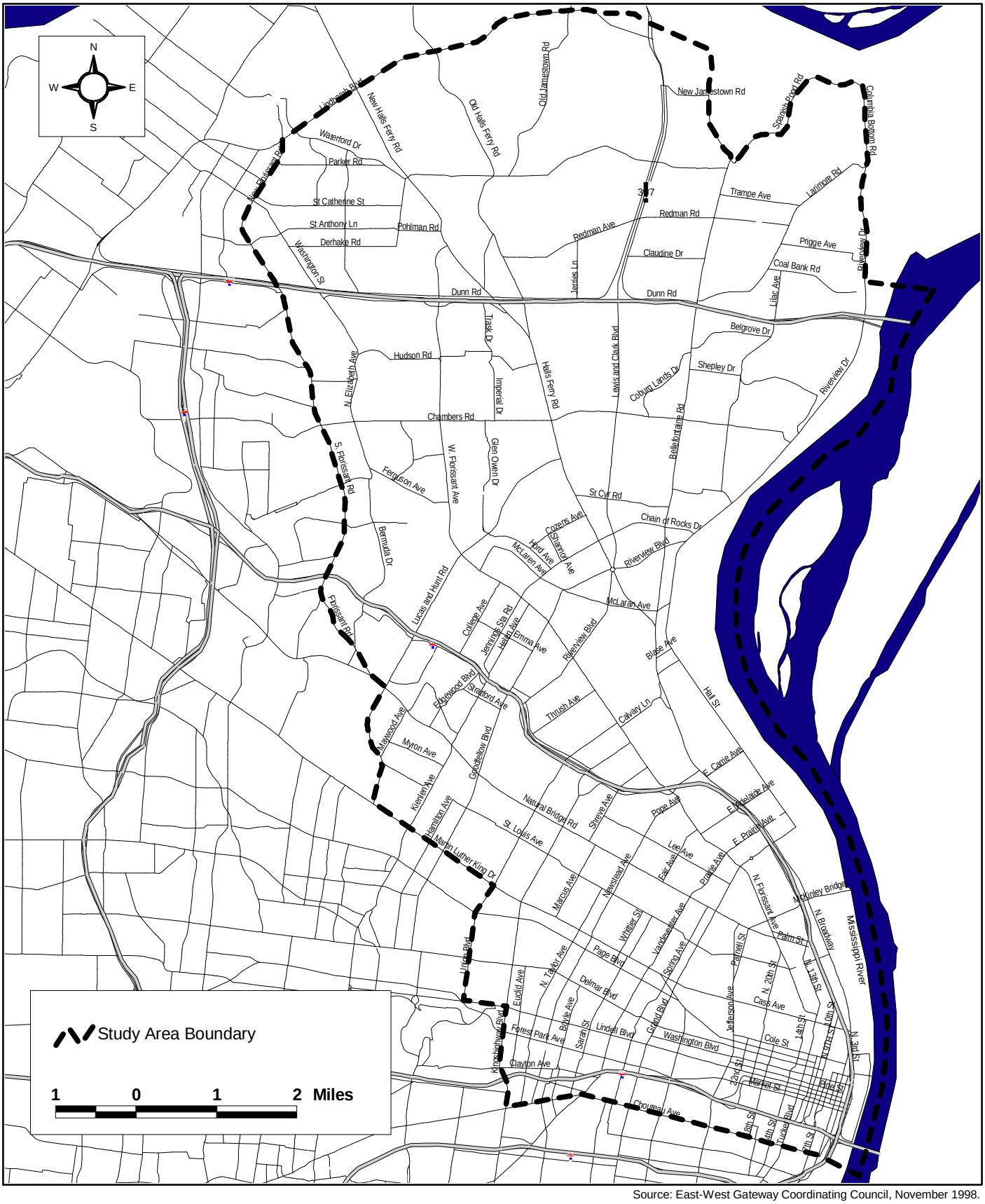
1.0 INTRODUCTION

This report provides information about existing conditions in the Northside 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 Northside Study Area lies in the north and northeast portion of the City of St. Louis and St. Louis County (see Figure 1.0-1). It is roughly bounded by the Mississippi River on the East, Lindbergh Boulevard on the North, North Florissant Road and Union Boulevard on the West and Chouteau Avenue on the South (see Figure 1.0-2), comprising an area of approximately 75 square miles. Twenty-six municipalities lie wholly, or in part, within the Study Area as well as a portion of unincorporated St. Louis County. Over 40 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 values, and a Study Area summary.

2.1 EXISTING LAND USE

The Northside Study Area encompasses almost all of the northern one-half of the City of St. Louis and a large portion of north St. Louis County. Following are descriptions of each of the land use types found within this Study Area and presented in Figure 2.1-1. Data on acreages of land use by type by neighborhood is not available for the City portion of this Study Area. Therefore, a table qualifying the different amounts of land use could not be developed.

2.1.1 Residential Land Use

From the information shown in Figure 2.1-1, residential land use is estimated to cover approximately 60 percent of the Study Area with a majority of that being single family. Multi-family residential land use sites are scattered throughout the Study Area, but are concentrated along the major roadways and near commercial areas. As illustrated in Figure 2.1-1, there are more acres of land devoted to multi-family land use in St. Louis County than in the City of St. Louis. In fact, a field inspection within the City portion of the Study Area, much of the older, multi-family housing has been torn down and the land is now either vacant or is in the process of being redeveloped in commercial, institutional-type or lower density uses. This is especially true for most of the 1950's-1960's era public housing just north and west of the Downtown area.

Housing prices vary from virtually nothing in some of the rundown parts of the City to well over $1 million for single-family homes on Lindell Boulevard along the north edge of Forest Park. Most of the housing, however, could be considered of moderate price. Housing prices in St. Louis County fall within the range identified for the City. Average housing prices for both the City and County cannot be obtained since neither jurisdiction keeps specified prices on homes valued at more than $500,000.

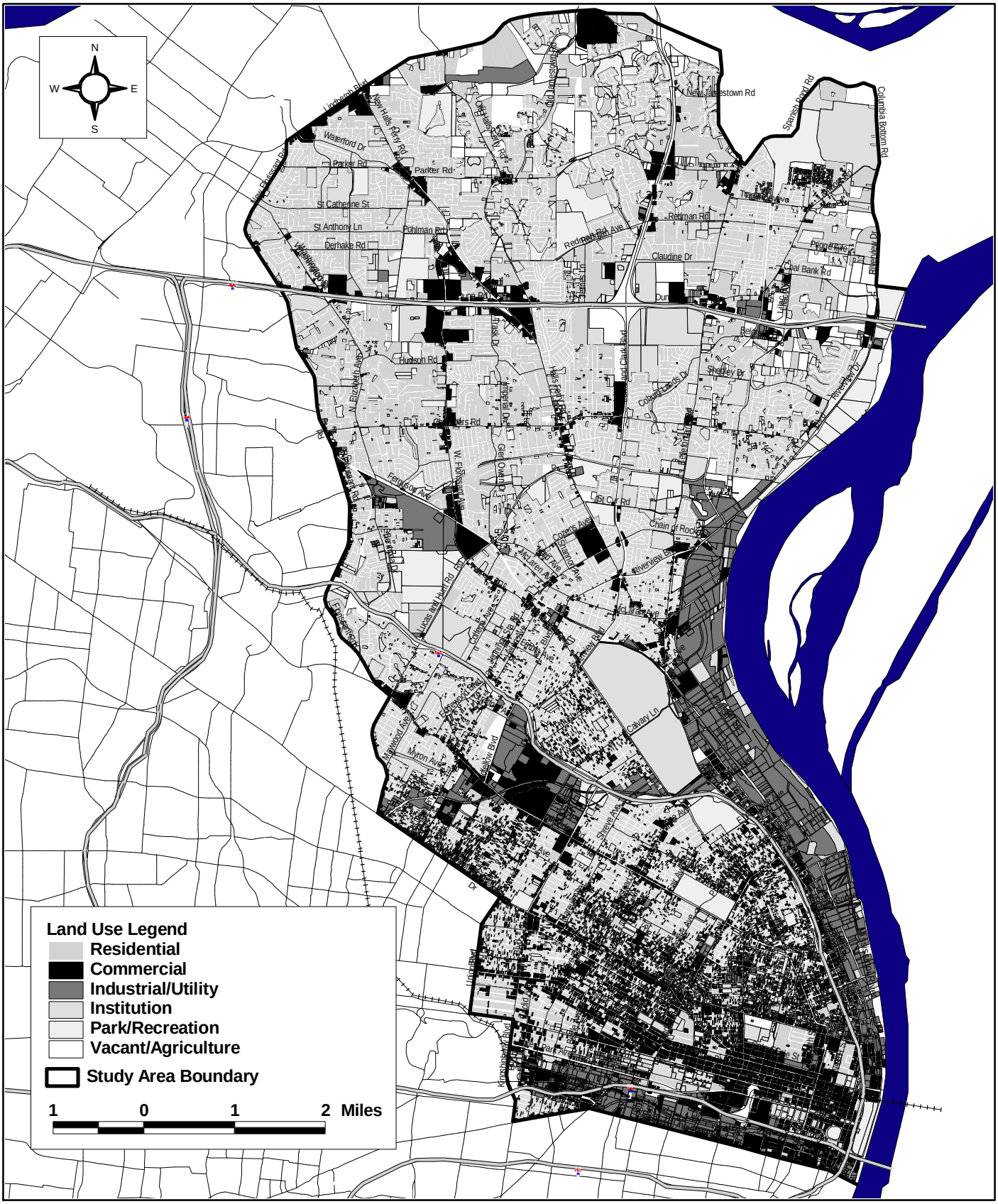
2.1.2 Commercial Land Use

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

Office Land Use

As would be expected with a Study Area that includes the Downtown of a major metropolitan area, the greatest amount of office land use type is found Downtown. Presently, the area designated as the Downtown and Downtown Neighborhood (Jefferson Avenue on the west, Carr Street on the north, Chouteau Avenue on the south, and the Mississippi River on the east) by the City of St. Louis has approximately 14.3-million square feet of office/commercial space of all categories (1999 St. Louis Office Leasing Guide, Building Owners and Managers Association, February 1999). Much of this space was built in the 1980's and early 1990's and used several tax abatement programs from the federal, state and city governments. In the mid- to late-1990's, very little new office space was built or rehabilitated. The only major building started in the late 1990's was the Thomas F. Eagleton Federal Courthouse in the block bounded by 10th, 11th, Spruce, and Walnut Streets. When finished in late 2000, this over 1-million square-foot building will be the fourth tallest structure in Downtown and will house approximately 30 federal courts and 1,000 employees (St. Louis County Star Journal, January 3, 1999).

Outside of Downtown, the Study Area does not contain the large amounts of office land uses found in Downtown. The second greatest amount would be within the Washington University Medical School complex in the southwest portion of the Study Area along Kingshighway Boulevard. Most, if not all, of the office land use would be medical in nature and connected with the hospitals and the medical school. No other sites



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

within this Study Area have large concentrations of office land use. Emerson Electric Company, located on West Florissant Avenue north of Lucas-Hunt Road, has several office and engineering research buildings on their headquarters campus. However, none of this space is available for general leasing purposes to other companies.

Retail Land Use

Encompassing one of the first suburban areas to develop after World War II, the Study Area contains the first suburban mall built in the St. Louis region, Northland Center. The center was completed in the mid-1950's at the intersection of Lucas-Hunt Road and West Florissant Avenue in the City of Jennings. It is an open-air mall and contained a branch of Famous-Barr, a local department store, and two wings of other shops on two levels. Another regional center was completed in the same suburban community only a few years later, River Roads Shopping Center at the intersection of Jennings Station and New Halls Ferry Roads. It was an enclosed mall similar in design and contained a branch of Stix, Baer and Fuller (now Dillard's), another local department store and a single wing of other shops. In the early 1970's, J C Penney added a second department store but closed it in the early 1990's after an attempt to make the facility an "outlet" store for discontinued merchandise (St. Louis County Star-Journal, March 10, 1999). Today, both centers are without an anchor department store with only a few shops still open.

The department stores from these two centers have migrated with the population to the north and are now located in Jamestown Mall at the intersection of Lindbergh Boulevard and Old Jamestown Road at the northern border of the Study Area. This center contains branches of Famous-Barr, Dillard's, Sears and J C Penney. Famous-Barr and J C Penney added their stores in late 1998.

Within the Downtown area there are two shopping centers; St. Louis Centre and Union Station. St. Louis Centre is a four-story enclosed mall connecting the Downtown branches of Famous-Barr and Dillard's. Union Station is a "Festival Marketplace" with no anchor store, but a mix of local and national shops, services, and restaurants. These centers and their respective sizes are as follows:

- Jamestown Mall; a superregional center (a mall with more than 1-million square feet) along the north boundary of the Study Area at the intersection of Lindbergh Boulevard and Old Jamestown Road (1,252,000 square feet)
- St. Louis Centre; a "regional" mall (a mall with more than 500,000 square feet) in Downtown connecting two department stores bounded by 6th, 7th and and Olive Streets and Washington Avenue (750,000 square feet.)
- River Roads Center; a regional, enclosed mall at the intersection of Jennings Station and New Halls Ferry Roads (488,000 square feet)
- Northland Center; a regional, open-air mall at the intersection of Lucas-Hunt Road and West Florissant Avenue (309,000 square feet)
- Union Station Festival Marketplace; enclosed mall built under the train shed of Union Station as part of the overall redevelopment of the property (904,000 square feet) includes retail, restaurants, movie theaters, and a Hyatt Hotel

This Study Area also contains two "Power Centers" or "Big Box"-type retail centers along with several community centers focused on a 60,000 to 70,000 square foot grocery store or discount department store. Virtually all of these centers are located along Interstate 270 (I-270), the belt interstate that encircles the region which passes east-west through the Study Area. These retail centers are located at I-270's interchanges with New Halls Ferry Road and West Florissant Avenue. Other centers are located along Lewis and Clark Boulevard at its intersection with Chambers Road, in the northeast corner of Lucas-Hunt and Natural Bridge Roads, and along West Florissant Avenue north of Chambers Road.

The Study Area's western boundary splits the old Downtown area of the City of Ferguson. This "downtown" developed around a commuter rail station and the terminus of one of the region's many streetcar lines that existed in the early 1900's. The City is in the process of attempting to redevelop this area along the theme of the original commercial area tied to the railroad and streetcar.

Hotel Land Use

Hotels in the Study Area are virtually all located in the Downtown St. Louis area. The only other hotels within the Study Area are located in the northeast quadrant of the interchange of I-270 and Bellefontaine Road and in the northeast quadrant of the I-270/New Halls Ferry Road interchange. The Downtown hotels run the spectrum in style, price and size. They range from large, luxury facilities of 1,000 rooms with rates of $140.00 and up per night to small, "boutique"-type facilities with under 100 rooms and rates of almost $200.00 per night to national chains with 250 rooms and rates of $80.00 per night. All of these facilities have restaurants, bars, room service, and enclosed corridors.

The hotels along I-270 are at the lower end of the spectrum in both style and cost. They are, in fact, motels in the real sense of the word. Each has direct outdoor access for each room, no restaurant , bar or room service. Their room rates run from $35.00 to $65.00 per night.

2.1.3 Industrial/Utility Land Use

This Study Area was once home to well over 40,000 manufacturing jobs from the end of World War II through the late-1970s. Through the 1980's and 1990's most of these jobs have been eliminated, moved out of the area, or been rendered obsolete by advances in manufacturing technology (from discussions with staff of the St. Louis Community Development Agency, various dates).

The industrial areas shown in Figure 2.1-1 still are present, in general, but the actual type of industrial activity has changed to warehousing, light assembly, small part fabrication, and new business incubation. In one of the biggest industrial land use conversions in the Study Area, the old General Motors Chevrolet Assembly Plant in the northwest corner of the intersection of Natural Bridge Avenue and Union Boulevard has been converted into the Union-Seventy Business Park. Most of the original General Motors multi-level building is used for warehousing and light industrial activities, but the park also includes a new bottling plant for the local Pepsi-Cola distributor built on land that used to be railroad yard tracks.

Other transformations of older industrial buildings include converting a multi-floored assembly plant into apartments and, along Washington Avenue west of Tucker Boulevard, converting many of the old garment center buildings into apartments, condominiums, and artists' studios with nightclubs on the first and second floors. One of the most interesting conversions involves an International Shoe Company warehouse that has been converted to the City Museum, a participatory "center" for children and adults alike.

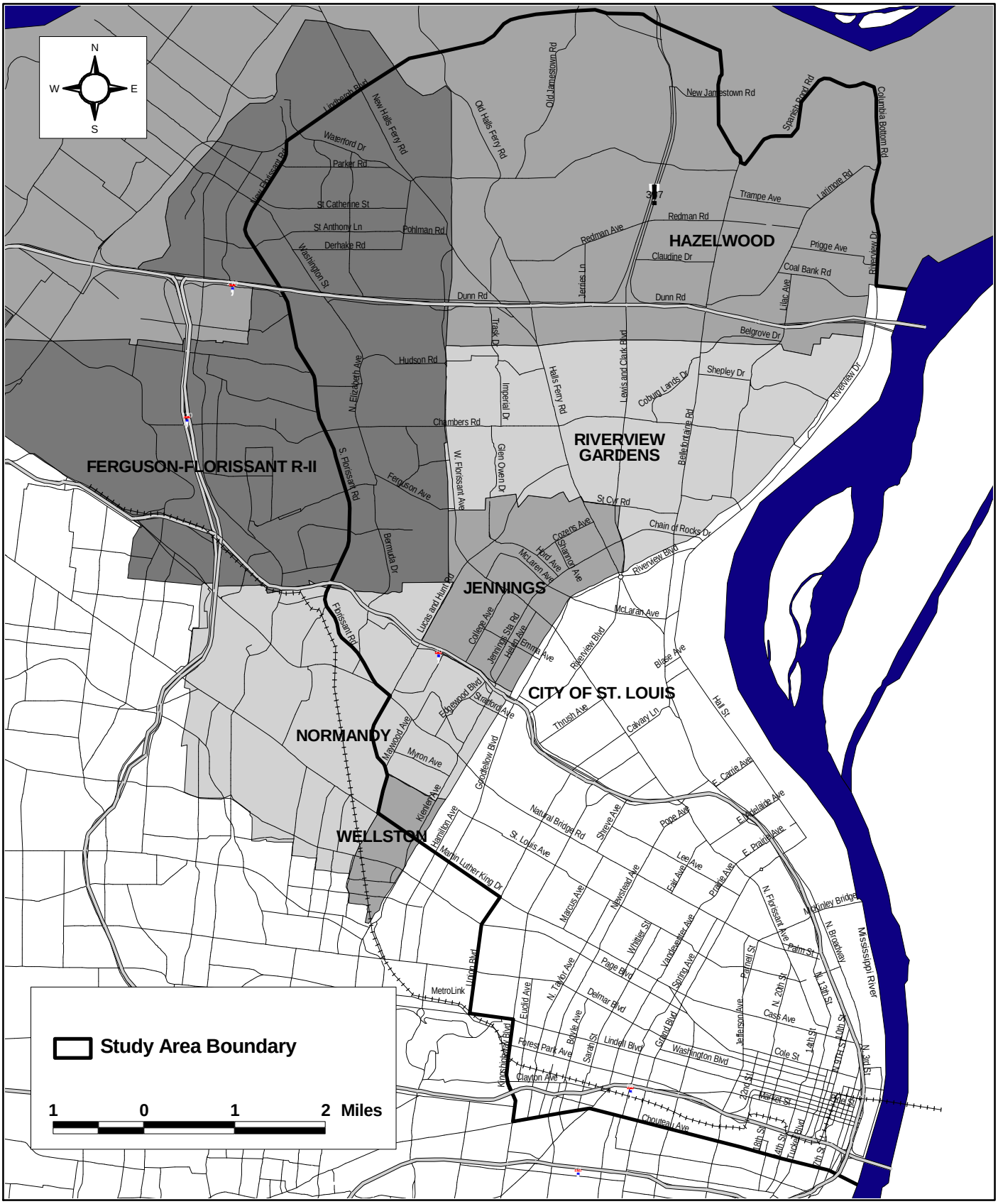
In terms of location, approximately 70 percent of the industrial land use is in the City of St. Louis along North Broadway east to the Mississippi River. The two major exceptions are the Emerson Electric Company headquarters and engineering facility on West Florissant Avenue in Ferguson and a mixed industrial area along Scranton/Lilac Avenues straddling the Burlington Northern Sante Fe railroad line west of the City Limits of St. Louis in the Cities of Bellefontaine Neighbors and Riverview.

2.1.4 Institutional Land Use

The Institutional land use is fairly evenly distributed throughout this Study Area and includes a wide range of activities. These activities include schools, hospitals, libraries, churches, and nursing homes.

Schools

The main campus of St. Louis University and the Washington University Medical School campus as well as the Florissant Valley campus of the St. Louis Community College District are all located in the Study Area. The Study Area includes all of the Jennings and Riverview Gardens School Districts and part of the Ferguson-Florissant, the Hazelwood, the Normandy, and the Wellston School Districts in St. Louis County. The northern half of the City of St. Louis' School District is also included within the Study Area. Major public school facilities include Hazelwood East High School along with the offices and two of the three high schools of the Ferguson-Florissant School District. The other two districts, Normandy and Wellston, only have elementary schools in the Study Area. These school districts are shown in Figure 2.1-2.



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

Figure 2.1-2
School Districts

In the City of St. Louis, major education facilities include Harris-Stowe State College; the offices of the City School District in Downtown; high schools such as Beaumont, Sumner, and Vashon; and magnet schools such as the Central Visual & Performing Arts High School, the International Studies High School, and Metro High School.

The Study Area has several private schools within its boundaries, including the previously mentioned main campus of St. Louis University and the Washington University Medical School; and the St. Louis College of Pharmacy, Cardinal Ritter College Prep School, Lutheran North High School, Rosary High School, Rosati-Kain High School for girls, and the Central Institute for the Deaf. The Study Area also contains the offices of the Catholic Archdiocese of St. Louis, as well as its main cathedral, The Basilica of St. Louis.

Hospitals

This Study Area has the largest regional concentration of hospitals and medical facilities, ranked by the number of staff (St. Louis Business Journal, 1999 Book of Lists), including the Washington University Medical School, and the BJC Medical Center in the southwestern portion of the Study Area and Christian Hospital Northeast in the northwest quadrant of the interchange of I-270 and Mo. Route 367. The Cochran Division of the Veteran's Administration operates a hospital located on the west side of Grand Boulevard at Enright Avenue.

Libraries

The St. Louis County portion of the Study Area has two branches of the St. Louis County Library System: the Florissant Valley Branch located in Florissant on New Florissant Road, the western border of the Study Area, and the Lewis and Clark Branch in Moline Acres on Lewis and Clark Boulevard approximately one-half mile north of the City Limits of St. Louis. Two other County libraries serve the Study Area population. The first is the Jamestown Bluffs Branch on Robin's Mill Road just north of Lindbergh Boulevard, the northern border of the Study Area, near Jamestown Mall. The second branch is the Natural Bridge Branch in Normandy just west of the Study Area's western border. The City of Ferguson has its own library system for its residents.

In the City of St. Louis, there are six library branches and the Main Library in Downtown. These facilities are listed below, along with their address:

- Main Library 1301 Olive Street
- Baden Branch 8448 Church Road
- Cabanne Branch 1106 Union Boulevard
- Divoll Branch 4234 North Grand Boulevard
- Julia Davis Branch 4415 Natural Bridge Avenue
- Lashley Branch 4537 West Pine Avenue
- Walnut Park Branch 5760 West Florissant Avenue

Churches

As would be expected in any large metropolitan area, there are many churches of various denominations located throughout the St. Louis region. Within the Study Area, the mixture of churches and their denominations generally follow the region's mix as a whole. One facility of note is the Basilica of St. Louis, the cathedral of the St. Louis Catholic Archdiocese located on the northwest corner of Lindell Boulevard and Newstead Avenue in the Central West End neighborhood. The Basilica is noted for its architecture and the mosaic tiles that cover its ceilings and walls. This collection of mosaics is said to be the largest in the world. An itemization of the churches will be completed at a later stage of the overall study when specific corridors and alignments have been identified for transportation investments.

Nursing Homes

Similar to the churches, there are numerous nursing homes, both skilled and intermediate care facilities, throughout the Study Area. Some are operated by one of the hospitals in the Study Area, while private operators run others. Again, there are too many facilities to list for this report, but nursing homes will be examined in more detail when the overall study process has identified more specific corridors and/or alignments for study.

Other Institutional Land Uses

Other Institutional land uses include two very large cemeteries, Calvary and Bellefontaine, located along West Florissant Avenue between Taylor Avenue on the south and Riverview Boulevard on the north. Bellefontaine Cemetery contains the graves of several famous Americans including playwright Tennessee Williams and World War I's General John J. Pershing. These two cemeteries combined cover an area almost equal in size to Forest Park, or about 1,250 acres. Other, smaller cemeteries are also found in the Study Area including Memorial Park, Bethlehem, St. John's, Greenwood, Evangelical Friends, and Coldwater.

2.1.5 Parks and Recreational Land Use

This land use category includes not only parks, but also other recreational facilities that may involve payment of a membership fee or dues and entry or use fee, such as a country club or golf course. The major park facilities in the St. Louis County portion of the Study Area are owned and operated by the St. Louis County Department of Parks and Recreation and include the following:

• Bella Fontaine	193 acres	All types of facilities, fitness circuit
• Bissell House	9 acres	Pre-Civil War historic house and park
• Bon Oak	15 acres	Picnic, ball fields, fishing
• Castle Point	11 acres	Picnic, ball fields, trails
• Larimore	24 acres	Sculpture garden, arboretum, picnic
• Spanish Lake	245 acres	All types of facilities, fishing, trails
• Veterans Memorial	251 acres	All types of facilities, ice skating, golf

In addition to these parks, St. Louis County also has two other parks on the perimeter of the Study Area; Coldwater Creek Park at the confluence of Coldwater Creek and the Missouri River and Fort Bellefontaine Park in the northeast quadrant of Lindbergh and Lewis and Clark Boulevards. Coldwater Creek Park contains 273.1 acres and historical and archeological sites as well as equestrian and hiking trails. Fort Bellefontaine Park is presently undeveloped, but will focus on the historic nature of the Fort when it is developed.

There are also several community parks in the Study Area that rival the County parks in terms of size and facilities. These include Black Jack Park in the City of Black Jack; St. Cyr Park in the City of Bellefontaine Neighbors; Forestwood/Lang Royce Park, Hudson Road Park, and January Wabash Park in the City of Ferguson; Dunegant Park, Civic Center Park, and the Little Creek Wildlife area in the City of Florissant, and Koeneman Park in the City of Jennings.

The City of St. Louis has several large parks within the Study Area including:

• North Riverfront Park	112 acres
• Fairgrounds Park	131 acres
• O'Fallon Park	127 acres
• Penrose Park	51 acres

In addition to these large neighborhood parks, the region's second largest municipal park, Forest Park, is adjacent to the southwest boundary of the Study Area. This 1,293-acre park includes many regional cultural facilities such as the Art Museum, History Museum, Jewel Box Conservatory, Municipal Opera outdoor theater, Science Center, and Zoo. Forest Park also contains golf courses and an outdoor skating rink. The

Study Area also includes the Jefferson National Expansion Memorial with the Gateway Arch along the Downtown riverfront. Many additional small parks and playgrounds are also located within the Study Area in the City.

Active recreational or spectator facilities for the region are also located within this Study Area. The three largest are Downtown and include:

- Busch Memorial Stadium — Cardinals National League Baseball
- Kiel Center — Blues National Hockey League, Ambush National Professional Soccer League, and St. Louis University Billikens NCAA Basketball
- Trans World Dome — Rams National Conference Football

Along Grand Boulevard, north of St. Louis University's main campus is the Grand Center Arts and Entertainment District which includes the renovated Fox Theater for stage productions; St. Louis Symphony Hall; the offices and studios of KETC, Channel 9, the local public television station, and several smaller theaters for shows and presentations.

The Study Area contains only two country clubs; Norwood Hills at the intersection of Lucas Hunt Road and West Florissant Avenue and Paddock along Old Halls Ferry Road south of Lindbergh Boulevard at Coldwater Creek.

2.1.6 Vacant/Agricultural Land Uses

Within this Study Area there is little agricultural land use. A few acres still are farmed along Coldwater Creek in the northern part of the Study Area and in several tracts north of I-270 and east of Larimore Road.

Vacant land is also in short supply, but can be considered to be of two types; fallow ground that was once farmed and is not used now and urbanized land that has been cleared for eventual redevelopment. Virtually the entire fallow ground category is found north of I-270 and east of West Florissant Avenue/New Halls Ferry Road. Much of this land within the Study Area is along Coldwater Creek in the City of Black Jack and is only now being viewed as developable for moderately high priced ($150,000) single-family housing as indicated by field inspection and observation of new construction signs showing unit prices.

Another large vacant site is the southwest quadrant of the I-270/Lewis and Clark Boulevard interchange in the north-central part of the Study Area. This property is owned by the Missouri Department of Transportation (MoDOT) and contains approximately 140 acres. MoDOT is considering selling the property and the City of Bellefontaine Neighbors' plan indicates it could be used for a variety of commercial-type land uses.

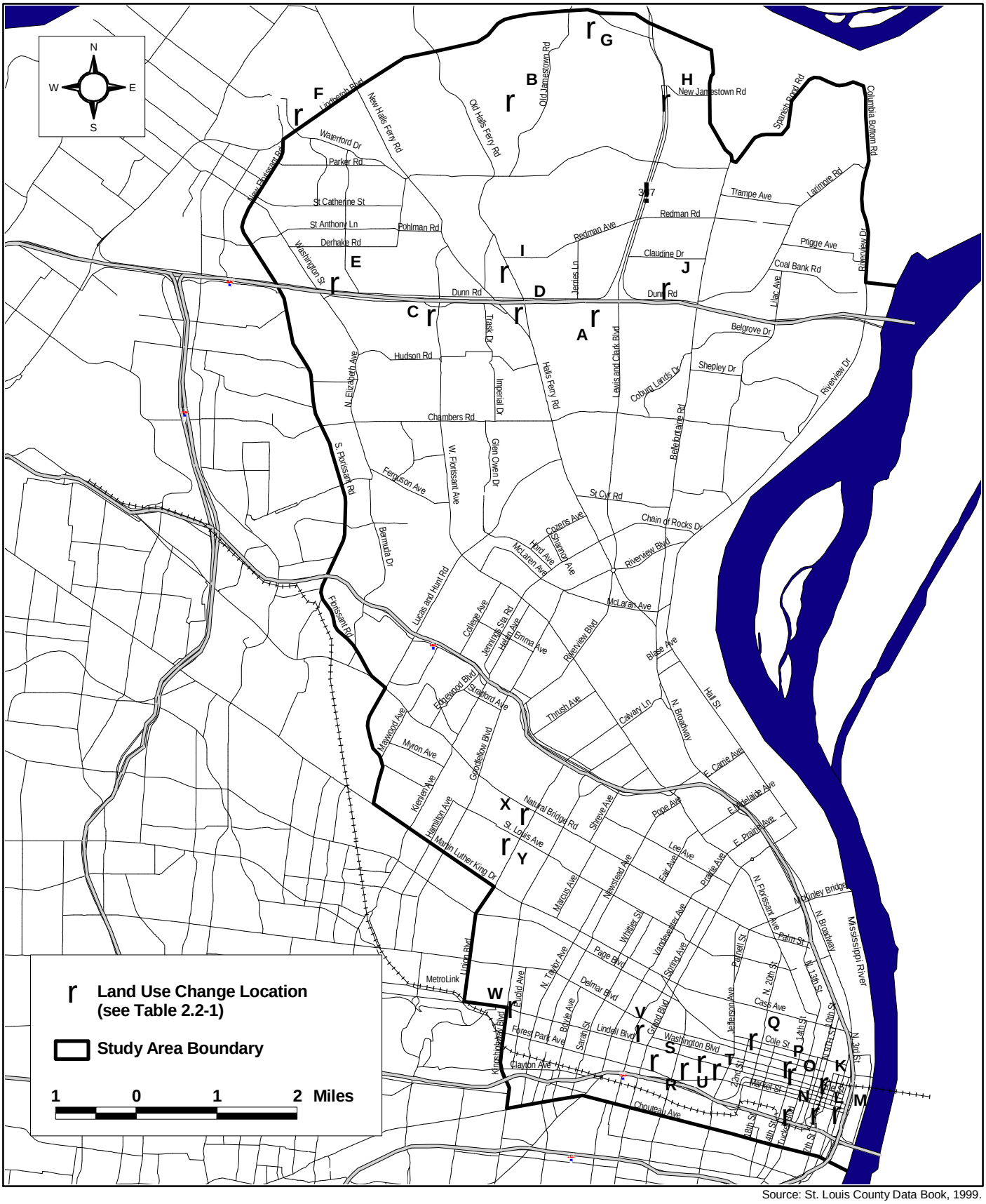
2.2 RECENT AND PLANNED MAJOR DEVELOPMENT

While this Study Area contains some of the oldest urban development in the St. Louis region, it has not kept up with the overall development pace of other areas in the region nor with the region as a whole. In fact, some of the oldest developed areas, especially in the City of St. Louis, are now being made available for redevelopment with either similar land uses of less density or totally different land uses. There is also development taking place adjacent to the Study Area, especially to the north of Lindbergh Boulevard. The recent or planned major developments in the incorporated communities, unincorporated Census Designated Places (CDP), and other areas not so designated, are identified alphabetically in Figure 2.2-1, discussed in the following sections, and listed in Table 2.2-1. Figure 2.2-2 shows the Cities and CDPs by name. Only those cities with major, planned developments are described below.

2.2.1 Summary of Recent Developments

Within the Northside Study Area, recent developments have taken place in two general geographic areas: north of I-270 and along the southern boundary of the Study Area, including the Downtown area west to

Forest Park. The developments north of I-270 are either infill housing on previously marginal land or new and/or redeveloped commercial retail land use.



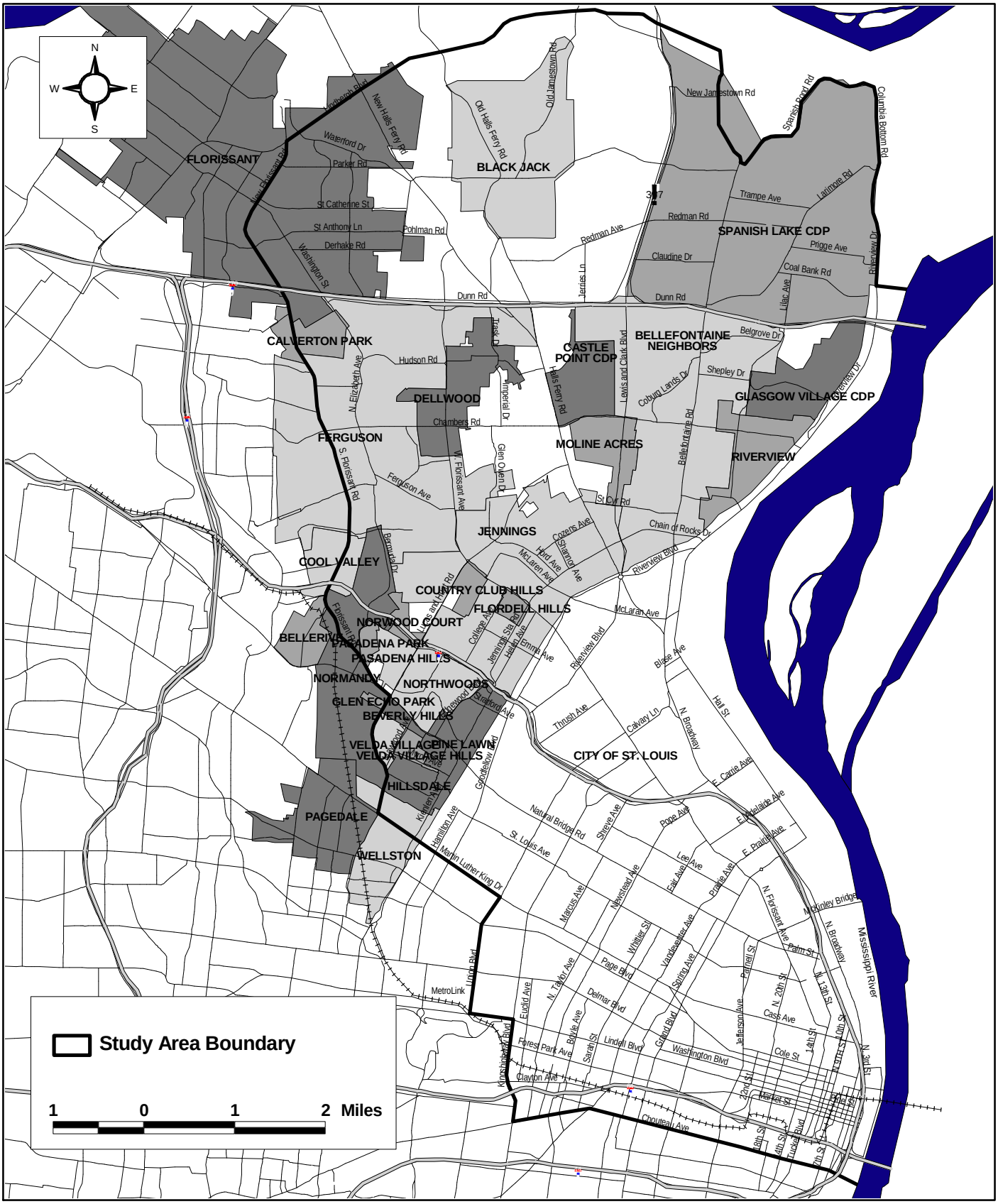
Source: St. Louis County Data Book, 1999.

Figure 2.2-1
Recent and Planned Development

TABLE 2.2-1
RECENT AND PLANNED MAJOR DEVELOPMENTS

Map Designation	Development Description
A	140-Acre Vacant Land Available for Development
B	Residential Construction Completing Subdivisions
C	North County Festival "Power Center" – 392,000 square feet
D	The Crossings at Halls Ferry "Power Center" – 277,000 square feet
E	Remodeled Grandview Shopping Center – 225,000 square feet
F	Grandpa Pidgeon's Center - 250,000 square feet
G	Jamestown Mall Expansion – 1,200,000 square feet total
H	In-Fill and Completion of Subdivision Residential Developments
I	Target Store – 100,000 square feet
J	GEM Department Store – 200,000 square feet
K	1,000-Room Marriott Renaissance Convention Hotel
L	250-Room Westin Hotel plus Rehabbing of Cupples Station Area
M	225-Room Drury Inn and Suites Hotel
N	300-Room Unflagged Suites Hotel
O	Washington Avenue 'Loft District"
P	City Museum
Q	St. Louis Commerce Center
R	Harris Stowe State College Campus Expansion
S	St. Louis University Campus Expansion
T	A. G. Edwards & Sons Expansion
U	Sigma Corporation Engineering Campus
V	New KETC, Public TV and Continental Building Rehabilitation
W	Chase Hotel Rehabilitation
X	Union – Seventy Business Park
Y	City Plaza with Schnucks Supercenter

Source: Discussions with City staff, representatives of the St. Louis Post-Dispatch, St. Louis Business Journal, local newspapers, etc., 1999.



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

Figure 2.2-2
City Boundaries

Along the southern boundary within the Downtown area, the new and redeveloped land uses focus on hotel and office space. The announced hotel developments all include at least partial rehabilitation of one or more older structures, while the new office space is scheduled for land that once held federally funded housing projects. The following are more specific discussions of recent and planned developments in these municipalities where they have occurred.

2.2.2 Bellefontaine Neighbors

This community is contained entirely within the Study Area and is one of the oldest in this part of St. Louis County. It has been one of the most stable in terms of maintaining its tax base and providing not only the basic public services, but also added services such as numerous programs at the community center and greater public park space than is normally provided by a similar sized community.

The City has recently completed a new Comprehensive Plan (Comprehensive Plan for the City of Bellefontaine Neighbors, April, 1998) that identifies areas that may need attention over the next ten years as well as some that are opportunities and should be "directed" for the future. Development of the aforementioned vacant land in the southwest quadrant of the I-270/Lewis and Clark Boulevard interchange (A) is suggested by the Comprehensive Plan with the City purchasing the land from MoDOT, preparing development guidelines for the property, and offering it to developers on the open market. The suggested use for the land in the Comprehensive Plan is a mix of commercial use types including medical offices and general office along with retail along the Lewis and Clark Boulevard frontage south of the site.

2.2.3 Black Jack

All of Black Jack is also within the Study Area, but it is one of the newest cities in all of St. Louis County having been incorporated in 1970. The City's land use is almost entirely residential with only a small commercial area at its "crossroads" of Old Halls Ferry and Parker Roads. Jamestown Mall, a potential tax source, remains just outside of the City limits north of Coldwater Creek.

Presently, the City is seeing development of previously "uncompleted" residential subdivisions in the area north of Parker Road (B). Some of the homes in these areas are selling for up to $250,000 with most in the $125,000 range.

2.2.4 Ferguson

About 80 percent of this City lies within the Study Area along the western boundary of West Florissant Avenue with the northern border being I-270. The old "Downtown" area, centered along New Florissant Road at the Norfolk Western railroad line, is split by the western Study Area boundary. Two significant land use changes have either taken place or are progressing in Ferguson. The first development is the North County Festival (C) in the southwest quadrant of the interchange of I-270 and West Florissant Avenue. Two "Big Box" retail stores along with other shops and restaurants in outlots along the periphery anchor this five-year old 392,000 square foot development.

The second development is The Crossings at Halls Ferry (D) located in the triangle formed by New and Old Halls Ferry Roads and I-270. This 277,000 square foot development will be a "Power Center" with a large supermarket and home improvement store along with additional shops and outlot restaurants. It is a Tax Increment Financing (TIF) project that replaces a closed shopping center (telephone conversations with St. Louis County Planning Department staff, various dates in January and February 1999).

2.2.5 Florissant

The Study Area's western and northern boundary split this City with about 60 percent of it lying to the west of the Study Area boundary and 40 percent within the Study Area. Virtually all of the City's development that is in the Study Area was built in the 1960s and early 1970s with most of the land being in single-family

residential and commercial uses along the major roadways. A small part of Old Town Florissant, which dates back to the late 1700s and early 1800s, is located in the Study Area east of New Florissant Road.

Two major land use changes have occurred recently dealing with a rehabilitation of an older commercial center and a new commercial development . The rehabilitated use is the Grandview Shopping Center (E). This 225,000 square foot center was remodeled approximately five years ago and now contains a 65,000 square foot supermarket, a 100,000 square foot home improvement store, and a 40,000 square foot drug store along with smaller shops.

A new "Power Center" is under construction in the northwest corner of the intersection of North Lindbergh Boulevard and North Waterford Drive (F). This 250,000 square foot center will contain two discount department stores along with other shops and restaurants in outlots along the periphery.

2.2.6 Unincorporated St. Louis County

Virtually all of the Study Area is incorporated into 23 municipalities. Many of these municipalities are nothing more than a suburban subdivision or several streets. The majority of the incorporations were completed in the late 1940s and the early 1950s after World War II. The oldest communities are Florissant and Ferguson, which were incorporated in 1857 and 1894, respectively. The newest municipality is Black Jack, which was incorporated in 1970.

Within this mix of municipal boundaries, there are very few small pockets of unincorporated St. Louis County. Three of these areas are designated CDPs, Castle Point, which is located west and south of Bellefontaine Neighbors, north of Chambers Road, and east of Halls Ferry Road; the majority of the unincorporated land within the Study Area is located north of I-270 and east of the Florissant City limits. In this area, the only incorporated municipality is Black Jack. Glasgow Village, located north of Riverview, south of I-270 and between Bellefontaine Neighbors on the west and the City of St. Louis on the east; and Spanish Lake covering the entire Study Area north of I-270 and east of Lewis and Clark Boulevard (Mo Route 367).

Major land use changes in this unincorporated area include the recent expansion of Jamestown Mall (G) to over 1.2-million square feet including the addition of two department stores and a 14-screen theater, and continued housing development both east and west of Lewis and Clark Boulevard (H). Two locations in this area appear to be ripe for redevelopment. The first of these is a Target Store (I) located along Target Drive between New and Old Halls Ferry Roads north of I-270. The possibility of redevelopment may not be great, however, due to the Crossings at Halls Ferry development taking place on the south side of I-270.
The second area is the site of an old GEM discount department store (J) along the north side of Dunn Road west of Bellefontaine Road near the Hazelwood East High School complex (telephone discussions with St. Louis County Planning Department staff, various dates in January and February 1999).

2.2.7 City of St. Louis

Within the part of the City of St. Louis in the Study Area, there are several locations where major land use changes have recently happened or are planned for the near future. In the Downtown area east of Jefferson Avenue, several new hotel developments have been announced recently. These include the following:

- A 1,000-room convention hotel (K) that will be operated by Marriott and carry the Renaissance Hotel flag. This facility will reuse two, historic hotel structures and add a 25–35 story tower to complete the project.
- A 250-room Westin Hotel (L) that will be located in the Cupples Station Warehouse buildings along the south edge of Downtown at the Busch Stadium MetroLink light-rail line station. The hotel is the first phase of the redevelopment of most of the Cupples buildings extending to 11th Street. Subsequent phases include an extended-stay hotel/apartment, renovation of five buildings and construction of two new ones, a glass dome connecting six of the seven buildings and an 800-car garage (St. Louis Post-Dispatch, February 5, 1999).
- A 225-room Drury Inn and Suites hotel (M) located at 4th and Market Streets in the Fur Exchange Building and two adjacent former office buildings.

- A 300-room suites hotel (N), as yet not flagged, in the Edison Brothers' Company Warehouse on the southeast corner of 14th and Spruce Streets adjacent to the Kiel Center MetroLink Station.

In addition to these specific announced projects, other parts of Downtown are experiencing additional activity. One of these areas is along Washington Avenue west of Tucker Boulevard (O). This old garment district has many loft-type buildings that have recently become in demand as apartments, condominiums, artists' studios, and nightclubs. The previously mentioned City Museum (P) also has been recently opened in this area and a local developer has announced plans to build the St. Louis Commerce Center (Q) on a 20-acre tract bounded by Dr. Martin Luther King Drive on the south and Carr Street on the north between 20th and 23rd Streets. Two companies have already indicated they will move into the new business park (St. Louis Business Journal, January 18-24, 1999).

On the west side of Jefferson Avenue, in the old Mill Creek Redevelopment Area, two schools and a private company have divided the now cleared land for expansion of their facilities. Harris Stowe State College (R) has started construction on the first of several buildings of an expanded campus along Market Street, the south edge of the overall area. St. Louis University (S) has expanded its main campus east to Compton Avenue and brought its Aeronautical and Engineering School to a new facility in this area. A. G. Edwards & Sons (T), a brokerage company, has used the eastern part of the area to expand its headquarters located in the northwest corner of Market Street and Jefferson Avenue. In fact, a very recent announcement indicates that the company plans to build between 600,000 and 800,000 square feet of additional office space west of their existing buildings. There also is speculation that Sigma Corporation, a chemical company, may build an engineering campus west of A. G. Edwards facilities and north of Harris Stowe State College's campus (U) (St. Louis Post-Dispatch, January 20, 1999, and St. Louis Business Journal, January 25-31, 1999).

Along Grand Boulevard, north of the St. Louis University Campus, two recent actions have added to this growing cultural district. KETC, Channel 9, the public television station for the St. Louis region, recently moved their offices and studios to a new facility in the northwest corner of Olive Street and Spring Avenue (V). Immediately east of this location, another developer has announced plans to rehabilitate the Art Deco, 30-story, Continental Building on Olive Street just west of Grand Boulevard (St. Louis Post-Dispatch, February 25, 1999).

Farther west, in the northwest corner of Lindell and Kingshighway Boulevards, the Chase Hotel (W) is being renovated to include apartments and a five-screen theater for independent films. The Chase was "the hotel" in St. Louis for many years through the 1940s to the late 1960's to early 1970's.

Outside of this "central corridor" area of the Study Area, the most new development activity in the City has taken place in and near the old General Motors Assembly Plant at Natural Bridge Avenue and Union Boulevard. The plant itself and its surrounding property has been converted to the Union-Seventy Business Park (X) which includes a new plant for the local Pepsi-Cola Bottler and several warehousing and light industrial companies. On the south side of Natural Bridge Avenue, across the street from the Business Park, Schnucks Markets has opened a new, 65,000-square-foot, 24-hour grocery store (Y) along with several other shops in City Plaza. This store marks a new commitment to the north St. Louis population by Schnucks.

2.3 PLANS AND POLICIES/INSTITUTIONAL CONSTRAINTS

2.3.1 Plans and Policies

A review of the available Comprehensive Plans for the 23 incorporated communities and the Spanish Lake CDP within the Study Area and the unincorporated parts of St. Louis County indicates a wide variation in the comprehensive plan updates. Some communities have no plan because they are small in both size and population, while others have a totally homogeneous land use, which is almost always single-family residential. Other communities, such as Bellefontaine Neighbors, actively use their plan and update it on a regular basis. Still other communities have a plan, but it is well over 20 to 30 years old. Therefore, the comprehensive plans may not always reflect current transportation improvement opportunities.

2.3.2 Institutional Constraints

Perhaps the greatest institutional constraint to land use policies in the St. Louis region is the decentralization of the entire area, but especially St. Louis County, into the multitude of individual municipalities and taxing districts. St. Louis County alone has 92 incorporated municipalities ranging in population (1990 Census Data) from 11 in Champ to 51,038 in Florissant. In addition to these 92 municipalities, there is a total of 198 other taxing districts for which St. Louis County collects taxes. Some of the larger number of districts includes the following categories:

- Subdistricts of the Metropolitan St. Louis Sewer District (MSD) 38
- Public School Districts 24
- Fire Protection Districts 23

The remainder of these taxing districts includes a community college system, libraries, Zoological Park and museums, Sheltered Workshop and Residence Fund, and Special Business. Added to this total is a large number of Tax Increment Financing (TIF) Districts within the various municipalities as well as other miscellaneous districts, resulting in a total of about 300 TIF taxing entities within St. Louis County.

As a result of the large number of taxing bodies, there is disparity in the ability of both municipalities and school districts to provide comparable levels of municipal and teaching services to people residing within the particular districts or municipalities. Typically, the municipalities and school districts must levee a high tax rate since they do not have a large or high-valued property tax base on which to rely for municipal and school district services. This leads to increased competition for land uses that augment local tax bases and political pressure to more readily make zoning changes.

2.4 NEIGHBORHOOD CHARACTERISTICS

Due to the large number of municipalities (23) in the St. Louis County part of the Study Area and the equally large number of neighborhoods (33) in the City of St. Louis' portion of the Study Area , "Neighborhood Identification" is, in fact, both municipal and City neighborhood identification. These municipalities and City neighborhoods are presented along with Census data as a basis for comparison. Table 2.4-1 presents that information for St. Louis County municipalities, while Table 2.4-2 follows with the same data for the City of St. Louis neighborhoods. Figure 2.2-2 shows the individual municipalities and Figure 2.4-1 shows the City of St. Louis neighborhoods within the Study Area.

2.4.1 St. Louis County

The data indicates that the Study Area has a very low median value of owner-occupied homes with only one community, Pasadena Hills, having homes valued over $100,000. The lowest value was $26,900 in Hillsdale. Rental units in the Study Area range from a low monthly rent of $188 in Uplands Park to a high rent of $428 per month in Pasadena Park. Annual household income for 1989 also is low compared to St. Louis County as a whole from a low of $18,667 in Hillsdale to a high of $47,132 in Pasadena Hills.

Average people per household size ranges from 3.14 in Hillsdale to 2.31 in Riverview with the remainder, including the County portion of the Study Area, falling between these two figures. Poverty levels are higher in this Study Area than in the remainder of the St. Louis region as a whole. A total of eight communities have poverty levels, as defined by the U. S. Bureau of the Census, greater than ten percent and two of those have poverty rates over 20 percent: Hillsdale at 26 percent and Pine Lawn at 22 percent. The lowest poverty rate in the Study Area is three percent in Florissant, Pasadena Hills, and Uplands Park.

TABLE 2.4-1
COMMUNITY COMPARISONS

Municipality	Area in Square Miles - 1998	Census Population 1990 [1]	Percent Population Change 1980-1990	Percent of Population - 1990		1998							1989		
				White	Black	Total Housing Units	Single-family Units	Multi-family Units	Percent Owner Occupied [2]	Median Value Owner Occupied Units	Median Contract Rent	Average Household Size [3]	Median Household Income	Per Capita Income	Percent Persons Below Poverty
Bellefontaine Neighbors	4.36	10,918	-10%	92%	8%	4,560	4,383	160	93%	$57,500	$418	2.35	$31,726	$14,277	4%
Beverly Hills	0.1	660	-7%	14%	86%	295	246	46	77%	$39,200	$269	2.40	$25,687	$12,040	10%
Black Jack	2.61	6,131	16%	55%	44%	2,078	1,602	465	75%	$86,800	$385	2.93	$42,813	$14,843	6%
Calverton Park	0.42	1,473	-14%	94%	5%	568	538	6	89%	$50,100	$373	2.68	$34,353	$15,681	4%
Cool Valley	0.45	1,407	-32%	45%	53%	874	463	409	87%	$52,400	$364	2.65	$32,546	$12,594	10%
Country Club Hills	0.17	1,348	2%	61%	39%	554	535	7	91%	$39,400	$386	2.51	$32,546	$11,813	9%
Dellwood	1.05	5,245	-15%	90%	9%	2,009	1,975	32	94%	$56,800	$409	2.67	$35,773	$13,922	4%
Ferguson	6.22	22,290	-9%	74%	25%	9,348	6,792	2,512	69%	$57,100	$365	2.52	$29,450	$13,498	6%
Flordell Hills	0.12	969	5%	50%	49%	401	368	23	82%	$36,800	$300	2.56	$27,727	$10,784	7%
Florissant	11.63	53,972	-5%	95%	4%	20,945	15,939	3,770	79%	$67,200	$411	2.61	$36,809	$14,914	3%
Hillsdale	0.34	1,948	-13%	7%	93%	747	640	96	69%	$26,900	$240	3.14	$18,667	$7,643	26%
Jennings	3.79	15,841	-6%	51%	48%	6,870	5,713	1,137	75%	$42,200	$286	2.49	$24,668	$11,054	11%
Moline Acres	0.57	2,713	-2%	30%	68%	1,043	848	187	80%	$54,600	$362	2.78	$29,014	$11,182	10%
Normandy	1.85	5,063	-2%	46%	50%	2,171	1,099	820	57%	$49,000	$345	2.40	$24,804	$12,444	9%
Northwoods	0.67	5,106	-12%	11%	89%	1,830	1,790	29	93%	$48,500	$349	2.83	$33,393	$12,260	10%
Norwood Court	0.13	888	1%	17%	82%	594	58	534	9%	$58,400	$397	2.59	$25,345	$18,199	6%
Pasadena Hills	0.21	1,165	-5%	55%	44%	484	342	142	73%	$108,600	$395	2.51	$47,132	$22,305	3%
Pasadena Park	0.10	532	0%	69%	29%	234	231	2	91%	$64,700	$428	2.33	$37,692	$17,283	7%
Pine Lawn	0.61	5,083	-23%	6%	93%	1,835	1,506	313	70%	$34,900	$258	3.09	$19,868	$7,410	22%
Riverview	0.84	3,242	-1%	91%	8%	1,502	1,023	583	64%	$49,000	$300	2.31	$31,890	$14,084	9%
Uplands Park	0.07	499	-13%	6%	93%	182	179	3	93%	$48,000	$188	2.92	$32,750	$11,494	3%
Velda City	0.17	1,597	-19%	6%	93%	639	524	111	75%	$40,600	$326	2.70	$26,414	$10,838	15%
Velda Village Hills	0.12	1,315	-8%	4%	96%	477	265	6	93%	$42,200	$319	2.87	$28,594	$11,631	8%
City of St. Louis	61.00	396,685	-12%	15%	79%	21,283	20,700	583	NA	NA	NA	NA	$17,822	NA	NA

Source: 1980 & 1990 Census of Population, US Bureau of the Census, Department of Commerce, Washington, DC, 1982 & 1992;
"The 1998 Fact Book", Research and Statistics Division, St. Louis County Department of Planning, St. Louis County,. MO, 1998.

Notes: [1] Includes annexations. Incorporated limits do not necessarily conform to Study Area boundary.

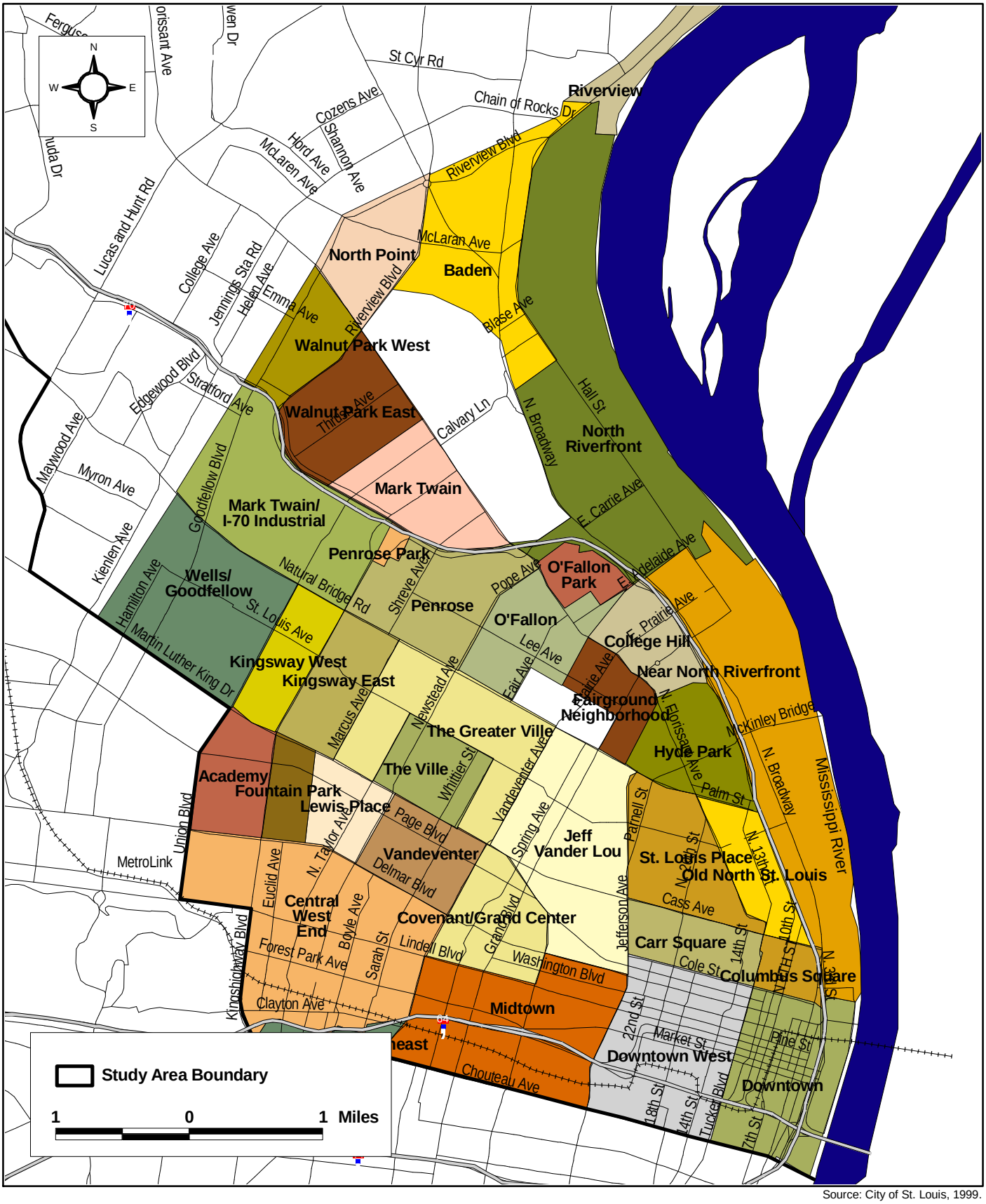
[2] Occupied units.

[3] Number of Persons.

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

Neighborhood Name	Census Population 1990	Percent Popula-tion 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 House-hold Size	Median House-hold Income	Per Capita Income	Percent Persons Below Poverty
Downtown	1,152	3%	66%	32%	1,239	10	1,221	1%	N/A	$456	1.28	$24,672	$19,886	0%
Downtown West	2,535	-35%	59%	39%	1,963	4	1,922	1%	N/A	$940	1.64	$22,741	$10,213	1%
Midtown	4,412	-26%	31%	66%	3,175	759	2,357	1%	N/A	$1,942	2.03	$25,473	$12,134	2%
Central West End	16,565	0%	59%	38%	6,181	871	5,116	23%	$167,622	$341	1.88	$33,660	$17,504	2%
Forest Park Southeast	2,452	-11%	32%	66%	1,979	572	1,377	34%	$20,306	$329	2.67	$15,737	$7,686	3%
Wells/Goodfellow	11,738	-19%	1%	99%	5,094	2,067	2,991	45%	$29,364	$319	2.90	$16,459	$6,650	4%
Academy	5,169	-23%	***0%***	99%	1,878	859	1,009	49%	$38,520	$327	3.22	$14,680	$7,359	39%
Kingsway West	4,182	-13%	1%	98%	1,972	609	1,346	42%	$38,820	$333	2.43	$17,060	$7,974	32%
Fountain Park	2,333	-16%	1%	99%	1,200	247	929	29%	$60,200	$356	2.47	$16,147	$11,439	42%
Lewis Place	2,696	-28%	1%	99%	1,142	427	956	44%	$31,280	$324	2.65	$14,236	$6,264	63%
Kingsway East	5,037	-14%	***0%***	99%	2,255	1,029	1,206	53%	$38,350	$283	2.54	$18,355	$8,374	37%
The Greater Ville	12,483	-11%	1%	99%	5,859	2,149	3,661	44%	$28,554	$303	2.60	$13,125	$6,889	22%
The Ville	3,061	-36%	***0%***	99%	1,666	592	1,056	31%	$35,886	$307	2.50	$11,964	$7,100	60%
Vandeventer	3,480	-26%	1%	99%	1,686	544	1,121	42%	$32,283	$311	2.81	$14,102	$6,694	45%
JeffVanderLou	8,177	-37%	1%	99%	3,797	1,217	2,537	34%	$31,062	$284	2.81	$12,231	$6,864	70%
St. Louis Place	3,799	-23%	14%	85%	1,691	559	1,116	38%	$26,770	$351	3.22	$14,756	$6,470	39%
Carr Square	3,070	25%	1%	98%	1,925	409	1,473	2%	$14,999	$225	2.30	$8,743	$4,628	52%
Columbus Square	2,047	18%	7%	93%	1,235	96	1,125	7%	$93,750	$332	2.51	$16,003	$9,563	60%
Old North St. Louis	2,221	-8%	47%	48%	1,300	226	1,056	22%	$14,999	$223	2.66	$13,229	$4,835	25%
Near North Side	1,397	-50%	56%	42%	533	278	255	36%	$56,850	$356	3.16	$7,537	$4,414	34%
Hyde Park	4,917	-18%	32%	68%	2,366	688	1,655	34%	$26,725	$283	2.84	$11,652	$6,710	46%
College Hill	5,439	12%	8%	92%	2,126	854	1,254	43%	$28,500	$341	3.52	$17,335	$6,248	10%
Fairground	3,026	-39%	3%	97%	1,284	559	714	46%	$28,263	$344	3.09	$15,763	$517	42%
O'Fallon	8,901	-15%	1%	98%	3,584	1,300	2,239	51%	$40,873	$363	2.91	$16,501	$8,471	29%
Penrose	8,451	-22%	1%	99%	3,680	2,022	1,635	60%	$38,118	$363	2.52	$19,897	$10,027	15%
Mark Twain/I-70 Industrial	1,581	16%	3%	96%	405	398	4	91%	$26,000	$330	4.00	$17,266	$5,243	26%
Mark Twain	6,902	-13%	1%	98%	2,496	1,580	885	57%	$34,363	$369	3.12	$18,383	$7,283	33%
Walnut Park East	7,353	-16%	3%	97%	2,428	2,063	348	65%	$32,633	$357	3.61	$21,262	$8,123	31%
North Point	5,657	4%	6%	93%	1,937	1,647	273	83%	$43,200	$406	3.05	$26,884	$8,955	21%
Baden	7,156	-15%	42%	58%	3,088	2,051	1,004	65%	$42,111	$334	2.67	$22,756	$9,869	12%
Riverview	329	-33%	56%	43%	177	100	77	55%	$29,600	$326	2.30	$14,600	$9,240	92%
Walnut Park West	4,610	-28%	3%	97%	1,502	1,369	120	80%	$36,180	$401	3.37	$21,738	$7,683	19%
Covenant Blu/Grand Center	4,175	-16%	25%	73%	2,107	340	1,701	9%	$45,383	$296	2.80	$8,914	$5,466	51%
Total	**166,503**	-30%	83%	15%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

1980 & 1990 Census of Population, US Bureau of the Census, Department of Commerce, Washington, DC, 1982 & 1992.
The 3 neighborhoods showing 0% (bold) for the percentage of White population actually have less than 0.5% of White population.
Data shown for Neighborhood 39 is 60% of that neighborhood's total for each category. However, 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: City of St. Louis, 1999.

Figure 2.4-1
City Neighborhoods

2.4.2 City of St. Louis

Median home prices range from a high of over $167,000 in the Central West End to a low of $14,999 in both Carr Square and Old North St. Louis Neighborhoods. The high value in the Central West End Neighborhood is due to the large number of private streets that have residences ranging into the millions of dollars. Other parts of this neighborhood have undergone extensive rehabilitation and construction of new housing over the past 25 years resulting in an overall fairly new housing stock in an old and historic area. The Columbus Square Neighborhood is similar in that new housing has been built and this is reflected in the median value of over $93,000. Only two other neighborhoods have median housing values over $50,000: Fountain Park at $60,200 and Near North Side at $56,850.

Average persons per household size in the City portion of the Study Area ranges from a high of 4.00 in the Mark Twain/I-70 Industrial Neighborhood to a low of 1.28 in Downtown. Like St. Louis County's portion of this Study Area, poverty levels are higher here than in any other part of St. Louis City. Seven of the neighborhoods have poverty levels of over 50 percent with the highest, 92 percent, in the Riverview Neighborhood. Only six neighborhoods have poverty levels fewer than ten percent and five of these are along the southern boundary of the Study Area east of Forest Park.

The overall characteristics of the Northside Study Area is one of low income, racially mixed, low home values and relatively low home ownership, and high incidences of poverty with household sizes close to the regional average.

2.5 MAJOR UTILITY CORRIDORS

Two significant utility corridors can be found in the Northside Study Area (see Figure 2.5-1). The first, primarily utilized by AmerenUE, is a east-west corridor which runs roughly parallel and midway between Chambers and Lucas-Hunt Roads. This corridor is partially owned outright by AmerenUE with remaining parcels held in neighborhood trusts or owned by St. Louis County. The width of this corridor varies between 100 and 150 feet.

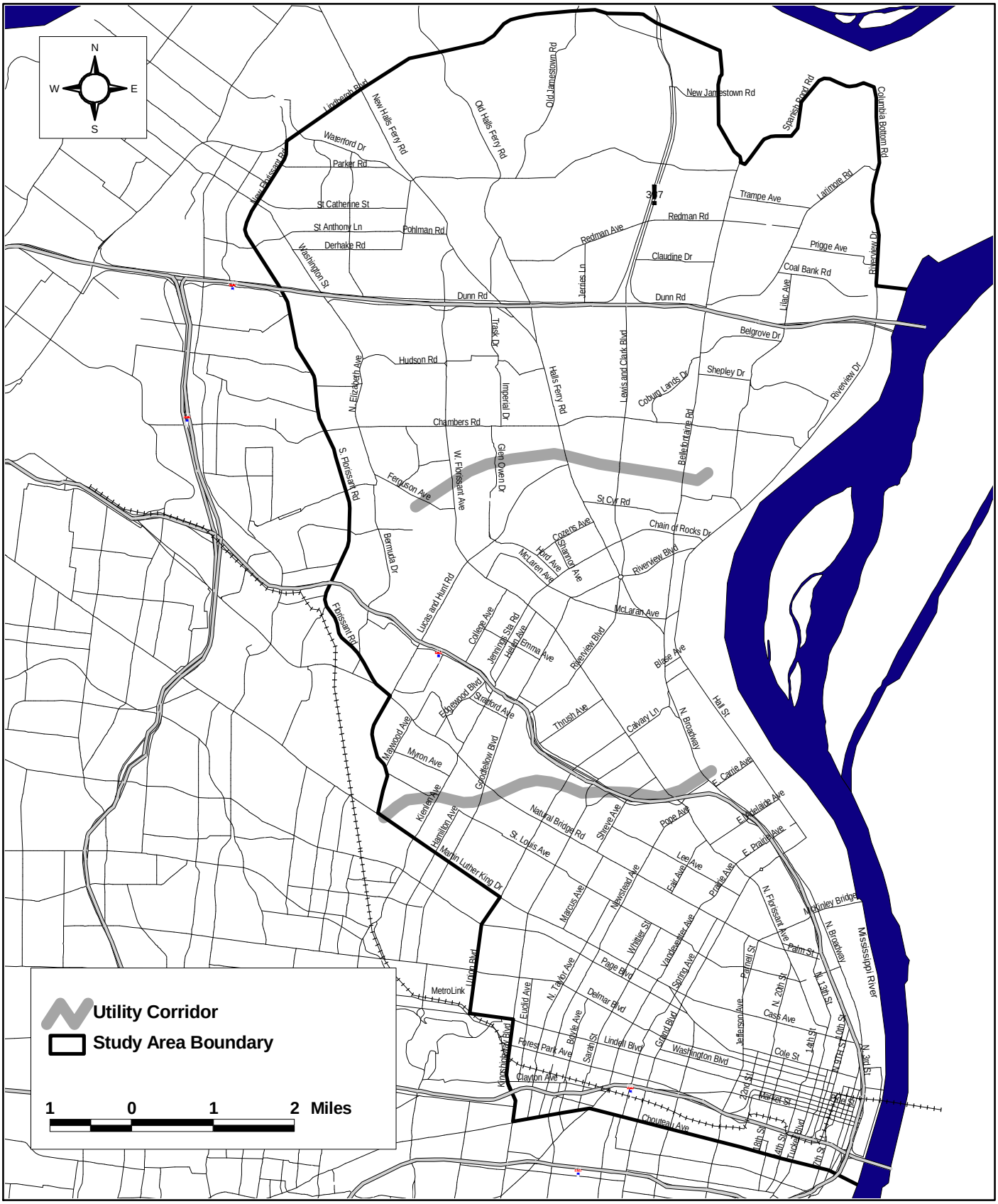
A second utility corridor can be found in the northern portion of the City of St. Louis. This corridor is generally 100 feet wide and also runs east-west. The approximate limits of the corridor are Broadway to St. Charles Rock Road. The corridor is parallel to and roughly follows the Terminal Railroad right-of-way and I-70. Information is not readily available pertaining to the ownership of the parcels comprising this corridor.

2.6 TRENDS IN LAND VALUES

2.6.1 St. Louis County

One of the best indicators of a city's economic and demographic stability is its aggregate assessed value over time. The St. Louis County Department of Revenue provided the assessed value for each of the 23 county municipalities within the Northside Study Area as they were on January 1st for the years 1990 and 1998. This assessed value includes both real estate and personal property values as well as a total valuation for each municipality. This information is depicted in Table 2.6-1 and shows the percentage change from the 1990 value to the 1998 value.

The data in the table indicates that communities to the north, Black Jack and Florissant, and those with higher average home assessments, Pasadena Hills, have greater increases in their assessed value than the other communities. The data indicates that several of the very small municipalities near the western limits of the City of St. Louis (e.g., Beverly Hills, Uplands Park, Velda City, and Velda Village Hills) all have increased assessed values of over 10 percent with Velda City having an increase in its assessed value of over 20 percent. One nearby municipality (Hillsdale), however, has experienced a 15 percent decrease in its assessed value.



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

Figure 2.5-1
Existing Utility Corridors

In terms of total dollar amount increase of assessed value, Florissant had the greatest increase of over $48 million followed by Black Jack with over $10 million. The next largest increases were in Ferguson with $6.2 million and Bellefontaine Neighbors with over $5.5 million. Such increases would be expected since these communities are both the largest geographically and have the largest tax bases. The greatest decreases occurred in Jennings ($3.35 million) and Hillsdale ($1.19 million).

Overall, property values in this Study Area are mixed depending on the location of the municipality. The farther north the municipality is, the more likely it will have a greater increase in its assessed value.

TABLE 2.6-1
MUNICIPAL ASSESSED VALUE COMPARISONS – ST. LOUIS COUNTY

	Assessed Value ($M) on 1/1/90			Assessed Value ($M) on 1/1/98			Change 1990 to 1998	
Municipality	Real Estate	Personal Property	Total	Real Estate	Personal Property	Total	Number	Percentage
Bellefontaine Neighbors	59.505	11.859	71.364	65.489	11.379	78.868	5.504	8%
Beverly Hills	2.624	0.658	3.282	2.709	0.890	3.599	0.317	10%
Black Jack	33.104	6.720	39.824	38.154	10.117	48.271	10.117	27%
Calverton Park	6.502	1.359	7.861	6.518	1.694	8.212	0.351	4%
Cool Valley	9.184	2.976	12.160	8.669	3.303	11.972	(0.188)	-2%
Country Club Hills	4.522	1.205	5.726	4.227	1.370	5.597	(0.129)	-2%
Dellwood	26.254	6.250	32.504	26.286	7.572	33.858	1.354	4%
Ferguson	124.225	29.230	153.454	121.492	54.924	159.686	6.232	4%
Flordell Hills	2.938	0.723	3.661	2.973	0.881	3.854	0.193	5%
Florissant	293.357	61.900	355.256	319.567	83.799	403.366	48.110	14%
Hillsdale	5.208	2.880	8.088	3.858	3.040	6.898	(1.190)	-15%
Jennings	62.652	13.793	76.445	56.947	16.145	73.091	(3.354)	-4%
Moline Acres	11.241	2.395	13.635	10.136	3.157	13.293	(0.342)	-3%
Normandy	23.477	4.856	28.334	22.638	6.872	29.510	1.176	4%
Northwoods	18.175	4.911	23.087	17.668	5.939	23.607	0.520	2%
Norwood Court	3.998	0.762	4.761	2.966	1.051	4.017	(0.744)	-16%
Pasadena Hills	7.583	1.291	8.874	8.421	1.689	10.110	1.236	14%
Pasadena Park	2.858	0.535	3.393	2.901	0.634	3.535	0.142	4%
Pine Lawn	12.224	2.675	14.899	12.219	3.568	15.787	0.888	6%
Riverview	11.873	2.648	14.521	11.156	3.059	14.215	(0.306)	-2%
Uplands Park	1.601	0.428	2.029	1.698	0.561	2.259	0.230	11%
Velda City	4.541	1.208	5.749	4.571	1.340	5.910	1.339	23%
Velda Village Hills	3.614	1.058	4.671	3.858	1.333	5.191	0.520	11%

Source: St. Louis County Department of Planning, 1990 and 1998.

2.6.2 St. Louis City

In the City of St. Louis, assessed value data is not compiled on a neighborhood basis. Therefore, the average price of home sales, both single family and multifamily homes, for the years 1993 and 1997 were used for comparisons on a neighborhood basis. This information is presented in Table 2.6-2.

The data indicates a variable pattern of changes in average home sale prices in the St. Louis City portion of the Northside Study Area (see Figure 2.4-1 for location of City Neighborhoods). Within the single family category, the positive dollar amount of change ranges from a low of $269 in the Kingsway East Neighborhood to a high of $15,027 in the JeffVanderLou Neighborhood. The positive percentage change ranges from a low of one percent in the Kingsway East Neighborhood to a high of 247 percent in the Fairground Neighborhood. The negative dollar amount changes range from a low of $1,909 in Walnut Park West to a high of $44,437 in Columbus Square. In terms of percentage of value lost, the range is from a low of minus five percent in both Kingsway West and Walnut Park West to a high of minus 85 percent in Fountain Park.

The change in the average sale price of multi-family units also is variable across City Neighborhoods in the Study Area. The positive changes range from a low of $102 in Hyde Park to a high of $42,861 in the Central West End. The percentage change ranges from a low of less than one percent in Hyde Park to a high of 89 percent in St. Louis Place.

The negative absolute dollar changes in average sale prices range from a low of minus $3,096 in Vandeventer to a high of minus $55,529 in Lewis Place. The negative percentage of average housing value lost ranges from a low of minus 16 percent lost in Vandeventer to a high of minus 76 percent in Lewis Place.

This information demonstrates a range of change in home values in City Neighborhoods that is so variable that a pattern does not seem evident.

2.7 STUDY AREA SUMMARY

Based on the information presented in this section regarding the Northside Study Area, the following comments can be made:

- The Study Area contains some of the oldest development of all land use types in the region.
- Based on field inspection and discussions with staff at the St. Louis Community Development Agency, most of the manufacturing industry has left the Study Area due to market forces or changes in technology.
- Office and hotel land uses are concentrated in the St. Louis Downtown and recent announcements indicate that added space and rooms are due in the near future.
- Retail land use is concentrated in one superregional and several Power Center shopping centers, along with two shopping areas in the St. Louis CBD.
- Within the City of St. Louis' portion of the Study Area, field inspection indicates that much of the housing stock has either been razed or is in poor condition. Only one neighborhood has a median housing value over $100,000, and only three neighborhoods have a median housing value over $50,000.
- In St. Louis County's portion of the Study Area, a similar pattern exists with only one municipality having a median housing value of over $100,000 and ten municipalities having median housing values over $50,000.
- Population in both the incorporated municipalities and City neighborhoods has declined between 1980 and 1990. Cool Valley had the greatest decline, 32 percent, of the St. Louis County municipalities, while the Near North Side Neighborhood in the City of St. Louis experienced a 50 percent decline.
- In St. Louis County, median household income ranged from a low of $18,667 in Hillsdale to a high of $47,132 in Pasadena Hills. In the City of St. Louis, median household income ranged from a low of $7,537 in the Near North Side Neighborhood to a high of $33,660 in the Central West End Neighborhood.

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

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

Source: City of St. Louis Community Development Agency, 1997.

3.0 DEMOGRAPHICS

This section describes past, current and future projections of demographic information of the Northside Study Area. These factors include population, age, race, income distribution, housing, car ownership, and employment. For additional information regarding race and housing see Section 2.0. 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 Northside Study Area.

3.1 POPULATION

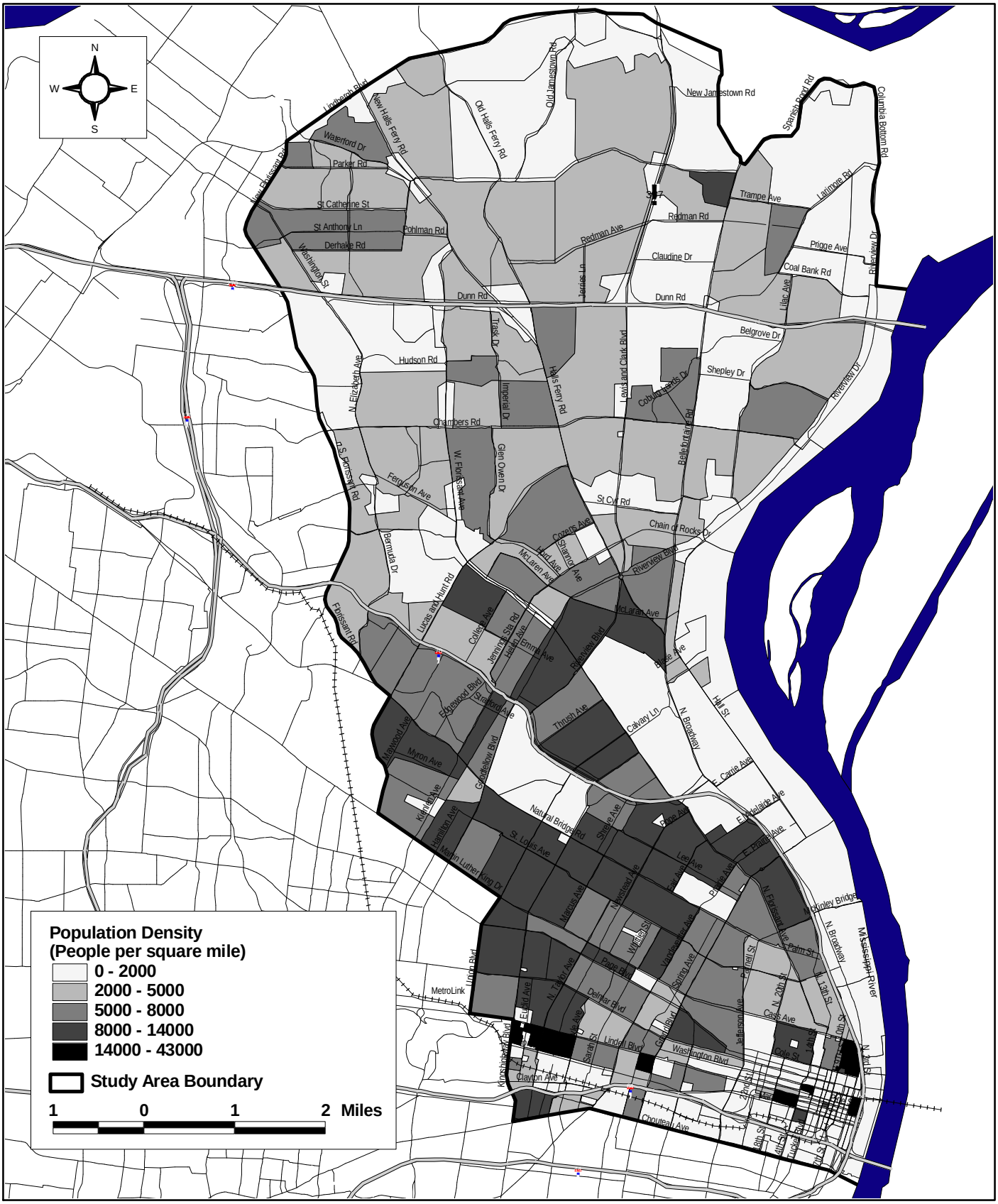
Table 3.1-1 displays the total population of the Northside Study Area and St. Louis County from 1980 to 2020. The 1980 and 1990 figures are based upon decennial census tabulations. The 1996 estimates are based upon demographic data compiled since the 1990 census, whereas 2020 estimates are based upon projections developed by East-West Gateway Coordinating Council (EWGCC), in cooperation with the local jurisdictions, such as St. Louis County. Note that total Study Area population has decreased by 62,600 people between 1980 and 1996, a 10.1 percent decrease. The population in the City of St. Louis portion of the Study Area declined by 52,500 while the population of the St. Louis County portion of the Study Area decreased by 10,100. Year 2020 projections indicate a continued decline in total population of about 28,400 persons, a 9.1 percent decrease from 1996. This projection assumes a further decline in population in the City of St. Louis portion of the Study Area of 12,000 and a decrease in population in the County portion of almost 16,300. 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, particularly from the City of St. Louis and inner suburbs of the St. Louis County portion of the Study Area. There also will be 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	Northside Total	Percent Change from 1980	City of St. Louis Portion	St. Louis County Portion
1980	375,477	--	199,382	176,095
1990	337,523	-10.1%	167,891	169,632
1996	312,856	-16.7%	146,933	165,923
2020	284,480	-24.2%	134,868	149,612

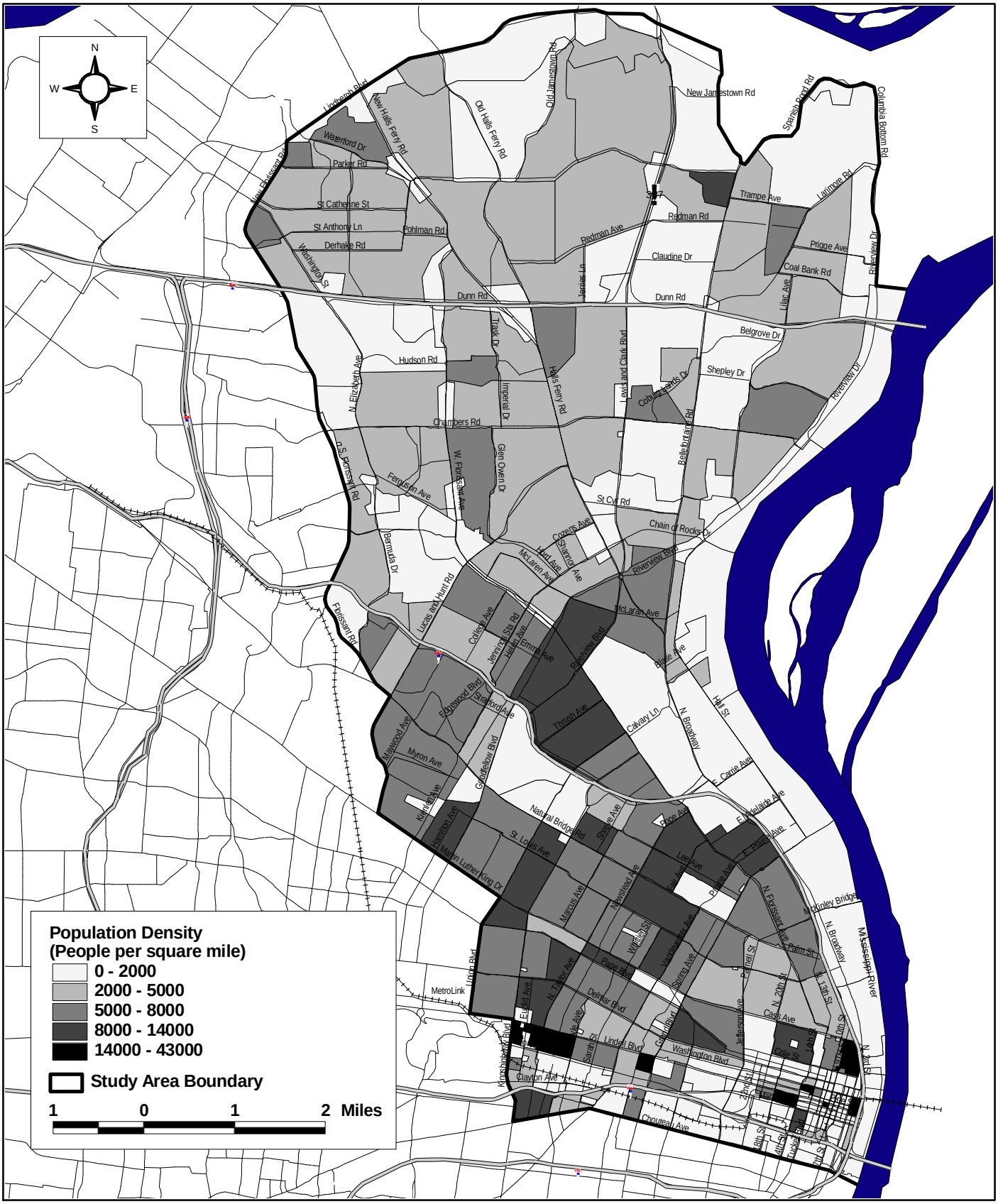
Source: 1990 Census (Data File STF3A); East-West Gateway Coordinating Council, 1999.

Figures 3.1-1 and 3.1-2 display the year 1996 and 2020 population density in persons per square mile for the Northside Study Area. The City of St. Louis portion of the Study Area has the higher population densities, generally greater than 5,000 persons per square mile, while the County’s portion of the Study Area predominantly has population densities lower than 5,000 persons per square mile. These population densities are forecast to decline through the year 2020 planning horizon due to forecast declines in total population. Higher population densities tend to encourage transit use, as a more concentrated population is 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.



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

Figure 3.1-1
Population Density (1996)



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 Northside 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 age distributions are very similar between the two portions of the Study Area, with the City portion having a slightly younger distribution than the County portion and they compare closely to the age distributions for the total City and total County. Note that 38.7 percent of the 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	Northside Total	City of St. Louis Portion	St. Louis County Portion	City of St. Louis Total	St. Louis County Total
0-15	23.7%	25.1%	22.5%	22.8%	22.0%
16-24	13.3%	14.9%	11.9%	12.7%	11.5%
25-34	16.4%	15.5%	17.2%	18.4%	17.1%
35-44	13.2%	12.2%	14.1%	12.8%	15.9%
45-59	13.6%	12.4%	14.7%	12.0%	15.6%
60-64	4.8%	4.6%	5.1%	4.6%	4.8%
65+	15.0%	15.3%	14.6%	16.7%	13.1%

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

3.3 RACE

Table 3.3-1 illustrates the ethnic breakdown within the Northside Study Area, the City of St. Louis and St. Louis County, based on 1990 Census data. According to this table, the Northside Study Area is predominantly African-American, with white 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 County and City of St. Louis as a whole.

TABLE 3.3-1
ETHNIC BREAKDOWN

Race	Northside Total	City Portion	County Portion	City Total	County Total
White	39.1%	14.6%	63.0%	51.0%	84.2%
African-American	59.9%	84.4%	36.0%	47.4%	14.0%
American Indian/Eskimo	0.2%	0.3%	0.1%	0.3%	0.2%
Asian/Pacific Islander	0.6%	0.5%	0.6%	0.9%	1.4%
Other	0.2%	0.2%	0.2%	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 Northside 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 indicates lower incomes compared 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 almost 60 percent of households in the City portion earning less than $20,000 per year in 1990 compared with 28.5 percent in the County portion. In fact, the median annual household income for the City portion of the Study Area was $16,000 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 and both have fewer options than the remainder of the region 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	Northside Total	City of St. Louis Portion	St. Louis County Portion	City of St. Louis Total	St. Louis County Total
0-$20k	43.8%	59.8%	28.5%	51.1%	21.6%
$20k-$40k	30.3%	25.1%	35.3%	29.9%	31.0%
$40k-$60k	16.3%	9.3%	22.9%	12.1%	23.1%
$60k-$75k	5.1%	2.7%	7.4%	3.6%	10.1%
$75k-$100k	2.9%	1.7%	4.1%	2.0%	7.2%
$100-$125K	0.8%	0.5%	1.1%	0.6%	2.9%
$125k-$150k	0.3%	0.3%	0.3%	0.3%	1.2%
$150k +	0.5%	0.6%	0.3%	0.5%	2.8%
Median Household Annual Income	$24,508	$16,224	$32,462	$20,300	$41,242

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

3.5 HOUSING

Table 3.5-1 displays the total number of households in the Northside 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, such as St. Louis County. The number of households in the Study Area have decreased by approximately 10,000 between 1980 and 1996, a 7.4 percent decrease, compared to the 16.7 percent population decrease cited above, indicating a decline in the average number of persons per household over that time period. In contrast to the population trends, the number of households has decreased in the City portion of the Study Area but increased in the County portion. Projections for the year 2020 estimate a small, additional decrease of 2,000 in the number of households in the overall Study Area over 1996. This compares with the projected decrease of 28,400 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, as well as a continued trend of abandonment of households in the City portion of the Study

Area. The trend of declining household size 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	Northside Total	Percent Change from 1980	City of St. Louis Portion	St. Louis County Portion
1980	134,977	--	72,463	62,514
1990	128,813	-4.6%	63,924	64,889
1996	125,049	-7.4%	59,182	65,867
2020	122,987	-8.9%	57,956	65,031

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

Table 3.5-2 shows the housing statistics for the Northside 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 Study Area. This pattern is consistent with housing trends observed throughout the St. Louis region. The Northside Study Area has slightly lower occupancy rates and higher vacancy rates compared to other areas in the City of St. Louis and St. Louis County. In addition, nearly 57 percent of the housing in the Northside Study Area is owner-occupied, while a little over 43 percent of the housing in the Study Area is occupied by renters. The majority of those renters live in the City portion of the Study Area.

TABLE 3.5-2
HOUSING STATISTICS

	Northside Total	City Portion	County Portion	City Total	County Total
Housing Units	148,874	79,047	69,827	194,881	401,877
Percent Occupied	86.9%	80.4%	94.2%	84.6%	94.6%
Percent Vacant	13.0%	19.5%	5.7%	15.4%	5.4%
Percent Owner-Occupied	56.5%	40.0%	72.4%	45.1%	73.9%
Percent Renter-Occupied	43.5%	60.0%	27.6%	54.9%	26.1%

Source: 1990 Census (Data File STF3A); 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 Northside 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 lower auto ownership than the City or County overall. However, the City portion of the Study Area has significantly lower auto ownership than the County portion, with 39 percent of the households in the City portion not having an auto available compared to only 8.5 percent in the County portion. This indicates that the mobility available to households in the Northside Study Area is significantly restricted and that the City portion of the Study Area has a measurably higher transit dependency than the County portion due to the greater lack of access to automobiles.

TABLE 3.6-1
DISTRIBUTION OF VEHICLES PER HOUSEHOLD

Number of Vehicles Per Household	Northside Total	City of St. Louis Portion	St. Louis County Portion	City of St. Louis Total	St. Louis County Total
0	23.5%	39.0%	8.5%	29.1%	6.0%
1	39.1%	40.1%	38.2%	42.9%	33.0%
2	26.9%	15.7%	37.7%	21.8%	43.4%
3	7.9%	3.8%	11.9%	4.6%	13.1%
4	2.0%	1.0%	2.9%	1.2%	3.5%
5+	0.6%	0.3%	0.8%	0.3%	1.0%
Average per Household	1.28	0.89	1.65	1.07	1.78

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

3.7 EMPLOYMENT

Table 3.7-1 displays the total employment in the Northside 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 trend data. 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 12,400 jobs between 1996 and 2020, a 5.4 percent decrease over the 24-year projection, indicating a relatively small employment loss. However, this projected decrease is comprised of an almost 14,200 job loss in the City portion of the study area compared to a slight 1,900 job increase in the County portion of the Study Area. The Northside Study Area's proportion of total City employment is forecast to remain at about 77 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	Northside Total	Percent Change from 1990	City of St. Louis Portion	St. Louis County Portion
1990	241,882	--	201,722	40,160
1996	230,451	-4.7%	191,036	39,415
2020	218,133	-9.8%	176,801	41,332

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

Table 3.7-2 displays a distribution of employment by type of employment for the Northside 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 categories in the Study Area overall are Administrative Support/Clerical and Service, and they are also the most predominant categories in the City portion of the Study Area. The two most predominant categories in the County portion of the Study Area are

Administrative Support/Clerical and Professional. "White collar" employment categories made up about 36 percent of the total employment in the Northside Study Area.

TABLE 3.7-2
1990 EMPLOYMENT BY TYPE

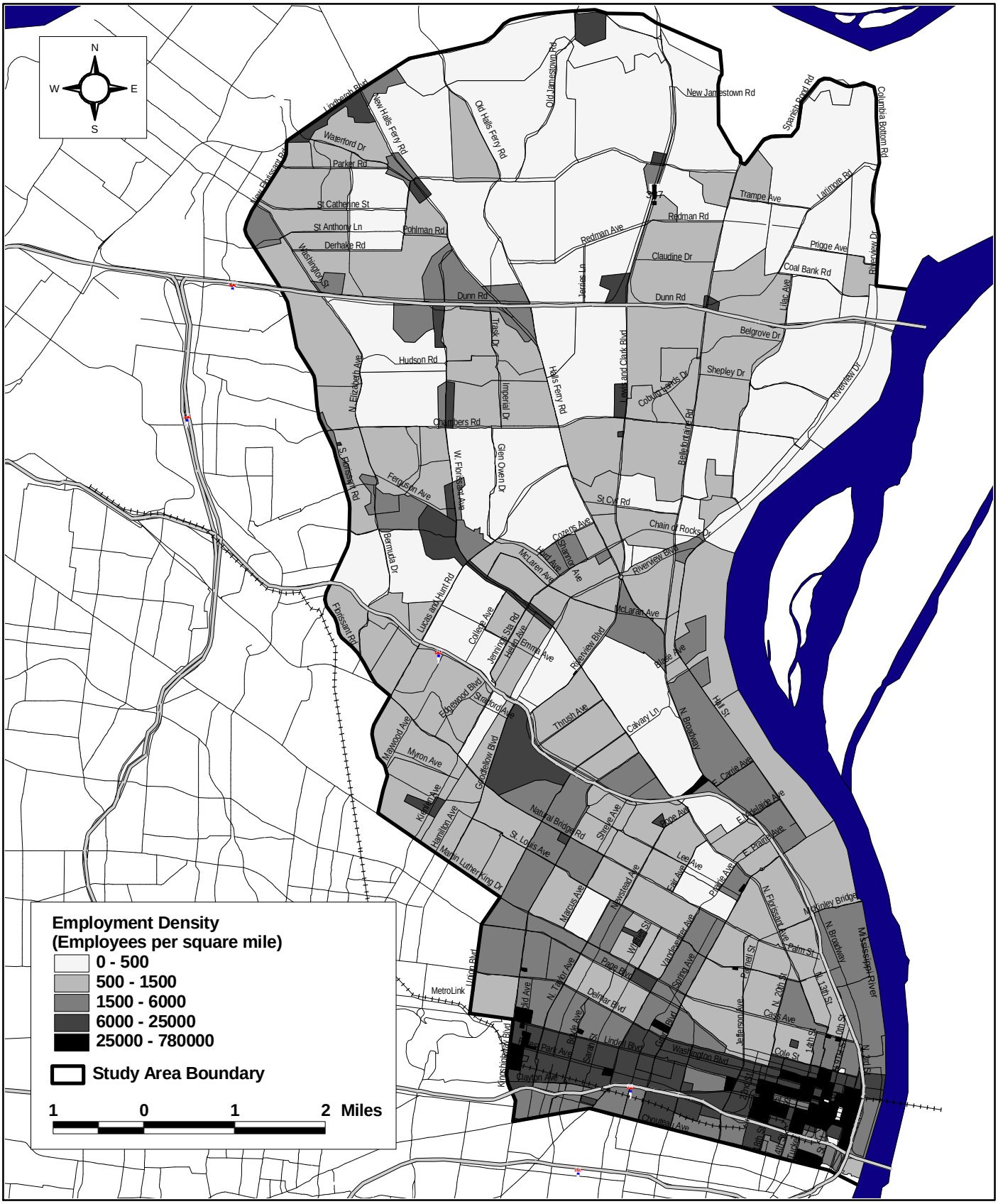
Type of Employment	Northside Total	City of St. Louis Portion	St. Louis County Portion	City of St. Louis Total	St. Louis County Total
Executive, administrative & managerial	9.6%	7.6%	11.1%	9.7%	15.7%
Professional specialty	13.3%	12.4%	14.0%	13.6%	18.0%
Technical/support	4.0%	4.1%	4.0%	4.0%	4.3%
Sales	9.6%	7.7%	10.9%	9.6%	14.0%
Administrative support, clerical	19.7%	18.9%	20.3%	19.0%	18.1%
Service, private household	0.7%	1.5%	0.2%	0.7%	0.2%
Protective service	2.1%	2.8%	1.6%	2.5%	1.2%
Service (except protective and household)	16.0%	21.7%	12.0%	16.8%	9.4%
Farming, forestry and fishing	0.6%	0.7%	0.5%	0.7%	0.6%
Precision production, craft and repair	8.5%	5.4%	10.6%	7.7%	8.5%
Operators, fabricators and laborers	7.4%	7.9%	7.0%	7.2%	4.2%
Transportation and material moving	4.1%	4.4%	3.9%	3.8%	2.8%
Handlers, equipment cleaners, helpers and laborers	4.4%	4.9%	4.0%	4.6%	3.0%

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

Figures 3.7-1 and 3.7-2 display the employment density in employees per square mile for 1996 and 2020 for the Northside Study Area. The highest employment densities are generally found in the southern portion of the Study Area within the City of St. Louis. They include the City of St. Louis Central Business District (CBD), the BJC Medical Complex, and the Olive Street/Lindell Boulevard corridor in between with A.G. Edwards and Sons and St. Louis University. Other high employment density locations in the study area include the Mark Twain Industrial area, Emerson Electric, and along I-270, especially near New Halls Ferry Road. The employment projections anticipate relatively stable locations of these higher density employment areas, with some decreases in employment densities in the southwest portion of the Study Area.

3.8 CONCLUSION

The summary of this demographic data shows that the Northside Study Area is forecast to have declining population and employment, household incomes and car ownership levels significantly below regional averages, and a full range of population and employment densities from low to high. These demographic characteristics will be taken into account when developing and evaluating transportation improvement alternatives.



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

Figure 3.7-1
Employment Density (1996)

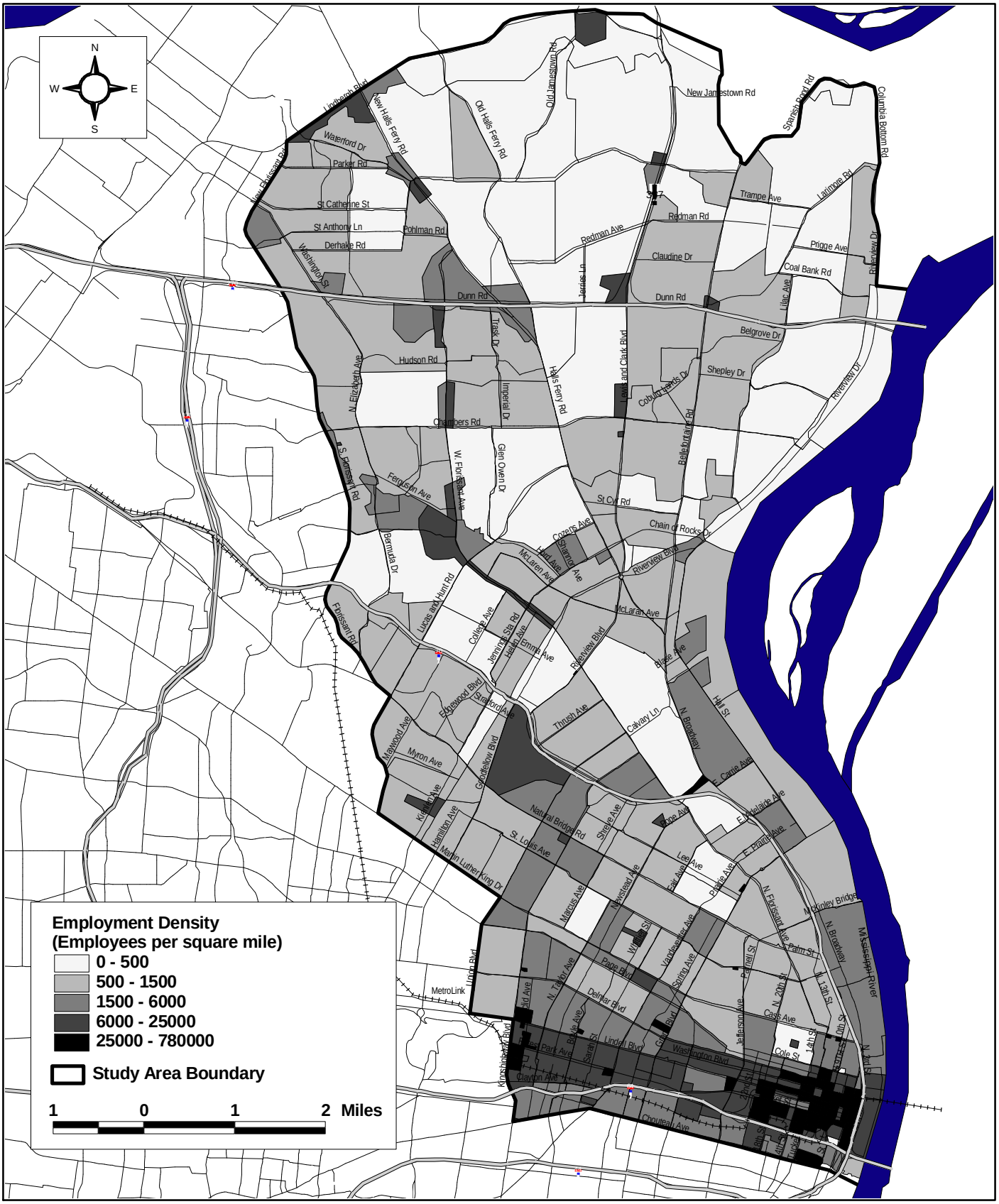


Figure 3.7-2
Employment Density (2020)

4.0 TRAVEL PATTERNS

This section describes the travel characteristics of the Northside 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 Northside 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 Northside Study Area in order to better understand travel to or from the St. Louis CBD separate from the rest of the study area. Total average daily trips produced in the Study Area are estimated to decrease by 4.1 percent between 1996 and 2020, while total trips attracted to the Study Area are also forecast to decrease by 4.1 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 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 decline due to a decrease in population and the number of households. Also, forecast work and non-work trips attracted to the Study Area are forecast to decrease by about six and seven 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 decrease by about 37,000 between 1996 and 2020, a 4.1 percent decrease, consistent with projected changes in population, households and employment in the Study Area. Similarly, daily trips attracted to the Study Area are forecast to decrease by about 34,000, also a 4.1 percent decrease. The majority of trips in both years are estimated to both start and end within the Study Area, with 46.7 percent in 1996 and 45.8 percent in 2020 of the trips produced estimated to remain in the Study Area, and 56.8 percent in 1996 and 50.5 percent in 2020 of the trips attracted 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 and it is also the second largest location of trip attractions for trips produced in the Northside 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 work person 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 25.8 percent of total daily trips produced in the Study Area in 1996 and 25.1 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, 16.4 percent of estimated 1996 Study Area work trips produced in the Study Area and 14.2 percent of estimated 2020 work trips produced in the Study Area are attracted to the St. Louis CBD, the third largest destination of 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 Northside 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
Northside	P*	234,428	453,373	221,702	909,503	219,279	426,294	226,500	872,073	-6.5%	-6.0%	2.2%	-4.1%
(excluding CBD)	A*	200,767	399,957	223,507	824,231	188,998	372,877	228,429	790,304	-5.9%	-6.8%	2.2%	-4.1%
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 Northside 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 Northside 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-3, 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 northern 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 northern portion of the study area as well as in Madison County, Illinois to the north of the study area. However, all three cutlines are forecast to have very modest traffic growth over the planning time horizon, reflecting the consequence of the declining population, households and employment forecast to occur. The two cutlines, SL-4 and SL-5, summarizing east-west traffic volumes, show a slightly greater forecast increase in east-west traffic volumes in the northern portion of the Study Area (SL-5) than the southern portion of the Study Area (SL-4). This also reflects a consequence of the demographic forecasts, which forecast some population growth in the northern portions of the study area and in neighboring Madison County, as opposed to forecast decreases in the southern portion of the Study Area and the St. Louis CBD.

TABLE 4.2-5
CUTLINE VOLUMES

Cutline	1996 Volume	2020 Volume	Change	Percent Change
SL-1	143,700	150,300	6,600	4.6%
SL-2	116,100	113,500	-2,600	-2.2%
SL-3	193,100	194,900	1,800	0.9%
SL-4	233,400	241,400	8,000	3.4%
SL-5	143,300	152,700	9,400	6.6%

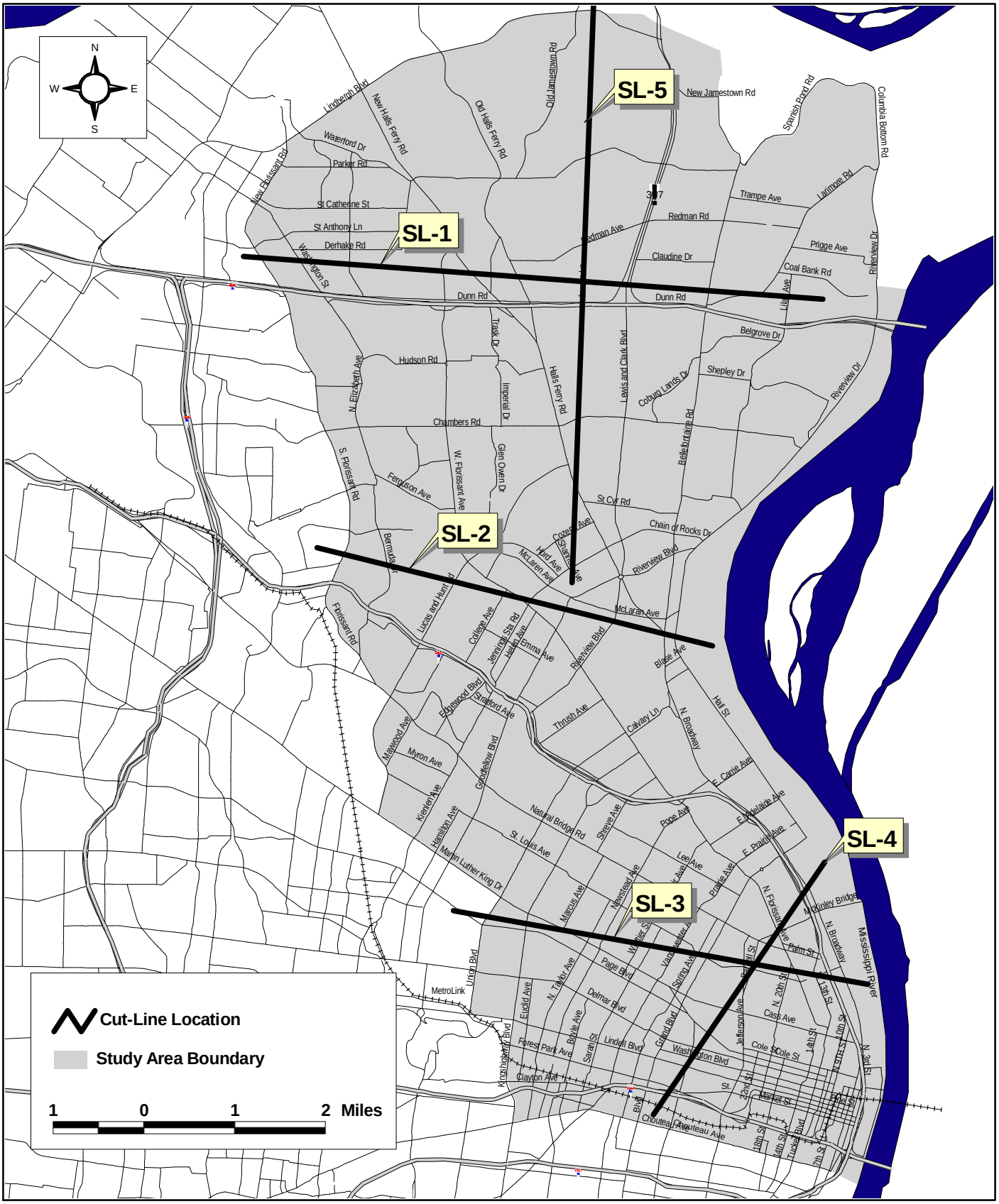
Source: East-West Gateway Coordinating Council, December 1998.
Note: Average annual weekday two-way traffic volume.

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 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 Northside 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 Northside 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 south 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

Activity centers located within the Northside Study Area are broken into the following four categories: A) recreational/cultural/parks, B) major employers/employment centers, C) retail shopping, and D) educational institutions. While all major activity centers are identified below, a brief description is provided for only the most significant of these centers. Knowledge of these activity centers is important to this study because, either individually or in combination, they can have a significant impact on both local and regional transportation networks. Most of the major activity centers described in this analysis are illustrated on Figure 5.0-1.

5.1 RECREATIONAL/CULTURAL/PARKS

Given the fact that the City of St. Louis was, throughout most of its history, the regional center for finance, business and cultural activities, it is not surprising that most of the regional facilities associated with these activities remain within the City. Forest Park, for example, though only touching the southwest edge of the Northside Study Area, is one of the area's most unique and 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 recreational pursuits, attend special events, or to enjoy a respite from daily routines.

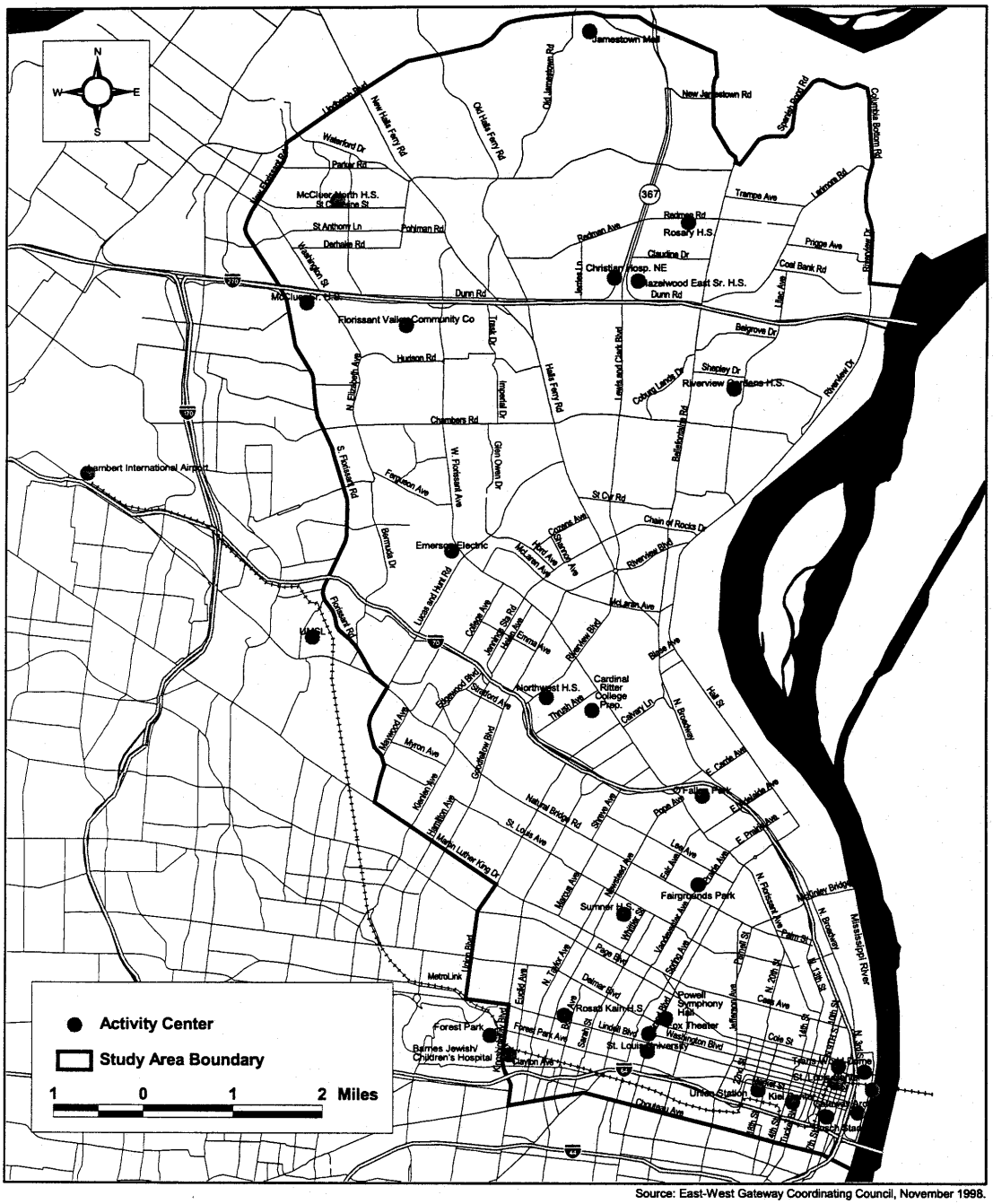
Just as Forest Park is the most widely recognized of the region's cultural and recreational centers, Downtown St. Louis is viewed as the business, financial and professional sports center of the region. The St. Louis Central Business District (CBD) annually hosts more than 150 professional and collegiate sporting events. Finally, 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.

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

5.1.1 Recreational

Recreational activity centers located within the Northside Study Area vary considerably within this corridor and include a federally operated national park, professional sport franchises, locally funded public facilities, and privately owned golf clubs. The most notable among these facilities are:

- Jefferson National Expansion Memorial (Gateway Arch)
- Busch Stadium
- Trans World Dome
- Kiel Center
- Union Station
- Laclede's Landing
- Forest Park: Triple A Golf Course, Zoo, Science Center, Steinberg Skating Rink (not within the Study Area)
- Paddock Country Club
- Norwood Hills Country Club
- North Shore Golf Club



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

Figure 5.0-1
Activity Centers

Located within the St. Louis CBD (which constitutes a significant portion of the southern edge of the Northside Study Area) are six major facilities with venues that, in 1997/1998[1] drew nearly 15-million people to Downtown St. Louis. Those activity centers and their annual reported visitation/attendance are:

TABLE 5.1-1
MAJOR ACTIVITY CENTERS

Activity Center	Annual Visitation/Attendance
Union Station	5,100,000
Jefferson National Expansion Memorial	3,915,166
St. Louis Cardinals Baseball Club	2,655,917
America's 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 southwestern edge of the Northside Study Area, it is a major attraction that influences traffic and transit facilities within the corridor. Of the numerous attractions within the park, five major facilities collectively drew more than a total of 5-million people in 1997. Those facilities and their estimated 1997 attendance are:

TABLE 5.1-2
FOREST PARK ATTRACTIONS

Facility	Estimated 1997 Attendance
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

The two dominant centers for cultural activities within the St. Louis Metropolitan Area are the Grand Center Arts and Entertainment District which is located just to the north of St. Louis University and Forest Park.

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

Given their dominance within the region, they represent a significant influence on traffic and transit in the Northside
Study Area. A listing of the most important cultural facilities and/or centers located within or adjacent to the Northside Study Area is provided below.

- Grand Center Arts and Entertainment District– Fox Theatre, Dance St. Louis, St. Louis Symphony Orchestra at Powell Hall, St. Louis Black Repertory Company, and The Sheldon Concert Hall & Ballroom
- Forest Park – Art Museum, Municipal Opera, Science Center, History Museum, Jewel Box
- Jefferson National Expansion Memorial Museum and Gateway Arch
- Bissell House Mansion – Bellefontaine
- Bellefontaine and Calvary Cemeteries – St. Louis
- Cathedral Basilica of St. Louis

5.1.3 Parks

The Northside Study Area is fortunate to have an established and generally well-maintained 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. A listing of major parks (over 20 acres in size) located within the Northside Study Area is provided below, followed by a description of several of the most notable parks.

- Jefferson National Expansion Memorial (94 acres)
- Forest Park – St. Louis (1,293 acres)
- Fairgrounds Park – St. Louis (131 acres)
- O'Fallon Park – St. Louis (127 acres)
- Penrose Park – St. Louis (51 acres)
- Sherman Park – St. Louis (22 acres)
- Spanish Lake County Park (245 acres)
- Bella Fontaine County Park (193 acres)
- Larimore Park County (24 acres)
- Black Jack City Park – Black Jack (80 acres)
- Dunegant Park – Florissant (64 acres)
- Florissant Valley Park and Civic Center – Florissant (30 acres)
- January – Wabash Park – Ferguson (23 acres)
- Forestwood Park – Ferguson (21 acres)
- Hudson Road Park – Ferguson (28 acres)
- Koeneman Park – Jennings (38 acres)

Jefferson National Expansion Memorial

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 nation's 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 a panoramic view 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 difficult to accurately determine, those associated with the Fair estimate that the event draws between 600,000 and 800,000 people from throughout the region and beyond.

Forest Park

Forest Park, the other major park of both national and international significance, is located at the southwestern edge of the Study Area. The St. Louis Zoo is a world class facility with over 6,000 animals. Natural habitat areas include Big Cat Country, Jungle of the Apes and the new Children's Zoo. The St. Louis Art Museum is among the leading art museums in the country. In addition to these fine facilities, Forest Park offers numerous active and passive recreation opportunities throughout its 1,293 acres.

Bella Fontaine County Park

Bella Fontaine County Park is a 193-acre facility located in the City of Bellefontaine Neighbors. In addition to providing open and passive recreation areas, the park provides residents from throughout the North County area with a state-of-the-art baseball and softball center, including seven ballfields. The park also contains eight tennis courts, picnic shelters, playgrounds, and over 1.5 miles of trails.

Many other parks are located throughout the Northside 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 Northside 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 North County area.

5.2 MAJOR EMPLOYERS/EMPLOYMENT CENTERS

Major employers and/or employment centers located within or adjacent to the Northside Study Area include the BJC Medical Center and the Washington University Medical School, Emerson Electric Company, Christian Hospital Northeast, the St. Louis CBD, the North Riverfront Industrial Area, Jamestown Mall Shopping Center, and Union-Seventy Business Park.

Major employers:

- BJC Medical Center/Washington University Medical School
- St. Louis University, Main Campus
- Emerson Electric
- St. Louis Community College, Florissant Valley Campus
- Christian Hospital Northeast
- Veterans Administration Hospital – Cochran Division

Major employment centers:

- St. Louis Central Business District
- Jamestown Mall Shopping Center

Some of these major employers and employment centers are highlighted in the following subsections.

5.2.1 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 in the southeastern portion of the Study Area.

A recent survey of businesses[2] located within the St. Louis CBD indicates that, contrary to some beliefs, the region's center of business and finance has recently been growing. The 1998 survey, conducted by the Downtown St. Louis Partnership, provided an opportunity for comparing similar data that was collected in

[2] Downtown St. Louis Partnership, Survey of Businesses in Downtown St. Louis, February 1999.

1996. According to the earlier survey, in 1996, Downtown St. Louis had 1,538 businesses and government entities, which employed 88,087 people. In 1998, the area had 1,658 businesses and government entities (a net gain of 120 or 7.2 percent) and 91,338 employees (a net gain of 3,251 employees or 3.6 percent).

Between 1993 and 1998, building vacancy rates within Downtown St. Louis decreased by 2.6 percent. The following table illustrates the changes in vacancy rates that have occurred during this six-year period, changes which indicate higher rates of occupancy for the total amount of available office space.

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%

Note:
[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 of –710,000 square feet, about 600,000 square feet of this space was demolished between 1993 and 1998.

Source: Interview with Keith Zeff, Vice President, Information Services, Colliers Turley Martin Tacker, March 11, 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 is expected to begin this year on 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 parking garage. It also will include a 220-room Westin Hotel with corresponding restaurants, a health club and transit oriented retail development at the light rail station.
- 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 also will be adjacent to the Kiel Triangle Park and MetroLink Station. This massive structure and grounds will be converted for the following purposes:---
  - Luxury 292-suite hotel
  - 76 condominium living units
  - Two restaurants, a health club and a mini-mart
  - Five hundred 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, the City of St. Louis has approved the project. It is anticipated that work will begin this year and be completed in 2001.
- The Drury Inn hotel development plan proposes a total renovation of three major buildings at Broadway and Market 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.

5.2.2 BJC Medical Center

BJC Health System is one of the largest integrated health care 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 in the St. Louis Metropolitan Area, approximately 14,450 of these people are employed at Barnes-Jewish and Children's Hospitals within the Northside Study Area. The medical center is served by the Central West End MetroLink Station.

5.2.3 Emerson Electric

Emerson Electric is a St. Louis Fortune 500 Company whose headquarters complex is located in the Northside Study Area at 8000 West Florissant Avenue. Emerson has more than 60 divisions, with 100,000 employees making and selling products in more than 150 countries through a network of 3,500 locations. According to the St. Louis Business Journal's Book of Lists (1999 Edition), the firm ranks as the 39th largest employer in the region with 2,800 employees at its St. Louis headquarters complex.

5.2.4 Christian Hospital Northeast

Christian Hospital Northwest at 11133 Dunn Road in unincorporated St. Louis County is the major provider of health care services in the northern portion of the Study Area. With 475 licensed beds, the hospital has a total staff of 3,167 people. (Since Christian Hospital considers their two facilities as one, the staff number is for both hospitals.)

5.3 RETAIL SHOPPING

Two major regional shopping malls and seven shopping centers are located within the North Study Area.

Regional Malls	Area Under Roof
St. Louis Center – St. Louis CBD	1,250,000 square feet
Union Station – St. Louis CBD	950,000 square feet[1]
Jamestown Mall – Route 67 and Old Jamestown Road	1,250,000 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[2]	Area Under Roof
River Roads	488,000 square feet (approximately 30 percent occupied)
North County Festival	392,000 square feet
Cross Keys	332,000 square feet
Northland	309,000 square feet (approximately 30 percent occupied)
Crossings at Halls Ferry	277,000 square feet
Grandview Plaza	225,000 square feet
Clocktower Place	220,000 square feet

[2] Indicates shopping centers with major vacancies – 1998 Fact Book, St. Louis County, Missouri.

5.4 EDUCATIONAL INSTITUTIONS

With the exception of the Florissant Valley Campus of St. Louis Community College, institutions of higher education are concentrated along an east-west corridor at the southern end of the Northside Study Area. In addition to colleges and universities, the Northside Study Area encompasses all or portions of the following school districts: St. Louis, Wellston, Normandy, Jennings, Ferguson-Florissant, Riverview Gardens and Hazelwood. 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 provide educational services to residents from throughout the Northside Study Area. The most notable of these are:

Colleges and Universities	Enrollment (1998/1999 School Year)
St. Louis University	10,998
St. Louis Community College, Florissant Valley Campus	10,000
Harris-Stowe State College	1,735
Washington University Medical School	480
St. Louis College of Pharmacy	845

High Schools	Enrollment (1998/1999 School Year)
Gateway	1,461
Vashon	1,045
Beaumont	1,002
Sumner	956
Soldan International Studies	845
Visual & Performing Arts	696
McCluer North	1,300
McCluer	1,700
Hazelwood East	1,665
Riverview Gardens	1,521
Jennings	704

Private High Schools	
Rosati-Kain	435
Cardinal Ritter College Prep	208
Lutheran North	330
Rosary	480

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 Northside 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 Northside Study Area is located within the watersheds of two rivers, the Mississippi River and the Missouri River. The major tributaries traversing the study area are Mill Creek, Coldwater Creek, Watkins Creek, and Maline 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 the FEMA as being associated with the following creeks and rivers: Mill Creek, Coldwater Creek, Watkins Creek and Maline Creek, the Mississippi River and the Missouri River. 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.

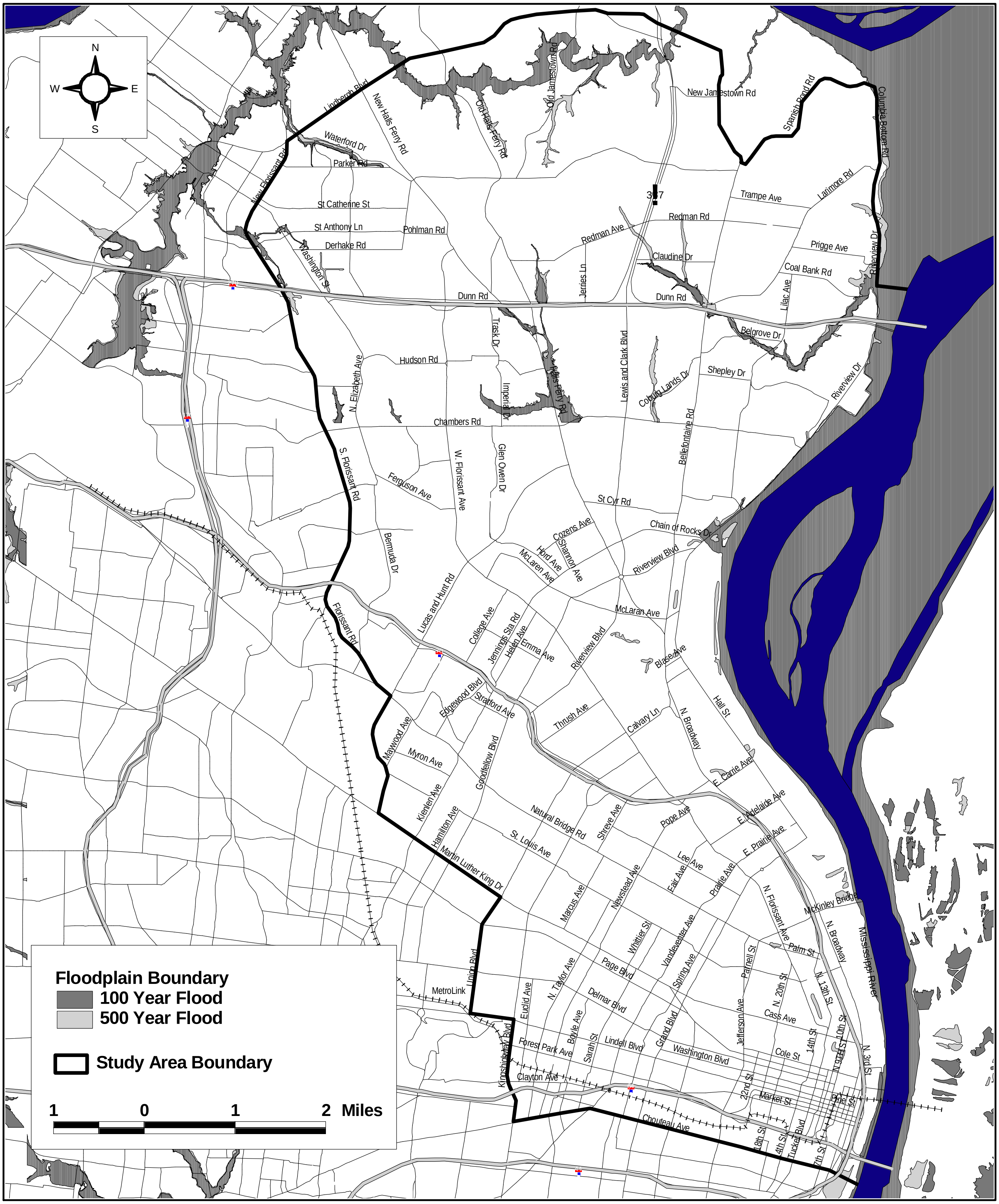
A review of the National Wetland Inventory Maps (NWI) indicates over 190 wetlands within the Study Area. A majority of these wetlands are associated with the tributaries listed above and are widely dispersed throughout the Study Area (see Figure 6.1-2). Only the U.S. Army Corps of Engineers (USACE) or 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 20 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 Northside 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.

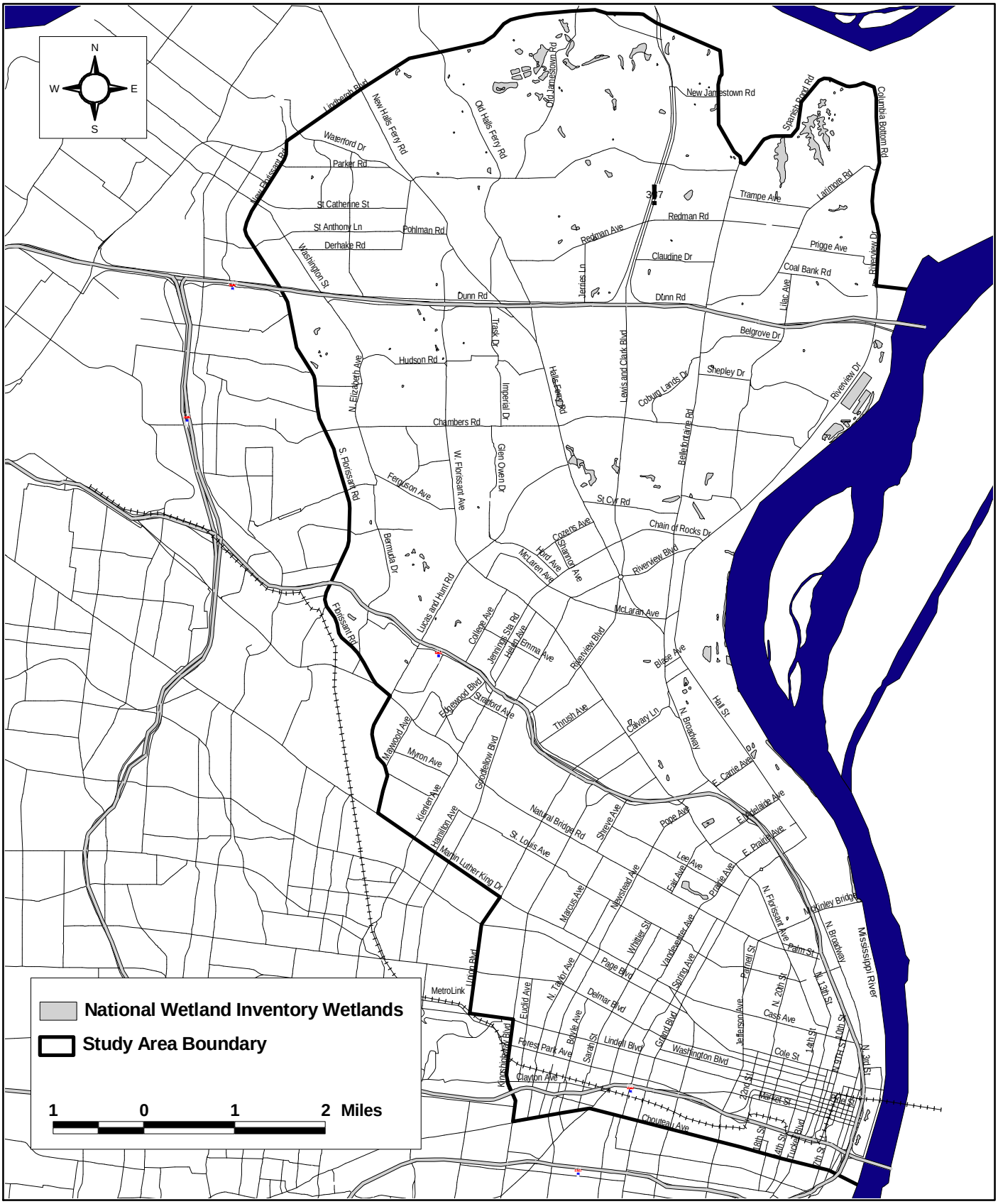
Riverine habitats are those areas contained within a channel. This wetland class includes excavated ditches and drainageways found throughout the Study Area and lined tributaries.

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 29 properties containing hazardous materials and waste in the study area (see Figure 6.2-1). The majority of these sites are located in the City of St. Louis and in the vicinity of Interstate 70 (the southern most portion of the Study Area). 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 River, Missouri River and associated tributaries. No protected natural heritage sites have been identified within the Study Area.

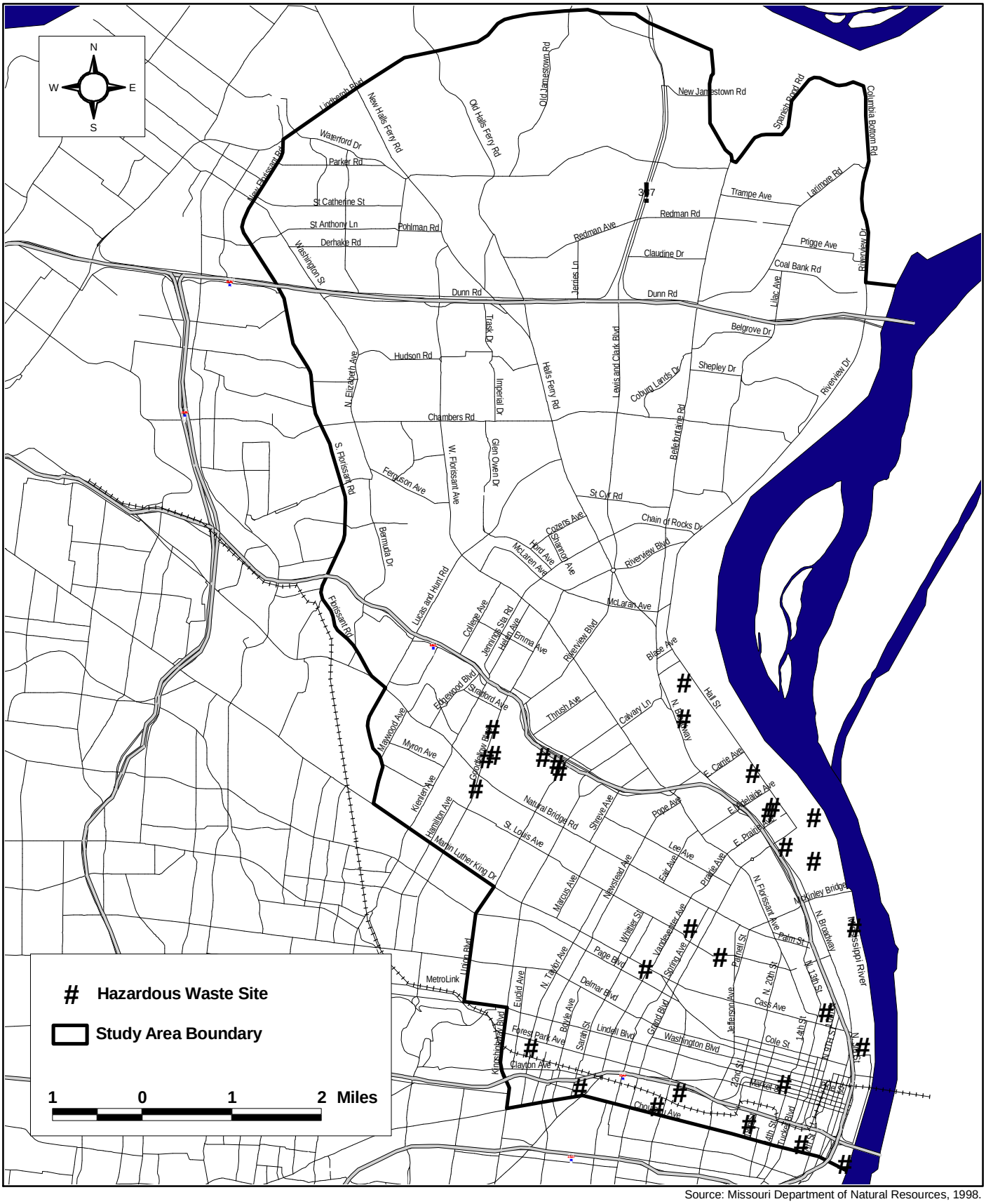
6.4 AIR QUALITY

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.

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."



Source: Missouri Department of Natural Resources, 1998.

Figure 6.2-1
Hazardous Materials and Waste Sites

Currently, St. Louis County and the City of St. Louis are listed by the EPA as a "moderate" non-attainment areas. These areas failed to meet the November 1996 attainment deadline. According to the Missouri Department of Natural Resources, the possibility remains for the EPA to reclassify the St. Louis Metropolitan Area 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 Northside 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:

- 13 Retirement Homes/Orphanages
- 170 Nursery Schools/Schools
- 78 Hospitals/Medical Facilities
- 260 Churches/Temples

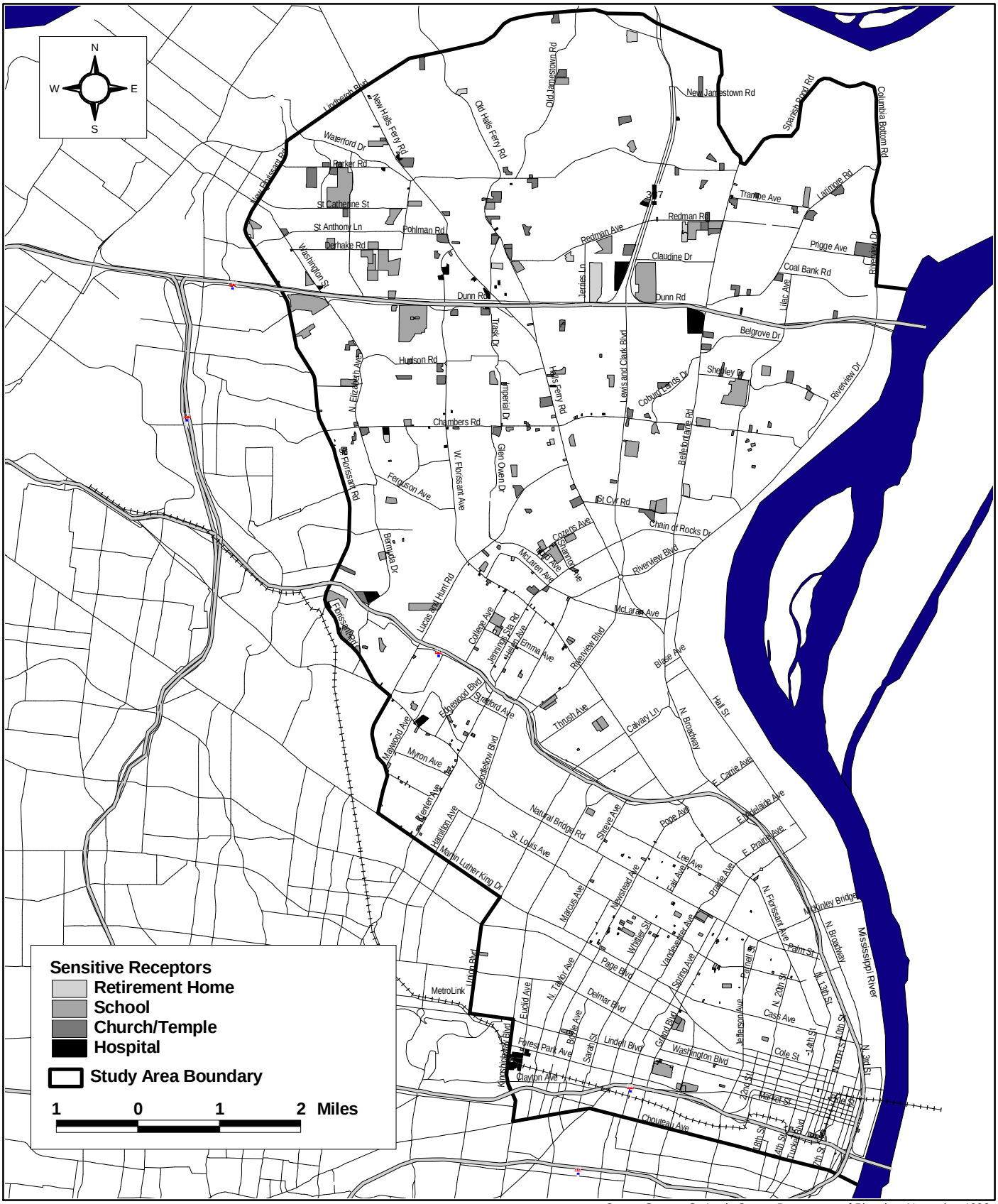
These facilities are primarily concentrated in the northernmost and southernmost portions of the Study Area (see Figure 6.5-1).

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 Northside Study Area has several major landform and geological conditions. The area is characterized by rolling topography and hills, occasionally cut by deep ravines. The northern and 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 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 generalized geologic characteristics of the corridor and immediate vicinity include sequential beds of Pennsylvanian age shales, sandstones, siltstones and limestones with thin seams of coal and clay in the southern areas. Two layers of glacially derived (wind-deposited) loess soils overlie this. The top layer is Peoria loess with a relatively thin, low-clay silt. Below the Peoria layer is a layer of Roxana loess, with higher clay content.

The northern portion of the study area is the alluvial plain of the Mississippi River and its surrounding bluffs. There are five geological units within this portion of the study area. The first unit in the northern portion of the study area is deep limestones of the Ste. Genevieve, St. Louis, and Salem Formations. The Peoria and Roxana loess mantles the bedrock. The upper Peoria is thin, less that five-feet thick. The high-clay Roxana is the predominant material to be considered for any construction project.

Deep limestones of the Ste. Genevieve, St. Louis and Salem Formations characterize the alluvial plain of the Mississippi River. The limestone bedrock is subject to solution and karst features have developed. Karst features such as sinkholes and pinnacles are present at the surface. The unconsolidated overburdened in this area is very thin and does not mask the karst in this area.

In the northern portion of the study area is the alluvial material that fills the valley of the Mississippi and Missouri Rivers. 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 central quadrant and the alluvial materials in the Mississippi River and Missouri River Valley. However, the geological conditions are such that they pose no major constraints to transportation related construction.

6.7 HISTORICAL/CULTURAL AND 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. 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 331 recorded archeological/cultural resource

sites within the Study Area. A majority of these sites are in the northern portion of the Study Area.

A state search of the National Register Information System revealed 124 sites currently listed on the National Register of Historic Places (NRHP) (see Table 6.7-1). These are primarily located within the City of St. Louis and include such sites as the Miles A. Seed Carriage House, the Beethoven Conservatory, the Bissel Street Water Tower, the Samuel Cupples House, the Eugene Field House, and the Scott Joplin House. There may be historic districts and other sites that are eligible for the NHRP and they will be identified in later phases of the MTIA.

6.8 SECTION 4(f)/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 Northside Corridor contains approximately 90 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 National Register of Historic Places 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 is prime farmland, almost all of which occurs in the bottomlands near the Mississippi and Missouri Rivers, at the northern and eastern edge of the study area. On the upland, small remnant patches of prime farmland occur near major creeks. However, 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, therefore will be no constraints to the development of transportation improvements alternatives.

TABLE 6.7-1
NATIONAL REGISTER OF HISTORIC PLACES

No.	Name	Address	No.	Name	Address	No.	Name	Address
1	Barteau House	305 N. Castello	43	Fashion Square Building	1307 Washington Ave.	84	Murphy-Blair District	I-70, Florissant Ave., Chambers
2	Barton House	680 St. Catherine	44	Eugene Field House	634 S. Broadway	85	Negro Masonic Hall	3615-19 Dr. Martin Luther King Blvd.
3	Bissell, Gen. Daniel House	10225 Bellefontaine Rd.	45	Eugene Field School	4466 Olive	86	Neighborhood Gardens Apartments	1205 N. Seventh St.
4	Bouas House	1290 St. Joseph	46	Forest Park Hotel	4910 W. Pine Blvd.	87	Old Laclede Gas & Light Company Bldg.	Olive, 10th & 11th
5	Church St. Commercial District	2-100 Church St.	47	Fox Theater	527 N. Grand Blvd.	88	Olive Street Terra Cotta District	600-22 Olive St.
6	Douglas House	801 St. Francois	48	Frisco Building	906 Olive	89	The Olympia	3863 W. Pine & 200 N. Vandeventer
7	Goldbeck House	1061 St. Louis	49	Fullerton's Westminster Place	Westminster Place	90	Page Boulevard Police Station	Page & Union
8	Hanson House	704 Ste. Catherine	50	Fulton Bag Company Building	612-8 S. Seventh St.	91	Peters Shoe Company	1232-36 Washington Ave.
9	Wilson Larimore House	11510 Larimore Rd.	51	Gateway Arch	Memorial Dr. at Poplar St. Bridge	92	Homer G. Phillips Hospital	26101? Whittier
10	Narrow Gauge Railroad Station	1060 St. Catherine	52	Goldenrod	400 N. Wharf St.	93	Plaza Hotel Complex	3301-3321 Olive
11	Pine Lawn Carriage House	6292-94 Stillwell Dr.	53	Grand Avenue Water Tower	E. Grand at 20th St.	94	Portland & Westmoreland Places	NE corner of Forest Park
12	Miles A. Seed Carriage House	2456 Hord Ave.	54	Hadley-Dean Glass Company	701-5 N. 11th St.	95	President	500 N. Leonor K. Sullivan
13	Smith House	310 Florissant Rd.	55	Hargadine-McKittrick Dry Goods Bldg.	911 Washington Ave.	96	Rock Spring School	3974 Sarpy Ave.
14	Stroer House	700 Aubuchon	56	Holy Corners Historic District	Kingshighway at Westminster Pl.	97	Mathew S. Parish Complex	Sarah & Kennerly
15	Taille de Noyer	rue Taille de Noyer	57	Holy Cross Parish District	8115 Church Rd.	98	Sanitol Building	4252-64 Laclede Ave.
16	Advertising Building	1627-1629 Locust St.	58	Hotel Statler	822 Washington Ave.	99	Scruggs-Vandervoort-Barney Warehouse	917 Locust
17	Ambassador Theater	411 N. 7th St.	59	International Fur Exchange Building	2-14 S. Fourth St.	100	Second Presbyterian Church	4501 Westminster Pl.
18	American Theater	416 N. 9th St.	60	Jackson School	1632 Hogan St.	101	Shelley House	4600 Labadie Ave.
19	American Zinc, Lead & Smelting Bldg.	20 S. Fourth St.	61	Jefferson National Expansion Memorial	Miss. River at Poplar St. Bridge	102	Silk Exchange Building	501-11 N. Tucker
20	Aubert Place	Fountain Ave. at Walton	62	Scott Joplin House	2658 Delmar Blvd.	103	St. Augustine's Roman Catholic Church	3114 Lismore St.
21	Beaumont Medical Building	3714 Washington Ave.	63	Laclede's Landing	Washington, 3rd St. & Miss. River	104	St. Joseph's Roman Catholic Church	1220 N. 11th St.
22	Beethoven Conservatory	2301 Locust St.	64	Lambert-Deacon-Hall Printing Co. Bldg.	2100 Locust St.	105	St. Liborius Church & Buildings	1835 N. 18th St.
23	Bissel Street Water Tower	Bissel St. at Blair	65	Lambert Building	2101-07 Locust St.	106	St. Louis Post Dispatch Building	1111 Olive St.
24	Blackwell-Wielandy Building	1601-09 Locust St.	66	Lambskin Temple	1054 S. Kingshighway Blvd.	107	St. Louis Union Station	18th & Market
25	Frank P. Blair School	2707 Rauschenbach Ave.	67	Lennox Hotel	823-7 Washington Ave.	108	St. Mary of Victories Church	744 S. 3rd St.
26	Blind Girls' Home	5235 Page Blvd.	68	Leonardo	4166 Lindell Blvd.	109	St. Stanislaus Kostka Church	1413 N. 20th St.
27	A. D. Brown Building	1136 Washington Ave.	69	Lesan-Gould Building	1320-4 Washington Ave.	110	Henry Stockton House	3508 Samuel Shepard Dr.
28	Building at 1300 Washington Ave.	1300-10 Washington Ave.	70	Lewis Place Historic District	Lewis Pl.	111	Charles Sumner High School	4248 W. Cottage Ave.
29	Butler House	4484 W. Pine Blvd.	71	Liggett & Myers Tobacco Co.	1900-12 Pine St.	112	U.S. Customhouse & Post Office	8th & Olive
30	Robert G. Campbell House	1508 Locust St.	72	Liggett & Myers (Rice-Stix) Building	1000 Washington Ave.	113	Union Market	Broadway & Lucas
31	Centenary Methodist Episcopal Church	55 Plaza Sq. St.	73	Lincoln Trust Building	706 Chestnut St.	114	Union Station Post Office Annex	329 S. 18th
32	Chemical Building	721 Olive St.	74	Lindell Real Estate Building	1015 Washington Ave.	115	Union Trust Company Building	705 Olive St.
33	Kate Chopin House	4232 McPherson Ave.	75	Lister Building	4500 Olive St.	116	Unitarian Church of the Messiah	Locust & Garrison St.
34	Chouteau Apartments	4937 Laclede Ave.	76	Louise Apartments	3900 Lindell	117	USS Inaugural	300 N. Wharf
35	Christ Church Cathedral	1210 Locust	77	Majestic Hotel	1017-23 Pine St.	118	Vesper-Buick Auto Co. Building	3900-12 W. Pine
36	Clemens House-Columbia Brewery	St. Louis Ave at Maiden Ln.	78	Marquette Hotel	1734 Washington Ave.	119	Wainwright Building	709 Chestnut St.
37	Samuel Cupples House	3673 W. Pine Blvd.	79	Maryland Hotel	205 N. Ninth St.	120	Wainwright Tomb	Bellefontaine Cemetary
38	DePaul Hospital	2415 N. Kingshighway Blvd.	80	May Company Department Store Bldg.	509-23 Washington Ave.	121	Washington Ave. Historic District	Delmar, Tucker, St. Charles, Olive
39	Dorris Motor Car Company	4100 Laclede	81	Mayfair Hotel	806 St. Charles Ave.	122	Washington Ave. East of Tucker District	Lucas, N. 9th, St. Charles, Locust
40	Eliot School	4242 Grove St.	82	Midtown Historic District	Lindell & Grand Blvds.	123	Winkelmeyer Building	11th & Walnut Sts.
41	Emerson Electric Co. Building	2012-18 Washington Ave.	83	Mullanphy Historic District	N. 14th St. Mullanphy & Howard	124	YWCA, Phyllis Weatley Branch	2709 Locust St.
42	Joseph Erlanger House	5127 Waterman Blvd.						

Source: National Register of Historic Places, 1998.

7.0 TRANSPORTATION FACILITIES/SERVICES

7.1 ROADWAYS

This section provides an overview of the transportation facilities in the Northside Study Area. It begins with a discussion of the roadways, including existing conditions and planned improvements, operating conditions and safety. This section then reviews transit facilities, including 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 the movement of goods in the region.

7.1.1 Interstate System

Existing Characteristics

Three interstates bisect the Northside Study Area. The first, Interstate 270 (I-270), runs east-west through the St. Louis County portion of the Study Area. Providing an east-west movement through Study Area, this facility is generally considered an outerbelt for the St. Louis Region. The second, Interstate 70 (I-70), runs diagonally from downtown St. Louis to the northwest. This facility generally provides an east-west movement to the region. Interstate 64 (I-64, US Highway 40/61) runs east-west through the very southern portion of the Study Area. These facilities and the general roadway classifications for the Study Area can be found in Figure 7.1-1.

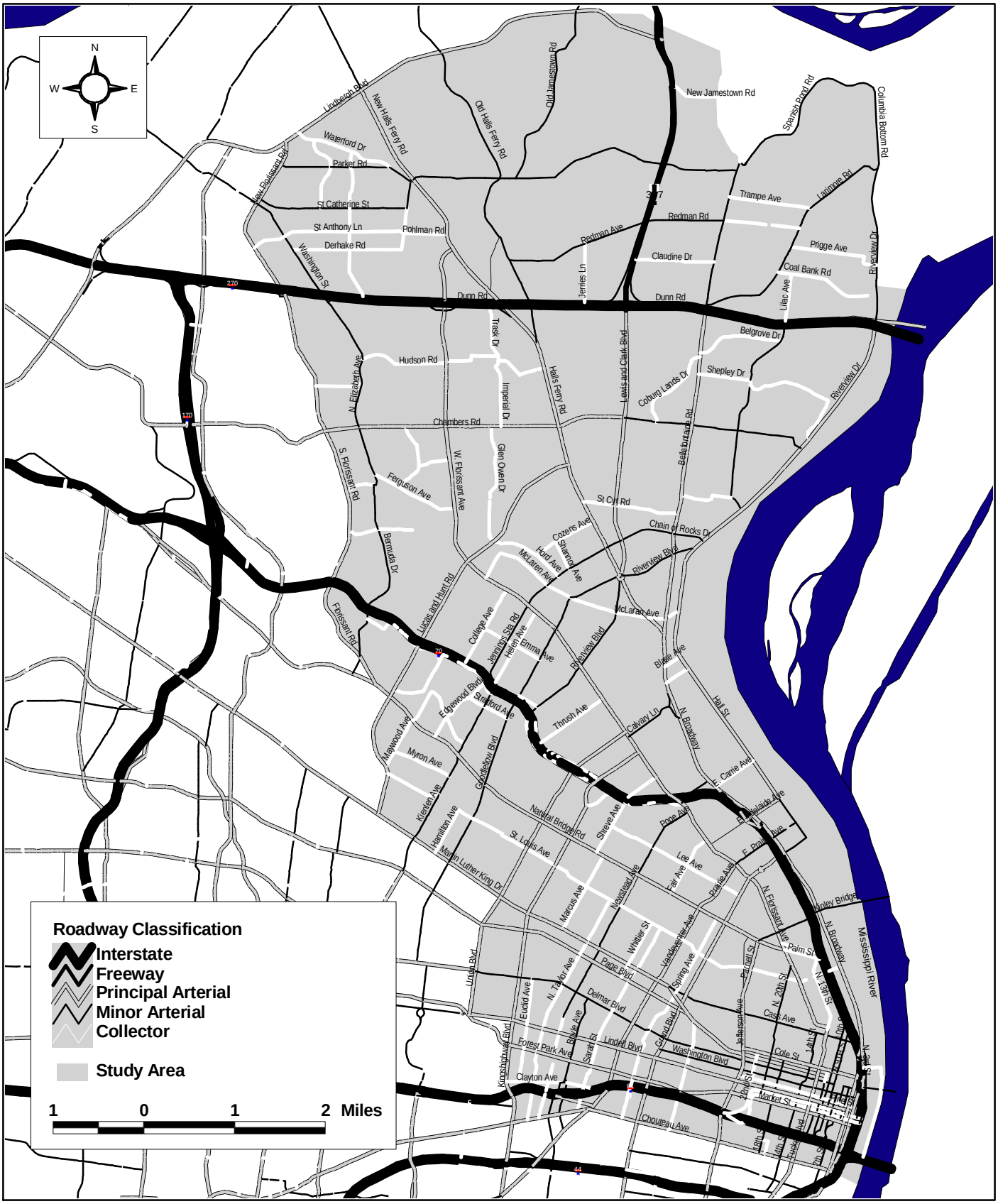
Interstate 270 within the Study Area generally provides three through lanes of traffic in each direction with auxiliary lanes between most interchanges. I-270 picks up a fourth lane at Lindbergh Boulevard. This facility provides full or partial access to New Florissant Road, Washington Street, West Florissant Avenue, New Halls Ferry Road, Old Halls Ferry Road, State Route 367, Bellefontaine Road, Lilac and Riverview Boulevard. The interchange with State Route 367, also known as Lewis and Clark Boulevard, is the only cloverleaf-type interchange along I-270 within the Study Area. The remaining interchanges use a full or partial diamond-type design. Also, several slip ramps, which provide access to parallel outer roads, for both entering and exiting vehicles, can be found on the westbound side of the facility.

Interstate 70 is a three-lane (each direction) facility for a majority of its length within the Study Area. Auxiliary lanes can be found between certain interchanges. Full or partial access is provided at interchanges with Florissant Road, Bermuda Drive, Lucas-Hunt Road, Jennings Station Road, Goodfellow Boulevard, Riverview Boulevard, Kingshighway Boulevard, West Florissant Avenue, Adelaide and Grand Boulevard. Full or partial diamond interchanges comprise the remaining interchanges. Several sections of the facility have outer roads with slip ramps providing access. In the downtown portion of the facility, full access to the major Mississippi River crossings is available as well as slip ramp access to collector-distributor roadways serving the St. Louis Central Business District (CBD).

A two-lane reversible section is also provided along I-70 from east of Union Boulevard to downtown, a length of approximately six miles. These two lanes are located in the median of the facility. Directional control is manually provided to assure access for the peak direction of flow. There is no intermediate access to or from this section. It is intended to provide additional capacity during peak travel periods. A map of the general roadway classifications can be found in Figure 7.1-1.

Planned Improvements

A list of planned improvements within the Study Area can be found in Table 7.1-1 and graphically represented in Figure 7.1-2. In addition to this list, numerous resurfacing and bridge rehabilitation and reconstruction projects are planned.



Source: Missouri Department of Transportation, 1998.

Figure 7.1-1
Existing Roadway Classification

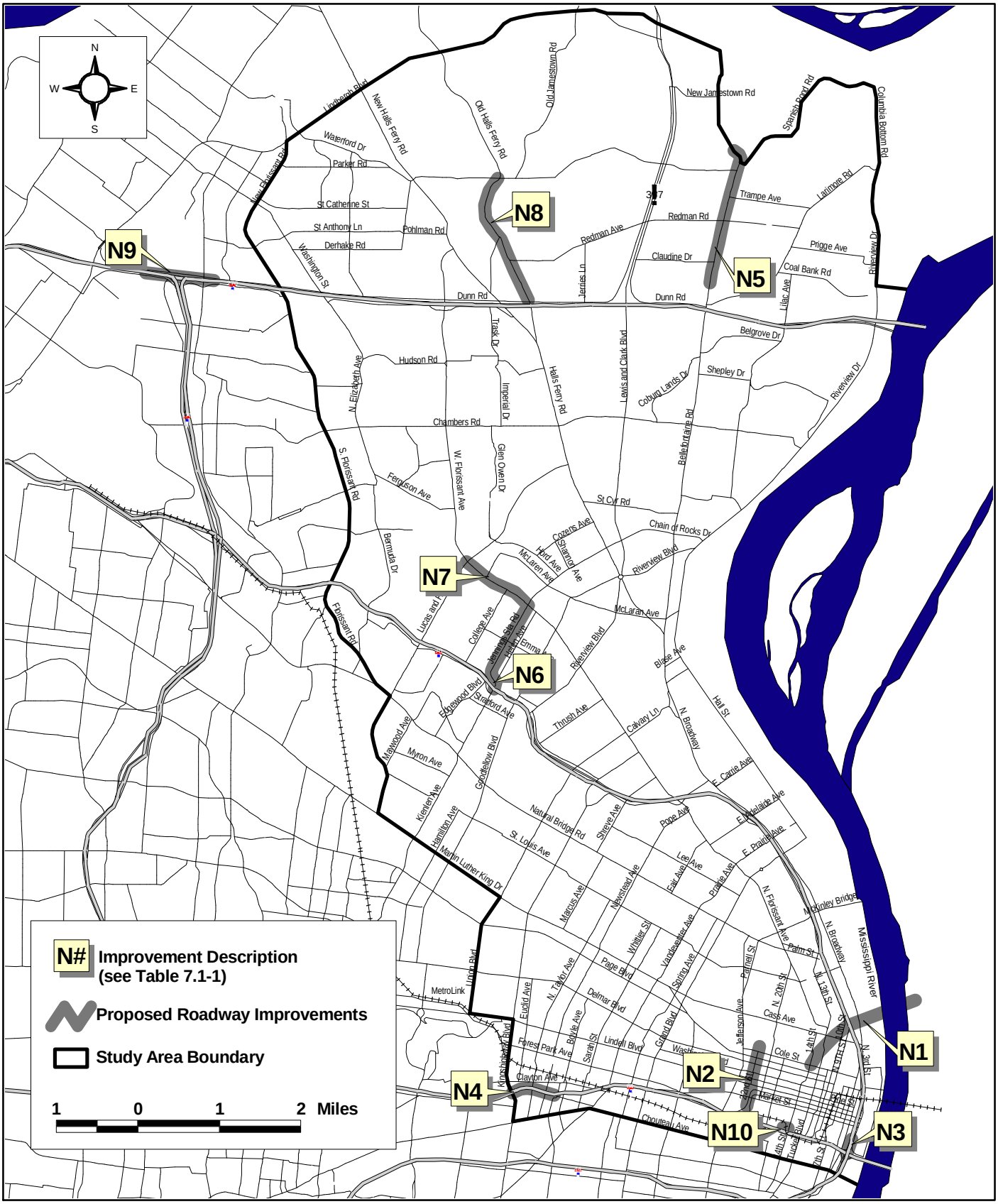


Figure 7.1-2
Proposed Roadway Improvements

TABLE 7.1-1
PLANNED ROADWAY IMPROVEMENTS

Number	Roadway	Location	Planned Improvement
N1	I-70	US 67 to Lilac Road	New Mississippi River Bridge, ramps from 14th Street and Tucker Boulevard to I-70/bridge
N2	22nd Street Parkway	I-64 to Martin Luther King Boulevard	Reconstruct as four-lane arterial, new I-64 ramps at Market Street and Olive Street
N3	I-70	Spruce Street and I-64	New ramps for northbound and southbound I-70
N4	I-64	Tower Grove Road to Kingshighway Boulevard	Interchange improvements, auxiliary lanes
N5	Bellefontaine Road	Sierra Vista Road to Horizon Village Drive	Widen from two to three lanes
N6	Jennings Station Road	I-70 to West Florissant Avenue	Widen from two to five lanes
N7	West Florissant Avenue	Jennings Station Road to Lucas-Hunt Road	Widen from four to five lanes
N8	Old Halls Ferry Road	Dunn Road to Parker Road	Widen from two to three lanes
N9	I-70/I-270		Widen from two to three lanes
N10	Spruce Street		Extension at new multimodal center

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

Usage

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

The weekday peak travel period is defined by 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 Northside Study Area experiences an a.m. peak distribution in a predominantly east-west direction. Interstate 70 regionally serves the east-west movement, although turns to the south to carry the east-west movement to the St. Louis CBD. The directional distribution of I-70 in the a.m. is as high as 65/35 with the heavier movement in east/southbound directions. This translates into approximately 65 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 unequal as in the a.m. period. Portions of I-70 within the Study Area typically experience as low as a 50/50 directional split during the p.m. peak.

Interstate 270 has the opposite directionality of I-70. Located in the northern portion of the Study Area and the northeastern portion of St. Louis County, I-270 in this area is primarily used by Illinois commuters with varying destinations throughout the western half of the region. The directional split in this case is approximately 60/40 with the heavier movement in the westbound direction during the a.m. peak period. The p.m. peak period experiences the reverse effect with eastbound as the predominant travel direction. Typically, though, the directional split can be found to be as low as 55/45 on this facility within the Study Area.

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

TABLE 7.1-2
TRAFFIC DIRECTIONAL DISTRIBUTION

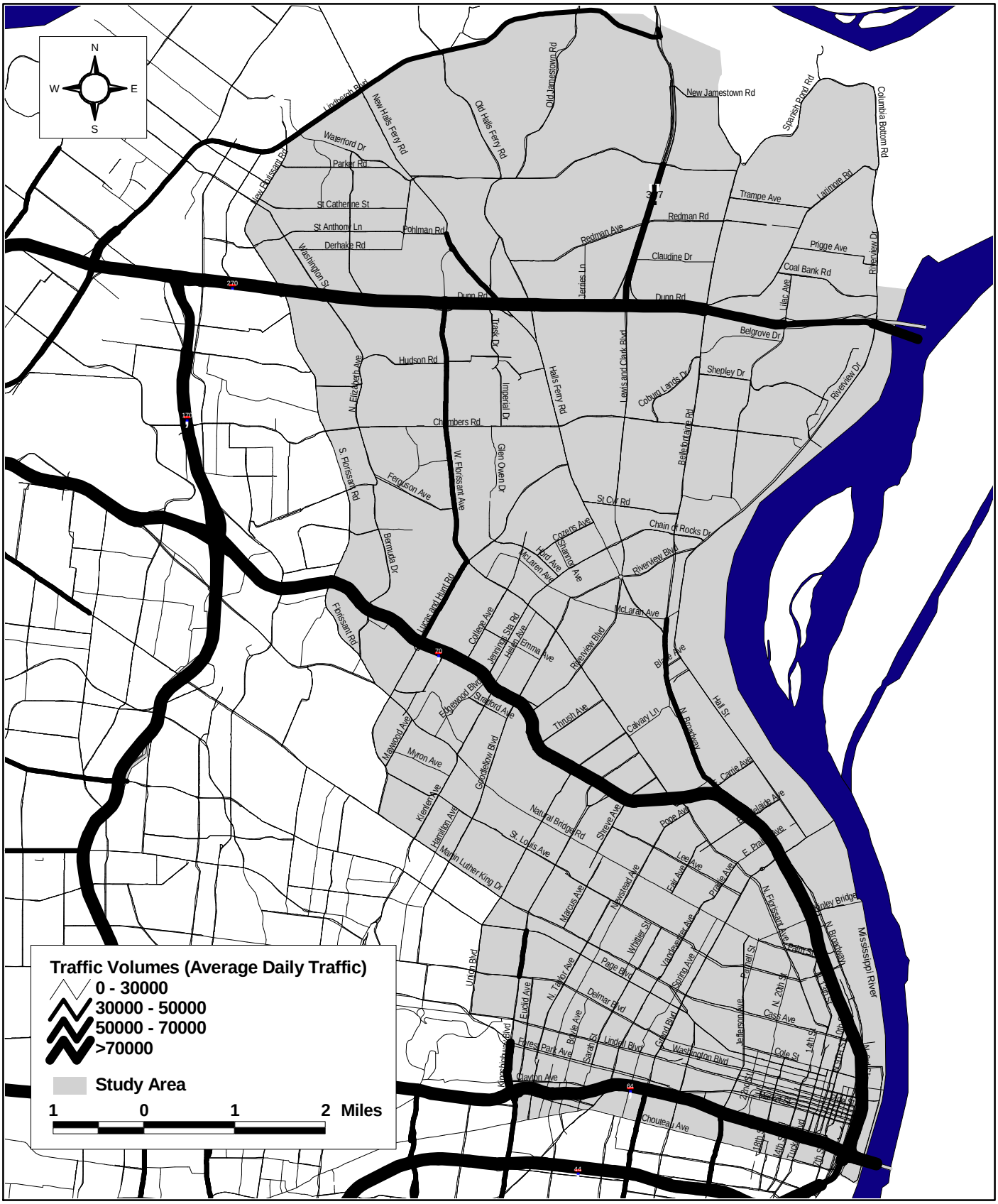
Roadway		a.m. Peak	p.m. Peak
I-64		70/30	60/40
I-70		55/45	55/45
I-270		65/35	60/40
MO 367/Lewis & Clark Boulevard	N of Chambers Rd	65/35	55/45
	S of Chambers Rd	70/30	60/40
New Halls Ferry Road	N of I-270	65/35	60/40
	S of I-270	65/35	55/45
Chambers Road		70/30	60/40
Lucas-Hunt Road/West Florissant		65/35	60/40
Grand Avenue	N of I-64/40	75/25	60/40
	S of I-64/40	65/45	55/45
Page Avenue	E of Grand Ave	70/30	60/40
	W of Grand Ave	60/40	55/45
Market Street		65/35	60/40
Jefferson Street		60/40	55/45
Tucker Boulevard		75/25	55/45

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

Average Daily Traffic (ADT)

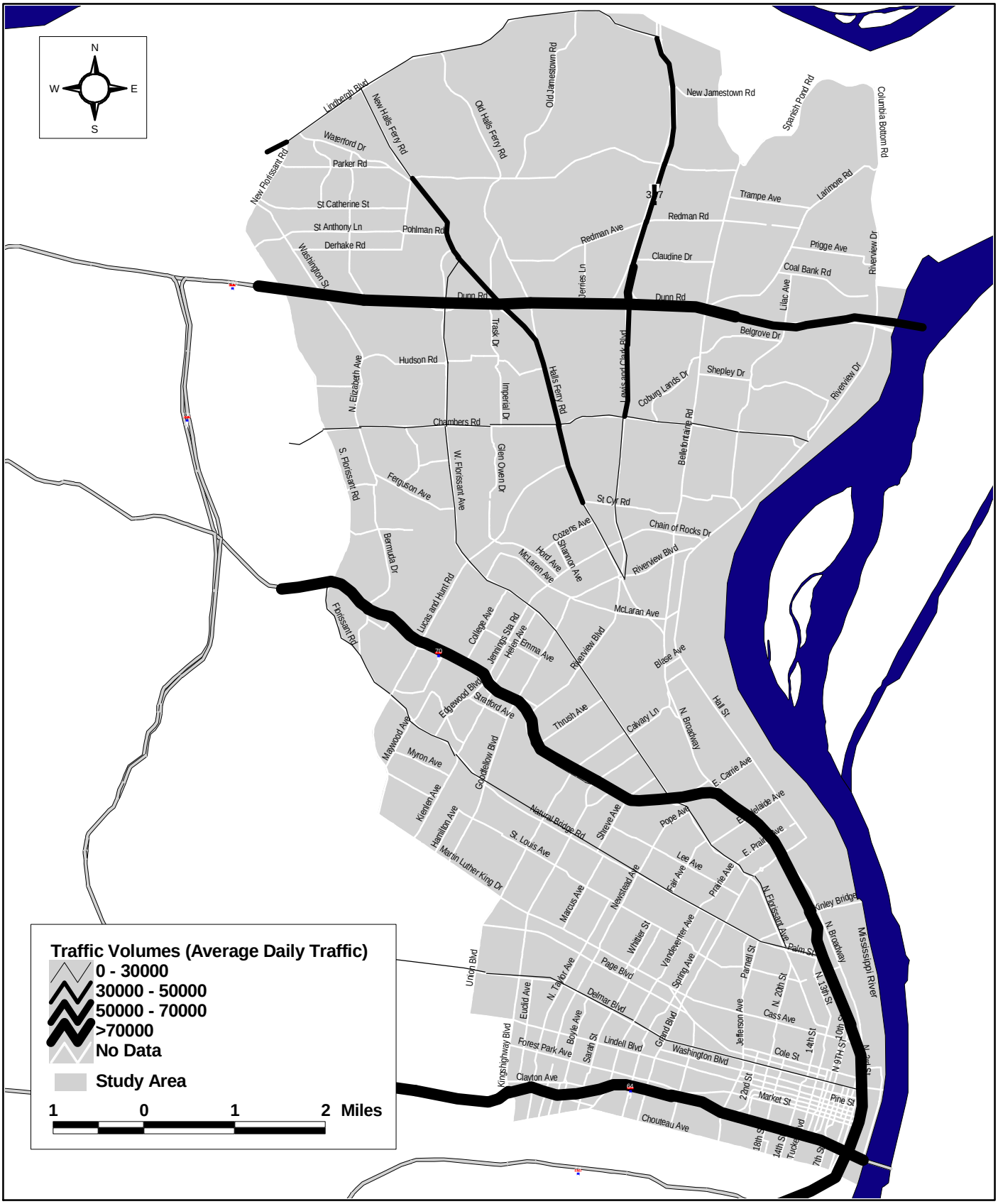
The average daily traffic volumes for 1995 and 2020 can best be summarized graphically. Figure 7.1-3 and Figure 7.1-4 shows these volumes respectively. Interstate I-270 within the Study Area has an approximate two-way daily volume of 60,000 vehicles on the Mississippi River crossing increasing up to over 100,000 vehicles in the western portion of the Study Area. Interstate 70 has volumes that range from 110,000 vehicles near the St. Louis CBD to 118,000 vehicles in the western portion of the Study Area. Volumes along I-64 range from 80,000 to 93,000 vehicles per day within the Study Area. These ranges are based on MoDOT counts from 1995.

Projections of 2020 daily volumes for these facilities were obtained from the EWGCC regional travel forecasting model. Based on these forecasts, I-270 will have a two-way daily volume ranging from 62,000 vehicles at the Mississippi River crossing to 114,000 vehicles in the western portion of the Study Area. Interstate 70 volumes will range from 113,000 near the St. Louis CBD to 124,000 vehicles approaching I-170 in the western portion of the Study Area. Projected volumes along I-64 range from 108,000 to 117,000 per average weekday. Given the downward demographic trends for the Study Area presented in Section 3.0, these small forecast increases in interstate highway traffic volumes result primarily from forecast population and employment growth in surrounding areas.



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)

Truck Percentages

The single unit truck percentages on the interstates within the Study Area are fairly typical of the regional traffic statistics, with single unit trucks comprising approximately four percent of average daily traffic along I-70 as well as I-270.

Level of Service

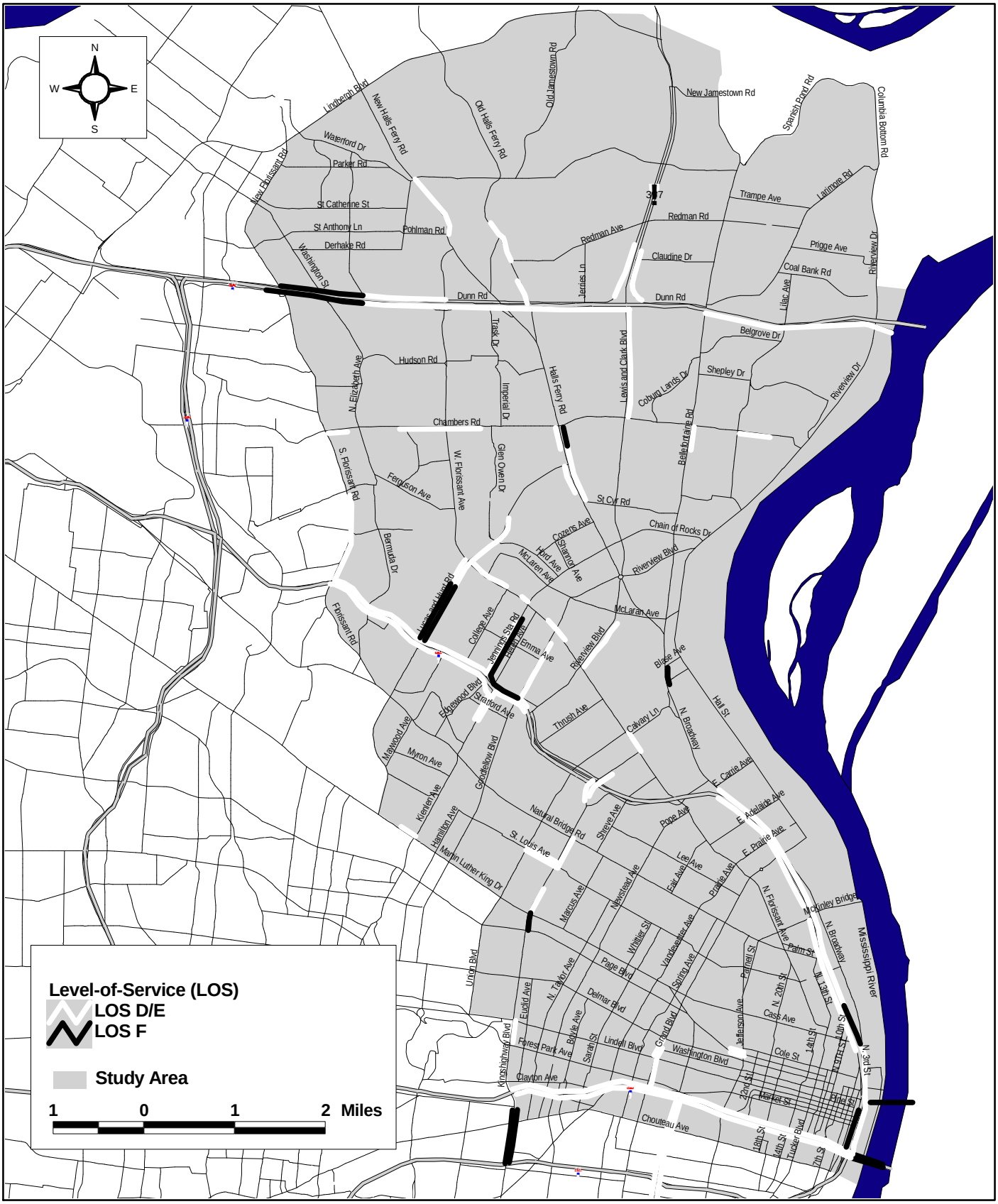
The peak hour levels of service for the major roadways in the Study Area were estimated from the volume to capacity (v/c) ratios provided by EWGCC for 1996 and 2020, and are shown graphically in Figures 7.1-5 and 7.1-6. Moderate peak period congestion (levels of service D and E) was identified along most portions of Interstates 70 and 270 for the year 1996. Additionally, traffic flow breakdown conditions (level of service F) were found to exist for certain segments of I-70 near the St. Louis CBD as well as a portion of I-270 in the western portion of the Study Area approaching I-170.

Levels of service projections for 2020, also produced by EWGCC, reveal that moderate congestion still exists along a majority of interstate segments in the Study Area. With the exception of a small segment of I-70 west of Goodfellow Boulevard, breakdown conditions seem to be alleviated along interstates within the Study Area. This can be mostly attributed to forecast declines in population and employment in the Study Area and proposed improvements to capacities of Study Area roadways.

Safety Issues

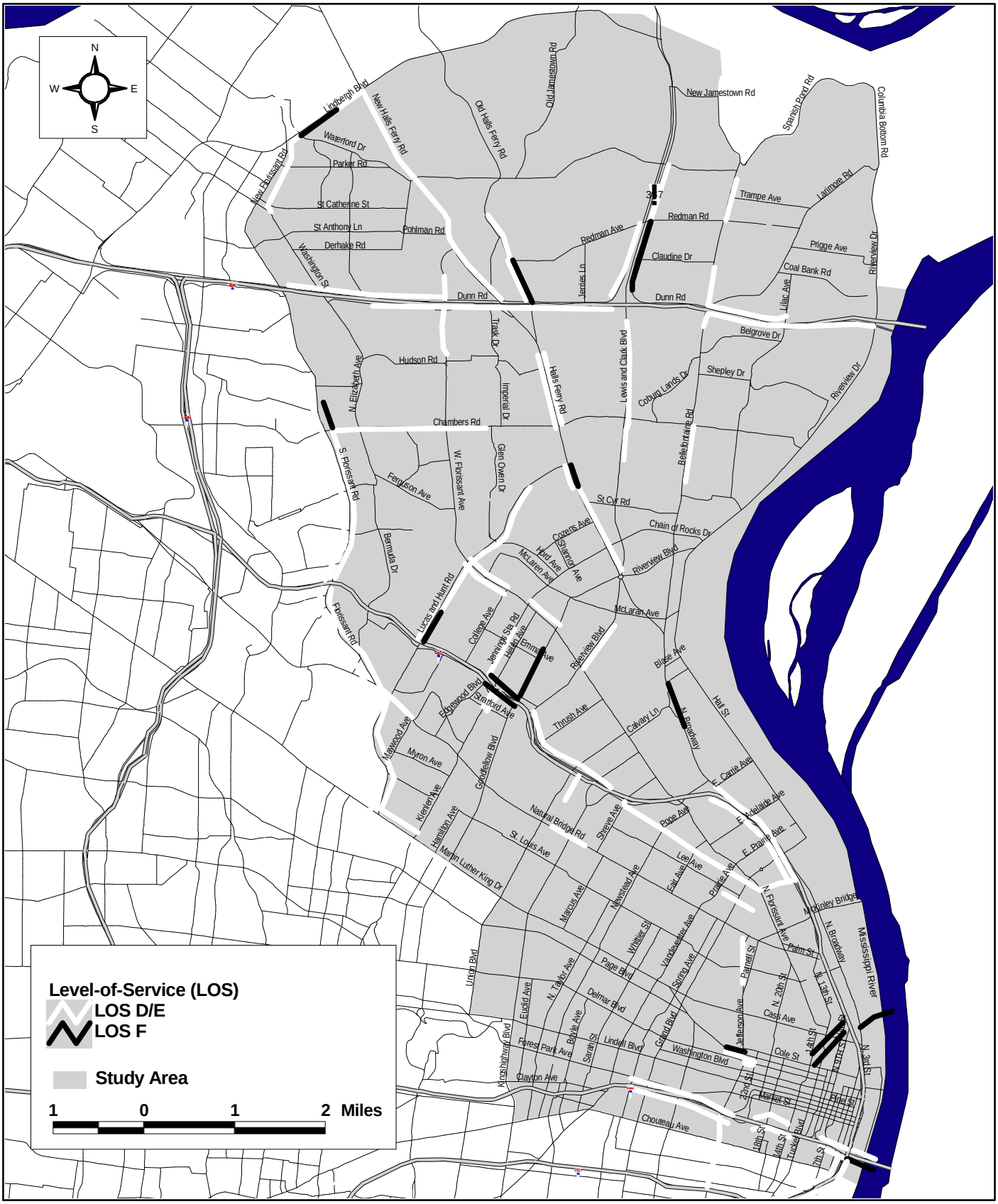
Accident data obtained from MoDOT for the Northside Study Area is summarized in Table 7.1-3. This data, for the year of 1996, illustrates the accident rate (accidents per million vehicle miles traveled) for roadway segments within the Study Area as well as the statewide rate for comparable roadway types. Note that I-64 westbound and I-70 westbound both had 1996 accident rates of more than twice the statewide average for interstate facilities.

The state records also reveal that a total of 19 of the accidents occurring in 1996 on these same segments of interstate and arterial roadways 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-270 Eastbound	Florissant Road to Riverview	221.77	139.28
I-270 Westbound	Florissant Road to Riverview	266.53	139.28
I-64 Eastbound	Kingshighway Boulevard to I-55	248.76	139.28
I-64 Westbound	Kingshighway Boulevard to I-55	333.11	139.28
I-70 Eastbound	Florissant Road to Mississippi River	231.64	139.28
I-70 Westbound	Florissant Road to Mississippi River	368.91	139.28
115 (Natural Bridge Road)	Florissant Road to I-70	371.85	289.76
180 (St. Charles Rock Road)	Lucas-Hunt to Dr. Martin Luther King	391.93	289.76
367 (Lewis and Clark Boulevard)	St. Louis City Limits to Lindbergh	302.88	289.76
67 (Lindbergh Boulevard)	New Florissant to 367	857.72	190.04
AC (New Halls Ferry Road)	Lindbergh to Cozens	228.46	264.37
N (Florissant Road)	Lindbergh to Natural Bridge	132.34	264.37
U (Lucas-Hunt Road)	West Florissant to Glenmore	265.37	264.37

Source: Missouri Department of Transportation, 1996.

Park and Ride Lots

The Northside Study Area has two MoDOT designated park and ride lots. One is located in the northeast quadrant of the intersection of I-270 and Missouri Route 367. The second, which serves the Riverview Gardens express route, is located at Lilac and I-270. Commuter parking also occurs at the Northland Shopping Center. No MetroLink park and ride facilities are currently located in the Study Area, however, commuter parking is known to occur along public streets adjacent to MetroLink facilities, particularly near the Central West End and Grand Boulevard Stations in the Study Area.

7.1.2 Major Arterials/Principal Roadways

Existing Characteristics

There are several arterials and other major roadways In addition to the interstate highways serving the Northside Study Area (see Figure 7.1-1). 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 and City of St. Louis). Local collector and feeder roadways, most of which are maintained by their respective municipalities, comprise the remainder of the roadway network.

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

- Route 67 Lindbergh Boulevard
- Highway N Florissant Road
- Highway AC New Halls Ferry Road
- Route 367 Lewis and Clark Boulevard
- Route 115 Natural Bridge Road
- Route 180 St. Charles Rock Road/Dr. Martin Luther King Drive
- Highway U Lucas-Hunt Road
- Highway D Page Avenue
- Route 100 Manchester Road
- Highway H Riverview Boulevard

These roadways vary in the number of lanes they provide and the type of access control. Roadways such as Lindbergh Boulevard, Manchester Road and Lewis and Clark Boulevard all provide up to 4 travel lanes with varying levels of access control. In most cases these facilities also provide a median turn lane.

In addition, several major arterials serve the City of St. Louis within the Study Area, including Memorial Drive, Broadway, Market Street, Tucker Boulevard, and Washington Avenue.

Planned Improvements

As in the case of the interstates, improvements within the Northside Study Area involve bridge replacement/repair or preservation of the existing infrastructure. The most notable project is the geometric improvements and widening of Bellefontaine Road (1999, 2000). The limits of this project are from approximately Sierra Vista to Horizon Village. In addition, potential improvements to Route 367 north of I-270 are currently under study by MoDOT in addition to this study (see Table 7.1-1).

Usage

The major arterials within the Study Area generally carry between 20,000 and 35,000 vehicles per day. Exceptions to this include Route 367, which carries over 52,000 vehicles per day, and Dr. Martin Luther King Drive, which has an ADT of less than 10,000 vehicles. Projections by EWGCC for the daily traffic on these same segments show varying levels of increase. A majority of the arterials in the Study Area show a forecast slight decrease in volume due to the forecast decline in Study Area population and employment. This decrease, however, is expected to amount to less than five percent. The roadways forecast to increase in volume include Natural Bridge Road, Kingshighway Boulevard and Martin Luther King Drive. Increases vary from ten percent on Kingshighway Boulevard to an over 40 percent increase anticipated on Dr. Martin Luther King Drive.

Generally, arterial segments in the southern portion of the Study Area have less volume than segments in the northern portion. In addition, east-west movements generally have less volume than north-south movements along these arterials. The ADT for all of the principal roadways in the Northside Study Area can be found in Figure 7.1-3. Volume projections by EWGCC for 2020 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 7.1-5 for year 1996 and Figure 7.1-6 for year 2020) were determined using the EWGCC 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 interchanges with I-270 and I-70. Several long segments of roadway currently experience moderate congestion including a portion of Lucas-Hunt Road north of I-70 and segments of New Halls Ferry Road and Lewis and Clark Boulevard in the northern half of the Study Area. Breakdown conditions (level of service F) can also be observed at many of these critical intersections, in particular roadways intersecting I-70.

Under 2020 conditions, virtually all of these same roadway segments are anticipated to continue experiencing moderate congestion or breakdown conditions. On portions of Goodfellow Boulevard and Old Halls Ferry Road, the level of service is forecast to deteriorate from moderate to breakdown conditions. In addition, a five-mile segment of Florissant Road north of Dr. Martin Luther King Drive is forecast to have moderate congestion.

Safety Issues/Statistics

The following arterials (see Table 7.1-3) have accident rates (1996) significantly exceeding the rates found on similar roadway segments statewide:

- Lindbergh Boulevard (New Florissant Road to Route 367)
- Route 180 (Lucas-Hunt Road to Dr. Martin Luther King Drive)
- Route 115 (Florissant Road to I-70)

7.2 TRANSIT

7.2.1 Intraregional Bus Services

Local Routes

Approximately 31 local fixed routes provide regular service to the Northside Study Area. Local route coverage is shown in Figure 7.2-1. The local routes that serve the Northside 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 of St. Louis 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 Northside is more concentrated in the southern portions of the Study Area, due to higher population and employment densities as well as lack of other transportation alternatives for residents of this area (see Section 3.6). This is evidenced by the high proportion of zero and one-car households within the Study Area as described in Section 3.6 of this report. (Maps of both population and employment characteristics within the Northside Study Area are also shown in Section 3.0.) Much of St. Louis's central business district lies within the Northside Study Area, which is a primary attractor of transit trips in the region. Consequently, the Northside has a well developed transit service base. As seen in Figure 7.2-1, the transit network in the Northside exhibits a compact grid pattern throughout most of the southern half of the Study Area.

In the northern portions of the Study Area, local service is slightly more dispersed and oriented towards serving clusters of development along major travel corridors such as Florissant Road, West Florissant Avenue, New Halls Ferry Road, Lewis and Clark Boulevard, Bellefontaine Road and Lindbergh Boulevard.

Based on market research studies and interviews conducted with community representatives, Northside residents rely on the transit system for a variety of trip purposes in addition to the home to work commute - to travel to school, shopping, errands, medical appointments, and special events.

Although service frequency varies throughout the Northside Study Area, typical weekday headways during the peak periods are between 15 and 20 minutes (see Table 7.2-1). Off-peak, buses tend to run about every 20 or 30 minutes. On Saturdays, headways are generally 30 minutes, whereas on Sundays and Holidays, headways range between 30 and 60 minutes.

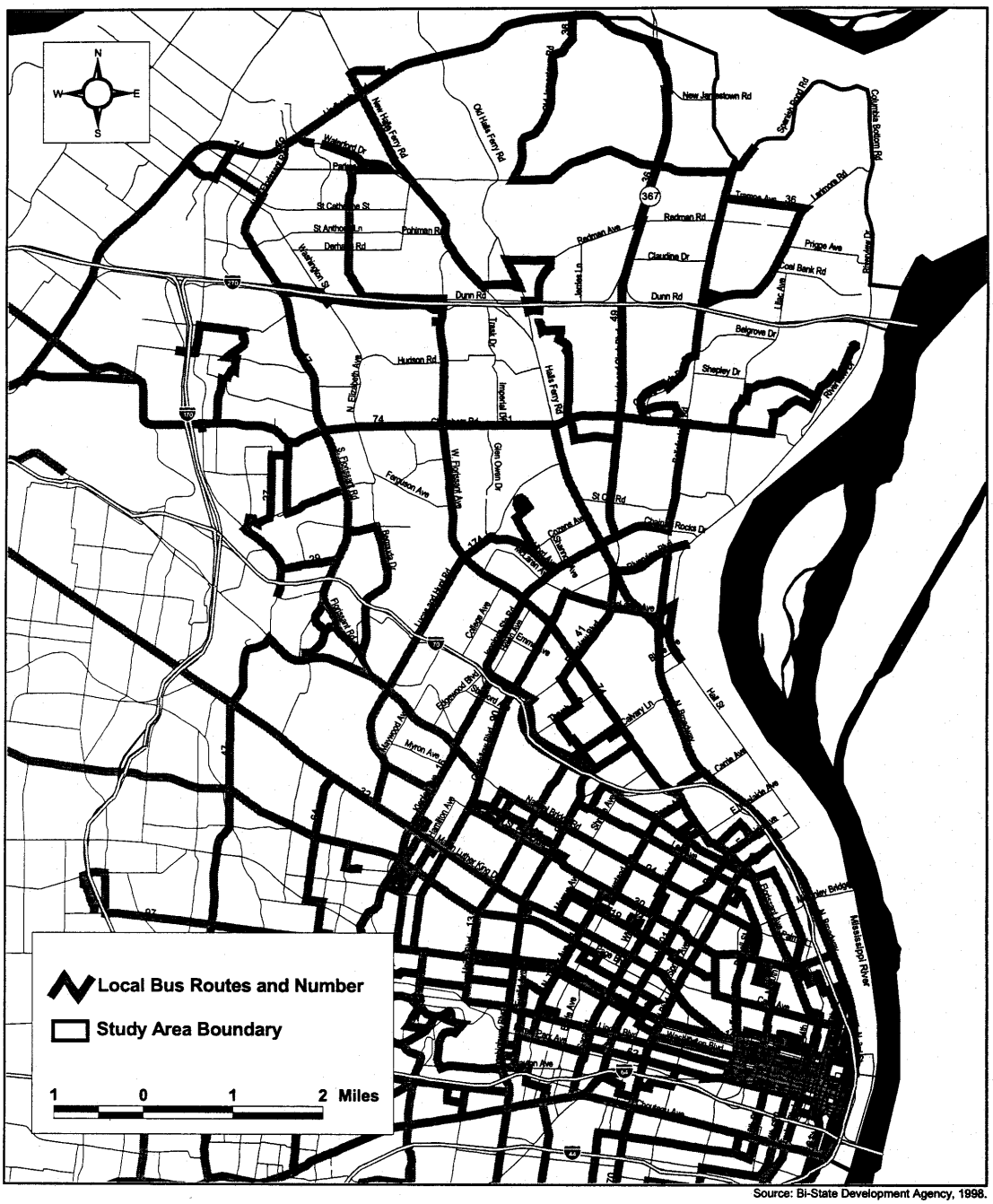
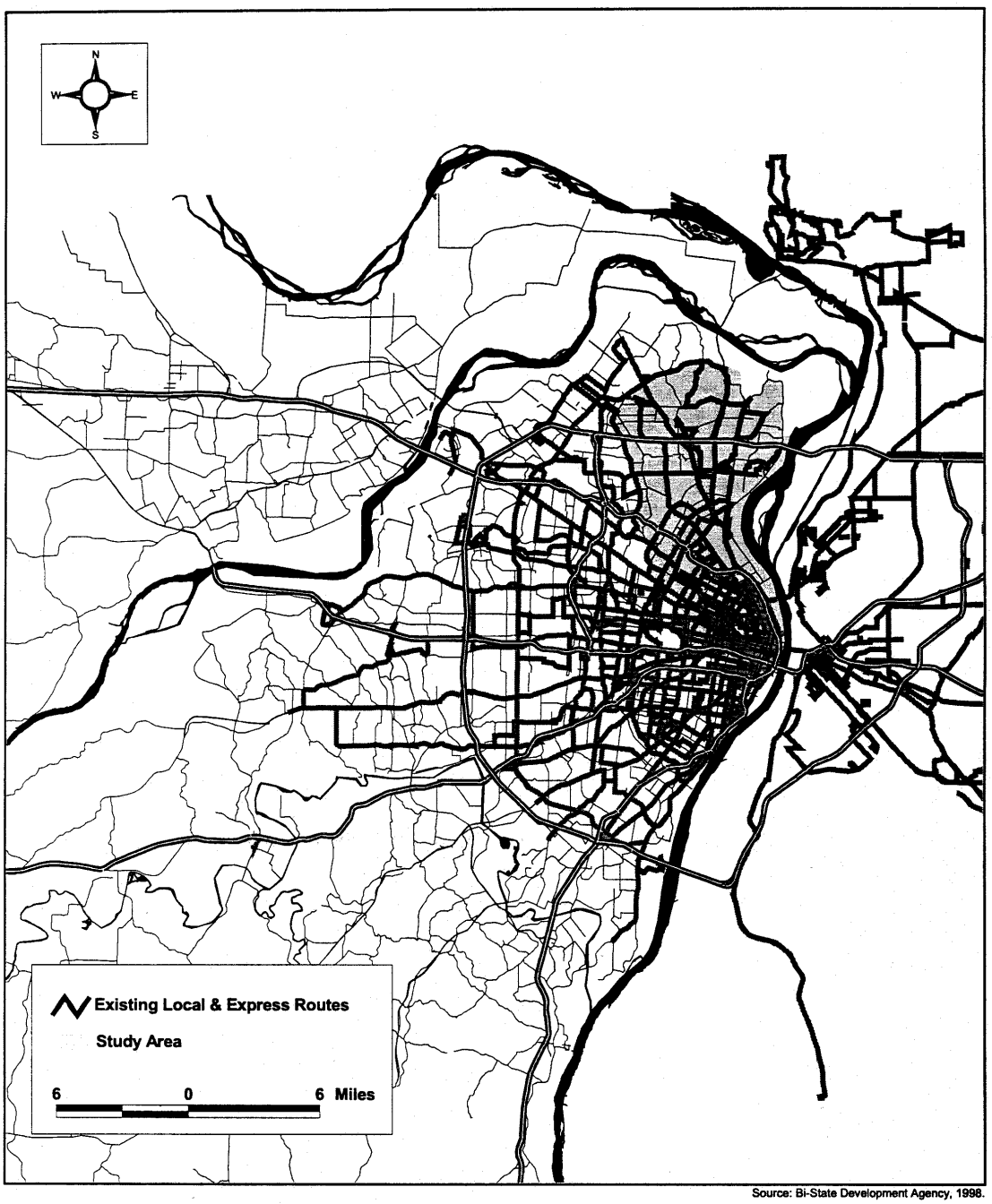


Figure 7.2-1
Existing Local Bus Routes



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
1	Vandeventer	30	30	N/A	18	4016	276	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	Forest Park Shuttle	20	20	20	36	10412	858	20	20	20	26	1546	883	20	20	20	26	1663	555
4	Natural Bridge	15	20	20	55	33213	6,283	30	30	30	30	4518	4,427	30	30	30	40	3714	2,056
13	Union	30	30	30	34	8376	1,230	30	30	30	27	1198	670	60	60	60	16	1278	421
15	Hodiamont	30	30	30	37	14868	1,419	30	30	30	28	3060	881	60	60	60	16	1490	374
16	City Limits	20	20	30	43	15861	2,455	30	30	30	36	3003	1,616	50	50	55	19	1581	799
18	Taylor	20	20	30	41	11454	1,895	30	30	35	32	1388	821	60	60	60	18	816	399
19	St. Louis Avenue	30	30	45	23	7195	852	45	45	45	15	908	308	45	45	45	13	780	178
27	Ferguson Shuttle	25	50	60	20	5922	306	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
29	Berkeley Shuttle	30	30	N/A	8	2292	155	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
30	Cass	20	20	30	42	18697	3,576	30	30	30	36	3179	2,435	30	30	30	33	2857	1,513
32	Wellston-M.L. King	20	30	30	45	25997	3,575	30	30	30	48	4402	3,142	30	30	30	37	3254	1,551
36	Spanish Lake	60	60	60	14	5330	363	120	120	120	7	570	232	N/A	N/A	N/A	N/A	N/A	N/A
40	Broadway	30	30	30	34	23774	2,954	30	40	40	19	3554	1,460	60	60	60	19	2167	661
41	Lee	15	15	30	56	24889	3,751	30	20	20	46	4050	2,430	60	30	30	23	2071	1,209
42	Sarah	15	25	30	42	11360	1,595	45	45	45	24	1285	872	45	45	30	25	1433	513
47	Cross County	15	15	20	44	27747	1,895	60	45	50	14	2232	517	N/A	N/A	N/A	N/A	N/A	N/A
49	Lindbergh	15	45	45	24	23091	1,198	50	45	60	14	2457	546	N/A	N/A	N/A	N/A	N/A	N/A
52	Forest Park	30	30	30	64	30044	3,467	60	60	60	37	3301	1,536	50	60	60	37	3274	914
57	Manchester	20	20	30	45	28286	2,919	30	30	30	30	3202	1,714	45	60	60	16	1943	679
61	Chambers	30	30	30	26	8842	634	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
64	Lucas Hunt	30	30	30	29	11212	1,770	45	45	45	16	998	755	60	60	60	11	533	251
70	Grand	5	10	15	61	34408	12,014	20	15	15	61	4480	7,509	30	20	20	48	3251	4,281
74	Florissant	20	20	20	74	27476	3,698	25	25	25	54	4386	2,614	30	50	50	31	1861	1,016
90	Hampton	20	15	30	53	24587	3,779	30	30	30	35	3506	2,275	30	30	30	34	3487	1,338
93	Lindell	20	20	20	51	23571	3,615	30	30	30	38	3190	1,511	45	35	30	26	1916	743
94	Page	15	15	30	41	29138	4,724	25	30	25	21	3714	2,245	30	25	30	21	3124	1,287
95	Kingshighway	10	15	15	78	34557	7,852	20	20	20	49	4345	4,798	40	30	20	34	3205	2,431
96	Walnut Park	30	30	60	20	8584	1,059	60	60	60	12	1064	472	60	60	60	11	1101	267
97	Delmar	15	15	15	77	34087	5,798	15	15	15	66	6108	3,356	30	20	20	47	3952	1,824
174	Northland Shuttle	peak period service only			4	272	21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

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

Hours of operation vary by route. On Saturdays and weekdays, buses generally run from about 5:00 a.m. to 1:00 a.m. On Sundays and holidays, buses typically operate from about 5:00 a.m. to 11:00 p.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 measure 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), and the span of service (hours of operation). The high frequency routes with peak hour headways of 5 to 15 minutes tend to exhibit the highest numbers of average daily passengers compared to routes with headways of 30 minutes or greater. For example, the Grand route (#70) 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 that cross cut the urban core of the Northside Study Area. These routes include Grand (#70), Kingshighway (#95), Natural Bridge (#4), Delmar (#97) and Page (#94).

According to 1998 transit data provided by Bi-State, the level of transit service in the Northside Study Area as measured by revenue service hours and route coverage is the highest of the three MTIA study areas: Daniel Boone, Northside, and Southside (see Table 7.2-1). Existing transit ridership in the Northside Study Area is also comparatively high. Examination of the average weekday ridership in each of the areas yielded the following median routes as shown in Table 7.2-2. Half of the routes in each study area have ridership that is higher than the median route and about half exhibit ridership that is lower. This finding of higher ridership in the Northside Study Area is correlated with its lower auto ownership levels and higher densities of development as described in Section 3.0.

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

Within the Northside Study Area, eight bus routes provide express or limited stop service. These routes are summarized in Table 7.2-3 and are also mapped in Figure 7.2-3.

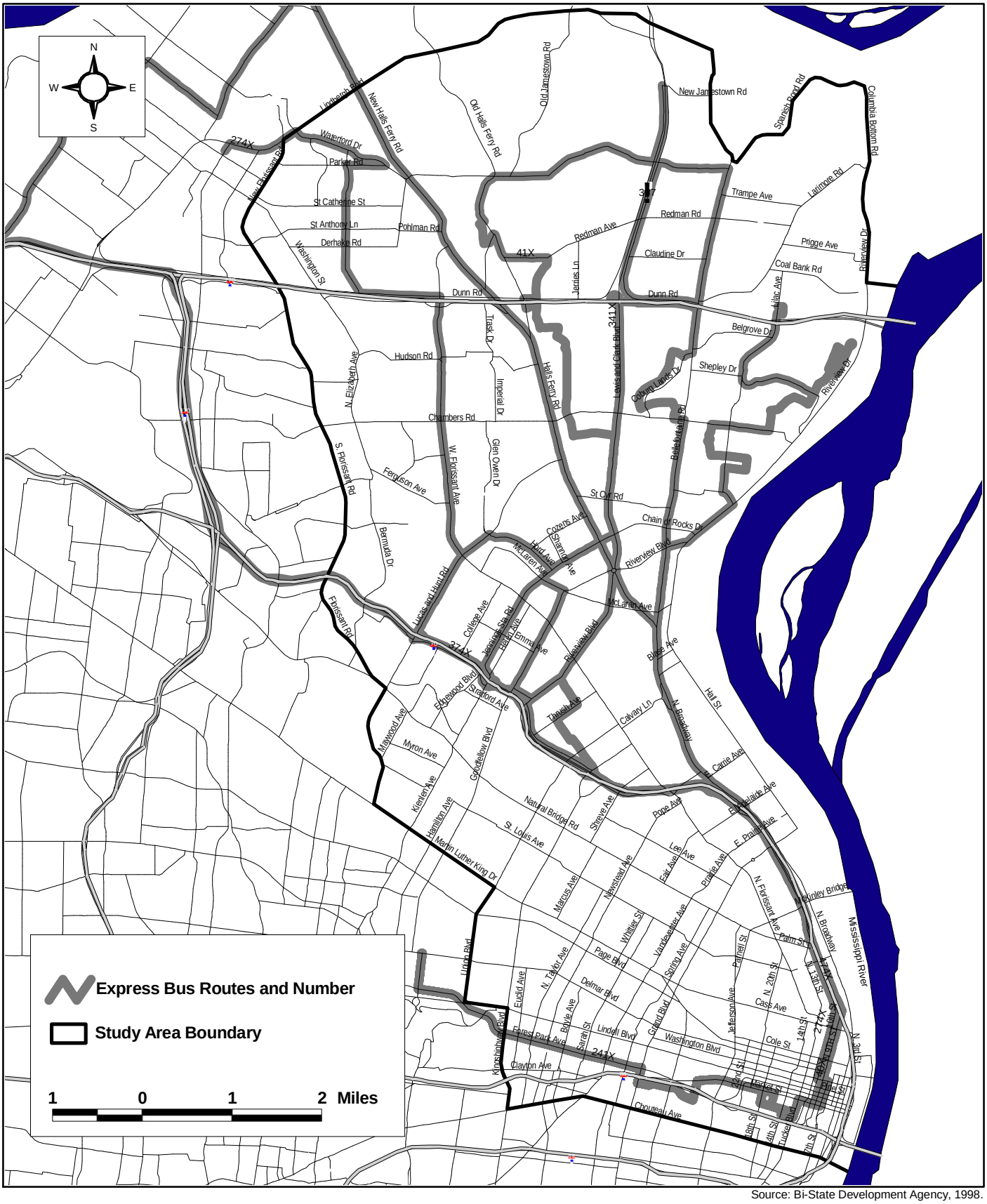


Figure 7.2-3
Existing Express Bus Routes

TABLE 7.2-3
EXPRESS ROUTES

Route No.	Route Name	AM Peak Trips	ADP
40X	Riverview Gardens Express	3	80
41X	Northside Express	4	151
141X	New Halls Ferry Express	5	254
240X	Hwy 367 Express	3	97
241X	Bissell Hills Express	6	234
274X	Paddock Hills Express	5	216
374X	Shackelford Express	3	163
474X	Jennings Express	3	81

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

These express routes primarily serve commuter trips destined to downtown St. Louis and provide limited stop service in the peak periods along selected arterials in the northern portions of the Study Area. All of these routes use I-70 to complete their trip. Express routes operate in the peak direction in that they travel in the southbound direction in the a.m. peak and the northbound direction in the p.m. peak in order to connect Northside residential areas with employment sites in downtown St. Louis and, in some cases, with other destination points in the region (i.e., south and west).

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).

7.2.2 MetroLink Light Rail Transit (LRT)

The existing MetroLink light rail system between Lambert International Airport and East St. Louis, Illinois, transverses the Northside Study Area near its southern border as it approaches downtown St. Louis from the west. Eight of the system's 19 MetroLink stations fall directly within the Study Area. From west to east, these include:

- Central West End
- Grand Boulevard
- Union Station
- Kiel Center
- Busch Stadium
- 8th and Pine

- Convention Center
- Laclede's Landing

During a typical weekday MetroLink runs at seven to eight-minute headways during the peak periods (both a.m. and p.m.) and at ten-minute headways, off-peak. On Saturdays, typical headways are about ten 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.

MetroLink indirectly serves portions of the Northside Study Area via feeder bus service. Table 7.2-4 lists the local routes in the Northside Study Area that provide direct connections with MetroLink rail stations outside downtown St. Louis.

In addition, EWGCC, in cooperation with Bi-State and MoDOT, is currently examining extensions of MetroLink that would provide for rail service for north-south travel movements parallel to and west of the Northside 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 this project are currently underway. As of this writing, a precise alignment for the Cross County MetroLink extension has yet to be determined.

7.2.3 Transit Facilities

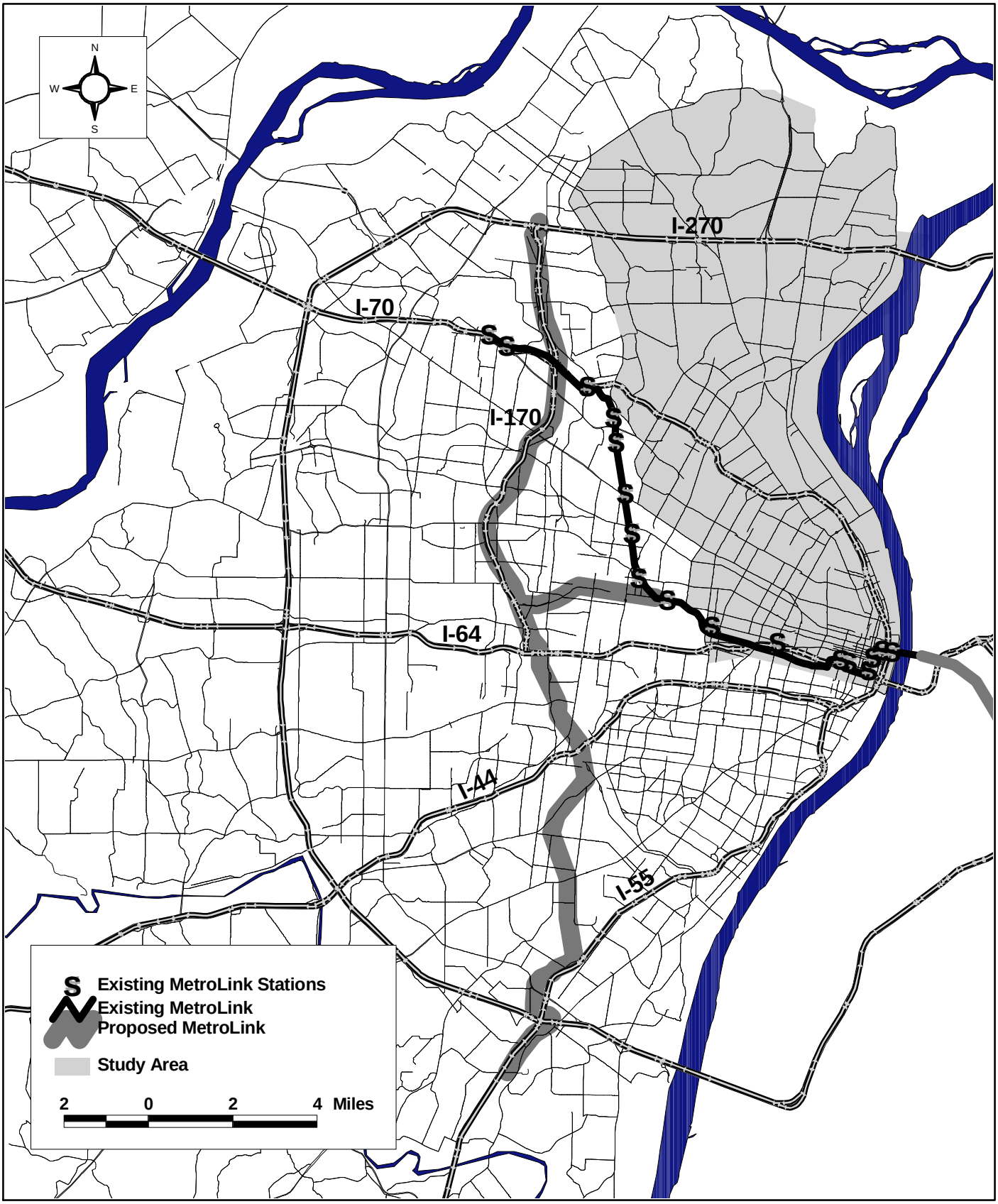
Bi-State is currently examining options to transition from the more traditional radial configuration of fixed route bus services to a transit center-based system. This is driven, in part, by the need to better serve changes in regional travel patterns resulting from shifts in population and employment 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.

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

- Grand Avenue Station
- Central West End Station
- Natural Bridge Road/Union Boulevard
- Northland Shopping Center
- Florissant

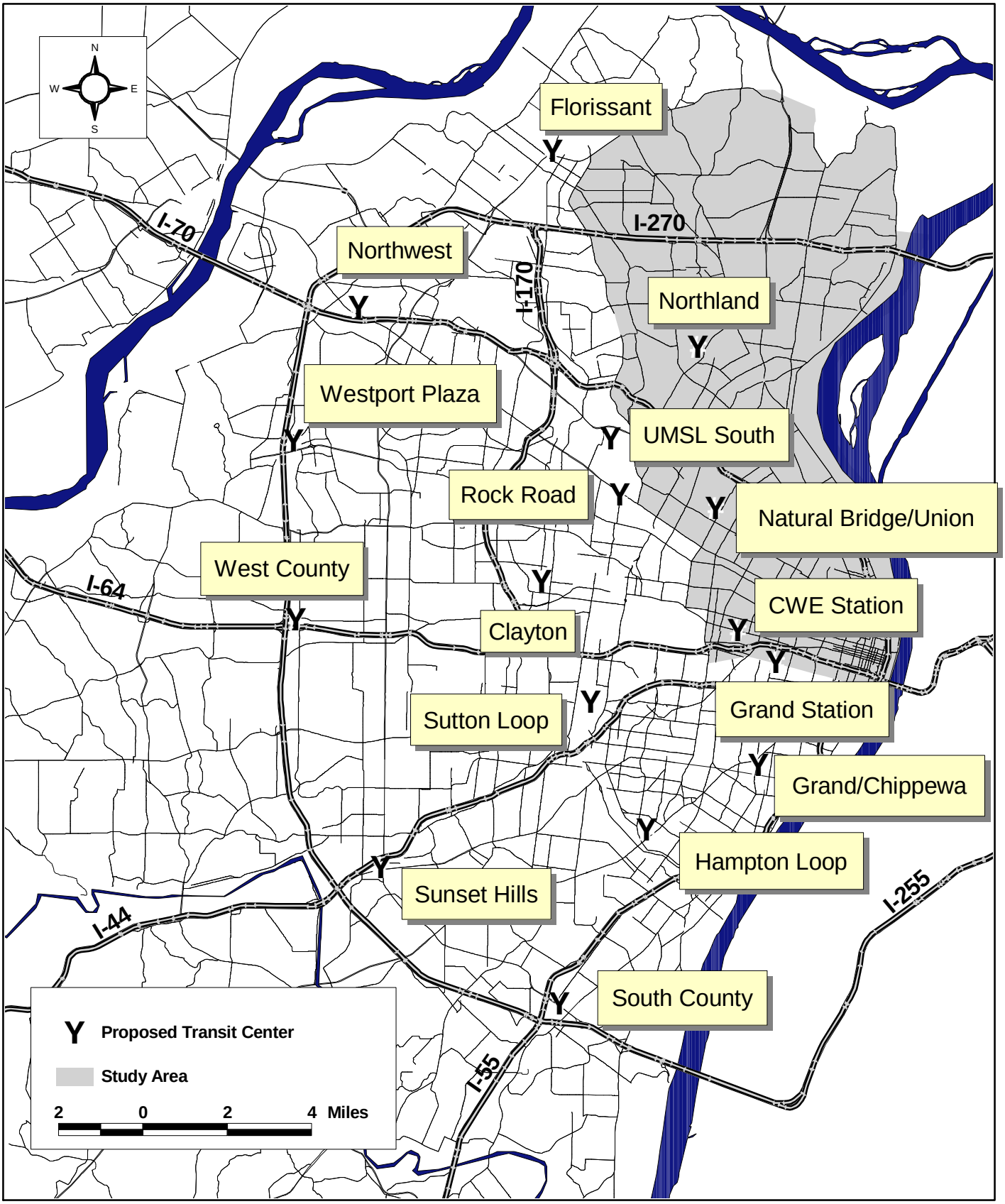
Three of these transit centers, Grand Avenue Station, Central West End Station, and Natural Bridge/Union, would be located in the St. Louis City portion of the Northside Study Area. The Grand Avenue Station and Central West End Stations are located on the existing MetroLink line and already serve as transfer points between bus and rail. The purpose of these transit centers would be to help facilitate intermodal transfers between bus and MetroLink riders as well as direct transfers for bus patrons in the urbanized portions of the Study Area. In these three 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 primarily to the west (i.e., the "reverse commute.")

Transit centers at Northland Shopping Center and Florissant would play a major role in facilitating travel between North 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. Although proposed transfer facilities at UMSL Station and Rock Road Station are not located within the Northside Study Area, these two transit centers would also serve Northside residents.



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

TABLE 7.2-4
FEEDER BUS ROUTES

Route No.	Route Name	MetroLink Station(s) Served
1	Vandeventer	Grand Station
2	Forest Park	Forest Park, Central West End Stations
4	Natural Bridge	Lambert Airport, UMSL South Stations
13	Union	Central West End Station
15	Hodiamont	Rock Road Station
16	City Limits	Delmar Station
18	Taylor	Central West End Station
27	Ferguson Shuttle	North Hanley, UMSL North, UMSL South Stations
29	Berkeley Shuttle	North Hanley Station
30	Cass	Rock Road Station
32	Wellston – MLK	Rock Road Station
42	Sarah	Grand Station
47	Cross County	North Hanley, UMSL North, UMSL South Stations
49	Lindbergh	Lambert Airport Station
52	Forest Park	Central West End Station
64	Lucas-Hunt	Rock Road Station
70	Grand	Grand Station
90	Hampton	Forest Park Station
93	Lindell	Forest Park Station
94	Page	Wellston Station
95	Kingshighway	Central West End Station
97	Delmar	Delmar Station

Source: Bi-State Development Agency, FY 1998.

Florissant 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 this North 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.

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 St. Louis 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.

Currently, no routes identified in the Plan lie within the Northside Study Area. Local municipalities, however, have implemented or are planning on implementing individual bicycle and pedestrian paths and walkways. One known such instance is the North County Bikeway, scheduled for construction in 1999. This facility is a joint project with St. Louis County and Black Jack and will connect Black Jack with Florissant Valley Community College and Jamestown Mall.

MoDOT is currently in the process of finalizing a region bicycle and pedestrian plan and identifying facility locations. At this time it is not known whether or not any potential facilities are within the Study Area. MoDOT does consider bicycle and pedestrian facility improvements in conjunction with roadway and other improvements where feasible.

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*

[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.

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.

The highways located within the Northside Study Area used for goods movement are I-70, I-64 (Highway 40/61) and I-270. The Northside Study Area includes numerous rail facilities. These are listed in Table 7.4-2. Piers, wharves and docks along the Mississippi River in the Northside Study Area are listed in Table 7.4-3. There are no airports located within the Study Area.

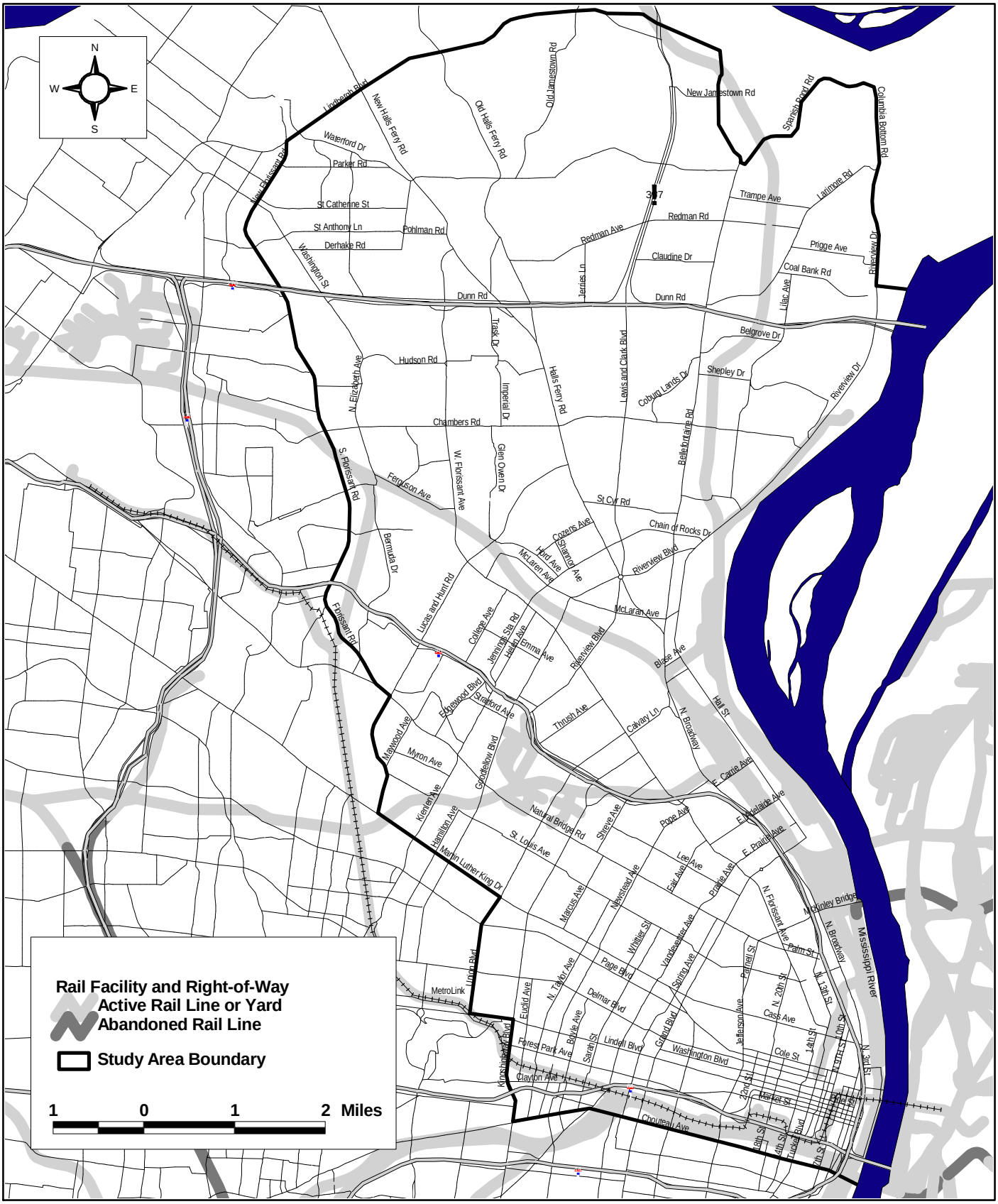
TABLE 7.4-2
RAIL FACILITY TYPES AND LOCATIONS FOR ST. LOUIS REGION

Company	Facility Name	Facility Type[1]	City	State	Zip
Burlington Northern	North St. Louis Yard	Classification Yard	St. Louis	MO	63147
Norfolk Southern	Luther Yard	Intermodal & Classification	St. Louis	MO	63147

Note:
[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 switches 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
187.6	right bank, MS River, St. Louis, approx. 1,300 ft. above foot of Humboldt Street extended	Missouri Portland Cement Company, St. Louis Terminal Dock	Cement
185.9	right bank, MS River, St. Louis, approx. 1,300 ft. above foot of Humboldt Street extended	Humboldt Boat Service Dock	Marine repair, outfitting
185.5	right bank, MS River, St. Louis, below foot of Humboldt Street extended	J. S. Alberici Construction Company, Humboldt Facility Loading Ramp	Handling equipment and supplies
184.7	right bank, MS River, St. Louis, approx. 1.5 miles above Merchants Railroad Bridge	American Commercial Terminals, Western Terminal Coal Dock	Coal/coke
184.0	right bank, MS River, St. Louis, approx. 0.5 miles above Merchants Railroad Bridge	ADM/Growmark St. Louis Elevator "A" Wharf	Grain
182.7	right bank, MS River, St. Louis, above Merchants Railroad Bridge	Lange-Stegmann Company Dock	Bulk cargo (dry misc.), coal/ coke, fertilizer (dry), grain, ore (misc.), salt
182.1	right bank, MS River, St. Louis, approx. 0.5 miles below McKinley Bridge	Kiesel Marine Service Branch Street Dock	Petroleum products
181.7	right bank, MS River, St. Louis, approx. 0.8 miles below McKinley Bridge	Beelman River Terminals Old Municipal North Wharf	Conventional cargo, heavy lift items, bulk cargo (dry misc.), coal/coke, grain, ore (misc.), sand, scrap metal
181.5	right bank, MS River, St. Louis, approx. 1 mile below McKinley Bridge	Beelman River Terminals New Municipal South Wharf	Conventional cargo, heavy lift items, bulk cargo (dry & liquid misc.), caustic soda, coal/coke, grain, ore (misc.), sand, scrap metal
181.2	right bank, MS River, St. Louis, approx. 1.3 miles below McKinley Bridge	Consolidated Grain & Barge Co., St. Louis Intermodal Bulk Transfer Wharf	Bulk cargo (dry misc.), grain
181.1	right bank, MS River, St. Louis, approx. 0.9 miles above Veterans Memorial Bridge	Continental Cement Company, St. Louis Dock	Cement
180.9	right bank, MS River, St. Louis, approx. 0.7 miles above Veterans Memorial Bridge	Petroleum Fuel & Terminal Company, St. Louis Dock	Asphalt, fuel oil
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 & 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

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

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