



# HIGHWAY 16 CORRIDOR PLAN

ADOPTED : 10.28.2014







The Highway 16 Corridor Plan was prepared for

## **WAXHAW, NORTH CAROLINA**

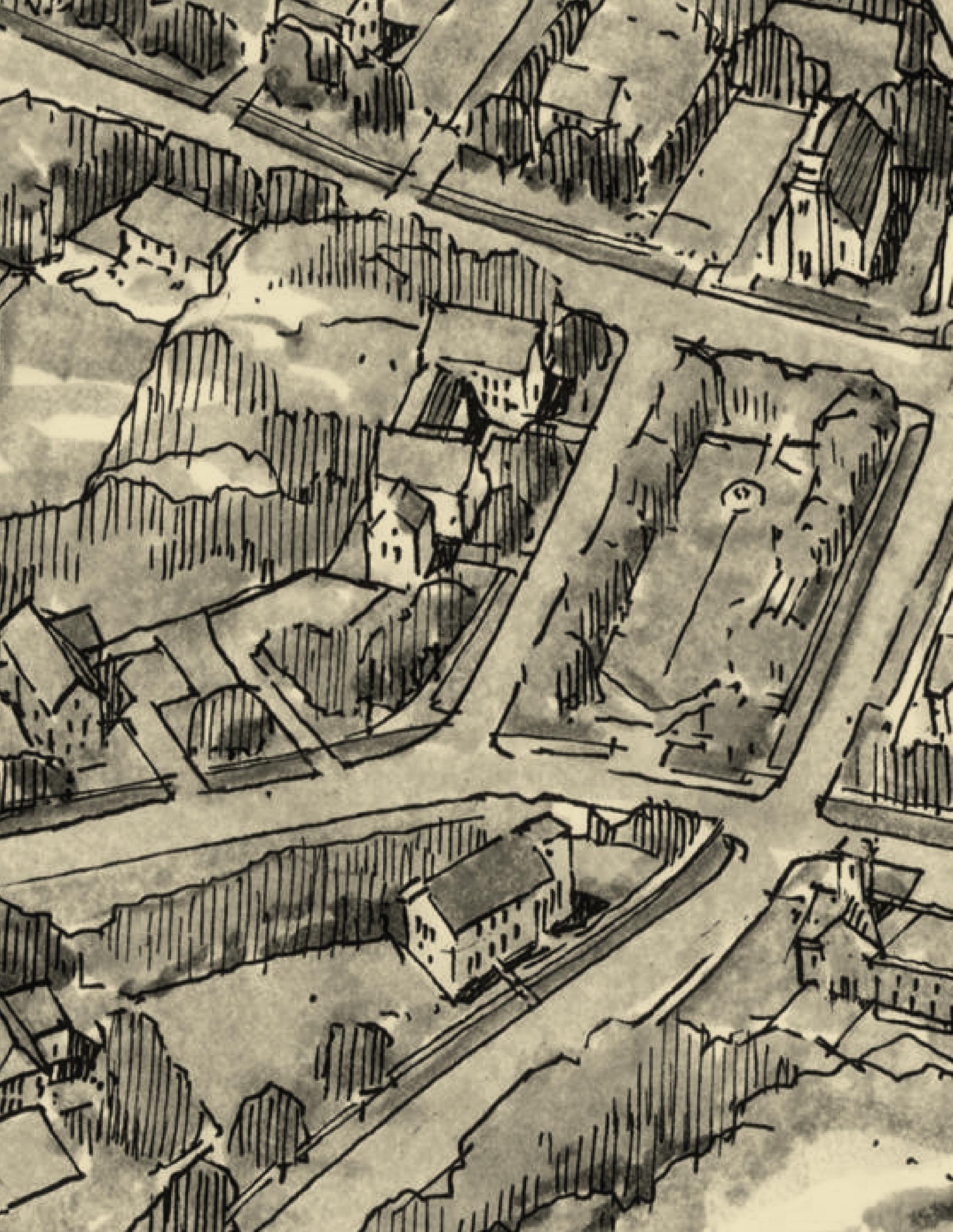
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**DRAFT 9.2.2014**



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# EXECUTIVE SUMMARY



**The Highway 16 Corridor Plan** presents a framework for the spine of Waxhaw. Starting as a rural boulevard at the north end and building to a walkable regional center, the Highway 16 corridor can become a string of villages and neighborhoods lined with trees and trails.

Highway 16 is Waxhaw's primary growth corridor, linking residents to Charlotte's retail and employment centers. This plan documents a wide range of suggested improvements and community-focused projects along Highway 16, developed through a week-long community design charrette in June 2013.

The future success of Waxhaw is intimately linked to the growth on the corridor. About two-thirds of the current town population live in neighborhoods on the corridor, and more than half of the commercial development in Waxhaw is located in retail centers along Highway 16.

Despite new development, the Highway 16 corridor lacks a clear identity and a sense of place: Highway 16 could be any suburban growth corridor in the southeast. A core component of the corridor plan is to respond to the significant market demand along Highway 16 through high-quality new development that provides more lasting value to the Town of Waxhaw and creates a distinguishable place.

## **Background & Analysis**

During the market rebound from the recent recession, the Waxhaw Town Board of Commissioners has sought to establish a sustainable plan for growth in Waxhaw to address

the rapid market turnaround. The Highway 16 Corridor Plan is the keystone of this sustainability plan. The planning process for the corridor identified a need to:

- > Respond to continued growth pressure on the Highway 16 corridor by identifying strategic nodes to focus development and higher density residential housing;
- > Create a regulatory framework that responds to the vision of the corridor; and
- > Explore a diversity of uses and solutions to manage growth on the corridor.

The corridor plan builds on prior planning efforts, clarifying the goals of the 2009 Comprehensive Plan and the Western Union County Local Area Regional Transportation Plan (2009), and building on the recommendations of the 2012 Pedestrian Plan, the 2012 Downtown Vision Plan and the 2013 Downtown Neighborhoods Plan.

## **The Planning Process**

The keys to a successful plan include an analysis of the existing conditions; meaningful public engagement; visionary, but practical planning and design; and financially- and politically-feasible implementation strategies.

The town invited a spectrum of community members and stakeholders to participate

**Community Priorities from Workshop:**

- > Improve the pedestrian and bicycle environment along Highway 16 so that it is a safe corridor for all users.
- > Encourage a greater diversity and mix of uses, especially in key activity centers, along the corridor.
- > Change the sprawling, auto-dominated character of the Highway 16 corridor and encourage development that is more compatible with Waxhaw’s traditional, compact, small-town character.

throughout the charrette and planning process.

Meetings and workshops included:

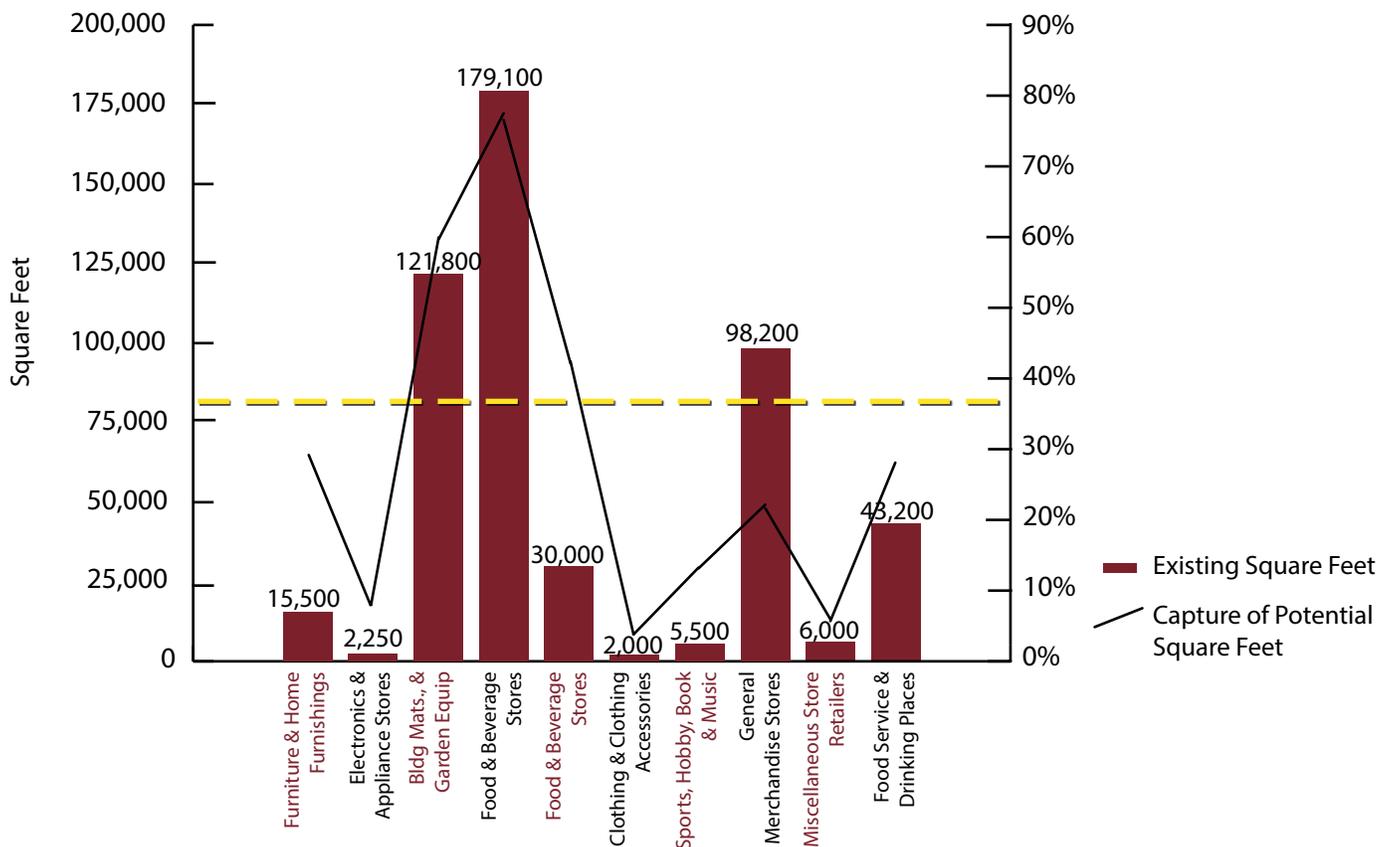
- > An Advisory Committee Meeting to kick-off the effort;
- > A public kick-off meeting that included a series of group discussions;
- > A four-day public planning and design charrette;
- > Topic specific stakeholder meetings; and
- > A follow-up Advisory Committee Meeting to review the charrette results.

**Analyzing the Market Potential**

The market study first offers general observations about Waxhaw’s position in the region in various market segments, summarized below.

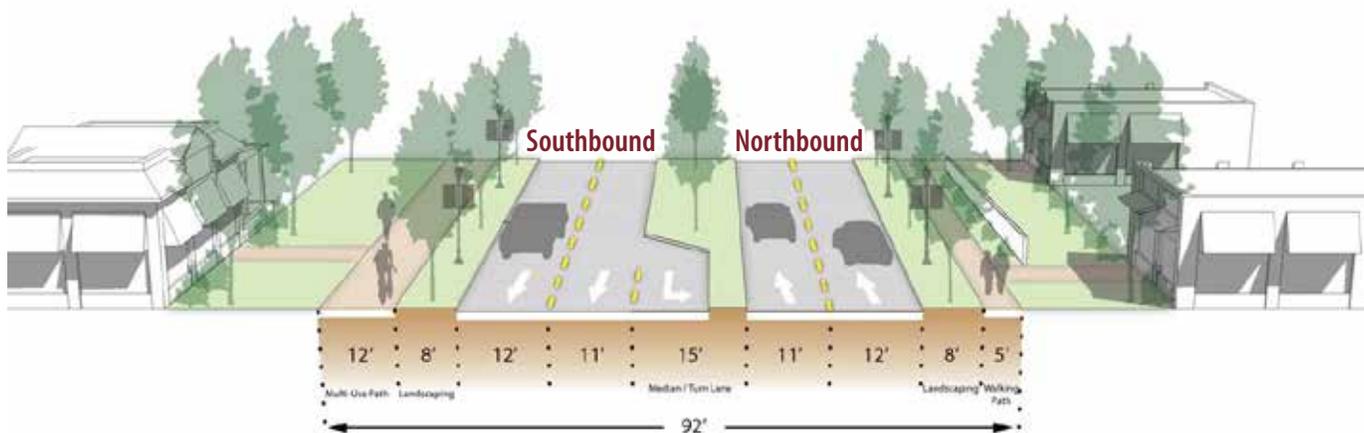
- > **Retail:** The retail vacancy rate in Waxhaw is currently low, however there are several approved retail developments that have not yet been built.
- > **Office:** The current office market in Waxhaw is fairly weak with a high vacancy rate and ample space for new businesses.
- > **For-Sale Residential:** Waxhaw is in the path of Charlotte’s executive housing trend with high home prices and solid growth.
- > **For-Rent Residential:** Currently there are no for-rent multi-family units in Waxhaw.
- > **Senior Housing:** Waxhaw has only one assisted-living facility that is currently filled to capacity.

Capitalizing on the market demand and focusing on high-quality new development requires specific conversations with developers and a clear vision.



**▲ HIGHWAY 16: 2013 RETAIL SUPPLY AND ESTIMATED CAPTURE OF DEMAND POTENTIAL**

The solid black line is the capture (dollars spent on retail) of the area relative to its expenditure potential and the dashed yellow line is the average capture (dollars spent) in Waxhaw across all retail types.



### ▲ COMPLETE STREET CHANGES PROPOSED FOR PORTIONS OF HIGHWAY 16

This plan aims to highlight those conversations and offer parameters to meet both the developer and the town’s needs. Additionally, this plan reviews and analyzes approved projects based on their 2013 market feasibility.

#### Building a Complete Street

Highway 16 is likely to be widened and improved in the next 10 years. This plan outlines a complete street design that would enable safe access for all users regardless of age, ability, and mode of travel.

The plan recommendations include:

- › Improved accommodations for pedestrians and bicycles moving along and across Highway 16;
- › Construction of a multi-use path along Highway 16 that connects to the Carolina Thread Trail; and
- › Higher development intensities to support the extension of transit service to the corridor in the future.

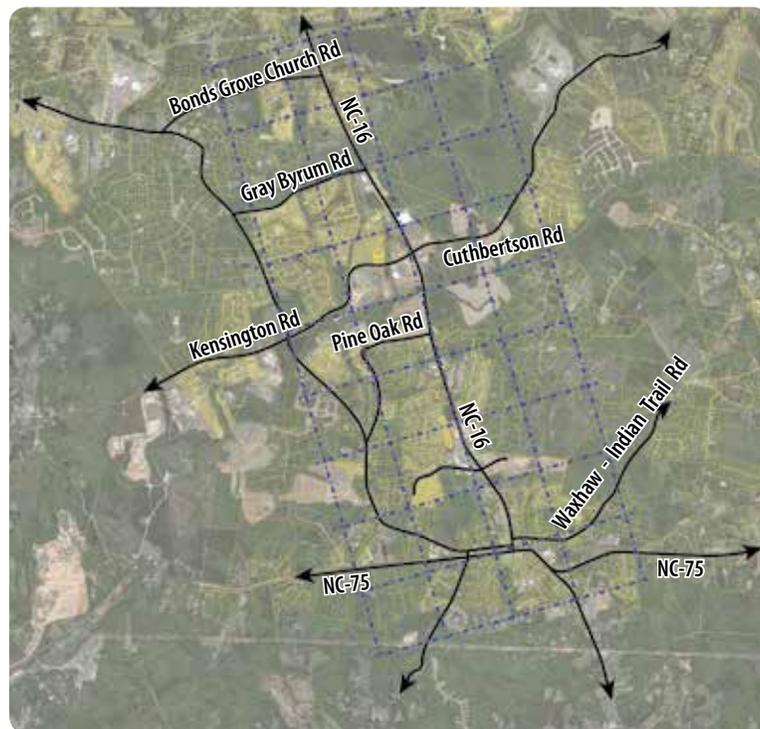
Recommended strategies such as driveway consolidation, frontage roads, roundabouts, roadway transitions and better signaling would improve the flow of traffic on Highway 16, address the congestion caused by growth and make it a more efficient and pleasant driving experience.

#### Making Key Connections

Waxhaw’s transportation network is limited because Highway 16 is the only viable route for most trips made in town. The lack of route options caused by development patterns and

natural features forces traffic onto Highway 16, clogging the corridor. This plan addresses network solutions and multimodal opportunities on the corridor.

The plan identifies specific locations where additional network connectivity should be established such as connections across adjacent parcels, shared access points, side street access, and rear alleys—all improving the overall transportation network.



### ▲ IDEAL HALF-MILE GRID NETWORK

For complete description on benefits of connected network, see Chapter 6: Making Key Connections.

### **Envision Development**

The plan recommends a preferred 20 year build-out option for the corridor based on the market study, growth in Waxhaw, approved development, citizen input and contemporary best practices in urban planning and design.

The conceptual plans show appropriate land uses and feasible development, serving as a future land use framework and economic development tool for the town when working with developers. The area between the intersection of Gray Byrum Road and Cuthbertson Road emerged as the site proposed for the most intense commercial use in the future. The remainder of the corridor is appropriate for less intense commercial/office development and a mixture of housing types.

### **Clarify the Regulations**

In order to support the recommendations within this plan, the town should amend its development

regulations to improve their clarity, coherence and predictability. Addressing the town's overreliance on Conditional Use Districts and simplifying the development process will be a significant part of that effort.

This plan identifies two approaches for regulatory reform within Waxhaw:

- › The preferred approach is a comprehensive update of the town's UDO that will address the district standards and procedural issues all at once. This approach requires a greater commitment of resources in the short-term, but is more coherent and effective than a series of piecemeal revisions to the ordinance over the long-term.
- › The second approach involves a series of ordinance revisions that can be implemented to improve the function and predictability of the current UDO without major map and text amendments to the base districts.



# TOP 10 GOALS IN 5 YEARS

## DO THIS NOW.

### 1. ZONE MIXED-USE NODES AT STRATEGIC INTERSECTIONS:

Developing mixed-use nodes at intersections reduces car trips between uses, integrates transportation improvements to targeted locations and creates a framework for sustained success through co-location of businesses and shops.

### 2. ASSIGN STREET TYPES BASED ON CONTEXT ZONES:

The character of Highway 16 changes from the northern town limit to Downtown Waxhaw. Instead of implementing one street type along the entire corridor, use context zones and street types that relate to the proposed land uses and overall vision for the corridor.



### 3. IMPROVE INTERSECTIONS TO IMPROVE SAFETY FOR ALL:

Key intersections should accommodate cars, pedestrians and cyclists with crosswalks, traffic signals and appropriately-scaled turning lanes.

### 4. ADOPT A LOCAL THOROUGHFARE PLAN:

A thoroughfare plan requires new street connections and improves the overall street network in Waxhaw, alleviating congestion and providing transportation route options.

### 5. ESTABLISH THRESHOLDS FOR A TRANSPORTATION IMPACT ANALYSIS:

New development should be required to analyze the impacts of development on the transportation infrastructure and to upgrade facilities as necessary.

### 6. ADOPT GROWTH SECTORS IN THE 2014 COMPREHENSIVE PLAN UPDATE:

Large undeveloped parcels should be designed as walkable neighborhoods; identified as specific community types including regional centers, traditional neighborhoods and conservation land developments.

### 7. BUILD OPEN SPACE AMENITIES WITHIN WALKING DISTANCE TO NEIGHBORHOODS:

New parks, churches and trails should be connected to mixed-use and residential development.

### 8. REPAIR THE BASE ZONING DISTRICTS AND ELIMINATE CONDITIONAL USE DISTRICTS:

Conditional use districts with commercial and multi-family zoning should be eliminated and replaced with design controls and standards.

### 9. SIMPLIFY THE DEVELOPMENT REVIEW PROCESS:

All development review should not go to the Town Board of Commissioners for approval. The majority of review should occur administratively or by the Planning Board.

### 10. USE PARALLEL DISTRICTS TO REZONE BY DEVELOPER CHOICE:

Give an option to developers to develop their property with a by-right preferred district without requiring the rezoning process, gradually reducing the number of parcels with a Conditional Use zoning while also producing development that meets the goals of the corridor plan.

## DEVELOPMENT DATA *(as drawn in Conceptual Plan)*

<i>Development Type</i>	<i>Byrum Village West</i>	<i>Byrum Village East</i>	<i>Byrum Ag Village</i>	<i>Cureton Village</i>
<i>Residential Units</i>	<i>Total: 117 units</i>	<i>Total: 1025 units</i>	<i>Total: 94 units</i>	<i>Total: 504 units</i>
FOR-SALE SINGLE FAMILY (UNITS)	78	75	94	-
FOR SALE TOWNHOUSES (UNITS)	19	90	-	152
RENTAL APARTMENTS (UNITS)	20	710	-	176
RETIREMENT CARE FACILITY (UNITS)	-	150	-	176
<i>Non-Residential</i>	<i>Total: 262,000 sf</i>	<i>Total: 260,000 sf</i>	<i>Total: 0</i>	<i>Total: 373,950 sf</i>
OFFICE/ MEDICAL OFFICE (SF)	262,000	-	-	-
RETAIL (SF)	-	260,000	-	373,950
HOTEL (ROOMS)	-	90	-	-
<i>Civic</i>	<i>Total: 6 acres</i>	<i>Total: 15 acres</i>	<i>Total: 15 acres 36,500 sf</i>	<i>Total: 9 acres 200 sf</i>
CIVIC SPACE (ACRES)	6	15	15	9
CIVIC BUILDINGS (SF)	-	-	36,500	200
<i>Parking</i>	<i>Total: 700 spaces</i>	<i>Total: 1684 spaces</i>	<i>Total: -</i>	<i>Total: 770 spaces</i>
PARKING SPACES	700	1684	-	770



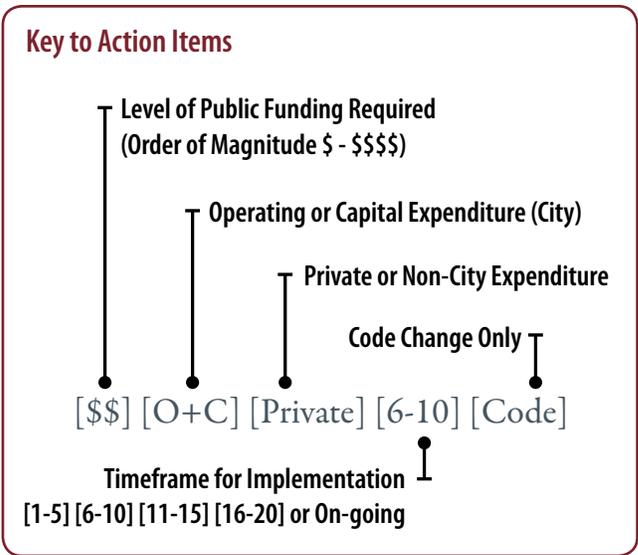
<i>Prescot Village</i>	<i>Pine Oaks South</i>	<i>North Red Oaks Trl</i>	<i>Old Hickory</i>	<i>Total</i>
<i>Total: 325 units</i>	<i>Total: 0 units</i>	<i>Total: 0 units</i>	<i>Total: 0 units</i>	<i>Total: 2,065 units</i>
53	-	-	-	300
90	-	-	-	351
182	-	-	-	1,088
-	-	-	-	326
<i>Total: 44,000 sf</i>	<i>Total: 32,400 sf</i>	<i>Total: 36,000 sf</i>	<i>Total: 91,900 sf</i>	<i>Total: 1.1 million sf</i>
-	-	-	-	262,000
44,000	32,400	36,000	91,900	838,250
-	-	-	-	90
<i>Total: 7 acres 2,000 sf</i>	<i>Total: .1 acres</i>	<i>Total: 10 acres 34,300 sf</i>	<i>Total: 2 acres 600 sf</i>	<i>Total: 64.1 acres 73,600 sf</i>
7	.1	10	2	64.1
2,000	-	34,300	600	73,600
<i>Total: 484 spaces</i>	<i>Total: 135 spaces</i>	<i>Total: 527 spaces</i>	<i>Total: N/A</i>	<i>Total: 4,300 spaces</i>
484	135	527	-	4,300



## 1.1 PRIORITIES FOR IMPLEMENTATION

In order for the vision and recommendations expressed in this plan to be realized, specific action items will need to be implemented by the Town of Waxhaw. Many of the action items seek to provide the conditions under which the vision can be achieved, by way of providing sensible land use regulation, necessary public investments, the development of appropriate programs and policies, encouraging catalyst projects and other actions. The list of high priority items, organized by major topic area, are shown on the next few pages.

The action items in the Implementation Summary Chart below are coded based on the legend noted at the right. The estimated funding levels are listed according to order of magnitude in order to evaluate the relative costs of one action over another.



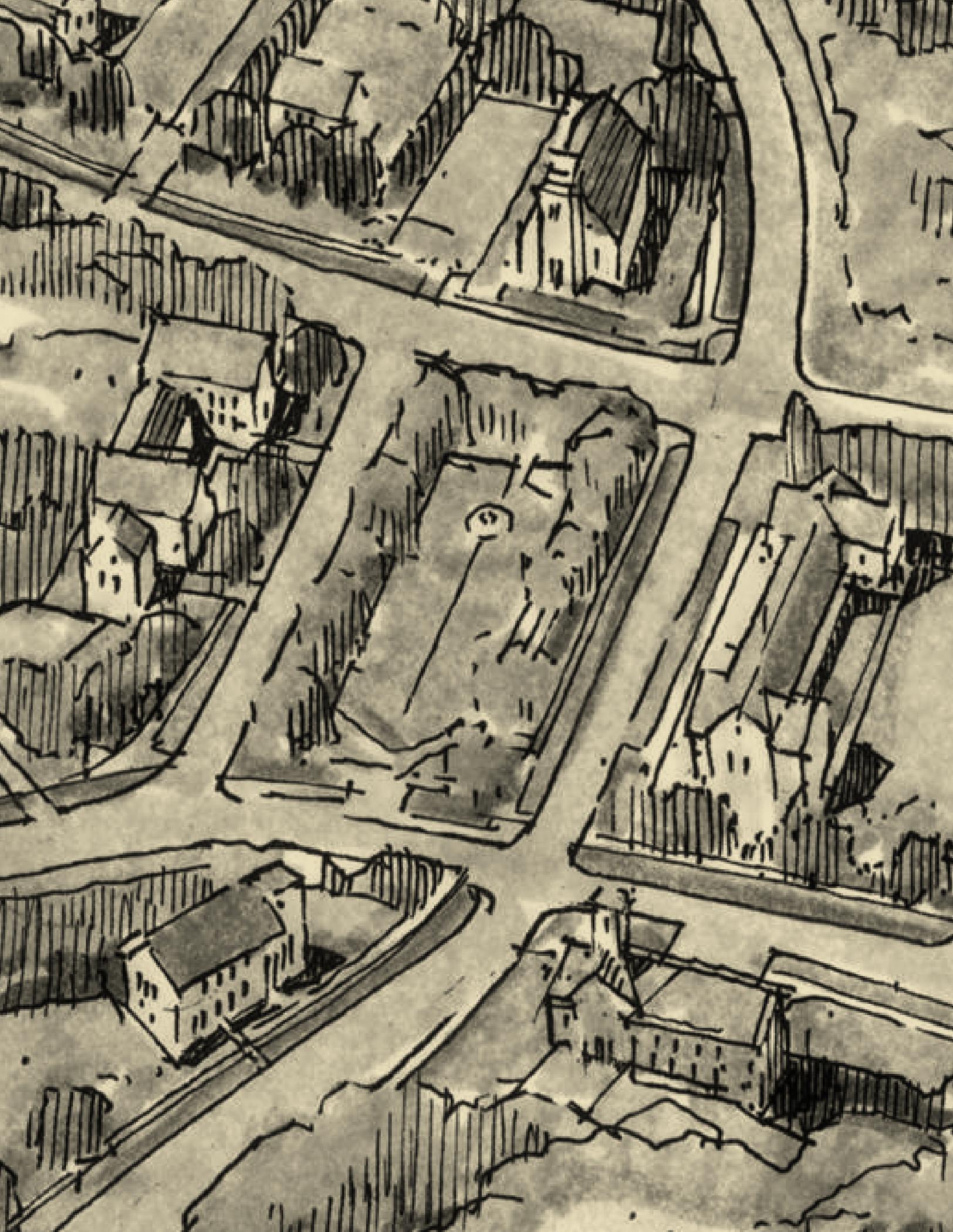
Order of Magnitude	Estimated Cost Range
\$	\$1 - \$50,000
\$\$	\$50,000 - \$250,000
\$\$\$	\$250,000 - \$1 million
\$\$\$\$	\$1 million+

Reference Number	Project/Task	Page #	Level of Public Funding Required	Operating or Capital Expenditure	Private or Non-City Expenditure	On-going	Year 1-5	Year 6-10	Year 11-15	Year 16-20	Year 20+	Code/Policy
<b>CHAPTER FOUR: ANALYZING THE MARKET POTENTIAL</b>												
M-1	Permit and locate new retail at key intersections	48	-	-	Private	x						x
M-2	Include pocket parks and open space in new retail/mixed-use developments	51	-	-	Private	x						x
M-3	Fill the existing office market in the corridor before building new office space	54	-	-	Private		x					
M-4	Incentivize small businesses to locate on the Highway 16 corridor	54	\$	0	-	x						x
M-5	Locate new office development in mixed-use nodes	56	-	-	Private	x						x

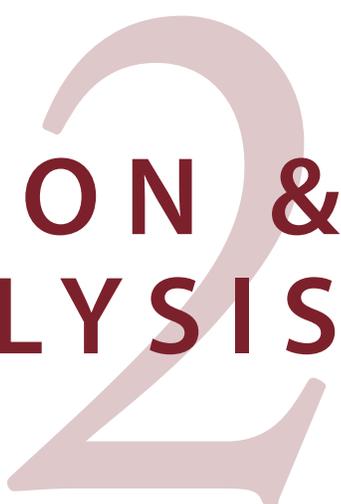
Reference Number	Project/Task	Page #	Level of Public Funding Required	Operating or Capital Expenditure	Private or Non-City Expenditure	On-going	Year 1-5	Year 6-10	Year 11-15	Year 16-20	Year 20+	Code /Policy
M-6	Create a design district to cater to residents building or remodeling homes	56	-	-	Private	x						x
M-7	Build a variety of new for-sale housing products	59	-	-	Private	x						x
M-8	Build new multi-family rental residential in mixed-use nodes on the corridor	61	-	-	Private	x						x
M-9	Build new assisted-living facilities in mixed-use nodes on the corridor	62	-	-	Private	x						x
<b>CHAPTER FIVE: BUILDING A COMPLETE STREET</b>												
S-1	Provide a separated bicycle facility on Highway 16	70	\$\$\$\$	C	-			x				
S-2	Assign street types to Highway 16 based on identified context zones	71	-	-	-		x					x
S-3	Select appropriate landscaping and buffering for each Highway 16 street type	78	-	-	-			x				x
S-4	Use the center median on Highway 16 to manage stormwater runoff	79	\$\$\$\$	C	Partially Non-City (NCDOT)			x				x
S-5	Build a roundabout at the intersection of Waxhaw Parkway and Highway 16	81	\$\$\$	C	-				x			
S-6	Plant street trees on Highway 16 to provide separation and frame the street	82	\$\$\$	C	Partially Non-City (NCDOT)			x				x
S-7	Improve intersections to improve safety for drivers, cyclists and pedestrians	85	\$\$\$\$	C	Partially Non-City (NCDOT)	x		x				x
S-8	Consolidate driveways on Highway 16 in conjunction with development	90	-	-	-	x						x
S-9	Construct a frontage road between Country Oaks Drive and Old Hickory Shopping Center	90	\$\$\$\$	0	-	x						x
<b>CHAPTER SIX: MAKING KEY CONNECTIONS</b>												
C-1	Adopt a thoroughfare plan to promote future connectivity	96	-	-	-	x						x

Reference Number	Project/Task	Page #	Level of Public Funding Required	Operating or Capital Expenditure	Private or Non-City Expenditure	On-going	Year 1-5	Year 6-10	Year 11-15	Year 16-20	Year 20+	Code/Policy
C-2	Connect the regional Carolina Thread Trail network to Highway 16 neighborhoods	98	\$\$\$	0	-	x						x
C-3	Require a connectivity index goal for new subdivisions	100	-	-	Private	x						x
C-4	Build a road connection through Lawson Phase 2 and 3 to connect to Highway 16	102	-	-	Private		x					
C-5	Build a road connection through the Prescot development	103	-	-	Private			x				
C-6	Use appropriate street types for connections through residential and commercial areas	106	-	-	Private	x						x
C-7	Establish consistent thresholds to guide the preparation of a Transportation Impact Analysis (TIA)	107	-	-	-		x					x
C-8	Establish a CATS Express Bus Route connection to Waxhaw	108	\$\$\$	0	-				x			
C-9	Create a local bus circulator that serves significant Waxhaw destinations	109	\$\$\$	0	-					x		
<b>CHAPTER SEVEN: ENVISION DEVELOPMENT</b>												
D-1	Create a gateway to Waxhaw at the intersection of Bonds Grove Church Road and Highway 16	115	\$\$	C	-			x				
D-2	Create a regional center at Byrum Village	116	-	-	Private			x				x
D-3	Develop large parcels as regional centers, clustered land developments or traditional neighborhoods	122	-	-	-	x						x
D-4	Leverage the CMC-Waxhaw Campus with complimentary development	127	-	-	Private				x			
D-5	Update previous plans near the intersection at Cuthbertson Road and Kensington Drive	128	-	-	Private		x					
D-6	Create a Trailhead Park for the Carolina Thread Trail between Prescot and Cureton	130	\$\$\$\$	C	-			x				

Reference Number	Project/Task	Page #	Level of Public Funding Required	Operating or Capital Expenditure	Private or Non-City Expenditure	On-going	Year 1-5	Year 6-10	Year 11-15	Year 16-20	Year 20+	Code /Policy
D-7	Update the Prescott plan to align with market demand	131	-	-	Private		x					
D-8	Redevelop over-sized parking lots incrementally	134	-	-	Private					x		x
D-9	Site civic buildings and amenities along the Highway 16 corridor	137	\$\$\$\$	O/C	-	x						x
D-10	Work with local leaders and county officials to establish a park and ride lot	137	\$	C	-				x			
<b>CHAPTER EIGHT: CLARIFY THE REGULATIONS</b>												
R-1	Adopt growth sectors in the Comprehensive Plan that create new community types, instead of large-parcel single-use zoning	145	-	-	-	x	x					x
R-2	Repair the base districts in the UDO and eliminate Conditional Use Districts along the Highway 16 corridor	148	-	-	-		x					x
R-3	Simplify and reformulate the development review process	149	-	-	-		x					x
R-4	Establish clear guidelines to expedite the approval of small lot single-family and townhome development	150	-	-	-			x				x
R-5	Establish clear guidelines to expedite the approval of multi-family development	151	-	-	-			x				x
R-6	Establish standards to mitigate the impact of large-format national retailers	152	-	-	-	x	x					x
R-7	Revise open space policies to ensure new residents are proximate to parks and greenways	154	-	-	-		x					x
R-8	Utilize overlay districts to support the recommendations of the corridor plan	155	-	-	-	x	x					x
R-9	Utilize parallel form-based districts to offer a by-right development option	158	-	-	-	x	x					x



# INTRODUCTION & ANALYSIS



**The Highway 16 Corridor Plan** presents an opportunity for Waxhaw to prioritize infrastructure improvements and policy changes as a comprehensive planning strategy for the most important corridor in Waxhaw.

Highway 16 is Waxhaw's primary commercial corridor and link to the employment centers to the north. This Corridor Plan documents a wide range of suggested improvements and community-focused projects along Highway 16, developed through a week-long community design charrette in June 2013. The Highway 16 corridor charrette built on the Waxhaw Downtown Master Plan (2012) and the Downtown Neighborhoods charrette (2013) as a logical extension from the downtown area to the commercial and residential areas along Highway 16.

Development on Highway 16 is intimately linked to the success and growth of Waxhaw. About two-thirds of the population of Waxhaw live in neighborhoods with direct access to the corridor, and more than half of the commercial development in Waxhaw, (including over 320,000 square feet of retail space) is located in retail centers along Highway 16.

Despite this concentration of population and retail space, the Highway 16 corridor lacks meaningful character and a sense of place. It is a sprawling, auto-oriented environment inhabited by isolated pods of commercial and residential development. A core component of the Corridor Plan is to respond to the significant market demand along Highway 16 through high-quality new

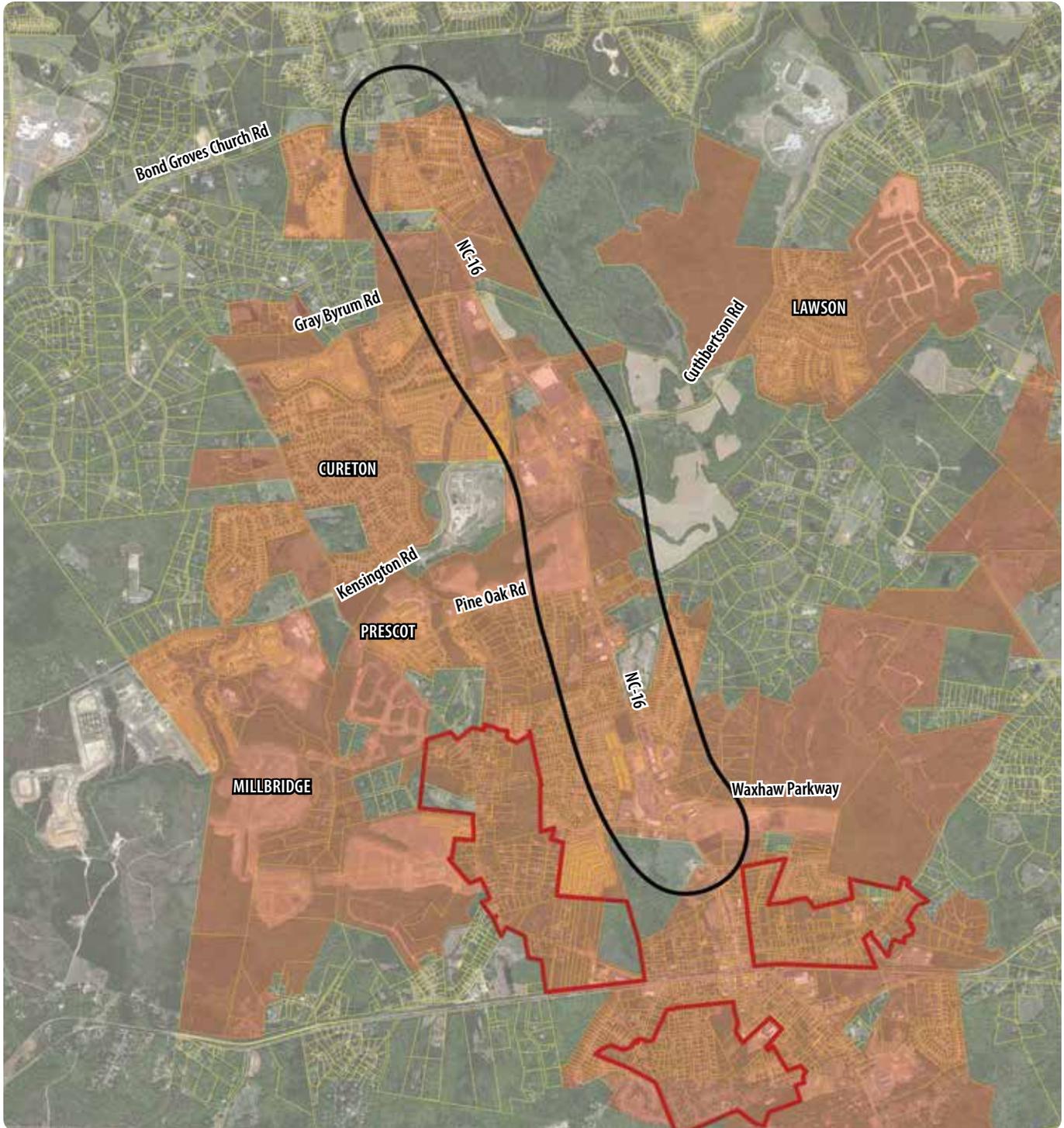
development that provides more lasting value to the Town of Waxhaw.

The planning process for the corridor grew out of a need to:

- › Respond to continued growth pressure on the Highway 16 corridor by identifying strategic nodes to focus development and higher density residential housing;
- › Create a regulatory framework that responds to the vision of the corridor; and
- › Explore a diversity of uses and solutions to manage growth on the corridor.

The first step in the planning process was to build community consensus for a preferred vision for the corridor through public meetings, stakeholder interviews and the collaborative charrette process.

A multi-disciplinary team of designers, planners, real estate professionals, graphic designers, architects and engineers worked throughout the Highway 16 charrette to develop plans and strategies in concert with stakeholders. The inclusion of many technical disciplines permitted the team to thoroughly analyze assumptions and expectations to create a plan that is feasible, realistic, and encourages investment by both the public and private sectors.



**▲ HIGHWAY 16 CORRIDOR STUDY AREA**

*Above:* The study area examined in this Corridor Plan is outlined above in black. The study area includes roughly 3.5 miles of Highway 16, from Blythe Mill Road (at the south end) to the Waxhaw Town Limits at Bonds Grove Church Road (at the north end), and the land within a quarter mile of that road section. The areas outlined in red indicate the neighborhoods studied as part of the Waxhaw Downtown Neighborhoods charrette in 2013.

*Opposite:* The photographs on the opposite page illustrate the typical character of existing development along the



▲ NORTH OF PRESCOT ON HIGHWAY 16



▲ 2 LANE SECTION NEAR BOND'S GROVE CHURCH RD



▲ 4 LANE SECTION NEAR GRAY BYRUM RD



▲ 4 LANE SECTION NEAR CUTHBERTSON RD



▲ 2 LANE SECTION NEAR CURETON TOWNCENTER



▲ SOUTH OF PRESCOT ON HIGHWAY 16

## 2.1 CONTEXT

**Waxhaw - 2013:** The Charlotte market is rebounding quickly from the Great Recession of 2007, and the numerous development projects underway on Highway 16 reflect growing market pressure. During the economic downturn, many projects fell into foreclosure and became bank-owned. Within the last 12-24 months, solvent builders and developers have purchased previously-failed projects and are quickly resuming construction. During this time, the Waxhaw Town Board of Commissioners has sought to establish a sustainable plan for growth in Waxhaw to address the rapid market turnaround.

**Physical Context:** The Highway 16 corridor extends north from Downtown Waxhaw to Weddington, I-485, and eventually, Uptown Charlotte. It is the key commuter corridor in Waxhaw. The closest parallel corridors are Highway 521 to the west and Highway 74 to the east. The Highway 16 corridor is approximately 3.5 miles long within the Waxhaw town limits.

## 2.2 PREVIOUS PLANNING EFFORTS

**2030 Comprehensive Plan (2009):** The adopted 2030 Comprehensive Plan encompasses key initiatives regarding economic development; transportation; infrastructure; environmental sustainability; arts and culture; recreation and leisure; housing; education; and city services.

The 2030 Comprehensive Plan provides general recommendations related to the Highway 16 corridor. These recommendations are incorporated into the Corridor Plan as shown below.

### **GI (Growth and Infrastructure) Policy 1.1:**

Promote a mix of uses in downtown and activity centers. Designate downtown and activity centers for mixed-use development and direct new development, infill, and redevelopment to these locations.

**GI Strategy 1.1.1:** Update the zoning ordinance to provide for mixed-use development in downtown and designated activity centers as identified on the Future Land Use Plan.

**GI Strategy 1.1.2:** Establish guidelines for the appropriate combination of uses in each mixed-use area, and assess existing conditions in each area to determine which uses are lacking.

**GI Strategy 1.1.3:** To direct growth to targeted areas that will improve the mix of uses, explore offering expedited development review procedures or other incentives to developments that include land uses that are lacking in these areas.

- > *Due to the high volume of traffic, Highway 16 will have at least two future activity centers. This Corridor Plan provides tools to focus new development at these centers. Chapter 8 of this plan highlights regulatory actions that will allow for mixed-use development and streamlined permitting in the activity centers. Chapter 7 of this plan highlights additional appropriate uses.*

**GI Policy 1.2:** Increase densities in downtown and in activity centers. Increase densities in already developed areas and places identified as activity centers, thereby focusing new development around existing infrastructure and preserving undeveloped areas.

- > *Chapter 7 of this plan explores conceptual development plans that balance density and infrastructure appropriately, connecting new development to open spaces and parks.*

**GI Strategy 1.2.1:** Using the Future Land Use Plan as a guide, update the development code to allow for increased densities downtown and in designated activity centers and reduce land area zoned for low-density single use development in these areas. Ensure that new standards align with the goals of future Historic Districts and recommendations from the Downtown Small Area Plan.

**GI Strategy 1.4.2:** Amend the development code to encourage clustering of units and open space set-aside in low-density residential areas. Open spaces should tie into the planned greenway and trail system. (See GI Policy 3.3)

<b>Table 1: Implementation Plan Timeline</b>				
<b>Implementation Plan Action Areas</b>	<b>Ongoing</b>	<b>Short-Term (1-3 Years)</b>	<b>Medium-Term (3-5 Years)</b>	<b>Long-Term (5-10 Years)</b>
<b><i>Development Code Amendments</i></b>				
Changes to Zoning		✓		
New Design Guidelines and Standards		✓		
Architectural Review Board		✓		
Tree Protection		✓		
<b><i>Programs and Planning Efforts</i></b>				
Comprehensive Plan Updating and Monitoring	✓			
Land and Water Conservation Efforts		✓		
Expanding Growth Management Tools				✓
Plan for Pedestrian and Bikeway System			✓	
Historic Preservation and Downtown Revitalization		✓		
Business Incentives			✓	
Revitalization of Transitional Neighborhoods			✓	
Expanding Cultural Amenities			✓	
Beautification Efforts		✓		
Community Branding			✓	
Government Communications	✓			
<b><i>Infrastructure Assessment and Capital Improvements</i></b>				
Capital Improvement Plan		✓		
Private Investment in Infrastructure			✓	
Level of Service Standards		✓		
<b><i>Inter-Jurisdictional Collaboration</i></b>				
Planning for New/Expanded Facilities and Programs				✓
Regional Transportation Plan		✓		
Extraterritorial Jurisdiction/Information Sharing in Areas of Joint Interest			✓	

### ▲ 2030 COMPREHENSIVE PLAN (2009 TIMELINE)

The gray boxes shown above represent task items that are in progress and addressed throughout this plan.

## two: introduction & analysis

- > *Chapter 7 and Chapter 8 of this plan illustrate different models of development that prioritize open space.*

**GI Policy 2.3:** Encourage private investment in public infrastructure. Identify opportunities for private developments to share in the cost and provision of public services and facilities that will be used by new developments.

**GI Strategy 2.3.1:** Consider developing an exaction system where developers directly provide infrastructure improvements (schools, transportation, parks, pedestrian and bicycle improvements, etc.) needed to service their development. The program should include a fee-in-lieu option as an alternative to providing infrastructure improvements.

- > *Chapter 6 of this plan explores the importance of transportation improvements in the corridor and how to pay for them in a constrained financial future.*

**GI Policy 3.1:** Improve road systems. Coordinate new development with existing and planned road systems in Waxhaw and in western Union County.

- > *Chapter 5 and 6 of this plan focus on transportation improvements that are critical network investments to prepare for continued growth.*

**GI Strategy 3.1.1:** Work with neighboring jurisdictions to develop and implement the Western Union County Transportation Plan. The plan will identify critical road improvements, such as Waxhaw Parkway and Providence Road (NC-16), and encourage the development of public transit service in Waxhaw. (See also RC Strategy 1.1.4.)

**GI Policy 3.2:** Promote transit-oriented development. Guide development to occur in a design and form that can support future public transit service.

- > *This plan recommends a Park and Ride Service to Charlotte in Chapter 6. Additional transit options are explored in this chapter as well.*

**GI Strategy 3.2.1:** Through the Western Union County Transportation planning process, identify potential transit corridors within Waxhaw. Work to designate mixed-use activity centers, as identified on the Future Land Use Plan, as future transit stops.

**Providence Road (Highway 16) Corridor.** The Providence Road (Highway 16) corridor through Waxhaw has been identified for additional planning. A plan for this corridor should include recommendations for specific design standards, such as building orientation, location and amount of parking, pedestrian and bicycle facilities, signage, and architectural requirements. Standards should also address transportation design, such as access management.

- > *The Highway 16 Corridor Plan provides recommendations that meet the goals of the 2009 Comprehensive Plan stated above.*

### **Design of Community Corridors and Gateways**

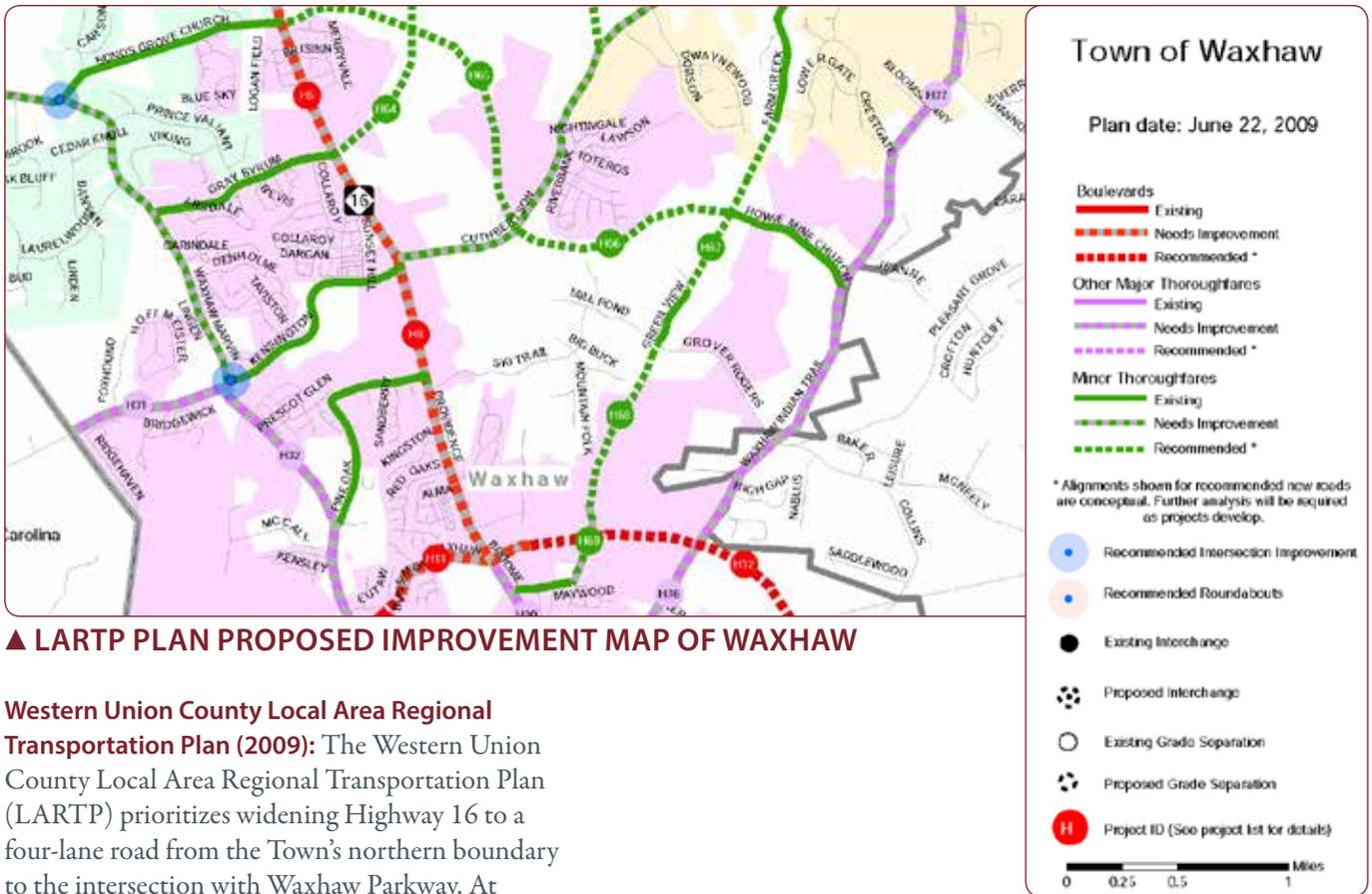
Waxhaw residents have expressed concern about the design of commercial and strip development; “no more strip malls,” some say. The 2003 Land Use Plan suggests that a highway corridor overlay district along the Providence Road (Highway 16) corridor north of Church Street should be designated to encourage buildings to maintain the historic character of the town. An overlay district for the main community corridor and specific design guidelines could help to prevent traditional strip shopping development and make commercial areas more appealing.

**GI Strategy 3.2.2** Adjust the town’s development ordinance to allow for increased density and mixed-use development along future transit lines, as guided by the Future Land Use Plan.

**GI Policy 3.3:** Develop an interconnected system of sidewalks, bicycle paths, and greenways between neighborhoods, activity centers, parks, and other local destinations, as well as to future transit stops. (See also QL Policy 3.3.)

- > *Chapters 6 and 7 discuss the importance of transportation choices and conceptually illustrate how the on- and off-road network can facilitate more viable transportation choices.*

The recommendations from the 2009 Comprehensive Plan listed above provide a framework of study for the Highway 16 Corridor Plan. The action items found in this report build on the ideas from the Comprehensive Plan and add clarity and refinement where necessary.



**▲ LARTP PLAN PROPOSED IMPROVEMENT MAP OF WAXHAW**

**Western Union County Local Area Regional Transportation Plan (2009):** The Western Union County Local Area Regional Transportation Plan (LARTP) prioritizes widening Highway 16 to a four-lane road from the Town’s northern boundary to the intersection with Waxhaw Parkway. At Waxhaw Parkway, the LARTP indicates a context-sensitive road design.

The LARTP uses traffic data that does not currently warrant widening Highway 16 as far south as Waxhaw Parkway, but there is a strong belief that with continued residential and commercial development the traffic demand will continue to increase.

Major improvements listed in the LARTP that directly affect Highway 16 include a wider outside lane for bike facilities and new five-foot sidewalks behind a five-foot planting strip.

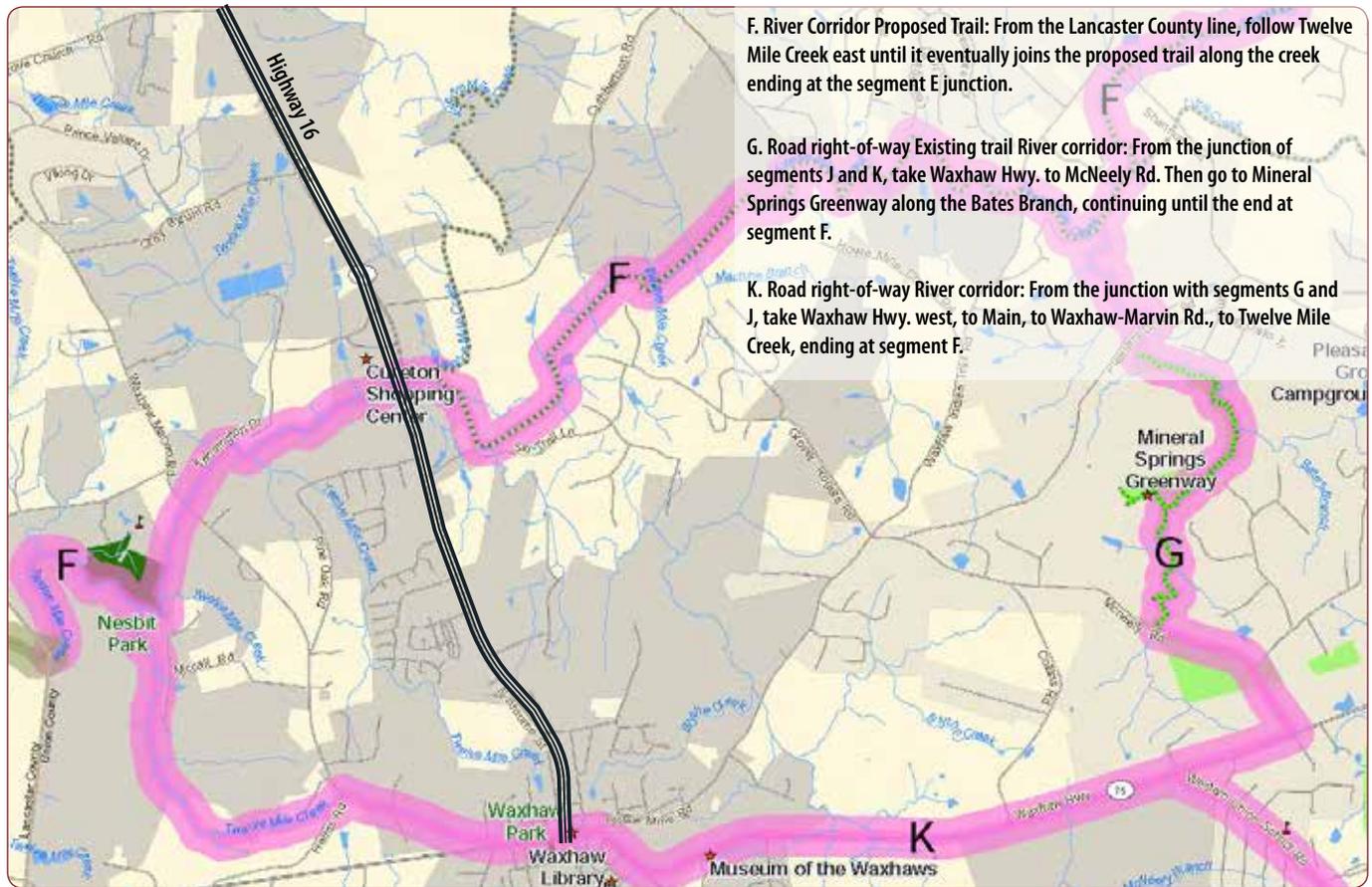
Additionally, the LARTP has a section that focuses on ordinance provisions that either aid or hinder the LARTP goals for each community. The Waxhaw Unified Development Ordinance is specifically critiqued for the following policies:

- > A lack of access management standards (See Section 18.9.2 and Section 18.9.7.);

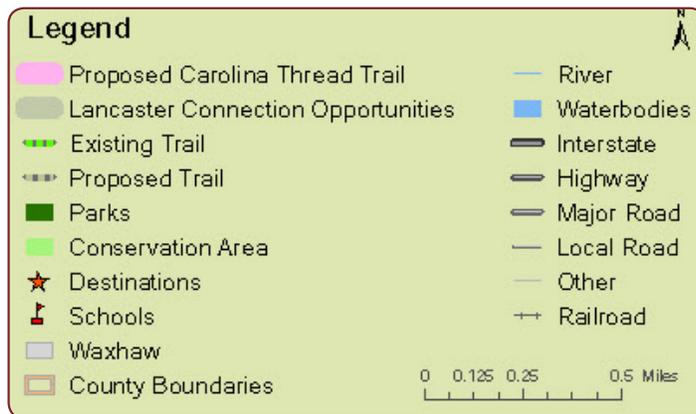
- > A requirement to dedicate right-of-way and build streets to local standards (See Section 18-10-1.);
- > Street stub-outs only required by the Town Administrator, Planning Board or Board of Commissioners (See Section 18.9.2.1.); and
- > No standards for limiting cul-de-sacs, only standards for maximum length and radii (See Section 18.9.2.12.).

The LARTP identified key connections that should be completed as development occurs, including the extension of Gray Byrum Road and Bond’s Grove Church Road, eventually tying them back to Cuthbertson Road.

Chapters 5 and 6 of this corridor plan discuss recommendations that clarify, and sometimes conflict, with the LARTP. The town should work with the Charlotte Regional Transportation Planning Organization to coordinate future



▲ CAROLINA THREAD TRAIL MAP

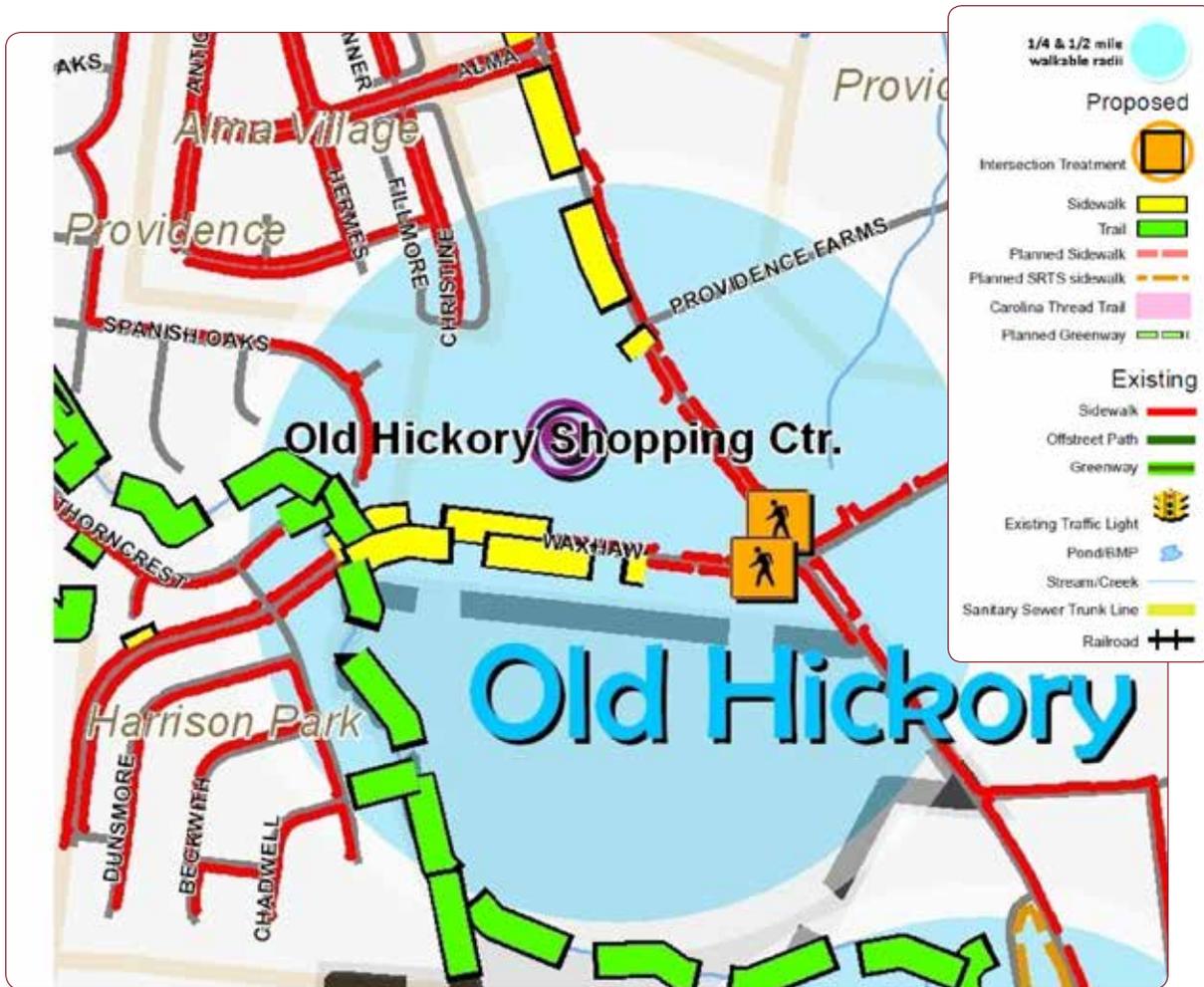


▲ MAP LEGEND

updates of the LARTP with the detailed recommendations of this corridor plan. This will ensure that the LARTP provides appropriate guidance for future improvements in accordance with the town’s preferred vision for Highway 16.

**Carolina Thread Trail Master Plan (2011):** The Carolina Thread Trail is a regional greenway system that meets the Highway 16 corridor at Twelve Mile Creek. The proposed Carolina Thread Trail corridor follows the Twelve Mile Creek watershed, continuing along a route behind Ski Trail Lane. The trail would eventually tie into the trail systems of Lawson and Cureton, helping to connect the two neighborhoods to each other and the rest of the Waxhaw.

The Carolina Thread Trail Master Plan specifies that the majority of costs associated with the construction of this nature trail are dedicated



**▲ PEDESTRIAN PLAN MAP – OLD HICKORY SHOPPING CENTER**

*For details regarding the map, please reference the Waxhaw Pedestrian Plan.*

to stream crossings and the Twelve Mile Creek underpass below Highway 16. Chapters 5 and 6 of this corridor plan further examine the Twelve Mile Creek underpass and the potential for a trailhead at this location.

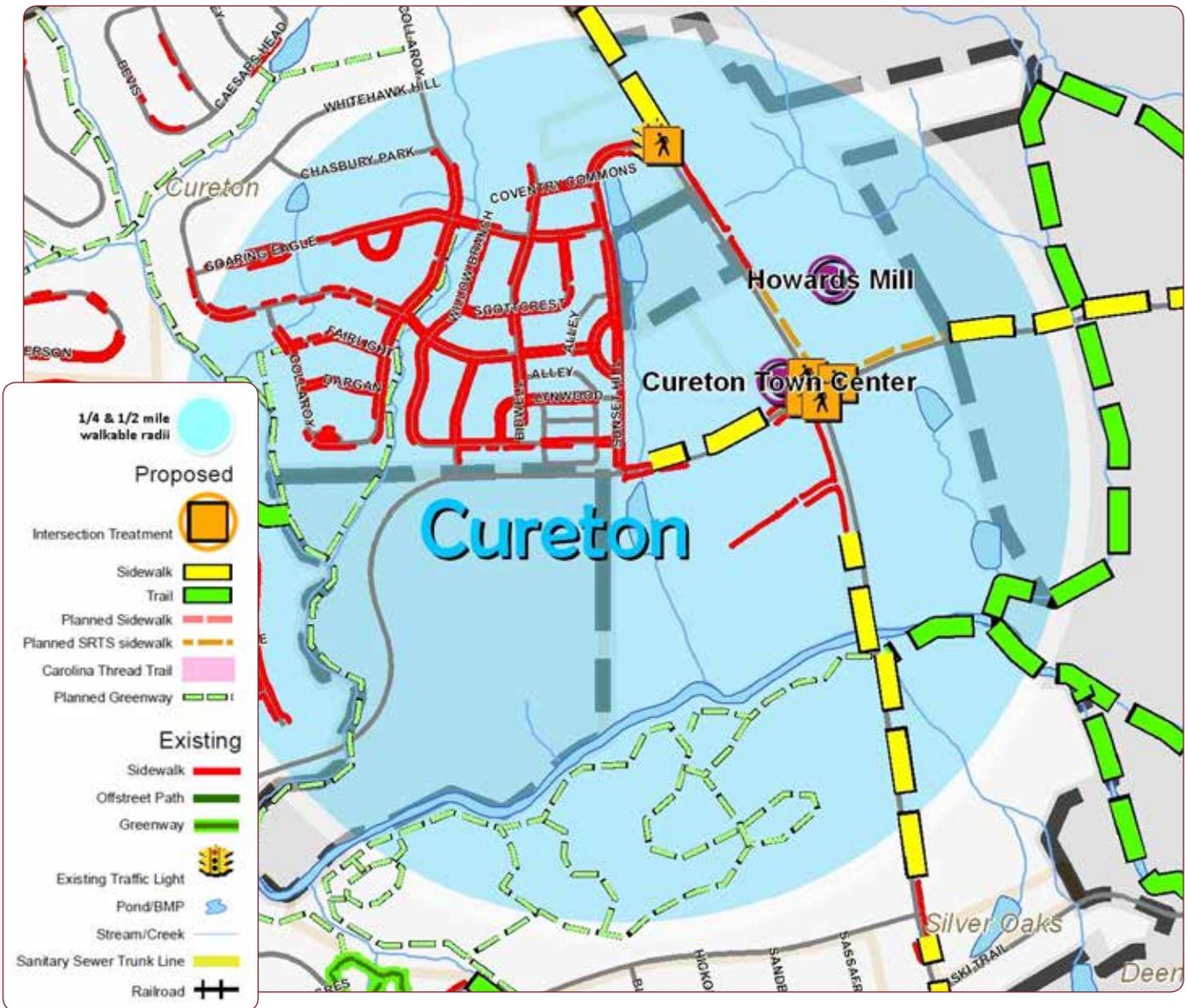
**Town of Waxhaw Pedestrian Plan (2012):**

The adopted plan provides recommendations for several specific areas, including Old Hickory Shopping Center and Cureton. Most recommendations focus on making Highway 16 crossings safer and promoting connectivity within each development. For Old Hickory Shopping Center, the proposed improvements focus on linking the adjacent neighborhoods to the shopping center. The plan also recommends two pedestrian crossings on Highway 16, and several

**The Pedestrian Plan balances prior plans and includes the following goals as a foundation in the decision and prioritizing process.**

**Does the project:**

- > Connect neighborhoods to identified destinations
- > Increase connections within and to the downtown area
- > Close the gaps in the existing pedestrian system
- > Improve walking conditions along Highway 16

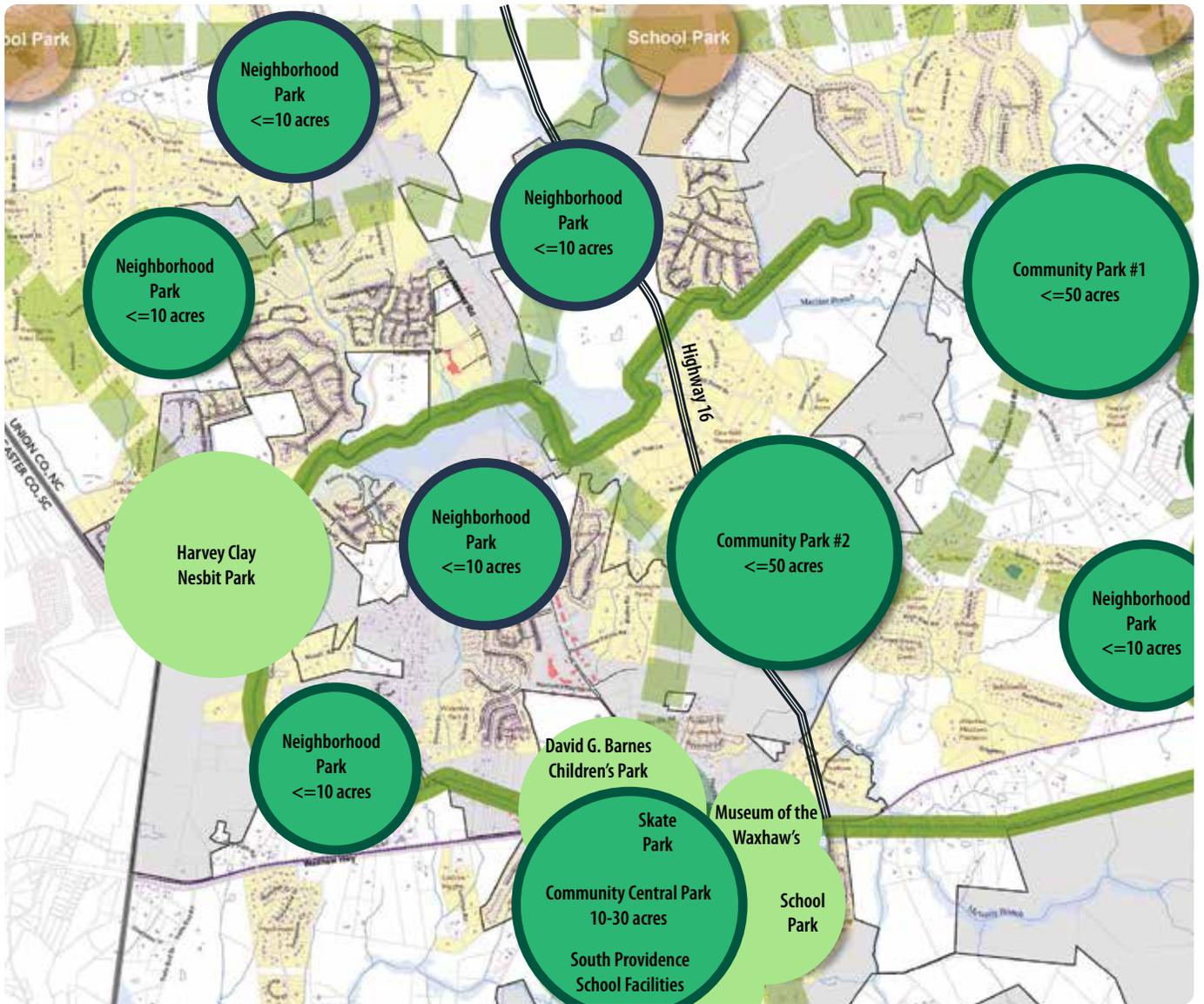


**▲ PEDESTRIAN PLAN MAP – CURETON**

*For details regarding the map, please reference the Waxhaw Pedestrian Plan.*

sidewalk connections along both sides of the shopping center. Specific projects are highlighted in the map above and in the Pedestrian Plan. The other Activity Center highlighted in the Pedestrian Plan that directly affects the Highway 16 Corridor Plan is Cureton Town Center and the surrounding development. The Pedestrian Plan focuses on improving crossings on Highway 16 and creating new linkages to neighboring development. Both Highway 16 and Cuthbertson

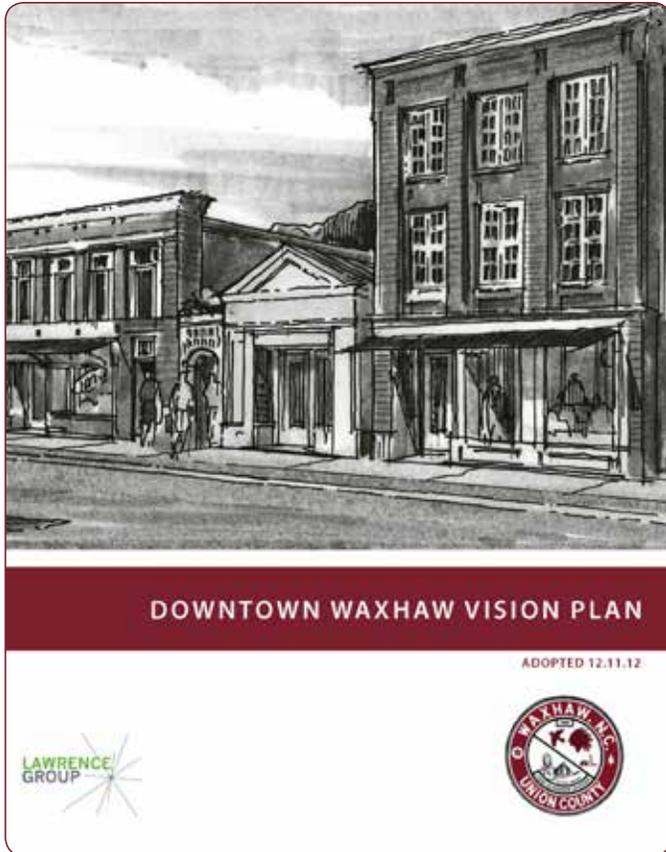
Road have extensive gaps in the sidewalk network that are prioritized for improvement by the plan. The underpass for the Carolina Thread Trail at Twelve Mile Creek is also listed in the Pedestrian Plan to connect the trail and greenway network on either side of Highway 16.



**▲ PARK, RECREATION, AND CULTURAL RESOURCES MASTER PLAN MAP**

**Park, Recreation, and Cultural Resources Master Plan (2012):** The approved Park, Recreation, and Cultural Resources Master Plan highlights a current deficiency of more than 123 acres of recreational space and an estimated future deficiency of an additional 125 acres. To address those gaps, several neighborhood parks are proposed along the Highway 16 corridor. According to the Master Plan, these parks should be at least 10 acres in size and include recreation fields, passive recreation spaces and playgrounds. This does not include small open spaces within developments that should be located within an eighth of a mile to all residents.

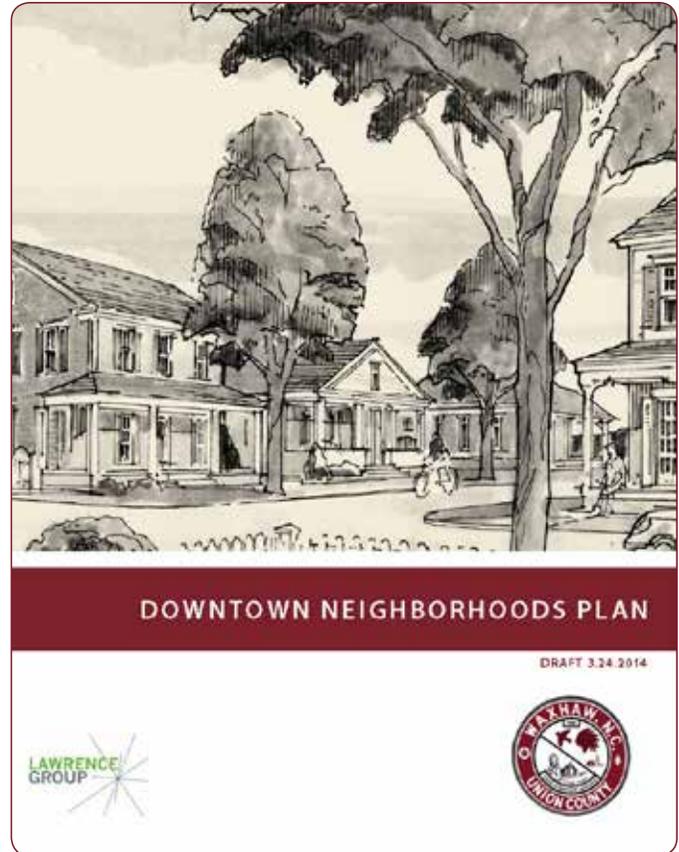
Facility	Current Supply (Acres)	Current Demand (Based on 2010 Population)	Current Gap (Acres)	Future Demand (Based on 2035 Population)	Future Gap (Acres)
Sports Fields	27	44	17	79.2	52.2
Courts	.3	3	2.7	5.4	5.1
Outdoor Recreation	.5	85	84.5	153	152.5
Leisure	.6	8	7.4	14.4	13.8
Other Recreation Facilities	3.5	15	11.5	27	23.5
<b>TOTAL</b>	<b>32 acres</b>		<b>123 acres</b>		<b>124 acres additional</b>



▲ DOWNTOWN VISION PLAN

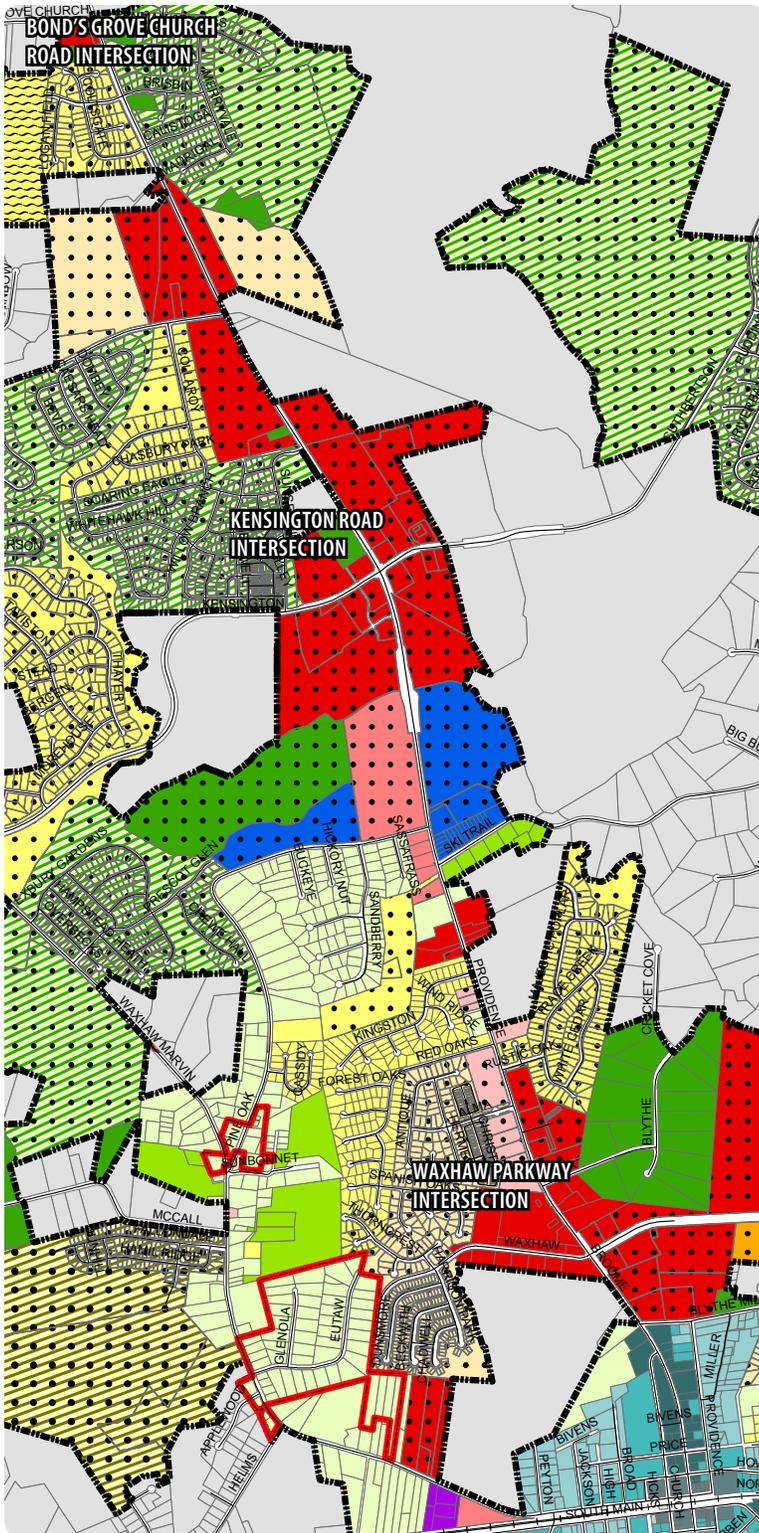
**Downtown Vision Plan (2012):** The Downtown Vision Plan discusses the market demand and pressures on Highway 16, and how the form of the corridor should change as it enters downtown and turns into Broome Street. The plan recommends constructing roundabouts as a transition at both Waxhaw Parkway and Church Street. The four-lane section of Highway 16 would drop to three lanes south of Waxhaw Parkway and then convert to a more urban street with on-street parking south of Church Street.

The Corridor Plan should complement the Downtown Vision Plan by providing a framework for higher-intensity development that is not necessarily appropriate for downtown. Multi-modal connectivity between downtown and the Highway 16 activity centers is critical to the success of both areas.

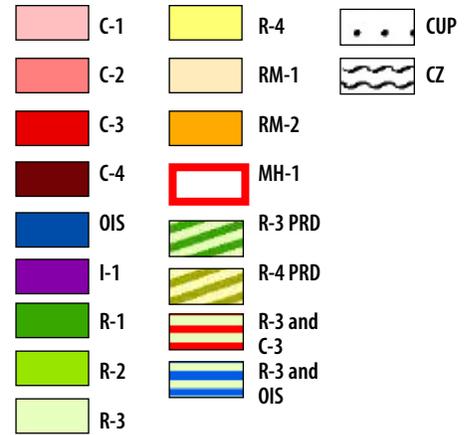


▲ DOWNTOWN NEIGHBORHOODS PLAN

**Downtown Neighborhoods Plan (2013):** Connectivity in Waxhaw is a continuing theme in the Downtown Neighborhoods Plan and translates to the recommendations for the Highway 16 corridor. Also pertinent to the Highway 16 Plan is the development of the Waxhaw-Marvin Neighborhood and the impact that neighborhood may have on traffic. With several developments already approved in the Waxhaw-Marvin Neighborhood and new construction picking up; traffic, commercial growth and community services such as schools and parks will all become significant issues. These issues must be addressed with regional, town-wide solutions and emphasized in each plan.

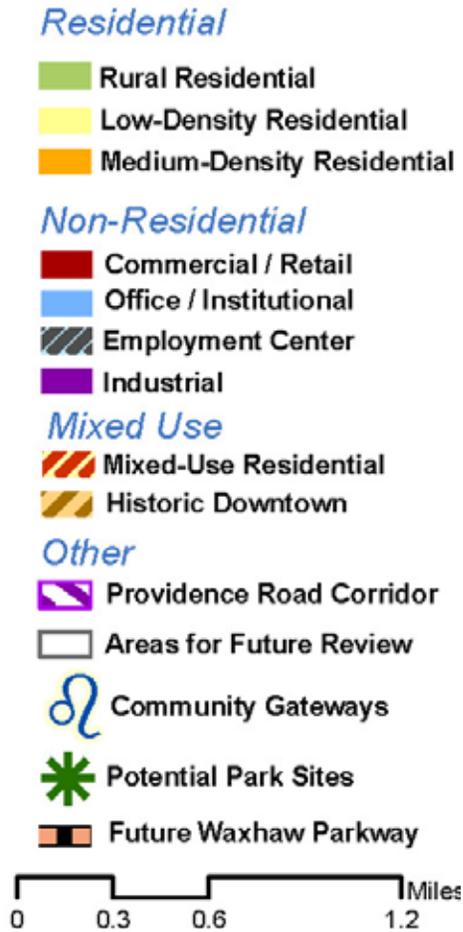


▲ WAXHAW EXISTING ZONING



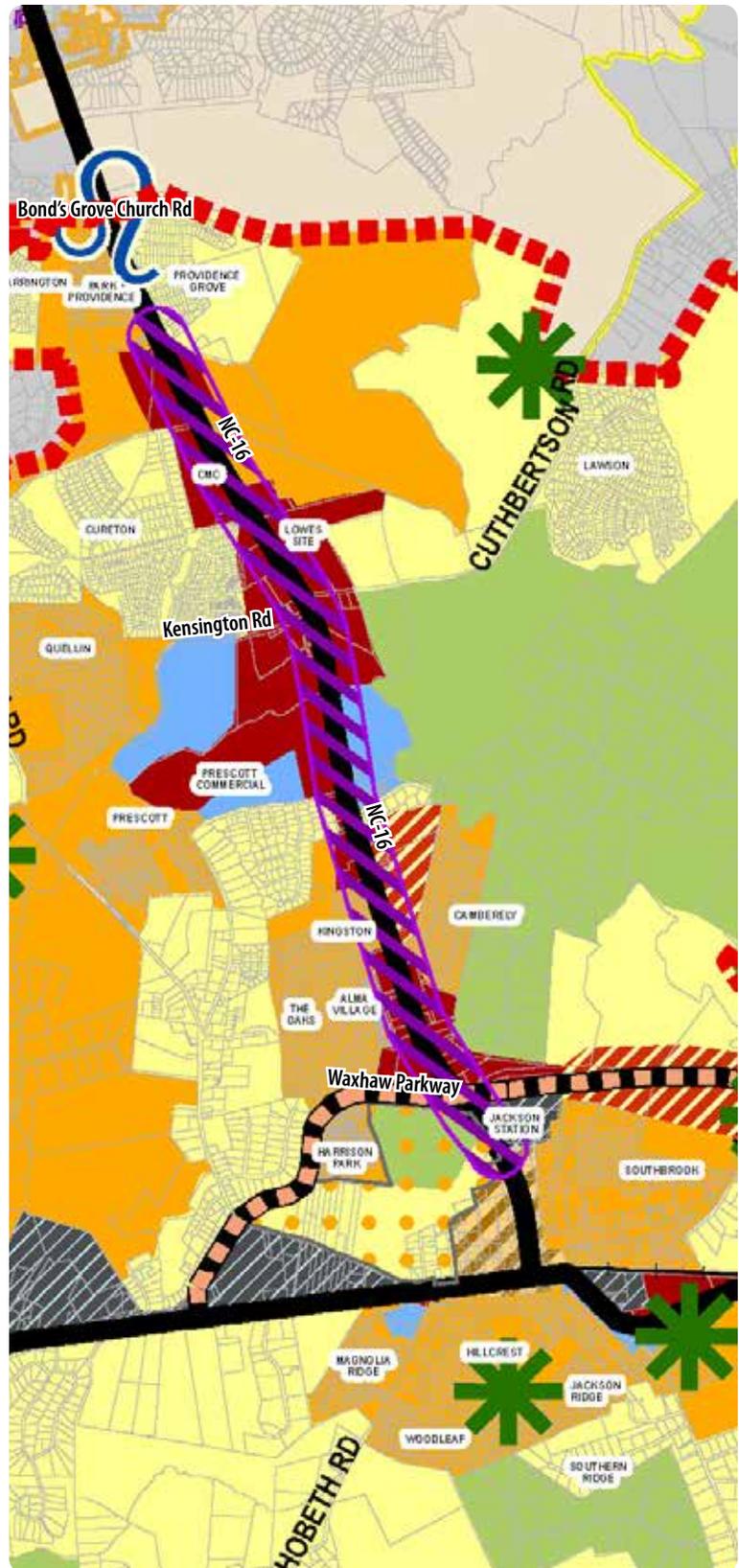
**Existing Zoning:** The land within the Highway 16 study area is zoned almost entirely conditional use, and C-3, C-2, OIS or a residential district. The primarily undeveloped parcels are almost solely zoned C-2 (Highway Commercial). This district is appropriate for auto-related uses, including drive-through restaurants and convenience services.

The Conditional Use Permit that is required to develop 90% of properties on Highway 16 is a mechanism to enforce strict design standards. The existing zoning is used in conjunction with the Future Land Use Map from the Comprehensive Plan to make land use decisions and zoning changes. As parcels are annexed into the town, zoning is applied based on the Future Land Use Map, staff and Town Board recommendations, and the request of the landowner. Further analysis of existing regulations are provided with recommendations in Chapter 8.

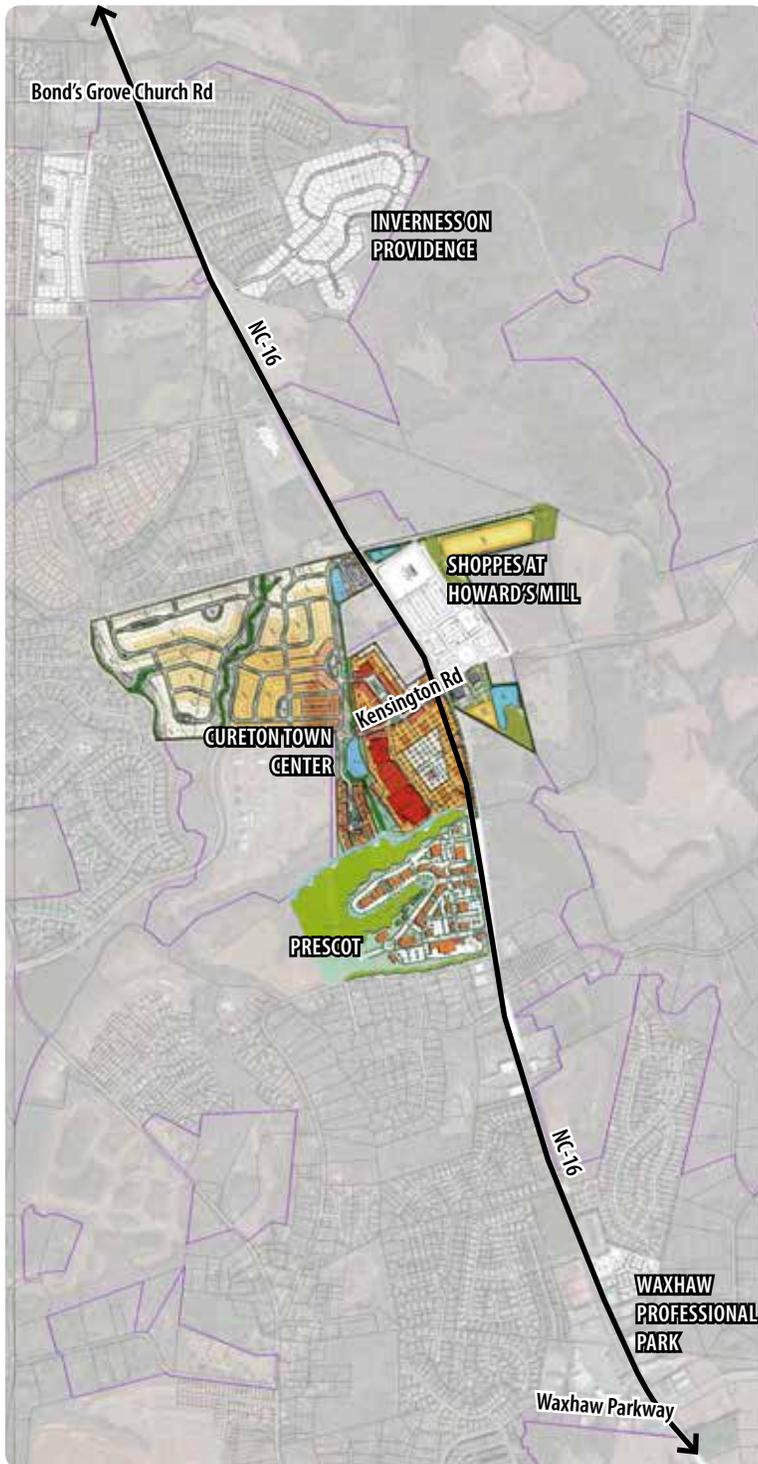


**Future Land Use:** The 2030 Comprehensive Plan highlights the need for further study of the Highway 16 Corridor. The Future Land Use Map has been the road map for land use decisions since it's adoption. There is little difference between the Zoning Map and Future Land Use Map along the Highway 16 corridor.

The Future Land Use Map focuses Commercial/ Retail use between the intersection of Gray Byrum Road and Cuthbertson Road. Several of the parcels on the southern part of the corridor which are currently zoned C-2 are proposed to be Mixed-Use Residential. The intensity of the Commercial/ Retail or the Mixed-Use Residential uses is not specified by the Future Land Use Map. As such, calibrating appropriate development intensity is a key focus of this Corridor Plan and the 2014 Comprehensive Plan Update.



▲ 2030 FUTURE LAND USE - COMPREHENSIVE PLAN



▲ APPROVED PLANS (AS OF MAY 2013)

## 2.3 APPROVED SITE PLANS

Highway 16 is a high-growth corridor with development pressure re-emerging after the recent recession. Several new projects have been approved and are in development. Additionally, several approved projects that predate the recession are now bank-owned and are being re-examined with respect to new development opportunities. These approved site plans are outlined below.

**Inverness on Providence:** Inverness is an approved 113-unit single-family residential subdivision that has its main entrance from Highway 16. The plan saves trees, but does not provide additional usable recreation space. The subdivision is owned by Standard Pacific Homes. It will connect to Providence Grove and includes a stub to a planned second phase.

**Shoppes at Howard's Mill:** Approximately two-thirds of the approved Howard's Mill development has already been constructed. The site plan includes a future development area behind Lowe's that has not yet been approved. In addition to Lowe's, Howard's Mill includes a Walgreen's, a McDonald's, a BP Gas Station, and several offices. The development is suburban in nature with large parking lots, required red brick, and unique signage standards.

**Cureton Town Center:** Cureton Town Center was originally designed and approved in 2004. The proposed development includes mixed-use buildings, a central green, and single-family attached and detached units. The residential portion of the development is approximately 90% built-out, but the commercial/mixed use development is only about 25% complete. The project is currently owned by Wells Fargo. While the site plan is approved, it is still unknown when the development will be completed and if the design of the remaining plan will change with demand.

**Prescot:** Prescot is another bank-owned property with an approved mixed-use site plan that includes retail, office and single-family housing. The single family housing is mostly complete, while the commercial/office section and the frontage

two: introduction & analysis



Image by: Shook Kelley

▲ CURETON TOWN CENTER



Image by: Overcash Dommitz Architects

▲ PRESCOT VILLAGE



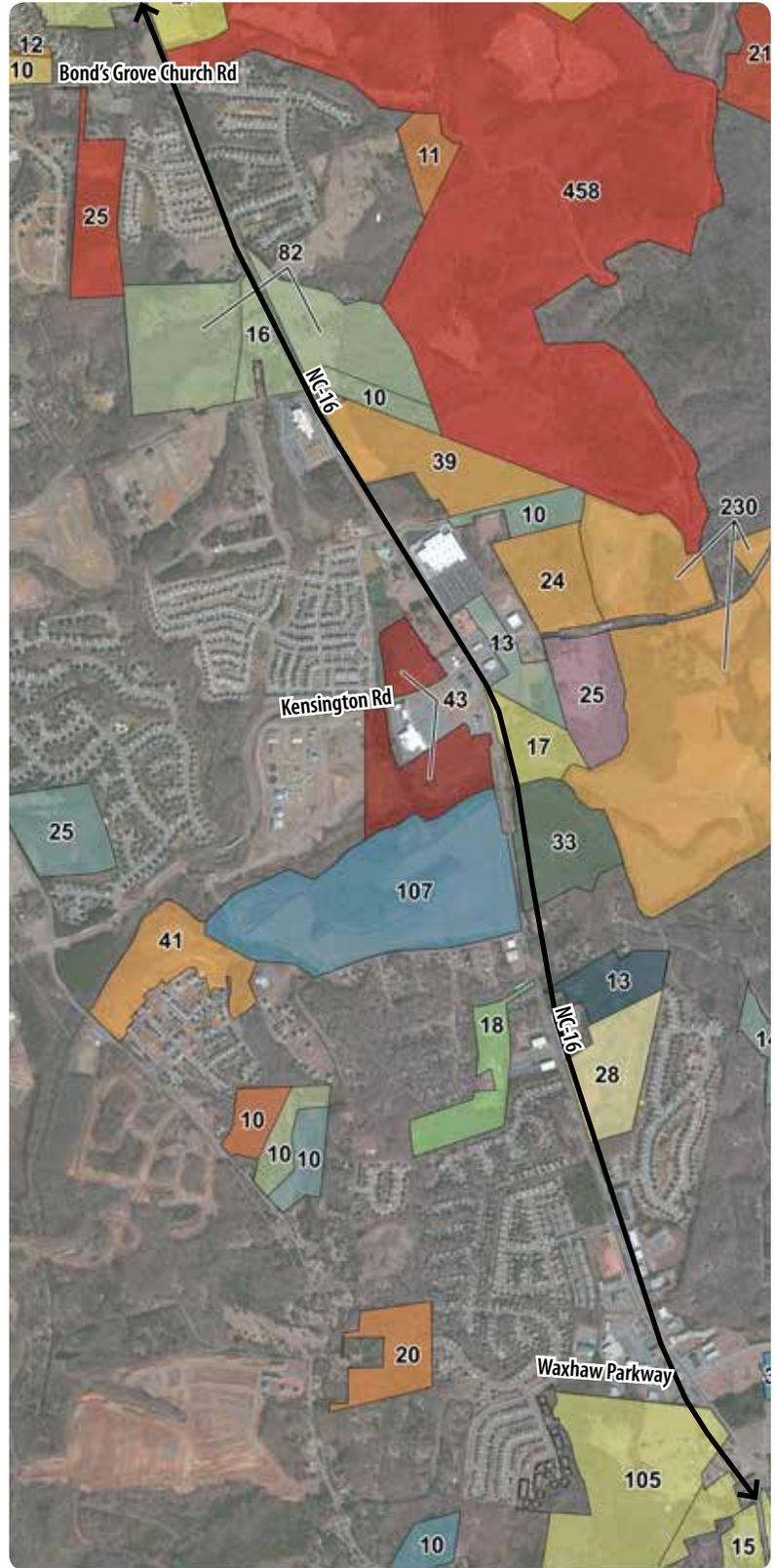
Image by: Land Design

▲ INVERNESS SUBDIVISION



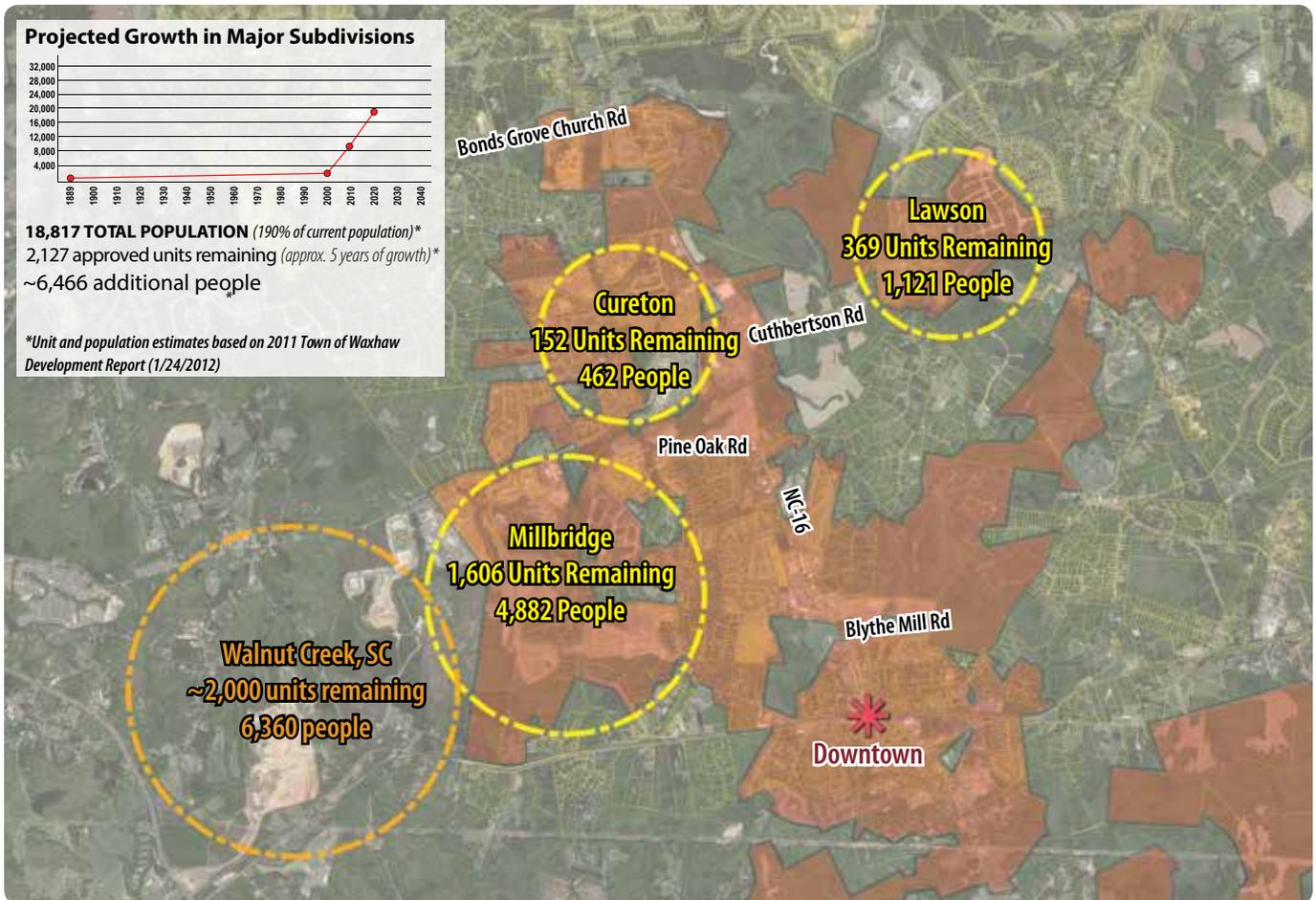
Image by: Frontier Land Surveying

▲ WAXHAW PROFESSIONAL PARK



▲ LARGE UNDEVELOPED PARCELS (AS OF MAY 2013)

*The shown numbers represent the number of acres each parcel is.*



**▲ REGIONAL POPULATION GROWTH DIAGRAM**

on Highway 16 is undeveloped. Currently, site work is underway to prepare the site for future development.

**Waxhaw Professional Park:** Waxhaw Professional Park is located on Highway 16, south of Pine Oak Road, near the intersection with Alma Boulevard and close to Alma Village. The approved plan includes over 64,000 square feet of office/retail space. Only 6,500 square feet are designated exclusively as retail. Two buildings have already been constructed.

Each of the approved site plans are integrated into this Corridor Plan as they have been designed and built. The approved plans that are not under construction or have changed ownership were evaluated based on feasibility and changing market demand, and were incorporated into the design recommendations as appropriate.

## 2.4 KEY TASKS

The planning process set out to accomplish the following tasks as part of the Highway 16 Corridor Plan:

- > A market study and strategic commercial plan to help guide the potential demand for various forms of commercial development and ensure sustainable, long-term investment;
- > A transportation analysis to ensure appropriate access management and operations;
- > Illustrations of various build-out scenarios under different development assumptions;
- > Analysis of the proposed NCDOT project along Highway 16 and the potential for multi-modal facilities that provide for the safe and enjoyable use of this corridor by pedestrians and bicyclists;
- > A precharrette workshop and focus group interviews with major stakeholders, developers and land owners;
- > A four-day public planning and design charrette to complete the detailed planning and design work within the context of a highly-participatory environment;
- > A detailed plan including key regulatory improvements to achieve the preferred vision; and
- > A regulatory review of policies that could hinder the vision.

## 2.5 GENERAL NEIGHBORHOOD PLAN PRINCIPLES

The following key principles summarize the goals of the Highway 16 Corridor Plan.

- > Create **context-sensitive** roadway design standards for the Highway 16 corridor as the roadway is widened to a four lane road.
- > Work with NCDOT to transform Highway 16 into a **Complete Street** with amenities that add **social, environmental, and economical** value to Waxhaw (see opposite page).
- > Adopt a Thoroughfare Map and Plan, including a transportation improvement fund, to implement and improve **connectivity** as new development occurs.
- > Encourage transportation options through **multi-modal** facilities.
- > Add **walkable** amenities and nodes of **mixed-use development** to connect to the existing auto-oriented development.
- > Preserve **small town character** through **strategic developments** that offset sprawling, low-density growth.
- > Identify locations for **commercial, retail, mixed-use and multi-family** development.
- > Diversify housing choices on the corridor to meet the needs of both **existing** and **future** Waxhaw residents.
- > Establish a **predictable development process** by creating clear, **by-right standards** for **high-quality** development.
- > Balance market demand with **community vision** and realities by zoning the corridor appropriately to build a **diverse tax base** for Waxhaw.

## SMART GROWTH AND COMPLETE STREETS

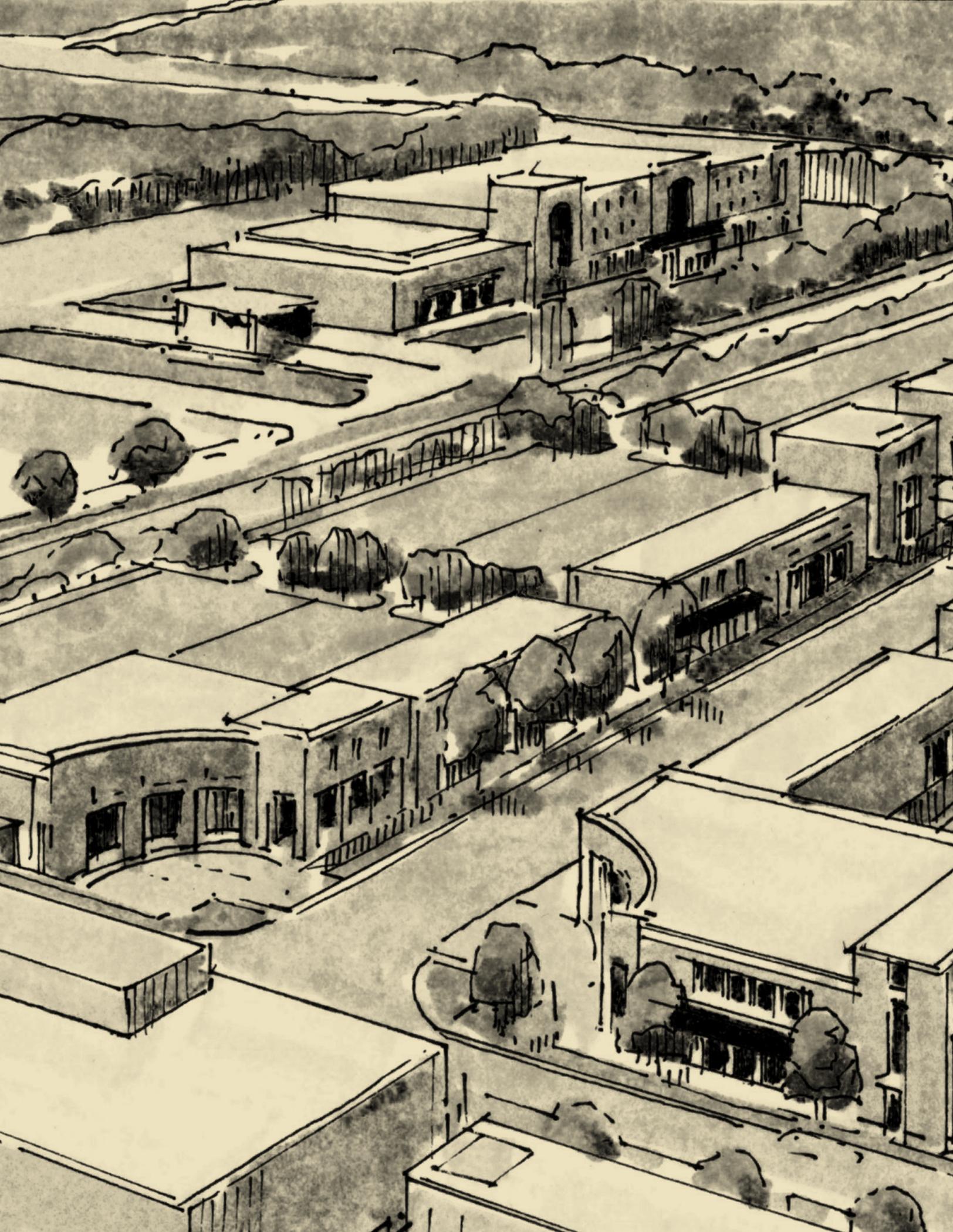
### What are “Complete Streets”?

**Complete Streets** are streets for everyone. They are designed and operated to enable safe access for all users – whether on foot, in a car, on a bike or riding a bus. People of all ages and abilities are able to safely move along and across streets in a community, regardless of how they are traveling. **Complete Streets** make it easy to cross the street, walk to shops, and bicycle to work. They allow traffic to move efficiently, buses to run on time, and people to walk safely to and from transit stations, shops, offices, churches, and homes.



### Complete Streets contribute many benefits to the surrounding community.

- > Wide, attractive sidewalks and well-defined bike routes, where appropriate to community context, encourage healthy and active lifestyles among residents of all ages.
- > Complete Streets can provide children with opportunities to reach nearby destinations in a safe and supportive environment.
- > A variety of transportation options allow everyone – particularly people with disabilities and older adults – to get out and stay connected to the community.
- > Multi-modal transportation networks help communities provide alternatives to sitting in traffic.
- > A better integration of land use and transportation through a Complete Streets process creates an attractive combination of buildings – houses, offices, shops – and street designs.
- > Designing a street with pedestrians in mind – sidewalks, raised medians, better bus stop placement, traffic-calming measures, and treatments for travelers with disabilities – may reduce pedestrian risk by as much as 28%.
- > A livable community is one that preserves resources for the next generation: Complete Streets help reduce carbon emissions and are an important part of a climate change mitigation strategy.



# THE PLANNING PROCESS

**The Highway 16 Corridor** is integral to the Waxhaw experience. Most Waxhaw residents spend at least a portion of their day using the corridor to access their daily needs.

The keys to a successful plan include a balanced mix of careful analysis of the existing conditions; extensive and meaningful public engagement; visionary, but practical planning and design; and financially and politically feasible implementation strategies. It is imperative for projects at every scale—from the redevelopment of a commercial strip mall to a corridor-wide circulation plan—to maintain this balance. To best facilitate the corridor planning process and achieve this important balance, the Town of Waxhaw used an intensive planning and design workshop called a “charrette.”

A charrette is an intense, week-long workshop where a team of designers work on-site in order to meet with interested citizens and produce a detailed series of recommendations, plans and renderings that reflect the vision of the community. Charrette processes:

- > Engage the entire community from the beginning;
- > Encourage a diversity of ideas and thinking “outside of the box” to solve neighborhood issues;
- > Produce actionable plans within an efficient, focused time-frame; and
- > Create a shared vision that guides growth over the long term.

A typical charrette is a four-day, community-driven design exercise that establishes expectations and builds enthusiasm for new investment and development. A successful charrette is predicated on the direct involvement of those who will implement the recommendations and proposals that result from the process.

The charrette process requires an investment of resources and trust by the community to assemble a team of experts to work intensely for several days with elected officials, key decision-makers, staff and the general public. These stakeholders are engaged through direct interviews, open discussions and collaborative design sessions that allow a large amount of planning work to be accomplished in a relatively short period of time. The efficiency of charrettes can pay great dividends, not only in terms of time and money saved, but in the pleasure of partnering with an entire community on a project everyone can be proud of.



▲ **PUBLIC PARTICIPATION**

## HIGHWAY 16 CORRIDOR PLAN



### *Schedule*

Waxhaw is investing in its future by creating a vision for the Highway 16 Corridor. Community participation is critical to the success of the plan! Please join us for the workshops and meetings.

Below are meetings that will be held during the design charrette that examine specific topics and include experts and invited local decision and policy makers. The public is invited to engage in these meetings as participants.

#### *Monday, June 17th*

- 11:00 am Highway 16 Roadway Design Options
- 1:00 pm Streets and Circulation
- 2:30 pm Sidewalks, Greenways, Pedestrians and Bicycles
- 4:00 pm Parks and Open Space

#### *Tuesday, June 18th*

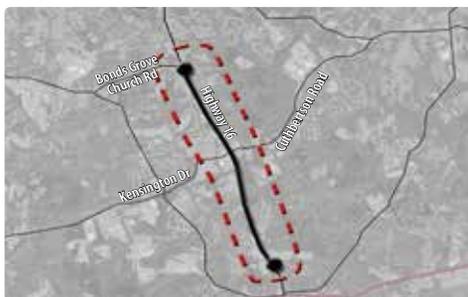
- 9:30 am Commercial Brokers and Developers
- 11:00 am Market Growth - Multifamily and Commercial
- 1:00 pm Merchants and Chamber of Commerce Members
- 2:30 pm Schools and Churches
- 4:00 pm Area Homeowner's Association
- 6:30 pm Daily Pin-Up Session

#### *Wednesday, June 19th*

- 9:00 am Codes and Regulations: Conditional Uses
- 11:00 am Big Boxes and Corridor Design Standards
- 1:30 pm Landscaping and Signage
- Afternoon Open Design Studio
- 6:30 pm Daily Pin-Up Session

#### *Thursday, June 20th*

- 9:00 am-Noon Open Design Studio
- 6:30 pm Closing Presentation



**YOU ARE INVITED!**  
**Public Kick-Off and Workshop**  
 The event brings together residents and business owners to discuss the future of NC Highway 16 in Waxhaw. How will the corridor evolve and grow over the next twenty years? What types of uses would the community like to see? Come to this session to get your voice heard!

Thursday, June 6th at 6:30pm  
 Location: Waxhaw Woman's Club, 200 East South Main St

**GOT IDEAS?**  
**Public Planning and Design Charrette**  
 Members of the community and all those interested in the future of Waxhaw are invited to stop-by the design studio throughout the week for specific meetings and to check in on the designs in progress.

June 17th - June 20th  
 Location: Waxhaw Woman's Club, 200 East South Main St

**WHAT'S NEXT?!**  
**Closing Presentation**  
 The design team will present its set of preliminary recommendations for guiding growth, development and redevelopment over the next twenty years.

Thursday, June 20th at 6:30 pm  
 Location: Waxhaw Woman's Club, 200 East South Main St

## 3.1 PUBLIC INPUT AND COMMUNITY PRIORITIES

The town sought to ensure that public input on the plan was garnered from a spectrum of community members and stakeholders. To that end, public participation in the plan included several key elements:

1. An Advisory Committee Meeting to kick-off the effort;
2. A public kick-off meeting that included a series of group discussions;
3. A four-day public planning and design charrette; and
4. A follow-up Advisory Committee Meeting to review the charrette results.

The public's participation through these events shaped the plan's final recommendations. The public comments, along with information gained from stakeholders, public officials and other representatives, guided the consultant team in their work and were key determinants of the plan's outcomes.

### Community Priorities

- › Improve the pedestrian and bicycle environment along Highway 16 so that it is a safe corridor for all users.
- › Encourage a greater diversity and mix of uses, especially in key activity centers, along the corridor.
- › Change the sprawling, auto-dominated character of the Highway 16 corridor and encourage development that is more compatible with Waxhaw's traditional, compact, small-town character.

## 3.2 PRE-CHARRETTE RECONNAISSANCE

### Kickoff Presentation & Public Workshop

A public kick-off workshop for the Highway 16 Corridor Plan for Waxhaw was held on the evening of June 6, 2013 to give the general public an opportunity to hear more about the process and help generate ideas to manage growth along the corridor. The kickoff presentation included a short discussion with residents about the process and examples of specific issues the planning team would investigate. Following the presentation, attendees were invited to participate in four information gathering stations, as follows:

- > Thought Bubbles
- > Development Types Survey
- > Transportation Survey
- > Idea Maps



▲ PUBLIC PARTICIPATION AT THE KICK-OFF AND CLOSING PRESENTATION

three: the planning process



▲ I WANT \_\_\_\_\_ ON NC 16.



▲ I DON'T WANT \_\_\_\_\_ ON NC 16.

**Public Input Received During Kickoff Meeting**

The design team utilized a combination of “thought bubbles”, visual preference surveys and maps to solicit feedback from participants during the kick-off meeting.

**Thought Bubbles**

The thought bubbles prompted participants to fill in the blank to the following statements:

- > I want \_\_\_\_\_ on NC 16.
- > I don't want \_\_\_\_\_ on NC 16.
- > In 20 years, NC 16 will look like \_\_\_\_\_

The combined results are shown in the word clouds above and on the following pages.

**Development Types Survey**

The development types survey was a visual preference survey in which participants voted on the images that they considered to be appropriate or inappropriate along the corridor. The survey was calibrated to different sections of the corridor, allowing participants to vote on the most appropriate types of development for specific areas along Highway 16.

Results in the northernmost portion of the corridor (see opposite page) indicated a strong distaste for continued suburban commercial development and a preference for more multi-family, and rural commercial development types with limited types of mixed-use development.

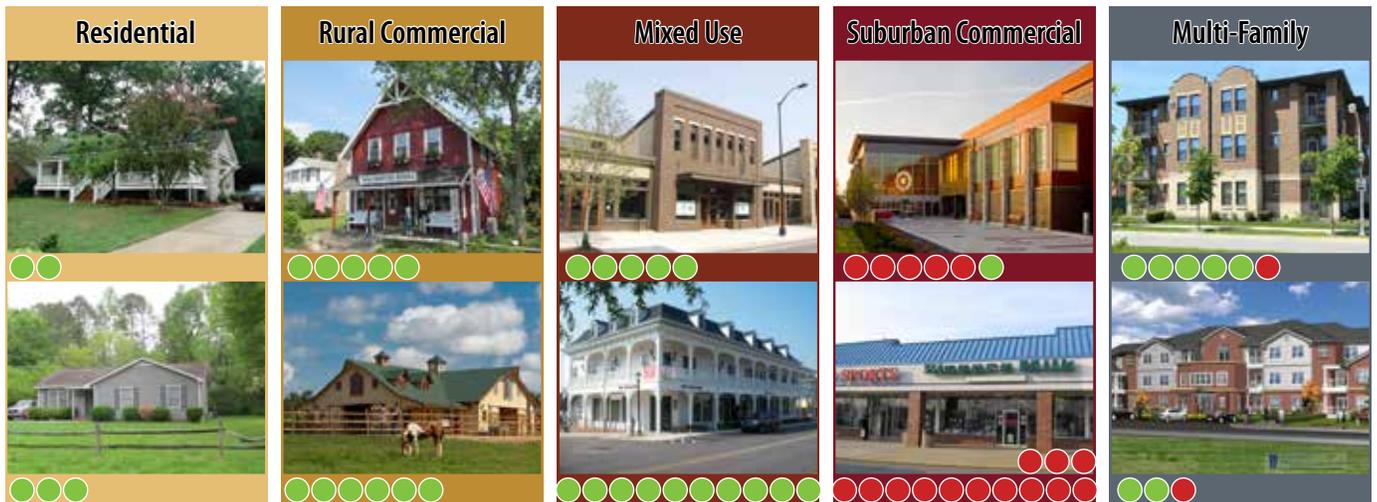
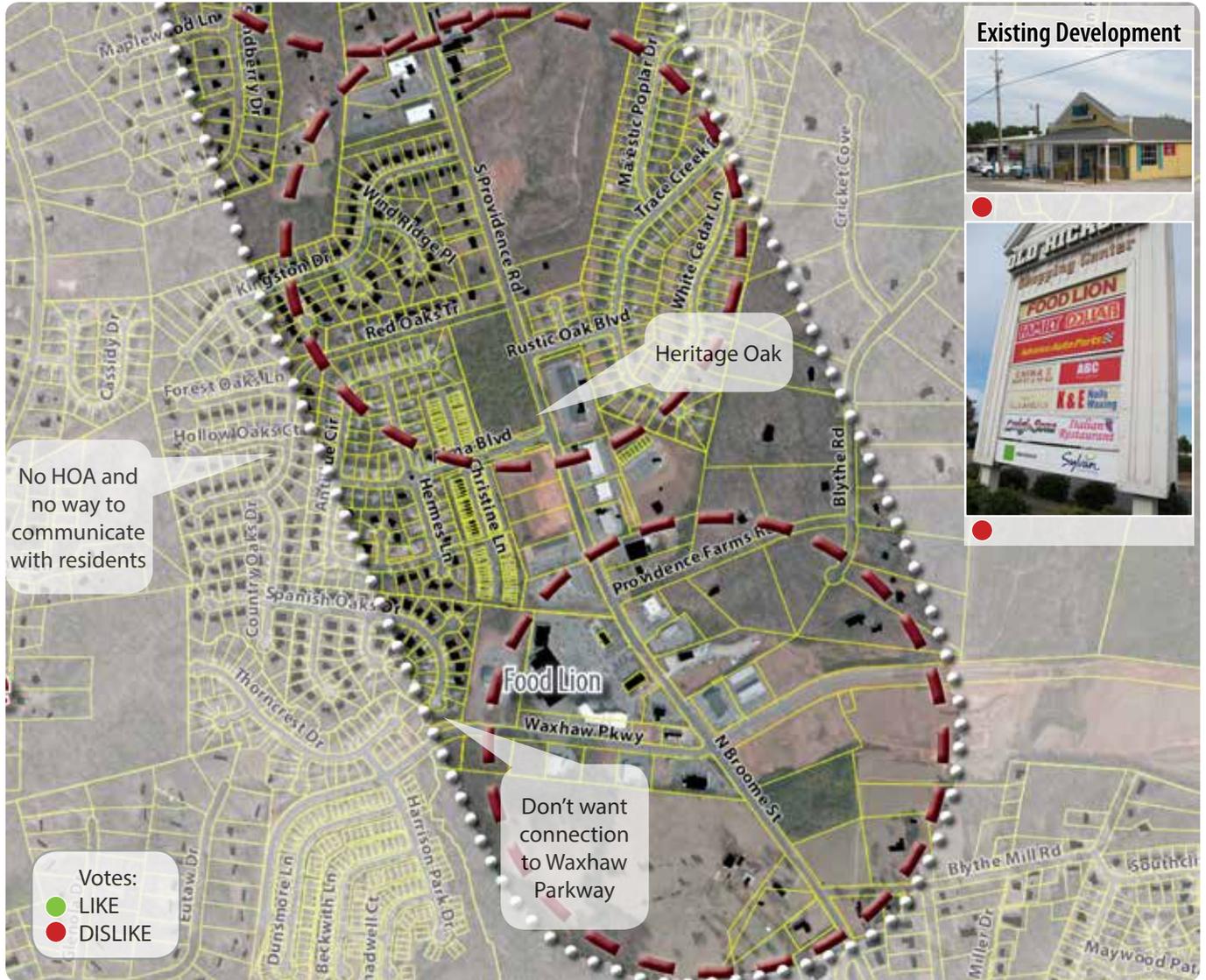
### Highway 16 - Bonds Grove Church Road to CMC Waxhaw



▲ DEVELOPMENT TYPE SURVEY RESULTS FOR THE NORTHERN PORTION OF NC 16



### Highway 16 - Waxhaw Family Physicians Building (south of Pine Oak Rd.) to Waxhaw Parkway



▲ DEVELOPMENT TYPE SURVEY RESULTS FOR THE SOUTHERN PORTION OF NC 16

### three: the planning process

#### Transportation Survey

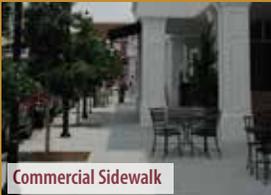
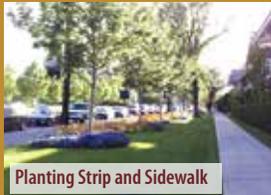
Similar to the development types survey, the transportation survey was a visual preference survey that asked participants to evaluate potential improvements along the Highway 16 corridor. Participants were directed to vote for their favorite and least favorite improvements in each of six categories: Bikes, Pedestrians, Intersections, Street Types, Landscaping and Amenities. The three most popular images from the survey are shown at right, and the overall results are illustrated on the opposite page.

- > **Bikes:** Results within the bikes category indicated a strong desire for separated bicycle facilities on the Highway 16 corridor. Two of the most popular images in all categories were within the bikes category. A bike lane without any separation from vehicular travel lanes was not a preferred option.
- > **Pedestrians:** The most desired pedestrian improvements were (1) pedestrian-activated crosswalks with traffic signals that provide safe crossing on-demand at key locations, and (2) sidewalks separated from the roadway by wide planting strips with street trees and formal landscaping. A commercial sidewalk with tree wells was not a preferred alternative.
- > **Intersections:** Results for intersection improvements were the least clear of all categories, although the installation of pedestrian refuge islands at intersections appeared to be a preferred improvement.
- > **Street Types:** Results for street types were the most clear of all categories, indicating a strong preference for a four-lane street with a planted median.
- > **Landscaping:** Formal streetscape plantings and natural tree buffers received broad support from participants. Rural fencing types did not.
- > **Amenities:** All streetscape amenities were popular among participants. Pocket parks and green space were the most popular.



#### ▲ MOST POPULAR IMAGES FROM TRANSPORTATION SURVEY

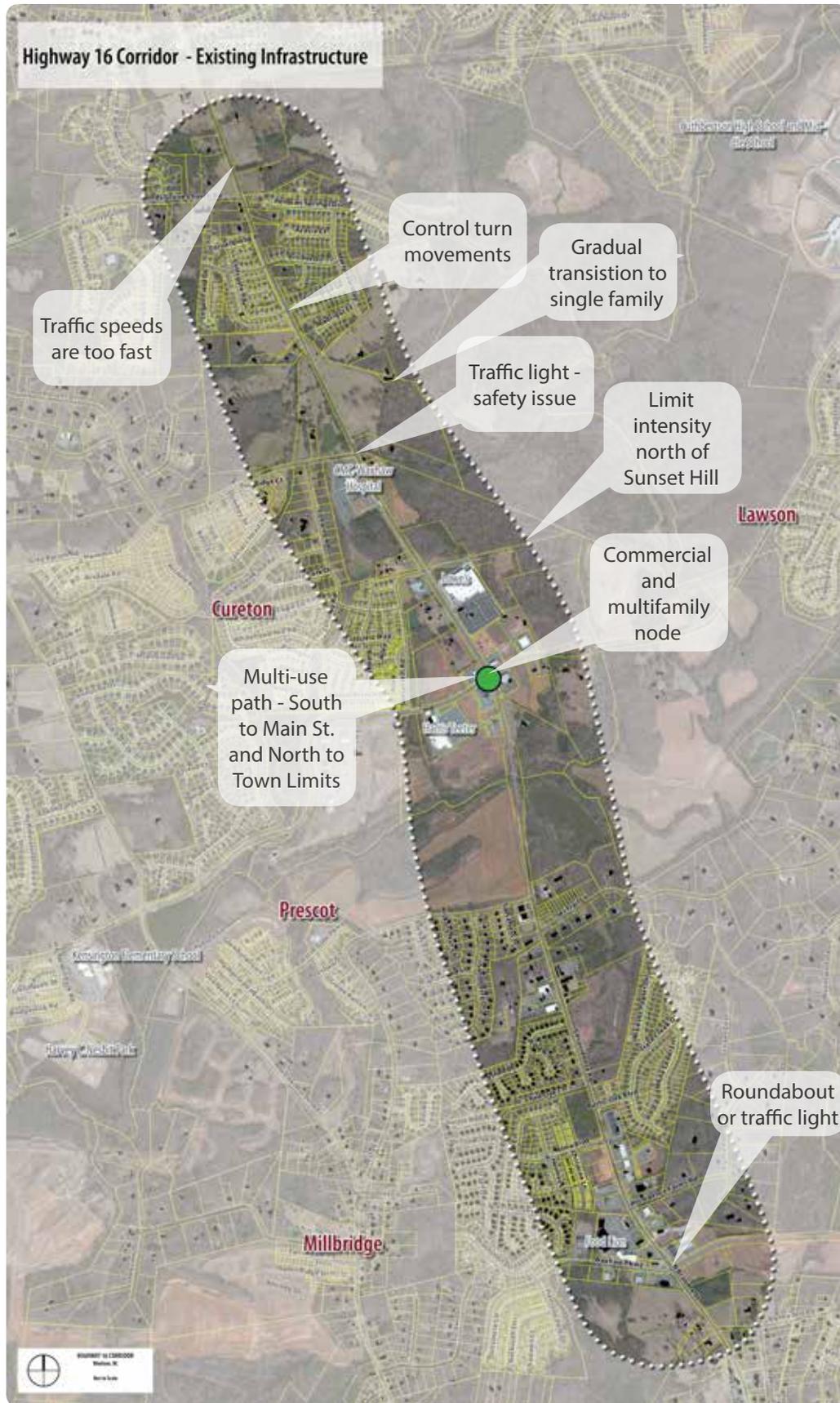
# Transportation Survey HIGHWAY 16 CORRIDOR

 Grade Separated Multi-Use Path ●●●●●●●●●●	 Side Path with Buffer ●●●●●●●●●●	 Bike Lane ●●●●●●●●●●	 Buffered Bike Lane ●●●●●●●●●●	<b>Bikes</b>
 Activated Crosswalk ●●●●●●●●●●	 Commercial Sidewalk ●●●●●●●●●●	 Planting Strip and Sidewalk ●●●●●●●●●●	 Flashing Beacon Crosswalk ●●●●●●●●●●	<b>Pedestrians</b>
 Roundabout ●●●●●●●●●●	 Table Intersection ●●●●●●●●●●	 Refuge Island at Intersection ●●●●●●●●●●	 Stop Light ●●●●●●●●●●	<b>Intersections</b>
 Typical Suburban 4 Lane ●●●●●●●●●●	 Planted Median 4 Lane ●●●●●●●●●●	 Urban 4 Lane ●●●●●●●●●●	 On-Street Parking 4 Lane ●●●●●●●●●●	<b>Street Types</b>
 Natural Tree Buffer ●●●●●●●●●●	 Split Rail Rural Fence ●●●●●●●●●●	 Rural Fencing ●●●●●●●●●●	 Formal Plantings ●●●●●●●●●●	<b>Landscaping</b>
 Community Garden ●●●●●●●●●●	 Benches ●●●●●●●●●●	 Street Lights ●●●●●●●●●●	 Pocket Park and Green Space ●●●●●●●●●●	<b>Amenities</b>

▲ TRANSPORTATION SURVEY RESULTS FOR NC 16

Votes:

- LIKE
- DISLIKE



The comments at left on the map represent specific comments and notes on the Idea Maps (described at right). These comments are location specific. The red comments below are general comments about the corridor that are applicable to several locations along the corridor.

- Caution signs
- Slower speed limits
- No convenience stores
- No strip malls
- Limit development to 2 stories max
- Consider +/-100 foot landscape buffer
- Keep commercial constrained to NC-16 corridor

### Idea Maps

In the final public input station from the kickoff workshop, large aerial maps were provided for participants to write comments and point out challenges and opportunities along the Highway 16 corridor. The comments have been collected in the map on the opposite page.

## 3.3 THE CHARRETTE

On Monday, June 17, the consultant team set up a temporary design studio in the Waxhaw Woman's Club. The space served as the design team's "home base" for the charrette's duration, June 17-20. The studio, complete with design tables, maps, pin-up boards and computer work stations, provided an open space in which both formal and informal meetings occurred, as well as room for designers to craft the plan's details with the public's help.

The charrette featured formal public meetings, led by the consultant, as well as informal sessions that emerged out of these meetings and other design-related activities. Topics discussed included neighborhood connectivity, regional greenways, sidewalks, landscaping and signage, design standards, intersection improvements, and development intensity, among many other issues.

The design team worked on-site at the Waxhaw Woman's Club throughout the charrette with an open invitation for the community to offer input and monitor the work in progress. At the end of each day, the design team facilitated an informal review and public critique of the day's progress for interested citizens.

On Thursday, June 20th, 2013, the charrette closed with a final presentation highlighting the week's results and the plan's preliminary recommendations. About 25 people were in attendance for the presentation of the plan that represented the consensus opinion gained through a week of collaboration between the public, Town staff, and the design team.



▲ TEAM DRAWING AT NIGHT



▲ CLOSING PRESENTATION



# ANALYZING THE MARKET POTENTIAL



**A market study**, completed as a part of the Highway 16 corridor plan highlights the 20-year demand on the corridor for retail, office, for-sale residential, for-rent residential and senior living.

The Noell Consulting Group was retained as a part of the consultant team analyze the existing conditions of the corridor, identify the market demand, and project the demand in years 2020 and 2030. This information was then combined into a report found in Appendix A at the end of this plan.

The market study first offers general observations about Waxhaw's position in the region in various market segments, summarized below.

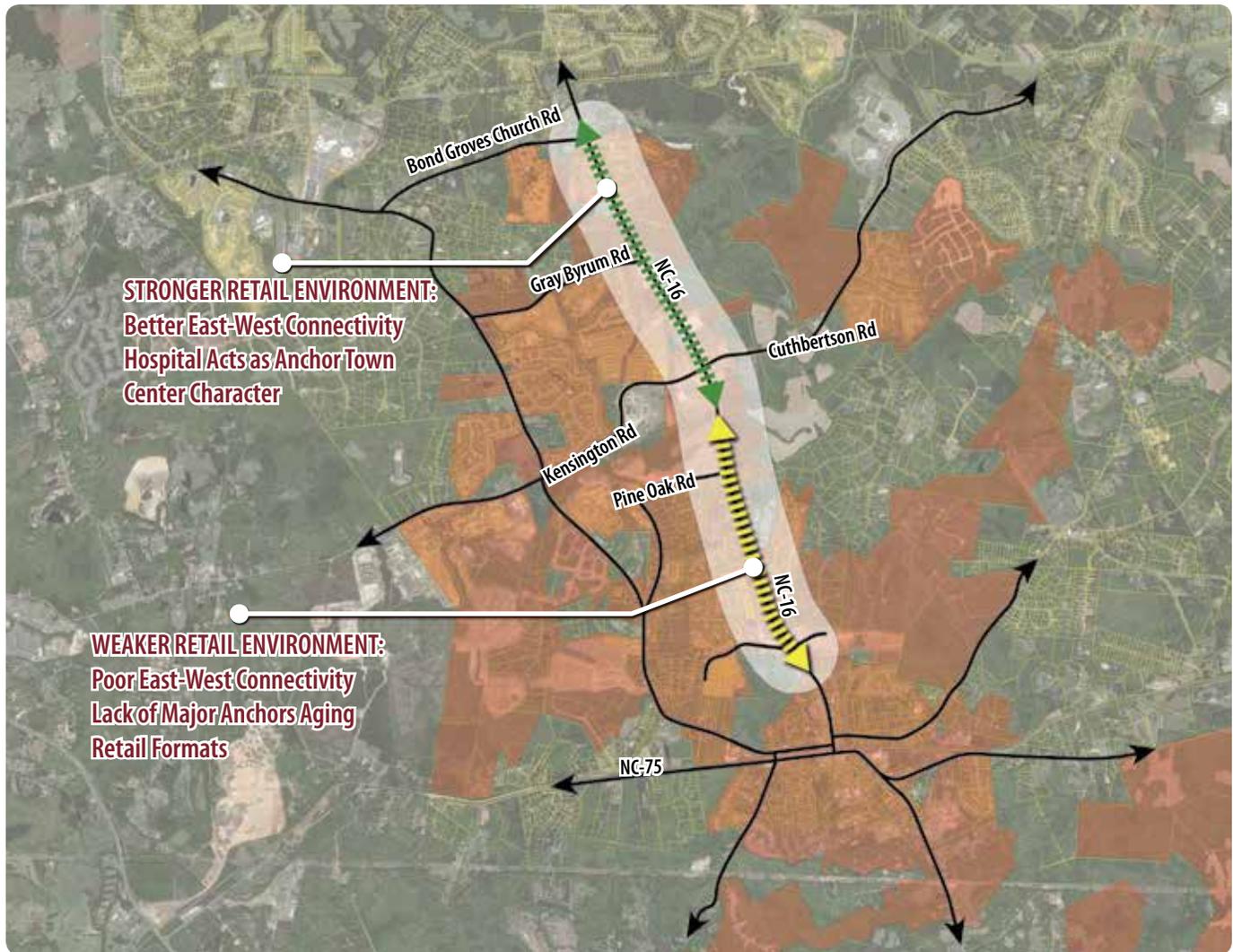
**Retail:** The retail vacancy rate in Waxhaw is currently low, however there are several approved retail developments that have not yet been built. There is more demand for retail on the northern side of the Highway 16 corridor, adjacent to the highest residential densities. Weddington (at the north end of the corridor) has not allowed new retail development, pushing demand towards Waxhaw. (See appendix for types of retail potentially appropriate for Waxhaw.)

**Office:** The office market in Waxhaw is significantly smaller than the housing and retail market because Waxhaw does not have immediate access to the regional highway network. The office market in Waxhaw primarily serves local needs, with uses such as medical office and real estate

business. The current office market in Waxhaw is fairly weak with a high vacancy rate and ample space for new businesses.

**For-Sale Residential:** Waxhaw is in the path of Charlotte's executive housing trend with high home prices and solid growth. The Waxhaw housing market is supported by a strong Union County School District and the amenity-rich environment provided by large master-planned communities such as Cureton, Lawson and Millbridge. Currently, the Waxhaw housing market is dominated by large single family detached products, and lacks other housing options such as small-lot single-family or townhouses.

**For-Rent Residential:** Currently there are no for-rent multi-family units in Waxhaw. The rental market consists of single-family houses that are mostly located in older downtown neighborhoods. Given that there are no multi-family for-rent units in the town, there is a significant opportunity to capture this market through new development on the Highway 16 corridor. Amenities, walkability and proximity to jobs and services all contribute to the desirability of rental options.



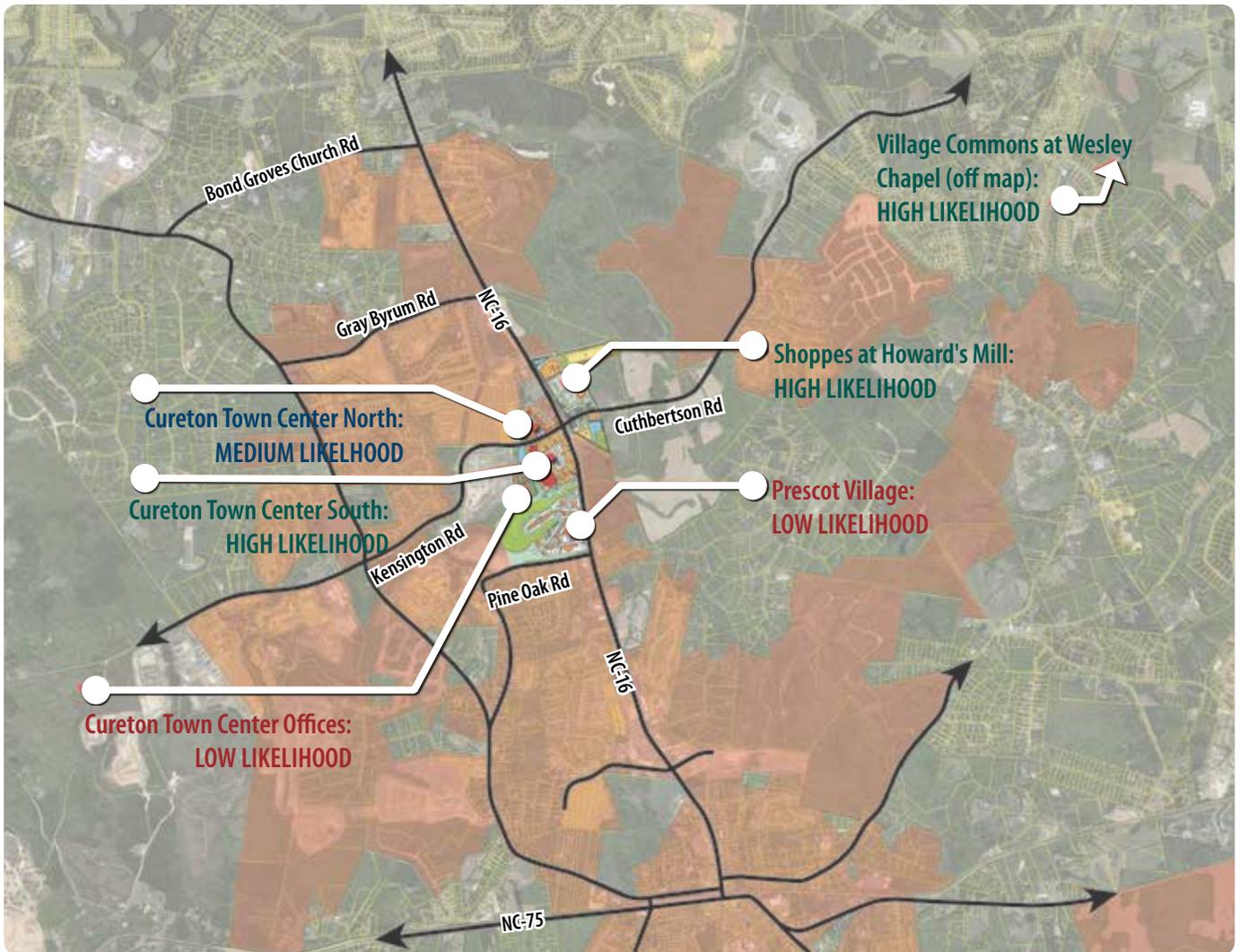
### ▲ RETAIL VIABILITY

**Senior Housing:** Waxhaw has one assisted-living facility that is currently filled to capacity. The aging population in Waxhaw echoes trends across the country; additionally, many retirees move to Waxhaw from other parts of the country to follow their grandchildren and children. These facilities tend to locate close to the regional transportation network, making the Highway 16 corridor an attractive area. Demand, absorption and format are all critical to evaluating the success of a potential senior living facility.

**Approved Plans:** The market study also examined the viability of approved development plans. In the mid-2000's, prior to the economic recession, projects totaling more than one million square

feet of commercial and retail space were approved. The details of these projects are further discussed in **Chapter 2 - Introduction and Analysis** and **Chapter 7 - Envision Development**. Many of the approved projects have yet to be constructed on the corridor. Re-examining these plans in the current market conditions helps to set a future vision for the corridor that balances community desires with market realities.

According to the market study, the projects most likely to be built as approved are projects that are located at major intersections, projects that are already partially constructed, or have approved uses sized to meet the market demand. More importantly the projects that are least likely to be



▲ APPROVED PLAN LIKELIHOOD

built as approved have poor locations, are bank-owned or include a majority of uses that lack demand. As discussed later, the projects with a low likelihood of being built as approved allow other developments to capture market share.

The following pages summarize the study and recommend specific actions to respond to the results from the market analysis. The recommendations are divided into the market categories and are meant to support future infill development, as described in **Chapter 7 - Envision Development**, and provide a framework for the regulatory changes, as described in **Chapter 8 - Clarifying the Regulatory Framework**.



▲ FOUR-CORNER INTERSECTIONS

## RETAIL

### M-1 Permit and locate new retail at key intersections

Retail development at four corner intersections is more likely to have long term success for several reasons:

- › Retail tends to fail at mid-block locations and at smaller intersections, particularly when oversupply of a particular retail sector exists;
- › Retail at intersections can include a mix of uses and be developed in a more walkable format, integrating green space and/or plazas to foster greater interaction;
- › Small retail tenants can attract more shoppers when paired with anchor tenants, whether that be a grocer, national retailer or other similar retailers; and
- › Small retail development strung along a corridor can create competition, sign clutter, lower lease rates, and higher vacancy rates.

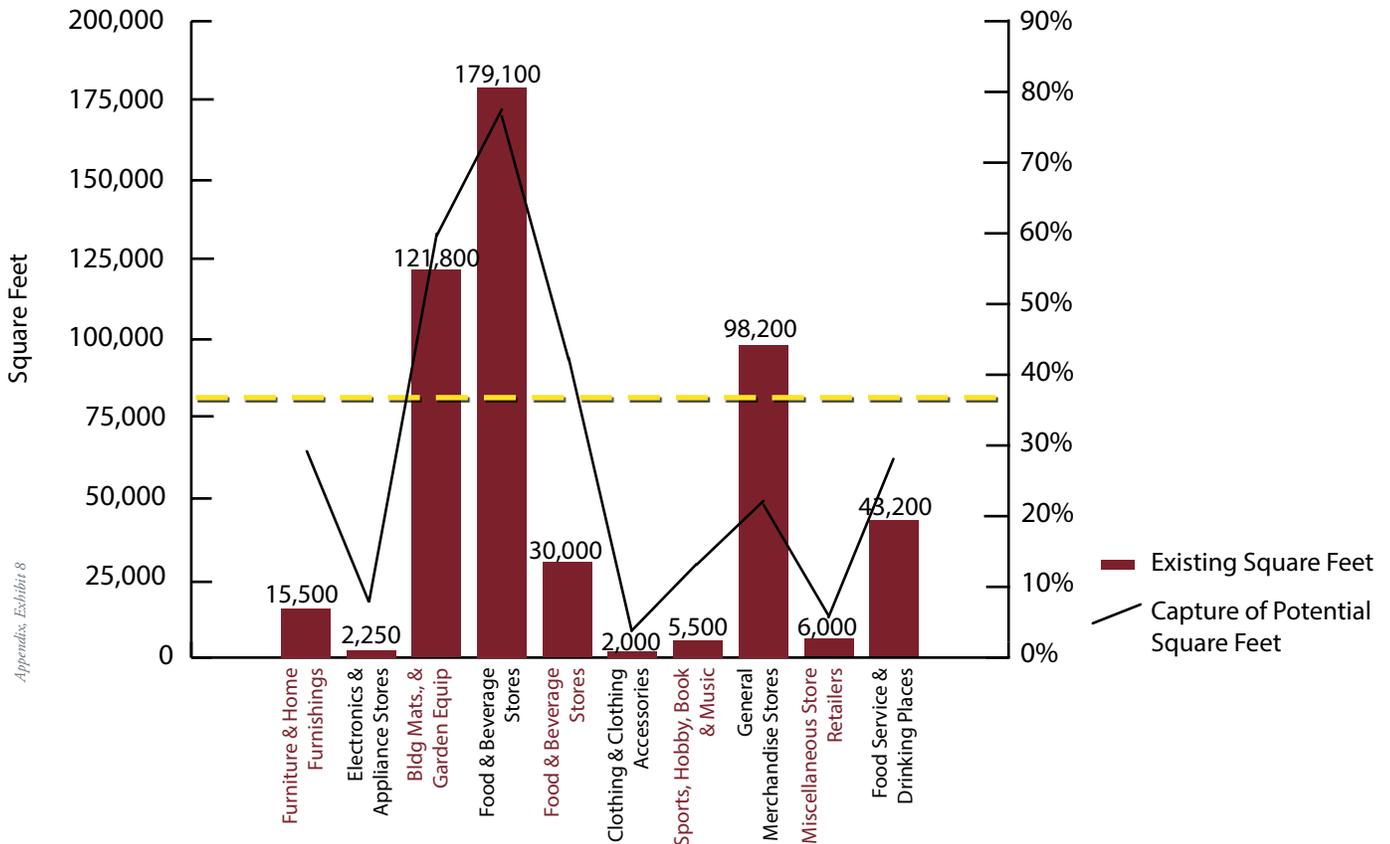
Waxhaw already has several small strip shopping centers that could become obsolete as retailers move. Creating a long-term regulatory strategy to organize future growth and focus on a couple of intersections is critical for Waxhaw's retail to remain successful. Retail businesses that have



▲ SOUTHPOINT, DURHAM, NC



▲ VILLAGE COMMONS, WESLEY CHAPEL, NC



**▲ 2013 RETAIL SUPPLY AND ESTIMATED CAPTURE OF DEMAND POTENTIAL IN THE HIGHWAY 16 CORRIDOR AREA**

The solid black line is the capture of the area relative to its expenditure potential and the dashed yellow line is the average capture in Waxhaw across all retail types.

**The Take Away**

The Highway 16 corridor (including Wesley Chapel) draws support from a broad area of southwestern Union County and currently captures more than one-third (36%) of demand potential from area residents, with the remaining 64% of demand potential being captured outside of the area (mostly in southern Mecklenburg County). Demand captures in the corridor are highest for grocery stores and building equipment stores (both capturing more than 60% of demand), and below 10% for clothing stores, electronics and appliance stores, and general merchandise stores, many of which are found in larger retail centers or big-box formats (largely prohibited from the Highway 16 corridor).

**Highway 16 Corridor Retail Demand Potential for Entitled Projects**

Remaining Supply to be Built	SF	Likelihood of Development
Village Commons at Wesley Chapel	165,034	High
The Shoppes at Howard's Mill	50,000	High
Cureton Town Center	351,000	Med. to High
Prescot Village	260,000	Low
Broome Street	201,600	Low
Historic Ventures	176,400	Low

Appendix, Exhibits 9, 10, 11

four: analyzing the market potential



▲ BALDWIN PARK, ORLANDO, FL



▲ MOUNT PLEASANT, SC

current demand and are projected to show growth in the future are listed below.

Given the high demand projections for the corridor, the uses could include well-designed national retail outlets. The ideal scenario would be for Waxhaw to permit, and even encourage, retailers to locate in the town and grow the tax base. If Waxhaw does not allow new commercial development, the market will move elsewhere, either west to South Carolina, northeast to Wesley Chapel, or to land within Union County jurisdiction. Waxhaw can capitalize on the population and the dollars spent per household, while maintaining the small town sense of place by allowing well-designed commercial development in strategic nodes. [Private] [On-going] [Code/Policy]



▲ MEADOWMONT, CHAPEL HILL, NC

**Demand by Store Type, 2030**

Category	Projected Square Footage (2030)	Size per Store	Average # of New Stores
Grocery Store	116,776 sf	40,000 sf - 50,000 sf	2-3
Health/Personal Care	65,853 sf	10,000 sf - 15,000 sf	4-6
Clothing Stores	77,883 sf	2,000 sf - 10,000 sf	15-30
Department Stores	160,018 sf	55,000 sf - 90,000 sf	2-3
General Merchandise/Big Box	453,053 sf	60,000 sf - 160,000 sf	3-6
Limited-Service Dining	82,433 sf	2,000 sf - 7,000 sf	10-20

Appendix: Exhibit 12

## M-2 Include pocket parks and open space in new retail/mixed-use developments

Integrating open space and playgrounds for children of all ages is a growing trend in retail and mixed-use developments. Not only does this attract more families, but visitors tend to stay longer, and spend more money on food and entertainment, as well as consumer goods.

Waxhaw is a town with a growing population of families. Catering to the family market will lead to more sustainable commercial success in the future. Popular types of playgrounds and open spaces embedded in retail and mixed-use projects include:

- > Spraygrounds
- > Plazas with movable furniture
- > Interactive water features
- > Sand boxes
- > Grass lawns
- > Walking trails connected to neighborhoods

A major children's playground in Byrum Village would also be a Saturday or weeknight destination for families regionally, especially if programmed with retail uses that cater to families and surround the park/playground. This could include low-cost family restaurants, kids clothing stores or an entertainment venue. [Private] [On-going] [Code/Policy]



▲ SOUTHPOINT, DURHAM, NC



▲ BIRKDALE VILLAGE, HUNTERSVILLE, NC



▲ BAXTER VILLAGE, FORT MILL, SC



▲ BALDWIN PARK, ORLANDO, FL

four: analyzing the market potential

**Estimated Retail Demand Potential in the Highway 16 Corridor**

Store Type (excl. Autos & Gas)	Store Types with Positive Demand - 2013	Store Types with Positive Demand - 2020	Store Types with Positive Demand - 2030
<b>Furniture and Home Furnishings</b>	<b>24,151</b>	<b>33,942</b>	<b>52,390</b>
FURNITURE STORES	9,337	14,738	24,915
HOME FURNISHING STORES	14,814	19,204	27,475
<b>Electronics &amp; Appliance Stores</b>	<b>19,282</b>	<b>25,176</b>	<b>36,280</b>
<b>Bldg Mats., Garden Equipment</b>	<b>54,063</b>	<b>92,526</b>	<b>164,995</b>
BLDG MATERIALS & SUPPLY STORES	37,966	71,675	135,188
LAWN & GARDEN EQUIPMENT	16,097	20,851	29,807
<b>Food &amp; Beverage Stores</b>	<b>32,913</b>	<b>76,264</b>	<b>157,943</b>
GROCERY STORES	10,566	47,392	116,776
SPECIALTY FOOD STORES	15,082	19,358	27,414
BEER, WINE & LIQUOR STORES	7,265	9,514	13,753
<b>Health &amp; Personal Care</b>	<b>27,187</b>	<b>40,594</b>	<b>65,853</b>
<b>Clothing &amp; Clothing Accessories</b>	<b>54,669</b>	<b>70,548</b>	<b>100,465</b>
CLOTHING STORES	42,245	54,602	77,883
SHOE STORES	6,996	8,979	12,716
JEWELRY, LUGGAGE & LEATHER	5,428	6,967	9,866
<b>Sports, Hobby, Book &amp; Music</b>	<b>21,004</b>	<b>28,003</b>	<b>41,191</b>
SPORTS, HOBBY, MUSICAL INST	13,030	17,769	26,697
BOOK & MUSIC STORES	7,974	10,234	14,493
<b>General Merchandise Stores</b>	<b>219,642</b>	<b>300,565</b>	<b>453,043</b>
DEPARTMENT STORES	87,613	112,718	160,018
OTHER GEN. MERCH. STORES	132,029	187,847	293,015
<b>Miscellaneous Store Retailers</b>	<b>50,358</b>	<b>65,775</b>	<b>94,822</b>
FLORISTS	2,555	3,280	4,645
OFFICE SUPPLIES, STATION. & GIFTS	14,156	18,549	26,826
USED MERCHANDISE STORES	2,650	3,971	6,461
OTHER MISC. STORE RETAILERS	30,997	39,974	56,889
<b>Food Service &amp; Drinking Places</b>	<b>91,784</b>	<b>126,011</b>	<b>190,499</b>
FULL-SERVICE RESTAURANTS	32,819	45,742	70,091
LIMITED-SERVICE EATING PLACES	38,886	53,985	82,433
SPECIAL FOOD SERVICES	16,071	21,140	30,690
DRINKING PLACES	4,008	5,144	7,285
<b>TOTAL</b>	<b>595,053</b>	<b>859,402</b>	<b>1,357,471</b>



Appendix, Exhibits 9, 10, 11

## ESTIMATED RETAIL DEMAND POTENTIAL IN THE HIGHWAY CORRIDOR

**2013:** Today there is an estimated demand potential for approximately 595,000 square feet of space in the Highway 16 corridor, with the greatest demand potential existing for General Merchandise (big boxes such as Target and Wal-Mart) stores and Eating & Drinking Places. Much of the current demand is lost to areas north, many of which are located in South Mecklenburg County.

There is currently around 1.2 million square feet of undeveloped, but entitled, retail sites in the corridor or close by, indicating plenty of land to satisfy demand today. Approximately half of this potential, however, is located in undeveloped centers that are considered less than optimal for retail development and unlikely to be built as currently entitled.

**2020:** Retail demand (driven largely by new housing growth) will increase to around 860,000 square feet, with significant demand potential for most retail types. This is approximately 265,000 square feet more than the 2013 market demand. Entitled land within the corridor is sufficient to capture this potential; however, after subtracting sites that are less than optimal for retail development, entitled retail land is insufficient to meet demand potential.

**2030:** Demand potential in the corridor increases significantly, with 1.35 million square feet of potential retail demand. This is nearly 800,000 square feet of demand beyond the currently-entitled sites that is likely to be delivered in the Highway 16 corridor (and in Wesley Chapel).

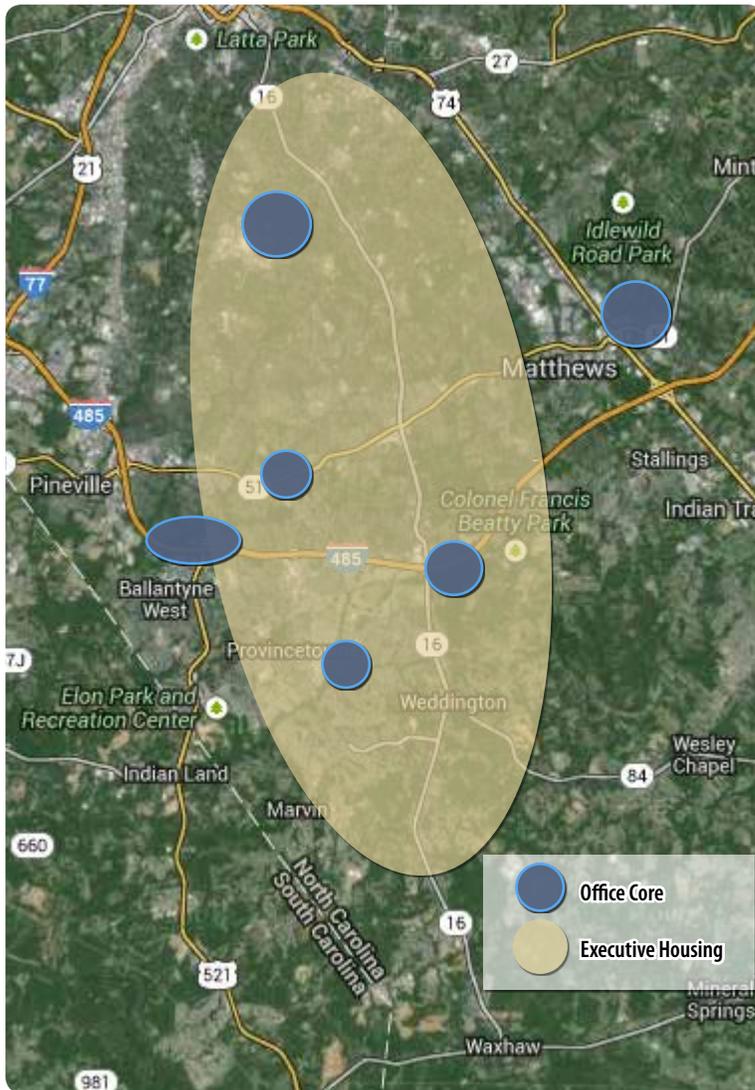
### Demand Indicators for Key Retail/Food Store Types

Category	Opportunity for Study Area	Comments
Grocery Store	Fair	WHOLE FOODS WOULD BE AN IDEAL CANDIDATE TO FILL THE GROCERY
Health/Personal Care	High	ADDITIONAL DEMAND FOR PERSONAL HEALTHCARE STORES
Clothing Stores	Moderate	AREA LACKS QUALITY CLOTHING STORES
Department Stores	Moderate	WOULD NEED TO BE IN LIFESTYLE CENTER FORMAT
General Merchandise/Big Box	High	HIGH DEMAND FOR BIG BOX RETAILERS SUCH AS WAL-MART OR TARGET
Limited-Service Dining	Moderate	DEMAND IN THE AREA FOR BOTH FULL AND LIMITED-SERVICE. LACK OF HIGHWAY ACCESS AS WELL AS MAJOR RETAIL CENTER HINDERS ATTRACTION.

Appendix, Exhibit 12



▲ CMC-WAXHAW MEDICAL OFFICES



▲ OFFICE MARKET OVERVIEW

**OFFICE**

**M-3** Fill the existing office market in the corridor before building new office space

There is approximately 19,000 square feet of office potential currently on the Highway 16 corridor after taking vacant space into account. Before approving or building new office space, the Town of Waxhaw should focus on filling existing space, for example in the CMC-Waxhaw Building or Waxhaw Professional Park. [Private] [6-10]

**M-4** Incentivize small businesses to locate on the Highway 16 corridor

There are specific types of businesses that are appropriate in the corridor and should be incentivized to locate in Waxhaw. With new residential and retail growth in Waxhaw, service industry office, medical office and real estate related offices will continue to grow in demand along the Highway 16 Corridor. Capitalizing on this demand in appropriate locations, in Waxhaw, includes providing incentives for businesses to locate. This could include:

- > Utilizing the Waxhaw Business Association to promote locations and available sites;
- > Improving town-wide internet access;
- > Using county or town economic development staff to support potential businesses.

The purpose of the incentives is to provide support and differentiate Waxhaw from other communities, building a reputation as a business-friendly community. [\$] [O] [On-going] [Code/Policy]

**Office Market Conclusion**

Office cores are located at the North and East of Waxhaw's Highway 16 corridor, mainly located along I-485. In spite of very high incomes (an attractor for office growth), the limited regional access offered by Waxhaw has significantly tempered demand for those uses, with demand only serving the local population.

<b>Small Service-Oriented Office &amp; Retail Space Demand: 2013, 2020, 2030</b>						
<b>Industry Code Description</b>	<b>Estimated Demand by SF- 2013</b>	<b>Capture, NC 16 Corridor 2013</b>	<b>Estimated Demand by SF-2020</b>	<b>Capture, NC 16 Corridor 2020</b>	<b>Estimated Demand by SF-2030</b>	<b>Capture, NC 16 Corridor 2030</b>
	<i>*SF - Square Feet</i>					
<b>Typical Office Users</b>	<b>116,500</b>	<b>18,827</b>	<b>226,013</b>	<b>84,535</b>	<b>454,000</b>	<b>221,327</b>
REAL ESTATE	50,000		95,000		180,000	
SECURITIES, FINANCIAL INVESTMENTS	0		0		0	
INSURANCE CARRIERS AND RELATED ACT.	0		0		12,500	
SPECIALIZED DESIGN SERVICES	0		0		0	
TECHNICAL AND TRADE SCHOOLS	-		2,501		5,000	
OTHER SCHOOLS AND INSTRUCTION	-		15,012		25,000	
OFFICE OF PHYSICIANS	0		6,000		26,000	
OFFICE OF DENTISTS	32,000		48,000		74,000	
OFFICE OF OTHER HEALTH PRACTITIONERS	32,000		46,000		72,000	
MEDICAL AND DIAGNOSTIC LABS	2,500		2,500		7,500	
MORTGAGE AND NON MORTGAGE LOAN BROKERS	0		2,500		5,000	
OFFICES OF LAWYERS	0		0		7,500	
OFFICES OF CPAS	0		2,500		7,500	
TAX PREPARATION SERVICES	0		0		0	
ARCHITECTS & ENGINEERS	0		6,000		32,000	
MARKETING & PUBLIC RELATIONS	0		0		0	
TESTING LABORATORIES	0		0		0	
COMPUTER RELATED SERVICES	0		0		0	
<b>Typical Retail Users</b>	<b>44,300</b>	<b>26,580</b>	<b>82,602</b>	<b>49,561</b>	<b>155,805</b>	<b>93,483</b>
WIRELESS TELECOMMUNICATION CARRIERS	4,500		6,000		7,500	
CHILD DAY CARE FACILITIES	9,800		19,600		34,300	
DRY CLEANING AND LAUNDRY SERVICES	12,000		16,500		27,000	
OTHER PERSONAL SERVICES	0		0		0	
COMMERCIAL BANKING	3,000		6,000		18,000	
SAVINGS INSTITUTIONS	0		0		0	
CREDIT UNIONS	3,000		3,000		6,000	
FITNESS AND OTHER REC. CENTERS	-		6,002		15,005	
HAIR, NAIL, AND SKIN CARE SERVICES	6,000		16,500		34,500	
OTHER PERSONAL SERVICES	6,000		9,000		13,500	
<b>Total, Office and Retail Users</b>	<b>160,800</b>	<b>45,407</b>	<b>308,615</b>	<b>134,096</b>	<b>609,805</b>	<b>314,810</b>



▲ HUNTERSVILLE, NC - LIVE-WORK UNITS



▲ O'NEAL VILLAGE - SALES CENTER



▲ BAXTER VILLAGE - OFFICE

## M-5 Locate new office development in mixed-use nodes

Mixed-use town centers and nodes are ideal locations for office uses, as office tenants provide on-location shoppers and residents. Workers also tend to shop and eat at off-peak hours relative to local residents.

In multi-story buildings, office uses are complementary uses on the second story of retail buildings. By locating offices close to new housing and retail, additional car trips on the Highway 16 corridor would also be further reduced.

Offices located in mixed-use nodes can range in size from small office space in live-work units to corporate headquarters. The current demand in the Waxhaw market is more attractive to the small office user, but with increasing development, larger office projects may become a reality. [Private] [On-going] [Code/Policy]

## M-6 Create a design district to cater to residents building or remodeling homes

Developing a design district along the corridor to provide local options for home goods and materials would complement the homebuilding activity in subdivisions near Highway 16. The Waxhaw Business Association and local trade organizations should support a strategy to attract furniture stores, product showrooms, real estate offices and home goods stores. All of these small offices and retail frontages would benefit from clustering so that new home owners and remodelers can visit this design district as a one-stop shop for fixing up and furnishing their homes. Stores and offices in the design district can range in size from larger furniture stores to small real estate offices and sales centers.

The proposed Byrum Village would be an ideal location for the design district. Close to the majority of the new construction housing in Waxhaw, Byrum Village includes ample square footage and land for a wide range of stores and offices. The design district could be one of several industry clusters in the regional village. [Private] [On-going] [Code/Policy]

**Small Service-Oriented Office & Retail Space Demand, 2013**

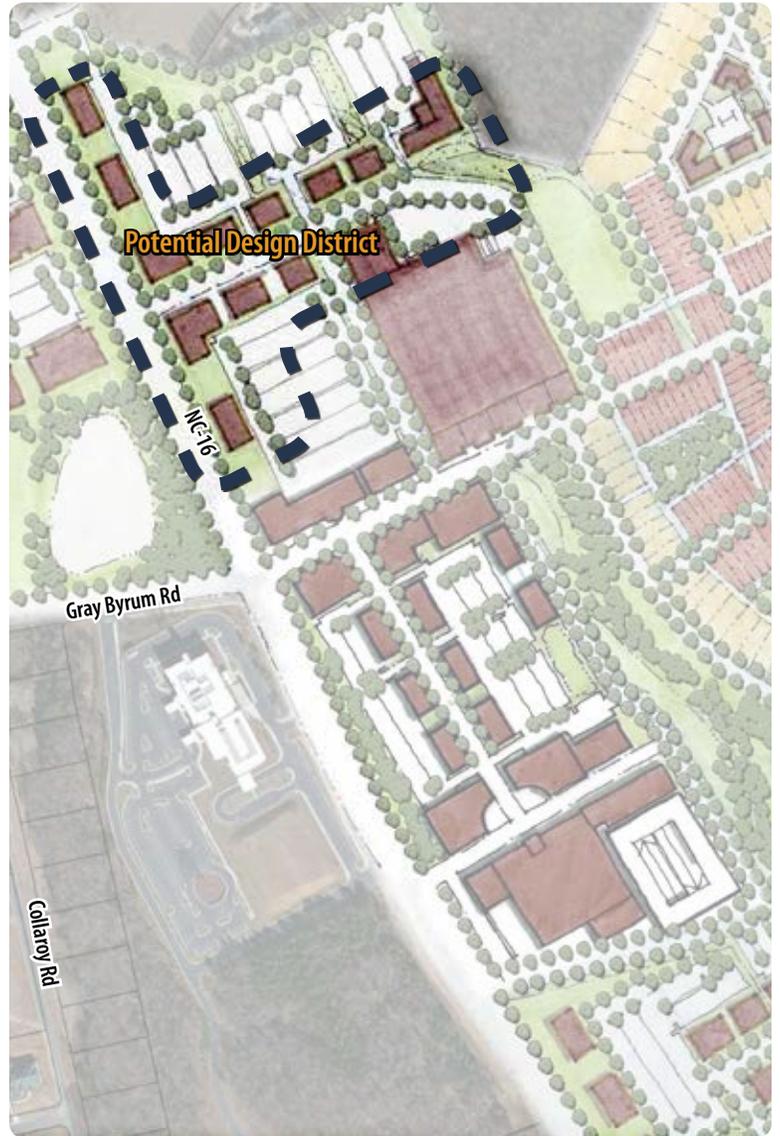
When factoring in vacant space along the Highway 16 corridor today, the net demand for office space is estimated at slightly less than 19,000 square feet. Weak market fundamentals and the ability to locate office uses in southern Mecklenburg County and service Waxhaw residents has tempered demand for space today.

**Small Service-Oriented Office & Retail Space Demand, 2020**

By 2020 the estimated net demand (after accounting for existing vacant space) is approximately 84,500 square feet. Assuming roughly 8,000 square feet per acre, this translates to a need for about 10 acres of space. Demand remains strongest for medical space serving local residents, real estate offices, and a mix of other office users.

**Small Service-Oriented Office & Retail Space Demand, 2030**

By 2030 demand for office space will exceed 221,000 square feet after accounting for existing vacant space in the Highway 16 corridor. Again, demand will be strongest for medical users, real estate offices and architects/engineers servicing the local population.



▲ BYRUM VILLAGE: DESIGN DISTRICT

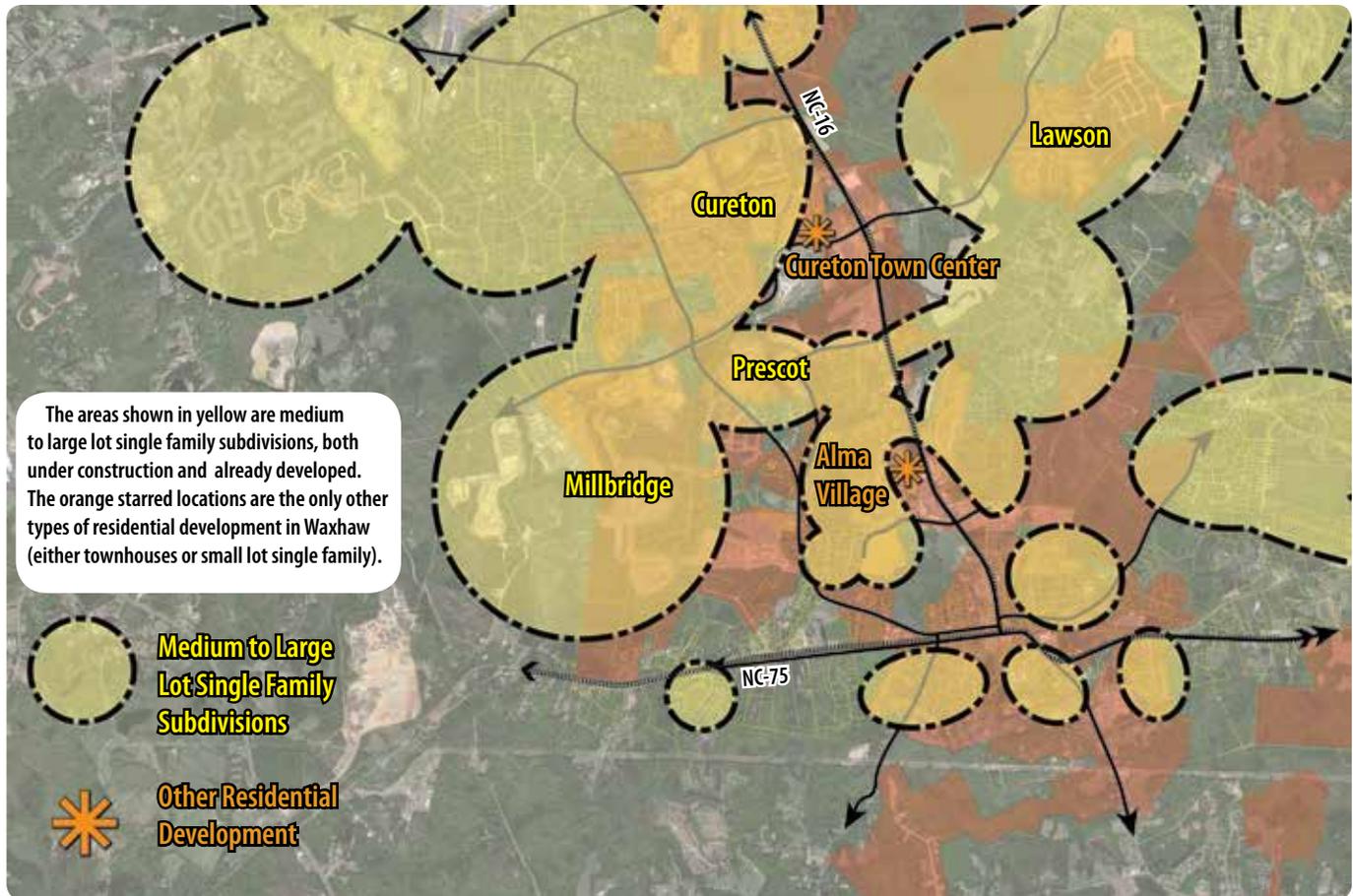


▲ REAL ESTATE OFFICE - CHARLOTTE, NC



▲ ARCHITECT'S OFFICE - NEW TOWN, ST. CHARLES, MO

four: analyzing the market potential



▲ HOUSING TYPES

For-Sale Residential Demand									
	2001-2005	2006-2010	2011-2015	2016-2020	2021-2025	2026-3030	2011-2030	NC 16 Corridor Capture	
PATIO HOME	577	577	359	471	633	617	2,080	40%	832
SINGLE-FAMILY ON A SMALL LOT	644	644	401	526	707	688	2,321	40%	929
SINGLE-FAMILY, AVERAGE LOT	1,519	1,519	946	1,240	1,667	1,624	5,477	20%	1,095
TOWNHOUSE W/ GARAGE	282	282	175	230	309	301	1,016	50%	508
CONDOMINIUM	132	132	82	108	145	141	477	50%	238

Appendix, Exhibit 24

**For Sale Residential, 2013**

The Waxhaw for sale residential market is dominated by conventional subdivisions, which rely on location, schools and lower costs per square foot than Mecklenburg County as selling points. Sales in the Highway 16 corridor are solid: over the last year, area communities averaged about 40 sales per month at an average price of roughly \$312,000. Today the Highway 16 corridor largely offers one lifestyle: a large-lot, auto-dominated environment targeting families with children. While this is appropriate for the area, Waxhaw should foster development that is also attractive to those without children or those seeking more walkable environments, similar to that found in communities like Baxter, Birkdale Village and smaller downtowns throughout the metro area.

## FOR-SALE RESIDENTIAL

### M-7 Build a variety of new for-sale housing products

New home sales in Waxhaw began rebounding from the recession in 2010, and have increased every year since. Waxhaw is on track to issue more residential building permits in 2014 than any other year on record, surpassing 2007 housing-boom levels. New for-sale products in Waxhaw are all single-family houses that range in average cost from \$205,320 to \$347,154; on the Highway 16 corridor the average home price is \$349,261. Houses sold in proximity to the corridor have an average size of 2,860 square feet.

The housing market in the Highway 16 corridor lacks diversity. The average home sales price and square footage per house in the study area represents only one type of housing: average-lot single family detached. Encouraging other housing types, as listed in the market study, with different price points and unit types will lead to the overall sustainability and success of the town by diversifying the population and housing stock.

A successful neighborhood model with a diversity of housing types is Cureton. The only neighborhood in Waxhaw to provide a range of housing types, home prices in Cureton have increased in value from \$93 per square foot to \$111 per square foot from 2005 to 2012. Other comparable neighborhoods have not seen the same rise in costs, nor are the prices as high, either per square foot or in total, in surrounding neighborhoods. The price range in Cureton from \$148,000 to over \$850,000 supports a diverse population that includes young families, singles, families with children and senior citizens. New housing projects in Waxhaw should adopt this model, looking not only to Cureton as an example, but also to regional examples of well-design housing neighborhoods with diverse housing options, such as Baxter and Birkdale Village. [Private] [On-going] [Code/Policy]

#### For Sale Residential Market Conclusion

Single-family homes on conventional to larger lots will remain the most preferred product type in the greater Waxhaw/Weddington area (Sandy Ridge and Jackson Townships), although there is also significant demand s for other for-sale products, including smaller-lot single-family homes, and patio homes, as well as moderate demand for townhouses and condominiums.

Opportunities for these alternate products in Waxhaw are greatest along the Highway 16 corridor. A more diverse housing stock will help Waxhaw broaden its market appeal and create opportunities for greater sustainability over time.



▲ COTTAGE HOUSE



▲ SINGLE FAMILY - SMALL LOT



▲ SINGLE FAMILY - AVERAGE LOT



▲ TOWNHOUSES

### Estimated Demand Potential for Rental Apartments in the Waxhaw/Weddington Area and the Highway 16 Corridor

		2011-2015	2016-2020	2021-2025	2026-3030
CUMULATIVE ESTIMATED POTENTIAL RENTER DEMAND		230	532	938	1,334
CUMULATIVE, CAPTURE, HIGHWAY 16 CORRIDOR	@80%	184	426	751	1,067

Appendix, Exhibit 29

#### Rental Residential Trends

Nationally, demand for rental apartments remains strong, as the for-sale market is somewhat constrained. Gen Y (those under 30) continues to bolster the rental residential market as they move away from home, and tend to value renting more than previous generations. Lenders are also providing loans for rental residential developers with good locations in solid markets, like Charlotte. The ideal locations for rentals are walkable areas that are close to major employment cores. The overall size of units is decreasing as renters are less interested in paying for excess space. Renters expect to have condo-level finishes in good locations, which includes granite countertops and high-end appliances.

Rental Residential demand in Waxhaw is tempered by the lack of convenience offered by the area. The area is not close to major job cores or well-known entertainment districts. However, there is growth in the area that is changing the paradigm. York County, a neighboring county in South Carolina, has seen much stronger growth and demand given its freeway and job access. It is likely that this demand will move to Union County and continue to grow in the area.



▲ DAVIDSON - APARTMENTS

Data Source: National Association of Realtors, 2011



**58% of people prefer neighborhoods with mix of houses, stores and business within an easy walk**

## RENTAL RESIDENTIAL

### **M-8** Build new multi-family rental residential in mixed-use nodes on the corridor

Multi-family rental residential is a complementary use to commercial development in mixed-use nodes. Rental opportunities and a diverse population of tenants and residents help to:

- > Activate the mixed-use center by keeping people and eyes on the street at all hours;
- > Provide a built-in market for retailers and eateries;
- > Provide an affordable housing option for less-wealthy households;
- > Develop a social scene and sense of place;
- > Attract other cultural and entertainment features, such as live music or art shows; and
- > Demonstrate a less car-dependent lifestyle where residents can walk to the grocery store, bank or shop.

While apartment developments usually need to be at least 100 units to meet the economies of scale required to provide on-site management and amenities with an adequate return on investment, this does not mean that rentals must be built in large, isolated complexes. In fact, making rentals part of a mixed-use center—as the plan recommends—necessitates a more fine-grained design that mixes apartments with retail development, condominiums, and townhouses.

For the provision of management, an apartment development could have several buildings with 30-40 units each that are within about a mile of one another. Additionally, the more amenities that



▲ BIRKDALE VILLAGE - MIXED-USE APARTMENTS



▲ ORENCO STATION - PORTLAND, OR - MIXED-USE APARTMENTS

### Rental Residential Market Conclusion

To aid in its modeling efforts, the consultant created a long-term growth model for Union County and the Waxhaw/Weddington Area to understand demand potential for development in these areas and in the Highway 16 corridor specifically. Given the lack of rental apartment product in the Waxhaw and Weddington areas (due to entitlement controls more than market demand potential), the consultant examined tenure data for a suburban Charlotte region county with a greater availability of product (York County) and blended the two areas together to identify market demand potential for new rental apartment product in the Waxhaw and Weddington areas.

As the most significant transportation corridor in the area, the Highway 16 corridor will capture the majority of this demand, estimated to be more than 1,300 units by 2030. New rental apartment product should target a mix of those working in the area (including those working retail jobs) and those seeking to live in the area, but not in a position or unwilling to purchase in Waxhaw or Weddington.

#### four: analyzing the market potential



▲ AURORA, CO - SENIOR APARTMENTS



▲ ELLISVILLE, MO - SENIOR APARTMENTS



▲ AURORA, CO - SENIOR APARTMENTS

are located on the corridor, such as the proposed Carolina Thread Trail extension and YMCA, the greater the attraction for renters. This means that the developer can rely on the amenities of the larger corridor community, without having to invest in complex-specific amenities like large courtyards and pools, making the corridor more attractive for investment. [Private] [On-going] [Code/Policy]

### SENIOR/ASSISTED-LIVING RESIDENTIAL **M-9** Build new assisted-living facilities in mixed-use nodes on the corridor.

As the baby boomer population ages and the demand for senior assisted-living facilities increases, incorporating these living environments into mixed-use nodes adds value to both the facility and the neighborhood. Residents provide valuable buying power to the surrounding retail and commercial development. Incorporating access to daily needs into the node supports resident independence in everyday life, where they can easily walk to the pharmacy, salon, grocery store and coffee shop.

Design of any senior/assisted-living residential development should include security measures to protect residents and their valuables. This does not necessitate the development of isolated gated communities however. Instead, layers of privacy and security can be incorporated into the design of senior living facilities. This provides a safe environment for residents while offering, proximity to amenities and complementary uses that allow independent residents to freely and easily come and go from their homes.

Partnerships with community centers and local schools can provide recreation and lifelong learning opportunities for residents at senior/assisted-living facilities, benefiting both the residents and the greater community. Given the demand of two to three new facilities in the next 20 years, locating the independent and assisted-living units in targeted locations can help to reduce traffic on the corridor, provide a healthier living environment for residents and add social and economic value to the mixed-use node or center. [Private] [On-going] [Code/Policy]

**Estimated Demand Potential for new Independent and Assisted-Living Units in the Waxhaw/Weddington Area and the Highway 16 Corridor**

Appendix Exhibit 30

	2011-2015	2016-2020	2021-2030
CUMULATIVE ESTIMATED POTENTIAL ASSISTED-LIVING UNITS DEMAND @ 100% CAPTURE	103	80	110

**Assisted Living Market Conclusion**

Based on this analysis, it is estimated that there is support in the market for one independent/assisted living community in the Highway 16 Corridor today. Assuming an average size of around 100-120 units, it appears growth in the market can support one new facility every 8 to 9 years.

These communities typically encompass around five acres in total, assuming a three-story structure, translating into around three total facilities and 15 acres by 2030.

four: analyzing the market potential

<i>Land Use</i>	<i>NC 16 Corridor Study Area Current Situation</i>	<i>Corridor Strengths</i>	<i>Corridor Challenges</i>
<b><i>Retail</i></b>	CORRIDOR HAS SEEN NEIGHBORHOOD RETAIL GROWTH, BUT LITTLE IN TERMS OF BIGGER BOX AND/OR REGIONAL-SERVING RETAIL. LACK OF MAIN STREET RETAIL.	AREA SOUTH OF NC 51 INTO UNION AND LANCASTER LACKING SIGNIFICANT MAIN STREET RETAILS. RELATIVELY SOLID TRAFFIC COUNTS.	LACK OF MAJOR INTERSECTIONS WITH STRONG THOROUGHFARES- REA ROAD STRONGEST. POPULATION DROPS OFF TO THE SOUTH.
<b><i>Office</i></b>	VERY SMALL OFFICE MARKET OF MEDICAL AND LOCAL-SERVING FIRMS. SIGNIFICANT OVERSUPPLY EXISTS - ALSO COMPETES WITH RETAIL SPACE	AFFLUENT POPULATION BASE CREATES STRONGER POTENTIAL FOR LOCAL-SERVING OFFICE USES.	CORRIDOR UNABLE TO ATTRACT REGIONAL/LARGER USERS. LOCAL MARKET HAS HIGH VACANCIES AND COMPETES FOR TENANTS WITH CHEAPER RETAIL SPACE.
<b><i>For-Sale, Single Family Detached</i></b>	UNION COUNTY MARKET SIGNIFICANTLY DISRUPTED BY HOUSING DOWNTURN, BUT COMING BACK IN TERMS OF VOLUME. HOME PRICES VERY HIGH FOR CHARLOTTE REGION.	STRONG SCHOOLS, LARGER AMENITY-ORIENTED COMMUNITIES, AND IN PATH OF EXECUTIVE HOUSING GROWTH.	MOST PRODUCT IS LARGER LOT SINGLE-FAMILY - APPEALING TO FAMILIES - BUT LACKS APPEAL TO OTHER AUDIENCES NOT DESIRING LARGE-LOTS
<b><i>For-Sale, Townhouses</i></b>	LACK OF PRODUCT IN THE CORRIDOR TODAY, THE EXCEPTION BEING A SMALLER COLLECTION OF TOWNHOUSES IN CURETON.	HIGH INCOMES AND QUALITY SCHOOL CREATE TRUE PRICE ALTERNATIVE OPPORTUNITIES FOR TOWNHOUSES IN THE CORRIDOR.	LACKING LIFESTYLE AMENITIES - CREATION OF WALKABLE ENVIRONMENTS, GREENWAYS OR PARKS INCREASES OPPORTUNITIES FOR TOWNHOUSES.
<b><i>Rental Apartments</i></b>	LACK OF RENTAL APARTMENT PRODUCT IN THE CORRIDOR AND LACK OF NEWER PRODUCT THROUGHOUT UNION COUNTY.	HIGH INCOMES AND GROWTH OF RETAIL AND SERVICES JOBS CREATE POTENTIAL DEMAND FOR NEW RENTAL PRODUCT.	THIS PORTION OF THE CORRIDOR IS WELL REMOVED FROM MAJOR OFFICE CORES AND WALKABLE ENTERTAINMENT/SHOPPING.
<b><i>Senior Housing and Assisted Living</i></b>	NONE ON THE CORRIDOR IN WAXHAW	PROXIMATE TO MEDICAL OFFICES AND RETAIL	REMOVED FROM WALKABLE AREAS AND REGIONAL HOSPITALS

▲ HIGHWAY 16 CORRIDOR SUMMARY OPPORTUNITY MATRIX

<b>Corridor Demand Potential</b>	<b>Total Sustainable SF/ Units 2013-2030</b>	<b>Development Intensity</b>	<b>Areas</b>	<b>Key Issues</b>
RETAIL DEMAND INCREASE FROM 575,000 SF TODAY TO MORE THAN 1.3M BY 2030.	1.3M SF GROSS BY 2030, NOT INCLUDING EXISTING APPROVED CENTERS, SOME CONSIDERED WEAKER SITES.	8,000-10,000 SF/ACRE	133-165 ACRES INCLUDING ALREADY APPROVED SITES.	CREATING "LOCATIONS" AND PLACEMAKING SHOULD BE A BIG FOCUS FOR THE TOWN.
VIRTUALLY NO DEMAND EXISTS TODAY, BUT INCREASES WITH POPULATION GROWTH IN THE AREA.	APPROXIMATELY NET 221,000 SF BY 2030, ACCOUNTING FOR FILLING IN OVER SUPPLY ALREADY ON MARKET TODAY.	8,000-10,000 SF/ACRE	APPROX. 21-28 ACRES BY 2030	AS WITH RETAIL, CREATING ATTRACTIVE, WALKABLE LOCATIONS WITH LIFESTYLE APPEAL.
SOLID DEMAND POTENTIAL FOR CONVENTIONAL LOT, SMALL LOT (TND) AND PATIO HOMES IN THE AREA.	DEMAND FOR 2,800 UNITS BY 2030, INC. 1,100 CONVENTIONAL, 930 SMALL LOT, AND 830 PATIO HOMES	2-7 UNITS/ACRE	ROUGHLY 960 ACRES FOR ALL THREE PRODUCT TYPES	PROVIDING A GREATER DIVERSITY OF PRODUCTS TO APPEAL TO COUPLES W/O CHILDREN AND EMPTY NESTERS.
NGC ESTIMATES ROUGHLY 9%-10% OF FOR-SALE DEMAND COULD BE CAPTURED BY TOWNHOUSE PRODUCT	500 UNITS THROUGH 2030	12 UNITS/ ACRE	ROUGHLY 50 ACRES THROUGH 2030	MATCH PRICE ALTERNATIVE OPPORTUNITIES WITH WALKABLE / GREEN ORIENTATIONS.
SOLID DEMAND THROUGH 2030, ALBEIT TEMPERED BY CORRIDOR'S CHALLENGES	1,334 UNITS BY 2030, TRANSLATING INTO ONE NEW RENTAL APARTMENT COMMUNITY EVERY 3 TO 5 YEARS.	15-20 UNITS/ACRE	67-89 ACRES	CREATING RENTAL APARTMENT COMMUNITIES IN WALKABLE AREAS, PROXIMATE TO RETAIL AND AMENITIES.
ASSUMING AN AVERAGE SIZE OF 100-120 UNITS, THE MARKET CAN SUPPORT 1 NEW FACILITY EVERY 8-9 YEARS	3 FACILITIES	1 FACILITY/5 ACRES	15 ACRES	CREATE SENIOR HOUSING PROXIMATE TO RETAIL AND AMENITIES

Appendix Exhibit 31



# BUILDING A COMPLETE STREET

**Improving transportation choices** was the most frequent concern expressed during the Highway 16 corridor charrette. Some of Waxhaw's citizens can't drive, and others choose not to. Even more would walk or bike along Highway 16 if the street configuration supported it.

As it is today, Highway 16 is designed to do only one thing well: move cars. This is a liability in a region where market trends and demographic preferences are moving toward less reliance on the personal automobile and more trips made on foot, bicycles and buses.

Today's market demands Complete Streets: streets that are designed and operated to enable safe access for all users regardless of age, ability, and mode of travel. Highway 16 is likely to be widened and improved in the near future. This chapter describes a vision for the design of Highway 16 as a Complete Street that allows traffic to move efficiently, buses to run on time, and people to walk safely to and from shops, offices, churches, transit stations and homes.

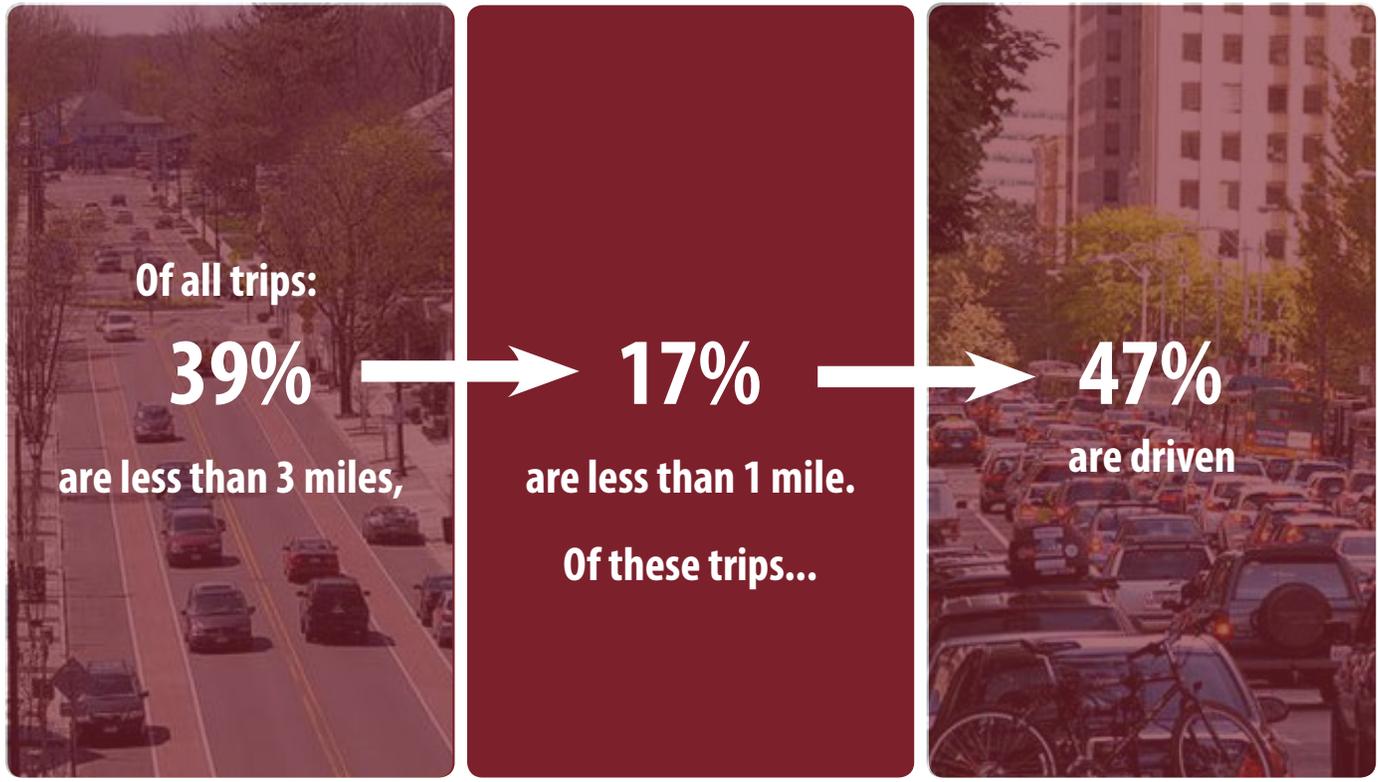
The recommendations in this chapter include improved accommodations for pedestrians and bicycles moving along and across Highway 16. A regional system of greenways includes a multi-use path along Highway 16 that connects to the Carolina Thread Trail. An improved pedestrian environment and higher development intensities also supports the extension of transit service to the corridor in the future.

Improving the configuration of Highway 16 to support non-motorized transportation has the simultaneous effect of improving the development environment along Highway 16 by increasing visibility, encouraging more foot-traffic, providing a more attractive retail corridor, and creating a more livable environment for housing. Truly complete streets also include integrated stormwater management solutions that enhance water quality and prevent flooding.

Complete Streets are for cars too. Highway 16 is major vehicular artery for the community and will continue to be so in the future. New growth and development will undoubtedly put more cars on the road, but strategies such as driveway consolidation, frontage roads, roundabouts, roadway transitions, and better signaling would improve the flow of traffic on Highway 16 and make it a more efficient and pleasant driving experience.

Supporting multiple modes of transportation along Highway 16 will enable a more balanced transportation network that moves people more efficiently. It will also move Waxhaw residents, in another sense, to be more active, healthy and engaged in their community.

## WHY COMPLETE STREETS?





**47%**  
of older Americans say it is **unsafe to cross** a major street near their home

More than 40% of pedestrian deaths occur where no crosswalk was available. These wide fast arterials are built to move cars, rather than people.

No Crosswalk

Lack of complete sidewalks discourages walking and decreases accessibility for those on wheels - elderly, disabled, parents, kids, and others.

Incomplete

No place to sit, no buffer from the street, no safe way to get to the stop.

Uninviting



**54%**  
of older Americans living in inhospitable neighborhoods say they would **walk and bike more often** if the built environment improved

Greenways provide off-street paths for pedestrians and cyclists. They are buffered from the road. They feel safer because they are separated from traffic.

Greenway

Skinny streets slow traffic, quieting neighborhoods, making it safer for children to play in and cross the street, and for cyclists to ride on.

Skinny Street

Cars, bicycles, and pedestrians all share the street space equally. Because everyone pays attention to each other, people go slower and there are fewer accidents.

Shared Street



**56%**  
express **strong support** for adoption of Complete Streets Policies

On-street bicycle facilities separated from vehicle travel lanes, parking lanes, and sidewalks by medians and bollards.

Cycle Track

Paved shoulders increase safety by providing a place for cyclists and pedestrians as well as motorists to pull over if needed.

Wide Shoulder

Bike lanes give a dedicated part of the street to cyclists. With lanes, cyclists are more encouraged to use the road.

Bike Lanes

Incomplete Streets



▲ SEPARATED MULTI-USE PATH - JOHN'S ISLAND, SC



Source: Smart Growth America

▲ SEPARATED CYCLE PATH



▲ SEPARATED MULTI-USE PATH - MEMPHIS, TN

## S-1 Provide a separated bicycle facility on Highway 16

The high speed of vehicular traffic along Highway 16 makes cycling in mixed traffic, or even in striped bike lanes, a significant challenge. At the public kick-off for the Corridor Plan, two of the most popular images in the transportation survey illustrated bicycle facilities that offer separation from vehicular lanes of traffic. Separated bicycle facilities, such as buffered bike lanes, separated cycle tracks, and multi-use paths, provide a transportation option that is safe and comfortable for all types of cyclists, from experienced bicycle commuters to the most timid beginner cyclists.

The inclusion of more accessible bicycle infrastructure has been a recommendation in both the Downtown Vision Plan and the Neighborhoods Plan. The public comments received during the Highway 16 Corridor charrette indicated that the desire for safe bicycle infrastructure extends beyond downtown to the neighborhoods along Highway 16.

As part of the proposed widening along Highway 16, a multi-use path is recommended along the west side of the roadway. The multi-use path should be at least 12 feet wide in order to accommodate mixed pedestrian and bicycle traffic. The path should be separated from the roadway by a planting strip at least 8 feet wide. This is the minimum width necessary to offer comfort and safety for cyclists and pedestrians and to provide an appropriate planting area for street trees.

The construction of an appropriately-scaled multi-use path along Highway 16 would offer more transportation choices and better connectivity from Downtown Waxhaw, to the proposed development nodes at Old Hickory, Cureton, and Byrum Village. The multi-use path would connect to the proposed Carolina Thread Trail extension through the Trailhead Park at Twelve Mile Creek. This would complete a regional bicycle/pedestrian network that allows Waxhaw residents to navigate their community in a way that is not possible with the current configuration of Highway 16. [\$\$\$\$] [C] [6-10]

## S-2 Assign street types to Highway 16 based on identified context zones

The Highway 16 study area is approximately 3.5 miles long, stretching north from Waxhaw Parkway to the Waxhaw Town Limits at Bonds Grove Church Road. Within this 3.5 miles, the Highway 16 corridor passes through a number of different context zones.

Corridor context zones are defined by different roadway characteristics, land uses and development expectations. Along the Highway 16 corridor, five context zones have been established based upon the different street type design recommended for the corridor and the character of fronting development.

Each context zone is supported by primary street type designs identified for use along a particular section of the corridor. The diagrams on the following pages illustrate the specific assignment of following street types within each of the five context zones.

**Rural Transition:** The Rural Transition street type dominates the northern portion of the Highway 16 corridor, as the environment transitions from a more rural character in Union County to the urbanized area of Waxhaw. This street type includes two vehicular travel lanes in each direction divided by a wide planted swale that collects stormwater runoff. Landscaping includes informal plantings and gateway signage that indicates arrival to the Town of Waxhaw. Land uses associated with this street type match the rural condition of the roadway, and include horse farms, large lot single-family homes, and neighborhood entrances. The proposed multi-use path on the west side of the street provides safe and convenient access to pedestrians and bicyclists.

**Boulevard:** The Boulevard street type is the most common street type design recommended along the Highway 16 corridor. The roadway configuration is similar to the existing conditions along Highway 16, but offers better accommodation for pedestrians and cyclists, and includes more formal plantings in the median and planting strips. Buildings are set back from



▲ SEPARATED MULTI-USE PATHS - HILTON HEAD, SC

five: **building a complete street that moves people**

the street and, depending on the proposed development configuration, may provide main access from Highway 16 or an internal street network. In some cases, the backs of buildings, parking lots and utility areas are screened from view by landscape buffers with generous plantings. This arrangement is similar in character to some existing development along Highway 16 from The Shoppes at Howard's Mill to Prescott, but the multi-use path on the west side of the roadway provides enhanced pedestrian and bicycle circulation.

*The Context Zone Diagrams on these pages assign primary street types within the identified context zones. The diagrams also illustrate the location of existing and proposed traffic signals, and opportunities to remove/consolidate driveway cuts onto Highway 16. The street type photographs above each Context Zone Diagram show the typical characteristics of a street type within that context zone.*

*The assignment of street types is based upon the proposed land uses and expectations for development outlined in this Corridor Plan. Areas that are proposed to remain largely rural in character are assigned street types appropriate for rural development. Areas that are expected to receive a greater intensity of development and concentration of pedestrian activity are assigned street types that are more appropriate for these kinds of urban environments.*

*These diagrams, in conjunction with the Street type Sections on the following pages, should be used to guide future improvements of the Highway 16 corridor.*

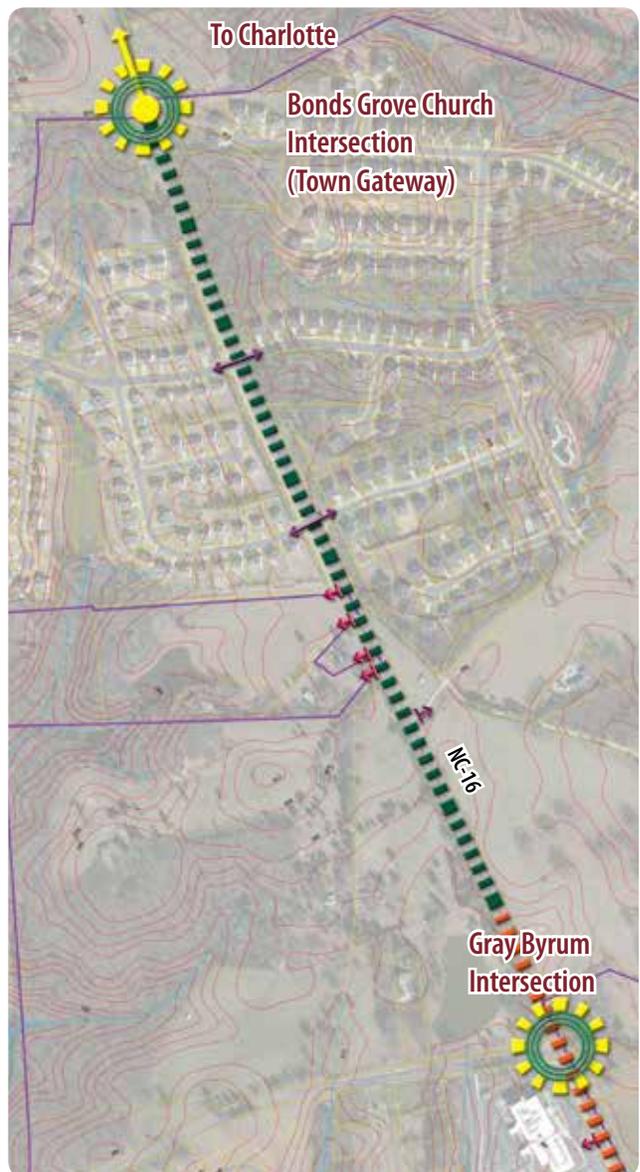
**LEGEND**

-  Major Intersections
-  Neighborhood Entry Roads
-  Existing Driveway Cuts
-  Approved Development Driveway Cuts
-  Removal/Consolidation Opportunities
-  Existing Traffic Signal
-  Proposed Traffic Signal
-  Hwy 16 Street Type - Rural Transition
-  Hwy 16 Street Type - Boulevard
-  Hwy 16 Street Type - Urban Boulevard
-  Hwy 16 Street Type - Commercial Frontage
-  Hwy 16 Street Type - Bridge

\*\*The above legend is the key for the three images at right, showing the context zones for the corridor. The diagrams are shown from north to south- left to right.



 **▲ STREET TYPE - RURAL TRANSITION**



**▲ CONTEXT ZONE 1 - BONDS GROVE CHURCH RD TO GRAY BYRUM RD**



▲ STREET TYPE - URBAN BOULEVARD



▲ STREET TYPE - BOULEVARD



▲ CONTEXT ZONE 2 - GRAY BYRUM RD TO KENSINGTON DR



▲ CONTEXT ZONE 3 - KENSINGTON DR TO PINE OAK RD

five: **building a complete street that moves people**

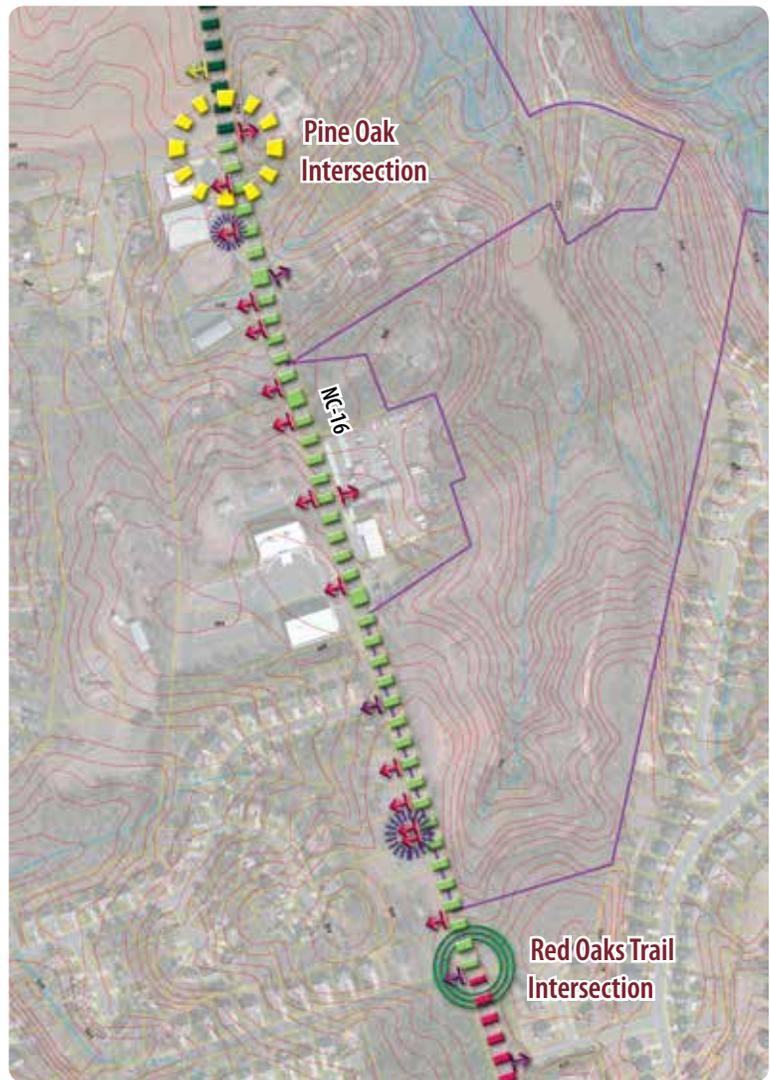
**Urban Boulevard:** The Urban Boulevard street type offers a slight variation of the Boulevard street type by reducing building setbacks and moving development to the back edge of a wide sidewalk. This is appropriate for areas where new development is proposed to activate Highway 16 as a pedestrian-oriented retail environment, such as the proposed town center development at Byrum Village. In the future, as uses along the corridor intensify, it may be appropriate to add on-street parking to support the adjacent retail environment.

**Commercial Frontage:** The Commercial Frontage street type is appropriate for areas expected to develop with the most intense and pedestrian-oriented commercial environments. The design incorporates a frontage road in order to provide convenient access and on-street parking for adjacent businesses. The portion of Highway 16 from Old Hickory Shopping Center to Red Oaks Trail offers an ideal environment for the application of this street type with the frontage road located on the east side of the street. The configuration of existing parking lots in this area provides a frontage road framework. Formalizing the frontage road connection through these parking lots would support the consolidation of driveways onto Highway 16, slow down local traffic associated with adjacent businesses, support a more pedestrian-friendly environment, and make traffic flow safer and more efficient. Access management strategies such as driveway consolidation would help the corridor to function more efficiently. Highway 521 near Ballantyne (see image, opposite) is an example of a typical four-lane boulevard with access management that encourages a free-flow of traffic.

**NCDOT Complete Streets Standards:** Highway 16 is a NCDOT roadway, and it is important to recognize that the design and construction of street improvements must be aligned to NCDOT guidelines. As such, each of the street types proposed for the Highway 16 corridor has been designed in accordance with the Boulevard and Parkway street types identified in the recently adopted NCDOT Complete Streets policy. [1-5] [Code/Policy]



▲ STREET TYPE - BOULEVARD



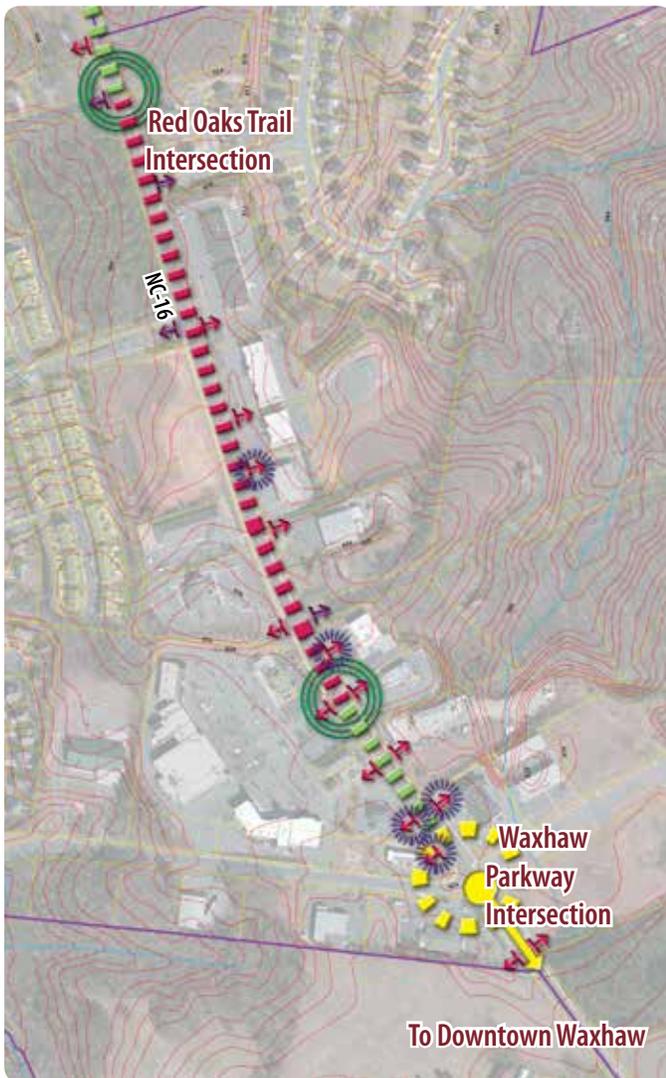
▲ CONTEXT ZONE 4 - PINE OAK TO NEW SIGNAL



▲ STREET TYPE - COMMERCIAL FRONTAGE



▲ HWY 521 NEAR BALLANTYNE



▲ CONTEXT ZONE 5 - NEW SIGNAL TO WAXHAW PKWY



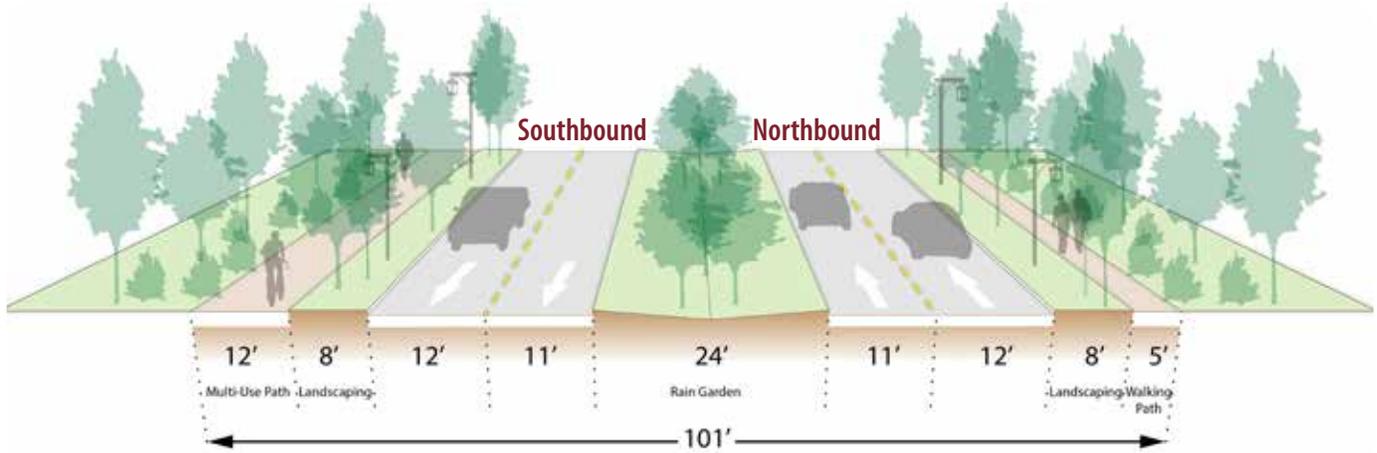
▲ FRONTAGE ROAD

**LEGEND**

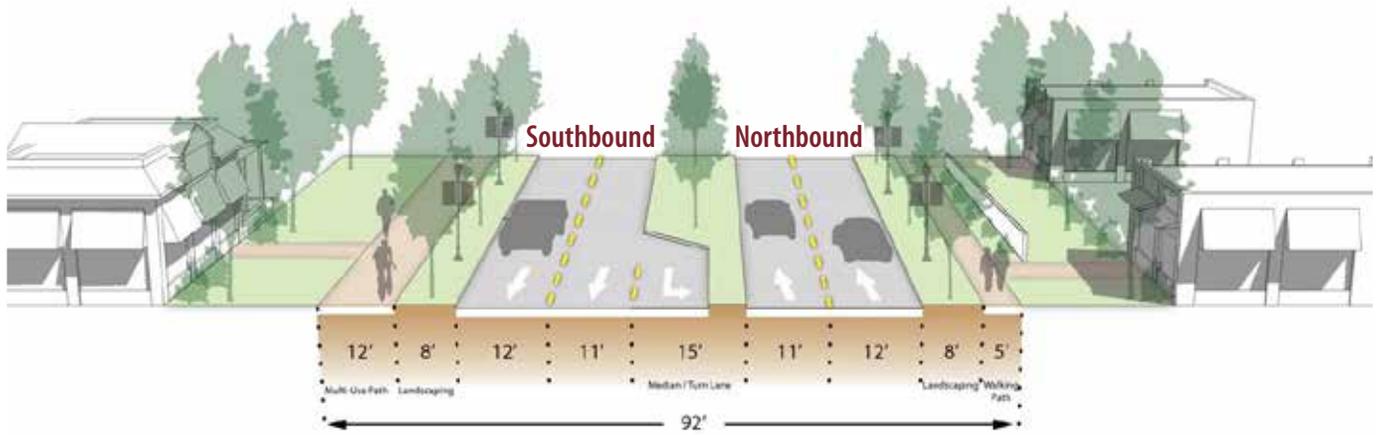
- Major Intersections
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- Hwy 16 Street Type - Urban Boulevard
- Hwy 16 Street Type - Commercial Frontage
- Hwy 16 Street Type - Bridge

\*\*The above legend is the key for the two images at left.

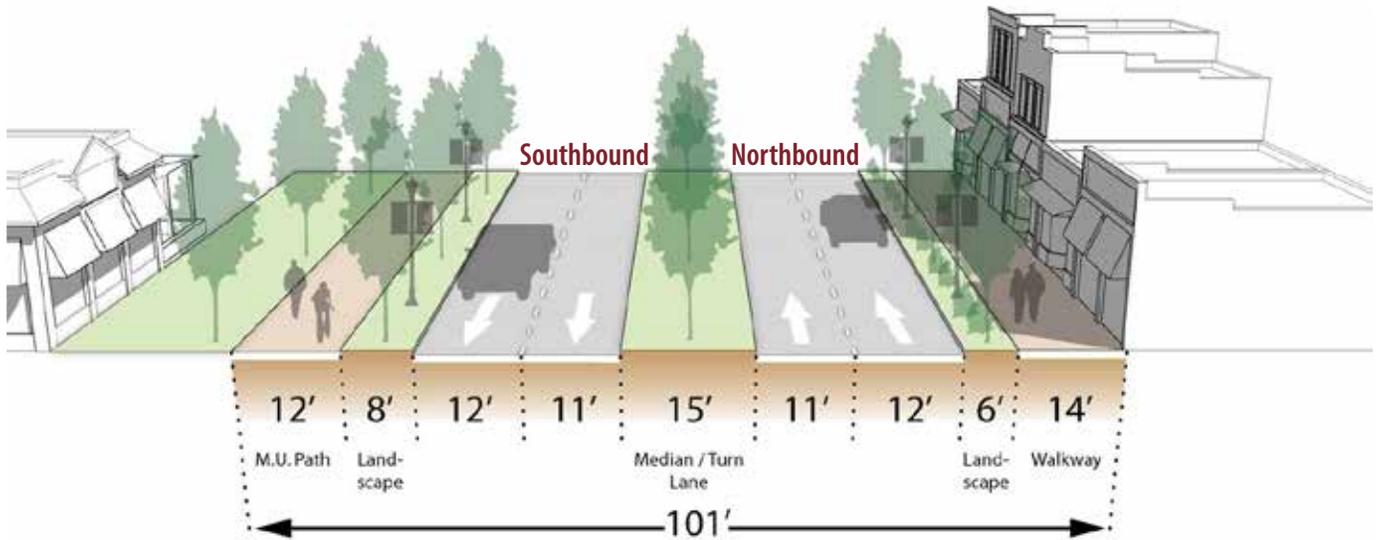
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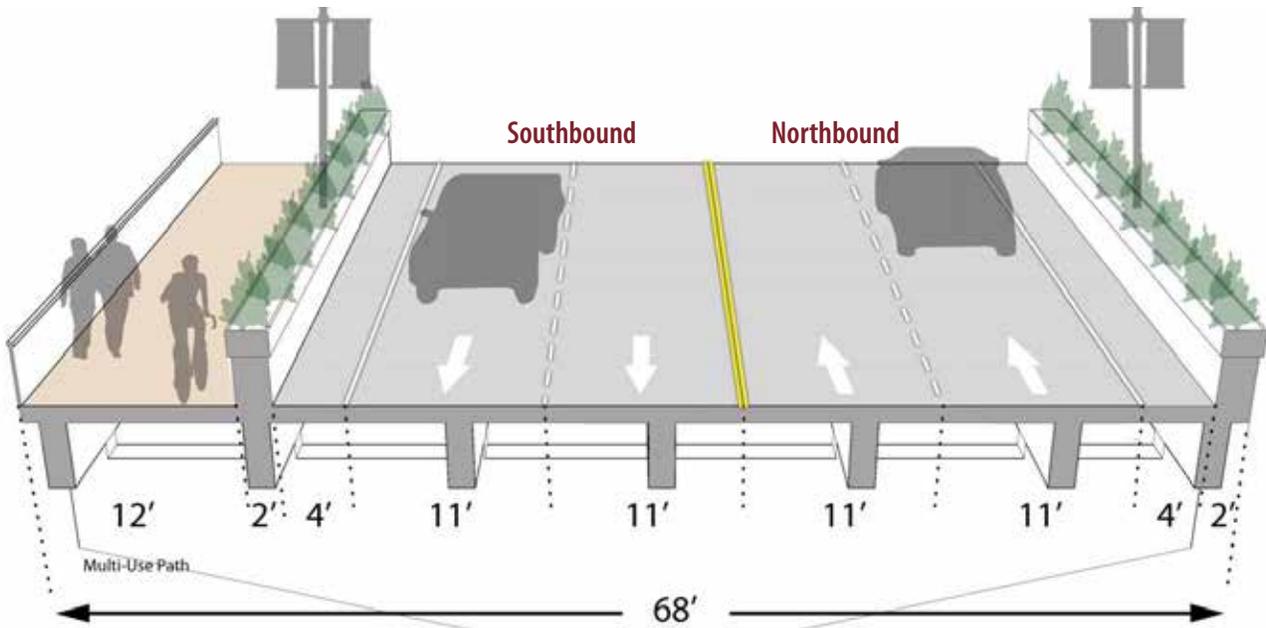
▲ STREET TYPE - RURAL TRANSITION



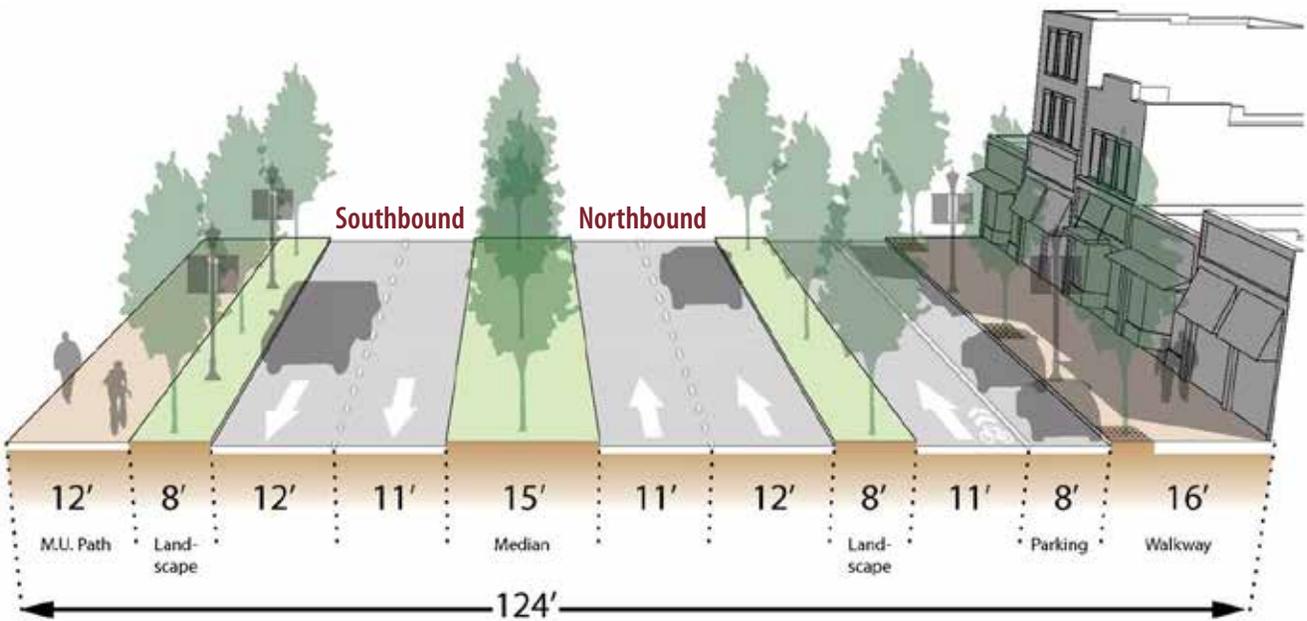
▲ STREET TYPE - BOULEVARD



▲ STREET TYPE - URBAN BOULEVARD



▲ STREET TYPE - BRIDGE WITH MULTI-USE PATH



▲ STREET TYPE - COMMERCIAL FRONTAGE

The Street Type Sections on this page illustrate the preferred street configuration for each street type established in this chapter.

The sections include typical dimensions for travel lanes, medians, planting strips, sidewalks, multi-use paths, and parking lanes, as well as an illustration of the typical fronting development proposed by this plan.

The dashed lines next to each street type label correspond to the Context Zone Diagrams on the preceding pages that assign each street type within the Highway 16 corridor.

These sections, in conjunction with the Context Zone Diagrams on the previous pages, should be used to guide future improvements of the Highway 16 corridor.



Source: maps.google.com

▲ TERRACED LANDSCAPING, CHARLOTTE, NC



▲ FLOWERS IN MEDIAN, COLUMBIA, SC



Source: www.inlandtoday.org



Source: www.gotgreenonline.com

▲ SOUTH BETHANY, DELAWARE

### S-3 Select appropriate landscaping and buffering for each Highway 16 street type

Landscaping and buffering play a key role in corridor design. Streetscape elements such as street trees, median plantings, rain gardens and landscape buffers help to calm traffic, manage stormwater, create a sense of identity, and define different development areas.

The application of landscaping and buffering along a corridor should support the characteristics of the street design and adjacent development. For example, commercial boulevards may include flowering plants and/or specific species of street trees to differentiate them from nearby residential districts.

Along Highway 16, landscaping should be tailored to the different street types established in the previous section. As such, the recommendations for landscaping along the corridor are as follows:

- ▶ **Rural Transition:** Tree plantings and shrubs in the landscape buffer may include rural fencing and/or edible herbs and vegetables. The center median should be utilized as a bioswale to manage stormwater runoff from the roadway.
- ▶ **Boulevard:** Large street trees in the median and planting strips should be used to create a consistently formal environment. Flowers and/or hedges may be included in landscape areas. The backs of buildings, parking lots and utility areas are screened from view by landscape buffers with generous plantings.
- ▶ **Urban Boulevard:** Consistent street tree spacing and formal plantings are appropriate here as well. The incorporation of landscaped terraces may be an ideal way to accommodate grade differences between the roadway and commercial frontage.
- ▶ **Commercial Frontage:** Street trees should be incorporated in tree wells where a wide sidewalk extends from the building frontage to on-street parking areas. Flowering plants may should be located in tree wells or raised planter beds that incorporate pedestrian seating. Formal landscape treatments in the center median also help to distinguish the commercial environment. [6-10] [Code/Policy]

## S-4 Use the center median on Highway 16 to manage stormwater runoff

Truly complete streets include integrated stormwater management and landscaping solutions that enhance water quality and prevent flooding. For nearly all of its length within Waxhaw, Highway 16 is proposed as a 4-lane road with a center median. (See the Street Type Sections on the previous pages.)

In most conventional roadway configurations the center median is leftover space, utilized simply as a traffic management and control device. The center median along Highway 16 should be used to accomplish a more robust set of objectives in accordance with the different street types assigned by this plan. As such, the recommendations for center median design along the corridor are as follows:

- > **Rural Transition:** The median should be constructed as a bioswale to accommodate stormwater runoff from the roadway. The road should be constructed with an inverted

crowns design to direct drainage to the median. Native landscaping will help to filter runoff, and in major storm events overflow drains will accommodate stormwater runoff that is beyond the capacity of the rain gardens.

- > **Boulevard and Urban Boulevard:** The design of the center median should be substantially similar to the Rural Transition street type, but incorporate different species and a greater regularity of plantings to help distinguish different context zones. In these street types the center median should be designed with a slotted curb (as shown in the image, below) to allow stormwater infiltration to rain gardens.
- > **Commercial Frontage:** A rain garden in the center median may be appropriate in certain low-lying areas. In most cases, however, the formality of street trees and other landscape treatments (such as raised medians that provide a more urban character) may preclude the use of rain gardens in the median. [\$\$\$\$] [C] [Partially Non-City (NCDOT)] [6-10] [Code/Policy]



▲ **STORMWATER MANAGEMENT IN ROAD MEDIAN**

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▲ EXISTING WAXHAW PARKWAY INTERSECTION



▲ PROPOSED WAXHAW PARKWAY INTERSECTION

## S-5 Build a roundabout at the intersection of Waxhaw Parkway and Highway 16

The intersection of Highway 16 and Waxhaw Parkway marks a significant transition from the neighborhoods along Highway 16 to the historic character of Downtown Waxhaw. It is a critical intersection in terms of supporting a regional transportation network and creating a development environment south of Waxhaw Parkway that is conducive to the pedestrian-oriented atmosphere of downtown.

A number of intersection improvement alternatives were examined for this location, and the alternative that addresses the issues at this intersection most effectively is the construction of a roundabout.

A roundabout at the intersection of Highway 16 and Waxhaw Parkway would accomplish the following goals:

- > The roundabout would serve as a prominent gateway, marking the entrance to downtown Waxhaw. The center of the roundabout should be landscaped with colorful flowering plants and include Waxhaw signage that announces arrival into downtown.
- > The roundabout facilitates the transition of Highway 16 from four-lanes north of Waxhaw Parkway to two-lanes south of Waxhaw Parkway. The proposed two-lane configuration respects the context and character of downtown, in accordance with the recommendations of the Downtown Waxhaw Vision Plan.
- > The roundabout would support pedestrian safety and accessibility in the area by calming traffic as it enters downtown. Narrower travel lanes on the approach to the roundabout would provide a signal to drivers to slow down. Crosswalks on all four legs of the intersection should be set back from the roundabout with enough distance to provide visibility to drivers exiting the roundabout. A flashing crosswalk sign may be included, as necessary, to further alert drivers to pedestrian crossings.



### ▲ ROUNDABOUT RENDERING

- > Dedicated bicycle infrastructure would separate cyclists from vehicular traffic. The multi-use path on the west side of Highway 16 would transition to a pair of cycle tracks for one-way bicycle traffic from Waxhaw Parkway to the proposed Church Street roundabout, on the east and west sides of the road. The cycle tracks would be elevated to the grade of the sidewalk and distinguished by a different paving treatment. A planted landscape buffer with street trees would separate the cycle tracks and sidewalks from vehicular traffic, offering greater safety and comfort to cyclists and pedestrians.
- > Finally, the roundabout would support greater efficiency and functionality of the regional transportation network by directing trucks around downtown via Waxhaw Parkway. The connection of Waxhaw Parkway to Highway 75 would complete the proposed Highway 16 bypass of downtown and provide an important alternate route for regional traffic. The roundabout at Highway 16 and Waxhaw Parkway would mark the shift of this new truck route and include signage directing truck traffic to the east and west along Waxhaw Parkway. [\$\$\$] [C] [11-15]

## **S-6** Plant street trees on Highway 16 to provide separation and frame the street

Street trees are an often-overlooked feature of successful street and corridor design. The inclusion of appropriately-planted street trees adds social, environmental, aesthetic and economic value to adjacent properties; improves safety for pedestrians; and enhances the performance and life of asphalt and stormwater infrastructure, among many other important benefits. (See 10 Benefits of Street Trees, at right.)

Street trees play a critical role in defining the spatial environment of a street and enhancing its character. Wide planting strips with street trees also enhance pedestrian comfort and safety by providing separation between the road and the sidewalk. The images below illustrate the dramatic positive effect that street trees can have on a

corridor and adjacent neighborhoods. Street trees are also an important part of the character of Waxhaw, particularly in the downtown area. The inclusion of street trees along Highway 16 in Waxhaw would help to distinguish that portion of the corridor from other portions of Highway 16 to the north and other less successful streets throughout Union County and the south Charlotte area.

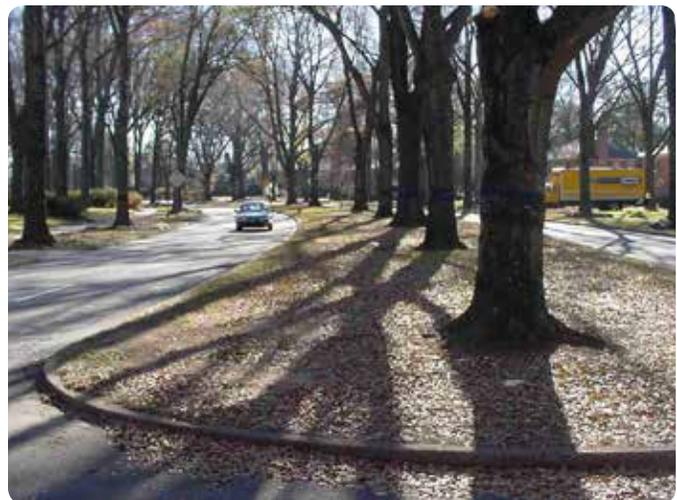
In areas where the Rural Transition street type is recommended, street trees may be planted opportunistically in an informal arrangement. In the areas where other street types are recommended by this plan, street trees should be planted in a regular pattern, 40 feet to 50 feet apart, in order to support the recommended development environment. NCDOT maintains a list of approved street trees.



Buffers on higher speed roads are key to making a safe feeling environment for cyclists and pedestrians.



▲ PROVIDENCE RD, CHARLOTTE - NO STREET TREES



▲ QUEENS RD, CHARLOTTE - GENEROUS STREET TREES

## 10 BENEFITS OF STREET TREES

Street trees offer many economic, safety and aesthetic benefits. For example, “for a planting cost of \$250-\$600 (includes first three years of maintenance) a **single street tree returns over \$90,000 of direct benefits** (not including aesthetic, social and natural benefits) throughout the lifetime of the tree.” (Burden)

In a study conducted by the United States Department of Agriculture, urban street trees in Portland, Oregon were estimated to provide “**benefits of \$45 million annually**, compared to annual maintenance costs of \$4.6 million (of which \$3.3 million is borne by private landowners). Street trees also increase annual property tax revenues for the City of Portland by \$13 million.” (USDA)

The following list includes 10 of the most significant benefits street trees provide:

### 1. **Added value to adjacent homes, business, and tax base:**

“Realtor based estimates of street tree versus non street tree comparable streets relate a \$15-25,000 increase in home or business value.” (Burden)

### 2. **Improved Business:** “Businesses on tree-scaped streets show 20% higher income streams, which is often the essential competitive edge needed for main street store success.” (Burden)

### 3. **Value spreads to neighboring properties:** “A tree with a canopy cover of 312 square feet (the average for the study) adds \$7,593 to the house it fronts. However, it also positively influences the prices of houses within 100 feet. On average, there are 7.6 houses within 100 feet of a street tree. Therefore, a tree with 312 square feet of canopy cover adds, on average, \$9,241 to the value of neighboring houses.” (USDA)

### 4. **Cost savings through reduced drainage infrastructure:**

“Trees absorb the first 30% of most precipitation through their leaf system... Another percentage (up to 30%) of precipitation is absorbed back into the ground and taken in and held onto by the root structure, then absorbed and transpired back into the air. Stormwater runoff and flooding potential to urban properties is therefore reduced.” (Burden)

### 5. **Lower air temperatures:** “Asphalt and concrete streets and parking lots are known to increase urban temperatures 3-7 degrees. A properly shaded neighborhood, mostly from street trees, can reduce energy bills for a household from 15-35%.” (Burden)

### 6. **Emotional and psychological health benefits:**

“People are impacted by ugly or attractive environments where they spend time. Kathlene Wolf, Social Science Ph.D. University of Washington, noted that trees have a calming and healing effect on ADHD adults and teens.” (Burden)

### 7. **Improved Safety:** Studies show that motorists slow down in environments with street trees. “Speed differentials of 3-15 mph” versus streets without street trees are typical. Street trees also create a more attractive environment which encourages more surveillance and security (i.e., eyes on the street) from increased pedestrian activity. (Burden)

### 8. **Perception of travel time and willingness to walk:** “A tree-less environment trip is perceived to be longer than one that is treed.” (Burden)

### 9. **Reduced road rage:** “There is strong, compelling research that motorist road rage is less in green urban versus stark suburban areas. Trees and aesthetics, which are known to reduce blood pressure, may handle some of this calming effects.” (Burden)

### 10. **Longer pavement life -** “Studies conducted in a variety of California environments show that the shade of urban street trees can add from 40-60% more life to costly asphalt. This factor is based on reduced daily heating and cooling (expansion/contraction) of asphalt. As peak oil pricing increases roadway overlays, this will become a significant cost reduction to maintain a more affordable roadway system.” (Burden)

#### **Sources:**

*Burden, D. (May 2006) “22 Benefits of Urban Street Trees.”*

*USDA Forest Service PNW Research Station. (March 2008) “The Value of Street Trees in Portland, Oregon.”*

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Source: [www.lagermannursery.com](http://www.lagermannursery.com)

▲ **THORNLESS HONEYLOCUST**

The images on this page illustrate a sample of the trees approved for use on NCDOT roads. The choice among different species should be guided by soil type, expected time of growth to maturity, resilience to pests and disease, ease of maintenance, and desired canopy spread, height, density and color.

Each of these elements, among other factors, will influence the quality of the driving experience, the safety and attractiveness of the pedestrian environment, the identity of the corridor (or district), the sense of enclosure created by the tree canopy and the success of the development environment along the corridor. [\$\$\$] [C] [Partially Non-City (NCDOT)] [6-10] [Code/Policy]



Source: [www.goingtothedetails.com](http://www.goingtothedetails.com)

▲ **EASTERN REDBUD**



Source: [www.forestryimages.org](http://www.forestryimages.org)

▲ **LACEBARK ELM**



Source: [www.northeastarboretum.org](http://www.northeastarboretum.org)

▲ **SUNSET MAPLE**



Source: [www.urbanforestry.com](http://www.urbanforestry.com)

▲ **JAPANESE ZELKOVA**



Source: [www.plants.usda.gov](http://www.plants.usda.gov)

▲ **PIN OAK**

## S-7 Improve intersections to improve safety for drivers, cyclists and pedestrians

Although Highway 16 functions well as a regional automobile thoroughfare, it also creates a barrier to pedestrians. Among the most frequent critiques that Waxhaw residents have of Highway 16 is the difficulty to cross it as a pedestrian. Waxhaw residents also noted that several intersections present dangerous turning situations for automobile traffic. In order to improve safety and circulation for all modes of travel, this plan offers recommendations for intersection improvements that should be implemented as part of the proposed NCDOT Highway 16 widening project.

A more regular spacing of traffic signals should be implemented along the Highway 16 corridor to improve the consistency of traffic flow along Highway 16 and the accessibility to Highway 16 from the adjoining street network. Traffic signals should be added along Highway 16 as needed and approved by NCDOT at the following intersections:

- > Bonds Grove Church Road,
- > Gray Byrum Road,
- > the proposed entrance to the Prescott development,
- > Red Oaks Trail, and
- > Old Hickory Shopping Center.

These new traffic signals will provide signalized intersection spacing along Highway 16 at approximately ½- to ¾- mile intervals, and will facilitate safer pedestrian crossings and vehicular turning. (See the proposed traffic signals in the Context Zone Diagrams shown in the previous pages as part of Action Item S-2.)

The images at right illustrate intersection features that will help to enhance pedestrian safety at these intersections, including pedestrian refuge islands, alternative paving/painting of pedestrian crosswalks, highly-visible signage for motorists, and clear signals for crossing pedestrians.

Specific recommendations for intersection improvements are discussed on the following pages:



▲ EXAMPLES OF INTERSECTION IMPROVEMENTS FOR PEDESTRIAN SAFETY



▲ EXISTING BONDS GROVE CHURCH RD INTERSECTION



▲ PROPOSED BONDS GROVE CHURCH RD INTERSECTION

**Bonds Grove Church Road:** The addition of a traffic signal, crosswalks, and a new visitor's center and country store (See Action Item D-1) would transform this intersection into a recognizable gateway into the Town of Waxhaw.



▲ **EXISTING GRAY BYRUM RD INTERSECTION**



▲ **PROPOSED GRAY BYRUM RD INTERSECTION**

**Gray Byrum Road:** The plan proposes development at all four corners of Gray Byrum, with buildings built up to the street, as part of the development proposal for Byrum Village. Prominent crosswalks would improve pedestrian safety, and the addition of dedicated left turn lanes would offer safer turning movements and space for more vehicle stacking.



▲ EXISTING KENSINGTON/CUTHBERTSON RD INTERSECTION

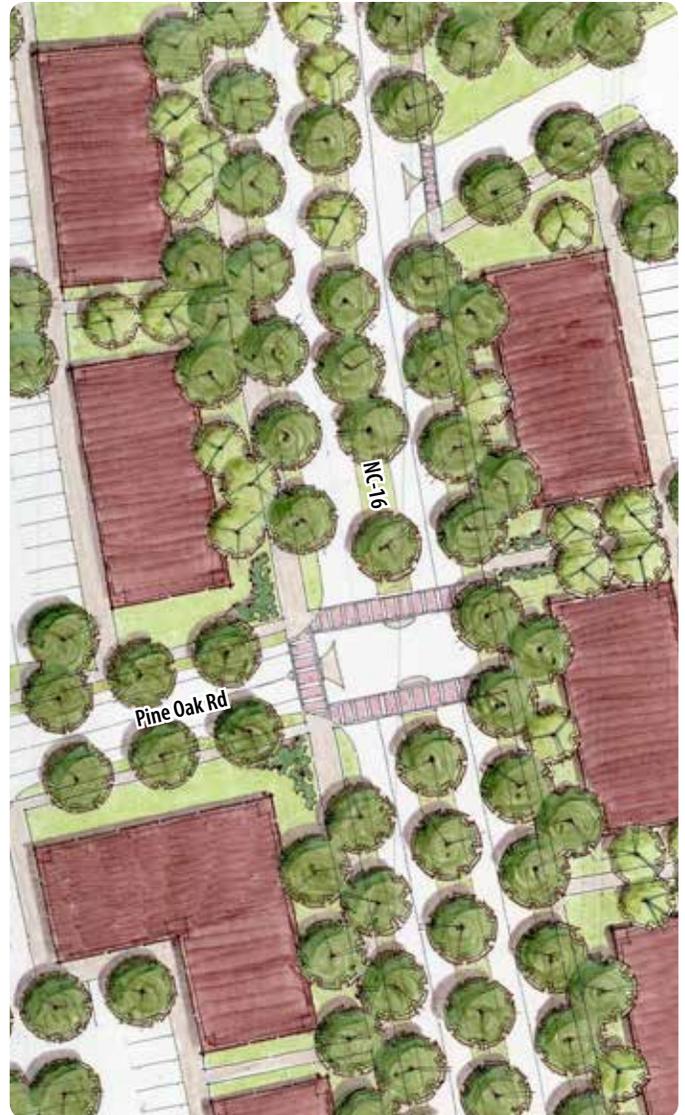


▲ PROPOSED KENSINGTON/CUTHBERTSON RD INTERSECTION

**Kensington / Cuthbertson Road:** Planted medians should be introduced at this intersection to create pedestrian refuge islands and divide the crossing distance of the roadways. Two medians should be installed on the Cuthbertson Road leg, as illustrated in the above plan, to split a dedicated turn lane from the westbound traffic pattern and create a second pedestrian refuge island. Crosswalks should be marked with an alternative paving treatment for greater visibility, and generous plantings should be used to beautify the intersection and encourage greater pedestrian use.



▲ **EXISTING PINE OAK RD INTERSECTION**



▲ **PROPOSED PINE OAK RD INTERSECTION**

**Pine Oak Road:** The intersection at Pine Oak Road was identified by Waxhaw residents as the most dangerous intersection in the study area. Left turn movements to and from Highway 16 to Pine Oak Road have caused several severe accidents in the recent past because of limited sight distance at this location. The plan above illustrates the proposed configuration of the Pine Oak Road intersection. There is no traffic signal proposed at the intersection, but turn movements are limited to right-in, right-out only. The proposed traffic signal at the Prescot development entrance to the north would accommodate safer left turn

movements at that intersection. Prominent crosswalks at the intersection would improve pedestrian safety. If necessary, an on-demand pedestrian-activated crossing signal (e.g., a HAWK signal) could be added to eliminate potential conflicts.

**Waxhaw Parkway:** See Action Item S-5 on the previous pages for information about the proposed roundabout at Highway 16 and Waxhaw Parkway. [\$\$\$\$] [C] [Partially Non-City (NCDOT)] [6-10] [Code/Policy]



▲ **FRONTAGE ROAD - SMYRNA, GEORGIA**



▲ **FRONTAGE ROAD OPPORTUNITIES - HIGHWAY 16**

### **S-8 Consolidate driveways on Highway 16 in conjunction with development**

Driveways for commercial areas offer greater accessibility to individual properties, but they also introduce more turning movements and potential conflicts along the Highway 16 corridor and, if spaced too closely, slow the flow of traffic. Driveway consolidation is a strategy that attempts to limit the number of driveways onto the primary roadway, while providing shared drives that offer easy access to adjacent businesses and homes.

The Context Zone Diagrams associated with Action Item M-2 identify opportunities to remove/consolidate driveway cuts on Highway 16. In many cases, driveways can be consolidated by simply creating better connections between parking lots in development adjacent to Highway 16. [Ongoing] [Code/Policy]

### **S-9 Construct a frontage road between Red Oaks Trail and Old Hickory Shopping Center**

The portion of Highway 16 from Old Hickory Shopping Center to Red Oaks Trail offers an opportunity to construct a frontage road along the east side of the street. The configuration of existing parking lots in this area provides a frontage road framework. Formalizing the frontage road connection through these parking lots would support the consolidation of driveways onto Highway 16, slow down local traffic associated with adjacent businesses, support a more pedestrian-friendly environment and make traffic flow safer and more efficient.

The Commercial Frontage street type illustrated in Action Item M-2 shows how a frontage road could be constructed along Highway 16 to support a more pedestrian-oriented sidewalk environment and greater accessibility to adjacent businesses. [\$\$\$\$] [O] [Ongoing] [Code/Policy]

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# MAKING KEY CONNECTIONS



**Town-wide mobility** is supported by increased transportation choices, in terms of mode of travel and alternative travel routes. As such, mobility in Waxhaw will depend on improvements to both Highway 16 and the surrounding transportation network.

Increasing travel demand on Highway 16 has led to an NCDOT plan to widen the roadway from two to four lanes between Downtown Waxhaw and Rea Road. The previous chapter presents recommendations for utilizing the NCDOT widening project to transform Highway 16 into a Complete Street. It describes a vision for improvements to Highway 16 that will support greater access and mobility for all users—whether travelling by car, bicycle, foot or bus.

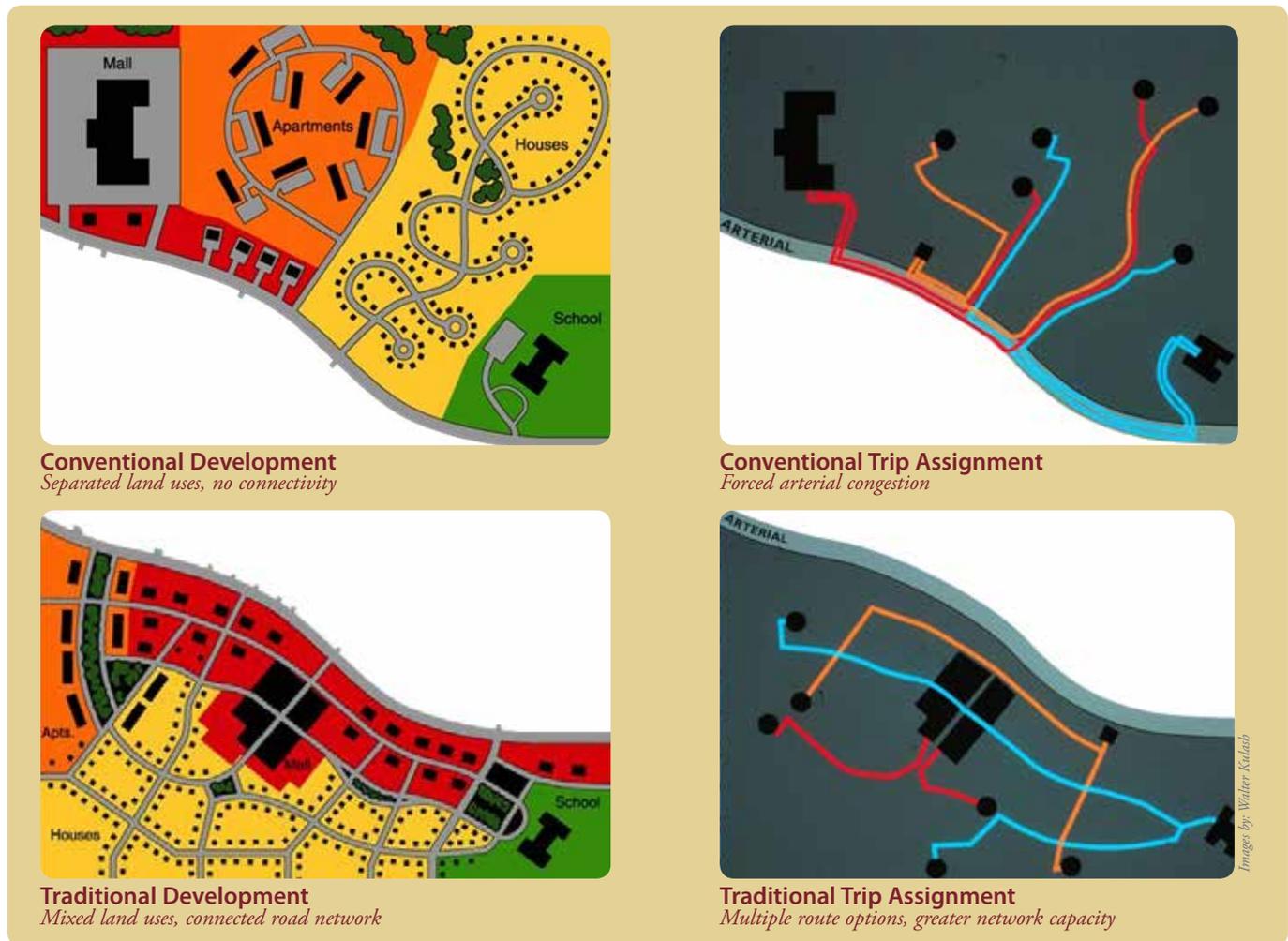
Such improvements within the Highway 16 corridor are critical to the future of Waxhaw, but they comprise just one necessary element in a comprehensive transportation strategy to improve regional mobility. Improvements to the Highway 16 corridor alone will not solve the congestion issues.

Waxhaw’s transportation network is limited in its capacity because Highway 16 is the only viable route for most trips made in town. The lack of route options forces traffic onto Highway 16, clogging the corridor during peak travel hours. In order to alleviate congestion and support the function of Highway 16, improvements to the surrounding transportation network will be critical.

As such, this chapter identifies specific locations where additional network connectivity should be established. Greater connectivity will permit more travel route alternatives that increase the overall network capacity. Improvements such as connections across adjacent parcels, shared access points, side street access, and rear alleys will improve the transportation network so that Highway 16 isn’t the only travel route option.

This will redistribute traffic volume through a larger network and allow people to travel between different destinations without adding more traffic to Highway 16. Enhanced network connectivity will also reduce the severity of conflict points along Highway 16 and improve safety.

All infrastructure systems are more robust and resilient when they are supported by multiple independent elements that combine to achieve a common purpose. Waxhaw’s transportation infrastructure is not a resilient system because it is overly reliant on a single element to support the entire function and capacity of the system: Highway 16. The key connections recommended in this chapter establish a more resilient system by supporting mobility beyond the Highway 16 corridor.



### ▲ TRADITIONAL VS. CONVENTIONAL DEVELOPMENT - CONNECTIVITY DIAGRAM

As growth pressure leads to new development and redevelopment along the Highway 16 corridor, opportunities will arise to provide new network connections and create alternate route options. The Connectivity Diagrams above illustrate the benefits of a connected network of streets.

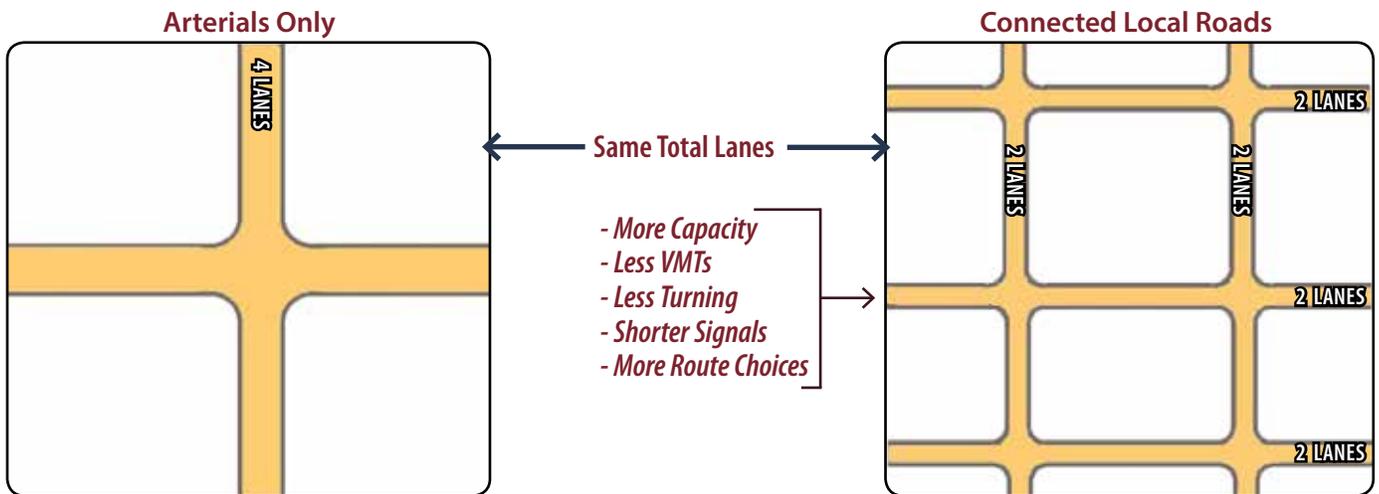
Until the past 60 years or so, development in the United States included a connected network of streets supporting a mix of land uses within a convenient walkable proximity. Downtown Waxhaw and its nearby neighborhoods were originally developed using this traditional model.

Trip assignment within a traditional development model occurs along multiple route options that offer ways to move between residences, schools, shopping and work. More recent development

conventions, including much of the development along Highway 16, forces arterial congestion by offering only one route option.

The advantages of a connected street network extend to pedestrians and cyclists as well, as more neighborhood streets offer enhanced connectivity options in an environment that is much more conducive to walking and bicycling. (See Block Structure Comparisons, opposite.)

Finally, traditional development patterns offer a more efficient provision of municipal and emergency services. Greater connectivity allows for minimal response times and alternate routes in the case of an incident that creates congestion or closure of a main arterial.



▲ **LANE CAPACITY COMPARISON**

	Traditional	Interior	Perimeter	Single Entry
Connected Street Spacing	400'-600'	1000'	1000'-2000'	None
Ped / Bike Spacing	400'-600'	400'-600'	400'-600'	None
Connected Road Character	All Streets Fronted	Connectors Fronted	Connectors Walled	(No Connections)

▲ **BLOCK STRUCTURE COMPARISON**

While NCDOT’s planned widening of Highway 16 will address some of the expected capacity issues along the corridor, road widening projects have their limitations. Doubling the number of lanes on a roadway does not equate to a doubling of traffic capacity. (See Lane Capacity Comparison, above.) Side friction, turning movements and lane utilization issues contribute to a phenomenon of diminishing returns when it comes to road widening strategies. Hence, a pair of two-lane roads has the ability to carry more cars than a single four-lane road; three two-lane roads carry more than a single six-lane road; and so on.

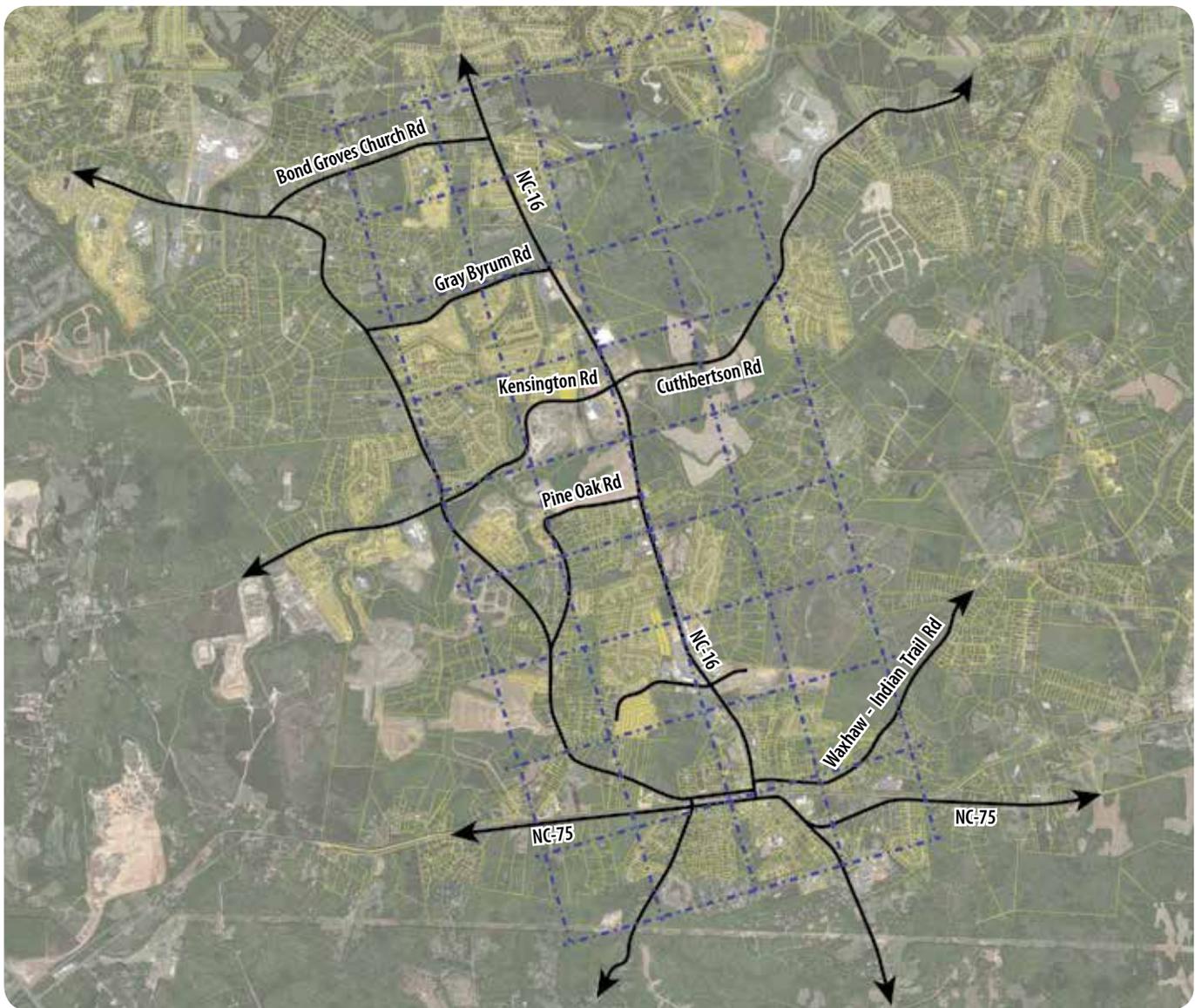
New connections should be designed in the context of the development or redevelopment, as identified in the following pages, to support the lane capacity of Highway 16. These new connections should serve multiple modes of transportation, balancing the needs of both motorized and non-motorized traffic. Since they are typically two-lane roadways, new connections can be easily integrated into the built and natural contexts. In this way, an interconnected mobility system can be provided that reduces reliance on Highway 16, while providing real mode and route choices for residents and visitors in Waxhaw.

## C-1 Adopt a thoroughfare plan to promote future connectivity

The Western Union County Local Area Regional Transportation Plan (LARTP) includes an analysis of the transportation needs for the towns of Marvin, Weddington, Wesley Chapel and Waxhaw. The plan includes a prioritization of recommended improvements and traffic counts for key intersections. Among the high-priority recommendations in the LARTP is the widening of Highway 16 and the completion of both legs of Waxhaw Parkway to NC-75.

Using the recommendations of the LARTP as a foundation, the Town of Waxhaw should develop and adopt a thoroughfare plan to guide future transportation projects and promote better connectivity. In addition to the major arterials discussed in the LARTP, the thoroughfare plan should include neighborhood collector and local streets that will provide key connections and increase the transportation network capacity.

The purpose of a town thoroughfare plan is to provide a framework for transportation investments and set expectations for the



▲ HALF-MILE GRID NETWORK: GOAL FOR STREET NETWORK DISTANCING

construction of important streets and connections by private developers.

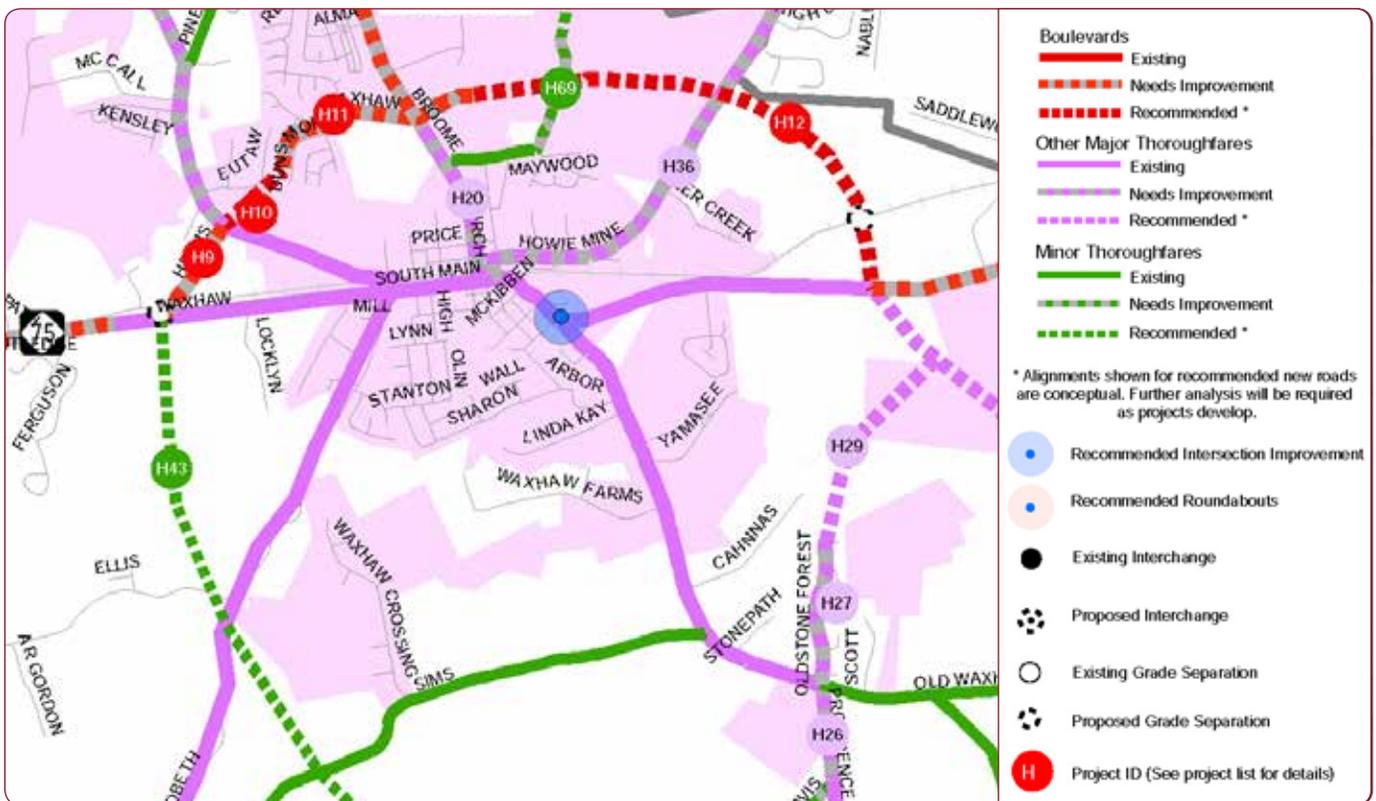
Local thoroughfare plans are implemented through local zoning and/or subdivision ordinances by requiring developers to align their subdivision and/or site plans in accordance with the designated thoroughfares. The resulting street network is developed incrementally, by successive developments, over time. Eventually, an effective local thoroughfare plan results in a coherent street network that can prevent millions of dollars in road widening and congestion mitigation projects on major arterials. Adopting such a thoroughfare plan will help the Town of Waxhaw and state agencies to prevent unnecessary transportation spending before it occurs.

A local thoroughfare plan in Waxhaw should be based on a goal of achieving an average spacing of a ½-mile between streets in a connected network and establishing multiple connections across large development parcels. [Ongoing] [Code/Policy]

### THE BENEFITS OF CONNECTED STREETS

- > Fine-grained street networks connect multiple places and people via multiple modes of travel, ultimately allowing places to become successful centers of economic development.
- > Networks comprised of frequent narrow streets, as opposed to a few large streets, move cars more efficiently, create a better environment for pedestrians, improve safety and support better public health.
- > Less traffic concentration leads to narrower streets which slows traffic, permits shorter pedestrian crossing distances at intersections, and reduces accidents.
- > Connected streets improve emergency response times by providing multiple direct routes.
- > Encouraging biking and walking improves public health and reduces the risk of many health issues.
- > The character and appearance of well-connected, walkable streets, increases the desirability and value of adjacent properties.

*Adapted from Congress for the New Urbanism, "Sustainable Street Network Principles" and "Benefits of Connected Streets" 2012.*



WESTERN UNION COUNTY LOCAL AREA REGIONAL TRANSPORTATION PLAN (2009)

## C-2 Connect the regional Carolina Thread Trail network to Highway 16 neighborhoods

The proposed Carolina Thread Trail extension in Union County crosses Highway 16 in two locations: at Twelve Mile Creek near Cureton Town Center and in Downtown Waxhaw. (See Proposed Carolina Thread Trail map, opposite.)

The Carolina Thread Trail expansion would link neighborhoods to the east and west of Highway 16, while the multi-use path along Highway 16 would offer a safe and convenient connection between Downtown Waxhaw and the commercial centers along the corridor. When complete, the trail network would create a regional bicycle/pedestrian network that supports greater mobility and transportation choice within Waxhaw, and establishes valuable connections to regional destinations beyond Waxhaw, such as Mineral Springs and the Catawba River.

In order for the Carolina Thread Trail expansion to fully realize its potential as a recreational amenity and alternative transportation route, frequent connections from adjacent development must be established. As the trail is built, the town should work with the Carolina Thread Trail organization and Union County to build connections to existing neighborhoods, schools, commercial centers, parks and other destinations that will support convenient access and encourage greater use. The town should also ensure that its ordinances support the proposed trail extension by requiring new development along the proposed trail to dedicate land to accommodate the designated trail route and establish connections from new neighborhoods. Such connections from new and existing development are necessary for the trail to serve its intended purpose as a viable transportation alternative and reduce the necessity of car trips within Waxhaw.

The trail also provides a unique opportunity for new trail-oriented businesses supported by trail users and nearby residents to fill a gap in neighborhood commercial services. Small restaurants, coffee shops, bicycle stores, gyms and other similar commercial uses are ideal partners to the development of an off-street

bicycle/pedestrian network, and can easily be integrated within the context of new and existing neighborhoods. (See Trail-Oriented Retail illustration, below, from the Swamp Rabbit Trail in Greenville, SC.)

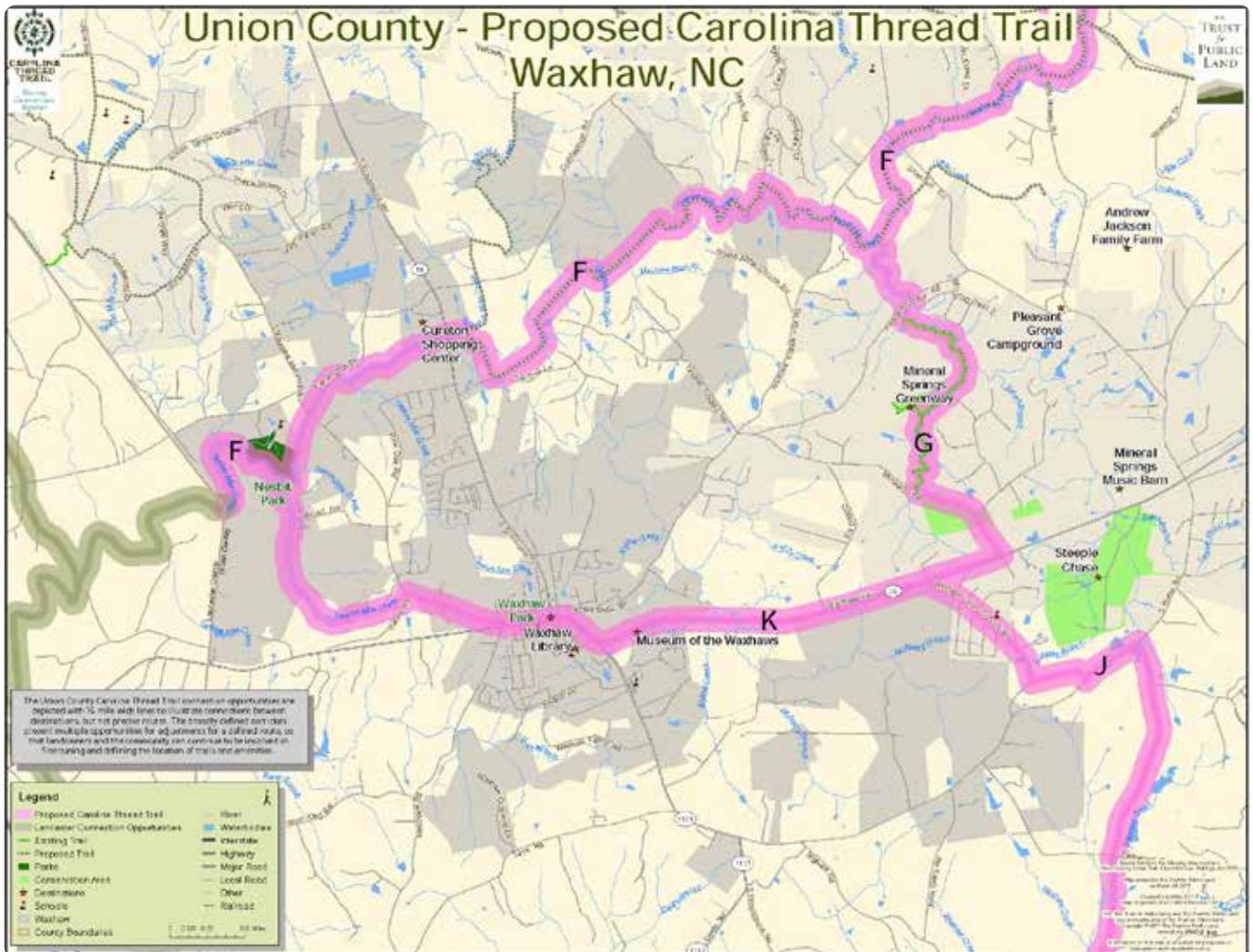
Finally, the trail crossing is an important regional connection and amenity along the Highway 16 corridor that should be recognized and celebrated. Action Item D-6 in Chapter 7 provides more information on a recommended Trailhead Park at the Highway 16 crossing of Twelve Mile Creek. [\$\$\$] [O] [Ongoing] [Code/Policy]



▲ TRAILHEAD PARK - CHARLOTTE, NC



▲ TRAIL-ORIENTED RETAIL - GREENVILLE, SC



▲ PROPOSED CAROLINA THREAD TRAIL



▲ HIGHWAY 16 & CAROLINA THREAD TRAIL UNDERPASS RENDERING

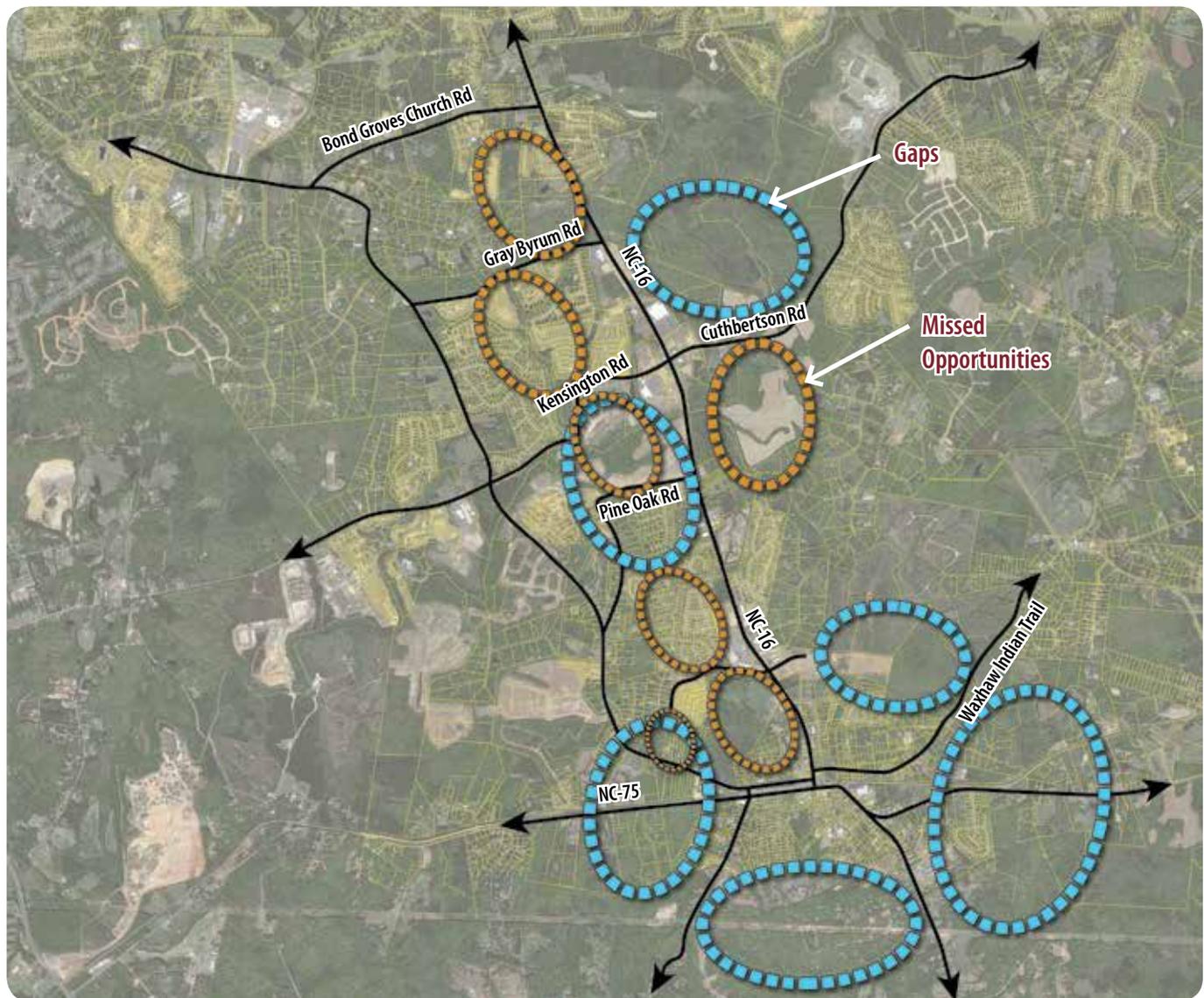
### C-3 Require a connectivity index goal for new subdivisions

According to Reid Ewing, a connectivity index indicates the density of a street network, and is typically calculated as the number of roadway links divided by the number of roadway nodes. Links are the segments between intersections and nodes are the intersections themselves and the ends of cul-de-sacs or dead end streets. A higher index means that travelers have increased route choice, allowing more direct connections for access between any two locations.<sup>1</sup>

<sup>1</sup> Ewing, Reid. 1996. Best Development Practices; Doing the Right Thing and Making Money at the Same Time. American Planning Association. Chicago, IL.

Generally speaking, more four-way intersections means a higher degree of connectivity. The frequency of intersections directly relates to block size for a given development pattern: small blocks mean a tighter street network and have greater connectivity than development patterns characterized by superblocks. Dead-end and cul-de-sac streets reduce the connectivity index value, although indices can be measured separately for non-motorized travel to account for off-street, connections (such as greenways and paths between cul-de-sacs).

According to the typical method for calculating connectivity indices, a four-square grid scores



▲ NETWORK GAPS AND MISSED CONNECTION OPPORTUNITIES

a 1.33, while a nine-square grid scores a 1.5. The Mecklenburg County: **Quality of Life Dashboard** suggests that a score of 1.4 is the minimum needed to support a walkable community.<sup>2</sup> Most of Waxhaw’s newer subdivisions along Highway 16 fall short of this goal. The Lawson neighborhood, for example, currently has a connectivity index of 1.03.

This connectivity index calculation provides a useful regulatory mechanism to require an appropriate degree of connectivity in new development and redevelopment. The Virginia Department of Transportation (VDOT), for example, requires a connectivity index of 1.4 in their **Secondary Street Acceptance Requirements**.<sup>3</sup>

As described earlier in this chapter, the benefits of a well-connected network of streets are numerous. Enhanced connectivity is particularly important for non-motorized accessibility as it encourages more walking and biking trips within a given neighborhood. Creating new connections and enhancing the street network also improves emergency response and safety.

Specific requirements for connectivity in Waxhaw should include one or more of the following:

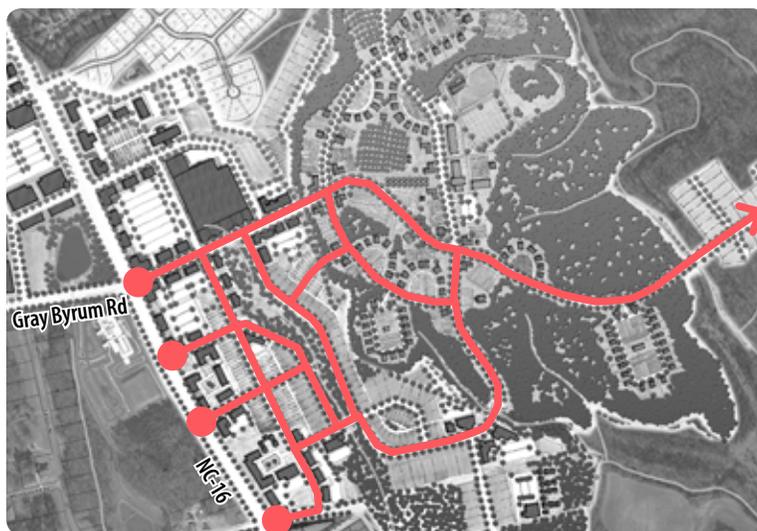
- > Minimum connectivity index of 1.4 or greater;
- > Maximum block size requirements and/or minimum intersection spacing requirements of 500 feet;
- > External street connections a minimum of every 800 feet;
- > Street stubs to adjacent undeveloped properties of 20 acres or more; and/or
- > Minimum intersection density of 1 intersection for every 4 acres (or 160 intersections per square mile).

By providing an interconnected system of Complete Streets, residents and visitors will have multiple options for travel routes and mode choice. [Private] [Ongoing] [Code/Policy]

2 (Mecklenburg County and University of North Carolina at Charlotte. 2013. <http://maps.co.mecklenburg.nc.us/goldashboard/>)  
 3 (Virginia Dept. of Transportation. 2009. [http://www.virginiadot.org/info/secondary\\_street\\_acceptance\\_requirements.asp](http://www.virginiadot.org/info/secondary_street_acceptance_requirements.asp))



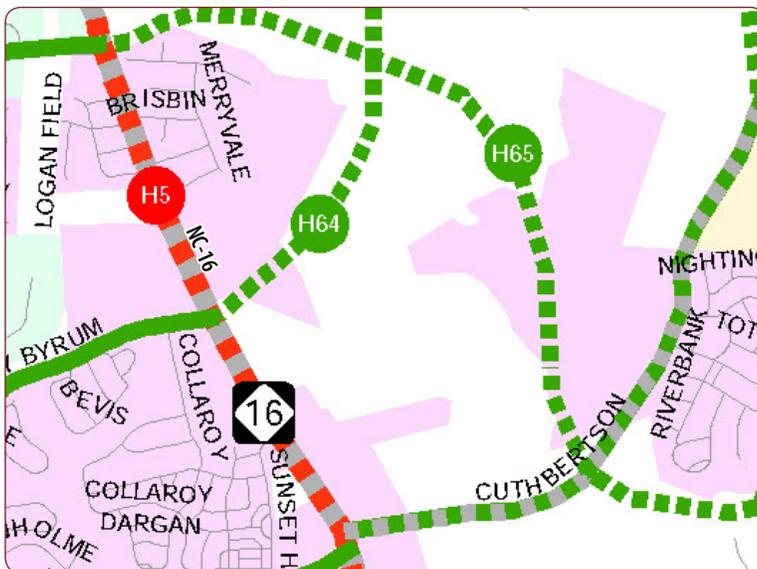
▲ LAWSON CONNECTIVITY INDEX



▲ PROPOSED BYRUM VILLAGE NETWORK OPTIONS



▲ EXISTING NETWORK



▲ PROPOSED CONNECTION FROM LARTP (2009)



▲ PROPOSED NETWORK WITH LAWSON CONNECTION

## C-4 Build a road connection through Lawson Phase 2 and 3 to connect to Highway 16

The Western Union County Local Area Regional Transportation Plan (LARTP) identifies the need for a new connection from Cuthbertson Road to Highway 16 to improve east-west connectivity. This connection should occur in conjunction with the development of the next phases of the Lawson subdivision. The completed portion of the Lawson neighborhood is located on the east side of Cuthbertson Road, about one mile away from Highway 16. Lawson Phases 2 and 3 are proposed on the large undeveloped parcels to the west of Cuthbertson Road, just south of Cuthbertson Middle and High Schools. This area is bounded to the north and west by Twelve Mile Creek and its associated floodplain.

The bottom image on the left illustrates how this connection could be made through subsequent phases of the Lawson development by crossing the Twelve Mile Creek floodplain at its narrowest point (approximately 75 feet) to save costs. The bridge over the floodplain could be funded through a variety of sources, including contributions from the Lawson development, future development exactions from the parcels to the west, and public funding sources. The connection could be established as a direct route, or through a more indirect connection, as illustrated below. In either case, the connection should match the Neighborhood Connector street section shown on the following pages, and it should be fronted by residential development. [Private] [1-5]



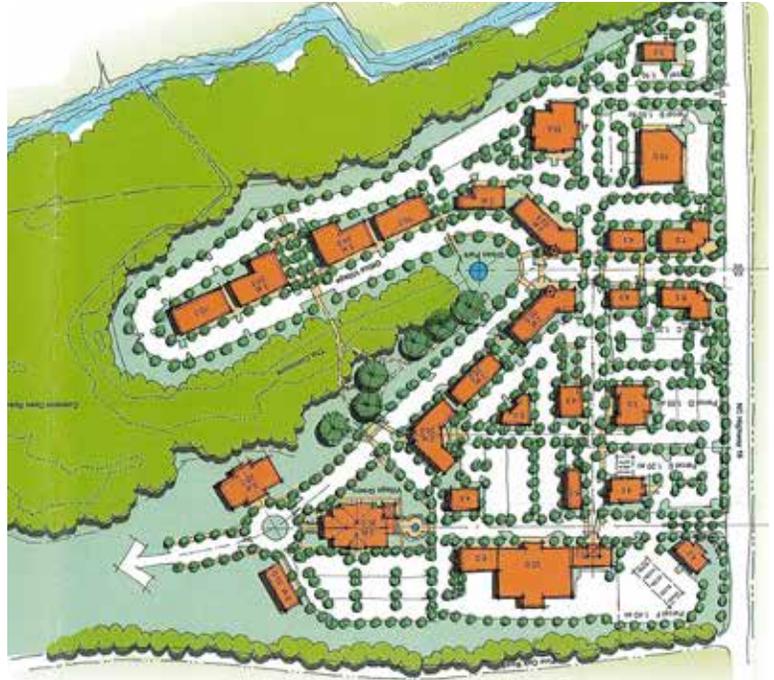
▲ ST. IVES AT LAWSON

## C-5 Build a road connection through the Prescott development

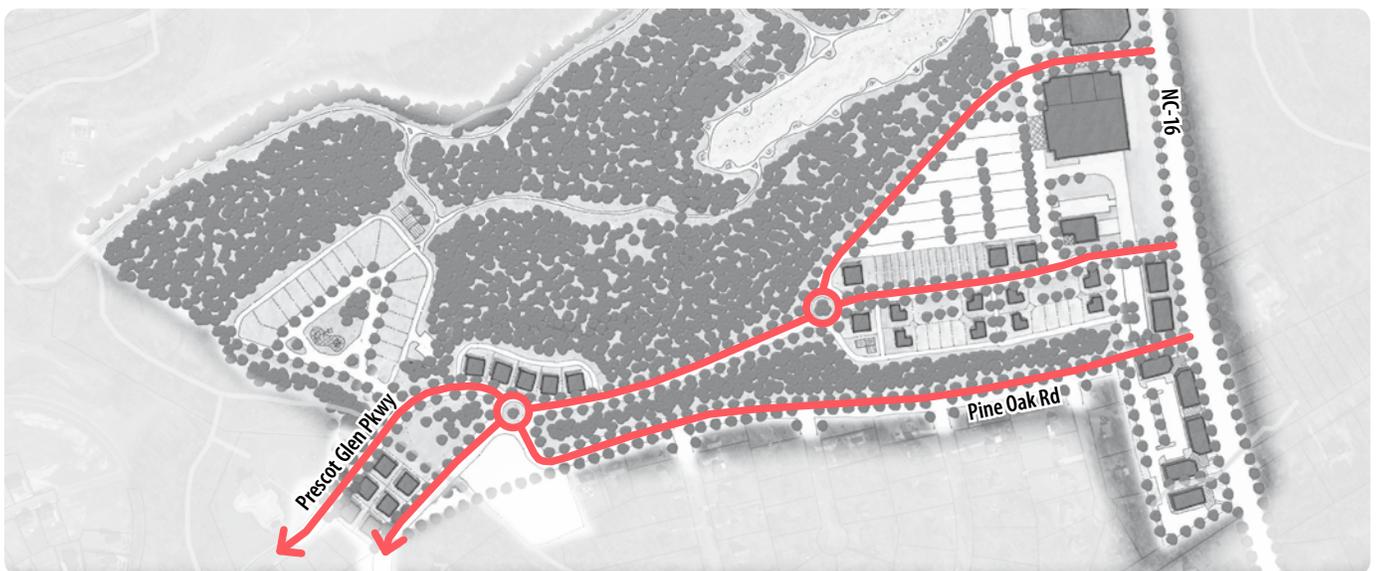
The Prescott development offers another opportunity to establish greater east-west connectivity. The previously-approved Prescott plan includes a connection from Waxhaw-Marvin Road, via Prescott Glen Parkway, to Highway 16. That connection to Waxhaw-Marvin Road is important, and is maintained in the revised plan for Prescott, but it ignores the possibility of a connection to Pine Oak Road.

The revised plan for Prescott includes an option for the realignment of Pine Oak Road through a roundabout at the western end of the Prescott development. This offers several advantages over the previously approved plan. First, it creates another important east-west connection and improves connectivity through the Prescott development from Pine Oak Road. It utilizes the established street layout, including the street segments that have already been built, without creating redundant infrastructure. Second, this connection would move the primary traffic movement away from Pine Oak Road, allowing that street to function as a low-volume neighborhood street, in accordance with the requests of adjacent residents. The introduction of the roundabout would calm east-west traffic through the area and provide a gateway into the

Prescott development. Finally, a significant portion of traffic would be diverted from the problematic Pine Oak Road and Highway 16 intersection to a new traffic signal north at the primary entrance to the Prescott development. This would allow the Pine Oak Road and Highway 16 intersection to be converted into a right-in/right-out only intersection, eliminating dangerous turning movements. [Private] [6-10] [Code/Policy]



▲ PRESCOT APPROVED PLAN



▲ PROPOSED PRESCOT PLAN OPTION WITH PINE OAK REALIGNMENT

## **C-6 Use appropriate street types for connections through residential and commercial areas**

The street connections identified in this chapter must be designed as Complete Streets that will support adjacent development. Similar to the goals for the reconfiguration of Highway 16, new street connections should accommodate all users regardless of age, ability, or mode of travel.

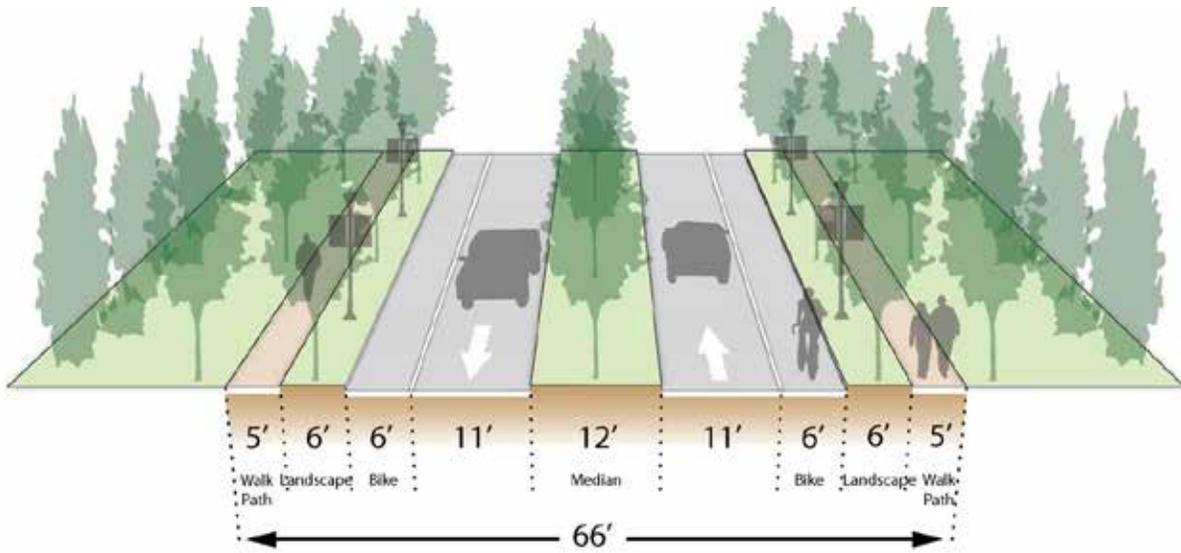
The images on this page illustrate how different connector streets should be detailed to accommodate development in different contexts. The Neighborhood Connector Street sections should include a median to minimize left turn movements and support an efficient flow of traffic, while providing greater street tree coverage and beautifying the corridor. The Neighborhood



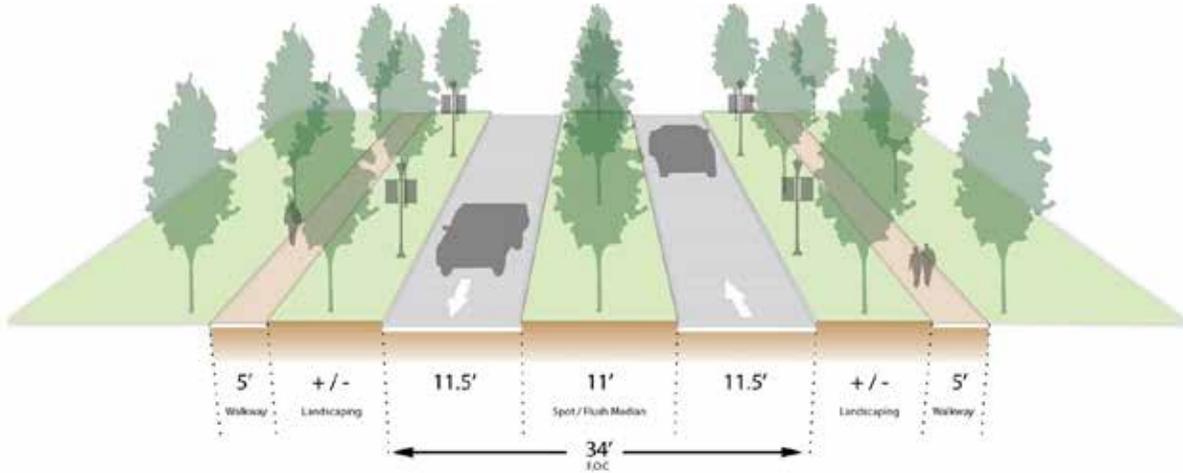
▲ NEIGHBORHOOD CONNECTOR STREET EXAMPLE



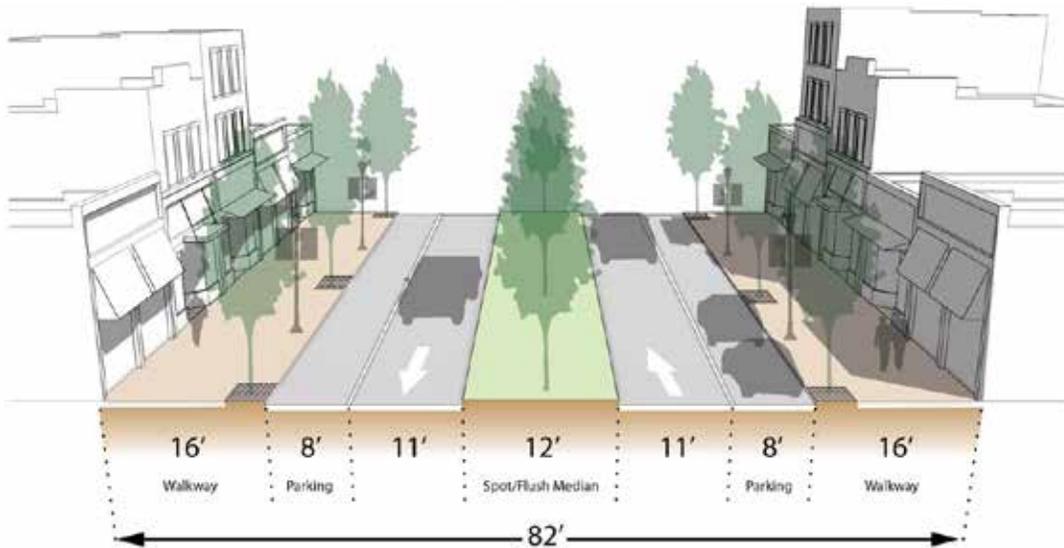
▲ COMMERCIAL CONNECTOR STREET WITH MULTI-USE PATH



▲ NEIGHBORHOOD CONNECTOR STREET WITH BIKE LANES



▲ NEIGHBORHOOD CONNECTOR STREET (APPROX. 60' OF RIGHT OF WAY)



▲ COMMERCIAL CONNECTOR STREET

## six: making key connections

Connector Streets should also include wide sidewalks and planting strips. Bike lanes should be provided where possible, and on-street parking may also be included to support higher-density residential and/or neighborhood commercial development.

Connector streets in denser commercial settings should be detailed to support a more active retail environment. The Commercial Connector Street section illustrates critical components such as on-street parking, retail frontage building types, a planted median, and wide sidewalks capable of accommodating outdoor dining. Generous sidewalk zones may also be used to accommodate a multi-use path as necessary.

All connector streets should support fronting development; these streets are not intended to serve as vehicular thoroughfares between isolated pods of development. They should be sited and constructed in association with development

that fronts on and activates the street corridor. The Colony Road Case Study, below, illustrates how a neighborhood connector street can serve a critical traffic need while also supporting adjacent development and important pedestrian and bicycle functions. [Private] [Ongoing] [Code/Policy]

### **C-7** Establish consistent thresholds to guide the preparation of a Transportation Impact Analysis (TIA)

A Transportation Impact Analysis (TIA) is a specialized study that evaluates the effects of a development's traffic on the surrounding transportation infrastructure. It serves an important role within the development review process, especially for large projects, by helping developers and government agencies identify where a proposed development may have a significant impact on safety and transportation operations. The conclusions of a TIA provide

#### **NEIGHBORHOOD CONNECTOR CASE STUDY: COLONY ROAD - CHARLOTTE, NC**

The construction of Colony Road helped to transform a portion of southern Charlotte in the late 1990's and early 2000's. Colony Road was built in 1998, at an estimated cost of \$5.2 Million, as a neighborhood connector with a planted median and bike lanes. (See Neighborhood Connector Street with Bike Lanes diagram on previous page.) It enhanced connectivity through the area, expanded mobility options, encouraged greater bicycle and pedestrian activity, and as a result, supports a greater mix of uses within the neighborhood.

**Before**



**After**



*Source: All images - Google Maps*

the basis for mitigating those impacts through road and intersection improvements that ensure adequate connectivity.

The Town of Waxhaw does not currently require a TIA for new development. Instead, the town relies on ad hoc provision of TIA's through two mechanisms:

- > NCDOT requests, which are usually made for residential developments with 100 or more units that are located near NCDOT facilities, and
- > The Conditional District process, whereby some developers may prepare a TIA, at their discretion, to illustrate the effects of their conditional rezoning request.

Instead of this ad hoc provision of TIA's, the town should establish consistent thresholds to guide the preparation of TIA's by developers.

A preliminary step in this process would be to require all applicants for new development to prepare a trip generation table according to the guidance and procedures in Trip Generation, 9th Edition (Institute of Transportation Engineers, 2012). The trip generation table should include

a calculation of expected daily total; AM and PM peak hour; and directional vehicle trips for the proposed development program. Proposed net external trip reductions resulting from pass-by trips and internal capture should also be shown.

Upon submission of the trip generation table, Town Staff should determine whether a full TIA or a less-intense Traffic Assessment (TA) is required. The TIA Thresholds Case Study, below, provides a model that Waxhaw might consider adapting within their own ordinance to establish development thresholds that require the preparation of a TIA. In most cases, proposals resulting in more than 200 daily trips (or 30 peak hour, directional, net, external trips) should require a TIA.

Once this determination is made, the applicant would meet with Town Staff and NCDOT (if applicable) to discuss the scope and limits of the TIA or TA and outline a Methodology Letter of Understanding (MOU) to guide the expectations and scope of the analysis required for the TA or TIA. Upon agreement of the MOU, the applicant can begin the TA or TIA process. [1-5] [Code/Policy]

### TRANSPORTATION IMPACT ANALYSIS (TIA) THRESHOLD CASE STUDIES

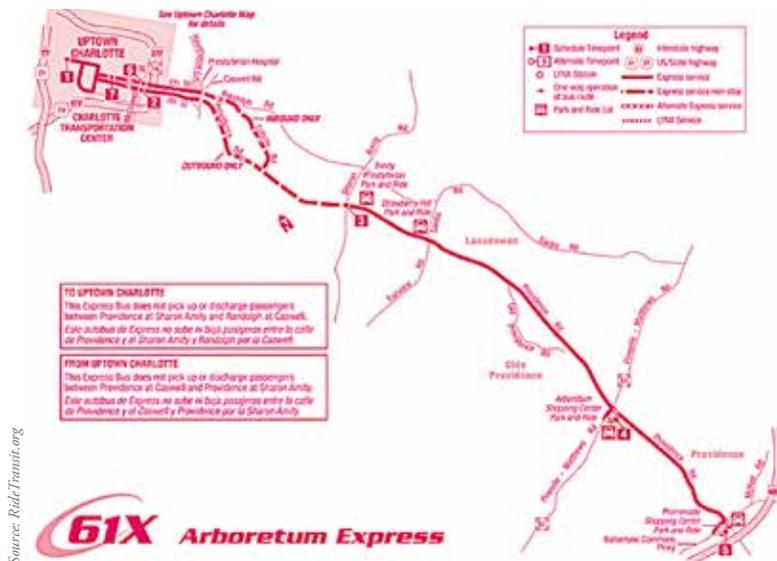
The Town of Davidson, NC utilizes a relatively low threshold for the preparation of a TIA. All development proposals in Davidson that include 20 or more dwelling units require the preparation of a TIA.

The Town of Wake Forest, NC utilizes a more nuanced approach. The town's ordinance establishes different levels of TIA study in accordance with specific thresholds for different types of development, as shown in the table below.

Level of Study Required by Development Type	Residential	Office	Hotel	Industrial or Warehouse	Retail / Shopping	Other
None (unless located in area of special concern)	<100 units	<50,000sf	<100 rooms	<150 employees	n/a	<100 peak hour trips
Standard TIA	100-500 units	50,000 -350,000 sf	100-500 rooms	150-1,500 employees	<100,000 sf	100-500 peak hour trips
Enhanced TIA	>500 units	>350,000 sf	>500 rooms	>1,000 employees	>100,000 sf	>500 Peak hour trips

Source: Town of Wake Forest, NC

six: making key connections



Source: Ride Transit.org

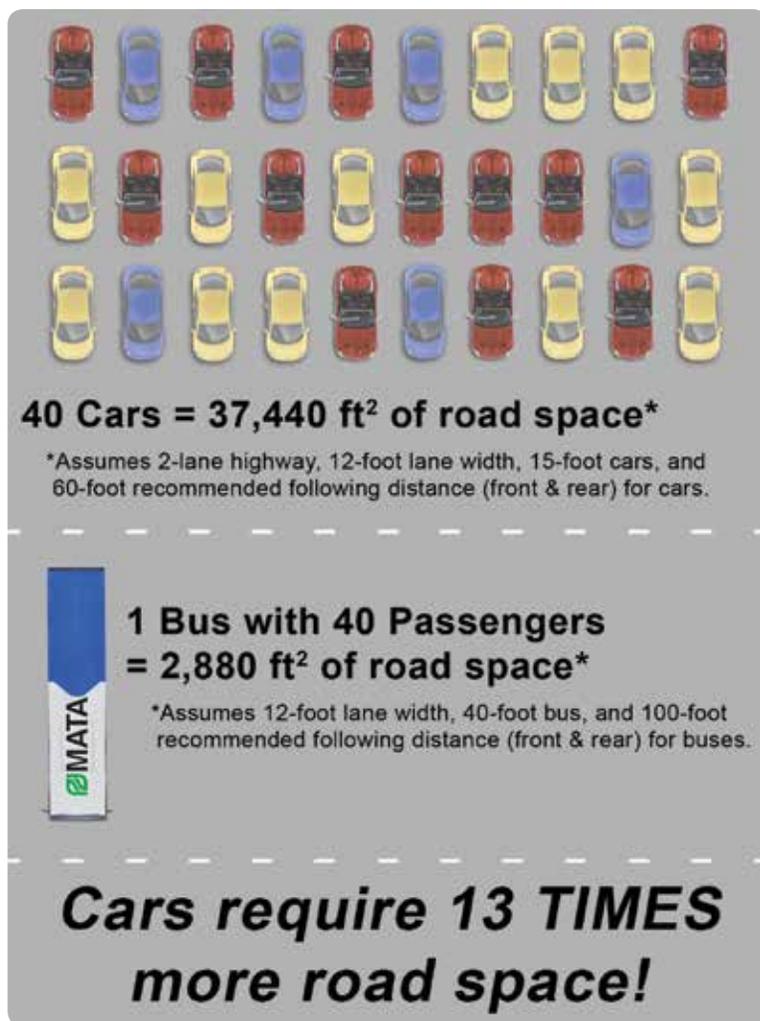
▲ ROUTE MAP - CATS ROUTE 61X

## C-8 Establish a CATS Express Bus Route connection to Waxhaw

Waxhaw does not currently have transit service, though there are several Charlotte Area Transit System (CATS) routes that travel near Waxhaw. CATS Routes 62X – Rea Road Express, 45X–Carmel Road Express, and 43 – Ballantyne all pass through the South Charlotte area near Waxhaw. CATS Route 61X – Arboretum Express, comes the closest to Waxhaw. That route travels down Highway 16 from Uptown Charlotte, but does not come south of I-485. It is possible, with the reconfiguration of Highway 16, continuing growth in Waxhaw, and the identification of a suitable Park and Ride Lot for use by CATS (See action item D-10), that the 61X, or another route, may be extended to Waxhaw in the future.

Transit service would be a significant improvement in the transportation options available in Waxhaw. A CATS bus route would offer a viable commute alternative for the large number of Waxhaw residents that work in Charlotte. Transit service would also decrease congestion on Highway 16, support a greater diversity of housing types, and help to attract the growing number of people who prefer transit to personal automobiles (e.g. educated younger workers and retired empty-nesters).

The town should collaborate with Union County, the Towns of Weddington and Marvin, and CATS to establish an express bus route to serve the western Union County area. This could be accomplished through an extension of existing express routes and should include stops at key locations in Ballantyne and/or Uptown Charlotte. The route should terminate at a Park and Ride location in Waxhaw that is also a stop on a future local circulator route (see Action Item C-9), providing a convenient link between regional and local transit service. This arrangement would allow people to carpool or take the local circulator route to the CATS Park and Ride lot. [\$\$\$] [O] [11-15]



▲ BUS VS. CAR - ROAD AREA COMPARISON

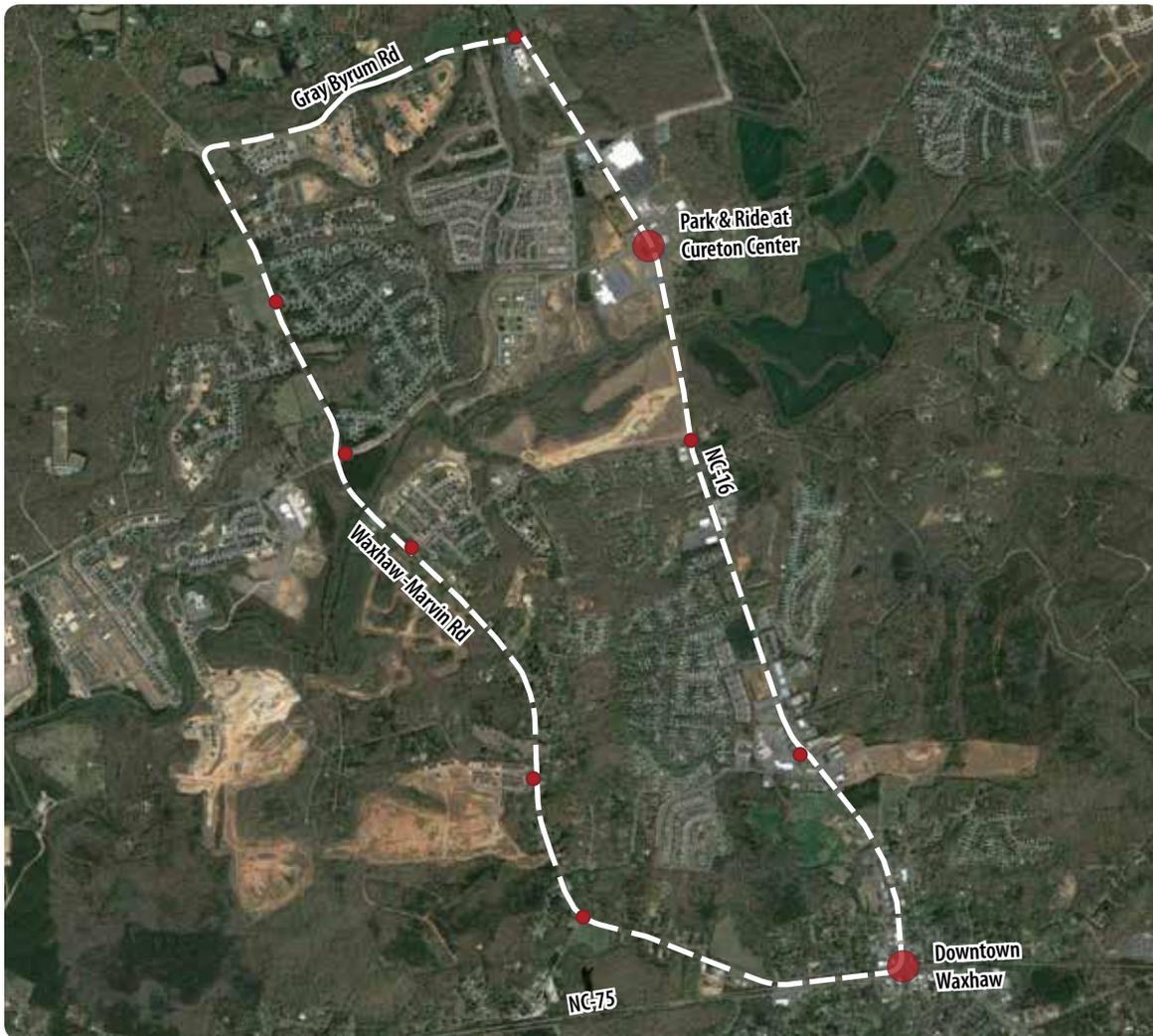
## C-9 Create a local bus circulator that serves significant Waxhaw destinations

The town should partner with Union County to establish a local bus circulator route. The proposed route, illustrated below, is a 30-minute local loop, offering frequent service to destinations within Waxhaw and a connection to the proposed regional express bus service (see Action Item C-8).

Major stops along the local circulator should include a Park and Ride at Cureton Town Center and Downtown Waxhaw. Other stops should be located to serve existing neighborhoods as well as future development areas identified in the town's adopted plans. This circulator route could begin with service through a small van, bus or electric vehicle with limited passenger capacity. As

ridership increases, this could evolve into service through a traditional bus vehicle.

Primary funding for a Waxhaw circulator route would likely come from the town and/or Union County. CATS Route 97 – Village Rider provides a model for this type of arrangement. The 97 Route serves the Towns of Huntersville, Cornelius and Davidson and includes stops at four Park and Ride Lots offering connections to regional express bus service. Each of the towns along this local circulator route contribute significant funds to operate the route in partnership with CATS because of the valuable transportation alternative the local route provides for those towns. [\$\$\$] [O] [16-20]



▲ WAXHAW CIRCULATOR BUS ROUTE



# ENVISION DEVELOPMENT



**The conceptual master plan** for the Highway 16 corridor illustrates the potential for new development and redevelopment that will enhance the Town of Waxhaw by transforming the Highway 16 corridor into a walkable, mixed-use environment suited to meet the changing market demands of the next 20 years.

Highway 16 is a high-growth corridor with a patchwork of development types: single family residential neighborhoods, large suburban retail centers, neighborhood-scaled commercial buildings that predate recent growth pressures, and large tracts of undeveloped land. Today, the corridor faces renewed construction activity and growth pressure following the nationwide recession of 2007-2009. The conceptual plans in this chapter balance increasing market demand, town regulations, and the shared vision of Waxhaw citizens to create a sustainable vision and roadmap for growth on the Highway 16 corridor.

The plan focuses on the highest and best use for each parcel in the corridor, identifying nodes and "pulses" to focus specific types of development within walkable neighborhoods. Instead of disorganized, piecemeal development along the corridor, pulses co-locate complementary uses and create synergies, eventually lowering the number of vehicular trips on Highway 16 and elevating the quality of life in surrounding neighborhoods.

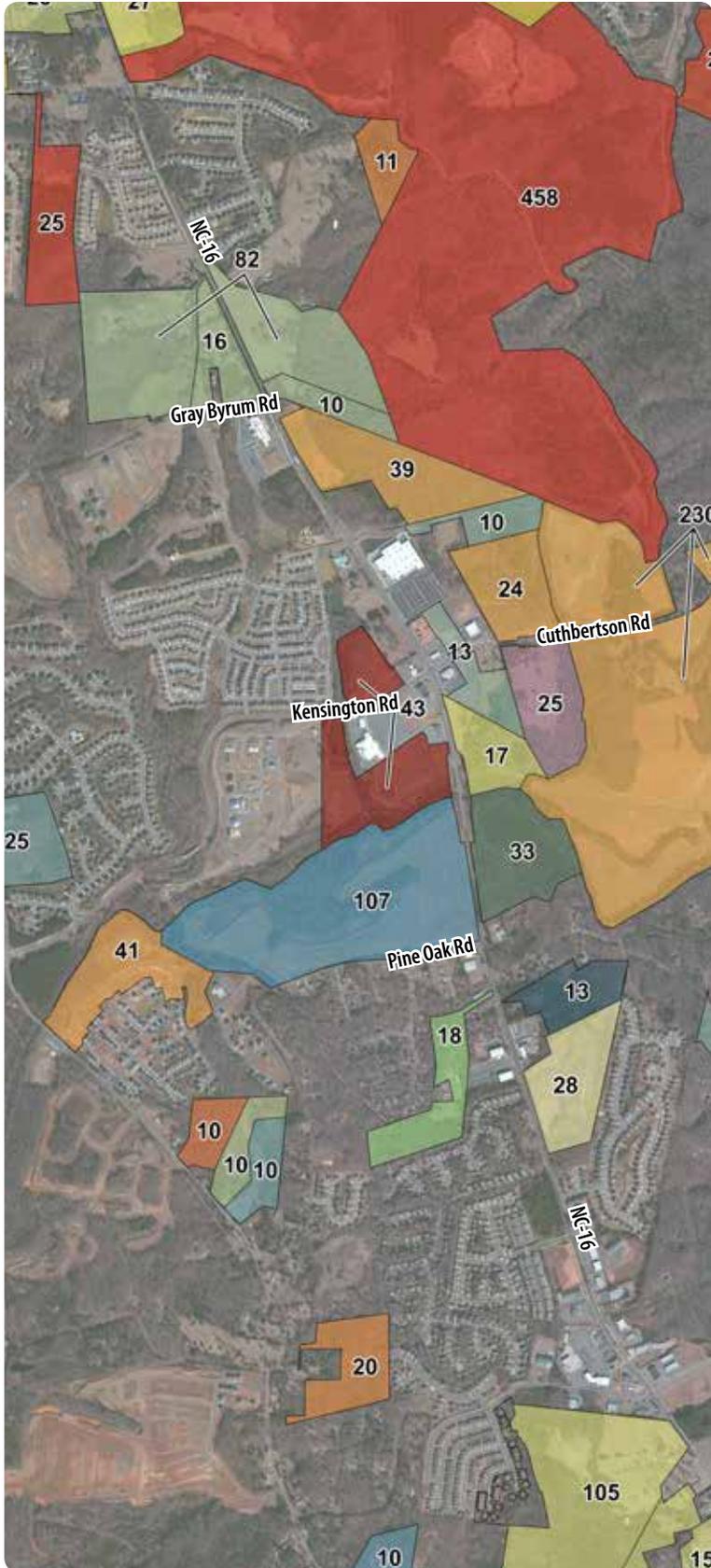
This plan highlights development opportunities in the following nodes:

**Proposed Byrum Village (both east and west):**  
The intersection of Gray Byrum Road and

Highway 16 is currently undeveloped. This three-corner intersection includes Carolinas Medical Center - Waxhaw (CMC-Waxhaw) on one corner and low-density rural development on the other corners. The land surrounding this intersection is controlled by a couple of land owners that plan to develop the land to its highest and best use. Located on the northern side of Waxhaw, thousands of residents live in nearby neighborhoods. The current zoning is general commercial, multi-family and low density single-family. The future land use is identified as commercial/retail.

**Agricultural /TND Village:** The land east of Gray Byrum Road, from the intersection of Gray Byrum Road (to the west) to Phase 3 of Lawson (to the east) and Cuthbertson Road (to the south), is currently within Union County jurisdiction. For this area to be developed as proposed, it would have to be annexed into Waxhaw. In the future land use map the area is identified as medium-density residential.

**Cureton Town Center:** The intersection of Cuthbertson Road/Kensington Road and Highway 16 is already developed on all four corners. All four corners are approved for



▲ **LARGE UNDEVELOPED PARCELS (AS OF MAY 2013)**

Numbers shown are the acres available for development.

additional development in accordance with the Cureton and Howard's Mill conditional approval plans. The manner in which this area develops in the future is dependent upon the approved plans and the build-out of the surrounding neighborhoods.

**Prescot Village:** Although this bank-owned land is cleared and graded, the approved mixed-use development is currently dormant. The viability of the parcel is dependent on transportation improvements and the market to the north. Prescot is currently zoned a mix of office, highway commercial and residential.

**Old Hickory:** Stretching from Prescot to Downtown Waxhaw, older commercial development and new neighborhood commercial development, including the Old Hickory Shopping Center, fronts Highway 16. This area is mostly zoned commercial and neighborhood commercial. In the future land use plan it is all identified as commercial use.

In assessing the appropriate locations for new infill development, an analysis of the available large parcels of land was completed. This helped the design team create a feasible framework based on the likelihood of development and market feasibility. Parcels greater than 10 acres (shown at left) were specifically identified as having potential for new development.

Some simple questions guided the assessment of potential development strategies for each site:

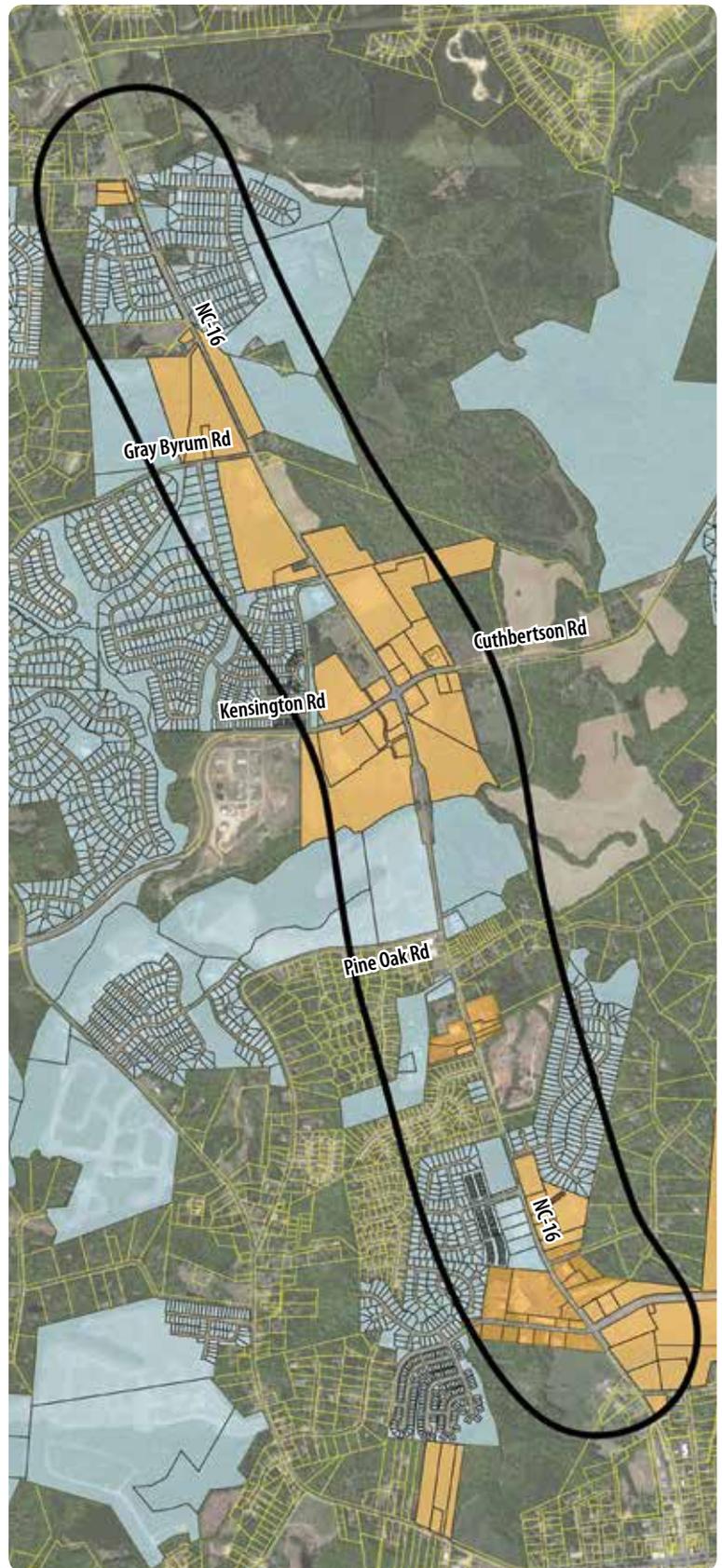
1. What is the appropriate type of development?
2. What is the property currently zoned?
3. Can the location support the opportunities identified in the market study?
4. Can the transportation network support the use, either as it exists now or with improvements in the future?
5. Does the owner want to develop the property?
6. What types of services do the neighbors and other Waxhaw residents want to see?
7. Is the identified Future Land Use appropriate?
8. What type of growth is sustainable—economically, environmentally and socially?

This assessment and the market analysis guided a prioritization of sites for future development. The area between the intersection of Gray Byrum Road and Cuthbertson Road emerged as the site proposed for the most intense commercial use in the future. The remainder of the corridor is appropriate for less intense commercial/office development and a mixture of housing types.

The diagram at left shows the large number of single owner parcels, almost all of which are still undeveloped. The diagram at right shows the land zoned C-3 (General Commercial) in orange. The land with this zoning category was purchased at a point in time when the rapid suburban growth along the corridor meant different expectations for development form and return on investment. The design team considered this market history in the planning and visioning of the corridor.

The plans on the following pages recommend viable options for future development within the conceptual focus zones. For larger sites, the options provide choices for land uses. The preferred option for the entire corridor, based on the market study, growth in Waxhaw, approved development, citizen input, and contemporary best practices in urban planning and design, is shown on the following page along with a breakdown of development area and unit types.

It is important to recognize that this corridor study focuses on the Highway 16 corridor and immediately adjacent properties. The uses that are appropriate for the Highway 16 corridor are different from those appropriate for the entire town of Waxhaw. With this in mind, the corridor plan calls for a concentration of development intensity within a quarter-mile of the corridor, including more multi-family units and commercial/retail space. Adding housing and a diversity of uses within this proximity will facilitate a mixed-use environment with the goal of reducing the number of trips on Highway 16 and creating connectivity between houses, jobs and shops.



### ▲ C-3 (GENERAL COMMERCIAL) ZONING

*C-3 shown in orange, blue and orange show conditional use zoning.*



▲ **OVERALL HIGHWAY 16 DEVELOPMENT SCHEME**

## DEVELOPMENT DATA

*(representing drawing at left)*

Development Type	Total
<i>Residential Units</i>	<i>Total: 2,065 units</i>
FOR-SALE SINGLE FAMILY (UNITS)	300
FOR SALE TOWNHOUSES (UNITS)	351
RENTAL APARTMENTS (UNITS)	1,088
RETIREMENT CARE FACILITY (UNITS)	326
<i>Non-Residential</i>	<i>Total: 1.1 million sf</i>
OFFICE/ MEDICAL OFFICE (SF)	262,000
RETAIL (SF)	838,250
HOTEL (ROOMS)	90
<i>Civic</i>	<i>Total: 64.1 acres 73,600 sf</i>
CIVIC SPACE (ACRES)	64.1
CIVIC BUILDINGS (SF)	73,600
<i>Parking</i>	<i>Total: 4,300 spaces</i>

**Action Items:** The various focus areas for infill development along Highway 16 provide a road map for both private development and public investment along the corridor. The following actions items outline a series of decisions that will leverage growing development pressure and the planned widening of Highway 16 to benefit the Town of Waxhaw and its residents. Action items range from small specific interventions to large development opportunities.

The development scheme and data shown on this page provide a general summary of the action items in this chapter. Together, these action items combine the development expectations outlined in the market study, public input from the citizens of Waxhaw, and contemporary best practices in urban planning to establish a preferred community vision for the future of the Highway 16 corridor.

**D-1 Create a gateway to Waxhaw at the intersection of Bonds Grove Church Road and Highway 16**

The gateway to Waxhaw should display the history and heritage of the community, welcome visitors, and serve as a meeting place. The house located at this intersection, previously used as a rural service station, has a unique charm that marks a transition to a different place.

Preserving the existing structure as a visitor's center and local country store would honor the rural working history of Waxhaw. This outpost would serve people ranging from out-of-towners picking up visitor maps to local cyclists stopping in for a cold drink on a weekly ride. The outpost would help attract people to downtown by offering detailed information about local shops, restaurants and tourist attractions. Local cycling groups could also meet at the outpost for group rides.

The outpost proposal includes gateway signage that matches the wayfinding package for the Town of Waxhaw. The outpost could also include a country store with items such as local honey and jams, fresh produce, small toys and refreshments. The Bradford Store in Huntersville, North Carolina is regional example of a prototype for this outpost. [\$\$] [C] [6-10]

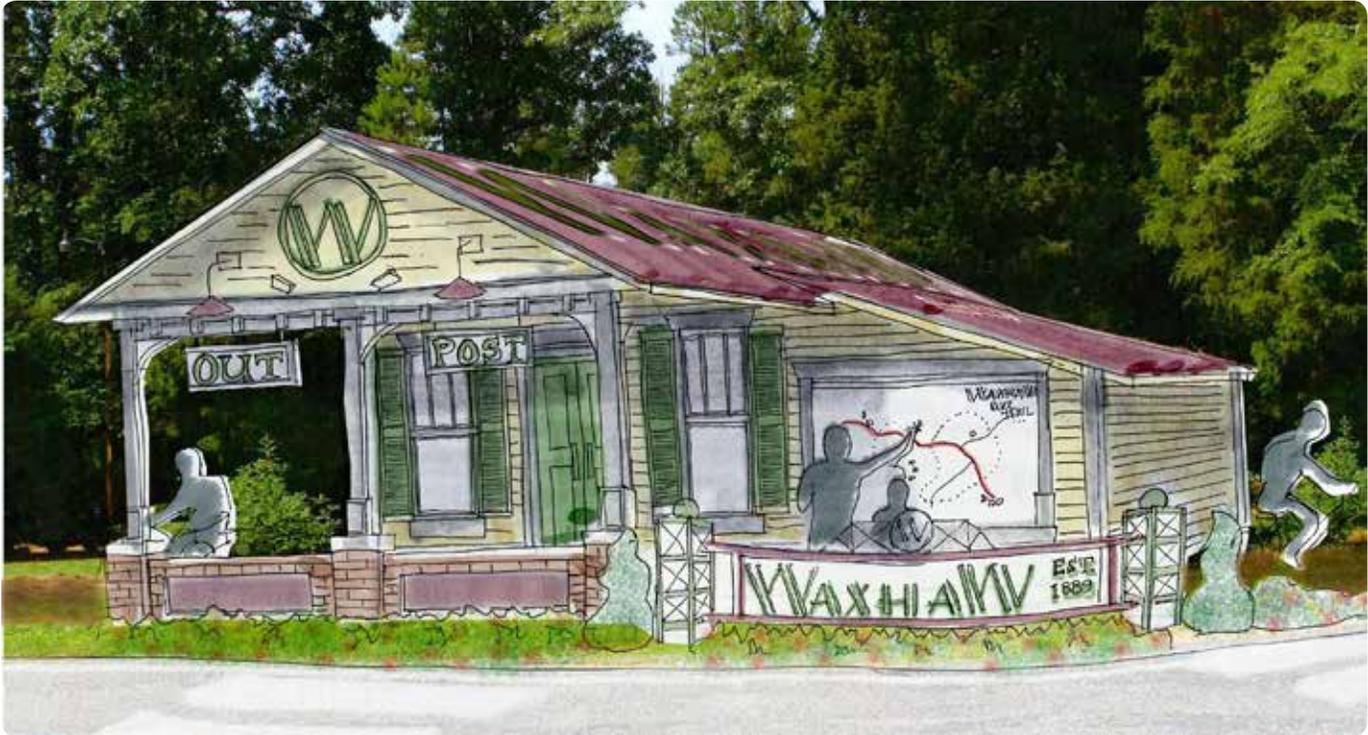


Photo Credit: www.charlottenmagazine.com

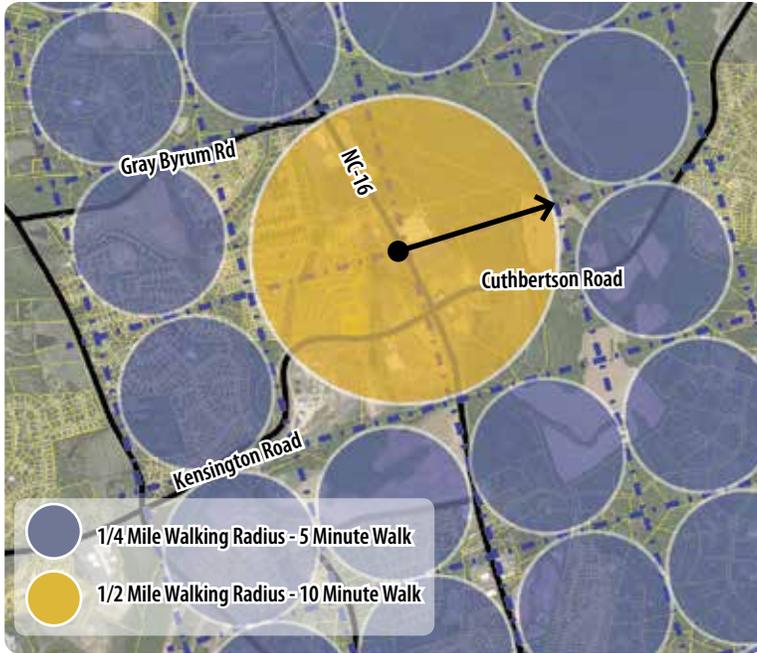
▲ BRADFORD STORE - HUNTERSVILLE



▲ OUTPOST - EXISTING



▲ OUTPOST - CONVERSION OF STRUCTURE TO A TRAILHEAD STORE AND VISITOR'S CENTER



▲ **1/2 MILE REGIONAL CENTER RADIUS**



▲ **PUBLIC PLAZA - GLENWOOD PARK, GA**



▲ **SPRAYGROUND - BIRKDALE VILLAGE**

**D-2 Create a regional center at Byrum Village** Focusing mixed-use development on Highway 16 meets new market opportunities and provides residents access to daily needs and services that are otherwise unavailable in Waxhaw. A mixed-use regional center would include shops and restaurants such as general merchandise stores, (like a Target or Stein Mart within the proposed Byrum Village and Cureton Village), clothing retailers, small local shops and businesses, and the opportunity for office and housing above the shops.

The development of a mixed-use town center (referred to a Byrum Village in this plan) at this location is supported by the comments the design team heard at the public workshops. Waxhaw residents want more opportunities for walkable urbanism on the Highway 16 corridor. Participants referenced Cornelius, Davidson and Birkdale Village as places they would like to see emulated along Highway 16 in the next 20 years.

The intersection of Gray Byrum Road and Highway 16 is adjacent to over 600 acres of undeveloped property, all owned by people who are willing to work together for new development opportunities. Currently, the land fronting Highway 16 is zoned C-3 (General Commercial), and the adjacent parcels have not been annexed but are zoned low-density residential by the county. This plan assumes (based on conversations with land owners) that these county parcels will eventually be annexed into Waxhaw. Development of Byrum Village will provide an ideal opportunity to incorporate these parcels within a larger development area supported by town services and regulated by consistent design standards that ensure high quality design.

In Byrum Village, the main commercial street would be parallel to Highway 16, focusing the pedestrian retail environment on a new, controlled street network. The other option (as shown in additional plan versions) includes retail buildings that front on Highway 16.

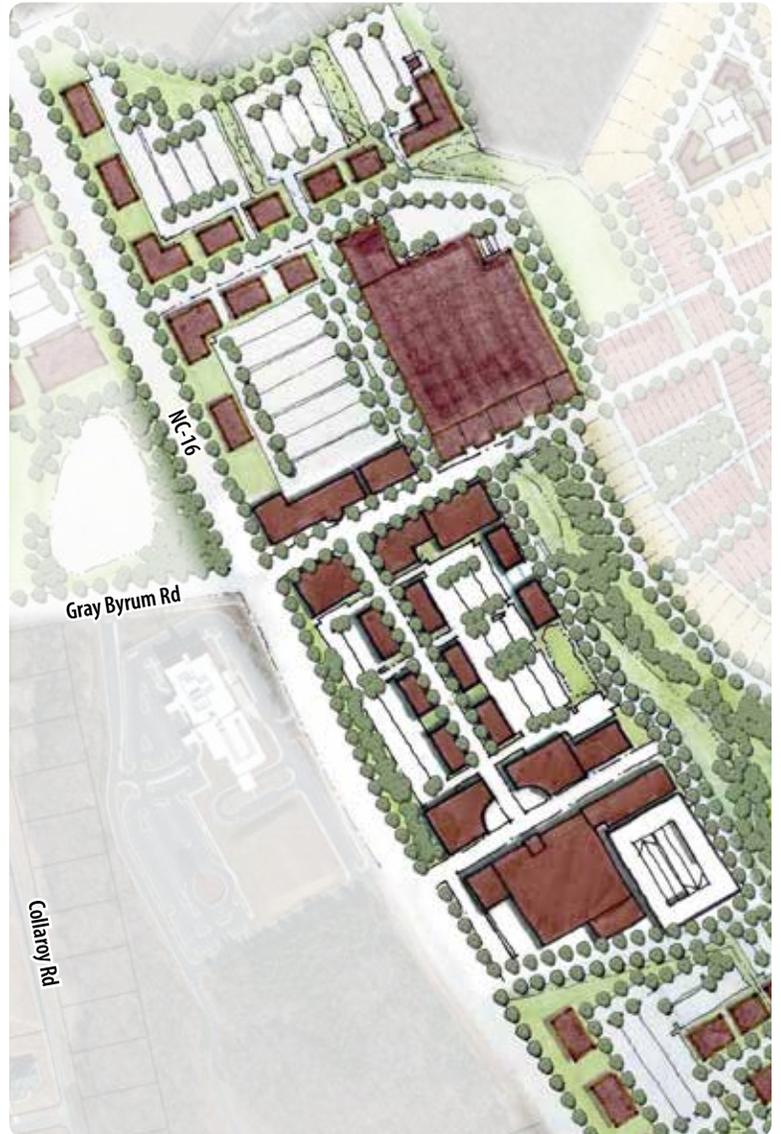
Byrum Village should be a regional lifestyle center with enough square footage available to create



▲ **EXISTING CONDITIONS**

## DEVELOPMENT DATA

Development Type	Byrum Village East
<i>Residential Units</i>	<i>Total: 180 units</i>
MULTI-FAMILY (UNITS)	180 UNITS
<i>Non-Residential</i>	<i>Total: 425,000 sf</i>
OFFICE (SF)	100,000
MEDICAL OFFICE (SF)	180,000
RETAIL GENERAL (SF)	165,000
ANCHOR RETAIL (SF)	180,000
HOTEL (ROOMS)	-
<i>Parking</i>	
OFF-STREET PARKING (SPACES)	2450
DECK (SPACES)	750



▲ **BYRUM VILLAGE - MIXED-USE CENTER**

### REGIONAL CENTER PRINCIPLES

**Density:** More people creates more energy, excitement and success.

**Mixed-Use:** Activity throughout the day keeps retailers busy at a variety of times and adds diversity to the development.

**Public Places for Families:** A sprayground or playground to entertain all members of the family is included, along with a plaza or green for programming and activities.

**Retail Diversity:** Shops - big and small, local and national - create an ideal blend to attract a cross section of people. The ideal retail environment is between 150,000 and 600,000 sf.

**Store Location:** Anchors are ideally located at both ends of Byrum Village and no more than 1,000 ft. from each other.

**On-Street Parking:** On-street parking creates a good retailing environment, pleasant for pedestrians and offering quick access to businesses.

**Pedestrian Scaled Streetscape:** Wide sidewalks, light fixtures, awnings, lighting and street trees in tree grates complement the retailing environment, creating a Main Street atmosphere.

**Outdoor Dining:** Outdoor dining provides a place for people to relax and enjoy the climate.

*ULI, "Ten Principles for Developing Successful Town Centers." 2007.*



## REGIONAL CENTER CASE STUDY: THE AVENUE

The Avenue, introduced by Cousins Properties Incorporated in 1998, is an outdoor lifestyle center concept with eight locations throughout the Southeast. It offers an instructive example for the development of a regional center at Byrum Village. The Avenue includes a dynamic mix of premier national retailers, select local merchants and specialty restaurants reflective of local demand and fashion trends. The shopping destination features an open-air, pedestrian friendly setting convenient to major metropolitan areas.



Image by: Cousins Properties

**Typical Shops:** American Eagle, Eddie Bauer, Famous Footwear, Francesca's, Gymboree, Hallmark, James Avery, Jos. A. Bank, Justice, Kay Jewelers, Kirkland's, LensCrafters, LOFT, Natural Body Spa & Shop, Panera Bread, Sprint, Stride Rite, Sunglass Hut, Victoria's Secret, White House|Black Market

**Size:** Vary from 250,000 - 500,000 sq. ft.  
**Locations:** Atlanta, Nashville, Memphis, Florida  
**Population:** 3 Mile Radius: 30,000-60,000  
 5 Mile Radius: 60,000-180,000

*Text is modified from www.cousinsproperties.com.*



Image by: Cousins Properties



**▲ BYRUM VILLAGE - MAIN STREET**

retail synergy. Ground floor retail uses on both sides of the main commercial street encourages an active walkable environment. This includes space for a large anchor tenant or three medium size stores. All parking should be located behind retail shops. The center could serve as a future transit node for residents and workers within a half-mile radius.

The center should include a mix of uses through office space or residential lofts above the shops. The center should be connected to surrounding development and tie into the future neighborhood to the east through both the street and sidewalk network.

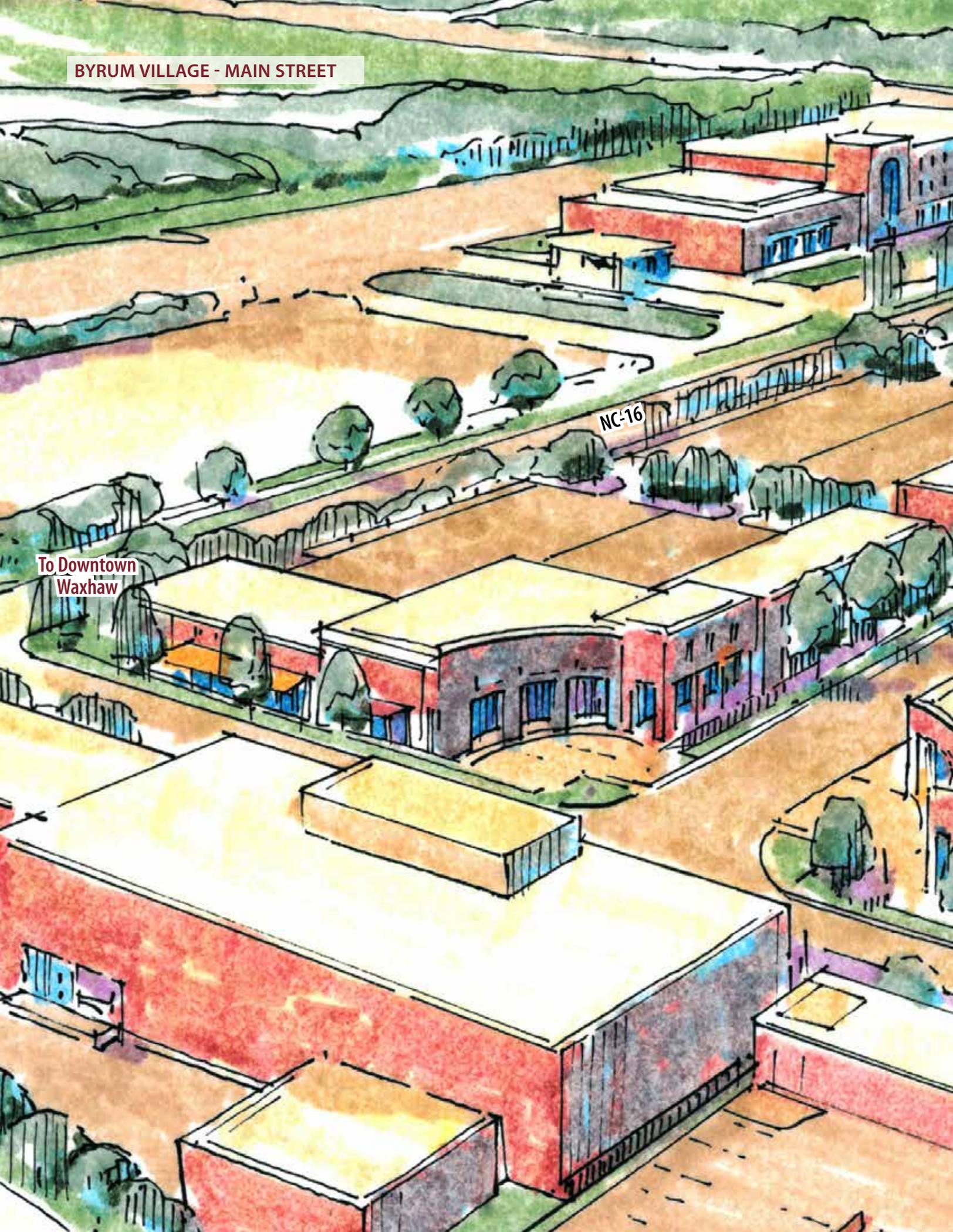
A regional center should also include retailing districts that focus on specific market segments including: home, daily needs, specialty shops, fashion and entertainment. Each district includes stores that cater to the specific markets. Regional town centers that strategically organize in this manner are more likely to be successful over time.

Byrum Village will be the northern center of Waxhaw, complementing the activity at Cureton and Howard's Mill and adding exciting new development on the eastern side of Highway 16. [Private] [6-10] [Code/Policy]



**▲ MIXED-USE MAIN STREET**

BYRUM VILLAGE - MAIN STREET



To Downtown  
Waxhaw

NC-16

NC-16



### **D-3** Develop large parcels as regional centers, clustered land developments, or traditional neighborhoods

Prior development on Highway 16 has included large tracts of single-use, isolated development based on the town's current zoning provisions. This model results in 100 acres of commercial/retail or 1,000 acres of single-family residential all developed at one time. An alternative model involves establishing neighborhood units that mix uses within three community types, as discussed below.

**Regional Center Development:** The regional center community types is embodied by the plans for Byrum Village, discussed on previous pages.

#### **Clustered Land Development:**

A unique community type, which is not currently found in Waxhaw, is a clustered land development (CLD). A CLD includes a rural zone, suburban zone and general urban zone within a compact neighborhood. This fine-grain neighborhood scale allows for a diversity of uses and can include agriculture. The property between Lawson and Byrum Village is an ideal location for this type of clustered, low-density development.

CLD's concentrate development in hamlets or nodes balanced with large areas of preserved open space and farmland. In this type of community an agricultural plot is included as part of the purchase of a home in the residential village. Many people move to the Waxhaw area to enjoy a more rural lifestyle, which the existing single-family subdivisions do not satisfy. CLD's offer an attractive alternative for these buyers in search of a more agrarian lifestyle.

CLDs also provide an opportunity to capitalize on the regional horse culture in Waxhaw and include horse stables and riding trails as part of the development. The construction of an environmentally-focused school, using the neighborhood as the learning lab, may be included as an alternative focus of the CLD. This school option is detailed in the development data on the opposite page.

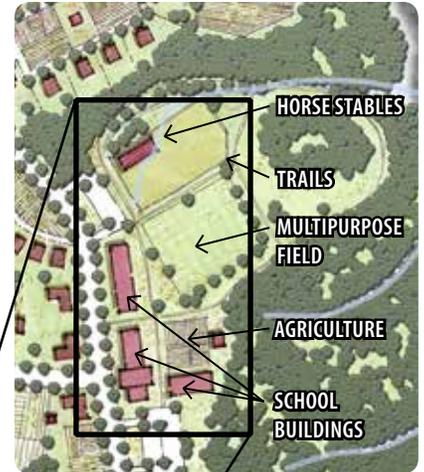
A successful model of the CLD community type is the Serenbe development outside of Atlanta, Georgia (see photos on opposite page and a description in Chapter 8). A CLD development would require a change in zoning regulations and new design standards, as discussed in Chapter 8.



▲ **BYRUM VILLAGE - RURAL CENTER RENDERING**

## DEVELOPMENT DATA

<i>Development Type</i>	<i>Byrum Village Agriculture Community</i>	<i>School Option</i>
<i>Residential Units</i>	<i>Total: 94 lots</i>	<i>Total: 94 lots</i>
SINGLE FAMILY SMALL (LOTS)	76	76
SINGLE FAMILY AVERAGE (LOTS)	18	18
<i>Non-Residential Square Footage</i>		
SHARED AGRICULTURE (SF)	561,000	561,000
HORSE STABLES (SF)	12,000	12,000
FORMAL GREEN (SF)	41,000	41,000
CIVIC BUILDINGS (SF)	4,700	36,500



▲ **SCHOOL OPTION**



▲ **WOODLAWN SCHOOL - DAVIDSON, NC**



▲ **CLUSTER LAND DEVELOPMENT - SERENBE, GA**



▲ **BYRUM VILLAGE - CLUSTERED LAND DEVELOPMENT OPTION**

**Traditional Neighborhood Development:**

Another community type, appropriate for the property between Lawson and Byrum Village, is the traditional neighborhood development (TND). A TND is based on a five-minute walk, with all residences located no further than a quarter of a mile from the neighborhood center. TND's include a range of development intensity from rural, to suburban, to general urban, to urban center areas. A TND is primarily residential in use, and includes a mix of housing types, including single-family houses, townhouses, cottage courts, and live/work units.

TND's also prioritize usable open space, arranging development around a diversity of open space types. Plazas, greens, pocket parks, greenways, stream buffers, playgrounds and recreation fields should all be included in a TND.

A TND neighborhood street network should be seamless with adjacent development, supported by as many connections as possible. Each connection should be treated as a neighborhood street, with

housing fronting on the street, on-street parking, slow speeds, wide sidewalks and street trees.

Live-work units and civic buildings should be appropriately placed throughout the community at main intersections, fronting on formal public spaces and at the termination of key vistas. Small commercial spaces, churches and schools are integrated throughout the neighborhood to reduce the necessity for daily car trips and provide services for those who do not drive. The proposed TND alternative illustrated below is also connected to the regional mixed-use center at Byrum Village, further reducing the need to drive.

A TND is an independent unit of development, between 80 acres and 160 acres, that should be organized and repeated on a unit basis. Several TND's or CLD's can be connected through the street grid, forming identifiable neighborhoods and hamlets. A further discussion of the regulatory strategies necessary to develop TND's can be found in Chapter 8. [Ongoing] [Code/Policy]



**▲ BYRUM VILLAGE - TRADITIONAL NEIGHBORHOOD DEVELOPMENT OPTION**



▲ **TRADITIONAL NEIGHBORHOOD DEVELOPMENT**

<b>DEVELOPMENT DATA</b>	
<i>Development Type</i>	<i>Traditional Neighborhood</i>
<i>Residential Units</i>	<i>Total: 567 units</i>
SINGLE FAMILY SMALL (LOTS)	173 UNITS
SINGLE FAMILY AVG (LOTS)	134 UNITS
MULTI-FAMILY (UNITS)	96 UNITS
TOWNHOUSES (UNITS)	164 UNITS
<i>Non-Residential</i>	<i>Total: 15,000 sf</i>
OFFICE/COMMERCIAL/CIVIC	15,000

**TND EXAMPLES**  
 Successful examples of Traditional Neighborhood Developments include:  
**Kentlands, MD**  
**Westhaven, TN**  
**Baxter Village (Fort Mill), SC**  
**East Beach, VA**  
**New Neighborhood (Davidson), NC**



▲ **TRADITIONAL NEIGHBORHOOD DEVELOPMENT EXAMPLES**



▲ **CMC-WAXHAW**

## DEVELOPMENT DATA

<i>Development Type</i>		<i>Byrum Village - CMC-Waxhaw</i>
<i>Residential Units</i>		<i>Total: 143 units</i>
SINGLE FAMILY SMALL (LOTS)		33 UNITS
SINGLE FAMILY AVG (LOTS)		55 UNITS
SENIOR MULTI-FAMILY (UNITS)		20 UNITS
TOWNHOUSES (UNITS)		35 UNITS
<i>Non-Residential</i>		<i>Total: 200,000 sf</i>
OFFICE (SF)		50,000
MEDICAL OFFICE (SF)		140,000
RETAIL GENERAL (SF)		10,000
ANCHOR RETAIL (SF)		-
<i>Parking</i>		
OFF-STREET PARKING (SPACES)		400



▲ **BYRUM VILLAGE WEST, ADJACENT TO CMC-WAXHAW CAMPUS WITH SENIOR LIVING, MEDICAL OFFICE AND HOUSING**

### **D-4 Leverage the CMC-Waxhaw Campus with complementary development**

Byrum Village West, adjacent to CMC-Waxhaw is the ideal location for additional medical offices and housing. Concentrating such uses in this location would give residents the opportunity to access high-quality medical care within walking distance.

The proposed mix of uses at this location include general office, medical offices with both family practitioners and specialists, daily needs retail (e.g. a pharmacy and corner store), townhouses, senior multi-family units, cottages/patio homes, larger single-family houses, and open space. The highest-intensity uses, office buildings, and retail would be located adjacent to Highway 16, transitioning to lower intensities to the west.

The open space on the plan preserves the existing creeks, capitalizing on these natural amenities with fronting development. The natural pond at the corner of Gray Byrum Road and Highway 16 would also be preserved. The street network ties into the adjacent street network of Cureton and connects to Highway 16 north of Gray Byrum Road. This provides connectivity alternatives to residents and workers beyond the intersection with Gray Byrum Road and Highway 16.

The land for this proposed node is currently undeveloped, with the exception of a couple houses on larger parcels. The parcels are under single ownership and are currently zoned CU-C-3 (General Commercial) and CU-RM-1, a low density multi-family district. The illustrative plan works within this framework, but is a more nuanced approach with a mix of uses. [Private] [11-15]



**▲ SENIOR LIVING COURTYARD**



**▲ MEDICAL OFFICE EXAMPLES**

## D-5 Update previous plans near the intersection at Cuthbertson Road/Kensington Drive

Previously approved plans for property at the intersection of Cuthbertson Road and Kensington Drive include Howard's Mill and Cureton Village. The Cureton development plan includes the only approved big box store in Waxhaw, a Target store located south of the existing Harris Teeter. Given the existing entitlements, the Target store will likely be built as approved.

However, the other components of the approved Cureton site plan are much less likely to be built as designed. The completed infrastructure is likely to be used as built, but the site does not have the flexibility to include the volume of

retail necessary to make it successful. After the outparcels have been sold, there is not enough square footage available for the addition of other retail anchors, which are critical for the success new development.

The modified development strategy for Cureton (Option A) acknowledges that the existing approved plan (Option B) is still a possible option for development, but that other uses may be more appropriate. Option A proposes changing the approved office development to a retirement care facility, converting a portion of the retail space to housing, and concentrating new development near existing development. The other Highway 16 frontages would be filled in with incremental liner retail buildings. This scheme



▲ SOUTHERN VILLAGE, CHAPEL HILL, NC



▲ SENIOR LIVING EXAMPLE



▲ CURETON VILLAGE - OPTION A

is more closely aligned with the current market demand.

The only corner of the Highway 16 and Cuthbertson Road/Kensington Drive intersection that does not have an approved site plan is the southeast corner. The conceptual plan integrates multi-family housing wrapping the Walgreen's on that corner with a mixture of townhouses, and small (four- to six-unit) apartment buildings. The floodplain and pond to the east and south of the development would be preserved. [Private] [1-5]

## DEVELOPMENT DATA

<i>Development Type</i>	<i>Option A</i>	<i>Option B (Cureton Only)</i>
<i>Residential units</i>	<i>Total: 504 units</i>	<i>Total: 150 Units</i>
MULTI-FAMILY (UNITS)	176	150
TOWNHOUSES (UNITS)	152	-
RETIREMENT CARE FACILITY (UNITS)	176	-
<i>Non-Residential</i>	<i>373,950</i>	<i>495,000</i>
RETAIL GENERAL (SF)	373,950	435,000
OFFICE (SF)	-	60,000



▲ CURETON VILLAGE - OPTION B



Image by: Shook Kelley



Image by: Shook Kelley

### ▲ CURETON RENDERINGS

Note: The proposed Walmart Neighborhood Market and fast food restaurant are not part of this plan, but are currently under review with the Town of Waxhaw.



▲ **TRAILHEAD TOT LOT - THREAD TRAIL - DAVIDSON, NC**



▲ **TRAILHEAD - SWAMP RABBIT TRAIL - GREENVILLE, SC**



▲ **SIGNAGE - SWAMP RABBIT TRAIL - GREENVILLE, SC**

## **D-6 Create a Trailhead Park for the Carolina Thread Trail between Prescot and Cureton**

The proposed Carolina Thread Trail extension follows a sewer easement along Twelve Mile Creek and passes beneath Highway 16 at the Twelve Mile Creek Bridge. The trail connects the neighborhoods of Prescot and Cureton (to the west) and Lawson (to the east). The trail crossing is an important regional connection and amenity along the Highway 16 corridor that should be appropriately recognized and celebrated. As such, this plan recommends the construction of a Trailhead Park at this location to provide easy access to the Carolina Thread Trail and a gathering place for trail users. The treatment of the underpass should include ample lighting and signage (see rendering, below). The Trailhead Park should include a directional kiosk, play areas for children and parking for bicycles and automobiles. Plantings in the trailhead park should be similar to those in other open spaces in town. Paths should connect the visitors to both the Carolina Thread Trail and adjacent commercial/retail developments. [\$\$\$] [C] [6-10]



▲ **NC 16 & THREAD TRAIL UNDERPASS RENDERING**



▲ **TRAIL AMENITIES - SWAMP RABBIT TRAIL - GREENVILLE, SC**

## DEVELOPMENT DATA

<i>Development Type</i>	<i>Approved Plan</i>
<i>Non-Residential</i>	<i>490,000</i>
RETAIL GENERAL (SF)	260,000
OFFICE (SF)	230,000

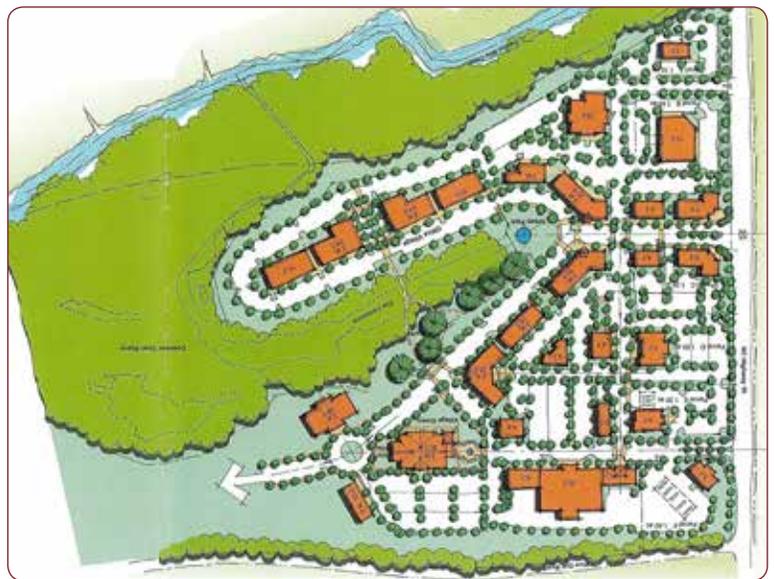
### **D-7** Update the Prescott plan to align with market demand

The Prescott Village development, as approved, includes almost half a million square feet of office and retail space. The property, now owned by Bank of North Carolina, is unlikely to be developed as designed. The market does not exist for such an extensive amount of development, nor does the site have a true four corner intersection, preferred by retailers. Although a large portion of the site has already been graded, there is no development on the site other than an aggregate base course and curbs for a few streets. Prescott Village is zoned highway commercial (CU-C-2), office/institutional (CU-OIS) and residential.

During the charrette, the design team re-evaluated the approved development plan for Prescott Village in light of the 2013 market analysis. New recommendations and design modifications resulted from the updated market conditions, focusing more on a variety of housing types rather than a retail and office park environment. Option A (Multi-Family Option) includes a mix of townhouses, quadraplexes (urban



▲ **PRESCOT VILLAGE - EXISTING CONDITIONS**



▲ **PRESCOT VILLAGE - APPROVED PLAN**



▲ **PRESCOT VILLAGE - EXISTING CONDITIONS (PRESCOT GLEN PARKWAY)**



▲ **PRESCOT - OPTION A (MULTI-FAMILY OPTION)**



mansions) and single-family homes, with a small amount of commercial development along Highway 16. Providing this type of housing would diversify the housing stock in Waxhaw and meet demand within an identified market gap. This option offers the potential for Prescot to become a model traditional neighborhood development that ties into the existing neighborhood to the west. Housing would be grouped in cottage courts or compact clusters around community gardens and pocket parks. The northern portion of the site would include a large constructed

wetland to mitigate stormwater issues along Twelve Mile Creek, and a trailhead park at the intersection of Highway 16 and the Carolina Thread Trail.

Option B (Civic Anchor Option) explores the potential for locating civic uses on the site, in conjunction with multi-family and commercial uses. The plan shows a YMCA and an elementary school integrated within the neighborhood. Such uses will be necessary to meet the demands of the rapidly-growing neighborhoods along Highway 16, and

## DEVELOPMENT DATA

Development Type	Prescot Village-Option A	Prescot Village-Option B	Prescott - Option B w/ Grocery Store	Pine Oak South
<i>Residential Units</i>	Total: 305 units	Total: 110 units	Total: 110 units	Total: -
SINGLE FAMILY SMALL (LOTS)	53	8	-	-
MULTI-FAMILY (UNITS)	190	88	-	-
TOWNHOUSES (UNITS)	62	14	-	-
<i>Non-Residential (SF)</i>	Total: 44,000 square feet	Total: 12,000 square feet	Total: 89,000 square feet	Total: 32,400 square feet
RETAIL GENERAL (SF)	44,000	12,000	44,000	32,400
SUPERMARKET (SF)	-	-	45,000	-
<i>Civic</i>				
CIVIC SPACE (SF)	29,000 & PLAYGROUND	-	-	4,200
PARK/STORMWATER (SF)	239,580	152,460	152,460	-
COMMUNITY GARDENS (SF)	31,000	12,000	6,000	-
ATHLETIC FACILITIES (SF)	-	138,000	64,000	-
TRAILS (MI)	~1	~1	~1	-
CIVIC BUILDINGS (SF)	2,000	64,000	24,000	-
<i>Parking</i>				
OFF-STREET PARKING SPACES	487	495	527	135

Development Data is based on the drawn schemes on below, to the left and on the following page.



**▲ PRESCOTT - OPTION B (CIVIC ANCHOR OPTION)**

these two uses make a complementary pair. They are located at an ideal site near the proposed Carolina Thread Trail, allowing students, teachers, YMCA members and others to conveniently walk or bike to and from this small civic campus. The proposed fields and fitness trail are also located within the site adjacent to the trailhead park, providing regional non-motorized access to these amenities. Given the constraints of Union County Schools it is likely that the school could be easier to develop as a charter or private school.

A possible alternative within this option replaces the elementary school with a grocery store. There is growing demand for another grocery store along the Highway 16 corridor, and this location offers a viable site. [Private] [1-5]

### **D-8** Redevelop over-sized parking lots incrementally

Unnecessarily high minimum parking requirements have created another opportunity for development along Highway 16: portions of large parking lots that often sit empty can become future development sites by reducing parking minimums and allowing developers/retailers to determine the amount of parking they need. In most cases, this approach will lead to relatively small buildings on newly-created outparcels along Highway 16. In conjunction with pedestrian and bicycle improvement along Highway 16, the addition of this infill development will transform the corridor into an attractive and vibrant streetscape.

Portions of the Highway 16 corridor between Pine Oak Road and Waxhaw Parkway provide an ideal location for this type of infill development to occur. The parking lots of the Old Hickory shopping center (where the Food Lion is located) should be incrementally filled-in with additional development to frame the street. This includes completing a frontage road on both sides of Highway 16 between Rustic Oak Boulevard and Providence Farms Road. The frontage road would include on-street parking and run parallel to Highway 16 to eliminate unnecessary curb cuts. Additional improvement include facade improvements to the existing stores, creating a block network within the parking aisles, and eliminating some of the driveways in favor of a new traffic signal (when warranted) at the entrance to the shopping center.

North of Red Oaks Trail, the plan shows neighborhood-focused commercial development along Highway 16. A small group of civic buildings is also shown along the Highway 16 frontage. Civic buildings are envisioned as opportunities for new churches, a potential library or community center. Behind these uses, low-lying areas along a creek are used for a park with trails and playing fields accessible to the surrounding neighborhoods such as The Oaks and Kingston on Providence. [Private] [16-20] [Code/Policy]

<b>DEVELOPMENT DATA</b>		
<i>Development Type</i>	<i>North of Red Oaks Trail</i>	<i>Old Hickory</i>
<b>Non-Residential</b>		
NEIGHBORHOOD COMMERCIAL	36,000 SF	91,900 SF
<b>Civic</b>		
PLAZA SPACE	-	-
PARK/STORMWATER	220,000 SF	78,000 SF
COMMUNITY GARDENS	20,000 SF	-
ATHLETIC FIELDS	125,400 SF	-
CIVIC BUILDINGS	34,300 SF	600 SF
<b>Parking</b>		
OFF-STREET PARKING	527	EXISTING



▲ **INFILL DEVELOPMENT BETWEEN PINE OAK ROAD AND WAXHAW PARKWAY**



▲ **EXISTING DEVELOPMENT ON NC-16**



▲ **PROPOSED INFILL DEVELOPMENT WITH FRONTAGE ROAD**



▲ **BYRUM VILLAGE EAST AND BYRUM VILLAGE WEST**



▲ **CHURCH SITE**



▲ **ST. ALBAN'S CHURCH**



▲ **PRESCOT**



▲ **BAXTER VILLAGE YMCA**



▲ **COMMUNITY PARKS**

## **D-9** Site civic buildings and amenities along the Highway 16 corridor

Future commercial and residential growth along Highway 16 will demand more parks, schools, community centers and other civic services. Parks and civic uses should be spaced appropriately along the corridor at important sites to meet the growing need for these services.

The Corridor Plan includes both small-scale civic improvements intended to meet individual neighborhood needs (such as community gardens, basketball courts, etc.), and large-scale facilities intended to serve the entire Town of Waxhaw (such as elementary schools and the Carolina Thread Trail extension). The plan shows civic sites in locations that provide a mix of passive and active uses for people of all ages, sized according to their location and intended function.

Recommendations for major civic sites/uses in the Corridor Plan (see opposite page) include the following:

- > Two potential school sites: one within Prescott and the other in the proposed Byrum Village development. (These sites have been chosen because of their size, their accessibility via existing roads, and their proximity to existing and proposed neighborhoods. All sites would have to be approved by Union County Public Schools.)
- > A church option near The Shoppes at Howard's Mill on Cuthbertson Road- shown on adjacent page behind the existing dental office .
- > Various play fields and opportunities for active recreation.
- > A regional greenway and open space network in association with the proposed Carolina Thread Trail extension and various low-lying and flood-prone areas throughout the study area.
- > Urban agriculture and active recreation opportunities in each residential neighborhood.

Each of these civic uses serves an important function and must be integrated into the future of the Highway 16 Corridor to attract new people to Waxhaw and strengthen the existing/community. [\$\$\$\$] [O/C] [Ongoing] [Code/Policy]

## **D-10** Work with local leaders and county officials to establish a park and ride lot

Waxhaw does not currently have transit service. CATS Route 61X travels along Highway 16, Uptown Charlotte but does not come south of I-485. With the redevelopment of Highway 16, continuing growth in Waxhaw, and the identification of a suitable Park and Ride Lot for use by CATS, it may be feasible to extend the 61X, or another express route, to Waxhaw in the future.

This would be an important addition to the transportation options available in Waxhaw. Transit service will decrease congestion along Highway 16, support a greater diversity of housing types, and help to attract the growing number of people who prefer transit to personal automobiles, specifically, educated younger workers and retired empty-nesters.

The most viable location for a Park and Ride Lot is at Cureton Town Center because it has immediate access to Highway 16 and excess parking spaces. This would also help to support existing and new development at Cureton Town Center as users of the Park and Ride Lot would be likely to spend money at nearby businesses. The location of the Park and Ride Lot should be re-evaluated as Cureton Town Center fills in, and its normal parking demands increase. In that instance, Byrum Village may be an appropriate alternative location for a Park and Ride lot in the future. [\$] [C] [11-15]



Source: Charmeck.org

### ▲ CHARLOTTE AREA TRANSIT SYSTEM (CATS) BUS



# CLARIFY THE REGULATIONS

**Land development regulations** work best when they are clear, coherent and predictable.

**Clear:** Clearly-stated regulations are easy for all audiences, including professionals and citizens, to understand. This means that regulations are stated succinctly, illustrated effectively, and established in an ordinance (or ordinances) with a recognizable structure.

**Coherent:** The coherence of regulations refers to the way that individual regulations with their own narrow aims work together to achieve a common vision. A coherent regulatory environment is made possible by a development review process that encourages desired development outcomes through expeditious approvals.

**Predictable:** Predictability means different things to neighbors, developers and the municipality. For neighbors, predictability means that new development will be appropriate and compatible to existing neighborhoods. For developers, predictability means that project approvals are promptly granted by the municipality when the specific requirements of the ordinance are met. For the municipality, predictability means the regulations result in consistently high-quality development outcomes that contribute lasting value to the community.

**Conditional Use Districts:** Waxhaw's land development regulations are established and administered in the town's Unified Development Ordinance (UDO). There are a number of substantive and procedural problems with the UDO that undermine the clarity, coherence and predictability of the regulations. Perhaps the most challenging and pervasive regulatory problem along the Highway 16 corridor is the predominance of Conditional Use Districts.

Conditional Use Districts are districts that do not have any by-right uses. Instead, land uses are either prohibited or they are permitted as a Conditional Use requiring extra review. The effect of Conditional Use District zoning is that all development proposals within such districts are required to go through a quasi-judicial development review process. In the Town of Waxhaw that quasi-judicial process is administered by the Board of Commissioners.

The intent of the Conditional Use District tool is to ensure a high quality of development within Waxhaw by giving the Board of Commissioners an extra measure of control over development approvals. Although Conditional Use Districts offer greater board control of development applications, municipalities should be careful not to overuse this tool for several reasons.

## eight: clarify the regulations

First, because development approvals within Conditional Use Districts involve a quasi-judicial process, Conditional Use Districts can be very unpredictable for developers. Without sufficient design guidance within the ordinance, applicants are at the whim of the approving authority. Negotiations occur on a case-by-case basis, which means that developers are unable to reliably project the development potential of their sites. This can lead to unexpected and unnecessary conditions that discourage good development.

The quasi-judicial nature of Conditional Use approvals can also be problematic when administered by the elected governing body. In a quasi-judicial proceeding, the applicant and the approving authority are bound by competent testimony and findings-of-fact to rule on a narrow interpretation of the ordinance. This is an awkward procedure for town boards or city councils that are accustomed to the freedom offered by legislative proceedings for engaging in broad conversations about the public interest. As such, it is not uncommon for town boards that administer quasi-judicial processes to fall into the trap of imposing development conditions that are not backed by guidance from the ordinance. Although such conditions may be perfectly acceptable within the bounds of a legislative proceeding, this can leave the municipality vulnerable to a lawsuit.

Further, elected bodies like city councils and town boards don't necessarily have the expertise to oversee a quasi-judicial design review. The quasi-judicial process offers some room to negotiate development conditions that ensure a proposed use or development plan is "in harmony with the area in which it is to be located." Establishing appropriate conditions however, typically requires the expertise of trained design professionals who understand the implications of development proposals and potential development conditions.

While it is possible that a town board may be populated by a group of commissioners who are fluent in design and perfectly capable of rendering effective development review decisions, the next election might replace that group with commissioners who do not share this capacity. For this reason, quasi-judicial development review decisions are better left to appointed boards or commissions, like a design review board, composed of local professionals in the architecture and planning field. This arrangement is more likely to yield consistent results and less likely to lead to legal action as a result of municipal overreach.

Finally, an overreliance on Conditional Use Districts leads to a regulatory environment that is extremely cumbersome for municipal staff to manage. Approvals for development within a Conditional Use District typically come with a

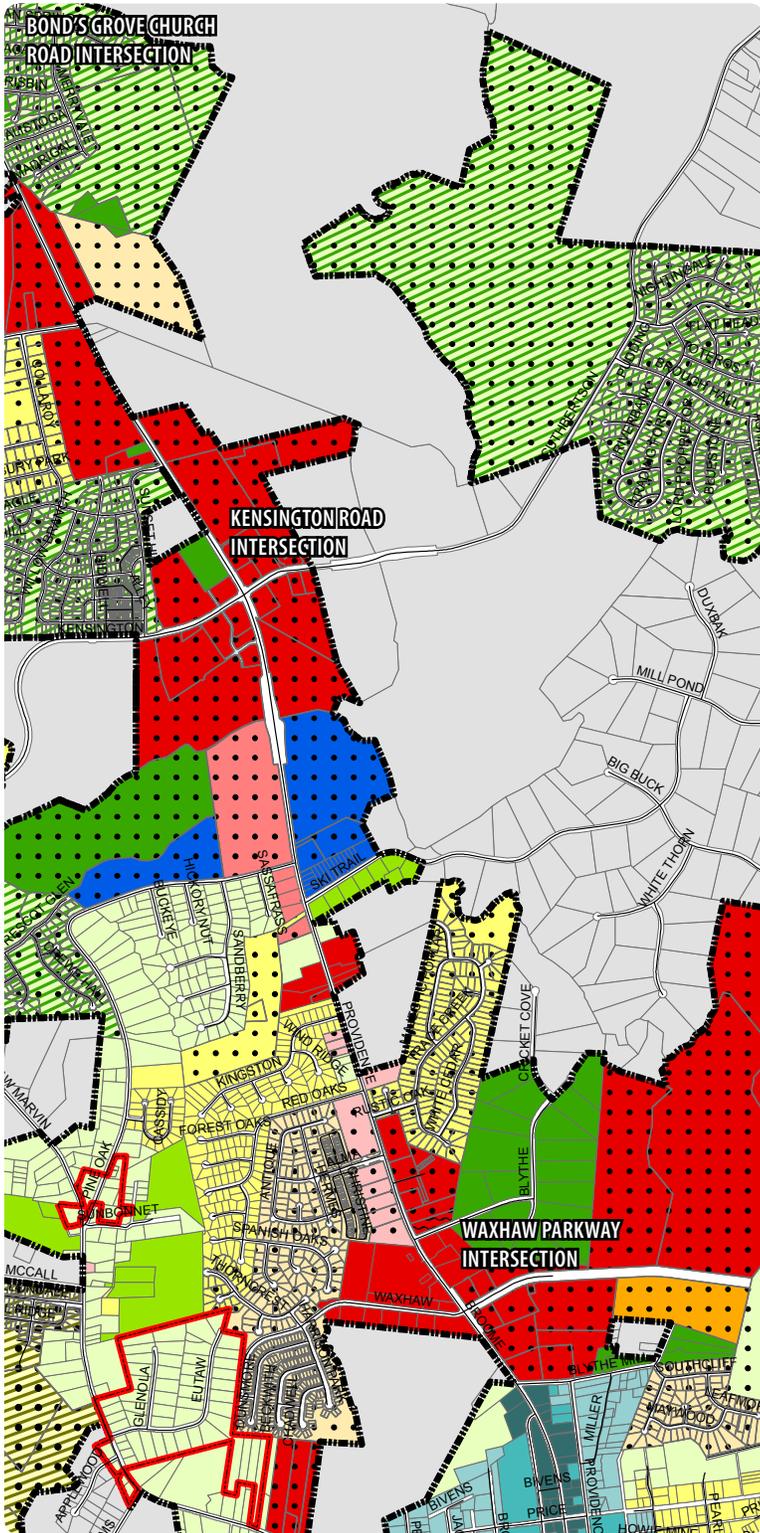
### Waxhaw's Conditional Use Districts

Conditional Use Districts may be appropriate as a regulatory mechanism in **limited** instances, such as heavy industrial areas. In such instances the Conditional Use permits should be reviewed and approved by an **appointed board**, such as an independent design review board, not the municipality's elected governing body.

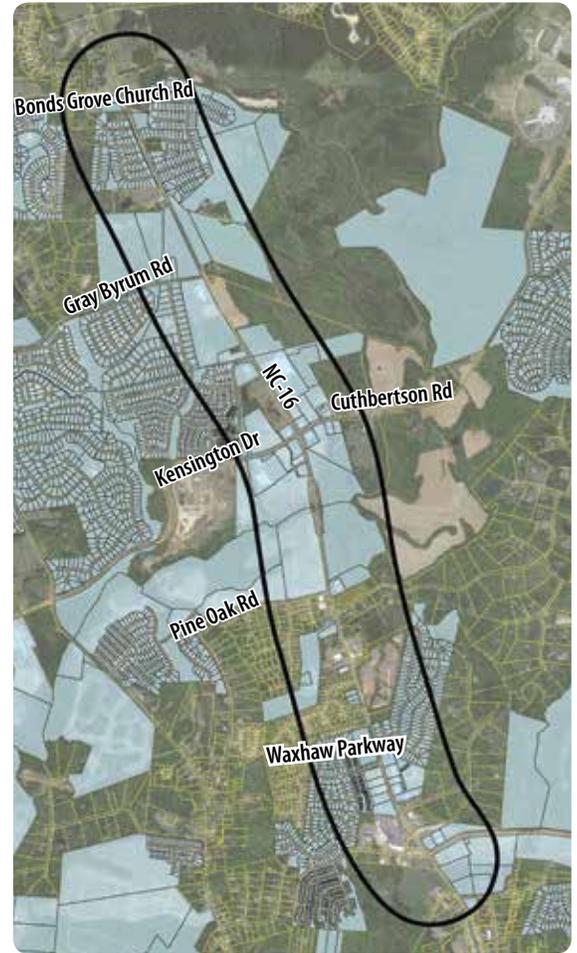
Currently, **more than half** of the land within the Highway 16 corridor is zoned as some type of Conditional Use District. (See Existing Zoning and Conditional Use District maps, opposite.)

Waxhaw's **overreliance** on Conditional Use Districts is problematic because:

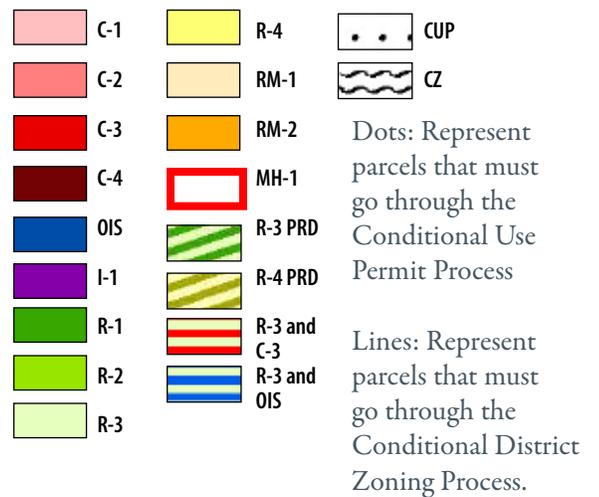
- > It has led to an unpredictable development environment for developers, neighbors and the town;
- > It has created a protracted development review process and unnecessarily long Town Board meetings;
- > It complicates the ongoing administration and enforcement of the town's UDO by staff; and
- > Ultimately, it may leave the town vulnerable to lawsuits.



▲ WAXHAW EXISTING ZONING



▲ CONDITIONAL USE DISTRICTS



**EXISTING ZONING SUMMARY TABLE**

	(C-1) NEIGHBORHOOD COMMERCIAL DISTRICT	(C-2) HIGHWAY COMMERCIAL DISTRICT	(C-3) GENERAL COMMERCIAL DISTRICT	(OIS) OFFICE, INSTITUTIONAL & SPECIALTY DISTRICT
<b>MINIMUM LOT AREA</b>	10,000 sq ft	24,000 sq ft	28,000 sq ft	5,000 sq ft is base requirement for first building, for each additional structure add 50% of base requirement
<b>MINIMUM LOT WIDTH AT BUILDING LINE</b>	75 ft	150 ft	100 ft	50 ft
<b>MINIMUM LOT DEPTH</b>	75 ft	150 ft	100 ft	50 ft
<b>MAXIMUM LOT COVERAGE</b>	80% of the gross lot area	80% of the gross lot area	75% of the gross lot area	85% of the gross lot area
<b>MAXIMUM HEIGHT OF BUILDING</b>	45 ft principal building, 25 ft accessory building	45 ft principal building, 45 ft accessory building	80 ft principal building, 80 ft accessory building	45 ft principal building, 25 ft accessory building
<b>FRONT YARD MINIMUM SETBACK</b>	20 ft	20 ft	40 ft	20 ft
<b>SIDE YARD MINIMUM SETBACK</b>	10 ft* on interior lot, 20 ft on corner or street side lot  * When abutting Residential or Office zone, add 10' to setback	10 ft* on interior lot, 20 ft on corner or street side lot  * When abutting Residential or Office zone, add 10' to setback	10 ft* on interior lot, 20 ft on corner or street side lot  *When abutting Residential or Office zone, add 10' to setback	8 ft on interior lot, 18 ft on corner or street side lot
<b>REAR YARD SETBACK</b>	20 ft, except 30 ft when abutting a Residential zone	20 ft, except 30 ft when abutting a Residential zone	20 ft, except 30 ft when abutting a Residential zone	20 ft
<b>MAXIMUM FLOOR AREA</b>	No single retail establishment shall exceed 8,000 sq ft or 12,000 sq ft for a multi-tenant use.	No single retail establishment shall have a footprint that exceeds 62,500 sq ft	No single retail establishment shall have a footprint that exceeds 62,500 sq ft	No single retail establishment shall exceed 5,000 sq ft, except through conditional use permit.
<b>PARKING REQUIREMENTS</b>	Parking requirements per use, may apply for reduction in required parking spaces.  New on-street parking may be utilized to fulfill parking requirement.	Parking requirements per use, may apply for reduction in required parking spaces.  New on-street parking may be utilized to fulfill parking requirement.	Parking requirements per use, may apply for reduction in required parking spaces.  New on-street parking may be utilized to fulfill parking requirement.	Parking requirements per use, may apply for reduction in required parking spaces. New on-street parking may be utilized to fulfill parking requirement.
<b>SCREENING</b>	Screening shall be provided for parking areas adjacent to street, service entrances, loading docks or spaces, storm water basins, open storage and unenclosed structures, dumpsters or trash handling areas, and utility and mechanical equipment.			
<b>BUFFERING</b>	Use landscape as buffer. Requirement may be reduced or waived when abutting a similar or compatible use, or when topography makes adherence to regulation useless.			

**Waxhaw's Base Districts**

In general, the overreliance on Conditional Use Districts in Waxhaw is indicative of a problem with the base districts established in the UDO. These base districts have not provided ideal development outcomes, so the Conditional Use District process has been applied as a Band-Aid solution to the larger structural issues with the ordinance. This suggests that the governing body has resorted to micro-managing development applications because the existing zoning is broken.

**EXISTING ZONING SUMMARY TABLE (CONT.)**

(RM-1) MULTI FAMILY RESIDENTIAL DISTRICT	(R-4) SINGLE FAMILY RESIDENTIAL DISTRICT	(R-3) SINGLE FAMILY RESIDENTIAL DISTRICT	(R-2) SINGLE FAMILY RESIDENTIAL DISTRICT	(R-1) SINGLE FAMILY RESIDENTIAL DISTRICT
9,000 sq ft is base requirement for first unit, add 50% of base for each additional unit	12,000 sq ft is base requirement for first building, for each additional structure add 50% of base requirement	20,000 sq ft	40,000 sq ft	100,000 sq ft
60 ft	60 ft	60 ft	75 ft	75 ft
60 ft	60 ft	60 ft	75 ft	75 ft
70% of the gross lot area	75% of the gross lot area	60% of the gross lot area	40% of the gross lot area	30% of the gross lot area
45 ft principal building, 25 ft accessory building	45 ft principal building, 25 ft accessory building	45 ft principal building, 25 ft accessory building	45 ft principal building, 25 ft accessory building	45 ft principal building, 25 ft accessory building
30 ft	20 ft	30 ft	30 ft	30 ft
10 ft on interior lot, 20 ft on corner or street side lot	10 ft on interior lot, 20 ft on corner or street side lot	10 ft on interior lot, 20 ft on corner or street side lot	10 ft on interior lot, 20 ft on corner or street side lot	15 ft on interior lot, 25 ft on corner or street side lot.
30 ft	30 ft	30 ft	30 ft	30 ft
<i>not specified</i>	<i>not specified</i>	<i>not specified</i>	<i>not specified</i>	<i>not specified</i>
Parking MAXIMUM is as follows: Studio: 1.25 per dwelling unit One Bedroom: 1.5 per dwelling unit Two or more Bedrooms: 2 per dwelling unit	Single Family is exempt from parking requirements	Single Family is exempt from parking requirements	Single Family is exempt from parking requirements	Single Family is exempt from parking requirements.
Screening shall be provided for parking areas adjacent to street, service entrances, loading docks or spaces, storm water basins, open storage and unenclosed structures, dumpsters or trash handling areas, and utility and mechanical equipment.				
Use landscape as buffer. Requirement may be reduced or waived when abutting a similar or compatible use, or when topography makes adherence to regulation meaningless.				

eight: **clarify the regulations**

separate set of conditional standards that must be maintained and enforced in addition to the standards of the ordinance. A large number of Conditional Use Districts creates a large number of additional districts and conditional standards that have to be incorporated into the administration of the ordinance.

**Approaches to Regulatory Reform:** In order to support the development recommendations within this plan and other recently adopted plans (e.g. the Downtown Vision Plan and the Downtown Neighborhoods Plan), the town should amend its development regulations to improve their clarity, coherence and predictability. Addressing the town’s overreliance on Conditional Use Districts will be a significant part of that effort.

There are a number of steps that Waxhaw can take to address the problems with its regulatory environment. The most effective approach would be a comprehensive update of the town's UDO, including

- > addressing procedural issues,
- > improving design guidance,
- > repairing the base district standards,
- > introducing form-based regulations, completing necessary map amendments, and
- > simplifying ordinance administration.

Short of a comprehensive zoning update however, there are several interim solutions that the town could apply to improve the function and predictability of the UDO.

The table below lists these general approaches and identifies specific action items within each approach that provide more detail for implementing meaningful regulatory reform.

**APPROACHES TO REGULATORY REFORM**

APPROACH	PROS & CONS	RELEVANT ACTION ITEMS
<p><b>Approach 1</b>  <b>Complete a Comprehensive Update of the town’s UDO.*</b></p> <p><i>*NOTE: A comprehensive update of the UDO necessarily includes a consideration of the the Action Items from Approach 2.</i></p>	<p>Pros</p> <ul style="list-style-type: none"> <li>• Most comprehensive approach - addresses procedural issues, improves design guidance, repairs base district standards, introduces form-based regulations, completes necessary map amendments, and simplifies ordinance administration in a single effort</li> </ul> <p>Cons</p> <ul style="list-style-type: none"> <li>• Requires a greater commitment of resources (in the short term) to complete major revisions</li> </ul>	<p>R-1: Adopt growth sectors in the Comprehensive Plan that create new community types, instead of large-parcel single-use zoning</p> <p>R-2: Repair the base districts in the UDO and eliminate Conditional Use Districts along the Highway 16 Corridor</p> <p>R-3: Simplify and reformulate the development review process</p>
<p><b>Approach 2</b>  <b>Establish more detailed design and development guidance within the current UDO framework to improve its function and predictability.</b></p>	<p>Pros</p> <ul style="list-style-type: none"> <li>• Offers greater predictability for neighbors, developers and the town</li> <li>• Can utilize the Downtown Code as a model</li> </ul> <p>Cons</p> <ul style="list-style-type: none"> <li>• Doesn't fully address procedural and ordinance administration issues</li> <li>• More time consuming and costly (over the long term) to implement piecemeal revisions</li> </ul>	<p>R-4: Establish clear guidelines to expedite the approval of small lot single-family and townhome development</p> <p>R-5: Establish clear guidelines to expedite the approval of multifamily development</p> <p>R-6: Establish standards to mitigate the impact of large-format national retailers</p> <p>R-7: Revise open space policies to ensure new residents are close to parks and greenways</p> <p>R-8: Utilize overlay districts (tied to districts and context zones on page 149 and 150) to support the recommendations of the corridor plan</p> <p>R-9: Utilize parallel form-based zoning districts to offer a by-right choice for rezoning.</p>

**Approach 1 - Complete a Comprehensive Update**

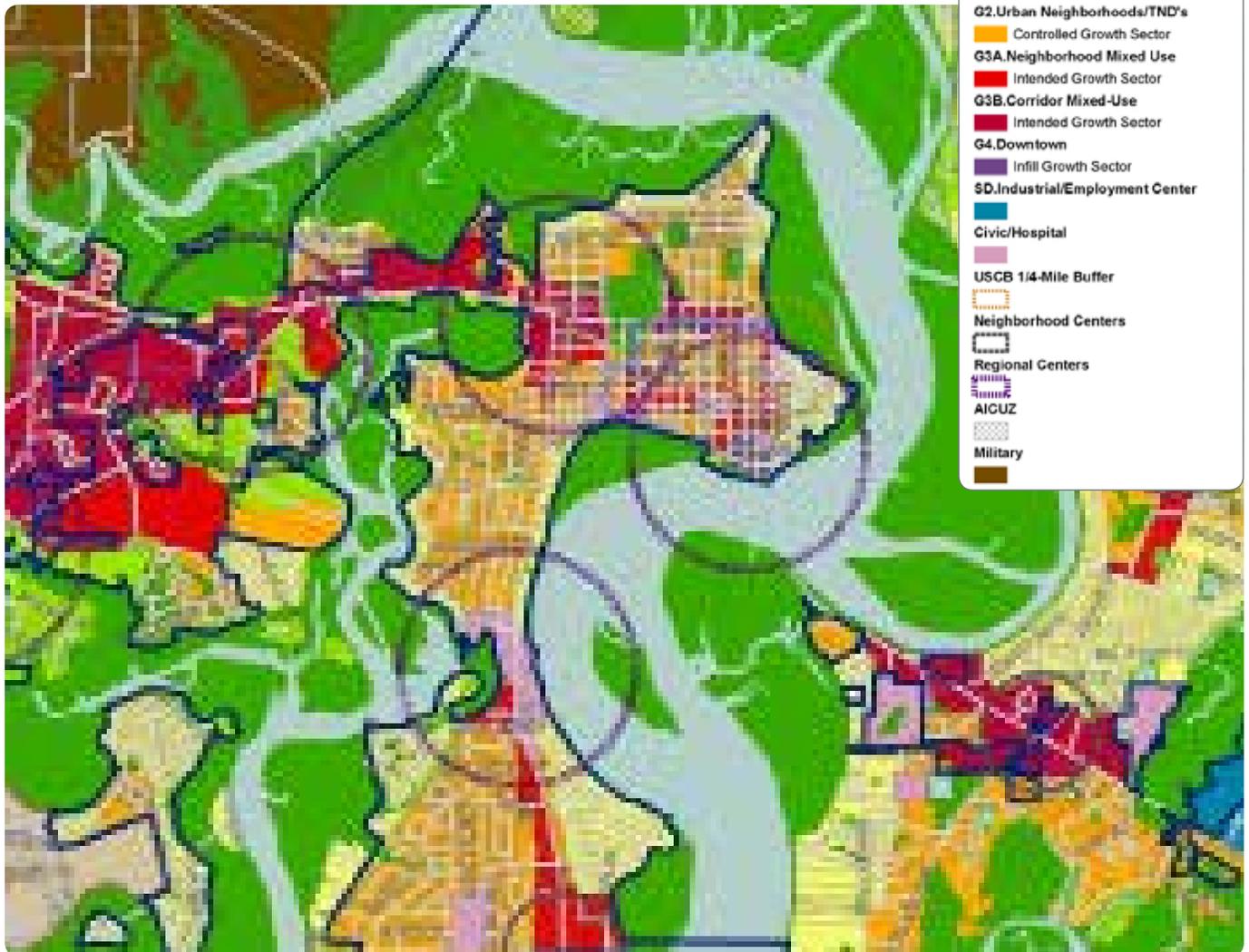
Action items R-1 through R-3 constitute the primary recommendations for Approach 1, however the comprehensive nature of the first approach necessarily includes a consideration of the the action items listed for the second approach.

**R-1 Adopt growth sectors in the 2014 Comprehensive Plan Update**

Future land use maps help to translate the vision for growth described in a community comprehensive plan to the regulations within zoning and subdivision ordinances. The first step to completing a comprehensive update of

the town's UDO should be a revision of the Comprehensive Plan and Future Land Use map to coincide with the recommendations of the town's recently adopted plans. This revision should incorporate growth sector designations that provide a more detailed and nuanced framework for development regulations than the single-use designations currently used in the Future Land Use Map. This is especially important to support the development recommendations for the large parcels of land along Highway 16.

Some of the parcels within the Highway 16 study area are several hundred acres in size. Parcels this large require a development approach that allows a range



▲ GROWTH SECTOR DESIGNATIONS - BEAUFORT, SC

eight: **clarify the regulations**

of potential, complementary land uses that create complete neighborhoods. As such, it is inappropriate to apply future land use designations to these parcels based on categories defined by a single land use. Instead, growth sectors should be utilized that rely on community types with a mix of uses and buildings, as illustrated in the example from Beaufort, South Carolina on the previous page.

A Growth Sector Map should be adopted to replace or complement the existing Future Land Use Map and establish a framework for community growth focused on the creation of different community types. The example from Beaufort illustrates how a contemporary growth framework (identifying Restricted Growth, Controlled Growth, and Intended Growth Sectors) can be incorporated within a more traditional Future Land Use Map.

Action Items D-2 and D-3 in Chapter 7 describe three major community types that should be incorporated within the Future Land Use

Map: Regional Center Development (RCD), Traditional Neighborhood Development (TND), and Clustered Land Development (CLD). Each of these community types incorporates a range of development intensities and uses across a large land area. Most of the development recommendations described in this plan fall into one of these three community types. A map of potential types is shown on page 148.

In order to support the development recommendations in this plan and establish a framework for a comprehensive update of the town's UDO, Waxhaw's Future Land Use Map should be amended to identify sectors for Restricted Growth, Controlled Growth and Intended Growth. Regional Center Developments are appropriate within Intended Growth Sectors; Traditional Neighborhood Developments are appropriate within Intended Growth and Controlled Growth Sectors; and Clustered Land Developments are appropriate within Controlled Growth and Restricted Growth Sectors. [1-5/ Ongoing] [Code/Policy]

### Case Study: Clustered Land Development

Located 32 miles south of Atlanta, the 1,000 acre Serenbe community preserves over 70% of the acreage for open space and woods and 30 acres are dedicated to farming. The community is projected to have approximately 1,000 to 1,200 units when it is complete. Clustered land developments include large tracts of preserved open space and farmland, medium density housing and small opportunities for neighborhood commercial uses.

Source: [www.serenbecommunity.com](http://www.serenbecommunity.com)



### Case Study: Regional Center Development

Birkdale Village in Huntersville, NC is a 52 acre community with 320 apartments, 300,000 square feet of retail space, and 200,000 square feet of office space. 7.4 acres are dedicated to the McDowell Creek floodplain. An example of a Regional Center, Birkdale Village includes higher density multi- and single family housing, regionally supported retail, formal open spaces and a diversity of office spaces.

*Source: MacDonald, Joseph, Michael Holmes, Phillip Berke. "Case Study of Birkdale Village, NC: Comprehensive report of the Impact of Urban Design on Water Resources." (2003)*



### Case Study: Traditional Neighborhood Development

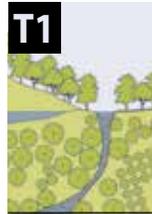
Baxter Village in Fort Mill, South Carolina includes 1,033 total acres, of which 500 acres are preserved as open space. In 2006, over 850 families lived in Baxter Village. A TND example, Baxter Village is primarily comprised of single family residential with locally serving retail and civic amenities for residents.

*Source: Miller, Jason. The Town Paper. "Baxter Village: Progress and Preservation." (2006)*



“Mixing land uses—commercial, residential, recreational, educational, and others—in neighborhoods or places that are accessible by bike and foot can create vibrant and diverse communities.”  
-Getting to Smart Growth

Source: DPZ; adapted for Waxhaw



**T-1 NATURAL**

**General Character:** Natural landscape with some agricultural use  
**Building Placement:** Not applicable  
**Frontage Types:** Not applicable  
**Typical Building Height:** Not applicable  
**Type of Civic Space:** Parks, Greenways



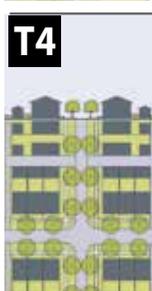
**T-2 RURAL TRANSITION**

**General Character:** Primarily agricultural with woodland & wetland and scattered buildings  
**Building Placement:** Variable Setbacks  
**Frontage Types:** Not applicable  
**Typical Building Height:** 1- to 2-Story  
**Type of Civic Space:** Parks, Greenways



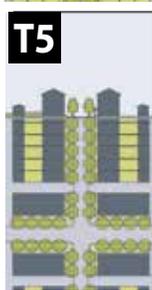
**T-3 SUB-URBAN**

**General Character:** Lawns, and landscaped yards surrounding detached single-family houses;  
**Building Placement:** Large and variable front and side yard Setbacks  
**Frontage Types:** Porches, fences, naturalistic tree planting  
**Typical Building Height:** 1- to 2-story with some 3-Story  
**Type of Civic Space:** Parks, Greenways



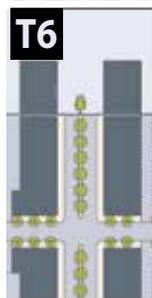
**T-4 NEIGHBORHOOD MIXED USE**

**General Character:** Mix of houses, townhouses & small apartment buildings, with scattered commercial activity; balance between landscape and buildings; presence of pedestrians  
**Building Placement:** Shallow to medium front and side yard Setbacks  
**Frontage Types:** Porches, fences  
**Typical Building Height:** 2- to 4-story with a few taller mixed use buildings  
**Type of Civic Space:** Squares, Greens



**T-5 TOWN CENTER**

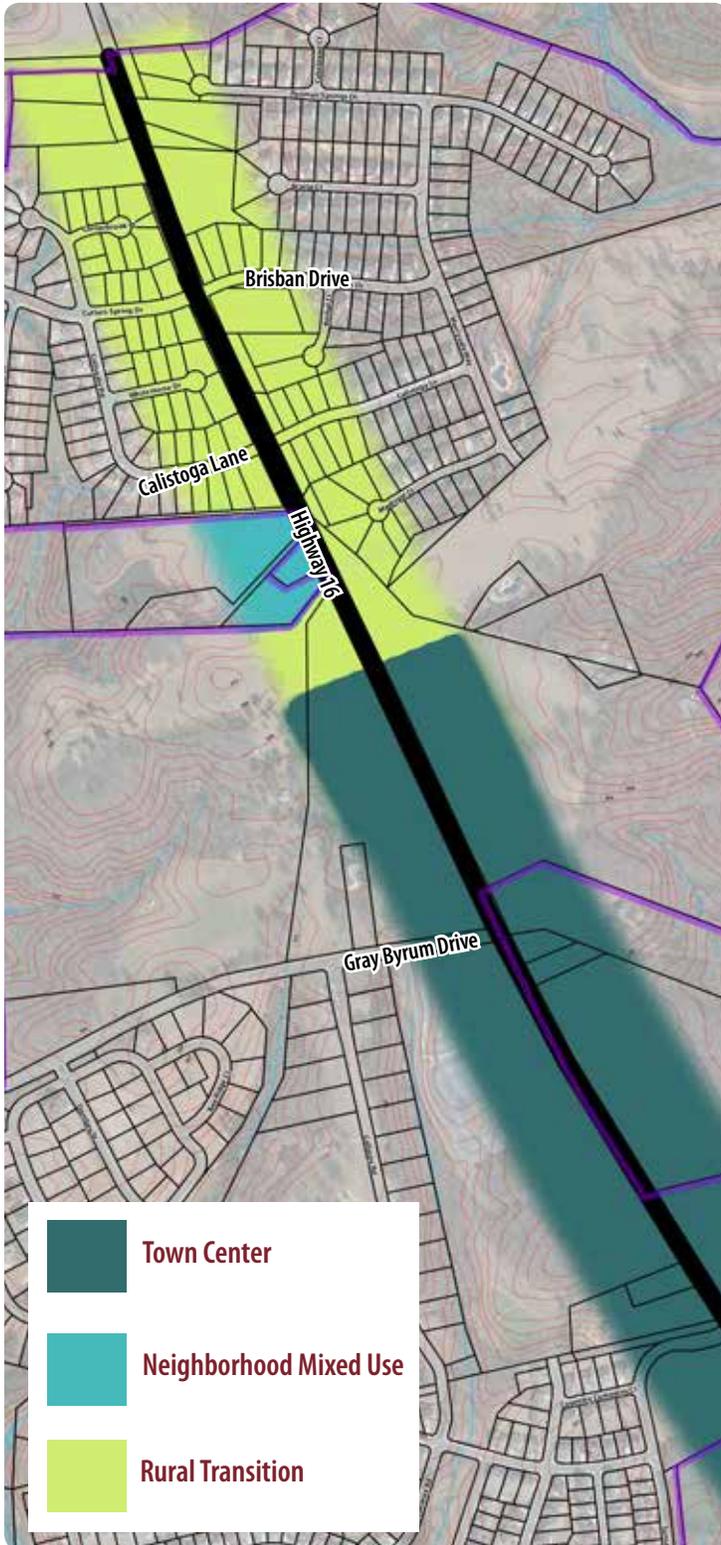
**General Character:** Shops mixed with townhouses, larger apartment houses, offices, workplace, and civic buildings; predominantly attached buildings; trees within the public right-of-way; substantial pedestrian activity  
**Building Placement:** Shallow setbacks or none; buildings oriented to street defining a street wall  
**Frontage Types:** Stoops, shopfronts, arcades  
**Typical Building Height:** 2- to 5-story with some variation  
**Type of Civic Space:** Parks, Plazas and Squares, median landscaping



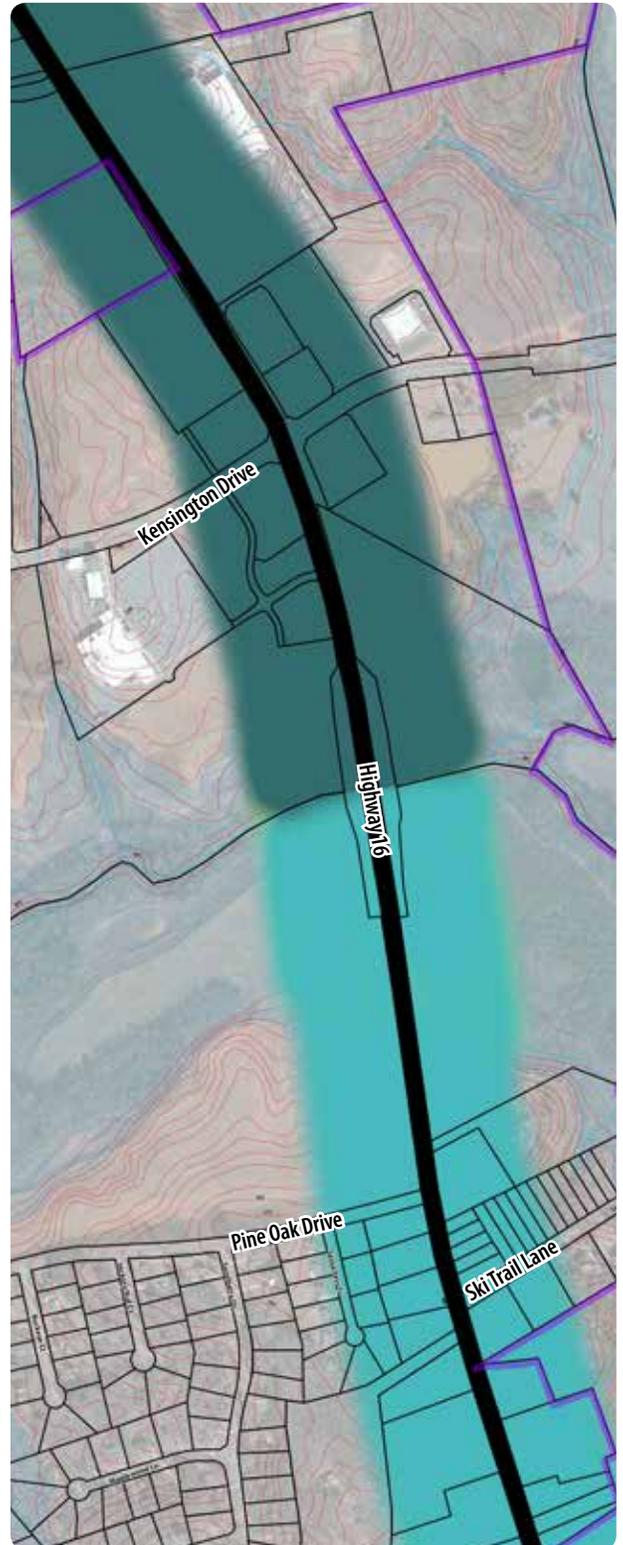
**T-6 URBAN CORE**

**General Character:** Medium to high-density mixed use buildings, entertainment, civic and cultural uses. Attached buildings forming a continuous street wall; trees within the public right-of-way; highest pedestrian and transit activity  
**Building Placement:** Shallow setbacks or none; buildings oriented to street, defining a street wall  
**Frontage Types:** Stoops, shopfronts, and arcades  
**Typical Building Height:** 2- to 4-story with a few taller buildings  
**Type of Civic Space:** Parks, Plazas and Squares; median landscaping

**▲ TRANSECT ZONES**

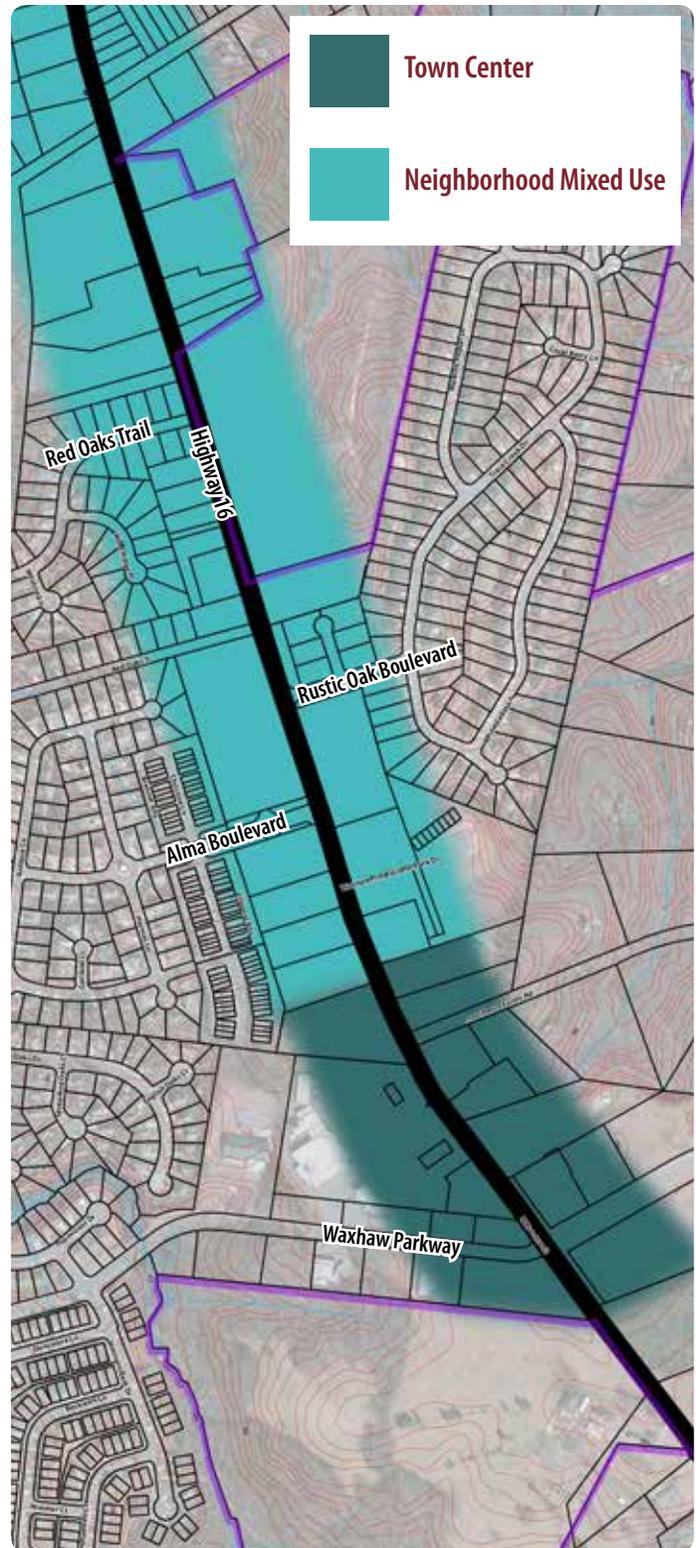


▲ FRONTAGE REGULATING PLAN - BOND'S GROVE CHURCH ROAD TO SUNSET HILL ROAD



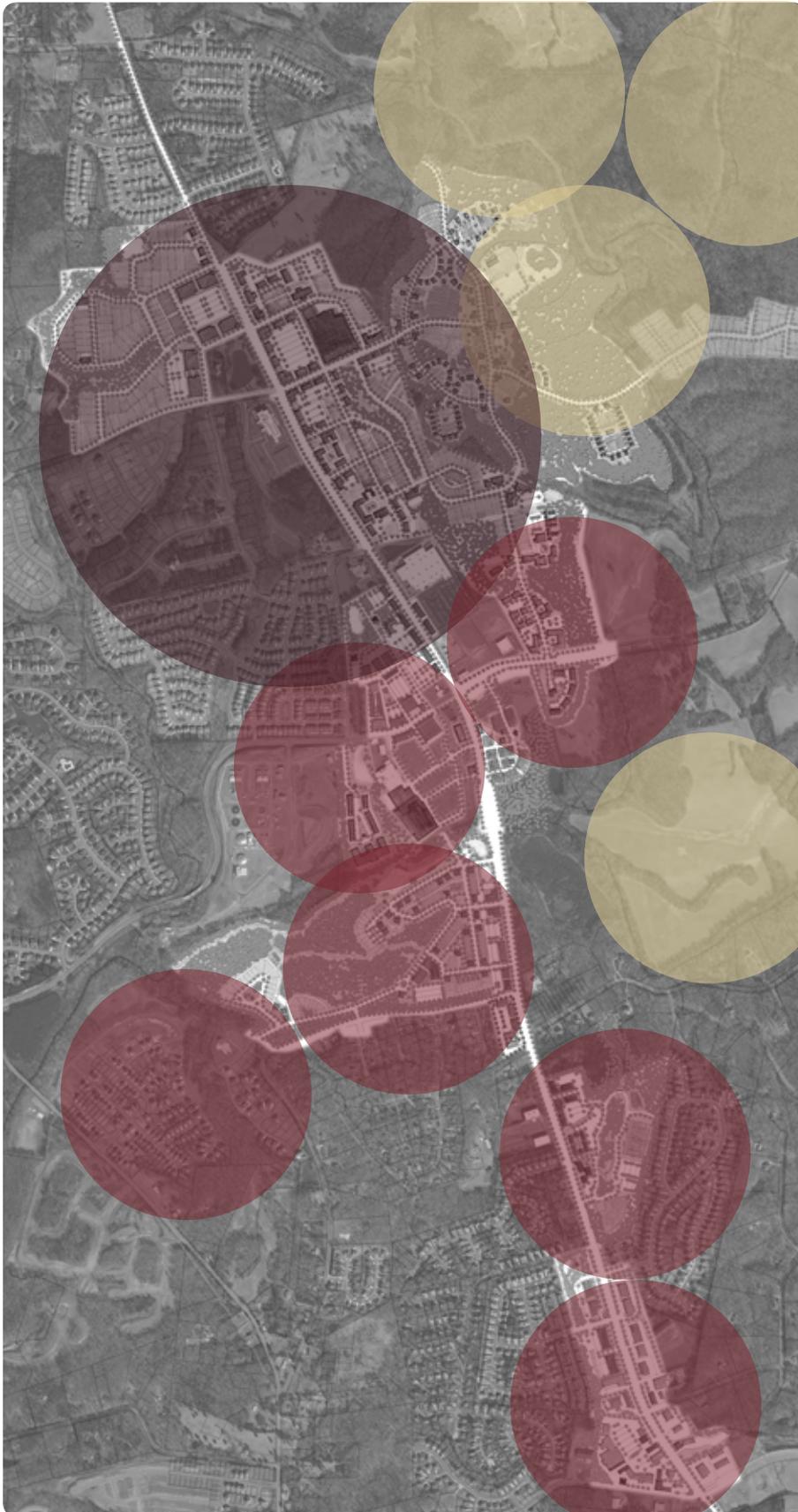
▲ FRONTAGE REGULATING PLAN - SUNSET HILL ROAD TO SKI TRAIL LANE

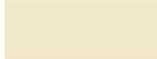
eight: **clarify the regulations**



**▲ FRONTAGE REGULATING PLAN - SKI TRAIL LANE TO WAXHAW PARKWAY**

The community types are described in the text on the prior pages. With the size of the parcels it is appropriate to have multiple transect and context zones along the corridor.



-  **Regional Center Development**  
(1/2 Mile Walking Radius)  
T4 = 10-30%  
T5 = 10-30%  
T6 = 40-80%
  
-  **Traditional Neighborhood Development**  
(1/4 Mile Walking Radius)  
T2 = No Minimum  
T3 = 10-30%  
T4 = 30-60%  
T5 = 10-30%
  
-  **Clustered Land Development**  
(1/4 Mile Walking Radius)  
T1-T2= 50%  
T3 = 10-30%  
T4 = 20-40%

▲ **GROWTH SECTOR FRAMEWORK FOR HIGHWAY 16 CORRIDOR**

## **R-2** Repair the base districts in the UDO and eliminate Conditional Use Districts along the Highway 16 corridor

With an appropriate growth sector framework in place, the detailed work of revising the base districts within the current UDO can begin. Currently the base districts in the majority of the study area allow, with a Conditional Use Permit, high intensity commercial development. While appropriate in targeted areas to meet market demand, many areas would be more appropriate with a revised district designation. Balancing developer/property owner expectations with the town/public vision for Highway 16 should guide the base district revisions. Revisions to the base district standards should be accomplished in two ways.

First, the town should use form-based regulatory strategies in order to precisely implement the intent and vision described in its adopted plans. The Downtown Vision Plan and Downtown Neighborhoods Plan, in addition to this plan, provide detailed, site-specific recommendations for development. These approved recommendations can be translated into specific, form-based district standards that will ensure development outcomes match the shared vision

of these groups. The recently-adopted Waxhaw Downtown Code utilizes form-based districts that could be expanded and adapted to other areas of town for this purpose.

Form-based regulations differ from conventional zoning by emphasizing the elements that affect the way a community looks and feels. Conventional zoning approaches, like most of Waxhaw's current regulations, focus primarily on land use, lot size, and parking requirements. Form-based codes focus on the elements that frame the public realm, such as building type, frontage, streetscape design, and public spaces. Form-based codes are much less concerned with the uses that occur inside buildings than with ensuring that buildings are contextually appropriate, support a cohesive streetscape environment, and contribute value to the public realm. The renderings below illustrate some differences in typical development outcomes under conventional zoning and form-based codes.

Second, the common conditions shared across various Conditional Use Permit approvals should be codified. This will allow many of the existing Conditional Use Districts to be eliminated and absorbed within the updated base districts and simplify the administration of the ordinance for

### **Conventional Zoning**

*Separated land uses, poor streetscape character, auto-oriented*



### **Form-Based Codes**

*Mixed land uses, focus on the public realm, pedestrian-oriented*



## **▲ CONVENTIONAL ZONING VS. FORM-BASED CODES**

town staff. This could include specific material standards, access management requirements, setbacks and use restrictions. [1-5] [Code/Policy]

### **R-3 Simplify and reformulate the development review process**

Once the UDO has been amended to clearly and precisely communicate the town's desired development outcomes through form-based regulations, the process should be amended to allow applications that meet those requirements to be automatically approved by-right. Waxhaw town staff should be empowered to administratively approve development applications that meet the conditions of the UDO.

Too many development applications in Waxhaw are referred to the Board of Commissioners for approval. This results in cumbersome Town Board meetings and an unpredictable and inefficient development review process. Any comprehensive update of the UDO should include improvements to the development review process that allow more administrative (by-right) approvals.

Quasi-judicial approvals depend on interpretation of the development ordinance. As such, quasi-judicial processes such as Conditional Use Permits are guided by a set of discretionary guidelines. In Waxhaw's UDO, there are four discretionary guidelines established to guide the review and approval of Conditional Use Permits. (See Waxhaw's Conditional Use District Guidelines, below.) These guidelines are very broad, which

leads to an inconsistent and unpredictable development process as interpretations of the guidelines can vary widely.

By contrast, quasi-judicial approvals in other municipalities, such as Wilson and Wake Forest, North Carolina, are guided by a comprehensive set of discretionary guidelines that ensure a more consistent interpretation of the ordinance.

In order to improve consistency and predictability, Waxhaw's UDO should be revised to eliminate quasi-judicial processes to the extent possible by permitting more administrative approvals guided by clear, objective standards. Any quasi-judicial processes that remain should be supported by a more robust set of discretionary guidelines to permit a narrower interpretation of the ordinance.

Further, a design review board, or other appointed board or commission, should be charged with administering quasi-judicial processes. This helps to remove quasi-judicial decision from the politicized environment of governing bodies in order to focus on the narrow findings of fact necessary to support conditions imposed through quasi-judicial proceedings. For example, in many communities large scale commercial development is approved through a quasi-judicial design review process that is administered by a planning board or a design review board. This would be an appropriate solution for Waxhaw. [1-5] [Code/Policy]

#### **Waxhaw's Conditional Use District Guidelines**

The following discretionary guidelines are established in Section 14.6 of the town's UDO. This brief set of guidelines allows for very broad interpretations of the ordinance, leading to an inconsistent and unpredictable process for neighbors, developers and the town.

1. That the use requested is among those listed as an eligible Conditional Use in the District in which the subject property is located or is to be located.
2. That the Conditional Use will not materially endanger the public health or safety if located where proposed and developed according to the plan as proposed.
3. That the Conditional Use meets all required conditions and specifications; and
4. That the location and character of the Conditional Use if developed according to the plan as proposed will be in harmony with the area in which it is to be located and in general conformity with the plan of development of Waxhaw and its environs.

**Approach 2 - Establish Detailed Design Guidance within the Current UDO Framework**

Completing the previous action items will require major substantive and procedural revisions to the town's UDO.

An interim solution to a consolidation and reassignment of the town's existing processes is to establish more detailed design and development guidance within the current UDO framework.

Actions items R-4 through R-7 discuss this interim approach by identifying specific development types for which a more robust set of development standards should be established.

Action item R-8 recommends an overlay district solution that would improve the development environment along Highway 16 without necessitating major revisions to the town's base districts.

**R-4 Establish clear guidelines to expedite the approval of small lot single-family and townhome development**

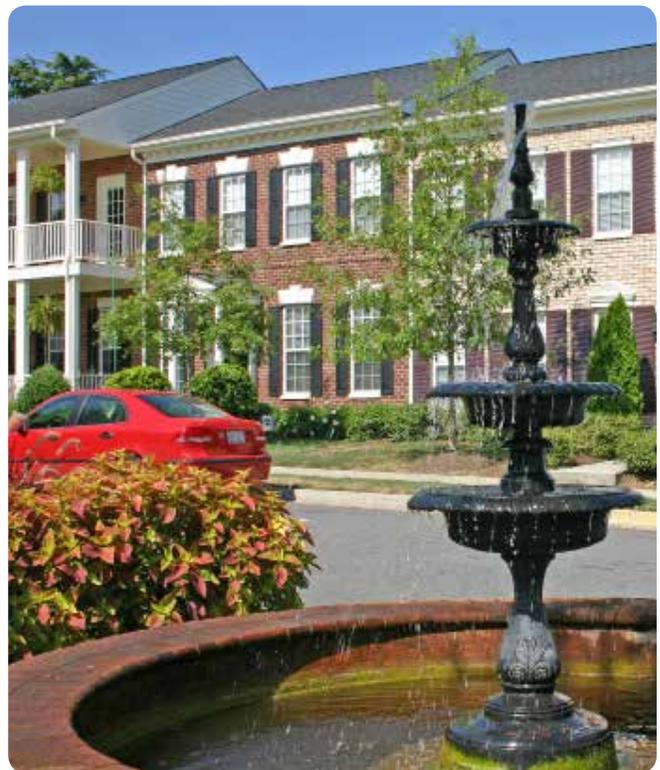
The development recommendations in this plan recognize the growing need for a greater diversity of housing products along the Highway 16 corridor. To enable this development, Waxhaw's UDO should be revised to include clear site and building design standards for homes in small lot configurations, townhomes, cottage courts, and similar single-family products (see images below).

Waxhaw's current UDO includes building and site design standards in Sections 9, 11, 12, 18 and 20. These standards should be coordinated, expanded, and in some cases changed, to support the development of new housing models within Waxhaw. Requirements for lot width, lot size, setbacks, lot access and garage placement should be reevaluated as part of that process.

The approval process should also be streamlined to allow administrative approvals wherever possible. Most subdivisions in Waxhaw are



▲ COTTAGE COURT - ST. CHARLES, MO



▲ TOWNHOMES - DAVIDSON, NC

reviewed and approved by the Board of Commissioners. The Town Board should authorize town staff or the Planning Board as the approving authority for more subdivision applications. This approach should be supported by a more coherent delineation within the UDO of the various administrative standards and discretionary guidelines applicable to development applications. [6-10] [Code/Policy]

**R-5 Establish clear guidelines to expedite the approval of multi-family development**

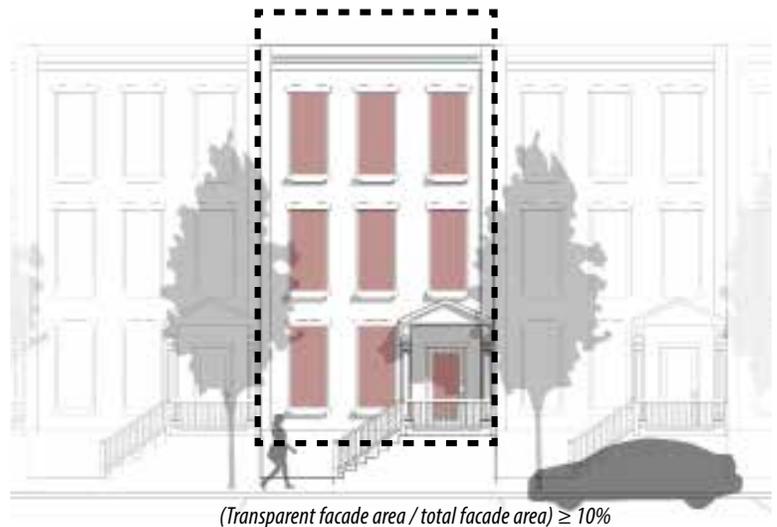
Similar to action item R-4, Waxhaw's UDO should be revised to support the multi-family housing opportunities illustrated in this plan. Waxhaw's current RM-1 and RM-2 Multi-Family Residential Districts accommodate multi-family uses, but impose site design requirements that do not support the integration of these uses within compact pedestrian-friendly neighborhoods, as recommended by this plan.



▲ **SINGLE-FAMILY ATTACHED UNITS - DAVIDSON, NC**

The UDO should be reevaluated to ensure that multi-family buildings are sited close to the street, with primary entrances to the fronting sidewalk. Parking areas should be minimized and screened from the fronting street and adjacent housing units. Building height, density and massing should be compatible with adjacent neighborhoods. Finally, connectivity across development should be required to prevent the development of isolated housing pods.

Development and design standards should be clarified through diagrams and images that illustrate regulatory intent and demonstrate the application of regulations to specific examples (see diagram examples, below). [6-10] [Code/Policy]



▲ **DIAGRAMS - TOWNHOME FACADE REQUIREMENTS**

## **R-6** Establish standards to mitigate the impact of large-format national retailers

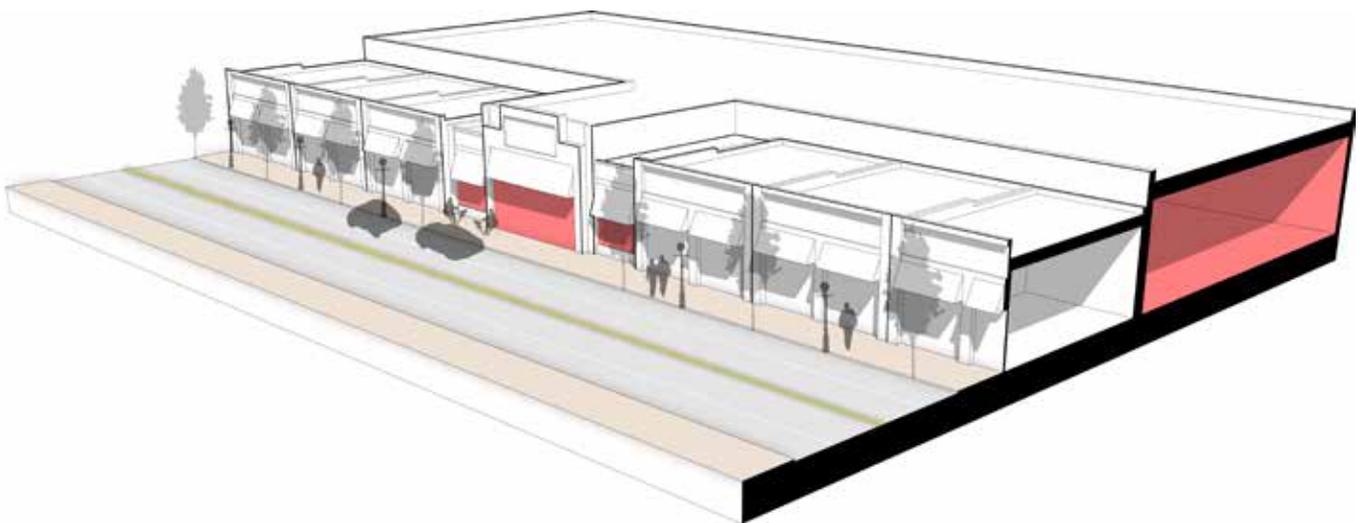
Large-format national retailers, commonly referred to as "big box stores," require special consideration within development ordinances. Big box stores are attractive to communities because of the tax revenue they generate and their ability to function as anchors for commercial and mixed-use districts.

The problem is that most big box stores provide this economic value without contributing any aesthetic, social or cultural value to the neighborhoods they are located in. Typical big box stores are located within buildings characterized by large blank walls that are surrounded on all sides by acres of parking lots and loading areas. In this format, big box stores are a hostile neighbor. They detract from the character of the public realm, cater only to automobile circulation, and contribute no lasting value to the community.

With appropriate design considerations however, big box stores can be an effective neighbor, fitting within the context of pedestrian-oriented neighborhoods and contributing meaningful value to the public realm. The Lowe's store on South Boulevard in Charlotte, North Carolina (see images, opposite) provides an ideal example

of a big box store that accomplishes these objectives. The store is located between a major vehicular thoroughfare and a pedestrian-oriented residential neighborhood. The site is designed to create an effective transition between these two environments by wrapping the Lowe's with housing on two sides, integrating retail uses in corner buildings, using appropriate traditional design treatments, and mitigating the visual impact of parking areas.

Design regulations that require this type of site layout and architectural detail should be incorporated into Waxhaw's UDO. Big box stores should be required to break up their massing with architectural detailing such as window openings, awnings, parapets, pilasters, and changes in wall plane and roof lines. Retail, apartment and/or townhome liner buildings should be incorporated into a mixed-use site plan, wherever possible, to screen the big box store (see diagram, below). Customer entrances and outdoor dining should face an appropriately-detailed streetscape with a generous sidewalk and planting strip. Finally, parking areas should be concealed by building(s) in order to continue a consistent pedestrian-oriented streetscape. [1-5/Ongoing] [Code/Policy]



▲ **BIG BOX WITH RETAIL LINER BUILDINGS AND SIDEWALK ENTRANCE**



▲ **LOWE'S SITE WITH MIXED-USE CORNER BUILDINGS - CHARLOTTE, NC**



▲ **LOWE'S WRAPPED BY HOUSING - CHARLOTTE, NC**



▲ **BIG BOX LINER WITH CAFE SEATING**

### Case Study: Discretionary Design Review

The excerpt below identifies the development types that require an extra level of discretionary design review. This design review is conducted by Wilson's Planning and Design Review Board in accordance with a set of design principles and guidelines intended to ensure community and neighborhood compatibility. The Town of Waxhaw should consider adopting a similar design review model and development thresholds for discretionary design review.

#### Wilson, NC Unified Development Ordinance (Section 5.2.2.B)

The following development types shall require discretionary design review:

1. Civic/institutional buildings,
2. All multifamily development or expansions of 8 units or more,
3. Any commercial or mixed-use development or expansion greater than 25,000 square feet,
4. All multi-tenant shopping centers, and
5. Any buildings in the CCMX and IMX districts.



▲ **VILLAGE GREEN - DAVIDSON, NC**



▲ **PLAYGROUND - DUNCAN, SC**

## **R-7** Revise open space policies to ensure new residents are proximate to parks and greenways

The Waxhaw UDO includes open space dedication requirements as a condition for development approvals within the downtown area only. Many subdivisions along Highway 16 have included common open space as a resident amenity, but the town does not require it.

Waxhaw's Park, Recreation, and Cultural Resources Master Plan highlights a current recreation facilities deficiency of more than 123 acres of recreational space and estimates a future need of an additional 125 acres. Additionally, the development recommendations of this plan are organized around integral open spaces—greens, plazas, community gardens, etc.—that serve as recreational amenities, community gathering spaces, and stormwater management features (see Action Item D-9).

In order to address the town's open space needs and implement the recommendations of this plan and the Park, Recreation, and Cultural Resources Master Plan, the town should adopt town-wide open space standards that provide a range of open space types in new development. [1-5] [Code/Policy]

### Case Study: Open Space Requirements

Requiring the dedication of open space is a common technique to ensure that new development provides centrally-located park space for resident use and conserves areas which are inappropriate for development. The recently-adopted Waxhaw Downtown Code includes such requirements for development within the downtown area. Many municipalities near Waxhaw apply such requirements to their entire jurisdiction. The excerpts below illustrate some typical standards.

#### Wake Forest, NC Unified Development Ordinance (Section 7.4.1)

- Urban Residential (UR) District - 2% required park space (improved); 5% required open space (unimproved)
- Neighborhood Mixed-Use (NMX) District - 2% required park space (improved) for projects 5 acres or more

#### Davidson, NC Unified Development Ordinance (Section 9.6.1)

- Neighborhood Center District - 10% required open space
- Central Business District - 5% required open space

#### Waxhaw, NC Downtown Code - (Section 21.7.2.B)

- Urban Neighborhood (UN) District - 5% required recreation space
- Neighborhood Mixed-Use (NMX) District - 2% required recreation space for projects 2 acres or more

## **R-8** Utilize overlay districts to support the recommendations of the corridor plan

Overlay districts are a zoning tool that impose design and development standards in addition to the standards of the underlying base district. In the case of a conflict, the requirements of the overlay district supersede the requirements of the base district. Overlay districts offer a mechanism for supporting the recommendations of this corridor plan without making substantial changes to Waxhaw's existing base districts. Two overlay district tool options are discussed below.

### **Thoroughfare Protection Overlay District**

Corridor overlay districts are a zoning tool commonly employed by municipalities along significant transportation corridors. They are intended to support aesthetic consistency, access management, and transitional setbacks to accommodate future right-of-way expansion.

Waxhaw's UDO establishes a Thoroughfare Protection (TP) Overlay District, but it is not currently applied anywhere within the town. This existing tool could be revised and applied along Highway 16 to ensure greater consistency of development and support the development outcomes described in this corridor plan.

The TP Overlay District's current standards aren't aligned with the vision of this plan (see specific

requirements below) but could be amended to provide more useful guidance. In order for the TP Overlay District to function most effectively, it should be tailored to the different context zones and frontage types shown on page 149 and 150 identified along Highway 16, as discussed in Action item M-2 in Chapter 5.

The TP Overlay District should be expanded to address each zone according to the development and street type recommendations of this corridor plan. For example, instead of a uniform parking facility buffer requirement, the district should limit the application of buffers to the more rural and suburban portions of the corridor. Instead of a uniform building setback line, the TP Overlay District should calibrate transitional setbacks according to future right-of-way needs. The standards should also include more detailed building frontage requirements for each context zone that provide form-based guidance to support the desired relationship of buildings to the fronting sidewalk and street.

In general, the TP Overlay District should be tailored to support intended character of each zone as follows:

**Rural Transition (RT):** This condition is the most similar to the existing standards established in the TP Overlay District. Parcels in the Rural

### **Waxhaw's Thoroughfare Protection Overlay District**

The Thoroughfare Protection Overlay District is established in Section 6.4 of the town's Unified Development Ordinance, as follows:

The purpose of the TP, Thoroughfare Protection Overlay Zoning District, is to provide for the protection and preservation of thoroughfare streets to avoid undue congestion and significant deterioration of service levels.

- 1. Lot Width Requirements:** The minimum Lot Width of all lots located wholly or in part within the TP Overlay Zoning District shall be 150 feet.
- 2. Parking Facility Setback:** All Parking Facilities located within and/or serving Development and/or uses within the TP Overlay Zoning District shall provide a landscaped buffer setback 20 linear feet
- 3. Front Building Setback Line:** All buildings located within the TP Overlay Zoning District shall be setback a minimum of 50 linear feet or as specified in the Primary Zoning District regulations, whichever is greater, as measured perpendicular to adjacent thoroughfare right-of-way lines.

eight: **clarify the regulations**

Transition area should be required to maintain a large landscape buffer. To limit development and preserve the rural character, large minimum lot sizes should be maintained, and driveway access to Highway 16 should be very limited. This overlay corresponds to the land use types found in the Rural Transition Zone on page 149.

**Neighborhood Mixed Use (NMX):** Parcels in the NMX zone should be required to maintain a landscape buffer to screen current auto-oriented uses such as big box stores and car dealerships. The landscape planting requirements for this area should be more formal than the Rural Transition context zone, while setbacks and lot sizes should be less restrictive and allow more intensity in the land uses. The access management priorities in the Neighborhood Mixed Use frontage should be accomplished with direct standards, such as shared driveways, minimum driveway spacing, and connected parking lots.

**Town Center (TC):** Parcels in the Town Center frontage should be required to provide a walkable environment that includes buildings with shallow setbacks, wide sidewalks, and parking located behind buildings. Development in this context may vary from large footprint uses to fine-grained compact developments. Development should be required to utilize shared driveways and include ample landscaping and pedestrian amenities within the streetscape environment.

**Floating TND Overlay District**  
A second overlay district tool that the town should consider is a Floating Traditional Neighborhood Development (TND) Overlay District. Floating overlay districts are overlay districts that can be automatically applied anywhere within a municipal jurisdiction without a legislative rezoning process. A Floating TND Overlay District automatically applies standards that support the development of fully-integrated, mixed-use, pedestrian-oriented neighborhoods. The regulations of the overlay district supersede



▲ **MULTIPLE DRIVEWAYS AROUND WAXHAW PARKWAY AND HIGHWAY 16**

any conflicting regulations of the underlying base districts, meaning that the town's underlying base districts would not require revisions in order to apply a Floating TND Overlay.

There are numerous instances in the development recommendations for Highway 16 where TND's are suggested (see Action Item D-3). As such, a Floating TND Overlay District would be an appropriate interim tool to support the recommendations of this report. The Floating TND Overlay District should be established using a minimum development site threshold for automatic, or by-right, district applications (see the case study below from Wake Forest, North Carolina).

Larger sites are appropriate for a by-right application of TND standards because they have enough land area to accommodate the range of uses and housing types necessary to support traditional neighborhood arrangements.

Development sites smaller than this preestablished threshold could apply for TND zoning using a standard rezoning process.

Sites within a Floating TND Overlay District would be permitted to develop according to subdivision and site development standards typical of traditional neighborhoods (see case study, below).

The town could expand and amend its existing TND standards (currently considered a type of Planned Residential Development use) in Section 11.3.77.B of the UDO to establish the overlay district standards. This adaptation of an existing zoning tool in Waxhaw would allow for an ideal implementation of TND in the short-term. In the long-term however, the addition of numerous Floating TND Overlay Districts would become cumbersome for staff to manage and should be replaced by form-based district designations in a comprehensive update of the UDO. [Ongoing/1-5] [Code/Policy]

### Case Study: Floating TND Overlay District

The Town of Wake Forest, North Carolina utilizes a Floating TND Overlay District to allow for the development of fully-integrated, mixed-use, pedestrian-oriented neighborhoods. The excerpts below from Section 2.5.1 of the Wake Forest UDO illustrate typical development thresholds and standards that the Town of Waxhaw should consider in creating its own Floating TND Overlay District.

#### Process and Applicability

- The TND Floating Overlay District designation shall automatically apply by-right to all development sites of 100 acres or greater...
- Development sites of less than 100 acres may be developed under a TND Floating Overlay District subject to the Conditional District rezoning process...

- All lots are within walking distance to retail and/or recreation opportunities...
- Uses and housing types are mixed and in close proximity to one another...
- Street networks are interconnected and blocks are small...
- Civic buildings are given prominent sites throughout the neighborhood.

**Findings of Fact for TND Master Plan Approval:** In granting approval of a TND Master Plan, the approving authority shall make the following findings of fact...

- The plan conforms to adopted plans (as applicable) for the physical development of the town...
- All neighborhoods have identifiable centers and edges...

**Civic Structures:** A minimum of 2% of the land area shall be reserved for the construction of civic structures (schools, community buildings, religious institutions, etc.)... Such sites shall be in prominent locations that are centralized to the neighborhood, accessible to the greater community, and help to visually anchor important vistas.

## **R-9 Utilize parallel form-based districts to offer a by-right development option**

As an alternative to floating overlay districts, the town could adopt form-based zoning districts and apply them in parallel to the existing base zoning along the Highway 16 corridor.

A parallel form-based zoning approach would involve first adopting a parallel form-based zoning map. For Waxhaw, this should include all of the districts with conditional use zoning. After the parallel map is adopted, all properties shown on the parallel form-based map could be developed under the form-based district by-right. However, the property owner could still choose to use the conditional use district—and accompanying discretionary plan approval process—if that was their preference.

If the developer of a parallel-zoned property elected to continue to utilize the conditional use zoning, then the option to use form-based zoning would still be available for future projects. However, once a development application for a parallel-zoned property is submitted under the form-based district regulations, then all subsequent development on that parcel would be required to follow the form-based regulations as well. This means that, in essence, developing under the form-based district renounces the conditional use zoning.

This technique offers an incremental approach for implementing the development recommendations of the corridor plan and has several significant benefits.

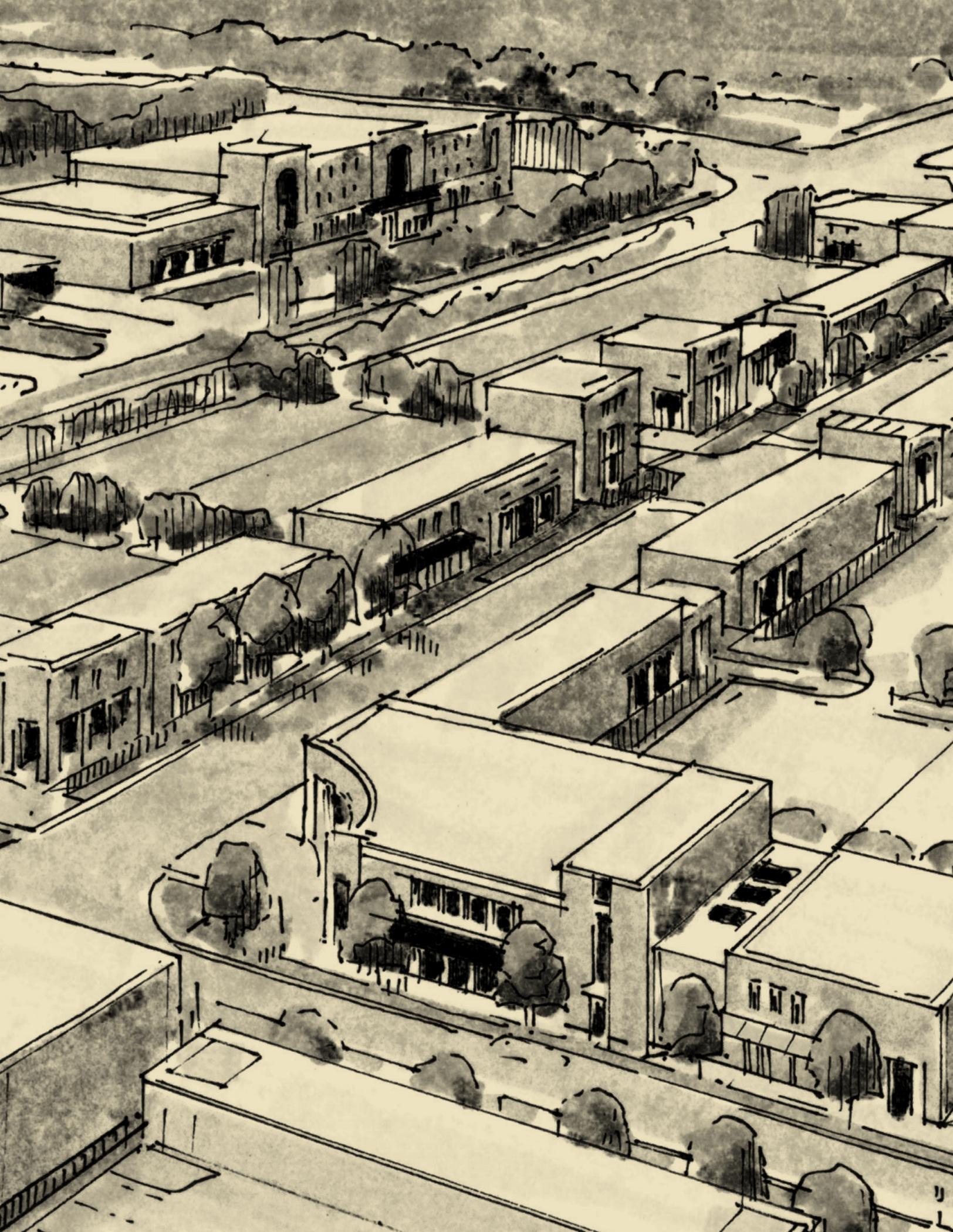
- > **It is non-compulsory.** Developers are free to choose between the existing zoning and the newly-established form-based districts. As such, this approach is much less likely to generate opposition from property owners than other approaches.
- > **It creates a by-right, administrative approval process.** A reconfigured development review process would be established to support

development within the newly-created form-based districts. This is a significant advantage over the cumbersome quasi-judicial Conditional Use Permit process that is applied to nearly all of the large parcels along the Highway 16 corridor. The predictability of the by-right process offers an incentive for developers to make the voluntary switch to the parallel form-based district designation.

- > **It simplifies the process and administration of the ordinance.** As applicants voluntarily switch from their existing Conditional Use District designations to the straightforward form-based districts, the Conditional Use Districts would be eliminated from the zoning map. Unlike the overlay district approach that adds layers of regulatory complexity, the parallel form-based approach reduces regulatory complexity over time and simplifies the administration of the ordinance for staff.
- > **It can be utilized in greenfield settings or to encourage the retrofit of sprawling commercial strips along Highway 16.** Over time, conventional suburban areas will be expected to be retrofitted to more mixed-use, sustainable forms of development. A parallel form-based district approach accommodates these conversions in an orderly progression in response to the reconfiguration of Highway 16 as a Complete Street and continuing growth pressure along the corridor.
- > **It can utilize the Waxhaw Downtown Code as a model.** The recently adopted Downtown Code includes form-based district designations that could be applied as part of the parallel zoning approach. This would implement the recommendations of this corridor plan using a zoning tool that the town is familiar with.

➤ **It provides an incremental transition to a more comprehensive revision of the UDO.**

Because the parallel form-based rezoning does not invoke compulsory development regulations, it will provide a gradual transition to a form-based regulatory environment along the corridor. Eventually, as more parcels are voluntarily rezoned to form-based districts, the town will become more comfortable and experienced with the administration of these newly-created base districts. There will also be fewer and fewer parcels under the old conditional and conventional district designations. All of this will ease the transition to a comprehensive, form-based update of the UDO, as described in Approach 1. [Ongoing/1-5] [Code/Policy]



# MARKET AREA ANALYSIS

**The NC-16 Corridor Market Area Analysis** was completed in July 2013 to provide a detailed account of the demand potential for development along the corridor.







If we can develop and design streets so that they are wonderful, fulfilling places to be... then we will have successfully designed about one-third of the city directly and will have had an immense impact on the rest.

-Allan B. Jacobs, Great Streets