



NASHVILLE AREA

**Metropolitan Planning Organization**

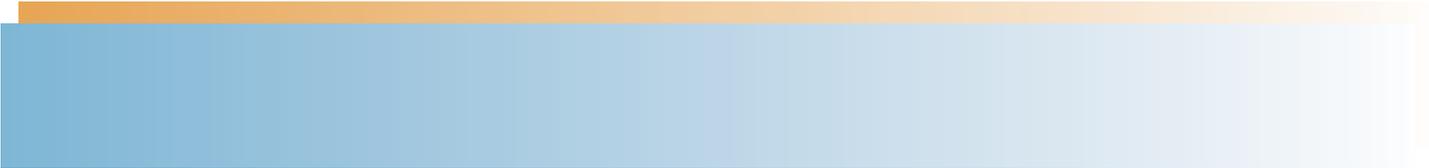
## **Southwest Area Transportation and Land Use Study**

March 2012



### ***Executive Summary***

Prepared By:  
RPM Transportation Consultants, LLC  
Hawkins Partners, Inc.  
Kimley-Horn and Associates, Inc.  
Cambridge Systematics, Inc.



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# Land Use Conditions

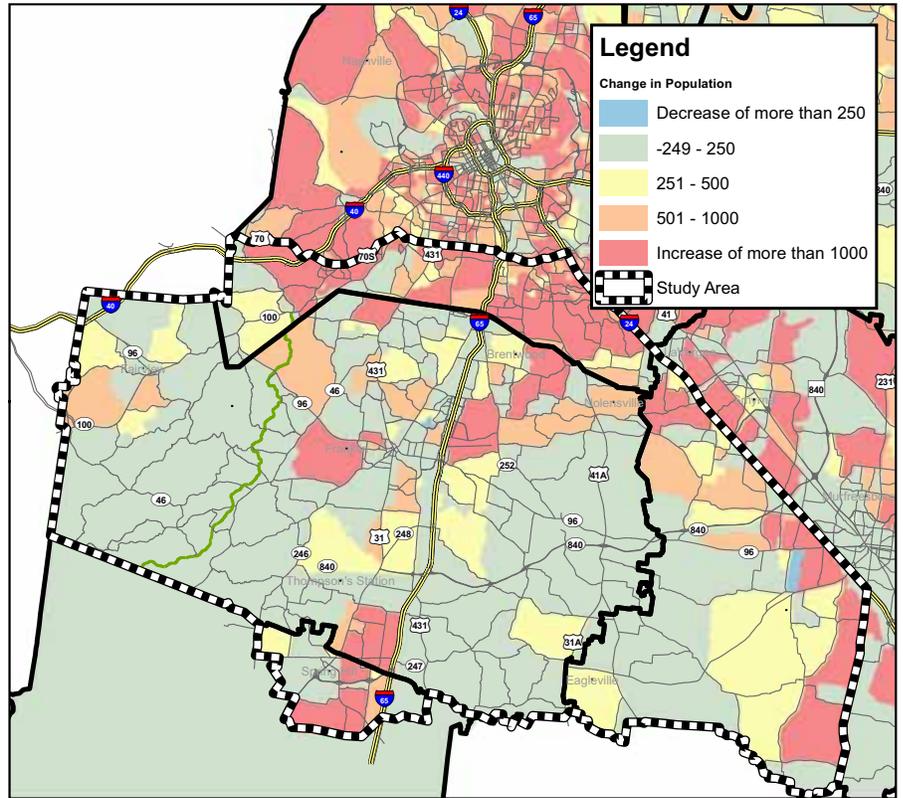
## Population

Over the past 25+ years (1980 – 2007), the southwest area has experienced significant population growth. The four counties of Davidson, Maury, Rutherford, and Williamson grew from a population of 670,000 to over 1.1 million during this time period. This growth equates to a 65 percent increase in population, representing a total increase of approximately 436,000 people. Of this growth, Williamson and Rutherford Counties accounted for nearly half of the population increase.

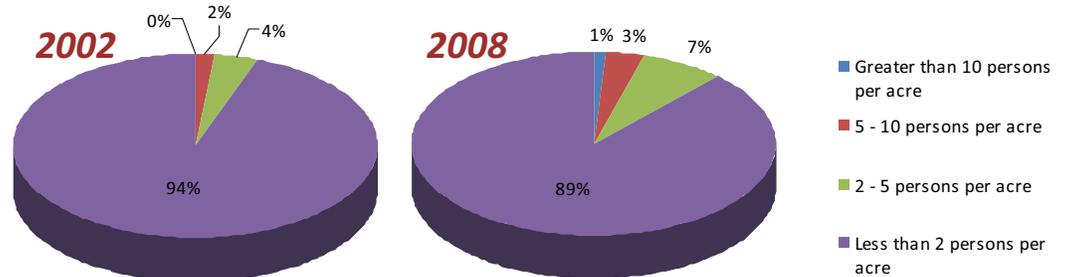
Beyond numbers, the geographic shifts in population help to explain the transportation conditions within this subregion. Williamson County’s population growth has largely taken place along the I-65 corridor. Specifically, areas east and west of Franklin and northern portions of Spring Hill led in population growth. This growth has led to a continued demand for north-south travel through the county and on into Nashville.

Primary population growth north of Williamson County occurred in the Antioch and Cane Ridge communities in the southeast corner of the Davidson County. Locations along I-24 west of Smyrna and south of Murfreesboro also exhibited pockets of significant population growth which affect Williamson County roadways to a growing degree.

The study area remains overwhelmingly rural (70% of the study area has a population density of less than 1 person per every 2 acres), though small pockets of moderately high density (10 or more persons per acre) exist in Bellevue and in the Tusculum community of Davidson County.



**Population growth during the period 2000 – 2008 was concentrated into identifiable areas. Growth along interstate corridors has been particularly notable.**

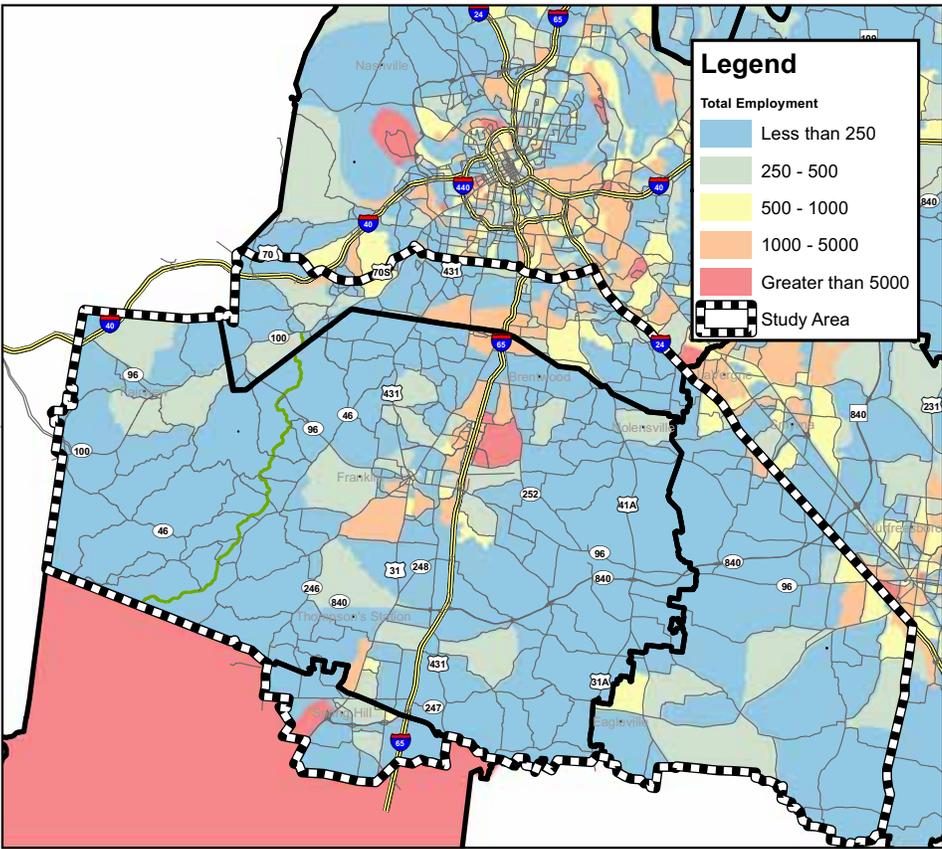


**Changes in population density have played an important part in the current makeup of the subregion’s land use conditions. In 2002, only 553 acres within the area had a population density greater than 10 persons per acre. By 2008, this area had grown by over 12.5 times to 6,926 acres.**

**Very little of the Southwest subregion has urban characteristics. The majority of the study area is rural, with expanding areas of suburban development.**



County	2008 Population Southwest Study Area	2008 Employment Southwest Study Area
Williamson	167,367	108,416
Davidson	118,897	40,335
Rutherford	64,399	13,445
Maury	8,077	9,096
<b>Total</b>	<b>358,740</b>	<b>171,292</b>



**Employment**

Because many types of service and retail businesses follow population growth, employment to some degree has followed the population trends as well. As the hub of the southwest area, Williamson County contributes the major share of employment within the subregion. From a transportation standpoint, employment is generally directly related to commuting and it is the impact of commuting that affects travel in the southwest area most greatly.

*The area's concentration of employment also shows the importance of the interstate corridors with LaVergne, Brentwood, and Cool Springs serving as leading employment areas in the subregion.*

**Local Development Attitudes**

Numbers define the quantitative aspects of the land use conditions, but may not provide the most comprehensive assessment of the development picture within the Southwest area. To better understand the driving forces behind the numbers, a series of local interviews was conducted with community planners and others involved in development within the subregion during the summer of 2009. Throughout the interviews, several issues surfaced time and again, from one side of the study area to the other.

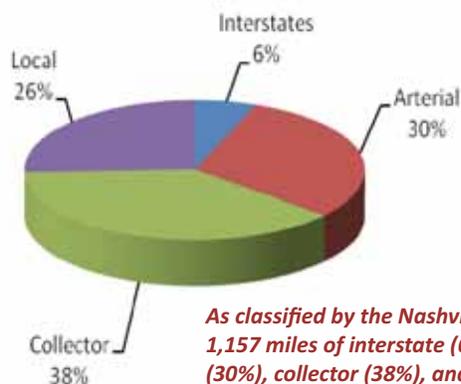
1. The I-65 corridor is likely to continue to be the most immediate growth corridor, particularly for commercial land uses. Associated with this is the expectation that locations with good I-65 access will

- gain the biggest share of new development in the area for the foreseeable future.
- 2. The completion of State Route 840 will have a significant impact on development in the area, especially in western communities like Fairview.
- 4. A broad finding concerning expected population growth is that plenty of land exists to develop within the study area (for most jurisdictions), the question is, "Are we able to serve it?"
- 5. Other development considerations (terrain and especially utilities) have become equally as important and equally as limiting as the transportation network.
- 6. Overall, there seems to be a roughly equal demand for building or extending new roads as compared to improving the existing ones. A common strategy is to plan construction

- of new roads in order to relieve traffic pressures on existing roads (therefore, lesser or no improvement is required on the existing road).
- 7. The belief that much of the recurring traffic congestion is caused by pass-through traffic to and from a neighboring jurisdiction is common.
- 8. Most believe that transit is good for the region, but have doubts as to its effectiveness in their community. Almost no one is designing road improvements or developing with significant consideration of existing or future transit service.
- 9. The most meaningful definition of regionalism refers to the adjoining jurisdiction. Almost everyone sees the need to coordinate with jurisdictional neighbors, but the recognition of the realized benefits or examples of larger-scale coordination are not as strong.

## Transportation Conditions and Trends

Transportation considerations have a significant role in the growth experience of Williamson County and its neighboring jurisdictions. Major corridors like I-65, I-24, and SR 840 have and will continue to shape this subregion in a major way. Issues with potentially more complexity, however, arise on arterials like Hillsboro Road, Franklin Road, Nolensville Pike, and Columbia Pike where primary mobility roles are tempered with the increasing demand for access.



*As classified by the Nashville Area MPO, 1,157 miles of interstate (6%), arterial (30%), collector (38%), and classified local (26%) roadways exist within the study area. Of this roadway mileage, approximately 341 miles is within established city limits, leaving 816 miles of classified roadway within unincorporated areas of the study area. Almost all (98.5%) of the non-freeway miles within the unincorporated portions of the study area are two-lane roads.*

### Roadway Level of Service

Overall, the roadways within the study area operate well with approximately 87% of these roads having a Level of Service (LOS) of C or better. This high level of operation is predominately due to the rural nature of these roads and the relatively light volumes of traffic they serve. Of the 72 miles of roadway that have a LOS E or F, 58 miles (80%) are urban arterials. Deficient operation is most often found on primary north-south corridors through the middle of the Southwest subregion. Portions of I-65 south of Franklin; Columbia Pike through Spring Hill, Thompson's Station, and Franklin; Franklin Road between Franklin and Brentwood; Hillsboro Road north of Franklin; and Nolensville Road in southeast Davidson County are examples of north-south corridors having operational deficiencies.

### Growth Trends

As the population and employment has grown steadily in the southwest subregion, so has the traffic generated by the demographic changes. The Tennessee Department of Transportation (TDOT) maintains annual traffic counts at 356 count stations within the study area. Data from these stations show that, during a period in which national and regional travel trends indicate less travel occurring, this subregion has exhibited traffic growth in two-thirds of its count stations, and higher-than-typical growth at approximately a third of its stations.

As mentioned by stakeholders, the imminent impact of the completion of SR 840 through Williamson County

is likely to create significant changes in this portion of the subregion in particular. Increases in freight operations may be expected, as well as a rise in industrial land uses in some jurisdictions along the SR 840 corridor.

The demographic growth figures estimated for the Southwest subregion were provided by the MPO. The Southwest subregion is expected to gain 308,000 in population and 184,000 new jobs over the next 25 years. This represents approximately 40% of the total residential growth in the MPO area and 33% of the employment growth.

Williamson County, at the heart of the Southwest subregion, is expected to experience robust growth, leading all five MPO counties in actual population growth, and second only to Davidson County in actual employment growth. As a percentage of the entire MPO area, Williamson County alone accounts for almost 30% of both residential and non-residential growth.



Over the next 25 years the Southwest subregion is expected to:

**Gain 308,000 Residents**  
(40% of MPO Residential Growth)

**Gain 184,000 New Jobs**  
(33% of MPO Employment Growth)

# Evaluation of Business-as-Usual Scenario

The Southwest Area Transportation and Land Use Study was largely developed around several modeled land use scenarios. A primary role of the land use modeling procedure is to objectively allocate projected population and employment growth throughout the study area.

The Business-As-Usual (BAU) scenario was developed by the MPO in 2009 to help predict the effect of current trends in development within the Nashville region over the next 25 years. Using methodologies prescribed by the MPO, the BAU scenario was modeled and analyzed as the baseline forecast condition. As its name implies, the BAU scenario is intended to replicate in a generalized way the current land use policies of respective jurisdictions in allocating the predicted future population and employment figures across the MPO region. The BAU is comprised of three basic analytical components, parcel suitability, future land use, and character area, and results in the automated allocation of control totals of population and employment across all parcels in the target county.

## Parcel Suitability

The suitability score of each parcel is determined by various factors which predict the attractiveness of a parcel for future development. Readily quantifiable factors such as current land value, the presence of utilities, and proximity to higher capacity roadways are used. Parcels that have existing development or severe environmental constraints are not included in the suitability analysis. Each parcel is assigned a unique suitability score that is relative within each county and is based on 13 factors.

## Future Land Use

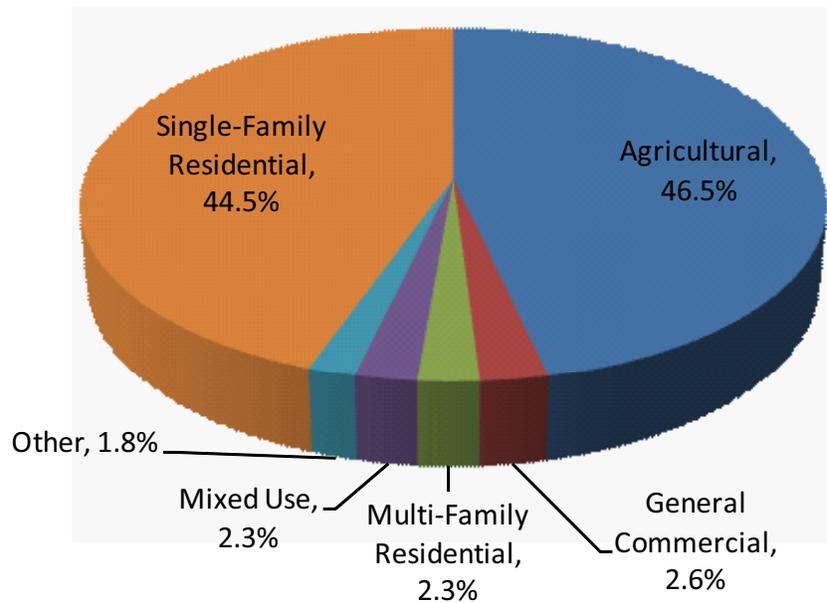
All parcels within the study area have been identified as having one of ten future land uses: Agricultural (AGR), Open Space (OS), General Residential (RES), Single Family Residential (SFR), Multi-Family Residential (MFR), Mixed Use (MU), General Commercial (GC), Office (O), Industrial (IND), and Institutional/Public (IPF).

At the heart of this subregion is a large amount of rural and/or low-density residential land and these

low-density areas surround centers of more dense and diverse land uses and are occasionally bisected by commercial corridors.

## Character Area

The third component of the BAU scenario is character area, which defines the contextual character of future development for each parcel. Nine unique character areas exist within the MPO model, each having unique development thresholds based on jurisdiction and future land use.

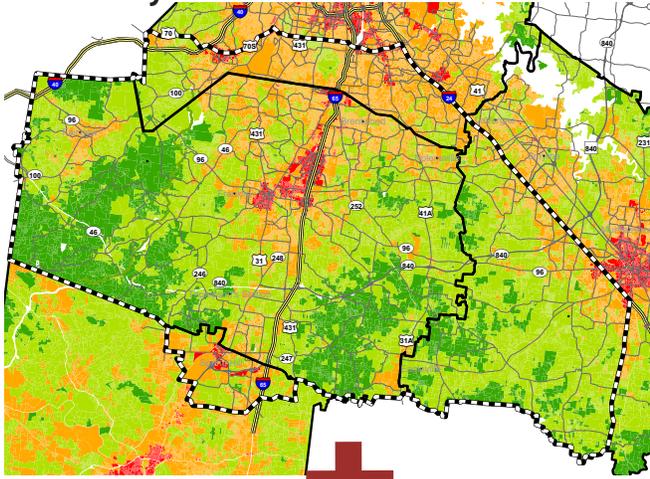


*The BAU scenario is partly defined by the makeup of future land use in Williamson County. As the only whole county in the BAU model, Williamson County statistics largely define the results of the growth scenarios. Under the BAU, over 90% of the county's land will remain in single family and agricultural uses.*

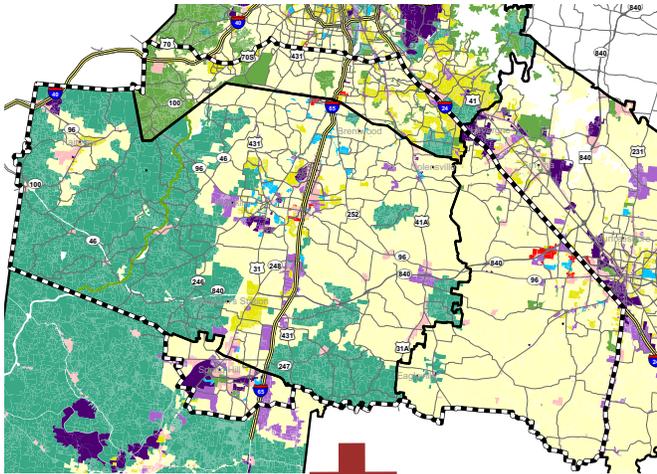


*Given the descriptive title of business-as-usual, jurisdictions may be inclined to understand the scenario as a reflection of current practices projected into the future planning horizon. However, the BAU scenario may more accurately be understood as a snapshot of today's planning conditions under future demographic conditions.*

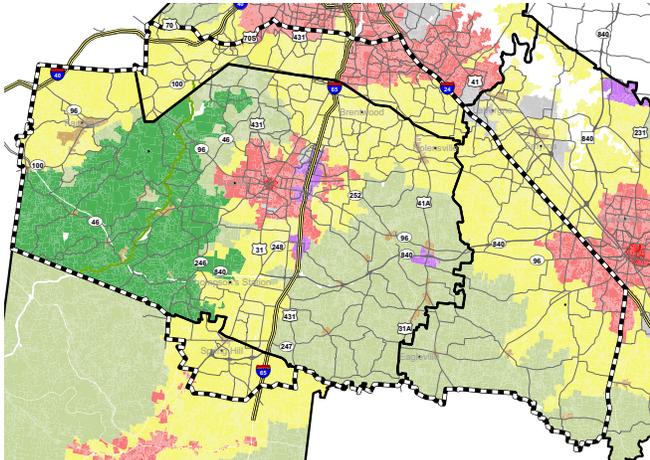
### Suitability



### Future Land Use



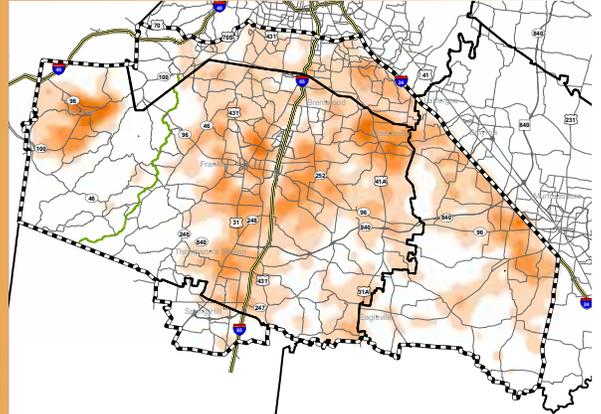
### Character Area



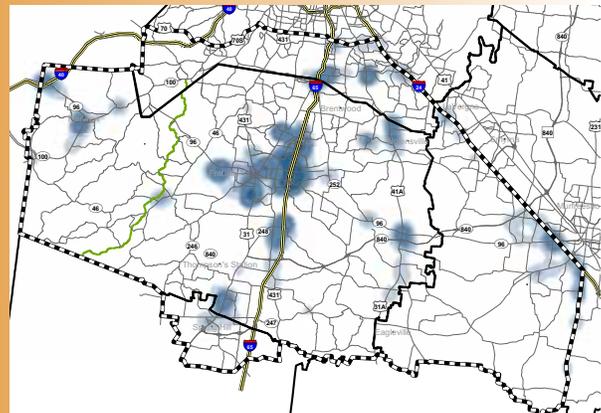
*Growth allocations were run independently for each county. That is, growth figures defined by control totals for each county were allocated within each county respectively. However, within each county, the growth is allocated based on this combination of suitability, future land use, and character area, irrespective of individual jurisdictions within the county.*

### Population Allocation

Strong population growth in the Williamson-adjointing portions of Davidson and Rutherford Counties is expected. Most of Spring Hill's residential growth is expected to continue inside Williamson County. Population growth southwest of Murfreesboro and in southeast Davidson County will likely have more of a dependence on I-24 than on I-65 or any other Williamson County arterial.



**BAU Population Allocation 2008-2035**



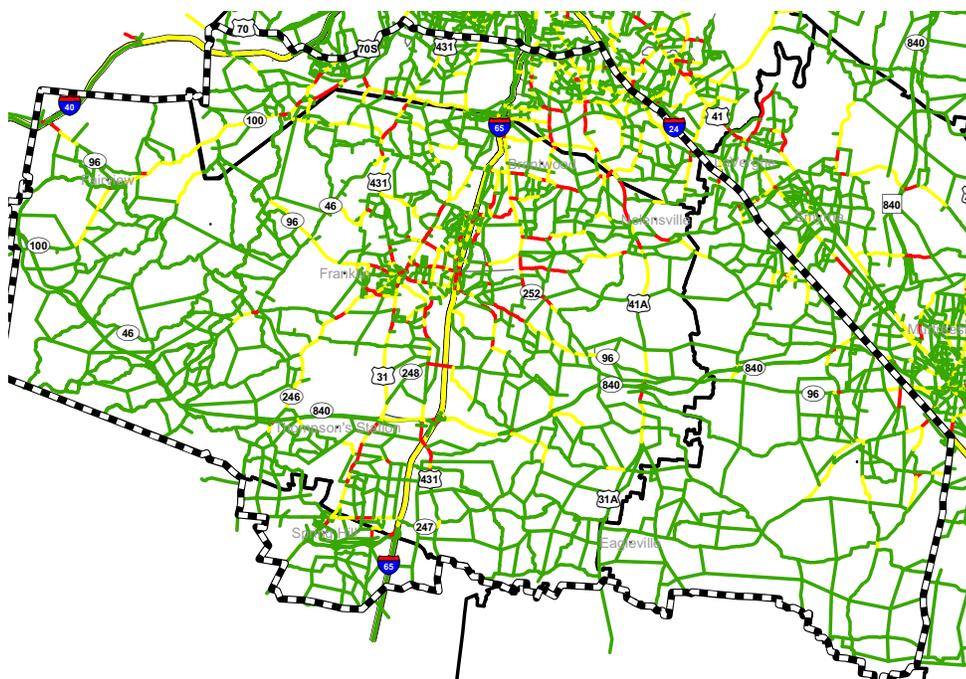
**BAU Employment Allocation 2008-2035**

### Employment Allocation

The 2008-2035 employment allocations for the MPO area estimate that Williamson County's share of the new employment coming into the region will be only slightly less than that of Davidson County. Considering those new jobs being attracted solely to the Southwest area, however, Williamson County accounts for 84% of the total.

## BAU Transportation Results

The population and employment conditions of the BAU scenario will have transportation-related impacts that are somewhat predictable given the Franklin-centric aspect of the growth allocations. Overall, the predominately rural highways of unincorporated Williamson County will remain serviceable with relatively light levels of congestion on a daily basis. Analyses (from the MPO's travel demand model) show that during peak traffic periods, approximately 80% of the county's highways will remain below capacity. An additional 16% will be nearing capacity, and traffic on 4% of the highways will exceed the capacity of the highway. As is typical, capacity issues will be limited to peak travel periods with the exception of a segment of Lewisburg Pike south of SR 840 where significant congestion may extend into off-peak periods.



*Growing congestion (yellow and red) is expected on almost all classified routes in unincorporated Williamson County that lead into and out of Franklin (Columbia Pike, Carters Creek Pike, Hwy 96 West, Del Rio Pike, Hillsboro Road, Clovercroft Road, Wilson Pike, Murfreesboro Road, Arno Road, and Peytonsville Road). Davidson County also has a predictable impact on the street network with several north-south routes crossing the county boundary nearing capacity by 2035 (Hwy 100, Old Harding Road, Sneed Road, Vaughn Road, and Hillsboro Road).*

Regional Goal (as specified in the 2035 LRTP)	Degree Met	Comment
Goal #1: Maintain and Preserve the Efficiency, Safety, and Security of the Region's Existing Transportation Infrastructure.	X	Population growth in the unincorporated areas is likely to introduce new traffic deficiencies on rural routes.
Goal #2: Manage Congestion to Keep People and Goods Moving.	X	High levels of congestion extend throughout the central and eastern portions of the subregion.
Goal #3: Encourage Quality Growth and Sustainable Land Development Practices.	—	69% of new population growth will occur within existing city limits.
Goal #4: Protect the Region's Health & Environment.	X	Over 50,000 acres of new development will occur within 50' of identified environmentally-sensitive locations.
Goal #5: Support the Economic Competitiveness of the Greater Nashville Area.	—	Deficiencies of the surface street network are likely to impact economic competitiveness.
Goal #6: Offer Meaningful Transportation Choices for a Diverse Population Including the Aging.	—	BAU does not preclude advancements in transit or non-motorized travel, particularly in growing areas.
Goal #7: Encourage Regional Coordination, Cooperation, & Decision Making.	✓	A relatively high dispersion of growth throughout the subregion will require ongoing coordination, particularly in urban growth boundary areas.
Goal #8: Practice Thoughtful, Transparent Financial Stewardship by Ensuring that Transportation Improvements meet Regional Goals.	N/A	

*As a qualitative measure, the results of the BAU analysis and the resulting MOEs are informative with respect to the regional goals. The growth scenario results can reasonably be compared against seven of the eight regional goals for adequacy.*

# Southwest Growth Scenarios

In order to effectively test the modeling tools and land use policies at work in the study area, two alternative growth scenarios have been developed and analyzed. The purpose of these scenarios is to provide an understanding of how modifications in land use patterns and policies can affect the distribution of growth and, ultimately, transportation conditions. They were also developed out of a response to the outcomes of the BAU which resulted in unmet or partially met regional goals. The alternatives are intended to provide some contrast to the business-as-usual (BAU) scenario, but are also grounded somewhat by the realities of existing local land use plans.

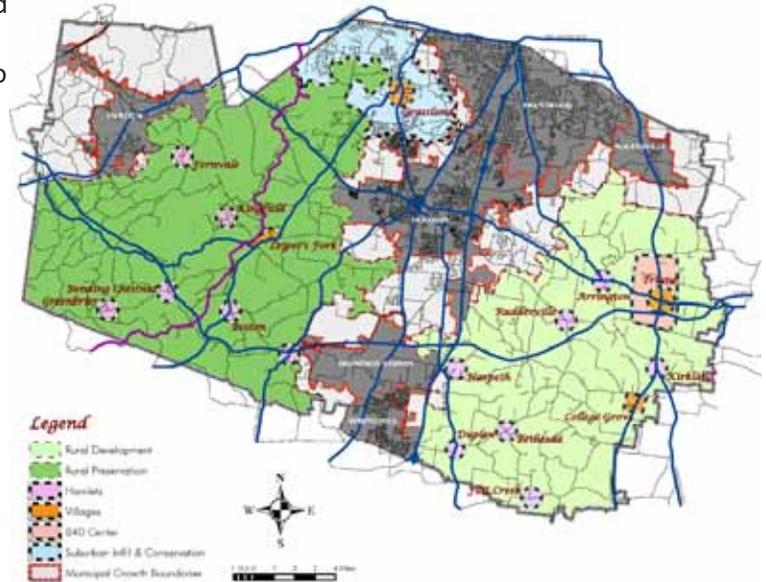
Both alternative growth scenarios were developed from the underlying BAU scenario. In addition to the BAU components of suitability, future land use, and character area, the scenarios are defined by a fourth component – the target growth area. The target growth area is simply a geographic designation which provides a broad-scale emphasis and limitation for where growth is or is not expected. Specifically, the designation of the target growth area specifies that 80% of the total allocation of the county’s growth will be within the target growth area, with the remaining 20% being allocated outside of it. Because Williamson County is the only whole county within the study area, target growth areas, and, as a result, alternative growth scenarios, were only applied within Williamson County.

Perhaps the most critical role of the two alternative growth scenarios is that they have been used to inform the development of the Preferred Growth (PG) scenario for the subregion.

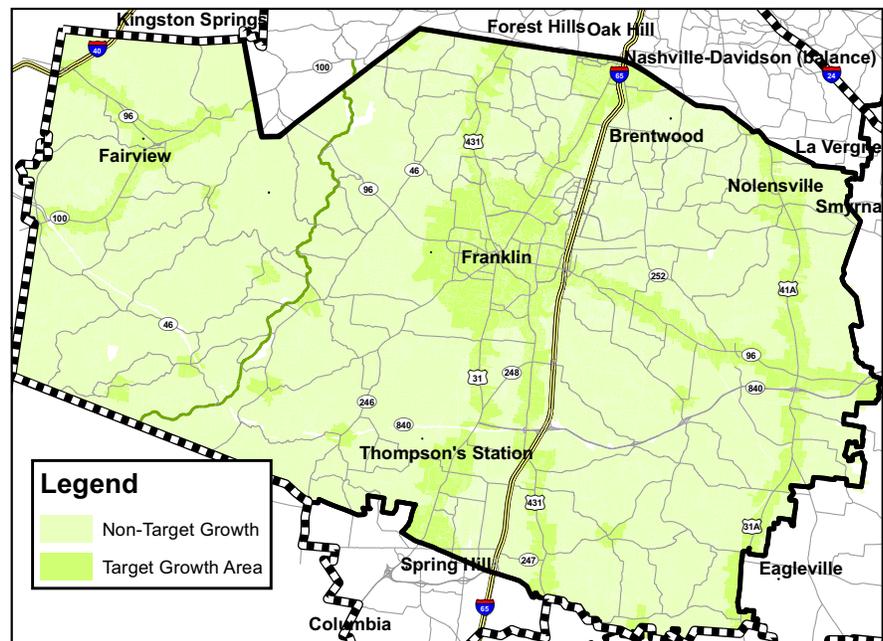
## Centers and Corridors Scenario

The Centers and Corridors (CC) growth scenario is defined by designated target growth areas around cities, towns, and villages as well as along strategic roadway corridors in Williamson County. The six major jurisdictions, the hamlets and villages designated in the *Williamson County Comprehensive Land Use Plan*, and eight corridor segments were identified as target growth areas.

Emphasizing development in these areas reflects the objectives of PC1101 which sets forth designated urban growth boundaries to help prevent the widespread growth of new development far from existing city services.



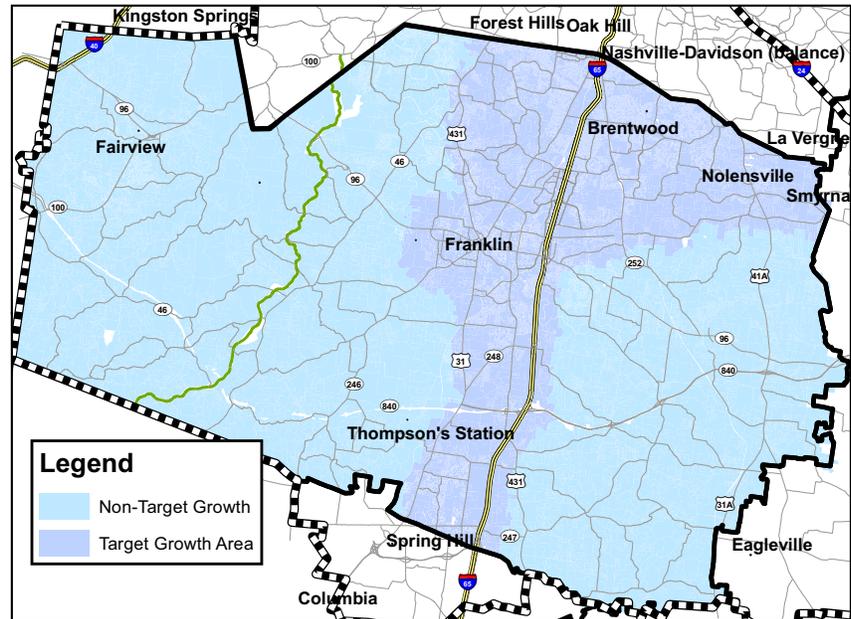
*The development “centers” defined in the CC scenario were largely developed from the hamlets, villages, and other land use designations in the Williamson County Comprehensive Land Use Plan.*



*Within the CC scenario, 71,074 acres of land (20% of the Williamson County total) are designated as a target growth area. The model directs 80% of the county’s control total growth inside these identified growth areas.*

## Wedge Growth Scenario

The Wedge Growth (WG) scenario is based less on regional planning objectives and more on an exaggerated extension of current growth trends within the county over the past few years. This scenario focuses on the growth corridors of I-65 and I-24, with the target growth areas widening in the northern portion of Williamson County. The interstate-influenced growth wedges overlap in the area between Brentwood, Franklin, and Nolensville which has been and continues to be a high-growth area. The growth wedges taper down in width as they extend south, but remain intact in buffered areas along I-65 and I-24. The western edge of the target growth area approximately follows Hillsboro Road, the Franklin City Limits, and Columbia Pike. The WG scenario allows emphasis of growth in all the major jurisdictions except Fairview, few of the identified hamlets or villages, and only the I-65, I-24, US 431, and US 31 corridors.

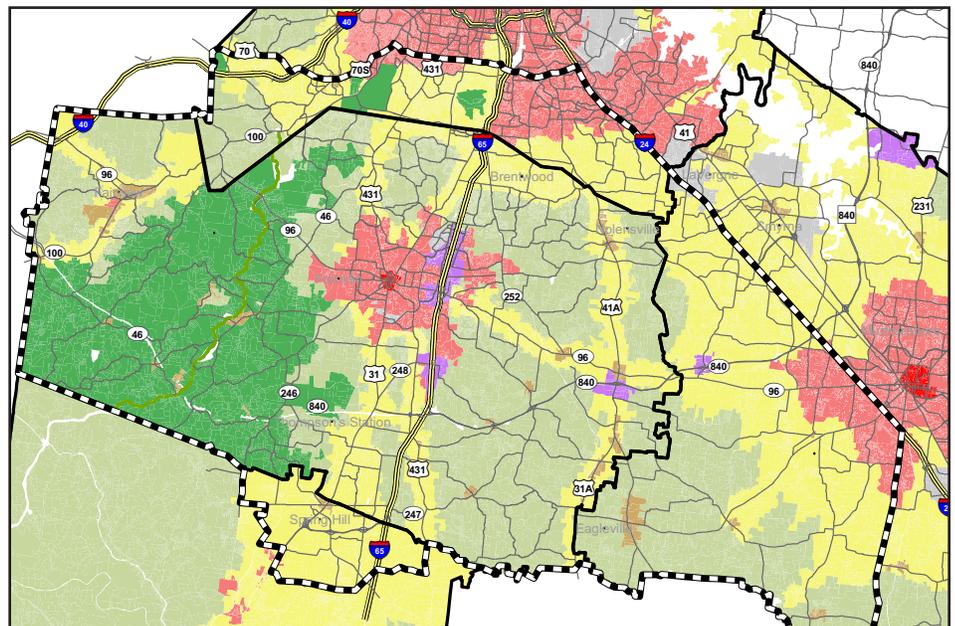


*Within the WG scenario, 93,794 acres of land (26% of the Williamson County total) are designated as a target growth area.*

## Preferred Growth Scenario

A review of the results of the CC and WG scenarios allowed the study development team and the local stakeholders to better understand how the model components of suitability, future land use, character area, and target growth areas worked together to produce different subregional demographic results. The Preferred Growth (PG) scenario was a direct outcome of this review and was the scenario most directly built upon stakeholder input.

It was determined that the PG scenario gave demographic allocation results that were both realistic given Williamson County's growth history and were in tune with local and regional planning objectives.



*The PG scenario was developed by modifying three of the four land use model attributes in particular locations of Williamson, Davidson, and Rutherford Counties. These were parcel suitability, future land use, and character area. Target growth areas were not used in the PG scenario. Instead, character areas in particular were structured such that growth allocations were allowed to occur where land use conditions most realistically dictated.*

# Evaluation of the Growth Scenarios

The growth scenarios developed for use in the Southwest subregion are comprised of varying levels of trends and assumptions to provide an understanding of how land use policies affect growth patterns and, ultimately, transportation conditions.

The outcome of the analysis of the baseline and two alternative growth scenarios is the development of a more educated preferred growth scenario. The PG scenario is described here in greater detail than the alternative growth scenarios and is the basis for the recommendations of the Southwest study.



## Land Use Evaluation

The outcomes of the land use growth scenarios are best and most completely described by the resulting allocation of population and employment throughout the study area. Because Williamson County is the only complete county within the study area, it was the only geography to which the CC and WG scenarios were applied.

Based on the MPO's 2035 LRTP, Williamson County is expected to grow by approximately 225,000 residents and 154,000 employees by horizon year 2035. This would more than double the current number of both residents and jobs in the county and represents an aggressive growth outlook.

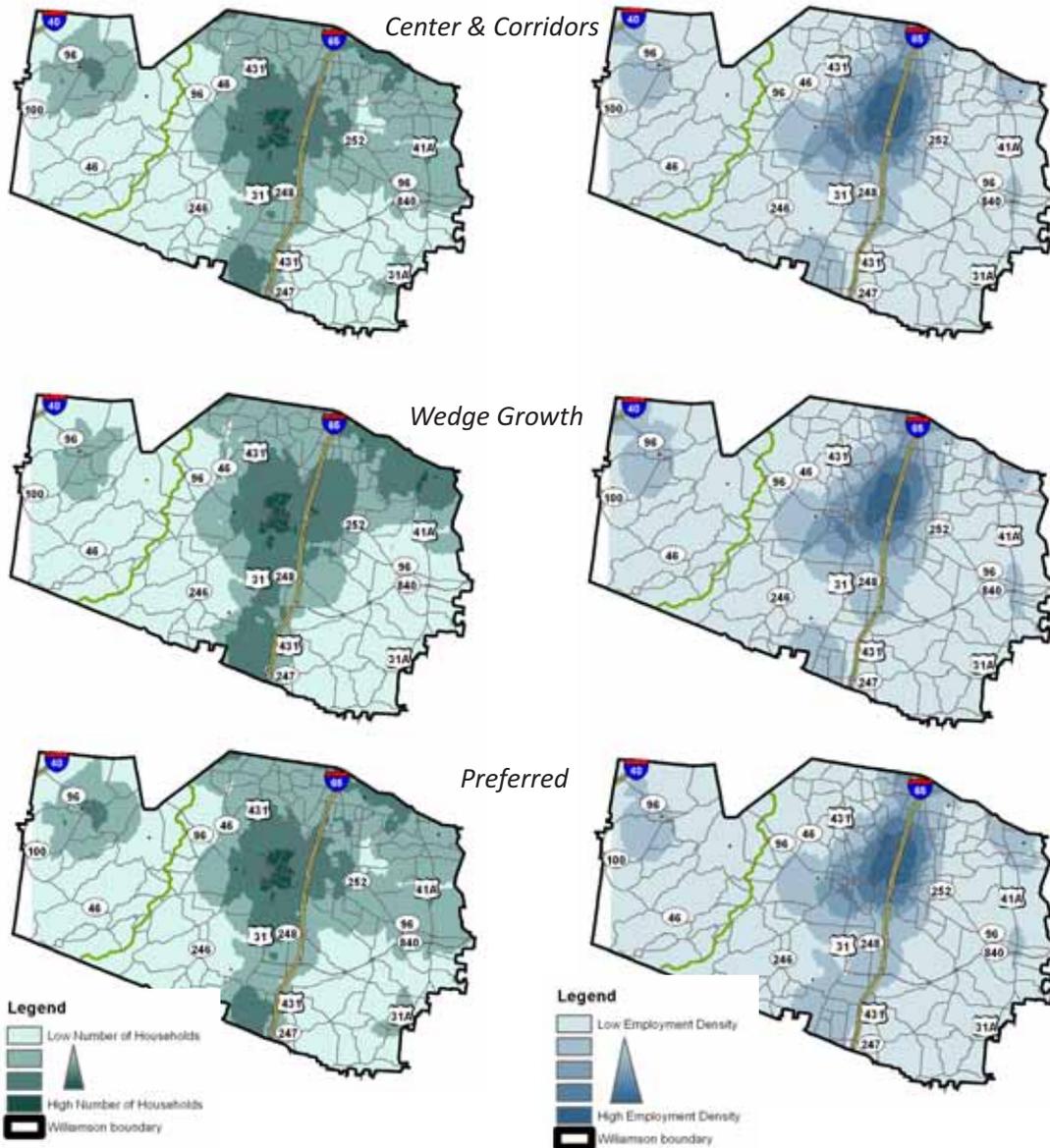
## Key Demographic Findings:

### Population

- Under all scenarios, growth in Brentwood and Spring Hill would slow
- Franklin's population growth remains fairly consistent with what has been experienced over the past 10 years
- The WG scenario predicted the lowest population increase in unincorporated Williamson County at 32,166 over the next 25 years. The BAU predicted the highest gain at over 70,000.
- The effect of the alternative growth scenarios in:
  - o Nolensville - garnered almost 12,000 more residents in the WG scenario than under other scenarios;
  - o Franklin - the CC and WG scenarios bring growth shares in line with 10 year trends;
  - o Fairview - the WG scenario resulted in almost 20,000 fewer residents than under other scenarios; and
  - o Unincorporated Williamson County - BAU scenario predicted 30,000 more residents than under the CC scenario.

### Employment

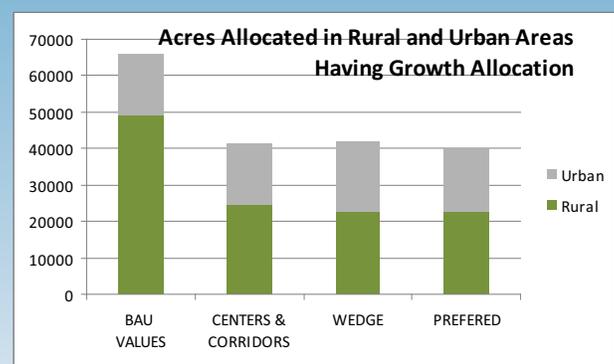
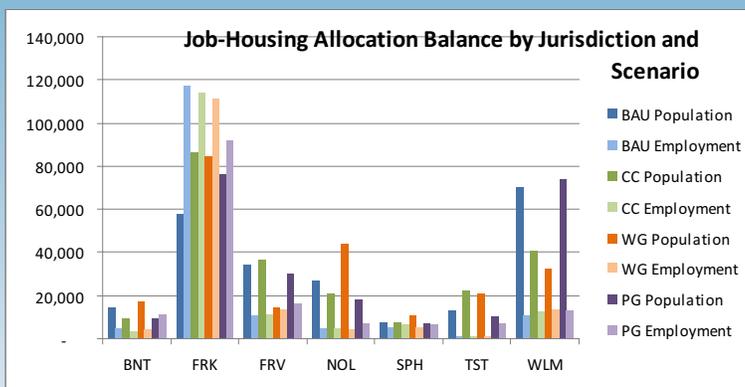
- The overwhelming majority share (70-75%) of new employment in Williamson County is predicted to go to Franklin under all scenarios.
- The two jurisdictions with the next highest share (7-10% each) are Fairview and unincorporated Williamson County.
- The Williamson County side of Spring Hill is not expected to see job growth. However, new employment is expected in the Maury County portion of Spring Hill.



Unincorporated Williamson County showed the most overall residential allocation and, consequently, the highest population density, under the PG scenario. Employment allocation in the unincorporated area remained fairly consistent across all scenarios.

### Measures of Effectiveness

To objectively gage the impacts of the various land use scenarios, several measures of effectiveness (MOEs) were used. The MOEs are generally based directly on the parcel allocations derived from the model. The MOEs are simply a way of seeing the large-scale impacts of different future land use conditions.



The scenarios had different effects across the jurisdictions with respect to job-housing balance. Brentwood, Franklin, Nolensville, Spring Hill, and Thompson's Station all showed their best job-housing correlation under the PG scenario. Unincorporated Williamson County is notably unbalanced under all scenarios - an expected characteristic of primarily rural areas with limited retail or office employment.

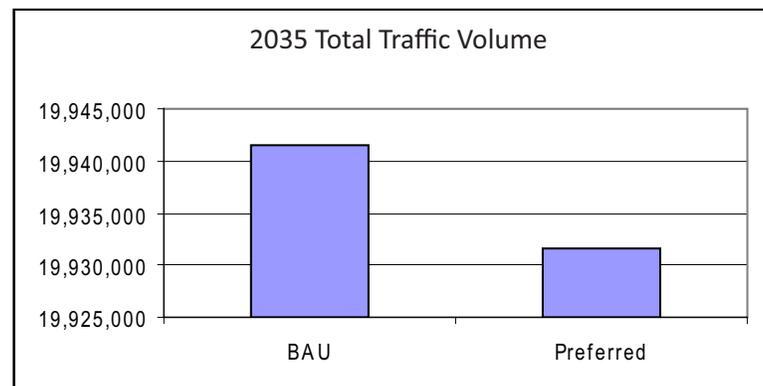
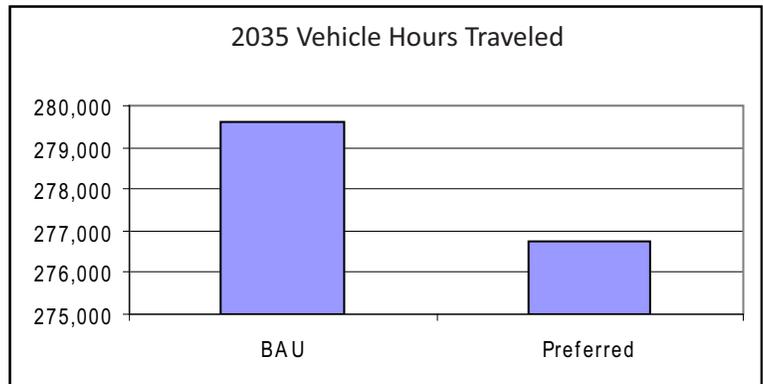
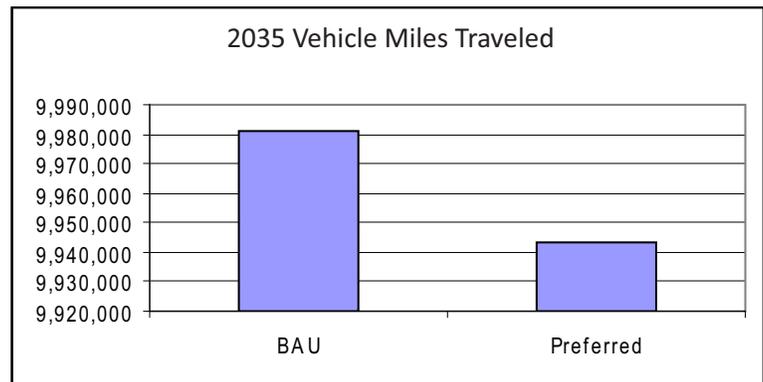
A desirable condition of subregional future growth is the allocation of more development in urban areas, where existing services can best accommodate it. All non-BAU scenarios show higher growth densities (and therefore fewer acres being developed) and the PG scenario in particular limits impacts to rural lands.

## Transportation Evaluation

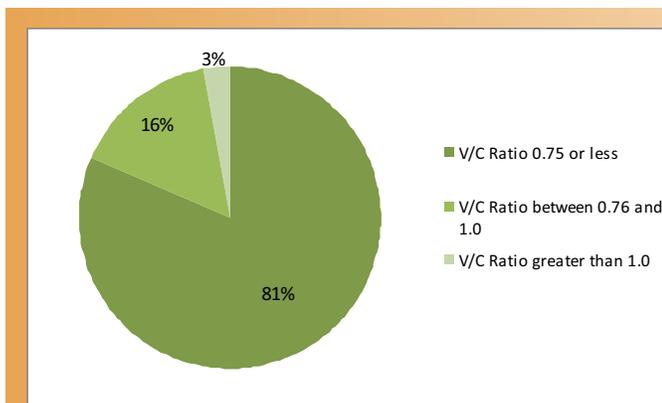
Using the MPO's travel demand model, the three alternate land use scenarios were analyzed to determine the effect of each on travel within the subregion and, in particular, Williamson County. Relatively little difference exists in travel metrics as expressed across the MPO area or Williamson County individually. While the differences are small, the PG scenario does result in the lowest levels of modeled vehicle miles travelled (VMT), vehicle hours travelled (VHT), and total traffic volume in the 2035 horizon year.

All evaluations of the alternative growth scenarios (including the PG) were based on the MPO's roadway network including existing plus committed (E+C) roadway projects. This means that future roadway projects which have a committed funding source were included in the model analysis as if these projects had already been constructed. This allows an estimation of what deficiencies still exist throughout the county even after construction of the future committed projects.

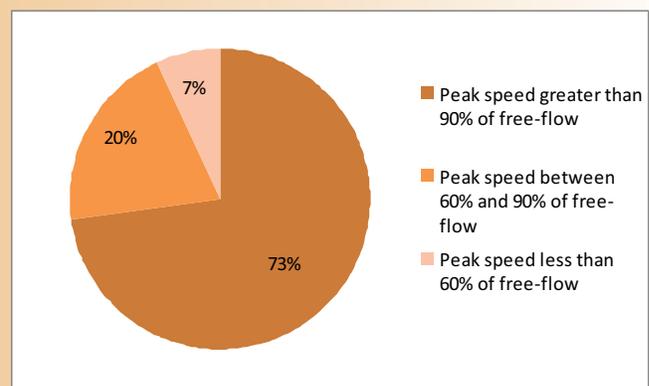
Based on the results of the travel demand model, the existing Williamson County roadway network will continue to serve large, predominately rural portions of the county well. Transitional areas of the county, however, will begin to see increasing capacity shortages as growth continues both inside urban areas and in rural parts of the county. Central Williamson County roads in particular will see steady traffic demand increases for north-south travel between Spring Hill, Thompson's Station, Franklin, Brentwood, and Nashville.



*The PG scenario results in the lowest levels of modeled vehicle miles traveled (VMT), vehicle hours travelled (VHT), and total traffic volume in the 2035 horizon year.*



*Although approximately 20% of the road mileage will either exceed or approach capacity by the 2035 planning horizon, the bulk of road mileage in the unincorporated areas will continue to operate below capacity (Volume to capacity (V/C) ratio below 0.75).*



*Over 70% of the roadway mileage will generally operate with peak period speeds that are at least 90% of the free flow speeds. Prevailing speeds on most county roadways will remain relatively unconstrained due to traffic.*

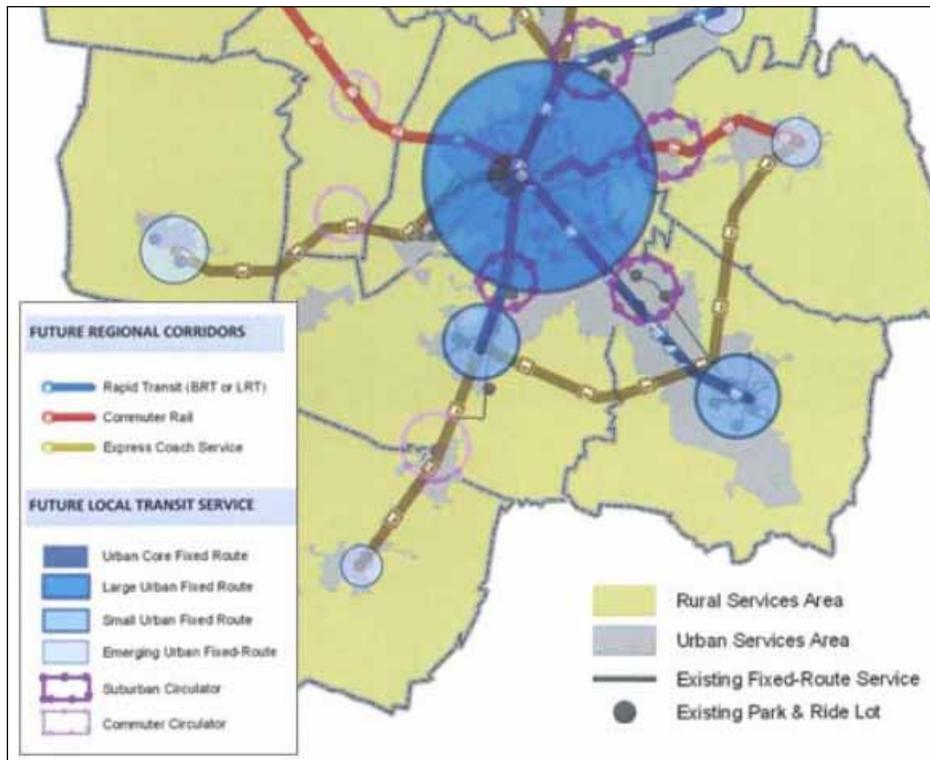
## Alternative Modes

Throughout the Southwest study procedure, transportation impacts have been driven almost exclusively by private vehicle use coming from growing demographics. However, other trends involving alternative travel modes will continue to emerge as important factors in this subregion over the next 25 years.

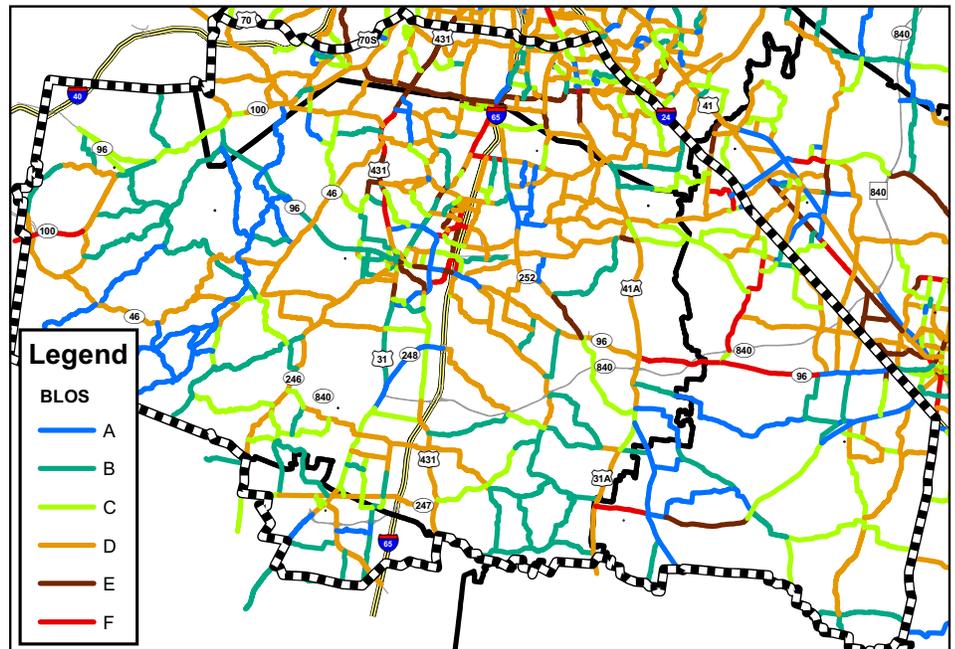
Analyzing 2035 household growth patterns, it can be seen that the existing transit routes in Franklin are well positioned to capture the potential growing ridership. Any transit route modifications that may be beneficial are within established City Limits and the introduction of transit service into unincorporated areas of the county is projected to have limited impact.

Also affecting subregional jurisdictions in the future is the desire for implementation of the regional transit vision. This vision would most affect the central sector of the subregion with combinations of coach and rapid commuter transit extending as far south as Columbia into Nashville. The urban core fixed route system would extend south into Brentwood, and other jurisdictions would be served by combinations of suburban circulators, commuter circulators, and small urban fixed route systems.

An analysis of truck traffic has shown that a significant number of county roads are expected to see increasing truck traffic through 2035. Generally along principal arterials and roads with access to SR 840 and I-65, truck percentages for the most part will remain below 10%.



*The MPO's 10-county vision for public transportation extends through the subregion along the I-65 and SR 96 East corridors. Smaller circulating routes are envisioned in communities like Brentwood, Smyrna, and Spring Hill. Source: Nashville Area MPO*



*The existing Bicycle Level of Service (BLOS) as provided by the MPO's Regional Bicycle and Pedestrian Study shows that roads in the western portion of the subregion are generally more suitable for bicycling. This is because less development in this area means less traffic, which means better bicycling conditions.*

As provided by the MPO's Regional Bicycle and Pedestrian Study, Williamson County's roads have varying degrees of suitability for transportation by bicycle. The cross-section of its rural roads remains fairly consistent, but increased volumes of traffic decrease the bicycle suitability

in more developed portions of the county. This trend will continue, making unimproved roads on the fringe of growth areas in central Williamson County less suitable for cycling than roads in the southeast and southwest quadrant of the county.

# Transportation Plan

With the Preferred Growth (PG) scenario assumed as the 2035 growth conditions within the study area, the Southwest subregion transportation needs have been identified for this planning horizon. The majority of roadway needs will occur in transitional areas surrounding established cities. Much of the land area where these needs will be present are currently within established urban growth boundaries, and are thus expected to be released from the jurisdiction of the unincorporated county and become fully part of the respective city in the future.

Many of the transportation deficiencies identified in the testing of the PG scenario will be mitigated with the schedule of existing plus committed projects identified in the MPO's 2035 Regional LRTP. These are projects for which funding has been identified and are reasonably assured of future completion. For this reason, the final transportation demand model run includes these committed and planned projects.

Locally planned projects have generally undergone some level of public review and comment as well as a formal political adoption process. This does not ensure public support of each project through the design and construction phases, but does provide a reasonable level of local understanding and approval of the projects in concept. For this reason, projects found in locally adopted transportation plans within the study area are considered to be recommendations for future improvement within the Southwest subregion.

## 2035 Regional Plan

Includes only projects financially constrained by anticipated revenues

Projects have a planning horizon for anticipated completion

Projects are generally completed with state and/or federal funding sources and thus follow specific planning, programmatic, and design requirements

Considers the mobility needs of the region using analysis of a regional-scaled transportation model

## Local Plans

Drafted without comparison to corresponding revenue sources

Individual projects are not given an anticipated completion

Projects are often completed in coordination with local development initiatives, may be completed with private funding, and therefore may be exempt from certain requirements

May include smaller local roads and may not consider roads outside their jurisdiction.



*Local plans typically undergo some type of public review and have been validated by the formal adoption process by locally elected leaders. The recommendations of the Southwest subregional study build on the planning processes inherent in the adoption of both local plans and the Regional Long Range Transportation Plan.*

## Study Recommendations

As determined by the results of the PG scenario, certain transportation deficiencies are expected to occur in the absence of roadway improvements and additions. The committed and planned projects of the regional LRTP as well as the locally planned projects are expected to significantly address the regional and many of the local transportation needs across the study area. Recommendations of this Southwest subregional study have been developed around three general plan strategies:

- 1 Work towards developing a more robust subregional transportation network by planning for a coordinated system of facilities within the study area.
- 2 Continue to plan and implement improvements congruent with regional growth objectives as developed by the MPO.
- 3 Build increasingly closer coordination linkages between adjacent planning jurisdictions in the study area.

### 1 Subregional Transportation Network

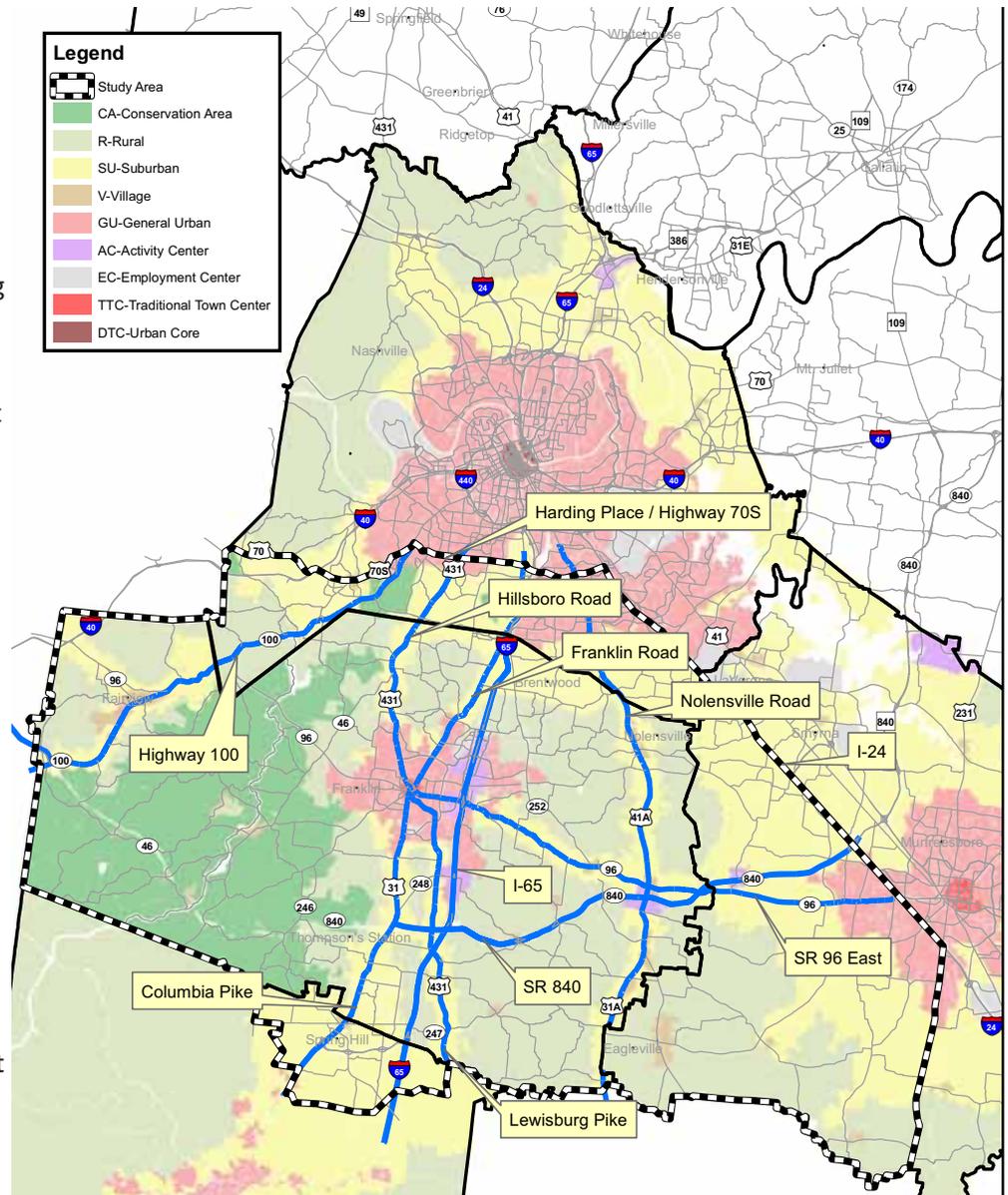
The primary recommendation of this study is development of the “missing piece” of a coordinated subregional roadway network. Specifically, this is the development of an updated Major Thoroughfare Plan for the unincorporated portions of Williamson County.

As study area jurisdictions have grown, and particularly since the passage of PC 1101, the overlapping planning jurisdictions within the Urban Growth Boundaries have changed the

dynamic of County plans. The subregional road plan should seek to introduce subregional continuity to locally planned projects and to reconcile inconsistencies that exist between multiple city and town plans.

### 2 Promote Regional Goals in Key Corridors

Certain corridors across the study area have the potential to substantially shape the subregional form and function as it grows over the next 25 years. Based on growth projections and the envisioned character areas of each, these corridors will play key roles in shaping the communities that they provide access to.



*Special planning emphasis should be given to several corridors which transverse the Southwest subregion but also serve as “Main Streets” in their respective communities. These corridors also help to define their adjacent character areas and provide the arterial network of the subregion.*

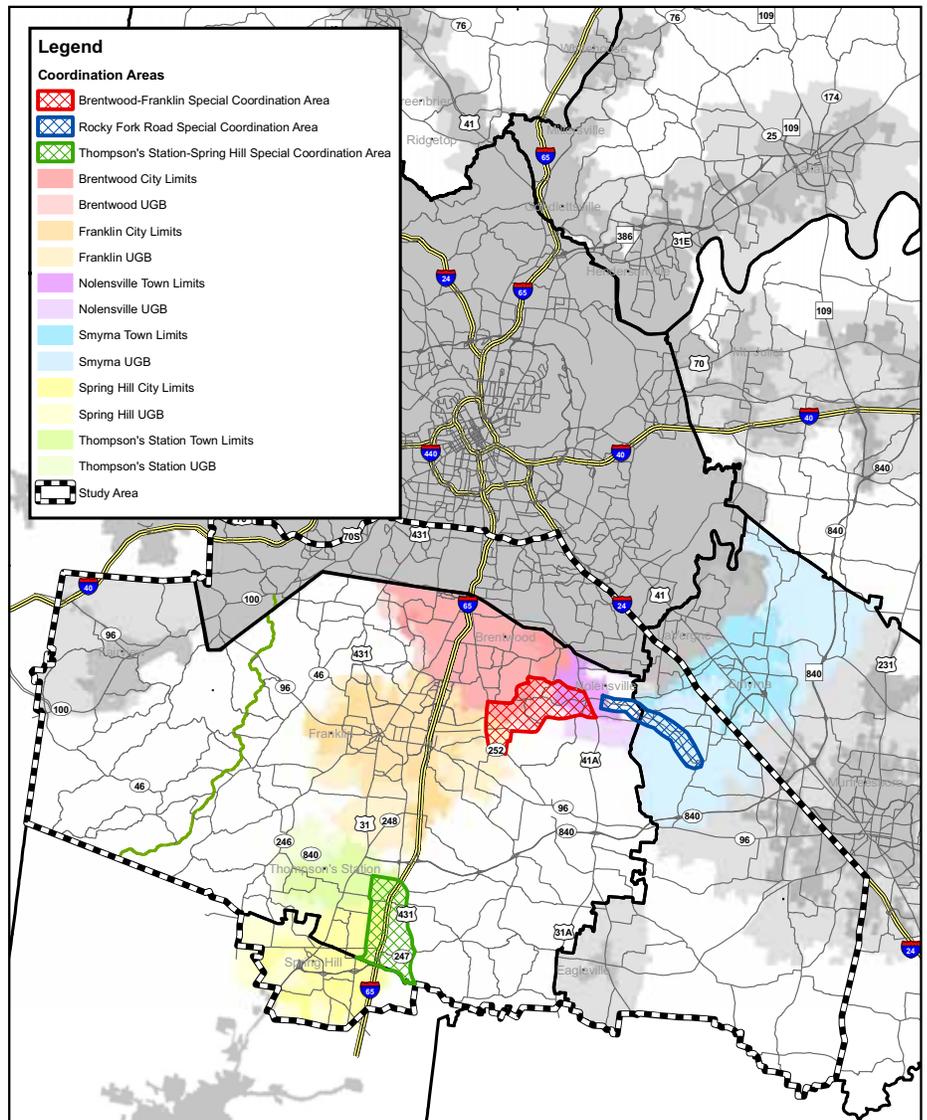
### 3 Stronger Linkages in Jurisdictional Coordination

For many years, the jurisdictions of this area have worked well together in administering deliberate land use and transportation objectives. These partnerships continue and should be both maintained and strengthened as added pressures in development grow. There are three areas of the subregion where the City Limits, Urban Growth Boundaries, and even county boundaries create unique coordination challenges.

One “critical coordination” area is the Wilson Pike/Clovercroft Road area where Brentwood, Franklin, and Williamson County meet. As annexation and residential subdivision projects have occurred, planning staffs of these agencies have adapted local plans to develop a coordinated approach to transportation needs.

The Rocky Fork Road corridor will require special coordination with its improvement and emergence as a primary subregional route and growth corridor. The Towns of Nolensville and Smyrna as well as unincorporated Williamson and Rutherford Counties all have some level of planning jurisdiction within the corridor and all expect to see increasing future growth along this corridor.

The third coordination area is the I-65 corridor between Thompson’s Station and Spring Hill. Along with Williamson County, these agencies have partnered on a study of this corridor to determine key access needs. As new development and roadway planning continues, this area too will require close on-going coordination.



**Transportation issues, often arising from land use decisions, will often occur near jurisdictional boundaries. A coordinated approach to tackling these issues is needed at all levels - technical staff to executive administration.**



**C-2**

Project: Sneed Road widening

Description: Widen Sneed Road to 3 lanes from the Davidson County Line to Hillsboro Road

Right-of-Way: 72'

Cost: \$34,910,000

**C-3**

Project: Hillsboro Road widening

Description: Widen Hillsboro Road to 4/5 lanes from the Davidson County Line to Berry's Chapel Road

Right-of-Way: 120' typical. 84' in Activity Center area at Grassland

Cost: \$47,740,000

**C-4**

Project: State Route 96 West widening

Description: Widen SR 96 West to 3 lanes from the Franklin City Limit to Temple Road Ext (proposed – see N-1)

Right-of-Way: 120'

Cost: \$26,580,000

**C-5**

Project: Rocky Fork Road widening

Description: Widen Rocky Fork Road to 3 lanes from the Nolensville City Limit to Rutherford County Line

Right-of-Way: 72'

Cost: \$14,360,000

**C-6**

Project: Clovercroft Road

Description: Widen Clovercroft Road to 2/3 lanes from Nolensville Road to Wilson Pike

Right-of-Way: 72'

Cost: \$21,990,000

**C-7**

Project: Nolensville Road widening

Description: Widen Nolensville Road to 4/5 lanes from the Nolensville Town Limit to Shelbyville Highway

Right-of-Way: 120' typical. 84' in Village and Activity Center areas at Triune and Kirkland.

Cost: \$72,360,000

**C-8**

Project: State Route 96 East widening

Description: Widen SR 96 to 4/5 lanes from Arno Road to the Rutherford County Line

Right-of-Way: 120' typical. 84' in Village and Activity Center areas at Arrington and Triune.

Cost: \$102,960,000

**C-9**

Project: Arno Road widening

Description: Widen Arno Road to 3 lanes from SR 96 East to SR 840

Right-of-Way: 72' typical. 60' in Village area at Rudderville.

Cost: \$47,270,000

**C-10**

Project: Lewisburg Pike widening

Description: Widen Lewisburg Pike to 4/5 lanes from the Franklin City Limit to Thompson's Station Road

Right-of-Way: 120'

Cost: \$57,270,000

**C-11**

Project: Columbia Pike widening

Description: Widen Columbia Pike to 4/5 lanes from Coleman Road to Goose Creek Bypass

Right-of-Way: 120'

Cost: \$25,770,000

**C-12**

Project: Carters Creek Pike

Description: Widen Carters Creek Pike to 2/3 lanes from the Franklin City Limit to SR 840

Right-of-Way: 96'

Cost: \$52,870,000

**C-13**

Project: Coleman Road widening

Description: Widen Coleman Road to 3 lanes from Kittrell Road to Columbia Pike

Right-of-Way: 72'

Cost: \$10,010,000

**C-14**

Project: Duplex Road widening

Description: Widen Duplex Road to 3 lanes from I-65 to Lewisburg Pike

Right-of-Way: 96'

Cost: \$18,300,000

**C-15**

Project: I-65 widening

Description: Widen I-65 to 8 lanes from SR 840 to the Maury County Line

Right-of-Way: Per TDOT

Cost: \$36,600,000

**C-16**

Project: York Road widening

Description: Widen York Road to 2/3 lanes from Fly Road Extension to Rocky Fork Road

Right-of-Way: 72'

Cost: \$8,830,000

**C-17**

Project: Kidd/McFarlin Road widening

Description: Widen Kidd/McFarlin Road to 2/3 lanes from Nolensville Road to the Rutherford County Line

Right-of-Way: 72'

Cost: \$22,190,000



## New Roadway Projects

Several reasons have led to recommending new roads. Capacity shortages may exist in a corridor, but there is limited opportunity to add capacity in that corridor. In these cases, a new road would provide an alternative to the existing corridor. A new road may be specified due to the lack of other alternative routes in a particular part of the county. An existing road may be extended to provide a longer range of mobility and thereby increase the effectiveness of the existing roadway. A new road may be needed to structure future development. A new construction project may be shown in order to be consistent with the previously adopted roadway plans of adjacent jurisdictions.

### N-1\*

**Project:** Temple Road Extension  
**Description:** Extend Temple Road as 2/3 lanes from near Green Road to SR 96 West  
**Right-of-Way:** 72'  
**Cost:** \$23,210,000

### N-2

**Project:** Old Charlotte Pike Extension  
**Description:** Extend Old Charlotte Pike as 2 lanes from Del Rio Pike to SR 96 West  
**Right-of-Way:** 72'  
**Cost:** \$13,970,000

### N-3

**Project:** Mack Hatcher Parkway Extension  
**Description:** Extend Mack Hatcher Parkway as 4/5 lanes from Hillsboro Road to Columbia Pike  
**Right-of-Way:** 250'  
**Cost:** \$159,810,000

### N-4

**Project:** McEwen Drive Extension  
**Description:** Extend McEwen Drive as 4/5 lanes from Wilson Pike to Pleasant Hill Road  
**Right-of-Way:** 120'  
**Cost:** \$17,540,000

### N-5

**Project:** Liberty Pike Extension  
**Description:** Extend Liberty Pike as 2/3 lanes to Wilson Pike  
**Right-of-Way:** 60'  
**Cost:** \$4,190,000

### N-6

**Project:** Wilson Pike Reconstruction  
**Description:** Reconstruct Wilson Pike as 2/3 lanes from McEwen Drive to SR 96 East  
**Right-of-Way:** 96' typical. 60' in Village area at Arrington.  
**Cost:** \$41,370,000

### N-7

**Project:** Market Street Extension  
**Description:** Construct Market Street extension as 2 lanes from Clovercroft Road to SR 96 East  
**Right-of-Way:** 72'  
**Cost:** \$7,550,000

### N-8

**Project:** N Chapel Road Extension  
**Description:** Extend N Chapel Road as 2 lanes from 90° curve to the proposed Trinity Road Extension  
**Right-of-Way:** 72'  
**Cost:** \$4,090,000

### N-9

**Project:** N Chapel Road Extension  
**Description:** Extend N Chapel Road as 2 lanes from SR 96 East to 90° curve  
**Right-of-Way:** 72'  
**Cost:** \$1,510,000

### N-10\*

**Project:** Trinity Road Extension  
**Description:** Extend Trinity Road as 2/3 lanes from Trinity Road to Clovercroft Road  
**Right-of-Way:** 72'  
**Cost:** \$20,920,000

### N-11

**Project:** Peytonsville Road Extension  
**Description:** Extend Peytonsville Road as 2/3 lanes from Peytonsville Road to Long Lane  
**Right-of-Way:** 60'  
**Cost:** \$4,880,000

### N-12

**Project:** Buckner Road Extension  
**Description:** Extend Buckner Road as 2/3 lanes from Buckner Lane to Lewisburg Pike  
**Right-of-Way:** 72'  
**Cost:** \$13,900,000

### N-13

**Project:** Saturn Parkway Extension  
**Description:** Extend Saturn Parkway as 4/5 lanes from I-65 to Lewisburg Pike  
**Right-of-Way:** 148'  
**Cost:** \$23,500,000

### N-14\*

**Project:** Evergreen Road Extension  
**Description:** Extend Evergreen Road as 2/3 lanes from Town Center Parkway Extension (proposed) to Carters Creek Pike  
**Right-of-Way:** 72'  
**Cost:** \$60,970,000

### N-15\*

**Project:** Thompson's Station Road Extension  
**Description:** Extend Thompson's Station Road as 2/3 lanes from Thompson's Station Road to Carters Creek Pike (use partial alignments of Evergreen Road and Barker Road)  
**Right-of-Way:** 72'  
**Cost:** \$34,750,000

### N-16

**Project:** Lewisburg Pike Connector and Interchange  
**Description:** Construct Lewisburg Pike Connector as 2/3 lanes from Lewisburg Pike to a proposed I-65 interchange  
**Right-of-Way:** 96'  
**Cost:** \$24,650,000

### N-17\*

**Project:** New Roadway construction  
**Description:** Construct new roadway as 2/3 lanes from Hillsboro Road to Urban Growth Boundary  
**Right-of-Way:** 60'  
**Cost:** \$7,350,000

**N-18**

Project: Lewisburg Pike Connector Extension

Description: Construct new roadway as 2/3 lanes from the proposed I-65 Interchange to Long Lane

Right-of-Way: 72'

Cost: \$12,390,000

**N-19\***

Project: Del Rio Pike Extension

Description: Extend Del Rio Pike as 2 lanes from Carlisle Lane to Urban Growth Boundary

Right-of-Way: 60'

Cost: \$5,310,000

**N-20**

Project: Split Log Road Extension

Description: Extend Split Log Road as 2/3 lanes from Sam Donald Road to Sunset Road

Right-of-Way: 72'

Cost: \$8,400,000

**N-21**

Project: Town Center Parkway Extension

Description: Extend Buckner Road (Town Center Parkway) as 2/3 lanes from Buckner Road to Maury County Line

Right-of-Way: 72'

Cost: \$18,900,000

**N-22**

Project: Kedron Road Connector

Description: Construct new roadway as 2/3 lanes from Buckner Road Extension (prop) to the Maury County Line

Right-of-Way: 72'

Cost: \$43,700,000

**N-23**

Project: Waller Road Extension

Description: Extend Waller Road as 2/3 lanes from Sunset Road to Clovercroft Road

Right-of-Way: 72'

Cost: \$13,510,000

**N-24**

Project: New Roadway construction

Description: Construct new road as 2 lanes from Kidd Road to Rocky Fork Road

Right-of-Way: 72'

Cost: \$11,210,000

**N-25**

Project: New Roadway construction

Description: Construct new road as 2 lanes from proposed road (N-24) to Fly Road

Right-of-Way: 72'

Cost: \$5,510,000

**N-26**

Project: Fly Road Extension

Description: Extend Fly Road as 2 lanes from Rocky Springs Road to York Road

Right-of-Way: 72'

Cost: \$7,410,000

**Safety Improvements**

Some primary county roads have been identified as in need of safety improvements. The recommended improvements would consist of adding a minimum two-foot stabilized shoulder and, where more complete construction could be accomplished without major property impacts, widening the travel lanes to at least 11 feet wide. Contextual sensitivity will be stressed in implementing these roadway improvements. Safety improvements have been identified for the following road segments:

- Carothers Road from South Carothers Parkway to Arno Road
- Del Rio Pike from Old Hillsboro Road to Cotton Lane
- Old Natchez Trace from Sneed Road to Old Hillsboro Road
- N Berrys Chapel Road from Hidden Valley Road to Holly Tree Gap Road
- Mobleys Cut Road from Leipers Creek Road to Johnson Hollow Road
- Johnson Hollow Road from Mobleys Cut Road to Carters Creek Pike
- Popes Chapel Road from Carters Creek Pike to Sugar Ridge Road

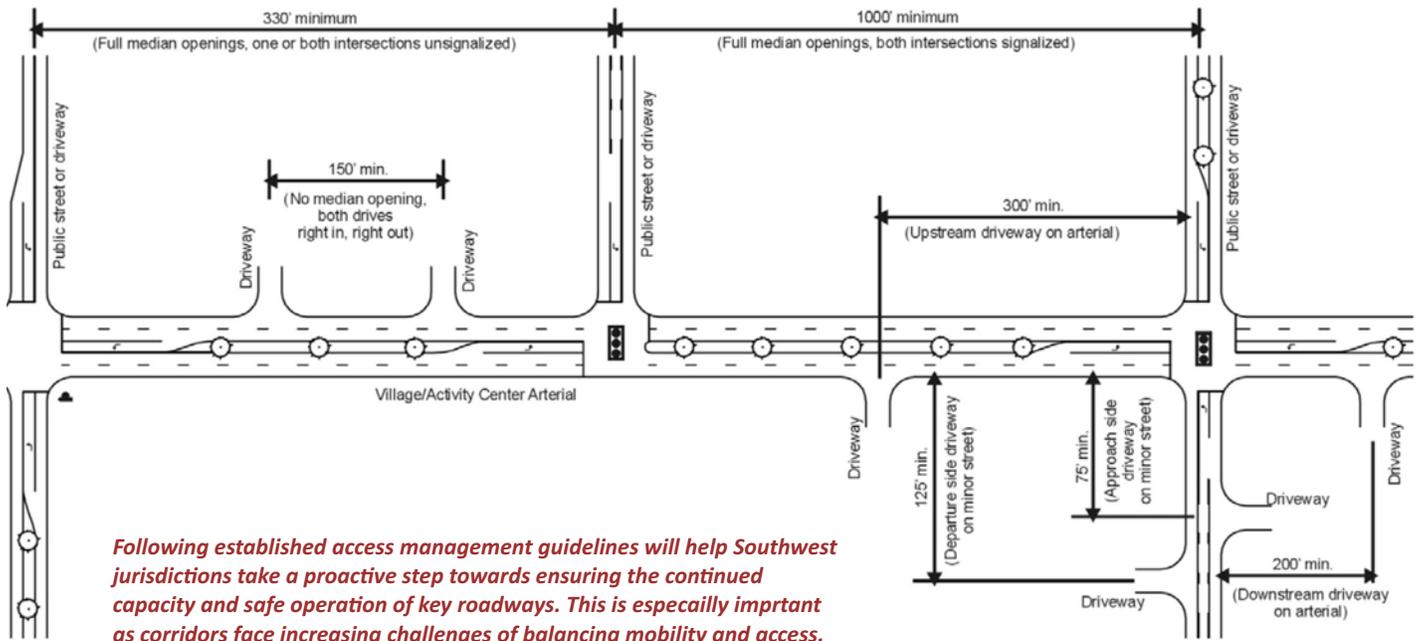
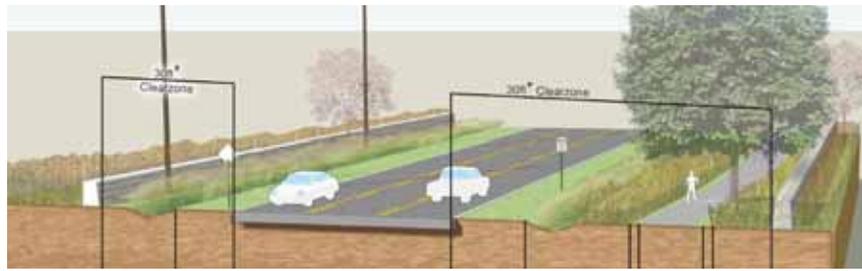


## Contextual Design

The recommended roadway improvements are more than just lines on a map. Each project and its context is unique. As they are implemented, they will affect the existing character of the roadways and areas they pass through. As part of the Southwest study, contextual guidelines were developed and are intended to facilitate the development of the design of the future roadway projects in a way that meets regional goals. The guidelines also offer mitigation strategies for reducing potential negative impacts to historic, cultural, and environmental resources as they are implemented.

The *Southwest Corridor Contextual Elements Guide* uses a combination of functional class and character area as identified in the PG scenario to describe the desirable roadway characteristics in the areas of cross-section, resource mitigation, and access management.

*The Southwest Corridor Contextual Elements Guide represents cross-sections of different function class roads in different character areas. The guidelines present appropriate contextual features for generally rural roads found within the Southwest subregion.*



*Following established access management guidelines will help Southwest jurisdictions take a proactive step towards ensuring the continued capacity and safe operation of key roadways. This is especially important as corridors face increasing challenges of balancing mobility and access.*