

Harrisburg Area Land Use Plan

DECEMBER 2010



HARRISBURG AREA LAND USE PLAN

Prepared for:

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Part 1

Introduction



PART 1: INTRODUCTION

1.1 Project Overview

The Harrisburg Area Land Use Plan (HALUP) is being created through community collaboration to define a direction for future growth and development in and around Harrisburg. It is a policy document that conveys a future vision and the steps to achieve that vision. The Plan is intended to clearly reflect the community's expectations and desires and to guide decisions of Cabarrus County staff, Harrisburg town staff, appointed and elected officials, developers and others involved in local development-related activities. More importantly, it will facilitate consistency in the decision making that affects this area, which is governed by two jurisdictions. Such decisions include those related to development proposals for properties within the study area, regulatory changes, and public infrastructure investments, as each should support the implementation of the Plan.

1.2 Planning Area

Context

Incorporated in 1973, Harrisburg is located in Cabarrus County adjacent to Mecklenburg County. Located along NC-49 just beyond the I-485 loop, the town is conveniently located in close proximity to several employment centers in the region, including Charlotte's center city and the University of North Carolina at Charlotte, and in recent years, has developed primarily as a bedroom community to Charlotte.

Though much of the development that has occurred in Harrisburg has occurred in recent decades, the place has a long history with evidence of settlement as early as 1765. According to the Town, it might have been settled even earlier. By the 1850s with the introduction of the railroad, the area became known as Harris Depot. The depot was named for Robert Harris from whom the right-of-way was purchased. In 1874, with the post office taking the name of Harrisburg, the area became known as Harrisburg. In 1923, with the construction of NC-49 through its business district, development—and the town—soon oriented toward the road and reduced its dependence on the railroad. The depot closed in 1933.

Planning Area Boundary

Cabarrus County has seven (7) different planning areas. The Harrisburg planning area, one of the seven planning areas in Cabarrus County, includes the incorporated area of the town, the unincorporated areas of the county that could be annexed into the town, and the town's future utility service area. (Note: The future utility service area was delineated and agreed upon by Cabarrus County and the municipalities. There also are agreements between Harrisburg and other bordering municipalities that define the utility service areas.)

The decision to include the town's incorporated area, potential annexation area, and future utility service area in the geographic scope of the Harrisburg Area Land Use Plan was a joint decision made by Cabarrus County and the Town of Harrisburg. By creating a plan for the larger area, the citizens in the incorporated and unincorporated areas were able to work together to create a coordinated plan that takes into consideration the impacts of growth and development—and related decisions—occurring in the adjoining areas of adjacent jurisdictions.

Specifically, the eastern boundary follows the Harrisburg Service Area boundary along Lower Rocky River Road instead of the Cabarrus County planning area boundary. The original boundary includes an additional area generally located north of Morrison Road, between Lower Rocky River and Flowes Store Road. With this exception, other boundaries of the study area align with the original planning area boundary for Harrisburg. The northern boundary represents the jurisdiction of Concord, and the western and southern boundary includes the Mecklenburg County line. Refer to Figure 1 for the map depicting the planning area boundary.

1.3 Purpose of Inventory and Assessment

The primary purpose of the detailed inventory and assessment of the characteristics of the Harrisburg area is to gain an understanding of the potential impacts of various factors on future development and redevelopment. By documenting the inventory and assessment in the Existing Conditions report, those involved in the process can identify the potential issues and opportunities, which will be the basis for the Harrisburg Area Land Use Plan.

Information in the report was gathered through review of plans, reports, policies and regulations. Mapping and analysis was performed to further the team's understanding of existing conditions. Elements examined are further described herein and include demographic, housing and economic conditions, land use, urban design, transportation, environment and natural resources, parks and recreation, cultural and historic resources, community facilities, utilities and stormwater management.

1.4 Data Collection and Research

In addition to data collected for mapping purposes, data was also collected to gain a better understanding of the conditions reflected in the data depicted on maps. Much of this additional data was gathered through a review of relevant documents, interviews of key stakeholders, a study area tour, the first community meeting and meetings with the Advisory Committee, and online communication tools.

Documents Reviewed

In the first phase of the planning effort, various documents were gathered from a variety of sources. Plans, reports, policies and regulations were reviewed to

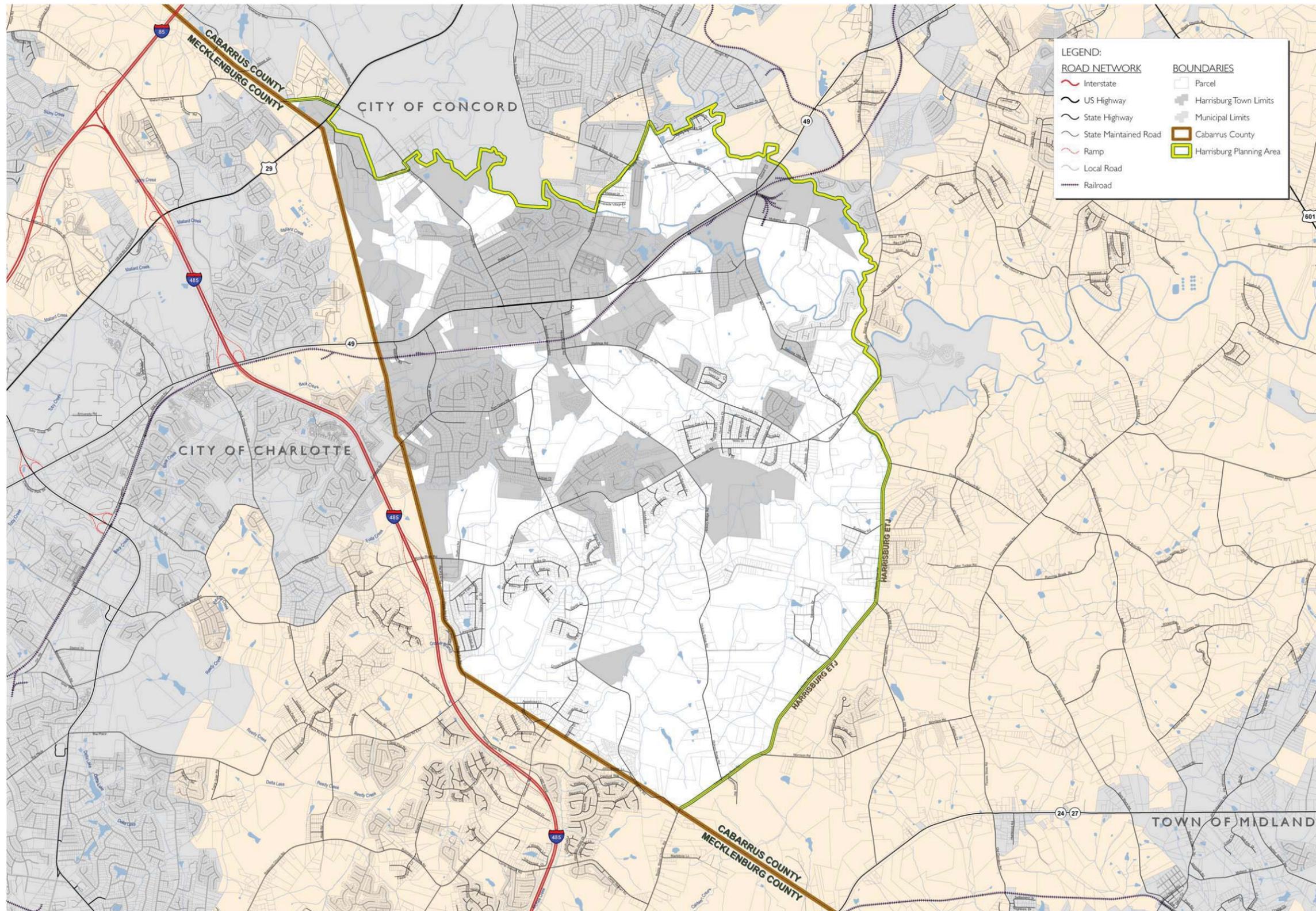


FIGURE I: HARRISBURG PLANNING AREA
HARRISBURG AREA LAND USE PLAN
CABARRUS COUNTY, NORTH CAROLINA



further our understanding of existing conditions. Other documents related to prior or ongoing planning efforts were provided and those documents also were reviewed for pertinent information. The following were among those reviewed prior to the development of the plan:

- Harrisburg Area Plan (2001)
- Central Area Land Use Plan (2008)
- Midland Area Land Use Plan (2004)
- Concord 2015 Land Use Plan (2007)
- Harrisburg Unified Development Ordinance (2009)
- Cabarrus County Zoning Ordinance (2009)
- Cabarrus-Rowan MPO Thoroughfare Plan
- Carolina Thread Trail Master Plan for Cabarrus County Communities (2009)
- Harrisburg Bicycle-Pedestrian Connectivity Study (2006)
- Livable Community Blueprint for Cabarrus County (2002)
- NCDPI Facilities Guidelines (2003)
- Harrisburg Stormwater Manual (2008)
- Harrisburg Stormwater Ordinance (2008)
- Cabarrus County Schools 15-Year Facilities Plan (2009)
- Cabarrus County Flood Damage Prevention Ordinance (2008)
- Cabarrus County Subdivision Ordinance
- Cabarrus County Proposed Trail Design Standards
- Center for Watershed Protection planning tools: *Needs and Capabilities Assessment* and *Eight Tools Audit*
- Upper Rocky River Local Watershed Plan (2005)

Stakeholder Interviews

Stakeholder interviews were conducted to verify and supplement and the data gathered and mapped, to explain the conditions observed and to further the understanding of issues and opportunities that affect the study area and, ultimately, will affect the plan. Their input supplements the input received directly from citizens and property owners participating in the process.

The stakeholders, interviewed in October 2009, include key personnel from town, county, regional and state organizations and agencies as well as representatives of interest groups who can address questions about the following topics: schools, utilities, transportation, real estate, local businesses, racing-related businesses, emergency services, government, economic development, and parks and the environment. Examples of such agencies, organizations and groups include the following: Harrisburg Fire Department, Harrisburg EDC Board, Hometown Pharmacy, Jay Howard Productions, Allen Tate Realtors, 600 Racing, Orleans Homes, J&B Development, Cabarrus County Sheriff's Office, Cabarrus County Parks and Recreation, Cabarrus County Schools, The Water & Sewer Authority of Cabarrus County (WSACC), Cabarrus-Rowan MPO, and the North Carolina Department of Transportation (NCDOT).

Study Area Tour

The consulting team performed a study area tour in July 2009. The purpose was to make observations and gather photos throughout the study area. Also, data gathered and information shown on preliminary mapping was verified.

Observations made were intended to document the established character of the built environment, including the development pattern and scale of existing buildings.

1.5 Community Participation

Advisory Committee

An Advisory Committee has been appointed to help guide the development of the plan. The Advisory Committee is comprised of property owners representing a broad range of interests and interest groups in order to ensure diverse thoughts and opinions. The 15-member committee includes home owners, land owners, business owners, real estate professionals (architects, developers, builders, realtors, etc.), representatives of local groups (including Harrisburg First and Harrisburg Now), a representative of Cabarrus County Schools, and citizens who are active in planning and zoning issues (including current and former members of the Planning and Zoning Boards). This group meets regularly with the consultant team to elaborate on issues and concerns raised by the community and to help prioritize implementation strategies. As community leaders with many connections to local citizens, this group also acts as conduits for input from the broader community. Their input supplements the input received directly from citizens and property owners participating in the process. Refer to Appendix A for a complete list of Advisory Committee members.

Community Meeting #1

Three community meetings occurred during the planning process: November 12, 2009; February 16, 2010; and March 3, 2010. The first of these meetings offered citizens and other stakeholders the opportunity to learn about the project, the process, and the related schedule and to provide input. Attendees listed community assets that should be acknowledged in the plan as features to protect or to leverage for a better community in the future. With those assets in mind, attendees provided input on possible community goals to guide the development of the Harrisburg Area Land Use Plan. Attendees furthermore considered whether the goals adequately addressed the community assets they felt should be part of the Harrisburg area's future.

Charrette

The second community meeting was the highlight of the "charrette," a two-day on-site workshop conducted by project planners and designers February 16-17, 2010. The purpose of the charrette was an intensive exercise to develop key aspects of the Harrisburg Area Land Use Plan in a transparent, accessible setting that maximized input from community stakeholders.

With the help of Harrisburg and Cabarrus County staff, project planners engaged officials and experts representing infrastructure and natural resources as well as the HALUP Advisory Committee in informal meetings throughout the charrette.

The public attended a “drop-in” session the first evening of the charrette, during which attendees viewed maps and drawings as works in progress and discussed ideas and concerns with project planners. Important concepts communicated by citizens included the scenic beauty, especially in the southern portion of the planning area, the future of central Harrisburg around the new municipal building, the state of flash flooding in older neighborhoods near creeks in the middle of the planning area, and the extent of residential land development.

Illustrations to develop some of these concepts for public inspection appear in Appendix B.

Community Meeting #2

The second community meeting engaged participants with an interactive exercise to evaluate alternative land use plans or develop their own version of the Harrisburg Area Future Land Use Map. The exercise followed a presentation of planning area issues and opportunities, as well as plan goals developed in earlier community input avenues.

Internet-based Communication

To augment the input gathered through meetings, a Web site (<http://planning.cabarruscounty.us/Harrisburg/default.aspx>) was created so citizens and other stakeholders could submit comments, ideas, concerns, and questions in response to information posted to the Web site and the Facebook page. Such input was recorded and, like the input shared at the community meeting, was used to clarify the issues and desires of the community.

Part 2

Existing Conditions



PART 2: EXISTING CONDITIONS

2.1 Demographics

The planning area contains an estimated 17,696 residents. The 7,247 new residents between 2000 and 2009 equated to a growth rate of 69.8%. Cabarrus County and the Charlotte Metropolitan Statistical Area (MSA) grew at slower rates of 32.3% and 30.8% during the same period. The planning area captured 17.2% of the population growth in Cabarrus County between 2000 and 2009.

There are an estimated 6,350 households in the planning area, an increase of 72.1% since 2000. The slightly higher growth rate in households over 69.8% for population indicates a downward shift in average household size.

In comparison to the Charlotte MSA, the planning area currently has significantly higher shares of population aged 45 to 64. While residents aged 45 to 54 represent the largest cohort in 2009, the 55 to 64 group increased 134.4% in nine years. These two cohorts represent individuals in the prime earning years, which aid in boosting move-up housing demand and retail spending potential. The 35 to 44 age cohort, representing young families, experienced the slowest growth rate of 26.9%.

The planning area experienced a strong increase in all household income cohorts over \$75,000 between 2000 and 2009. Households earning more than \$100,000 currently comprise the largest cohort in the planning area (29.5%). The planning area has comparatively higher shares of households earning more than \$75,000 than the Charlotte MSA. The median household income in the planning area is currently estimated at \$79,821, 26.9% more than \$62,855 for Cabarrus County and 32.4% more than \$60,301 for the Charlotte MSA.

Refer to the Harrisburg Area Land Use Plan Market Analysis in Appendix D for more information about demographic trends.

2.2 Land Use

2.2.1 Existing Land Use Pattern

The existing land use pattern, as depicted in the Existing Land Use Map (Figure 2), reveals a concentration of development along NC-49 and low density development north and south of that corridor. Rural areas are generally found along the Robinson Church Road, Hickory Ridge Road and Lower Rocky River Road corridors. These rural areas are primarily located outside of the town's municipal limits. Generally, the pattern of the developed area is not highly contiguous; it is interrupted by several undeveloped parcels. The following describes the uses that exist in the planning area and where such uses are located.

Residential Development

Land uses within the study area consist predominantly of single family detached residential uses. Such residential units have been developed at low densities with lot sizes in subdivisions at approximately 0.5 acres typically.

Single family attached (townhomes) and multi-family residential development is very limited; most of these residential unit types are concentrated in the center of the planning area, such as the town center, and in the eastern portion in very small pockets. Multi-family development does exist to the west of the study area within the City of Charlotte and Mecklenburg County, meeting much of the demand for such development in this part of the Charlotte region.

Approved single family (attached and detached) subdivisions in the planning area include the 13 under construction and another 10 that have received entitlements but have not begun site work. Within those 23 approved subdivisions, approximately 2,256 lots are available for development. Refer to the Harrisburg Area Land Use Plan Market Analysis in Appendix D for more information about approved subdivisions.

Non-Residential Development

a. Commercial

The NC-49 corridor is the location of the majority of the existing commercial uses found in the planning area. A small area of commercial development is located along Rocky River Road in close proximity to the interchange with I-485. Refer to Appendix D for more information about commercial development in the planning area.

b. Industrial

Industrial uses are also found along the NC-49 corridor. Certain industrial uses have taken advantage of access to the Norfolk Southern main line, a major freight route that runs roughly parallel to NC-49. The primary draw for industrial uses to the area today, according to stakeholders, is access to I-485 to the west. Other factors influencing location decisions include proximity to Charlotte Motor Speedway, industrial park sites (the sites tend to attract mid-size companies), access to NC-49, the proximity to Charlotte, and availability of workforce housing in Cabarrus and Mecklenburg Counties. The Town currently does not have an industrial site certified by the NC Department of Commerce through the North Carolina Certified Sites program. (The program showcases premium business locations throughout the state that have undergone a rigorous pre-qualification process to ensure they are "shovel ready" for immediate development, (<http://www.nccommerce.com/en/BusinessServices/LocateYourBusiness/BuildingsAndSites/>)). Refer to Appendix D for more information about industrial development in the planning area.

c. *Civic and Institutional*

Civic and institutional uses are located throughout in the planning area. These include Harrisburg Elementary, Hickory Ridge Middle, and Hickory Ridge High schools. The Town Hall and YMCA are collocated in the Town Center in front of a park. The Harrisburg Library is located on Sims Parkway adjacent to Harrisburg Park. Another park exists on Pharr Mill Road, operated by Cabarrus County. A number of churches and community centers are located throughout the study area.

d. *Agricultural*

According to the county's tax data, very few parcels in the study area are in agricultural use. In addition, a review of economic data indicates that agriculture is not a component of Harrisburg's economy. However, the soils in the southern portion of the planning area, which is relatively undeveloped today, would support agricultural uses.

Mixed-Use Development

The 2001 Harrisburg Area Plan called for the creation of a town center, recognizing the need for a physical center to the town and a "magnet for retail, office and service activities." The town center is sited near the intersection of NC Highway 49 and Roberta Road. The approved program includes 373 residential units and 750,000 square feet of commercial space. While the infrastructure is now mostly in place and some development has occurred, the town center vision has not been realized. It contains at least 18 acres of undeveloped land. Uses that have been developed include townhomes, some retail uses such as a coffee shop and several personal services, and the Harrisburg Town Hall, which also houses the Harrisburg YMCA.

Brookdale, another mixed-use development underway in the planning area, is located along Rocky River Road near I-485. A less integrated mixture of uses, this development includes a shopping center anchored by a Harris Teeter grocery store and townhouses adjacent to the shopping center. Additional residential uses, office uses and a park are among the future uses that will add to the mix at Brookdale when it is built out.

Special Uses

a. *Charlotte Motor Speedway*

Charlotte Motor Speedway is located to the north of the planning area at the intersection of Morehead Road and US 29 in Concord. The Speedway facility itself is just outside the northern study area boundary. However, off-site parking areas and camping areas for spectators, as well as related commercial and industrial properties exist along Morehead Road inside the planning area and along Hudspeth Road. Some of these properties accommodate motorsports-related businesses; similar uses have located elsewhere in Harrisburg. A modern landfill facility and a natural wildlife habitat are also located on the property. The Speedway property includes nearly 2,000 acres.

Charlotte Motor Speedway was designed and built in 1959. The Speedway facility has a seating capacity of 140,000 and features a 1.5 mile quad oval track. In addition, a 2.25-mile road course and a dirt track (four-tenths-mile clay oval, stadium-style facility with a seating capacity of 14,000 seats) are found at the facility. A recently completed expansion added a drag strip to the complex, the zMAX Dragway, in 2008. It features a four-lane, all concrete quarter-mile dragway with a seating capacity of approximately 30,000.

Several major events are hosted each year, along with weekly and evening events. Major events include three NASCAR Sprint Cup Series events, two NASCAR Nationwide Series races, a NASCAR Camping World Truck Series event and two NHRA Full Throttle Drag Racing Series events. Each year, two of the nation's largest car shows and swap meets are held at the facility. Driving and racing schools and other organizations use the track throughout the year. The Speedway facility is used more than 300 days per year.

2.2.2 Development Potential

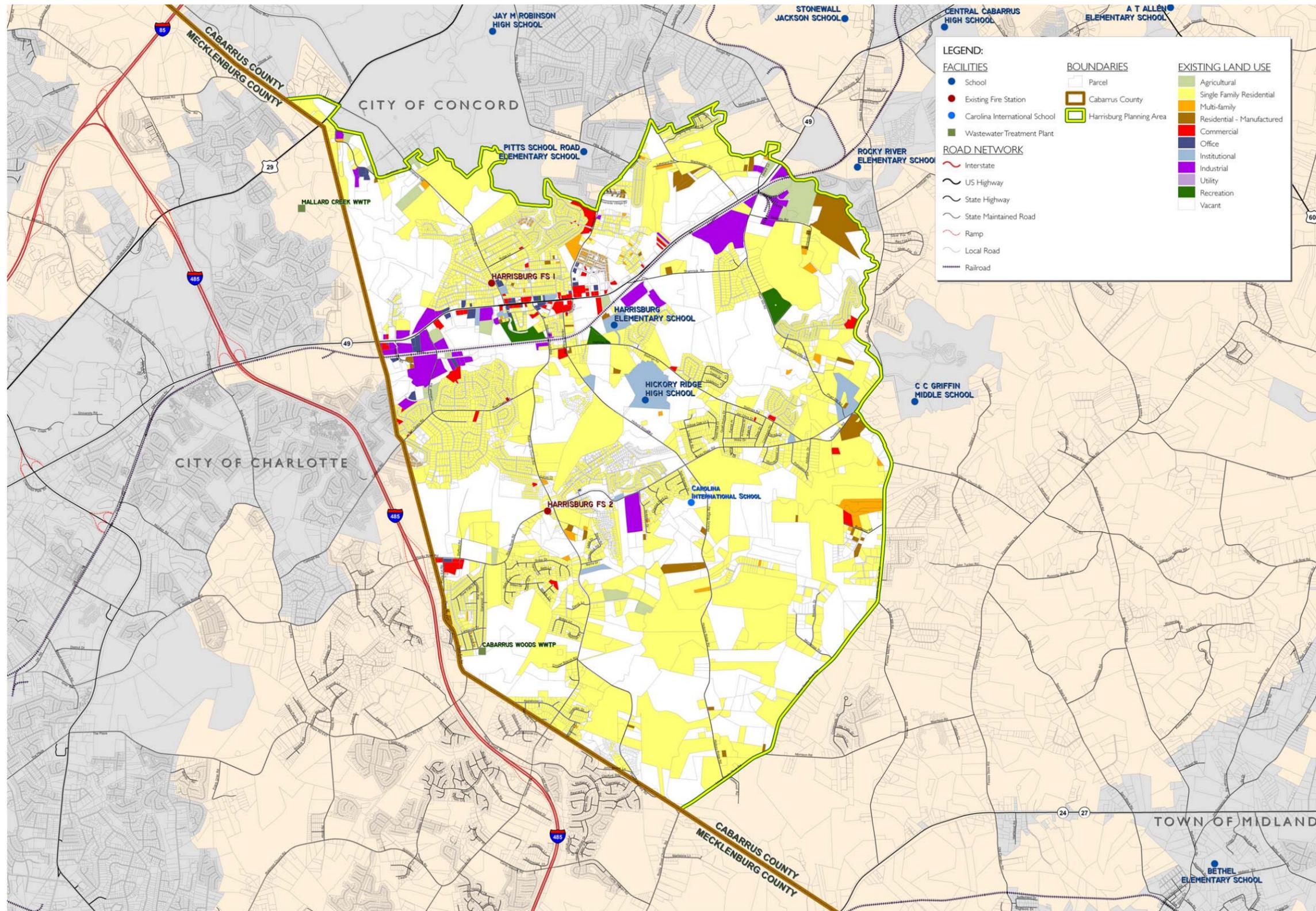
Available Land

The Existing Land Use Map (Figure 2), which is based on parcel data collected and maintained by the County Tax Assessor's office, indicates that approximately 6,084 acres (or 36% of the land in the planning area) are classified as undeveloped. (For the purposes of this planning effort, "undeveloped" refers to any parcel that either has no structure on it or is not classified as a "tax deferred parcel" in agricultural use.) However, the undeveloped land may not be an accurate representation of the land that is actually available for future development. Some parcels that have been developed for one or more uses may be suitable for redevelopment or infill development to better utilize the land. Assuming that all parcels having a structure (or structures) whose total value is equal to or less than 40% of the land value are considered underutilized, approximately 150 parcels could be considered for future redevelopment or infill development. This would expand the total land supply to approximately 10,653 acres (or 63% of the land in the planning area).

Not all such land may be available or suitable for future development due to environmental or regulatory constraints. For the purposes of this planning effort, the following constraints were defined.

No-build Constraints (cannot support development):

- **Water bodies** – All rivers, streams, creeks, lakes, ponds, and impoundments.
- **Stream buffers** – Roughly based on adopted county and town ordinances, a 50-foot buffer along perennial streams (measured from centerline of stream due to data limitations), lakes, ponds, and



- impoundments, and a 35-foot buffer on intermittent streams (measured from centerline of stream due to data limitations).
- **Wetlands and wetland buffers** – All mapped National Wetlands Inventory (NWI) wetlands and, based on adopted county ordinance, a 75-foot buffer around such areas.
 - **Natural Heritage Element Occurrences (NHEO) sites** – Locations of rare and endangered species populations and occurrences of exemplary or unique natural ecosystems (terrestrial and palustrine) and special wildlife habitats. Some are associated with the significant Natural Heritage Areas described in Section 7e.
 - **Areas not served by sewer** – Any areas within a drainage basin that lie more than 3,000 feet beyond an existing sewer line, or areas within a drainage basin not presently served by sewer. Areas within 3,000 feet but on the other side of a ridge were excluded. (This does not apply to single family suitability.)
 - **Undevelopable or permanently protected areas** - Public lands, cemeteries, parks, church sites, school sites, and conservation easements.
 - **Voluntary agricultural districts (VAD)** – Parcels that are currently in the VAD program, according to Cabarrus County.

Other Constraints (restricts/limits development):

- **Floodplains** – Based on FEMA maps and adopted ordinance, areas that are affected by the requirement for finished floor of structures to be elevated above the base flood elevation (BFE).
- **Proximity to the speedway or other high impact uses (for the residential uses only)** – Due to noise and other impacts, areas that lie within 2 miles of such uses.
- **Proximity to the landfill (for all uses except industrial)** – Due to potentially offensive sights and smells, areas that lie within 2 miles of such uses.
- **Proximity to a residential property (for the industrial uses only)** – Any areas that lie within 500 feet of parcels with any type of existing residential use.
- **Poor soils** – Areas with “very limited” soils that present issues for most types of development, based on the soil survey produced by the Soil Conservation Service of the USDA. (See soils information in Environment and Natural Resources section of this report.)
- **Prime farmland** – Areas with soils that considered highly suitable for agriculture producing food, feed, forage, fiber, and oilseed crops, based on the soil survey produced by the Soil Conservation Service of the USDA. (See soils information in Environment and Natural Resources section of this report.)
- **Tax deferred parcels** – Parcels that are identified by Cabarrus County as tax deferred, as such parcels are in agricultural use.

Given the constraints and the potential for redevelopment and infill development, the total area of land available for future development may be

more or less than the area of land classified as undeveloped. Figure 3A displays the land that may be considered available for future development, based on the assumptions explained above.

Land Suitability

“Developability” refers to attributes other than constraints that make a given area more or less attractive for future growth. For example, areas in close proximity to sewer were scored better than others in terms of suitability. In other words, areas close to existing sewer lines have a higher suitability scoring than those that do not. Scoring decreases the further a site or area is from existing sewer with the rationale that it will be more expensive to build new sewer lines.

Factors were applied to six land uses categories corresponding with market forecasts: Single-family/Townhome, Multi-family, Neighborhood Retail, Regional Retail, Office and Industrial. Refer to Figures 3B-3G, Suitability Maps.

Single-Family/Townhome Suitability Factors

- **Proximity to sewer collection line** - Minimum 8" diameter line. Proximity to sewer line using Euclidian distance.
- **Proximity to water supply line** - Minimum 8" diameter line. Proximity to water line using Euclidian distance.
- **Existing residential parcels within existing subdivision** - These are identified by the presence of parcels that have a land use description of 'Condominium', 'Duplex, Triplex', 'Garden Apartment', 'Manufactured Homes', 'Single Family Residence', or 'Town House Apartment'.
- **Proximity to existing neighborhood commercial** - Based on proximity to the nearest parcel with any type of commercial use based on tax data using the cost surface grid representing the road network.
- **Proximity to recreation sites** – Proximity to the nearest existing park, using the cost surface grid representing the road network.
- **Proximity to elementary schools** - Proximity to the nearest elementary school up to a maximum distance of 2 miles, using the cost surface grid representing the road network. After 2 miles, the suitability value will be considered very low.
- **Proximity to middle schools** - Proximity to the nearest middle school up to a maximum distance of 3 miles, using the cost surface grid representing the road network. After 3 miles, the suitability value will be considered very low.

Multi-Family Suitability Factors

- **Proximity to sewer collection line** - Minimum 8" diameter line. Proximity to sewer line using Euclidian distance.
- **Proximity to water supply line** - Minimum 8" diameter line. Proximity to water line using Euclidian distance.
- **Proximity to major intersections** – Proximity to an intersection of two major thoroughfares or a major thoroughfare and a minor thoroughfare, using the cost surface grid representing the road network.

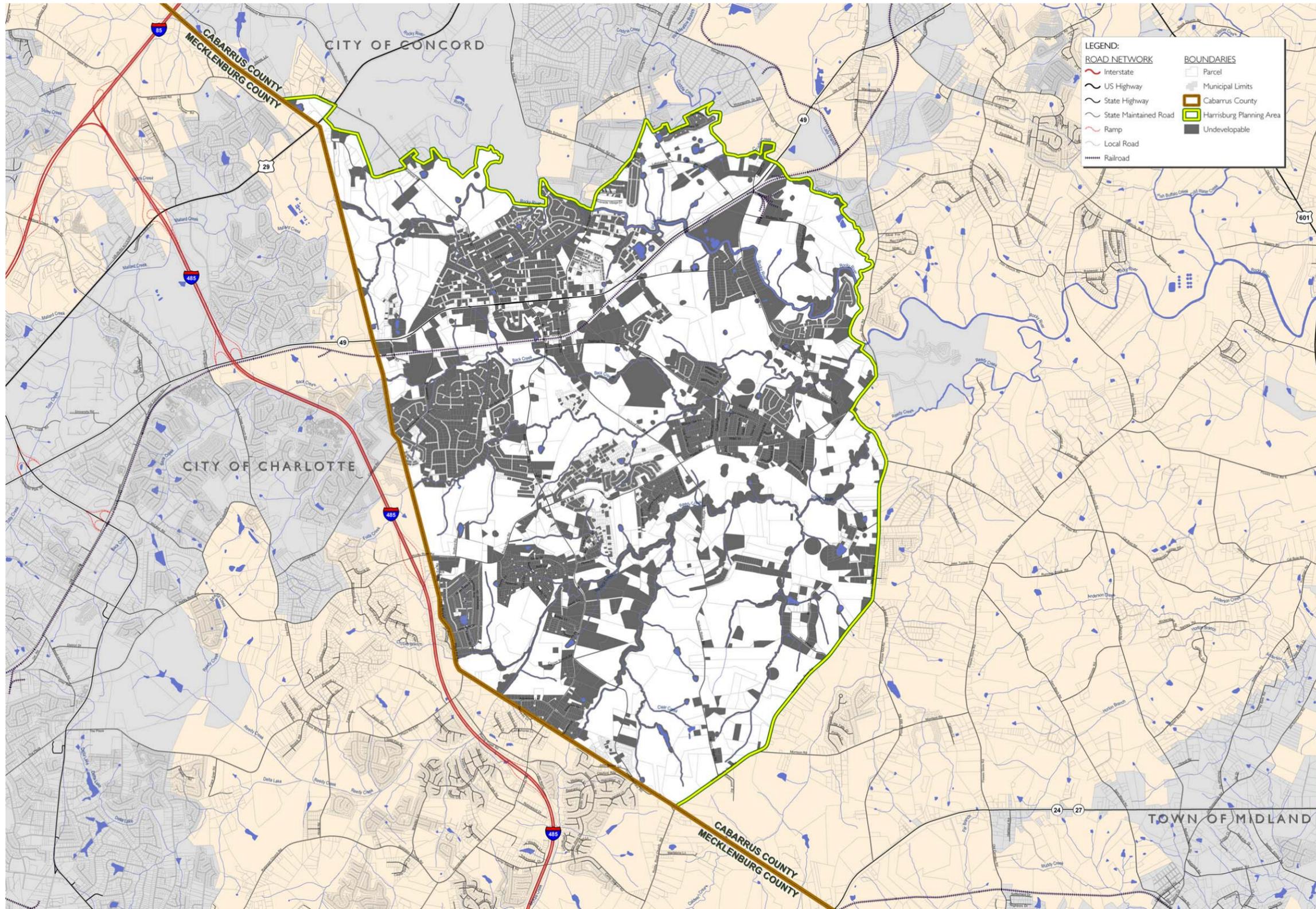


FIGURE 3A: AVAILABLE LAND
HARRISBURG AREA LAND USE PLAN
CABARRUS COUNTY, NORTH CAROLINA

NOT TO SCALE



1 Inch = 1,500 Feet

Sources:
North Carolina Dept. of Environmental and Natural Resources: <http://www.ncnemap.com/data.html>,
North Carolina Dept. of Transportation www.NC DOT.org
Disclaimer:
The user of this information is cautioned to consider the provisional nature of the information before making decisions that concern monetary or operational consequences. Furthermore, LandDesign Inc. assumes no responsibility for the accuracy, completeness or misuse of this information. Conclusions or actions taken from this information are the sole responsibility of the user. Please contact original source about questions on data.

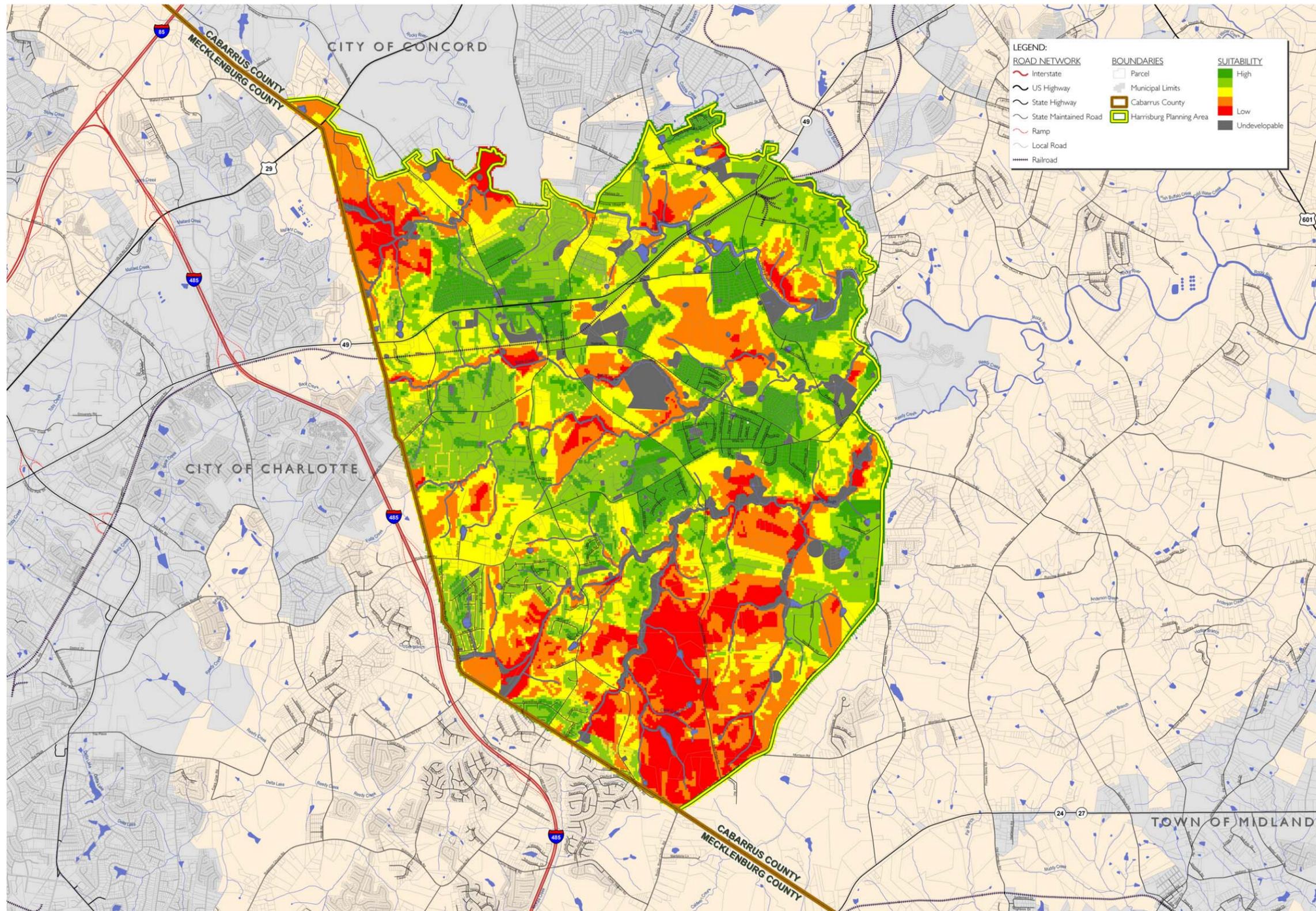
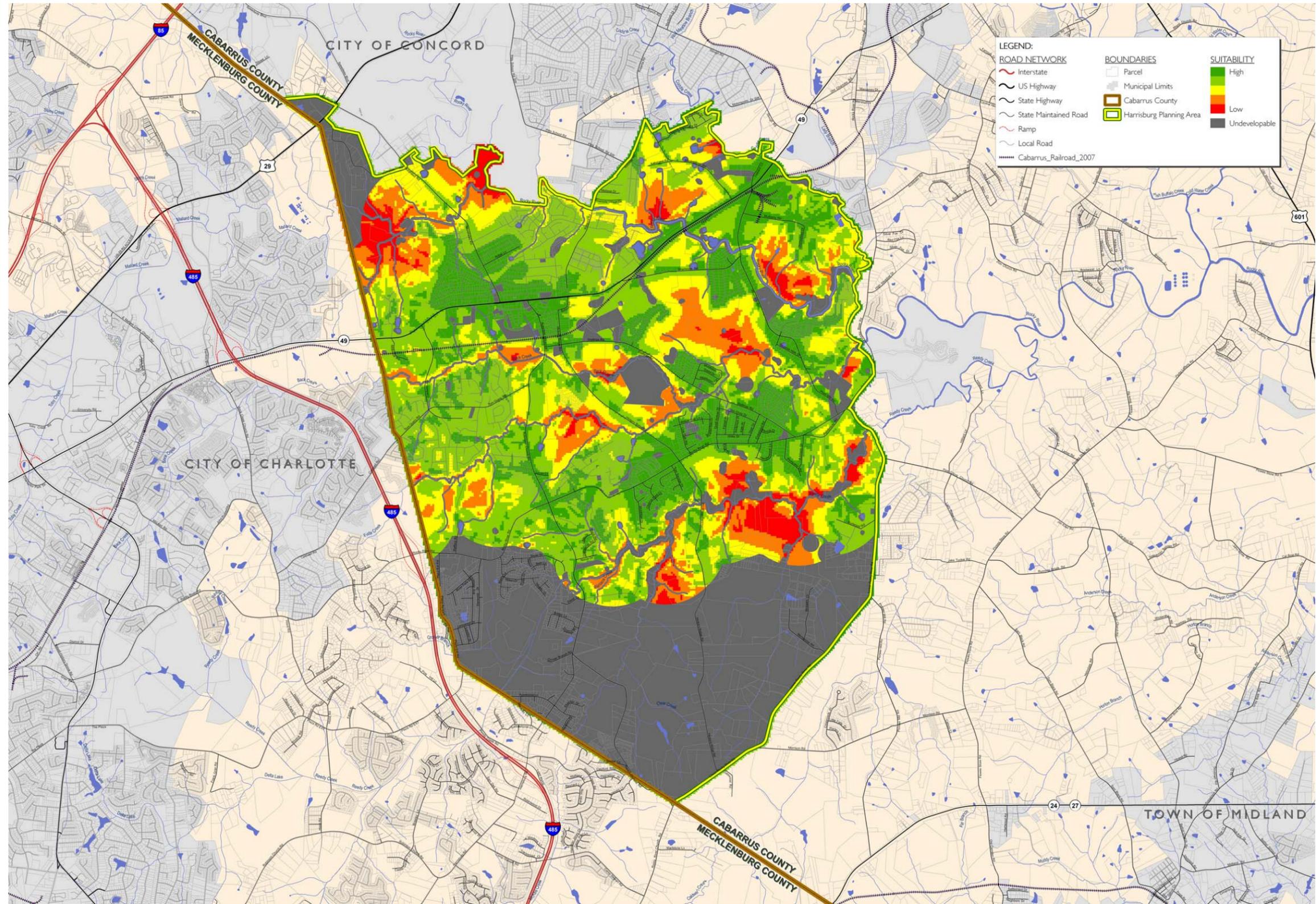
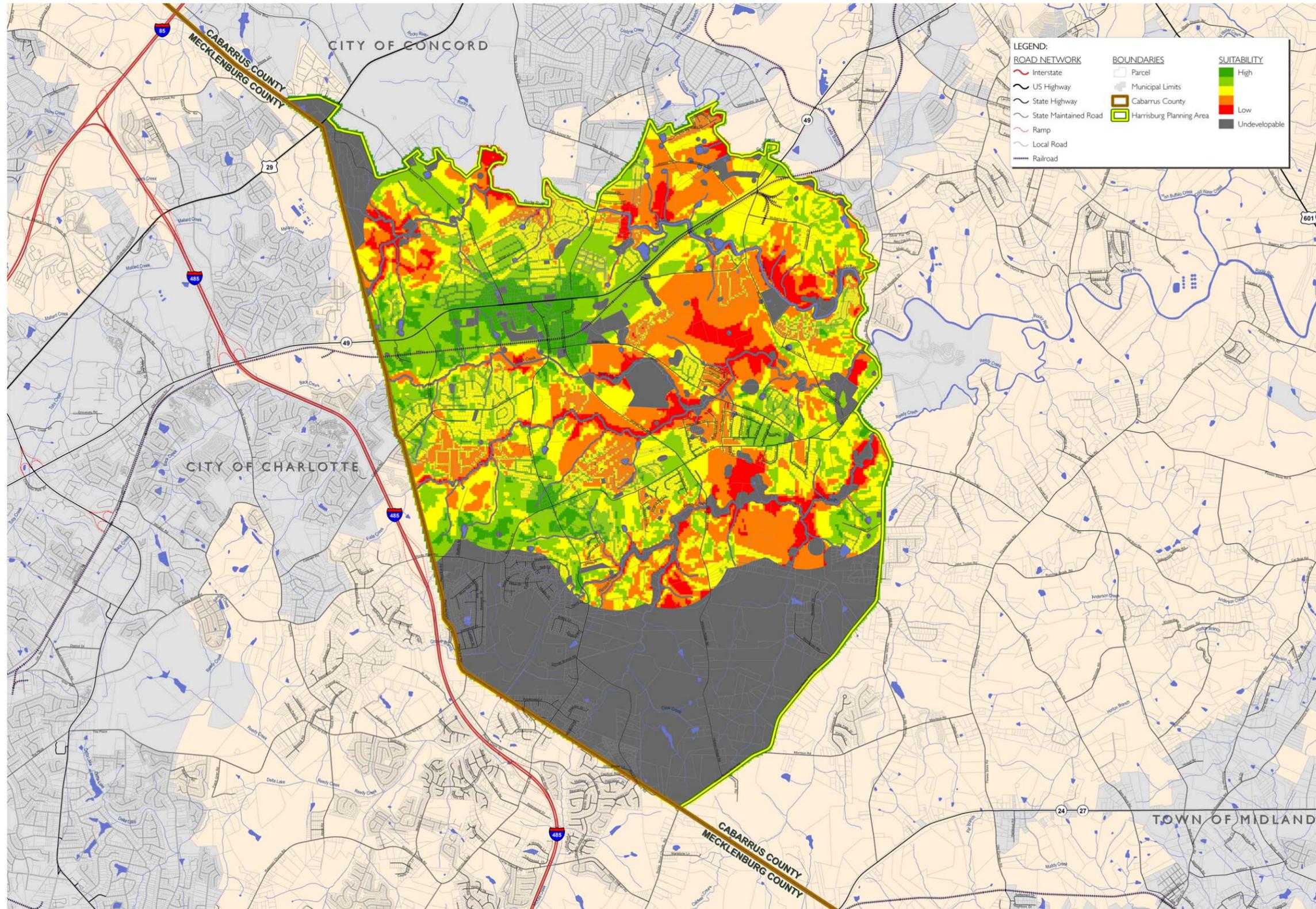
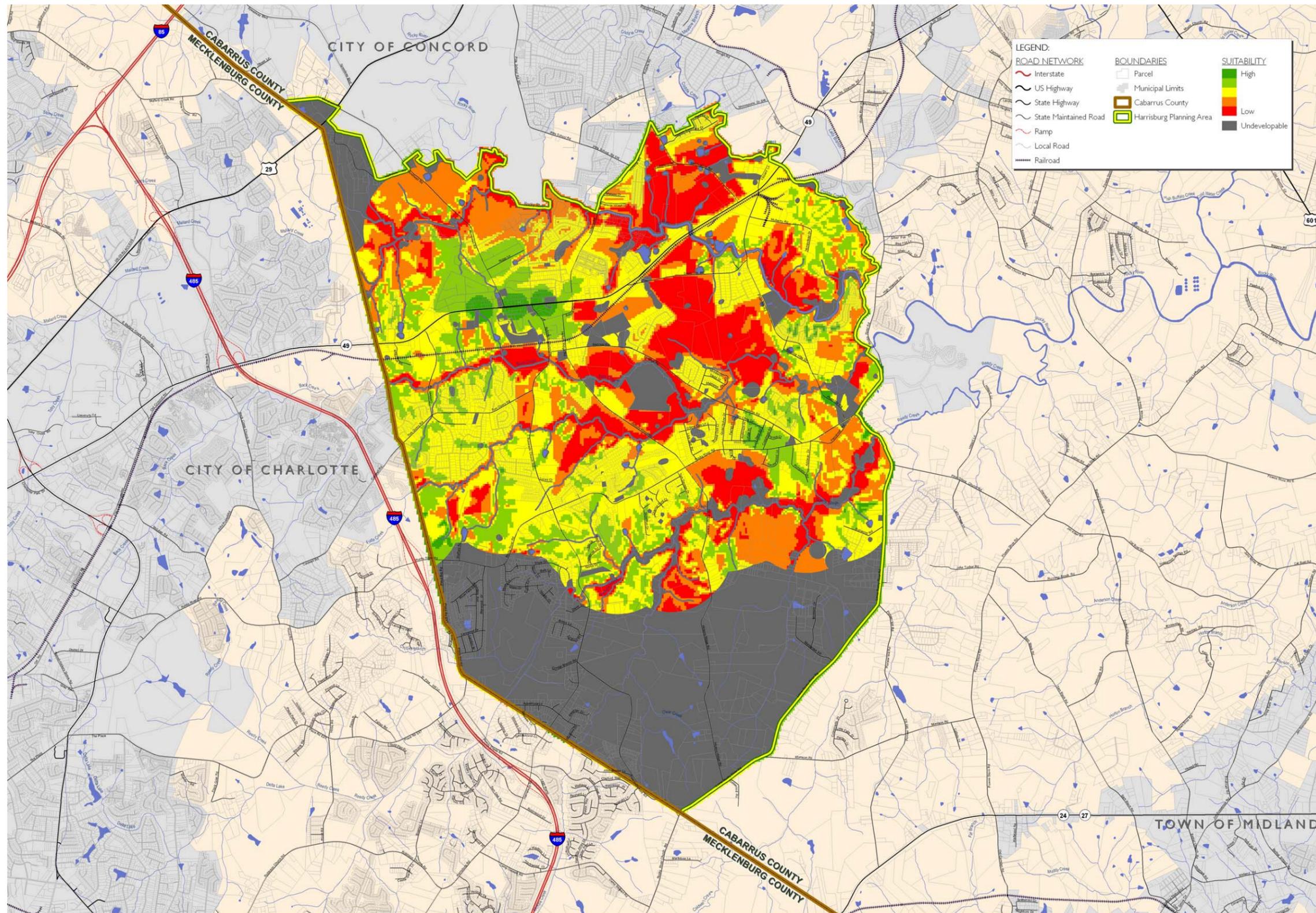


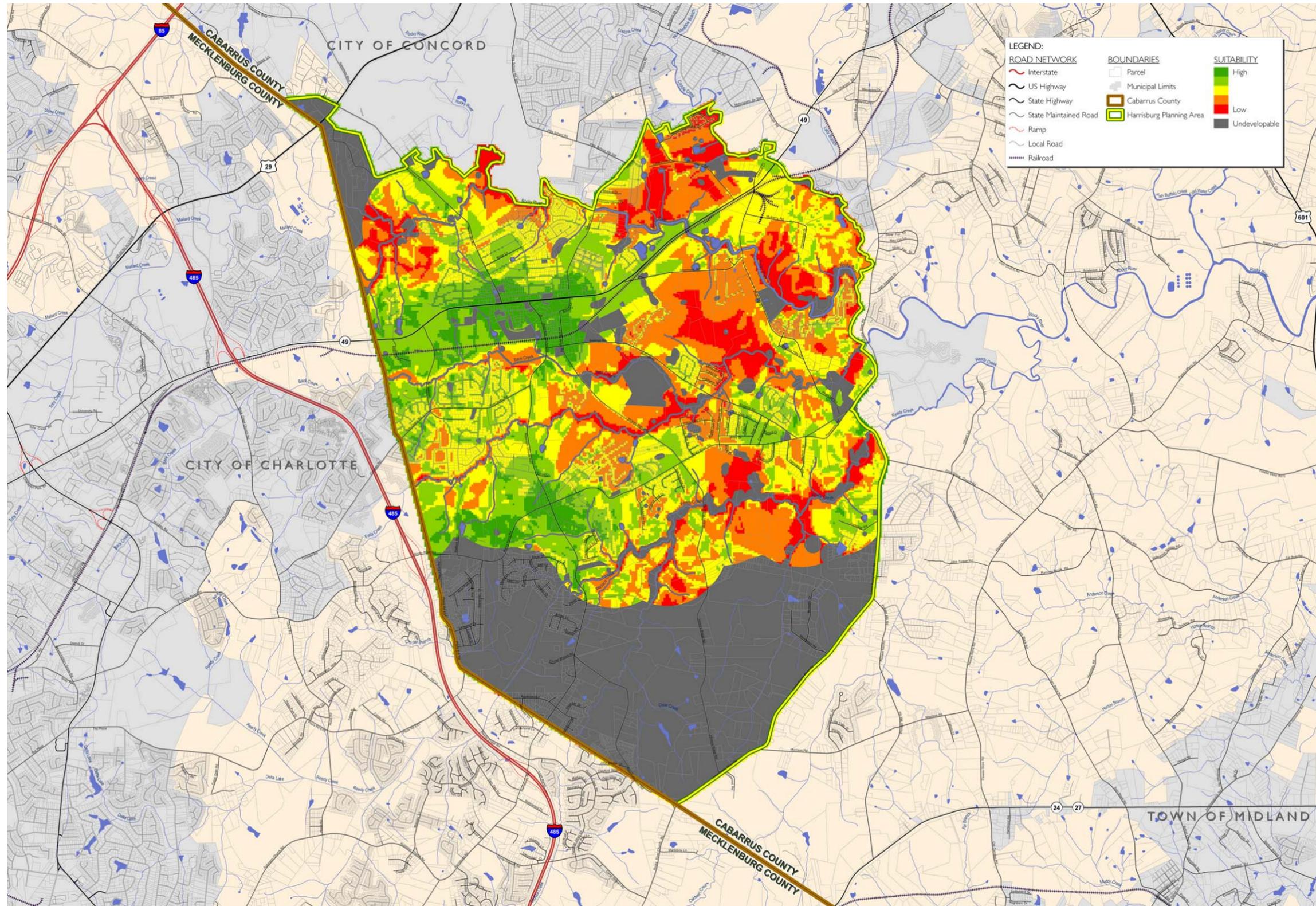
FIGURE 3B: SINGLE FAMILY SUITABILITY
HARRISBURG AREA LAND USE PLAN
CABARRUS COUNTY, NORTH CAROLINA

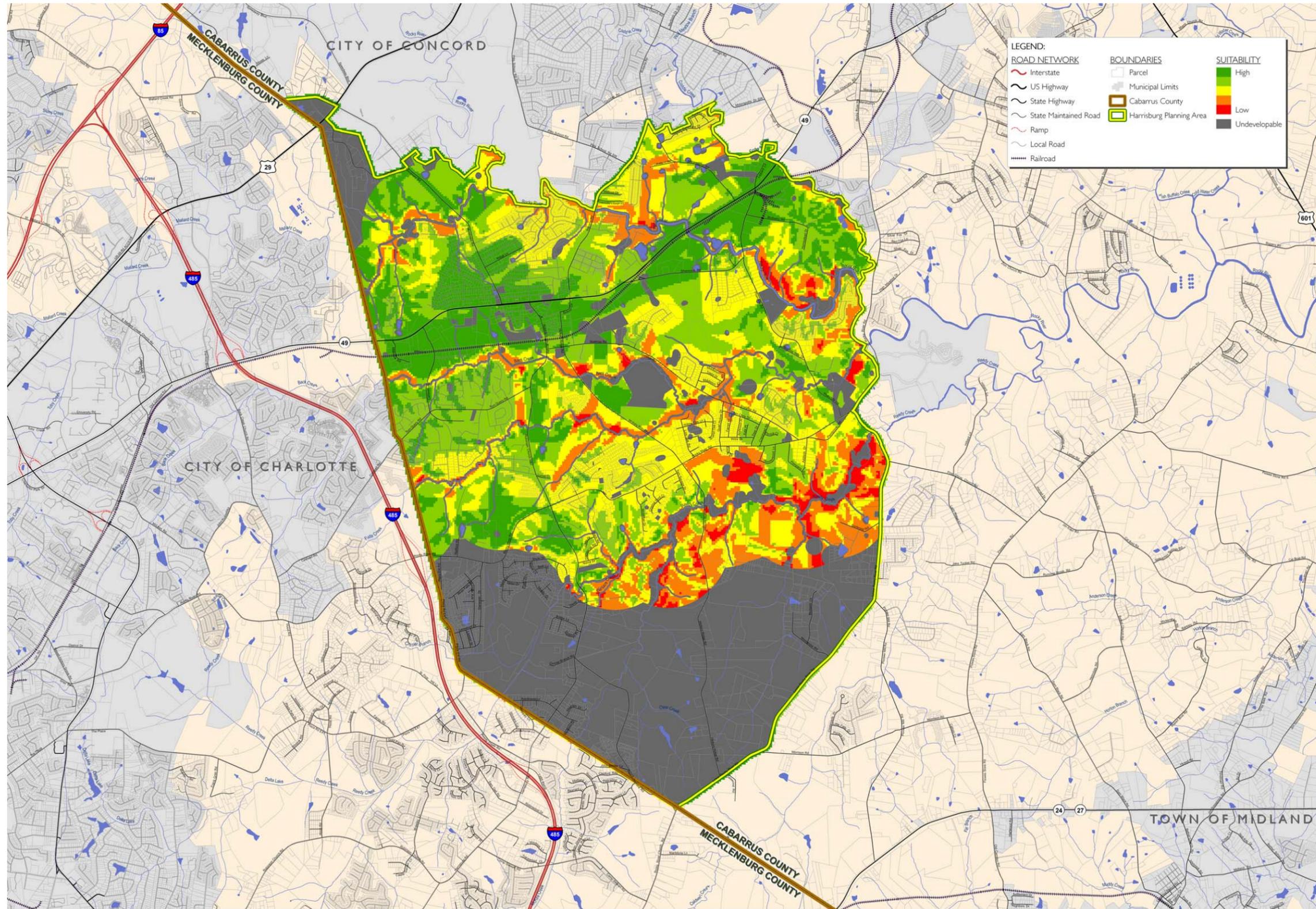












- **Proximity to interstate interchanges** - Proximity to interstate highway interchanges, using the cost surface grid representing the road network.
- **Proximity to existing neighborhood commercial** - Proximity to the nearest parcel with any type of commercial tax designation, using the cost surface grid representing the road network.
- **Proximity to recreation sites** – Distance from existing parks (using the cost surface grid representing the road network).

Neighborhood Retail Suitability Factors

- **Proximity to sewer collection line** - Minimum 8" diameter line. Proximity to sewer line using Euclidian distance.
- **Proximity to water supply line** - Minimum 8" diameter line. Proximity to water line using Euclidian distance.
- **Proximity to major intersections with 1,000 residential units within 1 mile of intersection** – From a selected subset of major intersections (where two major thoroughfares, or one major thoroughfare and one minor thoroughfare, intersect), a radius of ¼-mile from the intersection was delineated. Within the ¼-mile radius a suitability score was calculated based on the cost surface grid representing the road network.
- **Proximity to existing neighborhood commercial** - Proximity to the nearest parcel with any type of commercial tax designation, using the cost surface grid representing the road network. Areas more than 1 mile from a commercial parcel were given a suitability value of 0 for this variable.

Regional Retail Suitability Factors

- **Proximity to sewer collection line** - Minimum 8" diameter line. Proximity to sewer line using Euclidian distance.
- **Proximity to water supply line** - Minimum 8" diameter line. Proximity to water line using Euclidian distance.
- **Proximity to major intersections with traffic counts exceeding 25,000 ADT** – Distance from a major intersection (where two major thoroughfares, or one major thoroughfare and one minor thoroughfare, intersect), up to 1/8 mile, provided such intersections have traffic counts of at least 25,000 average daily trips.
- **Proximity to interstate interchanges** - Proximity to interstate highway interchanges, using the cost surface grid representing the road network.

Office Suitability Factors

- **Proximity to sewer collection line** - Minimum 8" diameter line. Proximity to sewer line using Euclidian distance.
- **Proximity to water supply line** - Minimum 8" diameter line. Proximity to water line using Euclidian distance.
- **Proximity to major intersections with 1,000 residential units within 1 mile of intersection** – From a selected subset of major intersections (where two major thoroughfares, or one major thoroughfare and one minor thoroughfare, intersect), a radius of ¼-mile from the intersection was identified. Within the ¼-mile radius a suitability score

was calculated based on the cost surface grid representing the road network.

- **Proximity to existing neighborhood commercial** - Proximity to the nearest parcel with any type of commercial tax designation, using the cost surface grid representing the road network. Areas more than 1 mile from a commercial parcel were given a suitability value of 0 for this variable.
- **Proximity to hospital** - Distance from existing or proposed hospital, using Euclidian distance.

Industrial Suitability Factors

- **Proximity to sewer collection line** - Minimum 8" diameter line. Proximity to sewer line using Euclidian distance.
- **Proximity to water supply line** - Minimum 8" diameter line. Proximity to water line using Euclidian distance.
- **Proximity to interstate interchanges** - Proximity to interstate highway interchanges, using the cost surface grid representing the road network.
- **Proximity to existing railroad** – Parcels adjoining existing railroad right-of-way.

Note: The NC Dept of Commerce's NC Certified Sites program requires the following:

- *Sewer - A minimum service requirement of 300,000 gallons per day of excess permitted sewer treatment is required.)*
- *Water – A minimum service requirement of 500,000 gallons per day of excess permitted water capacity is required.*

Adopted Zoning

Parcels within the study area are zoned in accordance with the zoning regulations of the town or the county. Composite mapping of the current zoning districts of the two jurisdictions reveals the variety. Refer to Figure 4, Existing Zoning.

Planned Unit Development (PUD) districts apply to significant areas along the western boundary of the study area where it abuts Mecklenburg County. Also, the town center has been designated a PUD.

Much of the area to the south of Rocky River Road falls within the Countryside Residential (CR) district, which the County has applied to unincorporated areas outside of Harrisburg Extraterritorial Jurisdiction. The Town has annexed land in this area, much of which has been developed, and zoned it Rural Estate (RE).

Outside of planned unit developments, the study area could be built out with mostly very low density residential uses if development occurred in accordance with current zoning.

Adopted Land Use Plans

In order to further understand the context and the intent for future growth and development of the planning area and various jurisdictions that surround the planning area, the policies expressed in the adopted land use plans were reviewed. Future land use maps were also collected and reviewed. The adopted

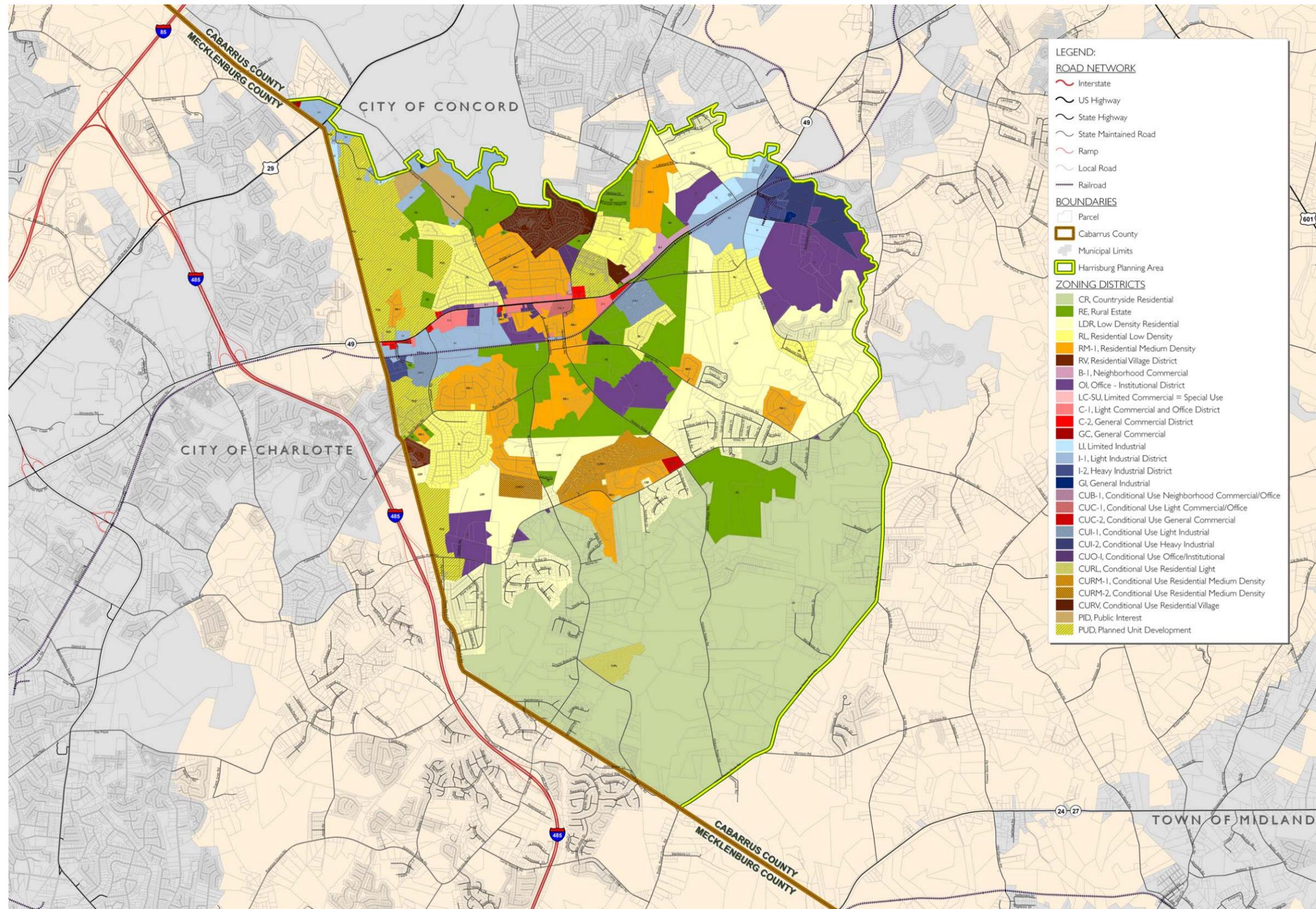


FIGURE 4: ZONING
 HARRISBURG AREA LAND USE PLAN
 CABARRUS COUNTY, NORTH CAROLINA



plans suggest a future pattern that is predominantly low density residential with commercial and industrial uses located along major arterials. The following describes the various plans in more detail.

a. Harrisburg

The Harrisburg Area Plan, a joint plan between Cabarrus County and the Town of Harrisburg, was adopted by the Harrisburg Town Council and the Cabarrus County Board of Commissioners in March 2001. The plan recognized the challenges that Harrisburg has been facing, which most communities in the path of metropolitan growth face. The goals and recommendations emphasize improvements to the quality of life, growth in areas with adequate infrastructure, and mixed-use development in key areas to accommodate a variety of uses, particularly higher density residential uses, in nodes. For example, a primary goal for residential development is medium and higher density housing within the Mixed Residential, Town Center, and Village Mixed-Use districts. The future land use map indicates a desire for low density residential development flanking the commercial areas depicted along NC-49 and near the Charlotte Motor Speedway as well as a very low density area with open space south of NC-49. A key recommendation of the plan is the creation of a town center to establish a downtown that did not exist in Harrisburg.

b. Neighboring Jurisdictions

In order to further understand the context and the intent for future growth and development of various jurisdictions that surround the study area, adopted land use plans and policy documents of surrounding jurisdictions were reviewed. Future land use maps were collected and reviewed. This review facilitated an understanding of future land uses planned near Harrisburg that may influence future land uses within the study area.

City of Concord Land Use Plan

The utility service and annexation areas of the City of Concord extend along the northern eastern boundary of the Harrisburg planning area. The City of Concord Land Use Plan (2007) depicts desired future land uses along this northern and eastern boundary in accordance with its own study area.

To the north, designated future land uses include "Industrial" along both sides of Morehead Road and also areas along NC 49. Charlotte Motor Speedway is designated as an area for motorsports-related uses. An area designated for commercial development exists at the terminus of Stough Road and NC 49, on the south side of NC 49 immediately outside the Harrisburg planning area. Single family residential uses are intended for areas along Roberta Road and Pitts School Road.

To the east, an area that includes a segment of the Rocky River Road corridor, single-family residential land uses are indicated. A "Village

Center," which is defined as small, mixed-use center predominantly residential in character, is likewise designated to the east of the study area.

Cabarrus County Central Area Plan

The Central Area is one of the seven (7) planning areas within Cabarrus County. The Central Area includes portions of areas also addressed by the City of Concord Land Use Plan. The Cabarrus County Central Area Plan (2008) was more recently completed. The land use plan designates future land uses for areas to the east of the study area.

Areas along NC 49 are designated light industrial, with the exception of a commercially-designated site at the terminus of Stough Road and NC 49. Low density residential is the preferred use for areas to the east of the study area along Rocky River Road. A mixed use area is designated to the east of the study area.

Midland Area Land Use Plan

While the jurisdiction of the Town of Midland does not immediately abut the study area, the Midland Area, one of the seven planning areas within Cabarrus County, abuts the southern boundary of the study area which runs along Lower Rocky River Road. According to the Midland Area Plan (2004), "countryside residential", which emphasizes a strong rural, pastoral feel achieved through very low density residential development, is indicated as an appropriate future land use south of the study area.

City of Charlotte / Mecklenburg County

The Northeast District Plan (2007) for Charlotte and Mecklenburg County calls for a variety of future land uses at or near the western boundary of the study area. Beginning in the area that lies northwest of the study area, the US 29 corridor includes areas designated for multi-family development. Between Mallard Creek and NC 49 are areas that would support single family development. A small retail area is designated on the north side of NC 49. Areas on the south side of NC 49 are designated for light industrial uses.

Moving southward along the county line are Residential designated areas, generally located between Back Creek and Fuda Creek and the interchange of I-485 with Rocky River Road. Office, residential office, and retail are uses envisioned for the eastern quadrants of the interchange along the county line. Additional residential development is desired to the south along the county line.

2.3 Economic Conditions

Much of the economic growth in the planning area has been influenced by significant development and transportation improvements in the region. Several economic drivers are affecting investment decisions in and near Harrisburg. Among the major drivers that are having an impact on housing and employment in the planning area are the following:

- Downtown Charlotte, the primary employment and entertainment center in the region;
- University Research Park;
- University of North Carolina at Charlotte;
- Concord Mills;
- North Carolina Research Campus;
- Philip Morris site; and
- Transportation facilities, including I-485 and the CATS northeast corridor light rail line.

Refer to the Harrisburg Area Land Use Plan Market Analysis in Appendix D for more information about these major economic drivers.

Commercial (Retail and Office) Development Activity

Retail construction in the planning area has been more prevalent since 2000. Of the 698,919 square feet of retail space currently in the planning area, 53.0% has been completed since 2000, mostly within the NC-49 corridor. The overall retail vacancy in the shopping centers in the planning area is 6.2%, slightly higher than 5.7% for Cabarrus County. In the county, unanchored specialty centers, which are typically the first to experience vacancies when the market weakens, had the highest vacancy of 21.8%. Cabarrus County completions of all types of retail space outpaced net absorption in the five years between 2004 and 2008, creating an oversupply of 69,961 square feet overall, which caused the vacancy rate to peak at 5.2% at the end of 2008. (Vacancy was the lowest in 2007 at 3.6%.) This compared favorably to a 6.9% vacancy rate for the six-county Charlotte market. Reported rents in the greater Charlotte market at year-end 2008 were, on average, \$2.20 more than Cabarrus County.

The planning area has approximately 245,000 square feet of office space, and approximately 51.8% of the total office inventory has been completed since 2000. Office space is primarily concentrated along NC-49, with some recent completions on Rocky River Road near the Brookdale development. Only general office space was completed in the planning area prior to 1980. Since that time, strong population growth in Harrisburg has increased demand for medical and professional services.

A total of 3.5 million square feet of commercial (retail and office) space has been approved in the planning area. Approved square footage per development ranges from 1.7 million square feet within EPIC to 150,000 within Magnolia Springs. In addition, Morrison Ridge and the Mills at Rocky River, two

developments which lie outside of the planning area but have not been constructed, have a combined total of 1.3 million square feet. With these nearby commercial developments, approximately 4.8 million square feet of retail and office space have been approved that would serve the planning area. Of this total, only 300,000 square feet have been constructed, most of which is in Harrisburg's town center. The developer has completed a mixture of retail and office square footage totaling 262,000 square feet.

Refer to the Harrisburg Area Land Use Plan Market Analysis in Appendix D for more information about retail and office trends and activity.

Industrial Development Activity

Most of the planning area industrial space is concentrated along NC-49 and the parallel rail line. Industrial construction has been highest since 2000, due primarily to 746,000 square feet completed along NC-49 for the Saddle Creek Corporation, bringing the planning area total to more than 2.6 million square feet. These buildings are located on freestanding parcels or in industrial parks.

The three improved industrial parks, which have infrastructure in place, are all located in the western portion of the planning area. Of the 173 acres contained within these parks, a total of 115 acres (66.5%) are currently vacant and available. Caldwell Industrial Park has the largest availability of land, with over 70% remaining vacant.

Refer to the Harrisburg Area Land Use Plan Market Analysis in Appendix D for more information about industrial trends and activity.

Employment

In comparison to the Charlotte MSA, Cabarrus County had higher shares of employment in the Manufacturing, Retail Trade, and Education and Health Services sectors in 2008. The county experienced significant increases in Education and Health Services, Leisure and Hospitality Services, and Retail Trade employment between 2002 and 2008. Education and Health Services had the most employees in 2008 (15,163), an increase of 32.5% since 2002. Leisure and Hospitality Services experienced the largest percent increase of 49.4% over the six-year period.

Three industries experienced a decline in employment between 2002 and 2008: Manufacturing (-34.3%); Transportation, Warehousing, and Utilities (-22.7%); and Information (-18.3%). The Manufacturing sector posted a severe 4,044-job loss during the same period.

The planning area currently has an estimated 8,182 employed residents; however, at least 4,163 residents (51%) work outside of the planning area. No industries exhibited a net inflow of employees from outside the planning area.

Refer to the Harrisburg Area Land Use Plan Market Analysis in Appendix D for more information about employment.

2.4 Housing

Housing units in the planning area increased 75.6% from 2000 to 2009. That growth accounted for 14.9% of new housing unit growth in Cabarrus County. Housing units in Cabarrus County and the Charlotte MSA grew at slower rates of 36.4% and 35.3%, respectively, during the same period.

In 2000, the 3,810 housing units in the planning area were approximately 92.5% single-family. Another 6.9% were mobile homes and 0.6% were multi-family.

Comparatively, 74.2% of the housing units in Cabarrus County and 66.3% of the units in the Charlotte MSA were single-family. The planning area also had a considerably lower share of multi-family units than both Cabarrus County (13.4%) and the Charlotte MSA (26.4%).

Owner-occupied units account for 87.8% of all housing units in the planning area, higher than 68.4% for Cabarrus County and 61.9% for the Charlotte MSA. The share of renter-occupied units is 22.5% less than the Charlotte MSA. The extremely limited stock of multi-family units in the planning area indicates that renter-occupied units are primarily investor-owned single-family properties. The planning area has a stabilized vacancy rate of 5.1%, less than 8.1% in Cabarrus County and 8.5% in the Charlotte MSA.

More than 11,000 new single-family residential permits have been issued in Cabarrus County since January 2003. New single-family closings since 2007 have strongly outpaced building permits, impacting the existing supply of new construction in the area. If closings continue to outpace building permits, new unsold residential units will be quickly absorbed.

There were 242 new townhouse closings in Township 1 (an area greater than the planning area) between 2003 and September 2009, averaging 40 units annually. New townhouse closings were primarily located in the Harrisburg Town Center development.

Refer to the Harrisburg Area Land Use Plan Market Analysis in Appendix D for more information about housing trends and activity.

2.5 Urban Design and Community Character

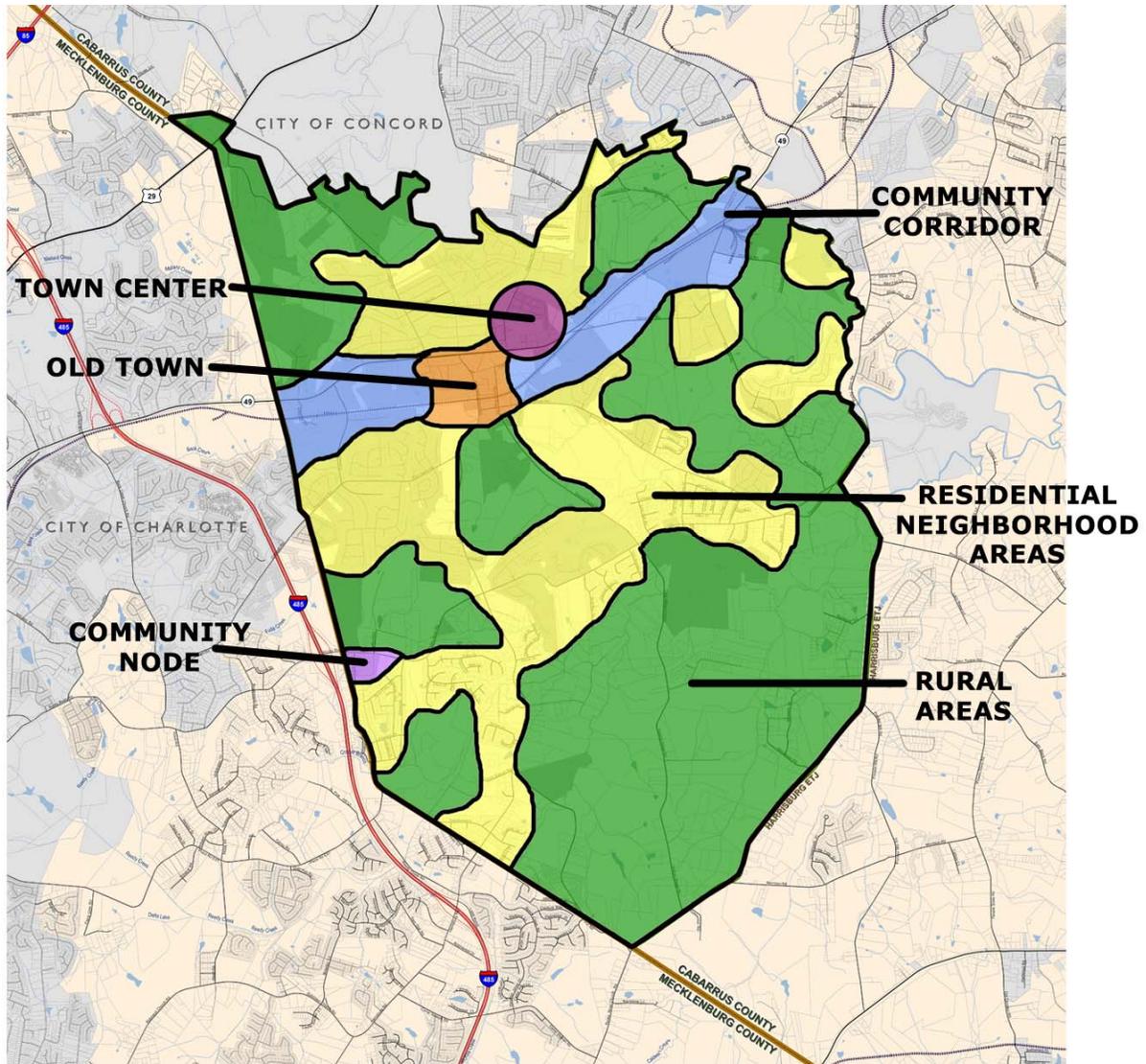
Overall Character

The study area is predominantly suburban in character, with a dispersed development pattern. Low structures of one to two stories are typical in the developed areas, and such structures are separated from each other and the public streets by large setbacks, creating a very open, low density appearance. The auto-oriented design of most of this suburban style development has led to parking that surrounds structures, allowing it to become a prominent feature of

the development pattern and streetscape, and to disconnected subdivisions in which single-family homes on large lots have been built.

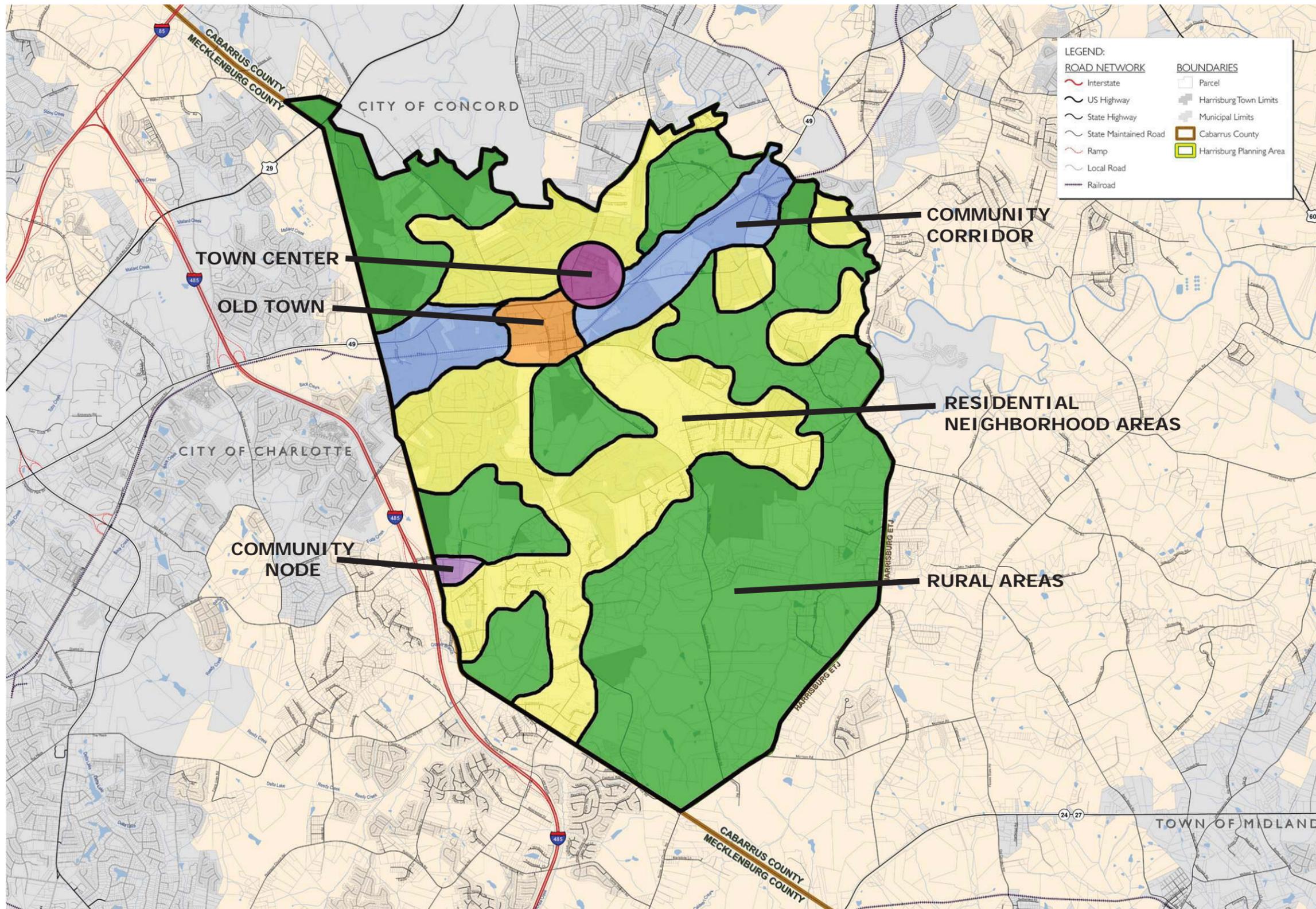
Character Areas

The planning area can be divided into several subareas, or character areas, based on the specific features of each. They are depicted in Figure 5 and explained below.



Town Center

Recent development within the town center is more typical of traditional urban development. Buildings within the town center possess a strong relationship to an internal street network. A mix of attached residential housing types, non-residential and civic uses (e.g., Town Hall/YMCA) is integrated within a system of walkable streets and blocks. Buildings enclose spaces in a manner that



creates a pedestrian scale. Together, the mix of uses, character and form of the town center provides a unique and important destination in the town.

Old Town

South of the town center, a small area lies along and near the rail corridor. It has remnants of an older development pattern, with smaller residential lots and homes as well as a variety of non-residential uses in close proximity. Unlike the newer development in Harrisburg, this area has a more urban character and a denser pattern.

Commercial Corridor

NC-49 is a significant, highly traveled east-west corridor within the planning area. Established development along the corridor includes commercial uses (e.g., outparcels) with a suburban character. Industrial uses are among those uses found in the corridor. The 2001 Harrisburg Area Plan characterized this development as laid out in a strip commercial manner.

Stakeholders in the process noted NC-49 is now complete in terms of road improvements in the planning area. Aesthetic improvements to NC-49 were discussed in the past and included the notion of a center median along with other streetscape improvements. However, these improvements were not implemented in conjunction with NC-49 improvements.

Commercial Node

A commercial node, Brookdale, exists within the planning area proximate to the interchange with I-485, and area that has transitioned from a rural to suburban character with the development that has occurred to date. During the process, stakeholders noted concern about the need for aesthetic improvements along Rocky River Road to ensure additional development like Brookdale or residential development does not negatively affect the scenic quality of this corridor.

Residential Neighborhood Areas

Newer suburban residential neighborhoods (since 1995) are located along Roberta Road, Tom Query Road and Rocky River Road. The character of development along Tom Query Road south of NC-49 and Rocky River Road is transitioning from a rural to suburban, although large tracts of undeveloped land still remain. Pharr Mill Road, Stallings Road, and Hickory Ridge Road are examples of corridors presently transitioning from rural to suburban.

Neighborhoods of varying ages exist in the vicinity of the town center. Along with Old Town, they comprise the core of the town of Harrisburg. While predominantly single-family detached in form, housing occurs at various densities in these neighborhoods.

Rural Areas

Rural and agricultural areas in the southernmost portion of the planning area contain large tracts of undeveloped land and rural subdivisions with larger lots. This area, particularly the corridors located south of Rocky River Road, such as

Robinson Church Road, Hickory Ridge Road and Lower Rocky River Road, have a rural character. The presence of expansive open space, larger lots and the terrain have helped to maintain this area's rural character.

2.6 Cultural and Historic Resources

Few cultural and historic resources exist within the study area. However, those that are present are a reflection of the past and provide a glimpse into the early evolution of the town and the strong sense of community that exists today. As development continues, such resources could be negatively affected if development does not adequately acknowledge and respond to the presence of such resources.

The following are among the locally important places and sites that may be worthy of protection from encroaching development. Janet Morrison writes about the Lubchenko House, which dates to 1899 (www.janetmorrisonbooks.com). Information about Rocky River Presbyterian Church property is available at www.RockyRiver.org/history.htm (1996-2002). The two houses concluding the list were built between 1895 and 1900, according to Cabarrus County GIS parcel data

- Old Post Office and Morrison/Sims Store
- Rocky River Presbyterian Church
- Cemetery – Pharr Mill Park has one of the oldest cemeteries in the county (1700s), owned by Rocky River Presbyterian Church
- Lubchenko House (the home of a doctor from Russia who settled in Harrisburg in 1922, according to the Independent Tribune), 6850 Robinson Church Road
- House, 7250 Robinson Church Road
- House, 8051 Hickory Ridge Road

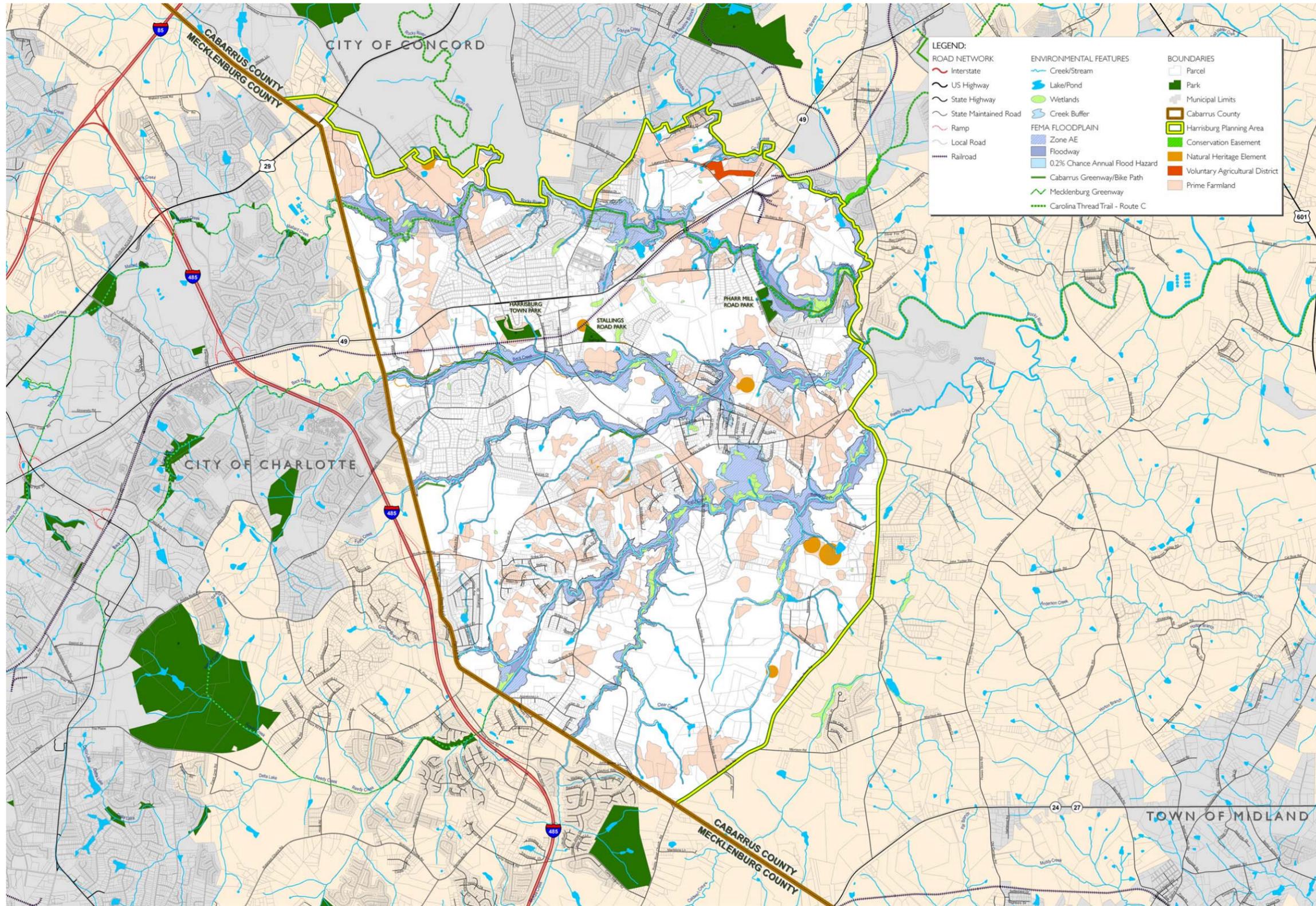
2.7 Environment and Natural Resources

Topography

Topography was mapped along with other environmental features (refer to Figure 6, Environmental Features). The topography of the study area is typical of the Piedmont region of North Carolina, characterized by flat uplands that are deeply dissected by creeks and streams. The general topography does not present a major issue for development in the study area.

Hydrology, Floodplains and Wetlands

The planning area is located in the Yadkin – Pee Dee River Basin with creeks and tributaries draining to the Rocky River. Some of the main tributaries are Back Creek, Reedy Creek, Fuda Creek and McKee Creek. Along them are expansive floodplain areas where some development, particularly residential, has occurred. Stakeholders indicated specific areas of periodic flooding along such rivers and creeks, particularly along Stallings Road, which has led to traffic circulation and public safety issues. Wetlands, which have been mapped using NWI data, are



concentrated within and near these floodplains, particularly along Reedy Creek. (Refer to Figure 6, Environmental Features.) While the floodplains and wetlands serve to filter stormwater, some water quality issues exist.

Soils

Soils in the study area present certain development limitations. While some are considered prime farmland soils and soils of statewide importance, there are many that have characteristics that are not supportive of development. According to the Cabarrus Soils and Water Conservation District (SWCD), many of the soils are rated as “very limited” for one, if not more, of the following uses: buildings with or without basements, local roads and streets and septic systems. Many also have hydric inclusions, or wet areas, associated with these types of soils. These soils tend to be “very limited” for most types of development as well. These soils are rated as such due to their propensity to flood and for the depths to their saturated zones. Depth to soft or hard rock presents limitations for foundations, roads and septic tanks in the study area. Often, extra reinforcement is required when building sidewalks and driveways to prevent cracks from developing in concrete, asphalt, bricks and blocks.

Other soils in the study area pose “severe” limitations, including but not limited to the following: Armenia loam, Altavista sandy loam, Chewacla sandy loam, Iredell loam, Sedgefield sandy loam and Wedhadkee. Such soils tend to limit most types of development, and their locations typically coincide with wetland areas, which are further limited for development due to state and federal regulations. These types of soils are highly erodible, drain poorly and may affect water quality when vegetation is disturbed.

Prime Farmland and Agricultural Areas

Large, undeveloped tracts of land exist in the southern portion of the planning area. These tracts are among those that have prime farmland soils, which have the combination of soil properties, growing season, and moisture supply needed to produce sustained high yields of crops in an economic manner if it is treated and managed according to acceptable farming methods, according to the USDA's Natural Resources Conservation Service. They include the following soils:

- Altavista sandy loam
- Appling sandy loam
- Cecil sandy clay loam
- Coronaca clay loam
- Cullen clay loam
- Enon sandy loam
- Georgeville silty clay loam
- Herndon silt loam
- Kirksey silt loam
- Mecklenburg loam
- Sedgefield sandy loam
- Tarrus silt loam
- Tarrus silty clay loam
- Vance sandy loam

This area has potential to support agricultural uses and may be the appropriate location for small farmsteads or other uses such as conservation subdivisions, particularly those that make provision for community-supported agriculture.

Agriculture Initiatives

Cabarrus County is taking part in a local food initiative. The county is partnering with NC State University's Center for Environmental Farming Systems. This movement is underway in North Carolina to make locating and buying locally produced foods easier for consumers and those in the food industry. The overall goal is to build a local food system in North Carolina that will supply the majority of local food needs, to provide more access to fresh foods and to increase the safety of our foods. The effort also can protect open space, decrease the use of fossil fuels and protect our environment by relying less on food shipped here from across the country.

Cabarrus County and the NC Cooperative Extension – Cabarrus Center partnered in the development of the Elma C. Lomax Incubator Farm Park off Atando Road in Concord. This incubator farm works much like a business incubator. Individuals interested in starting a business as farmer can enroll in the program which provides classroom instruction on the business of farming in Cabarrus County as well as hands-on experience on the farm. Participants in the program develop and manage their own agriculture business while receiving guidance from seasoned farmers. The incubator farm supports local farming while encouraging a new generation of farmers to ensure quality local food sources flourish in Cabarrus County.

Plant and Wildlife Habitat

The predominant natural communities are Dry to Mesic Oak-Hickory Forests and Mesic Mixed Hardwood Forests. Notable natural communities in the county include Basic Mesic Forest (Piedmont Subtype), Granitic Flatrock and Depression Swamp Forest. Rare species in the county include Schweinitz's Sunflower (*Helianthus schweinitzii*), Small's Portulaca (*Portulaca smallii*), crested coralroot (*Hexalectris spicata*), Carolina creekshell (*Villosa vaughaniana*) and Carolina darter (*Etheostoma collis*).

A review of the Significant Natural Heritage Areas Inventory, which contains mapped sites where threatened or endangered plants or animals—or their habitats— are found, was conducted for the study area. A total of four sites were identified within the vicinity of the study area:

- Back Creek Gabbro Hill – small knoll of gabbro, covered with boulders that support a mature Basic Oak-Hickory Forest (Mafic Variant) with a number of basic indicator species. The rare crested coralroot (*Hexalectris spicata*) occurs here. This site is privately owned.
- Reedy Creek Knoll and Beaver Pond – includes the top and north slope of a low knoll which is underlain by gabbro. A fair quality Basic Mesic Forest (Piedmont Subtype) contains southern sugar maple, mockernut and shagbark hickories, and swamp chestnut and Shumark oaks, among others. The understory contains painted buckeye, sugarberry, and southern sugar

- maple. A fair quality Basic Oak-Hickory Forest (Mafic Variant) occupies the upland parts of the site. The uncommon Eastern agave (*Manfreda virginica*) grows in the powerline right-of-way. On the north flank is a small stream bottom with a Piedmont/Mountain Semipermanent Impoundment community formed by beaver. This site is privately owned.
- Blackwelder Hill Plant Site – wooded stream terrace with an occurrence of the rare crested coralroot (*Hexalectris spicata*). This site is privately owned.
 - Jesse Slagle Knoll – has a Basic Oak-Hickory Forest with a sparse herb layer, due to the dry, rocky soil. The rare crested coralroot (*Hexalectris spicata*) occurs on a west-facing slope. This site is privately owned.

2.8 Parks, Recreation, Greenways and Open Space

Entities that address the need for parks and recreation facilities for the study area include the Town of Harrisburg and Cabarrus County. The Town currently has two park facilities which include the Harrisburg Park on Sims Parkway and the Stallings Road Park, adjacent to Harrisburg Elementary. No plans for additional parks exist at this time, although a comprehensive parks and recreation master plan for the town is being contemplated by the town for 2010.

Cabarrus County operates Pharr Mill Road park on six acres of land in the western extents of the Harrisburg planning area. The County is in the process of building a park in Midland, to the south of the planning area. The Cabarrus County CIP (FY 2009-10) indicates no immediate funding for additional park improvements in the Harrisburg planning area.

In HALUP community meetings, stakeholders indicated the need for more ball fields and indoor recreation facilities to support local athletic programs and meet a growing demand for these facilities. Refer to Figures 2 and 6, Existing Land Use and Environmental Features.

No greenways exist in the study area today. However, Cabarrus County identifies greenway linkages that are part of the 15-county Carolina Thread Trail, a regional network of greenways, trails and conserved land. The Carolina Thread Trail Master Plan was recently completed (2009), and the County adopted the portion of the plan applicable to its jurisdiction.

The 2002 Livable Community Blueprint provided a recreation needs assessment for the county with a 10-year time horizon. This “Blueprint” study was prepared as a guide to assist Cabarrus County and the municipalities in developing parks and recreation facilities and to identify bicycle and pedestrian routes (including greenways and other trails) on which the county may focus. An action plan contained in the plan provided a summary of recommended parks for Harrisburg, opportunities for land acquisition for active and passive recreation purposes (i.e., dedication through private development), and provision of on- and off-road facilities for pedestrians and bicycles. It also serves as a guide for implementation, indicating priorities in the planning and development of future park and transportation facilities. At the time of the Blueprint study, the only parks that existed were

associated with the schools in the area. The Harrisburg Park was being completed as a joint project between the Town and Cabarrus County. Since the Blueprint study was completed, the Town has created a recreation department.

2.9 Transportation

Roads/Streets

a. *Regional Road Network*

As shown in Figure 7, Transportation, regional corridors within the study area include a combination of Federal, State and local roads, providing several connections from the Harrisburg area to Charlotte and other destinations in the region. I-485 is west of the planning area, which connects to I-85 further to the north. A total of three interchanges exist to the west, connecting the planning area to I-485. These interchanges are at Robinson Church Road, Rocky River Road and NC-49. With such connections to the interstate system, Rocky River Road and NC-49 are the two most utilized routes for commuter traffic between Harrisburg and Charlotte.

NC-49 is an important east-west corridor which connects the planning area to University City and other areas in Charlotte to the west. More importantly, NC-49 is a strategic corridor, defined by NCDOT as a highway that is important for the efficient movement of goods and people across the state. In other words, its role in connecting activity centers (i.e., the Charlotte region and Raleigh's metropolitan area) and serving as an interstate highway relief route is deemed critical for intrastate mobility.

US-29 is another east-west corridor of importance to Harrisburg. It is north of the planning area, but is accessed via the local street network. US-29 connects Concord to Kannapolis and to the University City area of Charlotte. As indicated in the Cabarrus-Rowan MPO Long Range Transportation Plan and on the Thoroughfare Map, the planned Caldwell Road Extension is intended to provide a more direct connection between US-29 and NC-49.

NC 24/27 (outside the study area to the south) represents another important east-west route. NC 24/27 continues to Midland, which lies southeast of the planning area.

b. *Local Street System*

The local street system is comprised of state- and town-maintained roadways carrying local traffic circulating within the planning area. In general, north-south local roads, such as Roberta Road, Morehead Road, Robinson Church Road, and Hickory ridge Road connect to the center of Harrisburg, where the town center and the older established area of Harrisburg are located. Blackwelder Road and Pharr Mill Road in the eastern portion of the study area provide access to some industrial sites. Together, these roads provide important connections to US-29 and Concord from Harrisburg and points south.

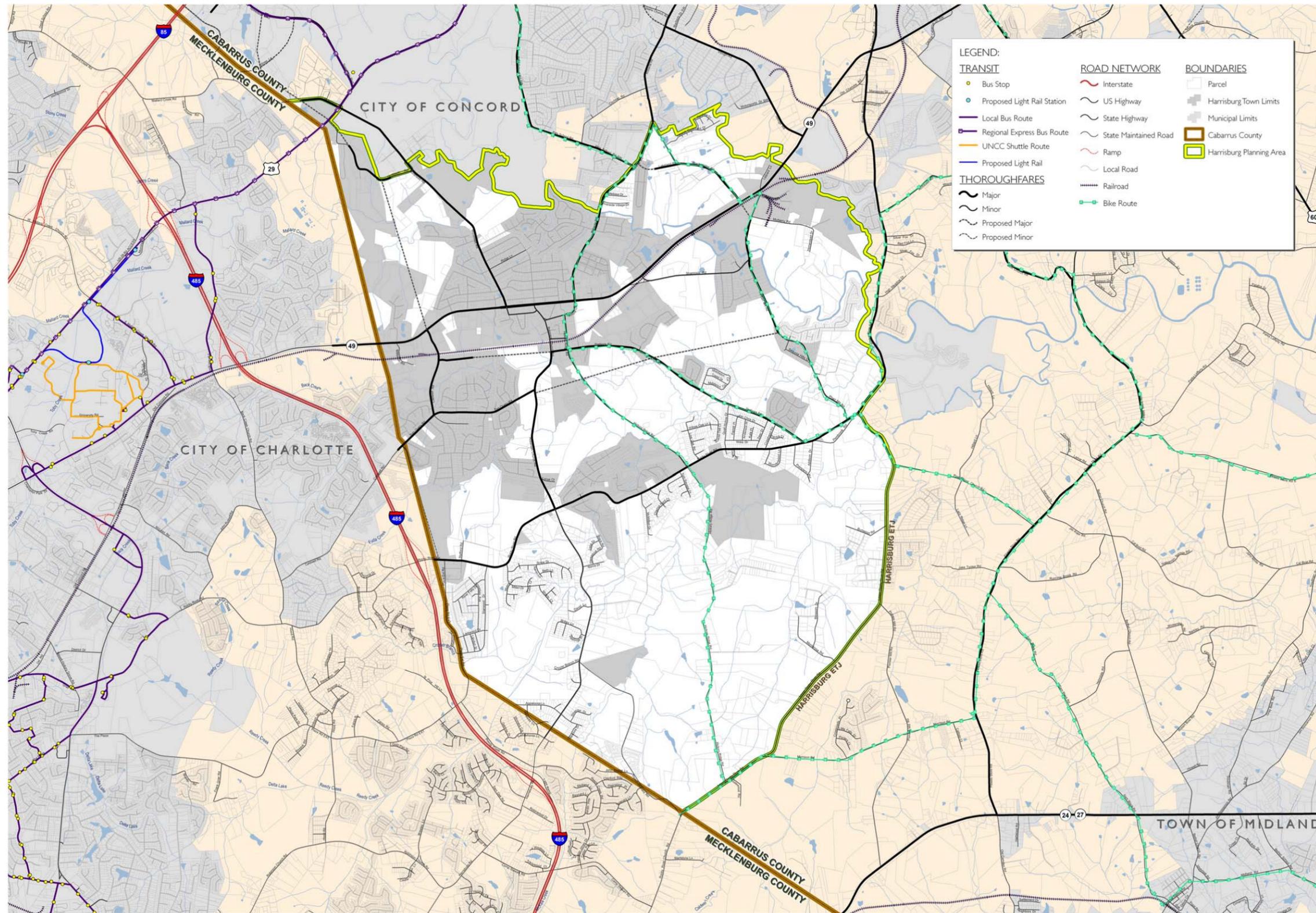


FIGURE 7: TRANSPORTATION
HARRISBURG AREA LAND USE PLAN
CABARRUS COUNTY, NORTH CAROLINA



Rail

The existing Norfolk Southern Railway line bisects the planning area, running east-west and roughly parallel to NC-49 on the south side of the corridor. Established in the 1850s, this line is a major freight route that serves industrial sites in Harrisburg. The 200-foot wide right-of-way is owned by the North Carolina Railroad Company (NCRR), which leases the corridor to Norfolk Southern Railway.

This line is also utilized for passenger service. The NCDOT Rail Division works with local communities and host railroads to facilitate passenger rail service within the state and to destinations outside of North Carolina. The Piedmont is a daily passenger service between Charlotte and Raleigh. Another daily passenger route in this corridor is the Carolinian offering daily service to New York City from Charlotte. Both are operated by Amtrak.

The Amtrak corridor is the topic of discussions among local leaders regarding commuter rail service. Officials representing the Harrisburg area are engaging their peers from Salisbury, Concord, and Charlotte in exploration of a heavy rail service that would operate at peak commuting hours. Paralleling Interstate Highway 85, the railroad directly links the cores of the three towns to Charlotte City Center, where a major multi-modal transit station is being discussed in concept.

This line is a segment of the proposed high speed rail (HSR) corridor from Washington, D.C., to Atlanta. Improvements to accommodate high speed rail service in the future include realignment of some curves and double tracking, which are being studied now by NCDOT's Rail Division. The high speed rail/double rail improvements are planned to begin construction in 2012. Most of the double tracking can be accomplished within the existing right-of-way. Such improvements will allow for train speeds of 90 to 110 miles per hour. The current maximum speed is 70 miles per hour.

While a HSR stop is not anticipated in Harrisburg, the number of trains and rate of speed will have an impact on the properties adjoining and in close proximity to the rail line. The greatest impact, however, will likely be to the circulation patterns. To safely move trains through Harrisburg at increased speeds and volumes, the following changes are under consideration during Plan development (July 2010):

- All five at-grade road crossings throughout the planning area will be closed.
- Three bridges will be constructed across the railroad, aligning with Caldwell Road, Roberta Road, and Blackwelder Road. Roberta Road will continue across NC-49, pick up a segment of School Circle, and intersect Stallings Road across the tracks. Blackwelder Road will link to Phar Mill Road.
- NC Rail will be constructing service roads to accommodate and service the private and public rail closings.

Transit

Presently, local transit options are limited in the study area. Cabarrus County Transportation Service (CCTS) provides a connection to Concord Mills via the Cabarrus Links service, which has a stop in Harrisburg's town center. This

connection provides access to Rider, the Concord Kannapolis Area Transit system, which is a service provided jointly by the two cities.

Other area transit services that complement the Harrisburg service include those offered by CCTS and the Charlotte Area Transit System (CATS). CATS provides an express bus service, route 80x, from Concord to the Charlotte Transportation Center in uptown Charlotte. Charlotte Motor Speedway also has a designated park-and-ride for this express bus service. CATS also has a vanpool service. CCTS operates a county-wide service providing transportation for special populations (i.e., individuals needing access to necessary medical care and other resources in the county). CCTS allows riders to be taken to various destinations with a minimum 24-hour prior notification.

In the future, CATS's LYNX Blue Line Extension (Northeast Corridor), a planned fixed guideway transit route, will terminate at a point west of the I-485/US-29 interchange. Within easy reach of Harrisburg, this is the location of a planned park-and-ride facility.

Public transit provides an alternative to single-occupant vehicular travel. A Lincoln Institute study defined density thresholds to support alternative transportation at 7-8 units/acre for intermediate bus service (30 min. headway). Additional density thresholds above 9-10 units/acre support fixed guideway transit and frequent bus service. The residential density of the planning area is approximately 0.37 units/acre, with an average density in subdivisions of 2 units/acre. The town center is approved for 2.4 units/acre, a density that does not surpass the recommended thresholds, but is being developed with a mix of uses and a walkable pattern of streets supportive of transit. If the 750,000 square feet of commercial space is built out, the town center area may be a suitable location for feeder bus transit stop in the future when mass transit service becomes available in the future.

Bicycle/Pedestrian

The Livable Communities Blueprint of 2002 recognized the need to provide bicycle and pedestrian facilities in the planning area to connect neighborhoods to schools and parks. Public access via minor trails was recommended for the following:

- 4.6 miles along Back Creek (from Rocky River to the county line)
- 6.9 miles along Rocky River (from Mallard Creek to the middle school)
- 2.0 miles of a connector between Town Park and the middle school

These would be complemented by the Carolina Thread Trail and other local greenways (see Section 9, Parks, Recreation, Greenways & Open Space) to expand the pedestrian/bicycle network.

2.10 Utilities

Public Water Supply, Treatment and Distribution

a. *Supply*

The Town of Harrisburg initially provided water via wells, but for many years, it has depended on the City of Concord for most of its supply. The Town has an ongoing 10-year contract with Concord. Under this contract, Concord guarantees a supply of 30 million gallons per month (approximately 1 million gallons per day, or MGD). The Town has flexibility where summer usage, due to irrigation, exceeds the allotted amount. Winter usage, meanwhile, is well below that amount.

While Concord has approximately 80% of its current rated plant capacity “committed,” or reserved based on commitments to specific projects, Concord is in the process of two initiatives to provide more supply. The first is the inter-basin transfer (IBT) Permit to transfer another 10 MGD from Charlotte-Mecklenburg Utilities (CMU)/Catawba River (this permit is currently being challenged).

The second is a raw water transmission main connection with the City of Albemarle. While the contract negotiations with Albemarle are relatively resolved, the project has significant design, permitting and construction hurdles ahead. Concord has included an additional 1 MGD allocation in its projected supply needs for Harrisburg. These initiatives, given success in defending the IBT Permit and completion of the Albemarle connection, should address the town’s needs well into the future.

Long range, the town is fully dependent on the Concord system for water supply. Should the challenge to the IBT 10 MGD transfer be successful and/or the connection to Albemarle somehow be delayed or fail to occur, there is the potential for supply issues for the town in meeting the growth and development needs of its service area.

A more specific analysis of current and projected needs is anticipated to be included in the recently completed Draft Water / Sewer Master Plan.

The town has three connections to the Concord System all protected and metered as well as two connections to the CMU system through the Concord system. While the town has its own elevated water storage tanks, the hydraulic gradient for the town’s system is somewhat dependent on Concord’s tanks and distribution system feeding the town’s system. With respect to long-range projected water demand, some adjustments to the Draft Water / Sewer Master Plan may evolve in support of the recommendations of the land use plan. The town also has a site designated for a future elevated storage tank.

b. *Distribution*

The Town owns and operates its water distribution system and maintains metered service to all its customers. The system operates, with the sewer system, as an enterprise fund, depending on revenues for operation and maintenance and capital improvements.

The system is known to have pressure problems in some areas. It is anticipated that the modeling from the Water / Sewer Master Plan process will identify critical distribution system improvements to be made to address this issue. In addition, improvements to the Concord system are also planned and will provide benefit to the town in addressing some of the pressure issues. The Town has attempted to somewhat address the low-water-pressure issue in new developments by mandating sprinkler systems, although this has been controversial. In some instances, new development has been allowed with wells; however, it is a policy of the City of Concord to withhold availability of sewer service unless water is provided from the city. This is also the policy of WSACC.

c. *Private Utility Systems*

Some development has occurred within the town's corporate boundary and in its extraterritorial jurisdiction on the basis of water and/or sewer being provided by private utility companies having Certificates of Convenience and Necessity for a Franchise issued by the NC Utilities Commission. Currently two private utility companies operate in the planning area: Carolina Water Service, Inc. of NC and AquaAmerica. Expansion of service by these systems is somewhat limited by the capacity of wells and waste treatment plant capacity. Long term, the town may need a policy or strategy pertaining to the existence of private utilities within its service area. Otherwise these areas will create some logistical issues in developing the town's system around, or parallel to, these systems. These systems could logically be purchased by the town at some point in the future if terms could be negotiated and could be integrated into the town's overall water and sewer systems. Significant capital would likely be required and a close assessment of the potential benefits to the town of the consolidation.

Public Sanitary Sewer System and Wastewater Treatment

a. *Collection System*

As noted above, the town operates and maintains its own sewer collection system, and the system currently only serves customers within its corporate boundaries. All wastewaters are conveyed to the WSACC Regional Rocky River Wastewater Treatment Plant (RRRWTP). WSACC provides only bulk service to the town and all connections are controlled and served by the town.

The history of service extensions has evolved without some critical trunk sewers. The evolution of sewer service and the town's approval of development in the absence of certain trunk sewers have resulted in the utilization of numerous pumping stations. The stations represent significant

operation and maintenance costs, as well as liability that could be reduced with the installation of new trunk sewers.

WSACC is installing new trunk sewers in the Reedy and McKee Creek Basins jointly, under an agreement with the City of Charlotte and Charlotte-Mecklenburg Utilities Department (CMUD). By agreement, these trunk lines provide CMUD access to six million gallons per day (6 MGD) of capacity at RRRWWTP. The Reedy and McKee Creek trunk sewers are not currently needed in Cabarrus County or Harrisburg, since these creek basins are largely undeveloped.

WSACC maintains a policy to support the growth management policies of Cabarrus County and the Town of Harrisburg; therefore, it maintains a restriction on connectors to the Reedy Creek Interceptor. This restriction is policy until 2015 or “until such time a study is completed to address the availability of adequate public facilities relating to schools, transportation, water, and sewer” (*Resolution for Adoption of Amendment No. 4 to the Water and Sewer Authority of Cabarrus County and City of Charlotte Agreement*, March 17, 2005).

Some previous initiatives to have trunk sewers installed in the Fuda Creek and Mallard Creek Basins have stalled. Both represent opportunities to reduce the town’s reliance on pumping stations.

b. Waste Treatment

As noted previously, WSACC is the provider for wastewater treatment via the Rocky River Waste Water Treatment Plant. The plant has a rated capacity of 24 MGD with a current flow of approximately 16 MGD. Consequently, there is considerable excess capacity to handle growth in the areas served by WSACC, including Harrisburg. In addition, WSACC has a plan by which the plant capacity can be increased as growth dictates. WSACC maintains a strategic CIP which looks at needs for current, 6-year, and 10-year periods. WSACC depends on the town for input regarding needs and the results of the land use planning study may dictate some revisions in recommended facilities or timetable for some specific projects.

Stormwater Management

Numerous streams run through the study area with the majority feeding Reedy Creek and Rocky River. Both of these streams fall on the North Carolina 303d list for impaired water making buffers, erosion control and post-construction stormwater management extremely important for future development projects in this area.

Harrisburg currently has two ordinances governing stormwater management: Article 9 of the Town of Harrisburg UDO and the Town of Harrisburg Stormwater Ordinance, which went into effect January 1, 2008. These ordinances cover the stormwater quality and quantity regulations as required by the designation of the town as a NPDES Phase II community. These regulations limit the peak stormwater

discharge rate from the site to match those of a pre-developed condition for the 1-year and 10-year storm event. The ordinance also requires the treatment of stormwater to the state standards of 85% total suspended solids (TSS) removal for water quality.

New development that will disturb an acre or more of land in Cabarrus County is subject to Post-Construction Stormwater Management permitting requirements administered by North Carolina Department of Environment and Natural Resources (DENR). The permitting program addresses stormwater management practices during site development or redevelopment as well as ongoing maintenance and operation.

Within the FEMA-regulated floodplain areas of Harrisburg and Cabarrus County, recently updated mapping indicates that none of the planning area is "unstudied (Zone A);" thus, base flood elevations have been set. The Town of Harrisburg floodplain ordinance requires that no impact to the floodplain be permitted unless a "no rise" analysis is completed for the proposed action. This requirement, combined with the updated stormwater ordinances of both local governments and the stream buffers described in the next paragraph, establishes a high level of stream and floodplain protection in the planning area.

The Town of Harrisburg Zoning Ordinance requires perennial streams have a buffer equal to 50' plus 4 times the average slope (up to 120' total) on each side of the stream. Intermittent streams have a buffer equal to 35' plus 4 times the average slope (up to 75' total) on each side of the stream. No development, including soil disturbing activities or grading, shall occur within this buffer area. Exceptions do exist for utilities, greenways, and agriculture.

The Cabarrus County Zoning Ordinance requires perennial streams have a buffer equal to 50' plus 4 times the average slope (up to 120' total) on each side of the stream. Intermittent streams have a 30' buffer on each side of the stream. No development, including soil disturbing activities or grading, shall occur within this buffer area. Exceptions do exist for utilities, greenways, and agriculture.

Grading and erosion control plan review and approval for projects within the planning area are subject to State review. Erosion control measures for all areas outside of any High Quality Waters (HQW) shall be designed to accommodate the 10-year design storm. Any areas disturbed within a HQW shall have additional requirements with the most notable being the increase to designing for the 25 year design storm.

Energy

Harrisburg is provided power by Duke Energy, as is all of Cabarrus County. A transmission right-of-way bisects the study area beginning on the western edge at Tom Query Road and runs east to the planning area boundary at Rocky River Road and Monterosa Road.

Gas service is provided by PSNC Energy. Like the power transmission line, a major gas line also bisects the planning area.

Refer to Figure 8, Utilities.

2.11 Community Facilities and Services

Government Services

a. *Town of Harrisburg*

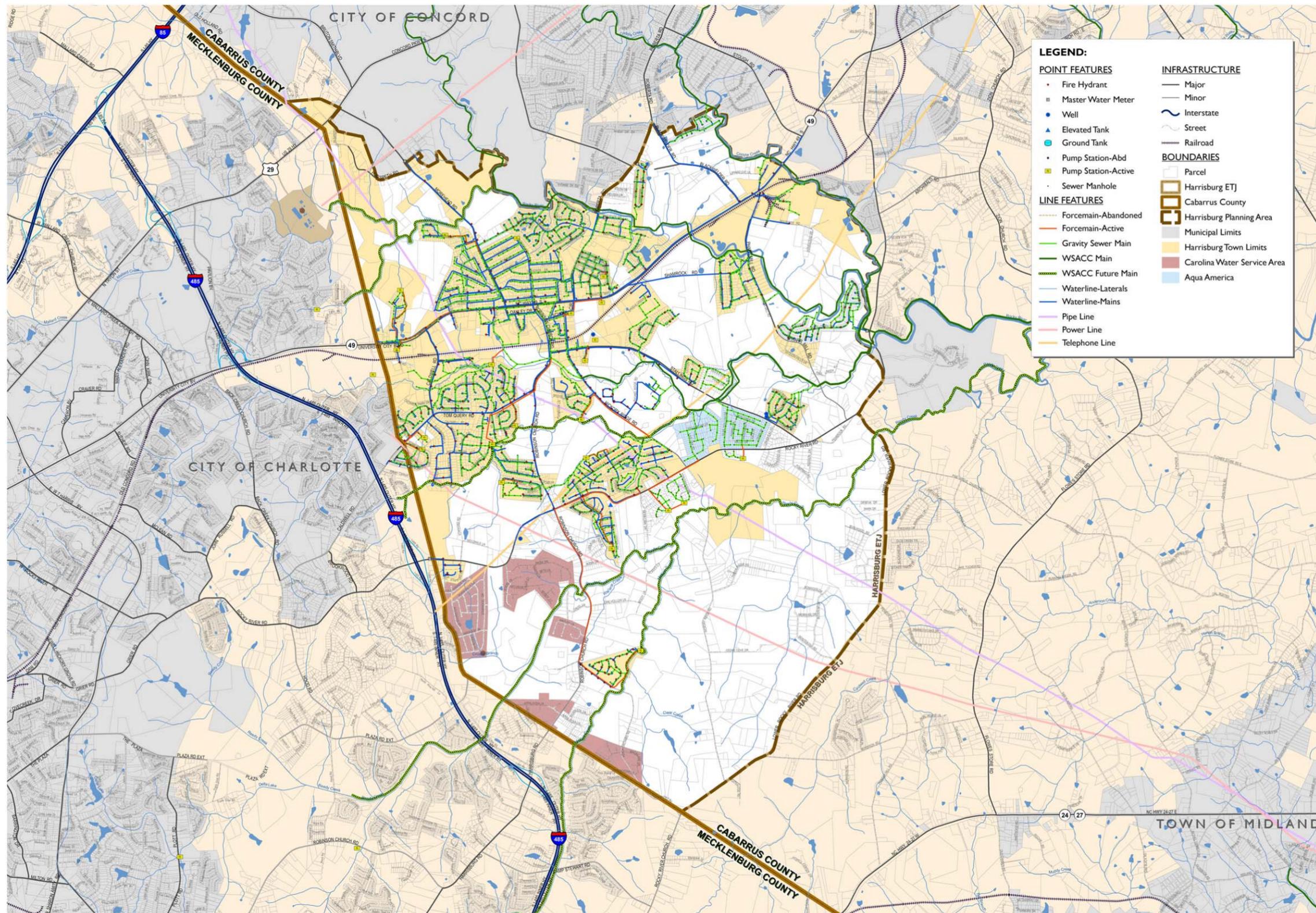
The Town of Harrisburg has a Mayor-Council form of government with eight elected officials (the Mayor and seven council members) and three appointed boards: Planning & Zoning/Board of Adjustment, Parks & Recreation Advisory Board, and the Fire Department Advisory Board. The town meets several of its population's needs through six departments: Finance, Fire, Parks & Recreation, Planning & Zoning, Public Works, and Water & Sewer. Most departments are housed in Town Hall located in the Harrisburg Town Center.

b. *Cabarrus County*

Cabarrus County government is led by a five-member Board of Commissioners. Among its many duties, the board is responsible for establishing goals and objectives to direct the County's growth and development and for adopting and providing for ordinances. County staff supports the board in fulfilling these specific responsibilities through long range planning for the unincorporated areas of the county and regular updates to and administration of adopted ordinances. The County departments that support or complement the Town's functions include the following:

- Commerce (Planning)
- Cooperative Extension
- Emergency Management
- Emergency Medical Services
- Library System
- Parks
- Register of Deeds (land records)
- Soil and Water Conservation District
- Sherriff

Given the limited capacity of some of the smaller municipalities to carry out planning and other local government functions, the County provides assistance to those communities. Harrisburg was once one of those communities to which the County provided planning assistance. While the Town of Harrisburg assumed responsibility for planning within its jurisdiction within the last decade and now performs a wide range of duties including reviewing site plans, processing subdivisions, issuing zoning compliance permits. The Town and the County coordinate efforts frequently, as evidenced by this planning process, which is an update to a previous plan also developed through a joint effort.



Education

Cabarrus County Schools (CCS) is responsible for public education in Cabarrus County. It is one of the largest districts in North Carolina and has a goal of becoming a top-ten-performing district in the state. In any growing community, maintaining a high-quality public school system is always among the primary challenges community leaders must face. Attracting qualified faculty members, addressing capacity issues as student population grows and maintaining existing facilities to ensure superior learning environments are among the many issues that CCS must deal with on a regular basis to meet the expectations of the citizens. In addition, a quality public school system is critical to economic development. Employers seek communities that offer a high quality of life for their employees, and good schools is one factor that weighs heavily in location decisions. To keep pace with growth, CCS has been expanding and building schools to implement its strategic plan.

Harrisburg Elementary, Hickory Ridge Middle, and Hickory Ridge High schools are the three CCS facilities located in the planning area. CC Griffin Middle School, Rocky River Elementary School, and Pitts School Road Elementary School stand just outside the planning area.

According to CCS representatives, these schools, relative to other CCS schools, are in good condition, have good quality classrooms and are well equipped with technology. However, the Draft 15-Year Facility Plan indicates that Harrisburg Elementary is at capacity (102% utilization) and Hickory Ridge High School is almost at capacity (94 % utilization). Hickory Ridge Middle School is expected to be completed in 2010. The draft plan calls for an elementary school in the planning area south of Harrisburg, which will alleviate some of the overcrowding at existing elementary schools. CCS aims to acquire land for the school (25 acres) in 2010.

Also located in the planning area along Hickory Ridge Road is the Carolina International School (CIS). A public charter school emphasizing an international perspective and environmental awareness, CIS opened in September 2004. It currently offers grades K-10 and has an enrollment of less than 500 students.

Public Safety

a. Cabarrus County Sheriff's Office

Police services for the town are provided by the Sheriff's Office of Cabarrus County. The Sherriff's Office funds eight positions, while the County funds two. Providing this service in the Harrisburg area is challenging, as a poorly connected road network affects response times. Officers working in this area reported that traffic violations are more of an issue than crime. However, theft is a problem for area businesses. Lying at the edge of the county, the western portion of Harrisburg area is a target for robberies. Proximity to I-485 allows criminals to flee rapidly from Cabarrus County and into Mecklenburg County, where the Sherriff's office's does not have jurisdiction. Additional officers are needed to improve service.

b. *Harrisburg Fire Department*

Serving a 32-square-mile fire district, the full- and part-time employees operate out of two fire stations in the planning area: Fire Station #1 on Morehead Road and Fire Station #2 on Rocky River Road. In addition, the department provides assistance to Jackson Park and Flowes Store Volunteer Fire departments in Cabarrus County and to Newell and Robinson Volunteer Fire departments in Mecklenburg County.

As growth continues in the Harrisburg area, the department expects a need for two to three more stations in the planning area. Land has been purchased for another station on Rocky River Road, and a fourth station is likely to be near the intersection of Pharr Mill Road and NC-49.

Though service areas are regularly examined to ensure adequate response times, there are other issues that the department is concerned about. Low water pressure in some areas and too little connectivity in the street network are among those issues.

c. *Cabarrus County Emergency Medical (EMS)*

The county's EMS department has a location in Fire Station #2, one of several that allow the department to boast an average response time of 7.1 minutes. Among the chief concerns is the rail line. According to staff, there is an incident monthly in this area and there have been several fatalities in the last several years. In addition, the rail line—and stopped trains—create a barrier between the northern and southern portions of the planning area, which affects response times.

d. *Cabarrus County Emergency Management Department*

According to Cabarrus County, the Emergency Management department is responsible for preparing and updating a plan of action to “respond effectively and expeditiously” to all types of emergencies. The intent is to prevent or mitigate the impacts of disasters or hazardous situations (i.e., severe thunderstorms, tornadoes, inland hurricane effects, flooding, and severe winter weather/ice storms) on people and property through the application of protective measures. Given the hydrology, soils and proximity of development to floodplains, flooding is one of the primary issues in the planning area. According to the current Hazard Mitigation Plan, Cabarrus County “has experienced development in high-risk areas such as river and stream floodplains that are vulnerable to flooding.”

Library

Located south of NC-49 at the entrance to Harrisburg Park, Harrisburg's public library is a branch of the Cabarrus County Public Library system. This 10,000-square-foot facility also serves as a community center with meeting rooms and several public internet and word processing workstations. Programs include book clubs for many age groups.

Solid Waste Collection and Disposal

Solid waste collection and disposal is managed by the town's Public Works Department, which utilizes Cabarrus County Landfill, Allied Waste-Landfill, and Cabarrus County Hazardous Waste Facility. One landfill is located at the northern edge of the planning area near Charlotte Motor Speedway.

Part 3

Summary of Issues & Opportunities



PART 3: SUMMARY OF OPPORTUNITIES AND ISSUES

The following summarizes the issues and opportunities identified through an assessment of existing conditions as well as input from the citizens and key stakeholders.

Population Growth

Opportunities

- Size of the 45-54 age group and the increase in 55-64 age group could boost move-up housing demand.
- Size of the 45-54 age group and the increase in 55-64 age group could boost retail spending potential.

Issues

- An aging population could increase need for more housing options for seniors who choose to remain in Harrisburg.
- Decreasing household size could result in demand for smaller homes and expanded choice in housing types to suit various lifestyles.

Land Use

Opportunities

- With additional private and/or public investment, Harrisburg Town Center has the potential to become the focal point it is intended to be.
- Several properties in the planning area are ripe for development or redevelopment and could support additional growth when market conditions improve.
- Demand for single-family detached residential development in the planning area has been increasing, and the quality of such housing has improved in recent years.
- The lack of infrastructure in the southern portion of the planning area today could support efforts to utilize land for agriculture and increase local food supply.

Issues

- With a predominantly residential development pattern, Harrisburg along with its surrounding area has become a bedroom community to Charlotte. (The short driving distance to downtown Charlotte is a reason people choose Harrisburg as a place to raise a family.)
- Planned high speed rail could affect uses along the corridor due to noise and potential for accidents.
- If developed, the amount of development, particularly commercial development, approved in Harrisburg could hinder the near term build out of Harrisburg Town Center.
- Due to a perception of crime with certain types of commercial development, such as "big box" large-format retail, there is resistance to permitting such development in the area.

- The landfill and Charlotte Motor Speedway have negative impacts (noise, odor, visual) on residential development in the northern portion of the planning area.
- Investment in infrastructure in the southern portion of the planning area could increase pressure for additional development, which might preclude the preservation of open space for future recreational purposes or for simply maintaining the rural character of this area.
- The low-density pattern of development is contributing to the challenges of providing infrastructure and services.
- Some residents think there is shopping, services, and entertainment close enough to the planning area, so the demand for such uses in Harrisburg is low.

Economic Conditions

Opportunities

- Proximity to key regional “economic drivers”, such as Charlotte Motor Speedway, UNC at Charlotte and Concord Mills, will continue to attract development that could have a positive impact on Harrisburg’s economy.
- Strong population growth has increased demand for medical and professional services.
- Harrisburg lies within the Piedmont Atlantic megaregion, which will be served by high speed rail in the future. Though no stop is planned for Harrisburg, the positive economic impacts for the region could benefit Harrisburg.

Issues

- The mix of residential and nonresidential uses is not very diverse, which affects the area’s ability to support a strong tax base.
- With employment outside of the planning area, many residents (51% of those employed) are not only commuting long distances to work but spending outside of the planning area.
- Manufacturing has suffered a significant decline.
- There is a lot of vacant industrial land in the planning area, and no certified industrial sites.

Housing

Opportunities

- The sale and resale of townhomes in Harrisburg Town Center indicates a demand for alternatives to single family detached homes.
- The concept for—and completed development within—the Harrisburg Town Center includes attached housing, which expands the housing options in the planning area, especially for seniors and young adults.

Issues

- Housing options in the planning area are limited.
- Housing supply is currently low, and given the number of units currently approved, a housing deficit is expected in 10 years based on forecasted demand.

Urban Design and Community Character

Opportunities

- Small town character.
- The rural areas in the southern portion of the planning area contribute to the quality and character of the area.

Issues

- Commercial “strip” development that has occurred along NC-49, Harrisburg’s front door, does not serve to create a distinct character for Harrisburg.
- Future development along Rocky River Road east of Robinson Church Road could affect the quality of what some agree is a scenic segment of the highway.

Transportation

Opportunities

- The Cabarrus-Rowan MPO Thoroughfare Plan recommends road connections that would improve north-south movements in the area.
- The recent expansion of area transit service and the future extension of CATS’s LYNX Blue Line toward Concord will improve access and mobility for residents of the planning area.
- Harrisburg lies within the Piedmont Atlantic megaregion, which will be served by high speed rail in the future. Though no stop is planned for Harrisburg, the positive economic impacts for the region could benefit Harrisburg.
- There is funding for bicycle/pedestrian facility improvements (i.e. sidewalks) through a CMAQ grant.
- The safety of two rail line crossings will be improved through grade-separated crossings that are planned as part of the double tracking project to accommodate high speed rail.

Issues

- As development and redevelopment occurs along NC-49, access management will be needed to improve traffic flow (consistent with the NCDOT strategic corridor) and safety
- Congestion is increasing on Rocky River Road with commuter traffic flowing to and from Charlotte daily.
- The lack of connectivity in the current road network affects circulation, which exacerbates issues related to congestion and public safety.
- The design of NC-49 facilitates speeding.
- With the few crossings that exist today, the rail line already presents safety and circulation challenges, especially when a train is stopped on the tracks. This is likely to worsen with the closing of some crossing as part of the double tracking project to accommodate high speed rail.
- Closing existing rail line crossings will also impact area businesses in that access will be affected.
- Problem intersections include Morehead Road at NC-49 and Stallings Road at Hickory Ridge Road.

Environment and Natural Resources

Opportunities

- Undeveloped land south of Rocky River Road has helped to maintain the quality of some of the natural resources in the area.
- The natural features, such as old growth forests, contribute to the quality and character of the area.
- The area is not overly developed; the open space that exists contains some important natural habitats and wildlife corridors.
- Some soils are prime farmland soils and are therefore suitable for some local agricultural purposes.
- Residents consider air quality to be good.

Issues

- Rocky River and Reedy Creek are on the North Carolina 303d list for impaired water, which underscores the importance of stormwater management to improve or maintain water quality.
- Soils present challenges for development.
- There is a significant amount of flooding on some portions of the study area, which poses a threat to affected residential development and impedes circulation along some roadways.
- Floodplains and creeks interfere with creating a connected development pattern.

Parks, Recreation, Greenways and Open Space

Opportunities

- Parks and the recreational opportunities are two of the reasons people choose Harrisburg as a place to raise a family.
- There is strong community support for parks and recreation, especially to accommodate local programs, in Harrisburg.
- Additional parks may be realized as a result of creating and implementing a comprehensive parks master plan, which will be undertaken by the Town in 2010.
- There are more opportunities to co-locate parks with schools for better utilization of land, facilities and resources.
- There is support for greenways, and the open space that remains, particularly along the creeks, lends itself to the creation of a quality greenway trail system that can be part of the regional Carolina Thread Trail.

Issues

- There is a need for additional ball fields and indoor recreation facilities in the planning area to accommodate programs in which the community members are highly involved.
- The County's CIP indicates no near-term priorities for parks and recreation (planning, design or construction).

Cultural and Historic Resources

Opportunities

- Development has not encroached significantly upon the few historic resources in the area, so there is still an opportunity to protect structures and sites that have not already been protected in some manner.
- There is a strong sense of community in the area as a result of citizen's participation in parks and recreation programs, churches and schools.
- The farmer's market and community events, such as the 4th of July celebration and movies in the park, also bring the residents together.

Issues

- There is a lack of awareness of some of the historic resources, so development could easily affect the preservation of such assets.

Utilities

Opportunities

- The wastewater collection system could be expanded in conjunction with new trunk lines along the creeks in the planning area (Charlotte-Mecklenburg Utilities projects), which could allow abandonment of pump stations.
- The Water / Sewer Master Plan for the town, which identifies key projects that would serve existing development, has been completed. This will help to update the town's CIP.

Issues

- Raw water supply is limited, and the Town has no long-term supply of its own. Through a contract with the City of Concord, the town's water supply is dependent on the City's ability to provide water, which hinges on the outcome of a challenge to the IBT permit and the potential raw water transmission line from the City of Albemarle.
- The low density pattern of development is contributing to the challenges of providing water and sewer services.
- Water pressure is low in some areas, which affects fire protection.
- Private utility systems are operating in the area, and separate systems create logistical issues in developing the town's system around, or parallel to, these systems.
- Sewer trunk lines may increase development pressure in the southern portion of the planning area, which might not be desired.

Community Facilities and Services

Opportunities

- Schools can be used as organizing elements in a community, and there is an opportunity to incorporate schools into the fabric of existing and future development through thoughtful site selection and site design.
- Schools and low tax rates are two of the reasons people choose Harrisburg as a place to raise a family.
- Coordination between county and town departments aids delivery of services and more efficient use of resources.

Issues

- There is a need for an elementary school south of the Rocky River and Hickory Ridge intersection.
- Circulation patterns and water pressure may make it difficult to maintain current ISO rating for fire protection.
- Circulation patterns, if they do not improve through better street connectivity, will affect public safety, specifically response times.
- As growth continues, additional stations for police, fire and EMS will be needed to adequately serve the area.

Part 4

Plan Framework



PART 4: PLAN FRAMEWORK

The broad planning ideas, goals and objectives provided the “framework” for developing land use and growth management solutions. From the existing conditions assessment, and importantly, direct feedback from the Advisory Committee and measured community feedback, the following goals were established for the Harrisburg Area Plan.

The goals of the Harrisburg Area Land Use Plan guided the creation and evaluation of land use map alternatives. After several refinements, the included map (Map 5.1) emerged as the *preferred alternative*. The final Harrisburg Area Land Use Plan, complete with the Harrisburg Area Future Land Use Map, is a direct outcome of these goals.

HARRISBURG AREA LAND USE PLAN GOALS

- Promote a sense of community through civic engagement.
- Promote local agriculture.
- Maintain open space to meet the demand for complementary purposes, such as recreation, agriculture and natural resource protection.
- Maintain existing neighborhoods by ensuring high-quality residential development.
- Foster local businesses through economic development that creates jobs, attracts investments, and diversifies industries within the community.
- Encourage a mixture of land uses and housing opportunities to expand tax base and support local retail services.
- Improve circulation and supply transportation options to ensure easy access within the community and to other places.
- Enhance quality of life with expanded recreational opportunities.

Part 5

The Harrisburg Area Future
Land Use Map



PART 5: THE HARRISBURG AREA FUTURE LAND USE MAP

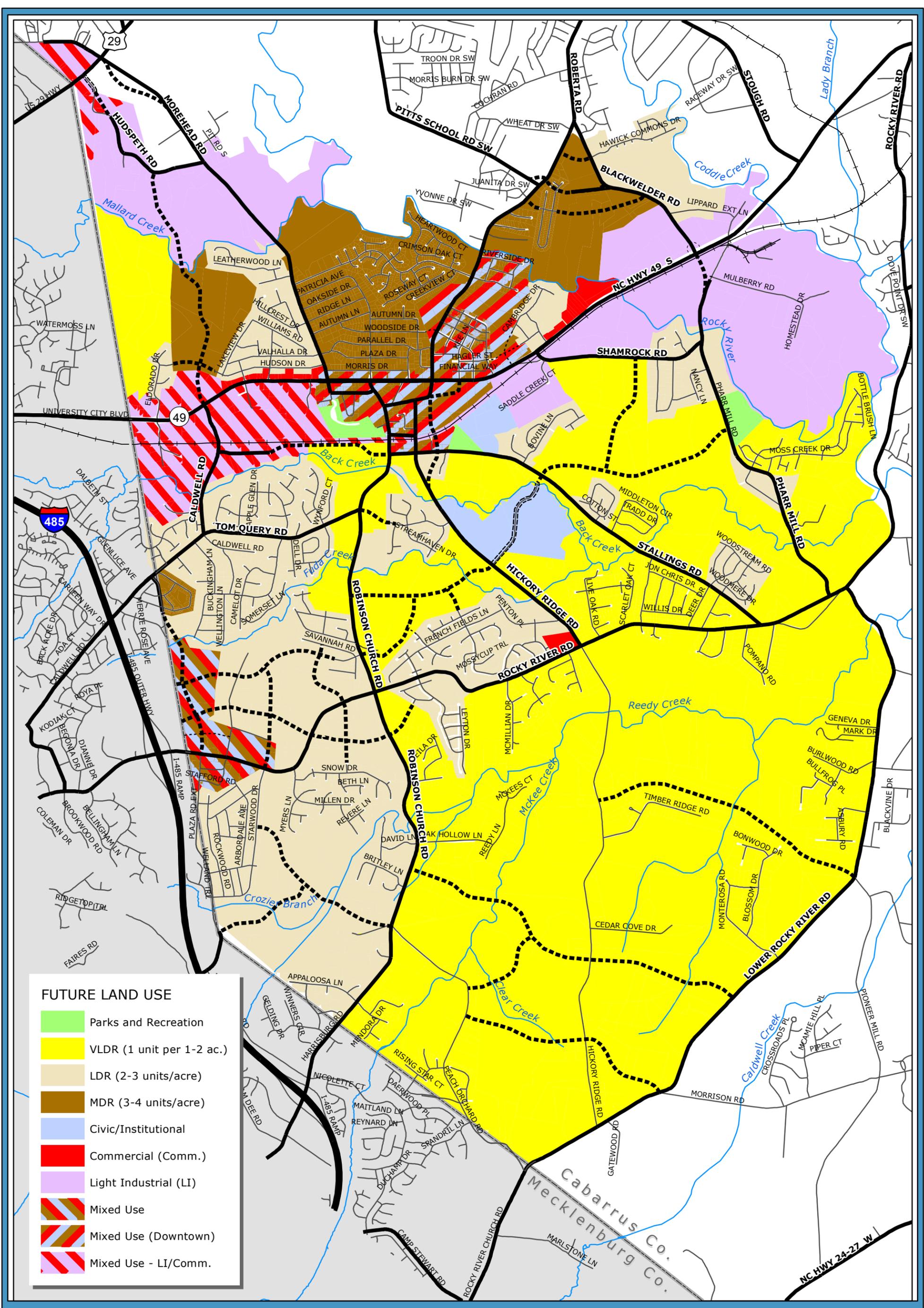
The Harrisburg Area Land Use Map (Figure 9) is a conceptual representation that illustrates the development patterns leaders and citizens of the Town of Harrisburg and Cabarrus County envision for the future of the study area. The map is descriptive, not prescriptive, conveying the community's desires for the future and the flexibility needed to accommodate unforeseen opportunities that may achieve the community's new vision in exciting ways.

The final Harrisburg Area Future Land Use Map – the *preferred alternative* – evolved through a public process that began at a *charrette*. The two-day, on-site workshop facilitated multiple iterations of the land use map by planners and citizens that would reflect the community's desires and goals. The HALUP Advisory Committee directed further refinements, ultimately leading to the preferred alternative included in this plan. Additional products that informed planners' recommendations and Advisory Committee members' decisions regarding future land use appear in Appendices B and C.

The map's features include the following:

- Clearly defined and delineated development areas (land use categories) that reflect the community's desire to encourage growth in specific geographic areas;
- Existing uses, including residential neighborhoods and publicly owned and maintained sites and facilities (i.e., parks and schools), that are likely to remain; and
- Transportation network improvements that support the future land use pattern envisioned by the community.

Ten land use categories are depicted on the map, including two variations of "Mixed Use," one of which highlights downtown Harrisburg. Each category is intended to indicate a predominant land use—or set of uses—as well as other features that define the character of the category. A brief description of each category is provided below. Each description is consistent with the ideas and vision the community has for the future of each category. These descriptions do not suggest a change to existing development within each category; instead, they suggest a direction moving forward and list qualities to be embodied by new development and redevelopment.



FUTURE LAND USE

- Parks and Recreation
- VLDR (1 unit per 1-2 ac.)
- LDR (2-3 units/acre)
- MDR (3-4 units/acre)
- Civic/Institutional
- Commercial (Comm.)
- Light Industrial (LI)
- Mixed Use
- Mixed Use (Downtown)
- Mixed Use - LI/Comm.

ADDITIONAL LEGEND ITEMS

CONCEPTUAL NETWORK	—+— Railroad	▭ County Boundary
▬ Collector	▬ Major Road	▭ Harrisburg Planning Area
⋯ Local	▬ Street	
⋯ Ramps	▬ Water Course	
⋯ T-fare on Existing Street		

**FIGURE 9: HARRISBURG
AREA FUTURE LAND USE MAP**
HARRISBURG AREA LAND USE PLAN
August 2010

3,000 1,500 0 3,000 Feet

Data Sources:
 Cabarrus County GIS, Mecklenburg County GIS
 N:_2008\1008319\GIS\FLUM 63010.mxd

Parks and Recreation

- Parks and Recreation: Recognizes existing parks serving the area. They are depicted on the map for reference only. They vary in size and range of activities supported, depending on the type of park.
- Parks are a type of land use that can be accommodated in all land use categories.



The Parks and Recreation land use category is intended to show the existing parks serving the area.

Very Low-Density Residential (VLDR)

- *Very Low Density*: Intended to remain predominantly rural in character while allowing residential uses to occur at very low densities.
- *Predominant Use(s)*: Agricultural and single-family residential (density from 1 dwelling unit per 1-2 acres, or if additional development standards are met, up to 2 dwelling units per acre).
- *Characteristics*:
 - Agricultural uses are present.
 - Scenic views are maintained.
 - Natural features are avoided by development.
 - Trees and large naturally vegetated areas are preserved.
 - Significant Natural Heritage Areas are avoided.
 - Conservation subdivision is a common approach to development design.
 - Architecture is sensitively integrated into the landscape.
 - Two-lane roads with shoulder and swale or ditch (no curb and gutter) constitute typical transportation rights-of-way.



The Very Low-Density Residential land use category is intended to remain predominantly rural in character, allowing one house per one to two acres.

Low-Density Residential (LDR)

- *Low Density:* Intended to allow low- to moderate-density residential development.
- *Predominant Use(s):* Single-family residential (density between 2 and 3 dwelling units per acre).
- *Characteristics:*
 - Significant hardwood trees and some naturally vegetated areas are preserved.
 - Neighborhoods organize around a focal point, such as an informal park around a stream and other natural features.
 - Conservation subdivision is a common approach to development design.
 - Architecture and landscape are balanced.
 - Typically, two-lane roads (curb and gutter may be present) are primary form of access, but collector street network connects two-lane roads to area highways.



The Low-Density Residential land use category is intended to accommodate residential development at a density from two to three housing units per acre.

Medium-Density Residential (MDR)

- *Medium Density:* Intended to allow medium-density residential development.
- *Predominant Use(s):* Single-family residential (density between 3 and 4 dwelling units per acre); some units may be attached in the form of townhouses and/or duplexes
- *Characteristics:*
 - Neighborhoods organize around a focal point, such as a central green.
 - Conservation subdivision is a common approach to development design.
 - Architecture is the dominant feature of the landscape, but is enhanced by landscaping (existing or planted) to soften the hard edges.
 - Typically, two-lane roads, collector streets and four-lane divided roads are primary form of access, and curb-and-gutter is more widely used.



The Medium-Density Residential land use category is intended to allow medium residential densities at three to four housing units per acre.

Commercial

- *Commercial:* Intended to accommodate neighborhood retail and local services at a scale appropriate to the small town of Harrisburg.
- *Predominant Use(s):* Retail, office
- *Characteristics:*
 - Architecture is the dominant feature of the landscape, but is enhanced by landscaping (existing or planted) to soften the hard edges.
 - Buildings may be organized around formal civic spaces.
 - Located in areas where infrastructure can support it (more intense than other land use categories).
 - Typically, two- and four-lane arterial streets – preferably where intersected by collector streets for improved neighborhood accessibility – provide primary form of access, and curb and gutter is more widely used.



The Commercial land use category is intended to accommodate neighborhood retail and local services.

Light Industrial

- *Industrial:* Intended to provide for light industrial and office uses.
- *Predominant Use(s):* Light industrial, office, and multi-tenant flex space.
- *Characteristics:*
 - Externalities of industrial processes – light, noise, odor, vibration – are confined to the site.
 - Architecture is the dominant feature of the landscape, but is enhanced by landscaping (existing or planted) to soften the hard edges.
 - Located in areas where infrastructure can support it (more intense than other land use categories).
 - Typically, four-lane highways and wide collectors designed for truck traffic are primary forms of access, supplemented by railroad service, and curb and gutter is more widely used.



The Industrial land use category is intended to provide light industrial and office uses, including multi-tenant flex space.

Civic/Institutional

- *Civic/Institutional*: Recognizes areas where a public use is appropriate to serve the needs of the overall community.
- *Predominant Use(s)*: Schools, hospitals, and civic buildings.
- *Characteristics*:
 - Institutional and civic facilities are centrally located within a neighborhood or commercial area to be a focal point and organizing element in such development.
 - Several neighborhoods may be oriented around a larger institution, such as a high school, centrally located to the broader community that it serves.
 - Architecture is enhanced by landscaping (existing or planted) to soften the hard edges
 - Smaller-sized institutions and civic uses are typically accessed via collector streets, while arterials (two- or four-lane) typically serve larger institutions.



The Civic/Institutional land use category recognizes areas where a public land use is appropriate to serve the needs of the community.

Mixed Use

- *Mixed Use*: Accommodates development that combines commercial, and civic/institutional land uses with a mixture of housing types where supported by infrastructure.
- *Predominant Use(s)*: Retail, office, multi-tenant (flex space), single-family detached and attached residential, multi-family residential at medium density, and civic and institutional uses.
- *Characteristics*:
 - Uses are seamlessly integrated and may include multi-storey structures that have two or more uses located within them (on separate floors).
 - Architecture is enhanced by landscaping (existing or planted) to soften the hard edges.
 - Uses are not separated by buffers.
 - Located in areas where infrastructure can support it (more intense than other land use categories).
 - Typically, highways, four-lane divided roads and collector streets are primary form of access, while collector and local streets provide access internal to the development, and curb and gutter is more widely used.



The Mixed Use land use category accommodates development that combines two or more compatible uses to create a pedestrian-friendly, compact development pattern where it is supported by infrastructure.

- The built environment is pedestrian-friendly, encouraging non-motorized transportation; due to proximity of various uses, vehicle trips are captured internally.
- Supports transit, and mobility is enhanced by multiple modes.

The map designates two areas for mixed-use. Because of their locations and access to infrastructure, among other factors, each mixed-use area will accommodate a different mixture of uses. The following is a description of each mixed-use area in terms of the potential mix of uses:

- **Downtown Harrisburg**
 - Medium-density single-family residential
 - Multi-family residential
 - Live/work (residential above commercial space in the same structure)
 - Neighborhood retail and local services
 - Shopping and restaurants serving the town and surrounding communities
 - Entertainment and leisure uses, such as theaters
 - Office, including multi-tenant space
 - Civic and institutional uses, such as YMCA and Town Hall, that serve as anchors and attractions to the downtown area
 - Parks and recreational areas
- **Rocky River Road near I-485**
 - Medium-density single-family residential (attached and detached)
 - Specialty housing, such as that supported by an institution
 - Neighborhood retail
 - Multi-tenant office, including medical
 - Hospital or similar institution

Mixed Use – Light Industrial/Commercial

- *Mixed Use – Light Industrial/Commercial:* Intended to provide for employment-generating uses.
- *Predominant Use(s):* Light industrial, office, retail, wholesale, and multi-tenant flex space.
- *Characteristics:*
 - Uses are mixed in a manner that creates a more cohesive development pattern.
 - These areas occupy high-traffic, high-visibility locations that have the potential to redevelop into denser communities over time.
 - Architecture is the dominant feature of the landscape, but is enhanced by landscaping (existing or planted) to soften the hard edges.



The Mixed Use – Light Industrial/Commercial category is intended to provide for employment-generating uses.

- Located in areas where infrastructure can support it (more intense than other land use categories).
- Typically, four-lane highways and industrial collector streets are primary forms of access, supplemented by railroad service, and curb and gutter is more widely used.

The Harrisburg Area Future Land Use Map identifies two locales for a mixture of light industrial and commercial development, both on regional arterial roadways.

- The district on NC-49, in the western side of the planning area, benefits from railroad access and potentially from road improvements depicted on the Conceptual Transportation Network Map: a grade-separated railroad crossing and improved north-south movements due to links appearing in the MPO thoroughfare plan.
- The district on US-29, in the northwest corner of the planning area, may attract economic spin-off from nearby Charlotte Motor Speedway in addition to a new link from the thoroughfare plan.

Conceptual Street Network

The rapid rate of residential and commercial growth within the study area coupled with limited mobility alternatives and reliance on the existing arterial roadway system suggests that the study area would benefit from the development of a more robust collector street network. The primary purpose of the collector street system is to collect traffic from neighborhoods and distribute it to the system of major and minor thoroughfares. A properly implemented collector street system improves accessibility to higher intensity residential areas and activity centers while minimizing impacts to natural areas.

To achieve an effective collector street network, a simple methodology correlates land use intensity (rather than use) with street spacing to generate preferred block structures. Simply stated, as land use intensity increases, street spacing should decrease. The table below equates categories of proposed residential land use intensities expressed on the Harrisburg Area Land Use Map with recommended street spacing.

LAND USE	INTENSITY	STREET SPACING
Very Low Density	0.5 – 1.0 du/acre	3,000-6,000
Low Density	2-3 du/acre	1,500-3,000
Medium Density	3-4 du/acre	750-1,500

The conceptual network appearing on the Harrisburg Area Future Land Use Map is illustrative only. The routes depicted represent possible alternatives in context of existing development patterns, natural barriers, and other physical constraints. The purpose of their illustration is to represent a network that can adequately support the preferred alternative land use pattern. More information about the conceptual street network, including non-motorized facilities, appears in Appendix C.

Part 6

Recommendations and Implementation Strategies



PART 6: RECOMMENDATIONS AND IMPLEMENTATION STRATEGIES

The following is a set of recommendations established through the Harrisburg Area Land Use Plan process, beginning with ideas gathered during the charrette held in February 2010 and refined with input from the Advisory Committee and elected and appointed officials in meetings following the charrette and from citizens attending the community meeting held on March 3, 2010.

The recommendations are supplemented by specific strategies, or action steps, that will aid in the realization of the vision reflected in the plan. The recommendations and strategies are in no particular order; they are presented in a menu-style format, designed to allow those involved in implementation to evaluate each to determine priorities and identify short-, mid-, and long-term tasks.

6.1 LAND USE

(LU-1) Recognize the value of existing agricultural land and protect it for future agricultural uses, and maintain agriculture as a viable component of the county's economy, based on the pattern expressed on the Harrisburg Area Future Land Use Map.

- Keep residential density very low where agricultural land use predominates to reduce conflicts between neighborhood residents and common agricultural practices.
- Protect existing agricultural operations from encroachment of development, particularly new residential subdivisions.
 - Increase awareness of voluntary agricultural districts and the benefits to increase the number of properties in agricultural use—and increase geographic area—in the program.
 - Consider critical mass of lands necessary for viable agriculture in conservation programs and future planning efforts.
- Protect prime farmland soils and soils of statewide importance.
 - To enhance the effectiveness of existing regulations that include prime

farmland soils and soils of statewide importance, provide incentives to protect these soils. As a model for this, the Soil and Water Conservation District (SWCD) recommends the LEED ND certification process provision that gives credit for protecting such soils.

(LU-2) Support additional residential development in the Harrisburg planning area at varying densities based on the pattern expressed in the Harrisburg Area Future Land Use Map.

- Allow single-family detached residential units in most, if not all portions of the Harrisburg planning area.
 - Single-family detached homes should be allowed throughout the Harrisburg planning area, especially where adequate utility and transportation infrastructure is available to support such development. Development should be discouraged in areas with limited or no utility infrastructure presently, particularly south of Rocky River Road; although, single-family development that is compatible with and does not encroach upon agricultural uses would be more appropriate than other types of development.
 - To protect the existing single-family residential neighborhoods, new development should consider the density of such neighborhoods and incorporate single-family units in a manner that provides a sensitive transition between new development and existing development. This can be achieved by developing new neighborhoods at densities equal to or less than those of existing neighborhoods that adjoin new development sites, as indicated in the Harrisburg Area Future Land Use Map. At a minimum, new development should consider the incorporation of like uses at comparable densities on portions of the site that adjoin existing development.
 - A land conservation approach to the subdivision of land, as permissible in the County's Open Space Subdivision Option and the Town's Conservation District, should be encouraged to accomplish single-family development in areas where the preservation of natural resources is imperative and where conventional development would have a negative impact on the protection of such resources.
 - ✓ These exemplary tools should be strengthened with increased flexibility to set aside more land without increasing residential density or losing home sites, provided that land development proposals seeking the most flexibility also propose to meet a higher standard for conservation of valuable natural and cultural assets in the Harrisburg planning area. While Town and County zoning ordinances can be amended to establish such higher standards, successful conservation would best be achieved through implementation of a Preservation Plan. (See Recommendation ENR-6.) A conservation subdivision employing flexibility in subdivision design greater than currently allowed would optimally demonstrate achievement of a Preservation

Plan's goals and protection of features recommended for preservation in that plan.

- Accommodate medium-density detached, attached, multi-family, and upper-floor units (above first-floor commercial uses) in the appropriate areas as indicated on the Harrisburg Area Future Land Use Map.
 - Attached, multi-family, and upper-floor units are appropriate for and should be encouraged in the mixed-use area identified as "Downtown Harrisburg" on the Harrisburg Area Future Land Use Map.
 - Medium-density single-family developments should be focused in the northern portion of the study area where public utilities and a connected system of streets are available. The resulting neighborhoods here would provide the population needed to support local businesses and make viable alternative transportation choices.
 - Multi-family development and medium-density single-family development would also be well suited along Rocky River Road near its interchange with I-485, where infrastructure is in place and an activity center is already emerging.

(LU-3) Continue efforts to create a true "downtown" for Harrisburg.

- Build on the efforts and investments of the Town and the private sector to create a center for Harrisburg that functions as a traditional downtown and gathering place for the community.
 - Maintain the location of Town Hall, as it is a strong anchor in this still-evolving area.
 - Incorporate other civic uses that, like Town Hall, function as key anchors and attract visitors on a regular basis, which is critical for the long-term viability of the businesses that have located—or will locate—in this area.
 - Support changes that will help downtown become a more vibrant, "24/7" environment where businesses can thrive.
 - ✓ Encourage additional residential development, particularly residential units on upper floors of buildings that house commercial uses on the first floor, which will increase the residential population in Downtown Harrisburg.
 - ✓ Encourage connections (i.e., streets, sidewalks, greenways, etc.) to adjacent neighborhoods to bring traffic—and potential customers—downtown.
 - Consider design standards for adoption by ordinance or inclusion in planned unit development proposals that are based on traditional town planning and design principles, such as these:

- ✓ Locate civic and other key buildings on prominent sites, and emphasize the importance of such buildings by creating view corridors terminated by these buildings.

- ✓ Locate buildings close to the street to create a strong physical presence, which signals the arrival of motorists to a destination and encourages pedestrians to explore and visit multiple venues.

- ✓ Attract and retain key anchors, both commercial and civic, that draw residents, patrons, and visitors to populate the area and keep activity levels high.

- ✓ Encourage a mixture of uses within downtown developments and individual structures to generate a more consistent activity level throughout the day and week.

- ✓ Encourage compact, pedestrian-friendly, mixed-use expansion of the downtown that enables daily activities to be conducted without need of an automobile.

- ✓ Allow and promote a mixture of housing types attainable to workers in a broad spectrum of incomes.

- ✓ Organize and orient development around a multi-modal transportation network that provides high levels of service for travelers of all ages and physical capacities and serves motorists, bicyclists, and pedestrians in balance.

- ✓ Guide the development of downtown to ensure possibilities for expansion and/or connectivity with adjacent neighborhoods, present and future.



These public spaces are defined by buildings with a strong presence, creating highly visible formal spaces that direct attention to downtown. Such a public space would be an opportunity around which to establish a key anchor along NC-49 to bring people into downtown on a regular basis.



- ✓ Complement residential and commercial development with public spaces, such as plazas, parks, and courtyards appropriate in type, proximity, scale, and material to the development proposed.
- ✓ Encourage new buildings to be appropriately proportioned and seamlessly linked to its surroundings, including streets and neighboring properties.



This town hall (above left) sits on a prominent site and at a visual terminus at the end of a formal green. As shown at right, this green can be activated by mixed-use structures – residences on upper floors – to generate more activity downtown throughout the day.

(LU-4) Encourage mixed-use development that provides employment opportunities and services in close proximity to one another and to would-be employees and consumers.

- Direct these higher intensity uses to areas with adequate infrastructure and high visibility.
- Encourage mixed-use development at an intensity and orientation that supports bus transit, particularly downtown and at the mixed-use area along Rocky River Road, which includes a residential component.
- Guide development in a pattern that facilitates interconnectivity for travelers in all modes.

(LU-5) Accommodate retail and professional/medical office space in areas with superior visibility and access.

- Approximately 400,000 to 450,000 square feet of retail and office uses could be accommodated along NC-49, primarily focusing on the Mixed-Use development areas shown on the Harrisburg Area Future Land Use Map: Downtown and Light Industrial/ Commercial. These areas provide access and visibility from NC-49, as well as close proximity to residential uses.
- An additional 50,000 to 75,000 square feet of retail space could be accommodated along Rocky River Road, near the I-485 interchange and the Brookdale shopping

center. This space could be partially accommodated in the proposed mixed-use development, north of Rocky River Road.

- Approximately 200,000 to 250,000 square feet of professional and medical office space could be supported along Rocky River Road near the proposed hospital site. If the hospital project is not completed, demand for medical office will diminish and professional office space will likely concentrate along the established NC-49 corridor.
- A retail center could be supported at the intersection of Rocky River Road and Hickory Ridge Road. Based on the current locations of grocery store chains, this area could potentially accommodate a grocery-anchored shopping center between 100,000 and 150,000 square feet.

(LU-6) Accommodate employment uses in areas where industrial park development exists and/or where access is facilitated by proximity to highway and rail.

- Identifying new industrial park sites in the areas described above is important to maintain a consistent ten- to twelve-year supply of available industrial land in Harrisburg.
- Employment and industrial uses will be most successful in the Light Industrial and Mixed Use – Light Industrial/Commercial areas along NC-49. These areas, as shown on the Harrisburg Area Future Land Use Map, are located near existing industrial parks with close proximity to highway and rail.
- Additional employment and industrial uses should be focused near the Charlotte Motor Speedway. These uses could provide a buffer between the Speedway and surrounding residential developments.

(LU-7) Consider the impact of the High Speed Rail corridor as planned by the Rail Division of the North Carolina Department of Transportation.

- As future development occurs, consider the potential impacts (e.g., noise) on adjacent uses, and discourage uses that are not compatible. Warehouse or storage facilities and parking lots serving commercial and industrial uses are two types of uses that may be more suitable for sites adjoining or in close proximity to the railroad right-of-way due to concerns for public safety as well as nuisances – noise and vibration.
- Consider increased building setbacks from the right-of-way that will further mitigate the negative impacts of high speed rail service on adjacent development. (Note: The typical right-of-way width is up to 200 feet, or 100 feet from the centerline. Any further encroachment into this prospective right-of way should be prevented through code enforcement.)
- Ensure that adequate sound attenuation is in place between existing and future development sites adjacent to the high-speed rail corridor. Work with North

Carolina Department of Transportation to implement protection for existing neighborhoods and civic uses as well as areas identified for future residential and institutional land uses.

(LU-8) Ensure zoning in the Town and the County is consistent with Harrisburg Area Land Use Plan.

- Examine existing zoning ordinances to determine which districts correspond to each of the four types of residential land use categories shown on the Harrisburg Area Future Land Use Map. Based on the standards associated with each, zoning districts may be associated with the land use categories as follows:

LAND USE	RESIDENTIAL DENSITY (DU/AC)	TOWN ZONING	COUNTY ZONING
Very Low-Density Residential	0.5-1.0	AG	AO
		RE	CR
			LDR
Low-Density Residential	2-3	RL	LDR (Amenity Subd.)
		RM-1	MDR
Medium-Density Residential	3-4	RM-2	MDR (Amenity Subd.)
Civic/Institutional	Not Applicable (N/A)	O-1	OI
Commercial	N/A	O-1	OI
		B-1	LC
		C-1	GC
		C-2	
		CD	
Light Industrial	N/A	I-1	LI
		I-2	
Mixed Use – LI/C	N/A	O-1	OI
		B-1	LC
		C-1	GC
		C-2	LI
		CD	
		I-1	
Mixed Use	3-4	PUD	PUD
		TND	
		TOD	
Mixed Use (Downtown)	3-4	CC	PUD
		PUD	
		TND	
		TOD	

- Revise Town and County zoning, as needed, to be consistent with Harrisburg Area Future Land Use Map.
- Modify zoning districts as needed to ensure consistency in development standards so that, in the event of an annexation, properties converting from a County district to a Town district will not lose existing development rights.
- Develop enhanced standards for all conservation subdivisions. Consult the North Carolina Wildlife Resources Commission's Green Growth Toolbox, particularly Section 5: Greening Development Review and Site Design, for recommended specifications for enhanced conservation-oriented standards. Consider standards that address or improve upon the following:
 - Open space (For example, 75% in contiguous tract, 25% accessible to homeowners {trails, greenbelts}, no lot further than ¼-mile from open space);
 - Adequate protection of stream buffers;
 - Restoration/enhancement of degraded streams;
 - Conservation of floodplains;
 - Conservation of state-identified Significant Natural Heritage Areas;
 - Preservation or enhancement of rural character viewsheds (See Appendix C.);
 - Protection or enhancement of scenic road corridors;
 - Perimeter compatibility;
 - ✓ Mitigation of visual impacts to public rights-of-way;
 - ✓ Mitigation of visual impacts to adjacent homes and neighborhoods;
 - Preservation of historic sites and structures;
 - Undergrounding of utilities;
 - Street trees;
 - Connectivity;
 - Tree protection; and
 - Site design (For example, corner lot treatments and front yard trees.).

6.2 HOUSING

(H-1) Ensure housing availability for all income ranges in the Harrisburg planning area.

- Consider opportunities for affordable and workforce housing. Financing techniques include tax credit and grant programs. Strategies may include any of the following:
 - Consider adopting an inclusionary zoning ordinance for predictability and consistency in application. This strategy is supported by case study research; however, additional studies are needed for the study area to determine affordability ranges, percentage of units to be set aside, alternatives to on-site construction, incentives and other factors to ensure success. The developer, business, and homebuilder communities should be engaged in the process of evaluating this strategy.
 - Establish partnerships with non-profit groups to allow the private sector to create affordable and workforce housing. This may include a requirement for land dedication to a community land trust where housing may be constructed by the community land trust or an outside developer.
 - Consider strategies to reduce non-housing costs such as transportation and utilities. This includes promoting mixed-use, considering transit options, and encouraging densities in appropriate locations. Regarding utilities, energy-efficient homes can help residents save on energy costs.

(H-2) Ensure housing availability for all housing preferences of citizens (existing and future) in the Harrisburg planning area.

- Recognize variation in housing preferences of various age groups, particularly as the current population ages, and support a wide variety of products to respond to those preferences. There is currently a demand for alternatives to single-family detached homes, as evidenced by property values and rate of sales (and resales) of attached units in the northern portion of the Harrisburg planning area. Alternatives to single-family detached homes are desired by those seeking less maintenance and mixed-use environments where auto-dependence is greatly decreased. Both attributes are attractive to older citizens who have a desire for independent living in Harrisburg.

6.3 ECONOMIC DEVELOPMENT

(ED-1) Attract new businesses to Harrisburg to promote a balanced tax base.

- Identify new employment and industrial locations in order to maintain a ten- to twelve-year supply of available land with immediate access to local highways and rail.
- Maintain regular meetings of the Harrisburg Economic Development Committee in order to promote the area and coordinate with the Cabarrus County Economic Development Corporation.
- Work with the Cabarrus County Economic Development Corporation and the Charlotte Regional Partnership to promote existing industrial parks within Harrisburg.
- Capitalize on Harrisburg's proximity to the Charlotte Motor Speedway in order to continue to attract race-related industries.
- Complete an analysis of Harrisburg's existing tax base and Harrisburg Area Future Land Use Map in order to understand impacts of development.

(ED-2) Promote the expansion and/or retention of existing employers in Harrisburg.

- Maintain an adequate supply of real estate options for expanding businesses. This can be achieved partially through the identification of viable office and industrial park sites, in areas designated "Light Industrial" or "Mixed Use – Light Industrial/Commercial" on the Harrisburg Area Future Land Use Map.
- Support and promote local business organizations in Harrisburg.
- Work with the Cabarrus County Economic Development Corporation to aid in retention and/or expansion of existing employers.

6.4 COMMUNITY CHARACTER AND DESIGN

(CCD-1) Address the design and function of important roadway corridors to protect or enhance the scenic quality of such roads.

- Conduct a corridor study for Rocky River Road in anticipation of significant residential, commercial, and institutional development in the corridor. The study should consider the following:
 - Operational and capacity improvements in the corridor, especially at intersections, but also in segments between major cross streets, which should consider parallel routes and connections between land developments.
 - Needs and improvements for transit, automobile, bicycle, and pedestrian travel in the corridor.
 - Non-motorized facilities appropriate to the road's various segments. Appendix B depicts hypothetical improvements that reflect stakeholder input regarding non-motorized transportation in the corridor.
 - Relationships between land use and developments and the road right-of-way. Appendix B includes conceptual illustrations of the Rocky River Road corridor, depicting elements worthy of consideration in a corridor study, intended to achieve multi-modal travel options in a corridor that maintains natural and scenic attributes enjoyed by the community.
 - Edge conditions between the roadway and buildings in the corridor. These may include segments where buildings front the right-of-way, segments where vegetative buffers screen development from the roadway, and segments where a parkway is created. (See illustration in Appendix B.)
 - Implementation via a corridor overlay district in Town and County zoning. The overlay district should set requirements for development setbacks, buffers, and non-motorized facilities (e.g., multi-use trails, sidewalks). These improvements would be required in addition to any operational improvements recommended in traffic impact analyses that may be required by NC Department of Transportation.
- Map scenic rural routes, as suggested on the Conceptual Preservation Map, and find tools to preserve their value. Examples of such tools may be restrictions on road widening, prevention of curb and gutter installation and guidance in future development patterns.
- In the event of future widening of Rocky River Road, consider increased setbacks from road rights-of-way for new subdivisions and the retention of existing stands of trees in the corridor as development occurs. The following Illustration 6.1 depicts design and aesthetic considerations at a conceptual level. Widening plans should incorporate, expand upon, and refine these concepts as appropriate to the corridor

to achieve a context-sensitive solution for the road improvements. More information about this concept appears in Appendix B.

Illustration 6.1: Conceptual Cross-Section for Hypothetical 4-lane Rocky River Road



Park-like Buffer
w/ Multi-use Trail

Shoulder
w/ Bike Lane

2 Travel
Lanes

Planted
Median

2 Travel
Lanes

Bike Lane
& Swale

Park-like Buffer
w/ 2-Way Divided Trail

6.5 CULTURAL AND HISTORIC RESOURCES

(CHR-1) Raise awareness of existing historic and cultural resources and encourage the preservation of such resources that contribute to the character of the area.

- Consider conducting a formal survey of existing structures and properties that, locally, have historic value to create an inventory of such assets.
- Incorporate survey results and identify strategies for protection of places of historic value in a Preservation Plan. (See Recommendation ENR-6.)

6.6 ENVIRONMENT AND NATURAL RESOURCES

(ENR-1) Protect water quality.

- Minimize soil erosion that is accelerated by land disturbing activities, such as grading, development of steep slopes, and the removal of vegetation and topsoil.
- Promote wetland conservation in new development to maximize the functionality of these natural water-filtering areas.
- Consider the recommendations of the Upper Rocky River Watershed Management Plan, which aims to protect water quality in this basin and specifically addresses monitoring, the enforcement of ordinances (erosion and sedimentation control, and buffers), education, conservation easements as a tool for better protecting stream corridors, low-impact development standards, stormwater management, and floodplain management. Specific recommendations regarding land use, community character, and open space in the Upper Rocky River Local Watershed Plan include:
 - Encourage low-impact design;
 - Include on-site performance standards for pollution run-off limits and stream buffer requirements in enhanced conservation districts;
 - Strengthen stream buffer requirements throughout the planning area;
 - Purchase land or development rights;
 - Preserve flatter lands for farmland;
 - Protect bottom-lands;
 - Preserve visual, rural, and natural buffers and corridors;
 - Preserve stream buffers; and
 - Protect habitat and habitat corridors.

(ENR-2) Preserve the existing tree canopy to the extent practicable.

- Prepare and adopt a tree protection ordinance that maintains existing tree canopy essential to retaining the natural character of the study area while also allowing new development to occur. Developers converting rural or undeveloped land to residential and other suburban uses within the study area should comply with tree protection standards.
- In addition to other open space protection measures recommended herein, consider limitations on the amount of the site that may be cleared of vegetation or disturbed in order to accommodate new development.

(ENR-3) Protect important plant and animal habitats.

- Increase awareness of the presence and importance of such habitats and corridors that connect them, thereby increasing the sensitivity of development in protecting such assets.

- Modify the plan review process to encourage the preservation of known habitats of important plant and animal species. Development plans should take into consideration the locations of Significant Natural Heritage Areas, identified in the inventory published by the Soil and Water Conservation District (SWCD) in 2002, and healthy native forests five to ten acres in size, which provide valuable habitat.
- Create incentives for avoiding such habitats by offering open space credits for protecting the areas identified in a future Preservation Plan (See Recommendation ENR-6.) and/or in regional conservation plans that delineate a connected system of open space aimed at protecting important habitats and wildlife corridors. For example, a weighted system for achieving open space requirements would place more emphasis—and therefore more credit—on open space that coincides with the areas delineated on the open space plan.

(ENR-4) Support the Soil and Water Conservation District’s (SWCD) conservation planning efforts to manage all natural resources – soil, water, plants, animals and air – and foster sustainable growth in the Harrisburg planning area.

- Revise local ordinances to protect soils officially designated as “prime farmland” soils and “farmland of statewide importance” soils.
- Define, identify, and preserve the planning area’s most ecologically sensitive lands.
- Restrict mass grading, particularly on steep slopes.
- Integrate water quality into planning efforts by coordinating road building and other construction projects with water resource management activities. Invest in research and analysis of the impact of development on water resources, and make this information accessible.
- Sign up all eligible degraded streams for enhancement and/or restoration with state Ecosystem Enhancement Program funds and encourage stream restoration and enhancement projects. Incentivize landowner participation through enhanced conservation subdivision standards.

(ENR-5) Raise awareness of the value of the lands and features to be preserved.

- Critical to the success of preservation tools is education. Enlist local schools, neighborhood and civic groups, and other community stakeholders to highlight the value of culturally and naturally significant landscapes to the Harrisburg planning area.
- Locate greenways and multi-use trail routes to capitalize on access to natural features and viewsheds in the Harrisburg planning area. (Non-motorized transportation facilities offer minimally intrusive access to features.) These facilities could be designed and supplemented with interpretive resources to raise awareness of the presence of important characteristics to infrequent users.

(ENR-6) Consider creating a Preservation Plan that takes into consideration the important cultural and environmental resources worthy of preservation.

- Using the Conceptual Preservation Map as a starting point, develop a joint Town/County Preservation Plan consistent with the following points.
 - The Plan should define the types of features to preserve and provide a methodology for identifying priorities.
 - The delineation of specific preservation areas in the Conceptual Preservation Map may be schematic and may require subsequent field verification as part of the preservation steps (implementation of the Preservation Plan).
 - The Plan should designate specific roadway segments that are potential scenic corridors, which have been preliminarily identified in this Harrisburg Area Land Use Plan process based on citizen input reflected in the products of charrette. (See Appendices B and C.)
 - The Plan should address features and landscapes with the following characteristics and values:
 - ✓ Cultural significance (e.g., archaeological sites, cemeteries, and burial grounds);
 - ✓ Historic value;
 - ✓ Scenic beauty (e.g., landscapes with tree lines, field borders, and meadows, especially as seen from public land or right-of-way);
 - ✓ Semi-rural character;
 - ✓ Healthy native forests covering several acres;
 - ✓ Lands with agricultural use, value, and or capacity (e.g., 5 or more acres, a quarter of which is covered by prime farmland soils);
 - ✓ Land for active and passive recreation;
 - ✓ Lands that are not naturally suited for development (e.g., large area sloping 25% or more);
 - ✓ Ecologically sensitive lands, including floodplains and wetlands;
 - ✓ Habitat for birds, fishes, and other wildlife, especially that for federally listed endangered or threatened species;
 - ✓ Lands critical to support natural processes and balances;
 - ✓ Defined landscape elements such as buffers, greens, planted medians, greenways, trails, and conserved open space;
 - ✓ A landmark tree; and
 - ✓ Lands strategically located to provide relief from an otherwise continuous developed suburban condition.
 - The Plan should identify specific conservation tools, which may include or add to the following:
 - ✓ Agricultural districts;
 - ✓ Conservation easements;
 - ✓ Purchase of development rights;

- ✓ Land acquisition;
 - ✓ Land donation or dedication;
 - ✓ Zoning options:
 - Land conservation district,
 - Overlay district,
 - Incentive zoning, and
 - Floating zone; and
 - ✓ Subdivision regulations:
 - Land set-aside, and
 - Conservation subdivision.
- The Plan should also identify funding mechanisms for conservation as well as public- and private-sector partners, including but not limited to state and federal agencies and programs; local, state, and federal conservation groups; and civic and neighborhood organizations.

6.7 PARKS, RECREATION, GREENWAYS AND OPEN SPACE

(PR-1) Ensure consistency in plans for parks, recreation, greenways and open space.

- Build on the ideas expressed by the community through this plan, just as this plan builds on previous planning efforts and adopted plans. Future efforts to create or update plans that address parks, recreation, greenways, and open space should likewise build on this HALUP.

(PR-2) Plan for greenway, pedestrian and bicycle paths linking neighborhoods through an interconnected network within floodplain corridors, utility easements, and road rights-of-way.

- Update the Harrisburg bicycle/pedestrian plan to a planning area-wide greenway, trails and bicycle master plan, including connections of and to the Carolina Thread Trail, and program capital improvements for greenway, pedestrian and bicycle facilities.
- Locate all park facilities close to greenways to provide efficient non-vehicular access.
- Coordinate access easements for greenways with utility companies and developers platting utility easements and common area for floodplains, buffers, and stormwater management.

(PR-3) Strategically work with private and public recreation providers to create high-quality recreation opportunities to all residents while reducing fiscal impacts.

- Follow strategic steps outlined in the upcoming Park and Recreation Master Plan to ensure a town-wide equitable public park system that provides adequate space and facilities to meet future demand based on projected population growth in the planning area. Explore all grant and funding opportunities in detail with the upcoming Park and Recreation Master Plan.
- Consider the preservation of large privately-held open spaces through land donation, buy-out, easement, deed restrictions, etc. (See Recommendation ENR-6 for additional preservation tools.)
- Adopt a policy to provide a park, conserved open space, or greenway within ½ mile of every residential home within the planning area.
- Encourage developers to provide open space in subdivisions.
- Encourage developers to build public parks within planned communities with park and recreation amenities and provide greenway connections to the non-motorized transportation system.

- Partner with schools to collaborate on a school facility sport field development to reduce the impact of park development and land acquisition costs.
- Develop partnerships with private recreation service providers, such as Young Men's and Women's Clubs of America (YMCA/YWCA), to collaborate on land and program sharing.
- Partner on grant applications with local non-profit organizations and other government agencies.
- Seek athletic field sponsorship and co-branding opportunities with local private businesses for various recreation facilities and sports programs to help offset the cost of future recreational needs.

6.8 TRANSPORTATION

(TR-1) Create collector street connections.

- Implement a collector street network through local authority to review subdivisions and require public improvements as conditions of approval. Collector streets are rarely constructed by local governments or the North Carolina Department of Transportation (NCDOT); instead, they are built by the private sector incrementally as development occurs.
 - Large subdivisions with multiple phases will typically include a spine road or similar central organizing roadway. This collector street should connect not only the phases proposed within the development, but also adjacent land developments. A successful collector street should intersect at least two other collector or arterial streets. The conceptual street network depicted on the Harrisburg Area Future Land Use Map should serve as a guide to developers and planning staff regarding proposal and review of multi-phase development projects.
 - A small, single-phase subdivision will not typically construct a collector street due to its size. The location of the development relative to the conceptual street network illustrated on the Harrisburg Area Future Land Use Map should be evaluated. One of two courses should then be pursued:
 1. If development is proposed on land necessary to achieve a link recommended on the Land Use Map, a local street should extend to the boundary of the development, retaining the potential to be improved at a later date. The conceptual street network should serve as a guide for approximate routing of this facility.
 2. Otherwise, the development should simply address street connectivity through local street stubs and connections, as currently required by local codes.
 - In the event of a small subdivision, simply obtaining right-of-way for a collector street to be constructed at a later date may be appropriate. Local government should require improvements commensurate in scale with the proposed development or partner with the developer to implement oversized improvements that potentially serve a much larger area or population.
 - Local street connections should always be implemented to complement collector streets and to achieve a successful street network. Per local ordinances, all land development projects proposing public streets will extend local street stubs to parcel boundaries of undeveloped land and complete links to street stubs existing in adjacent developments, except where natural boundaries prevent connections or incompatible land uses deter them.

- Consider preparation of a collector street plan to that would identify more precise routes, clarify proportionality of improvements, and address cost-sharing for oversized road improvements.

(TR-2) Support transportation improvement projects identified in CRMPO's Thoroughfare Plan.

- Implement significant portions of the following listed thoroughfares as collector streets, as described in Recommendation TR-1, immediately above. These roads are identified in the Cabarrus-Rowan Metropolitan Planning Organization Thoroughfare Plan.
 - Caldwell Road Extension (north-south link)
 - Harrisburg Industrial Park Road extension
 - Raging Ridge Road extension (major east-west link)

(TR-3) Seek improvements to existing corridors, resulting in "complete streets" that balance the need for adequate capacity to carry increasing vehicular traffic volumes with the need to accommodate other transportation modes.

- Prioritize bicycle and pedestrian circulation within NC-49's right-of-way across the road rather than parallel to it.
 - Crossings should occur at all intersections in downtown Harrisburg. Crossings should be clearly demarcated, discernibly textured, and equipped with pedestrian head signals. (Appendix B offers conceptual illustrations of these types of improvements.)
 - The number and frequency of *signalized* intersections in downtown Harrisburg should reflect the intensity of land use and development proposed in this HALUP. Both, pedestrian traffic and automobile traffic on cross streets should be considered when assessing need for intersection signalization.
 - Parallel sidewalks should be separated from curbs by several feet for safety and comfort of pedestrians. (See Appendix B.)
 - Bicycle circulation should occur a block away from NC-49 on parallel routes to the extent practicable.
- Manage access to NC-49.
 - All requests for driveway access to NC-49 should demonstrate their need for access, after exploring the possibilities for connections to side streets. In the absence of side streets, shared access easements should be implemented where practicable.

- In the event of site redevelopment, closure of existing driveways should be explored and enforced in concert with creation of shared-access easements between the redeveloping site and neighboring properties.
- Manage access to Rocky River Road utilizing strategies recommended above for NC-49.
- Implement articulated, signalized pedestrian crossings in the Mixed-Use area at the western edge of the planning area to facilitate movement across Rocky River Road between dense neighborhoods, neighborhood retail, and the proposed hospital.
- Conduct corridor plans for NC Highway 49 and Rocky River Road. The considerations of this Recommendation TR-3 and recommendations LU-3 and CCD-1 should be studied in depth.

(TR-4) Support improvements that facilitate the provision of transit in Harrisburg or other service that connects Harrisburg to regional transit facilities.

- Work with Cabarrus County Transportation Service to offer circulator bus service to Harrisburg to serve commuters destined for Charlotte. The town's most significant bus stop should occur downtown with intermediate stops along a route between the park-and-ride lot at Charlotte Motor Speedway (near term). In the future, this service should connect to the terminal light rail station on North Tryon Street inside I-485, which will require the aforementioned entities to work with Charlotte Area Transit System.
- Coordinate with adjacent local, regional, and state agencies to study commuter rail service between Salisbury and Charlotte with stops in Concord and Harrisburg.
 - A commuter rail station could become an important anchor in downtown Harrisburg, in line with Recommendation LU-3 in Section 6.1. Future plans for the station site should include a mix of land uses – office, retail, and residential – rather than a basic park-and-ride facility surrounded by surface parking. A commuter rail station would therefore best serve the town if located within the area denoted "Mixed Use (Downtown)" on the Harrisburg Area Future Land Use Map.
 - The Town should promote transit-supportive land uses and intensities of development, as recommended in Part 5 of this plan, to support commuter rail service. The Town should furthermore ensure this development is transit-oriented – i.e., arranged around an interconnected pedestrian-friendly street network that offers short walks to a prospective commuter rail station site, perhaps near the town library.
 - The Town should promote a fine-grained transportation system for non-motorized facilities including both, roadside facilities (typically, bike lanes and sidewalks) and independent facilities (typically greenways) to support transit

in those areas designated “Mixed Use” on the Harrisburg Area Future Land Use Map. Every transit trip starts with a walk or a bike ride to a transit stop.

- Bus routes should include clearly defined stops with shelters within the fine-grained non-motorized transportation network described above.
- Communicate that access to frequent, efficient transit is a vital component of a downtown Harrisburg lifestyle. A robust marketing program aimed to build choice ridership should accompany any and all modes of transit proposed for Harrisburg. Carless access to the broader Charlotte metropolitan area will contribute to the success of the downtown residential market and consequently, downtown retail and office uses. The program should furthermore communicate the benefits of transit to the entire community to enlist the support of those who would not choose transit.

(TR-5) Consider the potential benefits of high-speed rail service.

- Participate with municipalities and regional agencies of the metropolitan area to explore how the entire Charlotte metropolitan area stands to benefit from high-speed rail service in the Southeast and how these benefits translate to the local level.
- Promote seamless bus, light rail, and/or commuter rail service with short layovers between Charlotte and Harrisburg so that travelers from points elsewhere in the Southeast can use high-speed rail to reach the town.

(TR-6) Provide greenways, multi-use trails, sidewalks, and other facilities for enhanced mobility for bicycles and pedestrians.

- Build stronger communities, create great places, and maintain quality of life using a diverse approach to transportation planning.
- Require segments of multi-use trails and sidewalks to be constructed as requisite infrastructure in major subdivisions. Required segments should include those along existing road rights-of-way that adjoin land proposed for major subdivision.
- Require rights-of-way and/or easements for a system of interconnected greenways to be set aside during the planning for major subdivisions.
- Work with Cabarrus-Rowan Metropolitan Planning Organization and North Carolina Department of Transportation to identify funding and implement non-motorized transportation facilities. Any road improvement project should include sidewalks, multi-use trails, and crosswalks as essential components of the improvements.

6.9 UTILITIES

(U-1) Develop a utility system extension policy that supports the proposed land use pattern reflected in this Harrisburg Area Land Use Plan.

- Support utility system improvements, particularly extensions provided by private developers, that achieve the desired land use pattern expressed in the Harrisburg Area Land Use Plan (HALUP).
- Phase water and sewer service through Interlocal Agreement, in which Harrisburg and Cabarrus County agree on a timetable for service extensions to new development from planned trunk lines in manner that supports HALUP land use patterns. Establish priorities for publicly-financed future extensions:
 - Higher density areas (relative to one another on the Harrisburg Area Future Land Use Map;
 - Areas contiguous to developed portions of the planning area;
 - Locations that do not require crossing a major water course to serve;
 - Areas where septic and/or private package treatment plants are not an option;
 - Areas where the financial investment in utilities has already been made; and
 - Areas that have already been annexed into the Town limits, especially where there are gaps in service provision.
- In all instances, size systems to support the land use intensity indicated in the Plan.

6.10 COMMUNITY FACILITIES AND SERVICES

(CF-1) Consider this Harrisburg Area Land Use Plan in the creation and updating of all plans for community and facilities and services.

- Meet with school board representatives to discuss the Harrisburg Area Plan, once adopted, so that this plan may serve as input into the next school facilities plan update(s).
- In public safety (i.e., police, fire and emergency medical service), maintaining or improving the response times (particularly for ISO ratings) is critical as growth continues. Update the service areas and facilities plans for public safety to ensure level of service needs are met.

(CF-2) Encourage the integration of community facilities into existing and proposed development.

- Thoughtfully integrate churches, schools and libraries into the built environment to complement other compatible uses and serve as a focal point in a neighborhood and the broader community.
 - Integrate smaller facilities that serve one neighborhood or several neighborhoods into a new or existing development so that walking and bicycling are the preferred methods of travel to the facility. The facility should be centrally located and accessible via several routes.
 - Direct larger facilities, serving multiple neighborhoods or the entire community, to be accessible from at least two collector streets as well as the non-motorized transportation network. Just as existing community facilities are the destinations of the conceptual system of greenways, multi-use trails, and pedestrian ways (See Appendix C.), proposed facilities should be located adjacent to segments of the network, or the proposal should include extensions of the non-motorized network to the site.
 - Locate community facilities such that a full complement of public services and infrastructure is available to protect and support the facility upon opening, to the extent needed by the facility. Proposals for facilities that do not meet this standard should demonstrate plans in place to achieve it, or the proposing entity should be engaged by the Town and the County to achieve this standard. The Town and the County should engage community facility providers during the site selection process to the extent practicable.
 - Locate Town and County facilities on land well suited to the facility proposed to alleviate need to extensive clearing, grading, and filling that would disrupt or destroy natural and cultural resources. Athletic fields, for instance, should be located on flat lands with some capacity to permeate rainwater, and new structures should not be located in floodplains.

- Capitalize on natural advantages such as orientation to daylight and windbreaks provided by topography and natural vegetation when planning new facility sites. Topography and native vegetation should furthermore be incorporated into site plans as an amenity contributing to the natural aesthetic of the surrounding area.

6.11 IMPLEMENTATION

(IM-1) Harrisburg and Cabarrus County each should adopt the Harrisburg Area Land Use Plan as the policy document to guide land-use decisions pertaining to the planning area.

- This plan will supersede the previous land-use plans for the planning area.

(IM-2) Establish an implementation program to ensure the objectives of this plan are achieved within a reasonable time period through the participation of the two affected jurisdictions.

- Evaluate and prioritize implementation strategies outlined in this Harrisburg Area Land Use Plan.
 - Develop an implementation guide that reflects the prioritization by identifying short-, mid- and long-term activities
 - Establish measurable goals to be used in the monitoring of progress.
- Form a committee to oversee and measure progress on implementation activities, particularly those identified as short-term or first-year tasks.

(IM-3) Update this Harrisburg Area Land Use Plan not more than five years after its adoption.

(IM-4) Consider a city/county agreement to provide for joint decision-making.

- In order to insure future agreement on development proposals within the study area, the Town and the County should enter into a joint agreement that:
 - Requires future rezonings to be consistent with the plan; and
 - Sets up a coordinated process for rezoning application review following adequate notification of such applications.

Appendix A

HALUP Advisory Committee Members



APPENDIX A: HALUP ADVISORY COMMITTEE MEMBERS

MEMBER LIST

James Amendum
Janelle Bryans
Phillip Clarke
Kelli Embler
Jim Flowers
Mark Fortner
Linda Harris
Mildred McManus
William Milligan
Charles Paxton
Brent Whichel
Todd Berg
Ian Prince
David Hudspeth
Joe Howell

Appendix B

Charrette Products



APPENDIX B: CHARRETTE PRODUCTS

The HALUP planning process included a charrette, a two-day on-site workshop conducted by project planners and designers in February 2010. The purpose of the charrette was an intensive exercise to develop key aspects of the Harrisburg Area Land Use Plan in a transparent, accessible setting to maximize input from community stakeholders.

With the help of Harrisburg and Cabarrus County staff, project planners engaged officials and experts representing infrastructure and natural resources as well as the HALUP Advisory Committee in informal meetings throughout the charrette. The public attended a “drop-in” session the first evening of the charrette, during which attendees viewed maps and drawings as works in progress and discussed ideas and concerns with project planners.

The critical product of the charrette, the Harrisburg Area Future Land Use Map, appears in Part 5 of this plan. The following charrette products represent important principles and aspects of the community that drove decisions regarding future land use.

B.1 Planning for Cultural and Natural Resources

The charrette process is visible in the exploration and development of ideas for the preservation and enhancement of natural and cultural resources in the Harrisburg planning area. This aspect of the planning process addresses all of the goals identified in Part 4 of this plan and four of them specifically:

- Promote local agriculture.
- Maintain open space to meet the demand for complementary purposes, such as recreation, agriculture and natural resource protection.
- Improve circulation and supply transportation options to ensure easy access within the community and to other places.
- Enhance quality of life with expanded recreational opportunities.

This planning is vital to understanding what the Harrisburg planning area is now and to guiding the community’s vision for the area. The Harrisburg Area Land Use Plan posits recommendations and implementation strategies regarding the use of land that achieves these goals and incorporates important natural and cultural aspects of the community, which were identified and documented during the charrette.

This first image (Illustration B.1) depicts an inventory of resources overlaid with greenway routes, planned, proposed, or initiated. The second illustration (Illustration B.2) is the result of collaborative efforts between project planners and stakeholders over the two

days of the charrette to identify features and characteristics intrinsically valuable to the community and a conceptual plan to provide or enhance access to them.

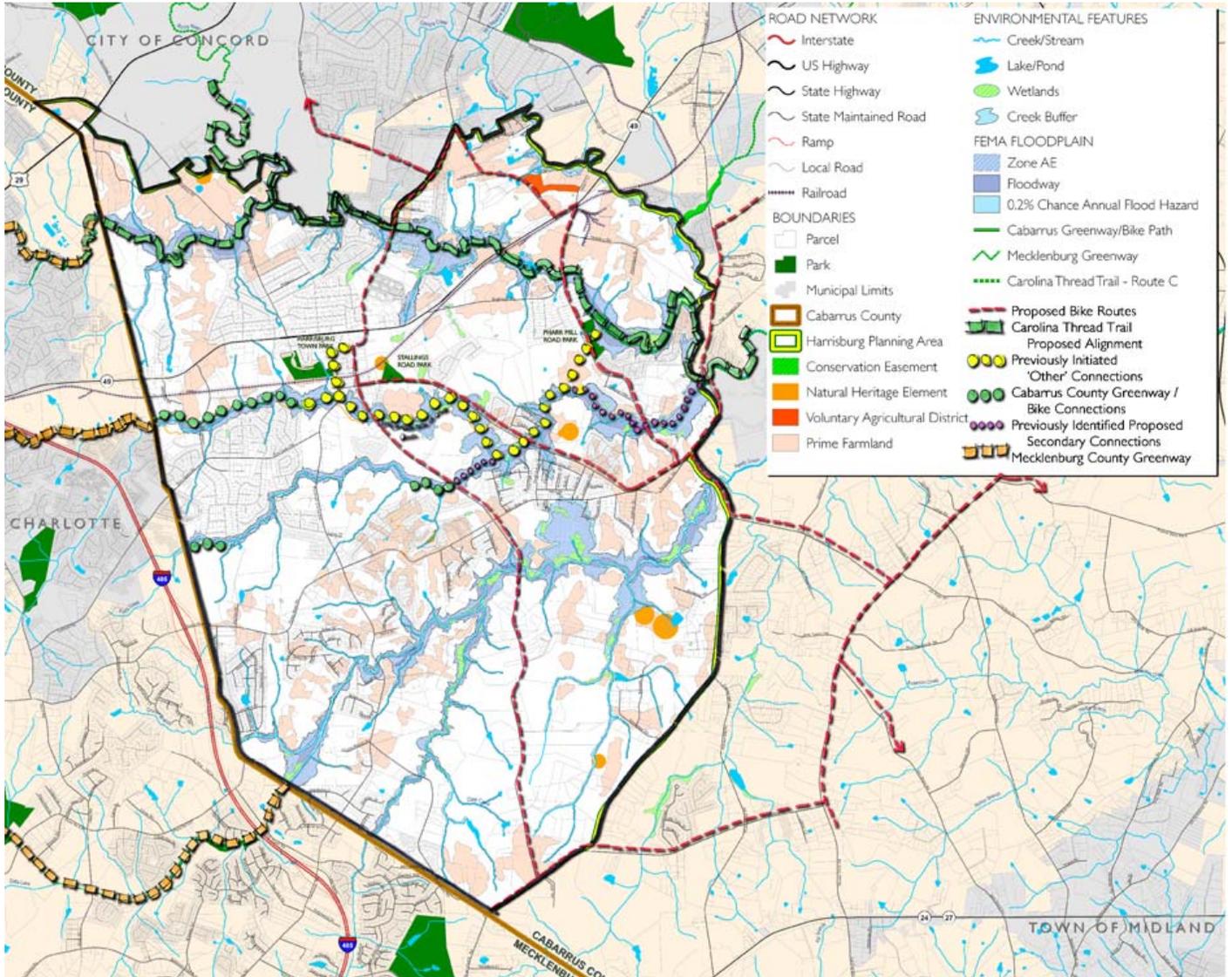


Illustration B.1: Map compiling greenways from various plans and proposals applying to the Harrisburg planning area, developed during charrette as base map for bicycle/pedestrian network proposal.

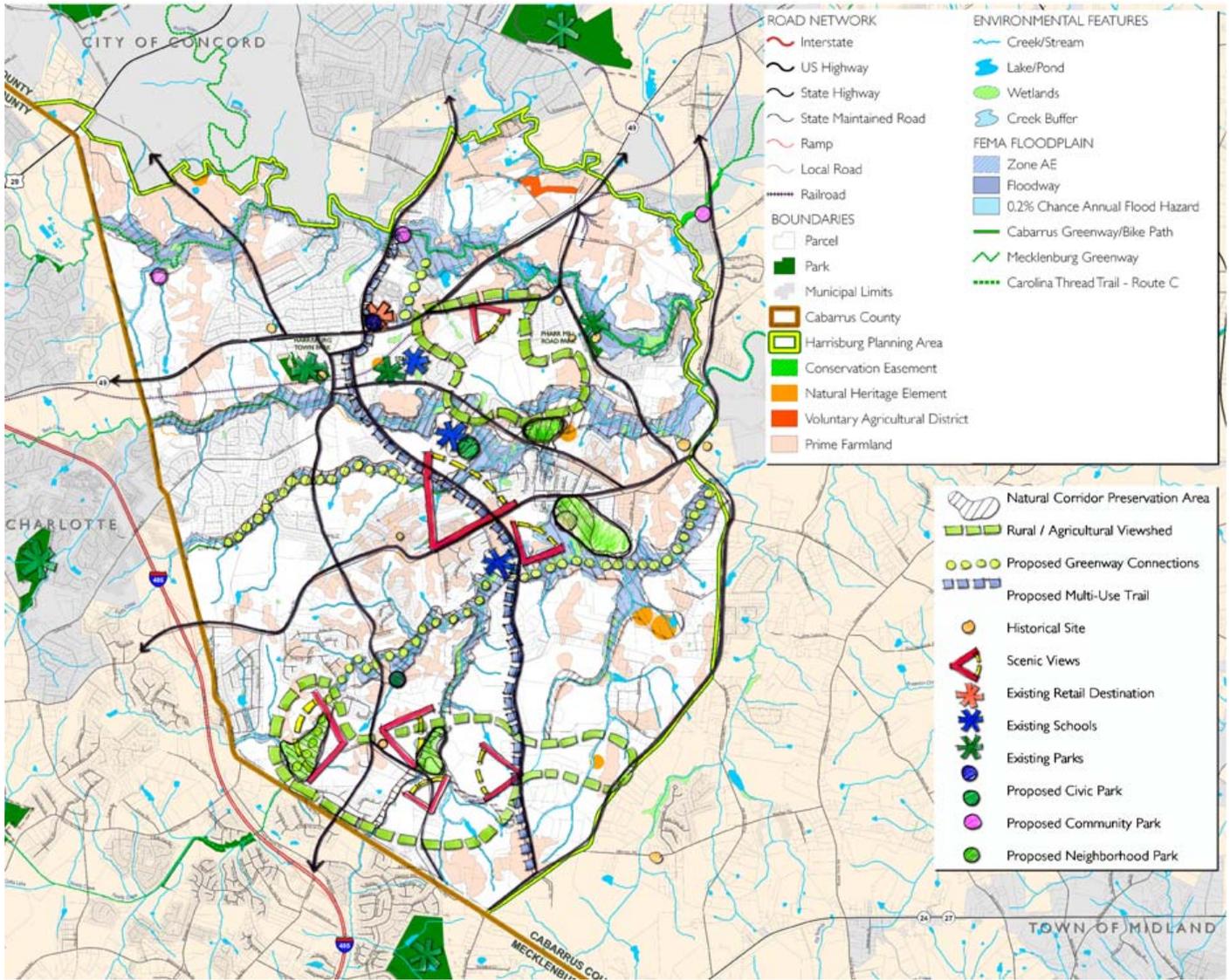


Illustration B.2: Map depicting bicycle/pedestrian network proposal, bicycle/pedestrian destinations (parks, schools, retail), hypothetical park system, and cultural and natural resources worthy of conservation.

The second illustration, above, depicts the opportunities for the Harrisburg planning area, should the town and the county choose to pursue them, rather than final recommendations. For instance, locations marked “Proposed Park” do not translate to the Harrisburg Area Future Land Use Map. Instead, the sites are suitable for further study in a public plan specific to parks and recreation or for incorporation into private land development plans. The final *Conceptual Preservation Map* appears in the next section of this document, Appendix C, and depicts those natural and cultural aspects that influence future land use as depicted in the map in Part 5: Harrisburg Area Future Land Use Map.

B.2 Linking Transportation and Land Use

The charrette also yielded a *Conceptual Transportation Network Map*, which appears in Appendix C and on this page as Illustration B.3. Transportation greatly affects the use of land, as land without access has very limited options for use. The capacity of transportation facilities, moreover, influences the intensity of land development. Several projects that affect road capacity were in planning stages at the time of the charrette, including road closure at railroad crossings.

The design of a road also influences land use and development intensity. Width, speed, and accommodations for bicyclists and pedestrians are all design elements that should reflect the context of a transportation corridor. The future context of a corridor is envisioned through comprehensive plans, land use plans, and small area plans. The project team, therefore, studied two of the most important thoroughfares in the Harrisburg planning area: Rocky River Road and NC Highway 49.

Among the stakeholders present at the charrette were representatives of North Carolina Department of Transportation (NCDOT) and Cabarrus-Rowan Metropolitan Planning Organization (CRMPO). Both agencies have plans for transportation facilities that impact land use and development in the Harrisburg planning area, which Appendix C addresses. The NCDOT representative indicated to the project team that rising traffic volumes on Rocky River Road seem likely, given its interchange with I-485 and the intensity of development expected to occur within its corridor. The representative furthermore communicated that community objectives for specific roads are more likely considered by NCDOT during transportation improvements analyses when they appear in adopted plans.

Rocky River Road is a two-lane rural road through much of the planning area. Citizens and stakeholders who attended the charrette expressed that they appreciate the semi-rural character of the road, segments of which are lined by vegetation or abutted by open land. Charrette participants desired to maintain an aesthetically pleasing corridor along Rocky River Road, even if capacity improvements are considered.

Based on this input, the project team developed ideas for future road cross-sections during the charrette. The project team studied variations of a four-lane cross-section to anticipate the possibility of future capacity improvements; however, the concepts depicted



Illustration B.3: This clip of a predecessor of the *Conceptual Transportation Network Map* illustrates the project team's study of possible routes for thoroughfares (in pink) identified in the CRMPO Thoroughfare Plan and intersections in need of further study (in orange). The finished product appears in Appendix C.

outside of travel lanes are applicable to the current two-lane road as well. The purpose of this study of Rocky River Road was to depict a corridor that exhibited a positive relationship between the road and adjacent land developments.

Illustrations B.4 through B.7 are products prepared and reviewed by citizens and stakeholders at the charrette. These conceptual illustrations are intended to express the vision of the Town and the County for this roadway in the event of a future widening project and are not themselves to-scale plans intended for implementation. The illustrations moreover represent options for improvements in the corridor adjacent to hypothetical, future land development projects. Amenities such as those depicted – sidewalks, multi-use trails, buffers, etc. – are commonly required in some form by local governments administering land development approval.

No single cross-section is appropriate for the length of Rocky River Road through the planning area. A combination of the following concepts may be best applied to various segments of the corridor based on their context.

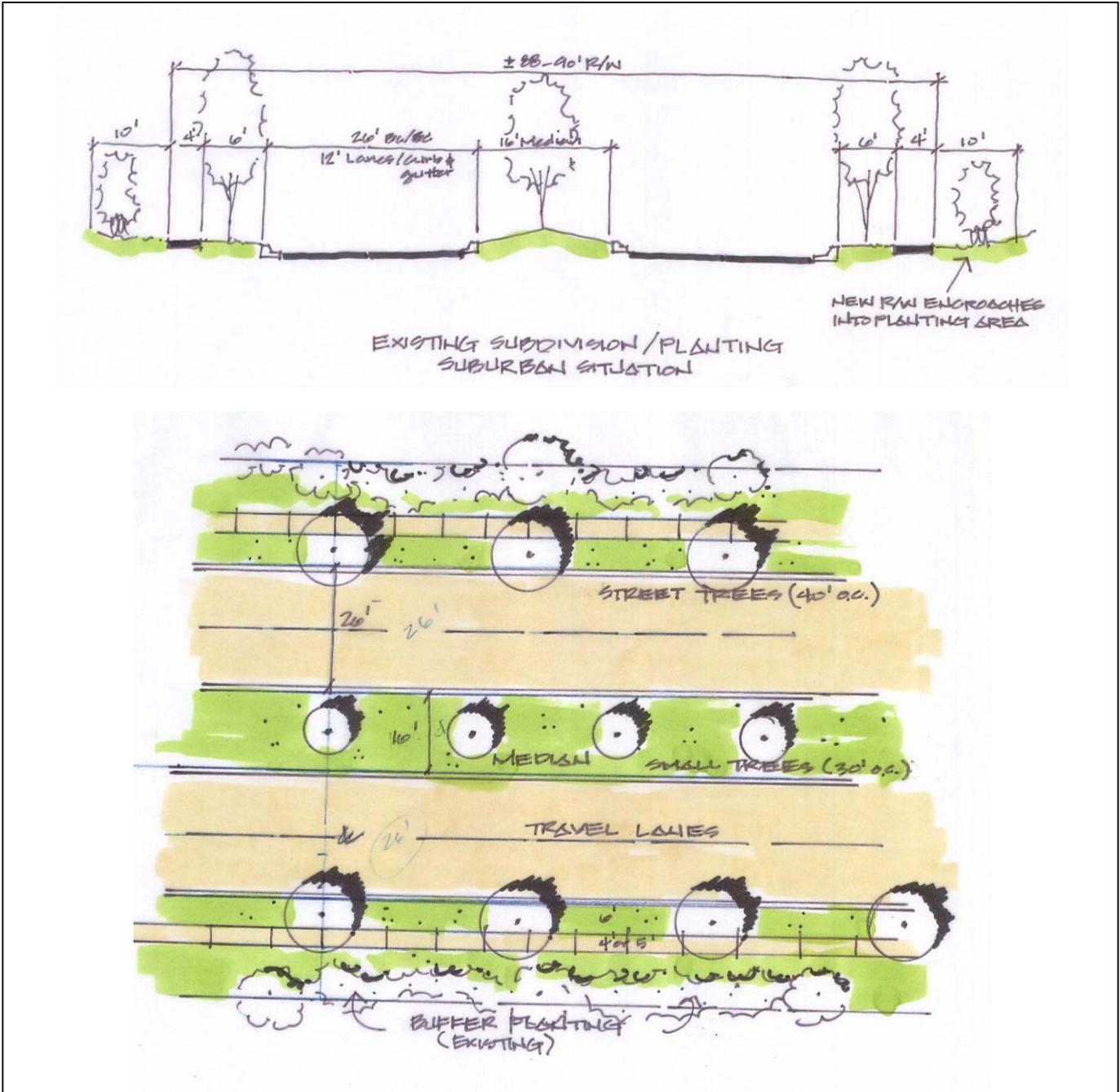


Illustration B.4: "Existing Subdivision/Planting, Suburban Situation," above, depicts a hypothetical four-lane road section within developed areas along Rocky River Road, where right-of-way expansion would be constrained by existing development. This condition may also be appropriate in Rocky River Road's commercial area near its intersection with Plaza Road Extension.

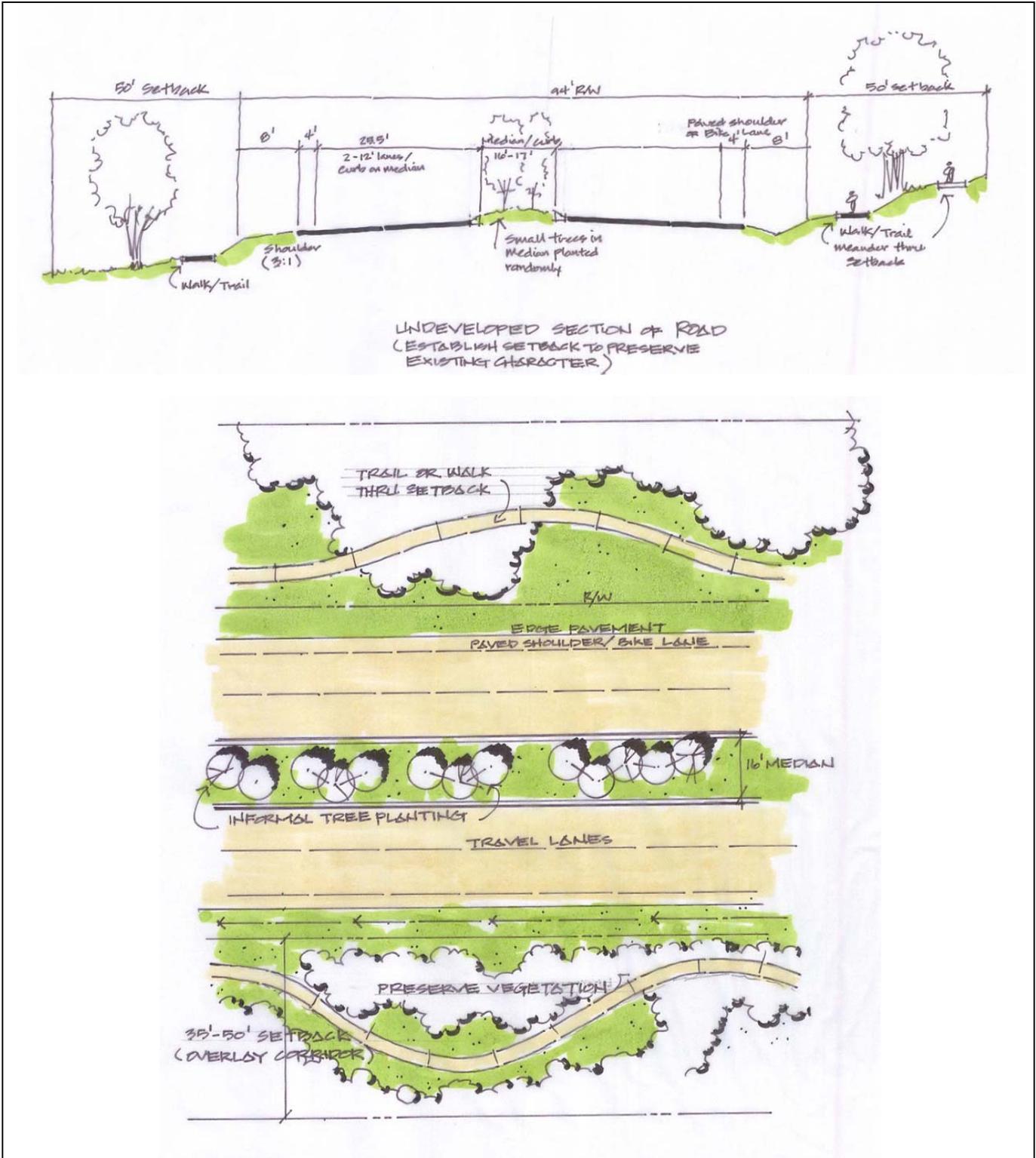


Illustration B.5: "Undeveloped Section of Road," above, depicts a hypothetical four-lane road section through undeveloped portions of the Harrisburg planning area. On-road bike lanes are shown in addition to a sidewalk or multi-use trail in a buffer parallel to the right-of-way. The buffer and trail could be secured as a requirement of major land development approval to mitigate the impact that large new subdivisions might have on the rural character prevailing in the southern portion of the planning area.

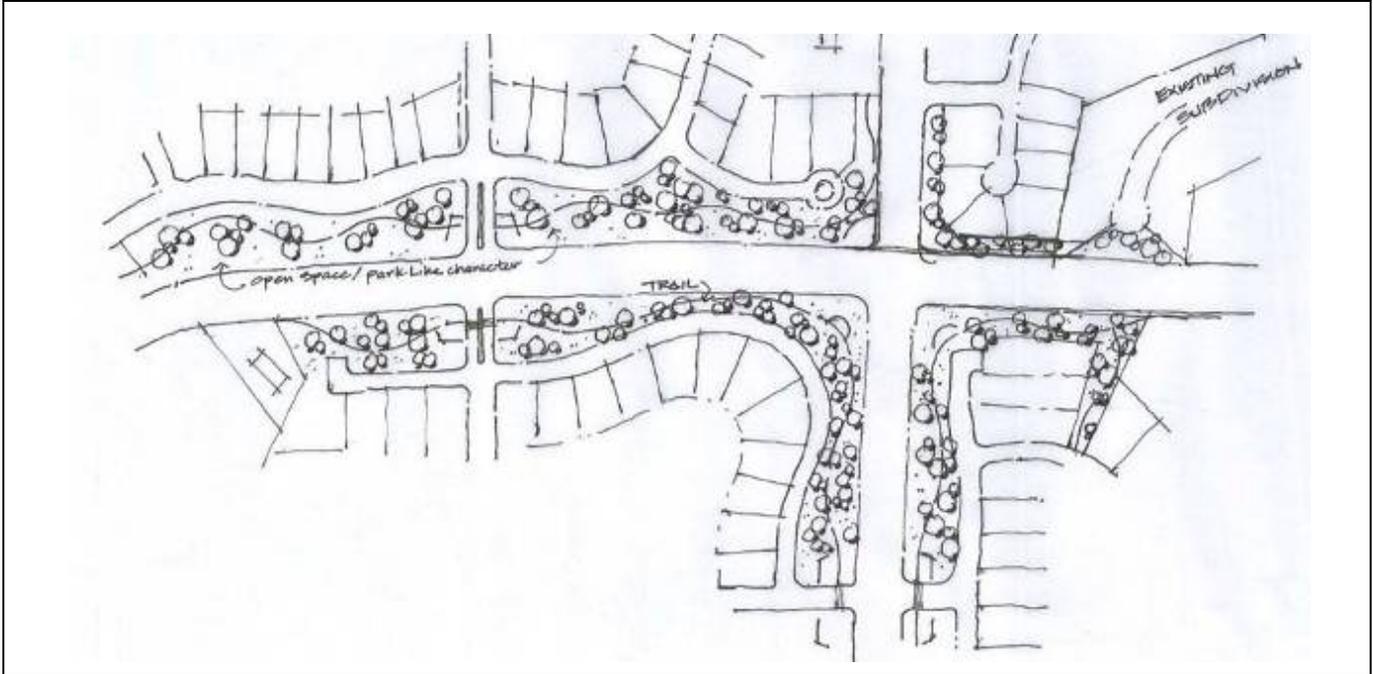


Illustration B.6 complements the previous illustration (Illustration B.4), depicting an enhanced roadside buffer. In this hypothetical scenario, the buffer and its trail could become a linear park-like setting between Rocky River Road and parallel local streets. Walkers and casual bikers on the trail would not be exposed to back yards or privacy fences on their route, and residents of the neighborhood could access Rocky River Road more directly, without requiring additional entry roads.

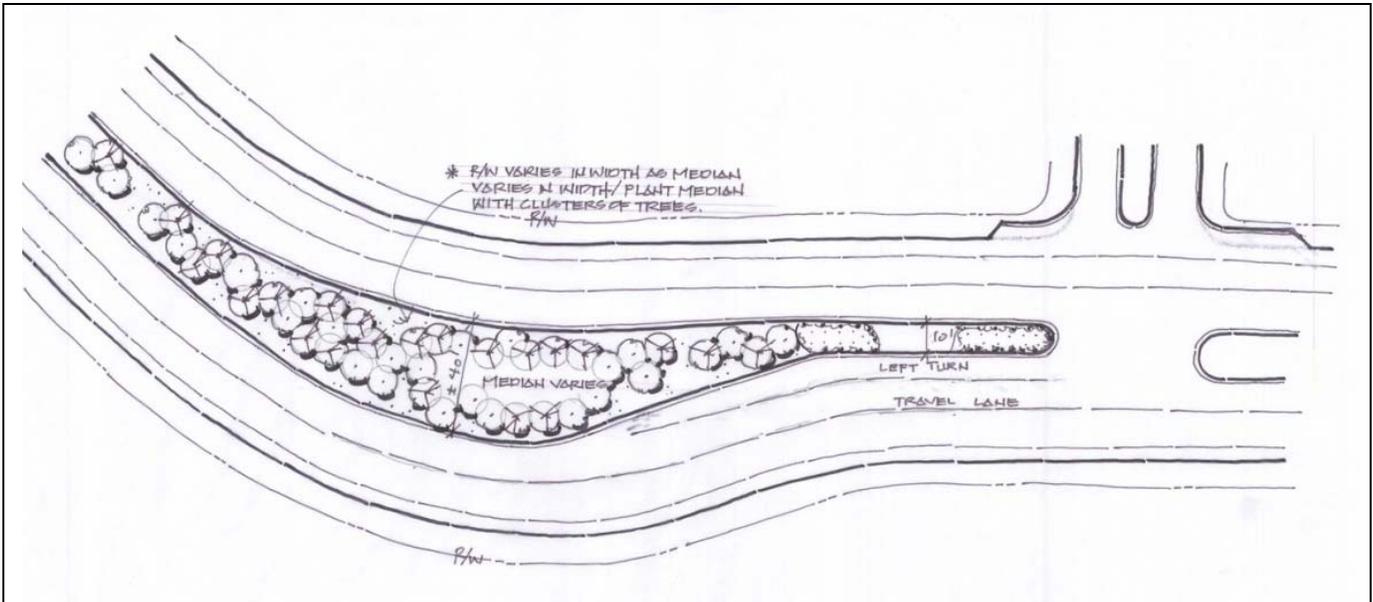


Illustration B.7 shows the introduction of a more organically shaped median in Rocky River Road to reduce the visual impact of a four-lane highway and accommodate more natural planting of vegetation. Differing centerline elevations between eastbound and westbound lanes might be considered to further enhance the concept. An expanded median includes dense vegetation to enhance a green aesthetic that obscures suburban land development. A forested condition could thus be carried through much of the planning area for the length of the corridor. This concept contrasts broad clearing and grading necessary to execute a typical widening and straightening.

The Town of Harrisburg has invested considerably in the area of town identified in the Harrisburg Area Future Land Use Map as “downtown.” This area has become the community’s civic hub and is emerging as its business center with a concentration of residents.

By virtue of these attractions, downtown Harrisburg is the community’s most important destination; mobility through the downtown must therefore not come at the expense of access to it. The best solution is a highly interconnected network of streets offering multiple routes to destinations throughout the district.

The notion of multiple routes applies for pedestrians as well as motorists. The project team therefore developed conceptual illustrations depicting multiple crosswalks across NC Highway 49 and framed the corridor with mixed use buildings. Guiding commercial and office development, with residences in upper stories, to the sidewalk alongside the road would calm traffic and encourage pedestrian activity throughout the downtown area. The bulk of these buildings near the road, combined with pedestrian activity leading into their front doors, would provide a sense of arrival into the heart of Harrisburg and signal to motorists that they have entered a place of activity and interest and help calm traffic.

Realization of this conceptual scenario would occur over time, as private landowners choose to redevelop commercial sites in the corridor. Green spaces could be components of private development.

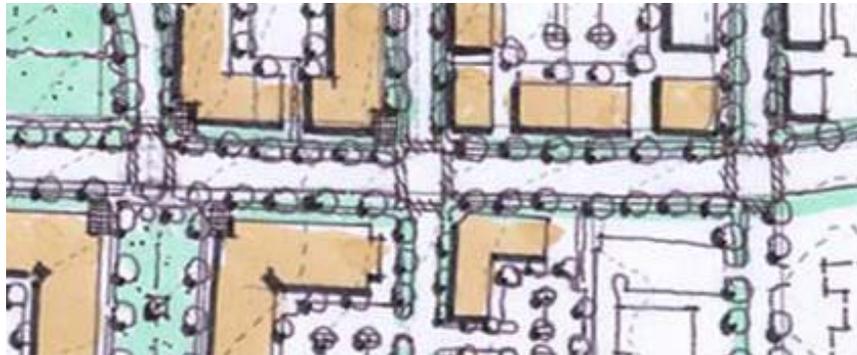


Illustration B.8 conceptually depicts NC Highway 49 through downtown Harrisburg, complete with textured crosswalks and street trees. Green-space and building placement are hypothetical and are intended only to illustrate orientation to NC-49.

Appendix C

Supporting Concept Maps



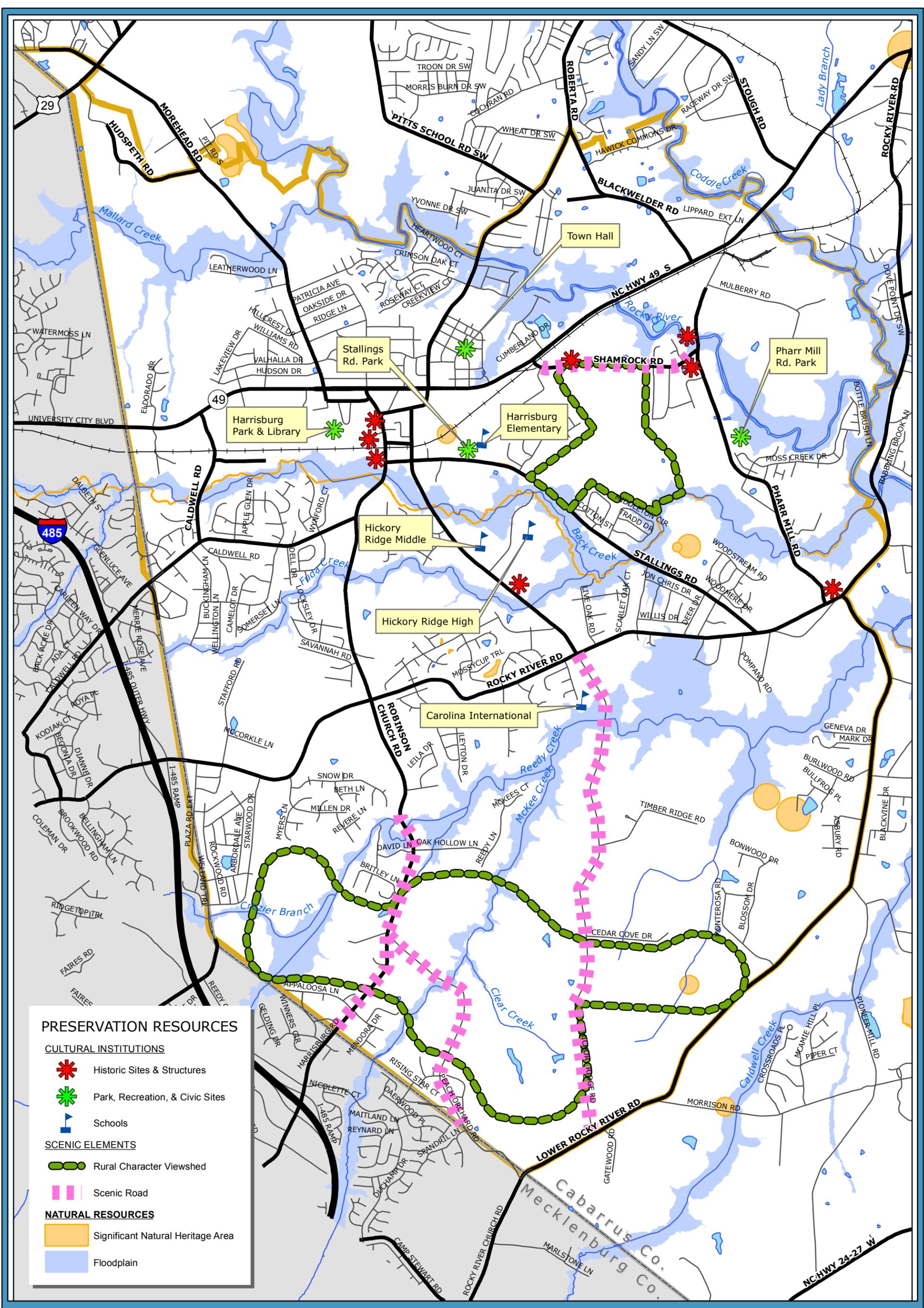
APPENDIX C: SUPPORTING CONCEPT MAPS

As discussed in Appendix B: Charrette Products, the project team for the Harrisburg Area Land Use Plan developed conceptual illustrations and proposals for cultural and natural resources and transportation. The team worked closely with officials with stakes in these topics and worked diligently to respond to public input, which in part, stressed that land development should respect resources and avoid congesting existing roads.

The project team developed two conceptual maps that complement the Harrisburg Area Future Land Use Map:

- The *Conceptual Preservation Map* (Figure 10) denotes historic sites, farmland, viewsheds, and natural features of particular value to the Harrisburg area.
- The *Conceptual Transportation Network Map* (Figure 11) highlights multi-modal transportation improvements for the Harrisburg Planning Area, including those planned by Cabarrus County, Cabarrus-Rowan Metropolitan Planning Organization, and NC Department of Transportation.

Neither map is intended to be a comprehensive assessment of needs and proposals. The Town of Harrisburg administers a bicycle/pedestrian plan and in the process of planning for parks and recreation. Cabarrus County, too, has plans for facilities to accommodate bicycles and pedestrians and is in and adjacent to the Harrisburg planning area. This HALUP complements and provides input into, rather than supersedes those efforts. These two maps depict features, existing or proposed, that significantly affect future land use and development and are therefore supportive of the Harrisburg Area Future Land Use Map.



PRESERVATION RESOURCES

CULTURAL INSTITUTIONS

- Historic Sites & Structures
- Park, Recreation, & Civic Sites
- Schools

SCENIC ELEMENTS

- Rural Character Viewshed
- Scenic Road

NATURAL RESOURCES

- Significant Natural Heritage Area
- Floodplain

ADDITIONAL LEGEND ITEMS

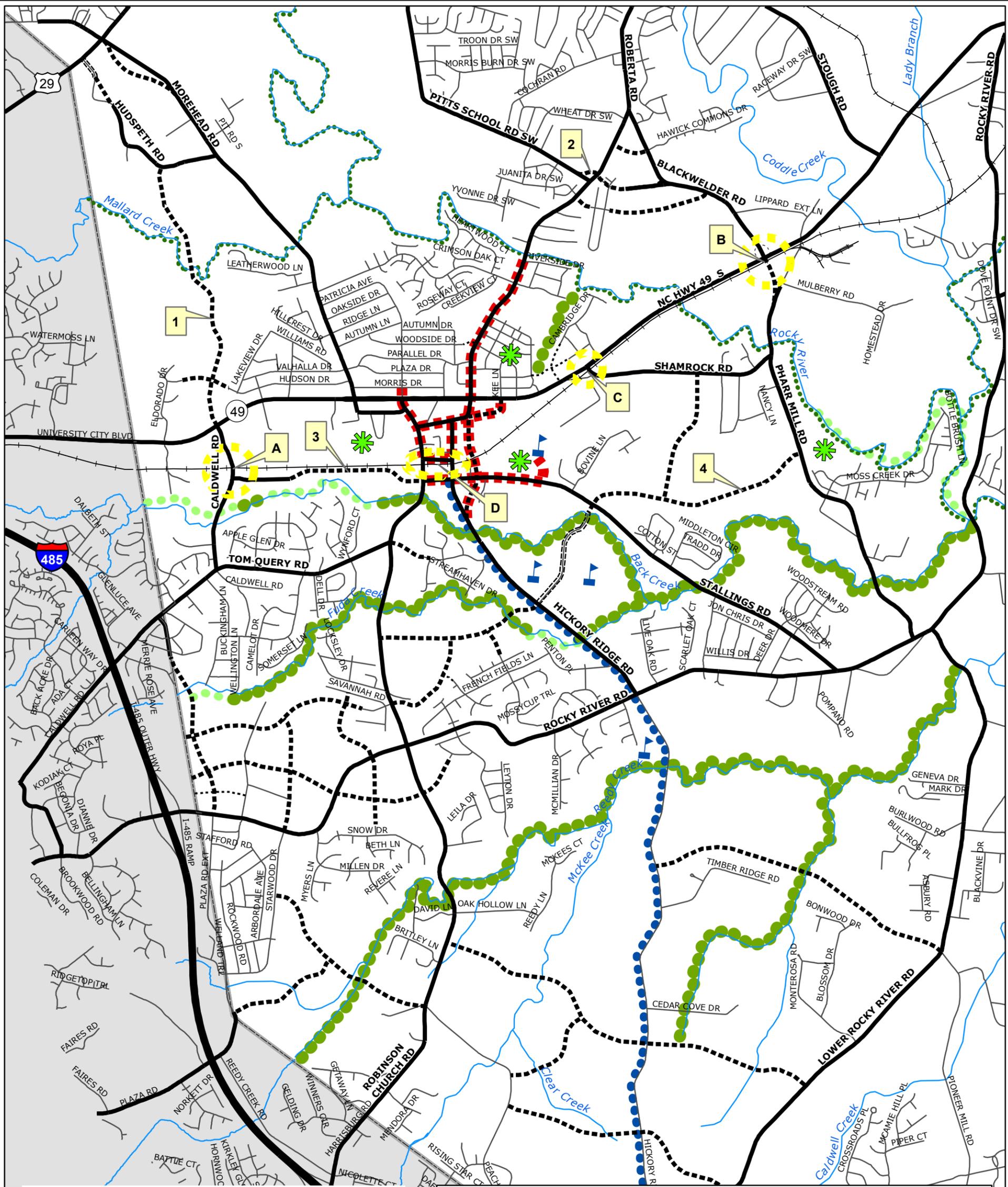
- Railroad
- Major Road
- Street
- Surface Water
- County Boundary
- Harrisburg Planning Area

FIGURE 10: CONCEPTUAL PRESERVATION MAP
HARRISBURG AREA LAND USE PLAN
 August 2010

3,000 1,500 0 3,000 Feet

LandDesign

Data Source:
 Cabarrus County GIS, Mecklenburg County GIS
 N:_2008\1008319\GIS\CPM 63010.mxd



FUTURE NETWORK ALTERATIONS

- | | |
|----------------------------------|-------------------------------|
| Planned RR Crossing Modification | Proposed Greenway |
| Collector Road | Proposed Multi-Use Trail |
| Local Road | Proposed Pedway |
| Ramps | Previously Planned Greenway |
| T-fare Route on Existing Road | Planned Carolina Thread Trail |

- 1) A north-south route between US-29 and Rocky River Road at its intersection with Plaza Road Extension;
- 2) An east-west route between Blackwelder and Roberta roads to realign and extend Pitt School Road across Roberta to Blackwelder;
- 3) An east-west route extending Harrisburg Industrial Park Road to connect Caldwell Road to Roberson Church Road at its intersection with Stallings Road; and
- 4) An east-west route to connect Pharr Mill Road to Roberson Church Road at its intersection with Tom Query Road.

- A) Caldwell Road will be reconstructed on a bridge to pass over the railroad. Its intersections with NC Highway 49 and Harrisburg Industrial Park Road will be retained and perhaps reconfigured.
- B) Pharr Mill Road will be realigned with Blackwelder Road onto a bridge above both, the railroad and NC Highway 49. Ramps will be constructed to maintain the link between the state highway and these north-south routes. Pharr Mill Road's existing railroad crossing near Lippard Lane will be eliminated.
- C) The railroad crossing of Shamrock Road will be closed and traffic rerouted.
- D) The railroad crossings of Hickory Ridge Road and Roberson Church Road will be closed. Roberta Road will be extended parallel to Hickory Ridge Road and overpass the railroad to Stallings Road. Stallings Road will be embanked and its intersections with Roberson Church Road and Hickory Ridge Road will be reconfigured to better accommodate north-south traffic in the middle of Harrisburg.

- ADDITIONAL LEGEND ITEMS**
- | | |
|---------------------------|-----------------|
| Park, Rec., & Civic Sites | County Boundary |
| Schools | Street |
| Harrisburg Planning Area | Major Road |
| | Railroad (RR) |
| | Water Course |

FIGURE 11: CONCEPTUAL TRANSPORTATION NETWORK MAP
HARRISBURG AREA LAND USE PLAN
 August 2010

3,000 1,500 0 3,000 Feet

Data Sources:
 Cabarrus County GIS, Mecklenburg County GIS
 N:_2008\1008319\GIS\CTNM 63010.mxd

C.1 Conceptual Preservation Map

The Conceptual Preservation Map depicts opportunities to conserve, protect, and enhance places and parts of the Harrisburg area that make it a unique community. Many participants of the public process for the Harrisburg Area Land Use Plan indicated these aspects of the community attracted them to reside and do business in the Harrisburg area.

The foundation of the Conceptual Preservation Map is the set of features and characteristics of the landscape that have functional and qualitative value to the citizenry. Members of the public who attended the charrette and other community meetings marked these features on the map or described them to the project team, which in turn identified and mapped these features and characteristics. They include the following:

- Working agricultural lands;
- Natural water courses and associated floodplains and wetlands;
- Historic sites and structures;
- Significant Natural Heritage Areas;
- Existing land dedicated to parks and recreation;
- Scenic roads; and
- Rural character viewsheds.

The first five types of land characteristics contribute to the last two. A rural character viewshed is a perspective from a roadway or other public land in which a person can observe and enjoy the natural beauty and open space created or framed by natural and cultural features, including farms and forests. A scenic road is a corridor framed by historic structures, large trees, and other natural elements offering travelers a visual break from the repetition of subdivision housing or parked cars on commercial property.

These natural and cultural features of the landscape range from functional to aesthetic – uses of the land to composition of features. Functions are uses of land and therefore guide the Harrisburg Area Future Land Use Map. Most simply, existing parks appear on the Land Use Map, indicating that these parks are important components of the community's future. Agriculturally used land exists primarily in areas designated for single-family residential development at low and very low densities. While not land uses, the remaining features and characteristics listed above are impacted by the use of the land they occupy. That land use greatly affects the integrity and longevity of cultural and natural features in the community.



Culturally and naturally significant places are more than scenic resources; they play important civic roles. Churches (above), cemeteries (below), and agricultural land (bottom) employ citizens and provide services. Their endurance is a testament to their value to the community.



C.2 Conceptual Transportation Network Map

The Conceptual Transportation Network Map identifies opportunities to weave an interconnected system of routes for all travelers through the Harrisburg planning area. The Network Map shows existing, planned and proposed facilities including improvements for three modes of transportation: pedestrian, bicycling, and motor vehicle. The map does not illustrate every planned bicycle or pedestrian improvement does; nor does it depict improvements exclusive to transit. One type of transit, high-speed rail, impacts the Conceptual Transportation Network Map as discussed herein.

Current Plans for Transportation Facilities

The Conceptual Transportation Network Map incorporates projects conceived or proposed by North Carolina Department of Transportation (NCDOT), Cabarrus-Rowan Metropolitan Planning Organization (CRMPO), Cabarrus County, and private landowners. These include railroad crossing modifications in anticipation of high-speed rail service passing through the planning area (NCDOT), routes for thoroughfares of regional importance (CRMPO), greenways (Cabarrus County), and major subdivision spine roads.

The Town of Harrisburg has plans for several bicycle and pedestrian improvements. These are not depicted due to scale and absence of spatial data sets necessary to generate the map. The improvements nevertheless guided the creation of the Conceptual Transportation Network Map.

The Network Map calls out each of the railroad crossing modifications planned by NCDOT in anticipation of the Charlotte-Raleigh high-speed rail link. Letters in the following list correspond with map call-outs in Figure 11. Service roads that NC Rail will construct to accommodate private and public rail closings are not depicted. Town staff is working with NCDOT to mitigate potential negative impacts of high-speed rail in Harrisburg.

- A) Caldwell Road will be reconstructed on a bridge to pass over the railroad. Its intersections with NC Highway 49 and Harrisburg Industrial Park Road will be retained and perhaps reconfigured.
- B) Pharr Mill Road will be realigned with Blackwelder Road onto a bridge above both, the railroad and NC Highway 49. Ramps will be constructed to maintain the link between the state highway and these north-south routes. Pharr Mill Road's existing railroad crossing near Lippard Lane will be eliminated.
- C) The railroad crossing of Shamrock Road will be closed and traffic rerouted.
- D) The railroad crossings of Hickory Ridge Road and Robinson Church Road will be closed. Roberta Road will be extended parallel to Hickory Ridge Road and overpass the railroad to Stallings Road. Stallings Road will be embanked and its intersections with Robinson Church Road and Hickory Ridge Road will be reconfigured to better accommodate north-south traffic in the middle of Harrisburg.

CRMPO maintains a Thoroughfare Plan covering its planning jurisdiction, which includes the Harrisburg planning area. Regionally significant transportation improvements ranging

from road widenings to new connections and alternate routes appear in the plan. Its four projects for the Harrisburg planning area are these:

- 1) A north-south route between US-29 and Rocky River Road at its intersection with Plaza Road Extension;
- 2) An east-west route between Blackwelder and Roberta roads to realign and extend Pitt School Road across Roberta to Blackwelder;
- 3) An east-west route extending Harrisburg Industrial Park Road to connect Caldwell Road to Robinson Church Road at its intersection with Stallings Road; and
- 4) An east-west route to connect Pharr Mill Road to Robinson Church Road at its intersection with Tom Query Road.

Two significant projects intended by private landowners include (1) realignment of Morehead Road around land associated with Charlotte Motor Speedway and (2) a segment of the north-south thoroughfare between Rocky River Road and Fuda Creek, part of the Brookdale land development.

Cabarrus County has plans that predate this document to implement three sections of greenways in the Harrisburg planning area. These trails for pedestrians and bicyclists parallel Back and Fuda creeks in the eastern portion of the planning area as well as Rocky River. The Rocky River greenway is the county's portion of the regional Carolina Thread Trail, which would link Harrisburg to a broad 15-county region around Charlotte.

Conceptual Network Enhancements

The Conceptual Transportation Network Map depicts facilities developed during this planning process, which fall in five categories.

- (1) Collector streets;
- (2) Local streets;
- (3) A multi-use trail;
- (4) Greenways; and
- (5) Pedestrian ways.

The purpose of illustrating these facilities is to identify mobility and access within and between the various land use districts identified on the Harrisburg Area Future Land Use Map. Proposed collector streets are needed to support the residential densities proposed, while the local connections depict opportunities for existing neighborhoods to connect to these proposed



A collector street, above, and local street, below, both demonstrate adequate levels of service for pedestrian travel. A clearly demarcated crosswalk enhances pedestrian mobility and safety at busier intersections; pedways on the Conceptual Transportation Network Map indicate appropriate locations for crosswalks like that in the image at bottom.



streets. South of the railroad, additional east-west routes will help maintain access and service for emergency response vehicles and school busses. These network enhancements would reduce burdens on existing thoroughfares and improve levels of urban services so that the intensity of land use proposed on the Harrisburg Area Future Land Use Map can be supported.

The collector and local streets shown on the Conceptual Transportation Network Map are suitable *approximate* routes for facilities in the context of existing development patterns and physical features. Implementation will require further route refinement. Typically, these routes will be implemented as required components of private land development proposals (e.g., Brookdale spine road). The Map is thus a framework in which private construction of roads for public maintenance expands the transportation network.

As previously noted, the Conceptual Transportation Network Map reiterates projects from the CRMPO Thoroughfare Plan. As a regional document, the Thoroughfare Plan identifies routes with broad strokes, leaving significant route refinement to local governments and landowners. Two of these routes appear adjusted on Figure 11, as follows:

- Route #1 follows Farmington Ridge Parkway and bypasses existing residential development at the southern end of Caldwell Road.
- Route #4 utilizes Raging Ridge Road and bypasses existing residential development at the eastern end of Tom Query Road.

Non-motorized facilities – multi-use trails, greenways, and pedestrian ways – provide residents access to parks, recreation areas, civic places, and institutions. An interconnected network of facilities for bicyclists and pedestrians is necessary to support public transit. A multi-modal transportation system of this nature supports the arrangement and varying intensities of land uses, as proposed in this Harrisburg Area Land Use Plan, that constitute the community.

The Conceptual Transportation Network Map builds upon Harrisburg's existing bicycle/pedestrian plan. The three facility types for bicyclists and pedestrians are intended to comprise a network that offers access to every civic destination in the planning area for non-motorized users. Existing and proposed parks, schools, library, town hall, and YMCA are all directly accessible to this network as shown.

Generally, multi-use trails and greenways are best suited to lower density areas, while pedestrian ways best serve areas planned with higher densities. (Pedestrian ways are existing roads that could benefit from improved pedestrian surfaces, crossings, and/or illumination.)



Greenways (above) and multi-use trails (below) are integral components of a multi-modal transportation system as well as popular, in-demand recreational facilities.



Greenways and multi-use trail segments are particularly useful links to parks, schools, and libraries, since many of their users are children. The separation from automobile travel lanes they provide is safer and more comfortable for children and their parents. Improved access to civic spaces improves their use and enhances sense of community by bringing everything figuratively closer together.

Pedestrian ways, meanwhile, support retail by increasing its visibility to prospective patrons. They also enable “trip-chaining,” whereby shoppers can access multiple shops on separate properties without relying on their automobiles.

Appendix D

Harrisburg Area Land Use Plan
Market Analysis



Harrisburg Area Land Use Plan Market Analysis

Cabarrus County, NC

December 2009

Prepared for

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1. Introduction

Warren & Associates was retained by LandDesign, Inc. to conduct a market analysis for the Harrisburg Area Plan in Cabarrus County. This analysis documents existing conditions from a demographic and real estate market perspective. The scope for this assignment included:

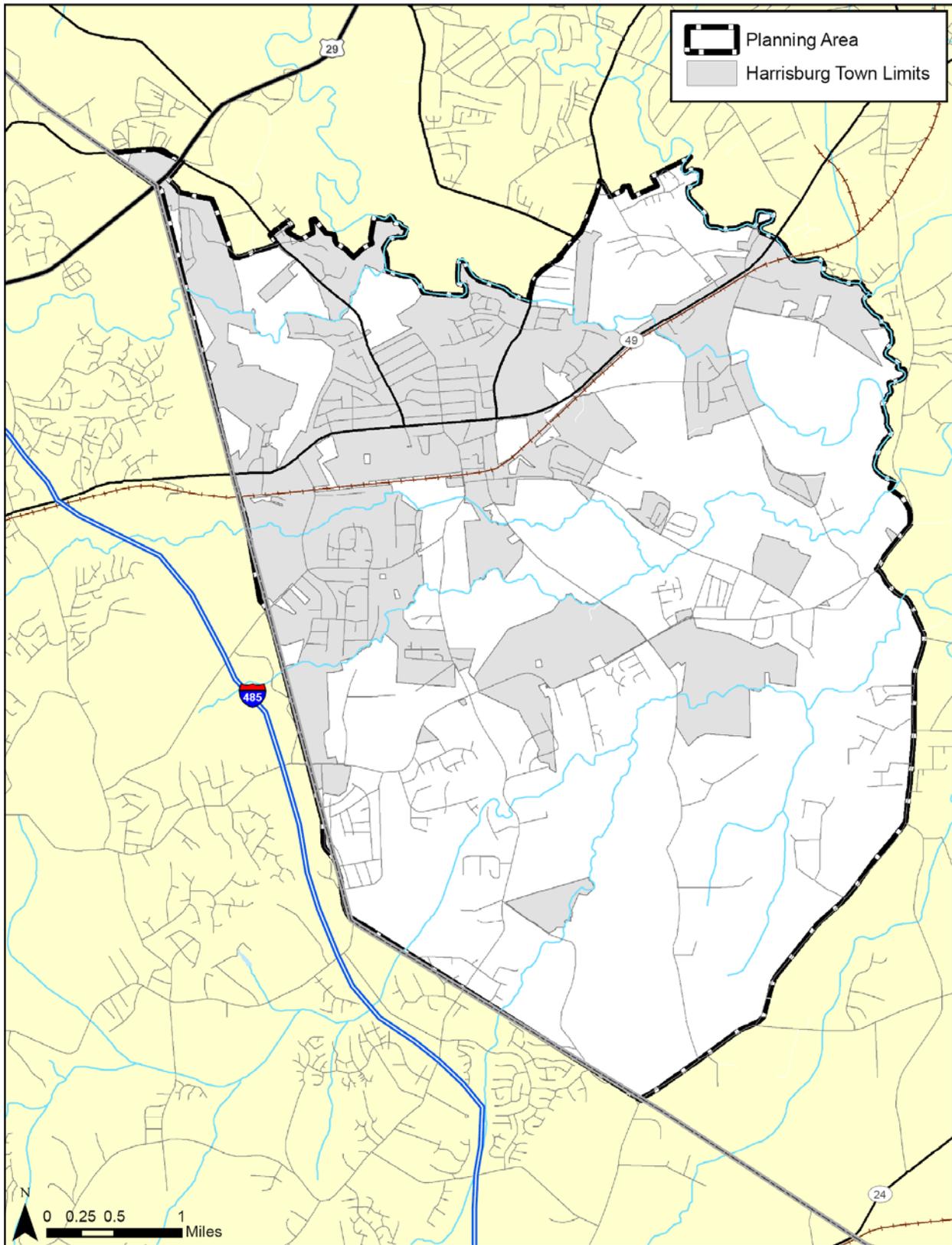
- Interview key stakeholders, including Cabarrus County and Town of Harrisburg staff and local real estate/development professionals
- Analyze demographic and employment trends
- Analyze real estate market trends and development activity
- Forecast supportable residential units through 2020
- Forecast supportable retail and office square footage through 2020
- Forecast supportable industrial acreage through 2020
- Recommend competitive locations for each land use type, including mixed-use

The Harrisburg Planning Area is approximately 17,000 acres or 26 square miles in size, and consists of the Town of Harrisburg and unincorporated Cabarrus County land (Map 1). The area encompasses numerous satellite annexations for the Town of Harrisburg. The Planning Area is generally bounded by Mecklenburg County to the west, Rocky River and Lower Rocky River Road to the east and south, and the Harrisburg jurisdictional boundary to the north.

The primary arterial in the Planning Area is NC-49, a four-lane highway, which runs east to west through the Town of Harrisburg. The most notable north-south routes in the Planning area are Morehead Street, between NC-49 and US-29, and Robinson Church Road, running south to Rocky River Road. A Norfolk Southern rail line runs along NC-49 through the Town.

The Planning Area is predominantly suburban-rural in nature. Commercial and industrial uses are primarily located along NC-49 in the northern portion of the Planning Area.

Map 1: Harrisburg Planning Area, 2009



2. Regional Economic Overview

Major regional economic drivers that could impact housing and employment in the Planning Area are summarized below and shown on Map 2.

2.1 Downtown Charlotte

Located 13.5 miles southwest of Harrisburg, downtown Charlotte is the region's primary employment and entertainment center. Tryon Street, which becomes NC-49 north of Charlotte, provides a direct link between Harrisburg and downtown. Estimates indicate that the current workforce is 65,000, including approximately 60,500 office jobs. Bank of America has its headquarters downtown, and Wachovia, now part of Wells Fargo, has a large presence. Other major employers include Duke Energy, The Charlotte Observer, and government facilities such as the Federal Reserve Bank and the City of Charlotte.

There are numerous entertainment and recreation facilities in downtown Charlotte. Two professional sporting teams have facilities; Bank of America Stadium is home to the Carolina Panthers NFL team and Time Warner Cable Arena hosts the NBA Charlotte Bobcats. Numerous museums and theaters are also located downtown, including the new cultural arts campus on South Tryon Street.

2.2 University Research Park

University Research Park (URP) occupies three quadrants of the I-85/Harris Boulevard interchange, less than five miles southwest of Harrisburg and one mile west of the University of North Carolina at Charlotte (UNC-C).

URP emerged in the 1970s and 1980s and now contains more than 10.5 million square feet of office, research, and industrial space. Over the past ten years, URP's size has plateaued, with fewer land sales and new buildings. Key highlights over the past decade have included new or expanded facilities for Wachovia and TIAA-CREF.



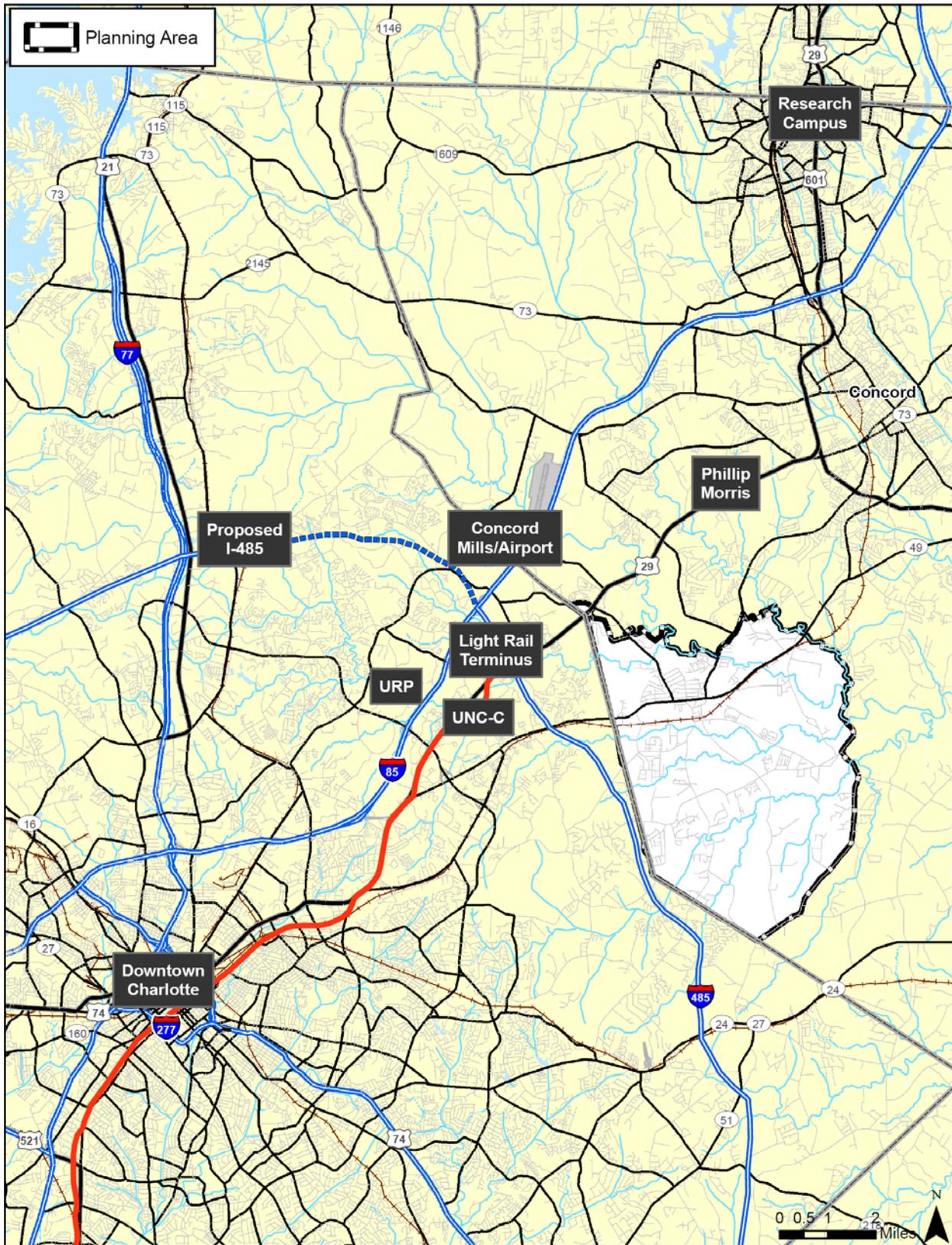
University Research Park

2.3 University of North Carolina at Charlotte

The University of North Carolina at Charlotte (UNC-C), located five miles southwest of Harrisburg, is the fourth largest university in the 17-institution University of North Carolina System. Founded in 1946, UNC-C has a current enrollment of 24,700 students, including 19,700 undergraduates. UNC-C has seven professional colleges and offers 18 doctoral programs, 63 master's degree programs, and 90 bachelor degrees. Ranked by US News & World Report as one of the "Nation's Top 10 Up and Coming Universities," UNC-C is expected to have an enrollment of 35,000 by 2020.

In 2010, UNC-C plans to open a 100,000-square-foot classroom and office building in Downtown Charlotte, at the corner of Ninth and Brevard streets. The building will offer classes in architecture and business.

Map 2: Regional Investments, 2009



2.4 Northeast Corridor Light Rail

The Charlotte Area Transit System (CATS) has proposed the Northeast Corridor, an extension of the LYNX Blue Line which runs south to I-485. The extension will run 11 miles from Seventh Street, through the NoDa and University areas, to I-485. There are 14 planned stations, including the northern terminus at I-485, three miles from Harrisburg. CATS is currently using Federal Transit Administration funds to conduct preliminary engineering and to finalize alignment alternatives and design. According to the CATS website, service for the Northeast Corridor is proposed to begin in 2013.



Rendering of Northeast Corridor Station

2.5 Concord Mills

Located at I-85 Exit 49, Concord Mills is the third largest shopping center in North Carolina and the state's largest tourist destination. Located five miles northwest of Harrisburg, the mall contains 1.4 million square feet of retail space, including Bass Pro Shops Outdoor World, a 24-screen AMC movie theater, and a NASCAR Speed Park with climbing walls and an Indoor NASCAR Simulator. Open since 1999, Concord Mills attracts approximately 17.5 million visitors annually.

2.6 Concord Airport

Concord Regional Airport is the fourth busiest airport in North Carolina, and is often called "NASCAR's Airport" because of its proximity to Lowe's Motor Speedway. The airport has one runway. In 2008, Roush Fenway Racing announced plans to build a \$1-million, 19,740-square-foot hanger which it would lease for 20 years.

2.7 I-485

I-485 is a 67-mile outer loop around the City of Charlotte, with 35 proposed or completed interchanges. The two interchanges closest to the Planning Area are at NC-49 and Rocky River Road. The first completed segment, between I-77 South and Independence Boulevard, is already proposed for widening due to heavy traffic volume. The northwest segment from I-85 West to I-77 North opened in 2008. Completion of the north segment between I-77 North and I-85 North is currently on hold due to lack of state financing.

2.8 North Carolina Research Campus

The North Carolina Research Campus (NCRC) is a 350-acre mixed-use research facility on the former Cannon Mills site in downtown Kannapolis, 15 miles northeast of Harrisburg. It is a collaborative project involving David Murdock (owner of Castle & Cooke and Dole Foods Company), Duke University, the University of North Carolina at Chapel Hill, the University of North Carolina at Charlotte, North Carolina State University, and other private investors. The

facility incorporates corporate, academic, commercial, and residential space, with an orientation towards research and development, and biotechnology.

The \$80 million initial phase was recently completed with a 311,000-square-foot core laboratory building that houses the Dole Nutrition Institute. The core laboratory contains a DNA sequencing facility, micro-array facilities, mass spectrometry facilities, and various specialized tools and laboratories.



Rendering of NCRC

Overall, there will be one million square feet of office and lab space; 350,000 square feet of retail and commercial space that will include a movie theater; and more than 700 residential units including townhouses, apartments, and single-family homes. In addition, the project will contain a 1,000-seat auditorium and a 125-room hotel. Site work has begun on the townhouses and condominiums, office, and retail components. When completed, the campus will house some of the most state-of-the-art laboratory space in the United States and is expected to contain over 100 biotechnology companies.

2.9 Phillip Morris Site



Phillip Morris Campus

Located on Concord Parkway (US-29), five miles northeast of Harrisburg, the Phillips Morris manufacturing campus opened in 1982. Declining tobacco sales caused Phillip Morris USA to announce a 2010 closing of the Concord facility. The facility officially closed in July of 2009, leaving more than 1,000 people unemployed.

The campus is currently marketed by both the Cabarrus County Economic Development Corporation (EDC) and Jones Lang LaSalle. The campus includes over 3.5 million square feet of industrial space on more than 2,000 acres. The campus is only four miles from I-85, and adjacent to the proposed George Liles Parkway extension.

3. Demographic Trends

In this section, Planning Area demographic trends are analyzed and compared to Cabarrus County and the Charlotte MSA (Map 3). The Charlotte MSA includes Anson, Cabarrus, Gaston, Mecklenburg, Union and York counties.

3.1 Population

The Planning Area contains an estimated 17,696 residents. The 7,247 new residents between 2000 and 2009 equated to a growth rate of 69.8% (Table 1). Cabarrus County and the Charlotte MSA grew at slower rates of 32.3% and 30.8% during the same period. The Study Area captured 17.2% of the population growth in Cabarrus County between 2000 and 2009. The Planning Area experienced a compound annual growth rate (CAGR) of 6.2%, approximately twice the rates for Cabarrus County and the Charlotte MSA.

Table 1: Population Trends, Planning Area & Charlotte MSA, 2000-2009

Area	2000	2009	2000-2009 Change		CAGR
			#	%	
Planning Area	10,422	17,696	7,274	69.8%	6.1%
Cabarrus County	131,063	173,392	42,329	32.3%	3.2%
Charlotte MSA	1,330,448	1,740,257	409,809	30.8%	3.0%
Planning Area % of MSA	0.78%	1.02%			

Source: ESRI

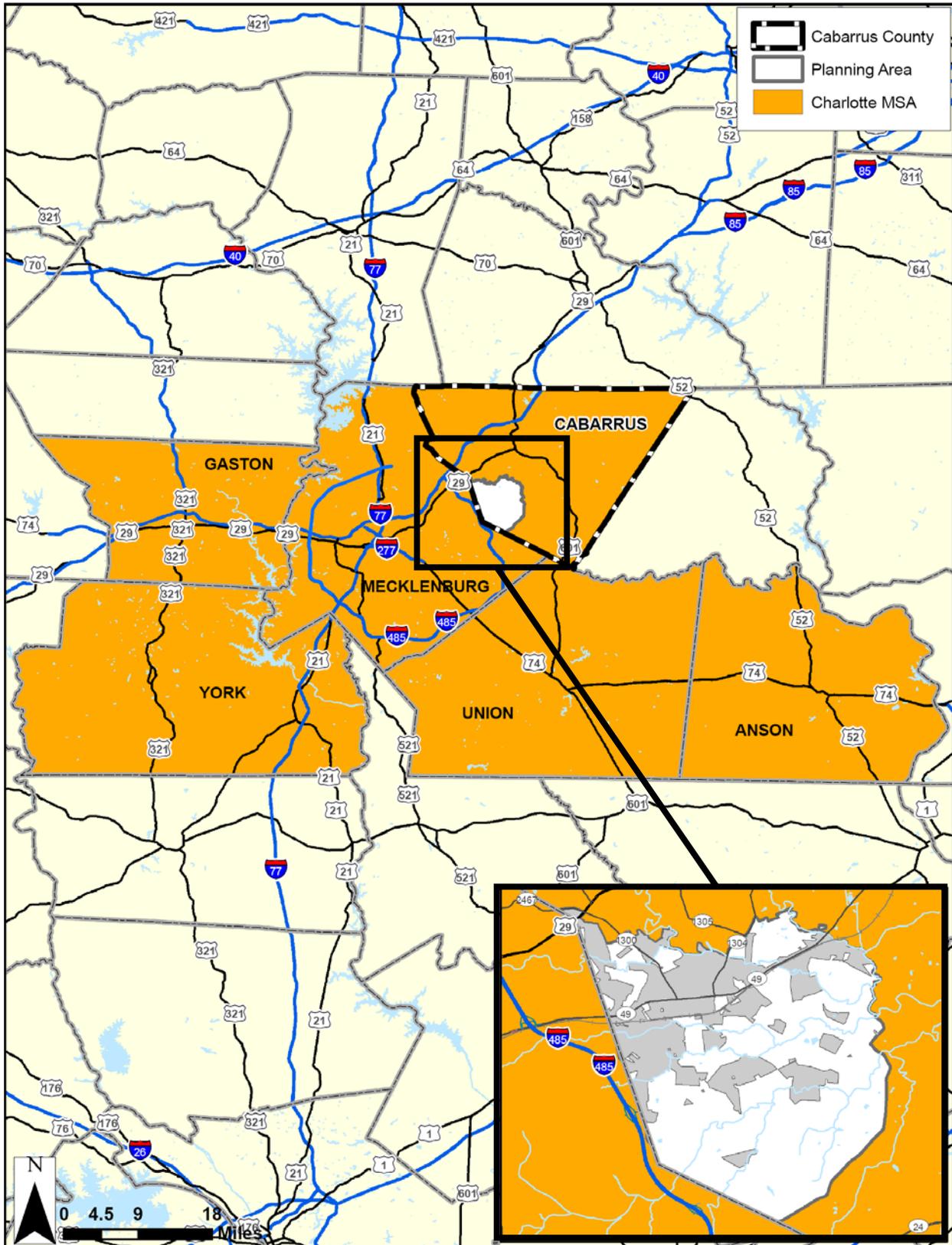
Table 2 demonstrates Planning Area population change between 2000 and 2009 by age cohort. While residents aged 45 to 54 represent the largest cohort in 2009, the 55 to 64 group increased 134.4% in nine years. These two cohorts represent individuals in the prime earning years, which aid in boosting move-up housing demand and retail spending potential. The 35 to 44 age cohort, representing young families, experienced the slowest growth rate of 26.9%.

Table 2: Population Trends by Age Cohort, Planning Area, 2000-2009

Age Cohort	2000	2009	2000-2009 Change	
			#	%
0-9	1,605	2,354	749	46.6%
10-19	1,553	2,761	1,208	77.8%
20-34	1,605	2,531	926	57.7%
35-44	2,189	2,778	590	26.9%
45-54	1,751	3,362	1,611	92.0%
55-64	959	2,247	1,289	134.4%
65-74	459	1,044	585	127.7%
75-84	240	460	220	91.9%
85+	63	159	97	154.7%
Total	10,422	17,696	7,274	69.8%

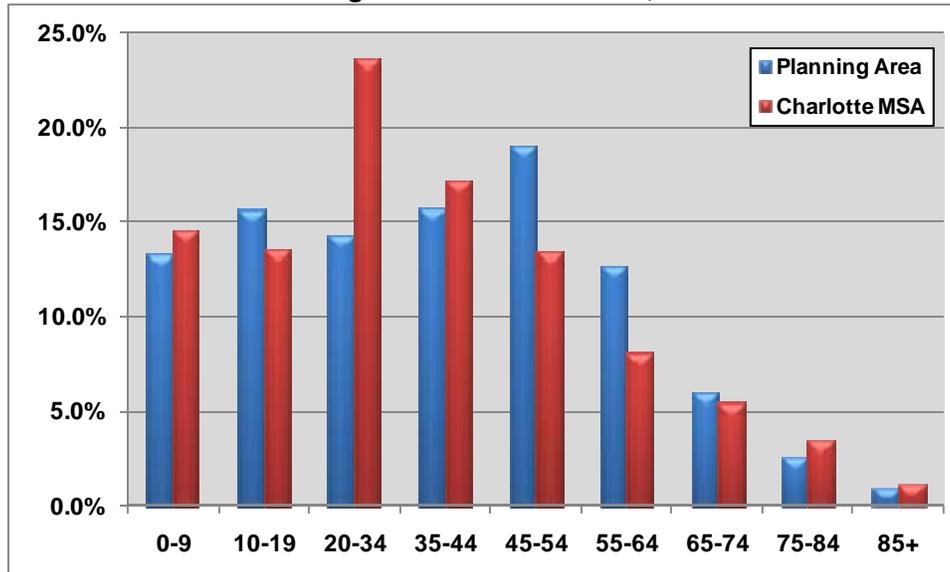
Source: ESRI

Map 3: Charlotte Metropolitan Statistical Area, 2009



In comparison to the Charlotte MSA, the Planning Area currently has significantly higher shares of population aged 45 to 64. Alternatively, the Charlotte MSA has a higher share of young adults, aged 20 to 34.

Graph 1: Population Shares by Age Cohort, Planning Area & Charlotte MSA, 2009



3.2 Households

There are an estimated 6,350 households in the Planning Area, an increase of 72.1% since 2000 (Table 3). The slightly higher growth rate in households over 69.8% for population indicates a downward shift in average household size. Cabarrus County experienced a slower 33.7% growth rate, from 49,519 households in 2000 to 66,228 households in 2009. Households in the Charlotte MSA increased from 510,516 in 2000 to 676,740 in 2009, an increase of 32.6%.

Table 3: Household Trends, Planning Area & Charlotte MSA, 2000-2009

Area	2000	2009	2000-2009 Change		CGAR
			#	%	
Planning Area	3,689	6,350	2,661	72.1%	6.2%
Cabarrus County	49,519	66,228	16,709	33.7%	3.3%
Charlotte MSA	510,516	676,740	166,224	32.6%	3.2%
Planning Area % of MSA	0.72%	0.94%			

Source: ESRI

3.2.1 Household Trends by Income Cohort

The Planning area experienced a strong increase in all household income cohorts over \$75,000 between 2000 and 2009 (Table 4). Households earning more than \$100,000 currently comprise the largest cohort in the Planning Area (29.5%).

Table 4: Household Trends by Income Cohort, Planning Area, 2000-2009

Income Cohort	2000	2009	2000-2009 Change	
			#	%
\$0-\$34,999	638	679	41	6.5%
\$35,000-\$49,999	513	527	14	2.8%
\$50,000-\$74,999	1,103	1,467	364	33.0%
\$75,000-\$99,999	671	1,803	1,132	168.6%
\$100,000+	764	1,873	1,110	145.3%
Total	3,689	6,350	2,661	72.1%

Source: ESRI

As demonstrated in Graph 2, the Planning Area has comparatively higher shares of households earning more than \$75,000 than the Charlotte MSA. The shares of lower income cohorts are also significantly smaller than the Charlotte MSA.

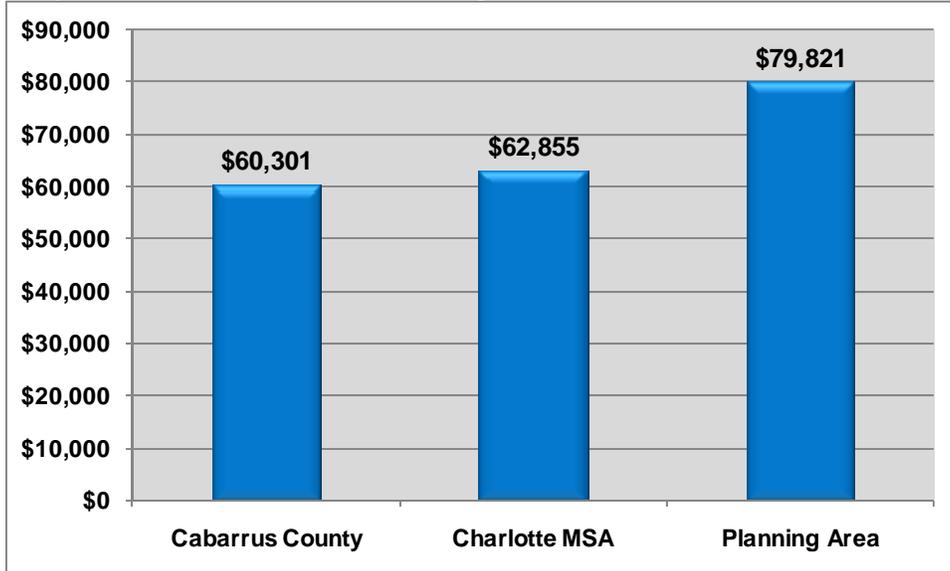
Graph 2: Household Shares by Income Cohort, Planning Area & Charlotte MSA, 2000 & 2009



3.2.2 Median Household Income

The median household income in the Planning Area is currently estimated at \$79,821, 26.9% more than \$62,855 for Cabarrus County and 32.4% more than \$60,301 for the Charlotte MSA.

Graph 3: Household Income, Planning Area, Cabarrus, Charlotte MSA, 2009



4. Employment

This section analyzes employment for the Planning Area and Cabarrus County. Major employers and employment trends by industry for Cabarrus County are analyzed. Employee inflow/outflow in the Planning Area is shown for 2009.

4.1 Cabarrus County Employment

4.1.1 Major Employers

As shown in Table 5, two of the three largest Cabarrus County employers, Northeast Medical Center and Connexions, are categorized under the Healthcare employment sector. Other significant employment industries include Education, Government, and Retail Trade.

Table 5: Major Area Employers, Cabarrus County, 2009

Employer	Sector Description	Total Employees
Cabarrus Medical Center - Northeast	Healthcare	4,000
Cabarrus County Schools	Education	3,398
Connexions	Healthcare	950
City of Concord	Government	925
Kannapolis City Schools	Education	900
Cabarrus County Government	Government	828
Hendrick Motorsports	Motorsports	500
North Carolina Government	Government	500
Shoe Show	Retail	500
A.C.N.	Telecommunications	480

Source: Cabarrus Economic Development Corporation

4.1.2 Employment Trends by Industry

As shown in Table 6, Cabarrus County had a total of 66,488 annualized full-time jobs in 2008, 14.7% more than in 2002. Education and Health Services had the most employees in 2008 (15,163), an increase of 32.5% since 2002. Leisure and Hospitality Services experienced the largest percent increase of 49.4% over the six-year period. Three industries experienced a decline in employment between 2002 and 2008:

- Manufacturing (-34.3%)
- Transportation, Warehousing, and Utilities (-22.7%)
- Information (-18.3%)

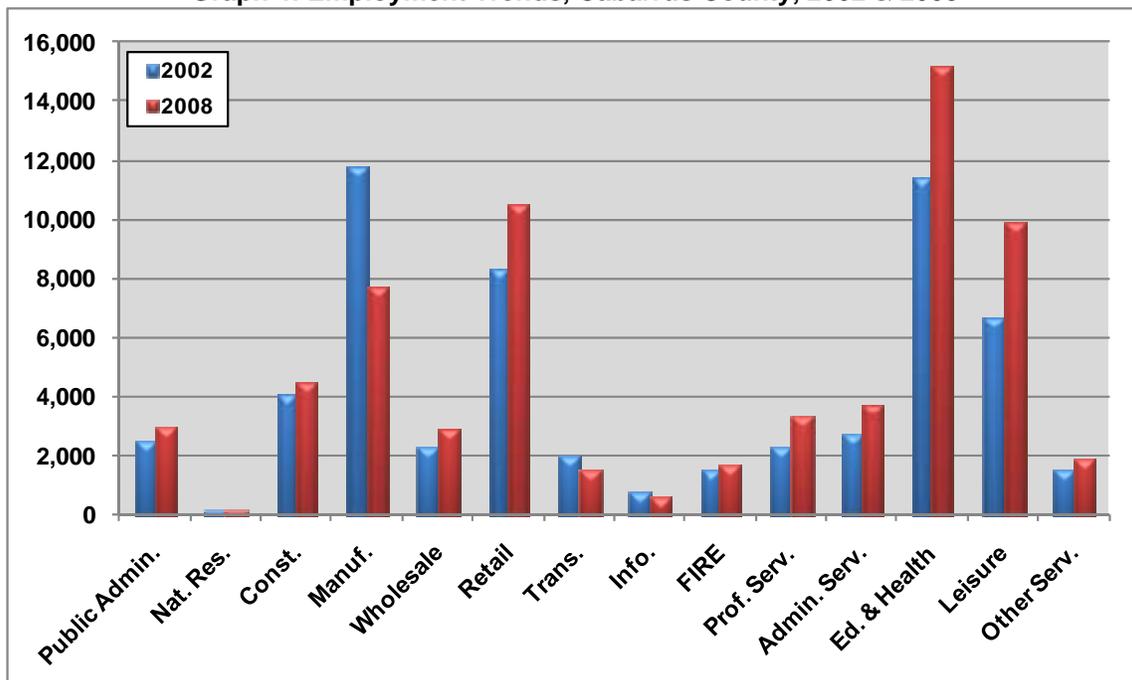
Table 6: Employment Trends, Cabarrus County, 2002-2008

Industry	2002	2008	2002-2008 Change	
			#	%
Public Administration	2,472	2,912	440	17.8%
Natural Resources & Mining	197	206	9	4.6%
Construction	4,089	4,478	389	9.5%
Manufacturing	11,794	7,750	-4,044	-34.3%
Wholesale Trade	2,247	2,870	623	27.7%
Retail Trade	8,313	10,480	2,167	26.1%
Transportation, Warehousing & Utilities	1,978	1,529	-449	-22.7%
Information	813	664	-149	-18.3%
FIRE	1,524	1,664	140	9.2%
Professional and Business Services	2,278	3,269	991	43.5%
Admin & Support & Waste Mgmt. & Remediation Serv.	2,698	3,764	1,066	39.5%
Education and Health Services	11,442	15,163	3,721	32.5%
Leisure and Hospitality	6,603	9,865	3,262	49.4%
Other Services (Except Public Admin)	1,534	1,874	340	22.2%
Total	57,982	66,488	8,506	14.7%

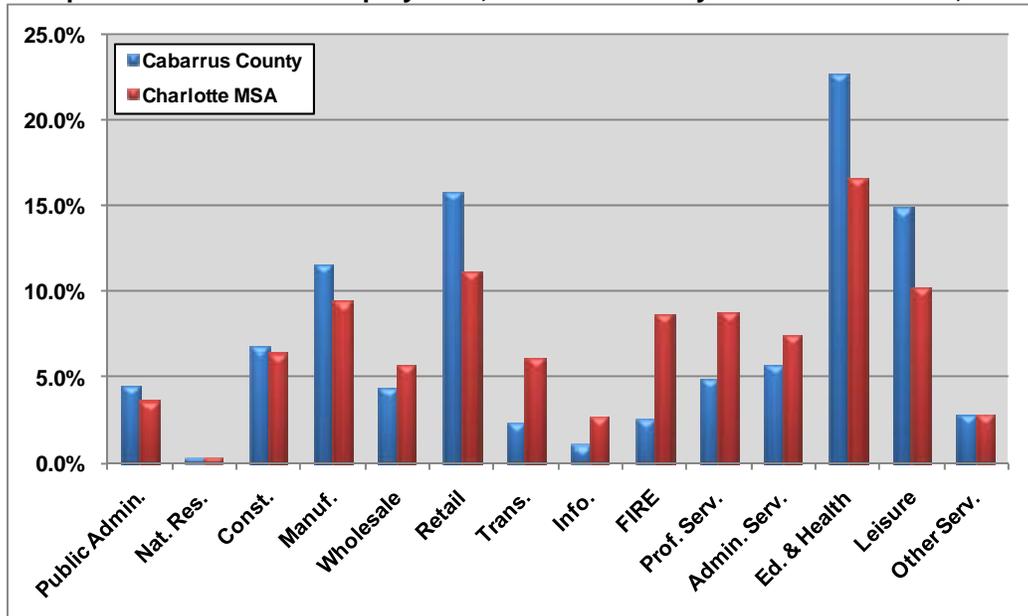
Source: North Carolina Employment Security Commission

Graph 4 demonstrates the significant increase in Education and Health Services, Leisure and Hospitality Services, and Retail Trade employment between 2002 and 2008. The Manufacturing sector posted a severe 4,044-job loss during the same time.

Graph 4: Employment Trends, Cabarrus County, 2002 & 2008



In comparison to the Charlotte MSA, Cabarrus County had higher shares of Manufacturing, Retail Trade, and Education and Health Services in 2008 (Graph 5). The County had lower shares for Transportation, Warehousing, and Utilities, Information, F.I.R.E., and Professional and Administrative Services.

Graph 5: Share of Total Employment, Cabarrus County and Charlotte MSA, 2008

4.2 Planning Area Employment

The Planning Area currently has an estimated 8,182 employed residents and 4,019 full-time place-of-work jobs (Table 7). To determine the net inflow or outflow of workers, the Planning Area's place-of-work jobs were subtracted from the number of employed residents by industry. In 2009, the Planning Area experienced a net outflow of at least 4,163 residents (51%). No industries exhibited a net inflow. The Services sector has the largest net outflow of 1,328 jobs.

Table 7: Employee Inflow/Outflow by Industry, Planning Area, 2009

Industry	Employment		Estimated Inflow/ (Outflow)
	Place of Residence	Place of Work	
Public Administration	254	123	(131)
Natural Resources & Mining	33	22	(11)
Construction	614	287	(327)
Manufacturing	712	333	(379)
Wholesale Trade	409	178	(231)
Retail Trade	924	882	(42)
Transportation, Warehousing, Utilities	614	45	(569)
Information	278	5	(273)
FIRE	998	126	(872)
Services	3,346	2,018	(1,328)
Total	8,182	4,019	(4,163)

Source: North Carolina Employment Securities Commission, ESRI

5. Residential Trends and Development Activity

5.1 Housing Unit Trends

Housing units in the Planning area increased 75.6% from 2000 to 2009 (Table 8). Cabarrus County grew at a slower 36.4% rate. The Planning Area accounted for 14.9% of new housing unit growth in Cabarrus County. Housing Units in the Charlotte MSA increased by 35.3% during the same period, similar to Cabarrus County.

Table 8: Housing Unit Trends, Planning Area & Charlotte Region, 2000-2009

Area	2000	2009	2000-2009 Change		CAGR
			#	%	
Planning Area	3,810	6,692	2,882	75.6%	6.5%
Cabarrus County	52,848	72,079	19,231	36.4%	3.5%
Charlotte MSA	546,447	739,229	192,782	35.3%	3.4%
Planning Area % of MSA	0.70%	0.91%	0.21%		

Source: ESRI

In 2000, the 3,810 housing units in the Planning Area were approximately 92.5% single-family (Table 9). Another 6.9% were mobile homes and 0.6% were multi-family.

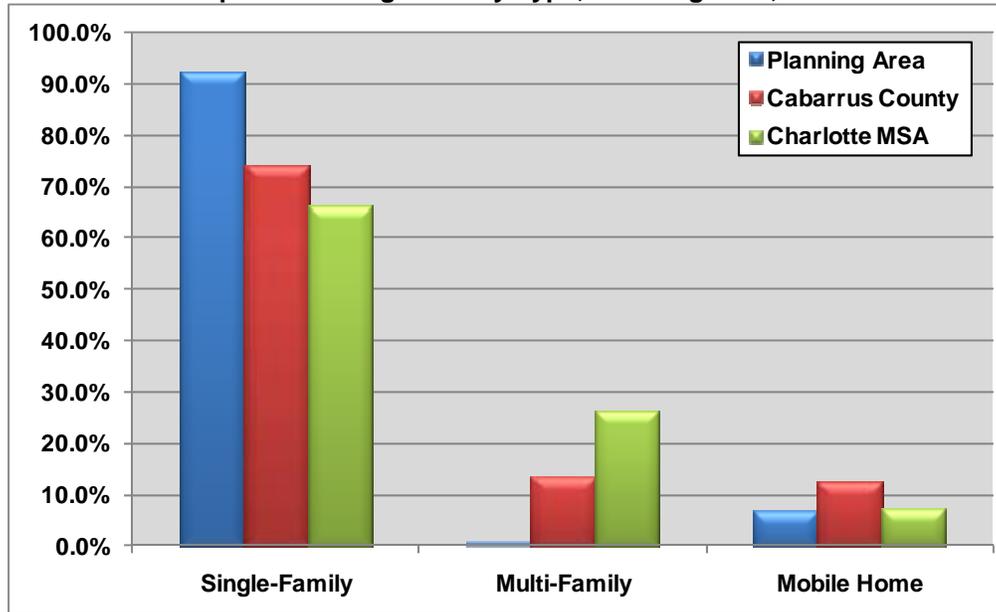
Table 9: Housing Units by Type, Planning Area, 2000

Type	Units	% of Total
Single-Family	3,524	92.5%
Multi-Family	23	0.6%
Mobile Home	263	6.9%
	3,810	100.0%

Source: ESRI

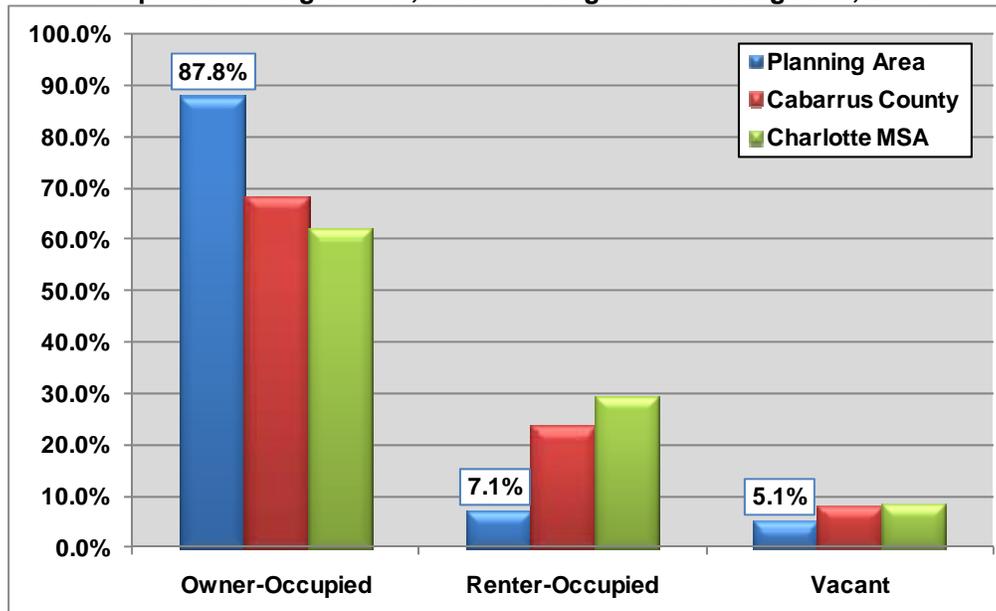
Comparatively, 74.2% of the housing units in Cabarrus County and 66.3% of the units in the Charlotte MSA were single-family residential (Graph 6). The Planning Area also had a considerably lower share of multi-family units than both Cabarrus County (13.4%) and the Charlotte MSA (26.4%).

Graph 6: Housing Units by Type, Planning Area, 2000



Graph 7 compares 2009 housing unit tenure in the Planning area to Cabarrus County and the Charlotte MSA. Owner-occupied units account for 87.8% of all housing units in the Planning Area, higher than 68.4% for Cabarrus County and 61.9% for the Charlotte MSA. The share of renter-occupied units is 22.5% less than the Charlotte MSA. The extremely limited stock of multi-family units in the Planning Area indicates that renter-occupied units are primarily investor-owned single-family properties. The Planning Area has a stabilized vacancy rate of 5.1%, less than 8.1% in Cabarrus County and 8.5% in the Charlotte MSA.

Graph 7: Housing Tenure, Charlotte Region & Planning Area, 2009



5.2 Single-Family Detached Residential Market

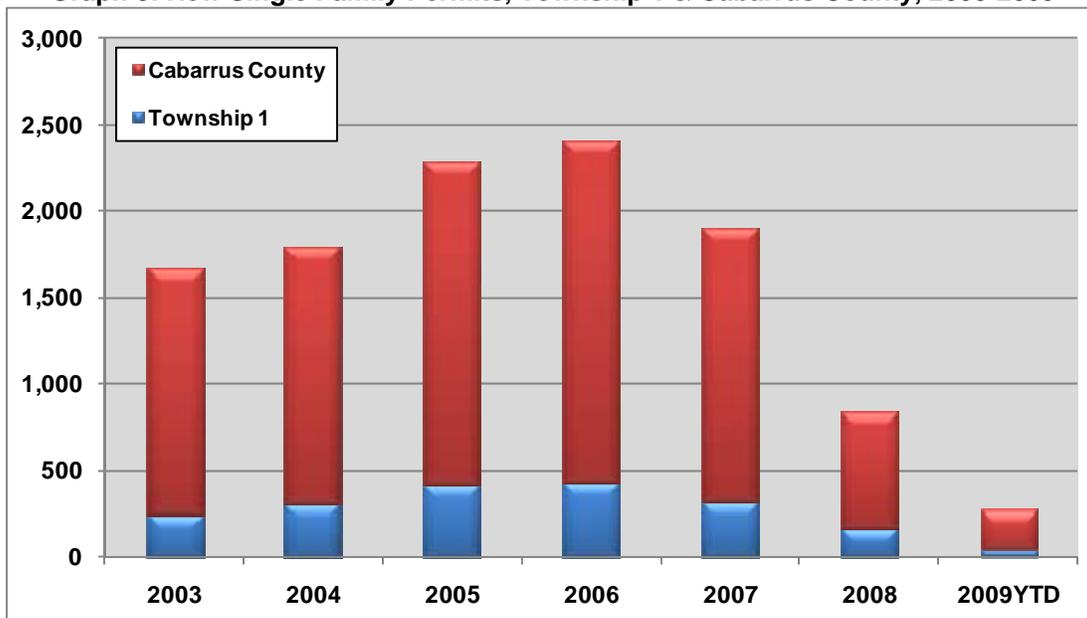
Annual building permit, closing, and new unit price trends for for-sale residential product have been provided through the Market Opportunity Research Enterprises (M.O.R.E.) data system. M.O.R.E. data provides a comprehensive listing of all residential units sold within the Planning Area, including new construction and resales.

M.O.R.E. data is reported by township. Data has been collected and analyzed for Township 1 in Cabarrus County, as this geographic area aligns closely with the Planning Area. A comparison of Township 1 and the Planning Area is shown on Map 4.

5.2.1 New Single-Family Detached Building Permit Trend

More than 11,000 new single-family residential permits have been issued in Cabarrus County since January 2003. Permits peaked in 2006 at 2,416 units (Graph 8). Permit issuance declined after 2006 as a result of the national housing crisis. As of September, only 268 residential permits have been issued in Cabarrus County in 2009.

Graph 8: New Single Family Permits, Township 1 & Cabarrus County, 2003-2009



Township 1 residential permits followed the same trend as Cabarrus County, peaking with 430 permits issued in 2006. Only 42 new single-family permits have been issued in Township 1 in the first three quarters of 2009, representing 15.8% of the County.

5.2.2 Single-Family Detached Closing Trend

There were 3,723 new and resale residential closings in Township 1 between 2003 and September 2009, ranging from 184 units in 2009 to 736 units in 2006 (Table 10). New closings represented 53.4% of the total, ranging from 33.7% in 2009 (year-to-date) to 60.6% in 2005. New closings averaged 321 annually, while resale closings averaged 269.

Map 4: Comparison of Planning Area and Township 1, 2009

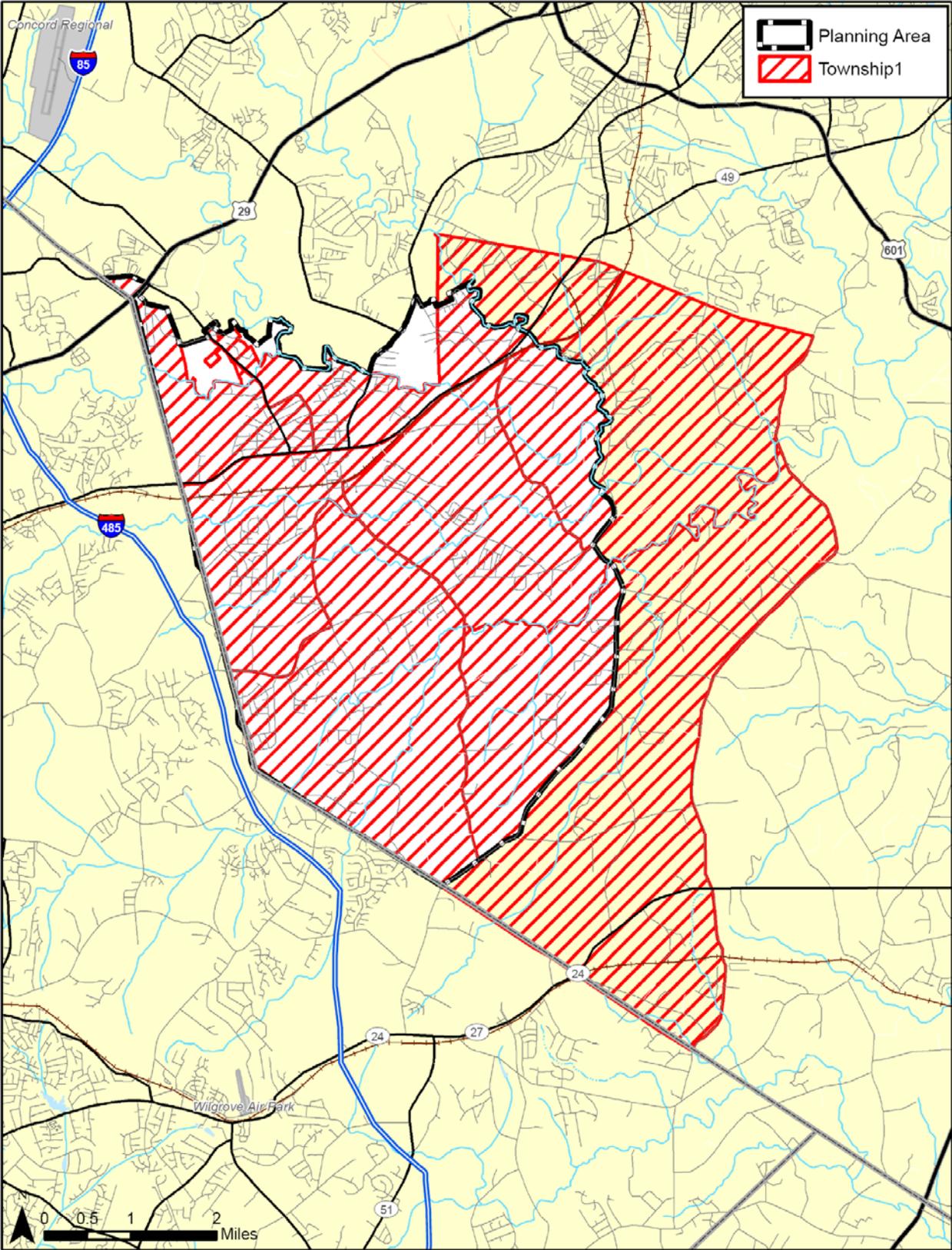


Table 10: Annual Single-Family Closings, Township 1, 2003-2009

Year	Closings		Total	New % of Total
	New	Resale		
2003	254	182	436	58.3%
2004	280	273	553	50.6%
2005	421	274	695	60.6%
2006	427	309	736	58.0%
2007	344	341	685	50.2%
2008	199	235	434	45.9%
2009(YTD)	62	122	184	33.7%
Total	1,987	1,736	3,723	53.4%
Ann. Avg.	321	269	590	

Note: 2009 YTD data through September.

Source: Land Matters, M.O.R.E. Data

5.2.3 Permit/Closing Comparison

The issuance of building permits closely followed new single-family closings between 2003 and September 2009. Between 2003 and 2007, the ratio of building permits to new construction closings remained close to 100%, indicating that Township 1 experienced a sustainable growth rate during that period. Closings since 2007 have strongly outpaced building permits, impacting the existing supply of new construction in the area.

Table 11: Ratio New Single-Family Permits to Closings, Township 1, 2003-2009

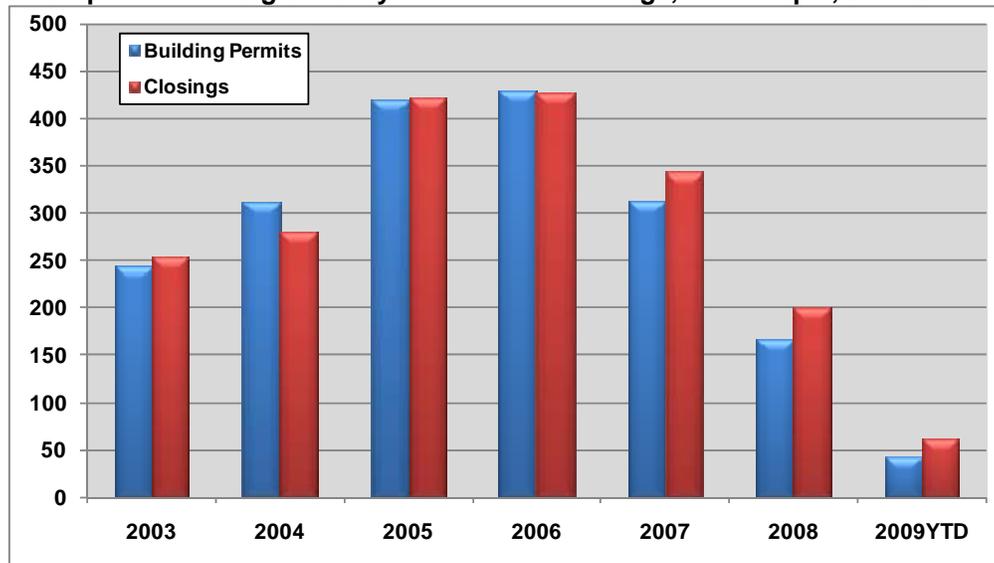
	2003	2004	2005	2006	2007	2008	2009YTD	Total
Building Permits	243	311	420	430	313	168	42	1,927
Closings	254	280	421	427	344	199	62	1,987
Ratio Permits to Closings	104.5%	90.0%	100.2%	99.3%	109.9%	118.5%	147.6%	103.1%

Source: Land Matters, M.O.R.E. Data

It is estimated that there were 1,927 building permits issued in the Planning Area between 2003 and September 2009. The 1,987 closings equated to an overall ratio of 103.1% during the same time period.

Graph 9 shows the comparison between new single-family permits and closings. Building permits outpaced closings in 2004 and 2006. If closings continue to outpace building permits, Township 1's estimated 50 new unsold residential units will be quickly absorbed.

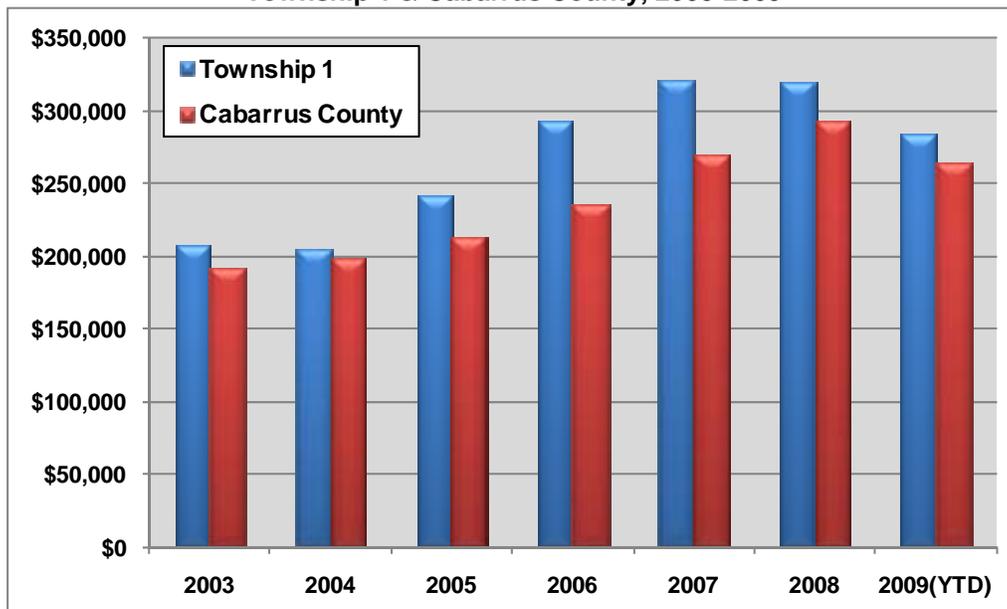
Graph 9: New Single-Family Permits and Closings, Township 1, 2003-2009



5.2.4 New Single-Family Detached Closing Price Trend

The average closing price for a new, detached single-family residence in Township 1 was higher than in Cabarrus County every year between 2002 and September 2009 (Graph 10). The average closing price in Township 1 ranged from \$207,193 in 2003 to \$283,677 in the first three quarters of 2009, an increase of 36.9%. On average, closing prices in Township 1 were 12.3% higher than in Cabarrus County. Closing prices have decreased since 2008 in both Township 1 and Cabarrus County, mirroring national housing market trends.

Graph 10: New Single-Family Closing Prices, Township 1 & Cabarrus County, 2003-2009



5.3 Townhouse Residential Market

5.3.1 Townhouse Closing Trend

There were 242 new townhouse closings in Township 1 between 2003 and September 2009, averaging 40 units annually (Table 12). New townhouse closings were primarily located in the Harrisburg Town Center development. Resale closings began in 2005, after the residential portion of Harrisburg Town Center was completed.

Table 12: Annual Townhouse Closings, Township 1, 2003-2009

Year	Closings		Total	New % of Total
	New	Resale		
2003	86	0	86	100.0%
2004	60	0	60	100.0%
2005	53	10	63	84.1%
2006	41	47	88	46.6%
2007	2	28	30	6.7%
2008	0	24	24	n/a
2009(YTD)	0	24	24	n/a
Total	242	133	375	64.5%
Ann. Avg.	40	18	59	

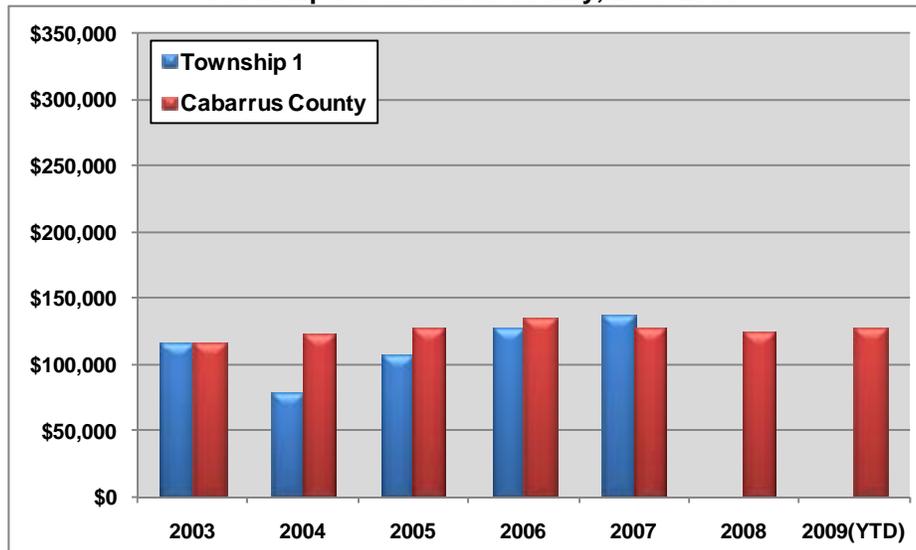
Note: 2009 YTD data through September.

Source: Land Matters, M.O.R.E. Data

5.3.2 New Townhouse Closing Price Trend

Average new townhouse closings prices in Township 1 ranged from \$115,942 in 2003 to \$137,750 in 2007, an increase of 18.8% (Graph 11). There have been no new townhouse closings in Township 1 since 2007. Unlike the overall price premium for single-family houses in Township 1, townhouses have generally sold at or below Cabarrus County averages.

Graph 11: New Townhouse Closing Prices, Township 1 & Cabarrus County, 2003-2009



5.4 Approved Subdivisions

Single-family and townhouse subdivisions that are under construction or proposed in the Planning Area have been documented in order to determine the remaining supply of entitled lots. For the purpose of this report, under construction subdivisions have infrastructure in place and are actively marketing lots. Proposed subdivisions have received entitlement, but no site work has begun. Subdivisions are shown on Map 5.

5.4.1 Under Construction

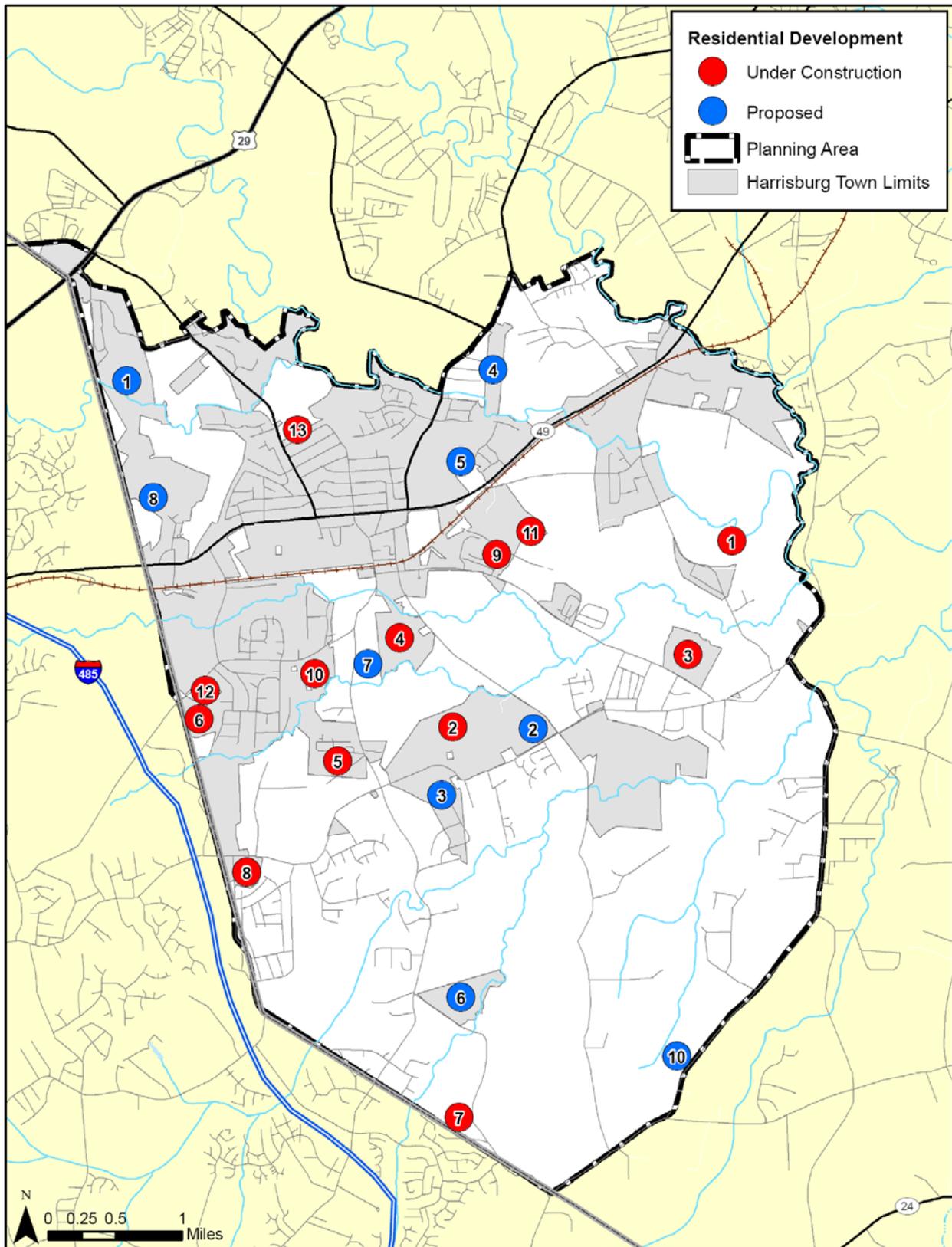
There are 13 residential subdivisions under construction in the Planning Area (Table 13). The subdivisions range in size from 501 approved lots at Canterbury Estates to 20 approved lots at Sloop Estates at Rocky River Crossing. Of the 1,921 approved lots in the Planning Area, 717 lots, 37.3% of the total, have not been issued a building permit. Subdivisions that are under construction are primarily located south of NC-49 and north of Rocky River Road.

Table 13: Under Construction Subdivisions, Planning Area, 2009

Map Key	Project	Location	Planned Remaining		Percent Remaining
			Lots	Lots	
1	Canterfield Estates	Pharr Mill Rd.	501	114	22.8%
2	Abbingdon Place	Rocky River Rd.	395	116	29.4%
3	Heatherstone	Stallings Rd.	174	20	11.5%
4	Bridgepointe	Robinson Church Rd.	154	25	16.2%
5	Litchfield Village	Robinson Church Rd.	150	80	53.3%
6	Farmington Ridge	Tom Query Rd.	137	132	96.4%
7	Peach Orchard Estates	Peach Orchard Rd.	137	43	31.4%
8	Brookdale Townhomes	Rocky River Rd.	72	60	83.3%
9	Stallings Farm	Stallings Rd.	71	47	66.2%
10	Fenton Dell - Phases 2&3	Tom Query Rd.	55	45	81.8%
11	Stallings Farm - Phase 5	Stallings Rd.	35	13	37.1%
12	Frances Haven	Tom Query Rd.	20	15	75.0%
13	Sloop Estates at Rocky River	Rocky River Crossing Blvd.	20	7	35.0%
Total			1,921	717	37.3%

Source: Cabarrus County Planning Department

Map 5: Under Construction and Proposed Subdivisions, Planning Area, 2009



5.4.2 Proposed

Proposed subdivisions have received entitlement, but no site work has begun. According to Table 14, there are an additional 1,539 entitled lots in ten proposed subdivisions within the Planning Area. Proposed subdivisions range in size from 669 lots at EPIC to 19 lots at Alexander Estates. The proposed subdivisions are distributed more evenly throughout the Planning Area.

Table 14: Proposed Subdivisions, Planning Area, 2009

Map Key	Project	Location	Proposed Lots
1	EPIC	NC 49 & NC 29	669
2	Magnolia Springs	Rocky River Rd.	190
3	Kensington Forest	Rocky River Rd.	188
4	Providence Manor	Roberta Rd.	149
5	Landon	NC 49	109
6	Hawthorne	Peach Orchard Rd.	104
7	Bridge Pointe - Phase 6	Robinson Church Rd.	45
8	Founders Reserve	NC 49	43
9	Avington	Trinity Church Rd.	23
10	Alexander Estates	Lower Rocky River Rd.	19
Total			1,539

Source: Cabarrus County Planning Department

5.4.3 Approved Subdivision Summary

The Planning Area has 2,256 remaining residential lots entitled for development (Table 15). Only 31.8%, or 717 lots, are in subdivisions that are currently under construction. The remaining 68.2% of the entitled lots are in proposed subdivisions with no infrastructure in place.

Table 15: Remaining Subdivision Lots, Planning Area, 2009

Subdivision Status	Remaining Lots	% of Total
Under Construction	717	31.8%
Proposed	1,539	68.2%
Total	2,256	100.0%

Source: Cabarrus County Planning Department



6. Population and Residential Unit Forecast

6.1 2009-2020 Population Forecast

6.2 Housing Unit Delivery Forecast

7. Retail Inventory and Forecast

This section provides retail trends for Cabarrus County, a retail square footage and shopping center inventory for the Planning Area, and a demand analysis forecast.

7.1 Cabarrus County Retail Trends

Cabarrus County retail trends are based on data for multi-tenant shopping centers over 25,000 square feet. The retail database does not take into consideration freestanding or single-tenant retail.

7.1.1 Absorption and Vacancy

Cabarrus County completions outpaced net absorption in five years between 2004 and 2008, creating an oversupply of 69,961 square feet (Table 16). The peak construction year was 2006, when 651,815 square feet of retail space was delivered. Completions fell dramatically in 2007 with only 94,474 square feet delivered. Absorption has followed similar trends as completions with a peak of 625,961 square feet occurring in 2006.

Table 16: Net Completions and Absorption, Cabarrus County, 2004-2008

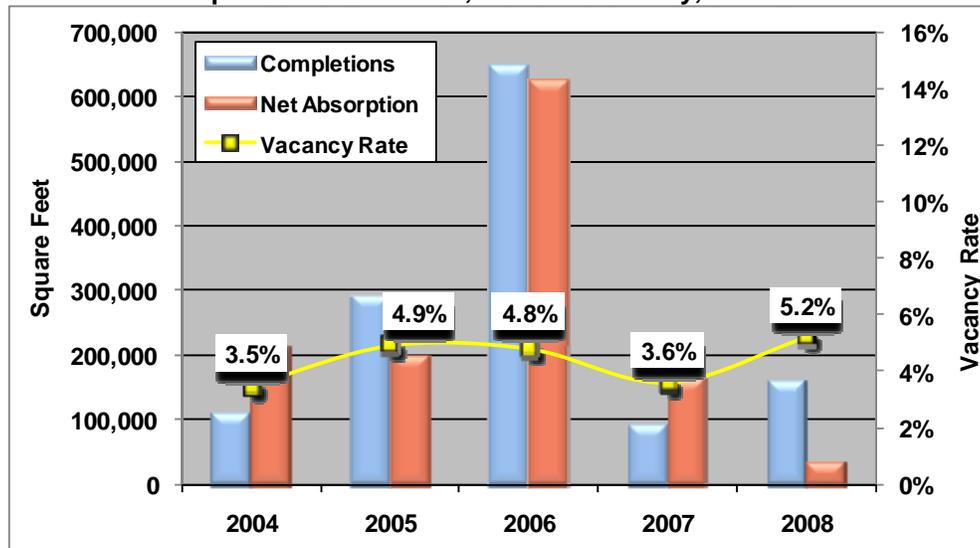
Year	Net Completions	Net Absorption	(Over)/Under Supply
2004	110,439	215,711	105,272
2005	294,612	200,790	(93,822)
2006	651,815	625,961	(25,854)
2007	94,474	166,588	72,114
2008	163,352	35,681	(127,671)
Total	1,314,692	1,244,731	(69,961)
Ann. Avg.	262,938	248,946	(13,992)

Note: Year-end data.

Source: The Karnes Report, Warren & Associates

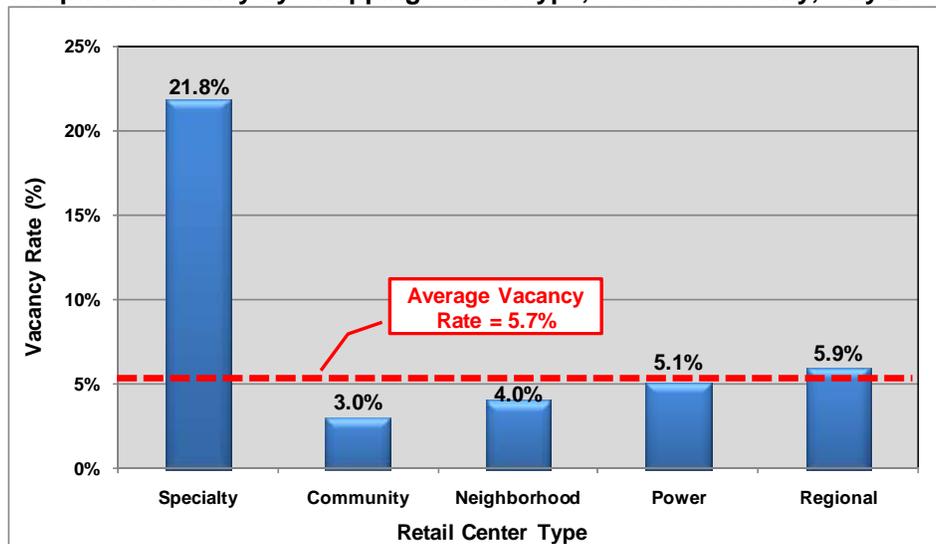
As shown in Graph 12, Cabarrus County's oversupply in 2008 caused the vacancy rate to peak at 5.2% at year-end. This compared favorably to a 6.9% vacancy rate for the six-county Charlotte market. Vacancy was the lowest in 2007 at 3.6% when net absorption outpaced deliveries.

Graph 12: Retail Trends, Cabarrus County, 2004-2008



Graph 13 demonstrates the July 2009 vacancy by shopping center type in Cabarrus County. The average overall vacancy rate for retail centers was 5.7%. Vacancy was broken down into five different center types: specialty, community, neighborhood, power, and regional. Unanchored specialty centers had the highest vacancy of 21.8%. Specialty centers are typically the first to experience vacancies when the market weakens. Regional centers, or large enclosed malls, had the second highest vacancy rate at 5.9%. Community centers, which typically have multiple anchors, had the lowest vacancy at 3.0%.

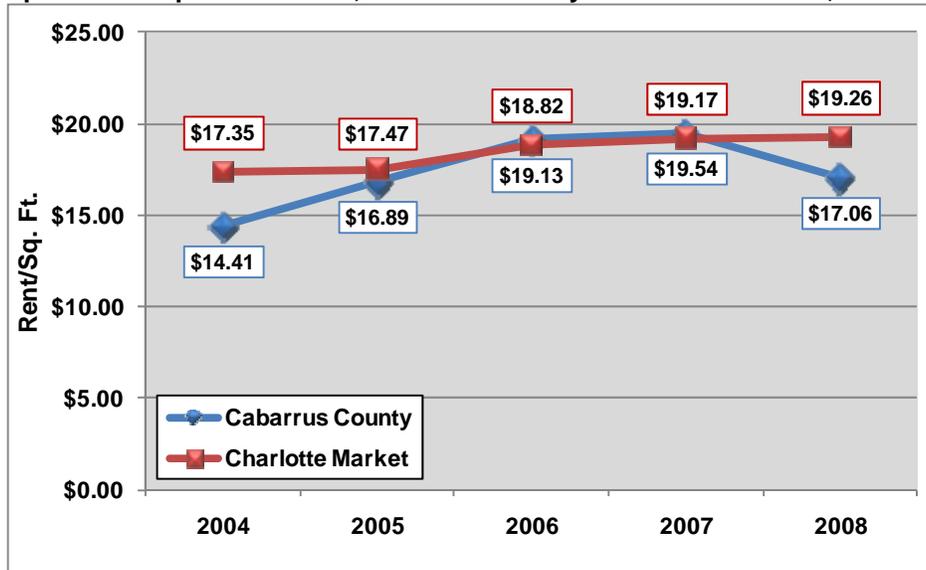
Graph 13: Vacancy by Shopping Center Type, Cabarrus County, July 2009



7.1.2 Rent

Average quoted rents for retail space in Cabarrus County increased 18.4% from \$14.41 in 2004 to \$17.06 in 2008. Rents peaked at \$19.54 in 2007 before decreasing in 2008. Reported rents in the greater Charlotte market at year-end 2008 were, on average, \$2.20 more than Cabarrus County.

Graph 14: Rent per SF Trends, Cabarrus County & Charlotte Market, 2004-2008



7.2 Planning Area Retail Inventory

The retail inventory in the Planning Area includes any building defined as retail in Cabarrus County’s tax parcel data. This is different from the Cabarrus County shopping center database used for retail trends. Of the 698,919 square feet of retail space currently in the Planning Area, 53.0% has been completed since 2000.

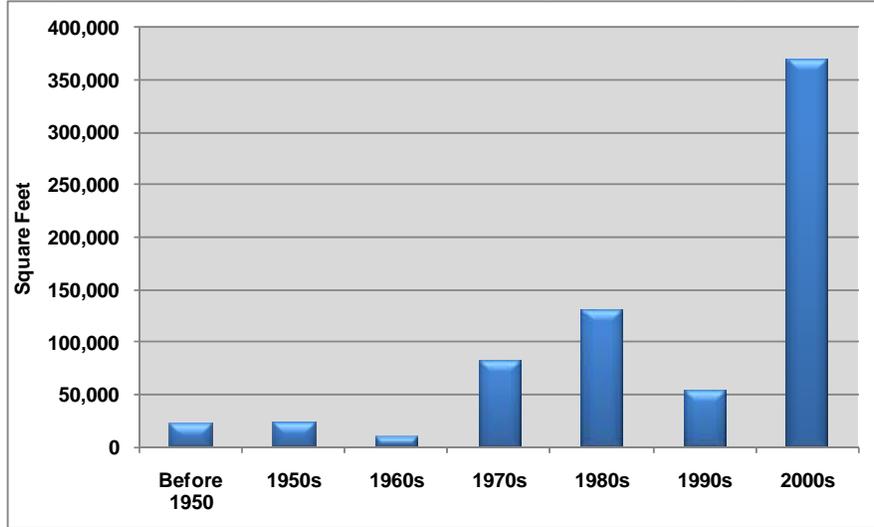
Table 17: Retail Inventory, Planning Area, 2009

Decade	Square Feet	% of Total
Before 1950	23,209	3.3%
1950s	25,442	3.6%
1960s	10,498	1.5%
1970s	83,103	11.9%
1980s	131,696	18.8%
1990s	54,620	7.8%
2000s	370,351	53.0%
Total	698,919	100.0%

Source: Cabarrus County, W&A

As shown in Graph 15, retail completions were less than 100,000 square feet annually in five of the last seven decades. Retail construction has been more prevalent since 2000, with over 370,000 square feet (53.0%) completed. Retail construction has primarily occurred within the NC-49 corridor. Crosland’s Brookdale Center was completed in 2004 on Rocky River Road, near I-485, in the southern portion of the Planning Area.

Graph 15: Retail Inventory by Decade Completed, Planning Area, 2009



7.3 Planning Area Shopping Center Inventory

As shown in Table 18 and on Map 6, there are three shopping centers in the Planning Area that contain at least 50,000 square feet of gross leasable area (GLA). The shopping centers contain a total of 215,000 square feet, ranging from 85,000 square feet at School House Commons to 50,000 square feet at Harrisburg Market. These centers, constructed between 1988 and 2004, represent 30.8% of the total retail square footage in the Planning Area.

Table 18: Shopping Centers over 50,000 Square Feet, Planning Area, 2009

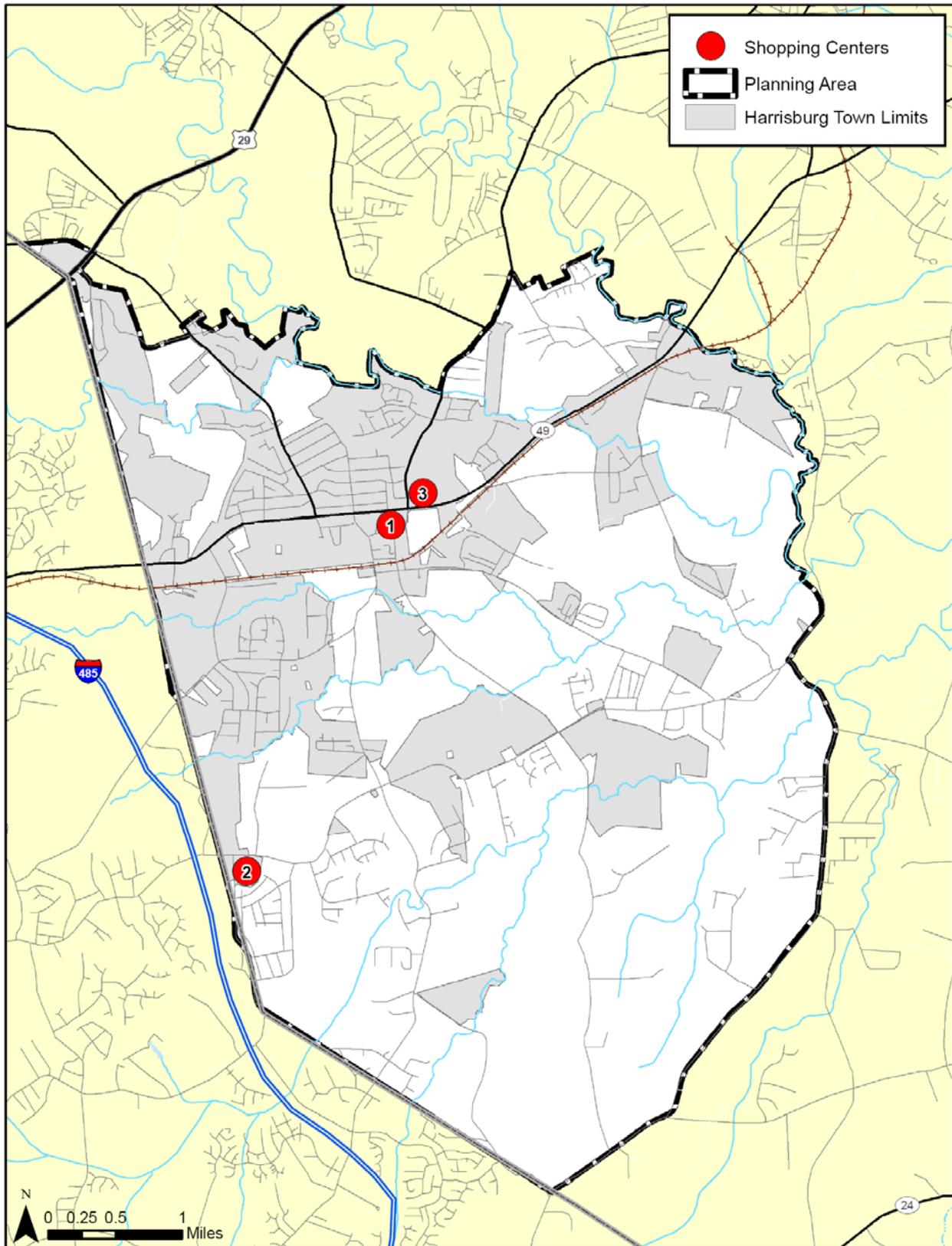
Map Key	Center	Location	Year Built	Total GLA	Vacant Sq.Ft.	Vac. Rate	Anchor Tenant
1	School House Commons	Highway 49 South	2003	85,000	1,000	1.2%	Lowes Foods
2	Brookdale	Brookdale Drive	2004	80,000	12,400	15.5%	Harris Teeter
3	Harrisburg Market	Highway 49 North	1988	50,000	0	0.0%	Bloom
Total				215,000	13,400	6.2%	

Source: Warren & Associates

The overall retail vacancy in the shopping centers is 6.2%, slightly higher than 5.7% for Cabarrus County. Vacancy rates range from 0.0% at Harrisburg Market to 15.5% at Brookdale. Quoted rents for School House Commons and Brookdale are comparable to the mid-2009 average retail rent of \$17.00 in Cabarrus County.

7.4 Retail Forecast

Map 6: Existing Retail Shopping Centers, Planning Area, 2009



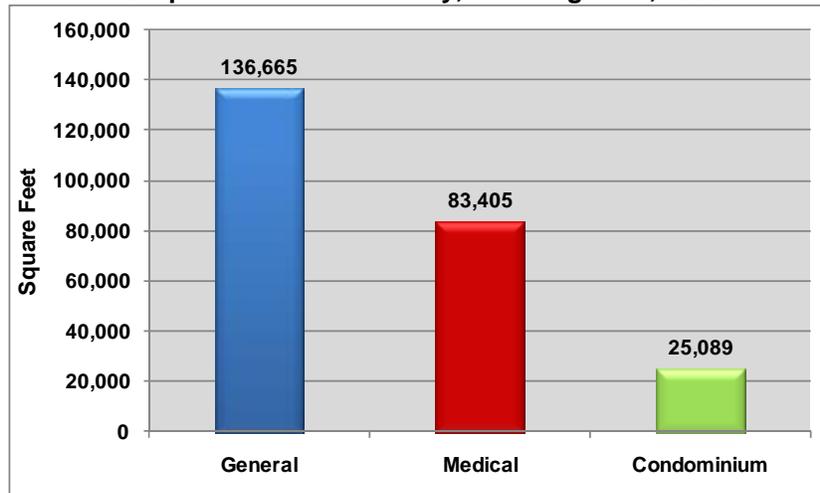
8. Office Inventory and Forecast

This section details the Planning Area's current office inventory, divided into general, medical, and office condominium space. The inventory was obtained from Cabarrus County tax parcel data. Office demand is also forecasted for the Planning Area, based on a capture of Cabarrus County's future office-occupying employment growth.

8.1 Office Inventory

The Planning Area has approximately 245,000 square feet of office space (Graph 16). General office space totals 136,665 square feet, or 55.7% of the inventory. General office includes privately owned multi-tenant and single-tenant space. Government owned office space is excluded from this analysis as it is coded separately for tax purposes. Medical office occupies 83,405 square feet, or a 34.0% share. Owner-occupied office condominiums represent 25,089 square feet.

Graph 16: Office Inventory, Planning Area, 2009



As demonstrated in Table 19, approximately 51.8% of the total office inventory has been completed since 2000. Until 2000, less than 22,000 square feet of general office space was completed in the Planning Area every decade. Office space is primarily concentrated along NC-49, with some recent completions on Rocky River Road near the Brookdale development.

Table 19: Office Inventory, Planning Area, 2009

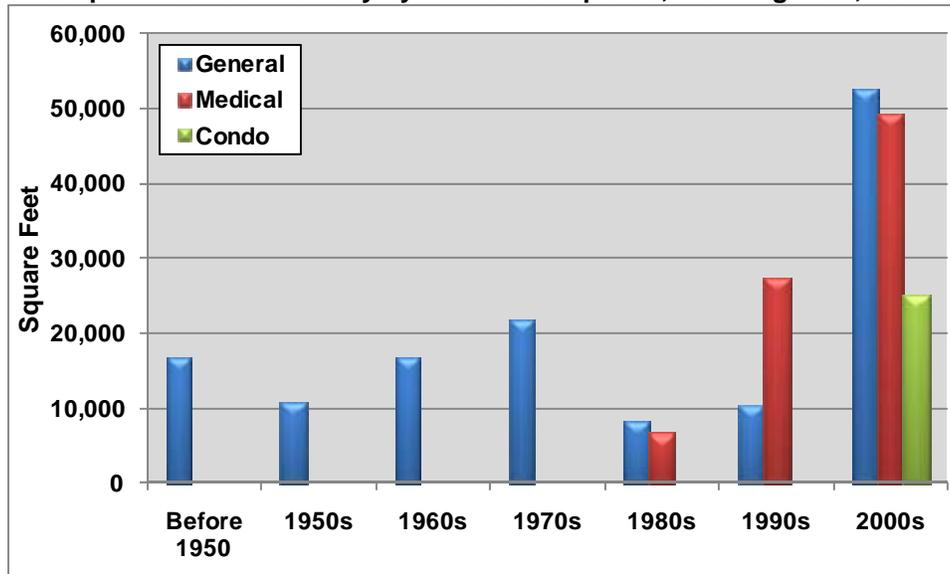
Decade	General Medical Office			% of	
	Office	Office	Condos	Total	Total
Before 1950	16,603	0	0	16,603	6.8%
1950s	10,866	0	0	10,866	4.4%
1960s	16,773	0	0	16,773	6.8%
1970s	21,630	0	0	21,630	8.8%
1980s	8,206	6,660	0	14,866	6.1%
1990s	10,222	27,329	0	37,551	15.3%
2000s	52,365	49,416	25,089	126,870	51.8%
Total	136,665	83,405	25,089	245,159	100.0%

Source: Cabarrus County, Warren & Associates

Construction of all medical office space has occurred since 1980; approximately 59.2% since 2000. Construction of 25,000 square feet of office condominium space has also occurred since 2000.

Graph 17 shows the distribution of office deliveries by decade in the Planning Area. Only general office space was completed in the Planning Area prior to 1980. Since that time, strong population growth in Harrisburg has increased demand for medical and professional services.

Graph 17: Office Inventory by Decade Completed, Planning Area, 2009



8.2 Office Forecast

9. Commercial Supply and Demand Comparison

This section compares the existing and entitled supply of retail and office square footage to the forecasted demand through 2020. The comparison will demonstrate remaining development capacity after 2020, as well as, the estimated post-2020 capacity years.

9.1 Commercial Development Activity

The Town of Harrisburg's entitlement process allows a total amount of commercial square footage for each project. In most cases, a differentiation between retail and office uses is not made in the approval documents. For this reason, retail and office development activity has been reported together. It should be noted that the total approved square footage will likely be a mixture of retail and office space in most of the projects. Only approved projects have been included in the list below.

There is 3.5 million square feet of commercial space currently approved in the Planning Area, with 3.2 million square feet remaining to be constructed (Table 20). Developments range from 1.7 million square feet of approved space at EPIC to 150,000 at Magnolia Springs. Only the Harrisburg Town Center has completed a mixture of retail and office square footage since approval. Of the 750,000 square feet approved for the Harrisburg Town Center site, the developer has completed 262,000 square feet.

Table 20: Commercial Development Serving Planning Area, 2009

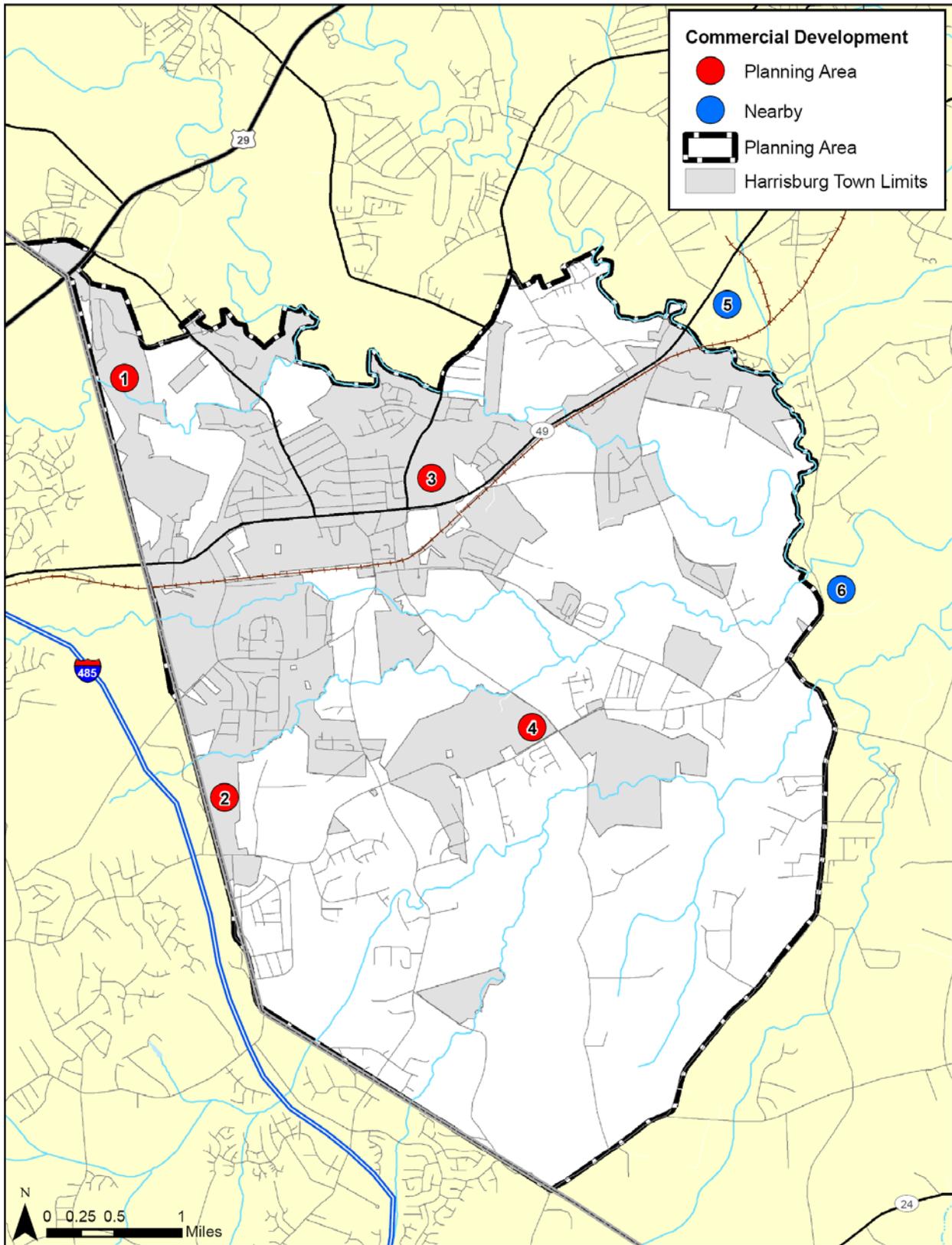
Map				Entitled	Remaining
Key Development	Location	Developer		Sq. Ft.	Sq. Ft.
1 Epic	NC-49 & El Dorado Road	CB Richard Ellis		1,700,000	1,700,000
2 Brookdale North	Rocky River Road	Merrifield Partners		900,000	900,000
3 Harrisburg Town Center	NC-49 & Main Street	J & B Development and Mgt.		750,000	488,000
4 Magnolia Springs	Rocky River Road & Hickory Ridge Road	n/a		150,000	150,000
Planning Area Development Total				3,500,000	3,238,000
5 Morrison Ridge	Rocky River Road & Stough Road	Aston Properties		765,000	765,000
6 Mills at Rocky River	NC-49 & Lyons Boulevard SW	n/a		565,000	565,000
Nearby Development Total				1,330,000	1,330,000
Development Total				4,830,000	4,568,000

Source: Town of Harrisburg, Warren & Associates

Additionally, two commercial developments immediately outside the boundaries of the Planning Area have also been approved. Morrison Ridge and the Mills at Rocky River have a combined total of 1.3 million square feet. These developments are currently not under construction. Including these nearby commercial developments, there are 4.57 million square feet of retail and office space approved and remaining to be built that would serve the Planning Area.

9.2 Commercial Development Capacity

Map 7: Commercial Development Activity, Planning Area, 2009



10. Industrial Inventory and Forecast

This section details the Planning Area's current industrial land and building inventories. Improved industrial parks in the Planning Area are shown on Map 8. Industrial forecasts, provided through 2020, are based on a share of industrial employment growth in Cabarrus County.

10.1 Industrial Park Summary

The Planning Area has three improved industrial parks with infrastructure in place (Table 21). All of the improved industrial acreage is located in the western portion of the Planning Area; these parks contain a total of 173 acres. Currently, vacant and available parcels in the parks total 115 acres (66.5%). Caldwell Industrial Park has the largest availability of land, with over 70% remaining vacant.

Table 21: Industrial Park Acreage Summary, Planning Area, 2009

Map Key	Park	Acreage			Vacant % of Total
		Occupied	Vacant	Total	
1	Harrisburg Industrial Park	20	18	38	47.4%
2	Caldwell Industrial Park	14	36	50	72.0%
3	Z-Max Industrial Park	24	61	85	71.8%
Total		58	115	173	66.5%
% of Total		33.5%	66.5%	100.0%	

Source: Cabarrus County EDC, Warren & Associates

10.2 Industrial Square Footage Summary

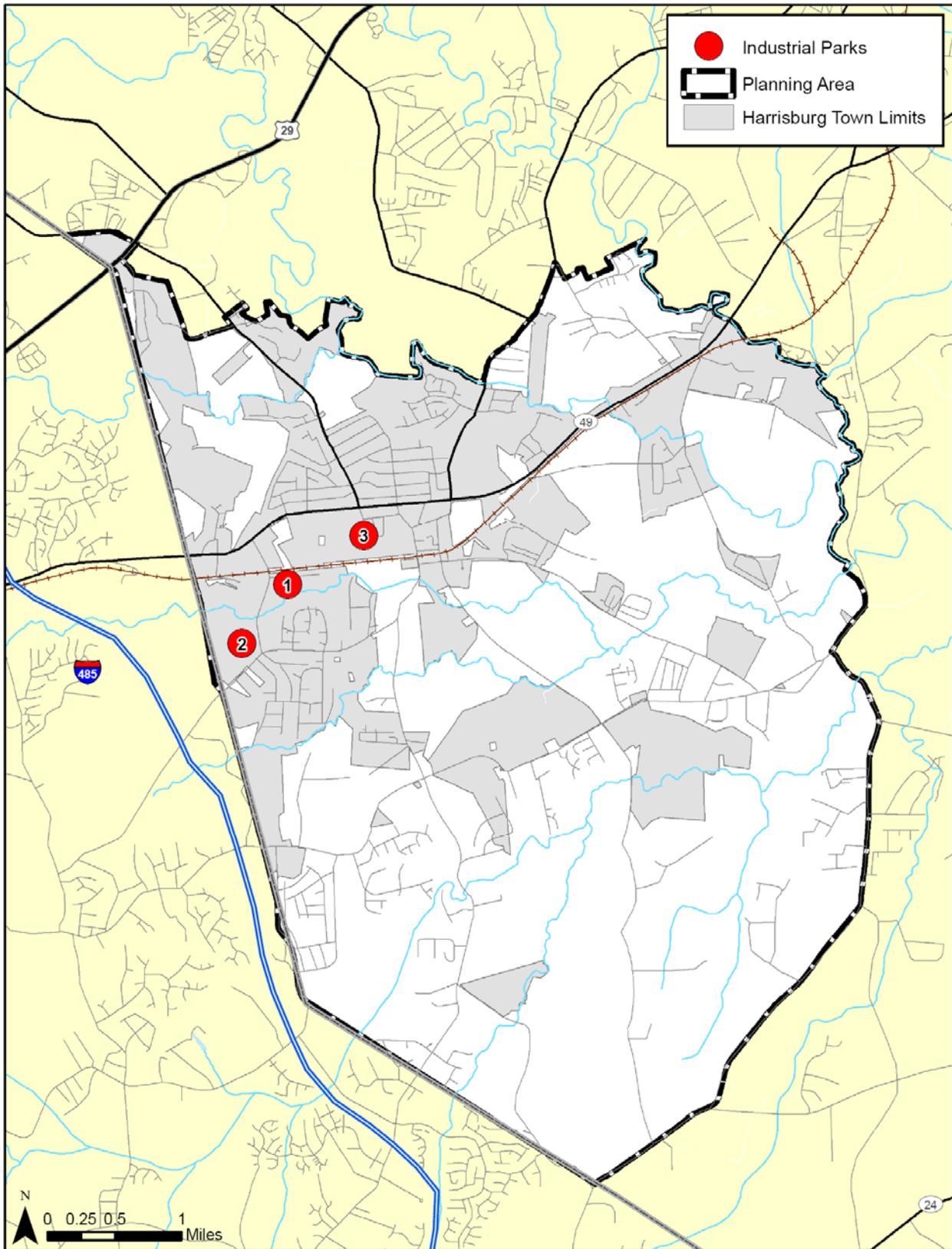
Based on tax parcel information provided by Cabarrus County, the Planning Area currently contains over 2.6 million square feet of industrial square feet. These buildings are located in industrial parks and on freestanding parcels. Over 80% of the industrial inventory has been completed since 1980. Industrial construction has been highest since 2000, due primarily to 746,000 square feet completed along NC-49 for the Saddle Brook Corporation.

Table 22: Industrial Inventory, Planning Area, 2009

Decade	Square Feet	% of Total
Before 1950	22,114	0.8%
1950s	14,718	0.5%
1960s	334,630	12.3%
1970s	105,238	3.9%
1980s	490,095	18.0%
1990s	642,199	23.5%
2000s	1,119,928	41.0%
Total	2,728,922	100.0%

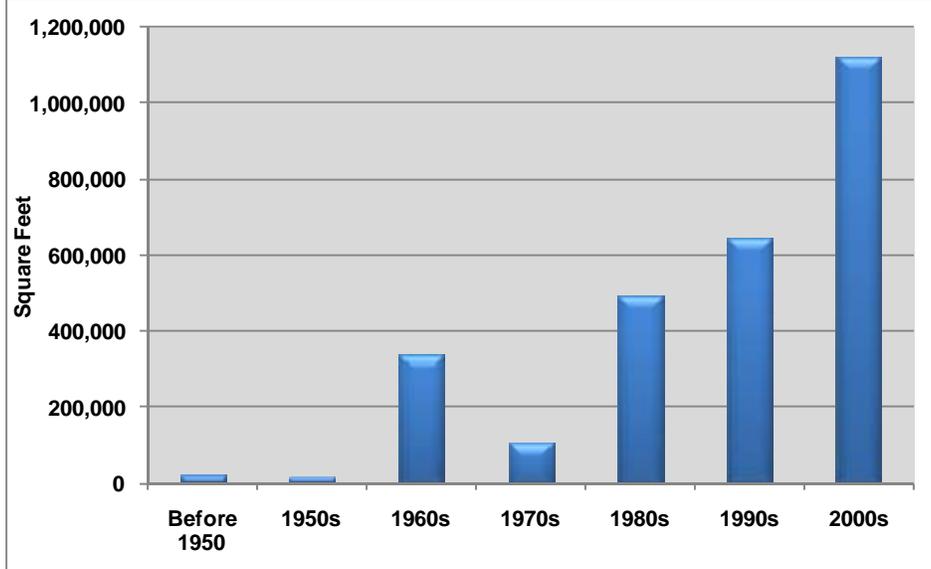
Source: Cabarrus County, W&A

Map 8: Improved Industrial Parks, Planning Area, 2009



As shown in Graph 18, completion of industrial space has increased in every decade since the 1970s. Most of the Planning Area industrial space is concentrated along NC-49 and the parallel rail line.

Graph 18: Industrial Inventory by Decade Completed, Planning Area, 2009



10.3 Industrial Forecast