

# Hickory by Choice 2030 Comprehensive Plan

City of Hickory, North Carolina





# **Hickory by Choice 2030 Comprehensive Plan**

**City of Hickory, North Carolina**

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# Introduction

## Purpose

Communities grow and prosper for scores of reasons. Some are external and beyond local control, but many others are well within the powers of municipalities to shape and leverage strategically, serving the long-range health, safety and welfare of the community.

This plan is a first step in addressing those concerns, and to achieving, through opportunities that growth may bring, improvements residents have long hoped to make. Though for many years the community has done well without a true long-range comprehensive plan, it is recognized that a broader scope of consideration offers the City a stronger, more efficient and effective basis for directing its future.

## Topics Covered

A long-range plan guides what happens on the ground relative to land use, transportation, natural resources, parks, and other aspects of a community's development. It provides direction integrating most aspects of a municipality's physical, economic and social development to achieve goals, both short and long-term. In many communities, plans such as this are referred to as comprehensive plans – aptly named, since all



Figure 1.1 - The Julian Whitener Municipal Building houses the offices of many of the city's administrative departments. (Image source: City of Hickory.)

are intended to help cover and coordinate the gamut of actions and services provided by a municipality.

Most of the chapters in this document summarize topical issues and challenges, identify relevant parts of the planning vision and provide a set of goals and policies intended to guide the City's regulatory and budgetary decision making. Notable and important exceptions are the Vision and Community Design chapter, which articulates the larger consensus voice of the plan and the Implementation chapter, which offers programs and strategies for the City to enact.

The plan consists of the following chapters:

- *Introduction – covering planning context, participation program, document summary*
- *Vision and Community Design – introducing and presenting the plan's overarching vision and directives*

- *Land Use – introducing and presenting policies related to future land use and growth patterns, including the future land use map*
- *Housing – introducing and presenting policies related to the availability and qualities of Hickory’s housing stock*
- *Transportation – including goals and policies related to all modes of travel in Hickory as well as network patterns and inter-connectivity*
- *Economic Development – introducing and presenting policies for the City’s overall economic development approach*
- *Public Facilities – introducing and presenting policies related to Hickory’s provision of municipal, police, fire, water and wastewater services*
- *Recreation & Parks – introducing and presenting policies supporting facilities and services not already provided in Hickory’s existing recreation and parks plan*
- *Implementation – introducing and presenting a strategic set of programs and actions Hickory may take in implementing the comprehensive plan*



Figure 1.2 - Union Square is Hickory’s historic heart, but the community is much, much more. (Image source: Studio Cascade, Inc.)

## Enabling Legislation

North Carolina State law enables and allows cities and towns to enact building and development regulations supporting the general health, safety and welfare of its citizens.

The 1923 legislative act that enabled zoning granted cities authority to zone within their corporate or city limits, including a provision that zoning be in accordance with a comprehensive plan. Since that time, the latter provision has been interpreted by the North Carolina Supreme Court as requiring that zoning be applied throughout a municipality. Perhaps as a consequence, the State does not mandate or even provide guidelines for comprehensive plans. When such plans exist, changes to regulations must reference consistency with adopted plans.

## Hickory’s Historical Context

Hickory grew from a small trading center located on the Western North Carolina Railroad. There was a great explosion of growth in the area from 1880 through the 1930s. This growth was fueled by the development and expansion of industry, primarily furniture-making and textiles.. This growth led to increased population, the establishment of service industries, and increased construction activity. This prosperity led to development of high quality residential areas, cultural facilities, educational institutions, and the extension of public services.

Hickory’s thriving economy led to increased residential development. In *From Tavern to Town: The Architectural History of Hickory, North Carolina*, the authors relate that in the 1920s various lending institutions were encouraging

home ownership. By the late 1930s, approximately 75 percent of Hickory's citizens owned their own homes.

Growth has continued in Hickory, though the basis for the current land use patterns was established in those early stages of city development. Industrial land is still primarily focused on the railroad, but more recent industrial development has focused on highway corridors. Residential development radiates from the city center, but more recent housing development seems less attached to the community's traditional core.

## Study Area

Hickory is located primarily in the northwestern portion of Catawba County in western North Carolina. Portions of the city also extend into Burke and Caldwell Counties. It has a rich tradition of attractive neighborhoods, a vital city center, good recreational opportunities, and an entrepreneurial spirit. It combines excellent residential areas with the character and scenic quality of the western North Carolina landscape. This tradition has established Hickory as a desirable place to live and invest in the region.

Since the 2001 downturn, the economy has slowed growth and diminished economic capacity. However, growth and development in the last decade have increased traffic and placed more demand on public services. Some of Hickory's essential qualities, such as a vital central city and bustling factories nearby, have changed as development moved outward and the economy worsened. As a result, Hickory has recognized the importance of a continued and proactive stance to city development in order to maintain a high quality of life and to promote appropriate development.

## Extra-Territorial Jurisdiction (ETJ)

North Carolina law has long allowed towns and

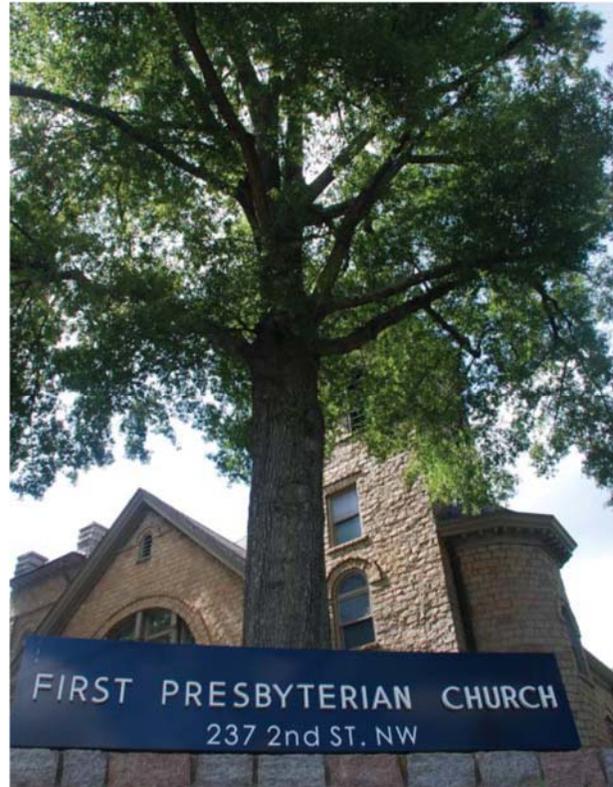


Figure 1.3 - The community's churches play a major role in defining Hickory's landscape and community activity patterns. (Image source: Studio Cascade, Inc.)

cities to establish land use regulations in areas just outside jurisdictional limits. First called "perimeter zoning," the current system enables communities to designate such lands as part of an Extra-Territorial Jurisdiction (ETJ), the maximum size of which is determined by community population.

Extraterritorial areas must be based on "existing or projected urban development and areas of critical concern to the city, as evidenced by officially adopted plans for its development." The established boundary does not need to be based on a detailed legal survey, but the boundary must be described with sufficient precision that landowners can determine whether their properties are included without hiring a surveyor.

North Carolina law provides no mandatory relationship between annexation and extraterritorial jurisdiction, but one of the primary reasons for the creation of ETJs is the need for coordinated planning and development in areas that may someday become urbanized. Cities typically restrict annexation plans to areas within

their ETJs.

Given Hickory's irregular city limits, its ETJ is not easily described by metes and bounds. Though it is depicted graphically in maps presented in this document, users wishing to determine specific applicability are urged to contact the City's Planning Department for the most current map.

## Recent Planning Efforts

This document, developed through public input, updates the existing Comprehensive Land Use and Transportation Plan, adopted by City Council in 1999. That previous planning effort provided planning and decision-making guidance appropriate for that time, but economic and community changes have necessitated a reevaluation of that plan's basic tenets.

The intent of this document is to evaluate and, if appropriate, confirm the underlying vision and direction of the community as expressed in the 1999 plan.

This plan will serve as a road map for the community to follow as it considers decisions, both large and small. It reflects a changing social and economic landscape - addressing existing trends and forecasted growth - to imagine civic needs 20 years into the future. This comprehensive plan is Hickory's vision for the future and strategic outline for getting there.

The plan provides a framework for making development and zoning decisions, promoting orderly land use, implementing public improvements, and generating private investment. In addition, the plan outlines a vision of where the residents of Hickory want to be in the future and provides a detailed strategy to achieve that vision. With this plan, decision-makers will be able to make short-term decisions that promote orderly long-term development and represent the views of the citizens of the community.

This plan incorporates concepts and policy from the previously adopted planning documents. Table 1.1 lists and describes those documents used in the



Figure 1.4 - Reusing the community's empty industrial buildings continues to be a challenge, in Hickory and throughout the Greater Hickory region. (Image source: Studio Cascade, Inc.)

development of this plan.

## Public Participation Program

Hickory by Choice 2030 is more than simply an update to Hickory by Choice. It is a thorough review of the 1999 land use and transportation plan and an expansion of it. The new Hickory by Choice represents a critical evaluation and revision of the older document, and it includes more elements than the original, addressing housing, the environment, economic development, and public facilities and utilities.

While this document captures extensive and current community thought on Hickory's future, much of its core direction carries forward the message of the earlier plan. The process that created the 1999 Hickory Land Use and

Table: 1.1 - Previously adopted planning documents		
Document	Date	Notes
Hickory by Choice – Comprehensive Land Use and Transportation Plan	1999	This plan updated the 1986 plan.
City Center Plan	1999	Provides a vision for the city center and the Oakwood, Claremont, Green Park, Ridgeview, and Kenworth neighborhoods.
Hickory Horizons – Continuing the Vision	1995	Regional visioning process (third iteration).
Eight Neighborhood/ Area Specific Master Plans	1996 - 2008	Neighborhood plans were designed to supplement the Comprehensive Plan.
Sidewalks, Bike, Greenway, and Trails Master Plan	2000 - 2005	Provides policy for improving access and mobility for pedestrians and bicyclists.
Hickory Public Art Master Plan	2001 - 2002	Provides a framework of policy for public art acquisition and placement across the City.
Hickory Landscape Master Plan - Creative Horizons	1996	Provides guidance for gateways and corridors.
Park and Recreation Master Plan	1997	Provides standards across park types along with policy guidelines.
Cloninger Mill Park Master Plan	2009	Provides a preferred design concept for development of Cloninger Mill park site.

Transportation Plan was “community driven.” That plan was a direct reflection of the citizens’ values and visions for the future. Though times have changed, the community values and vision expressed then have not changed significantly.

The first step of this process was to define the existing trends, opportunities, and constraints within the community. The information for this analysis was obtained from solicitation of issues, ideas, and visions for the future through

orientation interviews with community members and City staff, as well as a critical review of the first Hickory by Choice. The early workshops in this process served to bring into focus those values and policy directives from the first plan that should be carried forward into this version.

The public process accompanying the first Hickory by Choice effort was extensive, including several public meetings, a week-long planning charrette, community interviews, and a thorough inventory of existing conditions. This plan update did not seek to replicate that process. Rather, this approach was based on initial workshop results confirming the applicability of the first plan’s overall goals, focusing on specific revisions, plan expansion and refinement of the land use and community development concepts presented in 1999. Measures to implement the plan concepts and recommendations were then developed to provide the city with a roadmap to achieve the vision of Hickory’s future as outlined in this plan.

A summary of the public process for this planning effort is included in Appendix D.

From the outset, Hickory residents were consulted and asked to help lead the plan’s update. Outreach efforts were extensive and included:

- *The creation of a Council-appointed, 16-member Advisory Committee*
- *Early, one-on-one orientation interviews with staff, council and others to help spotlight existing needs and issues*
- *Six public workshops, summarized later in this section*
- *Short, issue-oriented questionnaires available on-line and in paper form*
- *Informational booths set up and staffed during local events*
- *Mail, newsletters and notices*
- *A project website, including all process materials, exercises, on-line questionnaires and custom videos*
- *Informational meetings hosted by the Advisory*



Figure 1.5 - A workshop series was the backbone of the public participation effort, but a project website and neighborhood presentations also invited public comment. (Image source: Studio Cascade, Inc.)

*Committee, including a design workshop to explore form-based zoning*

- *Articles, letters to the editor and guest editorials, published in the Hickory Daily Record, Charlotte Observer and Hickory Hound blog*
- *An hour-long, talk-radio interview introducing the planning process with Planning and Development Director Brian Frazier and consultant Bill Grimes*
- *A local cable TV interview with Planning and Development Director Brian Frazier*
- *Several neighborhood meetings with presentations by City staff*

*Several announcements and articles on the plan and its progress in Hickory's City Snippets newsletter*

In all, the level of outreach and community participation for the plan update effectively created a community dialogue and established a set of

consensus, values-based goals to drive plan development.

## Workshops

Developing Hickory by Choice 2030 took a “funnel” approach, beginning with work to elicit long and short-term ideals, moving to identify existing issues and opportunities, developing and receiving feedback on several differing land-use strategies, gathering responses to potential policy solutions, and finally, presenting a draft plan for review and comment.

All public meetings were publicized, and meeting minutes were taken for the record.

The following paragraphs summarize the public workshops used to update the plan. The full range of materials, including meeting and questionnaire results, a website archive, presentations and more, can be found on the city’s website and in the Planning and Development Department.

### Vision - Issues & Options Workshop, March 24, 2009

This workshop concentrated on reviewing and evaluating the vision from Hickory by Choice, giving direction on how it might be revised to address community and economic changes that have occurred since 1999. Presentations on findings were made by many individuals to the larger audience.

### Centers and Corridors Workshop, April 28, 2009

This workshop presented general results from the March 24 meeting and presented specific challenges related to shaping the vision expressed then to match the development patterns taking shape along the community’s major arterial corridors. Participants were asked to evaluate the downtown, north Highway 127, and the Viewmont area; discussing what characteristics made each environment either suitable for or hostile to pedestrians, motorists and shopkeepers.

## **Policy Options Workshop, June 18, 2009**

The workshop asked participants to discuss and evaluate some of the key policies contained in the existing plan, particularly those related to the neighborhood and commercial centers envisioned in Hickory by Choice. In addition, participants learned about and discussed the City's Land Development Code (LDC) and considered new types of development standards the community may wish to adopt.

Presentations included findings from the April Plan Priorities workshop, and introduced ways the City's LDC can be improved to help the community grow according to residents' long-term vision.

## **Commercial Land Use October 26, 2009**

This workshop covered potential means of developing successful mixed-use centers and corridor areas, as called for in Hickory by Choice. Consultants presented a review of current zoning strategies, offered schematic site plans for select centers, and engaged residents in exercises to refine potential solutions.

## **Residential Land Use, February 9, 2010**

This workshop presented strategies for designating and zoning Hickory's residential neighborhoods, applying the concepts established in the visioning and policy development phases to the management of residential development. In addition, a set of likely or potential programs necessary to implement the plan was presented.

## **Plan Roll-out, October 4, 2010**

This meeting presented citizens with a summary of the completed draft plan and its proposed translation into development standards. It provided opportunities for written comments, a question-and-answer session, and a "what's next" portion offering a summary of the official city

review and adoption process.

## **2016-2017 Five Year Update**

In 2016 the Hickory Regional Planning Commission appointed a subcommittee of its membership to embark on the five year update of the Hickory by Choice 2030 Plan.

The subcommittee met monthly to go over each chapter of the plan to determine which sections needed to be updated. The process took fourteen months to complete. Changes were proposed to each chapter of the plan to help maintain its relevancy. Two new chapters were also added, which covered Community Health and Historic Preservation.

The final draft document was rolled out to the public on March 22, 2017. The Hickory Regional Planning Commission held a "drop-in" style meeting where they were able to interact with the public to explain what had been updated and why. Over the course of the meeting the public was able to voice any concerns and offer their advice on the draft document.

# **Use and updates – City leaders and staff will need to internalize and use the plan, marking progress, considering revisions, and updating the plan using this document**

Cities generally employ two types of instruments to guide and enact legislation – policy documents, such as long-range or comprehensive plans, and regulatory documents, such as zoning or development standards. Both are intentionally distinct, but for obvious reasons, must be well-coordinated and complementary.

Citizens, often far more familiar with local development standards, may confuse the two. In using this document, it's important to understand that its intended role is, in brief:

*An internal guide, providing City staff with set goals, policies and programs leading actions and budgeting activities*

*A guide for elected and appointed leaders, providing direction on decision-making and in establishing regulations*

*A type of contract between residents and leadership, articulating and establishing expectations regarding key issues and community characteristics*

It is also important to understand the limits of this or any other plan. Many citizens assume plans are a type of “end-all,” holding legal sway over City activities or somehow extending automatically into land-use regulation. This is not the case. Instead, this document outlines a vision for future growth along with objectives to achieve that vision. Further actions, just as essential as this one, include:

*Further study – in some cases, the City will need to conduct relatively simple inventories or studies; in other cases, the creation of more topic-specific or sub-area plans will be required*

*Consistency – the City's set of development and zoning regulations are being updated to implement the plan. Other, department-specific plans such as those related to public works, recreation and parks, or utilities, may also require review*

*Use and updates – City leaders and staff will need to internalize and use the plan, marking progress, considering revisions, and updating the plan regularly, on-pace with conditions*

*Citizen involvement – expectations for this plan – as evidenced by the level of public input sought in crafting it – seem to mark the desire for a new, more participatory role for residents in the community's future. If so, citizens will need to remain active in helping achieve goals and in monitoring the plan's progress over time*

## Caveat

Few, if any of the various goals, policies or programs in this or any plan should be considered isolated from the whole. Decisions which on the surface seem exclusively transportation-related, for example, may well have deep implications related to housing, commerce, land value, or even to social issues. This plan is ordered by chapter and subject for the sake of accessibility. That does not imply that these orderings present a complete, or even best representation, of the plan's comprehensive objectives. Some, such as City staff, may wish to review individual chapters to assess project budgeting or compliance with plan objectives. Others may value individual chapters as a more immediate, accessible way of understanding community objectives. But for those wishing to gain a more comprehensive understanding of the plan, it should be taken in its entirety; an excellent means of absorbing this plan's intent is provided with the list of goals, policies and projects for each subject area included at the end of each chapter.



Figure 1.6 - As project participants learned, comprehensive planning impacts land use, community design, transportation and virtually everything else that shapes the city.

# Vision & Community Design

Communities grow and are shaped by numerous factors, including external market forces, natural features, topography, climate and available resources. But often, it is the power of civic will that plays the largest role in creating successful, livable places.

This plan's vision may be considered the foundation for everything else in the plan. By design, it is intentionally broad-brushed in nature – written to be indefinite enough to engender consensus and survive over the life of the plan, yet specific enough to direct policy.

This chapter communicates Hickory's planning vision for the next 20 years, establishing a snapshot of Hickory in the year 2030. The vision captures the community's aspirations, articulated through this planning process, and makes more current the concepts put forward in the 1999 Hickory by Choice land and transportation plan.

It also introduces the concept of community design, speaking to Hickory's physical environment and how it helps to provide the quality of life that residents of Hickory desire. While the plan's subsequent chapters deal with specific topic areas, this one is somewhat more holistic, focusing on the community's vision and how that vision is embodied in Hickory overall. Policies included at the end of this chapter focus on how the various planning elements – such as land use, transportation, housing and economic development – interrelate to shape the type of



Figure 2.1 - Hickory is set in a rich and diverse environment, with thickly wooded areas, streams and convenient access to transportation establishing an enviable quality of life. (Image source: Studio Cascade, Inc.)

Hickory the community desires.

## Conditions and Issues

Hickory's manufacturing past and its emergence as a regional service center, technology hub and data center corridor have provided the community with a high level of infrastructure and a breadth of land uses and economic activity. Although Hickory's roadways, utilities, and community institutions are well established, the community's overall quality of life is vulnerable to conditions that ebb and flow depending on a range of other influences.

Issues identified during previous planning efforts, data inventory and analysis, public input, and interviews are summarized here by category, relating those issues directly to the topic chapters this plan contains. These issues identify the community's concerns and

indicate potential opportunities for Hickory's future direction.



Figure 2.2 Hickory's train depot, located just south of Union Square. (Image source: City of Hickory)

## Economics

A large portion of the furniture and textile industry has left the region, and a restructured economy has not yet taken root. A spirit of regional collaboration in economic development has emerged, however, with the communities working together to revive the area's economic heartbeat. The transportation, medical, educational, data processing, and light manufacturing sectors have shown signs of growth, and the 321 corridor south of Hickory is feeling development pressure for light industrial and data storage facilities.

## Downtown

Hickory serves as a regional center for employment, medical services and cultural events. An action plan was developed to strengthen the city-center and adjoining neighborhoods, but community unemployment and storefront vacancies grow. Retail uses, including those positioned on Union Square, tend to experience difficulty, while other areas of the city have seen positive growth. The downtown plan provides additional assessment of the issues facing the area, offering suggestions for the built form. Despite its focus and recommendations, however, the plan has not been fully implemented and may need to be reconsidered in light of Hickory's current economic and demographic conditions. Hickory has been designated as a North Carolina Main Street Community, and its strategic planning and business development practices are consistent with

that model.

## Rail corridor/industrial land

A good deal of industrial and manufacturing land is underutilized. Many railroad corridor sites qualify as "brownfields," abandoned, vacant or underutilized properties and targeted for redevelopment. The City has recently completed a three-year brownfields assessment, examining the potential reuse of many of those properties and the steps necessary to reintroduce them to the active urban fabric.

## Highway corridors

Highways 127 and 70 were designed and developed to serve the automobile, with high-speed access and strip-style development. Some of the older commercial centers, obsolete by today's standards, are experiencing disinvestment with no real indication of redevelopment and reuse in the near future. Other areas along these highway corridors, however, are quite prosperous, notably those near major intersections and more affluent residential areas. The "center-oriented" land use plan in Hickory by Choice has provided little direction for development of these highway corridors.

## Core neighborhoods

Several neighborhood centers throughout the city were identified in the 1999 Hickory by Choice land and transportation plan. Redevelopment of those designated centers has not occurred as envisioned, but some commercial centers have developed in these areas in the past decade. It has been difficult to direct development toward the model proposed in Hickory by Choice, with guidelines for connectivity, building placement and the mixing of residential and retail uses. "Tried and true" retail development practices persist. The essential component of the concept is the development of a walkable community, where land use and transportation work together to make walking or bicycling a convenient and attractive transportation choice. A more comprehensive approach to managing land in these core neighborhoods, as well as a recognition of the influences of the

adjacent corridors, will be necessary for the concept to succeed.

### **Regional center**

Hickory is a center for employment, medical services, and cultural events. Its function as a regional center enlivens the community and strengthens its economic base, but it also leads to increased volumes of vehicle travel on certain major thoroughfares, particularly during commuting hours.

### **Population**

Growth in prior decades has resulted in a corresponding increase in housing construction occurring outside of the city center and in established neighborhoods.

### **Traffic**

Travel patterns in the city do not always support commercial activity centers, with a great number of single-occupant vehicles and freight traffic traveling through designated core neighborhoods. Hickory also has several one-way pairs, parallel streets a block apart that were once two-way but converted to one-way travel. While these one-way pairs expedite traffic flow, they also tend to lessen the viability of land alongside them for commercial or residential development. The 1999 Hickory by Choice plan recommended that one-way pairs be studied for conversion back to two-way streets.

### **Aesthetics**

Gateways and corridors leading into and through the community do not communicate a positive image to visitors and city residents.

### **Recreation and open space**

The community's less developed areas provide unofficial recreation and open spaces. Recreation opportunities are not available in all areas. Lake Hickory is a beautiful feature, and the community desires increased recreational access to its shores and water.

## **Planning Vision**

The community identified its vision as one of shaping a Hickory that is more sustainable than today's Hickory. Through the 1999 planning effort, the residents of Hickory defined sustainable development as enhancing what is already good about the community and ensuring that future generations will be provided the same opportunities. A sustainable Hickory will incorporate ecological integrity, economic security, equal opportunity, and social well being into its future.

This new planning process is built upon the original principle of Hickory by Choice that most services be within walking distance of neighborhoods. The process also sought to provide an expanded planning vision that takes into account the complexities and unique physical characteristics, opportunities and constraints. While the community agrees that the original planning principle of providing a range of services within walking distance of residences is a worthwhile ideal, recent practice has indicated it is not as universally achievable as the earlier plan may have proposed.

This vision keeps that ideal in mind, but it also adds other components to refine it and clarify its application. It provides for transportation options, mixing of land uses where appropriate and an openness to a variety of housing options to accommodate the types of complex and diverse neighborhoods envisioned in Hickory's planning.

The community's history and role as a regional center is considered in this more detailed vision. Residents desire a future that embraces a community providing for community housing, prosperous commerce, appropriate land uses, transportation options, accessible and diverse recreation and sustainable coexistence with the environment.

The following pages present the plan vision developed for Hickory by Choice 2030. Though its primary use in plan development was to articulate the desires of the city's residents, it is presented here for at least two reasons:

1. To provide context. Because the vision was developed as the foundation of the plan, topics have been categorized to (as much as possible) relate to chapters in the plan. As one reviews policies in the Housing chapter, for instance, it should be possible to understand their overall intent by reading that portion of the vision.
2. To engender consensus. To be successful, long-range plans must be dynamic, i.e., able to evolve along with the many forces and changes that occur after (and even during) its adoption. Over time, programs are completed, policies are revised, or, given new circumstances, civic priorities change. But the more basic values – expressed in the vision – are very likely to endure. Just as they helped formulate the goals, policies and programs included upon adoption of the plan, it is hoped the vision will provide guidance when implementing new policies. As much as is possible in a diverse community, the vision offers a consensus view of what the town represents, and what it ought to achieve over time.

Just as with the plan policy matrices, which can be found at the end of each chapter, the following vision should be understood to represent a more balanced, comprehensive view of Hickory’s aspirations than more topic-specific queries might indicate. Participants in crafting the plan were typically presented with competing ideals and asked to consider input in context with other, perhaps equally valid concerns.

In order to facilitate participants’ long-view consideration of issues, many parts of the vision were expressed in a future-tense format, understanding that all such conditions do not necessarily exist today.

# Hickory's Vision

## Natural Resources & Sustainability

Hickory is a place that does not contribute to environmental degradation. The city is a community of green open spaces which support mixed-uses that minimize pollution and protect the environment.

Lake Hickory is protected from contaminants and overuse. Rainwater is collected, and water is reused for landscaping and other non-potable needs. Water that is not collected for reuse is naturally filtered prior to entering surface and ground water. Residents are healthy and are not exposed to pollutants.

## Housing and Land Use

Hickory is a sustainable community with a vibrant downtown, neighborhood shopping, open spaces and parks, employment, and services. Hickory is a livable place, with preserved view-sheds, housing and employment. Housing is a priority with housing options for all economic levels.

The network of neighborhoods provides a traditional pattern of single family residences that support neighborhood schools and mixed-use commercial districts. Some larger commercial, industrial, and office centers are located along major corridors to provide regional services and employment. The overall pattern of centers and corridors connects all areas of the city and focuses the greatest growth to the downtown.

## Transportation

A network of neighborhoods supports a multi-modal transportation system that is centered on mixed-use districts, corridors and the downtown. This compact development pattern allows opportunities for transit to travel from the downtown to neighborhoods and between centers. Transit opportunities also improve access to mixed-use commercial, industrial, and office centers.

Parking is no longer the focus of commercial development and is located behind buildings. Street trees, landscaping and other amenities provide natural breaks between vehicle routes and sidewalks. The complete streets are built for pedestrians, bicycles and vehicles, with on-street parking on many of them.

While private transportation is still popular, the community is less reliant on automobiles



Figure 2.3 - Participants frequently mentioned Lenoir-Rhyne University as a defining component of Hickory's culture, economy and historic context. (Image source: Studio Cascade, Inc.)



Figure 2.4 - Hickory's railroads were fundamental to its economic prosperity, but the future of the railroad landscape is anybody's guess. (Image source: Studio Cascade, Inc.)

in general and promotes a more sustainable economy.

### Utilities

Hickory has positioned itself and is committed to serve as a regional provider of water and sewer service. The City has partnered with Catawba County and several municipalities to form strong, forward-thinking plans for interconnections or extensions with various operational agreements to provide water service to the majority of Catawba County and portions of Alexander, Burke, Caldwell, and Iredell counties.

### Economic Development and Commerce

Hickory is a regional provider of medical services, retail shopping, entertainment activities, and employment and has built upon Hickory's traditional development pattern. A seasonal farmers' market is located in the

revived and vibrant downtown. Outside of the downtown, grocery stores anchor regional centers and neighborhood redevelopment.

Hickory has a flexible business environment with incentives for business development. Industry is compatible with surrounding uses, made somewhat easier by a shift away from manufacturing. Vacant structures are reused for new business development. High tech jobs are an increasingly popular employment choice.

### Recreation and Parks

Hickory is a city full of parks and recreation opportunities, with easy access to residents of all ages. Residents are proud of the healthy community options Hickory has to offer. Pedestrian and bicycle enhancements are provided in many areas.

### Public Facilities, Safety and Services

Hickory has an informed process for decision-making. New development pays its share for parks and transportation improvements, and landscaping is planted as part of all new and re-development activities. Project developers and property owners volunteer to enhance the public realm adjoining their property. Hickory is an innovative city with alternative energy and building choices. Public transit connects housing, higher education centers, work, shopping, and medical facilities.

## Arts, Culture and Education

The city has an ethic rooted in sustainability which promotes inclusiveness, involvement, and the intertie between all aspects. Quality of life is very important for Hickory residents with interconnections that strengthen sense of community. Residents believe in life-long education, cultural activities, and access to art. They know that diverse art, culture and education opportunities are an intrinsic part of a strong economy.



Figure 2.5 - Change is coming. If the past decade is any indication of what can happen, the community's vision must be both directive and adaptable. (Image source: Studio Cascade, Inc.)



Figure 2.6 - While Union Square provides an iconic image of Hickory, this vision and the design directives emerging from it must address the larger community's diversity. (Image source: Studio Cascade, Inc.)

## Design directives

A gap exists between where Hickory is today and where the vision suggests it should be by 2030. These design directives articulate high-level principles, seeking to close the gap and inform goal and policy choices included in this plan. They connect the vision to commercial and industrial development, neighborhoods, pedestrian and vehicular circulation, utilities and facilities, economic development, open space, parks, and natural resource conservation.

### **Ensure that open space and natural resource areas are preserved and protected**

Residents want to have the open spaces and resource areas for the ecological, economic, and

recreational services that they provide. From air and water quality to industry, these lands provide irreplaceable benefits and the residents are clear that they want to see their protection and conservation.

### **Redefine commercial development patterns to be more thoughtful and sustainable**

Hickory residents want to see growth primarily focused into identified centers and the corridors that connect them. Hickory's corridors present interesting design and community development challenges and opportunities. The directive is clear in that the relationship between corridors and centers needs to be restructured to favor a viable retail environment in centers, allowing for an increasingly walkable community. Neighborhood identity should be preserved, even as infill occurs to intensify activity in identified centers. The new pattern would include a variety of housing types while supporting a more pedestrian focus.

### **Provide opportunities for economic growth in a balanced and deliberate manner**

Hickory's residents want a sustainable economy that provides jobs and retains the factors that make the community an enjoyable place to live. The community sees the potential to reestablish commercial and economic prosperity through offering a more eclectic, diverse and local economy. Existing buildings and infrastructure can be reused and reinvented. Strategically located centers can serve residents and be connected by well-planned corridors.

### **Integrate parks and recreation citywide**

Residents enjoy recreational pursuits, through city parks, bicycling, water-activities, and sports. Recreational opportunities must be available to all age-groups.

### **Support culture and arts**

Residents love the myriad of cultural activities and

realize that these events support Hickory as a regional destination. To ensure that current art and cultural opportunities are supported, promoted and developed into innovative programs is their goal. Support for future expansion of the local arts, heritage, and cultural programs is essential.

### **Develop a diverse transportation system**

Automobile travel is the dominant means of transportation in Hickory. Residents do not intend to give up this mode of travel, but they do want viable and attractive options for walking, bicycling, and public transit.

### **Promote development that is easily served by facilities and services**

The community expects Hickory to provide quality and affordable public safety, utilities, and transportation services. This requires consideration of how public services are provided, developed, and managed to ensure fiscal balance and equity. The community seeks a system of public utilities that is environmentally friendly, safe and financially responsible, designed and constructed from a regional approach and responsive to all ratepayers.

## **Community Design Goals**

The following goals are included to translate the preceding design directives into the language of a long-range plan. These goals, as well as the policies designed to achieve them, are described below and presented in the table at the end of this chapter.

Community design goals tend to be less specific than the goals found in other chapters of this document. They are more holistic, focusing on the integration of the community's various systems and attributes to create and maintain the type of Hickory residents and businesses love. Components of these goals will touch on topics dealt with in more depth in other chapters, and the

table at the conclusion of this chapter provides cross references to indicate where additional policy or planning concept information can be found in this document to support direction indicated here.

### **Goal 1: Improve quality of life for all Hickory residents**

By paying attention to the way Hickory develops, by the way land use, transportation, open spaces and housing interrelate, Hickory can ensure that the quality of life for its residents remains high.

### **Goal 2: Promote and protect Hickory's heritage.**

Hickory's historic properties are an important element of local heritage. Strategically coordinating and supporting community efforts that enhance Hickory's physical and cultural heritage can further a sense of community among residents and visitors alike.

### **Goal 3: Support Hickory's active civic legacy.**

Hickory residents desire to be engaged in decision making that will affect their community. Collaborative and responsive action to citizen concerns can provide a vehicle for the continued civic participation essential to community vitality and social stewardship.

### **Goal 4: Ensure a sustainable future**

Developing, employing, and updating community indicators to track Hickory's environmental, social and fiscal sustainability provides Hickory an important tool to assess the impacts of local growth and development and to consider these impacts in light of the community's desire to provide numerous lifestyle choices while becoming more ecologically, physically, socially, and economically sustainable.

### **Goal 5: Meet regional and community commercial needs.**

Paying attention to and promoting Hickory's varied commercial resources can facilitate business development consistent with the community's

vision and the planning principles included in this plan by providing greater support and encouragement to mixed use projects and the redevelopment of vacant and under-utilized properties within the City.

	Goal		Policy
1	Use community design to improve quality of life for all Hickory residents	A	Focus on the revitalization of downtown and disinvested commercial areas, while promoting quality development throughout the city.
		B	Make housing affordability a priority
		C	Promote workable design that creates community character, livability and mobility
2	Promote and protect Hickory's heritage	A	Preserve historic properties that embody important elements of Hickory's heritage
		B	Provide a sense of community through strategically-placed public art and support of local events
		C	Coordinate community enhancements and beautification efforts
3	Support Hickory's active civic legacy	A	Promote civic engagement and involvement in government and community
		B	Take responsive action on community voiced concerns
		C	Initiate collaborative efforts that focus on social stewardship
4	Employ community design strategies to ensure a sustainable future	A	Develop and update community and sustainability indicators to track environmental, social and fiscal sustainability
		B	Consider environmental impacts, social equity, and economic diversity in decision-making
		C	Concentrate growth into compact, well-defined centers that are connected by an efficient, multi-modal transportation system
		D	Provide the opportunity for residents to live near jobs and urban activities
		E	Support efforts for waste reduction and other measurable steps to decrease Hickory's impact on the earth
5	Provide options for commercial diversity to ensure community and regional needs are met	A	Focus growth to support the success of mixed use centers and corridors
		B	Encourage redevelopment of brownfields and other underutilized land
		C	Facilitate new business development in a manner consistent with plan principles and community vision

# Land Use

This chapter contains a brief overview of the City's existing conditions and community needs, as well as a goal and policy framework focused on land use considerations.

Led by the plan's vision and directives, the goals, policies and programs in this chapter are provided to guide implementation, including city resource allocation and regulatory decision-making.

This chapter also references the city's future land-use map, which will serve as a graphic policy to guide future decisions related to land use. The map is intended to reflect future uses - categorized more generally than with the zoning map - as well as uses the City sees as conducive to the community's long-range goals. Like other forms of policy, it represents an overall direction supporting larger community objectives, and requires the creation or refinement of site and building-specific regulatory instruments for implementation.

Change is part of all living communities. Toward that end, the plan directs new development towards places best suited for it - either because such places are largely vacant and are easily reached by municipal services, or because they are urbanized and developed in a manner that can easily accommodate new development.



Figure 3.1 - The land use element attempts to balance Hickory's historic legacy with opportunities for sensitive and sustainable use of its industrial, commercial and residential landscapes. (Image source: Studio Cascade, Inc.)

## Issues & Conditions

Hickory has historically been a single-family residential community. Population growth has kept up demand for single-family homes. A rising demand for high-quality affordable housing in recent years has increased demand for higher density and lower cost housing. There is a demand for a range of housing types and sizes to accommodate a broad range of households.

Hickory's status as a commercial center that serves city residents and a four-county region was originally established more than one hundred years ago. As the trends in the size and location requirements of commercial establishments have changed, the focus of commercial development has shifted from the city center to major roadways leading into Hickory.

Manufacturing and other industries have been



Figure 3.2 - The plan envisions increased density to emulate the traditional town neighborhood design and allow residents to walk to retail and commercial services. Viewmont Square's recent attempt to capture this concept is pictured here. (Image source: Studio Cascade, Inc.)

the backbone of the Hickory economy throughout the city's history. These industries are typically dependent on a good transportation network. This has resulted in the largest concentrations of industrial facilities being located along major thoroughfares such as U.S. 321, Highland Avenue, Tate Boulevard, Sweetwater Road, and along the railroad. Because of industry's importance to the economic viability of the region, industrial development is a key component of both the land use and transportation planning effort.

Public input sessions addressed a large number of issues including the proposed location of neighborhood mixed use and regional commercial districts, the retention and enhancement of neighborhood mixed use districts, and providing opportunities for regional establishments. Other themes that were discussed include the need for design standards that incorporate pedestrian access and improve the aesthetics of commercial areas.

Important themes that evolved during the planning  
**Hickory by Choice 2030 Comprehensive Plan**

process included continued reliance on efficient access to a regional/interstate road system, the importance of multi-modal connections, compatible land use relationships, and the need for appropriate aesthetic standards.

Most of Hickory's commercial establishments are located along major thoroughfares, primarily NC 127, Springs Road, U.S. 321, and U.S. 70. These locations require Hickory residents to travel from all quadrants of the city to reach a commercial establishment. The location of regional commercial uses along the U.S. 70/I-40 corridor does provide a good location for these establishments due to the high volumes of traffic generated by this type of commercial development and because of access to the regional roadway system. Retail districts serving local customers, however, are not now equitably distributed throughout the city to minimize the length and number of automobile trips.

Most industrial facilities are located along major thoroughfares in Hickory. However, these major thoroughfares are also the gateways into the city and are an important factor in developing a community image in the minds of residents and visitors.

Commercial development in Hickory is not well connected to surrounding residential neighborhoods, especially for pedestrians. While pedestrian access needs improvement, there is an abundance of automobile access to retail establishments. Commercial areas along road corridors have at least one curb cut for each business, usually more. A more equitable distribution between pedestrian access and automobile access to commercial areas should be provided, and that access needs to be safe and efficient.

Industrial growth in Hickory has historically been an important factor in the continued high quality of life and low tax rates city residents have experienced over the years. The last decade; however, has been difficult for industry, resulting in high industrial vacancy rates and efforts to restructure the region's economy. While industry may recover, it is likely to be from its situation

before this past decade's decline.

In many cases, modern industrial needs cannot be met by the utilization of existing, older facilities. The City has begun to help with the reuse of these structures, conducting a brownfields assessment on many properties and instituting a variety of grant programs to incentivize the rehabilitation and occupation of these buildings. Reuse of older structures may be appropriate for start-up or smaller industrial businesses.

## Plan Concept

There are multiple concepts shaping the proposed land use pattern, as derived from the community's vision and the process to develop this plan. Those concepts are introduced here, followed by the six over-arching goals guiding land use policy.

### **Redefine the commercial corridor development pattern in Hickory.**

In the past few decades, commercial development in Hickory has followed a similar pattern as most cities in this country. Long, continuous corridors of commercial development along major thoroughfares have become the normal pattern in the city. This has created real and perceived problems such as visually unattractive gateways into Hickory, wide roadways, and safety concerns for both pedestrians and motorists. City and neighborhood identities are lost when the roadways in Hickory most heavily traveled by visitors and residents are a canyon of parking lots and commercial structures.

### **Recognize that commercial establishments in Hickory serve a variety of customers ranging from residents in surrounding neighborhoods to regional customers.**

Hickory has provided retail customers in the city and region a large selection of shopping opportunities over the years and will continue to do so in the future. The city needs to create a



Figure 3.3 - Committing to pedestrian friendliness will mean rethinking street design standards, as well as rearranging the land uses in commercial districts to make walking a realistic transportation alternative. (Image source: Studio Cascade, Inc.)

sustainable economic mix of retail establishments to serve the needs of city and regional customers. As an example, large “big-box” or superstore retail development is not compatible with quiet, smaller-scale single-family residential neighborhoods because of noise, scale of development, and large volumes of automobile and truck traffic. However, commercial development that is similar in context and scale with the surrounding neighborhood is a compatible land use.

Guiding future development that serves the needs of neighborhood and regional customers requires different scales of commercial development. The sense of neighborhood is very strong in Hickory and residents and city officials want to sustain that sense of identity by providing neighborhood-scaled commercial districts at appropriate locations throughout the city. Economic reality dictates that cities need larger commercial establishments to provide the services and products that consumers

require. Locations where larger-scale commercial districts can serve multiple neighborhoods are needed. Regional shopping will also be required to continue Hickory's tradition of serving consumers in the surrounding communities.

### Promote the development of pedestrian friendly neighborhood and community commercial districts.

Existing commercial development patterns and the lack of a coherent pedestrian circulation system in Hickory have minimized the opportunities for residents of surrounding neighborhoods to access retail shops by walking, biking, or driving an automobile short distances. Constant use of the automobile to access several establishments along roads, such as NC 127 or Springs Road, creates safety problems due to the large number of curb cuts along the roads.

One role of neighborhood and community commercial districts is to provide shopping and other commercial activities in close proximity to a large population of city residents. Another role is to give residents the opportunity to establish an informal gathering space to socialize. Development of pedestrian and road connections between surrounding neighborhoods and the commercial districts will provide additional circulation options without a need to access high volume roadways. Pedestrian amenities could lead consumers to spend more time in the district. This could lead to increased retail sales. Because these districts tend to be located on higher volume roadways, traffic calming measures in locations adjacent to these roadways and clearly identifiable pedestrian and automobile circulation systems would be required to provide an environment that is safe for pedestrians.

### Establish appropriate design standards for commercial districts that embody a "sense of place" and respect the surrounding residential neighborhoods.

With the exception of Downtown, most commercial areas in the city do not reveal any true

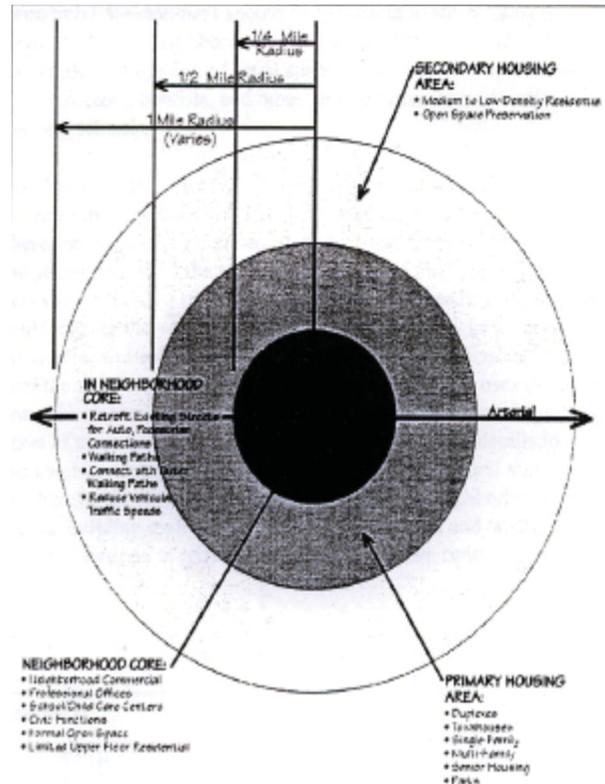
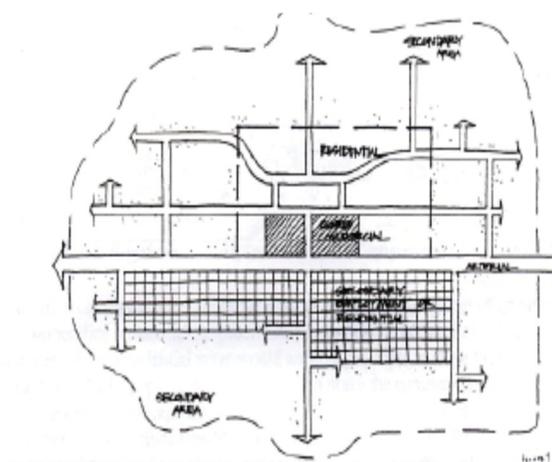


Figure 3.4 (above) - Hickory by Choice 1999 presented a neighborhood concept that still enjoys popular support today. Only somewhat modified to reflect the demands and influences of prevalent corridor development the plan update includes replacement of the terms “Neighborhood Core”, “Primary Housing Area” and “Secondary Housing Area” with “Neighborhood Mixed Use”, “High Density Residential” and “Medium Density Residential.” (Image source: Hickory by Choice, 1999)

Figure 3.5 (below) - That neighborhood concept was illustrated more fully in Hickory by Choice, showing how various uses can be arranged to accomplish the centrality encouraged by the model. (Image source: Hickory by Choice 1999.)



“sense of place.” Corridor commercial areas along NC 127, Springs Road, and U.S. 70 are not easily distinguishable from commercial corridors in other parts of Hickory or other cities. The road frontage is generally a “sea of asphalt” for regional commercial establishments, or a smaller parking lot for most corridor commercial areas. Landscaping is minimal in older commercial areas, which creates a development pattern that is less visually appealing and physically uncomfortable during the hot summer months. Improvements to commercial districts are another element of improving the community’s image to city residents and visitors. Most commercial areas are along gateways into Hickory and should contribute to the positive image of the city.

### **Promote economic sustainability by providing a variety of facility development opportunities for both large and small industrial businesses.**

The establishment of business parks should provide a variety of parcel sizes to accommodate large industrial facilities as well as smaller and start-up businesses. This variety provides the community the opportunity to diversify industrial business sizes that can then better withstand economic downturns. Another factor in identifying a variety of parcel sizes is the topography in the city. There are areas that are relatively unconstrained for large-scale industrial development. However there are also many locations where topography, watershed, aircraft safety, and flood prone areas limit the size and density of development.

### **Ensure efficient access to major transportation systems by locating industrial land uses in close proximity to highways and major thoroughfares.**

Another critical factor in the success and sustainability of the industrial sector in Hickory is the ability to get company products to the market. Safe, efficient access to interstate highways and major thoroughfares in the city will aid in the long-

term viability of these businesses. The proximity of limited access roads also helps reduce fuel consumption and air pollution by minimizing the number of times that trucks stop and start. This



Figure 3.6 - Industrial vitality will demand access to transportation systems. One challenge will be managing the development to be sensitive to the community’s overall image. (Image source: City of Hickory)

proximity to high volume roads would reduce the use of residential streets.

### **Minimize land use conflicts between industrial areas and residential neighborhoods.**

Residential neighborhoods and industrial land uses are usually not compatible and generally should not be located adjacent to each other; however, there are instances where industrial land and single-family neighborhoods can and will be in close proximity. Adequate distance buffering and landscape techniques provide an example of the tools employed to soften potential incompatibilities.

### **Prepare and enforce appropriate aesthetic controls.**

Because roads such as Tate Boulevard SE, Highway 70, and U.S. 321 are gateways into Hickory, it is appropriate to encourage a minimum aesthetic standard for these businesses. However, these aesthetic controls would not necessarily apply to industrial facilities that are not along minor or major thoroughfares.

# Land Use Goals

The following goals, and the policies designed to achieve them, are drawn from the 1999 Hickory by Choice and amended to reflect the community’s current vision and planning directives. They are consistent with the planning concept articulated in previous pages and explained below.

## Goal 1: Support land uses that are complementary to surrounding uses

While Hickory is a diverse place, residents appreciate harmony. As the City manages development, it should keep in mind that balance and compatibility are important characteristics. This guides the designation of land uses on the comprehensive plan map, informs zoning district standards, and shapes land use and subdivision approvals. New uses must “fit in”, respecting the context into which they are set.

## Goal 2: Promote pedestrian-oriented neighborhoods, centers and corridors

A fundamental underpinning of 1999’s Hickory by Choice was the commitment for pedestrian access from neighborhoods to daily services. This plan update carries that directive forward, though its policies modify it slightly. While pedestrian access is important, the community does not have the expectation that every neighborhood will be within easy walking distance of services.

## Goal 3: Provide a balance between development and open space

Open spaces include natural areas, parks, plazas - those unbuilt areas that provide for ecological balance, community recreation or social gathering. They are a critical component of our community landscape and should be remembered when time comes to consider which areas to develop. Whether implemented through cluster or conservation subdivision design, a community parks plan, development design guidelines, land conservation initiatives, or environmental regulations, open spaces should balance with development.

Table 3.1 - Land Use Districts and Characteristics

Land Use	Characteristics
High Density Residential	Multi-family residential
	Single-family residential
	Smaller building lots
	Pedestrian friendly roads
	Sidewalks and transit stops
	Open space and parks
	Schools
	Office uses along thoroughfares, as a transition between commercial and residential uses. Provided such office uses and their corresponding zoning districts are located adjacent to similar uses and zoning districts.
Medium Density Residential	Medium density housing
	Single-family residential
	Pedestrian friendly roads
	Sidewalks
	Open space and parks
	Schools
Low Density Residential	Single-family residential
	Larger average lot size
	Transition to rural areas
	Open space and parks
	Conservation subdivisions
	Open space preservation
Neighborhood Mixed Use	Retail
	Office
	Schools
	Multi-family and upper floor residential
	Formal public spaces
	Pedestrian friendly
	Transit stops
	Architectural compatibility with residential
Community Center Commercial	Serves a larger consumer market than neighborhood mixed use
	Allows big-box retail development
	Pedestrian friendly
	Multi-family and upper floor residential
	Transit stops

Regional Commercial	Regional retail with big-box development
	Pedestrian friendly
	Multi-family and upper floor residential
	Transit stops
Commercial Corridor	Primary application along NC 127 and Springs Road.
	Multi-family and upper floor residential
	Pedestrian Focused development that accommodates vehicles.
Central Business District	Institutional (finance, government, and medical)
	Multi-family and upper floor residential
	Sidewalks
	Formal public spaces
General Business	Provides diverse commercial and office uses
	Multi-family and upper floor residential
	Focused on development along major transportation routes serving both local and pass-through traffic.
Revitalization Area	Primary application along one way pairs, Highland Avenue, Hwy 70 SW, and Old Lenoir Road
	Commercial and freight corridors
	Mix of light industry, commercial, and residential uses
	Enhanced character of historic areas
Industrial	Opportunities for start-up or small businesses
	Minimized environmental impacts
	Reuse of existing structures
	Aesthetic improvements
	Efficient access to transportation systems

### Goal 4: Locate industrial uses in a manner compatible with their surroundings

Hickory has a legacy of thriving industry, and many of its industrial buildings are located near residential neighborhoods. That type of historic development pattern may no longer be

appropriate, as Hickory’s residents value land use compatibility. Still, the community needs new, viable industry. This goal recognizes that new industrial development should occur; however, it underscores the need for appropriate buffering and facility design to ensure that industrial uses are compatible with adjacent land uses and constructed in a manner consistent with community goals and objectives.

### Goal 5: Support a network of mixed-use centers and corridors

Similar to Goal 2, this goal promotes the effective integration of diverse land uses, allowing Hickory’s residents to live near where they shop, work or use public transportation. While this may not describe the community’s current land use pattern or transportation habits, managing development along corridors and in centers with this goal in mind will help the community adapt as future development incites change.

### Goal 6: Include comprehensive citizen participation in planning and plan implementation

Hickory’s residents desire involvement in the shaping, adoption and implementation of public policy. This goal underscores that desire, generating policies to keep citizens informed and active in local land use planning.

## Future Land Use

Land use recommendations are based on the principle of mixed-use neighborhoods, which include commercial, civic, and recreation uses in conjunction with a variety of housing types and transportation mode options. This network of neighborhoods could begin to balance downtown development with suburban investment by organizing proposed growth around a series of transportation options and keeping development compact. This strategy has several advantages, including:

- *Less emissions of air pollutants and degradation of water quality*

- *Less land consumed for development*
- *Less traffic generated*



Figure 3.7 - While mixed-use development has been the ideal, even recent neighborhood commercial projects have depended on large parking lots to accommodate customers. (Image source: City of Hickory)

- *More natural resources and open space conserved*

The land use categories are summarized in Table 3.1 on pages 3.6 and 3.7. The proposed future land use distribution for the City of Hickory can be found on the Future Land Use Map, which is available on the city website and in the Planning and Development Department.

It is evident from the public input process that there is a desire to change the development pattern in Hickory. The community no longer wants commercial areas stretched out over long distances on major thoroughfares. Rather, there is a desire for design that fosters diversity, pedestrian scale, and public identity. Changing the commercial development patterns in Hickory necessitates the creation of a variety of commercial districts. The Central Business District and proposed Neighborhood Mixed Use Centers and Community Commercial districts would meet the desire for a more pedestrian scale development, Regional Commercial and Commercial Corridor districts would serve regional customers.

## High Density Residential

High density residential development in Hickory is located in or near mixed-use areas or higher-intensity commercial districts. The area covered by this land use extends approximately one half mile from the central point of each mixed use center, allowing for convenient walking or bicycling from home to shop. This will create higher density living in close proximity to neighborhood-scale shopping and office employment centers. The combination of smaller single-family lots, shorter building setbacks, shorter blocks, and multi-family development would create a gross average density for housing at approximately 12 to 20 units per acre. These areas may also contain office uses along thoroughfares and adjacent to commercial areas to act as a transition between commercial and residential land uses. Provided, such office uses, and their corresponding zoning districts, are located immediately adjacent to existing office uses and office zoning districts. This should be done to avoid saw tooth land use patterns along thoroughfares.



Figure 3.8 - Medium and high density residential housing can be designed and developed to blend in to a historic context. (Image source: Studio Cascade, Inc.)

## Medium Density Residential

Medium density residential areas make up a large portion of the city north of I-40, as well as smaller areas in the southeastern part of town. These residential areas are associated with each neighborhood mixed use area as well as adjacent high density residential districts and/or higher intensity commercial districts throughout the city. Medium density residential areas will expand the existing single-family housing character in the city, and they will provide a medium density housing option where the gross density would be approximately six to eight units per acre. Although the housing density would be less than the high density residential areas, pedestrian and vehicular circulation strategies employed here will continue the pattern of connectivity from the more intensely developed areas.

Most of the land in this land use category is in the northern portion of the city where natural constraints are fewer. Conservation subdivision principles should be used to conserve flood plains, wetlands, and minimize storm water runoff in watershed protection areas. The use of conservation design principles should look beyond individual subdivisions in the medium density residential area and identify opportunities for connecting to open space in other areas of Hickory.

## Low Density Residential

This land use category is intended to provide an area of transition between higher density housing in Hickory and the surrounding rural areas by offering development at two to four units per acre. This development pattern also provides a measure of diversity of housing options for city residents. Although the gross density in these areas is proposed to be less than medium density residential, conservation subdivision design principles can provide opportunities for a combination of small and large lot development that helps preserve open spaces and environmentally sensitive lands.

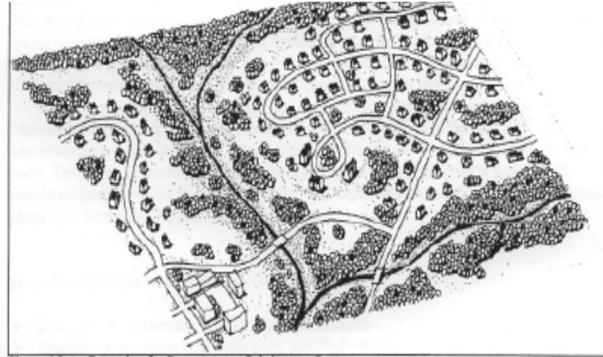


Figure 15 An Example of a Conservation Subdivision Design

Figure 3.9 - Hickory by Choice suggested conservation subdivision design, such as that pictured here, to help preserve natural features while still accommodating residential development. (Image source: Hickory by Choice 1999.)

## Neighborhood Mixed Use

The Neighborhood Mixed Use form provides the basis of most of the future development patterns in Hickory, but it occupies a small percentage of the community's overall land. Because these districts are intended to serve local residents they are located in a spatial pattern that provides most city residents the opportunity to travel a mile or less to work, shopping, small parks, or open space. These districts are proposed to be approximately one quarter of a mile in radius. This distance will be a comfortable distance for persons in the surrounding neighborhood to walk to businesses and services.

A typical neighborhood mixed use district would have a mix of residential, retail and office space. The key elements for these districts include neighborhood scale commercial establishments such as grocery stores, pharmacies, banks, small-scale office buildings, civic or institutional functions, residences, schools, and small parks.

Many of the existing neighborhood commercial areas currently have elements that are common to this proposed land use, including grocery stores, pharmacies, banks, and dry cleaners at locations such as the intersection of 16th St NE (Sandy Ridge Road) and 29th Avenue Drive NE. The current development patterns at these locations will not change dramatically in the short-term. However, as development and redevelopment proposals arise, infill development and reuse of

existing properties should utilize the existing character of the surrounding neighborhood as a development model.

Existing neighborhood and community commercial development should be identified and “grandfathered.” In locations where new neighborhood mixed use districts are proposed and there is minimal existing development in close proximity, the design elements of the commercial structures can influence the design of surrounding development.

New neighborhood mixed-use districts , such as those sought along the Startown Road Corridor , between Catawba Valley Boulevard and Settlemeyer Bridge Road, should seek to use the general development pattern shown in Figure 3.4, while further seeking to consider the historical development patterns to provide scaled design for newer development. New districts should also seek better pedestrian patterns to connect to adjacent thoroughfares, which work to provide transportation alternatives, as well as recreational opportunities.

To aid in the sustainability of these commercial activities, consumers beyond these districts will have easy access since these areas are located at intersections of major thoroughfares.

## Community Commercial

Community commercial districts provide services and retail establishments that serve a larger market than a neighborhood mixed use district. The intent of this district is to provide opportunities for larger scale retail developments that serve the northeast, northwest, and southern portions of the city and reduce the need for cross town travel to the regional shopping area along the U.S. 70 corridor. These areas also provide potential for the provision of multi-family residential in a mixed-use or stand-alone setting.

## Regional Commercial

Regional commercial is currently focused on the I-40/U.S. 70 corridor and this plan recommends the

continuation of this development pattern. The I-40/U.S. 70 corridor provides the most convenient access for city residents as well as persons living in the surrounding communities due to the proximity of I-40, U.S. 321, and U.S. 70. Another advantage to this location for “big-box” or superstores, and regional shopping malls is that there are minimal opportunities for land use conflicts with single family residential.

## Commercial Corridor

The commercial corridor is primarily applicable to those areas located along NC 127 and Springs Road. While these areas are intended to be pedestrian focused, the commercial corridor should remain accommodating of vehicular traffic. The commercial corridor is designed to protect residential areas, to provide connectivity and community open space and to alleviate conflicts in



Figure 3.10 - The central business district land use designation can help new development and redevelopment recognize and benefit from characteristics unique to the district’s area.

land use.

## Central Business District

The traditional downtown serves many functions of a neighborhood mixed use district as well as a regional service provider of banking and medical services. Residential neighborhoods within and surrounding the City Center not only provide the market for smaller neighborhood or convenience commercial services but these residential districts also provide a market for a variety of the Central Business District’s services which afford residents

and visitors a vibrant, pedestrian rich atmosphere in the City's downtown.

This district applies to the historic core, drawing attention to the need to ensure any new development in the area occurs in harmony with its historic surroundings and is designed to contribute to the area's pedestrian environment. This designation anticipates that the work conducted by the City to update zoning in the Central Business District and the establishment of a boundary for this downtown district will lead to the implementation of specific development policies that apply to this area.

## General Business

The general business designation provides for a diverse set of commercial and office uses. The district accommodates shopping, services, and professional offices. It is intended to capture the diversity of uses along thoroughfares, while also providing a predictable set of standards. Though the designation does include some residential uses, its primary focus is for commercial development accessed primarily by the automobile. Screening and landscaping standards are generally more relaxed than they are in other places given the proximity to similar use types.

The general business designation is generally located along the north and south sides of Tate Boulevard between Lenoir-Rhyne Boulevard and McDonald Parkway, south of Tate Boulevard east of McDonald Parkway, along Fairgrove Church Road, on parts of Highway 321 North, and on both sides of the western end of Springs Road.

## Revitalization Area

The City has created this designation to help address current conditions in some of Hickory's historic and less economically active areas. The revitalization designation includes those areas that have a diverse mix of light industrial, commercial and residential uses and are typically located along rail corridors or busy, disinvested arterials, such as US 70 west of South Center Street, Old Lenoir Road, Springs Road near Shuford Mills, Highland

Avenue, and North US 321.

The intent of this designation is to promote opportunities for redevelopment and expansion by applying flexible standards and targeted incentive programs. Its focus on the revitalization of commercial and freight corridors will help those areas most in need of economic development assistance.

## Industrial

Over the years, industrial development has concentrated in various areas in the city. These areas include the rail corridors, Highland Avenue NE, Old Lenoir Road, Tate Boulevard SE, U.S. 321, 21st Street Drive SE (Sweetwater Road) and 1st and 2nd Avenue SW. Although most industry has been concentrated in these areas there have been numerous individual industrial facilities scattered throughout the city.



Figure 3.11 - Redevelopment of functionally obsolete industrial buildings is one of the biggest challenges facing the city's rail corridor. (Image source: City of Hickory)

The existing concentrations of industrial businesses provide a basis for industrial districts. The industrial districts along U.S. 321 and Highland Avenue east of Springs Road will focus on redevelopment opportunities. Land in the vicinity of the airport is appropriate for industrial development, which is designed to be compatible with safety requirements for aircraft operations and reflects the long-term needs of airport operations. Industrial development in the vicinity of the airport will also be required to adhere to

watershed protection regulations to protect the water quality of the Catawba River, which is the primary source of drinking water for the city. The combination of these safety and environmental constraints will result in the construction of lower density, environmentally oriented businesses. Although these two areas offer some potential for industrial growth, the greatest potential for larger scale industrial development exists along Tate Boulevard, Sweetwater Road (21st Street Drive SE), and the southern portion of Fairgrove Church Road. This area has significant expansion opportunities for larger-scale industrial development. The proximity to I-40, U.S. 70 and U.S. 321 provide excellent access to regional and interstate transportation systems.

Excellent access to regional transportation systems is also a factor in the location of the proposed business/industrial park east of the U.S. 321/River Road interchange. This development area will incorporate many of the key principles of conservation subdivision design to minimize the impact to sensitive natural resources along the Henry River, but maximize the development potential of that area.

The Trivium Corporate Center located on Startown Road, and formerly referred to as Park 1764, has rapidly taken form, with a number of larger employers constructing facilities within the center. The center, partially funded by the City's



Figure 3.12 - Open spaces integrated into the urban landscape can serve multiple purposes. Here, a park in northeast Hickory provides a recreational amenity and an opportunity for storm water management. (Image source: City of Hickory)

municipal bond initiative, is a joint venture between the City of Hickory and Catawba County to create a new modern business park. The total area of this park will consist of approximately 300 acres of land area, which has convenient access to US 70 and I-40.

Interest in the areas around the corporate center have already garnered the attention of private development, with planning of residences, as well as retail and services for those employed within the center. The city views this as its next major growth area.

Recommended development types and intensities surrounding the corporate center are outlined within other sections of this chapter. Special emphasis should be placed on connectivity between the corporate center and surrounding development. This is in addition to carefully scaling and planning of the surrounding areas to ensure the center's continued success.

## Parks

Parks in the city include neighborhood parks, district parks, and passive open space. Many of the existing parks are located in areas where population density is higher, such as Kenworth, Ridgeview, and West Hickory neighborhoods. The current Parks and Recreation Master Plan identifies numerous improvements to the city's existing park and recreation facilities. To accommodate projected growth patterns the city has proposed to develop new parks in the southern and northeastern portions of the city. The new park in the northeast (Sandy Pines) will be a 13 acre district park located just east of 16th Street NE.

The future Bruce Meisner Park will serve increases in population in the northeast and provide additional access to Lake Hickory. Recreation in the southern portion of the city should incorporate the passive recreational opportunities along the Henry Fork, Jacob Fork, and South Fork Catawba River watersheds. Bird watching, fishing, hiking, and biking are potential outdoor recreation pursuits for the proposed open space in these

watersheds.

The Friends of Hickory, a non-profit civic organization, has constructed a privately funded public park located in Hickory’s Downtown. This park is located to the west of Union Square, and provides Downtown Hickory with a new asset for residents and visitors.

## Public/Institutional

Public/institutional facilities in Hickory include public works, hospitals, and schools in the allocation of public land uses. In addition to being the regional center for retail, Hickory also provides the region a rich cultural environment with public facilities such as the SALT Block, and schools such as Lenoir Rhyne University and Catawba Valley Community College. Cultural facilities such as the SALT Block and Lenoir Rhyne University are

important to the region and are also located in close proximity to a large concentration of the city’s population.

Hickory’s two hospitals offer good vehicular access with Frye Regional Medical Center’s proximity to NC 127, and Catawba Valley Medical Center’s proximity to I-40. These locations also offer opportunities for employees to walk to work from surrounding neighborhoods. The hospitals are also located in proximity to medical offices and commercial establishments that provide services for the hospitals and nearby residential neighborhoods. Catawba Valley Medical Center is located in an area that provides opportunities for expansion while Frye Regional Medical Center is surrounded by older residential and office development limiting expansion potential.

## Implementing Zones

Table 3.2 - Land Use Districts and implementing zones

Land Use	Zones
High Density Residential	High Density Residential (R-4)
	Office & Institutional (OI)
Medium Density Residential	Medium Density Residential—2 (R-2)
	Medium Density Residential –3 (R-3)
Low Density Residential	Low Density Residential (R-1)
Neighborhood Mixed	Neighborhood Center Commercial (NC)
Community Commercial	Community Center Commercial (CC-1)
Regional Commercial	Regional Commercial (C-3)
Commercial Corridor	Commercial Corridor (CC-2)
Central Business District	Central Business District (C-1)
General Business	Office & Institutional (OI)
	General Business (C-2)
Revitalization Area	General Business (C-2)
	Regional Commercial (C-3)
	Office & Institutional (OI)
	High Density Residential (R-4)
Industrial	Industrial (IND)
	Industrial (IND)
Public/Institutional	Office & Institutional (OI)

Table 3.2 indicates which zoning districts are intended to implement the various land use designations included in this plan.

# Land Use Map

The Future Land Use Map presents a graphic expression of this plan's land-use policy. Provided to guide decisions on land use, the map reflects both current uses - categorized more generally than with the City's zoning map - as well as uses the City sees as conducive to the community's long-range goals. As opportunity and interest emerge for changes in land use and regulation, the map should be referenced to ensure those changes meet overall planning goals. In contrast to the City's zoning regulations, the map is presented with soft-edged use boundaries, which are intended to identify current designations but at the same time reflect the fact that as policy, specific boundaries are less critical than the map's overall intent, including type, quantities and their relative arrangement. The adopted map can be viewed in the Planning Department offices.

	Goal		Policy
1	Support land uses that are complementary to surrounding uses	A	Provide transitions between residential neighborhoods and mixed-use centers with open space, alleys and landscaping
		B	Provide a mix of development intensity with denser mixed-use centers and high density residential areas surrounded by medium density and low density residential areas
		C	Support development that creates a strong functional relationship between land uses
		D	Employ strategic street tree planting to enhance and complement adjoining uses and provide visual continuity along corridors and within centers
		E	Enliven street frontages by minimizing or eliminating blank walls on the street edge
		F	Minimize the impacts of new development through public amenities and landscaping
		G	Develop design guidelines that create architectural and site amenities in mixed use centers which are identifiable with the surrounding residential neighborhood through the use of similar building materials, architectural elements, and landscaping
2	Promote pedestrian-oriented neighborhoods, centers and corridors	A	Include a variety of housing types such as condominiums, apartments, and small lot single family residential in high density residential neighborhoods
		B	Establish standards for mixed use centers that create a "sense of place"
		C	Provide opportunities for residences above ground-floor storefronts in centers and corridors
		D	Ensure landscaping in commercial areas is visually appealing and provides physical comfort throughout the year for pedestrians
		E	Locate and orient land uses to help make pedestrian and bicycle travel an attractive, practical, and safe transportation alternative
		F	Ensure pedestrian scale routes are preserved and developed between neighborhood housing and commercial centers

	Goal		Policy
3	Provide a balance between development and open space	A	Provide for open space through cluster development that preserves existing density
		B	Develop conservation subdivision design which considers preservation of wetlands, steep hills, floodplains, agricultural fields, forest and open space
		C	Provide public open spaces in both new development and redeveloped areas
		D	Prioritize redevelopment of existing commercial and industrial areas
4	Locate industrial uses in a manner compatible with their surroundings	A	Focus industrial uses within industrial areas
		B	Minimize land use conflicts between industrial areas and residential neighborhoods with landscaping, intensity restrictions near residential, and use restrictions based on compatibility to surrounding land uses
		C	Impose more stringent design standards for industrial sites on major thoroughfares and abutting residential neighborhoods, with less strict standards in other areas
		D	Develop landscape standards that improve the appearance of industrial areas from public corridors
5	Support a network of mixed-use centers and corridors	A	Provide mixed use centers and corridors to meet neighborhood and regional demand for a variety of uses including retail, offices, service, civic, recreational, and high density residential
		B	Locate high density residential neighborhoods within one-quarter mile of mixed use centers
		C	Combine transit stops and on-street parking in mixed use centers with improved pedestrian and vehicular connectivity to surrounding neighborhoods
		D	Provide formal open spaces and parks in mixed use centers to serve residential demand

	Goal		Policy
5	Support a network of mixed-use centers and corridors (Continued)	E	Integrate parking lots into the design of mixed-use districts by locating most parking on-street, behind buildings, or in the interior of lots
		F	Employ a combination of little to no setbacks, windows, landscaping, and architectural details to enhance the appeal of mixed use centers, engaging the street edge
		G	Ensure mixed use centers provide a compact scale that meets the commercial requirements of the neighborhood or community it serves
6	Include comprehensive citizen participation in planning and plan implementation	A	Ensure that public involvement serves the community over the long-term with solutions that advance the community's overall health and welfare
		B	Encourage diverse participation for neighborhood capacity building
		C	Provide opportunities for community-wide involvement, including neighborhood events

# Housing



This chapter contains a brief overview of the City’s existing conditions and community needs, as well as a goal and policy framework, focused on the City’s role in facilitating housing for Hickory’s citizens.

Led by the plan’s vision and directives, the goals and programs in this chapter are provided to guide implementation, including City resource allocation and regulatory decision-making.

## Conditions

Housing in Hickory has been primarily single-family residential throughout most of the city’s history. Single-family development took early root in the Kenworth, Hillcrest, Ridgeview, Claremont, and Oakwood neighborhoods. These neighborhoods established a strong sense of pride in home ownership early in the city’s history, but they also offered diversity in housing type. Apartment buildings and small single-family homes coexisted with the more stately homes of Hickory’s professional class and company officials.

## Diversity and Affordability

Hickory’s neighborhoods are the backbone of the community’s civic body. Among their

Figure 4.1 - Hickory’s neighborhoods offer a wide variety of housing choices. Retaining neighborhood character and accommodating an increasingly diverse population are important objectives in the comprehensive plan. (Image source: Studio Cascade, Inc.)

many functions, they provide housing to its diverse population, represent significant individual and family investment in the community’s well-being, and define the context within which children are raised, people worship and in which neighbors form relationships. But these neighborhoods are not homogenous. All differ from one area to the next, and some may even differ from one house to the next. Hickory is a diverse place, socially, economically and culturally and so are its neighborhoods.

While the community’s neighborhoods are essential to Hickory’s way of life, they are also undergoing change.

Table 4.1 shows race in Hickory in 1990, 2000, and 2010. During that time, the community’s racial composition changed, with the African-American and White populations growing at a slower rate than the “all other” population segments. Specifically, African-American residents accounted for

Table 4.1 - Race in Hickory

	Number	Percent
<b>2010</b>		
White	29,948	74.9
Black or African American	5,707	14.3
All others	4,355	10.8
<b>2000</b>		
White	28,747	77.2%
Black or African American	5,243	14.1%
All others	3,232	8.7%
<b>1990</b>		
White	23,032	81.38%
Black or African American	4,827	17.1%
All others	442	1.5%
<b>Change 1990-2010</b>		
White	6,916	30.0
Black or African American	880	18.2
All others	3,913	885.3

Source: US Census, 1990, 2000 and 2010 Census

17.1% of Hickory’s population in 1990 (4,827 people) but only 14.3% in 2010 (5,707 persons). The number of White residents grew from 23,032 in 1990 to 29,948 in 2010, but their overall percentage shrunk from more than 80% of the population to less than 75%. The “all other races” Census category increased from 1.5% of the city’s population in 1990 to 10.8% in 2010.

Table 4.2 illustrates ethnicity in Hickory in 1990, 2000, and 2010. During that 20-year span, Hickory became more ethnically diverse. The Hispanic or Latino population grew faster than all other populations, growing from 221 people in 1990 to 4,544 people in 2010. Though growth in the Hispanic population outpaced growth among other ethnic groups, Hickory’s Hispanic population still only accounted for approximately 11.4% of the City’s population in 2010. This is less than the national percentage of 16.3% but higher than the state percentage of 8.4%.

These figures indicate that social diversity in Hickory is on the rise, with increases in “all other” race categories and Hispanic ethnicity revising the community’s make up over the last 20 years.

Table 4.2 - Ethnicity in Hickory

	Hickory
<b>2010</b>	
Total population	40,010
Hispanic or Latino	4,544
Percent Hispanic or Latino	11.4%
<b>2000</b>	
Total population	37,222
Hispanic or Latino	2,863
Percent Hispanic or Latino	7.7%
<b>1990</b>	
Total population	28,301
Hispanic or Latino	221
Percent Hispanic or Latino	0.8%
<b>Change 1990-2010</b>	
Total population	41.4%
Hispanic or Latino	2056%

Source: US Census, 1990, 2000, and 2010

Affording the purchase of a single family home is also an issue in Hickory. Information from the 2010-2014 American Community Survey (ACS) indicates that median value of owner occupied housing units in Hickory was approximately \$155,800 with the median household income approximately \$42,393. Using the standard housing affordability index of 30% maximum household income spent for housing, no more than \$1,060 was available for the median-income household to spend per month on mortgage, insurance and utilities. Carried forward, a home selling for \$155,800 financed with a 95%, 30-year mortgage at a 3.75% interest rate would likely require a monthly payment of approximately \$680. Adding monthly utilities and insurance allowances brings the housing expense for the median value home to approximately \$1,020. This amount is towards the top end of what a family earning the median income can afford.

## Housing Stock and Ownership

Census 2010 results show that there are approximately 18,719 housing units in Hickory, with a vacancy rate of 11.2 percent. A quarter of



Figure 4.2 - No single housing type is suitable for all, and diverse - but compatible - housing is something the community will need to support in gaining its long-term objectives. (Image source: Studio Cascade, Inc.)

the housing units were built after 1990.

The average household size is 2.42, which is below the national average of 2.63. The breakdown of housing types within the city is: 57.1 percent single-unit (attached or detached), 38.6 percent multi-unit, and 4.3% percent mobile homes. Hickory has a higher percentage of multi-family housing than the national average, but this is not surprising based on the City's status as a central city and employment center in the four-county region.

According to the 2010-2014 ACS, the city's housing units are 53.5 percent owner occupied. Monthly housing costs varied greatly with those people who had a mortgage paying an average of \$1,197. Those without a mortgage had a cost of \$391, while the median gross rent is \$677. The breakdown of people spending 30 percent or more of their household income on housing costs or rent are: 27.8 percent owners with a mortgage (U.S. was 34.2 percent), 10.6 percent owners without a mortgage (U.S. was 15 percent), and 41.1

percent renters (U.S. was 50.3 percent). Housing in Hickory continues to be somewhat more affordable than national averages. However, housing affordability remains an issue that affects large percentages of the City's population.

*The median value of owner-occupied homes within the City of Hickory was estimated at \$155,800, which was considerably higher than Catawba County's median of \$133,100, and was slightly higher than North Carolina's median value of \$153,600.*

*Ownership rates of 53.5 percent are much lower within the City than the County or State (70.3 percent and 65.8 percent respectively). However, of the 21 principal cities of the fifteen MSAs in North Carolina, Hickory has the 11th highest home ownership rate. The median home ownership rate in those central cities is 53.1%. Central cities will almost always have a higher than average concentration of rental units given that these cities function as regional employment centers.*

The City of Hickory has also tracked the number of subdivision requests and documents those numbers in the City of Hickory Planning Department Annual Report. Table 4.3 shows the lots approved between 2008 and 2015. In 2008 and 2009 over 100 new lots were approved each year. Since then, new subdivision activity has slowed significantly. This is consistent with an overall slowing in residential construction. Most new single family developers are building out the existing lot inventory created in the early 2000s. Based on City residential permit data, it does appear that single family residential construction is slowly bouncing back from a low of 24 units constructed in 2010 to 44 in 2015. Notable multi-family projects were constructed in 2012 and 2014.

ACS data support findings that home ownership, a staple in the diet of stable and comfortable single-family neighborhoods, is not easily attained in Hickory, even for those households earning median incomes. While the amount of cost burdened homeowners is lower than the national average, significant numbers of homeowners continue to pay more than 30 percent of their income in housing costs. If ownership remains a goal, the city may wish to consider alternative ownership housing types like townhouses and



Figure 4.3 - While Hickory’s housing market continues to be active, there is a gap between what the median income family earns and what the median income family can afford to buy. (Image source: Studio Cascade, Inc.)

condominiums.

## Hickory Housing Programs

The City of Hickory has acknowledged the affordable housing issue that affects the community. The Hickory Public Housing Authority manages public housing, which is primarily concentrated in the southeast and southwest portions of the city. Demand for these facilities surpasses the supply.

The Hickory Housing Authority is working to rehabilitate and construct new units through the Rental Assistance Demonstration program. This is a federal program that will convert traditional public housing units to project based vouchers. The goal of the program is to provide a steady stream of income for public housing authorities along with the flexibility to leverage financing and private development dollars. According to presentations given by the Hickory Housing

Table 4.3 - Residential Subdivision Lots and Potential Units Approved 2008-2015

Year	Residential Lots	Townhouse Lots	Total
2008	100	14	114
2009	118	15	133
2010	31	7	38
2011	6	6	12
2012	13	1	14
2013	25	33	58
2014	7	9	16
2015	14	5	19

Authority, it plans to replace or rehabilitate all of its existing public housing units and add additional affordable housing units. However, even if the program is successful in creating approximately 200 affordable rental units, there will still be a significant shortage of affordable rental housing for low and moderate income households.

The city and private developers have created local housing programs along with some federal and state programs. These programs are designed to encourage quality, affordable, owner-occupied housing for low and moderate-income families. The following is a summary of housing assistance programs active throughout Hickory:

The city has successfully developed the 21 lot Hickory Hollow subdivision. The City is expanding housing opportunities for new affordable, owner occupied subdivisions for low and moderate-income first time homebuyers. A project in the Green Park neighborhood on four acres owned by Habitat for Humanity has recently been constructed. The subdivision includes 11 single family lots. Seven homes have been completed and it is anticipated that the remaining homes will be completed in coming years.

The City of Hickory’s First Time Homebuyer Program was developed to help qualified low to moderate-income persons to apply for a loan for the purchase a new or existing home. Residents

who have lived within the corporate limits of the city for at least one year can receive up to \$6,500 for purchase of an existing home or \$10,000 for new construction. Those who reside outside of the city can qualify for a \$5,000 loan for existing housing or \$7,500 for new construction. The loans are for the purpose of assisting the applicant with down payments, closing costs, discount points, or loan application fees. These loans are made on a case-by-case basis and are repaid at zero-percent interest upon final payment of the first mortgage, refinancing of the first mortgage, or when the house is sold.

The Housing Rehabilitation Program was created to assist in the conservation of existing housing and the preservation of neighborhoods. The program is designed to provide low-interest and deferred loans. The program targets very low, low, and moderate-income homeowners who would otherwise be unable to perform home repairs. It also is designed to stabilize older neighborhoods and prevent deterioration of property, eliminate unhealthy and unsafe housing conditions, conserve energy by making funds available for energy improvements, and improve the appearance of the neighborhood.

No less than 80 percent of available funds will benefit low and moderate-income applicants, based on the US Department of Housing and Urban Development Community Development Block Grant guidelines. In addition, eligible properties must be in violation of the city's Minimum Housing Standards as defined in the Hickory City Code, and funds must be used towards the elimination of conditions that, in the judgment of the Rehabilitation Specialist, are hazardous to the health and safety of the occupants. This program also allows a non-income based loan for repairs to preserve historic structures in designated historic areas.

The Urgent Repair Program (URP) is state a rehabilitation program sponsored by the City of Hickory. The goal of this program is to eliminate housing conditions that pose an imminent threat to the life and safety of very low and low-income homeowners with special needs. This program is funded by the North Carolina Housing Finance

Agency, and offers urgent repair assistance to eligible homeowners with a limit of \$8,000. These funds cannot be used in conjunction with any other state or federal housing assistance program, with the exception of the Weatherization Assistance Program. Habitat for Humanity has recently begun its Habitat Repairs which provides funding for low to moderate income homeowners for necessary repairs to their homes. This program is partially funded through Community Development program funding.

With the help of these programs, it is the intent of the city to produce more mixed and moderate-income housing, moving away from traditional public housing. But it is important to realize that each of these programs operate on a limited-funds basis.

## Aesthetic & Functional Characteristics

Hickory's neighborhoods are distinct. Many were developed during different eras, with lots, streets, houses, and open spaces designed and arranged in ways commonly associated with their vintage. The central and original part of town was built around the railroad station, and subdivided into a traditional rectangular grid aligned along the tracks, modified in places to accommodate the area's rolling topography. More recent neighborhoods were designed around the automobile, accessed by high-volume arterials emanating from the city's core and consisting of homes with prominent garages. Other neighborhoods feature homes and lots more responsive to the terrain – with curving roads, sloping yards and dramatic open spaces that capture the natural landforms. Some areas seem to have been developed somewhat haphazardly, likely taking advantage of opportunities to subdivide isolated parcels of land and creating residential outposts in otherwise commercial or wooded areas. More than a century of residential development has created diversity in pattern and place, with neighborhoods taking on characteristics consistent with their age of establishment.

Hickory is all of these places, and it is important that they be recognized and included in the

community's plan for its future. These neighborhoods typically serve the needs of their residents, and, while some neighborhoods may benefit from re-investment or rehabilitation, they are an important part of the community's collective identity.

## Interrelationships

Neighborhoods are not necessarily exclusively residential. While this chapter focuses on housing policy, it is also important to consider how the people who live in Hickory's neighborhoods access the services enabling them to live, work, shop, learn and play.

The combination of gross housing costs and transportation costs can consume more than 50% of a household budget. Based on the HUD Location Affordability Index, a family earning the median income is expected to spend approximately 58 percent of their income on housing and transportation. 30 percent of this cost is transportation, and 28 percent is housing cost. These numbers indicate that it's likely that most of the households in Hickory are spending more than half of their income on housing and transportation. One positive related to transportation is that according to 2010-2014 ACS estimates, 81 percent of commute less than 30 minutes to their place of employment. This is compared with only 69 percent of people in the state and 64 percent of the nation.

A core principle of this plan is to reduce transportation costs by more effectively connecting housing areas to commercial, civic, recreational, or employment areas. Reduced transportation costs attained by less reliance on private transportation can help make housing more affordable.

Connections to non-residential uses can also add character and vitality to nearby residential areas. Downtown's residential districts already benefit by being within an easy walk of the commercial district along Union Square and with their association to the nearby parks and natural, historic landscapes. Other neighborhoods enjoy

similar, if smaller-scale relationships with mixed-use or commercial areas, such as those abutting the Viewmont commercial district or in the vicinity of the Green Park, Kenworth, Highland and Claremont neighborhoods.

## Needs

With affordable housing growing more rare, families have had to move to more affordable but more distant peripheral areas, consuming agricultural land and open space in and beyond Hickory's ETJ, and overloading roads with longer commutes. In the past few years the demand for more affordable housing has resulted in an increase in large-scale multi-family residential developments in the city. Some neighborhoods near the city's center still suffer from disinvestment, but others have enjoyed recent vitality.

Still, Hickory needs to accommodate a diverse housing stock to meet an increasingly diverse community demand, and it needs to provide that housing affordability. Reflecting on its past, Hickory has a legacy of mixing housing types and doing it successfully. Neighborhoods can accommodate variety, as long as they maintain scale and are designed with appropriate levels of amenities.

## Plan Concept

Responding to these needs requires a planning concept that is based on the understanding that successfully housing a community is more than just providing houses. It is understanding the relationships between housing and the community's other uses of land, the patterns of living that residents maintain, and the variety and scale of its neighborhoods that make Hickory unique. The following planning directives spring from that complexity, responding to the community's call for a vibrant, diverse and affordable Hickory.



Figure 4.4 - Higher-intensity housing can fit in harmoniously with existing and historic neighborhoods, offering a more affordable housing type at a scale compatible with its surroundings. (Image source: City of Hickory.)

### **Promote mixed-use/multiple use neighborhoods.**

Hickory is similar to most communities in keeping different land uses separated through zoning. While there may be parks, schools, and in some locations, small commercial districts, in close proximity to residential areas, these land uses are not truly integrated. By minimizing physical barriers and promoting pedestrian access to non-residential uses in a neighborhood, people will be encouraged to walk or bike through their neighborhood to enjoy parks, use open spaces, attend schools, go shopping, or simply visit their neighbors.

### **Provide a variety of housing options to meet the needs of all residents of Hickory**

Cities across this country have experienced a significant out-migration of residents to suburban communities; however, Hickory is unique. Unlike many cities experiencing growth at the urban fringe and beyond, stable increases in population and household income in addition to a demand for varied housing types has afforded the city maintenance of its urban and older suburban housing stock. While Hickory has been able to maintain a diverse residential population in its older neighborhoods and has provided new construction desired in the mid to upper price

ranges, the development community has thus failed to meet the demand for affordable housing in Hickory.

Unintended side effects of Hickory's inadequate housing options within the city limits are numerous. For instance, many employees of industrial and commercial establishments, as well as city staff, have turned to other communities such as Conover, Newton, Catawba, Alexander, Caldwell, and Burke Counties to find housing that meets their financial requirements. Additionally, this settlement pattern has generated traffic congestion and a need for costly infrastructure expenditures as those living in areas outside of Hickory commute into the city for work, etc. These related consequences can be addressed by identifying appropriate locations in Hickory for higher density, more affordable housing and revitalization areas.

### **Ensure compatibility between single-family residential and higher density residential and non-residential land uses.**

Hickory is dominated by single-family residential neighborhoods that want to preserve their residential character. However, the desire for the traditional development pattern of disconnected single-family residential neighborhoods is beginning to change. Hickory residents have revealed their desire to provide more connectivity and proximity to commercial uses, public spaces and facilities, and in some limited form, higher density residential. This desire is predicated on adequate transitions of building size and use, and buffering from non-residential or higher-density residential areas that will retain the character of single-family neighborhoods while allowing proximity to non-residential uses.

# Housing Goals

## **Goal 1: Provide diverse housing options suited to neighborhood character**

While the plan calls for housing diversity, it also recognizes the importance of having stable, vital neighborhoods. New housing types should be encouraged, but they should be designed and distributed in a way that respects the scale and character of existing neighborhoods.

## **Goal 2: Sustain and enhance existing neighborhoods**

Neighborhood decline should be suppressed, and successful neighborhoods should be supported and emulated. This goal does not suggest that Hickory's neighborhoods all be alike. Instead, it strives for all neighborhoods to be successful in serving the unique needs of the residents who live there. Those characteristics that make neighborhoods lively, healthy places should be applied universally, adapted to reflect individual neighborhood social, cultural and economic makeup.

## **Goal 3: Promote urban infill with a variety of housing types**

For this plan's greatest goals and principles to succeed, Hickory must find ways to insert housing into its neighborhood and community centers. Whether it involves new housing downtown, revitalized housing along the community's corridors or the establishment of an entirely new housing type and philosophy in mixed-use centers, housing plays a crucial role in the revitalizing of Hickory's cityscape.

	Goal		Policy
1	Provide diverse housing options suited to neighborhood character	A	Encourage affordable housing with tools like public-private partnerships, rezoning to allow multi-family housing outright in identified areas, and providing more options for combined residential and non-residential
		B	Ensure development within mixed-use centers is compatible with the housing in
		C	Reflect neighborhood design characteristics in higher density housing infill without strict
		D	Incorporate alleys, landscape screening and other amenities in multi-family development to buffer the higher density from
		E	Low density residential development can provide larger lots further from mixed use
2	Sustain and enhance existing neighborhoods	A	Support efforts to retain the historic character of the neighborhoods surrounding
		B	Enforce housing and property maintenance, sign, animal control, littering and noise code
		C	Consider innovative zoning tools to protect neighborhood character and retain historic
		D	Support pedestrian-oriented neighborhoods
		E	Support community development efforts for
		F	Support acquisition, rehabilitation, and purchase programs to increase home

	Goal		Policy
3	Promote urban infill with a variety of housing types	A	Provide mixed use centers throughout the city which provide opportunities for more intense condo, townhouse and apartment housing options
		B	Provide a variety of housing options in all housing districts for aging in place options for seniors and for others desiring more
		C	Provide accessory dwelling unit (ADU) options in medium density neighborhoods.
		D	Incorporate alleys, landscape screening and other amenities in multi-family development to buffer the higher density from
		E	Low density residential development can provide larger lots further from mixed use

# Transportation

## Introduction

This chapter contains a brief overview of the City's existing conditions and community needs, as well as a goal and policy framework focused on transportation issues.

Led by the plan's vision and directives, the goals, policies and programs in this chapter are provided to guide implementation, including City resource allocation and regulatory decision-making.

Transportation is a topic with far greater implications than most people realize. Far from being simply about practical matters of getting from point to point, considerations such as method and speed of travel, distribution, orientation and the design of streets are among those things that often have the largest impact on communities.

## Existing Conditions

Hickory is well served by rail, arterial roadways, and a regional airport. The variety of transportation options is important for business to get supplies or goods to market and for residents of the city to travel to other destinations. The transportation system also provides circulation within the region and city for commuters to and from Hickory.



Figure 5.1 –Hickory is located at a major highway crossroads, underscoring the region's reliance on a robust, diverse, and functioning transportation system.. (Image source: Studio Cascade, Inc.)

The city has good regional access with U.S. 70 and 321, and I-40 which is included in the North Carolina Strategic Highway Corridor Vision Plan.

I-40 is a major east-west route through the Greater Hickory Metropolitan Region. This interstate is a part of the National Highway System – the backbone of the country's freeway system that serves the interstate and inter-regional travel between major population centers. I-40 connects the state of North Carolina from the port of Wilmington through the Blue Ridge Mountains and into Tennessee. I-40 is important to interstate commerce, as well as travel and tourism, which form the lifeblood of many towns in the North Carolina Mountains.

US 70, while not part of the North Carolina Strategic Highway Corridors Vision Plan, serves the Central Business Districts of multiple smaller towns and links them to larger urban areas, including Hickory. US 70 is the region's nearest parallel facility to I-40;

it serves as a business route through the Greater Hickory Metropolitan Region; and, as an alternative route to I-40 in emergency situations.

US 321, a major north-south facility serving the Western Piedmont area of North Carolina, connects the Charlotte/Gastonia urban area to the major furniture and textile industrial area of Hickory/Lenoir and to the tourist areas of Blowing Rock and the Blue Ridge Parkway before it crosses into Tennessee. In the Greater Hickory Metropolitan Region US 321 provides a critical connection between the Hickory urban area and other towns in Caldwell County such as Lenoir, Hudson, Sawmills and Granite Falls.

Transportation issues in Hickory have been addressed at a region-wide scale for three decades. The Greater Hickory Metropolitan Planning Organization, guided by the Western Piedmont Council of Governments (WPCOG), is responsible for carrying out the area wide transportation planning within the Hickory region. Federal Law (Section 134(a) of Title 23 United States Code), the Safe, Accountable, Flexible, Efficient, Transportation Equity Act- a Legacy for Users (SAFETEA-LU) and Moving Ahead for Progress in the 21st Century (MAP21) as well as State law (General Statute 136-66.2) require a documented comprehensive, continuous and cooperative transportation planning process for urban areas with a population of 50,000 people or more. The Hickory area met these requirements in 1980 and was designated by the United States Census Bureau as an Urban Area. The designation of an urban area also requires the establishment of an integrated, inter-modal transportation plan with a minimum planning horizon of 20 years. Since 1980, several comprehensive Long Range Transportation Plan (LRTP) studies were completed for the Hickory Urban Area.

## MPO Planning

The first Hickory-Newton-Conover Urban Area Transportation plan was adopted in 1986. Due to growth exceeding projections assumed in the 1986 plan, the MPO prepared an updated plan that was adopted in 1997. Since that time the regional plan

has been updated and adopted several times – first in 2001 then in 2005 and 2010, and most recently in 2014.



Growth in population and employment in the Greater Hickory MPO area is the basis for long-range transportation planning for the region. The MPO established a new Traffic Analysis Zone (TAZ) structure for the entire Metropolitan Area Boundary (MAB) following the MPO enlargement in 2002. Using population data derived from the 2010 Census and employment data from InfoUSA (a commercial vendor of current employment data), a 2011 base year was established. Population and employment were then projected to a horizon year of 2040. This projected growth was the basis for the 2014 Plan update.

The most current plan update was commenced in 2013. The 2040 Hickory Long Range Transportation Plan update is a technical update of the 2010 Transportation Plan with a 2011 base year and 2040 horizon year.

The 2040 Hickory Urban Area Long Term Transportation Plan is a multi-modal transportation plan that will guide the planning and development of the urban area's transportation system for the next generation. The Plan has also been developed in coordination with the Air Quality Conformity Analysis Report and Conformity Determination, and the 2012-2018 Metropolitan Transportation Improvement Program (MTIP).

Given the limited financial resources at the federal, state and local levels, the rapidly increasing costs of construction materials, the heightened air quality standards, and the desire by the citizens in the Hickory Urban Area to maintain a high quality of life, the emphasis of the Plan is to provide a better balance of transportation facilities, programs and services that will serve the urban area's future travel needs. In fact, the 2040 Hickory Urban Area Long Range Transportation Plan states that walking and biking are effective in meeting all five stated goals included in the plan update.

With the increased interest and acceptance of walking and cycling, eight objectives for pedestrian and bicycle transportation are included in the Plan update.

*Provide a pedestrian and bicycle system that allows greater access to and links between public transit, schools, parks and other major activity centers.*

*Develop a system that integrates pedestrian and bicycles modes of travel with motor vehicle transportation, and connects inter-regionally with existing bike and pedestrian infrastructure (such as the Carolina Thread Trail).*

*Increase pedestrian and bicycling activity for both transportation and recreation to promote healthy, active living and improve public health.*

*Promote, through public education, the economic, environmental, and health benefits of walking and biking as practical modes of transportation.*

*Partner with local, county, and state agencies to encourage bicycling and pedestrian activities across different populations.*



Figure 5.3 - The current urban area transportation plan prepared by the Metropolitan Planning Organization recognizes the importance of bicycles as a viable transportation alternative. (Image source: Studio Cascade, Inc.)

*Recommend that new or widened roadways are designed to include the land on each side of the road with sufficient width to accommodate bicycle and pedestrian facilities safely.*

*Encourage the delineation of safe pedestrian ways and bicycle routes, emphasizing separation from vehicular areas when possible.*

*Recommend the installation of signage when bicycle routes or pedestrian facilities are integrated with roadways.*

Additionally, public transportation has been recognized as a vital element of the total transportation services provided within a metropolitan area. Not only does public transportation provide options to senior citizens, those without vehicles, and those who are physically or economically disadvantaged, but

public transportation is an efficient, low cost, high capacity means of moving people through a densely traveled corridor. The Greater Hickory Metro area has a regional transit authority serving Alexander, Burke, Caldwell and Catawba Counties. Greenway Public Transportation began operations in July 2008 with the intent of improving transportation alternatives regionally.

The Greater Hickory Urban Area Long- Range Transportation Plan continues to address many issues affecting the roadway system in Hickory and surrounding region including traffic generated within the city, commuter traffic, and traffic volume from motorists passing through the region. Part of the transportation plan encompasses an evaluation of thoroughfares (highways) along with other transportation modes. The Highway Chapter of the 2040 Plan identifies existing and future deficiencies and uncovers the need for improving



Figure 5.4 - Highway access to the greater region is critically important for Hickory's economic development. (Image source: Studio Cascade, Inc.)

the existing transportation system. This part of the Plan analyzes and makes recommendations based on the ability of the existing street system to serve the present and future travel as the area continues to grow. The usefulness of transportation planning is in the analysis of different roadway configurations for their efficiency in serving the area.

To address these issues the 2040 Transportation Plan recommended numerous transportation improvements to create efficient east-west and north-south traffic patterns. The proposed road construction in the plan will provide improved regional access for commuters traveling to employment centers, better access to I-40, U.S. 70, and U.S. 321 and improvements to north-south circulation. While construction of one proposed thoroughfare (Northern Cross-town) is intended to improve east-west circulation, improvements to McDonald Parkway would be needed to achieve desired improvements. Other significant improvements include widening U.S. 321 using a super-street design to accommodate projected traffic increases.

While some improvements are only proposed at this time, others have been programmed into the State Transportation Improvement Program (STIP). Of those projects currently programmed into a STIP, some have received funds, while other identified projects await funding. The 2040 Hickory Urban Area Long Range Transportation Plan contains a full list of recommended improvements and other information regarding regional transportation planning. In addition this planning effort has revealed some additional improvements that should be implemented to accomplish the vision that city residents and officials have for Hickory.

## MPO UATP Proposed Projects

The following paragraphs describe changes in the 2040 LRTP. Hickory's comprehensive plan may suggest improvements and philosophies that differ from these, and those differences are noted here where appropriate.

## **Fourth Street SW, NW and Extension**

This north-south facility is located in Hickory's CBD and extends from 16th Avenue NW to US 70. This facility links cross-town travel between northern residential neighborhoods and the commercial areas along US 70 and southern neighborhoods to the commercial developments along NC 127 in northern Hickory. In addition, this facility also serves a mixture of development ranging from residential on the northern section to government offices and commercial businesses in the downtown and southern Hickory. The existing cross-section of this facility varies from two to four lanes.

Although present travel conditions are generally good, the projected future traffic is expected to result in deteriorating travel conditions. To avert this problem, the section of Fourth Street between First Avenue NW and US 70 should be improved as needed. On the section north of First Avenue NW, adding a left turn lane at the major intersections is recommended.

While the previously discussed improvements to Fourth Street SW/ NW and its extension is a viable solution to mitigate vehicular traffic congestion, the City of Hickory prefers a 4-lane divided boulevard cross-section due to existing land-use constraints. If this preferred alternative is to be constructed, a special cross-section with a narrower lane and median must be designed.

## **Lenoir-Rhyne Boulevard (SR 1534/ SR 2205)**

This major thoroughfare provides a major connection between northern Hickory and the regional commercial center along the I-40/US 70 corridor. It connects to Eighth Street NE on the north end and the south end terminates at US 70. Lenoir-Rhyne Boulevard has a 5-lane cross-section from Eight Street NE in the north to US 70 in the south. Development along this corridor is mostly commercial and considerable congestion currently occurs during peak hours, especially at the southern end. The completed segment of

McDonald Parkway from I-40 to Springs Road has taken some travel pressure off Lenoir-Rhyne Boulevard by providing an additional connection to I-40 and US 70. With strong commercial development projected along this corridor and a continuation of high demand in travel between northern Hickory and the I-40/US 70 corridor, traffic on Lenoir-Rhyne Boulevard is expected to gradually build up to capacity.

Although widening may be the best solution to improve the level of service on this road, it does not appear to be a viable option considering the high cost to purchase additional right-of-way and the detrimental impact to the commercial developments along the corridor. Adequate space is available to add a loop to the northeast quadrant of the I-40 interchange. This addition will improve northbound travel, thus eliminating the need for a protected left turn phase at the northern exit ramp traffic signal. The "saved" green time can be added to the through movement on Lenoir-Rhyne Boulevard, increasing the service capability of the facility. Other improvements such as signal coordination, adding acceleration and deceleration lanes where right-of-way is available and other traffic control measures should be implemented.

## **Second Avenue NW and Extension (Hickory-Long View)**

This east-west major thoroughfare provides service for travel in the Hickory and Long View urban areas. On the west end, it terminates at SR 1653 and turns into the eastbound leg of the Second/ Third Avenue one-way pair in downtown Hickory. The existing cross-section of Second Avenue NW ranges from two to four lanes. The 4-lane section extends from US 321 to 30th Street Place NW. Mixed development exists along this facility. Intense commercial and industrial development occupy the section west of downtown Hickory while a mixture of residential, commercial and office uses exist along the one-way pair section. In addition to serving these developments, Second Avenue NW provides a valuable service for travel in the northeast section of the planning area. It links eastern Burke County to Long View and



Figure 5.5 - Even as roadways get widened to increase capacity, attention must be paid to the pedestrian environment and to the widened roadway's impact on adjacent land use. (Image source: Studio Cascade, Inc.)

downtown Hickory and connects these urban areas to Hickory Regional Airport just north of the facility.

Current travel on Second Avenue NW is moderate with the highest traffic volume on the section west of US 321. Travel pressure on this facility will increase greatly during the planning period due to high development growth anticipated for this area (LRTP 2035, p. 2-27). To ease potential traffic problems, Second Avenue NW should be extended westward to Mount Harmony Church Road at SR 1627. This extension will serve new growth in eastern Burke County and provides a continuous east-west facility serving commuter traffic in the northeast part of the planning area. A multi-lane cross-section is recommended.

## Second/Third Avenue NW one-way pair

This one-way pair system is located in downtown Hickory and serves a mixture of development including businesses, offices, governmental institutions and housing. It also functions as a major cross-town facility between eastern Caldwell County, Burke County, Long View, downtown Hickory and eastern Hickory. Due to the lack of an efficient system serving east-west travel in northwest Hickory, especially traffic to and from US 321, the Second/Third Avenue NW one-way pair will continue to be used as a surrogate route. Projected growth in both housing and employment in northern Hickory and southern Caldwell County, the east-west travel in northwest is expected to increase.

The Second/Third Avenue NW one-way pair is expected to shoulder a large portion of this increased traffic. The future travel demand on this one-way pair will exceed the practical capacity of this system. Adding lanes is not feasible due to the detrimental impact on the housing communities and businesses and the high cost to purchase right-of-way. Therefore, other remedies such as signal optimization, adding acceleration/deceleration lanes where right-of-way is available and other traffic control measures will help to ease the traffic congestion. Nonetheless, difficult travel conditions are expected in the design year unless there is another facility to share the travel burden with the Second/Third Avenue NW one-way pair.

## Southern Corridor

Currently, NC 10 is the only major thoroughfare that serves the southern part of Hickory and Newton. This 2-lane highway mostly provides for travel to and from the City of Newton. The Southern Corridor has been proposed to serve the area between the NC 10 and US 70/ I-40 corridors connecting four future growth areas in the region - western Newton, River Road/US 321 interchange, Mountain View and southern Brookford. The link between this project, the Newton-Conover Loop, the Northern Cross-town and 33rd Street in Long

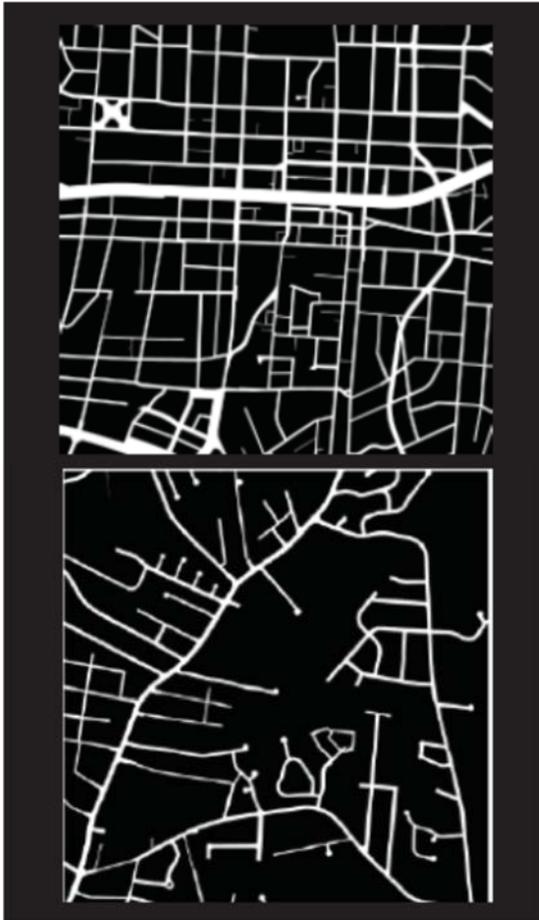


Figure 5.6 - The idea of street networks forming the “bones” of communities was presented early in the process. Both street networks are from Hickory; however, each portrays very different lifestyles. The upper layout identifies a more pedestrian-friendly and livable place. The lower layout shows how scale and lack of interconnectivity can all but dictate a car-centric lifestyle. (Image source: Studio Cascade, Inc.)

View would form a loop system in the planning area. This system will facilitate the suburban travel as well as the inter-city travel between Hickory, Newton, Conover and Long View.

The recommended Southern Corridor extends from the City of Newton (NC 16 Business) on the east to I-40 Exit 119 in Burke County on the west. The corridor consists of the widening of Settlemyre Bridge Road (SR 1165), River Road at the US 321 South interchange, Bethel Church Road (SR 1176) and Hildebran-Shelby Road / Costner Road (SR 1780). Between these roads are the new location segments. The recommended cross-

section for this project is a 4-lane divided boulevard with a grass median. The Southern Corridor is needed to serve the future travel in the southern part of the planning area. The Southern Corridor is programmed as STIP Project U-2532.

### Proposed Catawba Valley Boulevard Extension (Hickory-Newton)

Catawba Valley Boulevard is located on the south side of Valley Hills Mall extending from Robinson Road (SR 1146) to Startown Road (SR 1005). This 5-lane facility serves major commercial and residential developments and provides a connecting service between Startown Road and Robinson Road.

The proposed extension will connect Catawba Valley Boulevard to 20th Street in Newton and create a major east-west facility paralleling US 70. Due to the anticipated growth on US 70, future travel demands are expected to increase causing some congestion problems along this facility. The proposed road will also create an efficient route to link Hickory and Newton. A 4-lane divided boulevard with a grass median is recommended west of Fairgrove Church Road. East of Fairgrove Church Road, a 2-lane rural cross-section is recommended.

### US 321

This highway is a major north-south facility serving the Western Piedmont area of North Carolina. It connects the Charlotte/Gastonia urban area to the major furniture and textile industrial area of Hickory/Lenoir and to the tourist areas of Blowing Rock and the Blue Ridge Parkway before it crosses into Tennessee. In the Greater Hickory MPO, US 321 provides a critical connection between the Hickory urban area and other towns in Caldwell County such as Lenoir, Hudson, Sawmills and Granite Falls. In certain sections of this highway, the daily traffic volume will be over capacity by 2020. Other sections will be over capacity by 2030 and 2040. Currently, the portion of US 321 from US 70 in Catawba County to US 64/NC 18 in Lenoir is programmed in the TIP for improvements and



Figure 5.7 - Streets carrying arterial traffic can still be designed and managed to provide an attractive, residential landscape. This image illustrates the contrast between approaches to streetscape design. (Image source: Studio Cascade, Inc.)

widening. It is listed as Project U-4700 (A, B & C). It also includes B-4450 which is the widening of the bridge over the Catawba River to 6-lanes. Right-of-way money is allocated in the 2012-2018 STIP. Previously, the intersection at US 321 and US 64/NC 18 in Lenoir was programmed in the STIP to be upgraded to an interchange but is not currently listed in the STIP. It is critical to preserve the remaining integrity of US 321 by strictly limiting any further direct commercial access onto this facility.

#### Sweetwater Road (SR 1468) and Extension

This 2-lane facility extends from Highland Avenue to US 70. It functions as a radial, linking the US 70 corridor to the industrial area in eastern Hickory.

Mixed development along this corridor ranges from industrial/manufacturing on the north end to residential on the south end. The recommended extension on the southern end will connect Sweetwater Road to SR 1148 at Startown Road. The combination of Sweetwater Road, its extension and SR 1148 will create a north-south facility between the southern section of the planning area and eastern Hickory. A cross-section of three lanes is recommended for the proposed extension.

## Functional Roadway Classification

Many of the roads in Hickory are classified by the North Carolina Department of Transportation as belonging to the local jurisdiction. Generally speaking, the NCDOT system roads within city limits are major facilities making significant regional connections.

Streets are usually classified according to the following hierarchy, with those roadways carrying higher volumes traditionally belonging to NCDOT. Many collectors and virtually all local streets belong to the City of Hickory.

### Parkways

Parkways would have the widest ROW and be reserved for roads with the heaviest traffic volumes in industrial and commercial areas such as:

*Tate Boulevard SE,*

*U.S. 70,*

*McDonald Parkway,*

*16th Street NE extension from Lenoir-Rhyne Boulevard to Highland Avenue NE, and the Southern Corridor.*

These roads are intended to serve high volumes of automobile and truck traffic but still provide a visually attractive gateway to Hickory. This roadway cross section includes a 10-foot landscaped median that would be landscaped with appropriate plant materials. Medians on NCDOT

streets may need to be wider to accommodate trees. Because these sections of roads will handle large volumes of traffic and will not always be directly serving residential neighborhoods the construction of sidewalks will usually not be required. For areas where sidewalks are necessary, they should be separated from the curb by a landscape buffer between 10-12 foot wide to enhance pedestrian safety. The proposed pavement widths include an option for one three-foot bike lane in each direction.

## Arterials

Arterials would carry the bulk of the city's traffic volume since many more roads would have this designation. These roads would include:

NC 127, Springs Road, Sulphur Springs Road, Highland Avenue NE, Lenoir-Rhyne Boulevard, 16th Street NE, N/S Center Street, Fourth Street SW/NW, Cloninger Mill Road, Kool Park Road, Clement Boulevard NW, 29th Avenue NW, 29th Avenue Drive NE, and 16th Street NE (north of Highland Avenue NE), and 8th Street Drive NE

Arterials will provide the primary roads leading to neighborhood mixed use and community commercial districts. These new roadway cross sections include streetscape improvements that would benefit both the persons in the vehicles as well as pedestrians. The intensity of streetscape improvements would vary depending on the location of the road. The roadways with the most intense streetscape improvements would be in the neighborhood mixed use and community commercial districts. Because these commercial districts will be located along Major Thoroughfares, a typical cross section would include a four-lane, divided arterial with landscaping along the sides of the road and in the median to provide "friction" and help encourage the motorist to reduce the vehicle's speed. The road pavement widths will be narrowed to allow easier pedestrian crossing at intersections and to force motorists to drive at a slower speed. The speeds in the neighborhood core and community commercial districts would be less than portions of the arterials outside the districts. To ensure that motorists slow their vehicles when entering a

commercial district, a transition area would be constructed just prior to the district. This transition area would be approximately one block long and include the introduction of streetscaping, signage, narrowing of driving lanes, and the introduction of a median.

## Collector Roads

Collector roads will continue to serve the function that they currently serve which is funneling traffic from local streets to arterials or to other local streets throughout the city. Although these roads will also be in residential areas they will carry a heavier volume of traffic making a designated turning lane a viable option in appropriate locations to allow continuous traffic flow and minimize potential for accidents. The proposed revisions to the ROW for these roads include landscaping, sidewalks, and bike lanes where they are determined to be appropriate.

## Local Streets

Most streets in the city are considered local streets. Local streets serve individual properties and direct traffic to collectors or arterials. The proposed revisions to the ROW include landscaping and sidewalks. There are no bike lanes proposed since the traffic volume of these roads would be significantly less than collectors, arterials, and parkways allowing automobiles and bikes to share the road. In addition to smaller lane widths, proposed revisions to ROW include provision of on-street parking in appropriate locations. The High Density Residential area would be a typical location for a two-lane local street with on-street parking. This road design could also be found in the side streets of the Neighborhood Mixed Use districts to provide a traffic-calming effect as well as providing additional parking close to commercial establishments. All of the proposed revisions to roadway cross sections included curb and gutter; however, Hickory permits both curb and non-curb construction and in some locations it would be appropriate to eliminate the need for curb and gutter and provide stormwater drainage swales. This stormwater management measure should be incorporated into neighborhoods where conservation subdivision design is implemented.

## Traffic and Level of Service

Traffic volumes on main roads are compared to generalized roadway capacity guidelines to determine levels of service.

In general, few of the Hickory's roadway facilities experience severe levels of traffic congestion based on daily traffic volumes.

## Bicycle and Pedestrian

The City of Hickory adopted a Sidewalk and Bikeway Master Plan in March 1997. The plan identified seventy five miles of sidewalks, one and 1/2 miles of bikeways and five miles of walking tracks and unpaved trails in City parks.

In September 2000 the City adopted a Sidewalk, Bikeway, Greenway and Trail Master Plan. The plan provides overall guidance for policy and program development for improving access and mobility for pedestrians and bicyclists. Consistent with the Plan's goals and objectives, the Master Plan identifies a network of 137 miles of sidewalks, 132 miles of bikeways, 8.8 miles of greenways and .34 mile of trails. Design guidelines to assist in the implementation of the network are also included in the Plan. It also addresses initiatives to develop new sidewalks, bicycle routes, greenways and trails connecting the City's parks, schools, cultural facilities and shopping centers. Finally, the Plan proposes initiatives in the areas of facility maintenance, bicycle usage, enforcement and education programs.

In 2005, the City of Hickory amended its 2000 Sidewalk, Bikeway, Greenway and Trail Master Plan to further expand its existing and proposed greenways and to add facilities defined as urban trails. The 2005 update of the greenway component of the Master Plan identifies 21 specific greenways and urban trails, which collectively total 48.39 miles. While subject to the availability of funding, the implementation of the Plan is divided into three time periods. Short-range projects should be implemented within the first 12 years of the Plan. Medium range projects have a 12-20 year implementation period and long range



Figure 5.8 - Hickory's public transportation system is relatively young, but it has an established and diverse ridership. (Image source: Studio Cascade, Inc.)

projects have a horizon period of over 20 years.

In 2016 the Hickory City Council, by resolution, accepted the Western Piedmont Bicycle Plan. This plan was spearheaded by the Western Piedmont Council of Governments, and covers the four county Hickory Metro Region. The Western Piedmont Bicycle Plan provides a framework for improving bicycle transportation in the counties of Alexander, Burke, Caldwell, and Catawba.

## Transit

The current transit service is not well utilized. In addition to the existing transit route, drop-off and pick-up sites should be incorporated into new commercial developments. The Neighborhood Mixed Use districts, with their shopping destinations and higher residential densities, would make logical transit stops. Transit amenities should also be incorporated into the new Community Commercial areas and Regional Commercial districts. Providing transit stops in these districts would encourage use of transit to travel from one commercial area to another and allow more residents the opportunity to utilize the Greenway Public Transportation System to get to work.



Figure 5.9 - The airport no longer enjoys commercial air carrier service, but it serves the greater region's air travel needs through general aviation. (Image source: Studio Cascade, Inc.)

## Aviation

Hickory Regional Airport is a regional asset that is conveniently located off of US 321 and I40 while being strategically positioned between Charlotte and Boone with Asheville being an easy commute. The airport provides a valuable service to corporations and residents of Hickory and surrounding counties. The airport is situated on approximately 1600 acres with two runways. Runway 6/24 is the primary runway at 6400' X 150' and Runway 1/19 the secondary runway, which is 4400' X 150'. The primary runway has a weight capacity of 88,000 lbs. and can handle aircraft as large as G4's, military C130's, charter 737's, etc. There are twelve (12) hangars situated on various ramps some of which house only corporate aircraft while others house privately owned aircraft. Because of the projected growth for corporate aircraft, compatible land uses are required near the airport. Residential development should be discouraged in the vicinity of the airport with industrial development compatible with airport operations being located in close proximity. However, airport zoning needs to reflect the need to preserve the long-term capability and safety concerns of the airport by limiting the height of structures as well as the location and density of development.

## Rail

The railroad currently serves manufacturing industries in Hickory, but there is a potential to accommodate passenger service in the future. Passenger service should be reestablished to the Downtown area. Passenger rail service would provide additional travel options and potential customers for downtown retailers.

## Issues & Needs

The transportation themes in this plan are carried through from the original Hickory by Choice, reinforced through public workshops and affirmed for their importance.

## Vehicular Traffic

The development patterns in Hickory over the last 50 years have been the primary contributor to traffic congestion in the community. It is a symptom of the evolving economy in the area. While downtown employment once dominated, suburb to suburb traffic patterns now produce greater commute distances, driving time, and air pollution.

I-40 is currently a 4-lane controlled access freeway. Traffic projections indicate that I-40 through the Hickory Metropolitan Region will be over capacity by 2035 and is therefore recommended to be widened to 6-lanes in the 2040 LRTP

US 70 does not have the capacity to serve longer distance, free-flowing travel; however, because of the industry located in close proximity to major thoroughfares, a large percentage of heavy trucks comprise the total amount of traffic served by this facility. Daily traffic volumes vary along the corridor but one of the heaviest areas is located in the vicinity of Valley Hills Mall in Hickory. US 70 near this location is expected to be over capacity by 2020. The 2040 Greater Hickory Urban Area Long Range Transportation Plan indicates that if portions of US 70 are not widened at some point excessive congestion and delays will occur along the facility resulting in increased air pollution due to the stop-and-start conditions along the roadway.



Figure 5.10 - Creating active, walkable streets and neighborhoods requires an integrated approach involving more than just modifications to the transportation system. (Image source: City of Hickory)

This Plan also states that safety conditions along the roadway will also be compromised due to the high number and closeness of vehicles in the traffic stream.

In certain sections of US 321 the daily traffic volume will be over capacity by 2020. Other sections will be over capacity by 2030 and 2040. Currently, the portion of US 321 from US 70 in Catawba County to US 64/NC 18 in Lenoir is programmed in the TIP for improvements and widening. It is listed as Project U-4700 (A, B & C). It also includes B-4450 which is the widening of the bridge over the Catawba River to 6-lanes. Right-of-way money is allocated in the 2012-2018 STIP. Previously, the intersection at US 321 and US 64/NC 18 in Lenoir was programmed in the STIP to be upgraded to an interchange but is not currently listed in the STIP. It is critical to preserve the remaining integrity of US 321 by strictly limiting

any further direct commercial access onto this facility.

As the city and region grows these transportation systems will also need to evolve and improve to meet the demands of business and residents.

## Pedestrian Circulation

Residents of Hickory enjoy the small town character and relatively compact development patterns of the older portions of the city. However, beyond that area, a wide-spread pedestrian circulation system does not exist.

## Transit

The region is currently served by the Greenway Public Transportation system, which is primarily used by residents that may not have regular access to an automobile. Although this transit service is not widely used, residents of Hickory expressed support for continuation and improvement of the bus system and the Western Piedmont Regional Transit Authority is currently developing a plan to expand service throughout the region.

## Aviation

Hickory Regional Airport is an important asset to both residents and businesses in Hickory and surrounding counties. The airport retains its Part 139 Certificate and remains primed for commercial air service. It continues to grow as a general aviation airport and remains one of few general aviation airports with an Aircraft Rescue and Firefighting (ARFF) station and a FAA funded air traffic control tower. As of December 2011, the City of Hickory took control of the FBO (Fixed Based Operations) while providing competitive fuel prices and a 24 hour self-serve pump along with a well-maintained airfield, hangars, FBO facilities and excellent services. The airport's infrastructure continues to meet and/or exceeds FAA regulations through continued support by both federal and state grants. Most recent infrastructure improvements made possible by grant funding were the construction of a 10,000 gallon Avgas and 12,000 gallon Jet A tank fuel farm, rehabilitation of Taxiway A, Taxiway B & North Apron. The

continued growth of the airport depends on the economic growth of the area and the important role it plays on the community. Future projects for the airport include land acquisition, runway 6/24 extension making it over 7000' long, Master Plan Update and hangar construction. The airport needs to be protected from development that would hinder its operations and growth. The acquisition of land is necessary and pertinent to the growth and development of the airport by extending runways and construction of corporate hangars.

## Rail

From the earliest days in Hickory's history rail service has been an important transportation option for Hickory. Passenger service declined and was eventually discontinued. Some limited passenger service has been proposed. This may lead to an increase in the use of rail for tourist transportation.



Figure 5.11 - In some cases, increased connectivity may require reestablishing railroad crossings. (Image source: City of Hickory)

# Plan Concept

## Promote multi-modal transportation options.

The automobile is the primary transportation option in Hickory. Greenway Public Transportation provides access to services that people need in their daily lives such as retail shops and medical facilities. While an expansion of the transit service area is being planned, the current service offered is not used extensively.

For travelers leaving the city the automobile is generally the first option, but Greyhound bus service has recently reestablished service to Hickory. A former transportation option for people traveling to destinations beyond Hickory was the railroad. Although it has been decades since this option was available for travelers, there is the possibility that passenger rail service may again be provided in the future.

A transportation system that weaves each of these options into a coordinated system and provides convenient access from one mode of travel to another would best serve the community. A multi-modal transportation system, when linked to higher density land uses, would offer more options for employees to get to work, provide seniors access to medical facilities and shopping, and families to go to district/regional recreational facilities.

## Promote vehicular and pedestrian connectivity throughout the city.

The roadway system in Hickory is not ideally connected resulting in drivers taking circuitous routes in order to reach their destination. Pedestrian circulation has also been limited because of a lack of sidewalk connectivity and topography in residential and commercial areas. Limiting circulation options results in an increase in the number of trips in automobiles, a corresponding increase in the number of miles traveled in automobiles, and increases in air pollution.

Increasing vehicular and pedestrian connectivity would offer more paths for people, giving them the opportunity to reduce the length of their trip, elect from a variety of roads on which to drive, and reduce congestion on major thoroughfares. Improved pedestrian connectivity would offer an opportunity for people to elect alternative modes of transportation and would encourage shoppers to walk from one store to another.

## Establish measures to ensure pedestrian and motorist safety.

Motorist safety has always been one of the most important elements of roadway design. Designing safer roads has in many cases been in the form of wider ROW and lane widths, which have inadvertently given drivers a sense of safety. Safer, wider roads also encourage higher speeds. Sidewalk construction has generally been given a low priority in the design process resulting in sidewalks constructed next to roadways with no physical space buffering pedestrians from automobile traffic, or no sidewalk at all.

Higher traffic speeds are appropriate along roadways that are needed to move large volumes of traffic, but in areas where there are potential pedestrian/vehicle conflicts, vehicles need to be slowed down to minimize these conflicts. Neighborhood Core and Community Commercial districts are the primary locations where traffic calming measures such as narrow lane widths, road landscaping, and the construction of medians, would aid in slowing traffic and provide a safer environment for pedestrians.

## Promote measures to reduce congestion and the amount of vehicle miles traveled in Hickory.

As Hickory and the surrounding region grows, there will be a corresponding increase in traffic on major thoroughfares and local streets. The growth of the region also increases the distance many people have to travel to work, shopping, cultural activities, and visits with friends. One of the most important measures of reducing traffic congestion and vehicle miles traveled is adjusting land use patterns.

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### **Promote measures to reduce congestion and the amount of vehicle miles traveled in Hickory.**

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Thoughtful land use planning is critical to establishing the spatial relationship of where people live, work, shop, and recreate. Land use planning should identify appropriate locations for neighborhoods that enhance and preserve residential character while offering opportunities to easily access shopping, open space and recreation, and employment with only a short drive or walk. By maximizing these opportunities, congestion and the long distances of commuter travel can be reduced.

## **Transportation Goals**

### **Goal 1: Provide connectivity for pedestrians and vehicles**

Hickory by Choice 1999 and the public workshops convened as part of this update were clear: Hickory residents desire transportation options. By increasing connectivity, Hickory will help its residents use a variety of travel modes. Increased connectivity facilitates travel by car, on foot or by

bicycle, allowing travelers to find multiple routes to their destinations.

### **Goal 2: Manage increased traffic volumes and pressure on transportation infrastructure through a combination of system improvements, demand management and land use actions as an alternative to capacity improvements alone**

Simply increasing roadway capacity is not an adequate strategy for managing increasing transportation volumes. Wider roads may promise increased capacity, but, over time, congestion overcomes the initial capacity benefit. Wider roads tend to encourage increased traffic volume, leading to the truism “you can’t pave your way out of traffic congestion”. Hickory desires a more integrated approach to managing increased traffic, finding ways to manage demand on its roadways and to arrange its land uses to reduce reliance on single-occupant vehicles traveling on major thoroughfares. While regional traffic will continue to either travel through Hickory or to destinations in Hickory, this goal suggests local traffic should be managed in a way that does not burden arterial roadways.

### **Goal 3: Improve aesthetics of community gateways and corridors**

Improving the quality of the journey is the principle underlying this goal. When entering and traveling through Hickory, travelers should have a pleasant trip. A pleasant street environment is understood to be an economic development advantage, as well.

#### **Goal 4: Provide a transportation network that serves automobiles, pedestrians, bicyclists and public transit**

This goal is closely related to the goal on connectivity, but it dictates an approach to transportation system design that actively recognizes multiple travel modes will be using public rights of way. Public roadways should be designed to be more “complete,” serving pedestrians, bicyclists and motorists without necessarily increasing the amount of paving provided to accommodate them. In addition, this goal supports the expansion and use of sidewalks, bikeways and greenways to encourage pedestrian and bicyclist travel, both for recreational purposes and as an alternative to single-occupant travel by car.

#### **Goal 5: Consider industrial requirements in transportation decisions**

Hickory’s economy has relied on an industrial base, and the region’s economic future still will likely feature a significant industrial component. The community’s transportation infrastructure has been developed to serve industry, and this goal suggests that the transportation system and the community’s industries will continue to have an interdependent relationship. Transportation improvements should consider industrial requirements, just as industrial location decisions consider access and transportation facilities.

	Goal		Policy
1	Provide connectivity for pedestrians and vehicles	A	Provide many pedestrian and road connections within and between neighborhoods, mixed use centers and commercial centers for local circulation without requiring use of high-volume roadways
		B	Develop a continuous network of sidewalks and bikeways to allow people to walk or bicycle to shopping, employment areas, schools, parks, and neighborhoods
		C	Minimize driveways on major thoroughfares for pedestrian and traffic safety
		D	Design and manage roadway intersections to calm traffic and improve pedestrian and motorist safety
		E	Provide many route options to and through neighborhoods with an interconnected system of streets
2	Manage increased traffic volumes and pressure on transportation infrastructure through a combination of system improvements, demand management and land use actions as an alternative to capacity improvements alone	A	Emphasize transportation investments that provide alternatives to single occupant vehicles, such as transit, bikeways and pedestrian paths, and Transportation Demand Management (TDM)
		B	Support and preserve two-way streets to support retail establishments, reduce traffic speeds and enliven neighborhoods
		C	Provide more routes to reach destinations to reduce demand and congestion on major thoroughfares
		D	Reduce the length and number of vehicle trips per capita by locating jobs and shopping close to residential areas

	Goal		Policy
3	Improve aesthetics of community gateways and corridors	A	Provide welcoming and positive gateway corridors and entrances into and throughout the city
		B	Provide landscape amenities and open space along the communities corridors
		C	Provide landscaping, shade trees and other aesthetic amenities with visual access to retail businesses along corridors
4	Provide a transportation network that serves automobiles, pedestrians, bicyclists, public transit , and aviation	A	Develop good circulation and drop-off sites for transit services to improve traffic flow within regional commercial corridors and in mixed use centers
		B	Incorporate measures in the design of mixed use centers to slow traffic
		C	Provide parking that does not disrupt pedestrian routes or negatively impact surrounding residential areas
		D	Integrate pedestrian and bicycle facilities with school, open space, recreation, transit, and land development planning
		E	Support the state recommended passenger rail expansion to bring service through Hickory
		F	Promote on-street parking for easy access to stores and sidewalks and to slow roadway traffic
		G	Review road standards with NCDOT to ensure that roadways meet local, regional, and state goals.
		H	Ensure adequate land area is available adjacent to Hickory Regional Airport to support future expansion needs.
5	Consider industrial requirements in transportation decisions	A	Locate industrial land uses in close proximity to highways, major thoroughfares, the airport and rail lines for good access to major transportation systems

# Economic Development

## Introduction

This chapter contains a brief overview of the city's existing conditions and community needs, as well as a goal and policy framework focused on the city's economy and on economic development considerations.

Led by the plan's vision and directives, the goals, policies and programs in this chapter are provided to guide implementation, including City resource allocation and regulatory decision-making.

## Existing Conditions

Traditionally, Hickory's economic development occurred along its rail line. As the city grew and the transportation network expanded, industries naturally followed. Hickory, once highly devoted to the furniture industry, has worked hard to diversify over the last two decades. Historically, a strong entrepreneurial climate has defined the region. However, substantial changes in Hickory's economic profile during the past decade have resulted in an economic shift. While manufacturing remains a large component of the local and regional economy, diversification has taken a larger role, with the growth and expansion of retail and service based industries. In 2014,



Figure 6.1 - Hickory is finding new ways to use its traditional industrial landscape, part of an overall need to restructure the regional and local economy. (Image source: City of Hickory)

manufacturing accounted for 1/3 of the region's GDP, and 20-25% of the jobs within the City.

Hickory currently serves as a trade, manufacturing, distribution, and service center for a multi-county area. While areas of economic development are still focused around the transportation system, some corridors and segments of the city have been largely devoted to regional destinations for commercial and medical needs.

Information from the US Census 2010-2014 American Community Survey (ACS) and from a variety of other local and regional sources help describe economic conditions in the greater Hickory region.

## Setting

As part of North Carolina's eighth largest Metropolitan Statistical Area (MSA), Hickory

is home to a workforce of approximately 168,997 (Western Piedmont Workforce Development Board, Economic Indicators Newsletter, Vol. 19 No 2, Summer 2016). The City's proximity to major transportation routes provides convenient travel and shipping options. Interstate 40 runs east-west through Catawba County, and Interstate 85 is approximately 30 minutes away via US Highway 321. Interstate 77 is also only 30 minutes to the east via Interstate 40. The Norfolk Southern Corporation Railroad runs east to west through central Hickory, with the Caldwell County Railroad connecting from the north near downtown Hickory.

Charlotte (the nation's 17th largest city), Charlotte-Douglas International Airport, and the Appalachian Mountain resort areas of Boone and Blowing Rock are within one hour of Hickory. The City of Asheville is an hour and a half to the west; and Winston-Salem, Greensboro and the Piedmont Triad International Airport are an hour and a half to the east.

## Utilities

The City's water and wastewater systems are operating below capacity, with room for expansion. Recent water studies indicate that the City has sufficient water availability to support forecast population growth and the growth in the business sector. The City's water service area is far larger than the city limits and ETJ, and the city contracts with multiple municipalities in the region.

## Transportation

Hickory is accessible. Interstate 40 and US Highway 70 run east-west through the heart of the city, and US 321 and NC 127 run north-south, providing excellent freight access. The Hickory Regional Airport was designed and constructed to accommodate commercial air traffic and while no commercial service is currently offered, the airports flight control tower is manned 7:00 A.M. to 9:00 P.M. seven days a week and The Hickory "HOP" offers shuttle service between Hickory Regional and Charlotte-Douglas International

airports. Major rail lines also link Hickory to the region and beyond, accessing the community's industrial corridors. Additionally, Greenway Transit has expanded their transit services to Lenoir, Taylorsville, Boone, and Morganton.

## Income and Employment

Hickory's per capita income was estimated to be \$26,145 in 2010; and while per capita income increased to an estimated \$26,190 in 2014, income has not kept pace with inflation. Similarly, median household income grew marginally between 2010 and 2014 increasing from approximately \$37,289 in 2010 to \$42,393 in 2014. Given the estimated modest increase ~~decrease~~ in median income over that period, household purchasing power has not increased significantly. When compared to other geographic areas, household income in Hickory is lagging. Household income in 2014 was more than \$3,000 less than Catawba County levels and more than \$11,000 less than the National average. The average income from Social Security was \$18,216, an important factor given Hickory's aging population.

Based on 2010-2014 American Community Survey data, more than 87 percent of Hickory residents employed were private wage and salary workers. Nearly 9 percent were federal, state, or local government workers, and 4 percent were self-employed. The same ACS data sets show the most common occupations within Hickory as (Figure 6.2):

*Management, professional, and related occupations – 30 percent*

*Sales and office occupations – 25 percent*

*Service occupations – 18 percent*

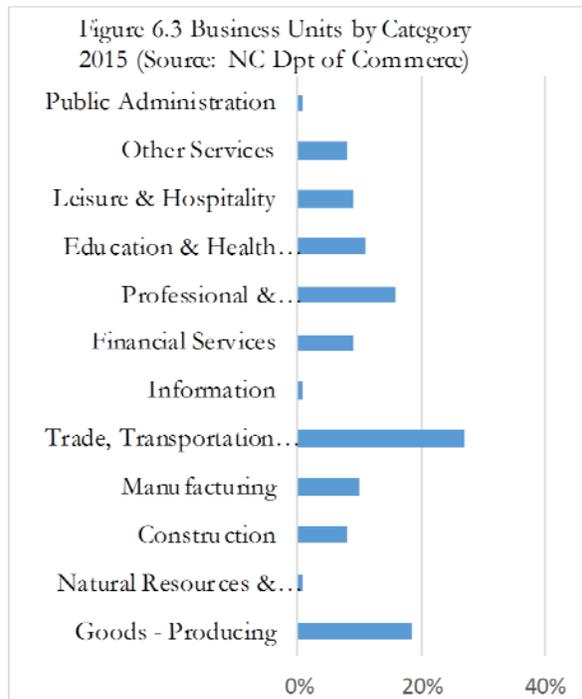
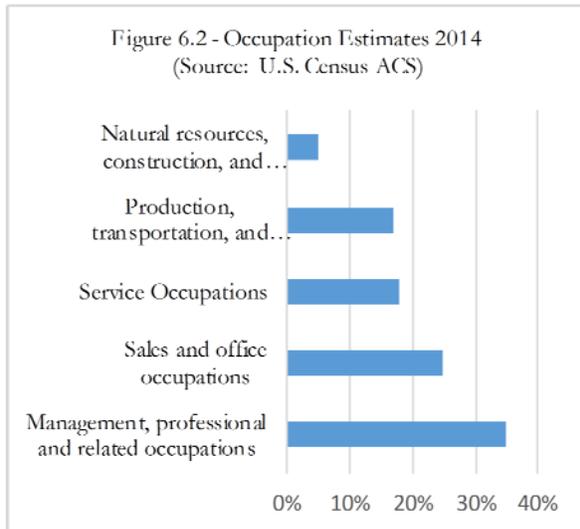
*Production, transportation, and material moving occupations – 17 percent*

*Natural resources, construction, and maintenance operations – 5 percent*

ACS 2010-2014 estimates identify the leading industries in Hickory as: educational services, health care, and social assistance - 21 percent - and

Manufacturing – 21 percent. Manufacturing sectors that call Catawba County home include machining and metalworking, plastics, fiber optic and coaxial cable, and the furniture sector (Figure 6.3).

Tables 6.1 and 6.2 provide context for employers



in the region. Specific data is not available for the City of Hickory, but regional employment provides a representative picture of what types of work is available to Hickory residents.

In Catawba County, unemployment rates have

### 6.3

decreased from 11 percent reported in 2010 to 5.4 percent in 2015. Table 6.4 provides unemployment rate information for all of Catawba County. The decrease in unemployment is a clear indicator of an improving economic situation for the city, county and region. Trends

An earlier study produced the Western Piedmont Council of Governments for the Greater Hickory area provided statistics about the current economic climate in the region. When this study was

Table 6.1— Businesses establishments by size of individual operational unit in Catawba County in 2014 (Source U.S. Census Bureau 2014 Business Patterns)

Employer Size	Number of Employers
Establishments with 1 to 4 Employees	1,915
Establishments with 5 to 9 Employees	807
Establishments with 10 to 19 Employees	546
Establishments with 20 to 49 Employees	446
Establishments with 50 to 99 Employees	170
Establishments with 100 to 249 Employees	97
Establishments with 250 to 499 Employees	27
Establishments with 500 to 999 Employees	12
Establishments with +1,000 Employees	3

produced the region was continuing to experience sharp decreases in employment - with the biggest decrease in manufacturing. Over the 2000 to 2008 period, the Western Piedmont Council of Governments study indicated an employment loss of over 31,000 jobs within the Hickory MSA. However, since this time the economy within the region has begun to rebound. Data obtained from the NC Department of Commerce indicated the region has added approximately 5,500 jobs during the period from 2010—2015.

Unemployment rates within the City of Hickory have been cut in half over the period spanning 2010-2015. The recent recovery gives cause to believe the national economic recovery is also having a positive impact on the City of Hickory and the larger region.

The Hickory MSA has a lower-than-average educational attainment, with the MSA ranked last out of 15 MSAs in the state for high school

Table 6.2 - Top 25 employers in Catawba County - All Industries (as of 4th quarter 2015)(Source: Quarterly Census of Employment and Wages (QCEW) Unit, NC Department of Commerce LEAD)

Employer	Industry	Jobs
Catawba Cnty Schools	Education	1,000+
Catawba Valley Med Cntr	Health Svcs	1000+
Frye Reg'l Medical Center	Health Svcs	1000+
<b>Catawba County</b>	<b>Public Admin</b>	<b>1,000+</b>
<b>Wal-Mart Associates, Inc.</b>	<b>Trade</b>	<b>1,000+</b>
<b>Commscope</b>	<b>Manufacturing</b>	<b>1,000+</b>
<b>Corning Optical</b>	<b>Manufacturing</b>	<b>1,000+</b>
Hickory Springs Mfg. Co	Manufacturing	1,000+
<b>Heritage Home Group</b>	<b>Manufacturing</b>	<b>1,000+</b>
<b>GKN Driveline Newton</b>	Manufacturing	500-999
<b>Century Furniture</b>	<b>Manufacturing</b>	500-999
<b>Catawba Valley Com. Col.</b>	<b>Education</b>	500-999
<b>Ethan Allen retail</b>	<b>Manufacturing</b>	500-999
<b>Apple Computer, Inc</b>	<b>Trade</b>	500-999
<b>Target Stores</b>	<b>Trade</b>	500-999
<b>McCreary Modern</b>	Manufacturing	500-999
<b>Lee Industries</b>	Manufacturing	500-999
<b>Congruity Hr</b>	<b>Professional</b>	500-999
<b>City of Hickory</b>	<b>Public Admin</b>	500-999
<b>Pierre Foods</b>	<b>Manufacturing</b>	500-999
<b>Sherrill Furniture</b>	Manufacturing	500-999
<b>Hickory City Schools</b>	<b>Education</b>	<b>500-999</b>
<b>Cargo Transporters</b>	<b>Transportation</b>	<b>500-999</b>
<b>Sutter Street</b>	<b>Manufacturing</b>	<b>500-999</b>
<b>Bassett Furniture</b>	<b>Manufacturing</b>	<b>500-999</b>

degrees and 14 out of 15 for bachelor's degrees or higher.

The number of people at or below the poverty level decreased by 12.3 percent between 2010 and 2014. In 2014, 18.3 percent of all Hickory residents were living in poverty.

Foreclosure filings within the MSA have decreased by 56%, from 2,205 in 2010 to 970 in 2015. Catawba County has seen a similar pattern of foreclosures, with a 57% decrease, from 974 in 2010 to 410 in 2015.

Table 6.3 - Businesses by category in Catawba County - quarter ending December 31, 2015 (Source: NAICS Employment and Wages, Quarterly Census of Employment and Wages (QCEW) Unit, NC Department of Commerce)

	No. of Business Units
Total all industries	4,311
Goods—Producing	799
Natural resource and mining	24
Construction	353
Manufacturing	422
Trade, transportation & utilities	1,153
Information	46
Financial activities	403
Professional and business services	675
Education and health services	481
Leisure and hospitality	387
Other services	328
Public administration	39

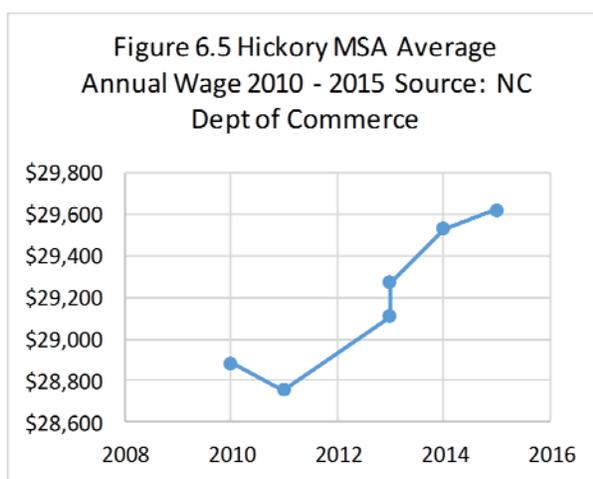
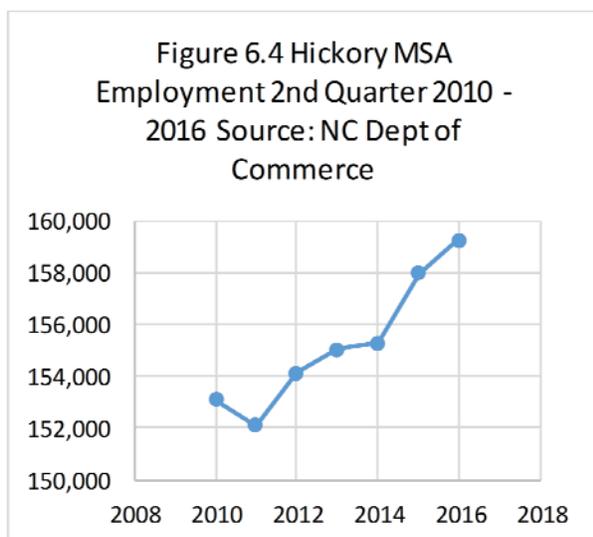
As of June 2016, RealtyTrac found that on average, one in every 1,530 housing units located in Hickory received a foreclosure filing in 2015. County wide this figure is one in every 1,275. Trends indicate foreclosure filings have been on the decrease ~~rise~~ over the past twelve months, RealtyTrac documented the number of foreclosure filings for May 2016 were down 50% compared from the previous month, and down 10% compared with a year ago

## Regional Strengths

In early 2012, the City of Hickory recognized that a plan (Inspiring Spaces) was necessary to economically revitalize the City. The strategy led to the creation of four major projects: Riverwalk, Class A advanced manufacturing park, known as Park 1764, Citywalk, and Streetscapes and Gateways. It was apparent that a substantial amount of money would be necessary to fund such an undertaking, which resulted in a \$40 million bond referendum that allowed Hickory voters to choose how to move forward. One bond order was for \$25 million to cover the costs associated

with street and sidewalk improvements, including enhanced streetscapes and pedestrian access. A second bond order was for \$15 million and was designated for economic development related costs, which encompasses a broad range of public infrastructure intended to enrich the local economy.

An expedited development approvals process is in place to help relocate businesses to Hickory and Catawba County, finding new ways to diversify the regional economic base. With increased focus on non-manufacturing industries, enhanced services to existing industries, proximity to major transportation arteries, and significant recent



announcements, the metropolitan area continues to strengthen its pro-business position.

## 6.5

Table 6.4 - Hickory's civilian labor force unemployment estimates, 2010-2016 (Source: NC Department of Commerce LEAD LAUS)

Year	Annual	January	May
2016		5.4%	4.58%
2015	5.4%		
2014	5.8%		
2013	7.4%		
2012	8.6%		
2011	9.8%		
2010	11%		

Hickory's location at the center of the region's retail shopping, entertainment, healthcare, and cultural life generates \$3.29 billion in annual retail sales (Catawba County EDC / FY 2014-2015). The region has maintained its reputation as a source for fine furniture, with much available in the Hickory Furniture Mart and other retailers.

Education and technical training continues to be a high priority for the Hickory region. Catawba Valley Community College (CVCC) is experiencing record enrollment, and Appalachian State University, Lenoir-Rhyne University and Catawba Valley Community College have become partners to offer quality graduate and undergraduate coursework, non-credit certificate courses, research and specialized workforce training.

The Appalachian State University Greater Hickory Partnership provides the Hickory area with strong economic development opportunities by aiding in recruitment and industry retention while, at the same time, offering students and workers with a unique collaborative learning experience. Other educational initiatives and developments include CVCC's Center for Emerging Manufacturing Solutions, North Carolina Center for Engineering Technologies, Center at Hickory, and Furniture Academy.

Lenoir Rhyne University has also embarked on a major expansion, which will culminate in the launching of a Physician Assistant program, as well as major expansion of the science curriculum at the university.



Figure 6.8 - Even with the downturn in the manufacturing economy as a whole, many of Hickory's furniture manufacturers continue to be competitive. (Image source: City of Hickory)

## Economic Successes

Recent economic successes, as observed by the Catawba County Economic Development Corporation (EDC), for Hickory and Catawba County include the development of the multi-jurisdictional industrial park inside the City of Conover, as well as the initial stages of construction of the 1764 Business Park on Startown Road in southeastern Hickory. Some of the businesses that have entered or expanded in the City of Hickory over the past five years are listed below.

*Bluebloodhound LP (driver/ motor carrier connectors)*

*Cornerstone United (3rd party warranty administrators)*

*Convergys (call center)*

*HSM Solutions (foam and furniture mfg supplies)*

*Corning Optical Communications (fiber optics)*

*Transportation Insight (3rd party logistics)*

*Stewart Superabsorbents (absorbent polymers)*

*Hickory Chair Co. (furniture)*

In addition, CommScope has continued as a mainstay within the fiber optic cable industry. They are listed in the Fortune 1,000, and are approaching Fortune 500 status with the purchase of Andrew Communications.

Further diversification has occurred along the medical corridor (Tate Boulevard) that links Frye Regional Medical Center (Duke LifePoint) and Catawba Valley Medical Center. The following medical related businesses have emerged in the last five years:

*Tate Medical Commons*

*Piedmont Cardiology*

*Moss Medical & Professional Building*

*Northwestern Carolina Oncology*

*Graystone Ophthalmology*

*Chancellor Health Services*

*VA Clinic*

*Piedmont Oncology*

*1900 Tate*

*Catawba Valley Medical Center expansion*

## Need

There is a diverse business community within the City of Hickory that contributes to the economy and the tax base, and the city and region are in the midst of a slow recovery that is and will continue to be a challenge to government and business. The region will need to further strengthen and diversify its job base, and determine how to provide services and amenities that residents and businesses desire.

# Economic Development Programs

The City’s primary economic development goal is to foster economic growth, job creation and quality of life through attracting and retaining diverse business and industry; providing resources to promote small business development; encouraging tourism, and supporting community revitalization. To this end, the City focuses on collaborating with existing and new businesses in the development process. The City also works with outside agencies including the Catawba County Economic Development Corporation, the Catawba County Chamber of Commerce, the Western Piedmont Council of Governments, Duke Energy, the Charlotte Regional Partnership, Advantage West, the Hickory Downtown Development Association, the Hickory-Conover Tourism Development Authority, Greenway Transit, and surrounding local governments to promote balanced growth and job creation.

The City’s economic development programs aim to promote diversified economic development, encourage growth in the property tax base, improve recruitment of business and industry, enhance job creation, and continue to encourage Hickory’s ability to function as the hub of the greater metropolitan area. The following provides an overview of the programs and resources provided by the City of Hickory and its economic development partners.

## Economic (Re)Development Initiatives

The City started an economic development initiative in 2008 called “Operation No-Vacancy” to proactively attract reinvestment in distressed commercial and industrial corridors. To encourage new and existing businesses to locate in vacant and underutilized buildings within six target redevelopment zones, the City has:

*Developed a vacant building inventory tool*

*Designated a commercial revitalization area*

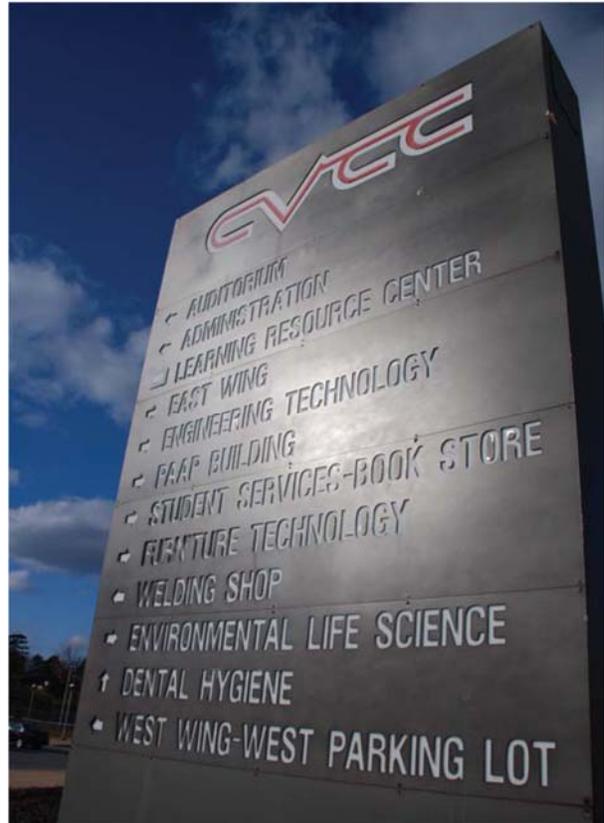


Figure 6.9 - Hickory’s education sector is flourishing. (Image source: Studio Cascade, Inc.)

*Created a vacant building revitalization grant program*

*Unified existing redevelopment programs*

In 2015, the City of Hickory completed the second of two USEPA Brownfield Grants, which assisted in significant redevelopment of idle and underutilized former industrial sites. A few of the success stories assisted by these initiatives include the redevelopment of Hollar Hosiery Mill, Moretz Mills, Piedmont Wagon, and St. Stephens Village. These assessment funds have leveraged over \$60 million dollars in private investment.

In 2015, the city was awarded a \$200,000 Area Wide Planning (AWP) Grant from the USEPA to further the city’s previous efforts. The AWP is currently underway, and is focusing efforts on redevelopment planning in an area of southern Hickory. The planning area contains large portions of the Ridgeview and Green Park neighborhoods, as well as portions of the West Hickory and Kenworth neighborhoods and an area

along the US 70 SW corridor. The City has received \$1,000,000 in total brownfield funds, making it a leader in the southeast.

The City offers a Microenterprise Grant Program through its Community Development Block Grant allocation. This program assists qualifying microenterprises with grants of up to \$4,000 to assist with funding business equipment, inventory, and marketing. The US Department of Housing and Urban Development defines a microenterprise as a business with fewer than five employees, one of whom is the owner of the business. The program is open to business owners with household incomes less than 80 percent of the area median income, which is currently \$41,750 for a family of four.

### **Incentive Programs**

The City of Hickory provides economic development assistance and has developed the Operation No-Vacancy initiative, as revised in October of 2011. Grants are available while the unemployment rate within the MSA is greater than four percent. This assistance is meant to help diversify economic development, promote adaptive reuse of vacant and underutilized buildings, and to support Hickory as the hub of the larger metropolitan area.

Other incentives available for new and expanding businesses have been summarized by the Catawba County Economic Development Corporation, and on the EDC's website ([www.catawbaedc.org](http://www.catawbaedc.org)).

### **Assistance to Business**

North Carolina provides all qualified companies with financial programs and advantages that lower the cost of doing business, thus improving corporate bottom lines.

The NC Department of Commerce administers a number of financial incentive programs geared toward recruiting new business and encouraging the expansion of existing businesses in North Carolina.

### **Incentives to Qualifying Businesses**

Job Development Incentive Grant (JDIG)

The Job Development Investment Grant (JDIG) is

a performance-based, discretionary incentive program administered by the State of North Carolina that provides cash grants directly to new and expanding companies to help offset the cost of locating or expanding a facility. The amount of grant is based on a percentage of the personal income tax withholdings associated with the new jobs.

### **One North Carolina Fund (OneNC)**

The One North Carolina Fund (OneNC) is a discretionary cash-grant program that allows the North Carolina Governor to respond quickly to competitive job-creation projects. The North Carolina Department of Commerce administers OneNC on behalf of the Governor. Awards are based on the number of jobs created, level of investment, location of the project, economic impact of the project and the importance of the project to the state and region.

### **Building Reuse Program**

The Rural Division of the North Carolina Department of Commerce administers the Building Reuse Program. Grants are provided to local governments for two purposes: the renovation of vacant buildings and the renovation or expansion of a building occupied by an existing North Carolina Company wishing to expand in its current location.

### **Industrial Revenue Bonds**

Industrial Revenue Bonds (IRB's) or Industrial Development Bonds may be used by companies engaged in manufacturing for the acquisition of real estate, facility construction, and/or equipment purchase. IRB's fall under three issuance types: Tax Exempt, Taxable, and Pollution Control/Solid Waste Disposal bonds. Regulations governing bond issuance are a combination of Federal regulations and North Carolina statutes. Population determines the amount each state may issue annually.

## The Rail Industrial Access Fund Program

This program provides grant funding to aid in financing the cost of constructing or rehabilitating railroad access tracks required by a new or expanded industry, which will result in a significant number of new jobs or capital investment.

## Plan Concept

The planning process focused on land use and transportation issues, but economic development played an active part in the community discussion. Hickory's economic challenges were a primary reason for this plan's updating, and concerns about the region's future influenced conversations on all elements of the plan.

The community's heightened awareness of Hickory's economic condition, its vulnerabilities and its strengths increased focus on the quality of the community's neighborhoods, the importance of its skilled and educated workforce, and the legacy of industry that can be a springboard into a more prosperous future. It was this context that created the goals and policies included in this chapter.

Hickory is a complex system, with social, economic, cultural and racial diversity growing even greater with time. The complexity of its social makeup underscores the concept that an economic boom in a single sector will not serve the entire community. Economic development policies and strategies must facilitate an economy that is as broad and diverse as the population that make up Hickory, ensuring that a rising tide in the future really does "lift all boats."

Several economic development concepts became favored parts of the discussion, each of which motivated the goals incorporated here.

Hickory, historically was a manufacturing center, and much of the community's prosperity grew from the success of that sector. When that sector faltered, however, the community felt a large

impact. While manufacturing will probably continue to be a significant part of the local and regional economy, Hickory must find ways to diversify its economic base so the community is more resilient to market shifts.

Quality of life is also an important consideration. Residents, particularly those who have the potential to restore, generate and sustain economic vitality in the community, appreciate the environment that Hickory offers. Maintaining a high quality of life will help retain the community's entrepreneurs and businesspeople. Part of that is working to make the community's corridors and commercial districts more attractive and functional.

As part of this, the planning concept also directs investment inward, strengthening infrastructure and utilities within the community's core areas and promoting the development of infill housing, helping Hickory create a more compact and more fiscally-sustainable development pattern. While the community's low-density housing types will certainly continue and be an important component of the town's economic profile, this plan encourages new population to be accommodated in a more land-efficient pattern.

Hickory is a central place for commerce, attracting residents from all over the region to shop, dine, be entertained and work. This is a characteristic that should be retained, and the community recognizes it. Two of this plan's goals target Hickory's regional significance, identifying the need to retain the position of regional commerce center and regional cultural center. Hickory is positioned to serve a wide range of needs, for both its residents and the residents of other areas.

As this most recent economic twist has shown, local provision of higher education is critical. Lenoir-Rhyne University, Appalachian State University Center at Hickory and others have experienced growing enrollment. The community believes that economic prosperity relies on the creation of new markets and innovation in old ones. Having a local, educated population is a key ingredient to both.

# Economic Development Goals

The following goals translate the plan concept into long-range goals for Hickory's economic development programs, which will help the community prosper.

## Goal 1: Grow the economy based on diverse industries and commerce

While Hickory accumulated its wealth based on a manufacturing economy, recent years have shown that a regional economy based on a single economic sector is vulnerable to political and market changes. While manufacturing may remain important, the community should diversify and take advantage of its geographical and economic opportunities.

## Goal 2: Support development of regional commercial centers

Hickory is the center for a large regional population. Residents of Burke, Caldwell, Alexander and Catawba counties consider Hickory the place for shopping and commerce. This is an important element of Hickory's identity, and much of the non-residential investment in Hickory depends on Hickory's position to serve the greater Hickory metro population.

## Goal 3: Support Hickory as the regional center for cultural events

As with its position as a regional center of commerce, Hickory is also a regional center for the arts. This is a cultural component that enriches Hickory's quality of life, but it is also an important economic development component as well. Visitors come to Hickory to shop and to go to school. They also come to Hickory for cultural and artistic engagement.

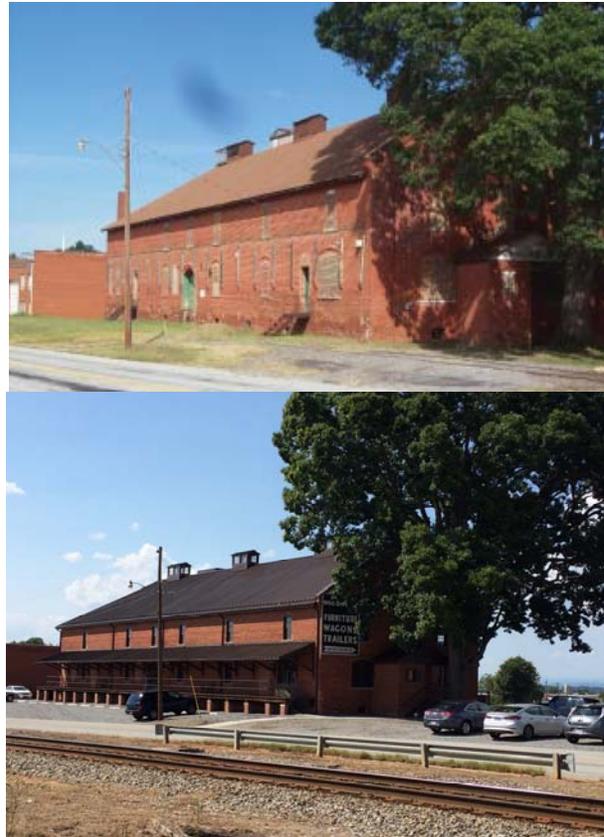


Figure 6.10 - Warehouses along the rail corridor, many of which have become vacant, can present opportunity for revitalization, provided new uses can fit into the older spaces. (Image source: City of Hickory). The former Piedmont Wagon manufacturing facility (pictured above) was redeveloped with the assistance of the City. The newly renovated facility provides office space for a local business.

## Goal 4: Encourage educational achievement

Hickory's shifting economy has attracted more students than ever to its institutions of higher education. Residents wish to remain in Hickory, and they're going to college and technical schools to help them compete for or create jobs in this community. By encouraging local education attainment, Hickory can also encourage local entrepreneurship and an increasingly diverse and resilient local economy.

## Goal 5: Develop Entrepreneurial Initiatives

Facilitate collaboration between the community's institutions of higher learning, local businesses and property owners to establish entrepreneurial initiatives to help start and grow locally-based businesses. These initiatives can take many forms, such as an incubator, with low rents and easy lease terms for small businesses, tuition rebates for business people looking to make that entrepreneurial leap, or advisory boards and committees like the recently formed Business Development Committee.



Figure 6.11 - The City's brownfield assessment work has met with acceptance by local property owners, such as with the Hollar Hosiery site in east Hickory. (Image source: Studio Cascade, Inc., and City of Hickory). The Hollar Hosiery Mill (pictured above) was a former brownfield site, which received assessment funding through the City's brownfield assessment program. The renovated former mill is now occupied by restaurant and retail spaces

	Goal		Policy
1	Grow the economy based on diverse industries and commerce	A	Encourage strategic economic development planning at a regional scale
		B	Promote economic sustainability through a variety of development opportunities for large and small industrial business facilities
		C	Promote existing industrial spaces for reuse and support redevelopment of vacant buildings and remodels
		D	Create a sustainable economic mix of retail, institutional, and service establishments to address city and regional demand
		E	Include a mix of retail and service businesses in mixed use centers
		F	Promote economic development with neighborhood-serving business
		G	Attract grocery stores as new development to anchor and help in the redevelopment of existing commercial/industrial corridors
		H	Support airport planning efforts to develop a strategic and business plan
2	Support development of regional commercial centers	A	Promote a healthy pattern of growth with the downtown as the City's primary center
		B	Locate regional centers where they can serve multiple neighborhoods conveniently
		C	Allow "big-box" stores in regional districts to reduce cross-town travel, provided they use existing buildings or are designed to blend with the surrounding community
		D	Provide internal vehicle circulation and pedestrian circulation to reduce automobile trips within and around regional and highway commercial areas
		E	Limit curb cuts for pedestrian safety and focused access to commercial centers

	Goal		Policy
3	Support Hickory as the regional center for cultural events	A	Support innovative ideas for the expansion of art and culture programs
		B	Encourage the growth of the SALT Block as a regional destination
		C	Support existing cultural activities with advertising and community outreach
		D	Identify areas that can contribute to the expansion or development of events and cultural opportunities
4	Encourage educational achievement	A	Support school district and educational institutions in the expansion of programs
		B	Ensure that educational activities are allowed as a land use throughout the city
		C	Consider life-long learning opportunities in city programming
		D	Collaborate and share facilities for continuing education programs
5	Develop entrepreneurial initiatives	A	Encourage cooperation between the community's institutions to help facilitate small business development and capacity building

# Public Facilities

## Introduction

This chapter contains a brief overview of the City's existing conditions and community needs, as well as a goal and policy framework focused on Hickory's public facilities, including water system, wastewater system, stormwater, libraries, recreation, fire protection, police and other essential services.

Led by the plan's vision and directives, the goals and policies in this chapter are provided to guide implementation, including city resource allocation and regulatory decision-making.

This chapter does not replace current or future departmental planning efforts.

## Existing Conditions

The City of Hickory provides a wide range of municipal public services including but not limited to, water system, wastewater system, stormwater within public rights of way, libraries, recreation, fire protection, and police. Public utilities are provided throughout the City of Hickory and the surrounding unincorporated areas, as well as other municipalities either through ownership or contract arrangements.

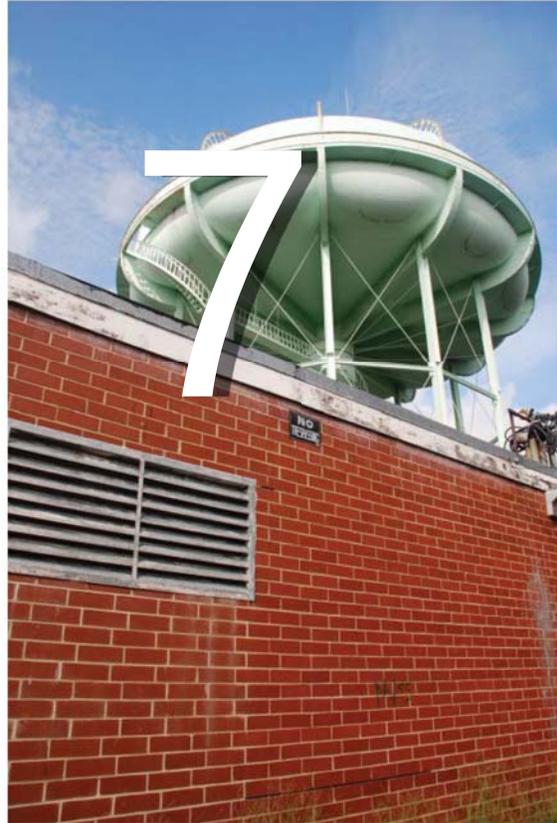


Figure 7.1 - Much of Hickory's infrastructure was developed and designed to serve high-demand industrial clients. (Image source: Studio Cascade, Inc.)

## Water System

### Source

The City of Hickory's water source is Lake Hickory. This source water is projected to meet the needs for customers of the system for current and planned future needs. The average daily withdrawal from this source water is approximately 13 MGD.

Water withdrawn from Lake Hickory undergoes conventional treatment, and finished water is pumped to onsite clear wells for storage before it is distributed to the system. The City of Hickory water treatment facility has approximately 20 hours of finished water storage including onsite clear wells and finished water storage tanks in the distribution system.



Figure 7.2 - The City operates water and wastewater utilities, serving an area much larger than the city limits and extra-territorial jurisdiction. (Image source: City of Hickory.)

The watershed for Lake Hickory is classified as a WS-IV watershed by the NC Department of Environmental Quality. Overall water quality in Lake Hickory is considered good. The 2010 Catawba River Basin Plan listed Lake Hickory with no exceedances and fully supporting.

### Treatment

The City of Hickory’s water treatment plant is a regional water supply facility, providing potable drinking water to three counties and manages three purchased water systems extending from Icard to Claremont and from Northern Alexander County to the Sherrill’s Ford area of Catawba County. Hickory supplies water to the towns of Maiden, Brookford, Catawba, Conover, Claremont, Long View and emergency connections for Mooresville. The City of Hickory water treatment facility has a permitted capacity of 32 MGD. The facility is a conventional treatment process with adequate capacity remaining for current and planned future. The facility is expandable on the same property.

### Distribution

The water distribution system consists of approximately 940 miles of water lines of varying sizes from 2-inch to 36-inch. The customer base of Hickory’s distribution system is approximately 23,293 residential customers and 3,600 commercial

connections for a total of 26,893 direct Hickory customers. The city serves water to other municipalities through master meter arrangements, which provide service to other distribution systems with a multitude of customers. The estimated customer base for the overall combined regional distribution system is 95,000.

### Projections

Population of the service area is predicted to grow over the next 40-year planning period. Table 7.1 shows the projected growth in water service demand for the service area.

### Conservation

The City of Hickory has a water shortage response plan in place, which is enacted during times of drought. The City of Hickory participates in a number of water resource planning groups, which strive to plan for the proper use of water from the basin and explore water use efficiencies to share with customers. The City of Hickory is part of an organization called the Catawba-Wateree Water Management Group, which works cohesively during times of drought to share the resource effectively and manage drought events. This group includes major water providers and Duke Energy.

### Needs

The City of Hickory has aging facilities and infrastructure that is in need of continued maintenance and repair and must continue to plan for growth in the system due to population/ industrial increases. The city has identified the need for additional water storage in the distribution system, continued replacement of aging infrastructure, replacement of water meters to improve efficiency of service delivery and an additional intake site has been purchased for future development.

## Wastewater System

### Wastewater Collection System

The wastewater collection system consists of approximately 500 miles of gravity sanitary sewer

Table 7.1 - Water demand and availability (in millions of gallons per day)  
 (Source: Hickory Local Water Supply Reporting Form, Section 5: System Planning, 2007.)

	2007	2010	2020	2030	2040	2050
Service Area Demand	12.31	12.45	13.65	14.95	16.4	17.99
Sales	5.75	7.8	7.8	9.0	9.0	9.0
Total Demand	18.06	20.25	21.45	23.95	25.4	26.99
Total Supply	32	32	32	32	32	32
Percent Used	56.4%	63.3%	67.0%	74.8%	79.4%	84.3%

lines of varying sizes from 4-inch to 42-inch. The customer base of the collection system is approximately 14,250 customers. The city provides sanitary sewer service to specific areas in the unincorporated areas of Catawba County, Alexander County and the towns of Brookford and Catawba. The predominant sizes of collections system lines are 8-inch and 12-inch, with larger lines acting as trunk sewers to carry flow to the wastewater treatment facilities.

### Treatment

The City of Hickory owns, operates and maintains three municipal wastewater treatment facilities. The Northeast WWTP and the Henry Fork WWTP are both located in the City of Hickory to provide service to customers in the City of Hickory municipal service area. The Hickory-Catawba WWTP is located in the Town of Catawba, and provides wastewater service to the Town of Catawba and Sherrills Ford service areas.

The Northeast WWTP was constructed as a 6 MGD activated sludge facility that is currently at approximately 50% capacity utilization. This facility provides for treatment services to the CBD of Hickory, northeast Hickory, northwest Hickory and Alexander County. This has been upgraded to a Oxidation Ditch facility to improve quality of effluent and operating efficiency; however, no additional treatment capacity was added during the upgrade.

The Henry Fork WWTP is a 9 MGD biological nutrient removal activated sludge facility that is currently at approximately 30% capacity. This facility provides for treatment services to southeast Hickory, southwest Hickory, Town of Long View,

Town of Brookford, Town of Hildebran and a portion of Eastern Burke County.

The Hickory-Catawba WWTP is a 1.5 MGD facility that is currently at approximately 5% capacity. This facility provides for treatment services to the Town of Catawba and the Sherrills Ford area. This facility's recent upgrade and expansion replaced a 50-year-old facility, and allowed for wastewater service provision in the identified growth area of Sherrills Ford and around the Town of Catawba. Catawba County is currently designing and installing sanitary sewer service to specific areas of the unincorporated area to allow for growth.

The City of Hickory is the lead agent for a regional compost facility, which treats bio-solids produced by regional WWTPs. This facility is managed by a consortium of the Cities of Hickory and Conover, and Catawba County. Veolia Water Southwest is the contract operator for this facility.

### Needs

The City of Hickory has a capital replacement plan that provides for the replacement of aging infrastructure as a means of ensuring continuous, reliable service provision, improved efficiency of operation or expansion of capacity to allow for growth. This capital improvement plan is a continuously evolving plan that addresses issues, be they growth or necessity, as appropriate.

### Stormwater

Lake Hickory is the city's source of drinking water, and the lake, creeks and streams leading to it are among Hickory's greatest environmental and



Figure 7.3 - City wastewater capacity far exceeds that required to serve current and expected demand, allowing room for additional growth beyond the current planning period. (Image source: Studio Cascade, Inc.)

recreational resources. Hickory has developed a stormwater management program to help protect and preserve these assets. Stormwater runoff is a concern because of the high concentration of pollutants found in urban discharges.

Development in urbanized areas substantially increases impervious surfaces, such as streets, driveways, parking lots, rooftops and sidewalks - on which pollutants from human activities settle and remain until a storm washes them into nearby storm drains or streams. In addition to its water quality impacts, increased stormwater runoff may also result in significant drainage problems and potentially hazardous flooding.

There are approximately 40,000 municipal separate storm sewer system (MS4) components within Hickory. The storm drainage system is separate from the sanitary sewer system; stormwater runoff

goes directly into nearby streams and lakes untreated.

The City of Hickory has developed an inventory of the MS4 as a part of its National Pollutant Discharge Elimination System (NPDES) Phase II program requirements. The MS4 is generally comprised of drainage inlets along streets, catch basins of varying types and sizes, and pipes that convey runoff from streets and discharge into the receiving waters.

## Need

As is the case with any type of public infrastructure, the MS4 must be maintained, repaired, and replaced over time in order to protect this significant and important public asset. Additional resources should be committed to fund the NPDES Phase II program requirements.

When resources allow, the City should consider development of watershed-based stormwater master plans that would provide for improvements of specific drainage and water quality problem areas, both current and future. Because citizens are often most concerned with the “visible” problems caused by unmanaged stormwater runoff, it is important the city continue to make its citizens and property owners aware of state and federal regulatory requirements, as well as continuing to satisfy needs for other municipal stormwater services.

## Libraries

The Hickory Public Library is a department of the City of Hickory and is governed by the City Council. The City of Hickory provides two public libraries within the community’s service area. These libraries provide important benefits to the community. The main branch, Patrick Beaver Memorial Library, is located at 375 3rd Street NE. The Ridgeview Library branch is located at 706 1st Street SW. Both Hickory libraries are free of charge to residents.

Catawba County Library facilities are also available in or near the city. The Southwest branch is located in the city limits while the St. Stephens

Branch is in the city's extra territorial jurisdiction (ETJ). Other library resources include those located at Catawba Valley Community College as well as the Carl A. Rudisill Library located at Lenoir-Rhyne University.

## Need

While Hickory's libraries are governed by City Council, needs are addressed by an Advisory Board appointed by City Council. Board members serve as the citizens' voice with the library administration and City Council. Library Advisory Board meetings are held monthly in the Patrick Beaver Memorial Library meeting room and are open to the public.

As identified in its strategic plan, the existing Ridgeview Branch Library is proposed to be expanded to provide additional services to the population it serves. The current target date for this expansion is listed as 2018 as the starting point for the consideration of this expansion.

## Recreation and Parks

For information regarding the condition, needs, and plan concept for Hickory's Recreation and Park facilities, please refer to chapter 9 of this document.

## Fire Service

The City of Hickory earned an Insurance Service Organization (ISO) Class 3 as of March 2005 due to a merger of urban and rural areas (Viewmont and Fairbrook). The City of Hickory Fire Department and the Hickory Rural District provide fire protection for a 43 square mile area. The City of Hickory has seven fire stations: Station 1 (Earl G. Moser - Main Station), Station 2 (Highland Station), Station 3 (West Hickory Station), Station 4 (Airport Station), Station 5 (Fairbrook Station), and Station 6 (Viewmont Station) and Station 7 (Larson Moore Station).

The Department has developed a comprehensive five year strategic plan. This plan sets goals for the Department, and also provides for metrics to



Figure 7.4 - Managing storm water is a challenge, particularly ensuring that urban runoff is treated adequately before it is discharged into the Catawba River or other local streams. (Image source: Studio Cascade, Inc.)

measure progress towards its implementation.

The Department is currently working to develop a master plan and develop standards for response and performance as part of national accreditation through the Commission on Fire Accreditation International Center for Public Safety Excellence.

## Need

In order to maintain adequate service to the city, existing facilities and fire hydrant distribution system must match any growth occurring within fire district limits and as the district limits expand. In addition, the Fire Department is seeking national accreditation so they are capable of fully exploring their mission and purpose, which include evaluating organizational goals and reviewing the effectiveness and efficiency of the organization.



Figure 7.5 - The SALT Block, site of the old Hickory High School, houses the community's library, aquarium, arts center and a variety of other arts and culture-related uses. (Image source: Studio Cascade, Inc.)

## Police Service

The City of Hickory's Police Department is a full service municipal police agency with its headquarters located in the downtown area. Since the early 1990s the City of Hickory Police Department has practiced department wide community policing. Through establishing partnerships with the community, the department attempts to address both crime and quality of life issues. The department is made up of three divisions that include Patrol, Criminal Investigations, and Support Services. The department also has several specialized units, such as Community Services, K-9, and Special Operations.

## Need

### Hickory by Choice 2030 Comprehensive Plan

In moving toward a safer community, with an improved quality of life, the department is continuing its efforts to promote prevention through programs like community watch, and the use of techniques such as foot and bicycles patrols. The department will seek to utilize community partnerships to promote citizens and police working together for a safer community.

## Schools

There are four school systems that serve the planning area – Hickory Public Schools, as well as Catawba, Caldwell, and Burke County School Systems. While listed under the Public Services section of this plan, none of the school systems are governed by the City of Hickory.

The Hickory Public School System includes nine schools: two high schools – Hickory High and the Hickory Career Arts Magnet School; two middle schools – Northview and Grandview Middle; and five elementary schools – Jenkins Elementary, Longview Elementary, Oakwood Elementary, Southwest Elementary, and Viewmont Elementary.

The Catawba County School System includes seven school locations within the Hickory area: two high schools - St. Stephens High and Fred T Foard High; one middle school – Arndt Middle; and five elementary schools – Clyde Campbell, Mountain View, St. Stephens, Snow Creek, and Webb A. Murray. The County also offers an Extended Day School in the City of Hickory at CVCC. In addition to the public school system, there are several private schools in the city.

## Colleges

There are two colleges located within the City of Hickory; Catawba Valley Community College (CVCC) and Lenoir-Rhyne University. There is also a collaborative center for higher education including Appalachian State University's North Carolina Center for Engineering Technologies and Appalachian State University's Center at Hickory. The main campus of Catawba Valley Community College is located off Highway 70. Catawba Valley Community College is primarily a technical and

vocational school. Lenoir-Rhyne University, located along 7th Avenue NE, recently expanded their degree offerings and made a change from a private liberal arts college to a university.

An agreement was made between Appalachian State University, Catawba Valley Community College, Caldwell Community College and Technical Institute, and Western Piedmont Community College to facilitate expansion of Appalachian's degree offerings in Hickory and in Caldwell and Burke Counties. The Appalachian State University Greater Hickory Partnership offers the region undergraduate and graduate degree programs, non-credit certificate course, and research and specialized workforce training.

## Gas

Piedmont Natural Gas Company supplies natural gas service to Hickory. It operates and maintains extensive gas transmission and distribution lines within the service area.

## Electrical

Electrical service is provided throughout the City of Hickory by Duke Energy Corporation.

## Hospitals/Medical Facilities

There are two hospitals located in the City of Hickory: Catawba Valley Medical Center (CVMC), a 258-bed regional medical center serving a five-county area, and Frye Regional Medical Center. CVMC is located on Fairgrove Church Road. Frye Regional Medical Center, a 355-bed medical center, is located on North Center Street.

## Plan Concept

The city's public service capacity is sufficient to accommodate the anticipated growth in population over the next 20 years. The challenge will be in bringing those services on line in a manner and on schedule to meet changes in demand as the community's population grows. While this plan

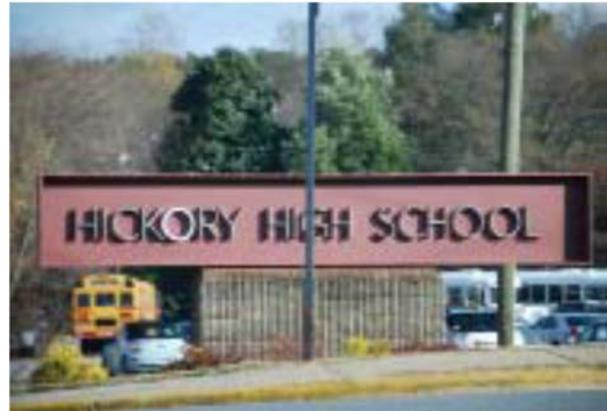


Figure 7.6 - Hickory High School is located in the Viewmont area of town, adjoining what is designated for mixed-use residential and retail development. (Image source: Studio

anticipates what the community's future population may be and where it will be located, it does not necessarily identify which improvements need to be made at what time to address which need. To some extent that determination must be made on a case-by-case basis, evaluating how individual proposals or changes in circumstance will dictate city response. Even so, this plan presents a framework to support shorter term strategic planning and decision-making.

Several priorities have guided the formation of the plan's goals:

### Protect and enhance the quality of life for residents of Hickory.

The ultimate goal for the City of Hickory is to protect and enhance the quality of life of those living in Hickory. Because the type and quality of services provided in urban areas is often associated with quality of life standards, these issues can be addressed by offering quality public safety, recreation and library services, and through the promotion and support of higher education opportunities in addition to other public services, facilities, and utilities.

### Improve and protect the quality of Lake Hickory.

Some of these issues can be addressed by continuing to lead and support the coalition of governments in the Catawba River Basin to protect



Figure 7.7 - Duke Energy currently provides Hickory electrical service, with abundant capacity in the face of the community's decline in manufacturing industry. (Image source: Studio Cascade, Inc.)

Lake Hickory's tributaries. Creating partnerships with other organizations such as the Reese Institute, Covekeepers, WaterWatch, Duke Energy, and the Catawba River Water Management Group to promote policies and practices which protect Lake Hickory and the Catawba River Basin, improve water quality and provide for water supply; and with the continued promotion of the "Your Catawba, Use it Wisely" conservation program. More directly, the city can meet federal stormwater regulations through the adoption and implementation of a stormwater management plan and through the promotion of stormwater best management practices, in addition to supporting Duke Energy's final agreement on the FERC relicensing process.

### **Promote economic growth through the pursuit of quality public services, facilities, and utilities.**

As the city continues to leverage its regional utilities and pursues agreements with new communities, care should be taken to ensure that such actions will encourage orderly growth consistent with the goals and policies identified within this comprehensive plan.

### **Seek additional funds for municipal infrastructure.**

Like many cities, Hickory has aging facilities and infrastructure that are in need of maintenance and repair, as well as areas that need improvement due to growth pressures. Due to limited resources from which local governments can draw for infrastructure needs and funding shortfalls for water, wastewater, and stormwater improvements at the state level, the City of Hickory should continue to support the North Carolina League of Municipalities in their efforts to seek legislation to provide additional funds for municipal infrastructure, including long term, permanent sources of dedicated revenue, additional local option revenue sources, and state bond packages for infrastructure needs.

### **Adopt a Stormwater Management Plan**

The Stormwater Management Program Action Plan was adopted in June, 2007. That action plan made key recommendations for successfully protecting and preserving the natural environment.

The complete action plan provides details on the process and the required steps. For additional stormwater information refer to the 2007 Stormwater Management Program Action Plan.

# Public Facilities Goals

## **Goal 1: Ensure access to safe, high quality and affordable community services, education and health care options**

Hickory's residents, businesses and institutions must be adequately served with the range of public utilities and facilities provided by the City and others. Hickory's primary asset is its quality of life, and maintaining high levels of service is something the community expects.

## **Goal 2: Improve efficiency in resource consumption and service provision**

Increasing population and increasing economic activity demand increased care in the use and management of natural resources. Water availability is finite. If Hickory intends to serve a larger customer base, it will continue to encourage conservation and find efficiencies in how it delivers its utility services.

## **Goal 3: Distribute services and costs equitably**

Infrastructure should be available to support urban levels of development throughout Hickory, and it should be available to support development in those areas of the ETJ targeted for growth. However, its costs should be distributed equitably, ensuring that ratepayers assume a fair share of system costs in proportion to their demand.

## **Goal 4: Encourage service-efficient development**

This plan calls for a more compact development style, reconfiguring Hickory's commercial corridors to emphasize mixed-use commercial centers. By doing this, and by acting to increase overall residential development intensity, Hickory will encourage a land development pattern that is more efficient to serve. By carefully managing Hickory's urban expansion; water, wastewater, parks, transportation and institutional facilities, and

services can operate more efficiently.

## **Goal 5: Improve water quality**

Lake Hickory is impacted by upstream runoff and its water quality is threatened by increasing levels of nutrients. The City can help improve its water quality by enhancing stormwater controls and continuing to collaborate regionally on stormwater management. Hickory's residents expect to be able to enjoy high-quality, available drinking water, and this goal stresses the resource's importance.

## **Goal 6: Improve the water delivery system**

Hickory's water system has been an operating utility for more than a century. While the utility has been working to upgrade its transmission lines, treatment facility and lift stations to repair leaks, upgrade fire flows and improve provision of services, still more work needs to be done to ensure long-term public health and to position the system to continue as a regional water utility.

	Goal		Policy
1	Ensure access to safe, high quality and affordable community services, education and health care options	A	Collaborate with hospitals and other medical facilities
		B	Collaborate on land use decisions for school design and placement, considering walking routes to schools and access to surrounding neighborhoods
		C	Provide adequate law enforcement and promote crime prevention through techniques like the Community Watch Program and PACT program
		D	Improve traffic safety in neighborhoods considering sight distance, on-street parking, pavement markings, and speed limit reduction.
		E	Encourage promotion and education for a safer com-
		F	Develop and implement school-based bicycle and pedestrian safety education programs through the Hickory Police Department
		G	The Hickory Fire Department will be recognized as a progressive organization committed to delivering high quality services to our community, by defending rather than reacting to the future.
2	Improve efficiency in resource consumption and service provision	A	Support increased routes and frequency for public
		B	Provide education for energy efficiency, water conser-
		C	Develop a relationship with public entities, private groups, and associations to provide shared services and facilities, minimizing duplication
3	Distribute services and costs equitably	A	Consider methods to recoup costs - negotiated solutions like development agreements or special districts - based on a development's proportional share of impact to parks, transportation, public safety, and
4	Encourage service-efficient development	A	Effectively use the existing utility systems, prioritizing development with existing utility and services extensions first (infill development)
		B	Prioritize investment for infrastructure, street lighting, and street improvements to centers and corridors

	Goal		Policy
5	Improve water quality	A	Create a stormwater utility to provide maintenance, management, and education on water issues
		B	Coordinate with other municipalities to develop regional water quality programs
		C	Develop standards and best management practices for managing runoff
6	Improve the water delivery system	A	Construct new water supply lines as looped systems to prevent stagnant water conditions
		B	Manage the water delivery system to keep pace with new development and population growth.

# Environment

This chapter contains a brief overview of the city's existing conditions and community needs, as well as a goal and policy framework focused on Hickory's environment, particularly in terms of natural resources and hazardous conditions.

Led by the plan's vision and directives, the goals and policies in this chapter are provided to guide implementation, including City resource allocation and regulatory decision-making.

## Existing Conditions

An overview of natural resource conditions in the Hickory planning area provides one component of the framework for decision-making about future development patterns in the city. Factors such as water quality, air quality, soils, and unique ecological resources should be considered during the planning process.

The few constraints to development in Hickory include topography and flooding. The most significant is topography, which is most pronounced in the northern portion of the city. The effect of steep slopes is evident in the development pattern of the city. Housing in this portion of the city is constructed on varying lot sizes to account for slope conditions. The southern portion of



Figure 8.1 - Lake Hickory is a popular recreational resource, but it is also the source of much of the region's drinking water. (Image source: Studio Cascade, Inc.)

Hickory also has some areas of steep slopes that will affect development patterns and increase construction costs. Flood prone areas are identified along the many drainages of Lake Hickory and the Henry Fork River, and development is regulated along these floodplains by the city's Flood Damage Prevention Ordinance. Wetlands are a constraint to development, however at this time there are few locations where wetlands are known to exist.

## Ecological Resources

The historic development patterns in the northern portions of Hickory have eliminated many opportunities for large-scale conservation of natural resources, although there are numerous parks and trails developed in this area. The southern portion of the city

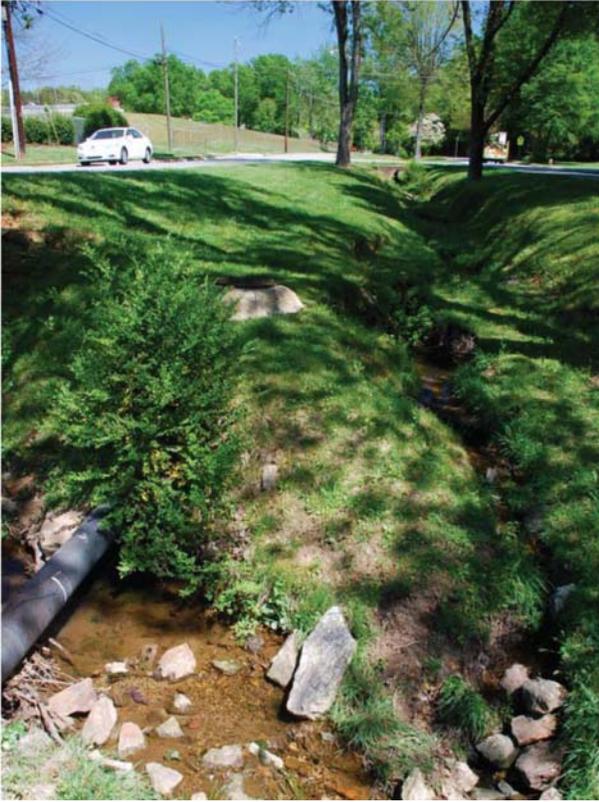


Figure 8.2 - Hickory has a network of small creeks and streams, each contributing to the community's ability to coexist with the area's ecosystems and manage fluctuations in nature. (Image source: Studio Cascade, Inc.)

planning area includes excellent natural resource areas. The Henry Fork, Jacob Fork, and South Fork Catawba River watershed form an interconnected basin for natural resource conservation. Another basin is the Clark Creek watershed. These watersheds include high-quality ecological resources, floodplains, steep slopes and woodlands that could be interconnected to provide a regional environmental and recreational resource.

## Air Quality

In May 1999, the Catawba Air Quality Committee (CAQC) was formed and began meeting on a monthly basis. Catawba County and the City of Hickory took the lead in educating its citizens about air quality. The CAQC was a very active group dedicated to the importance of air quality issues in the county. The CAQC evolved into the Western Piedmont Air Quality Committee (WPAQC) after ten local governments (representing a larger geographical area) in the

region signed the Early Action Compact in December 2002 to address ozone non-attainment. The Western Piedmont Council of Governments (WPCOG) has served as the lead agency for the Western Piedmont Air Quality Committee (WPAQC), working together to address air quality issues and to achieve clean air.

Each local government has either begun working on an air quality plan for their area, or have completed such a plan. Catawba County, Caldwell County and the City of Hickory have taken the lead in preparing air quality plans, and are offering examples to the other local governments. The WPCOG is assisting in plan development and other aspects of air quality planning as needed. These air quality plans are important tools leading to steps reducing ozone production. The plans are geared towards what employers, employees and citizens can do individually to help reduce ozone levels in the air.

A list of 14 control measures were adopted by the WPAQC group to be used as a guide for all participants as ways to reduce ozone production. The list contains strategies adopted by participating members to help guarantee clean air. Hickory adopted an Air Quality Action Plan in 2004.

## Flood Prone Areas

Flood-prone areas expose humans and their possessions to potential harm. The City of Hickory's flood-prone areas are associated with the Catawba River, the Henry Fork River, and their tributaries.

The City of Hickory participates in the National Flood Insurance Program, which includes floodplain management and land use controls within the floodway and floodplain.

Continued growth within flood prone areas could increase the potential for flooding along the city's waterways. Additional development could also add impervious surface in the form of roads, structures and parking lots, thus increasing both the volume and rate of surface water runoff and the potential for flooding.

## Watershed Protection Districts

There are two areas designated as water supply watersheds in Hickory. These areas have two components, “critical areas” and “protected areas.” Requirements differ depending on where in the district a property is located. Critical areas include property adjacent to Lake Hickory west of NC 127, extending approximately one-half mile from the lake at approximately the ridgeline of the watershed. The other areas included are portions of the Hickory Regional Planning Area located in the Jacob’s Fork Water Supply Watershed. Protected areas extend five miles upstream of the critical areas, draining to the portions of Lake Hickory west of NC 127 or to the ridgeline of the watershed, whichever comes first, and also includes portions of the Hickory Regional Planning Area in the Jacobs Fork Water Supply Watershed.

A minimum 100-foot vegetative buffer is required for all new high-density development activities and a minimum 30-foot vegetative buffer is required for all new low-density development activities along all indicated perennial waters within the Watershed Protection District. New development is not permitted within the buffer except for artificial stream bank or shoreline stabilization, water dependent structures and public or private projects such as road crossings or greenways when no practical alternatives exist. Buffer area activity should limit impervious areas, direct runoff away from surface waters and maximize best management practices.

## Henry River Conservation District

The Henry River Conservation district attempts to limit the impact of development to the Henry River and its perennial and intermittent streams. The focus is on impacts including increased storm water runoff from development, altered hydrographic conditions, nutrient loading and pesticide contamination from point and non-point sources.

The district is generally bounded by the City’s municipal boundary line on the north, US 321 on the west, Sandy Ford Road on the south, and

Startown Road on the east. Land within this area must be annexed into the city, and be subject to the Henry River Conservation District regulations to receive sanitary sewer service.

Techniques to minimize impacts include the requirement of low-impact development standards in combination with traditional stormwater control for control of post development increase in stormwater. Water quality management plans and a two-tier buffer area are also required for all new development, along with protection of flood plains.

## Open Space

Open Space is a way to conserve natural areas within a growing urban area, while at the same time providing for outdoor recreation opportunities. These opportunities could include activities such as walking, cycling, hiking, picnicking, camping, hunting and fishing. In addition to conservation of existing natural areas, rehabilitation of existing man-made areas can be undertaken to provide open space. These open spaces provide a type of “oasis” in areas where development may not be so attractive, such as vacant lots, abandoned rail lines, easements for sewers or power lines. Some options for open space creation and protection include cluster development and conservation easements.

The City of Hickory adopted a Sidewalk and Bikeway Master Plan in March 1997. The plan identified 75 miles of sidewalks, 1.5 miles of bikeways, and five miles of walking tracks and unpaved trails in City parks.

In September 2000, the City adopted a Sidewalk, Bikeway, Greenway and Trail Master Plan. The plan provides overall guidance for policy and program development for improving access and mobility for pedestrians and bicyclists. In 2005, the City of Hickory amended its 2000 Sidewalk, Bikeway, Greenway and Trail Master Plan to further expand its existing and proposed greenways and to add facilities defined as urban trails.

Consistent with the plan's goals and objectives, the Master Plan identifies a network of 137 miles of sidewalks, 132 miles of bikeways, 8.8 miles of greenways and .34 miles of separate trails. Design guidelines to assist in the implementation of the network are also included in the plan. It also addresses initiatives to develop new sidewalks, bicycle routes, greenways and trails connecting parks, schools, cultural facilities and shopping centers. Finally, the plan proposes initiatives related to facility maintenance, bicycle usage, enforcement and education programs.

The 2005 update of the greenway component of the Master Plan identifies 21 specific greenways and urban trails, which collectively total 48.39 miles. The implementation of the plan is divided into three time periods. According to the plan, short-range projects should be implemented within the first 12 years of the plan, medium-range projects have a 12-20 year implementation period, and long-range projects have a horizon period of over 20 years.

## Soils

There are four soil associations in the City of Hickory. Each soil association consists of several soil types and is a unique landscape unit within the city. Site-specific developments should be based on more detailed studies of soil properties at individual sites. The soil associations for the city are briefly described below:

Cecil Association - These soils are predominately found on broad ridge-tops and short side-slopes. These soils are well-drained and range from gently sloping to moderately steep. Locations of this association in the city occur primarily throughout the northeast. Slope is the main limitation to development on these soils.

Hiwassee-Cecil Association - Soils in this association are found on fairly broad ridge-tops and short side-slopes. These soils are well drained and range from gently sloping to moderately steep. This association in the city occurs along and just south of US Highway 70, beginning near the Catawba Valley Community College area,

extending to the east, and after the City limits, extends to the northeast. Slope is the main limitation to development on these soils.

Pacolet-Cecil Association - This association is generally found on long, narrow, winding ridge-tops and long side-slopes. These soils are well-drained and range from gently sloping to steep, mainly gravelly soils. Locations of this association in the city occur along steeper terrain surrounding Lake Hickory, through the eastern side of downtown, around the airport area, and to the area just south of downtown Hickory. Slope is the main limitation to development on these soils.

Madison-Cecil Association - Fairly narrow ridge-tops and long side-slopes are where the soils in this association are typically found. These soils are well-drained, and range from gently sloping to moderately steep, mainly gravelly soils. This association in the city occurs in the area between US 321 and I-40, and again around the Town of Brookford. Slope is the main limitation to development on these soils.

## Scenic Views

Scenic views of the Blue Ridge Mountains including Grandfather Mountain, Table Rock, Hawks Bill and Lake Hickory exist in several locations around Hickory and in a few locations within downtown Hickory. Natural areas that have potential scenic views occur in several areas along the Henry Fork River.

## Wetlands

Wetlands are found in depressions, along drainages leading to Lake Hickory, and drainages in the southern portion of the city such as the Henry Fork River, where they are subjected to periodic flooding. A number of larger forested wetlands are located just south of I-40, west of the US 321 interchange. Wetlands are important year-round habitats for hundreds of bird species, amphibians, reptiles, and mammals, especially in warmer climates. Additionally, many upland animal species depend on wetlands for water and food. The local

council of governments maintains mapping on major wetland areas in the city.

Wetlands provide many services to the community. They act as a sponge in collecting water and then slowly releasing that water. This minimizes flooding and erosion downstream. Stored water is filtered as it is slowly released back into the system. Sediment drops out of the water and helps naturally clean pollution, toxins and nutrients from the water system.

## Tree Preservation

The City of Hickory has had a “Tree City” designation for the last four years and has planted over 2,500 trees on public property in the past 12 years. The City works with the Community Appearance Commission to give out tree seedlings on Arbor Day each year (over 2,000). The City has also started the Treasured Trees Program, and has developed a web-based application to get citizens to nominate their trees as “treasured trees” to bring about awareness that mature trees are a treasure to our community. Currently, mandatory tree preservation in new subdivisions is not required.

### Tree Canopy Study

A tree canopy study was conducted in 2006 with a NC Urban Forestry Grant. City staff completed a canopy study for the city limits of Hickory using 2005 aerial photography, providing baseline data for that year. This allows the City to measure changes in Hickory’s tree canopy.

The study discussed the canopy as part of the city’s green infrastructure and the reasons for a tree canopy and the guidelines for canopy tree cover (stormwater erosion, air and water quality, energy conservation, wildlife habitat, etc.).

The study used a mapping process, using City Green Software, which calculated percentage of canopy, impervious surface, open space areas, and estimates a dollar value for the City’s trees.

Under the guidelines for tree canopy cover, Hickory’s canopy is considered urban residential,

with 32% tree canopy for the entire City. Considering open space and canopy, about 25% of all areas are impervious surfaces. The downtown tree canopy totals 6.2%, because of impervious surface with some open space. Tree canopy percentages for neighborhood developments in Hickory include Kenworth – 36.9%; Falling Creek 1 – 36.2%; Falling Creek 2 – 30%; Moore’s Ferry – 23%; Meadow Creek – 23%; Hunter’s Run – 19.6%; Grayfield – 36.4%, and Brookfield – 32%. A change in the City’s subdivision ordinance in 1987-88 provided for larger amounts of open space to be preserved in these areas.

The 2005 tree canopy data also gives the city a benchmark in comparing new aerial photography with land uses, and identifying where additional tree cover is needed.

## Plan Concept

“Sustainability” that promotes inclusiveness, involvement, and collaboration is a key component in Hickory’s environmental policy. Policies in this chapter reaffirm the city’s commitment to providing a full range of urban development, while at the same time being mindful of the natural resources upon which the community depends and the public safety risks of locating development in environmentally hazardous areas. With this in mind, the community focused on the following directives for environment-related policy.

### **Conserve natural resources and open space of local and regional significance.**

Hickory has developed a large portion of land in its northwest, and its northeast is actively being developed, minimizing opportunities for conservation of any large tracts of land that may be home to significant natural resources. The portion of the city south of the I-40/U.S. 70 corridor still provides excellent opportunities for open space/natural resource conservation.

The Henry Fork River watershed offers an opportunity for Hickory to be a leader in the

region for conservation of open space and natural resources, without precluding development. These watersheds include natural features that could be linked into a continuous ribbon of open space, protecting important plant species, providing wildlife corridors, preventing erosion of soils from development on steep slopes, and minimizing flood hazards.

### **Protect air and water quality.**

Air and water quality are important criteria for maintaining a high quality of life. The Hickory region was previously in non-attainment status for PM 2.5, but has since emerged from non-attainment, and is now considered by the USEPA to be a period of maintenance. PM 2.5 refers to particulate emissions where particles have a diameter of 2.5 microns (one-millionth of a meter) or less. PM 2.5 comes from a wide variety of stationary, mobile, and natural sources. Industrial sector growth and population increase will result in increases in pollutant emissions from both industry and automobiles.

Natural resource and open space conservation can aid in environmental protection. Open space conservation, particularly along waterways, provides additional time for surface water runoff to percolate into the ground, reduces the speed of surface water flow, filters pollutants, and cools the temperature of the water in streams. These advantages improve water quality, help limit flooding, and enhance riparian habitat. Large tracts of open space and consistent tree cover throughout the city would help filter air pollutants and help to cool the city during hot summer months.

### **Further develop recreational facilities and public access to recreational/natural resources.**

Open space and natural resources are an important aspect of a high quality of life. As mentioned previously, the city has numerous opportunities for open space/natural resource conservation and should continue to plan for the development of parks and recreation facilities. Two of the most significant recreational and natural resources are

Lake Hickory and the watersheds in the southern portion of the city. It is important to provide access to these resources in a manner that does not degrade their qualities.

### **Emphasize open space/greenway conservation**

Hickory is blessed with natural beauty. Large areas of natural open space are no longer in abundance in the city; however, there are opportunities for conservation of valuable resources, particularly along waterways and drainages. Establishment of conservation greenways along waterways and drainages could provide natural resource and water quality protection and floodplain management. Because land along the Henry Fork River, its tributaries and other watersheds in the southern portion of Hickory are not intensely developed, a conservation greenway could protect wetlands and wildlife habitat in these watersheds. Combining greenways with a comprehensive sidewalk and bikeway system can also provide pedestrian movement for both recreation, as well as, providing access from residential areas to cultural, commercial, recreational, and public facilities.

Greenways utilized for pedestrian circulation and recreation can incorporate linkages to the city sidewalk network to create a comprehensive pedestrian circulation system throughout Hickory. This comprehensive pedestrian circulation system could also provide needed access to parks and open spaces in the community, particularly in residential neighborhoods. The greenway planning process is not much different than land use planning. The main differences are site specific data are required on a smaller scale than for citywide land use planning. Public participation is vital in the greenway planning process particularly for communities that are leery of greenways or have not been exposed to the benefits of greenways.

Greenway planning has been included in Hickory's Sidewalk, Bikeway, Greenway, and Trails Master Plan. The plan can also be incorporated into the city's Parks and Recreation Plan, as both active and passive recreation opportunities. The greenway plan should also be incorporated into a storm

water management plan. The most logical coordination of planning efforts would be continuing efforts to combine greenways planning with regional open space planning.

## Employ conservation subdivision design

Open spaces can also be preserved in residential neighborhoods. These neighborhood open spaces could be used to provide visual relief, protect wetlands, wildlife, wood lots, or steep slopes and provide opportunities to experience nature with just a short walk from home. New subdivision design and development in watershed protection areas in Hickory should utilize conservation subdivision principles when appropriate to conserve open space. Conservation subdivision design principles which were synthesized by the Natural Lands Trust in the book *Conservation Design for Subdivisions*, is essentially a four-step process that is briefly outlined in the following text. The design process should occur in the following order:

*Identification of Potential Conservation Areas. This step identifies lands that should not be developed including historic resources, flood plains, wetlands, steep slopes, and significant wildlife and plant habitat.*

*Locate development sites. Utilizing the conservation areas as a starting point, the housing sites can be located on the site in a manner that maximizes views, connectivity, and minimize environmental impacts.*

*Design Street Alignments and Trails. This phase identifies the most appropriate alignment for roads that provide connectivity within the subdivision, as well as, connectivity with surrounding development. This phase of the design will also take into consideration the potential for pedestrian connectivity with greenway trails, sidewalks, and bikeways outside the development.*

*Subdivision of the property into individual lots. This final phase is simply drawing lot lines delineating individual building parcels.*

A regional open space initiative could provide the necessary open space to conserve and protect

important plant and wildlife habitat and corridors in all or portions of Catawba, Burke, Caldwell, and Alexander Counties. Currently the Western Piedmont Council of Governments is working with the public on a Regional Trails and Open Spaces Plan. Open space planning at the regional level will require political support from all communities in the region. The process will also require public participation at a regional scale to aid in identifying the priorities and criteria for open space conservation. In addition to the requirements for regional support by political entities and the public, an open space plan should at a minimum include:

*Identification of lands that pose hazards (flood plains, airports);*

*Significant natural resources (areas of high biological integrity);*

*Wildlife movement corridors;*

*Areas already designated as recreational resources or areas with potential for active or passive recreation and;*

*Implementation measures and funding sources.*

An additional benefit of open space conservation is stormwater management. Open space interspersed with clustered residential developments would help reduce flooding potential in that neighborhood and downstream by reducing the amount of impervious surface in the watershed. Drainages should be left in their natural state as much as possible with only minimal channelization or piping of the waterway. Roadways in areas where open space and natural drainages are conserved could provide drainage swales instead of curb and gutters to allow time for stormwater to percolate into the soil. This would also slow the speed of the surface water runoff prior to reaching the natural drainage way.

Passive parks/open spaces should be utilized to protect valuable natural and scenic resources on both neighborhood and regional scales. In addition to these potential neighborhood open spaces and parks, Hickory's Parks and Recreation Department has identified a number of new neighborhood park

locations for the northeast and southern portions of the city.

## Environmental Goals

The following goals translate the environmental plan concept into the language of the comprehensive plan, providing footing for the policies listed in the table at the end of this chapter.

### Goal 1: Conserve open space and natural resource areas

There must be a balance between what is developed and what is left undeveloped. This will help maintain equilibrium in the community's natural systems, ensuring that there is adequate open space to help manage surface water runoff, and that there remains adequate habitat to help minimize impact to the area's ecosystems. Similarly, locating development away from areas of steep slopes, wetlands, frequently-flooded areas, or geological hazards simply makes sense, allowing Hickory residents and businesses to live, work and play safely.

### Goal 2: Reduce per capita waste production

Solid waste disposal remains a challenge to urban populations, and Hickory should institute strategies to minimize its waste generation and demand on landfill space. Programs to divert recyclables from the waste stream and to encourage reuse can have significant impact both on direct reduction in demand and on heightened community awareness of the solid waste issue.

### Goal 3: Support environmentally-based businesses

Part of Hickory's economic restructuring may involve "green" industry, applying the region's manufacturing infrastructure to produce goods and services that enhance quality of life while reducing global environmental impact. The City should consider these new industries as more than just an environmental trend and participate in nurturing them and encouraging their growth into a mature industrial segment.

### Goal 4: Minimize environmental impacts of development

When considering development applications, Hickory should be aware of likely environmental impact, both on the area's ecosystems and on the quality of life for those surrounding the proposed development project. Impacts to be considered would include air quality, water quality, habitat, light, noise, traffic, and historic and cultural resources.

### Goal 5: Promote the utilization of Low Impact Design (LID) standards

Low Impact Design (LID) has numerous benefits and advantages over conventional stormwater management approaches. This approach is more environmentally sound, and a more economically sustainable approach to addressing the adverse impacts of urbanization. By managing runoff close to its source through intelligent site design, LID can enhance the local environment, protect public health, and improve community livability, all while saving developers and the city money. Efforts should be made to promote the use of LID techniques through development incentives, such as increased project densities.

	Goal		Policy
1	Conserve open space and natural resource areas	A	Develop mechanisms to conserve and create open space using development incentives, conservation easements, conservation overlay districts and land conservation and donation programs
		B	Improve mechanisms for conservation subdivision development in lower density areas and in areas that have open space or natural resource lands
		C	Encourage clustering of homes in close proximity to higher density residential areas
		D	Encourage decision-makers to develop mixed-use public open spaces with tree canopy and other green infrastructure to preserve ecological functions and create connected green corridors
		E	Implement the proposed greenway trail system and identify new opportunities to provide connections between parks and other open spaces
2	Reduce per capita waste production	A	Encourage recycling, waste reduction, reuse and resource conservation
		B	Lead by example with an action plan for becoming a more efficient city
3	Support environmentally-based industries and businesses	A	Consider incentives for redevelopment of vacant structures with the intent to minimize further environmental impacts from contaminated sites
		B	Provide incentives for green building

	Goal		Policy
4 & 5	Minimize environmental impacts of development and Promote the utilization of Low Impact Design Standards	A	Ensure that no impacts to environmentally sensitive areas occur with new development
		B	Consider managing development of land along stream edges to improve water quality.
		C	Support a storm water management system to decrease water-borne contaminants
		D	Consider alternative forms of storm water retention, like filtered swales, green roofs, and rainwater collection for irrigation to protect surface water
		E	Promote the utilization of Low Impact Design (LID) and similar techniques.

# Recreation & Parks

## 9



Figure 9.1 - Hickory's LP Frans baseball stadium is home to the Hickory Crawdads. (Image source: Studio Cascade, Inc.)

## Introduction

This chapter contains a brief overview of the city's existing conditions and community needs, as well as a goal and policy framework focused on the city's recreation and parks considerations.

Led by the plan's vision and directives, the goals, policies and programs in this chapter are provided to guide implementation, including city resource allocation and regulatory decision-making.

## Existing Conditions

The City of Hickory provides city residents and visitors with parks and recreation services. Currently the city operates and maintains 23 parks consisting of over 428 acres, 6 recreation centers and 2 senior citizens centers in addition to the operation of the L.P. Frans Baseball Stadium.

The city maintains and operates the park facilities shown in Table 9.1.

From its inception, Hickory established a focus on quality of life, recreation and leisure pursuits. First established as an industrial town, the community has continued to capitalize on its parks, recreational facilities and proximity to forested landscapes.

In addition to Hickory's parks and recreation facilities, Catawba County maintains several parks including: River Bend, a 450-acre regional park; St. Stephens Park, formerly a part of the Hickory school system; and Bakers Mountain, which has the highest elevation in the county. Catawba County also shares with its neighboring Counties five reservoirs along the Catawba River – Lake James, with 6,812 acres and 144 miles of shoreline, Lake Rhodhiss, with 3,060 acres and 93 miles of shoreline, Lake Hickory, with 4,100 acres and 105 miles of shoreline; Lake Lookout Shoals with 1,270 acres and 39 miles of shoreline; and Lake Norman with 32,510 acres and 520 miles of shoreline.

For the purposes of this chapter, it's important to note that Hickory's parks and recreation system is augmented by multiple private and institutional recreation facilities, including:

*Hickory Motor Speedway*

Table 9.1 - Existing Parks Facilities

Park	Acres	Function
Civitan	7.5	Neighborhood
Cliff Teague	8.1	Neighborhood
Bruce Meisner	73.3	Undeveloped
Fairbrook Optimist	6.7	Neighborhood
Rotary—Geitner	96.0	Regional
Henry Fork River Regional Recreation	45.0	Regional
Hickory Optimist	6.0	Neighborhood
Hickory City	15.0	Neighborhood
Highland	2.0	Civic Park / Gardens
Hilton	70.5	Open Space, Passive Uses, City-Wide
Jaycee Park	5.0	Neighborhood
Kiwanis	16.0	Community
Lowe's Foods Community	0.42	Community
McComb	2.5	Civic Park / Garden
Neill Clark	22.7	Community
Robinson	1.5	Civic Park / Garden
Sally M. Fox / Ivey Arboretum	4.6	Civic Park / Garden
Shuford Gardens	0.9	Civic Park / Garden
Sandy Pines	13.0	Undeveloped
Viewmont	0.3	Civic Park / Garden
Southside Heights	12.7	Neighborhood
Stanford	37.0	Community
Taft Broome	9.6	Neighborhood
West Hickory	5.6	Neighborhood
Westmont Center	3.0	Neighborhood
Winkler	50.0	Regional
Total	514.92	

*Lenoir-Rhyne University*

*Catawba Valley Community College*

*Hickory Foundation YMCA*

*Catawba Springs and Hampton Heights Golf Courses*

*Lake Hickory Country Club*

*The SALT Block and its multiple facilities*



Figure 9.2 - The SALT Block, former site of Hickory High School, houses the art museum, symphony, library and science center, among other things. (Image source: Studio Cascade, Inc.)

These private and institutional facilities do not appear in the City's inventory, but do help address the community's recreational demand. They provide, for a fee in many cases, recreational outlets that fall outside the scope of the City's Parks and Recreation Department.

For more information about parks and recreation in Hickory please refer to the City's Parks and Recreation Master Plan (Gardner Gidley & Associates, February, 1997), the Sidewalk, Bikeway, Greenway, and Trail Master Plan (Hickory Regional Planning Commission; Hickory Recreation Commission, updated February, 2005), the Cloninger Mill Park Master Plan (accepted by Hickory City Council and Hickory Parks and Recreation Commission March, 2009), Parks and Recreation Needs Assessment (May 2010), Cloninger Mill Park Master Plan (Bruce Meisner Park, February 2016).



Figure 9.3 - Hickory's open spaces, hardwood forests and creeks provide beautiful backdrops for recreation activity. (Image source: Studio Cascade, Inc.)

## Needs

At the present time, Hickory's existing recreation system is well positioned to meet current and future needs. As the population continues to grow, the anticipation of future needs will result in the extension of recreation services to new areas and improvements to the existing recreation system to bring it up to contemporary standards.

## Plan Concept

The complete Parks and Recreation Master Plan updated by Gardner Gidley & Associates in 1997, builds upon their 1979 study of the park and recreation needs of Hickory. Standards and principles recommended in the previous study have served the City well. Actions recommended in the 1979 study have largely been completed, and with minor changes, continue to form the basis of recommendations in the current study.

Most of the standards recommended in the 1997 plan update relate to population. Since 1979, Hickory's population has grown to over 40,000 which is 8,000 residents short of the 1997 plan projections for the year 2020. The complete Parks and Recreation Master Plan update identifies recreation needs and makes specific development program recommendations for three time frames: immediate, intermediate, and long-range. The 1997 report used local and national recreation preferences and needs to establish space and facility standards for recreation and parks in Hickory. Key recommendations of the 1997 plan include: the quality of recreation sites and their development, the adequacy of space and facilities, and the optimum use of both public and private resources.

Since the completion of the Parks and Recreation Master Plan update in 1997, the Bruce Meisner Park Master Plan has been completed. The Master Plan identifies walking trails, a mountain bike course, picnic shelters, a disc golf course, an outdoor education classroom, playgrounds, overlooks, and a water fall. An update to the master plan was accepted by the Hickory City Council with a recommendation from the Hickory Parks & Recreation Commission in February 2016.

The city's Parks and Recreation Department has also entered into a partnership with Greater Hickory Tennis Association (GHTA) to provide for improvements to Hickory City Park. The Hickory City Park's main amenity are tennis courts that are open to the public. The partnership between the city and the GHTA provides for an expanded parking area, as well as a new building that will house a meeting room, restrooms, and a picnic area.

The Parks and Recreation Department completed a needs assessment in May 2010 that prioritizes facility and park development according to nationally recognized standards. Please refer to the Parks and Recreation Needs Assessment for more detailed information. The document has a twenty year time horizon.

At least two core philosophies guide the City's parks planning policy.

## Neighborhoods

Hickory has a long commitment to providing convenient recreation opportunities to residents of all its neighborhoods. The 1997 park plan affirmed that commitment, and the city continues to increase and enhance its parks facilities and recreation programs. Underpinning this philosophy is the understanding that parks facilities and greenways contribute to both the functional characteristics and aesthetic characteristics of neighborhoods. They help neighborhoods act as community gathering places, getting residents out of their homes and meeting each other in public open spaces. They also make neighborhoods more attractive and valuable, presenting a very public statement of the community's investment in local quality of life. Placing a park in a neighborhood presents opportunities for the community's families and individuals to enjoy public space together, to share stories and to build relationships.

The neighborhood park is but one type of park the City provides. It also provides community and regional park facilities, supporting recreation at a variety of scales for a variety of audiences. While some who are involved in specific athletic activities, such as baseball or soccer, may desire additional fields, the overall makeup of athletic facilities is more than adequate for a city of Hickory's size.

## Sustainability

Fiscal balance, sensitivity to environmental context and an awareness of important community needs underpin virtually all of what the Parks and Recreation Department does. The department's management philosophy is to ensure that it maintains fiscal solvency, provides a high level of community service and protects Hickory's natural environment for the enjoyment of present and future generations.



Figure 9.4 - Active recreation facilities in neighborhood parks are an important component of Hickory's park offerings. (Image source: City of Hickory)

## Parks and Recreation Goals

Parks and recreation goals and policies from the 1997 plan are carried forward in this comprehensive plan, confirming the city's commitment to providing a system of parks and greenways and a range of recreation programs that respond to community needs. It calls for developing and maintaining neighborhood parks, developing and enhancing a system of greenway trails, collaborating with Catawba County and adjoining municipalities and ensuring that all neighborhoods have access to recreational opportunities.

### Goal 1: Expand recreation facility offerings and public access to recreation and resource areas

The City has a commitment to enhancing its recreational offerings, and this goal emphasizes the importance of continually improving the community's recreational experience. It also emphasizes the city's commitment to provide access to its open spaces, for both active and passive recreation.

## **Goal 2: Distribute recreational opportunities equitably**

While the city recognizes the need to enhance its overall recreational offerings, it is particularly sensitive to the needs of the neighborhoods and the desire for all Hickory residents to enjoy access to recreational facilities, regardless of socio-economic status.

## **Goal 3: Provide options for all ages and for active and passive uses**

This goal underscores Hickory's commitment to design its recreational facilities to address the breadth of community demand. Young and old, athletes and non-athletes, all should be able to enjoy Hickory's recreational spaces and satisfy their leisure needs.

## **Goal 4: Coordinate offerings with other recreation providers**

There are multiple providers of recreational facilities and services in and around Hickory. Not all users of Hickory's recreational resources are Hickory residents, and not all recreational resources used by Hickory residents are owned and operated by the City of Hickory. This goal recognizes that providing comprehensive recreational access relies on partnerships, either formal or informal, and that the city should collaborate with other recreation providers to ensure its citizens are served.

## **Goal 5: Promote and provide walking and cycling opportunities throughout the City**

Recreation involves more than just parks, golf courses, and gymnasiums. Many Hickory residents recreate by walking and bicycling. This goal recognizes what is a popular community pastime and directs the City to meet the needs of pedestrians and cyclists.

## **Goal 6: Collaborate regionally for improved arts and culture programs**

Hickory is a regional center for arts and culture which provides for leisure pursuits, and educational opportunities. Hickory's arts and cultural assets attract a wide variety of visitors. This goal builds on that regional position, seeking to enhance the community's arts and culture programs by emphasizing collaboration with regional jurisdictions and those who sponsor arts and cultural activities.

	Goal		Policy
1	Expand recreation facility offerings and public access to recreation and resource areas	A	Plan and design facilities and programs to take full advantage of all existing resources, both natural and man-made
		B	Develop neighborhood parks and open spaces in northeast Hickory
		C	Improve public access to Lake Hickory
		D	Provide a variety of land and water areas adequate in size and strategic in location for both active and passive leisure pursuits and for visual enhancement and conservation
		E	Establish appropriate levels of local funding sufficient to match other sources of funds; and sustain a program of land acquisition, facility construction and program administration
2	Distribute recreational opportunities equitably	A	Distribute and locate recreation areas and facilities equitably and conveniently throughout the City to provide recreational opportunities for all
		B	Adopt the standards recommended in the Parks and Recreation Plan, as updated, as minimums for: publicly-owned acreage for recreation and open space; convenient and equitable site location; and facilities for indoor and outdoor recreation programs
		C	Prioritize park and recreation development based on the amount of benefit a project provides to the community
3	Provide options for all ages and for active and passive uses	A	Provide diverse facilities and programs to meet the basic needs of children, teenagers and adults.
		B	Continue to provide police enforcement for public parks and facilities
		C	Maintain all recreation areas and facilities to their appropriate design standards

	Goal		Policy
4	Coordinate offerings with other recreation providers	A	Continue to coordinate a long range open space initiative with state and local governments and civic organizations
		B	Offer programs, services and facilities which complement and supplement those provided by other public and private agencies
5	Promote and provide walking and cycling opportunities throughout the City	A	Provide sidewalks and direct access to mixed use centers from residential areas
		B	Implement and update greenway, trails, and sidewalk planning efforts as indicated in the Sidewalk, Bikeway, Greenway and Trail Master Plan amended in February 2005
		C	Provide walking and biking trails for community wellness and fitness options
		D	Sponsor promotions, events, and activities that encourage bicycling and walking
6	Collaborate regionally for improved arts and culture programs	A	Create partnerships that expand the resources available for municipal programs focused on public art, preservation, and beautification
		B	Partner with other communities for increased access to park and recreation facilities

# Historic and Cultural Preservation

## Introduction

This chapter contains a brief overview of the city's existing conditions and community needs, as well as, a goal and policy framework focused on land use considerations.

Led by the plan's vision and directives, the goals, policies and programs in this chapter are provided to guide implementation, including city resource allocation and regulatory decision-making.

## Historical Background

The City of Hickory can trace its roots back as early as the 1850s, when it was established as a small trading center along the Western North Carolina Railroad. The establishment of the furniture-making, hosiery, textile industries from the 1880s to 1900s led to Hickory's first significant growth phase, including the development of Hickory's oldest neighborhoods, the downtown area, and the establishment of the present-day Lenoir-Rhyne University. Post World War I, the city experienced another increase in development and population growth. During this period, urban core neighborhoods, such as Kenworth and Green Park began to take shape, and the municipalities of Highland and West Hickory were incorporated into the city limits. After World War II, Hickory experienced an additional growth phase, which led to the creation of neighborhoods like Forest Hills and Lakeland Park. When growth slowed in the



Figure 10.1 (Image source: Studio Cascade, Inc.)

1970s and 1980s, urban renewal led to the unfortunate destruction of many old buildings, some of which could have been saved. Today, the City of Hickory seeks to preserve its historical past, while planning for the future. In order to carry out these efforts, City Council established the Hickory Historic Preservation Commission.

## Hickory Historic Preservation Commission

The City of Hickory's historic preservation programs began in the 1970s with the establishment of the Historic Properties Commission in March of 1978. Upon its creation, this group took to completing an inventory of historic properties in Hickory. This work was completed in 1980 by consultant F. Bogue Wallin. This survey project identified a number of properties potentially eligible for listing on the National Register of Historic Places. This survey led to the designation of the majority of the city's local historic landmark properties. In the mid-1980s, the city also formed a Historic Districts

Commission and designated three local historic districts: Claremont, Kenworth, and Oakwood, which are composed of primarily residential properties. The Commission's Design Review Guidelines went into effect in 1989.

In 1994, the Historic Properties Commission and Historic Districts Commission were re-established and combined into the current Historic Preservation Commission. The commission is made up of a licensed architect, two representatives from the building trades, three owners of historic properties, and three at-large appointees. The commission also has a representative from the Hickory Youth Council who serves as a non-voting advisory member. The purpose of the Historic Preservation Commission is to safeguard the heritage of the city by preserving properties, which embody important elements of its cultural, social, economic, political, or architectural history.

## Historic Designation Programs

For the purposes of this plan, historic preservation will focus on the built environment. Historically designated property can be recognized individually or as a group known as a district. Additionally, there are two levels of recognition that historic properties may receive: local and/or national. Stakeholders in historic preservation must understand these differences.

*Local Historic Districts* are established by City Council and are a form of zoning that provides controls on the changes to the exterior of existing buildings and the construction of new buildings within the district. The Local Historic Overlay Zoning District protects neighborhoods from changes that are incongruous with the special character of the district. These changes must receive a Certificate of Appropriateness through the City of Hickory Planning and Development Services Department or Hickory Historic Preservation Commission, depending on the level of change proposed.

The National Register of Historic Places maintains a nationwide list of historic districts, landmarks, and objects worthy of preservation. *National Register Historic Districts* are a portion of this list and are

primarily an honorary designation. No additional requirements are placed upon owners of property in a National Register district, provided they are using private funds. Contributing structures listed in a National Register Historic District may qualify for tax credits established by the federal government and State of North Carolina for expenses related to preserving the property.

## Existing Historic Districts

There are four existing National Register Historic Districts within the City of Hickory. They are: Claremont High School, Kenworth, Oakwood, and Southwest Downtown. Additionally, there are three existing Local Historic Districts within the City of Hickory. They include Claremont, Kenworth, and Oakwood. These districts are illustrated on Figure 10.2.

### Claremont

The Claremont High School Historic District neighborhood is located within the shadows of the Catawba Valley Arts & Science Center (former Claremont Female College and later Claremont Central High School). The Claremont Female College stood at the corner of 3<sup>rd</sup> Avenue NE and 3<sup>rd</sup> Street NE from 1883 to 1916, and provided instruction in the classics, art, and music for the young women of Hickory. Upon the closing of the female college in 1916, the way was cleared for the opening of a new public high school in 1925. The high school served as the center of educational and cultural activities for the city for many years. Another gathering place for local residents was Carolina Park (now Sally Fox Park). The seven acre Ivey Arboretum was known for its healing mineral springs by local residents and tourists alike. The park was purchased by the city in 1904 and with the help of the Hickory Civic League became the city's first large park in 1909.

The Claremont Historic District is dominated by Queen Anne Style Structures, including the two finest examples of this style in Hickory. Examples of Bungalows, Colonial Revival, and Tudor Revival are also scattered throughout the district. The large

building lots and grid pattern streets are similar to those in the Oakwood Historic District. Claremont, like Oakwood, has been and is still home to families that have played a vital role in the development of the City of Hickory.

The Claremont neighborhood has been designated as a National Register Historic District, as well as, a Local Historic District in order to protect it from the effects of modernization.

## Kenworth

The Kenworth Historic District neighborhood is located in Southeast Hickory. This neighborhood has the largest and most intact group of Bungalow style homes in Hickory. The Kenworth neighborhood was Hickory's first planned subdivision. It was planned by Charlotte Civil and Landscape Engineers, Holmes Blair, Brent Drane, and Wilbur W. Smith and platted in 1913. These same individuals were instrumental in the development of the Dilworth subdivision in Charlotte. The major characteristics of this area are the similarity in the type of structures, the location of the structures on small building lots, and use of like building materials. The historic district also includes Hickory's second graded school and a neighborhood church. The Kenworth neighborhood was the first of several planned subdivisions in the City of Hickory and as such has been designated a National Register and Local Historic District.

## Oakwood

The Oakwood Historic District neighborhood is located in Northwest Hickory. Its development began in the 1880s and 1890s as prominent Hickory businessmen and professionals built fine homes using the latest architectural styles in an area away from the busy downtown. This area of sizeable building lots is characterized by its examples of Queen Anne, Shingle, Colonial Revival, Spanish Mission Revival, Tudor Revival and Bungalow Style homes. As you travel along its tree lined, grid pattern streets you notice the similarities of these structures in relation to the distance they are setback from the street, the dominance of 2-story structures

and the location of the porte-cocheres and garages in the back or side yards. The Oakwood neighborhood has served a vital role in the development of Hickory as prominent Hickory citizens such as state senators, mayors, doctors, lawyers and business leaders lived there. This neighborhood has been designated as a National Register Historic District and a Local Historic District in order to preserve its distinctive character, architecture, and associations with the city's historical development.

## Southwest Downtown

The Southwest Historic District is located on five city blocks in the southwest quadrant of Hickory near the city's center and is bordered by the railroad to the north. The district contains historic buildings that reflect the commercial and governmental development of Hickory. The area transformed into a busy commercial and industrial center during the early 20th century. The Harper Motor Company, Southern Railroad Passenger Depot, United States Post Office, Abernathy Livery Stable, and the Armory are the principal structures in the district. The Southwest Downtown District has been designated a National Register Historic District, but is not a Local Historic District at this time.

## Potential National Register Historic Districts and Listings

In 2014, the City of Hickory received a grant from the North Carolina State Historic Preservation Office to update the city's existing architectural survey records and to record additional undocumented properties and neighborhoods constructed prior to 1970. This new survey was completed in October 2015 and the architectural historian identified the following residential neighborhoods as having the potential to become National Register Historic Districts based on initial findings: an expansion of the current Oakwood district, as well as, new districts for the Hillcrest and Timberlane Terrace neighborhoods. The State

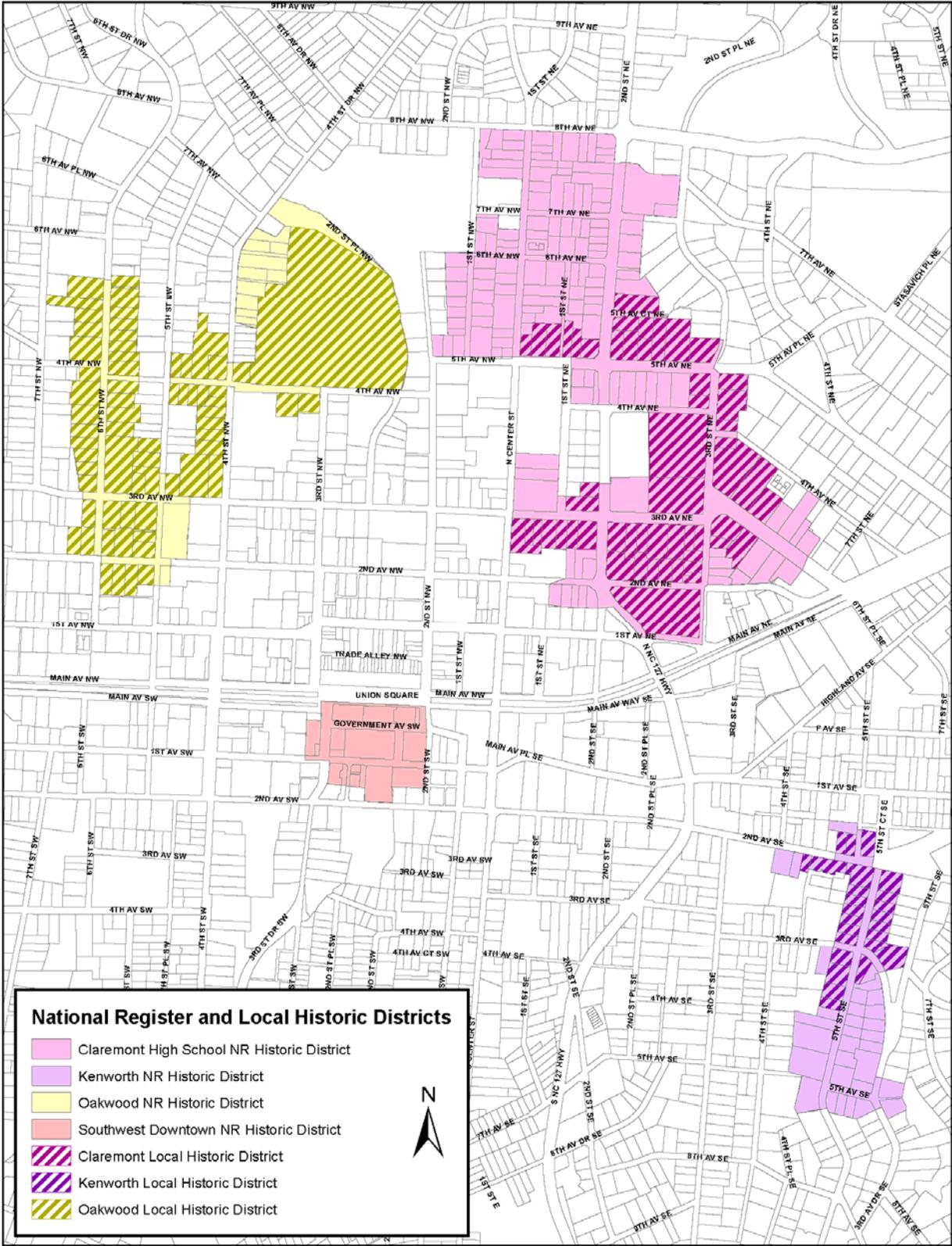


Figure 10.2 Map of Hickory's National Register and Local Historic Districts

Historic Preservation Office has since added the three neighborhoods to the state’s “study list,” which functions as an early review for National Register eligibility. Further review and community support would be needed before a nomination to the National Register could occur. Figure 10.3 illustrates the existing and potential National Register Historic Districts in Hickory.

## Oakwood District Expansion

As mentioned previously, the Oakwood neighborhood is located within Northwest Hickory and is one of Hickory’s oldest neighborhoods that has a history of being associated with prominent Hickory citizens. The oldest section of Oakwood is already listed as a National Register District, however past and current findings indicate an expansion of the Oakwood district is possible.

## Hillcrest District

The Hillcrest neighborhood is located in Northwest Hickory. The neighborhood was platted in 1940 on land west of the Oakwood neighborhood and north of 3<sup>rd</sup> Avenue Drive NW. Hillcrest presents a cohesive collection of residential architecture dating from the 1940s through the early 1970s. Specifically, numerous examples of Colonial Revival and Ranch residences, as well as, some Period Cottage, Minimal Traditional, Split Level, and Modernist houses can be found within the neighborhood. Some quality examples of Frank Lloyd Wright influenced housing exist among the Modernist homes. According to Clay Griffith, an architectural historian, these findings indicate Hillcrest has strong potential to garner a nomination to become a National Register Historic District.

## Timberlane Terrace District

The Timberlane Terrace (also known as Fox Circle) neighborhood is located within Northwest Hickory. The neighborhood was originally platted in 1946 and consists of approximately 20 houses that were designed and built by the M. G. Crouch Lumber Company in the 1950s. The houses are typically late -period Colonial Revival and Ranch house

variations. According to the architectural historian Clay Griffith, these findings indicate Timberlane Terrace has the potential to garner a nomination to become a National Register Historic District.

## Individual Listings

Historic properties are not limited solely to historic districts and are able to be individually listed. There are currently 18 individually listed historic properties within Hickory and the architectural historian documented approximately 125 stand-alone properties as part of the 2015 survey update. Many of these newly documented properties were commercial and industrial in nature. Property owners of potential individual listings would need to conduct further research on their own to garner a nomination to the National Register.

## Issues and Needs

Preserving the rich history of Hickory’s built environment has and will continue to be an important challenge to address as the pressures of economics, growth, and time itself result in the erosion of city’s physical heritage in favor of new, inexpensive construction that often lacks character.

## Fragility and Costs of Historic Structures

As time continues to pass, maintaining buildings that are over 50 years in age becomes challenging. High costs to maintain or repair historic structures can limit a property owner’s ability to address a pressing issue, which can result in neglect. Additionally, historically incorporated architectural features such as cornices, wood siding, copper gutters, and slate roofs can add to the costs of renovation and preservation.

## Inappropriate Infill Development and Existing Juxtaposition

Although residential growth around Hickory has slowed significantly in recent years due to the

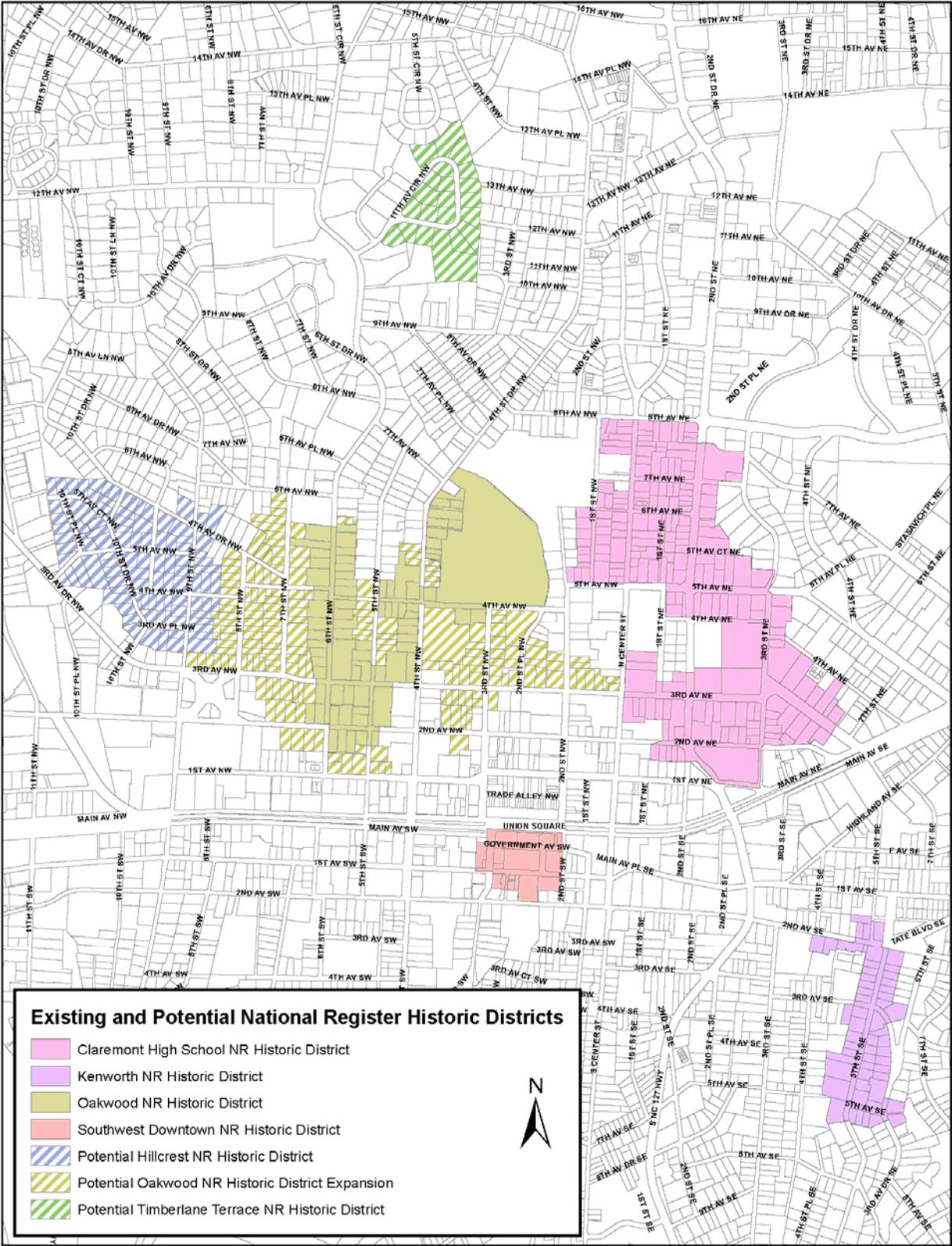


Figure 10.3 Map of Hickory's Existing and Potential National Register Historic Districts

economic downturn, there has been an uptick in the development of multi-family housing. This is particularly concerning amongst some of the potential historic districts, as these areas may be zoned to permit multi-family development by-right. The modern design of duplexes and multi-family housing often lacks the fitting character of the historic area. Additionally, certain commercial and institutional uses near historic areas create a juxtaposition with older single-family residential.

## Marketing of Historic and Cultural Resources

Marketing of historic and cultural assets adds to local economic development and tourism efforts, while also increasing civic pride. Coordination and knowledge sharing between historic societies, economic developers, tourism promoters, and the City of Hickory is necessary to strengthen these efforts.

## Awareness of Historic Preservation Regulations and Benefits

Public education and awareness regarding the meaning of National Register and local historic designations are an ongoing challenge. Property owners and potential property buyers may not realize the tax credit opportunities available for contributing properties listed on the National Register of Historic Places. Additionally, property owners making changes to the properties that are locally designated may not realize these changes need to obtain a Certificate of Appropriateness. Changes made without approval are subject to enforcement actions and remedies can be costly for inadvertent violators.

## Plan Concept

The need for historic preservation in Hickory arose in response to urban renewal, which led to the destruction of buildings that were culturally and architecturally significant. Addressing the aforementioned existing conditions and issues are

necessary to creating a successful and effective plan.

## Promote Hickory's Heritage

Historic preservation is directly linked to promoting Hickory's development history and local customs. Strengthening these efforts enhances the sense of community among residents.

## Encourage Sustainable Development Patterns

Rehabilitation of historic structures for new occupancies is one of the most sustainable construction practices available. Reusing the existing infrastructure reduces waste from demolition and does not require as much materials as new construction would. Additionally, the original architectural details are often saved and restored during rehabilitation keeping the building's character alive.

## Promote Economic Development and Tourism

Successful rehabilitation of historic properties eliminates derelict properties and the problems associated with them, while adding back to the tax base. These properties are also examples of revitalization efforts of Hickory itself, which add to the marketing and branding efforts undertaken by the City of Hickory and its counterparts.

## Promote Pedestrian Friendly Neighborhoods and Mixed Use Centers

The existing and potential historic districts in Hickory are examples of pedestrian friendly development. Houses with front porches, short building setbacks, active sidewalks, and mature street trees are common sights in these areas.

# Historic Preservation Goals

The following goals translate the historic preservation plan concept into the language of the comprehensive plan.

## Goal 1: Continue Involvement in Historic Preservation

The City of Hickory needs an engaged and well informed Historic Preservation Commission in order to be effective in carrying out this plan's goals and policies. New members should demonstrate significant interest in the work the Commission carries out. All members should strive to attend at least one training workshop a year. Additionally, the Commission should maintain its Certified Local Government status, which requires a certain amount of training for Commissioners and staff. In addition to training, the Commission should work to promote the importance of historic preservation within the community. These efforts should be supported and funded by City Council.

## Goal 2: Enhance Regulatory and Incentive Tools

The City of Hickory currently uses a historic zoning overlay to enforce regulations related to locally designated properties and districts. Properties within this overlay must go through Certificate of Appropriateness approval. A neighborhood preservation zoning overlay has also been implemented for older neighborhoods near the urban core of Hickory. The purpose of this overlay is to ensure infill development is compatible within these neighborhoods through enhanced dimensional regulations. Historic and potentially historic areas should be encouraged to support these regulatory tools as a way to ensure development compatibility. New regulatory tools should be explored by the City of Hickory, as permitted by the North Carolina General Assembly. Financial incentives are also a tool to encourage preservation efforts and infill compatibility. The City of Hickory should continue to support North Carolina's use of historic tax credits to entice developers to redevelop historic

structures in disrepair over demolition. Local financial incentives such as grants through nonprofits and the City of Hickory should also be evaluated.

## Goal 3: Improve Coordination among Stakeholders

The Hickory Historic Preservation Commission is fortunate to already have working relationships with the Hickory Landmarks Society and the Historical Association of Catawba County. The Commission should ensure these nonprofits are supported when possible and are consulted on preservation issues. Neighborhood property owners and recognized neighborhood associations are also key stakeholders that should be involved in preservation planning. Specifically, neighborhood associations and the Hickory Landmarks Society should be informed of proposed development projects, zoning changes, and demolition requests within or nearby the historic areas. The Hickory Code Enforcement Unit of the Hickory Police Department is also an important stakeholder in preservation efforts. The Code Enforcement Unit is responsible for stabilizing derelict properties and demolishing them if necessary. Ensuring potential historic properties have an opportunity to be saved, rather than demolished is an important goal of preservation. Derelict properties that are locally designated must obtain a Certificate of Appropriateness to be demolished, and may be legally delayed up to one year prior to demolition to attempt to find an alternative to the demolition. Ensuring Code Enforcement is aware of which properties are deemed historic and potentially historic is necessary to achieve this goal.

## Goal 4: Sustain and Enhance Historic and Cultural Resources

There are currently four National Register Historic Districts and three Local Historic Districts within Hickory, most of which were established in the 1980s. Additionally, there are multiple individual listings on the National Register of Historic Places and 15 Local Historic Landmarks. Continuing to maintain the integrity of these properties is a top priority of preservation in Hickory. Periodically reviewing historic districts for expansion and

evaluating the feasibility of new historic districts is one objective to meeting this goal. The survey update finalized in October 2015 represents one of the first steps in this process. Another method of sustaining historic resources is promoting policies that favor rehabilitation over demolition.

### **Goal 5: Market Historic and Cultural Assets**

Highlighting the connections of historic preservation to economic redevelopment and city branding can bring positive attention to Hickory's historic preservation efforts. In the past few years, there have been multiple examples of historic tax credits used to redevelop neglected industrial buildings into successful commercial venues. Hickory has and should continue to take advantage of marketing these sites as part of the Hickory's historic heritage. Other marketing efforts of existing sites and districts has been ongoing. The recent installation of street sign toppers around the historic districts and the release of the downtown walking tour phone app are examples. Further improvements of these efforts should be undertaken. Implementing wayfinding signage and adding more tours and features to the app will increase visibility and usage.

	Goal		Policy
1	Continue Involvement in Historic Preservation	A	Recruit and retain engaged citizens for the Hickory Historic Preservation Commission
		B	Ensure the Hickory Historic Preservation Commission membership attends regular training and education sessions
		C	Continue to maintain the Hickory Historic Preservation Commission's Certified Local Government (CLG) status and pursue funding opportunities through the CLG program to support historic preservation activities
		D	Promote the importance of historic preservation within Hickory through a variety of public outreach methods
2	Enhance Regulatory and Incentive Tools	A	Continue to utilize zoning as an effective regulatory tool to protect and preserve historical areas. Strengthen the Neighborhood Preservation Zoning Overlay District as allowed by North Carolina statute. Consider expanding the Neighborhood Preservation and Historic Zoning Overlay Districts to new areas if community support exists
		B	Promote the historic tax credit program funded by the State of North Carolina to developers and property owners. Support the program's continued funding and expansion
		C	Evaluate the effectiveness of existing financial incentives offered at the local level for historic preservation needs
		D	Revise and update the design review guidelines on an annual basis
		E	Work to lower the fees of a Certificate of Appropriateness application for a major work item to ensure costs are not unreasonable and do not deter an application
		F	Add new features to the Commission's website that create easier access to information, regulations, and upcoming meetings, trainings, and events

3	Improve Coordination Among Stakeholders	A	Strengthen relationships with local preservation nonprofits and groups like the Hickory Landmarks Society and the Historical Association of Catawba County to further mutual goals
		B	Reach out to neighborhood associations and Hickory Landmarks Society during Certificate of Appropriateness petitions and district expansions
		C	Develop a working relationship with the Code Enforcement Unit to ensure historic and potentially historic properties have an opportunity to be saved from demolition, if the property is subject to enforcement action
		D	Ensure the local MLS system has all historically designated properties tagged and Realtors have access to information to inform potential homebuyers about what the designations mean
4	Sustain and Enhance Historic and Cultural Resources	A	Promote the rehabilitation of historically designated properties over demolition
		B	Expand historic districts, individual listings, and landmarks to new properties that have been identified as worthy of preservation
		C	Encourage National Register nominations that involve underrepresented demographic groups
		D	Continue partnering with the Hickory Landmarks Society on the plaque program
		E	Host training and educational opportunities for preservation professionals and interested citizens
5	Market Historic and Cultural Assets	A	Highlight and share successful preservation work through press releases, newsletters, annual reports, and other outlets
		B	Maintain and improve signage of historic districts and local historic landmarks
		C	Incorporate historic and cultural assets into the city's wayfinding and signage program
		D	Expand the smartphone walking tour application to include more tours and other points of interest to increase usage
		E	Ensure all audiences are all targeted during marketing and awareness activities

# Community Health

## Introduction

This chapter provides an overview of the City of Hickory's efforts to improve public health in the community. The current fields of urban planning and public health can each trace their roots to the urban problems of the nineteenth century's developing cities. As the fields became more specialized, they grew apart during much of the twentieth century. However in the new millennium, social science researchers, public health professionals, and urban planners have become more aware of the effects of the built environment on public health outcomes.

For example, the Office of Disease Prevention and Health Promotion (part of the US Department of Health and Human Services) has developed the Social Determinants of Health model. This model recognizes that the physical and social environments in which people live can have an effect on their health. (See [healthypeople.gov](http://healthypeople.gov) for more information.) Often these differences are the result of access to recreational opportunities, pedestrian infrastructure, and healthy foods. This plan seeks to improve community health by reducing barriers to making the healthy choice.

Nearly all of the chapters in this plan have some effect on community health. The Land Use chapter describes the mixing of land uses to encourage pedestrian activity and reduce



Figure 11.1 - The City recently used Community Development Block Grant funds to construct an outdoor gym at Optimist Park in the Green Park Neighborhood.

automobile trips. The Environment chapter encourages actions to improve air and water quality to help reduce the negative impacts of pollution. The Parks and Recreation chapter discusses improved access to parks and recreational opportunities. The Hickory by Choice 2030 document as a whole seeks to be consistent in its promotion of community health in all of the plan's policies.

This chapter will focus on the three issues identified in the 2015 Catawba County Community Health Assessment: Physical Activity, Nutrition, and Chronic Disease. Every four years, Catawba County Public Health conducts the Community Health Assessment through extensive community engagement. This process includes reviewing secondary health statistics, conducting surveys, meetings, presentations, and with numerous agencies and groups involved with community health. The document provides an extensive overview of the existing conditions in the area relative to community health.

# Existing Conditions

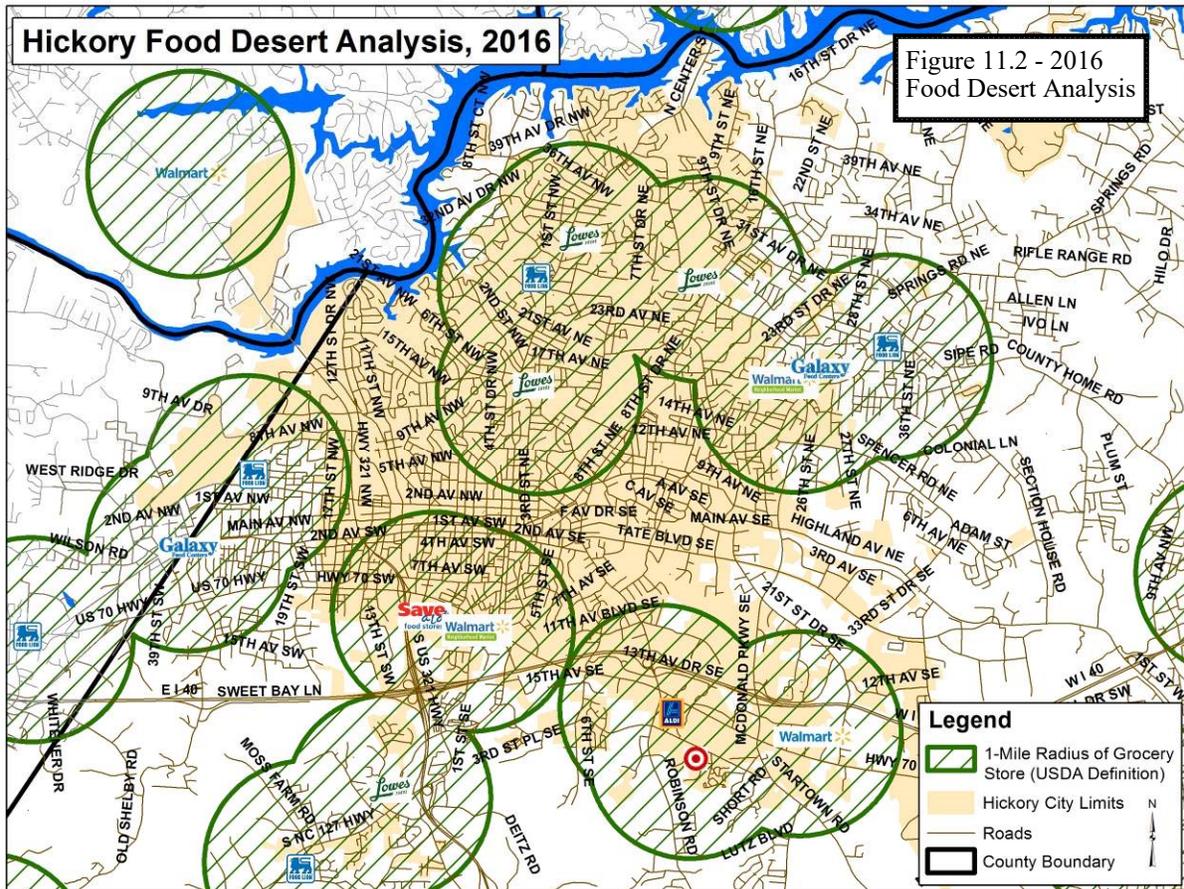
The Catawba County 2015 Community Health Assessment identified physical activity, nutrition, and chronic disease as the area’s three highest priority community needs. Lack of physical activity and poor nutrition are causes of a number of chronic diseases. According to the Community Health Assessment, lack of physical activity and poor nutrition are together considered the second leading preventable cause of death in North Carolina. Regular physical activity helps maintain a healthy weight and reduces the risks of numerous chronic diseases including heart disease, diabetes, colon cancer, and osteoporosis.

One of the ways to promote physical activity is through walking. Walkability is a challenge in Hickory, as the City has largely developed in a

suburban development pattern with non-connected subdivisions and commercial strip development along arterial roads. Older neighborhoods in closer proximity to the historic downtown are generally more walkable than those neighborhoods located further from the City Center. However, many of these older neighborhoods still have significant gaps in sidewalks that make walking for exercise difficult. According to data from the 2015 Community Health Assessment, only about 50 percent of adults in the Northwest AHEC Region, which includes Catawba County and the City of Hickory meet the recommendations for physical activity. This is slightly higher than the state average but significantly less than the 60.6 percent goal found in the NC Division of Public Health’s Healthy NC 2020 Plan.

## Food access

The US Department of Agriculture defines a food desert as a low income census tract where a



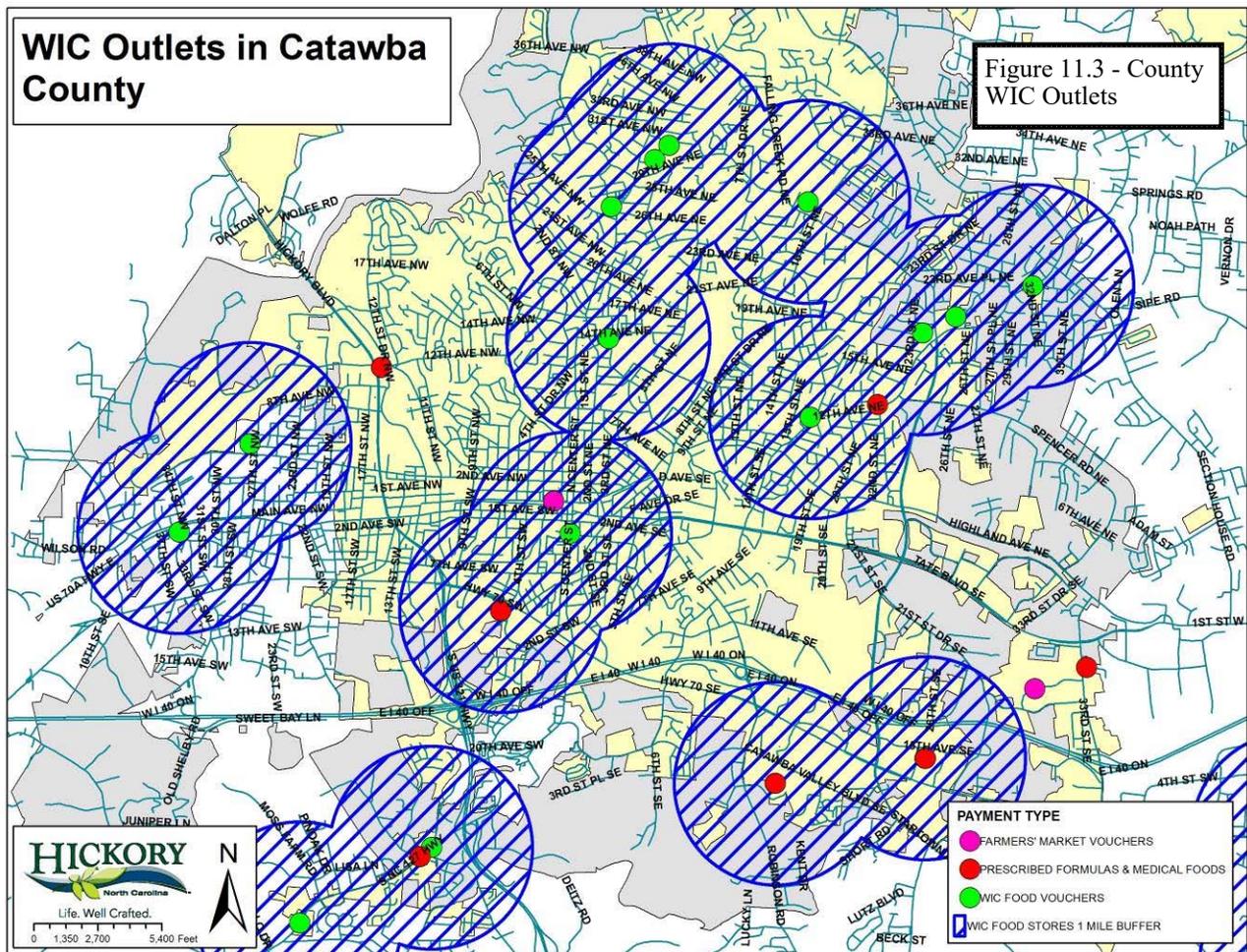
significant number of residents live more than 1 mile (urban) or 10 miles (rural) from the nearest supermarket. Six census tracts that have at least some of their boundaries within the City of Hickory qualify as food deserts (see figure 11.2). These areas are located within the southern and northeastern sections of the City. Construction of the new Walmart Neighborhood Market on US 70 SW has helped alleviate some of the issues in the southern parts of Ridgeview and Green Park, but that census tract is still considered a food desert. The WIC Program (Women, Infants, and Children Supplemental Nutrition Program) provides nutritional assistance to post-partum women and their young children. This program has more eligibility criteria for stores looking to accept the vouchers, which means that fewer stores accept the vouchers than the SNAP (food stamp) program. Figure 11.3 shows the WIC food voucher

locations along with a one-mile buffer.

There are two farmers markets located in the City of Hickory. The Downtown Hickory Farmers Market operates Wednesday afternoons and Saturday mornings from April through November. The Catawba County Public Health Department offers a farmers market on Thursdays from 10AM to 1PM from June through September. The downtown market accepts farmers market vouchers through the WIC program, while the Public Health market accepts both WIC and SNAP (food stamp) benefits.

### *Sidewalks, bikeways, greenways, and trails*

In 2005, the City updated its Sidewalk and Bikeway Master Plan to include greenways and trails. The 2005 Sidewalk, Bikeway, Greenway and Trail Master



Plan espouses a vision for the City that includes improved access to bicycle and pedestrian facilities through the creation of an interconnected network of sidewalks, bikeways, greenways, and trails. The plan calls for more integrated planning when considering recreation, park, school, transit, and other projects. The plan also calls for improved safety for cyclists and pedestrians along with encouraging bicycling and walking as legitimate modes of transportation. The plan represented a move towards planning for all modes of transportation instead of focusing solely on the automobile. The sidewalk section of the plan has been implemented most thoroughly. Funds obtained from the \$5.00 sidewalk fee for vehicle registrations is used to construct sidewalks. Commercial projects are also required to build sidewalks if located along a route referenced in the plan. New residential subdivisions are also required to install sidewalks. Given the age of the plan, it is likely time to re-visit the document to eliminate gaps in the map and make sure that the prioritized routes are consistent with community needs. The plan also recommended improvements to existing sidewalks to ensure usability by all ages and abilities. It is also likely time for an assessment of the condition and usability of existing sidewalks that were built prior to current standards. This was beyond the scope of the 2005 plan, but such an assessment will identify areas where older sidewalks need to be replaced or improved. Such an initiative will help ensure that all sidewalks are usable and safe.

The greenway section of the plan focuses primarily on connections between schools and city parks along creeks and other easements. While this plan has not been funded to date, it provides a vision for improving connectivity between neighborhoods and recreational facilities. In addition, the 2014 City Bond Initiative will include significant streetscape and trail construction. The bond projects will include a City Walk along the rail corridor stretching from Lenoir Rhyne University to 4<sup>th</sup> Street SW. Additional streetscape improvements along Main Avenue NW, 9<sup>th</sup> Street NW, and Old Lenoir Road NW will connect to a River Walk that will travel along the shoreline from the Hickory Water Plant to the current Rotary Geitner Park. These projects should improve connectivity between the lake, the downtown area, and Lenoir Rhyne University.

## *Parks and Recreational Facilities*

Chapter nine describes the plan's vision for recreation and parks. There are currently 23 active and passive parks spread across all four quadrants of the City. This plan seeks to improve access to all of those facilities for citizens of all income levels and increase services where necessary. For more information, consult the Recreation and Parks chapter of this plan along with the May 2010 Parks and Recreation Needs Assessment.

## *Current and potential partners*

The City of Hickory is committed to improving community health. The Planning and Development Services, Parks and Recreation, and Public Services departments will be instrumental in working together to achieve the objectives of this plan. Staff plans to continue partnering with Catawba County Public Health, Catawba County Health Partners, and other local organizations. Planning and Development Services staff recently served on Catawba County Health Partners' Physical Activity Working Group, which had members from a number of local organizations having the goal of increasing physical activity in the community. Members included staff from Catawba Valley Medical Center, YMCA of the Catawba Valley, Frye Regional Medical Center, the Western Piedmont Council of Governments, and numerous other representatives from local businesses and other organizations interested in improving community health. It is anticipated that these partners will assist in the implementation of this plan. Local neighborhood and business associations will also serve as vital partners to help raise awareness and assist with hosting events geared towards improving community health.

## **Plan Concept**

Planning and public health both arose out of the desire to alleviate urban problems and diseases. As suburbanization, urban sprawl, and disinvestment in the urban core have led to different issues, the urban planning and public health fields have begun to work together to address health problems related to the built environment and existing land use

patterns. The City will work to advance the priorities contained in the Catawba County Community Health Assessment. Notably, this will include working to achieve reductions in the incidence of chronic diseases related to poor nutrition and lack of physical activity.

### **Improve the opportunities for citizens to be active in their daily lives and increase the number of citizens meeting the recommended amounts of daily physical activity**

One of the goals of this community health chapter is to ensure that a healthy choice is as easy a choice as possible. This would include improvements to connectivity and walkability to make walking easier. The same is also true for the City's bike infrastructure. Pedestrians and novice bicyclists will be less likely to use facilities that they deem unsafe or confusing to use. Wider sidewalks, reduced curb cuts, and improved crosswalks can improve pedestrian safety and increase pedestrian activity.

It is also likely time for a city-wide assessment of the condition and usability of existing sidewalks that were built prior to current standards. This assessment was beyond the scope of the 2005 plan, but such an assessment will identify areas where older sidewalks need to be replaced or improved. Such an initiative will help ensure that all sidewalks are usable and safe. Another goal of the plan is to increase the number of destinations to which citizens can walk from their home or place of business.

In addition to walking and biking, the City should continue to provide exercise equipment at recreation centers. In addition to the four indoor exercise gyms, the City has recently constructed an outdoor gym at Hickory Optimist Park. The City should look to include these facilities in other parks as funds allow.

### **Ensure that walking and biking are safe recreational activities**

As mentioned previously, the 2005 Sidewalk, Bikeway, Greenway, and Trail Master Plan includes

improvements to pedestrian and bicyclist safety in its vision. The plan seeks to continue efforts to improve safety with the idea that more people will take part in an activity that they view as safe. Partnerships with the Hickory Police Department, Catawba County Public Health, and state agencies interested in improving bicycle and pedestrian safety should continue. This should include educational presentations to schools and other organizations regarding bicycle safety and the importance of wearing helmets. Staff should also work with the community to identify critical areas where safety is lacking and work to improve these areas. The City should investigate Safe Routes to School funding and other opportunities for youth to walk and bike to school.

### **Ensure adequate access to recreational opportunities for citizens of all income levels**

Chapter nine of this plan outlines the City's goals for parks and recreation. Implementation of that chapter should result in the achievement of this goal. This chapter does not reiterate those strategies in the goals section. For more information on the City's vision for recreation and parks, consult the Recreation and Parks chapter along with the Parks and Recreation Needs Assessment (May 2010).

### **Improve access to healthy foods and increase the number of citizens eating the recommended amounts of fruits and vegetables**

As with physical activity, this plan seeks to promote activities that make the healthy choice easier to make. Access to healthy foods can be especially difficult for low income households. This effect is even more pronounced when a household does not have a vehicle available. Due to the fact that Hickory does not have a particularly high density of residential development even people living in reasonably close proximity to shopping areas need to spend a significant percentage of the day to run errands that would take a fraction of the time by automobile. The City and its partners ought to take steps that increase the availability of healthy foods in convenience stores and corner stores that are more likely to be in walking distance of low income

households without vehicle access.

### Raise awareness about the benefits of increased physical activity and healthy eating

The City and its partners should take steps to promote increased physical activity and healthy eating by raising awareness of the benefits of these activities. The *Active: Well Crafted Initiative* is a voluntary city program designed to get citizens moving and engaging in physical activity. Programs like these should be continued. The City should also partner with Catawba County Public Health and community groups to have neighborhood events and health fairs that raise awareness about community health.

## Community Health Goals

### Goal 1: Increase the number of citizens achieving the recommended amounts of daily physical activity.

The City should strive to increase physical activity by making the healthy choice the easy choice. This involves improving pedestrian and bike connectivity to parks and recreation facilities and commercial areas. Ensuring safe routes to parks and schools should increase the amount of people walking and biking to these facilities. Reviewing the 2005 Sidewalk, Bikeway, Greenway, and Trail Master Plan should help identify strategic gaps in sidewalk infrastructure that will increase access to city parks, facilities, schools and commercial areas. The review should also help determine necessary updates to the plan and whether community priorities have changed.

### Goal 2: Provide adequate access to healthy foods to citizens of all income levels.

Eating enough fruits and vegetables is vital to maintaining a healthy lifestyle. For households at low income levels, obtaining healthy foods can be even more of a challenge if the household lacks access to a vehicle. Working with local convenience

and corner stores to increase the number of healthy foods that they provide can help increase access for areas with lower than average access to vehicles. In addition, the City should partner Catawba County Public Health to work towards increasing the number of outlets that accept WIC vouchers for food. This can be a challenge because, generally, there is a more extensive list of goods that a retailer must provide in order to qualify as a WIC outlet as opposed to accepting SNAP benefits. Increasing the number of WIC retailers would have the effect of increasing the amount of healthy foods available for all residents and not just those with WIC benefits. Farmers markets also provide opportunities to purchase healthy foods. Working with local farmers markets to accept SNAP benefits could increase access to healthy foods especially when these markets are located in close proximity to low income neighborhoods.

### Goal 3: Decrease injuries related to pedestrian, bicycle, and automobile accidents.

As stated on numerous occasions, this plan aims to make the healthy choice the easier and accessible choice. This includes making sure that pedestrians and bicyclists are able to reach their destinations safely. Improvements should include installation of infrastructure improvements such as: pedestrian crosswalks, pedestrian signals, bike lanes, and other improvements that aim to make walking and biking safer. In addition, the City should support programs designed to educate citizens about walking and biking safely.

### Goal 4: Support efforts to raise awareness about the benefits of increased physical activity, eating healthy foods, and preventing chronic disease

The City should continue to support efforts such as the *Active: Well Crafted* initiative, which aims to increase physical activity in the community. In addition, the City should partner with community organizations to support local health fairs and community events that provide information about

community health issues, including health screening, nutritious foods, and the benefits of increased physical activity. It should also continue working with Catawba County Public Health and Catawba County Health Partners on influencing community well-being through collaborative and evidence-based strategies.

	Goal		Policy
1	Increase the number of citizens achieving the recommended amounts of daily physical activity	A	Improve pedestrian and bike connectivity to parks and recreation facilities and commercial areas. Ensure safe routes to parks and schools. Identify strategic gaps in sidewalk infrastructure that will increase access to city parks, facilities, schools, and commercial areas.
		B	Review the 2005 Sidewalk, Bikeway, Greenway, and Trail Master Plan to determine if updates are needed.
2	Provide adequate access to healthy foods to citizens of all income levels.	A	Increase the number of farmers markets in Catawba County that accept SNAP benefits.
		B	Consider implementing a healthy corner store initiative or other initiatives in food desert and other strategic areas to increase the availability of healthy fruits and vegetables.
		C	Work with Catawba County Public Health and local businesses to increase the amount of WIC outlets within the City of Hickory.
3	Decrease injuries related to pedestrian, bicycle, and automobile accidents.	A	Pursue streetscape, sidewalk, crosswalk improvements aimed at increasing pedestrian safety.
		B	Support school-based and other programs designed to improve bicycle and pedestrian safety.
4	Support efforts to raise awareness about the benefits of increased physical activity, eating healthy foods, and preventing chronic disease	A	Continue support for efforts such as the Active: Well Crafted initiative, which aims to increase physical activity in the community.
		B	Support local health fairs and community events that provide information about community health issues, including health screening, nutritious foods, and the benefits of increased physical activity.
		C	Continue working with Catawba County Public Health and Catawba County Health Partners on influencing community well-being through collaborative and evidence-based strategies.

# Implementation

This chapter summarizes and lists key strategies to help Hickory begin implementing the comprehensive plan. All projects presented support the overall goals and policy objectives expressed by the community in developing and adopting the plan.

This chapter guides future resource allocation and regulatory decisions, and is based on and developed to implement the city vision and directives presented in that section.

This chapter does not replace current or future departmental plans.

## Partners

The plan's implementation depends on building partnerships. The city will need to work with Catawba County, other regional agencies, and community groups to make the larger goals contained in this plan a reality. For example, tailoring Hickory's economic growth to fit resident desires for a specific quality of life will rely on collaboration with the Catawba Economic Development Corporation (EDC), the Western Piedmont Council of Governments (WPCOG), the Catawba County Chamber of Commerce and others. Efforts to revitalize Hickory's neighborhoods will rely on active involvement of neighborhood residents, property owners and neighborhood



Figure 12.1 – The plan will provide the message, but the community's implementation will be critical for success. (Image source: Studio Cascade, Inc.)

associations, ensuring policies and actions the City pursues meet citizen needs.

Revitalizing and reshaping the community's arterial corridors will require active coordination and participation of City Departments, The Greater Hickory Metropolitan Planning Association (MPO), the North Carolina Department of Transportation, businesses and property owners. Corridors are complex environments, and any intense planning work will demand effective collaboration.

Partnerships with residents, agencies and organizations are essential to this plan's successful implementation.

## Plan Programs

The programs listed in this chapter are prioritized according to current estimates of need, urgency, and fiscal possibility. Attempting all implementation items at once

would certainly drain the city’s resources, and likely even the energies of the community. Instead, the city must budget projects and complete them in a timely and strategic fashion, maintaining fiscal balance, ensuring steady progress, and advancing productive civic involvement.

For public works projects, creating, and annually updating a capital facilities plan will aid in moving projects from concept to realization. Capital facilities planning, together with long-range budgeting for necessary improvements is critical.

This plan and the implementation programs presented here reflect the community’s expressed needs and goals today, but as those needs and goals change, so should the relative priorities of the program items. An important program, then, is the periodic (at least every 5 years) review of the plan itself, ensuring it remains on-track with community needs and expectations.

The following pages detail the various implementation projects and programs to help Hickory achieve its comprehensive planning goals.

The comprehensive plan’s effectiveness is measured by its ability to guide and affect desired change. This change will occur over the long-term through a number of short-term decisions made by elected and appointed officials acting in accordance with this plan.

## Regional Cooperation

Cooperation between state and federal governments, neighboring municipalities, and regional entities are vitally important in the successful implementation of the recommendations in this plan. Hickory has historically served, and continues to this day, as a regional center for employment, medical services, entertainment, retail sales, cultural resources, and to a limited extent, provision of public services. However, there are instances where the city must pool resources in the region to ensure an equitable distribution of responsibility.

Natural resource protection, recreation, transportation, economic development, and public

services are just a few areas where the city will need to continue regional collaborative efforts. Although the city should be proactive in continuing or initiating regional cooperation, the WPCOG and the Greater Hickory MPO will also bear responsibility in these efforts. These responsibilities will include, among many others, continued coordination of transportation planning, coordination of water quality programs, investigation of regional land use planning, and promoting regional cooperation for affordable housing and economic development.

## Plan Updates

The analysis of existing conditions, responses from public participation, and formulation and evaluation of land use patterns form the basis for the creation of Hickory’s plan and vision. This plan is intended to be a dynamic document and should be referred to, discussed and revised as needed over time. Revisions to the plan should consider changes in the economy, population, or other types of baseline indicators.

Staff will solicit community input and review plan goals and policies annually and make a status update to the Hickory Regional Planning Commission. No less than once every 5 years should the plan be comprehensively updated to reflect changes in conditions and citizen sentiment.

## Baseline Indicators

The baseline of existing conditions can be found as part of the appendices and throughout this planning document. This baseline data was used to develop the plan, but it is also a great way to monitor the plan. This baseline provides a starting point and is intended to be a signal to the community about potential problems and issues that need to be addressed.

Updating this baseline data as new information is available or as conditions change and developing key “sustainability” indicators can help the community monitor the success of the current plan

and provides a first step when commencing an update process.

Baseline indicators should:

*Be understandable to the community*

*Be accepted by the community*

*Show the link between the economy, society, and the environment*

*Focus over a long period of time - in some cases twenty years or more.*

*Measure local sustainability, but consider a regional viewpoint*

*Be based on reliable and timely information*

The development of indicators should occur following the adoption of this plan. The number of indicators selected by the community should be reasonable to ensure that they will be monitored in a timely and efficient manner.

## Communications Strategy

The planning process is continuous. To ensure that the public stays involved in the implementation of the plan, a communications strategy is recommended. This communications strategy will include providing review copies at public locations such as City Hall, public libraries, and schools. The public will also be available to purchase the plan through Hickory's Planning Department and view the plan on the city's internet web page.

The plan may be obtained by interested persons at the Planning Department. In addition to creating awareness about the plan, the Planning Department will work to raise awareness about the value of community planning in general. This will be accomplished through meetings with neighborhoods and business associations as well as utilizing local media and the city's own social media pages. In addition to general outreach, specific efforts should be made to reach youth of all age levels.

# Implementing the Plan

In addition to the goals and policies contained in the individual chapters of this plan, this section recommends that the city take the following specific actions to continue implementing this comprehensive plan. The proposed actions involve both the development of new master plans and updates to existing master plans. These actions will occur in areas where more detailed study is needed to facilitate achievement of plan goals.

## 1.1 Update the City's Land Development Code and Manual of Practice

The comprehensive plan expresses a vision for the community's long-range development. Part of this most recent planning update process has involved a review and revision of Hickory's Land Development Code. Work to revise the code has concentrated on making it easier to use and administer, reducing its size, removing redundancy and making specific changes to standards as indicated through review of the comprehensive plan. Modifications to commercial zoning districts along highway corridors, the fine-tuning of conservation subdivision standards, the consolidation of planned development zoning with regard to future projects proposals, new zoning strategies for neighborhood centers and the community's overlay districts have also been completed. Staff will also review and update the Manual of Practice which contains the city's design standards for physical infrastructure. This work should be completed simultaneously with the adoption of the Comprehensive Plan.

## 1.2 Prepare a local economic development plan and strategy

Hickory's economy has struggled over the last decade, and various economic development groups have worked diligently to help the community recover. Still, no single economic development plan or strategy specifically targeted to the City of Hickory has emerged to assist the city in planning its economic development targets and investments. In addition there is currently no regional plan for the entire four county area. The Foresight Plan and Catawba County's current strategic planning effort will guide the efforts of Catawba County as a whole, but a local plan will help greatly with targeting efforts.

## 1.3 Prepare a master plan for the area surrounding the future City Walk

Collaborating with Lenoir-Rhyne University (LRU) and the area's property owners, prepare a master plan for the the area surrounding the future city walk that explores feasibility and design for redevelopment of that area as a mixed-use district. The plan can build on the concepts promoted in Hickory's downtown plan and involve the university and downtown as anchors for development and activity. The plan should also address the development of the rail corridor to the west of downtown, which has seen lower levels of investment than the area between the eastern edge of downtown and LRU. This plan should also build on the city's brownfield efforts, which have involved studying numerous properties along the city walk route.

## 1.4 Prepare small area plans for commercial areas adjacent to major thoroughfares and strategic intersections

Hickory is a city of many commercial nodes and corridors that are linked by its major thoroughfares. These areas are at various points in the growth cycle. Some of these areas are

growing and seeing new investment, while others have declined. The US 321 superstreet (widening) project will create new land use challenges for that area. The Springs Road corridor has also seen changes over the past decade with the opening of McDonald Parkway and increased commercial development. These small area plans would provide more specific recommendations to advance development of these areas in a manner consistent with this plan.

### **1.5 Review, update, and create neighborhood plans**

In the 1990s and early 2000s, the city through its former Office of Neighborhoods, completed numerous small area plans for the residential neighborhoods throughout the City, and accepted by City Council. The Green Park and Claremont plans have been updated recently. However, other plans are up to twenty years old and in need of significant updates to ensure they are still meeting the needs of neighborhood residents. Staff should reach out to determine whether there is sufficient interest from existing neighborhoods with older plans in completing an update process. Additionally, staff should also reach out to other neighborhood and business associations to determine if there are areas where new small area plans are necessary.

# Appendix A

## Acronyms, Abbreviations and Definitions

# List of Acronyms & Abbreviations

ADD	Average Daily Demand (water/wastewater)
ADU	Accessory Dwelling Unit
ADT	Average Daily Traffic
BMP	Best Management Practices (water/wastewater)
BOD5	Five-day Biochemical Oxygen Demand (water/wastewater)
CBD	Central Business District
CFP	Capital Facilities Plan
CIP	Capital Improvement Program
DF	Direct Filtration (water/wastewater)
EMS	Emergency Medical Services
EPA	Environmental Protection Agency
ERU	Equivalent Residential Unit
ETJ	Extra-Territorial Jurisdiction
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
GIA	Grassed Infiltration Area (water/wastewater)
GPCD	Gallons Per Capita per Day (water/wastewater)
HUD	United States Department of Housing and Urban Development
IBC	International Building Code
I/I	Infiltration and Inflow (water/wastewater)

LID	Low Impact Development
LOS	Level of Service
MDD	Maximum Day Demand (water/wastewater)
MGD	Millions of Gallons per Day (water/wastewater)
MMD	Maximum Month Demand (water/wastewater)
MPA	Minimum Planning Area
MS4	Medium and large Municipal Separate Storm Sewer Systems
NCDOT	North Carolina Department of Transportation
NPDES	National Pollutant Discharge Elimination System
PDR	Purchase of Development Rights
PHD	Peak Hour Demand (water/wastewater)
RAS	Return Activated Sludge (water/wastewater)
RTPO	Regional Transportation Planning Organization
TDR	Transfer of Development Rights
TIP	Transportation Improvement Program
TMDL	Total Maximum Daily Load (water/wastewater)
TND	Traditional Neighborhood Development
TSS	Total Suspended Solids (water/wastewater)
UA	Urbanized Area (US Census tracking)
WTP	Water Treatment Plant
WWTP	Waste Water Treatment Plant

# Definitions

## Accessory

As applied to a use, building or structure, means customarily subordinate or incidental to, and located on the same lot with a principal use, building, or structure.

## Accessory Dwelling Unit

A dwelling unit created within another owner-occupied dwelling unit.

## Activity Centers

Those places in the community that feature a collection of public spaces, commercial land uses and public institutions serving neighborhoods, the community or the region.

## Adaptive Reuse

The conversion of outmoded buildings for use or uses unrelated to the original building use. Adaptive reuse projects have traditionally converted old school buildings, train stations, hospitals and other public buildings, inns, hotels and warehouses, factories or other industrial buildings into residential or mixed-use projects.

## Aesthetic

The intangible quality of a place or thing that creates the sensory experience of the sublime.

## Affordable Housing

Housing where the occupant is paying no more than 30 percent of gross income for gross housing costs, including utility costs. In the case of ownership housing, the purchase costs of a housing unit is equal to or less than three times a household's annual gross income.

## Americans with Disabilities Act of 1990 (ADA)

Ensures access for the disabled for publicly used facilities, employment, public transportation and public communication.

## Annexation

The process that a city undertakes to incorporate new territories into its existing boundaries.

## Aquifer

Any geologic formation that will yield water to a well or other withdrawal works in sufficient quantity for beneficial use.

## Aquifer Recharge Areas

Areas where an aquifer that is a source of drinking water is vulnerable to contamination that would affect the potability of the water.

## Arterial Roadways

A class of roadway serving major movements of traffic not served by freeways. Arterial roadways are functionally classed depending on the degree to which they serve through traffic movements verses access to land.

## Average Daily Traffic (ADT)

This is the average amount of traffic (average number of vehicles) crossing one location of a roadway within a 24 hour period. Generally the ADT is a yearly average. ADT and other traffic level measurements differ from the VMT in that they measure traffic crossing at one point while VMT measures the total miles driven along a certain stretch of roadway within a given period of time. The confusion between these two terms stems from the fact that a specific ADT (a point location measure) is often assigned to a whole stretch of a roadway.

## Big Box

Large, warehouse-style discount stores.

## Buffer

An area contiguous with a critical area, natural resource land, or urban growth area that is required for the integrity, maintenance, function, and stability of the area or land.

## Building Vernacular

Those specific components and architectural treatments that define a style and establish a structure's link to a particular place or region, such as chimney design, eave treatments, window surrounds, exterior materials or building placement on the site.

## Business Sectors

In economic development terms, a grouping of businesses and facilities that serve an individual industry, such as medicine or defense, seeking economies of scale and enhanced access to resources or markets.

## Capacity

The maximum number of vehicles that can pass over a given section of a lane or roadway in one direction (or in both direction for a two- or three-lane facility) during a given time period under prevailing roadway and traffic conditions. It is the maximum rate of flow that has a reasonable expectation of occurring.

## Capital Cost

Costs of transportation systems such as purchase of land, construction of roadways, and acquisition of vehicles. Distinguished from operating costs.

## Capital Facilities

As a general definition, public structures, improvements, pieces of equipment or other major assets, including land, that have a useful life of at least 10 years. Capital facilities are provided by and for public purposes and services. For the purposes of the capital facilities element, capital facilities are

surface water management, solid waste disposal, law and justice, general government, parks and recreation, airport, transportation, education, fire protection, sanitary sewer and public water supply systems.

## **Capital Improvement Program (CIP)**

A plan that matches the costs of capital improvements to anticipated revenue and a time line. CIPs are usually prepared for six or more years, updated annually, and coordinated with the comprehensive planning process.

## **Collector System**

In Rural Areas Principal Arterials, Minor Arterial Roads, Collector Roads, Local Roads. In Urbanized Areas Principal Arterials, Minor Arterial Streets, Collector Streets, and Local Streets. In Small Urban Areas Principal Arterials, Minor Arterial Streets, Collector Streets, and Local Streets.

## **Community Design**

An analysis of needs for governing landscaping, building design, tree planting, signs, and suggested patterns and standards for community design, development, and beautification.

## **Compatible**

Capable of existing together without discord or in a state of mutual tolerance.

## **Comprehensive Plan**

An official public document adopted by a local government as a policy guide to decisions about the physical development of the community. It indicates in a general manner how the community and its government leaders want the city to develop in the next 10 to 20 years.

## **Concurrency**

The concept of timing the provision of public services, particularly road and utilities infrastructure, to meet changes in demand for those services, especially as population grows and public demand increases.

## **Connectivity**

The sharing of a common link, such as a trail connecting two neighborhoods.

## **Conservation Easement**

Is a legal agreement between a private landowner and a municipal agency or a qualified, not-for-profit corporation to restrict the development, management, or use of the land.

## **Context**

All the factors which systematically determine the form, meaning, and/or appropriateness of a definable object within its locale as a whole.

## **Contiguous Development**

Development of areas immediately adjacent to one another.

## Cooperative Home Ownership

An enterprise or organization owned by and operated for the benefit of those using its services. The basic six principles providing the framework for cooperative housing are open and voluntary membership, democratic control, limited rate of return on investment, return of surplus to members, cooperation among cooperatives and constant education. Housing cooperatives offer low-income families the opportunity to own a share of stock in a housing corporation that gives its members many advantages over rental housing.

## Demographic

Social, economic, racial and age characteristics of an area's population, helpful in describing in general terms a community's composition.

## Density

The ratio between the number of families, individuals, housing units, or residential dwelling units per land surface area (usually expressed as square miles or acreage).

## Density Bonuses

Where a proposed development is designed and constructed at a level of quality in excess of the minimum, additional development rights may be allowed in locations where added density can be accomplished while still providing appropriate protection to neighboring properties and the general public.

## Design standards

Standards used to govern how portions of the built environment may look and/or function.

## Development

Any manmade change to improved or unimproved real estate, including but not limited to buildings or other structures, mining, dredging, filling, grading, paving, excavation, or drilling operations.

## Development Regulation(s)

The controls placed on development or land use activities by a county or city.

## Diversity

A broad range within a definable category.

## Downtown

For purposes of this plan, downtown includes that area characterized as the town's center, including the historic commercial district established near the rail depot, the secondary ring of offices and institutions surrounding it, and the historic residential areas on its periphery.

## Ecological Functions

Those uses of land that are part of a larger related natural system. These functions include, but are not limited to, storm water detention; floodway/floodplain; drainway; sediment collection area; aquifer recharge area; fish and wildlife habitat conservation area; wind break; noise, sight, or dust barrier;

shade; erosion control; waste disposal; and, maintenance of slope stability.

## **Economic Development**

Sustained increase in the fiscal standard of living of a population, normally accomplished by increasing the supply of physical and human capital and improving technology.

## **Essential Services**

Activities that include the maintenance and operation of public utilities associated with electric, gas, telephone, sewer, and water lines.

## **Extremely Low Income**

Income below 30% of median income.

## **Flood plain**

All land adjacent to a watercourse over which water flows in times of a flood. The flood plain is subject to a 1% chance of flooding in any given year as designated in an “area of special flood hazard” by the Federal Insurance Administration.

## **Floor Area Ratio (FAR)**

A method of calculating the amount of allowable floor area. An assigned FAR multiplied by the parcel size equals the amount of allowable floor space that can be developed on a site.

## **Frequently Flooded Areas**

Lands in the floodplain subject to a one- percent or greater chance of flooding in any given year. These areas include, but are not limited to, streams, rivers, lakes, coastal areas, wetlands, and the like.

## **Functional Classification**

Functional Classification is the grouping of highways, roads, and streets that serve similar functions into distinct systems or classes. Functional Classification defines the primary role a road or street serves within the total existing or future highway network (see Collector System above).

## **Geologically Hazardous Areas**

Areas that, because of their susceptibility to erosion, sliding, earthquake, or other geological events, are not suited to the siting of commercial, residential, or industrial development consistent with public health or safety concerns.

## **Goal**

Broad statements which indicate a general aim or purpose to be achieved. A goal is a direction setter. It is an ideal future end, condition, or state related to the public health, safety, or general welfare toward which planning and implementation measures are directed. A goal is a general expression of community values and, therefore, is abstract in nature. Consequently, a goal is generally not quantifiable, time-dependent, or suggestive of specific actions for its achievement.

## **Green Building Design**

The philosophy, approach and application of energy and environmental conservation in the design and construction of buildings, often associated with specific criteria for determining compliance, such as Leadership in Energy and Environmental Design (LEED) certification.

## **Greenway**

A trail facility dedicated exclusively to pedestrian, bicycle and/or equestrian use, usually following alignments other than parallel to roadways and designed to help promote non-automotive travel in a natural or near-natural setting.

## **Gross Density**

Gross density means the total number of dwelling units divided by the total land area of the site or area, excluding nothing.

## **Growth management**

A wide range of techniques used in combination to determine the amount, type, and rate of growth and to direct it to designated and appropriate areas.

## **Hazardous Areas**

An area in which a danger is present, or likely to be present, in quantities that require special precautions for construction.

## **Housing Forms**

A range of residential styles such as: single-family, condominium, multifamily, or town home.

## **Impacts**

Consequences (both good and bad) of an action or decision that occur beyond the site under consideration.

## **Impervious Surfaces**

Those paving, roofing or other impermeable surfaces that impede the flow of rainwater or storm runoff into the ground.

## **Implementation Measure**

Regulatory and non-regulatory measures used to carry out the plan.

## **Incompatible Uses**

Uses of land that is not harmonious.

## **Indigenous (Landscaping) Materials**

Plants and landscaping materials generally recognized as being native to an area.

## **Infill**

The process of developing vacant or redeveloping under-used parcels within existing urban areas.

## **Infill Housing**

The construction of new residential units on land within existing neighborhoods, making available new housing without expanding into vacant land on the community's periphery.

## **Infrastructure**

Facilities and services needed to sustain the functioning of an urban area.

## **Intensity**

The measurement of all use in a defined area.

## **Interconnectivity**

The concept of enhancing linkages within and between neighborhoods, promoting and facilitating walking, bicycling and reduced automotive congestion by accommodating and dispersing traffic flow.

## **Land Bank**

Land is acquired independently of a specific development project, for the expressed purpose of providing affordable housing at a future time.

## **Land Conservation**

The placement of dwellings and accessory buildings in a pattern of development which reduces impervious surface area, lowers costs of development and maintenance and retains larger expanses of property available for agriculture, forestry, or continuity of ecological functions characteristic of the property to development.

## **Land Use**

The specific purpose for which land or a building is designated, arranged, intended, or for which it is or may be occupied or maintained.

## **Landscaping Buffers**

The separation of land uses from other land uses or sensitive environmental areas by a strip of unoccupied land, reducing potential conflicts and negative impacts by putting distance and screening between the two.

## **Level of Service**

Means an established minimum capacity of public facilities or services that must be provided per unit of demand or other appropriate measure of need.

## **Living Wage**

Earned income sufficient to allow one individual wage earner per household to support that household.

## **Local Road**

A class of roadway with the primary function of providing access to abutting properties. Traffic control is usually limited with slow speeds and numerous driveways. This roadway class typically carries low traffic loads and is usually 1 to 2 lanes. They can be paved or gravel and don't often extend over much distance.

## **Long-term Commercial Significance**

Includes the growing capacity, productivity, and soil composition of the land for long-term commercial production, in consideration with the land's proximity to population areas, and the possibility of more intense uses of the land.

## **Lot Line**

The legal perimeter of a parcel of property, often shown on a record of survey, final plat and/or legal description of property.

## **Low-Income**

Households whose income is between 51% and 80% of the median income for the area, as determined by the Department of Housing and Urban Development (HUD).

## **Manufactured Housing**

A manufactured building or major portion of a building designed for long-term residential use. It is designed and constructed for transportation to a site for installation and occupancy when connected to required utilities.

## **Mass Transit**

The general term used to identify bus, rail, or other types of transportation that move large numbers of people at one time.

## **Middle Income**

Between 96% and 120% of median income.

## **Minerals**

Clay, coal, gravel, industrial mineral, valuable metallic substances, sand, stone, and other similar solid materials or substances to be excavated from natural deposits on or in the earth for commercial, industrial, or construction use.

## **Mixed-Use**

Mixed-use buildings, typically with residential units above or beside a story or two of commercial spaces. This category provides for a mixture of uses where no single use predominates. The mixed-use district allows for a mixture of residential housing types and densities; commercial, office, and institutional uses, parks and recreation uses; and public uses.

## **Moderate Income**

Between 81% and 95% of median income.

## **Multi-modal**

Two or more modes or methods of transportation. The means by which people move from place to place including, but not limited to automobiles, water vessels, trains, planes, bicycles, skateboards, and by foot.

## **Mutual Housing Associations**

Members share ownership of an association that owns housing cooperatives. Residents participate in the development, operation, and management of the property. (They do not build up equity in their housing but have the right to residency as stipulated by an occupancy agreement).

## **Neighborhood Center**

A small-scale concentration of mixed uses, generally located at the crossing of arterial streets, consisting of less than 80,000 total square feet of retail and office space, and intended to serve the daily needs of the immediately surrounding neighborhoods.

## **Net Density**

The total number of dwelling units divided by the net area of the lot or site. The net area excludes roads, public open spaces, community facilities, and critical areas (environmentally sensitive areas).

## **Non-Motorized Transportation**

Bicycle, pedestrian and equestrian transportation modes.

## **Open Space**

Land in a predominantly natural state or altered for natural resource based uses (e.g., farming), and may include, but is not limited to: riparian areas, agricultural lands, watersheds, forests, floodplains, and habitat areas.

## **Operating Costs**

Those recurring costs in a transportation system, such as salaries and wages, maintenance, energy, taxes, insurance, and supplies. Distinguished from capital cost.

## **Ordinance**

A municipal statute or legislative action adopted by a local government that has the force of law.

## **Overlay Zone or District**

A designated area applying additional special regulatory requirements or standards to address unique circumstances, such as on land near airports, in environmentally sensitive areas or in historic districts.

## **Pedestrian and Bicycle Orientation**

Neighborhoods and areas of the town (e.g., downtown) that are designed for the safe movement of pedestrians and bicyclists via sidewalks, bike paths, etc.

## **Pedestrian Friendly Development**

Development designs that encourage walking by providing site amenities for pedestrians. Pedestrian friendly environments reduce auto dependence and may encourage the use of public transportation.

## **Pedestrian Infrastructure**

Those elements that support those traveling on foot or by bicycle, often including sidewalks, benches, trash receptacles, awnings, bike racks, enhanced roadway crossings, public squares and plazas, and small-scale signs.

## **Plan Amendment**

An amendment or change to the text or maps of the long-range comprehensive plan.

## **Planning Commission**

A group of citizens appointed by the City Council to research, survey, analyze, and make recommendations on current and long range development policies, resource management, implementing ordinances and land use decisions such as subdivision plats and zoning requests.

## **Planning Period**

Refers to the amount of time the comprehensive plan is intended to perform. This plan is designed for a 20-year life with reviews every 5-to-7 years.

## **Policy**

Guidelines that establish a definite course to guide present and future decisions. A policy is a specific statement that guides decision-making. It indicates a clear commitment of the local legislative body. A policy is based on a comprehensive plan's goals as well as the analysis of data. A policy is effectuated by implementation measures (such as zoning, land division, and environmental ordinances).

## **Potable Water**

Suitable for human consumption as drinking water.

## **Preserve**

To save from change or loss and reserve for a special purpose.

## **Proscriptive ordinance**

A written law specifying prohibited actions.

## **Protect**

In legal terms, preservation is the action required to provide the conditions for a monument, site, or historic area to survive. The term is also related to the physical protection of historic sites to ensure their security against theft or vandalism, as well as environmental attack and visual intrusions. Buffer zones also provide protection to historic areas. Legal protection, which is based on legislation and planning norms, aims to guarantee defense against any harmful treatment, provide guidelines for proper action, and institute corresponding punitive sanctions.

## **Public Facilities**

Infrastructure including streets, roads, highways, sidewalks, street and road lighting systems, traffic signals, domestic water systems, storm and sanitary sewer systems, parks and recreational facilities, and schools.

## **Public Services**

Include fire protection and suppression, law enforcement, public health, education, recreation, environmental protection, and other governmental services.

## **Public Spaces**

Those areas dedicated to use by the general public, such as streets, sidewalks, parks, community buildings, schools, public open spaces, plazas and other similar spaces.

## **Public Transportation**

Multi-passenger transportation services available to the general public including buses, ferries, vans, airline and rail transit.

## **Purchase of Development Rights (PDR)**

A mechanism typically used to help conserve open spaces, with public agencies or foundations acquiring from landowners the right to subdivide their land, keeping the land as open space in perpetuity.

## **Revitalization**

A process of economic, social, and cultural redevelopment of a civic area or neighborhood.

## **Right of Way (ROW)**

The right of way is the right to pass over the property of another. It usually refers to the land required for the traffic lanes plus shoulders on both sides of roads, railroads, bikeways, and trails.

## **Roadway**

An open, generally public way for the passage of vehicles, persons, and animals. Limits include the outside edge of sidewalks, curbs and gutters, or side ditches.

## **Sanitary Sewer Systems**

All facilities, including approved on-site disposal facilities, used in the collection, transmission, storage, treatment or discharge of any waterborne waste, whether domestic in origin or a combination of domestic, commercial or industrial waste.

## **Scenic Resources**

Includes, among other things, the historical pattern of land use (including logging and farming activities).

## **Sedimentation**

The process by which suspended particles in water settle to the bottom of a lake or river bed.

## **Self-Help Housing**

Self-help, or sweat equity, housing enables potential homeowners to build up credit for a down payment on a home by contributing their labor to the construction or renovation. It can be a means for the low-income household to enter the housing market.

## **Sensitive Development**

A use capable of being continued with minimal long-term effects on infrastructure and environment.

## **Shared Housing**

Occurs when people reside together for social contact, mutual support and assistance, and/or to reduce housing expenses. This may range from two elderly persons sharing a small home to several disabled adults sharing a large single family home. A single mother with an extra bedroom may share her home with an elderly person who helps with childcare and/or living expenses.

## **Soil Erosion**

The wearing away of the soil by the elements.

## **Sole Source Aquifer**

Sole Source Aquifer is an EPA definition. It defines those areas where more than 50 percent of the drinking water is obtained from the groundwater.

## **Species of Local Importance**

Those species that may not be endangered, threatened or sensitive from a statewide perspective, but are of local concern due to their population status, sensitivity to habitat manipulation, or other educational, cultural or historic attributes.

## **Sprawl**

The development and expansion of urbanized areas at generally low residential densities, requiring the provision of roadways and urban services at costs exceeding provider income generated by such growth.

## **Streetscape**

The view along a street from the perspective of a driver or pedestrian, especially of the natural and man-made elements in or near the street right of way, including street trees, lawns, landscape buffers, signs, street lights, above-ground utilities, drainage structures, sidewalks, and street furniture.

## **Structured Parking**

A multi-story structure or part thereof which is specifically designed for vehicle parking.

## Suburban

Blending or characterized by the blending of the urban and the rural. A land use development pattern that is dispersed as opposed to decentralized.

## Supportive Housing

Housing for groups or individuals that need assistance to be able to maintain independent living.

## Sustainability

Balancing the need for development and growth against the need to protect the natural and built environment, while at the same time meeting the needs of the present generation without compromising the needs and aspirations of future generations. Focuses on economic, environmental and social needs to ensure needs of future generations are met.

## Threshold Markers

Those indicators of population density, transportation costs, employment commute patterns or household income used to determine at what point another action can or should be taken, used in this context to help determine at what point a transit system could be considered.

## Traffic Calming

A set of strategies used by urban planners and traffic engineers that aim to slow down traffic and improve safety for pedestrians and bicyclists. Typical of: curb extensions, center islands, speed bumps, street tree canopies, strategically placed valley pans, and roundabouts.

## Transfer of Development Rights (TDR)

The transfer of the right to develop or build, expressed in dwelling units per acre, either on land within one zoning district under contiguous ownership, or from land in one zoning district to land in another district where such density/development is permitted.

## Transit

A general term applied to passenger rail and bus service available for the use by the public and generally operated on fixed routes with fixed schedules.

## Transition Zone

That difficult-to-define area where one district ends and another begins, often featuring development and/or use patterns typical of each abutting district. In Southern Pines, one example are areas along the periphery of downtown.

## Transitional Housing

Per the definition of Transitional Housing from the Federal McKinney Act, transitional housing is made available for up to 24 months to people who are homeless or are leaving emergency shelters.

## Transportation Demand Management (TDM)

Methods or strategies aimed at changing travel behavior by reducing the demand for single occupancy vehicle travel rather than by expanding transportation facilities to meet travel demand. The strategies

can include such things as expanding transit or ride-sharing options, changing parking policies, promoting work hour changes, and providing for telecommuting.

## **Transportation Facilities**

Includes capital facilities related to air, water or land transportation.

## **Transportation Level of Service Standards**

A measure that describes the operational condition of the travel stream and acceptable adequacy requirements. Such standards may be expressed in terms such as speed and travel time, freedom to maneuver, traffic interruptions, comfort, convenience, geographic accessibility, and safety.

## **Urban Forest**

Includes tree-lined roadways, open green spaces, undeveloped forests, and parks, along with other public and private spaces within an urban area.

## **Urban Governmental Services**

Include those governmental services historically and typically delivered by cities, and include storm and sanitary sewer systems, domestic water systems, street cleaning services, fire and police protection services, public transit services, and other public utilities associated with urban areas and normally not associated with non-urban areas.

## **Urban Growth**

Refers to growth (commercial, industrial, and residential) that makes intensive use of land for the location of buildings, structures, and impermeable surfaces to such a degree as to be incompatible with the primary use of such land for the production of food, other agricultural products, or fiber, or the extraction of mineral resources. When allowed to spread over wide areas, urban growth typically requires urban governmental services. “Characterized by urban growth” refers to land having urban growth located on it, or to land located in relationship to an area with urban growth on it as to be appropriate for urban.

## **Urban Sprawl**

Urban sprawl manifests itself in one or more of the following patterns (a) Leapfrog development which bypasses vacant parcels located closer to the urban area that are suitable for development and instead locates away from existing urban areas; (b) strip development which allows commercial, retail, and multi-family residential developments to locate in a linear pattern along both sides of a major arterial; and (c) large expanses of low density, single-family dwelling development.

## **Urbanized Area**

That space served by public utilities and services and characterized by development intensity of more than two residential units per acre.

## **Utilities or Public Utilities**

Enterprises or facilities serving the public by means of an integrated system of collection, transmission, distribution, and processing facilities through more or less permanent physical connections between the plant of the serving entity and the premises of the customer. Included are

systems for the delivery of natural gas, electricity, and telecommunications services.

## **Very Low Income**

Between 31% and 50% of median income.

## **Viewshed**

The landscape or area that can be seen directly from a defined viewpoint or along a transportation corridor.

## **Visioning**

A process of citizen involvement to determine values and ideals for the future of a community and to transform those values and ideals into manageable and feasible community goals.

## **Wetland or Wetlands**

Areas that are inundated or saturated by surface water or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.

## **Wildfire Mitigation**

The implementation of various measures designed to reduce the risk of destruction by wildfires.

## **Zone and Zoning District**

A legislatively defined and enacted policy, including standards, a detailed map and other criteria, all of which control and define areas of physical development of the county or any part thereof or any detail thereof and which are classified by the zoning ordinance as available for certain uses and unavailable for certain other uses.

## **Zoning**

The demarcation of an area by ordinance (text and map) into zones and the establishment of regulations to govern the uses within those zones (commercial, industrial, residential) and the location, bulk, height, shape and coverage of structures within each zone.

# Appendix B

## Plan Context & Community Background

# Introduction

## Study Area

The study area for this baseline and the Comprehensive Plan update include the City of Hickory and its Extra-Territorial Jurisdiction area (ETJ). The City of Hickory is located in the foothills of the Blue Ridge Mountains along the Catawba River approximately 50 miles north of Charlotte and 80 miles east of Asheville in North Carolina's Piedmont region. The city encompasses approximately 29 square miles and is crossed by Interstate 40, US Highway 321 and US Highway 70.

Hickory, with a population of about 40,000, is mostly located in Catawba County, but is also partially situated in Burke and Caldwell Counties. Alexander County, just to the north of Hickory, completes the Hickory-Lenoir-Morganton Metropolitan Statistical Area (MSA), the State's eighth largest. The MSA is primarily urban and is comprised of 24 municipalities.

## Government

The Hickory Tavern post office was established in 1860. Ten years later, in 1870, "Hickory Tavern" was incorporated. Seven years later, the "tavern" portion of the name was dropped, providing the official beginning for the City of Hickory. In 1931, the city expanded its boundaries to include the previously independent towns of West Hickory and Highland. The City has operated under a council/manager form of government since 1913, the first jurisdiction in North Carolina and the third jurisdiction in the United States to adopt this method of government. The City Council is comprised of a mayor and six council members representing area wards, who are elected to staggered terms on a nonpartisan basis in citywide elections. The Council is the City's policy-making and legislative authority, and is responsible for adopting the annual budget, and other matters related to the health and welfare of the city. The

Council makes appointments to various boards and commissions and appoints the City Manager. The City Manager is the Chief Executive Officer, and is responsible for enforcement of laws and ordinances, delivery of services, implementing policies, managing daily operations and appointing department heads.

## History

Hickory was initially incorporated as Hickory Tavern, which grew and took in the incorporated areas of Highland and West Hickory in 1931. Excerpted from the book *From Tavern to Town*, by Kirk F. Mohny & Laura A.W. Phillips. City of Hickory Historic Properties Commission, Hickory Landmarks Society, Inc.: 1988:

*Hickory began as a small Piedmont city whose growth and development moved it from a late nineteenth-century trading center on the Western North Carolina Railroad to a thriving twentieth-century manufacturing center for furniture, hosiery, and textiles.*

*The history and development of Hickory has been divided into five stages of growth. The earliest phase began at the end of the eighteenth century and ended with the outbreak of the Civil War (1769-1860).*

*The second phase began when the Civil War ended, as the city's population and economy expanded as well as increased development in cultural and educational facilities (1861-1900).*

*This second phase lasted until around 1900, when the establishment of the first large-scale furniture plant made permanent changes in the manufacturing business. From 1901 through 1917, many furniture factories as well as hosiery and textile mills were built in the city's realm resulting in a rise in population, service industries, and building activity.*

*During World War I, construction in the city declined only to be followed by a large increase in population and housing needs, growth of businesses and manufacturing companies, and the extension of public services rendered by local government (1918-1940).*

*Growth since 1945 – After World War II, Hickory*

Table B.1 - Hickory's Population Trends, 1970-2014

Hickory Population Trends	
Year	Population
1970	20,569
1980	20,757
1990	28,301
2000	37,222
2010	40,010
2014	40,330

Source: NC Office of State Budget and Management - 2016

*continued growing and by 1961 the city boasted 46 furniture plants, 89 hosiery mills, 27 other manufactories, and a population of 37,000 people.*

*A vast urban renewal project as well as continual redevelopment also accompanied this period of growth. Much of the historic fabric of Hickory's downtown was removed or drastically altered in the 1960s and 1970s, leaving gaping holes in the urban landscape. Yet, this period also saw the emergence of historic preservation efforts in Hickory, a trend that has grown in scope by instilling pride in the city's past by encouraging the appreciation, preservation, and continued use of Hickory's historic resources.*

The 1980s and the 1990s brought new economic growth to the region. The fiber optic industry made its home in the region and added to the overall prosperity of Hickory. However, many factories have since closed and the fiber optics industry has down-sized. Globalization is generally seen as the most significant factor in this most recent downturn.

The past 20-plus years have also witnessed the opening of Hickory's Arts and Science Center, the construction of the new US 321 Corridor,

construction of the new L.P. Frans Stadium, and Hickory Public Library's distinction as the first public library in North America to use "smart card technology."

In 2001, the Hickory Metropolitan Higher Education Center, a collaboration of Lenoir-Rhyne University, Catawba Valley Community College and Appalachian State University, was developed. In 2009, the center became the Appalachian State University Greater Hickory Partnership. Hickory was designated as a North Carolina Main Street Community by the North Carolina Department of Commerce in 2006. Also in 2006, a section of the McDonald Parkway connected northeast Hickory to the southeast quadrant of the city. In 2007 Hickory was named "All America City" for the 3rd time.

## Demographics

### Introduction

A primary source of demographic data is the United States Census Bureau. Recently, the City of Hickory participates in the Bureau's American Community Survey (ACS), an annual survey containing multiyear estimates for areas with populations less than 65,000. The City's involvement contributes to a multi-year community estimate, spanning from 2010 to 2014. Under the ACS, surveys are sent to a population sample, providing a snapshot of larger population characteristics and conditions. This demographic information is of tremendous value in assisting Hickory's choices regarding service provision and resource allocation.

Additional demographic information is available

Table B.2 - Hickory's Population Change and Land Area, 2000 and 2014

Hickory Population					Land Area (Sq. Miles)		
April	July	Total	Population	Urban	2000	Annexed	2010
2010	2014	Growth	Annexed	Growth	Limits	2010-2014	Limits
40,010	40,330	320	8	312	29.708	0.132	29.84

Source: NC Office of State Budget and Management - 2016

Table B.3 - Growth Rates in the Four County Region

County	2000	2010	% Growth	2014	% Growth
Alexander	33,603	37,198	10.7	37,832	0.2
Burke	89,145	90,912	2.0	89,197	-1.9
Caldwell	77,708	83,029	6.8	82,445	-0.7
Catawba	141,686	154,358	8.9	155,830	1.0
<b>Total</b>	<b>344,142</b>	<b>365,497</b>	<b>6.2</b>	<b>365,304</b>	<b>-0.1</b>

Source: Western Piedmont COG Data Center 2016

from the State of North Carolina and the Western Piedmont Council of Governments (WPCOG). Demographic data from these sources will also be considered for a more complete understanding of the population.

Understanding existing population trends, employment conditions and housing markets helps determine Hickory’s growth potential, as well as providing a better perspective of the community. The city’s growth potential is useful for predicting future trends, influencing the allocation of land and infrastructure for future planning efforts, and for the formulation of development opportunities, goals, and objectives.

Table B.4 - American Community Survey 2010-2014 Age Breakdown by Segment and Median Age

Age	Population
Under 5 years	2,404
5 to 9 years	2,823
10 to 14 years	2,463
15 to 19 years	2,770
20 to 24 years	3,027
25 to 34 years	4,998
35 to 44 years	5,680
45 to 54 years	5,021
55 to 59 years	2,614
60 to 64 years	2,035
65 to 74 years	3,335
75 to 84 years	2,146
85 years and over	792
<b>Total Population</b>	<b>40,108</b>
Median age (years)	38.0

## Population Characteristics

The City of Hickory has been in a state of positive, but limited, growth over the last several decades. More recent growth, although not as aggressive as in the past, is consistent with the population trends occurring in both the Hickory-Lenoir-Morganton Metropolitan Statistical Area (MSA) and throughout Catawba County.

According to the NC Office of State Budget and Management, Hickory’s population in 2014 was 40,330. Of this population, 40,243 were located in Catawba County, 66 were located in Burke County, and 21 were in Caldwell County. Recent growth within the City is split between new growth and annexation as shown in Table B.2.

Regional growth rates show a similar pattern of slower growth between 2010 and 2014, and indicate the Hickory-Lenoir-Morganton MSA’s highest growth area as being within Catawba County:

Population data indicates:

*Hickory’s population grew by an estimated 0.2 percent between the year 2010 and 2014 as reported by the US Census Bureau. During the same time period, the MSA experienced a growth rate of 0.3 percent, and Catawba County grew at a rate of 1 percent.*

*Since 1990 the area’s population has continued to grow. The Census Bureau reported the population of the City of Hickory to be 40,108 in 2014. In contrast, Hickory’s estimated population in 1996 was 32,632. The population change from 1996 to 2014 represents a 23 percent increase, much of which may be associated with the annexation of previously unincorporated areas.*

Table B.5 - American Community Survey Demographic Race Estimates 2010-2014

Race	Hickory City	Percent	Catawba County	Percent	NC %	U.S. %
One race	39,526	98.5	151,465	98.1	97.7	97.1
White	30,118	75.1	126,247	81.7	69.9	73.8
Black or African American	5,575	13.9	13,244	8.6	21.5	12.6
American Indian and Alaska Native	171	0.4	500	0.3	1.2	0.8
Asian	1,280	3.2	5,341	3.6	2.4	5.0
Native Hawaiian and Other Pacific Islander	0	0.0	48	0.0	0.1	0.2
Some other race	2,382	5.9	5,885	3.8	3.0	4.7
Two or more races	582	1.5	2,992	1.9	2.3	2.9
Hispanic or Latino (of any race)	4,771	11.9	13,294	8.6	8.7	16.9

*Catawba County will lead all counties within the Hickory MSA in total population gain through 2030. The US Census Bureau estimates that the MSA had a population of 363,936 in 2014.*

The population data were reviewed for age distribution, racial composition, and education attainment level within the area. This information, when combined with other socioeconomic data, helps to evaluate the characteristics of typical residents and consumers within the community.

Census data indicates:

*The Hickory median age is 38.0, almost two and one-half years younger than Catawba County.*

*Hickory is more racially/ethnically diverse and the Latino population was increasing, compared to Catawba County as a whole. Based on the 2010-2014 American Community Survey, Whites represented 75.1 percent of the population – an increase of 0.5 percent since 2010 and Black or African Americans represented 13.9 percent. Of any race, 11.9 percent claimed to be Hispanic or Latino – high for the County and State and an increase from 5 percent from 2000, but similar to national percentages. Catawba County figures show any-race Whites representing 81.7 percent of the population and 8.6 percent any-race Hispanic or Latino.*

## Hickory and ETJ Census Tract Population 2010 Estimates and 2030 Projections Methodology

Population (100% county) from the 2010 Census were collected for each of the census tracts in and near the City of Hickory city limits or its ETJ limits. The 2010 census tract estimates are based on a proportion of population given to each census tract from the 2010 County population estimates (for Alexander, Burke, Caldwell and Catawba counties) from the OSBM.

The 2030 census tract projections are based on a proportion of population given to each Census Tract from the 2030 County population estimates from the OSBM. Census tracts that have received a higher proportion of building permit growth (site built and multi-family) over the past five years (2011 through 2016) were given a higher proportion of population growth per year than tracts with less building permit activity. Household size for each census tract was also reduced by another five percent to match state projections of fewer persons per household from the US Census Bureau. This trend explains how some Census Tracts may have lost population since 2010. Please note that the census tract projections for 2030 are only projections based on current and future economic conditions, zoning ordinances, as well as, national, state and local government policies. The next 100% population count of the census tracts will not occur until after the 2020 Census.

Table B.6 - Projected Population Growth for the Four County MSA Region, 2007-2030

County	2010	2015	2020	2030	2007-2030 % Growth
Alexander	37,198	38,088	38,573	39,020	2.5%
Burke	90,912	92,966	94,301	95,828	5.4%
Caldwell	83,029	85,984	88,239	91,507	10.2%
Catawba	154,358	160,292	165,926	177,195	14.8%
<b>Total</b>	<b>365,497</b>	<b>377,330</b>	<b>387,039</b>	<b>403,550</b>	<b>10.4%</b>

Source: NC Office of State Budget and Management - 2011 and Western Piedmont Council of Governments

For the region, the State Projections for the four-county MSA show some growth in Catawba County, Hickory's primary population base.

The following maps can be used to cross-reference with Table 8 to see where the census tracts are located in relation to the projected growth. Ultimately, land use patterns will help determine where actual growth will occur. The maps do not reflect land use decisions and should be considered only as a short-term indication of regional growth.

## Households and Housing

The population increase experienced in the City of Hickory and throughout the region is also reflected in the household growth patterns occurring during the same time period. Based on Census data, the following household and housing patterns have emerged:

*There are an estimated 16,174 housing units as of*

Table B.7 - Housing Characteristics (Source: NC Office of State Budget and Management, Western Piedmont Council of Governments, and the United States Census Bureau)

Characteristics	Hickory	Percent	Catawba	Percent	NC %	U.S. %
Total housing units (2010 Census)	18,719	-	67,886	-	-	-
Occupied housing units (2010 Census)	16,174	88.8	60,887	89.7	86.5	88.6
Owner-occupied housing units (2010 Census)	8,995	54.9	42,857	70.4	66.7	65.1
Renter-occupied housing units (2010 Census)	7,297	45.1	16,271	27.7	31.6	32.7
Vacant housing units (2010 Census)	2,105	11.2	6,999	10.3	13.5	11.4
Owner-occupied homes (2010 Census)	8,995	-	42,857	-	-	-
Median value (dollars) (2010-2014 ACS)	155,800	-	133,100	-	153,600	175,500
Selected monthly median owner costs (2010-2014 ACS)						
With a mortgage (dollars) (2010-2014 ACS)	1,197	-	1,102	-	1,272	1,522
Not mortgaged (dollars) (2010-2014 ACS)	391	-	318	-	373	457

*2010 with an average household size of 2.33 persons.*

*The number of households increased from approximately 12,580 in 1998 to an estimate of 16,174 households in 2010. Trends are consistent throughout the area, which show continued growth but at slower rates.*

*Hickory in 2000 had an average household size of 2.35. By 2010, the average household size had decreased to 2.33 persons per household. Hickory's average is smaller than those of Catawba County or the State. Nationwide, trends indicate average household size is generally on the decline.*

## Trends

There is a diverse business community within the City of Hickory that contributes to the economy and the tax base, but the city and region are

Table B.8 - Projected Population Growth in the Hickory Region

Location		Population			Change	
County	Tract	2010	2030	Population	Total %	Annual %
Catawba	102.01	4,815	5,265	450	9.3	0.4
Catawba	102.02	8,365	10,377	2,012	24.1	1.1
Catawba	103.01	4,821	5,340	519	10.8	0.5
Catawba	103.02	5,467	5,896	429	7.8	0.4
Catawba	103.03	4,027	3,866	-161	-4.0	-0.2
Catawba	103.04	4,344	4,725	381	8.8	0.4
Catawba	104.01	6,593	6,988	395	6.0	0.3
Catawba	104.02	4,948	4,940	-8	-0.2	0.0
Catawba	105.01	3,753	3,633	-120	-3.2	-0.2
Catawba	105.02	3,226	3,603	377	11.7	0.5
Catawba	106	6,421	6,667	246	3.8	0.2
Catawba	107	2,426	2,155	-271	-11.2	-0.6
Catawba	109	3,762	3,264	-498	-13.2	-0.7
Catawba	110	2,644	2,370	-274	-10.4	-0.5
Catawba	111.01	3,497	3,794	297	8.5	0.4
Catawba	111.02	6,873	8,488	1,615	23.5	1.1
Catawba	117.01	4,280	4,907	627	14.6	0.7
Catawba	118.01	6,218	7,514	1,296	20.8	1.0
Burke	211	6,431	6,688	257	4.0	0.2
Burke	212.02	4,367	4,178	-189	-4.3	-0.2
Caldwell	313	8,094	7,946	-148	-1.8	-0.1
Caldwell	314.02	3,580	3,473	-107	-3.0	-0.2
Alexander	407	6,645	6,496	-149	-2.2	-0.1
<b>Total</b>		115,597	122,573	6,976	6.0	0.3

Source: NC Office of State Budget and Management - 2016 and Western Piedmont Council of Governments

recovering from an economic downturn that will continue to be a challenge for government and business. The region will need to strengthen and further diversify its job base, and determine how to provide services and amenities that residents and businesses desire.

Recent unemployment rates within the City of Hickory have been cut in half, from 11.2% in 2010 to 5% in 2016

- The region has seen an upward growth in income as shown by the increase in weekly wages over the last

eight years

- The number of people at or below the poverty level increased
- Foreclosures in the MSA have decreased by 56% from 2,205 in 2010 to 970 in 2015. Catawba County has seen a decrease of 57% from 974 in 2010 to 410 in 2015.
- The Hickory MSA has a lower-than-average educational attainment, with the MSA ranked last out of 15 MSAs in the State for high school

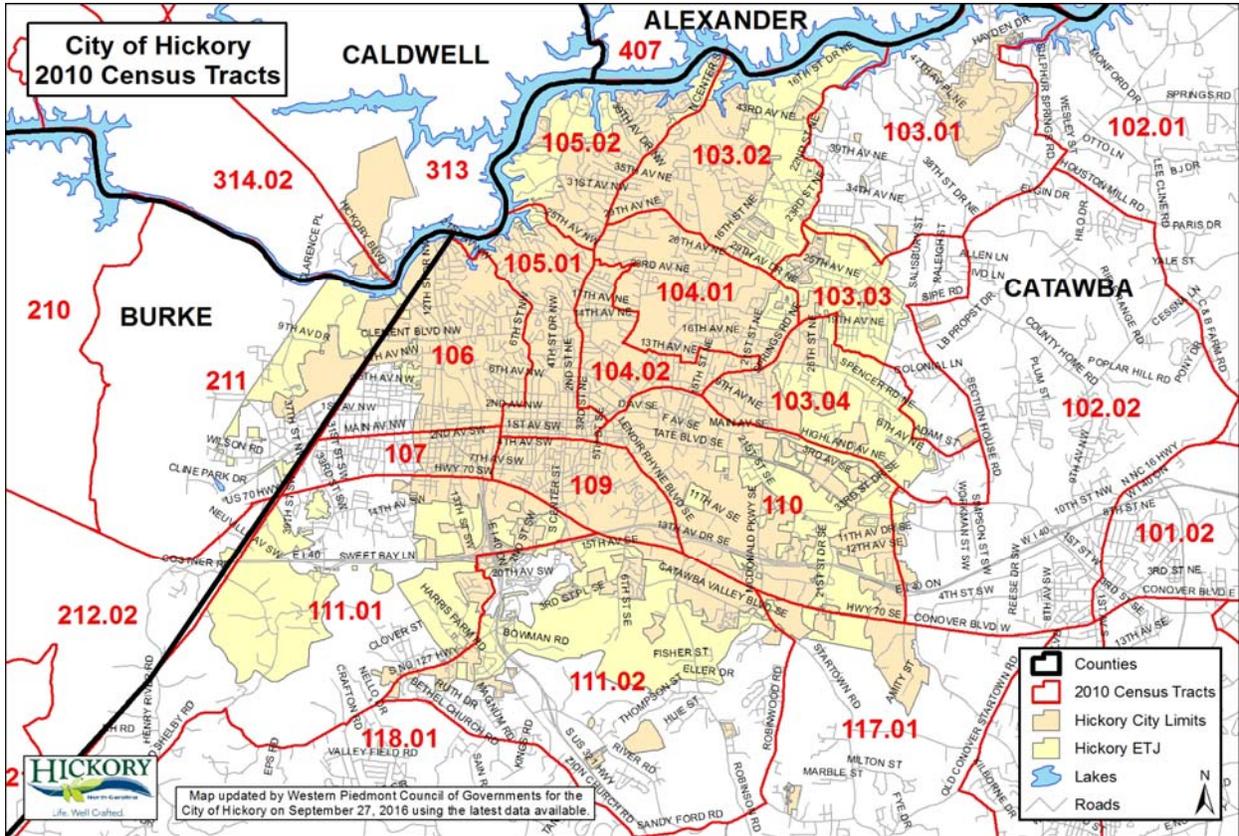


Figure B.1 - Census Tracts for Hickory, the ETJ, and the Surrounding Region

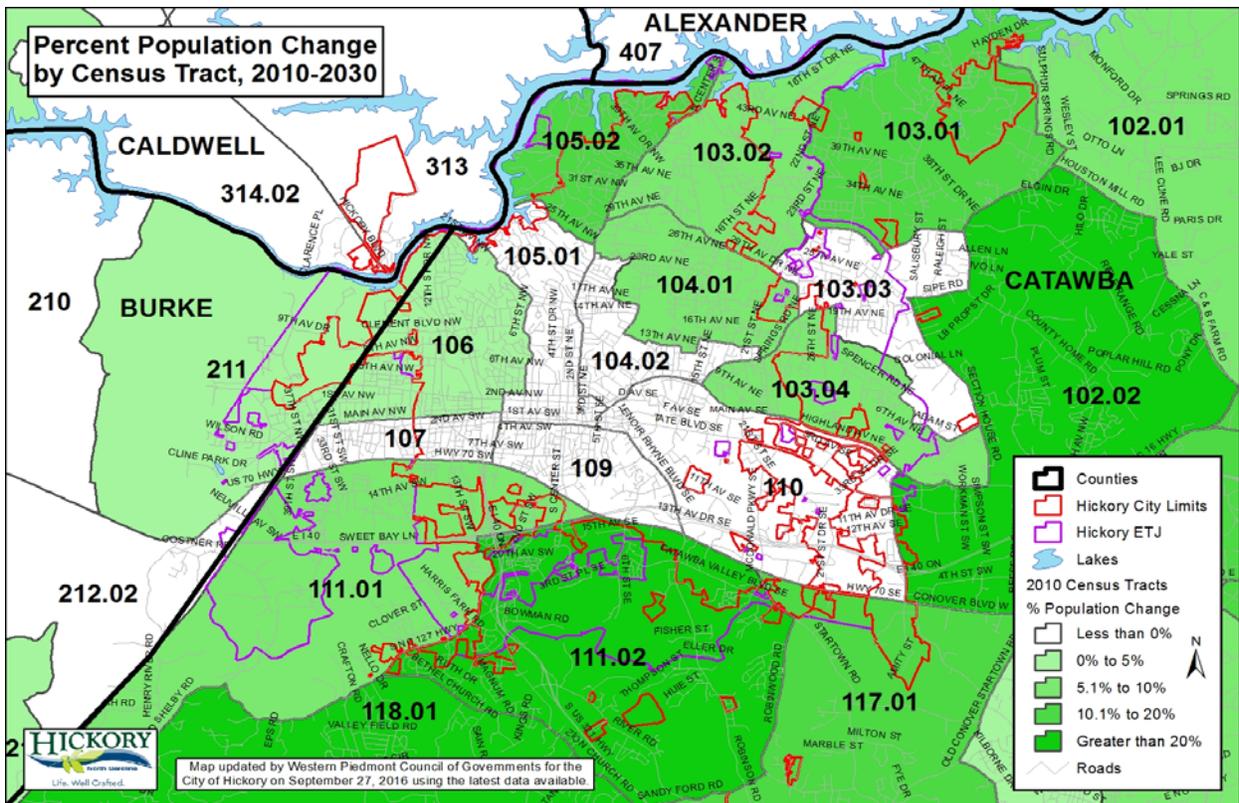


Figure B.2 - Projected Census Tract Population Gains

*diplomas, and 14 out of 15 for ~~and~~ bachelor's degrees or higher.*

include art works and programming. The document also provides guidance for developing goals and policies for Hickory's Comprehensive Plan.

## Cultural Resources

### Cultural Opportunities

There are numerous cultural opportunities in Hickory. A regional center for performances and museums is located in the Science Arts and Literature Together ("SALT") Block. The Catawba Science Center, the Arts and Science Center, Hickory Choral Society, Union Square, and Patrick Beaver Memorial Library are all located there, as well as the offices of the Western Piedmont Symphony. Concerts are held at several local churches, Lenoir-Rhyne University and the Museum of Art. Music programming also provides in-school performances, senior facility concerts and a library series.

### Public Art

The Public Art Commission reviews project proposals for the placement and maintenance of pieces of art throughout the City. The Public Art Commission was appointed by the Hickory City Council to provide a forum for integrating public art into the public space, to help create a visual sense of the community, and to provide leadership in implementing a public art program for Hickory. The Public Art Commission is composed of twelve members with three-year terms, one from each ward, five at-large members and one representative from the Youth Council.

The Commission has an adopted Public Art Master Plan, which provides guidance for developing a comprehensive public art program. The master plan is designed to be a guidebook for public art in the city, and to be the major tool for implementing the public art program. The plan is a working document assisting the Public Art Commission and City Council in planning and funding for art-related projects, and provides artists' guidance when responding to those projects. The plan provides opportunities to