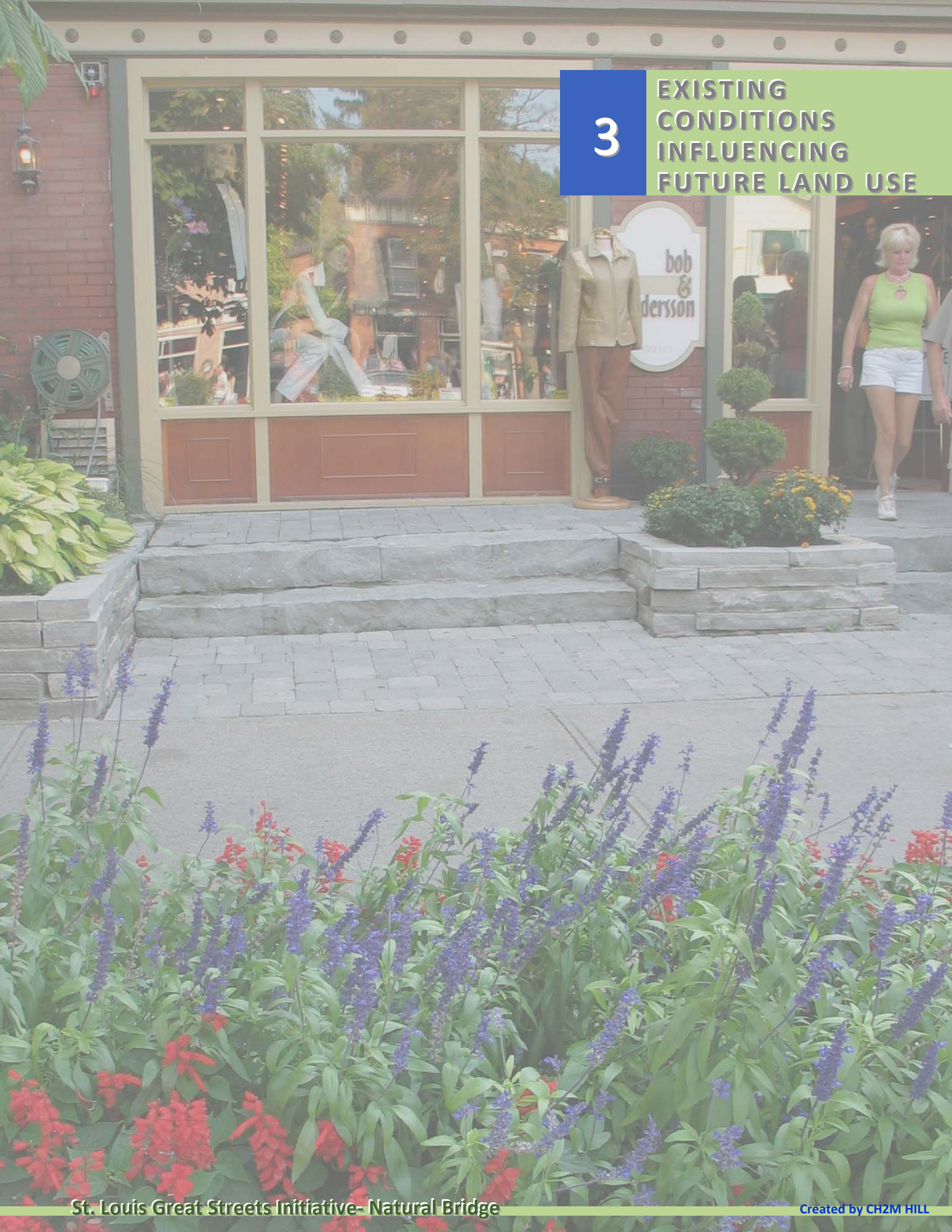
3 EXISTING CONDITIONS INFLUENCING FUTURE LAND USE



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Chapter 3: Existing Conditions Influencing Future Land Use

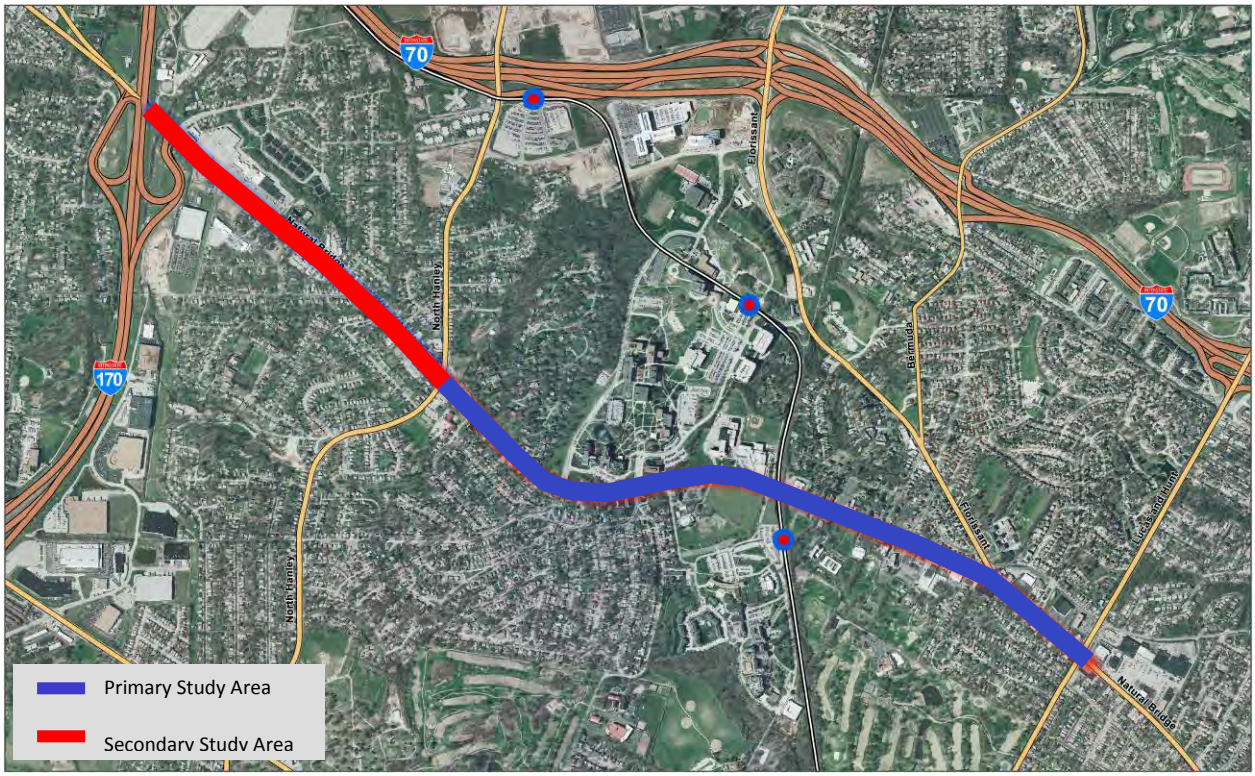
The study areas set out for this project are defined as primary and secondary (See Exhibit 3.1). The segment areas are:

- Primary Study Area: Natural Bridge corridor from West of West/Clearview Drive to Lucas and Hunt Road
- Secondary Study Area: Natural Bridge corridor from I-170 to East of Hanley Road

The primary study area is reviewed in detail including evaluations of residential, commercial, and institutional development. The secondary study area is reviewed more generally and does not include recommendations for specific development in detail. The secondary study area is included because of its impact on the primary study area.

The primary study area is the focus of land use recommendations, as well as detailed design of the roadway. In this chapter and following chapters, the primary study area is discussed in detail at the beginning of each chapter, while general observations and recommendations for the secondary study area are only included in Chapter 5: Future Land Use.

Exhibit 3.1 Primary and Secondary Study



Source: St. Louis County GIS

Physical Conditions Influencing Future Land Use

Existing physical conditions influence future land use planning, exhibiting development trends, population growth, and market preferences. A significant amount of housing and infrastructure within the primary study area were developed post WWII. Although these investments are aging, neighborhood interest and cohesive community participation have maintained the quality and values of individual properties. The cities and villages of Bel-Nor, Bellerive and portions of Normandy are examples of this type of residential development. Some areas are pre WWII development such as Pasadena Hills , which is a planned residential community dating back to the 1920s with 1265 acres of land and 478 structures. The neighborhood is included on the national historic register as a historic district and has remained aesthetically and economically strong.

Commercial areas play an important role in the economic health and vitality of any community. These investment areas contribute employment opportunities, provide goods and services, and set quality of life trends that reflect community buying power. Commercial areas along Natural Bridge Road are aging and do not accomodate the goods and services demanded by the local market place, for the most part. Lack of commercial density robs the market of development that could enhance the market; limits sales tax revenue; and reduces market trend changes that could stabilize the area overall.

Institutional development remains the strength within the corridor. Through expansion and constant investment in school and church properties, institutional investment has stabilized and sustained the marketplace. Although the institutions do not contribute to the area's tax base, they have provided stability, as mentioned, and the University of Missouri – St. Louis (UMSL) has planned and implemented development areas adjacent to their campus. Examples of this development, including private, corporate development such as Express Scripts and infrastructure upgrades will go a long way in attracting additional investment. Institutional land is made up of larger parcel sizes and in the event any of these entities become interested in disposition of all or a portion of their land, the size and location of these sites will be attractive to the private sector.

Existing Conditions: Residential, Commercial, Institutional

Residential Property

Attractive housing stock with high property values: an involved community: and a professional and mobile workforce is essential to continued investment. Residential construction within the communities along the Natural Bridge corridor is substantially composed of brick structures: having attractive architectural details: landscaped yards: and well maintained streetscapes. Some residential streets are enhanced with statuary and park-like medians and curb landscaping. For the most part, homes are situated on ¼ to ½ acre lots with residential street configurations assuming cul-de-sac and meandering internal circulation layouts within each neighborhood. Homes vary in appearance, upkeep, and value based on their original design, construction materials used and the extent to which various neighborhoods have worked together to sustain their property values and community appearance. Most neighborhoods have remained close knit and cooperative in their desire to maintain and systematically improve their neighborhoods and the community overall.

Opportunities for new housing are limited due to the age and development patterns in the area. Any new residential development within the neighborhoods would most likely require demolition and redevelopment, or rehabilitation of existing structures. The greatest opportunity for new residential development is located along Natural Bridge Road in the form of mixed use development, student housing, and senior housing.

Exhibit 3.2: Examples of Residential Property

Exhibit 3.2: Examples of Commercial Property

Source: CH2M HILL

Commercial Property

Commercial property, developed during the same period as the housing boom, now struggles to

Source: CH2M HILL

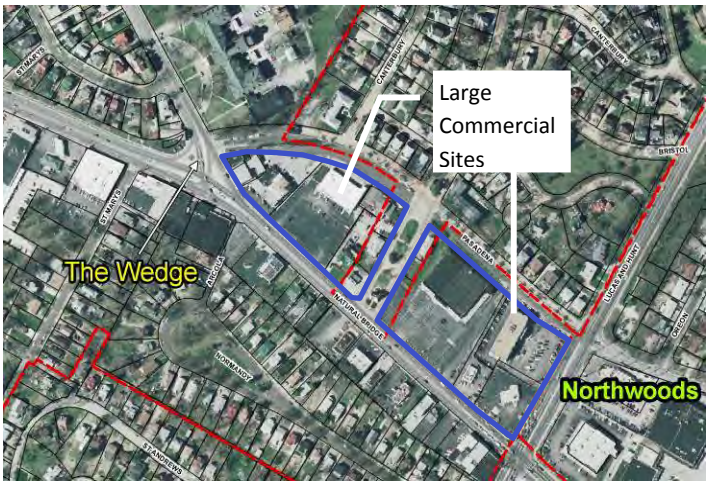
meet the needs of the local market. Retail structures along the corridor lack the constant upgrades needed to meet the needs of new retail marketing trends. Local commercial strip centers and independently developed, free standing buildings are limited by the local population's expendable income (buying power). Examples of commercial development include:

- Hardware Store
- Wig Shop and Clothier
- Resale Shop
- Various Fast Food Operators

The commercial development patterns consist primarily of small box store sites that appear to have been developed during the 1960's. These buildings have been modified over the years to respond to retail development trends and required layouts to accommodate new and subsequent tenant uses. Typically, retail box stores rely on highway access and visibility and are not found located along secondary corridors without immediate highway access. Therefore, these developments have declined in tenancy and value detracting from the commercial market. Potential redevelopment of buildings may include:

St. Louis County exhibits many population and development trends seen in other metropolitan areas around the county. Actual population growth has slowed while the existing population simply moves out towards the edges of the County and beyond. Housing and infrastructure, the majority of which was built between the 1950s and 1960s, continue to age and require regular upkeep. Commercial development continues to follow the shifting population and requires constant updating to avoid obsolescence. These trends, which mirror those seen in the 1940s and '50s as people, jobs and investment left the City of St. Louis for St. Louis County, are leading many older suburban communities to experience similar urban pressures – an older population, a reduced capacity for investment, and aging homes and businesses in need of maintenance and updating."

EXHIBIT 3.3: EXISTING LARGE COMMERCIAL SITES



Source: St. Louis County GIS

- Redevelopment of the sites and buildings to accommodate new tenancy such as:
  - A single tenant occupancy or the subdivision of buildings to include multiple tenant needs
  - Site improvements, including repaved parking lot and landscaping, building maintenance and alterations to accommodate the needs of new tenant(s)
- Tear down of existing structure(s) and rebuild of more dense structures including:

— Consideration given to internal circulation and reduced parking requirements in order to maximize available land and market demand

— Increased density

- Assembly of adjacent parcels to increase commercial development sites

— New interior circulation patterns

— Creation of public places

— Urban design strategies to facilitate implementation, financing and tenancy

Small, free standing retail is located on the south side of the Natural Bridge Road. This commercial area contains typical, small tenant space and for the most part is occupied by local businesses. There are two structures having historic and redevelopment potential significance. One such building is the former show room for the historic Moon Car (see Exhibit 3.4) located on the southwest quadrant (corner building) of Natural Bridge and Lucas and Hunt Roads at 7200 Natural Bridge Road. The other location is near the intersection of Natural Bridge and Florissant Roads. This building, currently houses a printing company, is the former home of a local theater located at 7324 Natural Bridge Road (Roland to Lucas and Hunt).

EXHIBIT 3.4: EXISTING SMALL COMMERCIAL SITES

Source: St. Louis County GIS

The Moon Car building is in very poor condition (interior and exterior), while the theater building appears to have been well maintained, although the original façade has been updated to match the adjacent building to the west. Overall, the structures offer an opportunity for in-fill and redevelopment. The properties south of Natural Bridge Road between Lucas and Hunt and the Wedge are void of public amenities. Parking lots and walk areas located on private property are in poor condition except for Afro World located at 7276 Natural Bridge Road and the hardware store at 7204 Natural Bridge Road.

Institutional Property

Institutional property, including schools and churches, control large parcels of land (Refer Exhibit 3.5). These properties have consistently maintained their property to the highest standards. Examples of these institutions include:

- Normandy City Hall
- University of Missouri (UMSL), North and South Campus and ancillary property
- Oblate Sisters of the Providence (Sisters of the Good Shepherd)
- Normandy School District
- Normandy United Methodist Church
- St. Ann's Church and School

Unity Lutheran Church

Murchison Tabernacle C.M.E Church

Reorganized Church of Jesus Christ

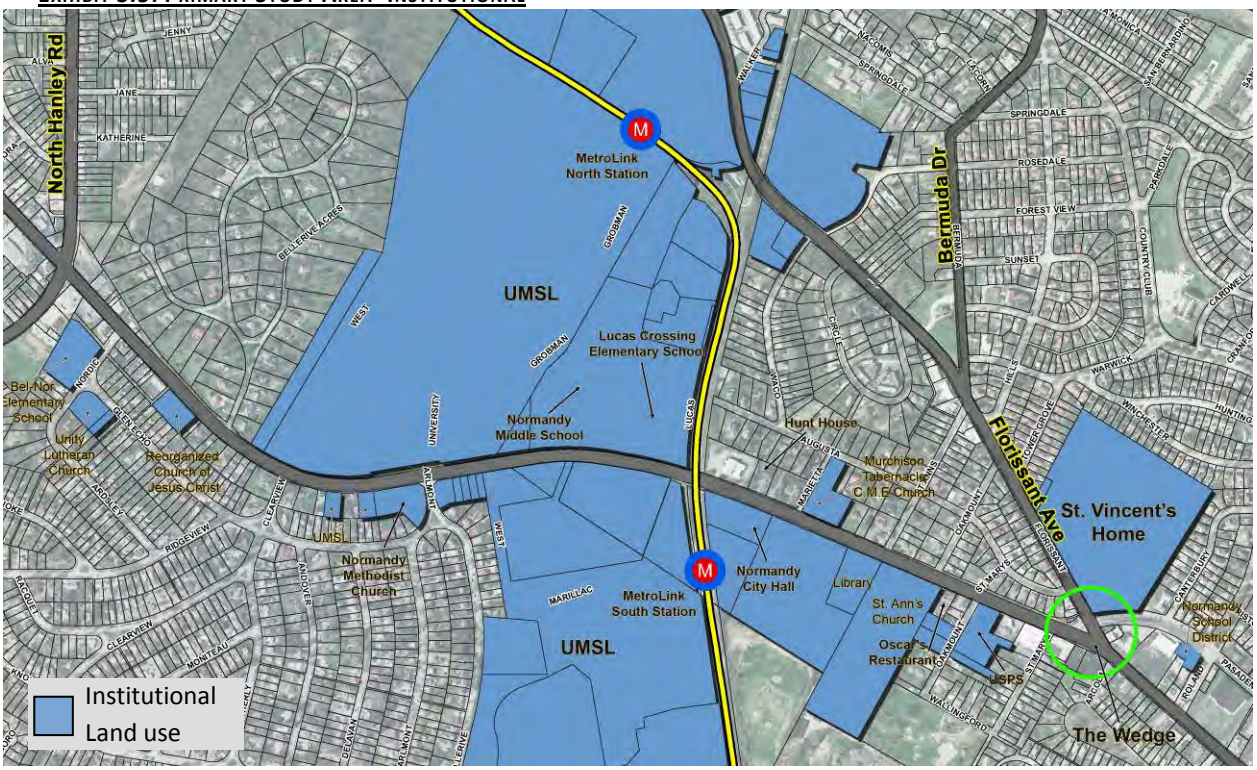
St. Vincent's Germanic School for Orphans

St. Louis County Public Library

Bel-Nor Elementary School

U.S. Post Office

EXHIBIT 3.5: PRIMARY STUDY AREA- INSTITUTIONAL



Source: St. Louis County GIS

The referenced institutions continue to dominate the market with properties that are developed on larger parcels of land and include various venues within their boundaries. For example, the UMSL campus is not limited to class rooms and administrative buildings. The campus includes the historic Mercantile Library and student housing. The Sisters of the Good Shepherd property includes residential living units for the order as well as housing and rehabilitation for women in need of special services. Varied use of the institutional property adds to the richness and variety of activities within the area. Upkeep and property investment has been ongoing for years as the various institutions modify and/or reuse their buildings and property configuration to accommodate changing needs. The reuse and upgrading of existing structures, development of new buildings, planning and construction of bike trails and the addition of parking and landscaped areas are examples of modifications that have occurred over time.

Institutional investment has created an island of economic strength within the primary study area that is unique in the North County area. These institutions, some historic, have stabilized the market and although there are changing economic pressures being exerted from within the greater St. Louis regional market, it is the interest and investment of these institutions (in concert with the dedicated neighborhood community groups) that have sustained social, cultural, and economic values in the area and have created opportunities for the future.

Another important institutional contribution concerns attracting people from outside the immediate local market area (the transient market). The increase in regional market access is the hallmark of institutional economic contribution. These facilities collectively contribute to the makeup of the local market through visitors and workforce entering the area on a regular basis.

In addition to the daily school and church schedules that increase public awareness of the area as a whole, there are public and private amenities that add to the prestige of the primary study area such as:

- The Mercantile Library, a historic St. Louis institution, now located on UMSL campus (an historic library containing priceless books, maps, and reference materials)
- UMSL special conferences, meeting rooms, and social events
- Touhill Performing Arts Center
- The historic beauty and aesthetic quality of the churches and their

Exhibit 3.6: Example of Institutional

Source: www.romeofthewest.com

Source: www.stltoday.com

grounds (some of the stained glass within these buildings attest to the age and cultural integrity of the buildings)

- Public and Private schools, academic activities and special events
- The St. Louis Public Library

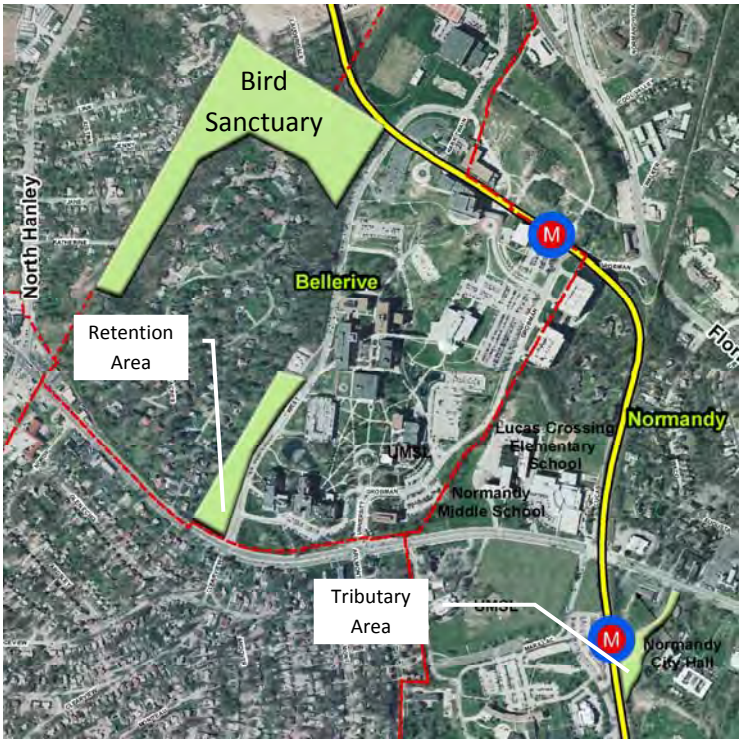
Grounds are well landscaped and maintained with mature trees, plantings, and well defined walkways and public areas, including bike trails. Access to parking and alternative transportation is well marked. Should any one of these institutional properties become available for redevelopment in the future (in whole or partial subdivision of the land), the size of existing parcels and the condition of the properties will provide an opportunity for market driven development and infrastructure upgrade.

Open Space Property

The primary study area boundary depth is limited to one parcel depth extending from West/Clearview Drive on the west to Lucas and Hunt Road on the east. Due to the maturity and historic development patterns within this market, all of the land within the study is substantially development and contains little open space.

One exception to limited open space is the retention area owned by UMSL. This open, unimproved land running parallel and west of West Drive extends northward as an open swale used for additional water retention and disbursement (See Exhibit 3.7). As the swale continues northward it leaves UMSL property and enters a designated bird sanctuary. Another open space location includes the open tributary on the east side of the city hall site. This tributary offers an opportunity for beautification and trail development that can enhance developer investment and increase the aesthetic value of the area.

Exhibit 3.7: Open Space



Source: St. Louis County GIS

Few parks exist near this sector of the Natural Bridge Road corridor; however, the creative planning of residential neighborhoods included land set aside for landscaped

areas, fountains, and quality public space environments. These landscaped areas, internal to the residential areas, have remained well maintained and contribute to the quality of life for residents living in the planned communities.

Summary

There are existing conditions within the primary study area that has helped sustain the local market. These conditions set this area apart from surrounding neighborhoods within North County. Institutional investment has helped put off encroaching decline and disinvestment to a great extent and have added to the stability of residential investment. Commercial property is in decline, unable to compete while relying exclusively on local market demand. Declining commercial investment is compounded by alternative shopping locations easily accessible in an automobile dependent community.

Existing conditions that will positively support and justify new investment include:

- Neighborhoods that have been able to resist decline and disinvestment, working cooperatively in community groups to maintain property values
- Attractive housing stock
- Educated, professional owners
- Business owners interested in improving commercial areas
- Long term investment of institutional entities
- Municipalities interested in working together for the common economic good of the area
- The history and beauty of the area

Existing conditions provide an excellent format for future planning and development opportunities in this community. The strength of commitment and communication among the stakeholders and their ability to cooperative set their path forward to long term sustainability is the most significant element within the primary study area. The influence exerted by institutional investment includes the size and condition of property and the existing land uses. Each property provides services to the community that attracts local as well as regional access, contributing to the market potential within the primary study area. The size, density, and quality of land and buildings on these sites will be attractive to private sector development should any of the institutions decide to dispose of their land holdings either partially or in total. Future development options for these parcels, due to their size and density, include more dense mixed use development and the conversion to taxed land investments.

Existing Transportation Availability

Community investment is strengthened by access and mobility provided by various transportation options. Transportation alternatives widen market access and create focused consumer interest in certain areas by providing safe, convenient market alternatives. Existing transportation corridors within the primary study area include:
Natural Bridge Road, including Pedestrian Sidewalks

- MetroLink Light Rail Transit System (MetroLink)
- MetroBus System along Natural Bridge Road
- St. Vincent's Greenway Multi-Use Trail
- Jones Trail
- Shuttle Service Exclusively within the UMSL Campus Grounds at this time

Sidewalk

Pedestrian sidewalk traffic along Natural Bridge Road is sparse although sidewalks are in good condition for the most part. The sidewalks are used by children walking to school and commuters accessing MetroLink. Current pedestrian traffic, however, does not strengthen commercial areas nor does it provide a strong alternative consumer access route. This suggests that certain existing conditions are affecting pedestrian movement and limiting pedestrian access as a transportation option.

EXHIBIT 3.8: EXAMPLE OF SIDEWALK CONDITION

Source: CH2M HILL

Examples of these existing conditions include, but are not limited to:

- Lack of consumer interest in existing commercial venues
- Few retailers such as coffee shops and small, interesting restaurants

- Lighting that provides the perception of safety
- Lack of public amenities and landscaping that create attractive "places"
- Poor connectivity to some of the neighborhoods along the corridor
- Need for visual interest and activity areas that draw pedestrians from one location to another
- Need for goods and services that appeal to the local and regional population

Enhanced sidewalk environment and revitalization of the commercial business area will greatly improve pedestrian movement along the corridor. Increased pedestrian travel along the improved Natural Bridge Road alignment will add vibrancy and renewed interest in the marketplace. Improved pedestrian connections into the neighborhoods will better serve the residents of the area.

EXHIBIT 3.9: METRO LINK ACCESS

Source: www.lightrail.com/photos/stlouis/stlouis.htm

Source: CH2M HILL

Source: www.google.com/images

MetroLink

Of all alternative transportation modes mentioned, MetroLink represents the latest major infrastructure investment in the primary study area. The station structure is located on the east side of the UMSL south campus and is adjacent to the Normandy City Hall site east of the tracks. The station and platform functions are situated approximately 625' south of Natural Bridge Road. Access and connectivity from the station to the Natural Bridge Road corridor is not particularly convenient for pedestrians although there is a bus transfer service at the station.

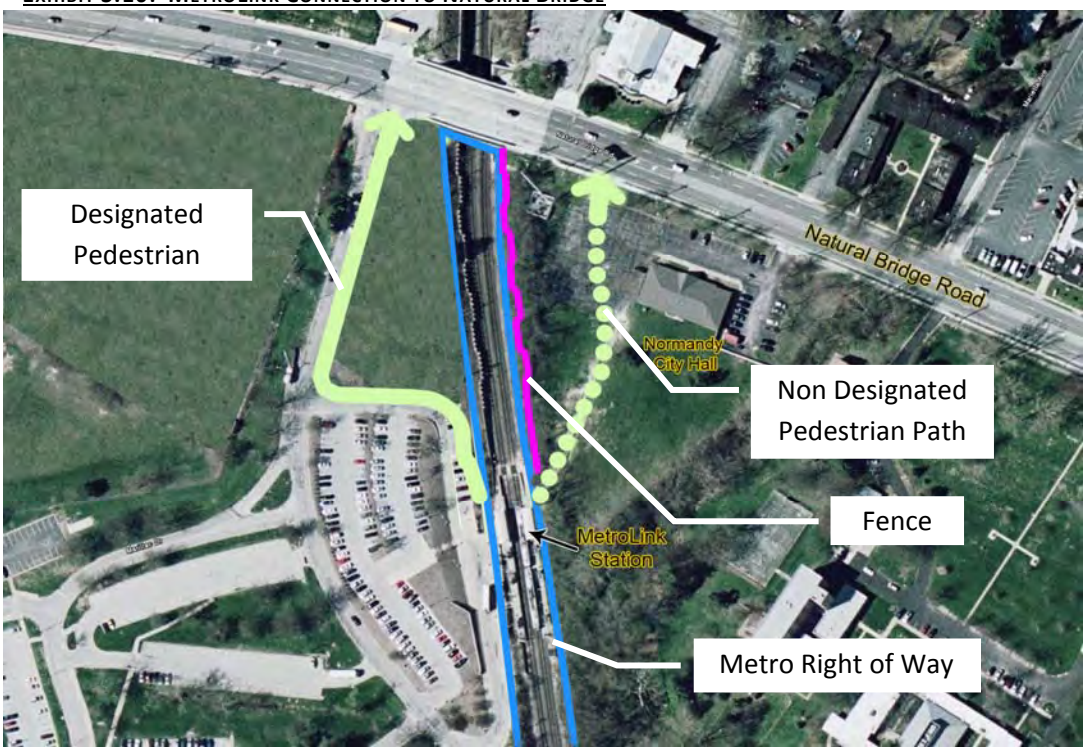
The MetroLink station offers a unique opportunity to capture potential consumers that may otherwise not be drawn to this marketplace. Although there is not a great deal of land adjacent to the track and station facilities, creative planning can provide amenities and

visual excitement to this location. As described below, this station provides the Natural Bridge Road market with exposure to travelers from Missouri and Illinois, along established MetroLink routes. The St. Louis Lambert Airport provides an expanded market to this location. Future development options at this location, including the redevelopment of the City Hall site, can solve access issues and provide development options that incorporate effective and creative use of land around the station structure. Connecting this station's function and activities to other transportation options adds value to all transit options serving this area.

There is a second MetroLink station on the UMSL north campus providing access to the north campus; however, that station does not have Natural Bridge Road access and is not located within the primary study area.

The Exhibit 3.10 illustrates the MetroLink station located within the heart of the primary study area. The station is located approximately 650 feet south of Natural Bridge Road and although served by a surface parking lot to accommodate automobile access to the location and Metrobus service at the station, pedestrian access is limited. Paths worn from Natural Bridge Road to the station are shown by the two pale green arrows on the Exhibit 3.10, pedestrians are obstructed by the MetroLink tracks themselves, physical station improvements, physical layout of the parking lot, and limited sidewalk construction. At the present time, a fence has been erected to prohibit pedestrian access to Natural Bridge Road through the city hall property. Pedestrian access on the west side of MetroLink is provided for by a paved sidewalk with American Disability Act (ADA) curb cuts along the north side of the Metro parking lot and the east side of East Drive to Natural Bridge Road. An informational kiosk is located at the transition point between the parking lot and the sidewalk alongside the street as a pedestrian amenity.

EXHIBIT 3.10: METROLINK CONNECTION TO NATURAL BRIDGE

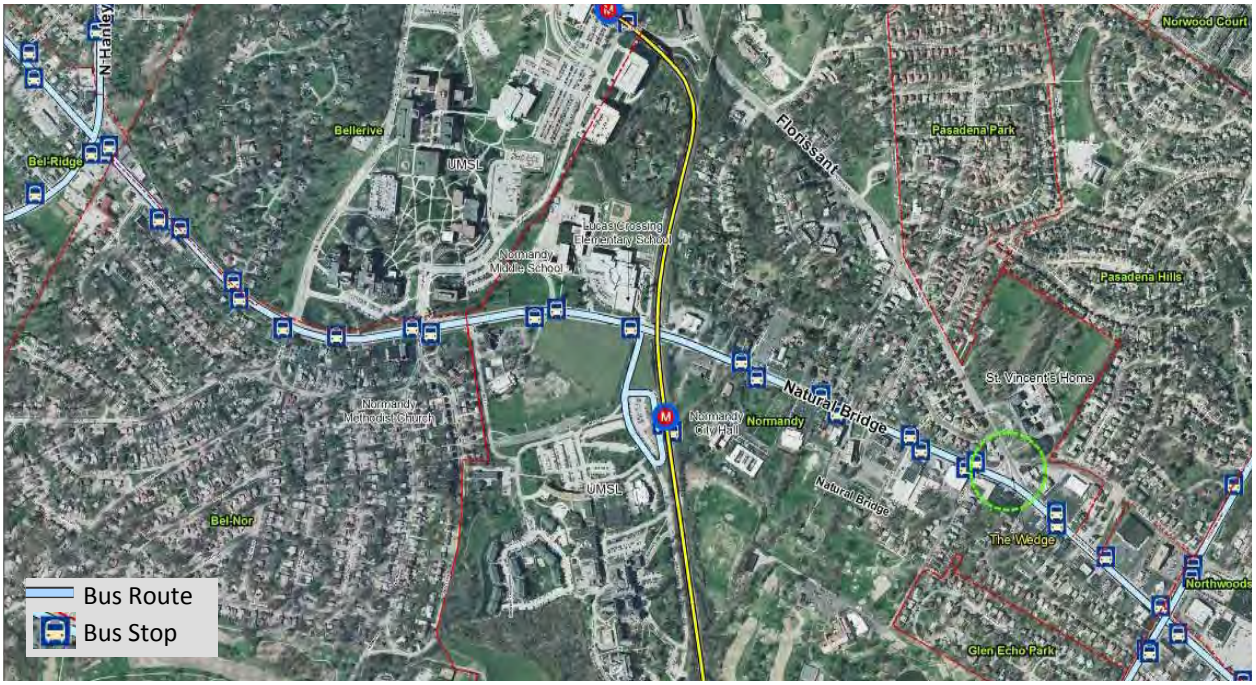


Source: St. Louis County GIS

MetroBus System

The Natural Bridge corridor is well served by the Metro bus system. The corridor has numerous bus stops and connections can be made throughout the region. Presently, Metro is considering modifications to bus stops along the corridor; however those decisions have not been finally made or implemented. Exhibit 3.11 illustrates the present Metro bus route and stops along Natural Bridge Road demonstrating the connectivity between the UMSL South MetroLink station, the Natural Bridge Road services and institutions, and the region.

EXHIBIT 3.11: METRO BUS ROUTE AND STOPS



Source: St. Louis County GIS & Bi-State Agency

St. Vincent's Greenway

The St. Vincent's Greenway within the boundaries of the UMSL Campus was developed by Great Rivers Greenway, a regional special taxing district dedicated to the planning and development of connected bike systems throughout the St. Louis Region.

The St. Vincent's Greenway is a 7-mile trail extending from I-70 and Hanley Road to Forest Park. Its route extends through the UMSL campus southward through St. Vincent's Park and the St. Charles Rock Road MetroLink station. This greenway also connects to the Ted Jones Trail developed by St. Louis County that crossed Florissant Road and I-70 to connect to communities on the north side of the highway.

Regional trails provide access to new market areas and provide opportunities for promotional activities and public gathering for special activities. The St. Vincent Greenway is a natural extension of all other transit options within the study area and provides a vital, if mostly recreational, alternative means of transportation in a traditionally automobile reliant community.

EXHIBIT 3.12: ST. VINCENT'S GREENWAY

Source: CH2M HILL

UMSL Shuttle Service

Finally, the existing shuttle service within the UMSL campus provides access to various venues and limited transit stops throughout the north and south campus. The shuttle provides an important means of transportation for those moving within a localized area and serves to expand student contact with various remote locations on campus.

The existing shuttle service operates within the north and south campus based on the following schedule:

- Monday through Thursday: 7:30 AM to 10:45 PM
- Friday: 7:30 AM to 5:00 PM

The service is provided for students, faculty, and visitors on campus.

Existing Roadway Configurations and Circulation

The Great Streets Initiative provides a unique opportunity to view the Natural Bridge Road corridor as a living and growing market entity rather than a series of individual parcels of land fronting on a right of way, contiguous but not interacting. Today, Natural Bridge Road, with no direct access to the I-70 corridor, is vital to the survival of institutional and commercial investment in the area. Therefore, any road enhancements must become an integral part of the overall market growth and sustainability concept for the corridor.

Automobile traffic volumes vary from 13,000 to 23,000 cars per day on Natural Bridge Road. This number varies between Lucas and Hunt Road and the area just west of West Drive; however the numbers quoted is representative of vehicular traffic counts within the primary study area. This number is low given existing infrastructure configurations (the width of the right of way) and the large residential neighborhoods near and abutting the corridor.

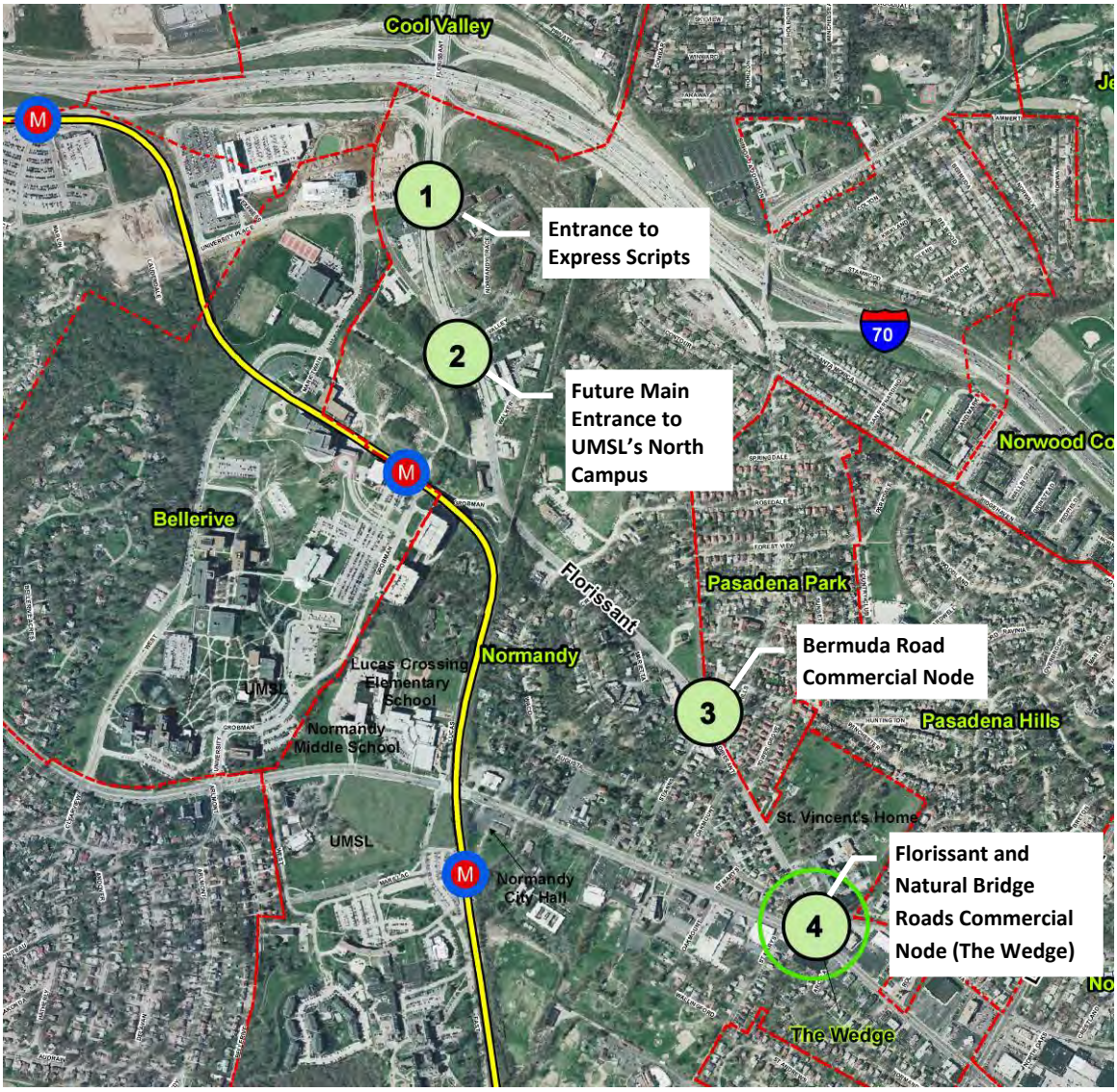
Entities attracting large numbers of visitors each day, such as UMSL and Express Scripts, attract transient populations within their respective boundaries. Once within the boundaries of the respective campus, employees, students, and visitors remain on campus. This results in a lack of connectivity between these campus locations and the commercial district east of Florissant Road. In support of this theory, both UMSL and the Express Scripts campus provide food services within their respective boundaries making it less attractive to leave for meals during the day. And, although most large campus environments (institutional and corporate) provide food service, thousands of individuals travel to the Express Script and UMSL campuses each day without any interest or in some cases knowledge of the small commercial development nearby.

An important aspect of the proposed new road infrastructure will be the integration of the various modes of transportation within the corridor. Making access, function, and aesthetics more conducive to travel along the entire length of the corridor, commercial revitalization and increased amenities will benefit the entire area.

Highway I-70 at Florissant Road access is the vital link between the commercial area and regional markets. As mentioned above, lack of highway access puts the Natural Bridge Road corridor at some disadvantage when considering revitalization and increased market access. Highway I-70 does provide the resource for increased market capacity at Florissant Road, although the distance from the highway to Natural Bridge Road is approximately 1.35 miles. This stretch of roadway is hilly in places and line of sight is limited. Points of interest along the road may be created as indicated on the Exhibit 3.13. These points of interest can be designed to inform travelers they are nearing the commercial district while highlighting the market as a whole.

1. **Entrance to Express Scripts**
2. **Future Main Entrance to UMSL's North Campus**
3. **Bermuda Road commercial and business node**
4. **Florissant and Natural Bridge Roads commercial node**

EXHIBIT 3.13: POINTS OF ACCESS ALONG FLORISSANT ROAD



Source: St. Louis County GIS

A brief description of various access points are provided here as they relate to future land use and the role they play in the prospect of successful revitalization:

As stated above, the interchange at I-70 and Florissant Road provides a vital link to the subject commercial area and market in general. Its location and enhancement to serve the Natural Bridge Road corridor cannot be overstated (See Exhibit 3.15). There are other access points from I-70 leading into the Natural Bridge Road corridor as well. Due to distance and convenient access, these points are less attractive when considering regional access; however they do serve the market and should not be minimized.

Exhibit 3.14 illustrates access points serving the corridor. Clearly, highway access to Natural Bridge Road is predominantly from the west and north including I-170; Hanley; Florissant; Bermuda and

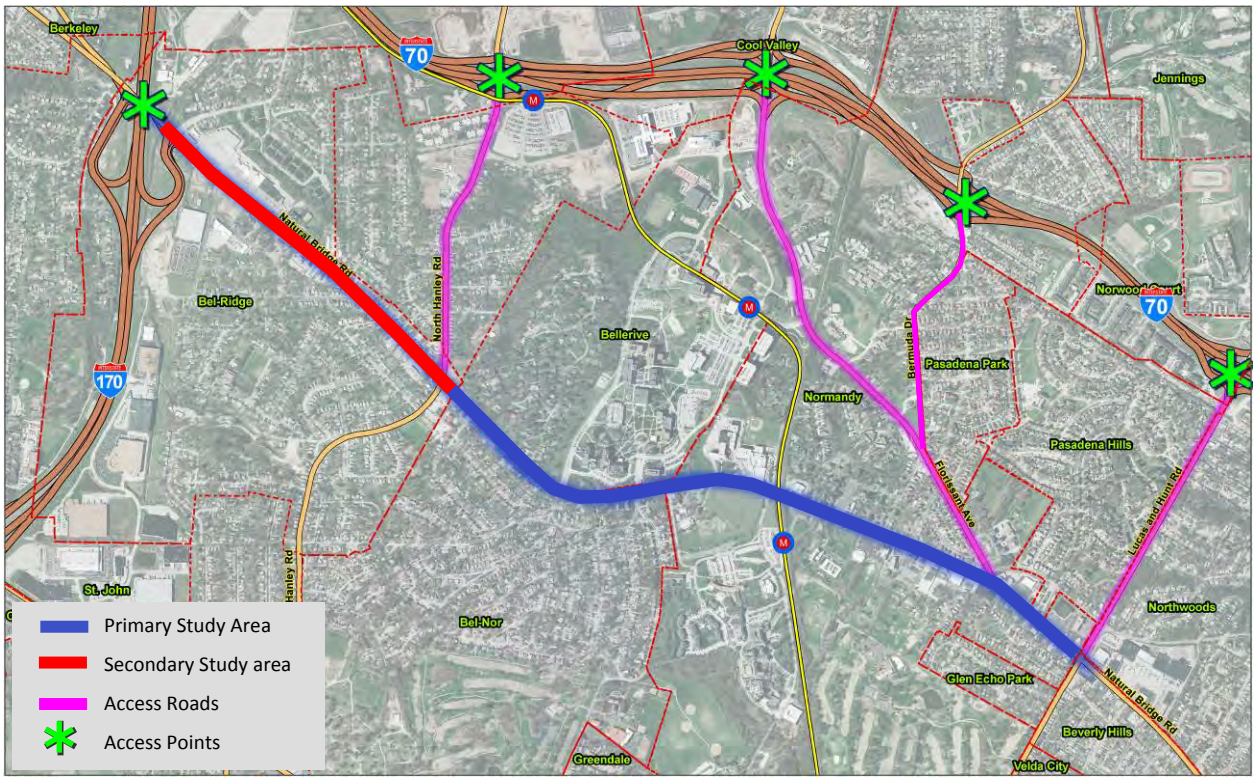
Lucas Hunt Roads. The highlighted interchanges represent access points serving the Natural Bridge Road corridor.

The Natural Bridge and Florissant Roads intersection is a focal point of the primary study area in relationship to I-70 and all distances noted below (approximate distances) begin at that intersection and extend to the various highway access points to provide perspective to the placement of the Natural Bridge Road corridor within the overall infrastructure framework:

- 1. I-170 at Natural Bridge Road (+/- 2.89 miles to the intersection)
- 2. I-70 at Hanley Road (+/- 2.14 miles to the intersection)
- 3. I-70 at Florissant Road (+/- 1.35 miles to the intersection)
- 4. I-70 at Bermuda Road (+/- 1.10 miles to the intersection)*
- 5. I-70 at Lucas-Hunt Road (+/- 1.25 miles to the intersection)

*Although Bermuda Road is a shorter distance between the highway and the subject intersection, Bermuda Road is narrower and travels through residential neighborhoods making this a less desirable travel way to Natural Bridge Road for commercial and visitor traffic.

EXHIBIT 3.14: HIGHWAY ACCESS POINTS FROM I-70 & I-170



Source: St. Louis County GIS

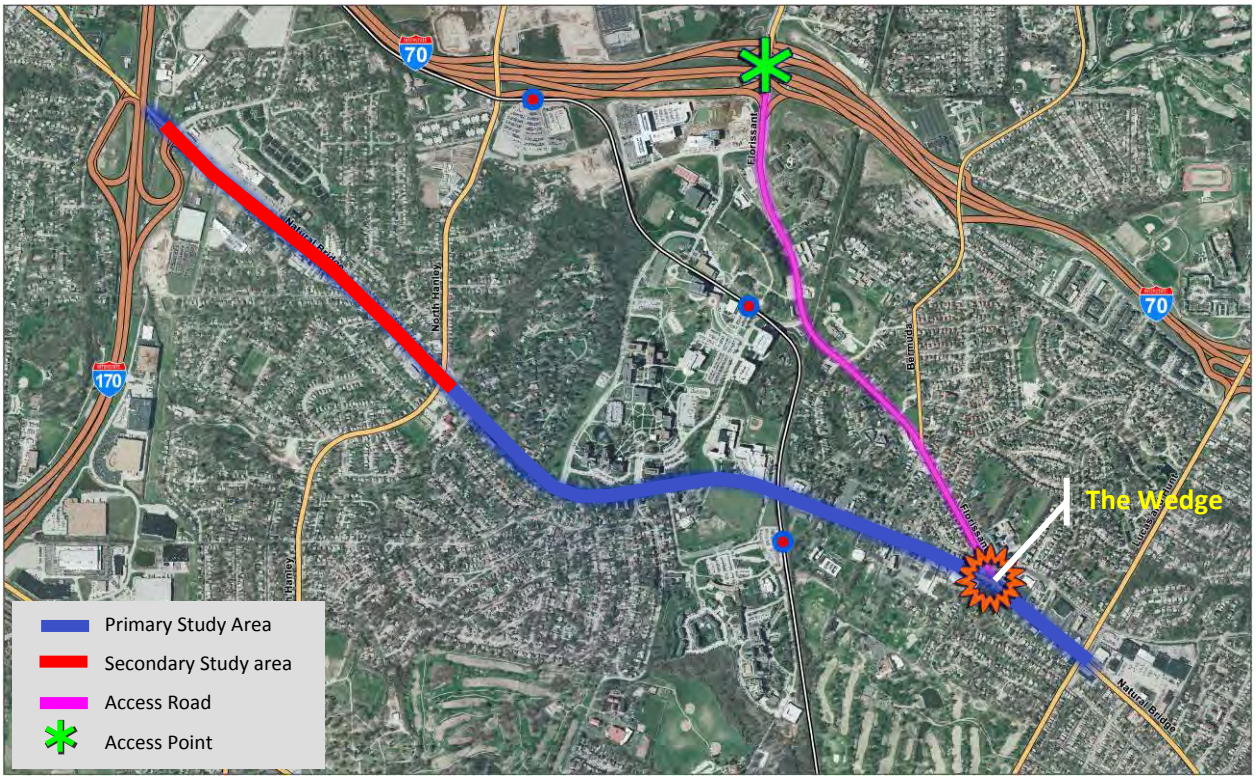
The point of most convenient access is critical to the long term success and sustainability of existing and future economic investment within the primary study area.

In summary, the secondary roadway system and circulation patterns within the primary study area are excellent and will support future development opportunities. Creating a visually attractive link between the commercial revitalization area and I-70 along Florissant Road is key to future investment and directly relates to the expansion of market capacity by providing regional access to the area.

Long term sustainability is directly related to safe, convenient regional access

The recent development of the Express Scripts office building complex at I-70 and Florissant Road and the opportunity for expansion in this general vicinity reinforces the concept of Florissant Road as the portal to Natural Bridge Road and future revitalization. Additionally, University Boulevard (Florissant Road/State Highway N) is planned to be the main entrance into the UMSL campus. The university's use of roadway from I-70 as a main access to the campus will result in increased traffic at this location and redistribution of traffic patterns within the marketplace. These factors increase the validity of Florissant Road as the priority access point from I-70 and establish one particular corridor to serve the primary study area. Future planning, infrastructure development, funding, and public amenities may be concentrated into one specific area that will fully serve and sustain the commercial and institutional investment long term. It follows that as the market base expands, planning and implementation strategies along the corridor will need to

EXHIBIT 3.15: FLORISSANT ROAD INTERSECTION



Source: St. Louis County GIS

include well planned infrastructure to serve the following identified future land-use:

- The intersection of Natural Bridge and Florissant Roads will need to be enhanced as a commercial focal point, including landscaping and other elements that announce the mixed use elements of the market and greets visitors as they arrive within the corridor
- Regional visitors will most likely arrive by automobile requiring a safe, well lighted, and strategically positioned location(s) for a parking garage(s) located for easy access to sidewalks and public amenities, shops, restaurants, and entertainment venues
- Natural Bridge Road corridor enhancements will need to complement the varied land uses, playing an important role in the overall design and function of the market as a whole
- Creation of policies and guidelines to facilitate unique commercial development opportunities will need to be adopted
- Development at the City Hall and MetroLink station will increase market access and capture transit riders as consumers

The complex make up of the market area is the result of substantial institutional and corporate investment within a commercial corridor in need of revitalization. Future, area wide investment of public and private financing will be enhanced by the participation of the communities within the primary study area and through implementation planning and finance strategies designed to capture market driven investment. The Interstate 70 at University Drive/Florissant Road interchange will play an important role in achieving revitalization and market sustainability. MetroLink will play an important role in contributing to the multi-modal composition of this market and in providing alternative consumer access to the area by rail and increased pedestrian access. And, improvements to pedestrian accommodations along the corridor are important to successfully link MetroLink riders to the destinations along the corridor.

Existing Market Conditions Influencing Future Development

As a result of evolving, market driven commercial needs the methodology used by retailers to conduct their business in today's marketplace and developers' expectations related to return on investment will make it necessary to rethink land uses within the primary study area. By understanding modern commercial trends and responding to merchant needs, revitalization can become an essential part of business renewal. The consumer market has become complex as well, due in part to the influence imposed by the following emerging conditions. These market influences are positive and will continue to influence future development potential.

University of Missouri/St. Louis (UMSL):

An influx of approximately 15,000 + students and faculty arrive in this marketplace each day. This number is anticipated to increase as the campus grows. This population is transient in nature (that is the majority of these individuals do not live on campus but travel from other locations into the campus environment each day by automobile, MetroLink, and bicycle) bringing regional consumer need for goods and services. Additionally, the university has developed student housing on campus which adds to the overall demographic makeup of the local market, including consumer demand locally.

A challenge for revitalization planning includes infrastructure and aesthetics that provide safe and convenient pedestrian and bike environments; attracting retailers that appeal to campus populations; and the development of additional multi-family and student housing around or near the intersection of Natural Bridge and Florissant Roads that physically expand student facilities and economic influence on future revitalization.

MetroLink:

The development of a MetroLink station with direct access to Natural Bridge Road has contributed to the corridors multi modal composition and provided regional market access to the area. When economically optimized, this site represents a source of significant transient market access. Although not incorporated into any comprehensive plan at this time, the MetroLink station has the capacity to enhance the commercial characteristics of the corridor and attract outside resources from the airport, downtown, the Central West End, and Clayton as well as other markets along the entire Missouri and Illinois routes. The access provided by the MetroLink station is truly a regional portal to the natural Bridge Road marketplace and with creative promotional activities will be a dynamic resource for revitalization efforts.

A challenge for market growth will be planning and implementation strategies that connect the station to the surrounding market environment by providing safe and convenient access to Natural Bridge Road; incorporation of the station site into the City of Normandy City Hall site; and cooperative planning related to UMSL expansion adjacent to the station.

Express Scripts:

The development of Express Scripts office buildings at I-70 and Florissant Road has greatly enhanced the marketplace. This development is populated by thousands of professional employees and visitors accessing this market on a work week basis. The Express Scripts complex represents significant new investment to the area generally and the company has plans for expansion of the facility in the near future.

A challenge for revitalization will be the planning and implementation of a strategy that provides direct access from the Express Scripts campus to the commercial district along Natural Bridge Road. The efficient and timely movement of this population within the local marketplace is a key element to growth and sustainability within the commercial corridor.

Private Development Between Hanley and Florissant Roads:

Planned, private development in this area represents a confidence in this area of North County that is unprecedented. Developer confidence and ongoing investment adds to the ability of the Natural Bridge Road corridor to grow and improve its business environment. The significance of these planned developments includes an increase in professionals and visitors accessing this marketplace on a regular basis and the increased demand for goods and services created by new professional populations.

The challenge for revitalization includes the ability to determine the highest and best use of property within existing commercial locations to accommodate new businesses and restaurants while providing necessary amenities such as parking and public spaces. The lack of density today provides significant opportunities for revitalization and increased density.

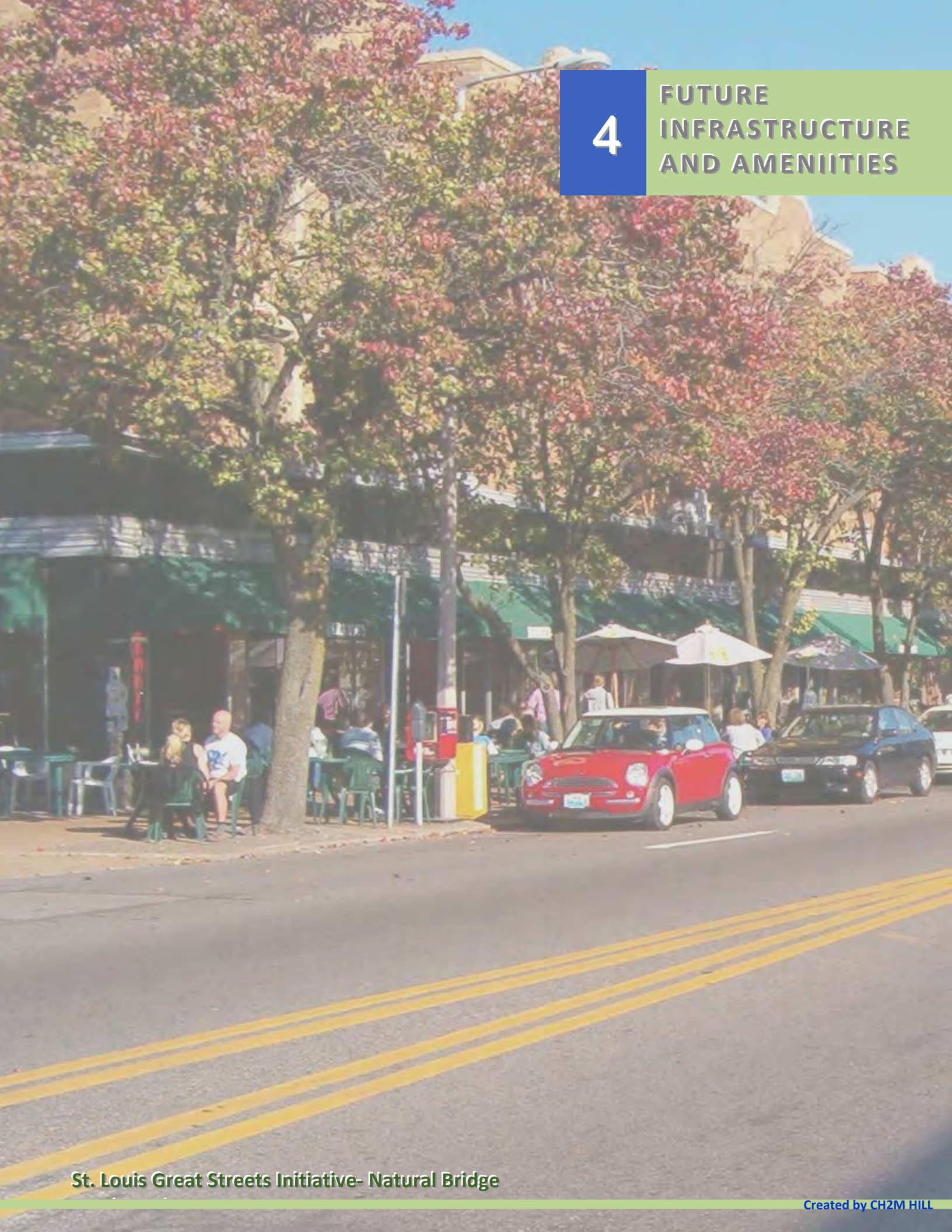
In Summary

Existing conditions within the primary study area contribute to and strengthen future land use options and reinvestment possibilities. And, although this market is adjacent to some areas in decline, the contribution of social, cultural, and financial investment of instructional entities and commercial businesses has served to stabilize market conditions. Community interest and desire to preserve residential neighborhoods through physical upkeep and social interaction has also contributed to the stability of the market. New investment occurring within the marketplace, including the development of the Express Scripts campus and plans for new office and mixed use projects reinforces the strength of the area and demonstrates the economic viability of the market.

Transportation investment provides a unique quality of service to the Natural Bridge Road corridor, providing multi-modal options to local markets and regional access by way of I-70; MetroLink, regional bus routes, bike trails, and Natural Bridge Road, a major secondary corridor. An existing shuttle, operating within the UMSL campus presently, provides future opportunities for safe and convenient movement of consumers within the local market as well providing a transit options throughout the primary study area.

The primary study area is well positioned today for the planning and development of new investment and revitalization of established commercial areas based on existing conditions and future planned development in the area.

4 FUTURE INFRASTRUCTURE AND AMENIITIES



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Chapter Summary **4.16**

CHAPTER-4: FUTURE INFRASTRUCTURE AND AMENITIES

Great Streets Goals

The goal of the Great Streets Program is to improve our regional streets by demonstrating best practices in design and the value of landscaping, lighting and pedestrian safety. This Natural Bridge Great Streets Pilot Project was funded initially through a multi-year federal transportation bill called the Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU), "SAFETEA-LU". The pilot project was completed and the current project was given notice to proceed by East-West Gateway Council of Governments in October 2009. This project is being funded by the American Recovery and Reinvestment Act (ARRA).

The initial design project was defined for Natural Bridge Road between Lucas and Hunt Road and west of West/Clearview Drive (the primary study area) to meet the needs of the street, neighborhoods and community. Due to its impact on the market area, an extended area of influence will be considered along Natural Bridge Road between Lucas and Hunt Road and I-170 (Including I-170 to west of West /Clearview Drive) to provide insight into the revitalization of this portion of the road. The secondary study area will be discussed at the end of certain chapters in order to emphasize the priority of the primary study area and to avoid confusion as to the location being discussed.

Typical enhancements within the Great Streets Initiative include road diets, bike lanes, parking, expanded planting areas, sidewalk furnishings and lighting improvements. In addition, economic development impact and strategic planning for future development opportunities set this program apart and provides for implementation possibilities that are usually not included in typical infrastructure planning projects.

With respect to any project or a specific area to be served by a project, "transportation enhancement" means projects that are designed to improve transportation facilities or use and that are physically or functionally related to transportation facilities. Eligible projects include:

- Historic preservation, rehabilitation, and operation of historic public transportation buildings, structures, and facilities (including historic bus and railroad facilities)
- Bus shelters
- Landscaping, street furniture, street lights and public art
- Pedestrian access and walkways
- Bicycle access, including bicycle storage facilities and installing equipment for transporting bicycles on public transportation vehicles
- Transit connections to parks within the recipient's transit service area
- Signage

- Improved access for persons with disabilities to public transportation

These elements of transportation enhancements go a long way to establish patterns of travel, and create market stability necessary for economic development improvements. In the case of the primary study area, visitors' access to highways, roads, MetroLink, sidewalks, and bike trails make traffic patterns and people places of great importance. These areas serve to improve the overall health and economic well being of the municipalities functioning as an economic engine in the St. Louis region. To this end, the Great Streets Initiative is an ideal tool to augment, support, and sustain the primary study area.

In summary, East West Gateway Council of Governments (EWGCOG) and its consultant partners will provide validated recommendations for enhanced infrastructure improvements and economic development strategies along Natural Bridge Road from Lucas and Hunt to west of West Drive, all within the Great Streets Initiative parameters.

Role of Infrastructure in Future Development

Infrastructure plays an essential role in creating realistic economic development opportunities. This chapter discusses suggested transit and multi-modal alternatives ideal for the study area. Each concept builds on the idea that there is a balance between infrastructure investment and the economic development opportunities created by public investment.

Chapter 3 of this document discussed in some detail the importance of I-70 to the sustainability of the Natural Bridge Road commercial corridor. In summary, it was identified that major highway access points serving Natural Bridge Road include:

- I-170 – farthest access point from the primary study area and a commercial development area adjacent to the highway
- Hanley Road – primarily residential development upon leaving the I-70 interchange
- Florissant Road – Office and UMSL access points mixed with multi-family
- Bermuda Road – Residential neighborhoods front this narrow road
- Lucas and Hunt Road – Primarily residential with commercial development at its intersection with Natural Bridge Road

Once within the primary study area (See Map 1.1 Study Area Extents), local access and travel patterns become important to the long term success of the various land uses within the corridor. Natural Bridge Road serves a complex market composition consisting of:

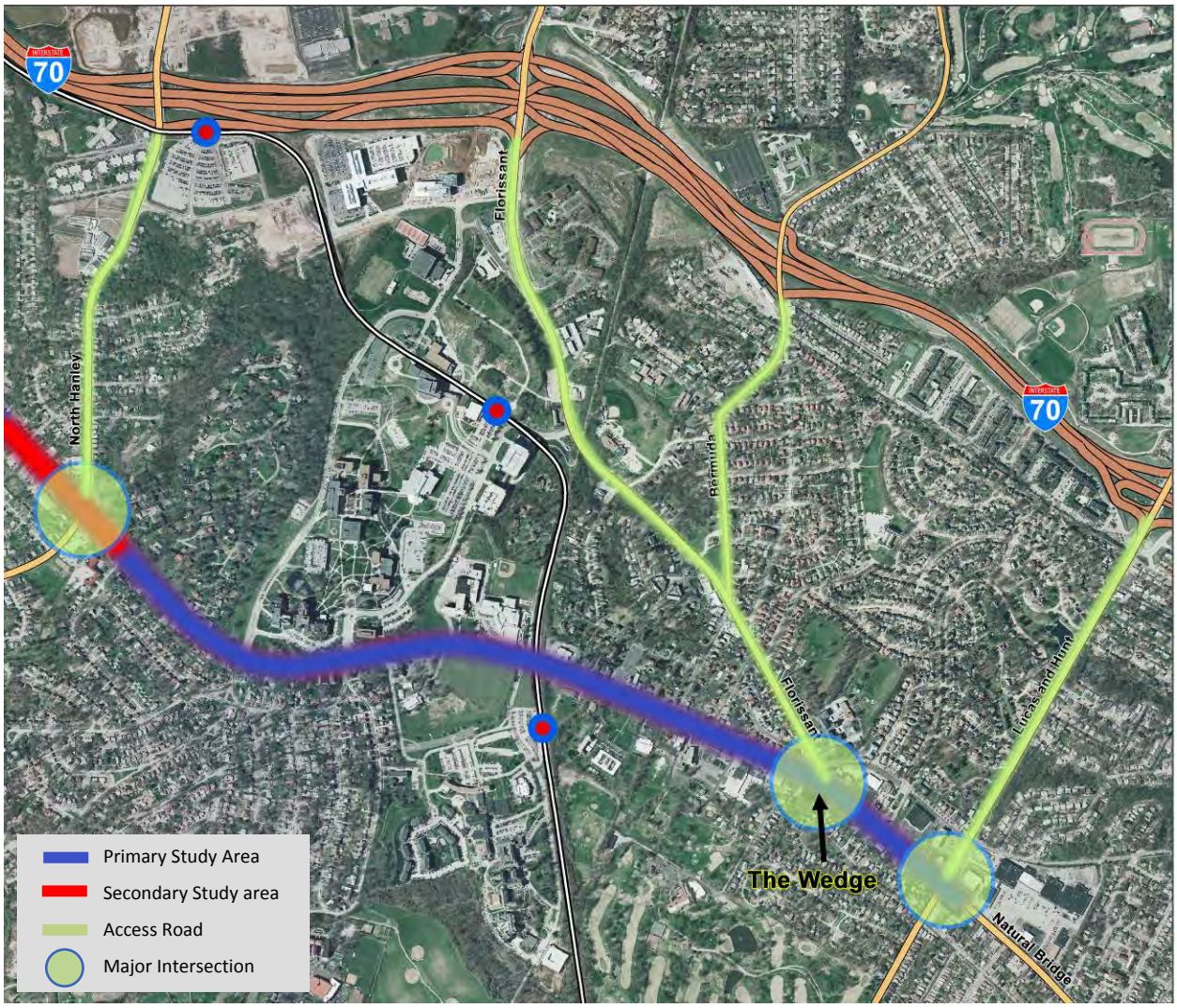
- Residential areas designed with cul-de-sac and independent internal circulation roads have resulted in limited automobile access to Natural Bridge Roads from within the neighborhoods
- Institutional entities attracting a daily influx of commuters from outside the marketplace relying on Natural Bridge Road as a means of traffic, pedestrian, and bicycle distribution around the area
- Commercial development relying on numerous points of access for automobile access
- MetroLink station generating public bus and pedestrian traffic along the corridor
- Various sites that result in continuous access and automobile movement throughout the corridor such as the St. Louis County Public Library, filling stations, and fast food restaurants that produce a continuous flow of in and out traffic movements

The Natural Bridge Road corridor within the primary study area has few full intersections at which to disburse automobile movement (Lucas and Hunt Road; Florissant Road; and, Hanley Road). This serves to capture traffic within the corridor making parking, bicycle, and pedestrian movement key to the long term success of the commercial development opportunities. Between Hanley and Lucas and Hunt Roads for instance, an approximate 1.61 mile distance, there is only one full intersection located at Florissant Road that connects I-70 to the Primary Study Area (See Map 1.1 Study Area Extents) in the Natural Bridge Road corridor.

Florissant Road and Natural Bridge Intersection

The importance of Florissant Road is critical to future investment and the potential for economic revitalization. Due to Florissant Road's relationship to I-70 and its central location within the road expanse between Hanley and Lucas and Hunt Roads, this corridor is essential to attracting new business and the long term sustainability of new investment (See Exhibit 4.1). Today, infrastructure and traffic movements provide adequate local access to commercial areas. Revitalization and new investment will require regional access to assure business success and employment opportunities. To achieve regional access, the Florissant Road corridor at its intersection with Natural Bridge Road will facilitate broader market access.

EXHIBIT 4.1: MAJOR INTERSECTIONS IN THE PRIMARY STUDY AREA



Source: St. Louis County GIS

Note: Exhibit 4.1 illustrates the intersection number and locations within the market area emphasizing the importance of Florissant Road.

The intersection at Natural Bridge and Florissant Roads have been discussed in some detail pursuant to the idea that the Florissant Road corridor and its linkage to I-70 is essential to providing regional market access to the proposed revitalization of commercial property on Natural Bridge Road. It follows that at the point of intersection at Natural Bridge and Florissant Roads, the efficient movement of all modes of transportation is critical to the success of the corridor. There are two alternative design concepts that may provide improved access:

- A Roundabout Structure
- A "T" Intersection

Infrastructure creates a grid into which economic development patterns emerge. These patterns may be greatly enhanced or devalued based on the configuration of highways, roads, trails, and transit options creating the grid.

Level of Service, functionality and safety for either type of intersection will be affected by the proximity and design of access points in the functional area of the intersection. As a primary portal to the corridor, the configuration of the subject intersection will need to complement existing and planned land uses, providing convenient access to all modes of travel. As important to the promotion of business investment, the intersection design needs to provide for immediate access to all adjacent or impacted land by either intersection mentioned above. Future land use is recommended to be festive and to provide a public gathering place for special events supporting businesses and to experience activities that establish this intersection as the activity center of the corridor. At the same time, private property around this location must be considered and either incorporated into the focal point theme or be allowed to conduct their business without loss of access, parking, and visibility.

Future land use planning around the intersection will need to include:

- Planning related to adjacent land uses, creating a balance between public amenities and development options on private property, including adequate access
- Design and traffic patterns that recognize the mixed use elements of potential investment and the varied demographic composition of the market, including elderly, elementary and college students, shoppers, and recreational walkers and bicyclists
- Recommendation for underground utilities throughout the primary study area to create a clean, well defined sense of place and unique quality of life environment
- Planning and installation of landscaping and public amenities at the intersection to create public space and a sense of "arrival" into the corridor including space definition that can translate into the entire corridor as a place to be, a place to experience
- Signage, traffic control and lighting that complements the ambiance of the corridor and provides for a safe pedestrian and bicyclist environment
- Public art and water features that add perspective and interest to the corridor

The design configuration of the intersection will need to provide:

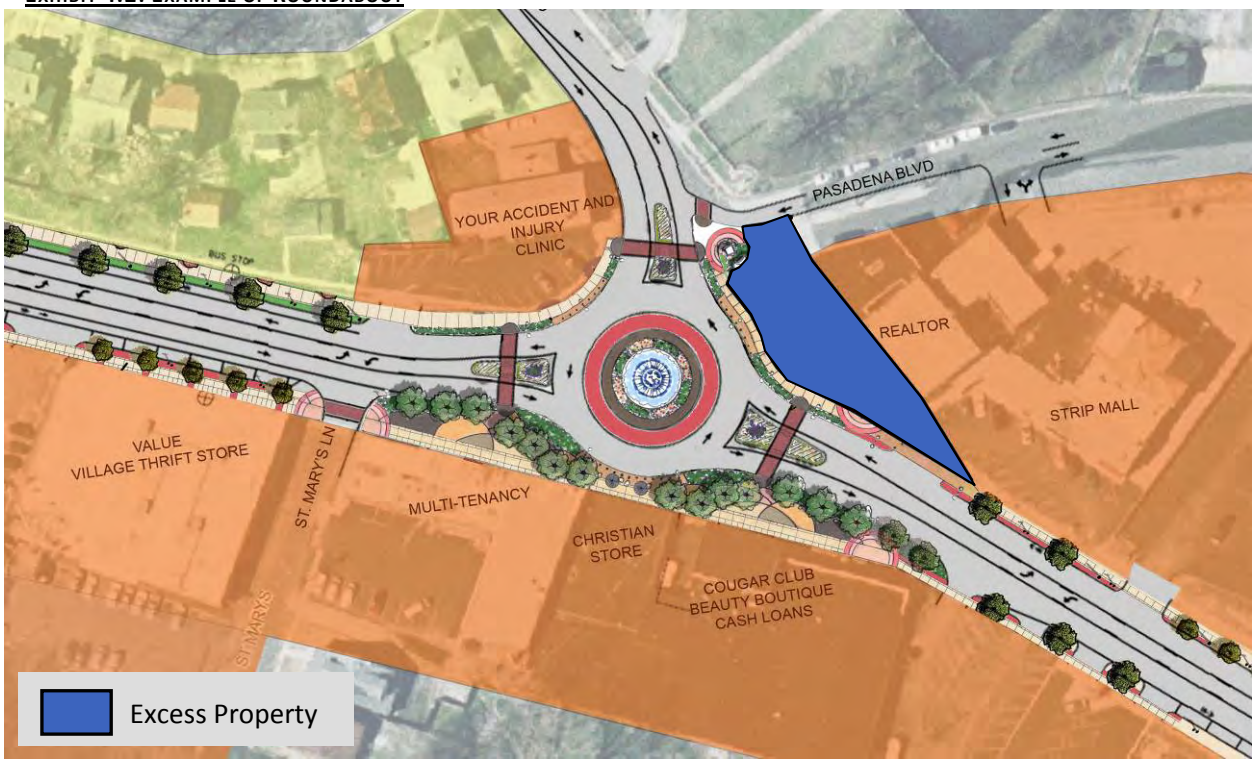
- Safe, convenient access for drivers, pedestrians, shuttle/trolley and bikes

- Visibility for businesses located around the intersection
- Direct automobile access for properties adjacent to the structure(s)
- Maximize useable excess right of way property in the creation of public spaces

Roundabout Intersection:

Inherent in the design of the roundabout is limited access points to the intersection, requiring careful consideration to those nearest points of access in relation to existing and future commercial and residential investments. The implementation of a roundabout intersection may warrant the redesign of internal circulation on adjacent property. Any design of the roundabout configuration will need to take into consideration public access to private property assuring that property values are not minimized by lack of access to buildings and parking adjacent to the existing right of way.

EXHIBIT 4.2: EXAMPLE OF ROUNDABOUT

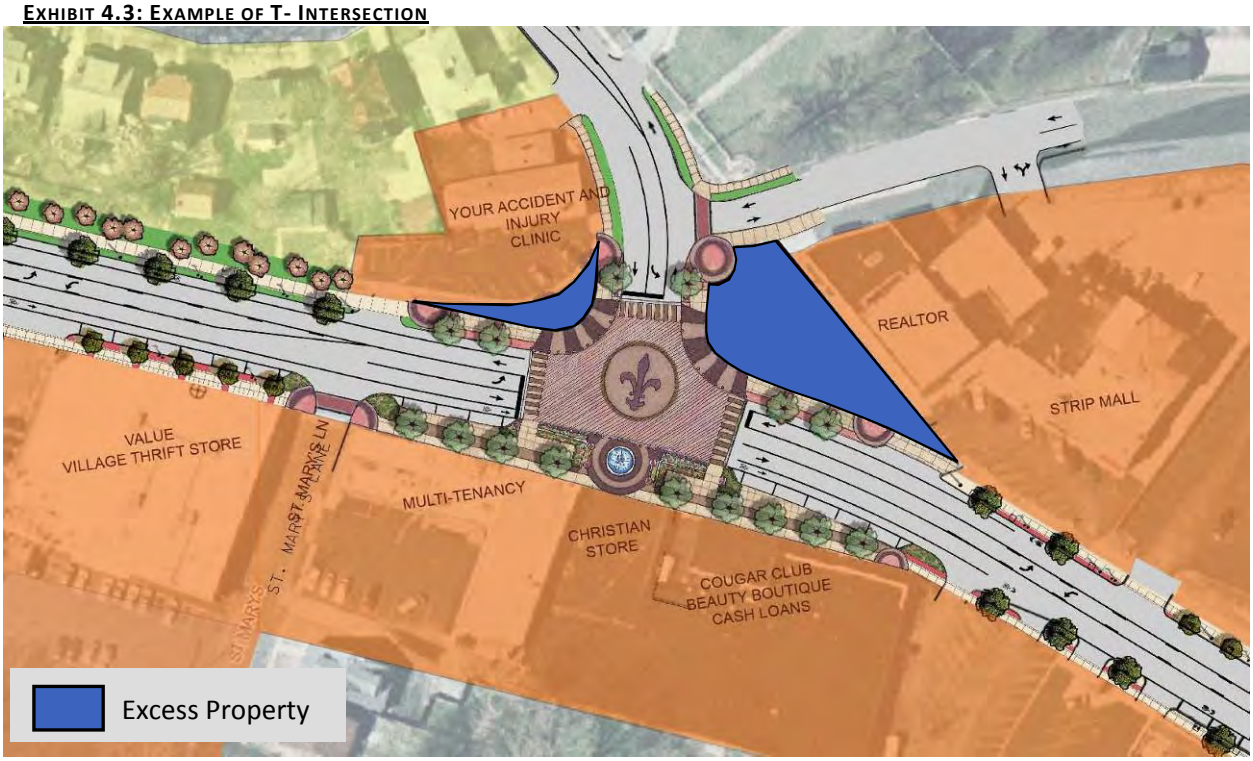


Source: CH2M HILL

The "T" intersection:

The "T" intersection, a more traditional design, will be influenced by the perpendicular intersection configuration at Natural Bridge and Florissant Roads. While a roundabout intersection limits access by design, traditional intersections tend to provide easy access adjacent to property while providing safe movement of pedestrians and traffic. At the intersection, the existing roadway and sidewalks will be modified to accommodate the "road diet" concept and the interface with Pasadena Drive approximately 115' north of the defined intersection. In the preliminary review of the "T" intersection, considerable excess property becomes available for public enhancement as described above.

EXHIBIT 4.3: EXAMPLE OF T- INTERSECTION



Source: CH2M HILL

In summary, considering both design concepts, excess useable property is created and depending upon the final, engineered concept for the intersection, excess right of way can be made available for public use and as a transition from public to private property. Land use planning associated with the excess property will account for existing and future development of adjacent property in order to complement and not detract from economic development options, visibility, access, and corridor design guidelines that may be adopted by the city as part of their zoning codes. The Natural Bridge and Florissant Roads intersection, more than any other access point within the study area, provides for regional vehicular access that supports new investment.

Infrastructure Related Components Impacting Future Land Use

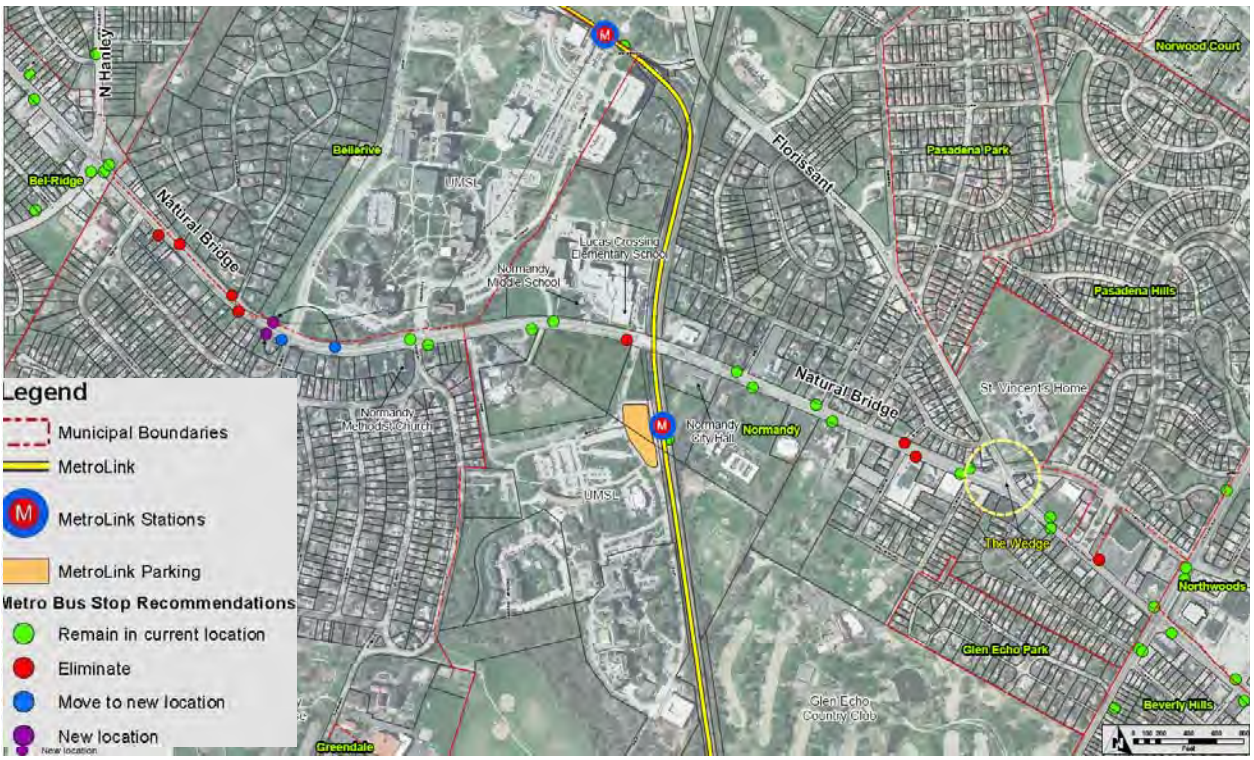
To follow are elements of infrastructure related components that directly impact future land use and economic development opportunities. Presented here are not engineering concepts, but concepts for creating a public environment that influences the perception and appeal of the corridor.

In order to meet market demand for consumer access and convenience related to vehicular movement and truck access, the design of Natural Bridge Road will need to take into consideration the following modes of multi-modal transit:

MetroBus

In most large metropolitan areas, bus transportation is an integral part of regional transportation options and connectivity. And, this is true of transit options along Natural Bridge Road. The MetroBus service available within the area adds to the multi-modal elements in the market place and provides connectivity at the MetroLink station to the entire region. This linkage to commercial areas at Lucas and Hunt Road provides safe, easy access for visitors to the area as well as providing mobility to the elderly and students wishing to move within as well as outside the Natural Bridge Road. Metro has implemented new bus schedules to improve service. Schedule adjustments will be complemented by new bus stop enhancements and improved public environment at stop locations. Exhibit 4.4 shows recommended bus stop locations demonstrating the level of service and availability of MetroBus as a transit option.

EXHIBIT 4.4: RECOMMENDED BUS STOP LOCATIONS



Source: St. Louis County GIS and Bi-State Agency

Shuttle/Trolley*

The movement of local market traffic in and around the corridor is essential to the long term investment potential and revitalization options within the primary study area. A shuttle/trolley route may be established to move those individuals living, working, and visiting the area with a convenient and alternative means of moving about within the marketplace. Students, faculty, professionals, and those living near Natural Bridge Road will have the option to conveniently leave there place of work or residence and lunch or shop in the commercial district. Transit locations are recommended to be placed far enough away from the actual Florissant Road functions to prevent roadway traffic from backing up into the intersection. Bus and shuttle/trolley pullouts will be an important element to the overall roadway design. Shuttle/trolley stops are considered market focus areas and public amenities such as landscaping, seating, art, and other right of way features are recommended to be incorporated at shuttle/trolley stop locations. Additionally, it is recommended that stops be strategically planned to coincide with strategic business locations and public activity areas to assure maximum market penetration.

* The term "shuttle/trolley" refers to local market movement. It is recommended that the shuttle service be established initially (perhaps an extension of the existing UMSL service). As the market evolves and matures, a trolley service will add interest and uniqueness to the area and provide regional interest in the area.

MetroLink

MetroLink's UMSL South station provides an important transportation perspective to the primary study area that expands this marketplace and sets it apart from other mixed use area in the St. Louis region. Stops along the MetroLink corridor near and adjacent to the **UMSL South station** include St. Louis Lambert Airport; the Hanley Road station serving the Express Script and future office markets; and UMSL's north campus. Capturing the interest and participation of riders at these locations will increase revitalization potential. MetroLink access provides for the capture of ridership that includes both Missouri and Illinois routes and the increase of visitors to the Natural Bridge Road corridor. In addition, the physical location of the **UMSL South station** offers an opportunity to update and add features that promote the marketplace as riders pass through or access the station. Creating a sense of place with kiosks, imaginative signage and other promotional options, as well as events, designed to inform riders of activities in the area, make this location exciting and more connected to the region. MetroLink also provides an excellent opportunity to participate in development adjacent to the station including the south campus of UMSL and the Normandy City Hall site.

Top Ten Reasons for Riding MetroLink

Reason #1 — getting to Work is the Number #1 Reason Commuters Ride Metro

Reason #2 — Getting to School is the 2nd Most Popular Destination for Metro Commuters

Reason #3 — Average Cost to Drive to Work is $587 a month. A Metro Monthly Pass is $68

Reason #4 — MetroLink Runs on Electricity and Takes over 80 Single-Occupancy Cars off the Road with each Trainload

Reason #5 — MetroLink is On-Time 98% of the Time.

Reason #6 — To date, $15 Billion in New Development has occurred within a Ten-Minute Walk of MetroLink stations

Reason #7 — 96% of all Job Centers in Metro's Service Area are within One-Quarter Mile of a MetroLink Station or Metro Bus Stop.

Reason #8 — Metro Eases Traffic Congestion and Crowded Roads by Taking 45,000 Vehicles Off the Roads Each Day.

Reason #9 — From 1995 through 2008, Public Transportation Increased by 38%, a Growth Rate Higher than the 14% Increase in U.S. Population and a 21% Growth in the Use of the Nation's Highways over the same period.

Reason #10 — Every Dollar Communities Invest in Public Transportation Generates Approximately $4 in Economic Returns

Truck and Larger Commercial Vehicles:

Providing goods and services to the various commercial and institutional sites is important to the long term success of the existing and future investment areas. The roundabout design option for Natural Bridge and Florissant Roads will be designed to accommodate large truck traffic entering, circulating, and exiting the intersection. The integration of normal pedestrian, bicyclist, and automobile traffic movements with large truck movements will be an important design detail. This can be accomplished in a variety of ways to keep the intersection compact, yet make sure trucks do not damage curbs and do not encroach on sidewalk areas. As important, truck access points along the Natural Bridge Road corridor is required so that normal deliveries and special over-the-road truck traffic can be accommodated at drives and alley entrances. Inconvenient movements and time delays to trucks and, as importantly, the normal flow of traffic, will limit the long term success and economic development opportunities in the area over time. Rear access to businesses and institutions through internal driveways or alleys adjacent to building sides should be considered in addressing this challenge. Commercial and institutional locations rely on large truck deliveries and these truck movements along the Natural Bridge Road corridor, as well as ingress and egress at driveways and side streets are important to the success of the primary study area. Large truck interaction with automobiles, trolley/shuttles, buses, bikes and pedestrians will also be a consideration in the final design of the corridor.

Pedestrian Traffic

The Federal Highway Administration publication (FHWA-RD-00-067) called "Roundabouts: An Informational Guide", indicates that fewer pedestrian accidents with less severity occur at roundabouts when compared to signalized and unsignalized intersections with comparable traffic volumes. In this market, immediately adjacent to existing and future commercial opportunities, slow entries and exits for pedestrian safety will be important whether a roundabout or "T" intersections is finally constructed. Demographics in the study area include a mix of students, elderly, shoppers, professionals, and those individuals from outside the local market seeking the amenities within the area all converging at the "wedge" location. Choosing the appropriate crossing locations for pedestrians that provides the greatest safety and access to businesses will need to be well planned. Crosswalks and well designed curb ramp treatments will be important design elements at the "wedge" for pedestrian safety and security. Pedestrian use of the sidewalks throughout the primary study area is essential to the long term success of this marketplace. Therefore, the safety, aesthetics, and public amenities experienced by pedestrian traffic will determine the long term use of sidewalks and crosswalks and continued public interest in commercial venues.

The roundabout intersection presents additional challenges for pedestrians. While providing continuous flow for motor vehicles, there are no traffic or pedestrian signals, therefore gaps in traffic that exist are the means for pedestrian crossing, as well as the prioritization of pedestrian movements in an unsignalized intersection. Crosswalk pattern, color and texture, signing and striping all are critical for safe movements in the intersection.

Bicyclists

The Insurance Institute for Highway Safety, a nonprofit organization funded by auto insurers, reports that roundabouts provide a ten percent reduction in bicycle crashes at roundabouts compared to signalized intersections. Roundabout design option will need

to consider all levels of experience related to bicyclists' needs and will give consideration to less experienced bicyclist as well. Adjacent public amenities will include creative storage of bikes that complement the overall aesthetics of the area. Intermingling with traffic and the movement of vehicles through the roundabout may warrant means of walking bikes within the pedestrian travel ways. Providing a ramp from the roadway to a shared-use path prior to the intersection can allow bicycles to exit the roadway and proceed around the intersection safely. Whether a roundabout or "T" intersection is constructed, cycling safety for all levels of rider experience will be considered in the final design of the structure. It is anticipated that due to existing and planned trails and bikeways in the region; the growing interest in the general populations associated with the health benefits of biking; the acceptance of bikes as an alternative mode of transportation; and the increase of bikes in this marketplace associated with student populations, infrastructure design at the "wedge" will need to be well planned to accommodate increased bike travel and safety.

Bicycle parking will be a key to increased use of bicycles as an effective form of transportation in the corridor. Both public and private spaces should allow for the effective and safe parking of bicycles. Bicycle parking is a policy element and a critical part of development in the area to encourage healthy and active employees and businesses. This is supported by bicycle parking in the form of bike racks along streetscapes that encourage this travel mode.

Emergency Vehicles

Emergency vehicles will experience the same issues and physical conditions as larger truck traffic and will not tolerate any delay passing through the roundabout or "T" intersection. Obviously all traffic must yield to the emergency vehicles which may result in important design considerations in the overall engineering of the structure (for instance, shoulder width as a place to pull over as emergency vehicles pass). As a significant point of convergence, the "wedge" road design will need to take into consideration emergency vehicle safe passage among pedestrian, bike, shuttle, bus, and automobile traffic.

Underground Utilities

Installation of underground utilities, including electrical and telephone service, assures the safety and aesthetic integrity of the entire marketplace by eliminating unsightly wires crisscrossing vehicular and pedestrian ways. Natural Bridge Road, by necessity, will be reconstructed in order to implement new road configurations (the road diet) and roundabout or "T" intersection structure. Therefore, the installation of all underground utilities may be possible extending from Nordic Drive to Lucas and Hunt Road along the subject corridor due to the surface disruption associated with the recreation of alignment configuration. Although underground utilities may add greater expense to construction costs associated with initial design and installation, the long term benefits are worth considering when planning new streetscape environments. Revitalization of any market includes "reinventing" market conditions and physical space. Success associated with revitalization relies on the creation of a safe environment and aesthetic elements that make local and regional visitors comfortable and interested in returning to experience the corridor. The elimination of overhead lines and power poles add to the clean, unobstructed ambiance of major commercial corridors.

Landscaping and Public Furniture

Landscaping and public furniture are those design elements that create an environment of safety and well being necessary for attractive and functional public gathering places. Successful landscaping and public amenity choices consider scale, color, planting patterns, the history of the area, location of amenities, and the way the public will use these amenities over time. There are many potential landscaping opportunities along the new corridor extending from Nordic Drive to Lucas and Hunt Road. As the market investment areas change, so the landscaping and public amenities can reflect the various elements of the corridor by providing excitement and uniqueness to the overall streetscape experience. Any environment is improved with landscaping and the addition of color and patterns. Well placed public gathering places, planted with creative landscaping and other public amenities can provide the ambiance and interest along the corridor that attracts public interaction and keeps people interested in returning to the corridor as a place to shop and to be experienced overall.

A separate landscape plan will be prepared to address the needs and opportunities of the corridor. In no case will the landscaping and public amenities obstruct or detract from commercial signage, safety directions related to the movement of the public, or access. Physical and visual obstruction of entrances and signage for instance, impedes business activities and distracts from the overall productivity of the corridor. The goal of this plan is to enhance and promote business and facilitate the long term growth and success of the institutions, businesses and residential neighborhoods.

Signage, Traffic Control and Lighting

There are many opportunities for the creative use of signage, traffic control, and lighting to enhance public areas and to significantly improve commercial and institutional areas by making their frontage along Natural Bridge Road aesthetically pleasing. Incorporating signage, traffic control, and lighting into the overall landscaping plan will add value to the corridor and the various land uses while provide a safe environment. Signage, traffic control and lighting do not need to be utilitarian, especially in commercial areas. These public safety necessities provide an excellent opportunity for creative elements and in some cases whimsical designs that make a statement about a particular locations as well as providing fundamental information and well being.

Public Art, Signing, and Water Features

An ideal opportunity for public art and water features are available along the Natural Bridge Road created by the road diet concept. An example of the effective use of the corridor may include, but are not limited to:

- Creative signage, branding, and way finding
- Public art (this area is historically significant and finding ways to celebrate that history is one idea for artistic expression along the corridor)
- Use of Stormwater Best Management Practices
- Public gathering places
- Outdoor dining areas at commercial locations

Creative signage will link the villages and cities along the corridor to create a consistent, visual character throughout the corridor, while allowing the unique individuality of various land uses to remain. Design elements may also allow the corridor to become a more distinct destination through the use of creative branding styles that reflect existing and future economic development activities. Way-finding signing is critical to any destination. Distinct signage and design elements will allow confidence while traveling and provide guideposts to mark locations and directions to institutions and significant areas of activity.

Art work defines public spaces and provides an opportunity to distinguish this corridor from all other roadways in the region. Sculpture and artist outdoor art pieces can reflect the history of the area as well as defining specific market conditions along the corridor enhancing large, institutional campus environments to bringing focus and interest to smaller places along the business sections or at the "Wedge" location. When incorporated into the overall streetscape design elements, public art will enhance signage, way-finding, public furnishing areas and corridor ambiance. Artwork can become so interesting or compelling that it becomes a visual attraction for the area to visitors, adding to the appeal of the corridor.

Water features provide a focal point for pedestrian travel. There placement along the corridor provide opportunities for public gathering, places of reflection, and additional aesthetic value at points of interest. Due to climatic conditions in St. Louis, winter time care and maintenance of water features need to be taken into consideration as well as their visual impact when not in use.

Land use and market growth are directly related to the design and function of supporting infrastructure. Public amenities planned as part of infrastructure design is the vital link between the travel way and the land use in the corridor. The creation of public spaces throughout the entire corridor will be realized and planned as part of the Natural Bridge Road. This will allow the addition of functional landscaping that will not only provide areas for landscaping, but also areas that will reduce pollutants and lengthen concentration times for storm water entering the currently stressed storm water system. The proper selection of plants for functional landscape from native plants in areas such as the medians, bump out areas, tree lawns, and excess open areas will ultimately reduce ongoing costs for these plantings and eliminate the need for irrigation as typically proposed in such areas.

Well designed and implemented public gathering places become the communities "living rooms" providing locations for public markets, celebrations, and special events. Typically, the treatment of these public areas create development opportunities as well, due to increased regional market interest and the pleasant and urbane atmosphere created by the "place" and the "activity".

Chapter Summary

In summary, infrastructure design can influence public areas as outlined above providing immediate impact to the appearance and use of the corridor. Proposed new infrastructure includes:

- Roundabout or "T" intersection structure at the intersection of Natural Bridge and Florissant Roads
- Improved road configuration that allows for the safe and convenient movement of automobiles, buses, bikes, shuttle/trolley service, and pedestrians
- Establishment of a shuttle/trolley service important for local consumer movement and adding uniqueness to the marketplace for regional visitors
- New bus stops and enhanced public amenities at these location
- Landscaping, lighting, and public amenities that enhance public areas

The planning and financing of public infrastructure represents a substantial investment. It also represents opportunity for revitalization and improved market conditions for communities. The prospect of a reconfigured road alignment, optimizing the I-70 corridor, expanded shuttle service, and new public amenities places important emphasis on future development community renewal.