

MOORESVILLE TRANSPORTATION PLAN



Town of Mooresville, Indiana

Adopted
April 17, 2007





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ACKNOWLEDGEMENTS

The Mooresville Transportation Plan was developed with the ideas, input and effort of the following Steering Committee members:

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1 INTRODUCTION

1.1 *Plan Purpose*

This document provides a plan for the development of transportation facilities in and around Mooreville, Indiana over the next 20 years. The plan is based on an evaluation of community goals and anticipated 20-year transportation needs. This plan is intended to serve as a guide for public infrastructure and private development decisions by:

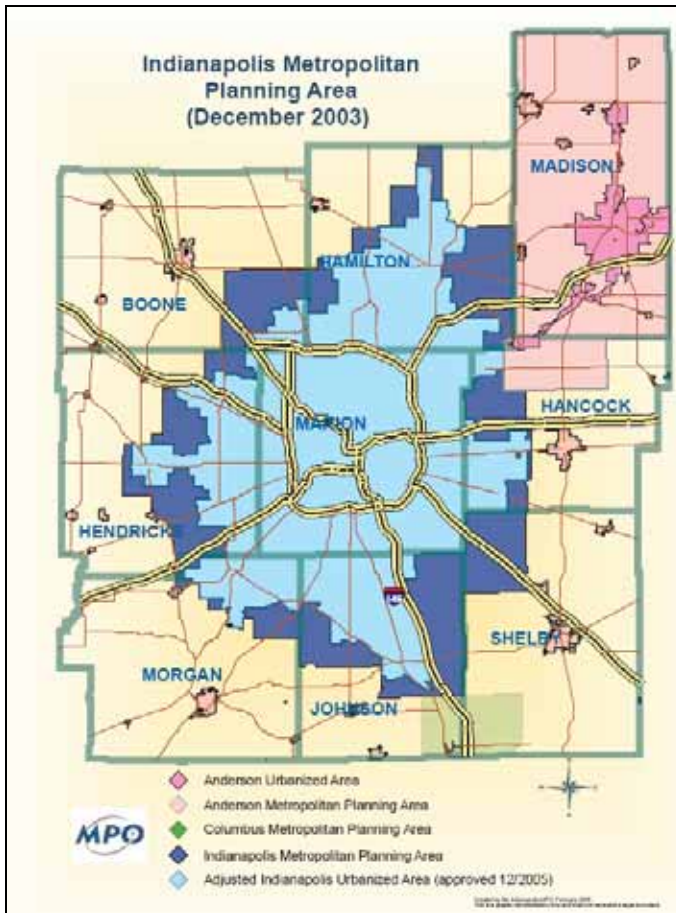
- Identifying short and long term transportation construction priorities
- Identifying right-of-way requirements for transportation facilities
- Anticipating future capital funding needs

The coverage area for this plan includes the Town of Mooreville and surrounding areas of Morgan County within the Mooreville Planning Buffer. This buffer extends up to two miles from the town boundaries, but does not extend into Hendricks County north of the town. The Town of Mooreville and nearly all of its planning buffer area is included in the Indianapolis Metropolitan Planning Area (MPA). Figure 1-1 shows the Indianapolis MPA and its relationship to Morgan County. Figure 1-2 shows the location of Mooreville within Morgan County.

The development of this transportation plan has been funded through the Indianapolis Metropolitan Planning Organization (MPO). The Indianapolis MPO is the primary entity responsible for regional transportation planning within the Indianapolis MPA. The MPO helps to ensure that transportation planning in the Indianapolis Metropolitan Planning Area is coordinated among all responsible governments. MPO activities are guided and approved by the Indianapolis Regional Transportation Council, which is comprised of representatives from each of the affected local and state governments. This includes both Mooreville and Morgan County.

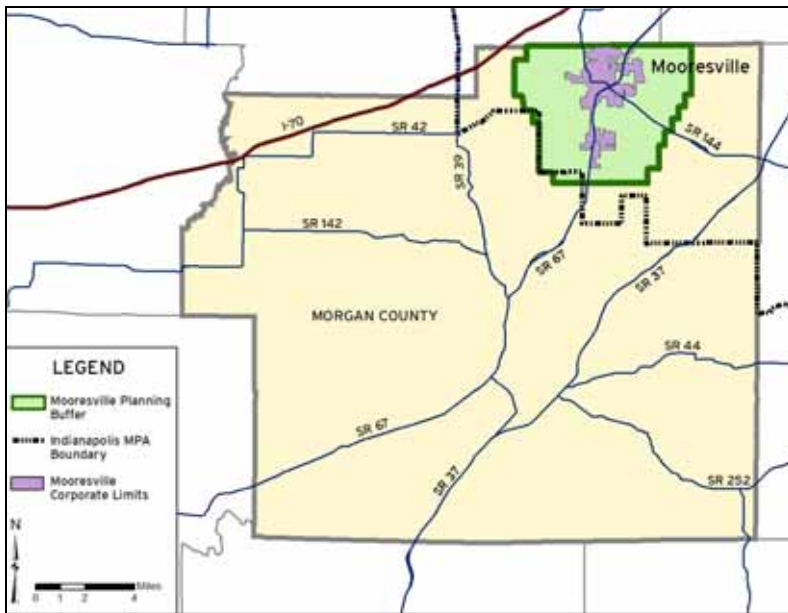


Figure 1-1: Indianapolis Metropolitan Planning Area



Source: Indianapolis Metropolitan Planning Organization

Figure 1-2: Mooresville Location Map





1.2 ***Planning Process***

This plan is the result of a comprehensive, coordinated effort to identify long term transportation needs and solutions for the Town of Mooresville and the surrounding areas of Morgan County within the Mooresville Planning Buffer. The plan components were developed through review of existing trends, assessment of future land use development and travel demand forecasts, input from Steering Committee members, and discussions with stakeholders. A public information meeting was held in October 2006 to obtain public input on the draft needs and recommendations.

1.3 ***Related Plans and Documents***

Several existing plans and other planning documents were reviewed during the development of the Mooresville Transportation Plan. These documents are described below.

1.3.1 *Indianapolis Regional Transportation Plan (2005)*

The Regional Transportation Plan is maintained by the Indianapolis Metropolitan Planning Organization as a long-range (25-year) plan for transportation improvements in the Indianapolis MPA. This area includes Marion County and portions of eight other Central Indiana counties. In Morgan County, it includes Brown, Harrison and Madison Townships, as well as portions of Monroe and Clay Townships. The Mooresville Planning Buffer is almost entirely contained within the MPA.

The most recently adopted update of the Regional Transportation Plan is dated April 2005 and has a planning horizon of 2030. A major review and update of the Regional Transportation Plan is currently underway and will extend the planning horizon to 2035. The following Morgan County transportation improvements are identified in the current Regional Transportation Plan for construction by 2030:

- New alignment of SR 267 between I-70 and SR 67 immediately north of Mooresville
- New I-69 on the alignment of existing SR 37
- Widening of I-70 from I-465 to SR 39
- Widening of SR 44 from State Road 67 to I-69

The following improvements are identified in the Regional Transportation Plan as needed improvements for which funds are not anticipated to be available:

- New connection of Hadley Road to Smith Valley Road and I-69 (SR 37)
- Widening of existing SR 267 and Center Street Road from Mooresville to I-70

1.3.2 *Mooresville Comprehensive Plan (2003)*

This document provides long range goals and policies for the development of Mooresville. The plan emphasizes preservation of the small town character of central Mooresville, with the objective of maintaining the mixture of residential and



local commercial uses in the downtown area. The area north of downtown is expected to remain primarily residential. The areas east of SR 67 and west of White Lick Creek are expected to develop as low density residential, with possible pockets of higher density development. Commercial and industrial should be focused along SR 67 and the Indiana Southern Railroad. The following transportation related goals and policies are paraphrased from the Comprehensive Plan:

- Businesses should be located where roads can support high traffic volumes
- Retail should be located on high visibility sites
- Industrial sites should be located with access to appropriate highway or rail
- The traffic impacts of developments should be evaluated
- Rights-of-way should be appropriate to support traffic generated by land uses specified in the Comprehensive Plan
- Sidewalks should be located in all residential and business areas
- Access should be managed and traffic flow should be maintained along SR 67
- Adequate public facilities should precede development
- Residential areas should have easy and safe access to business areas and major thoroughfares
- Main corridors through town should promote community pride and small town charm

1.3.3 Indianapolis Regional Pedestrian Plan (2006)

The Indianapolis Metropolitan Planning Organization has recently completed a pedestrian plan for the Indianapolis Metropolitan Planning Area. The plan identifies recommended facilities for pedestrians, bicycles and other non-motorized forms of transportation within the MPA. This includes facilities within the Mooresville Planning Buffer and adjacent areas of northeast Morgan County. The plan also includes recommended design guidelines for these facilities. The plan recommends a number of exclusive bicycle/pedestrian trails that follow existing roads or scenic natural corridors. These include greenways trails that follow White Lick Creek and the East Fork of White Lick Creek and extend into Hendricks County. The plan also recommends the designation of "pedestrian districts" in the downtown areas of Mooresville, Monrovia and Brooklyn and designation of a "pedestrian corridor" along SR 67 and South Indiana Street in Mooresville. The intent of these designations is to promote better pedestrian accessibility in these areas of dense commercial land use.

1.3.4 Morgan County Greenways Master Plan (2004)

This plan was developed to identify bicycle and pedestrian corridors to link Mooresville, Martinsville and other nearby destinations. The plan development process included an inventory of natural corridors and transportation corridors in the area. The plan includes several recommended improvements to accommodate bicycles and pedestrians in upcoming road projects or in existing natural corridors. Within the Mooresville area, these recommendations include:

- A 10' wide, three mile long trail along the north side of Landersdale Road that is currently under design and will be constructed with federal funding



- A 10' wide trail connection along the East Fork of White Lick Creek and Bridge Street to connect the existing trail system in Pioneer Park with the recommended Landersdale Road Trail
- Ultimate extension of the Landersdale Road Trail to Mann Road, the White River and the Indianapolis Greenways system
- Incorporation of an 8' wide trail in the scheduled reconstruction of the Greencastle Road bridge over White Lick Creek

The Morgan County Greenways Master Plan is currently being updated by the Morgan County Parks and Recreation Board and expanded to identify corridors in other parts of the county. Relevant information and input provided by the Parks and Recreation Board will be considered in developing the final draft of the Transportation Plan.

1.3.5 *Indiana Trails, Greenways and Bikeways Plan (2006, Final Draft)*

This plan provides an inventory of existing recreational trails throughout the state and identifies a planned network of interconnected trails. The plan also discusses issues and strategies related to developing the planned trail network. The plan identifies 2.5 miles of existing hiking trail in Mooresville's Pioneer Park and the possibility of a future trail along the proposed I-69 corridor.

1.3.6 *Central Indiana Regional Mass Transit Service Plan (2000)*

This plan provides long range transit service recommendations for Central Indiana. The plan was developed for the Indianapolis Metropolitan Planning Organization and the Central Indiana Regional Transit Alliance. Short term options listed for Morgan County include rideshare/vanpool programs, "smart growth" land use initiatives and transportation corridor preservation. Long term options include express bus/park and ride facilities and demand responsive transit service. The plan specifically recommends that the Indiana Southern Railroad and the Indiana Railroad Corporation corridors through Morgan County be monitored for potential future passenger rail service.

1.3.7 *Comprehensive Operational Analysis of IndyGo Transit System (2005)*

A Comprehensive Operational Analysis (COA) of the IndyGo Transit System was conducted for the Indianapolis Metropolitan Planning Organization as part of the "DiRecTionS" Regional Rapid Transit Study. This effort evaluated the existing service provided by IndyGo for the Indianapolis region and recommended operational improvements to serve future demand. The recommendations included a proposed express/local bus line from Mooresville and Plainfield to the Indianapolis International Airport and downtown Indianapolis. This service was proposed for implementation by 2009, but no funding source was identified.

1.3.8 *Morgan County Transportation Plan (2006, Draft)*

A transportation plan for Morgan County was developed concurrently with the Mooresville Transportation Plan. The development of these two plans was coordinated throughout the process, and the recommendations of the plans are consistent with each other.



2 DEVELOPMENT TRENDS

2.1 *Population and Economy*

2.1.1 Relationship between Economic Development and Transportation

Most communities consider economic development to be the creation of new jobs or new wealth in the community, as well as the retention of existing jobs and investments. The jobs component of economic development is related to people, and the choices they and their employers make in determining where to live and where to work. In a large metropolitan area, commuting between counties is not unusual, and it is a way of life in the Indianapolis metropolitan area. This means that thousands of people drive each day between their homes in one county and their jobs in another county. These commuting patterns affect the traffic volumes on the roads that best connect communities.

Transportation is also related to economic development in terms of the supply and delivery needs of local businesses. Often supplies come from other counties and other states. Many companies must also deliver their products and service locally or worldwide. In this sense, transportation is broader than the road network and must also consider access to rail systems, airports, and shipping ports.

2.1.2 Existing and Historic Conditions

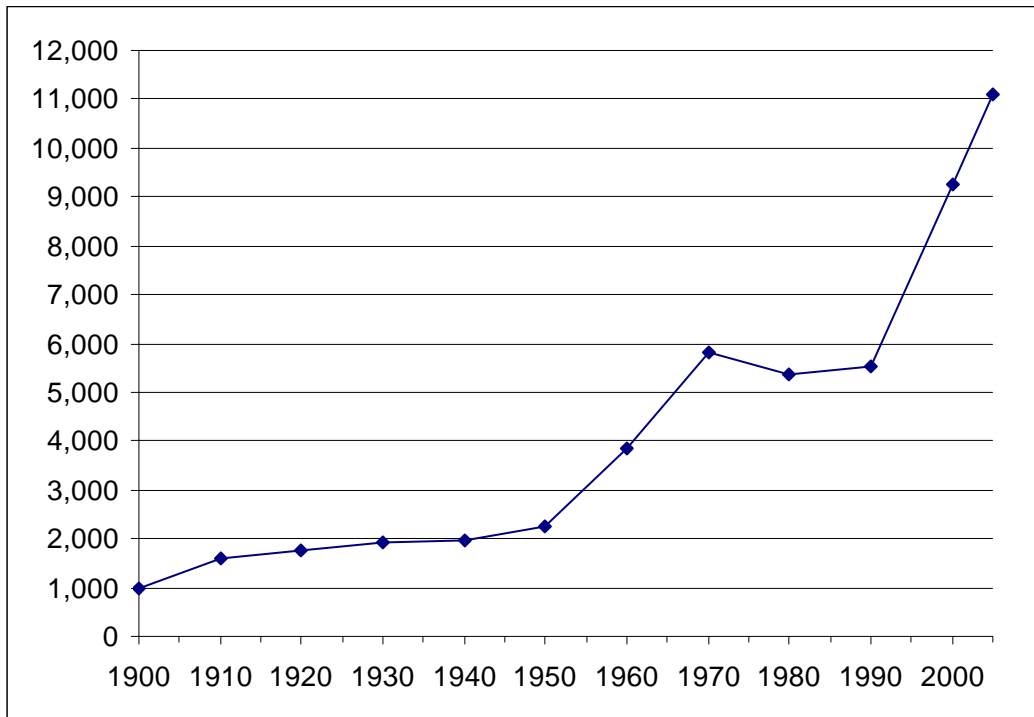
Population

Mooresville grew at a slow but steady rate from 1900 until 1950. During the 1950s and 1960s, the population grew considerably, reaching 5,800 in 1970. During the 1970s, the town's population declined slightly and remained fairly steady during the 1980s. During the 1990s, the town again experienced dynamic growth, as the population increased from 5,540 in 1990 to 9,270 in 2000. The growth has continued since the 2000 Census, with the 2005 population estimate reaching more than 11,100.

This exponential growth over the past fifteen years has changed the development pattern and transportation demands of the Mooresville community. Mooresville is also growing relative to Morgan County. While the town accounted for roughly 10 percent of the county population in 1980 and 1990, it has grown to approximately 15 percent of the county population today. Some of this growth relative to the overall county population can be attributed to housing construction at the edge of the Indianapolis metropolitan area. Annexation is another likely source of population increase in Mooresville.



Figure 2-1: Mooresville Population Growth



Source: U.S. Census of Population and Housing

Industries and Employment

According to ESRI, a private provider of socio-economic data, there are 5,182 employees and 441 businesses in Mooresville. The largest employment sectors are retail trade, accounting for nearly 30 percent of the local jobs (nearly half of those jobs are at eating and drinking places), and services, accounting for 41 percent of jobs (with approximately half of those being in health services). The major sectors in Morgan County are also retail, accounting for 25 percent of jobs, and services, accounting for 43 percent of jobs. Health services and educational institutions are the largest service sector employers. Major manufacturing and distribution employers in Mooresville include:

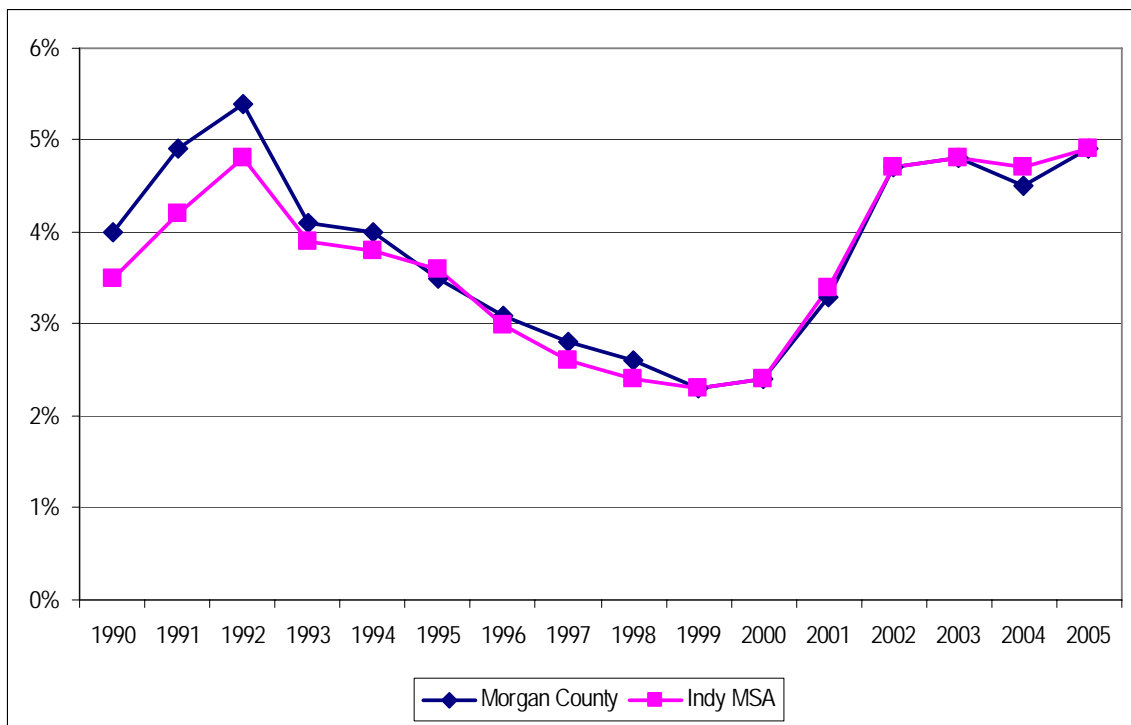
- Ambassador Steel
- Capital Adhesives & Packaging
- Equipment Technologies
- Carter Lee Lumber
- Cougar Bag, Inc.
- General Shale Brick
- GR Wood, Inc.
- Honey and Me, Inc.
- Laboratory Equipment Corp.
- LinEl Signature
- Majestic Block
- Molex Incorporated
- Nice-Pak Products, Inc.
- Overton & Sons Tool & Die
- PacMoore
- Reed City Power Supply
- Riverside Stone
- SaniServ
- Simpson and Craft
- Sun Polymers
- Thiesing Veneer Company
- TOA (USA)
- Wooley Lumber



Between 2001 and 2004, the largest increase in employment was in the construction sector, followed by retail trade. The manufacturing sector lost the largest number of employees during the same time period.

Labor force and unemployment data are available from the Indiana Department of Workforce Development only at the county level. However, an examination of overall data for Morgan County provides useful insight. The Morgan County labor force grew, more or less steadily, from 1990 to 2005. The labor force was under 30,000 in 1990 and was approximately 37,500 in 2005. The unemployment rate of the county closely reflects the unemployment rate of the Indianapolis metro area. This has been especially true since the economic decline that began in 1999. The annual average unemployment rate for the county was 4.9 percent in 2005.

Figure 2-2: Morgan County Unemployment Rates



Source: Indiana Department of Workforce Development

Compensation

Compensation per employee provides a measure of how much employees are paid in various industry sectors. It is the total compensation in an industry sector divided by the number of employees in that sector. Compensation per employee in Morgan County was highest in the utility sector (\$79,348) and manufacturing sector (\$53,180). Compensation was over \$50,000 in a number of sectors at the metro level, including utilities (\$92,570), management of companies (\$88,017), manufacturing (\$78,221), wholesale trade (\$60,022), finance and insurance (\$56,914), and information (\$55,744). Compensation growth per employee in Morgan County exceeded that of the metro area in several sectors from 2001 to 2004, including: forestry, fishing and related activities; utilities; construction;



manufacturing; wholesale trade; retail trade; finance and insurance; administrative and waste services; arts, entertainment, and recreation; other services; and, government.

Market

Median household income is a measure used by many agencies and communities to gauge their economic health. According to ESRI Data, the median household income for Mooresville in 2000 was approximately \$46,800 and is expected to increase 25 percent to \$58,700 by 2010. The median household income for Morgan County was slightly higher at \$47,700 in 2000 and is projected to rise 22 percent to \$58,400 by 2010. The metro area is projected to have a 32 percent increase in median household income from 2000 (\$46,000) to 2010 (\$60,550).

Similarly, median home values and the direction their change are gauges of the health of the local real estate market and the local economy. According to ESRI Data, in 2000, the median home value in Mooresville was \$111,900. It is projected to increase 32 percent by 2010, to approximately \$147,700. The Morgan County median home value is projected to increase 33 percent from \$114,400 in 2000 to \$152,500 in 2010. The Indianapolis metro area median home value was \$112,350 in 2000 and is projected to increase 43 percent to \$161,300 in 2010. This rate of increase is considered normal to good for the Midwest United States housing market.

Consumer spending data provide information about how local residents spend their disposable income and can also provide information about retail market opportunities. Data provided by ESRI indicate that Mooresville residents spend less than 80 percent of the national average on clothing, sports/recreation/exercise equipment, housewares, and telephones and accessories. Morgan County spending patterns are similar, except that Morgan County residents also spend less than 80 percent of the national average on investments. These below average spending patterns could indicate that quality retail spending opportunities are not readily available in the area.

2.1.3 Commuting Patterns

Commuting is a significant factor in Morgan County, and commute to work patterns can be determined from Indiana State Income Tax form (IT-40) data that workers submit each year. These data provide the most timely commuting information, though they are only available at the county level. While the Census 2000 data does include commuting patterns for cities and towns, it is several years old and does not capture the changes that have occurred in the economy since January 2000.

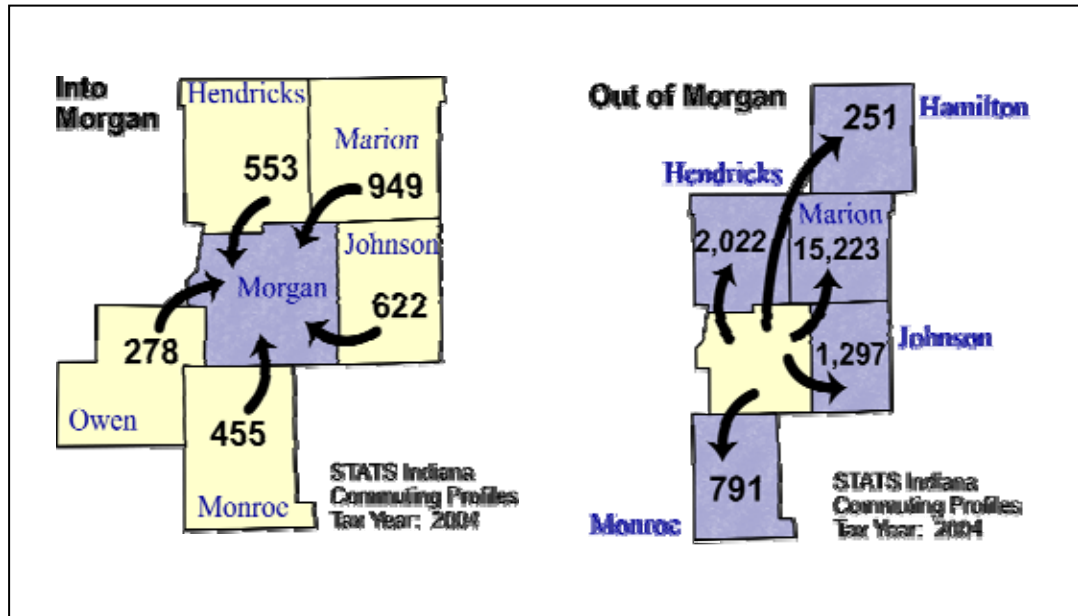
2004 Morgan County commuting patterns are shown in Figure 2-3. Nearly as many people live in Morgan County and work elsewhere as live and work in Morgan County. A little more than half (55%) of the working population living in Morgan County also work in the county. The top five other counties where Morgan County residents work are Marion, Hendricks, Johnson, Monroe, and Hamilton Counties. Marion County is by far the most significant recipient of Morgan County workers, with 15,668 Morgan County residents working there. Morgan County also receives workers from other counties. However, the county imports far fewer workers than it exports to other counties. Approximately 2,300 workers commuted to Morgan



County from other counties in 2004. They primarily came from Marion, Johnson, Hendricks, Monroe, and Owen Counties.

There have been some small changes in commuting patterns between 2000 and 2004. More people were living and working in the county in 2004 than in 2000. Commuting to Marion County has decreased over this time period, but commuting to Hendricks County has increased.

Figure 2-3: Morgan County Commuting Patterns



Source: Indiana Business Research Center, Indiana University

2.1.4 Population and Employment Projections

Projections of population, households and employment in Morgan County were obtained from the Metropolitan Planning Organization and reflect preliminary estimates from the ongoing update of the Regional Transportation Plan. 2030 projections for Morgan County and the nine-county Indianapolis metropolitan area were developed by interpolating the 2025 and 2035 “Current Trends” scenario projections used in the Regional Transportation Plan update. The 2030 projections are shown in Table 2-1. Morgan County population projections have been estimated at the township level for the Regional Transportation Plan update, but those estimates are considered too preliminary at this time. The population projections used by the MPO and used in this plan are more aggressive than the population projections developed by the Indiana Business Research Council, but they are more conservative than the exponential growth methods often used by planning professionals.

Population and employment in Morgan County are projected to grow by approximately one-third between 2005 and 2030. The number of households is projected to grow by 38 percent in the same time period, which reflects a continuing nationwide trend toward smaller household sizes. The growth rates of population and



households in Morgan County is expected to be about the same as the overall Indianapolis metro area, while employment growth in Morgan County is expected to be slower than that of the overall metro area. An increase in the proportion of Morgan County residents working outside of the county can be expected as a result.

Table 2-1: Population and Employment Projections

	Morgan County			Indianapolis 9-County Metropolitan Area		
	2005 Estimate	2030 Projected	Growth	2005 Estimate	2030 Projected	Growth
Population	69,788	89,854	29%	1,719,432	2,229,603	30%
Households	26,217	36,401	39%	684,231	923,636	35%
Employment	21,171	28,240	33%	1,114,328	1,589,063	43%

Source: Indianapolis MPO 2005 estimates, plus 2025 and 2035 forecasts.

Based on projections of national employment trends, the industries that can expect job growth include: construction, wholesale trade, retail trade, transportation and warehousing, information, finance and insurance, educational services, health care and social assistance. Industries projecting job losses include: mining and manufacturing. Other sectors are either projected to be stable or reasonable data is not available to make a projection.

2.1.5 Population and Economy Conclusions

The population of Moorsville has grown dramatically over the past fifteen years, placing new demands on its transportation and other infrastructure systems. Moorsville and the surrounding areas will continue to grow and will become progressively more integrated with the Indianapolis metropolitan area economy over the next 25 years. Northern Morgan County will increasingly become a place of residence for people working throughout the Indianapolis MPA. This means that work commute traffic will continue to grow and routes used by commuters will experience increased traffic demand. This is especially true for routes that link northern Morgan County to Hendricks, Johnson and Marion Counties. Market analysis data also indicate opportunities for new employment and retail in the Moorsville area. New commercial developments will likely be focused in the SR 67 corridor, which offers developable land with rail and road access to populated areas.

2.2 Land Use

2.2.1 Existing Land Use

A base map of existing land use information for the Moorsville planning area was obtained from the Indianapolis Metropolitan Planning Organization. This existing land use information was updated using photo interpretation of 2005 aerial photos. Figure 2-4 is a map of existing land use for the Moorsville planning area.

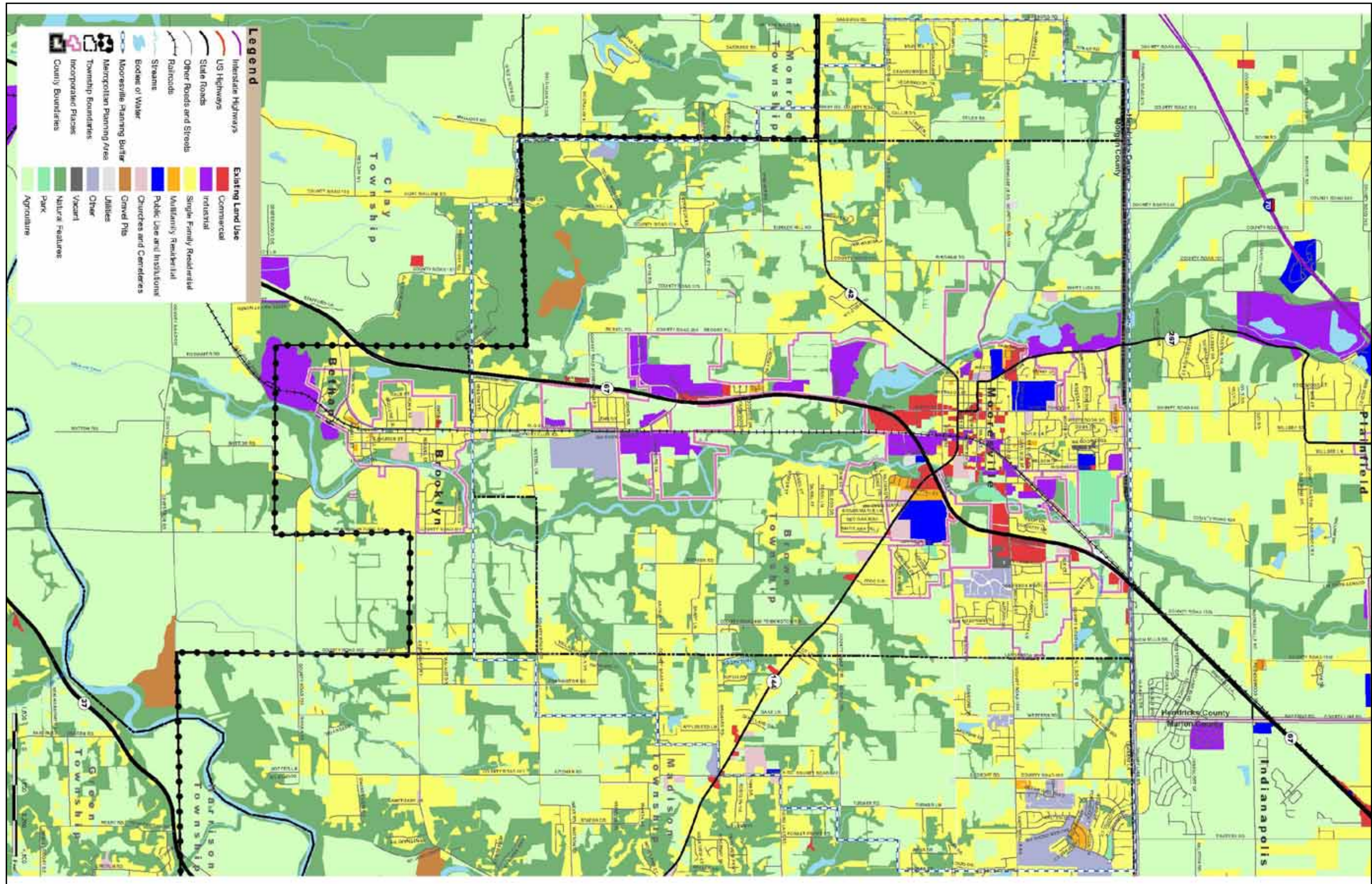


Figure 2-4: Existing Land Use



2.2.2 Future Land Use Development

The types and locations of future land use development throughout the entire county were identified through Steering Committee input and in conjunction with the Steering Committee for the Morgan County Transportation Plan. Coordination between the two transportation planning efforts assures that land use development forecasts within the Mooresville planning buffer agree with the overall forecasts for Morgan County. In addition to input from the two steering committees, the land use development forecasts were also guided by interviews with key stakeholders, review of recent development patterns, and review of Morgan County land use projections developed by an expert panel for the I-69 environmental study process. The intent was not to identify all growth that will occur by 2030 or to prescribe the types and locations of desired growth, but rather to identify the critical areas where a significant amount of the anticipated growth is expected. This will help to provide a general assessment of future travel demand patterns.

Two different growth scenarios were developed in order to determine whether the amount of future land use development might impact travel patterns countywide. In the base scenario, the total amount of development in the county was limited so that it corresponded approximately to the 2030 population and employment projections from the MPO Regional Transportation Plan update. It was assumed that new residential development would be constructed at the average gross residential population densities currently existing in the county (i.e., 2005 population divided by the 2005 residential acreage). It was assumed that new industrial and retail development would be constructed at the average gross employment densities currently existing in the county.

In the second land use scenario, the limitations on total development were relaxed, and additional areas of potential development were identified. This alternative scenario includes approximately 22 percent more residential growth and 13 percent more industrial growth than the base scenario. Scenario 2 added in-fill residential growth in Monroe and Green Townships, industrial and residential growth near Waverly, more industrial growth west of Martinsville, and industrial growth along old SR 67 in Jefferson Township. A comparison of the acreage by land use type is shown in Table 2-2

Figure 2-5 and Figure 2-6 show anticipated critical growth areas in the study area between 2006 and 2030 under the two separate growth scenarios for Morgan County. There is no difference between the two scenarios within the Mooresville planning buffer. Figure 2-7 shows the critical growth areas for the entire county under Growth Scenario 2 in order to provide context to the growth shown in the Mooresville area.

Under either of the two land use development scenarios, future land use development is expected to be focused in the northeast quarter of Morgan County and in the I-69 (SR 37) corridor. Table 2-3 shows the proportion of the critical growth area acreage that is within the Mooresville Planning Buffer under either growth scenario. Approximately 50 percent of the residential and industrial growth in the base scenario is expected to occur within the Mooresville Planning Buffer. Continued residential development is anticipated both east and west of Mooresville, while



continued industrial development is anticipated along SR 67 between Mooresville and Brooklyn.

Land use development is expected to increase travel demand in the SR 67, SR 42, SR 144 and SR 267 corridors and require a denser and more connected network of roads in northeastern Morgan County. The difference between the two growth scenarios would not likely have a significant impact on transportation network needs within the Mooresville planning buffer.

Table 2-2: Morgan County Development Scenario Comparison

Land Use Type	2005 Estimated Acres Countywide	2030 Base Scenario Acres Countywide	2030 Scenario 2 Acres Countywide
Residential	20,633	27,185	31,693
Commercial	2,117	2,763	2,763
Industrial	3,283	5,121	5,556

Table 2-3: Distribution of Morgan County Critical Growth Areas

Land Use Type	Proportion of Acreage in Mooresville Planning Buffer	
	Base Scenario	Scenario 2
Commercial	0%	0%
Industrial	48%	39%
Residential	51%	30%

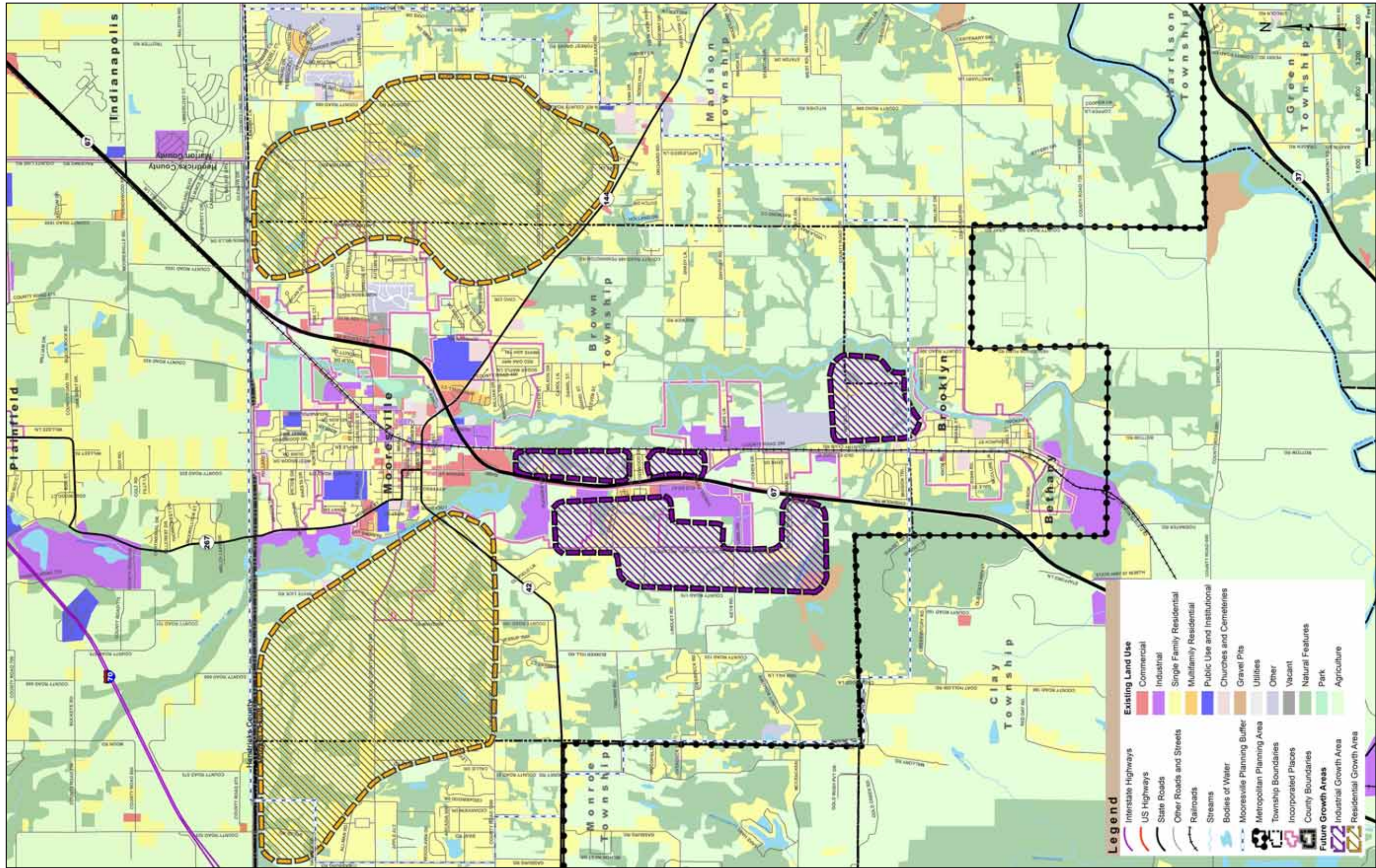


Figure 2-5: Critical Growth Areas near Mooresville Base Scenario

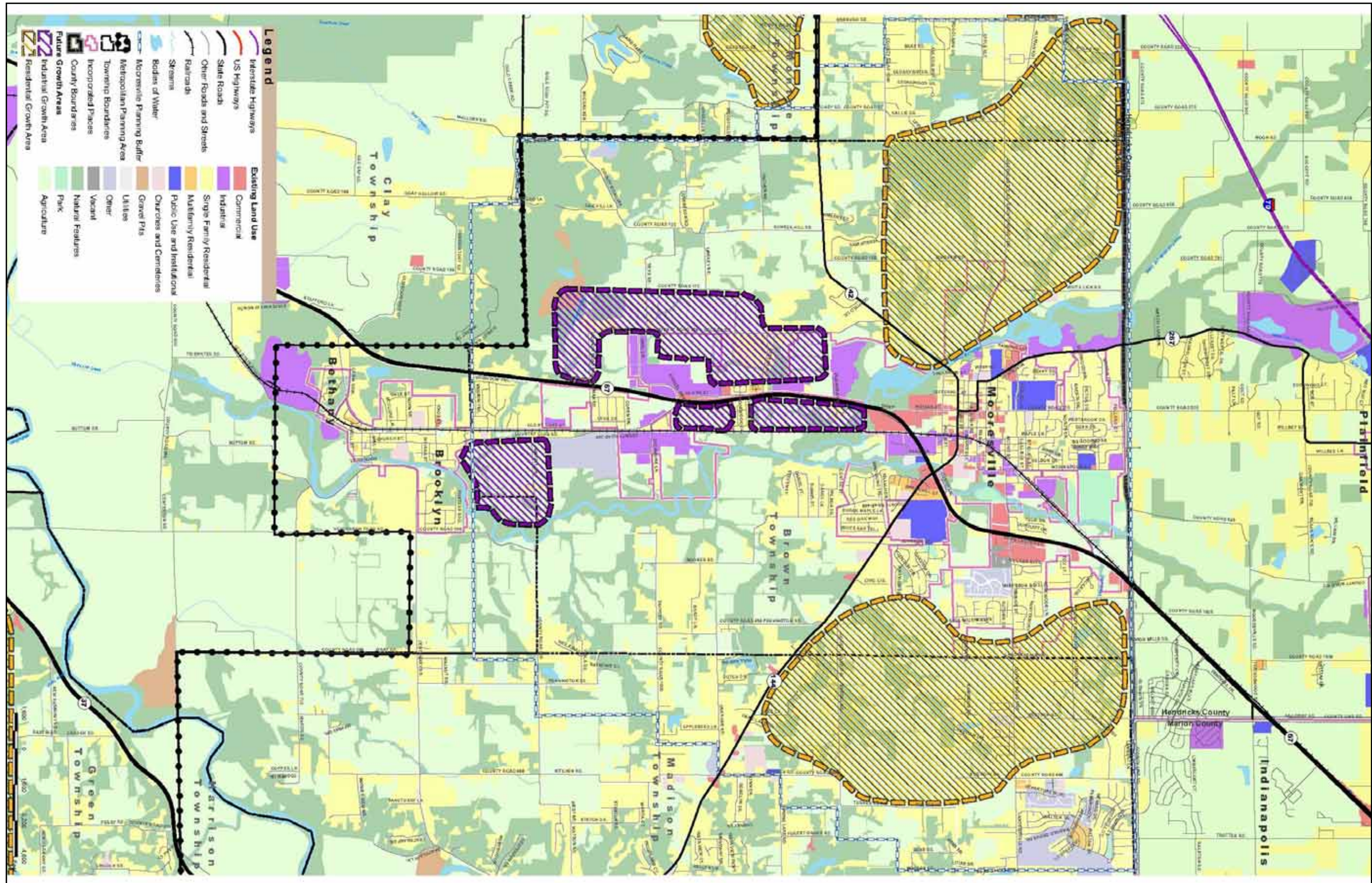
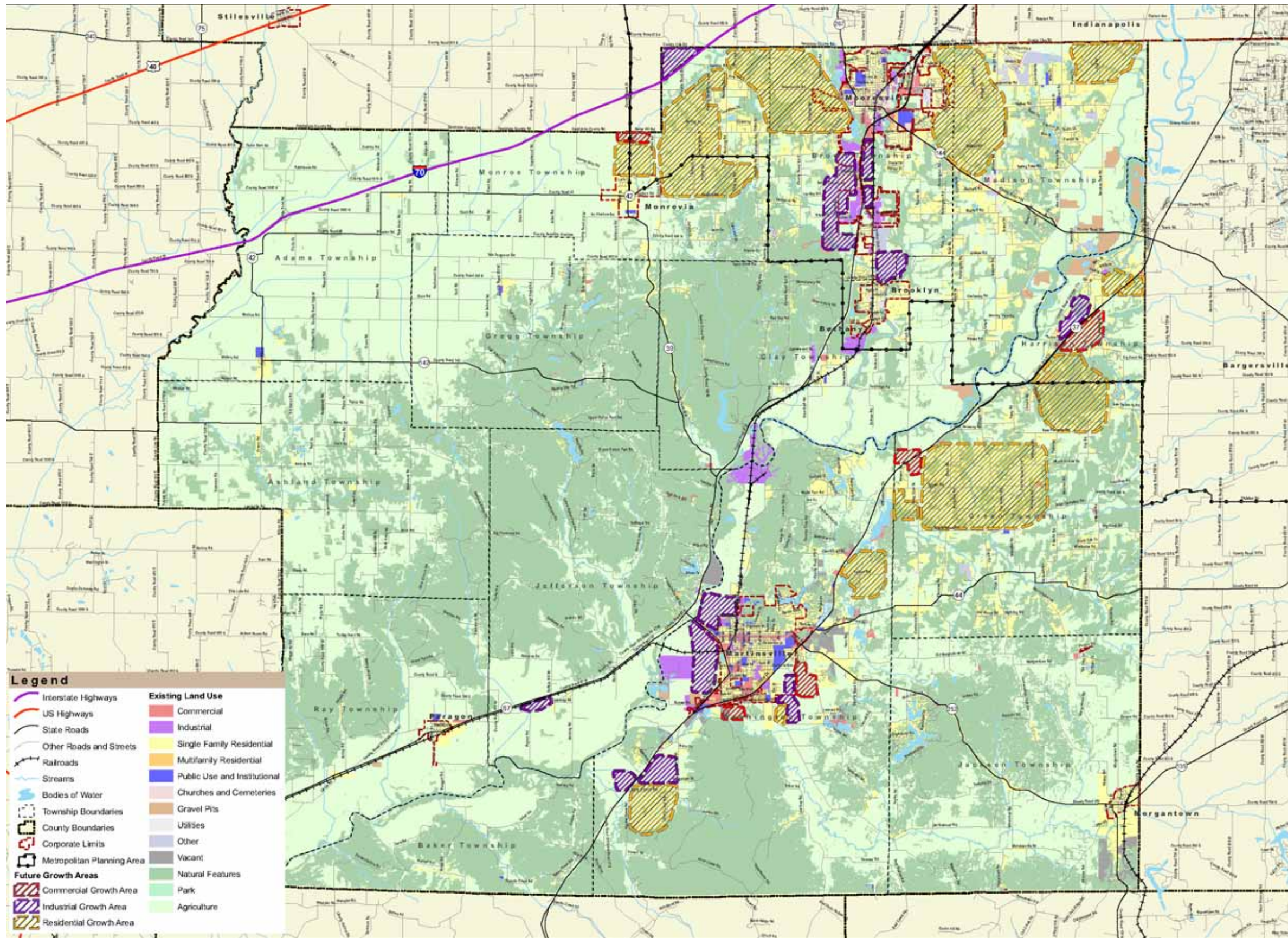


Figure 2-6: Critical Growth Areas near Mooresville Scenario 2



Figure 2-7:
Critical Growth
Areas for
Morgan County
Scenario 2





3 EXISTING TRANSPORTATION SYSTEM

3.1 Road Network

3.1.1 Existing Conditions

Figure 3-1 is a map of the existing roadway network in and around Mooresville. SR 67 is the most heavily traveled route in the Mooresville area, providing access to retail opportunities and connection to I-465 and the Indianapolis metropolitan area. Access from SR 67 to Mooresville area land uses is provided at Old SR 67, Allison Road, Bridge Street, Hadley Road, SR 144/High Street and Indiana Street. SR 267, SR 42 and SR 144 provide access into downtown Mooresville from the north, west and east, respectively. These routes provide connectivity for through traffic and are used by significant numbers of trucks due to the lack of alternate routes. Indiana Street is a major north-south route through downtown Mooresville that connects to SR 267 and ultimately to I-70 in Hendricks County. Indiana Street is a significant route for daily commuter traffic, but through trucks are prohibited.

East-west routes have become increasingly important in northern Morgan County as development increases both east and west of Mooresville. White Lick Creek, SR 67 and the Indiana Southern Railroad all present barriers to east-west travel in the area. North-south connections are also limited in the area, especially due to historic differences in roadway alignments between Morgan County and adjacent portions of Hendricks and Marion Counties.

The most recent available daily traffic volumes on Mooresville area highways were obtained from the Indiana Department of Transportation and the Morgan County Highway Department. Peak period traffic counts were also conducted at a few spot locations in Mooresville during the development of this transportation plan. Existing daily traffic volumes are identified on the map in Figure 3-1.

Vehicle crash data for the years 2003, 2004 and 2005 were also obtained from the Indiana Department of Transportation, and locations with at least 15 crashes during this 3-year period are identified on the existing roadway network map.

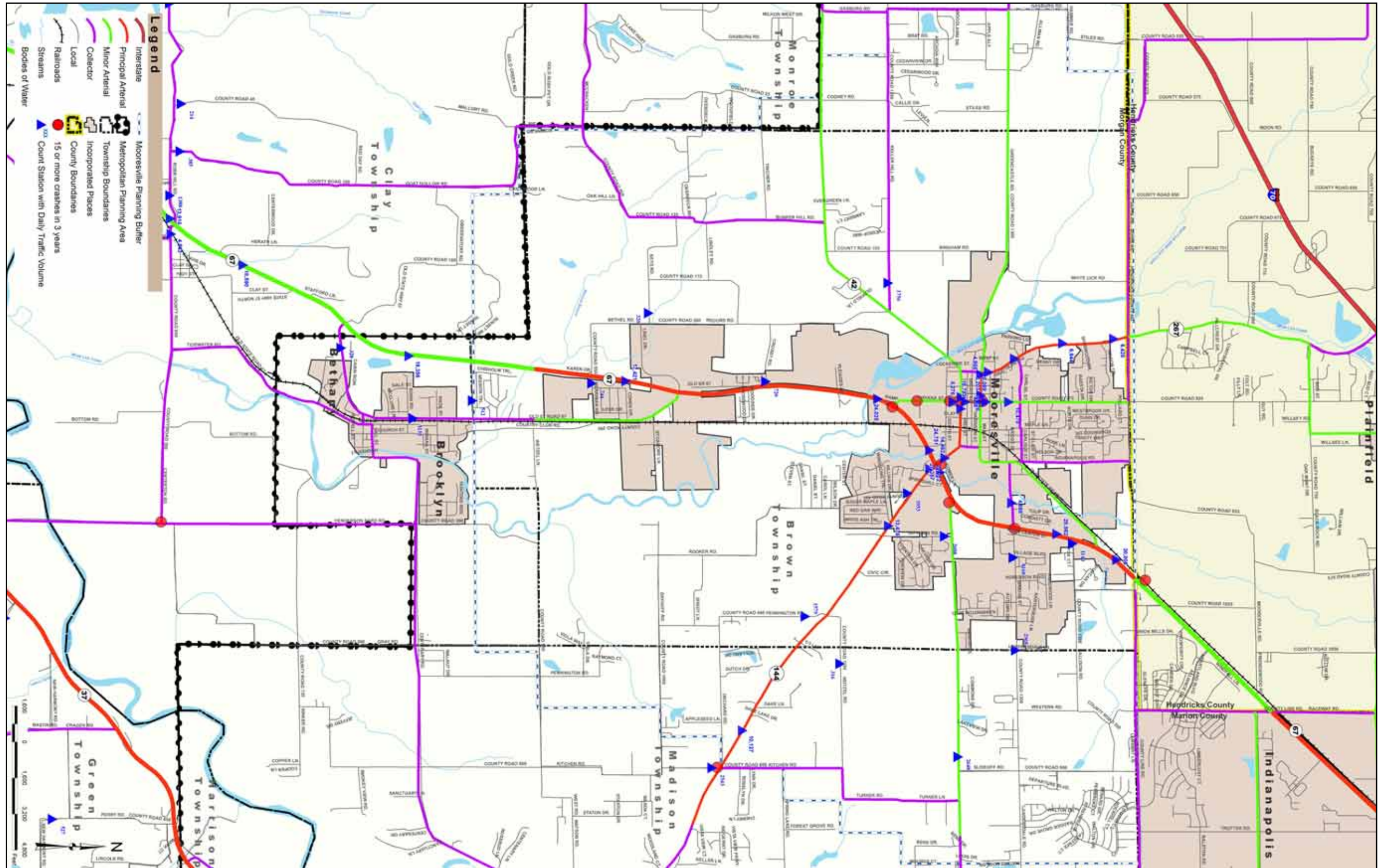


Figure 3-1: Existing Transportation Network



3.1.2 Travel Trends

Historical traffic volume data available for state highway routes in and around Mooreville provide an indication of traffic growth over time. In general, daily traffic volumes in Morgan County have slowly but steadily increased since the late 1970's. Traffic volumes on state highways in the northeastern portion of the county are typically higher than those on similar highways in the remainder of the county. This is to be expected because of the denser land use. Traffic volumes on SR 144 and on SR 42 within the Town of Mooreville have experienced the most growth over the past 30 years.

Volume trends on the state highway segments were also compared to generalized estimates of daily through traffic capacity of those segments. This comparison revealed that the segment of SR 42 between SR 67 and South Street in Mooreville is now nearing the effective capacity of a two-lane arterial street. No other state highway segment for which these travel trends were analyzed appeared to be experiencing capacity problems. However, the generalized through capacity estimate of these road segments does not consider poor operation at intersections or other bottlenecks that may worsen actual travel conditions.

Detailed travel trend information for state highways at several locations around Mooreville is provided in Appendix A of this document.

3.1.3 Existing Functional Classification

The roads shown in Figure 3-1 are color coded according to their existing functional classification, as recognized by the Indiana Department of Transportation. The functional classification of a roadway describes how it balances the two primary functions of all roads: (1) carrying through traffic and (2) providing access to adjacent property. Roads that are primarily used for through traffic service (typically for longer trips) are referred to as arterials. Those used primarily for access to abutting land use are local streets. Collector roads link local streets with arterials and often serve balanced demands for travel and access to property.

The functional classification of a road guides decisions including lane requirements, appropriate design standards, cross section elements, right-of-way, and access management components. The functional classification also has implications for the funding of roadway improvements, as most types of federal funding are not available for roads that are classified as "local."

Functional classification should be defined in the context of the overall roadway network to provide a balanced system that meets both travel and access requirements. Failure to provide a well-planned network of streets in a variety of functional classifications can result in congested streets that were not designed for high traffic volumes, cut-through traffic on neighborhood streets, high crash rates and other problems.

The following paragraphs provide summary descriptions of the various roadway functional classifications. These descriptions have been adapted from the Federal Highway Administration and the Indiana Department of Transportation.



Freeways

Freeways accommodate the highest operating speeds, greatest traffic volumes and longest trips. Freeways are divided highways with a minimum of two travel lanes in each direction. They are intended solely for mobility and provide no direct access to adjacent land uses. Example: I-70.

Other Principal Arterials

Principal Arterials carry high traffic volumes and are intended primarily for through traffic movement rather than land access. Partial control of access is desirable on these facilities. In rural areas, these facilities serve substantial statewide or interstate travel. Within urbanized areas, these facilities serve both through trips and longer intra-city trips. They serve major through movements between important centers of activity in a metropolitan area and a substantial portion of trips entering and leaving the metropolitan area. Examples: SR 67 through Mooresville; SR 37.

Minor Arterials

Minor arterials are intended to serve a mobility function, with some access to land. They connect with and supplement the principle arterial system. In rural areas, these facilities serve both interstate and inter-regional travel. In urban areas, they provide major intra-community connections. Minor arterials may carry local bus routes, but they should not penetrate neighborhoods. Minor arterials provide lower travel speeds and accommodate shorter trips than principal arterials, while providing more access to property. Examples: Hadley Road; Greencastle Road.

Major Collectors

Collectors provide a balance of both mobility and access. Major collectors are rural roads that serve the larger towns not directly served by arterials and other traffic generators of equivalent intra-county importance like consolidated schools, shipping points, county parks and important agricultural areas. Major collectors link these places with nearby larger towns or cities, or with routes of higher classification. Major collectors serve as important intra-county travel corridors. Examples: Keller Hill Road, Centenary Road.

Minor Collectors

Minor collectors are rural routes that are spaced at intervals consistent with population density in order to collect traffic from local roads and assure that all developed areas are within a reasonable distance of a collector road. Minor collectors provide service to smaller communities and locally important traffic generators that are not served by roads of higher classification. Examples: Kitchen Road; Bunker Hill Road.

Urban Collectors

Urban collectors provide both land access and traffic circulation within residential, commercial and industrial areas. Urban collectors may penetrate residential neighborhoods, providing a connection between the neighborhoods and higher volume arterials. Examples: Carlisle Street; Indianapolis Road north of Carlisle.

Local Roads and Streets

All public roads and streets not classified as arterials or collectors are classified as local roads and streets. They provide direct access to abutting properties and are



intended to serve only local traffic movement. Traffic speeds and volumes are generally low, and through traffic is discouraged.

Functional Classification Review

For the most part, the existing functional classification designations maintained by the Indiana Department of Transportation appear to be appropriate. One location where an update is recommended is along Bridge Street and Landersdale Road east of SR 67. It is recommended that Bridge Street and Landersdale Road be designated as collectors rather than local roads between SR 67 and Mann Road. These roads form an important route that carries traffic between SR 67 and a developing residential area. There are also a few locations where the functional classification of a roadway in Morgan County does not match its classification in adjacent areas of Hendricks or Marion Counties. These roads include SR 67, SR 267 and Indiana Street/Hendricks CR 825 East. The Town of Mooreville and Morgan County should request that the Indiana Department of Transportation review the existing functional classifications of these roadway segments and update them as appropriate.

3.2 Other Modes of Transportation

Sidewalks for pedestrian use currently exist in downtown Mooreville and in some older residential neighborhoods near downtown. Sidewalks or bike paths have also been provided within newer residential developments, such as Heartland Crossing east of Mooreville. Bicycle and pedestrian facilities generally do not exist along major roads outside of the downtown core, including the commercial areas along SR 67 and SR 267. Sidewalks are required by ordinance within any new residential subdivision or commercial development in Mooreville.

There is currently no scheduled transit service in Mooreville. The Indiana Southern Railroad freight rail line connects Indianapolis with Southwest Indiana and passes through Mooreville and Brooklyn. No passenger service is available on this rail line. The closest passenger air service is available at the Indianapolis International Airport in Marion County.



4 TRANSPORTATION NEEDS

4.1 Steering Committee Assessment

The Mooresville Transportation Plan Steering Committee identified the following critical issues, problems and opportunities related to transportation in and around Mooresville:

Existing Issues

1. Downtown traffic flow is adversely affected by the poor alignment of SR 267
2. Inconsistent application of roadway standards (e.g., building setbacks)
3. North-south traffic flow problems through town
4. Construction on SR 37 has caused many people to reroute to SR 67
5. Downtown streets, including state routes, are not designed for the large trucks that use them
6. Lack of control over state routes through downtown
7. Heavy congestion along Bridge Street, with no alternate routes
8. Traffic congestion and speeds around the school campus area
9. Imbalance between the number of routes into town from the north and the number from the south
10. Increased traffic on Bridge Street east of SR 67, and planned middle school at Landersdale Road and Bridge Street
11. Use of CR 150/Bingham Rd./White Lick Rd. north of SR 42 as an alternate route to SR 267 west of Mooresville.
12. The Metropolis development in Hendricks County has increased traffic between Mooresville and Plainfield
13. Offset intersections and discontinuous streets are a problem
14. Intersection problems at Bridge Street/Indianapolis Road, Carlisle Street/Indianapolis Road and Bridge Street/SR 67
15. Indiana Street design is insufficient for its traffic volume, and cannot handle the same weight in Mooresville as it can in Hendricks County
16. East-west traffic flow is a problem due to a lack of contiguous streets
17. Possible need for a SR 267 bypass west of town
18. SR 67 connection to Indianapolis is congested without good alternates
19. Traffic congestion on SR 144
20. Growth in traffic to and from Hendricks County

Additional Long Range Issues

21. Impacts from I-69 (increased traffic due to diversion and new development)
22. Possible limits to improvements on roads paralleling I-69 Toll Road
23. Development of east and west connections through the town
24. Projected growth along SR 144
25. Desire to enhance industrial development south of Mooresville
26. Removal/restructuring of SR 267 through Mooresville
27. Development potential east and west of the town
28. Need for improvements to SR 67 at I-465



4.2 Committed Projects

Table 4-1 lists the previously committed but not yet constructed projects in and around Mooresville that are expected to have significant capacity, safety or operational impacts on the transportation network. Figure 4-1 shows the location of most of the listed projects. The term “committed” implies that funding has been identified for these projects and there is a commitment from the responsible organization to construct them. These projects are not included in the recommendations of this Transportation Plan, but it is assumed that they will be constructed when analyzing the future transportation needs of Mooresville.

Table 4-1: Significant Committed Road Projects Near Mooresville

INDOT Des. No.	Route	Project Description	Estimated Cost	Ready for Contracting Year
0400826	SR 267	Modernize traffic signals at SR 267 and Indiana Street, Mooresville	\$ 160,000	2006
0068530	Greencastle Road	Replace bridge over White Lick Creek	\$ 1,500,000	2007
0500826	Landersdale Trail	New bicycle/pedestrian trail from Bridge St. to Paddock Rd.	\$ 1,108,000	2007
9902960	SR 144	Median and added travel lanes from SR 67 to Johnson Road, includes signals and signs	\$ 2,476,921	2007
0100750	SR 144	Intersection improvement at Kitchen Road	\$ 300,000	2008
9608908	SR 42	Pavement replacement from 0.15 mi E of SR 39 to 0.44 mi W of SR 267	\$ 10,113,042	2008
0400407	SR 144	Intersection improvement at Pennington / Neitzel Rd	\$ 1,000,000	2010
0500430	I-69	New freeway from SR 39 via SR 37 to 8.5 mi N of SR 39	\$ 103,755,667	2017
0500297	SR 267	New road construction from SR 67 to SR 267 S of I-70	\$ 3,713,780	2018
0500431	I-69	New freeway via SR 37 from 8.5 mi N of SR 39 to 9.0 mi S of I-465	\$ 103,755,667	2018
0500398	SR 144	added travel lanes from Johnson Rd (CR 400E) to SR 37 (2 to 4 lanes)	\$ 15,215,000	2021
0500293	I-70	I-70 added travel lanes from US 231 to 0.5 mi. W of SR 267 (4 to 6 lanes)	\$ 117,600,000	2022

Sources: Indiana Department of Transportation and Indianapolis Metropolitan Planning Organization



Of the listed projects, the planned relocation of SR 267 would have the greatest impact on travel in the Mooresville area. This project would decrease traffic volumes significantly on the existing SR 267 route through downtown Mooresville, but would increase traffic volumes on SR 67 through Mooresville. The SR 144 widening will also have a significant impact on travel by making it easier to travel from Mooresville to SR 37 and Johnson County. The construction of I-69 could bring new development and increased traffic in the Mooresville area. It could also increase traffic volumes diverting to SR67 and other alternate routes if it is constructed as a toll road, although Indiana Governor Mitch Daniels has recently stated that I-69 will not be tolled.

Although the pavement replacement project on SR 42 involves considerable cost, it will not provide any significant capacity improvement on that facility. Similarly, the I-70 added travel lanes project involves considerable cost, but is not expected to have any significant impact on travel patterns in the Mooresville area.

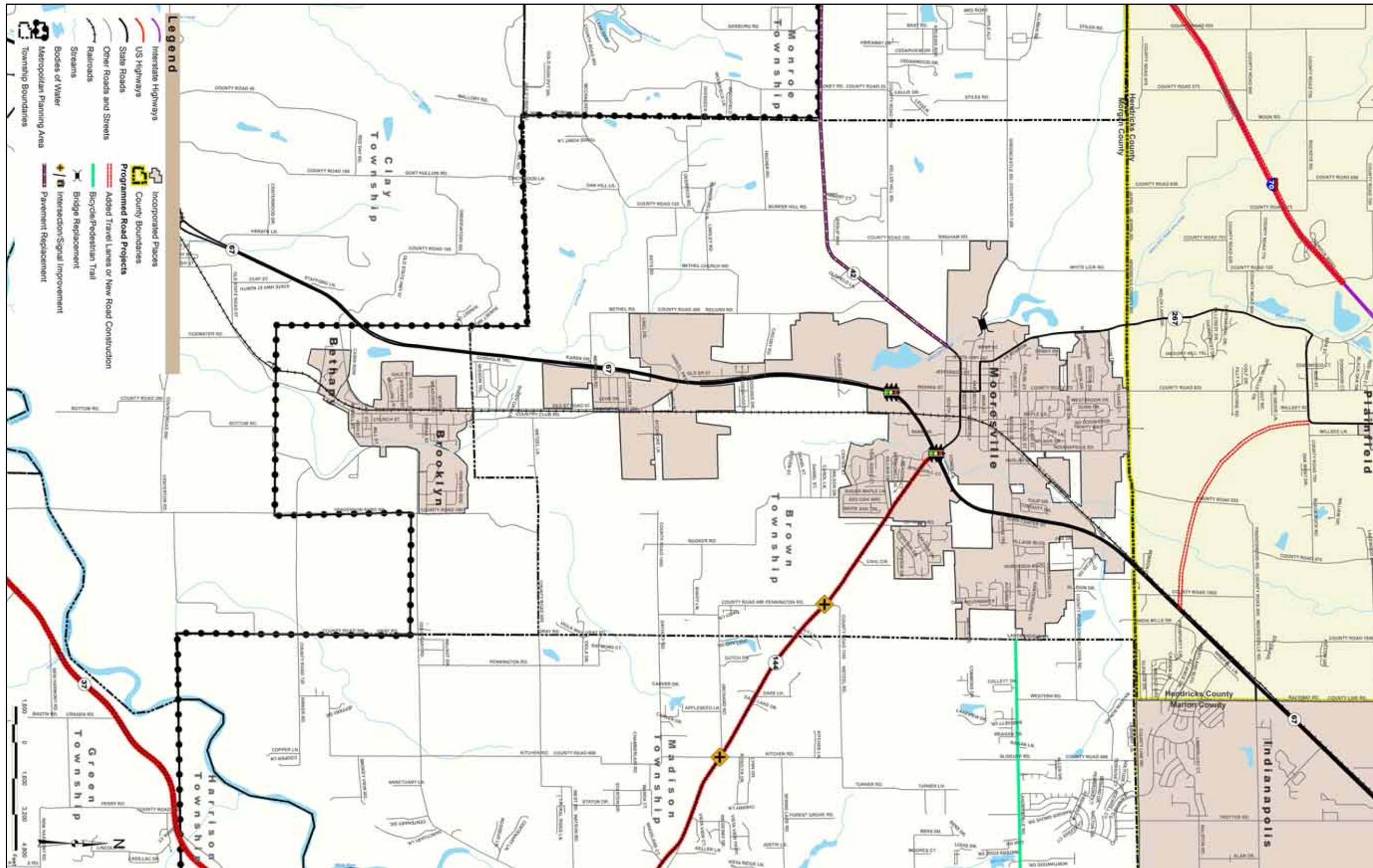


Figure 4-1: Committed Roadway Projects



4.3 Travel Demand Forecasts

Travel demand forecasts developed through regional and statewide planning efforts help to clarify future roadway needs in Morgan County. The 2030 travel demand forecasts developed by the MPO for the current Regional Transportation Plan are the best source of future travel demand information within the Indianapolis Metropolitan Planning Area. Forecasts developed by the Indiana Department of Transportation using its statewide travel demand model provide additional information that can help to confirm the MPO forecasts. Anticipated congested road segments identified by these forecasts include SR 67, SR 144, SR 42 and SR 267 in and around Mooreville. Analysis and comparison of the results from these two travel demand forecasts reinforced the following long-range transportation needs identified for the Mooreville area:

- An improved transportation network to serve residential development east and west of Mooreville
- An improved transportation network to serve industrial development south of Mooreville
- Additional east-west capacity to supplement SR 144
- Additional north-south capacity to supplement SR 67 & SR 267
- Better network connectivity to Johnson, Marion and Hendricks Counties
- Remove undesired through traffic from downtown Mooreville

Identifying actions ahead of time to address these needs is the fundamental purpose of a transportation plan. This is addressed in the following chapter.



5 RECOMMENDED TRANSPORTATION PLAN

5.1 Goals

The Mooresville Transportation Plan Steering Committee has agreed that the development and operation of transportation facilities in the Mooresville Planning Buffer should support the following general goals:

- I. Provide excellent access to housing, employment and commerce in Mooresville
 - A. Identify a hierarchy of roads and streets that provide for the optimum balance of access and through traffic movement in and around Mooresville
 - B. Improve access to Mooresville from other parts of Morgan County and the Indianapolis metropolitan area
 - C. Support the movement of commercial goods to and through appropriate areas
 - D. Promote appropriate access alternatives to single occupant automobile travel

- II. Provide safe and efficient transportation facilities for Mooresville
 - A. Maintain the existing transportation network in good condition
 - B. Identify and correct existing transportation safety and capacity deficiencies
 - C. Provide an interconnected network of bicycle and pedestrian facilities
 - D. Identify and preserve the appropriate rights-of-way for the ultimate transportation facility requirements of developing areas
 - E. Design transportation facilities to accommodate anticipated future needs using appropriate design standards
 - F. Require developers to identify and fund improvements necessary to mitigate impacts of new construction on transportation infrastructure and operation.
 - G. Direct commercial and through traffic to roads with adequate capacity and design
 - H. Manage access to properties along arterial routes for safe and efficient operation
 - I. Coordinate transportation improvements and operation with the Indiana Department of Transportation and surrounding communities

- III. Support the vision and values of the community
 - A. Provide a transportation infrastructure that reinforces the small town character of Mooresville
 - B. Provide access that encourages development in designated growth areas and adjacent to existing developed areas
 - C. Develop transportation facilities that support the logical and efficient use of land
 - D. Minimize the negative impacts of transportation facilities to property and the natural environment



5.2 Future transportation system

5.2.1 Proposed Thoroughfare Plan

Figure 5-1 shows the proposed Thoroughfare Plan for Mooresville. This plan represents the proposed 2030 roadway network, and the roads are color coded according to their proposed future functional classification. Proposed functional classifications have been defined to provide a balanced road network that meets future travel and access needs but minimizes the costs and disruptions of constructing new roads.

The Federal Highway Administration provides a recommended method for classifying a proposed roadway network (FHWA Functional Classification Guidelines, 1989). This method considers classification of any particular roadway within the proposed future network based on attributes that include:

- Rural vs. urban context
- Adjacent land use
- The proportion of through vs. local trips served
- Typical trip lengths served
- Traffic volumes
- Types of destinations served
- Roadway network spacing
- Balance of road miles and vehicle travel among functional classes in the overall network

In regard to rural vs. urban context, the Mooresville Planning Buffer is nearly all located within the Indianapolis Metropolitan Planning Area and is expected to be urbanized by 2030. In regard to the balance in the network, the Federal Highway Administration provides guidelines on the typical balance of mileage and travel volumes within each functional class, which are shown in Table 5-1. A careful review of this table shows that the higher functional class roadways carry greater volumes of traffic despite having less mileage. This highlights the importance of planning for adequate capacity on the arterial network.

Table 5-1: Recommended Balance of Roadway Network in Urban Areas

System	% of Miles Traveled	% of Road Mileage
Principal Arterials	40-65%	5-10%
Principal Plus Minor Arterials	65-80%	15-25%
Collectors	5-10%	5-10%
Local Streets	10-30%	65-80%

Source: FHWA Functional Classification Guidelines, 1989



The proposed Thoroughfare Plan shows an additional functional classification of “Feeder Street” that is not shown in Table 5-1 or described in Section 3.1.3. Feeder streets are considered to be urban collectors, but they generally serve only a very limited development area, typically a single development or a few small developments. Feeder streets are expected to carry low traffic volumes and were separated from other urban collectors during this planning process in recognition of their reduced right-of-way requirements.

Local streets shown on the Thoroughfare Plan may be designated as Residential streets or Cul-de-Sacs by the Town of Mooresville.

It is anticipated that other new collector and local streets not shown on the Thoroughfare Plan will be constructed as part of new developments. New collectors should be constructed at logical spacing between arterial roads in order to provide appropriate access to and through development areas.

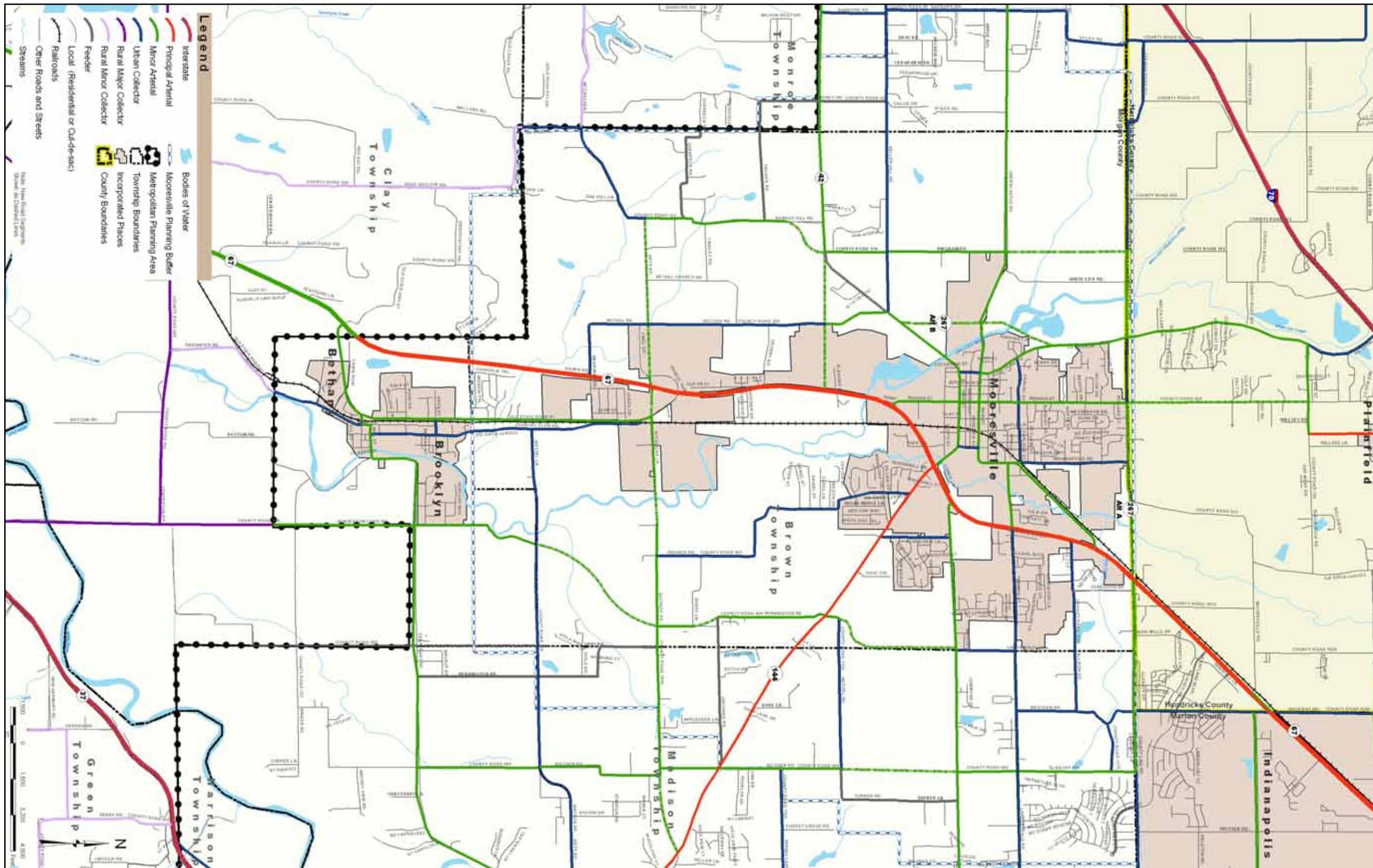


Figure 5-1: Thoroughfare Plan



5.2.2 Roadway Improvement Needs

The goal of this transportation plan is to identify major, long-term network improvement needs and begin the process to address them. The paragraphs below describe major, long-term roadway improvement needs within the Mooresville planning buffer that were identified through this planning process. New and relocated routes are included on the Thoroughfare Plan map in Figure 5-1. Many of the projects identified in this plan are outside of the Mooresville corporate limits, and some are on state highways. The Town of Mooresville will need to work with Morgan County and the Indiana Department of Transportation to implement these projects.

This plan does not attempt to identify or anticipate all transportation improvement projects that will be necessary over the next 25 years. Spot safety and capacity improvements will likely be required at locations throughout the existing transportation network during the 25-year planning period. The Town of Mooresville should maintain a process to identify, study and address these spot problems as they arise. The Town should work with both Morgan County and Hendricks County to address spot problems outside of its corporate limits.

Major roadway improvement recommendations include the following:

SR 42

It is recommended that SR 42 be extended east from its intersection with Bingham Road to intersect with SR 67 at or near the existing TOA, Inc. facility driveway. A new TOA entrance would be constructed on SR 42. Construction should attempt to minimize impacts to existing businesses. It is assumed that the existing portion of SR 42 that is east of Bingham Road would be relinquished by the Indiana Department of Transportation to local control.

SR 67

If SR 267 is relocated so that it terminates at SR 67 north of downtown Mooresville, travel demand forecasts show that SR 67 is expected to require capacity improvements between SR 67 and SR 144 some time after 2020. If SR 267 is relocated on the west side of Mooresville, this capacity improvement may not be necessary. The final resolution of interchanges and tolls on I-69 may also affect future demand on SR 67. Further analysis of the need for SR 67 improvements should be conducted as more information becomes available regarding these projects.

SR 267

It is recommended that SR 267 be relocated so that it does not travel through downtown Mooresville. An alignment that connects SR 267 from its current intersection with Hendricks CR 275 South to SR 67 in the vicinity of Heartland Crossing is shown in the Indianapolis Metropolitan Planning Organization (MPO) Regional Transportation Plan. However, current indications are that this route will not be feasible due to environmental constraints. The Town of Mooresville should work with the Indiana Department of Transportation (INDOT), the MPO, Hendricks County and other affected agencies to initiate a study of SR 267 relocation alternatives.



Two reasonable alternatives exist for relocation of SR 267, and both are shown on the Future Roadway Network Map. One alternative would route SR 267 down (or near) Hendricks CR 825 East and across County Line Road to SR 67. A new segment of County Line Road would need to be constructed between Hendricks County Road 925 East and SR 67. The second alternative would use the existing SR 267 route north of Sherwood Drive in Mooresville. South of Sherwood Drive, a new alignment would be constructed that would cross to the west side of White Lick Creek and continue south to tie into existing SR 42. The relocated SR 267 would end at the intersection of Bethel Road with the relocated SR 42 just west of TOA, Inc. (see separate description)

The best scenario might be to designate the route west of Mooresville as the new SR 267 and to construct the County Line Road link as a local project. This would optimize mobility options for local travel while minimizing the amount of truck traffic through downtown Mooresville.

Under either of these SR 267 relocation alternatives, it is assumed that the roadway segments from which the SR 267 designation is removed would be relinquished by INDOT to local control. This includes portions of Monroe, Main and Indiana Streets. Additional coordination will be required with INDOT, Hendricks County and the Indianapolis MPO following the opportunity for public comment.

If the SR 267 relocation cannot be implemented in the near future, a minor modification to the route of SR 267 within downtown Mooresville should be considered as a short term solution. This modification would remove the SR 267 designation from Main Street and Indiana Street in downtown Mooresville. Instead, the segment of Monroe Street from Main Street to High Street (SR 42) would be designated as SR 267. This would reduce the state route mileage used by through trucks in downtown Mooresville and the number of turns required by those trucks.

Bingham Road/Bunker Hill Road

It is recommended that Bunker Hill Road be realigned south of its intersection with SR 42 in order to align with Bingham Road. It is further recommended that Bingham Road be extended north from its existing terminus at Greencastle Road to intersect with County Line Road. These roadway improvements would provide better north-south connectivity for development west of Mooresville.

Bridge Street

Bridge Street west of SR 67 provides a major link into downtown Mooresville. It is recommended that this segment of Bridge Street be evaluated for potential capacity improvements, particularly at its intersections with SR 67 and Indianapolis Road and at the bridge over the East Fork of White Lick Creek.

County Line Road

County Line Road should be designated as a Minor Arterial from Bingham Road extended (see separate description) to existing SR 267. County Line Road should also be designated as a Minor Arterial from Indiana Street to Slide Off Road. This includes a new segment of County Line Road constructed between Hendricks County Road 925 East and SR 67. The segment of County Line Road from Indiana Street/Hendricks County Road 825 East to SR 67 could be designated as SR 267 as part of the SR 267 relocation (see separate description). Any construction on County



Line Road would require coordination with Hendricks County, as they maintain this road.

Dayhuff Road/Sycamore Lane

It is recommended that Dayhuff Road be extended eastward to SR 144 and that a new bridge be constructed over White Lick Creek to connect Dayhuff Road to Sycamore Lane. This would provide an important link between SR 67 and SR 144 to serve residential and industrial development south and east of Mooreville. Sycamore Lane should be extended west past Old SR 67 to a new intersection with SR 67 and Keys Road or Hancel Parkway (see separate description). The existing traffic signal at the SR 67/Hancel Parkway intersection would be moved to this new intersection.

Henderson Ford Road/Pennington Road

It is recommended that Henderson Ford Road be extended north from its existing terminus at Watson Road to connect to the intersection of Pennington Road and Dayhuff Road. Pennington Road should be extended north from its existing terminus at SR 144 to connect to the intersection of Landersdale Road and Hadley Road. These two roadway extensions would provide a north-south connection between I-69 and the residential areas east of Mooreville. This road would also help to remove some of the local traffic from SR 67.

Indiana Street

It is recommended that the segment of Indiana Street and Hendricks CR 825 E from SR 267 in Hendricks County to Main Street in Mooreville be studied for potential structural, safety, capacity and aesthetic improvements. This road segment functions as an arterial route and carries more traffic than the parallel SR 267. However, it is not designed for these traffic volumes. The evaluation of Indiana Street and CR 825 E should be included in, or coordinated with, the study of SR 267 relocation alternatives. This will require coordination among the Town of Mooreville, The Town of Plainfield, Hendricks County and the Indiana Department of Transportation.

Indianapolis Road

It is recommended that the segment of Indianapolis Road from Bridge Street to Carlisle Street be studied for potential safety, capacity and aesthetic improvements.

Keys Road

Keys Road should be extended east from its existing terminus at Bethel Road to a new intersection with SR 67 and extended Sycamore Lane (see separate description). This new intersection would replace the existing intersection of SR 67, Hancel Parkway and Old SR 67, which would be closed. Keys Road should also be realigned to remove the two 90-degree bends between Bethel Road and Bunker Hill Road and to intersect Bunker Hill Road approximately ¼ mile south of its existing intersection. As an alternative to extending Keys Road eastward from Bethel Road, Hancel Parkway could be realigned to connect to the proposed intersection of SR 67 and extended Sycamore Lane and could be extended west of Bethel Road to connect to Keys Road or Bunker Hill Road.



Kitchen Road

Kitchen Road should be extended north and connected to Slide Off Road at Hadley Road. This would provide a continuous north-south arterial between Centenary Road and County Line Road to serve development east of Mooresville. The jog in Kitchen Road between Dayhuff Road and Watson Road should be eliminated through relocation or minimized through reconstruction.

Watson Road/Wetzel Road

It is recommended that a new bridge be constructed over White Lick Creek to connect Watson Road with Wetzel Road. It is further recommended that Watson Road be reconstructed to replace the two 90-degree turns east of Kitchen Road with a smoother curve section.

5.2.3 Other Road Projects Impacting Mooresville

Hadley Road

The Morgan County Transportation Plan recommends that Hadley Road be extended east into Johnson County from its current terminus at Mann Road. This road would connect to Smith Valley Road and its proposed interchange with I-69. The Johnson County Thoroughfare Plan supports this recommendation. This connection would likely increase traffic volumes on Hadley road within the Mooresville planning area.

I-69

The construction of the proposed I-69 through Morgan County could bring new development and increased traffic in the Mooresville area. It could also increase traffic volumes diverting to SR67 and other alternate routes if it is constructed as a toll road. Governor Mitch Daniels has recently stated that I-69 will not be tolled, and this transportation plan assumes that no tolls will be imposed for travel on I-69 within Morgan County.

Indiana Commerce Connector

On November 9, 2006, Governor Mitch Daniels announced a proposal to construct a 75-mile road in Central Indiana, south and east of Indianapolis. The Indiana Commerce Connector would be constructed using \$1 billion to \$1.5 billion of mostly private funds and would be operated as a private toll road. The approximate route of the highway would run from I-69 near Pendleton south to Shelbyville, west to Martinsville, and then north to I-70 near Monrovia. While the exact route of the highway is not yet known, the preliminary corridor shown in Figure 5-2 follows SR 39 and SR 44 through Morgan County.

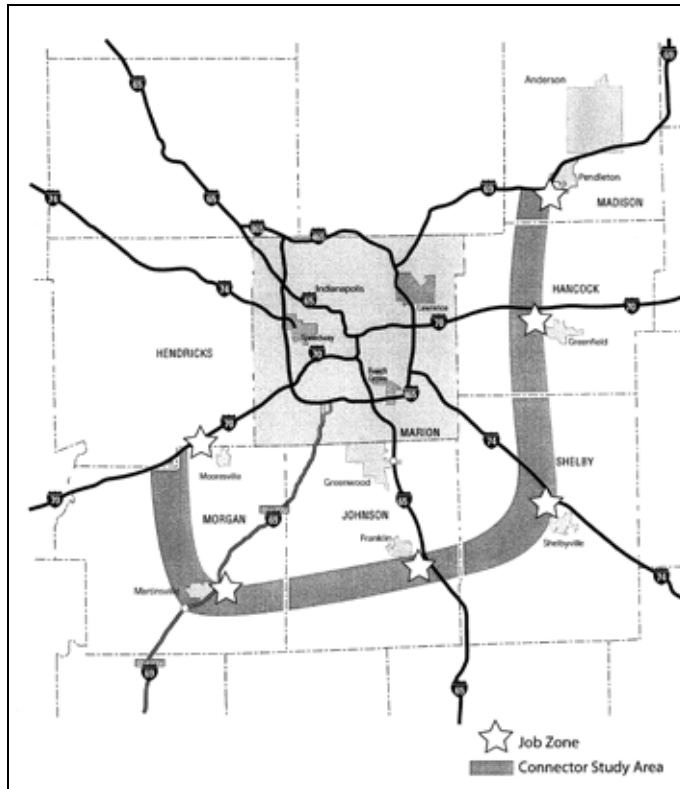
Construction of the Indiana Commerce Connector would significantly impact both land use and transportation demand in Morgan County. One of the primary objectives of the proposed highway would be to link and strengthen economic development centers in six areas along its route, including the Mooresville/Plainfield area and Martinsville. The highway would likely spur increased travel demand to and through these areas.

Based on public meetings in Morgan County and other affected communities during early 2007, the Governor has withdrawn his current proposal for this project. However, future studies of this project or similar roadway facilities are possible. The



Town of Mooresville should monitor any such studies to assure that the needs of its citizens are met. Construction of a facility like the Indiana Commerce Connector could cause significant changes in development patterns and transportation demand in the Mooresville area.

Figure 5-2: Proposed Indiana Commerce Connector



Source: Indiana Governor's Office

5.2.4 Bicycle and Pedestrian Plan

The proposed bicycle and pedestrian network is shown in Figure 5-3. Key definitions used in the description of bicycle and pedestrian improvements have been adapted from the MPO's *Regional Pedestrian Plan*. They are as follows:

- Sidewalk: A hard surfaced travel way dedicated for use by pedestrians.
- Multi-use path: A hard surfaced travel way dedicated for use by bicyclists, pedestrians, skaters, joggers and/or other non-motorized transportation users. A multi-use path is wider than a sidewalk, and two-way travel is usually allowed.
- Bicycle lane: A hard surfaced travel way dedicated for use by bicycles. The hard surface is contiguous with a motorized vehicle travel lane and is appropriately marked with paint and signs. Bicycles travel in the same direction as motorized vehicles.



- Pedestrian Corridor: A street segment with a linear distribution of dense mixed uses supported by adjacent residential land use and usually served by co-linear transit routes. A pedestrian corridor is generally a quarter-mile, or a five-minute walk, in width.
- Pedestrian District. An area characterized by dense mixed uses and clustered pedestrian destinations within a five-minute walk. These areas have, or are intended to have, high pedestrian activity where priority is given to make walking the transportation mode of choice for trips within the area.

As shown on the map, bicycle and pedestrian facilities may be provided either within road rights-of-way or by facilities constructed in separate rights-of-way. When these modes are accommodated within road rights-of-way, it may be done with a separate multi-use path or with pedestrian sidewalk and on-street bicycle provisions. It is recommended that separate off-street bicycle facilities be provided in arterial corridors. Bicycle accommodation within collector corridors, however, could be either on-street or off-street. Depending on the situation, on-street accommodation could mean dedicated bicycle lanes or wide vehicle travel lanes. Local streets do not typically require special bicycle accommodations, as bicycles can share vehicle travel lanes. The design guidelines in the *Regional Pedestrian Plan* should be considered during the design of pedestrian and bicycle facilities.

Pedestrian corridors and districts shown in the plan do not have distinct boundaries, but indicate general areas where pedestrian movement and connectivity should be emphasized. Any land use development or transportation improvements in these areas should place a high priority on pedestrian accessibility. Links from these areas should also be provided so that pedestrians can access the external pedestrian network. In Mooresville, the pedestrian district includes the historic downtown area, adjacent commercial and residential areas and the school campus. A pedestrian district is also shown for Brooklyn to reflect the *Regional Pedestrian Plan*, although this is outside of the planning buffer for Mooresville.

A pedestrian corridor is designated along SR 67 from the Morgan County line to Indiana Street and along Indiana Street from High Street to SR 67. Pedestrian and bicycle movements should be accommodated along these roads, along with improved bicycle and pedestrian access to the commercial uses in these corridors.

5.2.5 Transit Plan

Figure 5-3 shows the proposed transit elements of the Mooresville Transportation Plan. An express bus route is shown from downtown Mooresville traveling north along Indiana Street and SR 267 to Plainfield, the Indianapolis International Airport and downtown Indianapolis. Based on the June 2005 recommendations of the Comprehensive Operational Analysis of the IndyGo Transit System conducted for the MPO, this express bus service should be implemented within the next 10 years. The County would like to extend this express bus service to Martinsville. A proposed route using SR 144, Henderson Ford Road and I-69 (SR 37) is shown.

It is recommended that the Indiana Southern Railroad line be preserved as far south as Martinsville for potential future use by commuter rail service to Indianapolis.

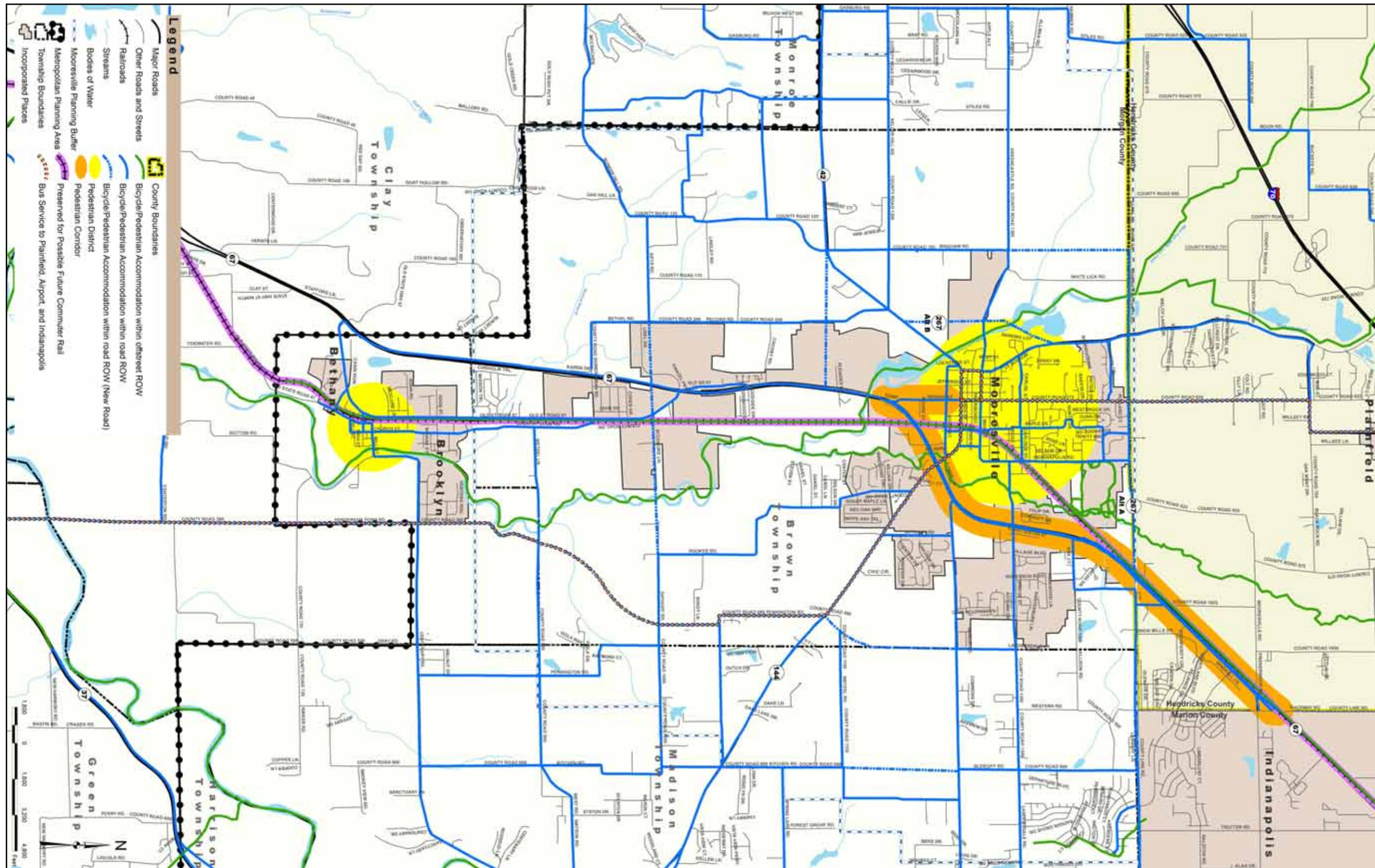


Figure 5-3: Bicycle, Pedestrian and Transit Plan



5.3 Roadway Right-of-Way Requirements

Right-of-way (ROW) is publicly owned land reserved for a transportation facility or other public uses. Roadway rights-of-way must be wide enough to accommodate travel lanes, auxiliary turning lanes, medians, parking lanes, sidewalks, bicycle and pedestrian facilities, roadway drainage, utilities, safety buffer and landscaping. Table 5-2 identifies the minimum right-of-way width required to construct typical sections of a roadway based on the functional classification of the roadway. It is recommended that the Mooresville subdivision control ordinances be updated where they are inconsistent with the right-of-way requirements proposed in Table 5-2.

It is important to identify right-of-way requirements in advance so that adequate rights-of-way will be set aside for transportation needs as an area is developed. Additional right-of-way could be required at driveways and intersections to accommodate anticipated traffic flows. Conversely, when a road is to be constructed or improved in an area that is already developed or is environmentally sensitive, the Town of Mooresville or Morgan County may allow narrower right-of-way at their discretion. A roadway facility should typically be centered within the right-of-way, but this may also be altered at the discretion of the Town or the County in order to accommodate special circumstances. Feeder streets are considered to function as urban collectors but serve a very limited development area. They have been identified separately from other urban collectors in Table 5-2 in recognition of their reduced width requirements.

Table 5-2: Right-of-Way Requirements by Functional Class

Functional Classification	Subdivision Control Ordinance Reference	ROW Width (feet)	Travel Lanes	Bicycle Accommodation
Arterial	Arterial	130	2-4	Off Street
Collector	N/A	100	2	On or Off Street
Feeder Street	Feeder Street Industrial Street	70	2	On or Off Street
Local Street	Residential Street Cul-de-sac	50	2	On Street

5.4 Estimated Project Costs

Table 5-3 provides a summary of the preliminary construction cost estimates for the needed transportation improvements identified in this plan. The table includes all projects on locally maintained roads within the Mooresville planning buffer but does not include projects on roads maintained by the Indiana Department of Transportation. The Town of Mooresville would not necessarily be responsible for implementing or funding all of these projects. The costs are in current year dollars and assume that all required right-of-way will need to be purchased for the projects. These estimates are subject to change based on the development of more project specific information.



Table 5-3: Estimated Costs of Projects on Locally Maintained Roads

Road	Limits	Improvement	Length (Miles)	Preliminary Cost Estimate (2006) ¹
Bingham Rd.	GreenCastle Rd. to Country Line Rd.	New 2-ln on 4-ln ROW	1.00	\$3,400,000
Bunker Hill Rd.	Tincher Rd. to SR 42	2-ln Realignment	0.47	\$1,470,000
County Line Rd.	Hendricks CR 925 East to SR 67	New 2-ln on 4-ln ROW	0.97	\$4,960,000
Dayhuff Rd.	Kitchen Rd. to SR 144	New 2-ln on 4-ln ROW	0.68	\$2,530,000
Dayhuff Rd.	At White Lick Creek	Bridge (40' Width)	0.19	\$4,520,000
Henderson Ford Rd.	Watson Rd. to Dayhuff Rd.	New 2-ln on 4-ln ROW	1.27	\$4,140,000
Keys Rd.	West of Bunker Hill Rd. to Bethel Rd.	New 2-ln on 4-ln ROW	0.27	\$820,000
Keys Rd.	Bethel Rd. to SR 67	New 2-ln on 4-ln ROW	0.52	\$1,550,000
Kitchen Rd.	Neitzel Rd. to Hadley Rd.	New 2-ln on 4-ln ROW	0.97	\$3,010,000
Kitchen Rd.	Dayhuff Rd. to Watson Rd.	2-ln Realignment	0.19	\$1,020,000
Pennington Rd.	SR 144 to Hadley Rd.	New 2-ln on 4-ln ROW	1.11	\$3,540,000
Pennington Rd.	Shady Ln. to Orchard Rd.	2-ln Realignment	0.23	\$930,000
Sycamore Ln.	Old SR 67 to SR 67	New 2-ln on 4-ln ROW	0.36	\$1,250,000
Watson Rd.	At White Lick Creek	Bridge (40' Width)	0.11	\$3,630,000
Watson Rd.	Kitchen Rd. to Mann Rd.	2-ln Realignment	0.40	\$1,230,000
TOTAL NEEDS				\$34,600,000

¹ Costs reflect current year planning-level estimates of design, construction and right-of-way acquisition costs based on assumed typical sections and project length. Project studies, special environmental considerations, utility relocation and significant grading requirements have not been specifically considered. No design has been performed for any project.



5.5 Project Priorities

The relocation of SR 267 and SR 42 away from downtown are the top transportation priorities for the Town of Mooresville. The downtown Mooresville streets do not readily accommodate the traffic volumes and heavy trucks using these routes. In particular, intersections along Indiana Street and Main Street have inadequate geometrics for the traffic they serve and cannot be easily widened without compromising the character of these streets. Relocating SR 267 and SR 42 would improve safety and mobility both for through travelers using these state routes and for other local vehicles and pedestrians in downtown Mooresville. Reducing unnecessary through traffic and truck volumes would also help to improve the historic character of downtown Mooresville.

Other transportation projects that are of particular importance to Mooresville are described in Section 5.2.2 and listed below. These projects are located on roads that will serve as important connecting links in the fully-developed Mooresville area transportation network.

- County Line Road construction from Hendricks CR 925 E to SR 267
- Indiana Street improvements identified through further analysis
- Indianapolis Road improvements identified through further analysis
- Pennington Road extension from SR 144 to Hadley Road
- Dayhuff Road/Sycamore Lane between SR 67 and SR 144
- Hadley Road extension from Mann Road to Smith Valley Road
- Kitchen Road extension from Neitzel Road to Hadley Road
- Henderson Ford/Pennington Road extension from I-69 to SR 144
- Keys Road extension and realignment between Bunker Hill Road and SR 67
- Bunker Hill Road realignment between Tincher Road and SR 42
- Bingham Road extension from Greencastle Road to County Line Road
- Kitchen Road realignment between Dayhuff Road and Watson Road
- Watson Road bridge at White Lick Creek
- Watson Road realignment between Kitchen Road and Mann Road

It is emphasized that project priorities, as well as the recommended projects themselves, should be adjusted as development progresses in the Mooresville area and more information becomes available about the I-69 design and other regional transportation projects. Certain transportation projects could be constructed prior to other projects if development patterns create traffic demand and/or provide dedicated rights-of-way that make those projects more desirable. Private decisions to construct new developments will spur the need for additional transportation capacity and may also provide opportunities to obtain dedicated rights-of-way for those improvements.



5.6 Access Management

Access management involves the implementation and control of roadway design elements in order to allow safe and efficient access to property while preserving the traffic movement function of the transportation system. Access management typically involves ordinances that control the location, spacing and design of intersections and driveways on arterial and collector roads. Proper access management can preserve the throughput of a corridor, reduce congestion, and crashes, provide for aesthetic pedestrian and landscaped areas, create attractive areas for business and residential development and increase property values.

Access management is an important issue for development within the Mooresville Planning Buffer, where new developments are being constructed at an increasingly rapid rate. Obtaining adequate right of way to construct necessary roadway improvements will help to address some of the congestion problems often caused by land development. However, it will also be important for the Town and the County to actively control access to arterial and collector roads in order to maintain their traffic carrying capacity. It is recommended that the Town of Mooresville take the following steps to manage access on its roadways:

- Establish intersection and driveway spacing requirements for arterial and collector roads.
- Assure that minimum lot size and frontage requirements along arterials support driveway spacing and intersection corner clearance requirements.
- Review property access requirements to assure that they discourage direct property access to arterial roads and encourage shared access to adjacent developments.
- Require that existing properties be brought into compliance with access management requirements upon:
 - Subdivision of the property
 - Change in zoning
 - Significant increase in trips generated by the property
 - Request for new a driveway permit
- Require traffic impact studies for developments that are expected to generate 100 or more new peak direction trips to or from the site. Impact studies should be required to follow the recommended practices of *Transportation Impact Analyses for Site Development* by the Institute of Transportation Engineers.



5.7 Plan Implementation and Revision

Once this Transportation Plan has been recommended for adoption by the Plan Commission and formally adopted by the Town Council, the Town of Mooresville should take the following actions to carry out its recommendations:

- Revise the Town's ordinances as necessary to implement the right-of-way and access management standards recommended in the plan
- Request incorporation of the plan's recommendations in the Indianapolis Regional Transportation Plan maintained by the Indianapolis Metropolitan Planning Organization
- Request that the Indiana Department of Transportation review the existing functional classification changes discussed in the plan
- Work with the Indiana Department of Transportation (INDOT), the MPO, Hendricks County and other affected agencies to initiate a study of SR 267 relocation alternatives
- Continue to coordinate with Morgan County, Hendricks County, the Indianapolis Metropolitan Planning Organization, the Indiana Department of Transportation, the Indianapolis Airport Authority and other affected local jurisdictions on the planning and development of projects identified in this plan
- Work with property owners along SR 67 and South Indiana Street to identify opportunities for better pedestrian accessibility to and within these corridors
- Continue an ongoing process to identify, evaluate and implement spot network improvements

The Plan Commission and Town planning staff should periodically review this plan and revise it as necessary to reflect changes in local and regional transportation conditions, priorities concerns or opportunities.



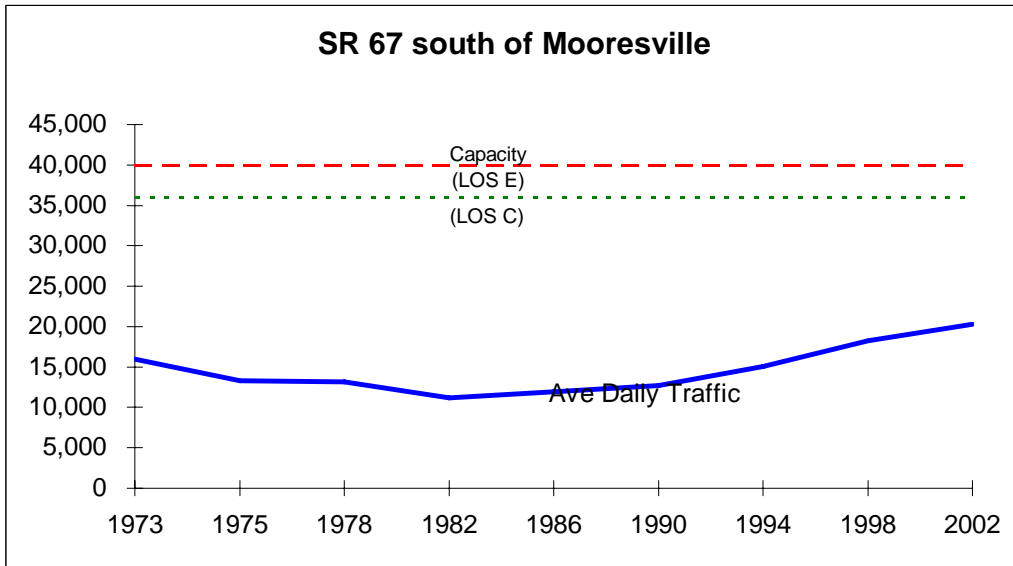
APPENDIX A. STATE HIGHWAY TRAVEL TRENDS



Route: SR 67 south of Mooresville

(4 Lane Arty)

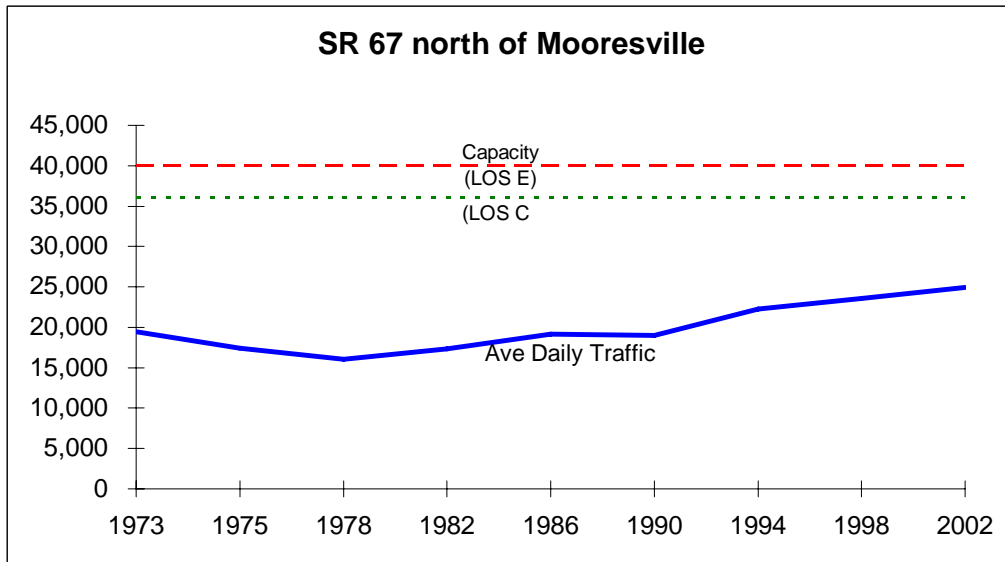
Year:	1973	1975	1978	1982	1986	1990	1994	1998	2002
ADT:	16,000	13,300	13,125	11,160	11,950	12,680	15,040	18,240	20,270



Route: SR 67 north of Mooresville

(4 Lane Expwy)

Year:	1973	1975	1978	1982	1986	1990	1994	1998	2002
ADT:	19,450	17,400	16,075	17,360	19,140	18,990	22,300	23,600	24,950

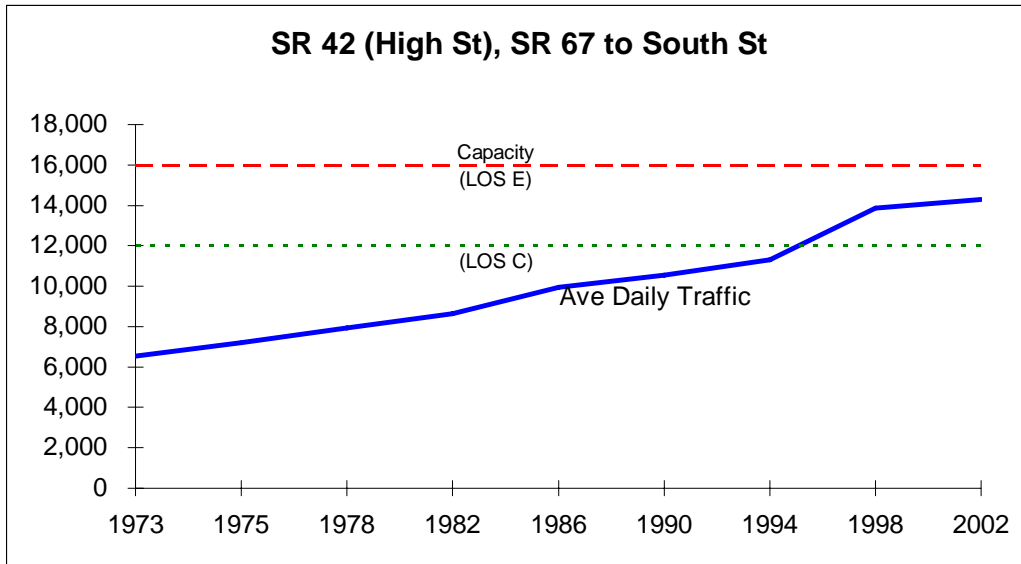




Route: SR 42 (High St), SR 67 to South St

(2 Lane Arty)

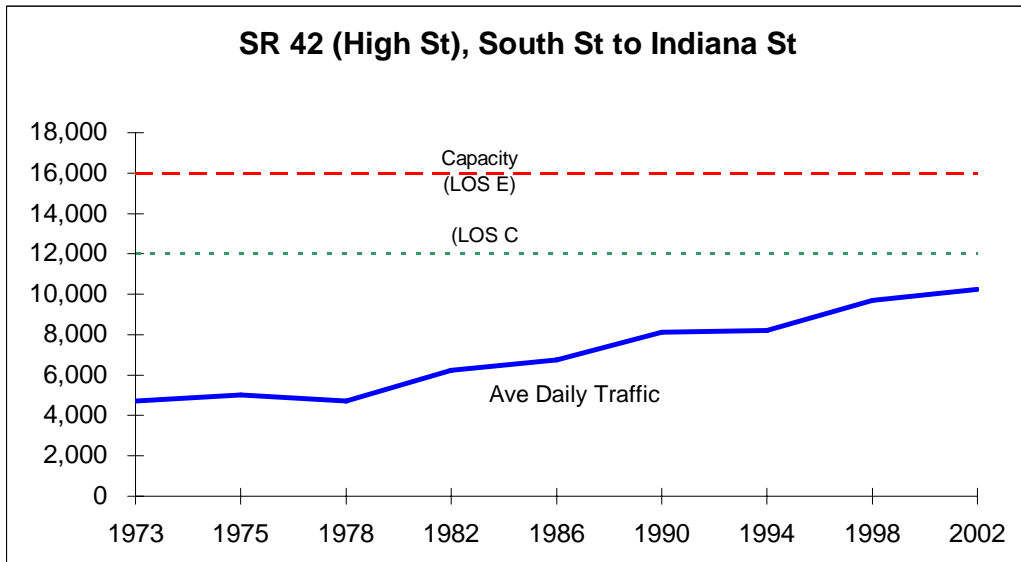
Year:	1973	1975	1978	1982	1986	1990	1994	1998	2002
ADT:	6,525	7,200	7,950	8,620	9,950	10,550	11,300	13,870	14,280



Route: SR 42 (High St), South St to Indiana St

(2 Lane Arty)

Year:	1973	1975	1978	1982	1986	1990	1994	1998	2002
ADT:	4,700	5,025	4,700	6,230	6,740	8,120	8,200	9,700	10,260

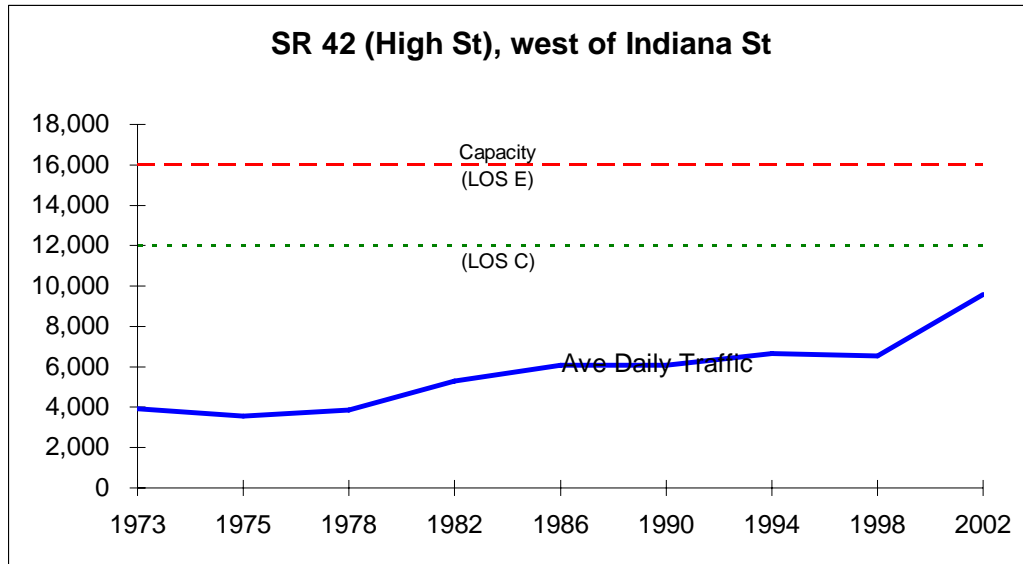




Route: SR 42 (High St), west of Indiana St

(2 Lane Arty)

Year:	1973	1975	1978	1982	1986	1990	1994	1998	2002
ADT:	3,925	3,550	3,875	5,300	6,080	6,080	6,660	6,550	9,570

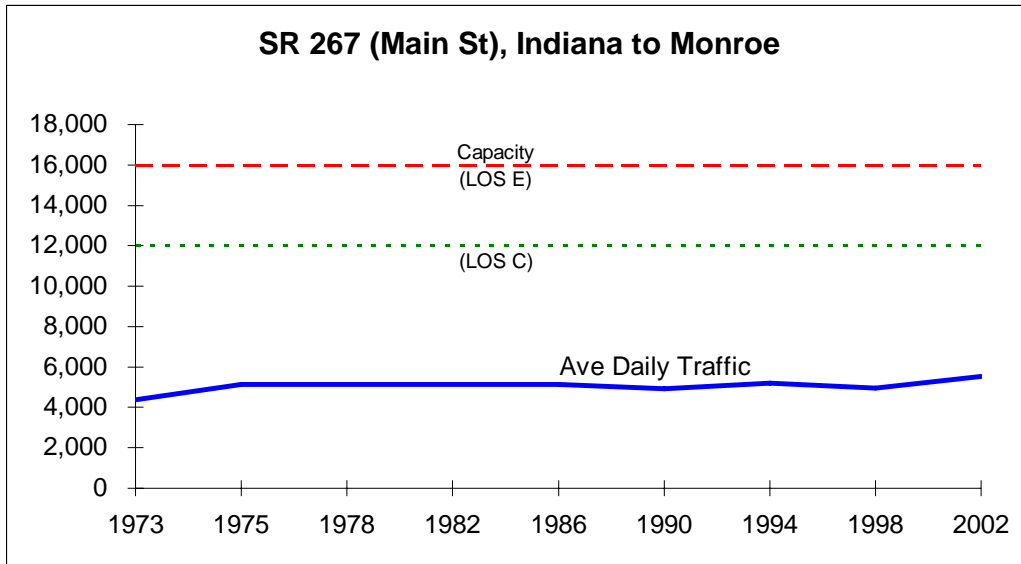




Route: SR 267 (Main St), Indiana to Monroe

(2 Lane Arty)

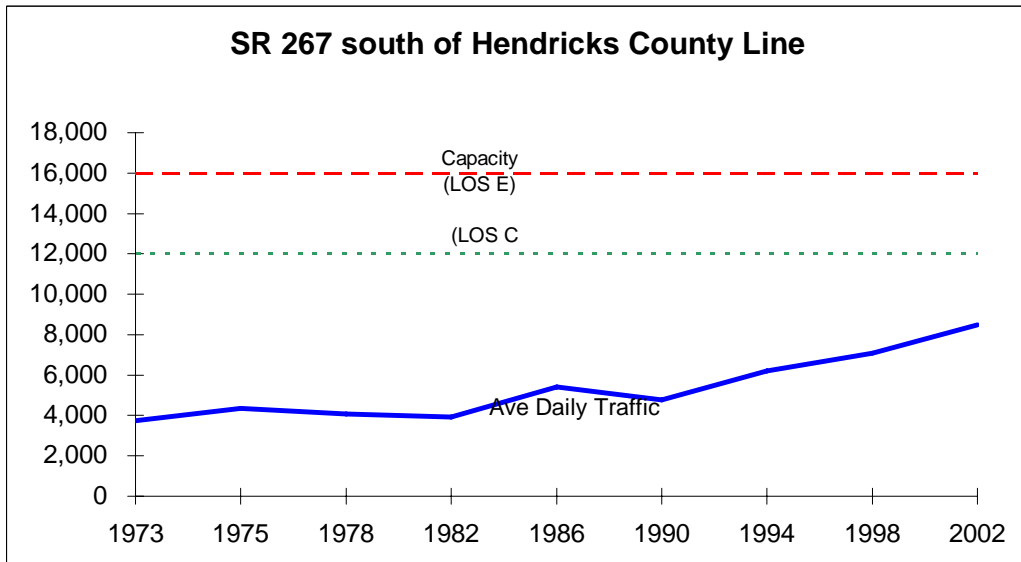
Year:	1973	1975	1978	1982	1986	1990	1994	1998	2002
ADT:	4,375	5,125	5,135	5,150	5,150	4,940	5,190	4,950	5,530



Route: SR 267 south of Hendricks County Line

(2 Lane Arty)

Year:	1973	1975	1978	1982	1986	1990	1994	1998	2002
ADT:	3,725	4,350	4,075	3,930	5,400	4,760	6,190	7,080	8,470

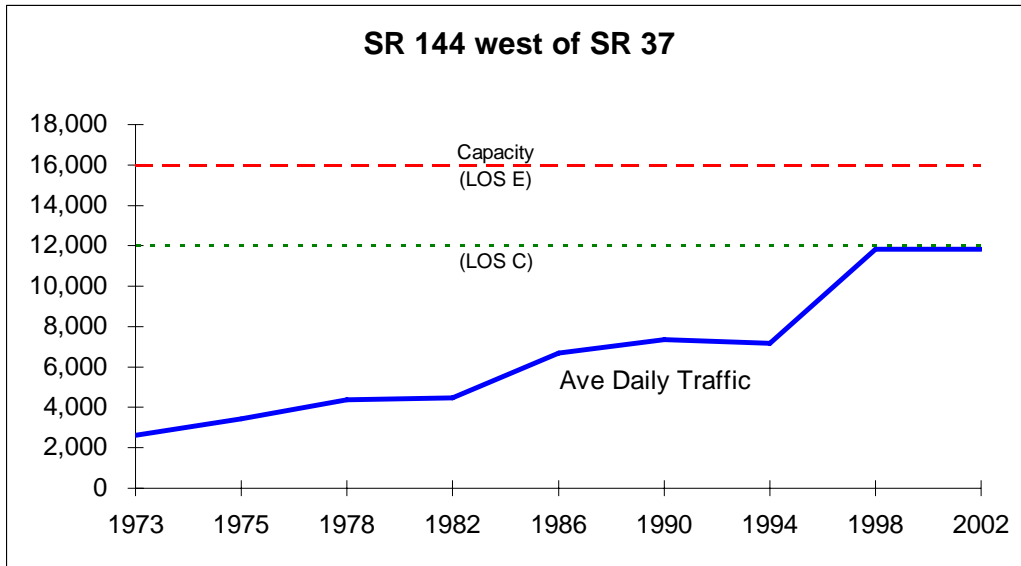




Route: SR 144 west of SR 37

(2 Lane Arty)

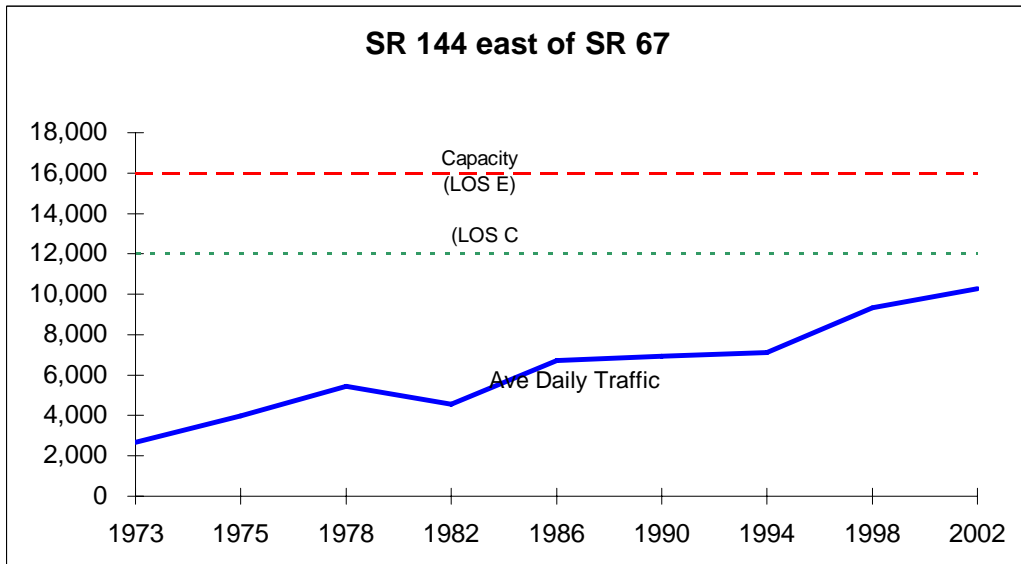
Year:	1973	1975	1978	1982	1986	1990	1994	1998	2002
ADT:	2,600	3,450	4,375	4,480	6,700	7,360	7,190	11,830	11,820



Route: SR 144 east of SR 67

(2 Lane Arty)

Year:	1973	1975	1978	1982	1986	1990	1994	1998	2002
ADT:	2,675	3,975	5,450	4,570	6,730	6,920	7,100	9,340	10,280





APPENDIX B. TRANSPORTATION FUNDING OPTIONS





Major transportation improvements require significant capital investment beyond the revenue streams generally used for local government operation. Identifying sufficient funds for transportation capital improvements requires careful planning and consideration of many alternatives. Several funding alternatives that are commonly used in Indiana include:

- State and Federal-aid Transportation Funds
- Local Option Highway User Tax
- Other Local Option Taxes
- Tax Incremental Financing (TIF)
- Impact Fees
- Negotiated Development Fees (Exactions)

The general characteristics of these funding options are described below. However, more detailed analysis of each funding type is advisable in order to fully evaluate its desirability for any particular project. Each of these funding options has associated advantages and disadvantages, and the choice of one or more funding sources for a particular project may depend on several factors. More information about transportation funding alternatives can be obtained from the Indiana Local Technical Assistance Program, the Indiana Department of Local Government Finance, and the Indiana Department of Transportation.

Federal-Aid Transportation Funds

Federal-aid transportation funds are a primary source of revenue for large transportation capital improvement projects. The State of Indiana receives an allocation of transportation funds each year from the Federal Government that are used to construct various projects identified by either the state or local governments. Most of the funds available to local government are distributed through one of the following programs:

- Surface Transportation Program (STP)
- Congestion Mitigation and Air Quality Improvement Program (CMAQ)
- Transportation Enhancement Program (TE)
- Highway Bridge Program (BR)

75% of Indiana's Federal-aid funds are retained by the Indiana Department of Transportation (INDOT) for use on designated state and federal routes. INDOT has the primary responsibility for selecting and prioritizing projects on these routes. Projects are developed in cooperation with the affected local communities, and INDOT will work to help assure that community needs are met by planned roadway improvements. Local governments may be asked to contribute funding to cover the additional costs of design features that they request on state projects.

The remaining 25% of Indiana's Federal-aid funds are distributed to local governments for projects that those jurisdictions have identified on approved federal-aid routes. Within urban areas having a population of 50,000 or greater, these funds are allocated by a designated Metropolitan Planning Organization. Outside of these urban area boundaries, Federal-aid funds for local projects are allocated by the Indiana Department of Transportation. The Mooresville planning buffer falls almost entirely within the Indianapolis Metropolitan Planning Area





(MPA), and any Federal-aid funding for local transportation projects within this buffer would be allocated by the Indianapolis Metropolitan Planning Organization (MPO).

Funding for these "Local Public Agency (LPA)" projects typically covers 80% of the qualifying project costs, with the local agency responsible for the remainder. Most funds may not be used on routes with a functional classification of "Local," as determined by INDOT. Bridge funds and Transportation Enhancement funds are two exceptions

Competition for Federal-aid funding is generally keen. Local government agencies that fall within the Indianapolis MPA must submit applications for funding through the MPO and compete for limited funding available for projects in that urban area. In order to receive funding through INDOT, a project must compete with all other projects submitted by local agencies statewide. INDOT and the MPO typically issue a "call for projects" each year to local government agencies, but an agency may have to re-submit a project several times before it is funded. Applications must demonstrate a real need and local support for the project.

Once a project is successfully programmed for federal funding, design and construction are subject to Federal and INDOT requirements. These requirements cover all aspects of the project development process, including design standards and submittal procedures, public involvement, environmental documentation, and construction standards. Meeting these requirements can be costly and normally requires a development schedule that is significantly longer than that for comparable locally funded projects.

State Transportation Funds

The State of Indiana distributes money to county and local governments for use in funding transportation maintenance, operations and improvements. The primary funding mechanisms are the Motor Vehicle Highway Account and the Local Road and Street Account. These accounts are funded through motor vehicle fees, licenses and fuel taxes statewide. The funds are distributed according to formulas based on road mileage and population. Bonds may be issued against future revenue from these funds to pay for capital construction of transportation improvements.

Local Option Highway User Tax

The Local Option Highway User Tax (LOHUT) is an optional tax that can be adopted by Indiana counties to provide funding for roadway capital improvements and maintenance. The intent is to capture some of the costs for maintaining the transportation network from the users. The LOHUT consists of two separate components—a county motor vehicle excise surtax and a county wheel tax—that must be adopted concurrently. Taxes are collected by the Indiana Bureau of Motor Vehicles at the time of vehicle registration and are then remitted to the county of registration. The revenue is shared among the county and its cities and towns according to Indiana's Local Road and Street (LRS) Formula. At least 43 Indiana counties in Indiana have adopted the LOHUT, including Morgan County, which has had the LOHUT in effect since 2005.





Other Local Option Taxes

Local Taxes are those that are currently available to be collected by Morgan County. They include taxes on real and personal property, County Option Income Tax (COIT), and Economic Development Income Tax (EDIT). The County may issue bonds for road and bridge construction against future revenue from COIT and EDIT funds. Local property taxes in Morgan County are also currently levied for an established Cumulative Bridge Fund. Revenues from this fund can be pledged for road and bridge construction bonds. Given that the existing transportation funding levels within Morgan County make full use of all currently available revenues, "new" tax revenues would only be available by considering raising the rates on existing taxes or by implementing new taxes. These sources for assisting in the funding of the future transportation needs of Morgan County and the Town of Mooresville should be considered along with all other alternative funding sources.

Tax Increment Financing

Tax Increment Financing (TIF) is a mechanism to temporarily reallocate new tax revenue generated by development in a specially designated area in order to pay for public infrastructure in that area. The revenues are used either to directly finance public improvements in the designated economic development area or to pay off bonds issued by the local government for this purpose. TIF revenues are generated from real property taxes and some business-related depreciable personal property taxes.

When Tax Increment Financing is used, the additional tax revenue generated by new development within the specific development district remains within the TIF district to pay for improvements or debt service on outstanding bonds. Other tax supported programs that normally benefit directly from property tax revenues, such as local government, schools, libraries, etc., will continue to receive their share of pre-TIF tax revenues for the district, but will not receive the additional tax revenues until the bonded indebtedness is retired. This is often perceived as a negative impact by the schools and libraries. Since TIF is usually implemented in order to initiate development that would not otherwise occur, the additional tax revenue generated by the development is not, in reality, "lost" to these other entities, but is merely delayed. In many cases, it can be argued that without the infrastructure improvements funded through the TIF, there would be no increase in tax revenues for that district.

Impact Fees

Impact fees are allowed in Indiana under IC 36-7-4. Several communities have successfully implemented impact fees to fund transportation improvements or other publicly financed services and programs, such as parks systems and drainage control. A transportation impact fee, for example, would require all new development, including residential, commercial, and industrial, to pay a fee to the local government based on the impact of that development on the transportation system. These fees can be assessed in a variety of ways, including the square footage of structures, acreage of land, amount of property frontage along roadways, or per dwelling unit.





Impact fees are often viewed as positive by existing residents and businesses, since they require new developments to pay their share of the government costs to provide adequate infrastructure. However, many developers perceive impact fees as a disincentive to their developments. This can be a factor if the atmosphere for new development in an area is marginal, as the impact fees would be considered an added cost to any potential developer. In some cases, however, developers prefer impact fees to negotiated exactions, as they provide a better up-front understanding of development costs.

The Indiana statutes require substantial effort in order to permit a local government to implement impact fees. This includes detailed engineering and financial analyses to document the costs of needed improvements, the fair distribution of costs to various users (i.e. residential, commercial/retail, and industrial), and estimated revenue streams.

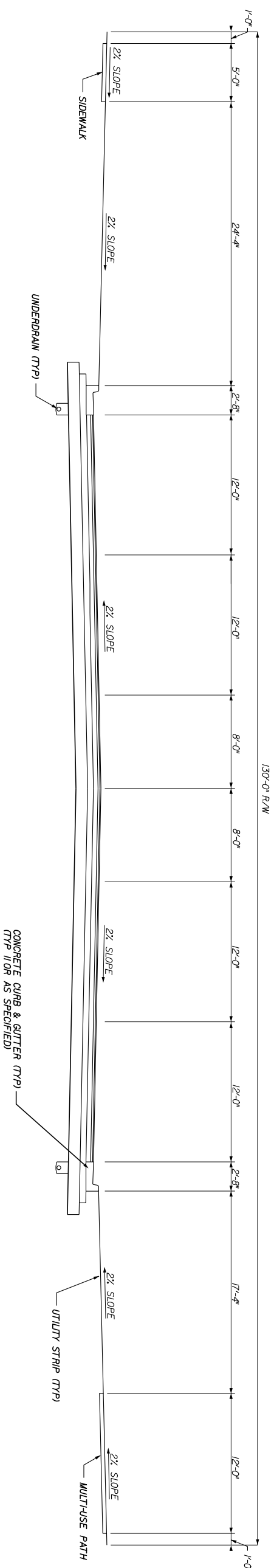
Negotiated Development Exactions

Local governments that do not have established impact fees generally negotiate individually with developers to fund or construct new and improved infrastructure within developments. These negotiated exactions have been used primarily for improvements within the developments themselves. However, the exactions can also be used for necessary improvements to the adjacent local roadway network. The impact of new developments on the local infrastructure outside the developments themselves can be substantial in some cases and should be considered for any new development.

The participation of the development community in infrastructure improvements outside the developments can be required, but can lead to inconsistent results. While the concept of new development paying its own way is readily acceptable as both fair and desirable by those outside the development, the exaction of improvements without an overall coordinated system of improvements may appear to be irrational. Exactions for road network improvements should be based on the results of a traffic impact study. Even with a study to identify necessary improvements, however, the question of the developer's fair share of improvement costs remains. It can be argued legitimately that other taxpayers benefit from the improvements and should pay a share of the costs.



APPENDIX C. TYPICAL ROADWAY SECTIONS

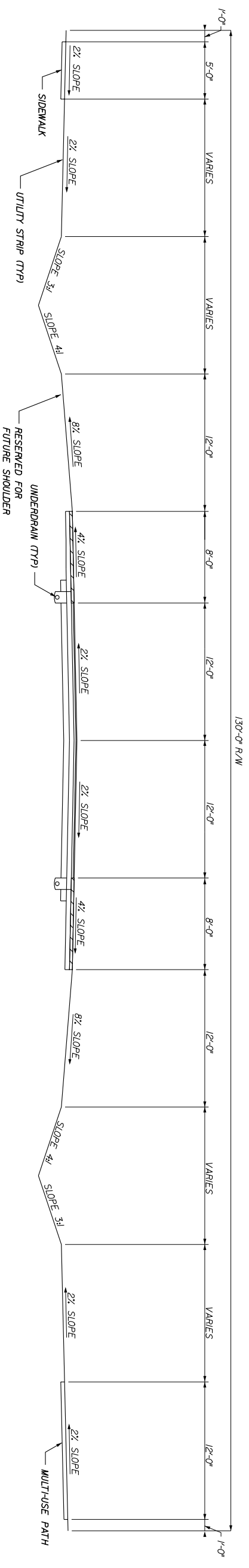


TYPICAL ARTERIAL ROADWAY
 CROSS SECTION WITH CURB & GUTTER

NOTE: THESE TYPICAL SECTIONS ARE INTENDED FOR THE RESERVATION OF RIGHT OF WAY IN NEW DEVELOPMENT AREAS AS PROJECTS ARE BEING REVIEWED BY THE PLAN COMMISSION. THEY ARE NOT INTENDED TO BE DESIGN REQUIREMENTS. THE DIMENSIONS SHOWN ARE SUBJECT TO CHANGE BASED ON TRAFFIC IMPACT STUDY RESULTS AND INDIVIDUAL PROJECT NEEDS. THESE SECTIONS ARE NOT INTENDED FOR GENERAL RIGHT OF WAY ACQUISITION FROM EXISTING PROPERTY OWNERS, WHERE NECESSARY, RIGHT OF WAY WILL BE ACQUIRED FROM EXISTING PROPERTY OWNERS THROUGH A SEPARATE PROJECT DESIGN AND IMPLEMENTATION PROCESS.



TYPICAL ROADWAY SECTIONS	
HORIZONTAL SCALE 1" = 10'	BRODGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEET NO.
CONTRACT	PROJECT



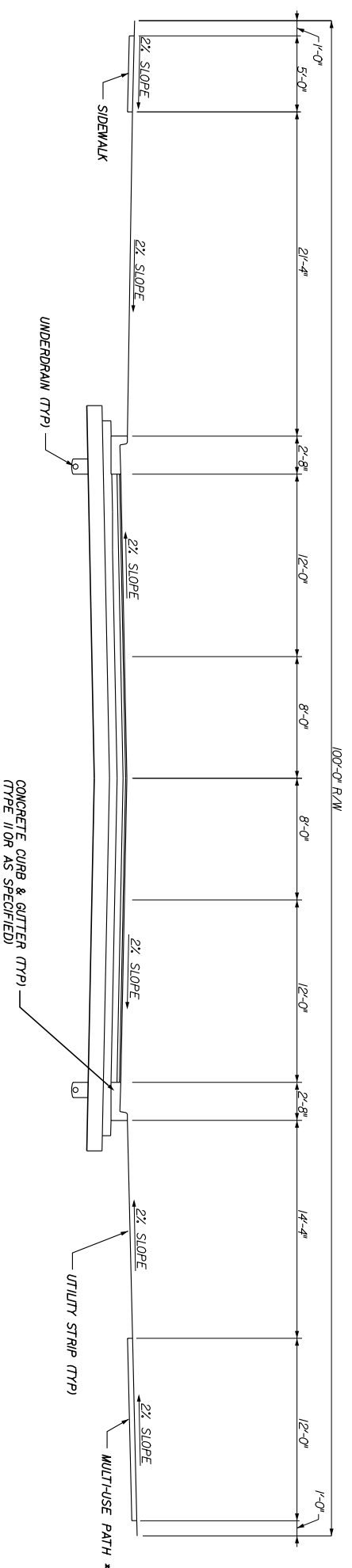
TYPICAL INTERIM ARTERIAL ROADWAY
 CROSS SECTION WITH SHOULDER

NOTE: THESE TYPICAL SECTIONS ARE INTENDED FOR THE RESERVATION OF RIGHT OF WAY IN NEW DEVELOPMENT AREAS AS PROJECTS ARE BEING REVIEWED BY THE PLAN COMMISSION. THEY ARE NOT INTENDED TO BE DESIGN REQUIREMENTS. THE DIMENSIONS SHOWN ARE SUBJECT TO CHANGE BASED ON TRAFFIC IMPACT STUDY RESULTS AND INDIVIDUAL PROJECT NEEDS. THESE SECTIONS ARE NOT INTENDED FOR GENERAL RIGHT OF WAY ACQUISITION FROM EXISTING PROPERTY OWNERS, WHERE NECESSARY, RIGHT OF WAY WILL BE ACQUIRED FROM EXISTING PROPERTY OWNERS THROUGH A SEPARATE PROJECT DESIGN AND IMPLEMENTATION PROCESS.



TYPICAL ROADWAY SECTIONS

HORIZONTAL SCALE 1" = 10'	BRODGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEET NO.
CONTRACT	PROJECT



TYPICAL URBAN COLLECTOR ROADWAY
 CROSS SECTION WITH CURB & GUTTER

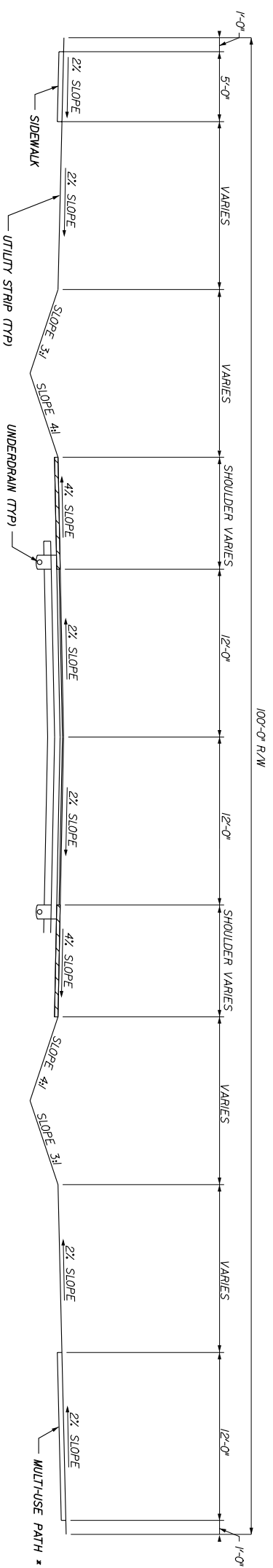
* BICYCLES MAY BE ACCOMMODATED WITH A WIDER ROADWAY AND APPROPRIATE MODIFICATIONS IN LIEU OF A MULTI-USE PATH

NOTE: THESE TYPICAL SECTIONS ARE INTENDED FOR THE RESERVATION OF RIGHT OF WAY IN NEW DEVELOPMENT AREAS AS PROJECTS ARE BEING REVIEWED BY THE PLAN COMMISSION. THEY ARE NOT INTENDED TO BE DESIGN REQUIREMENTS. THE DIMENSIONS SHOWN ARE SUBJECT TO CHANGE BASED ON TRAFFIC IMPACT STUDY RESULTS AND INDIVIDUAL PROJECT NEEDS. THESE SECTIONS ARE NOT INTENDED FOR GENERAL RIGHT OF WAY ACQUISITION FROM EXISTING PROPERTY OWNERS, WHERE NECESSARY, RIGHT OF WAY WILL BE ACQUIRED FROM EXISTING PROPERTY OWNERS THROUGH A SEPARATE PROJECT DESIGN AND IMPLEMENTATION PROCESS.



TYPICAL ROADWAY SECTIONS

HORIZONTAL SCALE H = 10'	BRIDGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEET NO.
CONTRACT	PROJECT



TYPICAL RURAL COLLECTOR ROADWAY
 CROSS SECTION WITH SHOULDER
 (MAJOR & MINOR)

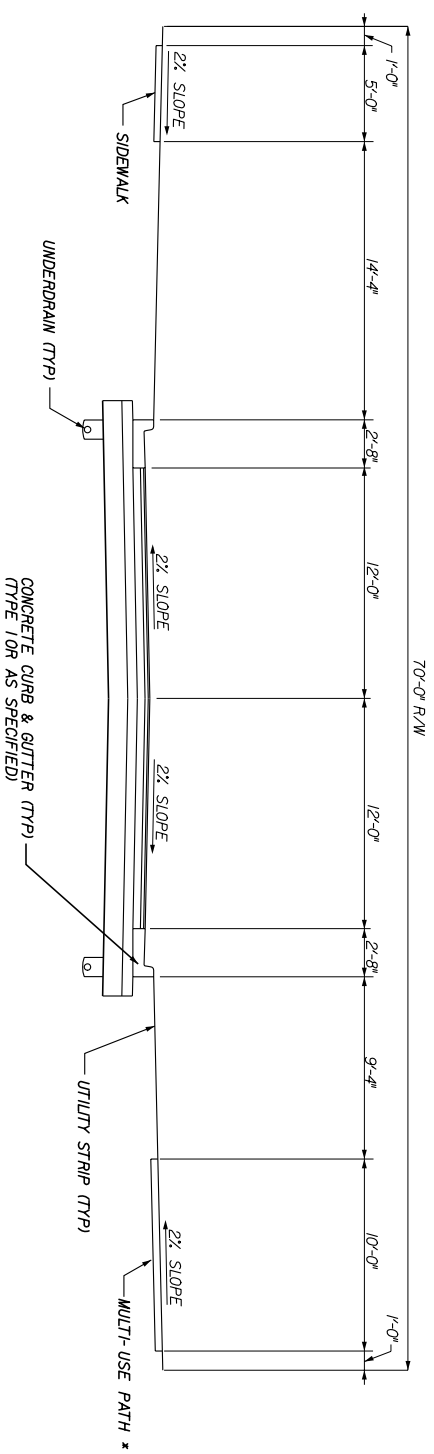
* BICYCLES MAY BE ACCOMMODATED WITH A WIDER ROADWAY AND APPROPRIATE MODIFICATIONS IN DEU OF A MULTI-USE PATH

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TYPICAL ROADWAY SECTIONS

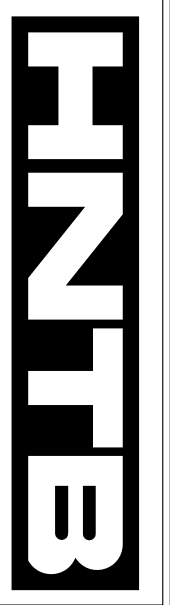
HORIZONTAL SCALE H = 10'	BRODGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEET NO.
CONTRACT	PROJECT



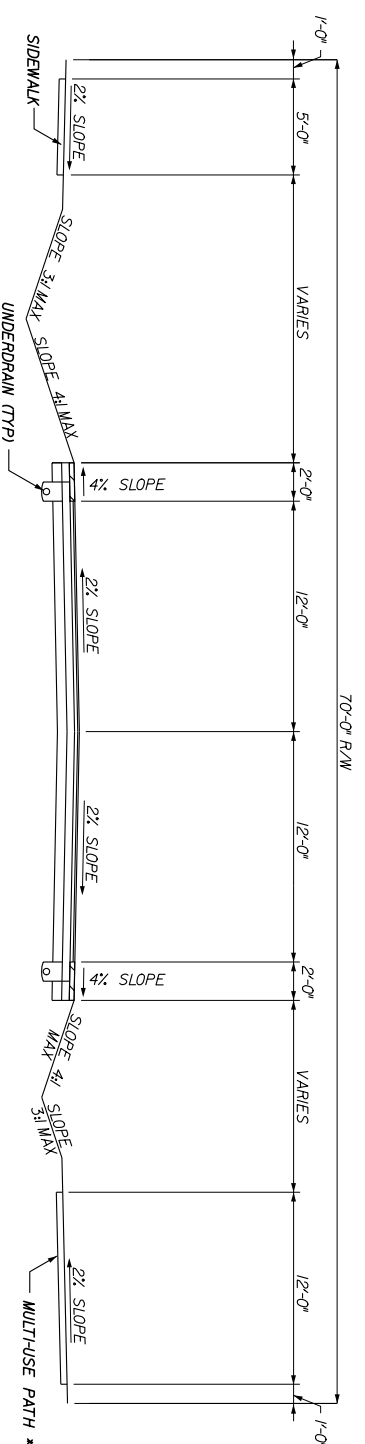
TYPICAL FEEDER STREET
 CROSS SECTION WITH CURB & GUTTER

* BICYCLES MAY BE ACCOMMODATED WITH A WIDER ROADWAY AND APPROPRIATE MODIFICATIONS IN USE OF A MULTI-USE PATH

NOTE: THESE TYPICAL SECTIONS ARE INTENDED FOR THE RESERVATION OF RIGHT OF WAY IN NEW DEVELOPMENT AREAS AS PROJECTS ARE BEING REVIEWED BY THE PLAN COMMISSION. THEY ARE NOT INTENDED TO BE DESIGN REQUIREMENTS. THE DIMENSIONS SHOWN ARE SUBJECT TO CHANGE BASED ON TRAFFIC IMPACT STUDY RESULTS AND INDIVIDUAL PROJECT NEEDS. THESE SECTIONS ARE NOT INTENDED FOR GENERAL RIGHT OF WAY ACQUISITION FROM EXISTING PROPERTY OWNERS, WHERE NECESSARY, RIGHT OF WAY WILL BE ACQUIRED FROM EXISTING PROPERTY OWNERS THROUGH A SEPARATE PROJECT DESIGN AND IMPLEMENTATION PROCESS.



TYPICAL ROADWAY SECTIONS	
HORIZONTAL SCALE 1" = 10'	BRODGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEET NO. of
CONTRACT	PROJECT



TYPICAL FEEDER STREET
CROSS SECTION WITH SHOULDER

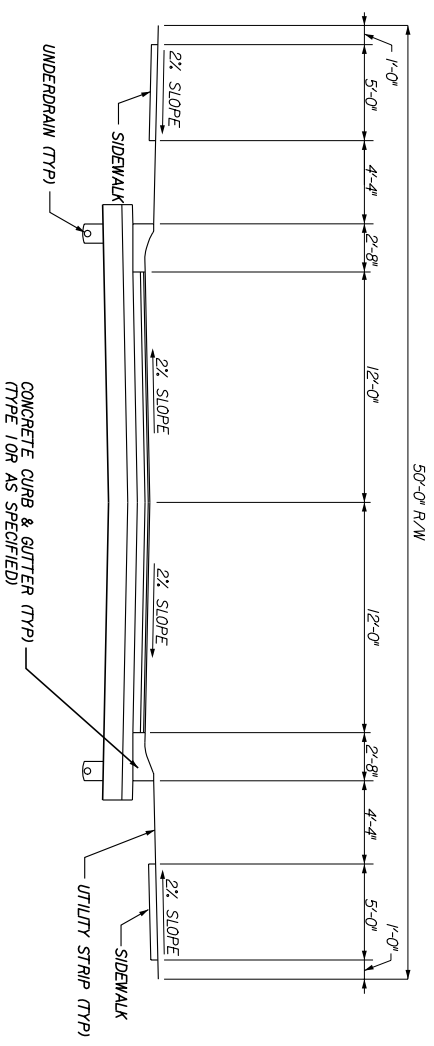
* BICYCLES MAY BE ACCOMMODATED WITH A WIDER ROADWAY AND APPROPRIATE MODIFICATIONS IN DEU OF A MULTI-USE PATH

NOTE: THESE TYPICAL SECTIONS ARE INTENDED FOR THE RESERVATION OF RIGHT OF WAY IN NEW DEVELOPMENT AREAS AS PROJECTS ARE BEING REVIEWED BY THE PLAN COMMISSION. THEY ARE NOT INTENDED TO BE DESIGN REQUIREMENTS. THE DIMENSIONS SHOWN ARE SUBJECT TO CHANGE BASED ON TRAFFIC IMPACT STUDY RESULTS AND INDIVIDUAL PROJECT NEEDS. THESE SECTIONS ARE NOT INTENDED FOR GENERAL RIGHT OF WAY ACQUISITION FROM EXISTING PROPERTY OWNERS, WHERE NECESSARY, RIGHT OF WAY WILL BE ACQUIRED FROM EXISTING PROPERTY OWNERS THROUGH A SEPARATE PROJECT DESIGN AND IMPLEMENTATION PROCESS.



TYPICAL ROADWAY SECTIONS

HORIZONTAL SCALE $1" = 10'$ VERTICAL SCALE	BRIDGE FILE DESIGNATION
SURVEY BOOK CONTRACT	SHEET NO. of PROJECT



TYPICAL LOCAL STREET
 CROSS SECTION WITH CURB & GUTTER

NOTE: THESE TYPICAL SECTIONS ARE INTENDED FOR THE RESERVATION OF RIGHT OF WAY IN NEW DEVELOPMENT AREAS AS PROJECTS ARE BEING REVIEWED BY THE PLAN COMMISSION. THEY ARE NOT INTENDED TO BE DESIGN REQUIREMENTS. THE DIMENSIONS SHOWN ARE SUBJECT TO CHANGE BASED ON TRAFFIC IMPACT STUDY RESULTS AND INDIVIDUAL PROJECT NEEDS. THESE SECTIONS ARE NOT INTENDED FOR GENERAL RIGHT OF WAY ACQUISITION FROM EXISTING PROPERTY OWNERS, WHERE NECESSARY, RIGHT OF WAY WILL BE ACQUIRED FROM EXISTING PROPERTY OWNERS THROUGH A SEPARATE PROJECT DESIGN AND IMPLEMENTATION PROCESS.



TYPICAL ROADWAY SECTIONS	
HORIZONTAL SCALE 1" = 10'	BRODGE FILE
VERTICAL SCALE	DESIGNATION
SURVEY BOOK	SHEET NO.
CONTRACT	PROJECT