,000. Projections for these two facilities along the same segments indicate moderate growth (+12 percent) to a range of 108,000 to 117,000 vehicles per day.

Interstate 55 had 1995 volumes ranging from 80,000 to 120,000 vehicles per day and is forecast to show the most significant growth among the sections of interstate highway within the Study Area. Projections indicate a range of 130,000 to 160,000 vehicles per day, or an overall increase exceeding 60 percent on certain sections of the interstate.

Interstate 270/255 had 1995 volumes of 80,000 to 110,000 vehicles per day and is also forecast to show significant traffic growth within the Study Area. Projections for 2020 indicate increases of over 40 percent, or an anticipated range of 125,000 to 145,000 vehicles per day.

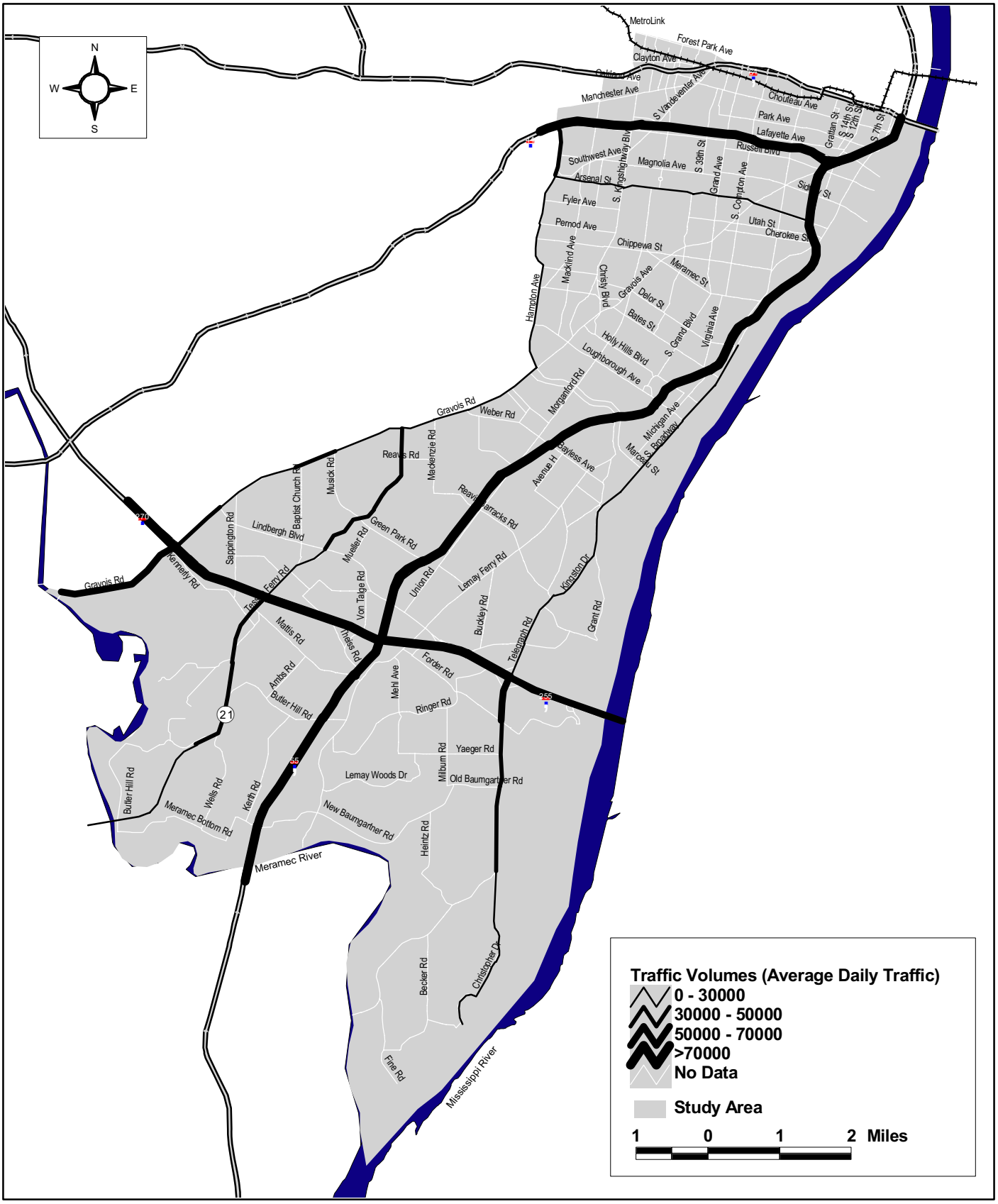
Truck Percentages

The truck percentage of total daily traffic on interstates within the Southside Study Area is approximately four percent, typical of the region as a whole.



Source: Missouri Department of Transportation, November 1998.

Figure 7.1-3
Traffic Volumes (1995)



Source: East-West Gateway Coordinating Council, November 1998.

Figure 7.1-4
Traffic Volumes (2020)

TABLE 7.1-2
TRAFFIC DIRECTIONAL DISTRIBUTION

Roadway		a.m. Peak	p.m. Peak
I-44		65/35	55/45
I-55		75/25	60/40
I-64		70/30	60/40
I-255/I-270		70/30	60/40
Route 30/Gravois Road		80/20	60/40
Broadway		80/20	65/35
Lemay Ferry Road		75/25	65/35
Telegraph Road	N of I-270	85/15	75/25
	S of I-270	80/20	60/40
Route 21/Tesson Ferry Road	N of I-270	60/40	55/45
	S of I-270	75/25	65/35
Route 67/Lindbergh Boulevard		70/30	60/40
Grand Avenue		65/35	60/40
Jefferson Street		65/35	55/45
Hampton Avenue		65/35	60/40

Source: East-West Gateway Coordinating Council, November 1998.

Level of Service

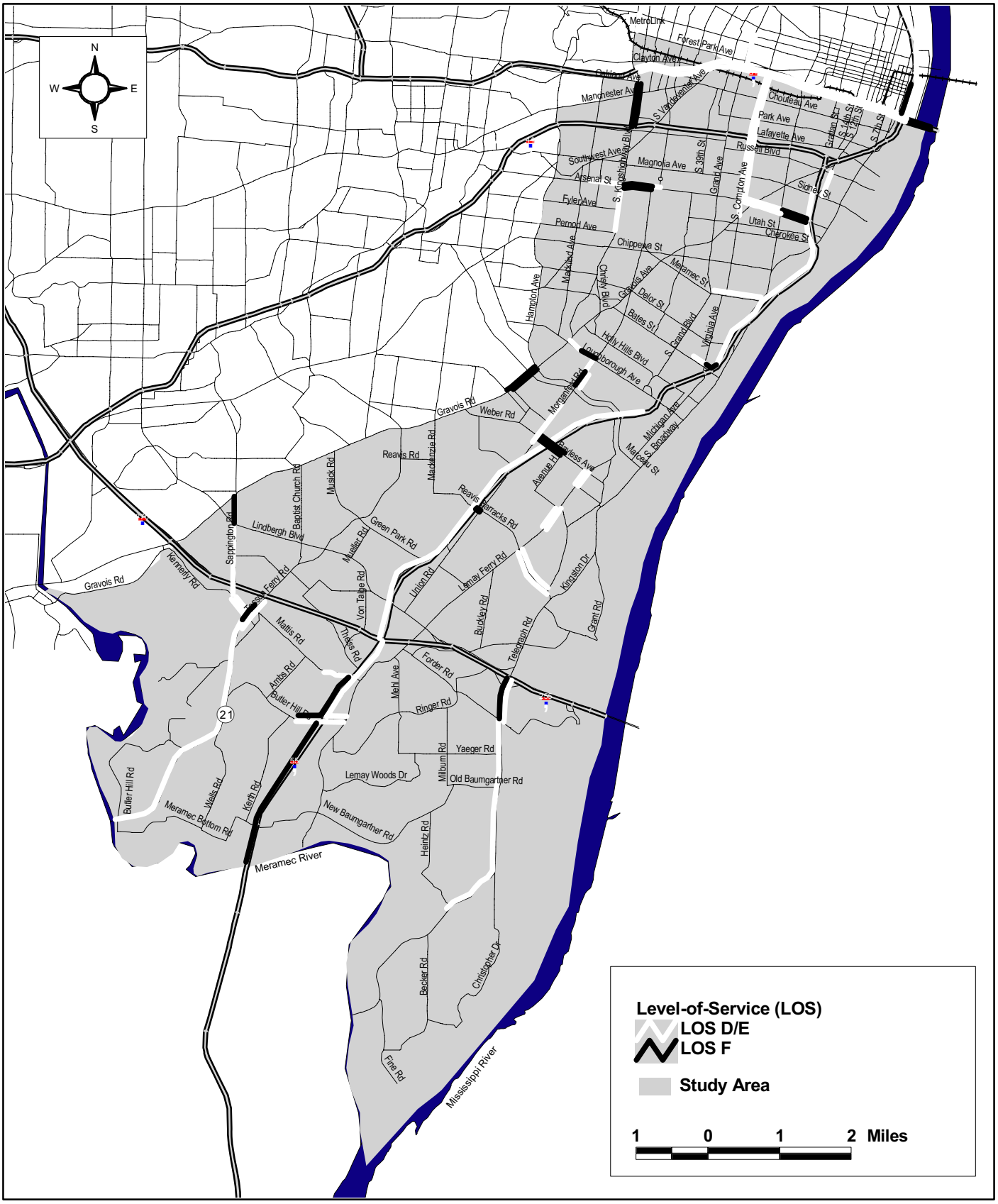
The peak hour levels of service for the major roadways in the Study Area were estimated from the volume to capacity (v/c) ratio provided by EWGCC for 1996 and 2020. These levels are shown graphically in Figures 7.1-5 and 7.1-6.

Of the interstates within the Study Area, I-64 and I-55 are the two with current traffic congestion problems. Interstate 55 from south of Loughborough to the Meramec River is an approximately nine-mile stretch with long segments of moderate to breakdown conditions. Interstate 64 also has moderate congestion from the Mississippi River to the western edge of the Study Area. Traffic forecasts for the region by EWGCC indicate considerable degradation of traffic flow conditions on interstate facilities within the Southside Study Area. All four interstates show some degree of moderate to breakdown congestion, including stretches of I-55, which has two sections of breakdown conditions that exceed a length of two miles.

Safety Issues

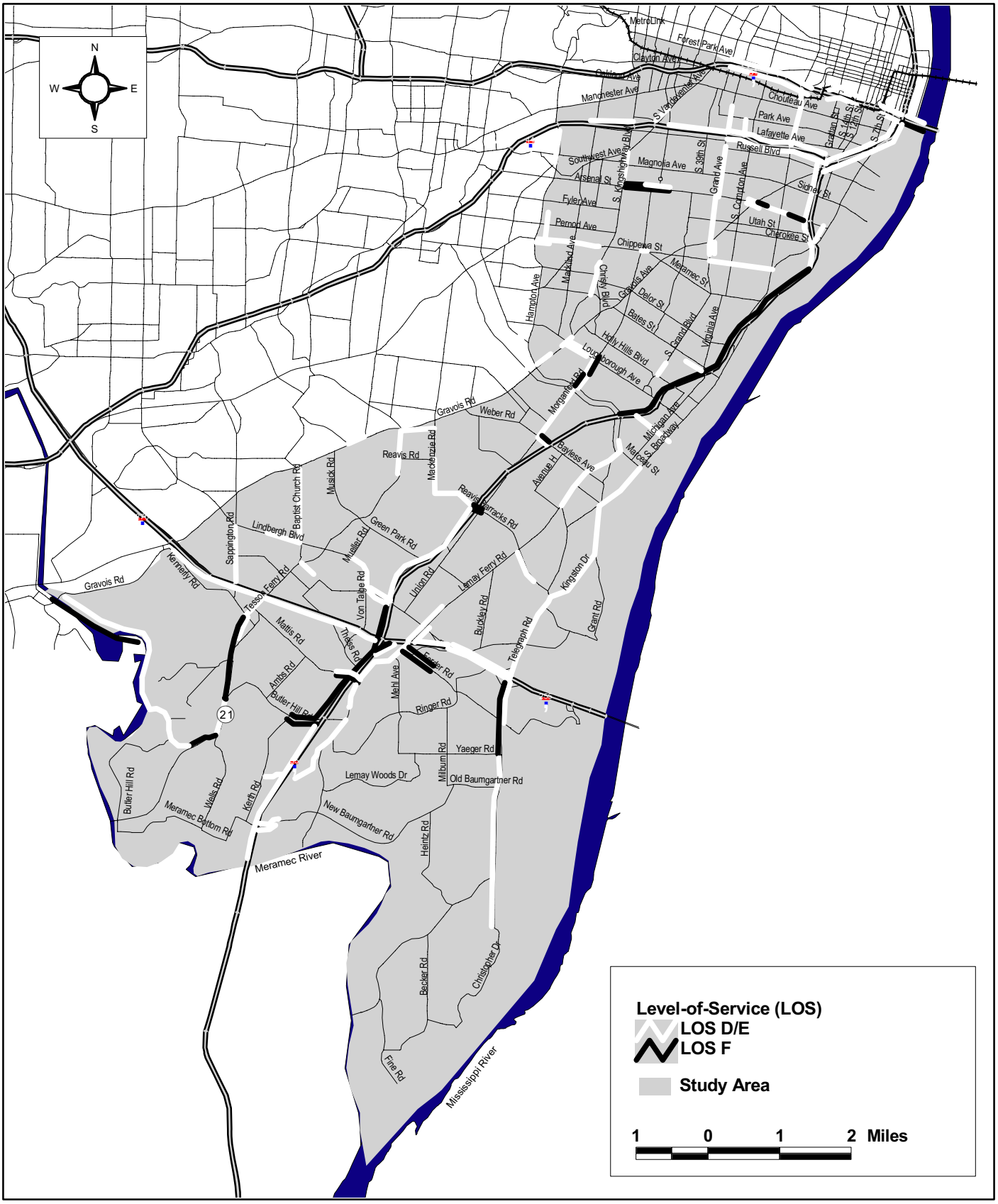
Accident data obtained by MoDOT for the Southside Study Area is summarized in Table 7.1-3. This data, obtained for the year of 1996, illustrates the accident rate (accidents per million vehicle miles traveled) for roadway segments within the Study Area as well as the statewide rate for comparable roadway segments.

The state records also reveal that of the total accidents in the Southside Study Area in 1996 on these same roadway segments, 31 were fatal.



Source: East-West Gateway Coordinating Council, November 1998.

Figure 7.1-5
Level-of-Service (1996)



Source: East-West Gateway Coordinating Council, November 1998.

Figure 7.1-6
Level-of-Service (2020)

TABLE 7.1-3
1996 ACCIDENT RATES
(ACCIDENTS PER MILLION VEHICLE MILES TRAVELED)

Roadway	Segment	Accident Rate	Statewide Accident Rate
I-255 Northbound	Mississippi River to I-270	244.62	139.28
I-255 Southbound	Mississippi River to I-270	241.85	139.28
I-55 Northbound	Meramec River to Mississippi River	121.52	139.28
I-55 Southbound	Meramec River to Missssippi River	112.30	139.28
I-270 Eastbound	I-255 to Route 30	146.69	139.28
I-270 Westbound	I-255 to Route 30	212.66	139.28
I-44 Eastbound	Hampton to I-55	168.92	139.28
I-44 Westbound	Hampton to I-55	167.19	139.28
Route 21/Tesson Ferry Road	Meramec River to Route 30	181.46	289.76
Route 231/Broadway/ Telegraph	Meramec River to Broadway	260.38	289.76
Route 267/Lemay Ferry Road	Lindbergh to I-255	375.92	289.76
Route 30/Gravois Road	I-270 to I-55	149.38	289.76
Route 366/Chippewa	Hampton to Chippewa	380.72	289.76
Route 67/Lindbergh Boulevard	Meramec River to Route 30	399.51	190.04
Highway P/MacKenzie	Watson to Route 30	213.80	264.37

Source: Missouri Department of Transportation, 1996.

Park and Ride Lots

The Southside Study Area has two MoDOT designated park and ride lots in the vicinity. The first is located in the northwest quadrant of the interchange of Gravois Road and I-270. The second is located in the southeast quadrant of the interchange of I-55 and Reavis Barracks Road. No information is available at this time as to the overall usage of these facilities.

7.1.2 Major Arterials/Principal Roadways

In addition to the interstate highways, several arterials and other major roadways serve the Southside Study Area. Included in this list are state numbered and lettered routes (maintained by MoDOT) and arterial roadways (maintained by St. Louis County Department of Highways and Traffic). Local collector and feeder roads, most of which are maintained by their respective municipalities, comprise the remaining roadway network.

MoDOT maintains the following numbered and lettered routes that lie partially or wholly within the Southside Study Area:

- Route 30 Gravois Road
- Route 100 Manchester Road
- Route 231 Broadway/Telegraph Road
- Route 67 Lindbergh Boulevard
- Route 21 Tesson Ferry Road
- Route 267 Lemay Ferry Road
- Highway P Mackenzie Road
- Route 61/67 Lindbergh Boulevard
- Route 366 Chippewa

These roadways vary in the number of lanes they provide and the type of access control. Roadways such as Lindbergh Boulevard, Manchester Road and Gravois Road all provide up to four travel lanes with varying levels of access control. Lindbergh Boulevard is divided with a median for portions of its length. Also, in most cases, these facilities usually provide a median turn lane.

Usage

The major arterials in the Southside Study Area generally carry between 25,000 and 40,000 vehicles per day. An exception to this is Gravois Road, which carries over 60,000 vehicles per day in the southern portion of the Study Area. In addition, certain arterial segments, such as Arsenal Street, Chippewa and Grand Boulevard, particularly in the northern portion of the Study Area, carry less than 10,000 vehicles per day.

Projections by EWGCC for these same segments of roadway indicate varying levels of increase in the average daily traffic. Increases are expected on certain sections of Tesson Ferry Road, Gravois Road and Reavis Barracks Road. Little change or minor decreases are also expected on certain segments of Arsenal Street, Chippewa and Hampton Avenue.

Generally, arterial segments in the southern portion of the Study Area have more volume than segments in the northern portion. This correlates with the population, household and employment data presented in Section 3.0. In addition, the general trend among these heavier movements is north-south along segments adjacent to I-270 and east-west along segments adjacent to I-55. The ADT for all of the principal roadways in the Southside Study Area can be found in Figure 7.1-3. Volume forecasts by EWGCC for some of these same facilities can be found in Figure 7.1-4.

Level of Service

The peak hour levels of service for the principal roadways found in the Study Area (see Figure 7.1-3 for 1996 data and Figure 7.1-4 for 2020 data) was determined using the results from the EWGCC results from the regional traffic forecasting model. Conditions found in 1996 indicate moderate levels of congestion (levels of service D and E) along many principal arterial and collector roadways, in particular at their respective intersections with the interstates of the Study Area. Significantly long stretches of moderate congestion are shown along segments of Tesson Ferry Road and Telegraph Road. Portions of Arsenal Street, Gravois Road and Sappington Road, among others, currently experience breakdown conditions.

The conditions found in 2020 indicate a general degradation in levels of service along these same roadway segments. Exceptions to this are largely due to anticipated improvements in the Study Area and the region as a whole. Tesson Ferry Road (Route 21) for instance, shows a large segment of improvement in the southernmost portion of the Study Area because of planned upgrades to the facility. Other unimproved segments of the same roadway, however, remain at moderate congestion or degrade to breakdown conditions.

Shifts in demographics, such as population, households and employment discussed in Section 3.0, also contribute to forecasted shifts in levels of service.

7.2 TRANSIT

7.2.1 Intraregional Bus Services

Local Routes

Approximately 21 local fixed routes provide regular service to the Southside Study Area. Local route coverage is shown in Figure 7.2-1. The local routes that serve the Southside Study Area tie into Bi-State's regional transit network.

St. Louis's regional transit system is generally oriented on a radial network connected by a series of ring or cross town routes. See Figure 7.2-2 for a map of the region's existing transit system. This framework largely serves a transit trip pattern that links suburban communities and the outlying residential areas in the City with major concentrations of employment in downtown St. Louis. Cross town and cross county routes provide some connections between non-downtown points.

Fixed route service in the Southside is more concentrated in the northern portions of the Study Area, due mostly to higher population and employment densities. (Maps of both population and employment characteristics within the Southside Study Area are shown in Section 3.0 of this report.) In addition, the Southside's older, more established neighborhoods are generally located in the north, in the City of St. Louis. These residential areas within the Southside Study Area have a stronger tradition of transit use and the bus network exhibits a conventional grid pattern within the northern portions of the Study Area.

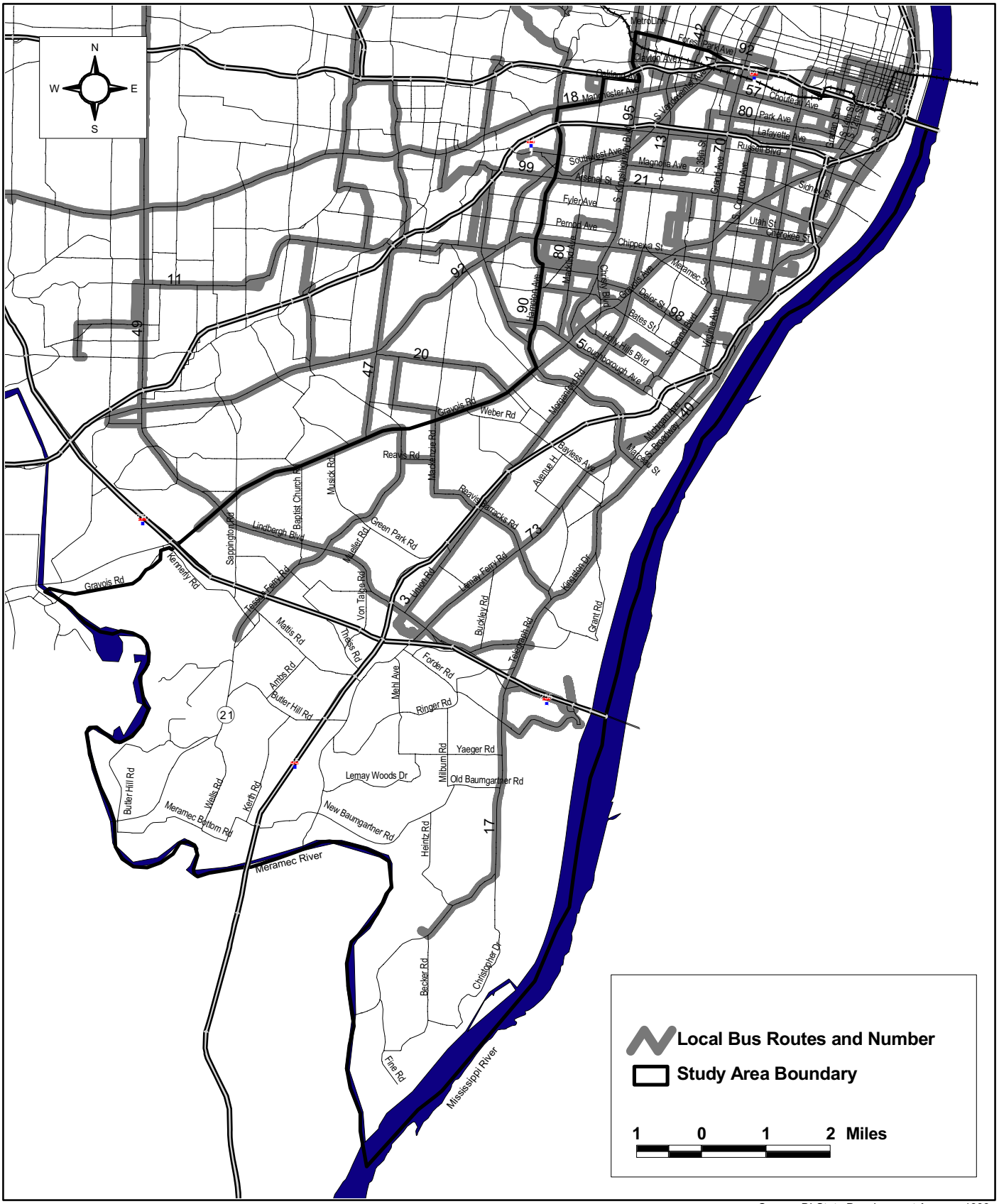
In the southern half of the Study Area, local service is more dispersed and oriented towards serving clusters of development along major travel corridors such as Gravois Road, Tesson Ferry Road, Lemay Ferry Road, Telegraph Road, and Lindbergh Boulevard. These routes also serve a major commute pattern, linking residential areas in the south to downtown St. Louis and major employers such as Ralston Purina and Anheuser Busch.

Although service frequency varies throughout the Southside Study Area, typical weekday headways during the peak periods are between 15 and 30 minutes (see Table 7.2-1). Off-peak, buses tend to run about every 30 minutes. On Saturdays, headways are generally 30 to 40 minutes, whereas on Sundays and Holidays, headways follow 60-minute intervals.

Hours of operation vary by route. During a typical weekday, buses generally run from about 5:00 a.m. to 12:30 a.m. On those routes where service is provided on Saturdays and Sundays, buses typically operate from about 6:00 a.m. to 12:00 a.m.

As can be expected, existing ridership correlates strongly with the level of transit service provided. Revenue hours of service listed in Table 7.2-1 is one measure that illustrates the level of transit service provided by each route. Revenue hours of service measures the total amount of time per day that buses on the route are providing service to passengers. Revenue hours are a function of the frequency of service, the length of the route (total run time), the span of service (hours of operation). The high frequency routes with peak hour headways of 15 to 20 minutes tend to exhibit the highest numbers of average daily passengers compared to routes with headways of 30 to 60 minutes. For example, the Grand (#70) route has a peak headway of five minutes and the number of riders on that route averaged over 12,000 per day in 1998.

In addition, existing transit ridership is heaviest on those routes which traverse the more established residential and commercial neighborhoods in City of St. Louis. These routes include Grand (#70), Kingshighway (#95), Chippewa (#11) and Hampton (#90). In general, transit ridership is fairly stable and consistent in the Southside. The existing ridership on most of these routes averages between 1,500 and 2,500 riders per weekday.


N
W
E
S
Local Bus Routes and Number
Study Area Boundary
1 0 1 2 Miles
Meramec River
Mississippi River
Gravois Rd
Kennerly Rd
Sappington Rd
Lindbergh Blvd
Baptist Church Rd
Musick Rd
Green Park Rd
Weber Rd
Reavis Rd
Reavis Barracks Rd
Lemay Ferry Rd
Union Rd
Kingston Dr
Grant Rd
Buckley Rd
Telegraph Rd
Forder Rd
Ringer Rd
Yaeger Rd
Old Baumgartner Rd
Lemay Woods Dr
New Baumgartner Rd
Heintz Rd
Becker Rd
Christopher Dr
Fine Rd
Butler Hill Rd
Meramec Bottom Rd
Wells Rd
Kerth Rd
Ambs Rd
Mattis Rd
Tesson Ferry Rd
Von Talpe Rd
Mehl Ave
Millburn Rd
Bayless Ave
Loughborough Ave
Holly Hills Blvd
Bates St
Delor St
Meramec St
Chippewa St
Pernoll Ave
Fyler Ave
Arsenal St
Southwest Ave
Magnolia Ave
Russell Blvd
Lafayette Ave
Park Ave
Chouteau Ave
Manchester Ave
Gravois Ave
Michigan Ave
Utah St
Cherokee St
Sidney St
Grand Ave
Gravois Ave
Hampton Ave
Macadam Rd
Michigan Ave
Mat. Sp. Broadway
Avenue H
Meadowlane Rd
Mattis Rd
Ambs Rd
Butler Hill Rd
Wells Rd
Kerth Rd
Meramec Bottom Rd
Lemay Woods Dr
New Baumgartner Rd
Heintz Rd
Becker Rd
Christopher Dr
Fine Rd
Mississippi River
Meramec River
Gravois Rd
Kennerly Rd
Sappington Rd
Lindbergh Blvd
Baptist Church Rd
Musick Rd
Green Park Rd
Weber Rd
Reavis Rd
Reavis Barracks Rd
Lemay Ferry Rd
Union Rd
Kingston Dr
Grant Rd
Buckley Rd
Telegraph Rd
Forder Rd
Ringer Rd
Yaeger Rd
Old Baumgartner Rd
Lemay Woods Dr
New Baumgartner Rd
Heintz Rd
Becker Rd
Christopher Dr
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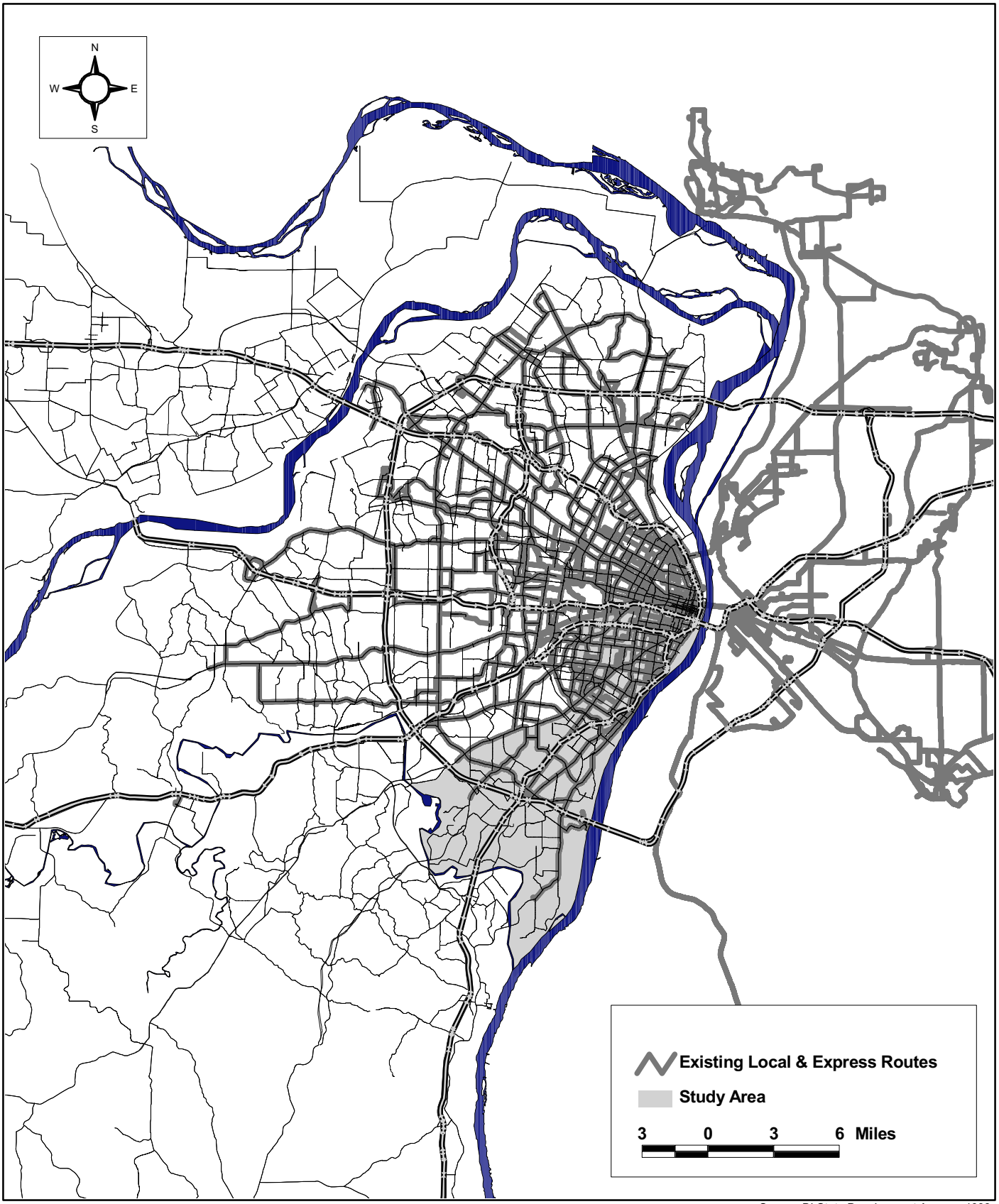
Butler Hill Rd
Meramec Bottom Rd
Wells Rd
Kerth Rd
Ambs Rd
Mattis Rd
Tesson Ferry Rd
Von Talpe Rd
Mehl Ave
Millburn Rd
Bayless Ave
Loughborough Ave
Holly Hills Blvd
Bates St
Delor St
Meramec St
Chippewa St
Pernoll Ave
Fyler Ave
Arsenal St
Southwest Ave
Magnolia Ave
Russell Blvd
Lafayette Ave
Park Ave
Chouteau Ave
Manchester Ave
Gravois Ave
Michigan Ave
Utah St
Cherokee St
Sidney St
Grand Ave
Gravois Ave
Hampton Ave
Macadam Rd
Michigan Ave
Mat. Sp. Broadway
Avenue H
Meadowlane Rd
Metro Dr
Forest Park Ave
Laclede Ave
Gaslight Ave
Mat. Sp. Broadway
Michigan Ave
Gravois Ave
Grand Ave
Sidney St
Cherokee St
Utah St
Michigan Ave
Mat. Sp. Broadway



Source: Bi-State Development Agency, 1998.

Figure 7.2-2
St. Louis Regional Transit Network

TABLE 7.2-1
SERVICE FREQUENCY

		Weekday						Saturday						Sunday					
		Typical Headways			Daily	Revenue		Typical Headways			Daily	Revenue		Typical Headways			Daily	Revenue	
Route #	Route Name	AM	PM	Off-Peak	Trips	Hours	ADP	AM	PM	Off-Peak	Trips	Hours	ADP	AM	PM	Off-Peak	Trips	Hours	ADP
3	Morganford-Arsenal+	60	60	60	15	7,048	283	60	70	60	8	852	139	N/A	N/A	N/A	N/A	N/A	N/A
5	Gravois	30	30	30	34	13,887	1,933	30	30	30	28	1,886	1,180	65	70	70	11	662	422
11	Chippewa	15	15	20	54	31,031	5,430	20	20	20	49	5,592	4,437	30	30	30	29	3,472	2,139
13	Union	30	30	30	34	8,376	1,230	30	30	30	27	1,198	670	60	60	60	16	1,278	421
17	Clayton-Oakville	30 (NB)	30 (SB)	N/A	6	2,000	50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
18	Taylor	20	20	30	41	11,454	1,895	30	30	35	32	1,388	821	60	60	60	18	816	399
20	Cherokee	20	20	30	45	21,277	2,686	30	30	30	30	2,559	1,799	30	30	30	26	2,194	1,086
21	Tower Grove	25	30	25	40	15,916	2,107	35	30	40	27	2,221	1,129	60	50	50	22	1,672	624
40	Broadway	30	30	30	34	23,774	2,954	30	40	40	19	3,554	1,460	60	60	60	16	2,167	661
42	Sarah	15	25	30	42	11,360	1,595	45	45	45	24	1,285	872	45	45	30	25	1,433	513
47	Cross County	15	15	20	44	27,747	1,895	60	45	50	14	2,232	517	N/A	N/A	N/A	N/A	N/A	N/A
49	Lindbergh	15	45	45	25	23,091	1,198	50	45	60	14	2,457	546	N/A	N/A	N/A	N/A	N/A	N/A
57	Manchester	20	20	30	45	28,286	2,919	30	30	30	30	3,202	1,714	45	60	60	16	1,943	679
70	Grand	5	10	15	94	34,408	12,014	20	15	15	61	4,480	7,509	30	20	20	48	3,251	4,281
73	Carondolet	25	25	30	37	17,724	2,626	30	30	30	33	3,282	1,879	50	50	50	20	1,818	890
80	Southhampton	20	20	30	41	17,752	1,637	30	30	30	33	3,012	895	60	60	60	16	1,453	395
90	Hampton	20	15	30	53	24,587	3,779	30	30	30	35	3,506	2,275	30	30	30	34	3,487	1,338
92	Lindenwood	30	30	60	25	8,567	451	60	60	60	17	1,009	169	60	60	60	12	736	81
95	Kingshighway	10	15	15	78	34,557	7,852	20	20	20	49	4,345	4,798	40	30	20	34	3,205	2,431
99	Lafayette	45	45	40	27	10,850	835	45	35	35	23	1,963	646	60	60	60	15	1,271	331
657	Maplewood Limited	peak service operation only			13	1,292	30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Express Routes																			
4005	South Grand Express					2084													
4011	Shrewsbury Express					3319													
4017	Oakville Express					1475													
4073	Lemay Express					1785													
4080	Southhampton Express					1687													
4092	St. Louis Hills Express					2048													
4111	Kirkwood Express					1849													
4120	Affton Express					4170													
4140	Broadway Barracks Expr.																		
4173	Tesson Ferry Express					3489													
4220	Watson Road Express					2901													
4440	I-55 Mehlville Express					744													
4457	I-44 Fenton Express					977													

Source: FY 1998 Transit Data, Provided by Bi-State Development Agency, November 1998.
A.M. Peak = 6:00 a.m. - 9:00 a.m.
P.M. Peak = 4:00 p.m. - 7:00 p.m.
Daily Trips - No. of Buses per Day, Both Directions
ADP = Average Daily Passengers

According to 1998 transit data provided by Bi-State, the level of transit service in the Southside Study Area as measured by revenue service hours and route coverage can be considered moderate relative to the other two study areas: Daniel Boone and Northside.

Examination of the average weekday ridership in each of the areas yielded the following median routes as shown in Table 7.2-2. This table illustrates that existing transit ridership in the Southside falls into middle ranges. By comparison, Southside ridership is lower than the Northside, but higher than the Daniel Boone Study Area.

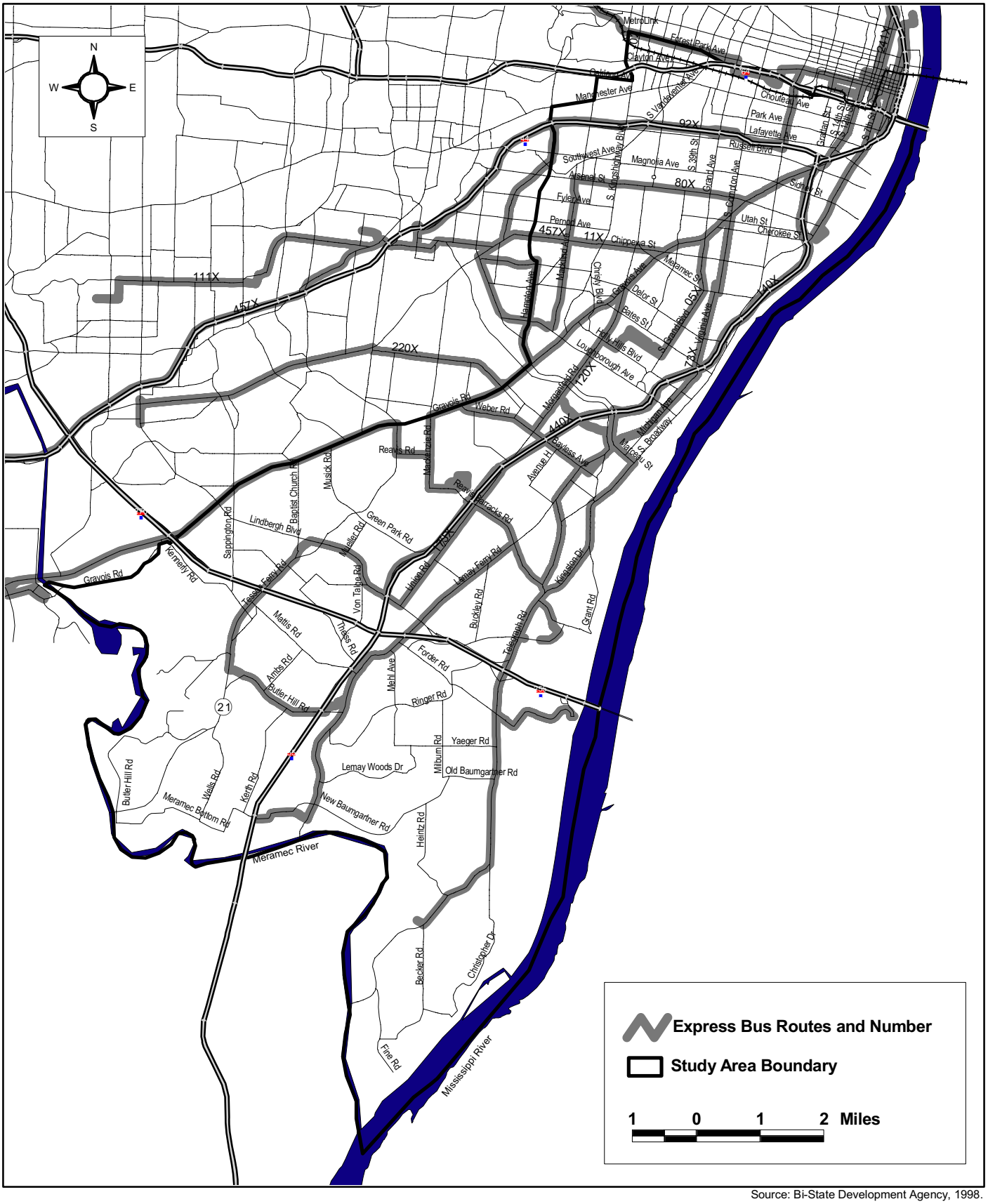
TABLE 7.2-2
MEDIAN ROUTES – RIDERSHIP

Study Area	Median Route[1]	Weekday ADP
Daniel Boone	Clayton Bee (#55)	1,258
Southside	Gravois (#5)	1,933
Northside	City Limits (#16)	2,455

Source: Bi-State Development Agency, FY 1998 Transit Data
Notes: [1]Median Route = 50% of routes in Study Area below/above Average Daily Passengers for this route
ADP = Average Daily Passengers

Express Routes

The Southside Study Area is well served by express bus service. This is consistent with the strong commuter travel patterns observed in the Study Area. Thirteen bus routes provide express service in the Southside Study Area, whereas the Northside has eight express routes and the Daniel Boone Study Area only three. These routes are summarized in Table 7.2-3 and are also mapped in Figure 7.2-3.



Source: Bi-State Development Agency, 1998.

Figure 7.2-3
Existing Express Bus Routes

TABLE 7.2-3
EXPRESS ROUTES

Route No.	Route Name	AM Peak Trips	ADP
5X	South Grand Express	4	176
11X	Shrewsbury Express	6	209
17X	Oakville Express	3	104
73X	Lemay Express	4	117
80X	Southhampton Express	4	108
92X	St. Louis Hills Express	5	109
111X	Kirkwood Express	4	82
120X	Affton Express	8	262
140X	Broadway Barracks Express	3	100
173X	Tesson Ferry Express	6	190
220X	Watson Road Express	5	182
440X	I-55 Mehlville Express	4	180
457X	I-44 Fenton Express	2	54

Source: Bi-State Development Agency, Transit Center Hub Restructuring Study, February 1998.
Note: ADP = Average Daily Passengers

These express routes primarily serve commuter trips and provide limited stop service in the peak periods along major arterials throughout the Study Area. Several of these routes (Oakville, Lemay Ferry, Tesson Ferry, and Mehlville) use I-55 to complete their trip to the downtown area. Express routes operate in the peak direction in that they travel in the northbound direction in the a.m. peak and the southbound direction in the p.m. peak in order to connect residential areas with employment sites in downtown St. Louis and other major employers within the Southside Study Area.

Demand Response Services

Bi-State operates two demand response programs in the St. Louis region, Call-A-Ride and Call-A-Ride Plus. Demand response programs are where riders call in to make an appointment for curb-to-curb van service. Call-A-Ride is open to the general public in St. Louis County, whereas Call-A-Ride Plus is provided only to the disabled community in both the County and the City of St. Louis. Call-A-Ride is used for a variety of trip purposes, while Call-A-Ride Plus is mostly used for medical appointments. Based on FY 1998 data provided by Bi-State, ridership for Call-A-Ride services averages about 1,300 passengers per weekday regionwide. The vast majority of these riders are disabled (83 percent) or elderly (eight percent).

Bi-State has also initiated efforts to develop a Transportation Management Association (TMA) to advance demand response services in the St. Louis Metropolitan region. To date, the TMA consists of 29 member agencies, including social service agencies, funding agencies and transportation service providers. The TMA provides coordinated communications, vehicle routing, scheduling, dispatching, and customer service enhancements among its association members and is geared towards furnishing a “one stop” transportation

solution for transit passengers. Transportation providers are linked through the use of "real time" routing and scheduling computer terminals within the vehicles and are coordinated through a unified system of Call Centers. These features allow for rapid response trip dispatching for unscheduled or emergency trips and for vehicle deployment in the event of a vehicle breakdown or unanticipated incident.

7.2.2 MetroLink Light Rail Transit (LRT)

The existing MetroLink light rail system between Lambert International Airport and East St. Louis, Illinois, skirts the Southside Study Area to the north as it approaches downtown St. Louis from the west. Two MetroLink stations, Central West End and Grand, fall directly within the Study Area.

During a typical weekday MetroLink runs at 7 or 8 minute headways during the peak periods (both a.m. and p.m.) and at 10-minute headways, off-peak. On Saturdays, typical headways are about 10 minutes and on Sundays and holidays, trains run about every 15 minutes. The span of operation for MetroLink service is from 5:00 a.m. to 12:00 a.m. on Saturdays and weekdays and from 5:30 a.m. to 11:00 p.m. on Sundays and holidays.

Table 7.2-4 represents ridership statistics for existing MetroLink service based upon a survey conducted by Bi-State over a two-week period in September 1998. The table shows the average daily passengers (boardings by station) for weekdays, Saturdays, Sundays, and holidays.

TABLE 7.2-4
METROLINK RIDERSHIP

	Average Daily Passengers		
MetroLink Station	**Weekday**	**Saturday**	**Sunday**
5th and Missouri	4,956	2,448	1,532
East Riverfront	1,680	940	765
Laclede's Landing	1,218	1,779	1,255
Convention Center	3,104	2,207	1,576
8th and Pine	2,386	983	663
Busch Stadium	968	642	636
Kiel Center	1,213	1,282	519
Union Station	2,833	3,002	2,023
Grand	2,760	2,101	1,320
Central West End	3,446	2,012	1,385
Forest Park	2,077	1,459	976
Delmar	2,216	1,464	851
Wellston	1,255	782	475
Rock Road	1,689	1,320	801
UMSL South	1,472	1,081	656

UMSL North	940	444	287
North Hanley	2,947	1,922	1,134
Lambert Airport	1,885	1,658	1,492
Total	39,045	27,526	18,346

Source: Bi-State Development Agency, September 12-27, 1998.

In addition, portions of the Study Area are indirectly served via feeder bus service. Table 7.2-5 lists the local routes in the Southside Study Area that provide direct connections with MetroLink rail stations and hence can be characterized by feeder routes.

TABLE 7.2-5
FEEDER BUS ROUTES

Route No.	Route Name	MetroLink Station(s) Served
13	Union	Central West End Station
18	Taylor	Central West End Station
42	Sarah	Grand Station
47	Cross County	UMSL South, UMSL North, North Hanley Stations
49	Lindbergh	Lambert Airport Station
70	Grand	Grand Station
80	Southhampton	Union Station
90	Hampton	Forest Park Station
92	Lindenwood	Grand Station
95	Kingshighway	Central West End Station

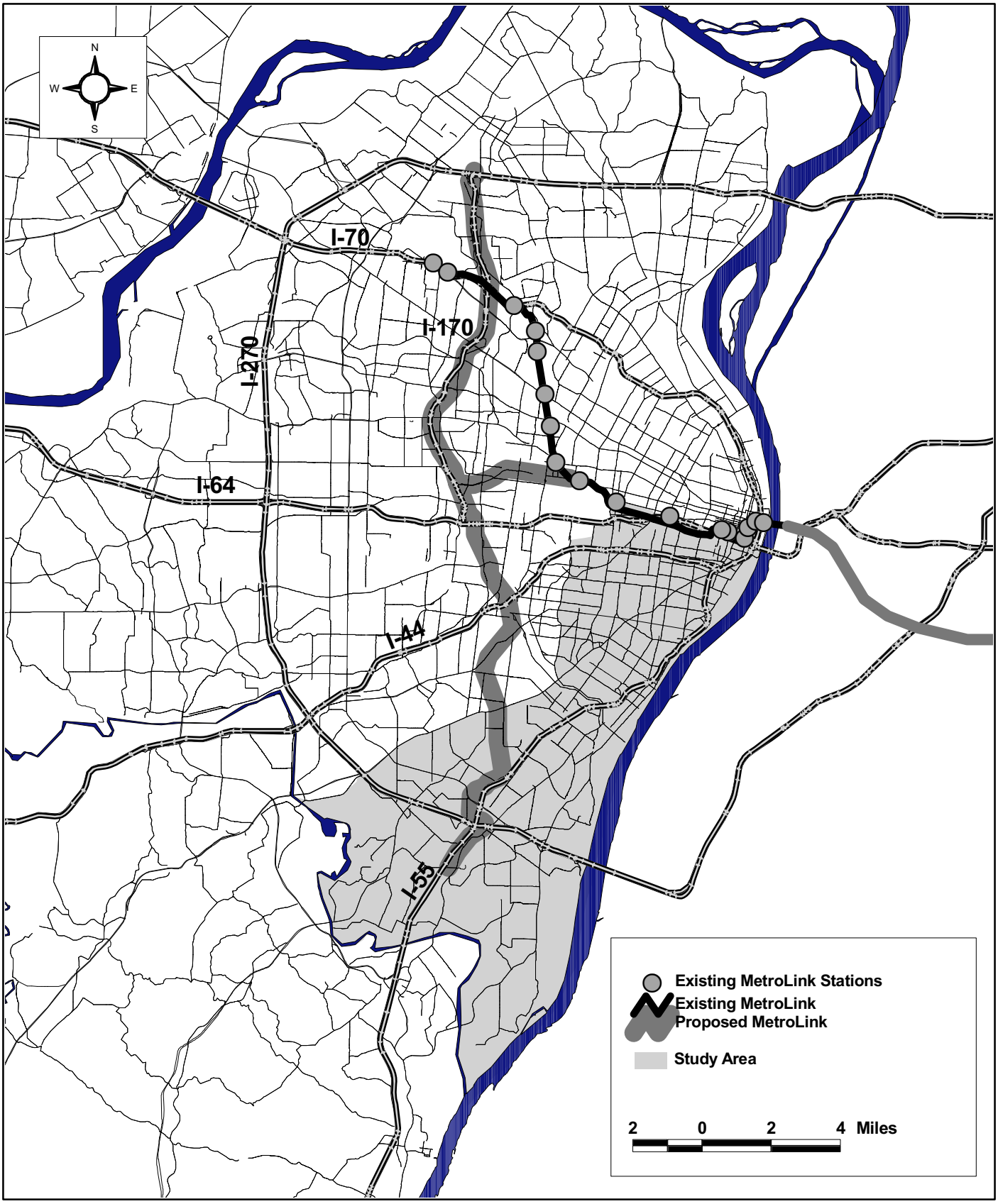
Source: Bi-State Development Agency, FY 1998.

In addition, EWGCC, in cooperation with Bi-State and MoDOT, is currently examining extensions of MetroLink that would provide direct rail service in the Southside Study Area. Figure 7.2-4 shows the existing MetroLink system as well as planned extensions identified by the Cross County Corridor MTIA that was revised in March 1998 and adopted by the EWGCC Board. Design studies for Segment I are currently underway from the Forest Park MetroLink Station through Clayton to Shrewsbury. As of this writing, a precise alignment for the Cross County MetroLink extension has yet to be determined.

7.2.3 Transit Facilities

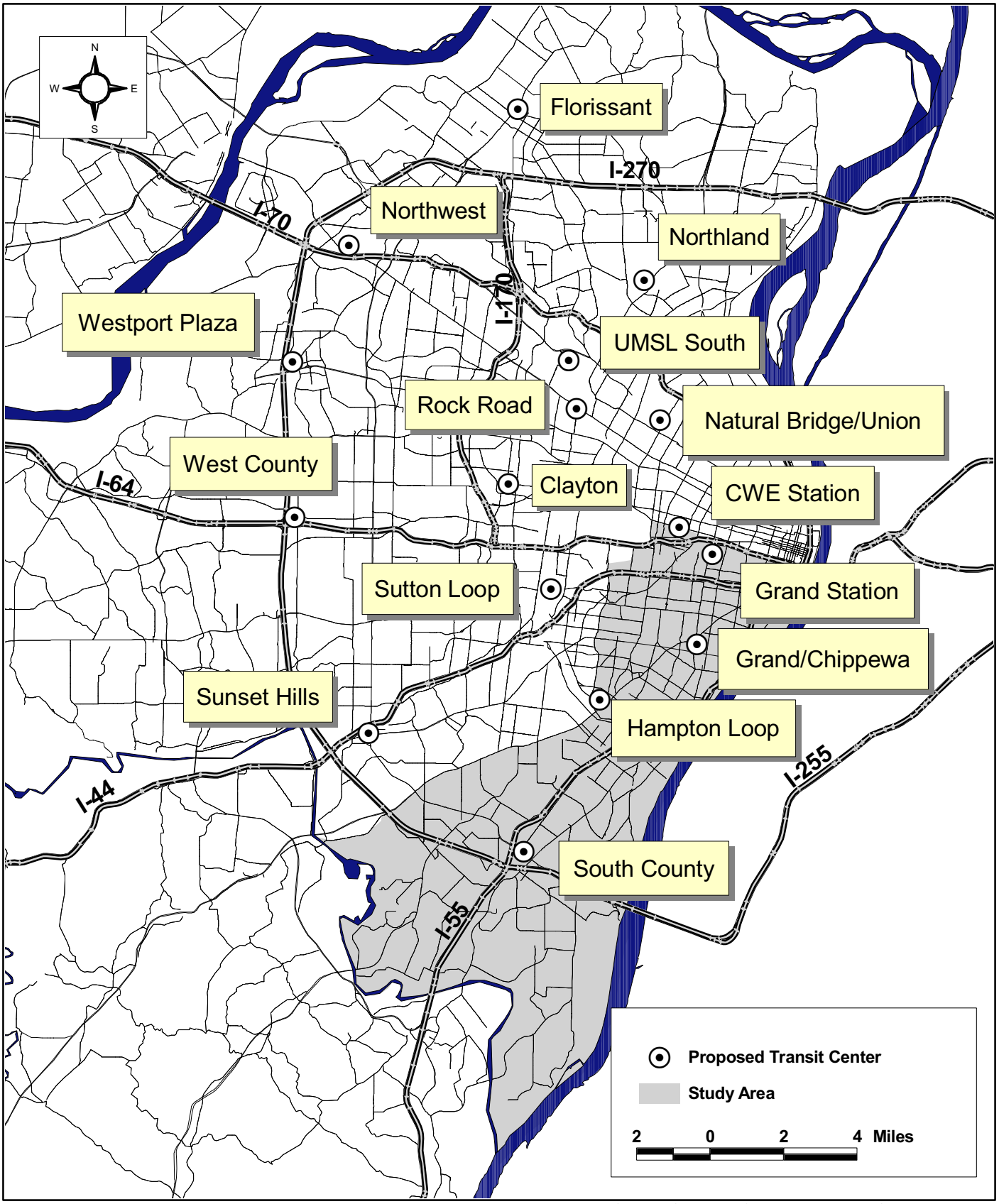
Bi-State is currently examining options to transition from the more traditional radial configuration of fixed route bus services to a transit center-based system. This is driven, in part, by the need to better serve changes in regional travel patterns resulting from shifts in population and employment throughout the region (see Sections 3.0 and 4.0) given constrained financial resources. In February 1998, Bi-State completed the

“Transit Center Hub Restructuring Study” which identified seventeen potential transit centers in urban/suburban St. Louis. General locations for these transit centers are shown in Figure 7.2-5.



Source: East-West Gateway Coordinating Council, November 1998.

Figure 7.2-4
MetroLink - Existing and Future



Source: Bi-State Transit Center Hub Restructuring Study, February 1998.

Figure 7.2-5
Proposed Transit Centers

Five of the proposed transit centers would serve the Southside Study Area:

- Central West End Station
- Grand Avenue Station
- Grand/Chippewa
- Hampton Loop
- South County

Four of these transit centers, Central West End MetroLink Station, Grand Avenue MetroLink Station, Hampton Loop, and Grand/Chippewa, would be located in the St. Louis City portion of the Southside Study Area. The purpose of these transit centers would be to help facilitate intermodal transfers between bus and MetroLink riders as well as direct transfers for fixed route and express bus patrons in the urbanized portions of the Study Area. The Central West End Station and the Grand Avenue Station are located on the existing MetroLink line and already serve as transfer points between bus and rail. At these four transfer centers, urban transit riders could also be collected in the City for trips to destinations in the suburbs and other major activity centers in the region (i.e., the "reverse commute.")

The South County transit center would play a major role in facilitating travel between south St. Louis County and the City of St. Louis as well as other areas in the region such as Clayton and west St. Louis County. This location was also identified as being a logical connection point between conventional local service and new, potential transit strategies such as collector-distributor shuttle services and flexible route services. It is envisioned that the South County transfer facility will figure significantly in the development of flexible routes and point deviation routing.

In addition, Call-A-Ride and Call-A-Ride Plus vehicles would also serve the proposed transit centers to facilitate transfers between fixed route services and Call-A-Ride.

The City of St. Louis will soon begin construction of a Multimodal Center that will connect airport users with downtown transportation modes: Amtrak, Greyhound and MetroLink. The station will be able to accommodate a future high-speed rail line located at 14th and Spruce Streets. This central transportation center is located just north of the Mill Creek Valley at the existing Amtrak station south of Kiel Center. The project will consist of a terminal building, railroad and bus staging areas, pedestrian connection to the Kiel MetroLink Station, Kiel Triangle Park, and related street improvements. Terminal construction is scheduled to commence in spring 2000, although related track work will occur sooner.

7.3 BICYCLE/PEDESTRIAN FACILITIES

The St. Louis Regional Bicycle Facilities Plan (1994) recognizes the growth of bicycling as a transportation alternative in the St. Louis region. Transportation Redefined listed pedestrian walkways and thoroughfares as a method to encourage sustainable development.

The purpose of the Regional Bicycle Facilities Plan (1994) is to "encourage cooperative and coordinated development of facilities that provide access for bicyclists and pedestrians to population centers, educational and government institutions, employment and retail centers, along with recreational areas and parks throughout the region." With input from the public and technical advisors, existing routes and facilities were identified, current trends were analyzed, and specific routes were identified.

Using the above information, the Plan recommended and prioritized specific routes "determined to be the best routes available in linking communities and principal regional services, employment, and institutional destinations." One route proposed in the Plan lies within the Study Area. This route roughly follows Route 61/67 from the Meramec River north to Telegraph where it continues northward along Broadway. This proposed corridor also provides a feeder segment to the Grant's Farm area.

In addition, MoDOT is currently in the process of defining a region bicycle and pedestrian plan and identifying facility locations. At this time it is not know whether or not any potential facilities may lie within the Study Area. MoDOT does consider bicycle and pedestrian facility improvements in conjunction with roadway and other improvements where feasible.

One major local bicycle/pedestrian facility also exists in the Study Area. Grant's Trail follows the Oak Hill Branch of the old Missouri Pacific rail right-of-way, roughly parallel to I-55 between Bayless Road and Green Park Road and was developed by Gateway Trailnet. This facility may be eligible for 4(f) evaluation if recommended improvements were to impact it.

7.4 FREIGHT/INTERMODAL

One of the seven focus areas of Transportation Redefined (1994) is "the efficient movement of goods, improving the movement of freight within and through the region by rail, water, air and surface transportation modes." Some of the measures in evaluating system performance include the amount of freight moved, average travel time, cost and ease of access to terminal facilities. These measures are important to the region's economy due to the number of major industries located in St. Louis.

The EWGCC report, Industry Perspectives and Recommendations for a Regional Freight Planning Process (1997) studied the movement of goods in the region. Substantial input from the region's shippers and carriers was received through numerous meetings and surveys. According to the report:

> *The St. Louis region historically has held a vital role in the country's transportation system, particularly with the movement of freight. The region's central location, the confluence of major river systems, its extensive railroad network, a strong international airport, and a major interstate highway system have made the St. Louis region an important link in freight movement. This, in turn, has attracted major manufacturing and distribution centers to the area, as well as many Fortune 500 businesses. St. Louis is the nation's 17th largest metropolitan area, and the eight-county bi-state area has a population of 2.4 million.*
>
> *St. Louis has the second largest inland port,[1] the northernmost ice-free port, the third largest rail network[2] (second largest in terms of rail jobs), and the sixth[3] busiest airport in the United States. The region, situated at the crossroads of Interstates I-70, I-44, I-55, and I-64, has the sixth largest interstate system, comprising approximately 300 miles of interstate highway system. The region ranks sixteenth nationally in distribution centers and thirteenth nationally in manufacturing facilities.*

Table 7.4-1 shows the mode use for commodity flow to/from the St. Louis metropolitan area.

TABLE 7.4-1
COMMODITY FLOWS BY MODE

Mode	Percent
Truck	76
Water	11
Rail	5
Air	2

Source: Industry Perspectives and Recommendations for a Regional Freight Planning Process, 1997.

[1] Based on annual freight tonnage handled by the port.
[2] Based on the number of rail lines.
[3] Based on the number of arriving and departing flights.

The highways located within the Southside Study Area used for goods movement are I-64 (Highway 40/61), I-44, I-55 and I-270. The Southside Study Area contains numerous rail facilities. These are listed in Table 7.4-2. Piers, wharves and docks along the Mississippi River adjoining the Southside Study Area are listed in Table 7.4-3. There are no airports located within the Study Area.

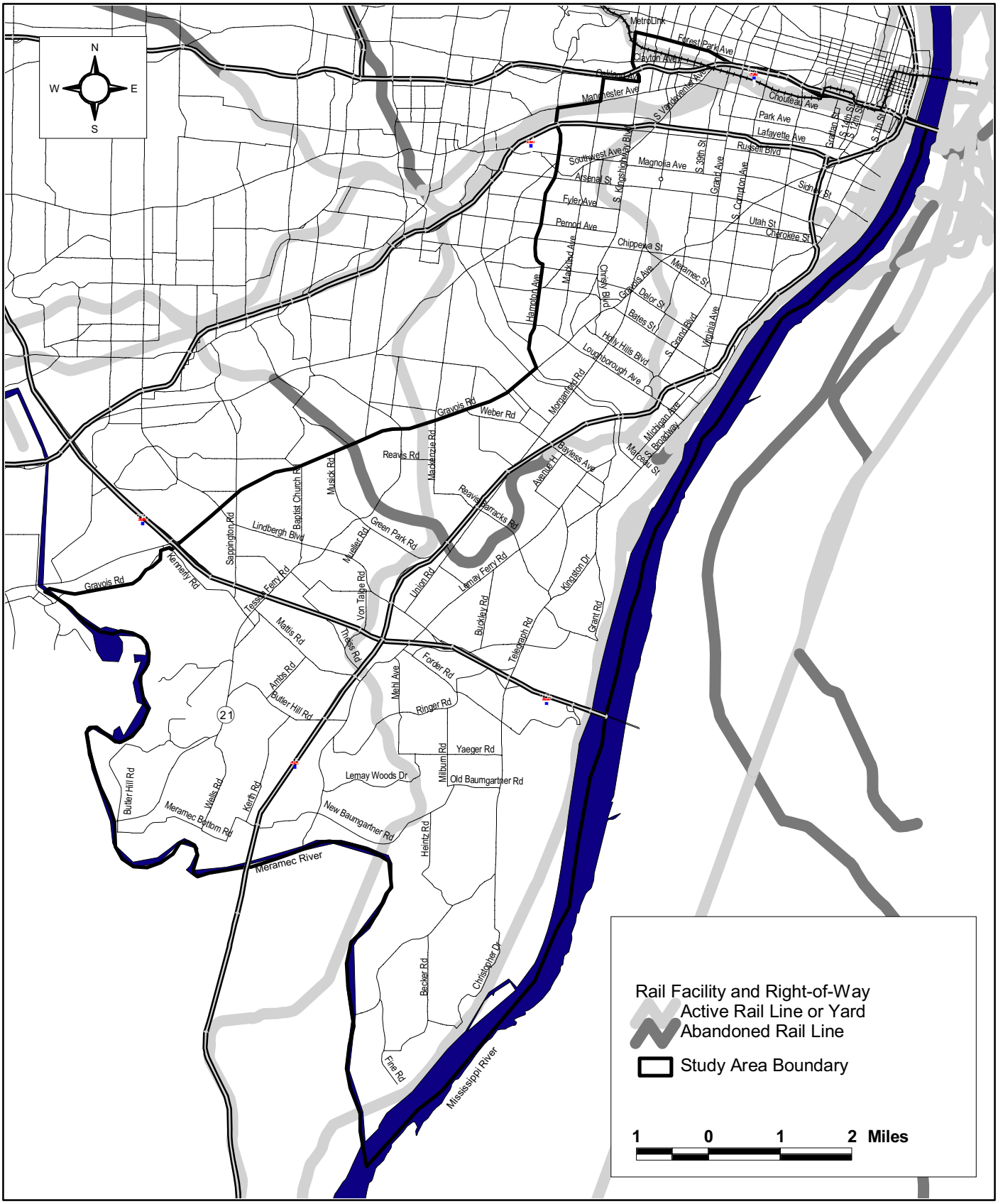
TABLE 7.4.2
RAIL FACILITY TYPES AND LOCATIONS

Company	Facility Name	Facility Type[1]	City	State
Union Pacific	Gration Yard	Classification Yard	St. Louis	MO
Union Pacific	Lesperance Yard	Classification Yard	St. Louis	MO

[1] A classification yard is a rail facility that only receives incoming trains for switching of cars as needed for various outbound rail shipments, whereas an intermodal yard not only swiches rail cars for various shipments but also provides access for other modes of freight shipment (i.e., truck trailers) to unload cargo onto outgoing trains.

Source: Industry Perspectives and Recommendations for a Regional Freight Planning Process, 1997.

In addition to these active facilities, several abandoned rail facilities and rail rights-of-way exist within the Study Area. A map of existing rail and rail right-of-way facilities for both active and abandoned lines can be found in Figure 7.4-1.



Source: East-West Gateway Coordinating Council, November 1998.

Figure 7.4-1
Existing Rail Facilities

TABLE 7.4-3
PIERS, WHARVES AND DOCKS WITHIN THE PORT OF METROPOLITAN ST. LOUIS

River Mile	Location	Name	Commodities
179.8	right bank, MS River, St. Louis, opposite upper base of Gateway Arch	Gateway Riverboat Cruises, St. Louis Dock	Excursion vessels
179.1	right bank, MS River, St. Louis, between Poplar Street and MacArthur Bridges	Fuel St. Louis Dock	Fueling, marine repair, handling equipment & supplies, mid-stream fueling barges
178.9	right bank, MS River, St. Louis, below MacArthur Bridge	Reidy Terminal, Chouteau Fleet Mooring	Fleeting services
178.8	right bank, MS River, St. Louis, approx. 1,000 ft. below MacArthur Bridge	Fred Weber, Rutger Street Sand Plant Dock	Salt, sand
178.6	right bank, MS River, St. Louis, approx. 0.4 miles below MacArthur Bridge	The Valley Line Company, St. Louis Wharf	Handling equipment & supplies
178.5	right bank, MS River, St. Louis, approx. 0.5 miles below MacArthur Bridge	Nooter Corporation Dock	Steel structures (fabricated), barge mooring
178.3	right bank, MS River, St. Louis, approx. 0.7 miles below MacArthur Bridge	The Valley Line Company, Fleet Mooring	Fleeting services
178.1	right bank, MS River, St. Louis, approx. 0.8 miles below MacArthur Bridge	Eagle Marine Industries, Upper Fleet Mooring	Fleeting services
177.9	right bank, MS River, St. Louis, approx. 1.2 miles below foot of Barton Street	Riverway Harbor Service, Lesperance Street Fleet Mooring	Fleeting services
177.8	right bank, MS River, St. Louis, approx. 1.2 miles below foot of Barton Street	Slay Bulk Terminals, St. Louis Dock	Chemicals (liquid)
177.6	right bank, MS River, St. Louis, approx. 1.4 miles below MacArthur Bridge	Reidy Terminal, Barton Street Fleet Mooring	Fleeting services
177.2	right bank, MS River, St. Louis, approx. 1.8 miles below MacArthur Bridge	Eagle Marine Industries, St. George Fleet Mooring	Fleeting services
176.6/ 176.9	right bank, MS River, St. Louis, below foot of Arsenal Street	U. S. Army Corps of Engineers, St. Louis District, Service Bas Dock	Repairs to own equipment, handling equipment & supplies, mooring government equipment
176.5	right bank, MS River, St. Louis, foot of Zepp Street extended	Manufacturers Cartage Company, Molasses Terminal Dock	Not operated or used
176.4	right bank, MS River, St. Louis, foot of Potomac Street extended	Mobil Oil Corporation, St. Louis Lube Plant Dock	Not operated or used
176.4	right bank, MS River, St. Louis, below foot of Potomac Street extended	Valvoline, St. Louis Wharf	Lubricating oil
176.2	right bank, MS River, St. Louis, approx. 0.5 miles above foot of Gasconade Street extended	Savannah Foods of St. Louis Dock	Sugar (raw)
176.1	right bank, MS River, St. Louis, approx. 2,000	River Cement Company, St. Louis	Cement

	feet above foot of Gasconade Street extended	Terminal Dock	

176.0	right bank, MS River, St. Louis, approx. 1,500 feet above foot of Gasconade Street extended	J. D. Streett & Company, St. Louis Terminal Dock	Petroleum products
175.9	right bank, MS River, approx. 600 feet above foot of Gasconade Street extended	Missouri Terminal Oil Company, St. Louis Dock	Petroleum products
175.6	right bank, MS River, St. Louis, at foot of Gasconade Street extended	Texaco Refining & Marketing, St. Louis Distribution Terminal Dock	Petroleum products
175.5	Right bank, MS River, St. Louis, below foot of Gasconade Street extended	Reidy Terminal, Gasconade Street Fleet Mooring	Fleeting services
174.9	right bank, MS River, St. Louis, foot of Mount Pleasant Street extended	Reidy Terminal, St. Louis Dock	Bulk cargo (liquid misc.), petroleum products, marine repair, vessel/barge cleaning, gas freeing
175.1/ 173.9	Right bank, MS River, St. Louis, between foot of Mount Pleasant and Fillmore Streets extended	Reidy Terminal, Reidy and Bellerive Fleet Moorings	Fleeting services
173.6	Right bank, MS River, St. Louis, foot of Iron Street	U. S. Coast Guard Base, St. Louis Mooring Facility	Handling equipment & supplies, mooring government equipment
173.5	Right bank, MS River, St. Louis, foot of Soper Street	Chemtech Industries, St. Louis Terminal Dock	Chemicals (liquid), petrochemicals
173.4	Right bank, MS River, St. Louis, between foot of Mott and Haven Streets	Lone Star Industries, St. Louis Wharf	Cement
173.3	Right bank, MS River, St. Louis, approx. 1.4 miles above mouth of River Des Peres	Arsenal Island Dock Company, Krauss Street Fleet Mooring	Fleeting services
173.1	Right bank, MS River, St. Louis, approx. 1.1 miles above mount of River Des Peres	Inland Partners, St. Louis Dock	Petroleum products
173.0	Right bank, MS River, St. Louis, approx. 1 mile above mouth of River Des Peres	Midway Marine, Nagel Street Fleet Mooring	Fleeting services
172.8	Right bank, MS River, St. Louis, approx. 0.9 mile above mouth of River Des Peres	Econo-Flo Flour Service, St. Louis Terminal Dock	Not operated or used
176.2	Right bank, MS River, St. Louis, approx. 0.7 mile above mouth of River Des Peres	Italgrani Elevator Company, St. Louis Dock	Grain
172.4	Right bank, MS River, St. Louis, approx. 0.5 mile above mouth of River Des Peres	Davis Street Sand Company Dock	Sand, salt
172.3/ 172.1	Right bank, MS River, St. Louis, approx. 2,500 feet above mouth of River Des Peres	Louisiana Dock Company, St. Louis Wharf	Marine repair/outfitting, dry docking
172.0	Right bank, MS River, St. Louis, above mouth of River Des Peres	Carondelet Coke Corporation Dock	Mooring for barges
171.6	Right bank, MS River, Lemay, approx. 1,500 feet below mouth of River Des Peres	St. Louis County Port Authority Dock	Not operated or used
171.3/	Right bank, MS River, Lemay, approx. 1,500 feet below mouth of River Des Peres	American Commercial Marine Service, Notre Dame Fleeting Mooring	Fleeting services

170.3			

170.4	Right bank, MS River, St. Louis, approx. 1.8 miles above J.B. Bridge	Streett Industries, St. Louis Dock	Caustic soda, methanol, petroleum products
168.6	Right bank, MS River, Lemay, below J.B. Bridge	Triangle Refineries, St. Louis Terminal Dock	Aviation fuel, fuel oil, petroleum products
168.3	Right bank, MS River, Lemay, approx. 2,000 feet below J.B. Bridge	Midway Marine, Upper JB Fleet Mooring	Fleeting services
168.2	Right bank, MS River, Lemay, approx. 2,500 feet below J.B. Bridge	Bussen Terminal Dock	Bulk cargo (dry misc.), coal/ coke, fertilizer (dry), pipe, salt, steel
168.1	Right bank, MS River, Lemay, approx. 3,000 feet below J.B. Bridge	Jefferson Barracks Marine Service Dock	Mooring (misc.)
167.9	Right bank, MS River, Lemay, approx. 0.7 mile below J.B. Bridge	Bussen Terminal Sand Dock	Sand
167.8	Right bank, MS River, Lemay, approx. 0.8 mile below J.B. Bridge	Bussen Terminal Upper Ramp Barge Dock	Bulk cargo (dry misc.), calcium aluminate, clay, copper, filter cake, ore (misc.), stone
167.5	Right bank, MS River, Lemay, approx. 0.8 mile below J.B. Bridge	Bussen Terminal Lower Ramp Barge Dock	Bulk cargo (dry misc.), clay, copper, filter cake, scrap metal, slag
167.3	Right bank, MS River, Lemay, approx. 1.3 miles below J.B. Bridge	Bussen Terminal Lower Dock	Bulk cargo (dry misc.), clay, copper, filter cake, scrap metal, slag
167.6	Right bank, MS River, Lemay, between 1 and 5 miles below J.B. Bridge	Midway Marine, Lower J.B. Fleet Mooring	Fleeting services

Source: Industry Perspectives and Recommendations for a Regional Freight Planning Process, 1997.

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