

# BUCKHORN AREA PLAN



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December 2020

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Thank you to all the City of Mebane staff, Orange County staff, and individuals that gave their time, input, and enthusiasm to this plan.



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# 1 | EXECUTIVE SUMMARY

The Buckhorn Area Plan is a technical study of future land use and potential utility services to identify properties that could be zoned for nonresidential purposes and best support economic development, while balancing the cost of utility service extensions. This report uses GIS mapping to determine parcels most suitable for development within the study area. This process allows for a technical review of multiple development factors including: developable acres, preservation areas, mean slope, watershed, sewer infrastructure, water infrastructure, interstate access, interstate visibility, roadway access, and access to existing rail.

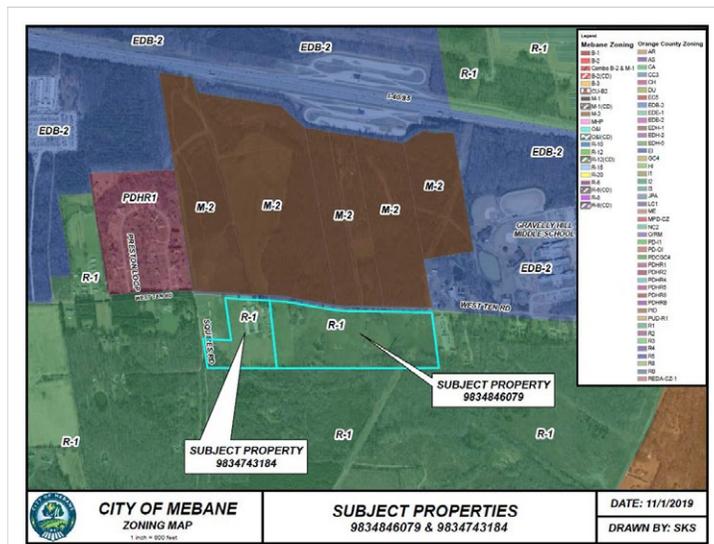
A review of relevant plans was completed to ensure the vision, goals, and strategy for the area from previously adopted plans aligned with the recommendations in the Buckhorn Area Plan. The study area for this plan was defined after significant consideration of existing land uses, environmental impacts, and economic potential. The City of Mebane and Orange County Planning, Administrative, Public Works, and Economic Development staffs worked with the Piedmont Triad Regional Council to ensure parcels with the highest potential were included in the analysis. The boundaries for this plan focus area are the rail line to the North; Ben Wilson and Mattress Factory Road to the west, Mt Willing Road and parcels along the I-85 connector to the East; Bushy Cook Road and Seven Mile Creek to the South.

Recommendations in this plan include the expansion of manufacturing, wholesale, distribution, and service uses in the Buckhorn Area. With this expansion of the Buckhorn Economic Development District, the plan also recommends additional land use districts to incorporate a new zoning district that encourages documented research, office and manufacturing facilities and also support walkability, mixing of uses and practical design that is compatible with the surrounding land uses. A primary factors in developing many sites rely on the availability of water and sewer systems. An extension of the Utility Service Agreement is needed to provide the necessary utilities. Finally, Orange County should use this plan to help inform possible future planning initiatives.

# 2 | PROJECT BACKGROUND

## PLAN NEED

The Buckhorn Economic Development District (BEDD) was dedicated as a development district by the City of Mebane and Orange County in 2011 to include a variety of manufacturing, wholesale, distribution, retail and service uses. The existing BEDD is located in the western portion of Orange County just off exit 157 from Interstate 85/40, and includes approximately 900 acres of developable land. This study expands the boundaries of the original Economic development District in order to utilize the most suitable land that has reasonable access to infrastructure.



The section currently dedicated as the BEDD is included in this study area. The BEDD is defined by the area contained by Ben Wilson Road to the west, E Washington St Ext to the north, Hope Allison Road to the east, and West Ten Road to the South. This study area broadens the area to include areas recently annexed into the City and rezoned as M-2 Light Manufacturing and the surrounding area. Mebane by Design, the Comprehensive Land Development Plan, defines six Growth Strategy Areas as well as Conservation Areas. Growth Strategy Area V is G-2 Industrial and is included in this Buckhorn Area Plan Study Area (Map 1). The CLP defines G-2 Industrial (V) uses as: “Maximize non-residential use and discourages further single family developments. Multifamily or workforce housing in close proximity to the current and future industrial land uses will be encouraged to minimize commuting concerns, especially traffic congestion. Encourage low water user and incentivize the employment of local residents at any new industries developed in this area”.

Per North Carolina General Statutes, the City of Mebane has an obligation to update the long-range plan so that its actions are consistent with its adopted plans. Orange County has planned for Buckhorn area economic development and is interested in what areas are feasible for infrastructure. Both jurisdictions felt a planning study of future land use and potential utility service could identify properties that could





be zoned for economic development purposes to best support the City and County's shared goals, while balancing the cost of utility service extensions.

### **HISTORY ON SEWER/WATER AGREEMENT**

Orange County entered into a Utility Service Agreement with the City of Mebane in 2004 to provide water and sanitary sewer service to much of the area located between West Ten Road and Interstate 40/85 known as the Buckhorn Economic Development District (BEDD).

Due to a growth in non-residential uses and development interest, the agreement was amended in 2012 to enlarge the original service area and incorporate a wider range of uses after plan amendments or utility capacity analysis to absorb more varied types of development.

Orange County, with a combination of federal and local funds, committed to extend water and sewer services into nearby unincorporated areas, with the City of Mebane to take ownership and maintenance of the lines and wastewater outflows once permitting and construction was complete. The agreement discusses specific uses to provide water and sewer service: the BEDD, as well as Commercial-Industrial Transition Activity nodes, public school, public recreational facilities, defined areas where residential uses are permitted. The service agreement acknowledges a need for cooperation and flexibility to accommodate changing development patterns, but also references existing residential areas north of Interstate 40/85 that should not be annexed and pay "out of town" utility rates or the development with a separate wastewater treatment agreement.

This plan utilizes criteria determined by City of Mebane and Orange County staff incorporating: habitat preservation, slope, watershed regulations, sewer and water serviceability, interstate access and visibility, roadway access, and access to existing rail. The methodology of this land suitability analysis for the growth areas is included in the Parcel Analysis Chapter.

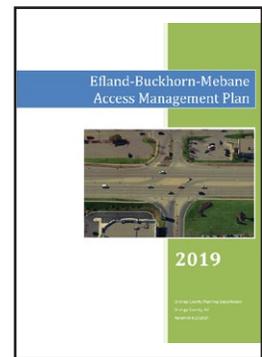
# 3 | PREVIOUS RELEVANT PLANS

## RELEVANT PLANS

The City of Mebane and Orange County have several existing adopted plans that provide vision, goals and strategy for the surrounding area. The relevant plans are summarized to illustrate the various recent planning efforts and inform strategies for implementation.

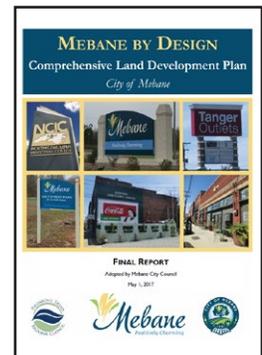
### *EFLAND-BUCKHORN-MEBANE ACCESS MANAGEMENT PLAN (2019)*

Adopted April 2, 2019, this document serves as an update to the 2011 Efland-Buckhorn-Mebane Access Management Plan and is combined with the 2017 Transportation Report (a study completed by the engineering firm, Volkert Inc.) to highlight the area’s development potential, traffic impact analysis and recommended improvements aligned to 2030 Comprehensive Plan goals and objectives. The final plan creates a long-range transportation vision for the area to illustrate roadway alignment to best serve future land uses with economic development opportunities, though it is not a guarantee that future development will occur or that roads will be built. The final version of this plan takes into account input from local residents and businesses from the public input process as well as staff recommendations.



### *MEBANE BY DESIGN (2017)*

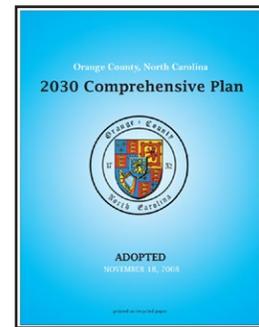
Mebane’s Comprehensive Land Development Plan, Mebane by Design, was adopted in 2017 and provides a vision for Mebane’s growth through 2035. The plan lays out growth management, facilities & infrastructure, community appearance, open space & natural resource protection, and coordination. Mebane By Design did not fully address the area reviewed in this plan as much of the area was outside the Future Growth Area. However, the area west of the Medline site and north of West Ten and east of Buckhorn was addressed. When implemented, the Buckhorn Area Plan will amend Mebane by Design by including most of this study area in the CLP as both part of the Future Growth Area and as part of the G-2 Industrial (V) Growth Area.



### ***THE ORANGE COUNTY 2030 COMPREHENSIVE PLAN (2008)***

The Orange County Comprehensive Plan serves to guide the County's growth and development through the year 2030. The underlying theme of the Plan is the County's vision of becoming a more sustainable community. This document serves as the statutory basis for many of the County's land use regulations and provides a coordinated approach to future growth. The Comprehensive Plan covers eight major areas, each known as an Element:

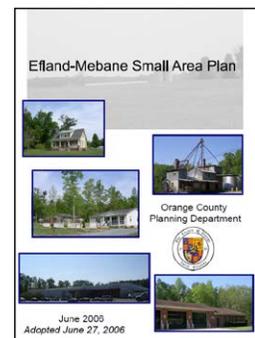
- County Profile;
- Economic Development;
- Housing;
- Land Use;
- Natural and Cultural Systems;
- Parks and Recreation;
- Services (Utilities) and Community Facilities; and
- Transportation



While there has not been a comprehensive update to all elements of the Comprehensive Plan, the Land Use Element has been amended regularly since 2008. These amendments have been primarily in response to Orange County's Economic Development efforts across all three of its Economic Development Districts, which include the Efland-Buckhorn-Mebane EDD that is located within the study area of this plan.

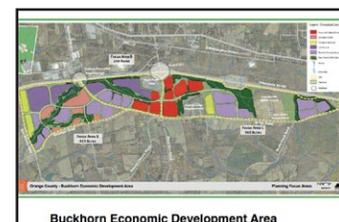
### ***EFLAND-MEBANE SMALL AREA PLAN (2006)***

Adopted by Orange County in 2006, the unincorporated community of Efland's future growth was addressed through the development of a small area plan (SAP). The SAP addressed the Efland-Mebane corridor in its entirety and made recommendations regarding Housing, Community Services, Transportation, Open Space, and Land Use and Economic Planning. The Orange County Board of County Commissioners approved the creation of a small focus group to assist staff in coordinating implementation of the SAP.



### ***BUCKHORN ECONOMIC DEVELOPMENT DISTRICT (BEDD)***

The areas in and immediately surrounding the eastern side of the City of Mebane have been designated for commercial and industrial growth in the near future. In collaboration with Orange County, the City of Mebane invested in the water and sewer infrastructure to support such private sector growth.



### ***WATER AND SEWER MANAGEMENT, PLANNING AND BOUNDARY AGREEMENT (WASMPBA)***

The WASMPBA is a multi-party agreement among Orange County, Orange Water and Sewer Authority, and the Towns of Carrboro, Chapel Hill, and Hillsborough. The Agreement establishes a system of service areas for public water and sewer utilities. The City of Mebane is not party to this agreement; the City and Orange County have a separate Utility Service Agreement that was amended in 2012.

# 4 | AREA DESCRIPTION

## **STUDY AREA**

The study area for this plan was defined after significant consideration of existing land uses, environmental impacts, and economic potential. The City of Mebane and Orange County Planning, Administrative, Public Works, and Economic Development staffs worked with PTRC to ensure parcels with the highest potential were included in the analysis.

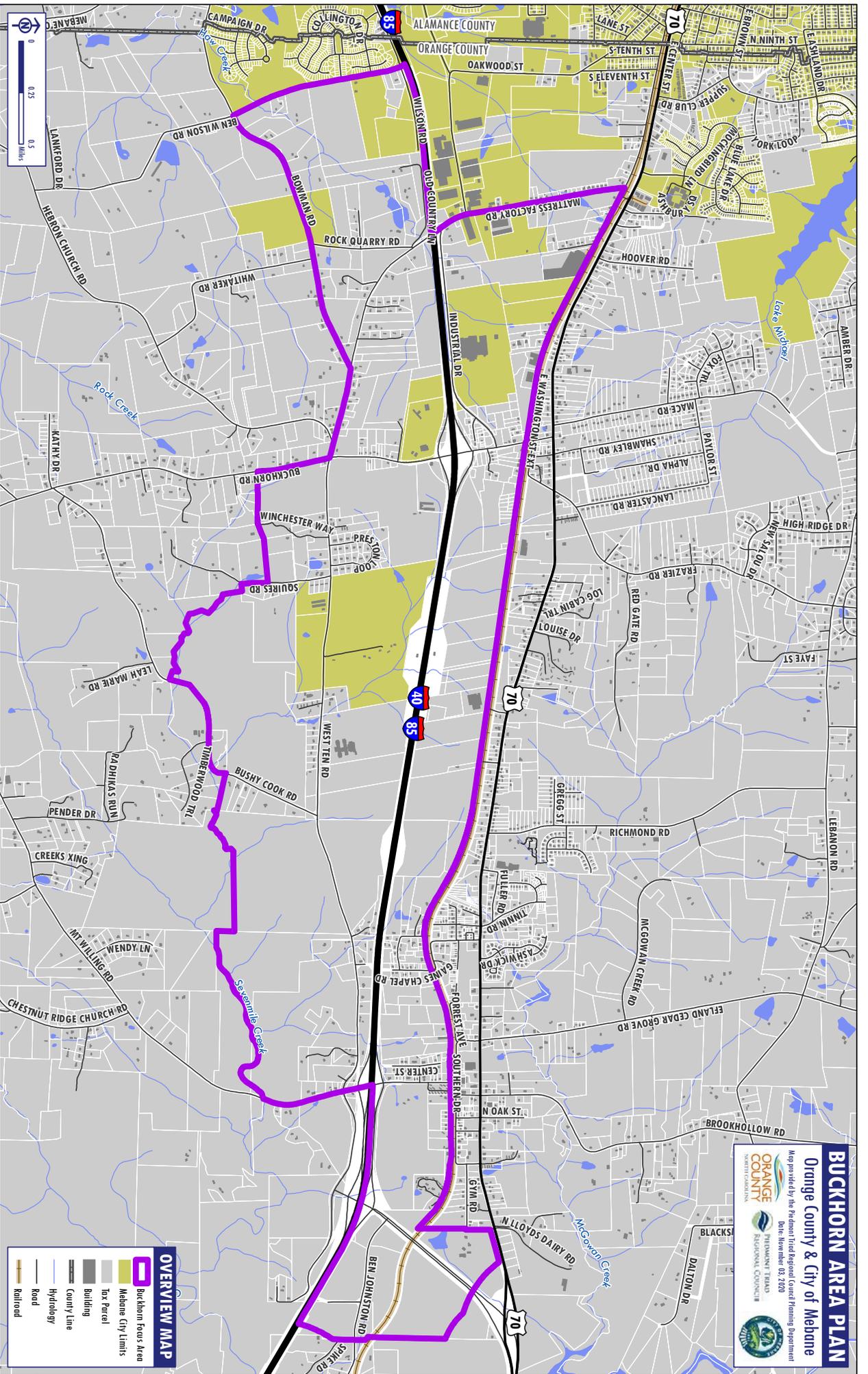
The boundaries for this plan (Map 2) focus area are the rail line to the North; Ben Wilson and Mattress Factory Road to the west, Mt Willing Road and parcels along the I-85 connector to the East; Bushy Cook Road and Seven mile creek to the South. The study area is outside both the Mebane City Limits and ETJ. Mebane is able to annex these properties due to a Local Act passed by the NC General Assembly in 2018 eliminating restrictions to its ability to conduct satellite annexations.

## **LAND USE**

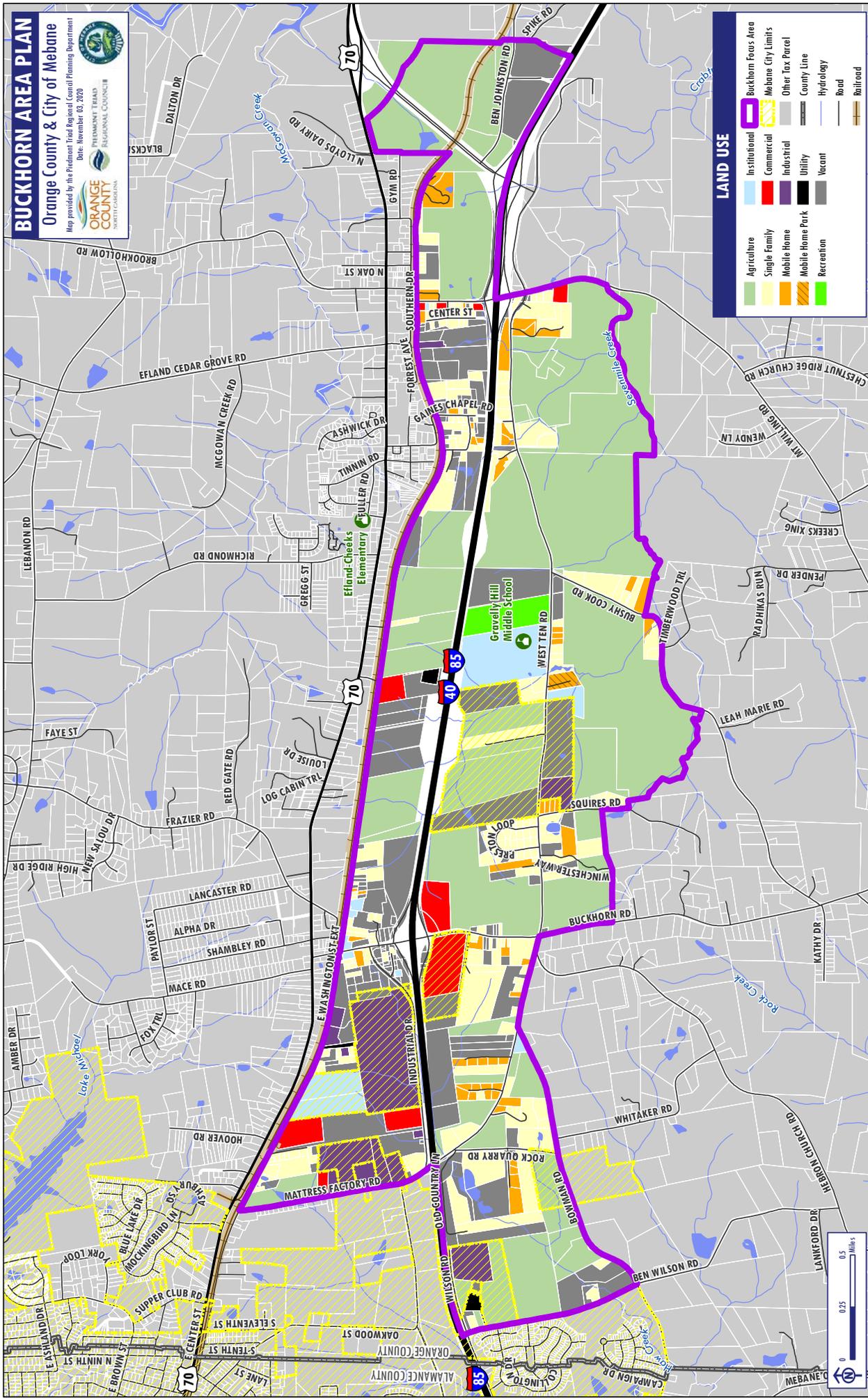
The intent of the Buckhorn District is to create a district allowing a wide range of nonresidential uses with limited higher density residential uses. The large land areas and low residential growth of this area make it ideal for commercial and industrial growth. The existing land use for the Buckhorn area is primarily agriculture and residential (Map 3). Much of the study area has been established as the Buckhorn Economic Development District (BEDD). The BEDD is defined as being located near the western boundary of Orange County where Buckhorn Road crosses Interstates 85 and 40. The remaining area defined in this study is currently zoned Rural Residential (R1), Existing Comm. (EC5), and Office, Research, Manufacturing (ORM).

## **ENVIRONMENT**

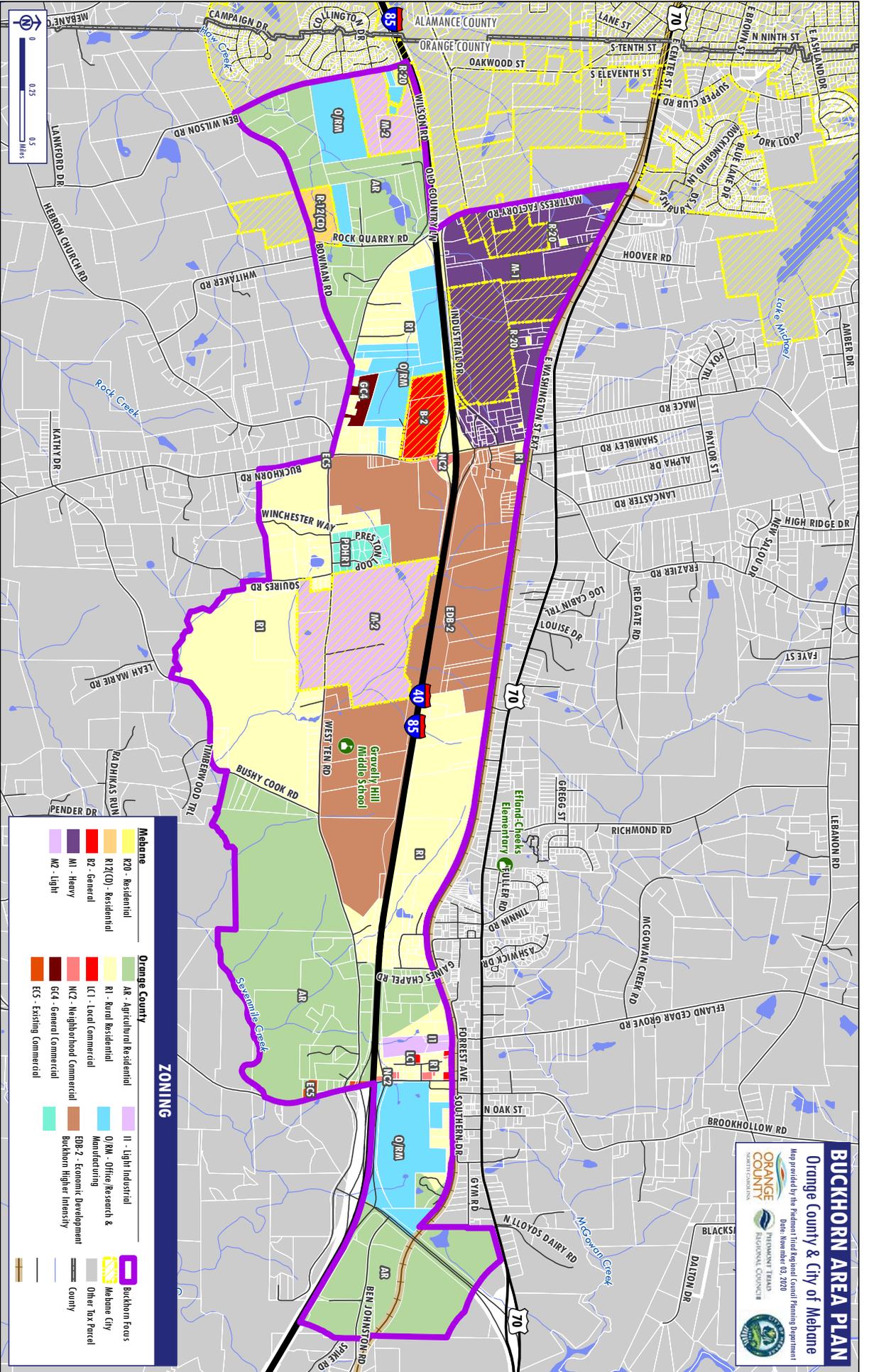
Compared to other jurisdictions in the Piedmont region, Mebane and its surrounding area has relatively few slope constraints. The majority of the study area has mean slope below 6% or between 6% and 10%. No parcels greater than 6 acres have a mean slope over 10% and the majority of parcels with steep slope are in floodplains. Some soil conditions can make potential land development more difficult or expensive. In the Piedmont region, dominant soil limitations include hydric (wetland) conditions, rock content, or high shrink-swell potential due to moisture fluctuations. Even where such conditions actually occur, there would probably still be a means to undertake urban type development, although with greater difficulty or expense. No development will be encouraged on environmental wetlands.



Map 3: Current Land Use



Map 4: Current Zoning



## **WATERSHEDS**

The Buckhorn Area include areas in the Haw River Basin and the Neuse River Basin. The Haw River flows to B. Everett Jordan Dam to form the Cape Fear River. All waters in the Neuse River basin are classified as Nutrient Sensitive Waters (NSW), a supplemental classification that the Environmental Management Commission may apply to surface waters that are experiencing high algal growth, including blooms. The Falls Lake Nutrient Management Strategy applies to nearly all property east of Buckhorn Road.

Areas east of Buckhorn Road are also in the Upper Eno River Water Supply II (WS-II). These waters are also protected for Class C uses - secondary recreation, fishing, wildlife, fish consumption, aquatic life including propagation, survival, and maintenance of biological integrity, and agriculture. WS-II waters are generally in predominately undeveloped watersheds. All WS-II waters are High Quality Waters (HQW) by supplemental classification.

The Mebane Unified Development Ordinance (UDO) defines protected watershed overlay districts which includes all WS-II Critical and Protected Areas. These management rules limit impervious cover and residential density to protect the water quality of water supplies and apply to all lands falling within a state-designated water supply watershed that are annexed into the City. North Carolina and Orange County have different measurements for the for the Upper Eno River water supply. These can be seen on Map 10 and Map 11.

## **INFRASTRUCTURE**

### ***ROADS***

Interstates 40 and 85 run through the Buckhorn Study Area. US 70 is located north of the study area and is directly connected to the interstate corridor by Buckhorn Road and the I-85 Connector. The most travelled roads in the study area are I-40/85, US 70, Buckhorn Road, and Mt Willing Rd. Interstate 40/85 has an Annual Average Daily Traffic (AADT) in the study area of 118,000 to 124,000 vehicles. US 70 has an AADT in the study area of 4,500 to 9,000. Buckhorn Road has an AADT of 6,800 to 12,000. Mt Willing Road has an AADT of 8,100 (Map 5). Both Buckhorn Road and Mt Willing Road are connected to I-40 exit ramps.

### ***RAIL***

A NC Railroad Company (NCRR) corridor runs east to west through the study area. The corridor is given primary use to Norfolk Southern under their lease agreements; it is public right-of-way. There is freight access in Mebane at the NC Industrial Center.

North Carolina is home to the largest consolidated rail system in the country. These rail connections extend all the way to the coast, enabling the state ports in Morehead City and Wilmington to offer import and export services to a large market. The NC rail system includes more than 3,200 miles of track and service to 22 states in the eastern half of the country (EDPNC, 2020).

At this time, there is not a passenger rail stop in the Mebane or Orange County area. Transit plans in Wake and Durham counties include a commuter rail project that would run 37 miles along the NCRR



Corridor between Garner and West Durham, stopping at downtown Raleigh, NC State, Cary, Morrisville and Research Triangle Park along the way. This plan includes possible extensions to the existing NCCR corridor through Mebane. Currently, the nearest passenger rail stop to the west is Burlington and to the east is Durham though a station is under construction in Hillsborough.

**BUS AND PARK & RIDE**

The Orange County Public Transit Orange-Alamance Connector Route connects Hillsborough, Efland, and Mebane in western Orange County. The Orange-Alamance Connector does not currently stop inside the study area but travels through the study area on I-40 from Mebane to Hillsborough (Fig 4).

There is a Park and Ride located at the Cone Health MedCenter Mebane campus at 3940 Arrowhead Boulevard, just west of this study area and accessible from the Mebane Oaks Road interchange with I-40/85. This location provides connections between the Triangle and the Triad and is served by the GoTriangle ODX line, PART Route 4, Link Red Route, and Alamance County Transportation Authority (ACTA).

The Burlington Graham MPO TAC approved the Mebane Park and Ride Relocation Study Special Study for FY2021. The purpose of the study is to establish site parameters and evaluation criteria for a new 150-200 space park and ride to be shared by GoTriangle, PART, and Orange County Public Transit. The project scope includes the development of 10% conceptual design for a preferred location and a possible alternate location. This project task will help implement the CTP and/or MTP by supporting expanded transit services.

**Figure 1: Orange-Alamance Connector Route**

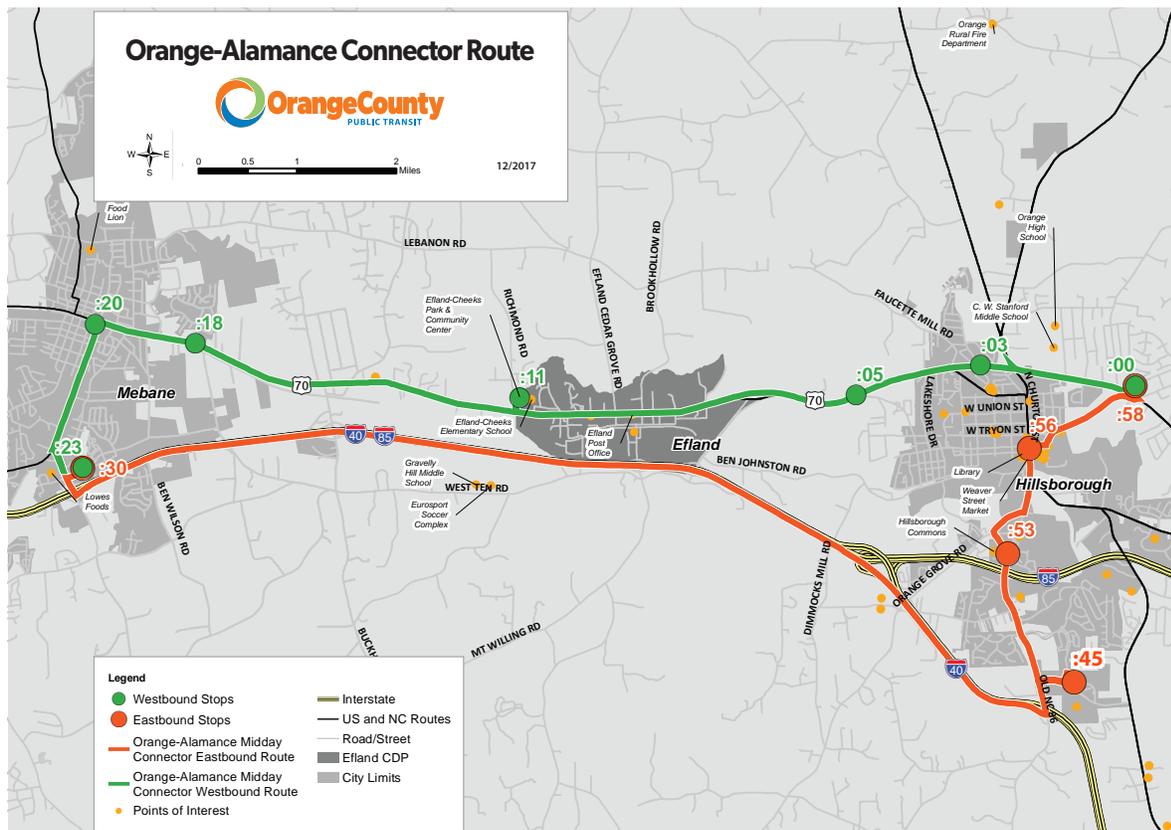
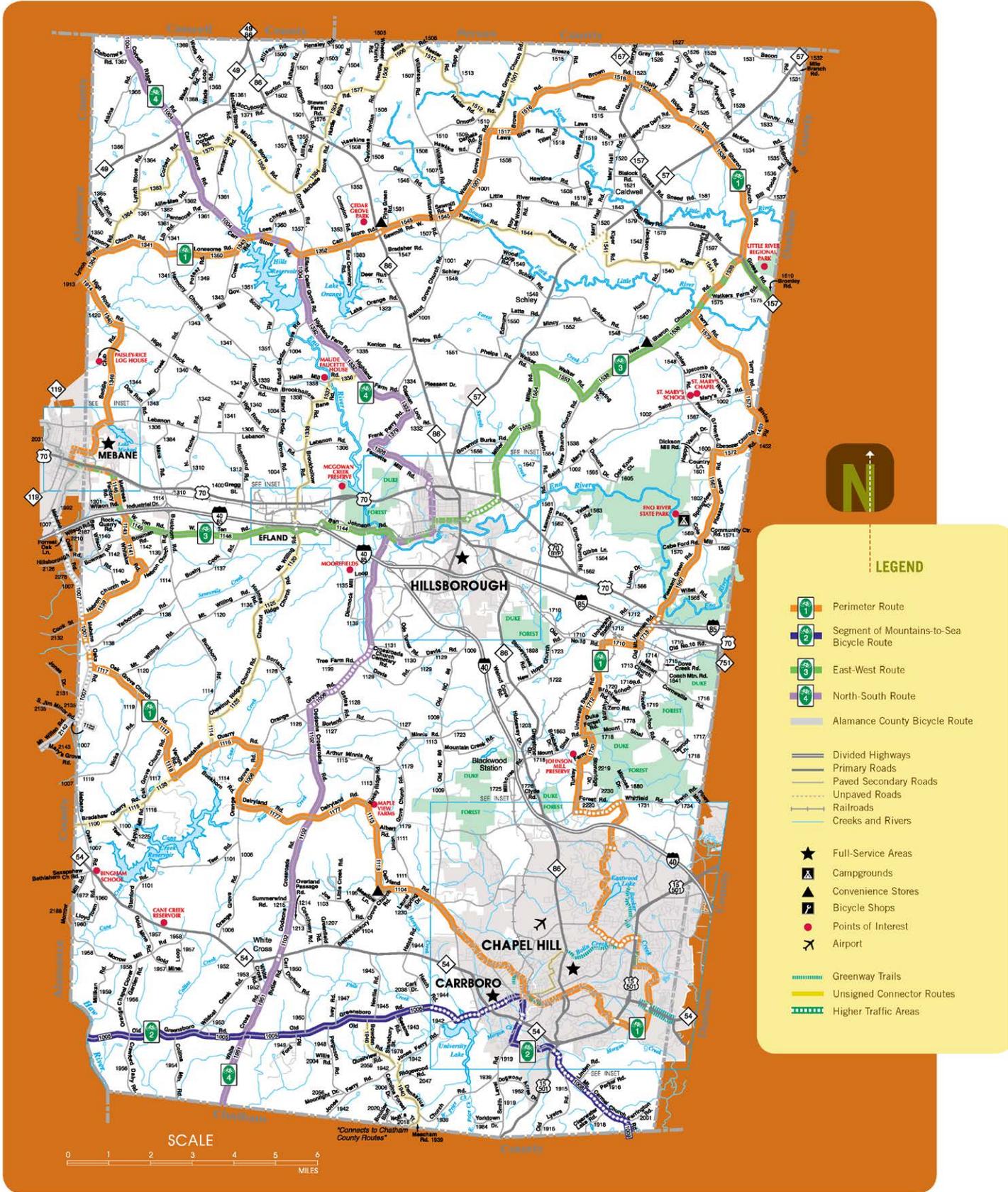


Figure 2: Orange County Bicycling Map

# ORANGE COUNTY BICYCLING MAP



## **BIKE AND PEDESTRIAN**

The study area contains the East-West, Route 3 Bicycle route and an unsigned Connector Route along Mt Willing Road, connecting Routes 1, 3, and 4. The study area has little pedestrian infrastructure. NCDOT's Bicycling Orange County brochure describes the 25 mile East-West Route:

*"On the west side of Orange County, this route joins those in adjoining Alamance County. The town of Mebane anchors the westernmost point on this East-West Route that also visits Efland and Hillsborough before meandering northeast through fertile farmland to the border with Durham County. After you turn right on Ben Johnson Road from the I-85 Connector, you will see signs for Kings Highway Park a small natural area with walking trails. On the west side as you enter Hillsborough, you can find picnic tables and restrooms at Gold Park, on Dimmocks Mill Road near the intersection with Eno and S. Nash streets."*

In 2018, the City of Mebane adopted a "Complete Streets" resolution, this resolution ensures that the City will utilize, whenever practical, the principles and goals of the NCDOT Complete Streets Planning and Design Guidelines when the Council is 1) developing new multimodal transportation options, 2) reconstructing or retrofitting existing roadways; and 3) leveraging existing infrastructure to increase connectivity and universal access to all citizens.

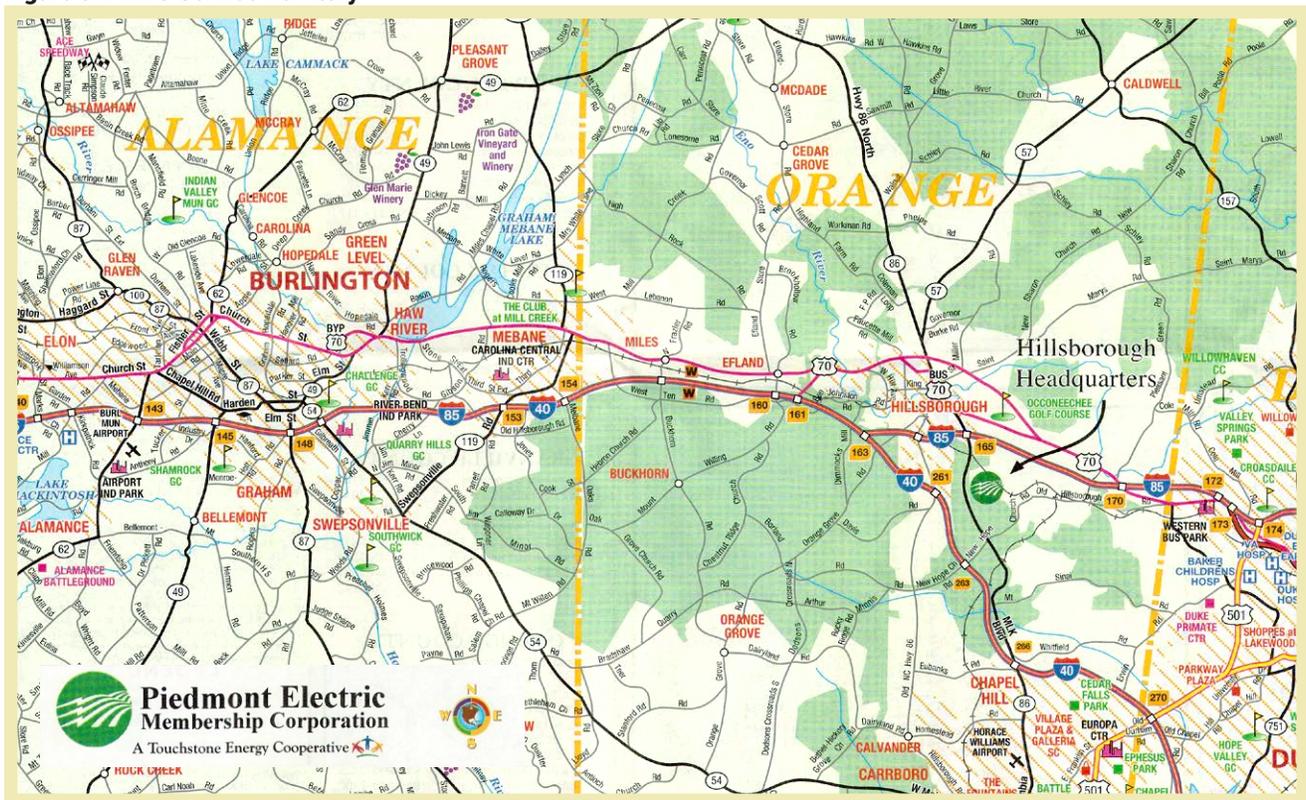


## UTILITIES

Dominion Energy is the natural gas provider to Orange County. Electric service in the area is provided by Piedmont Electric Membership Corporation (PEMC) and Duke Energy. There is service overlap in transitional areas.

The extension of Mebane's water and sewer utilities to the Buckhorn area through the Utility Service Agreement has made the Buckhorn Area a viable location for significant commercial and industrial growth. Water is currently available from Mebane as far east as Bushy Cook Road. Current sewer availability can be viewed on Map 12. It is possible in some eastern areas of the study area that parcels will have sewer provided by Mebane and water provided by another entity.

Figure 3: PEMC Service Territory



# 5 | ECONOMIC DEVELOPMENT

## LOCATION

The Buckhorn Economic Development District (BEDD) was dedicated as a development district by the City of Mebane and Orange County in 2011 to include a variety of manufacturing, wholesale, distribution, retail and service uses. The existing BEDD is located in the western portion of Orange County just off exit 157 from Interstate 85/40, and includes approximately 900 acres of developable land. This study expands the boundaries of the original Economic Development District in order to utilize the most suitable land that has reasonable access to infrastructure.

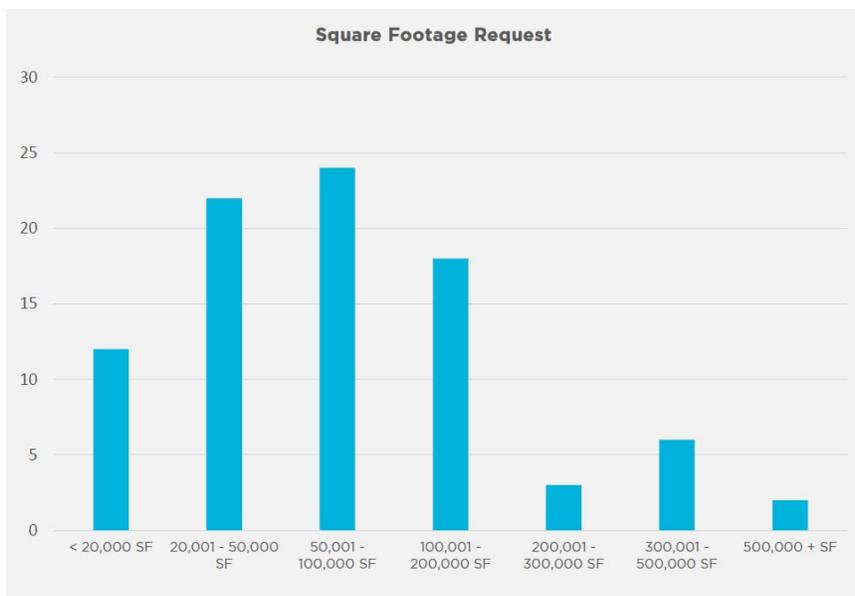
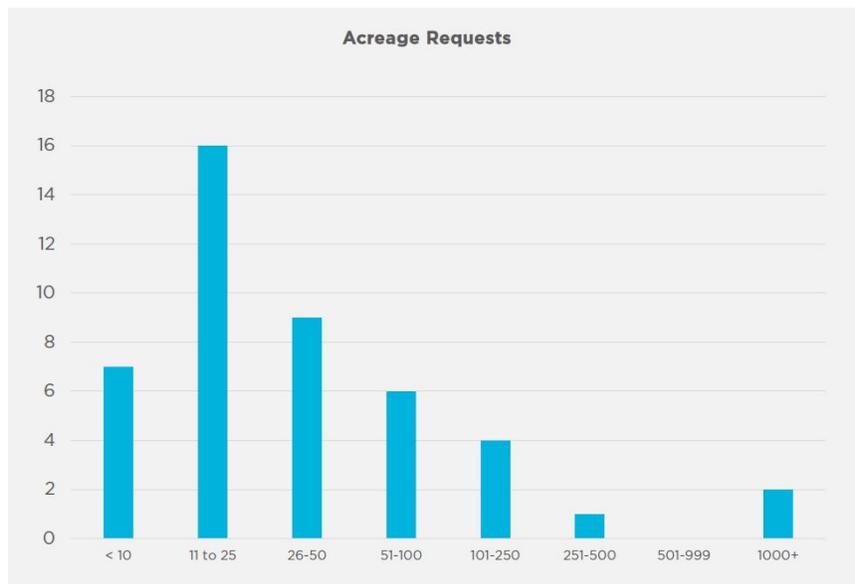
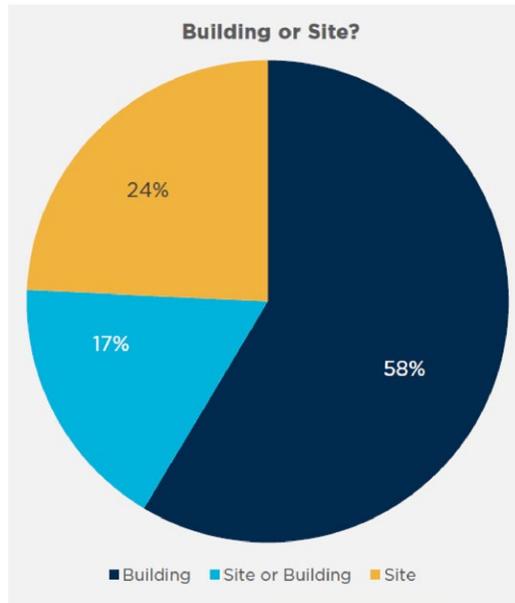
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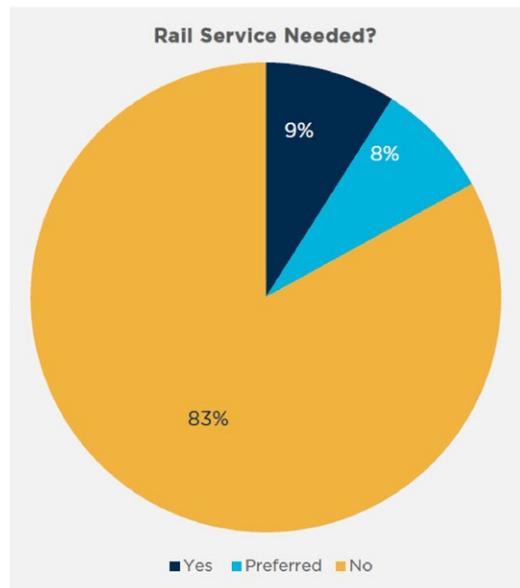
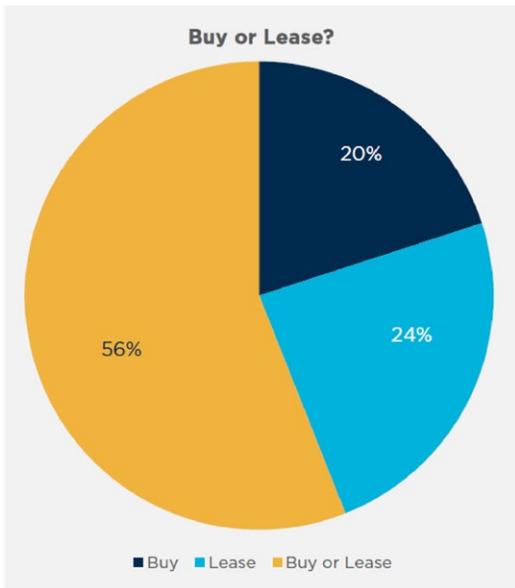
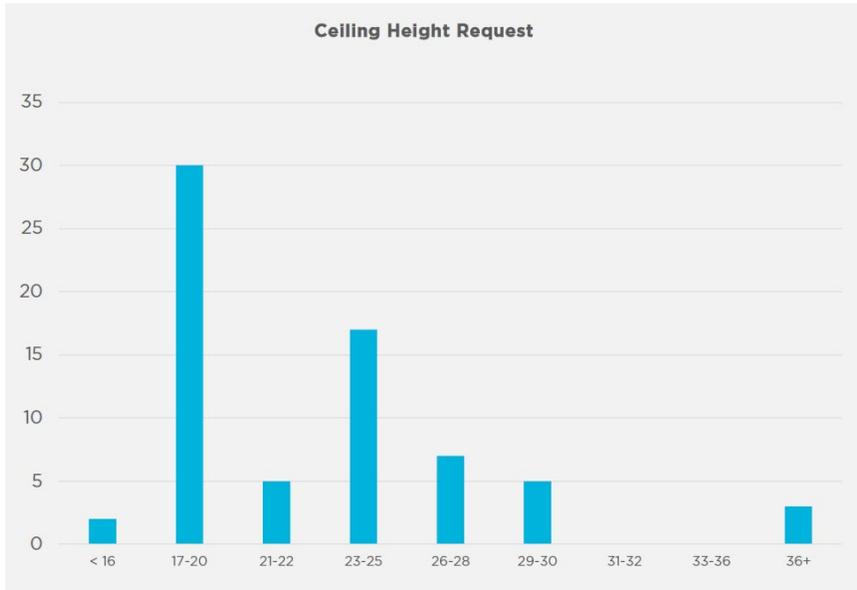
## INDUSTRIAL AND COMMERCIAL POTENTIAL

The Buckhorn Area has direct access to Interstates 40 and 85, and US 70, with high potential for economic development expansion. The Orange County SWOT Analysis (2018), prepared by the Timmons Group covers the Buckhorn Area in multiple sections, including Buckhorn EDD, Buckhorn Commercial-Industrial Transition Activity Nodes (CITAN), and sections of East Efland CITAN, West Efland CITAN. In reviewing the SWOT analysis, the overall size, mild slopes, and medium environmental constraints are positive for industrial development. The area includes several properties with large vacant tracts. Common Next Step recommendations between all areas include, working with the City of Mebane to expand the water and sewer service areas and increase water and sewer capacities.

The Economic Development Partnership of North Carolina (EDPNC) Business Recruitment Projects and Real Estate Requests from 2019 include information on preference and demand for industry sector, site needs, square footage requests, acreage requests, and rail service needs. The majority of recruited projects are for manufacturing (16%) followed by food, beverage, and agriculture (13%). The following graphs illustrate the needs and preferences for the manufacturing projects from EDPNC .

**Figure 4: EDPNC Business Recruitment Requests**





The Buckhorn Area Plan maps and evaluates parcels based on their size, constraints, and access. As the majority of the parcels in the Buckhorn Area do not have buildings, that feature was not used in the evaluation. Of the project needs outlined above, the Buckhorn Area has developable parcels in the 11 to 50 acre range, making them ideal areas to market and improve for future development. Similarly, while most parcels do not currently have rail service, multiple large parcels are adjacent to rail.

### PERFORMANCE BASED INCENTIVES

Performance-based incentive programs may be considered for the recruitment of larger industrial, distribution and commercial investment prospects, and require the company to meet agreed upon investment and job creation goals over a specified period of time. Orange County, along with the City of Mebane, have utilized this type of program in recent years with the expansion of one existing company,

ABB, Inc., and the location of three new companies in the Mebane area: Morinaga America Foods, Inc., Piedmont Metalworks, and Medline Industries, Inc. Future company expansions or site locations could be considered under a performance-based incentive program.

### **SMALL BUSINESS GRANT PROGRAM**

For smaller companies, Orange County currently has two grant available with the Business Investment Grant Program to stimulate successful non-farm Business Investment development and expansion in Orange County.

#### ***SMALL GRANT (\$1,500 OR LESS)***

Use of Funds – Priority will be given to ventures demonstrating a clear need for grant funds to grow their business, hire additional staff, grow the commercial tax base, and/or create a significant social and economic impact in the County.

#### ***LARGE GRANT (\$1,500.01 – \$10,000)***

High Potential Founders – Although all applicants will be considered, business owners who exhibit the following characteristics will be given priority: a. Have a thorough understanding of their market b. Have assembled a talented team c. Have a passion for building their venture in Orange County High Potential Ventures – Priority will be given to “growth” ventures capable of expanding rapidly, renting office space in Orange County, and hiring Orange County employees. Use of Funds – Priority will be given to applicants demonstrating a clear need for grant funds to grow their business, hire additional staff, grow the commercial tax base, or create a significant social impact in the County. The Orange County Economic Development business assistance team provides a range of expertise and services to new and relocating businesses, assisting with any needs from site selection and development to employee housing options.

# 6 | PUBLIC INPUT

Public input is important to the success of any planning effort. The Buckhorn Area Plan provided opportunity for input at the November Mebane Planning Board meeting, a virtual public input session, and online webpage with a comment box.

## PLANNING BOARD

The Mebane Planning Board reviewed the Buckhorn Area Plan and accepted public comment on November 9th. This meeting was available to join online via zoom, in-person (limited to 7 members of the public due to coronavirus protocol),

and available to stream and rewatch on YouTube. A notification of the planning board and virtual public meeting was mailed to all property owners within the Buckhorn Focus Area (Map 2). A short presentation was given by the Piedmont Triad Regional Council outlining the planning process, parcel analysis, and recommendations. The Mebane Planning Board passed a motion to adopt the Buckhorn Area Plan and amend the Mebane Comprehensive Land Development Plan.

## VIRTUAL MEETING

The City of Mebane held a public meeting dedicated solely to the Buckhorn Area Plan on Tuesday, November 10, 2020. The meeting was held on Zoom and welcomed guests questions, comments, and concerns after a short presentation on the overview of the plan. These questions and comments were taken into consideration and changes were made to reflect the needs and concerns of property owners. Primary concerns were about development standards, such as traffic, buffering, noise, and lighting. The meeting was 2 hours long and about 25 people attended.

## WEB PAGE WITH COMMENTS

A designated website for this project was published and available to the public providing a full copy of the draft plan, an overview paragraph of each chapter, an interactive map, and a comment box. The web address was shared in planning board and City Council notification letters to property owners as well as during meeting presentations.

**CITY OF MEBANE &  
ORANGE COUNTY**

**BUCKHORN AREA PLAN  
VIRTUAL MEETING**



**ONLINE  
NOVEMBER 10 | 6PM**

**WHEN:**  
November 10, 2020 at 6pm

**WHERE:**  
To livestream the meeting, visit the City of Mebane YouTube Channel. To participate in the Zoom teleconference, email [planning@cityofmebane.org](mailto:planning@cityofmebane.org) for log-in information.

**WHAT:**  
Join online to provide input on an area plan exploring economic development at the area surrounding Buckhorn Rd and West Ten Rd.

**Can't make the  
online meeting?**

You can review the plan and provide comment any time at:  
[www.ptrc.org/Buckhorn](http://www.ptrc.org/Buckhorn)





The online interactive map at this site allows for site visitors to turn on different map layers, such as flood zones, wetlands, parcel final sums, zoning, land use, and other layers of interest. Links are also provided for individual pages giving descriptions of the identified growth areas. These direct links allow property owners and interested parties to directly see why the growth area was chosen, aspects of future growth in the area, and what is needed to promote development.

The screenshot displays the 'Buckhorn Area Plan Map' interface. The map shows a geographic area with several highlighted zones labeled A, B, C, and D. A purple line indicates a route or boundary, with 'Exit # 157' and 'Exit # 160' marked. The map includes street names like 'INDUSTRIAL DR', 'BOWMAN DR', 'SOUTHERN DR', and 'FORREST AVE'. A 'Layer List' panel on the right side of the map is open, showing a list of map layers with checkboxes. The layers include:
 

- Buckhorn Area Plan Layers (expand)
- Buckhorn Study Area
- Roads
- Schools
- Mebane City Limits
- Potential Growth Areas
- CLP Growth Strategy Areas
- Tax Parcels
- Parcels not for Development
- Most Suitable
- FINALSUM
- Individual Layers (expand)
- Zoning
- LandUse

 Below the map is a 'Comments' section with a note: 'Note: Irrelevant or offensive content will be removed'. The comments form is titled 'Buckhorn Area Plan - Public Comments' and includes a text area for feedback, a 'Contact Information' section with fields for 'First Name' and 'Last Name', and a small disclaimer: 'If you would like to be contacted by project staff, please provide your contact info below. This is optional. Your information will not be shared with any outside parties.'

# 7 | PARCEL ANALYSIS

## METHODOLOGY

The PTRC obtained GIS files from Orange County and the City of Mebane, including tax parcels, zoning, city limits, and water/sewer infrastructure for analysing tax parcels for their suitability to be developed as employment centers. Other GIS files were used from the State, including roads, railroads, hydrology, watersheds, LiDAR elevation, orthophotography, and conservation areas. After the stakeholder group determined the study area boundary, 569 parcels were selected for further analysis.

## PARCEL ANALYSIS LAYERS

Orange County and City of Mebane Planning, Administration, and Economic Development staffs worked together to establish a list of factors that influence the suitability of a parcel for potential development. The layers include developable acres, preservation areas, mean slope, watershed, sewer infrastructure, water infrastructure, interstate access, interstate visibility, roadway access, and access to existing rail. This section explains the parcel analysis layers in more detail providing a map showing the weighted layers of parcels in the Buckhorn Study Area. The final sum value of each individual layer was then calculated for each parcel to determine a final suitability value. Parcels in the study area ranged from values of 2 to 16, with 16 being the most suitable for development. Parcels could have ranged from -7 to 18, but no parcels reached these minimum/maximum values.

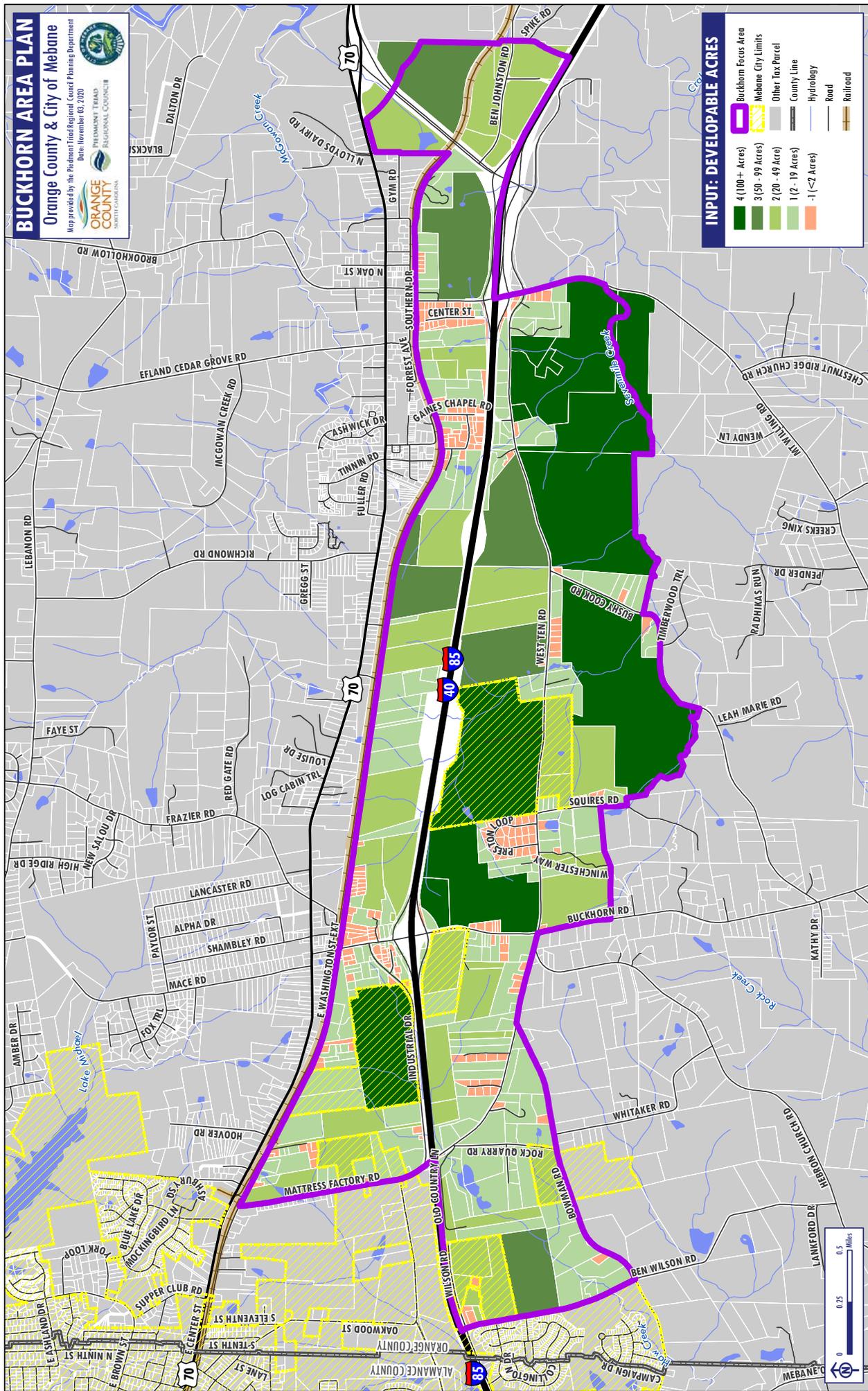
Layer	Criteria	Points
Developable Acres (Wetlands and floodplains removed; merged adjacent owners)	Under 2 Acres	-1
	2 to 19	1
	20 to 49	2
	50 to 99	3
	100 or More	4
Preservation Areas	Voluntary Ag District	-1
	Conservation Easement or Managed Area	-2
	Natural Heritage Element Occurrence or Significant Natural Heritage Area	-1
Mean Slope	< 6	1
	6 to 10	0
	> 10	-1
Watershed	NSW II-P	-1
Sewer Infrastructure	Available	4
	Potential to serve	2
	Unlikely to serve	0
Water Infrastructure	Available	2
	Potential to serve	1
	Unlikely to serve	0
Interstate Access	Within 1.5 Miles Driving Distance to Interchange	2
Interstate Visibility	Yes (Adjacent)	1
Roadway Access	Access to 2+ public roadways	3
	Access to 1 public roadway	1
Access to Existing Rail	Yes	1

### ***DEVELOPABLE ACRES***

Areas with larger developable acreage were given higher weights in this analysis. Adjacent parcels with the same owners were merged. Areas that limit development, including wetlands and flood zones, were removed from the analysis. The remaining area was calculated as developable area, and weighted in five different categories. Parcels with less than 2 developable acres were given a value of -1, as these are generally too small for non-residential development. Parcels between 2 and 19 developable acres were given a value of 1; parcels between 20 and 49 developable acres were given a value of 2; parcels between 50 and 99 developable acres were given a value of 3; and parcels with 100 or more developable acres were given a value of 4. The Economic Development Partnership of North Carolina reported that most manufacturing businesses request sites in the 11 to 25 acre range followed by the 26 to 50 acre range.



Map 6: Developable Acres



## **PRESERVATION AREAS**

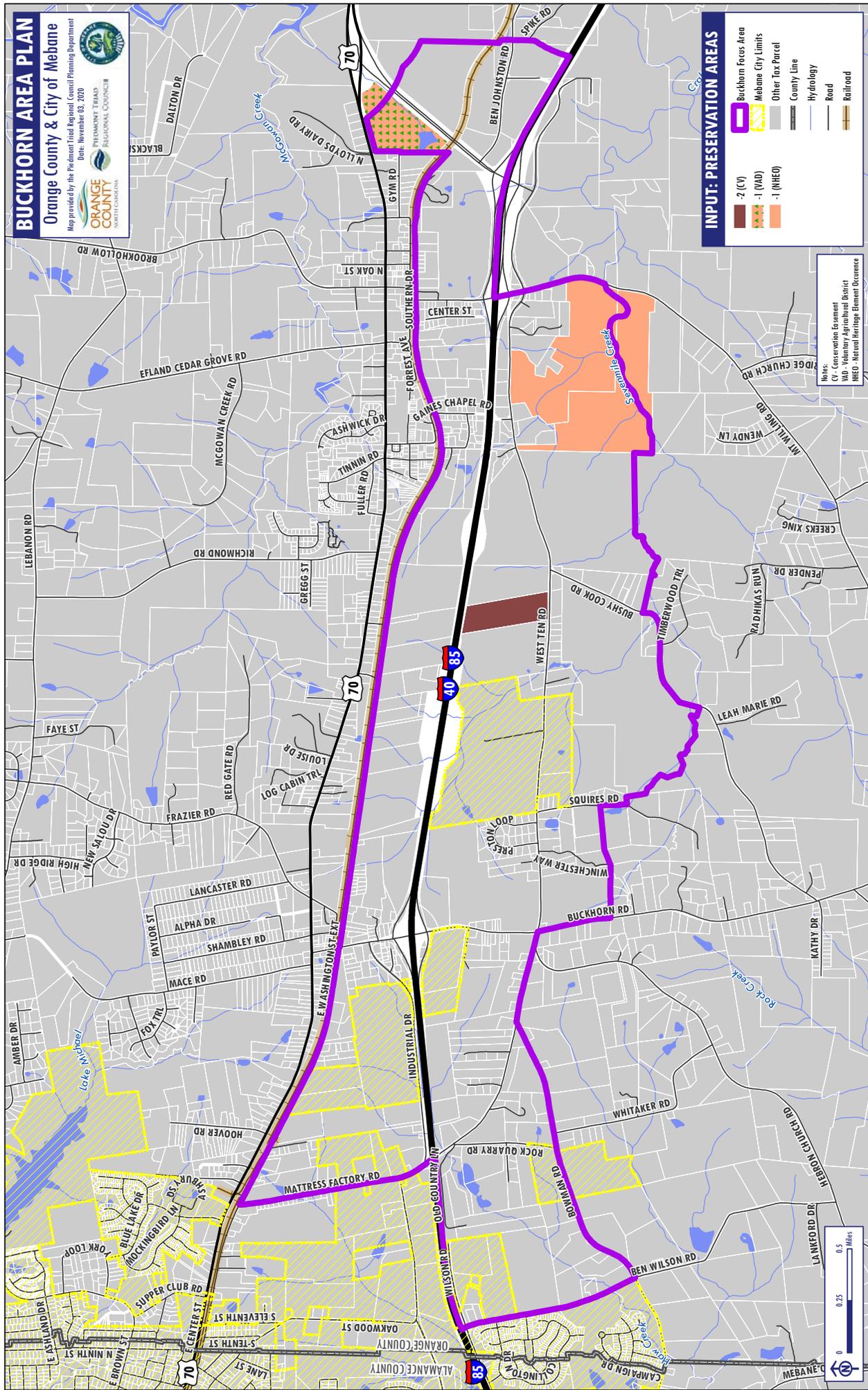
Preservation areas include Voluntary Agricultural Districts (VAD), Conservation Easements, and National Heritage Element Occurrences (NHEO). These preservation areas were given negative weights as they have potential to make development on these parcels more difficult. VADs, lasting for 10 years in Orange County, encourage the preservation and protection of farmland, allow landowners to publicly recognize their farms, and protect farms from negative impacts, such as waivers of water and sewer assessments.

VADs agreements allow owners to opt out with written notice, so a value of -1 was given to these parcels. Conservation easements are permanent legal agreements that limit uses of the land in order to protect its conservation values. Because these are permanent agreements, this parcel was given a value of -2. There is only one parcel with a conservation easement in the study area, located at the Soccer.com Center, east of Gravelly Hill Middle School.

A NHEO is an area of land or water that is important for the conservation of the natural biodiversity of North Carolina. The Natural Heritage Program identifies these natural areas based on biological surveys, as authorized in the Nature Preserves Act. Parcels containing these occurrences were given a value of -1. These parcels contain two threatened or endangered bivalves known to live in the Neuse drainages (including Sevenmile Creek). These species are threatened at a state level but are not a federally listed species. It is not thought that these species would significantly restrict development.



Map 7: Preservation Areas



**BUCKHORN AREA PLAN**  
 Orange County & City of Mebane  
 Map provided by the Piedmont Triad Regional Council Planning Department  
 Date: November 03, 2020

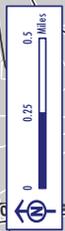
ORANGE COUNTY NORTH CAROLINA  
 TRIAD REGIONAL COUNCIL

**INPUT: PRESERVATION AREAS**

- Buckhorn Focus Area
- Mebane City Limits
- Other Tax Parcel
- County Line
- Hydrology
- Road
- Railroad

-2 (CV)  
 -1 (VAD)  
 -1 (NHED)

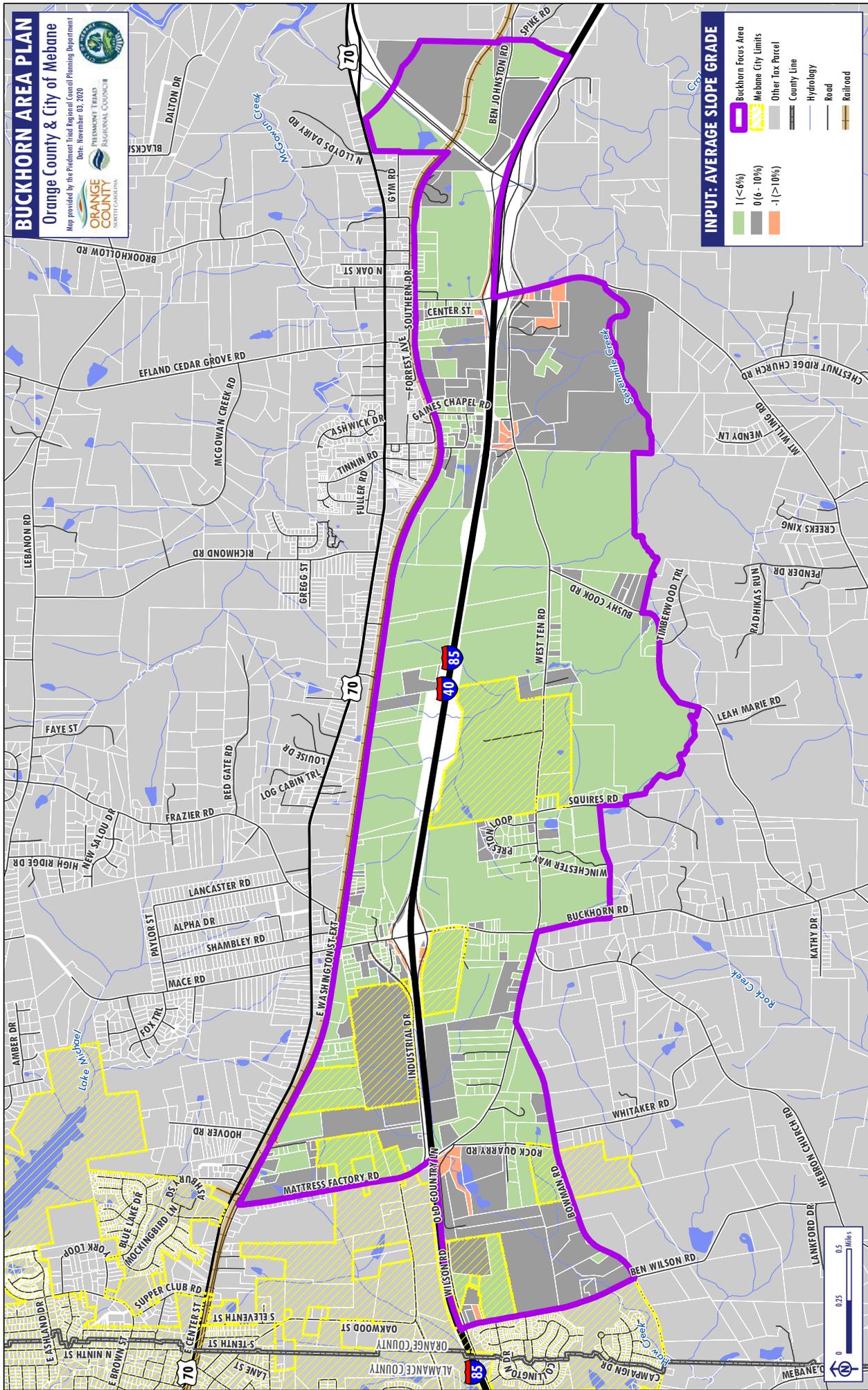
Notes:  
 CV - Conservation Easement  
 VAD - Voluntary Agricultural District  
 NHED - Natural Heritage Element Occurrence



## ***MEAN SLOPE***

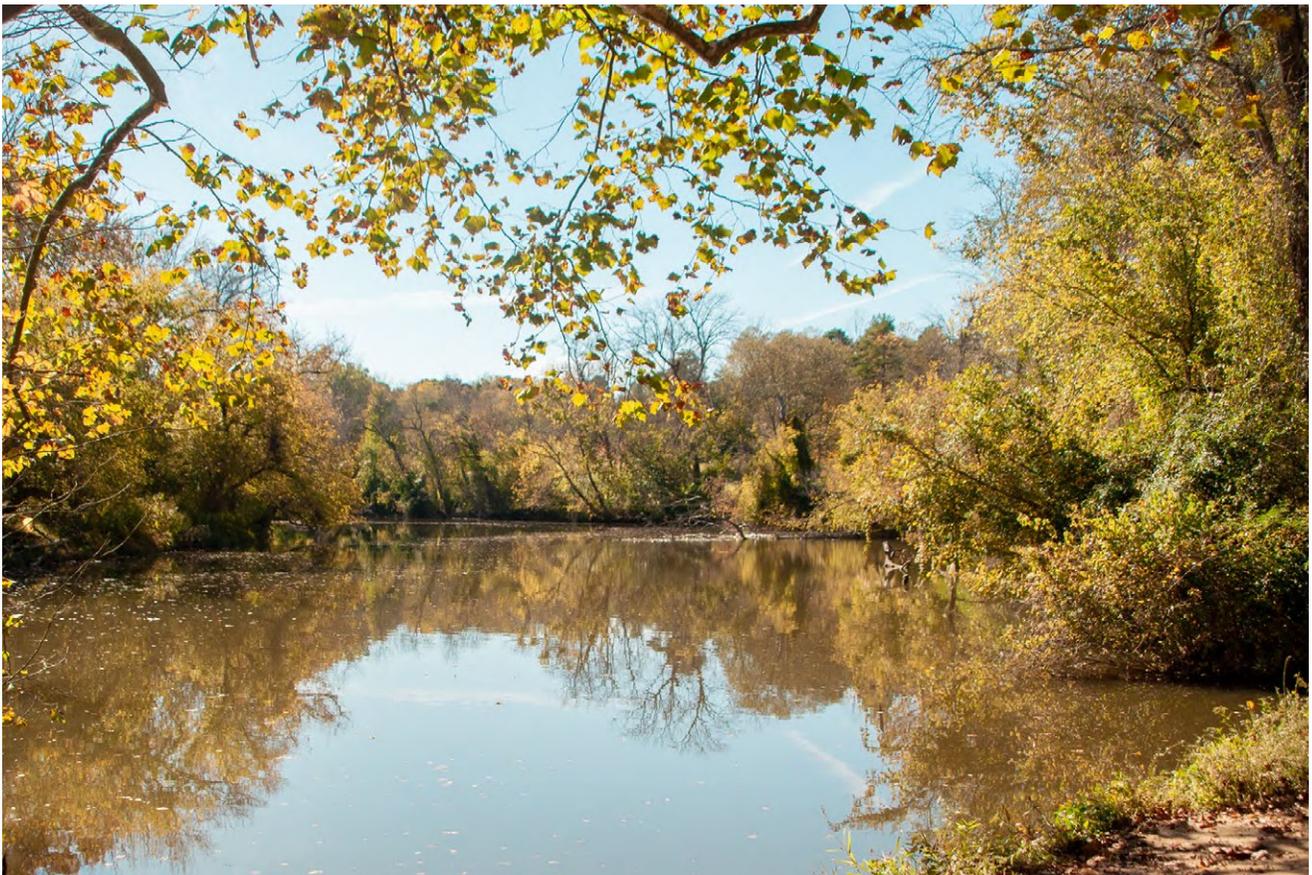
The percent slope was averaged for each parcel using LiDAR elevation data with a 10-foot resolution. For all parcels in the study area, the mean percent slope grade was roughly 6%. Parcels with a mean percent slope grade less than 6% were given a value of 1, as they are ideal for construction. Parcels with a mean slope grade between 6% and 10% received no points, and parcels with values greater than 10% were given a value of -1, as these steeper slopes are not favorable for development. In construction, a slight slope may be helpful for site drainage but a steeper slope can increase the need for grading, increasing site development costs.

Map 8: Mean Slope

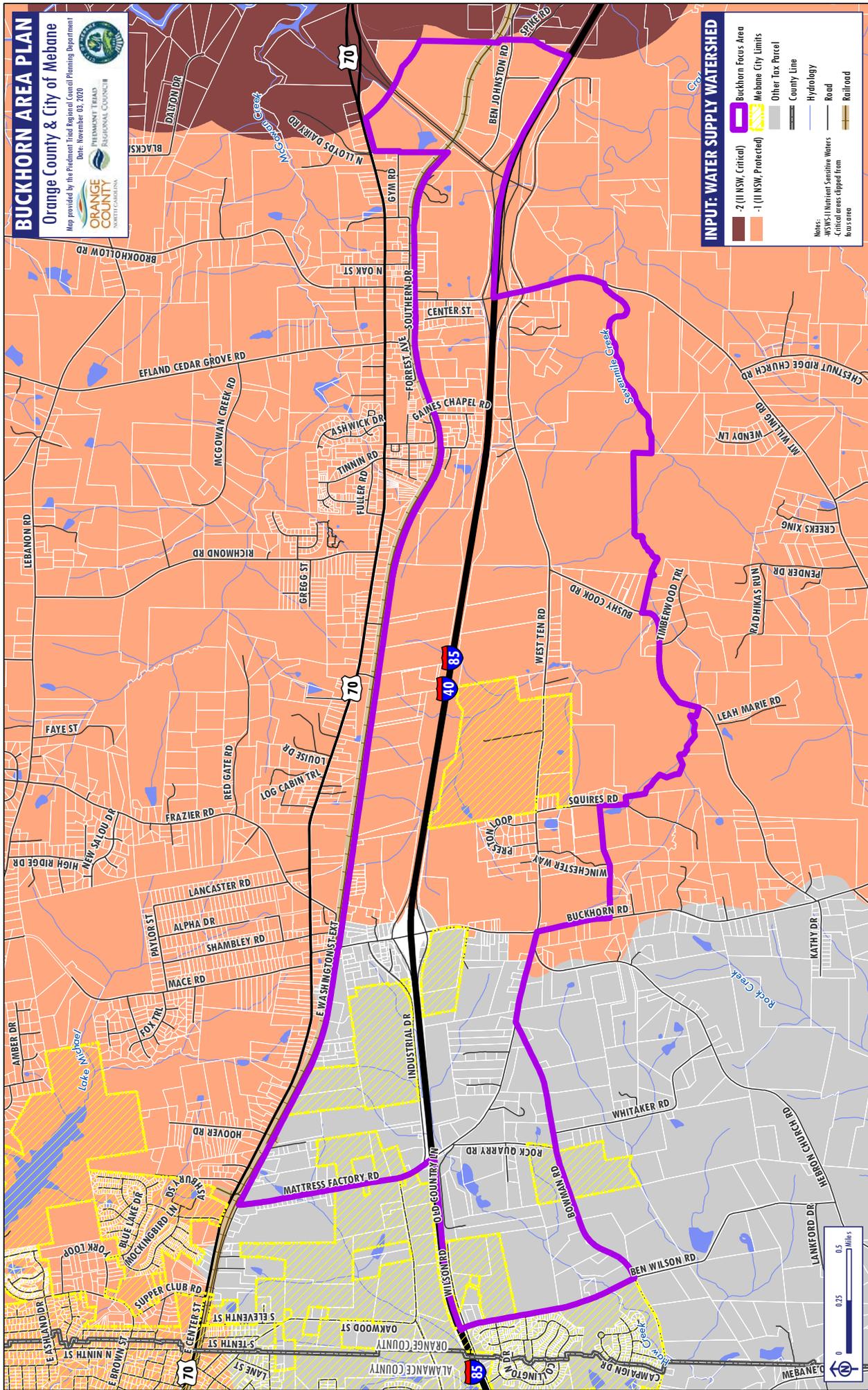


## **WATERSHED**

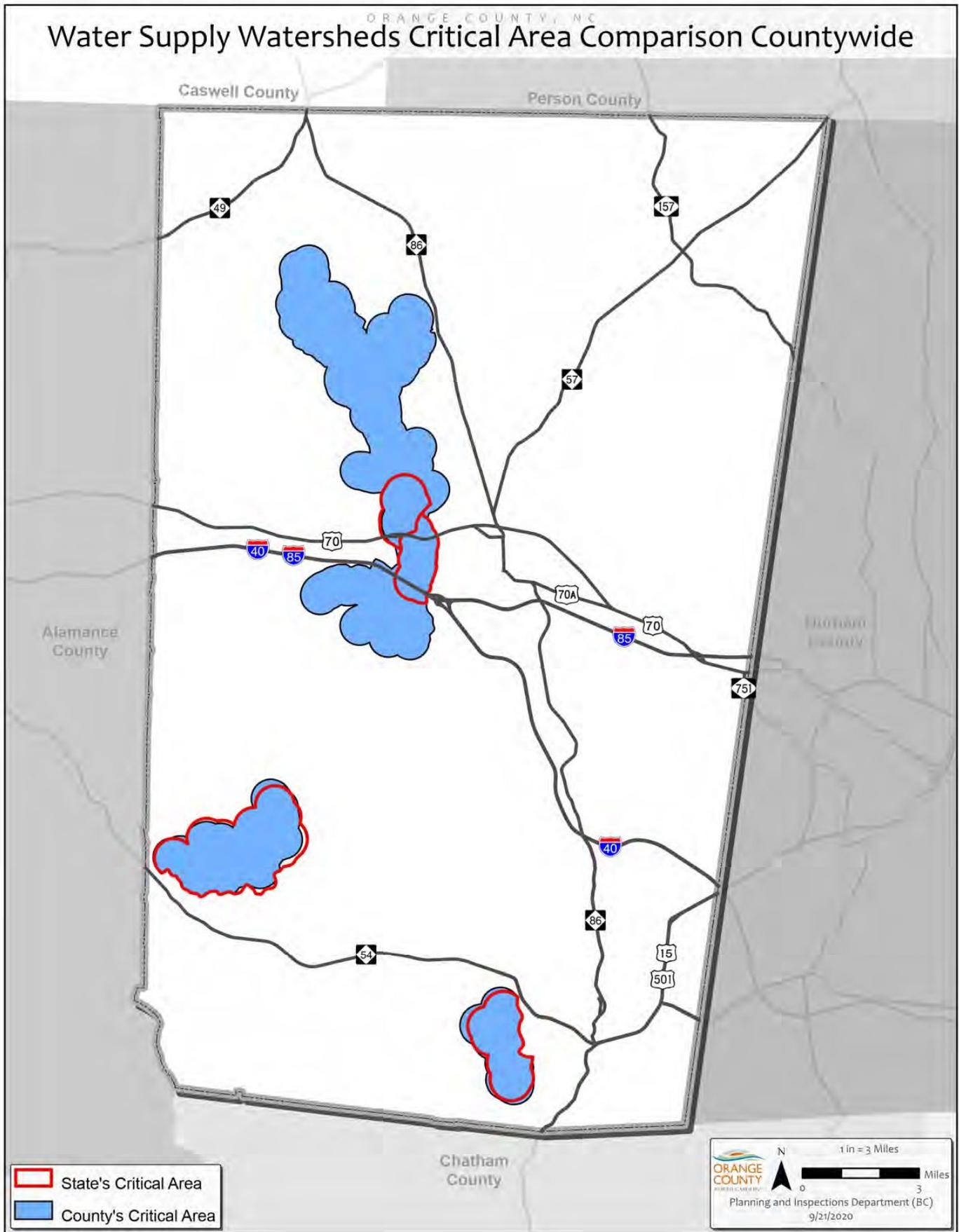
The Buckhorn Area includes land in the Cape Fear River Basin and the Neuse River Basin. The 200-mile Cape Fear River is the main tributary and namesake of the state's largest river basin. This area is in the Haw River Basin that drains to the Jordan Lake watershed of the Cape Fear River Basin. All waters in the Neuse River basin are classified as Nutrient Sensitive Waters (NSW), as well as waters in the Jordan Lake. NSW is a supplemental classification that the Environmental Management Commission may apply to surface waters that are experiencing algal growth or blooms. Nearly all land east of Buckhorn Road is in the Falls Lake watershed and subject to a Nutrient Management Strategy that limits the nitrogen and phosphorous allowed in the stormwater runoff from development. Many of the waters in this study area are also level two water supply watersheds (WS-II). These waters are used as sources of water supply for drinking, culinary, or food processing purposes, and are deemed High Quality Waters by supplemental classification. Areas in the critical portion of the water supply watersheds were clipped out of the study area. Critical areas include land half-mile upstream and draining to a river intake, and pose very high restrictions on development. Orange County's locally-designated critical areas were not designated or regulated by the NC Department of Environmental Quality and are not recognized within this plan. The remaining area of a water supply watershed is designated as the balance of the watershed. These areas are considered protected with somewhat limiting development restrictions such as impervious cover limits. Parcels in the protected watershed were given a -1 weight.



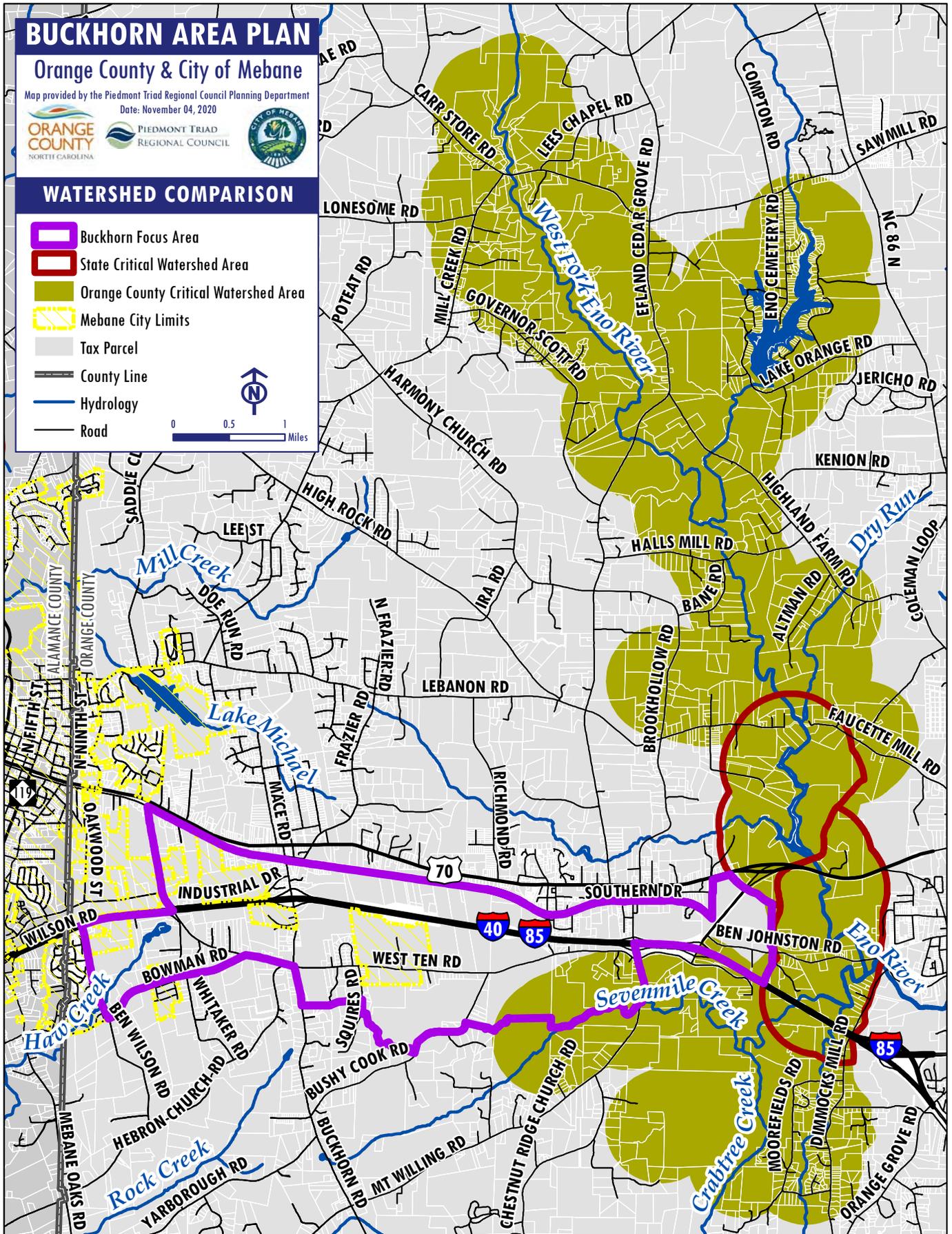
Map 9: Water Supply Watershed



Map 10: Critical Watershed Area Comparison - Orange County



Map 11: Critical Watershed Area Comparison - Buckhorn Focus Area

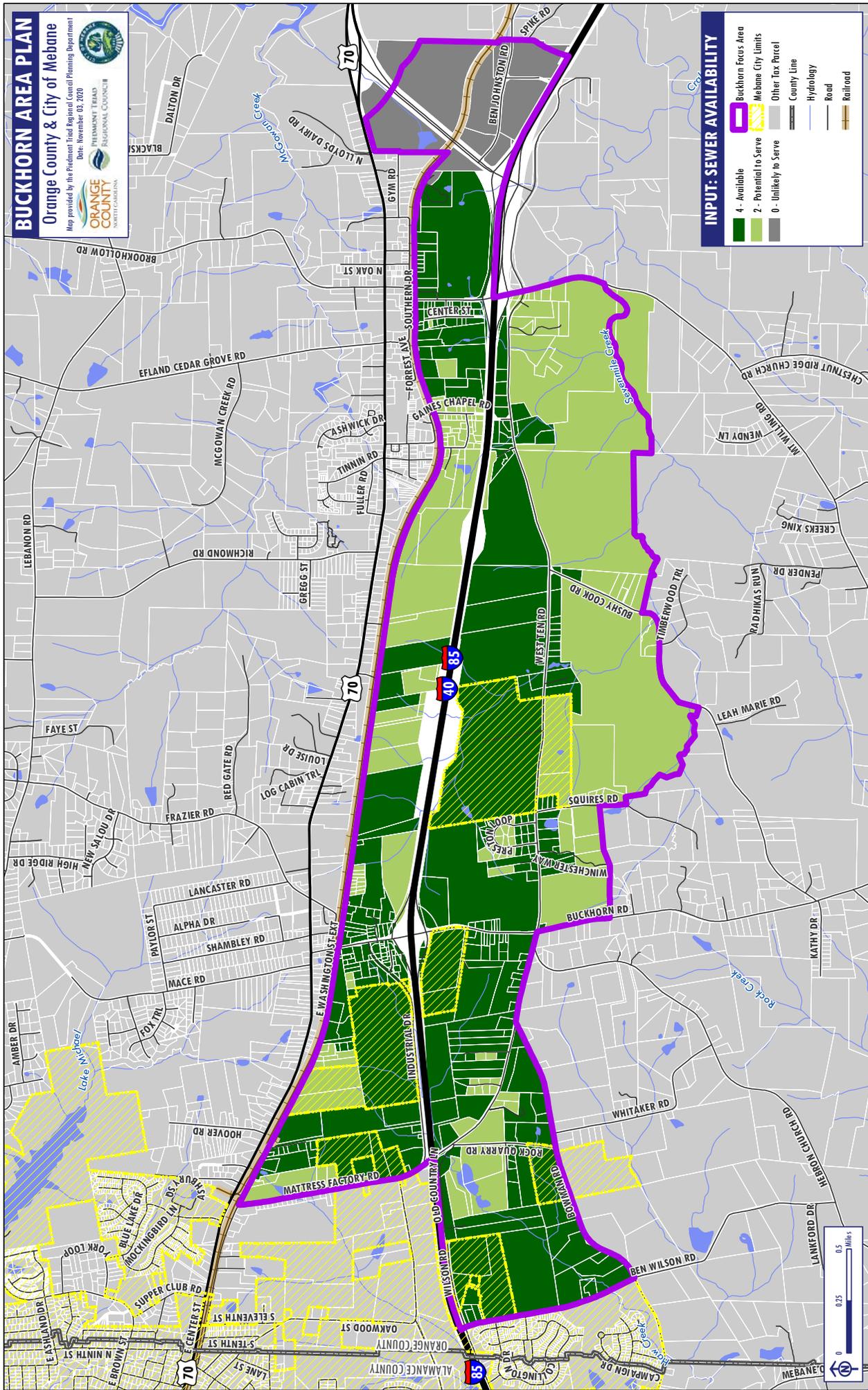


## **SEWER INFRASTRUCTURE**

Public works and engineering staffs from the City of Mebane and Orange County reviewed which parcels had sewer currently available, had potential to be served, or were unlikely to be served in the future. Parcels with sewer currently available were given the weight of 4, with potential to serve a 2, and unlikely to serve a null score (0). The current Utility Service Agreement with the City of Mebane and Orange County will need to be expanded from the current area to provide utilities to some parcels. Areas outside the focus area were not included in the availability study.



Map 12: Sewer Availability

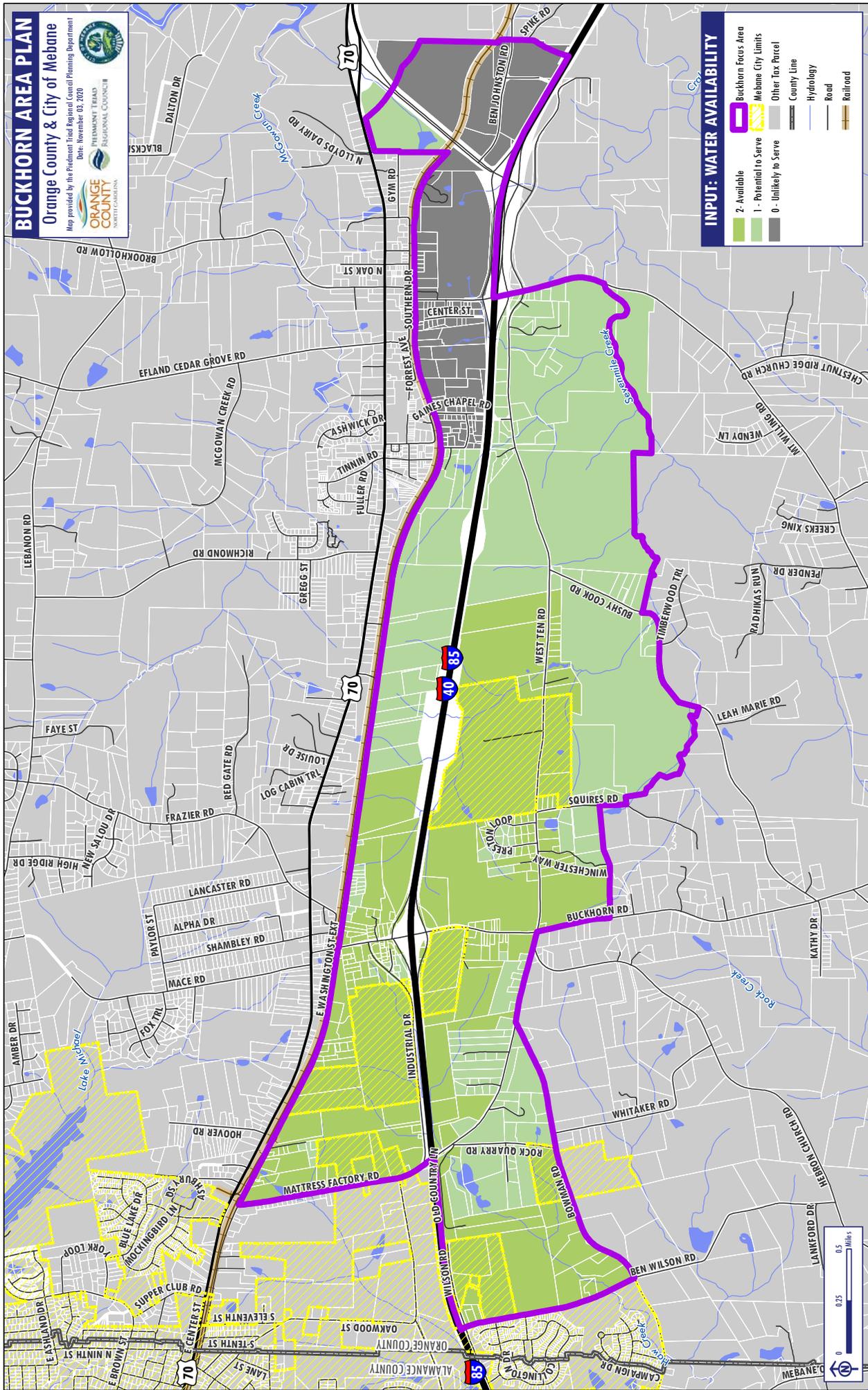


## *WATER INFRASTRUCTURE*

Public works and engineering staffs from the City of Mebane and Orange County reviewed parcels had water currently available, had potential to be served, or were unlikely to be served in the future. Parcels with water currently available were given the weight of 2, with potential to serve a 1, and unlikely to serve a null score (0). The current Utility Service Agreement with the City of Mebane and Orange County will need to be expanded from the current area to provide utilities to some parcels. Areas outside the focus area were not included in the availability study.



Map 13: Water Availability

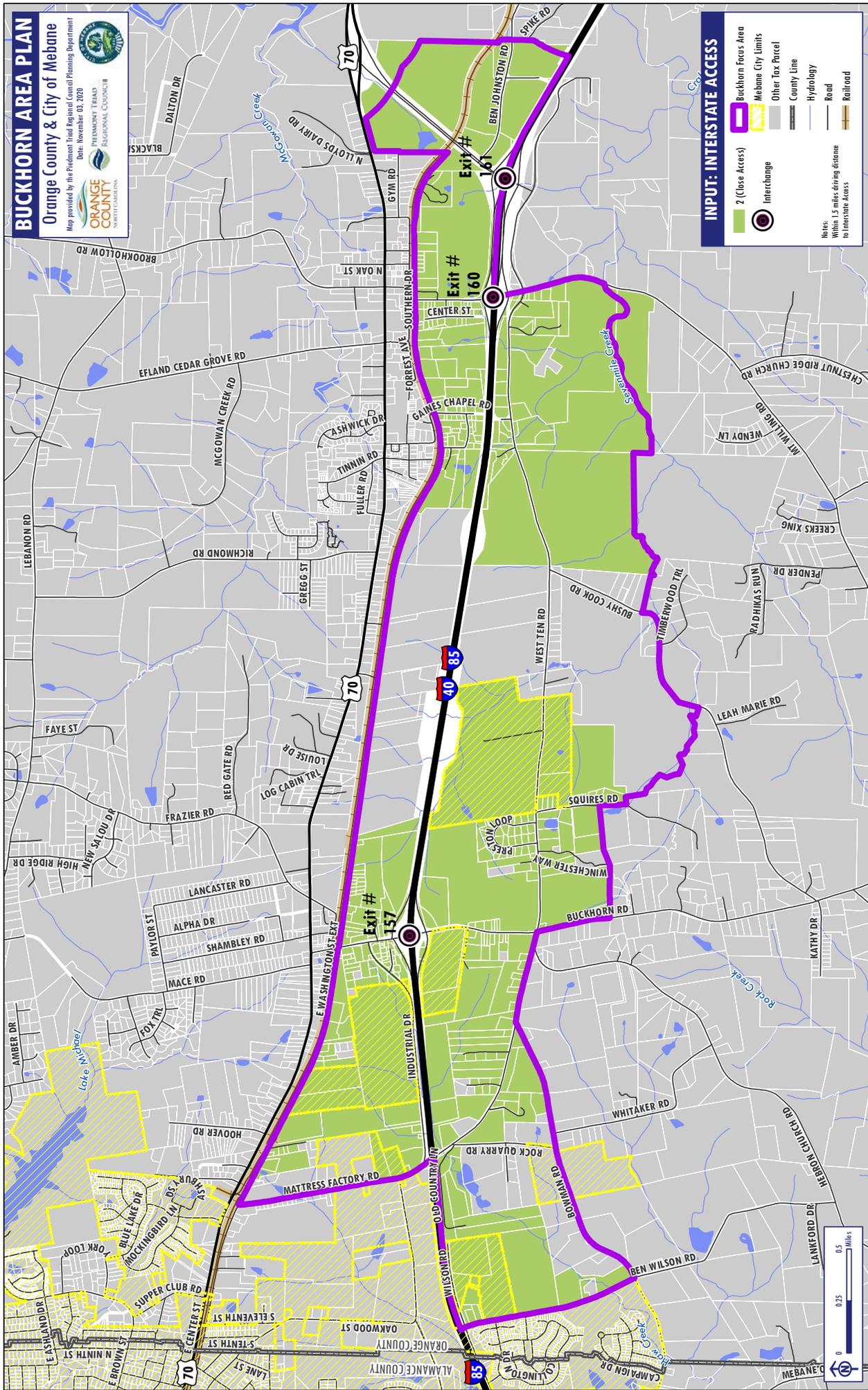


## *INTERSTATE ACCESS*

Access to the interstate is measured as driving distance from the nearest interchange. A 1.5-mile drive time buffer from each interstate access point was created in ArcGIS. Parcels with a majority of its area falling within the 1.5-mile drive time buffer were given a weight of 2. Location near the interstate is an essential need for manufacturing and shipping industries. I-40/85 are highly marketable interstates as they span the country coast-to-coast from North Carolina to California and Atlanta to Richmond, where I-85 interchanges with I-95, the primary interstate corridor for the entire East Coast of the United States.



Map 14: Interstate Access

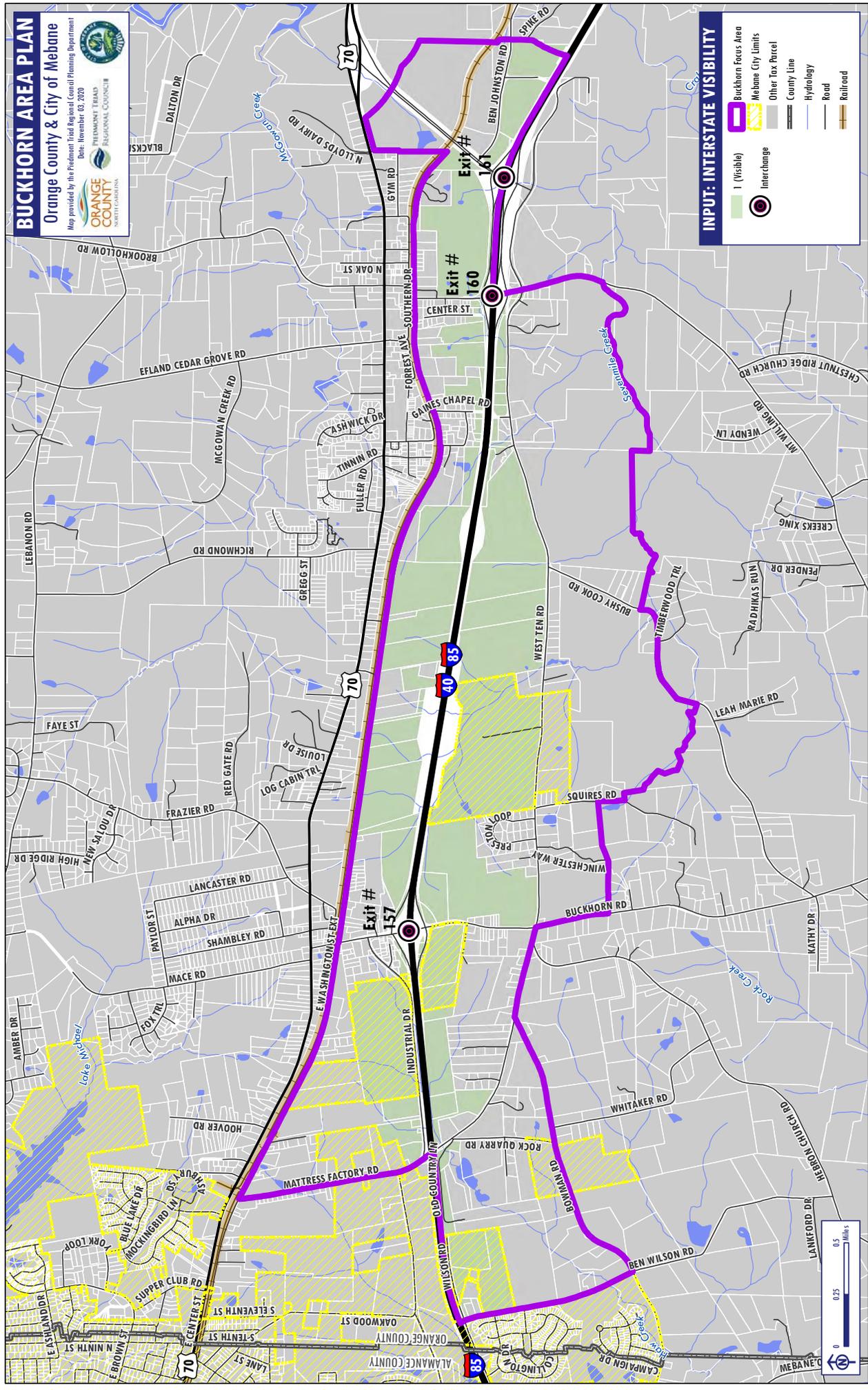


### *INTERSTATE VISIBILITY*

Access and visibility from the interstate is the primary factor considered by businesses and developers in the site selection process. Interstate designation will open up new markets as some companies choose to locate along interstate highways for additional exposure. Parcels with visibility from the interstate were given a weight of 1.



Map 15: Interstate Visibility

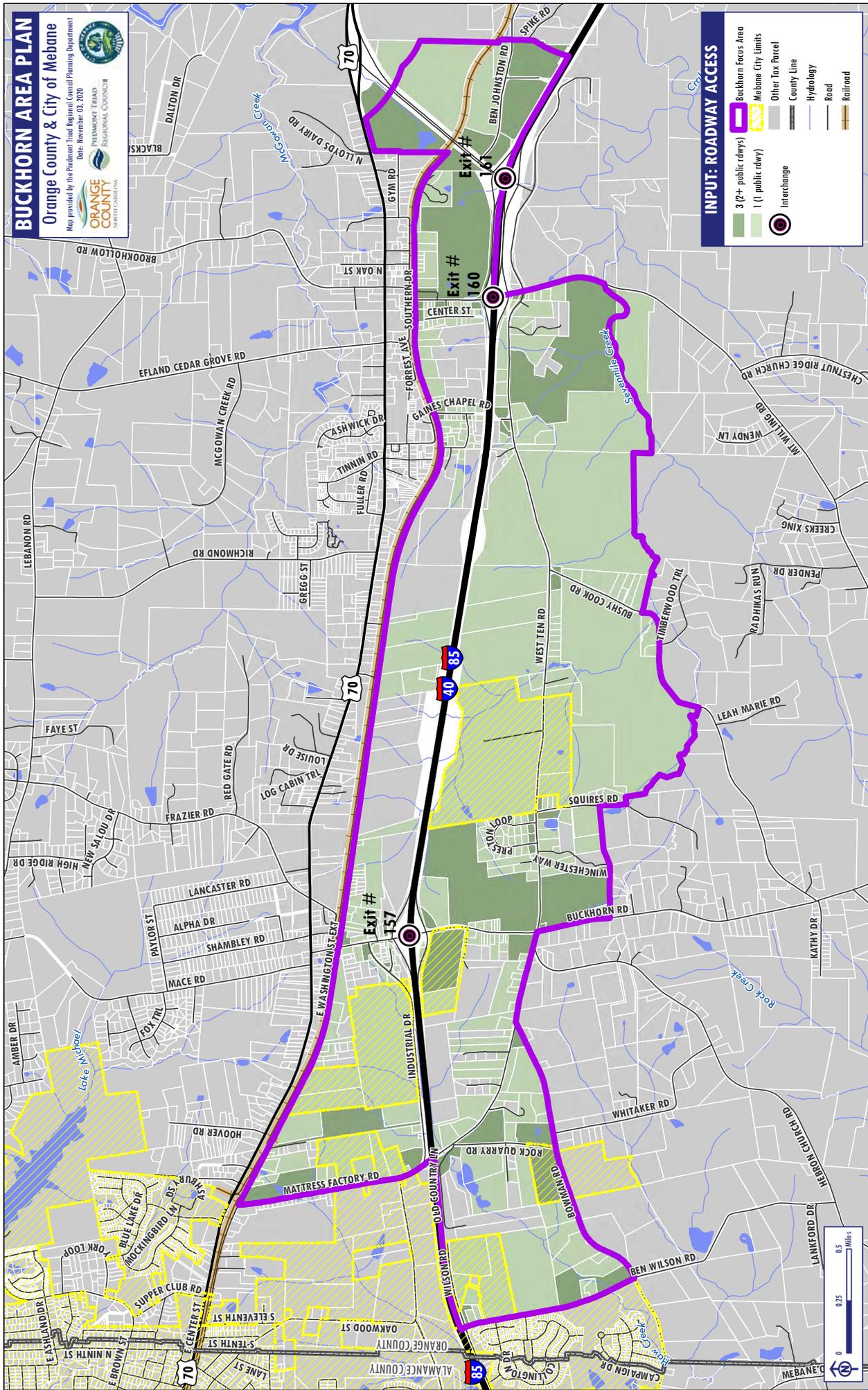


## ROADWAY ACCESS

Roadway access was weighted in two sections; parcels with access to two or more public roadways (mainly at an intersection) were given a weight of 3, and parcels with access to one public roadway were given a weight of 1. Local connector roads are crucial to provide access from the interstate and highways to local business districts and industrial parks.



Map 16: Roadway Access

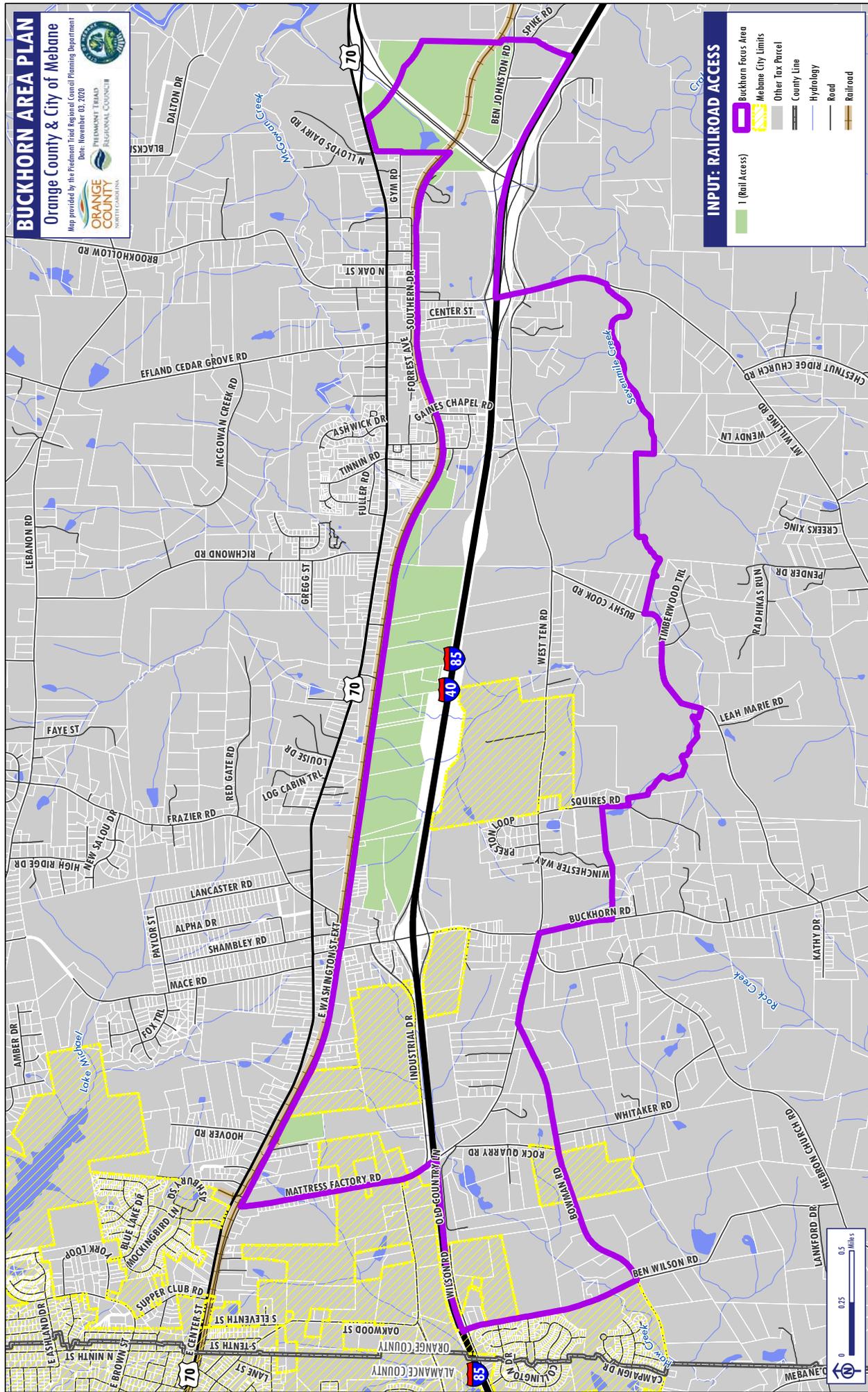


### *ACCESS TO EXISTING RAIL*

Parcels with access to existing rail were given a weight of 1. Rail access promotes and supports economic growth for industries relying on freight rail transportation networks and facilities. It supports facilities and terminals that need to accommodate heavy, wide and tall shipments. Additionally, rail can lower transportation costs, lowering costs for consumers and reducing freight congestion.



Map 17: Rail Access



# 7 | RECOMMENDATIONS

## 1. LAND USE

The areas defined in the description below and portrayed on Map 18 should be considered for manufacturing, wholesale, distribution, and service uses. The Mebane Comprehensive Land Development Plan Mebane By Design should be amended to include these Top Tier Growth Areas and Focus Areas, with exception of Focus Area E. The amendment should refer directly to this plan, which shall serve as an appendix to the CLP and in revisions to the City's Future Growth Area and G-2 Industrial (V) Primary Growth Area.

**The Most Suitable Parcels Map (Map 18) displays two different classifications of suitable parcels. The teal parcels are described below as "Highly Suitable Parcels", the brown dotted areas are described as "Potential Growth Areas". The primary difference in the different parcel types are the readiness to develop. The teal Highly Suitable Parcels have little to no major changes needed for development. They primarily all have water and sewer access, road access, and large land areas. The brown dotted Highly Suitable Parcels are areas that are close to "development ready" but need one or two changes, such as access to water, sewer, or road access.**

**Small lot residential areas in the study area have been identified (Map 20). As an effort to preserve rural residential appeal, buffering these residential areas from light and noise should be defined and applied to protect residents' quality of life. This is further explored in Recommendation 2, Future Land Use Districts.**

### *HIGHLY SUITABLE PARCELS*

The land suitability analysis of the Buckhorn Area reveals multiple parcels ideal for immediate development along the I-40 corridor (Map 19). Parcels ranking from 11-16 in the scoring matrix are ideal for immediate economic development, with little to no major changes needed for development. The majority of these parcels currently have water, sewer, high acreage, and road access available. Of the twelve parcels that are scored in the top tier, two are already developed as employment centers in the manufacturing and distribution sectors.

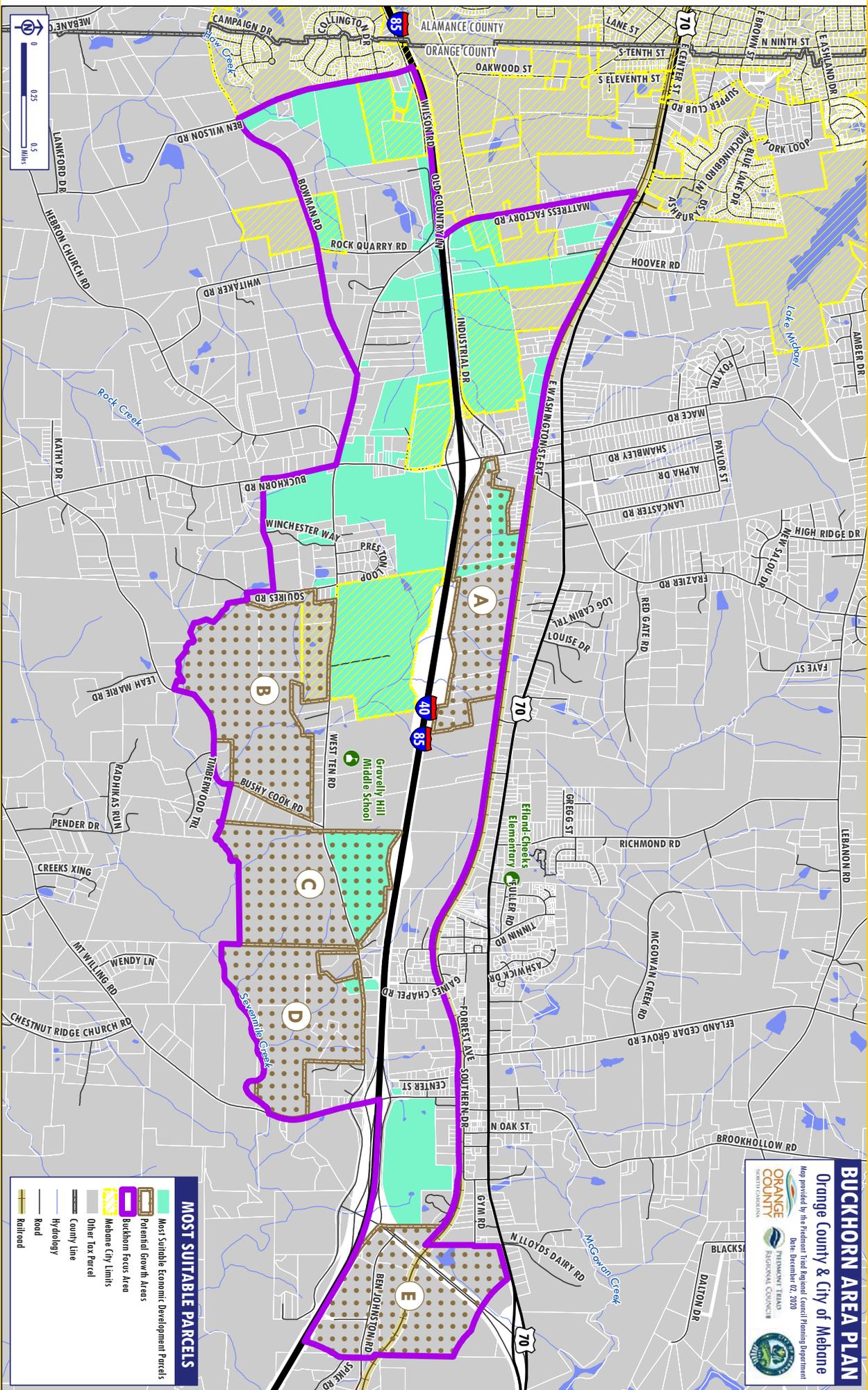
Developable acreage in these top rate properties range from 2.2 acres to 126.02 acres. Adjacent parcels with the same owner were merged for a total property acreage.



No top tier parcels are located in a preservation area, such as a Voluntary Agriculture District, Conservation Easement or Managed Area, or a Natural Heritage Element Occurrence or Area.

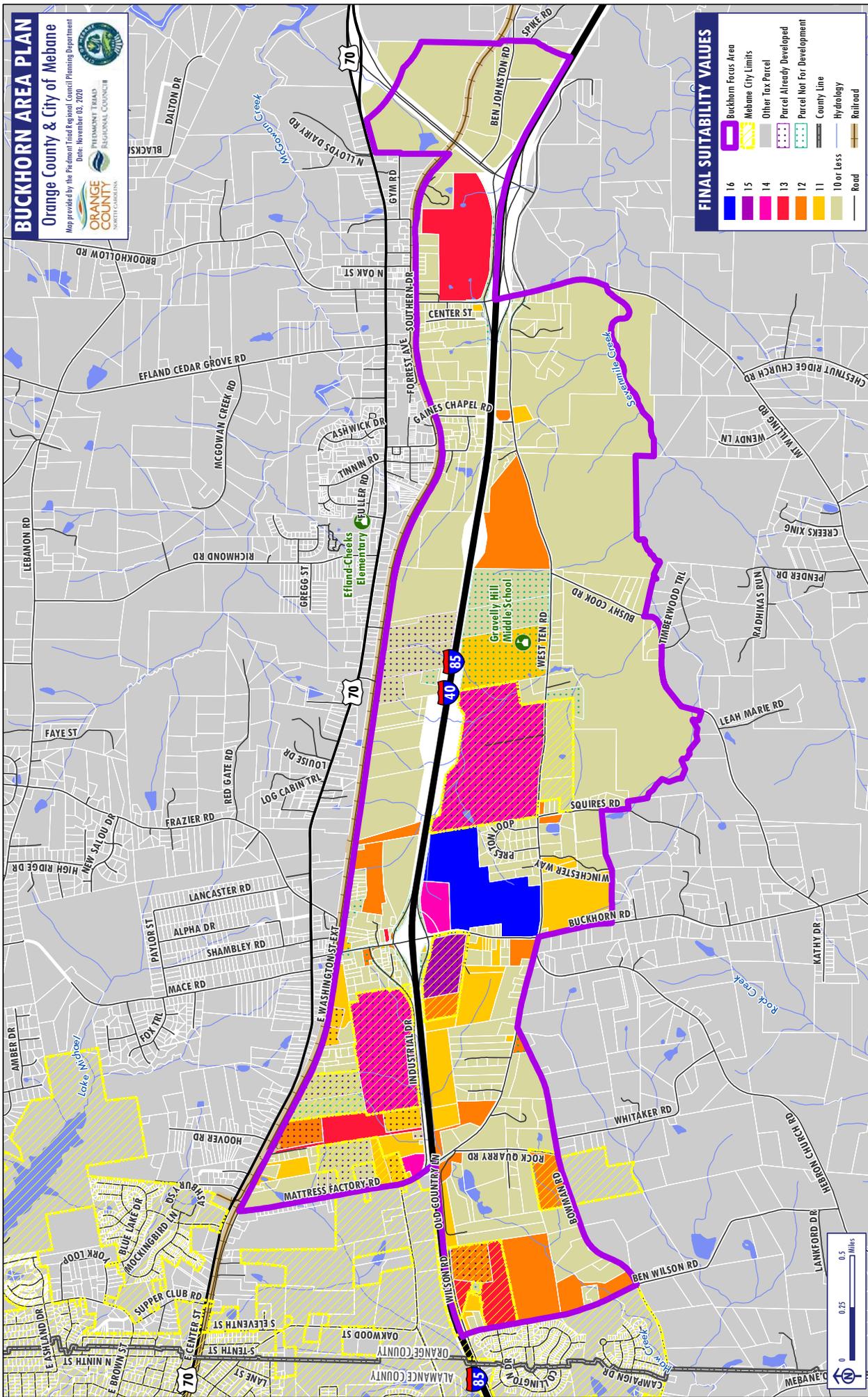
Environmental constraints play a factor in a few of these highly suitable parcels. Slope is not a concern, with the majority of slopes being less than 6%.

Infrastructure needs for these parcels are already met. Only one identified parcel, to the farthest east, does not currently have water available and is unlikely to be served by Mebane. Many identified parcels are adjacent to I-40 providing visibility from the interstate and access to the interstate for all highly suitable parcels is less than 1.5 miles driving distance. The majority of identified parcels are accessible by two or more public roadways and all parcels have access to at least one public roadway. None of these parcels have currently have access to rail, however numerous parcels on the northern part of the study area are potentially accessible. Growth areas with rail access are identified in the next section.

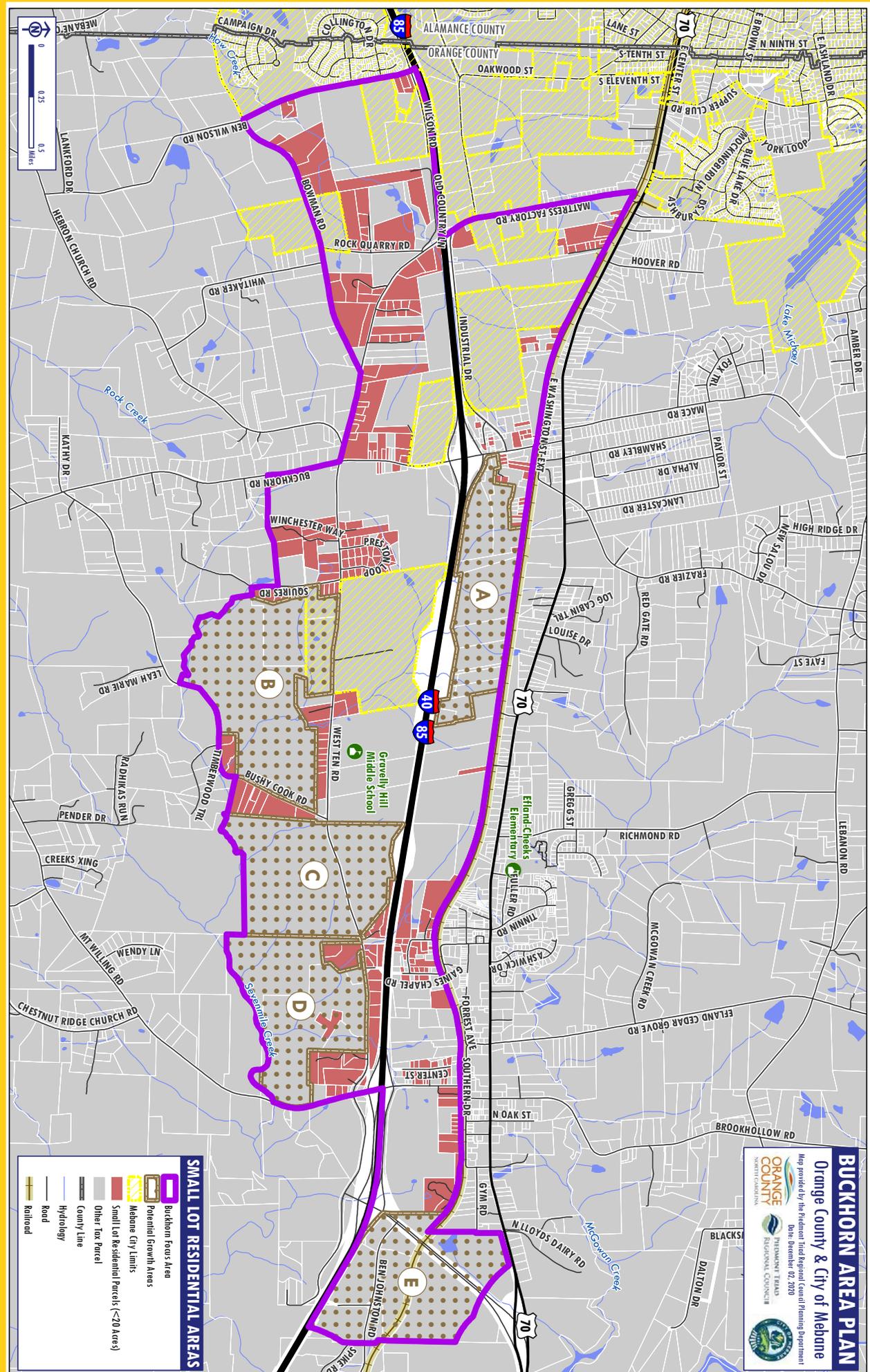


**BUCKHORN AREA PLAN**  
 Orange County & City of Mebane  
 Map provided by the Piedmont Triad Regional Council Planning Department  
 Date: December 02, 2020  
 PIEDMONT TRIAD REGIONAL COUNCIL  
 NORTH CAROLINA

Map 19: Final Suitability Values



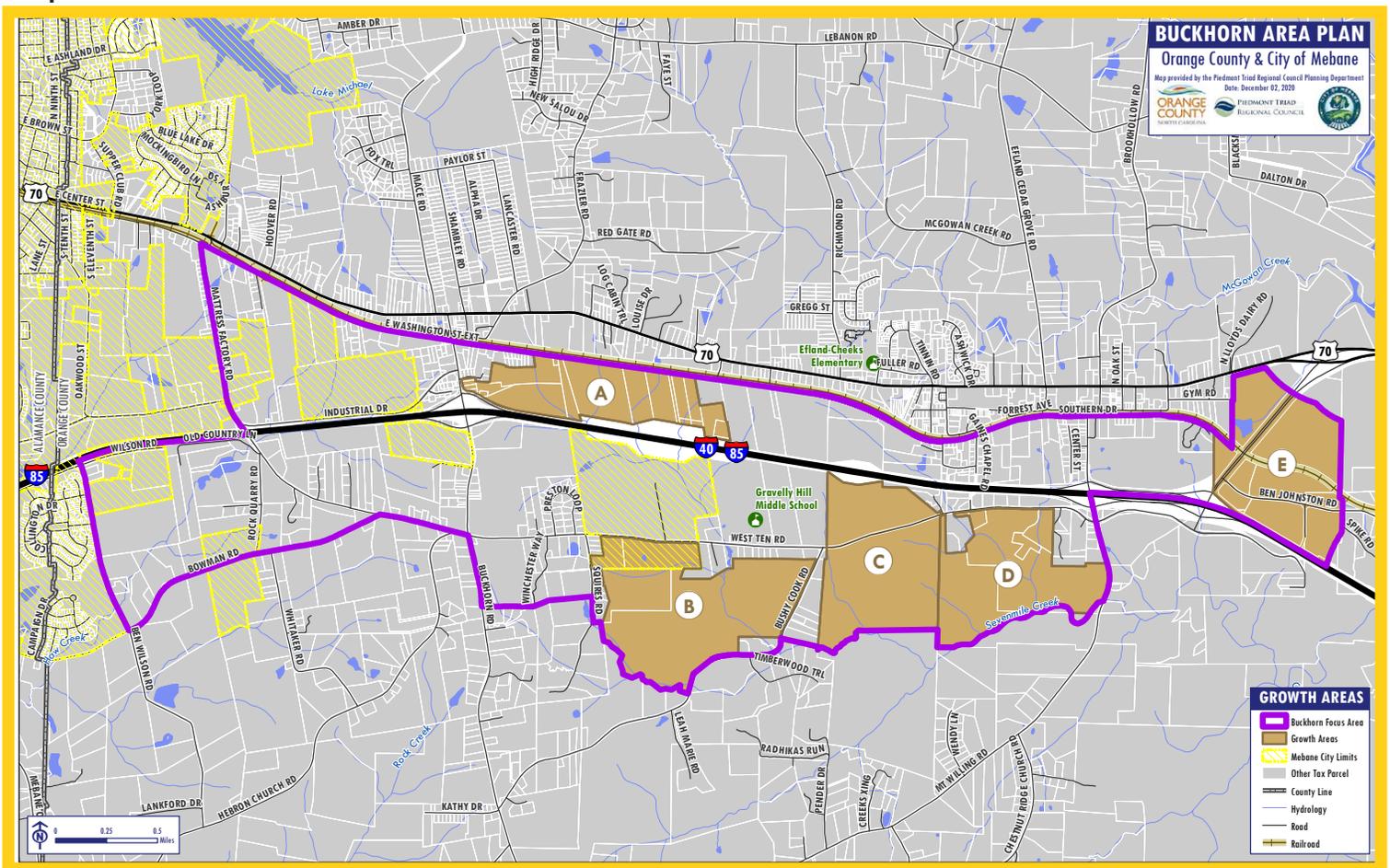
Map 20: Small Lot Residential Areas



## POTENTIAL GROWTH AREAS

Five areas have been identified by City of Mebane and Orange County staff as potential areas for growth based on size, access, and needs. The five areas have been labelled from west to east, **in their preferred development order or phasing, though not in a particular order of growth potential**. Each of the five areas will be described in detail what elements are needed to encourage development. Maps 18 and 21 show the identified growth areas A through E.

Map 21: Growth Area Overview



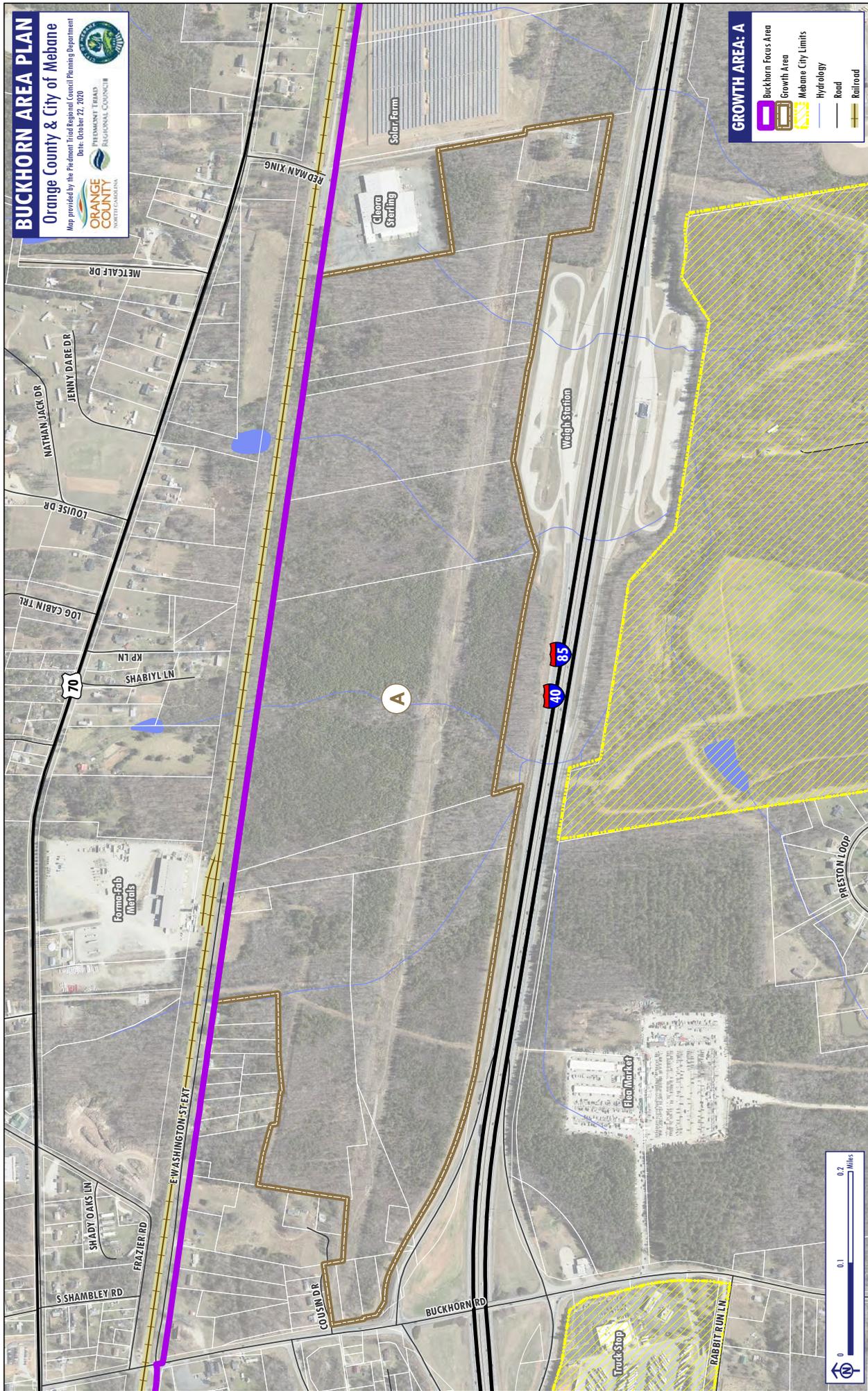
## **GROWTH AREA A**

This area is a total of 219.62 acres and is comprised of 19 developable parcels. This growth area is unique because road and rail access are adjacent to the parcels but not available. Road access is needed to increase development (and the land suitability score) in this area. There are several large parcels located north of the I-40 truck weigh station but they are not currently accessible by road. There is significant interstate visibility and the Buckhorn Road on and off-ramps are located adjacent to the area. If rail and/or road right of way is dedicated to one or more of these parcels, it will greatly enhance their potential as a primary economic development site.

There are ten larger parcels adjacent to each other (mostly 20 to 49 developable acres) that total 176.33 acres. No parcels have greater than 10% slope. The majority of these parcels are located in the Neuse River Basin and are classified as nutrient sensitive waters (NSW). This classification may affect land use, buffer requirements, impervious surface limitations, and stormwater management requirements. Sewer and water infrastructure is either readily available or has the potential to be served on all developable parcels in this area. Sewer and water is available in the majority of parcels east of the weigh station.

This growth area is next to a historically Black & Occeneechee, working class community (Buckhorn). who will need to be included in guiding its development. Partnership and communication with this community will be critical to its development, ensuring protection of the residential nature of the community, including the preservation of cultural markers such as cemeteries and churches.

Map 22: Growth Area A



## **GROWTH AREA B**

This area is a total of ~~315.4~~ ~~348.99~~ acres and is comprised of ~~four~~ ~~fifteen~~ developable parcels. To increase development in this area, water and sewer is needed. There is potential for water and sewer to be served in this area, but it is not currently available. This area was reviewed in 2019 by Orange County as a Proposed Economic Development Area (Area 3) and was determined to be a possible future economic development area with some necessary amendments to the UDO and restrictions due to the Watershed Overlay regulations.

This area is primarily 4 parcels that make up 90% of the developable acreage. No parcels in this group are located in a preservation area, such as a Voluntary Agriculture District, Conservation Easement or Managed Area, or a Natural Heritage Element Occurrence or Area.

The mean slope of this area is ideal with almost all parcels having less than 6% slope.

This area is located in the Neuse River Basin and is classified as nutrient sensitive waters (NSW). This classification may affect land use, buffer requirements, impervious surface limitations, and stormwater management requirements.

The southernmost portion of this area connected by Bushy Cook Road is just outside a 1.5-mile driving distance from the interstate. Parcels connected by Squires Road and West Ten Road are within the 1.5 mile driving distance. All parcels currently have access to one public roadway. A new internal road network could help realize improved interstate access and increase the value of these parcels. These parcels do not have interstate visibility or access to existing rail.

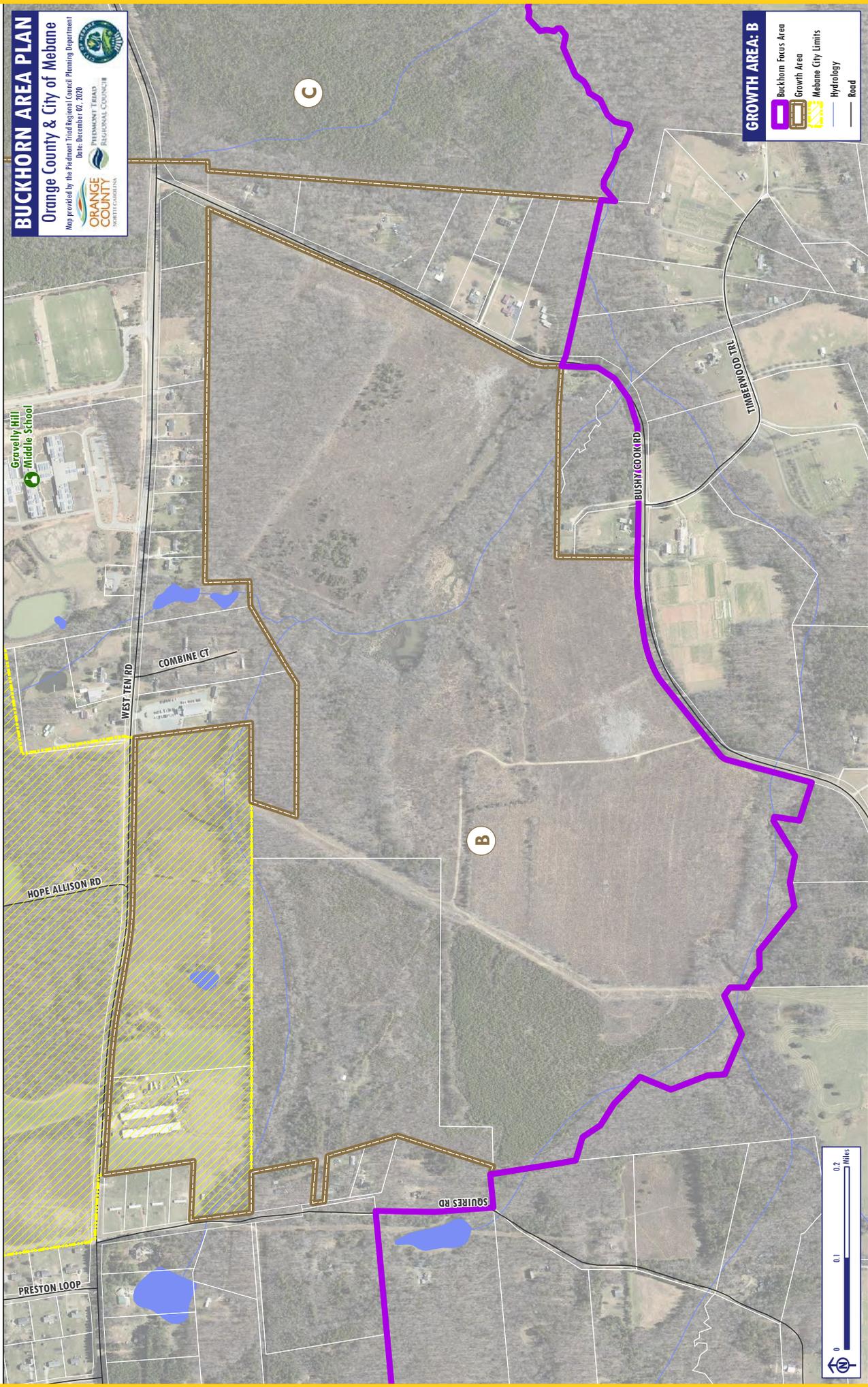
Map 23: Growth Area B

**BUCKHORN AREA PLAN**  
Orange County & City of Mebane  
Map provided by the Piedmont Triad Regional Council Planning Department  
Date: December 02, 2020

ORANGE COUNTY  
NORTH CAROLINA

PIEDMONT TRIAD  
REGIONAL COUNCIL

MEBANE CITY



**GROWTH AREA: B**

- Buckhorn Focus Area
- Growth Area
- Mebane City Limits
- Hydrology
- Road

### **GROWTH AREA C**

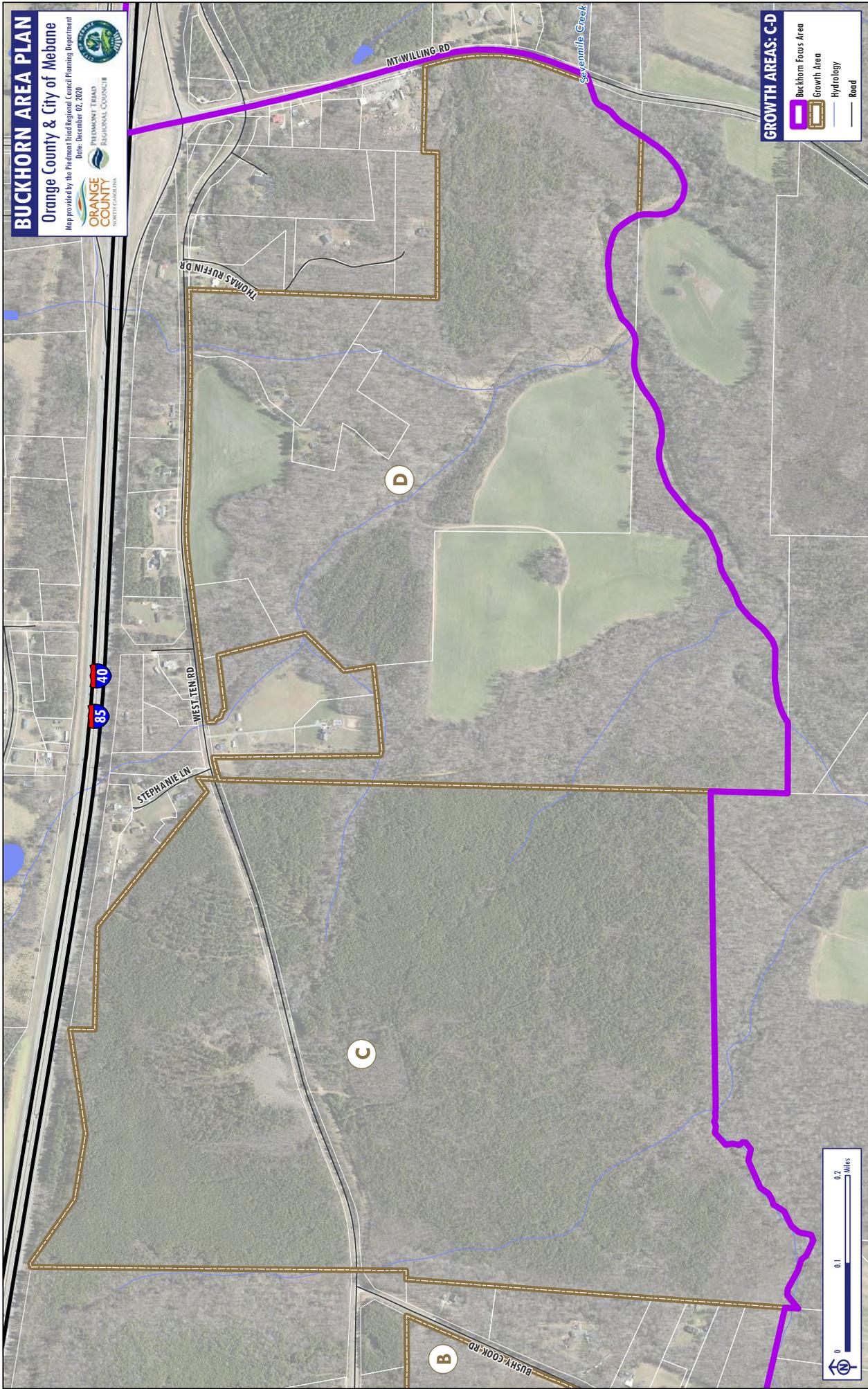
This area is comprised of two developable parcels: One is 73.5 acres and the other is 178.81 acres. The parcels are separated by West Ten Road and have the same owner. This area was reviewed in 2019 by Orange County as a Proposed Economic Development Area (Area 4) and was determined to be a possible future economic development area with some necessary amendments to the Mebane Utility Service Agreement and the Orange County Comprehensive Plan Land Use Plan and Zoning Matrix.

No parcels in this group are located in a preservation area, such as a Voluntary Agriculture District, Conservation Easement or Managed Area, or a Natural Heritage Element Occurrence or Area. The mean slope of this area is ideal with both parcels having less than 6% slope. This area is located in the Neuse River Basin and is classified as nutrient sensitive waters (NSW). This classification may affect land use, buffer requirements, impervious surface limitations, and stormwater management requirements.

Sewer is currently available in the northern parcel and there is potential to serve the southern parcel. Water is not currently available, but there is potential to serve on both parcels.

These parcels are located within 1.5 miles of the interstate and the northern parcel has visibility from the interstate. Both parcels are accessible from West Ten Road. These parcels do not have access to existing rail.

Map 24: Growth Area C



## GROWTH AREA D

This area is a total of ~~254.2~~ 244.92 acres and is comprised of ~~six~~ eight developable parcels. ~~Five of eight parcels are owned by Seven Mile Farm, LLC and make up 94% of the developable land area.~~ This growth area has a southern border of Sevenmile Creek. Sevenmile Creek was chosen as a boundary due to the environmental constraints and concerns it presents, including permitting of a crossing, environmental and water supply protections, and steep slope challenges. This area was reviewed in 2019 by Orange County as a Proposed Economic Development Area (Area 4) it was determined to be a possible future economic development area with some necessary amendments to the Mebane Utility Service Agreement and the Orange County Comprehensive Plan Land Use Plan and Zoning Matrix.

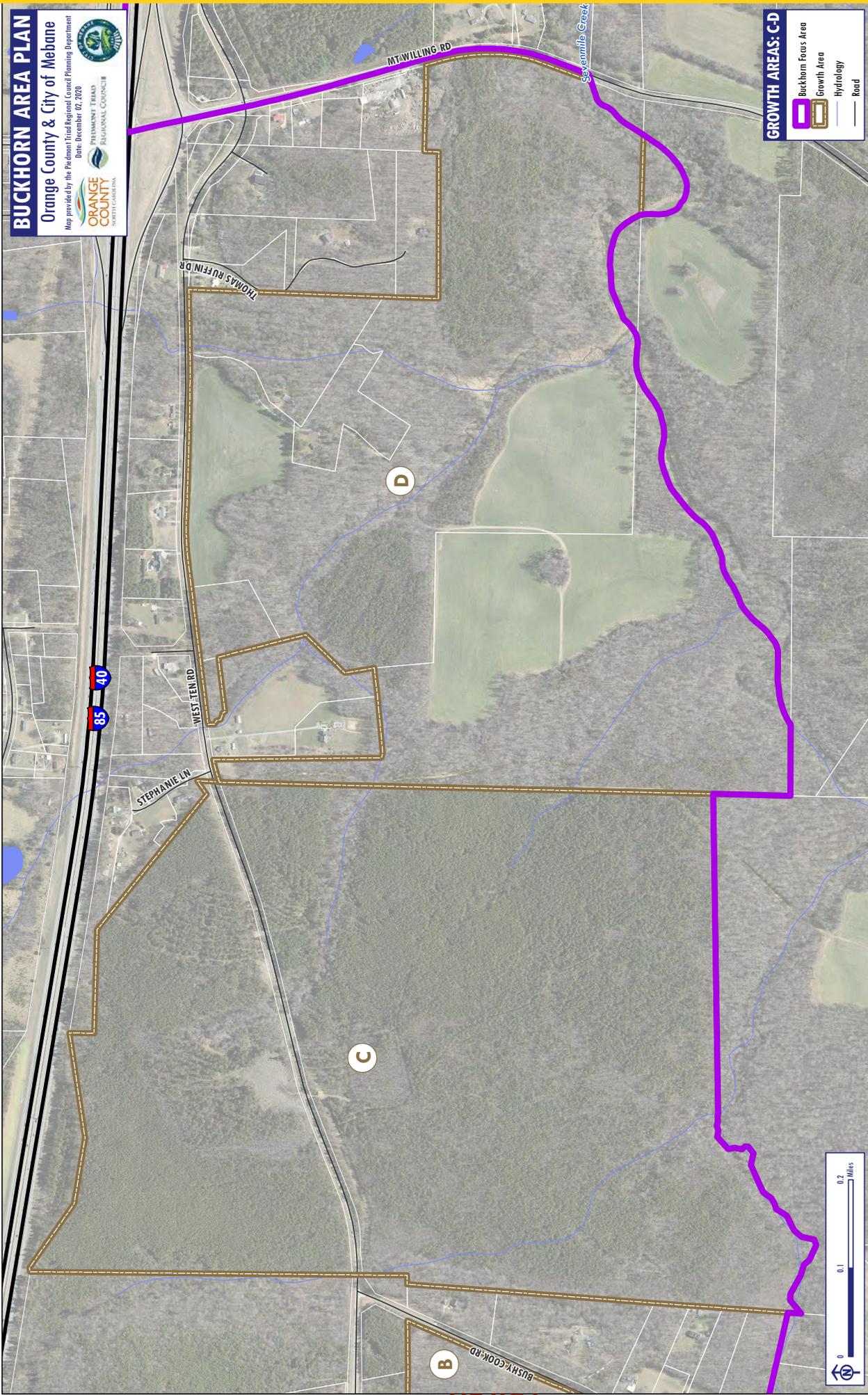
The two largest parcels are located in a National Heritage Element Occurrence (NHEO), which means element occurrences reflect the presence of plant and/or animal communities that are tracked by the NC Natural Heritage Program. Sevenmile Creek contains two threatened or endangered bivalves known to live in the Neuse drainages. These species are threatened at a state level but are not a federally listed species. It is not thought that these species would significantly restrict development.

The mean slope of this area is primarily 6% to 10% slope. This area is located in the Neuse River Basin and is classified as nutrient sensitive waters (NSW). This classification may affect land use, buffer requirements, impervious surface limitations, and stormwater management requirements. Sevenmile Creek is located in this growth area, stormwater devices are necessary to ensure high quality water before going back into the creek.

This area does not currently have water or sewer available in the majority of parcels, but it has the potential to be served.

These parcels are located within 1.5 miles driving distance from the interstate but do not have visibility from the interstate. Parcels are accessible from West Ten Road and Mt. Willing Road. There is not access to existing rail.

Map 25: Growth Area D



## **GROWTH AREA E**

This area is a total of 269.08 acres and is comprised of eleven developable parcels. Nine of these parcels are owned by a single property owner, making up 259.13 acres. The majority of the parcels are between 20 and 99 acres in size.

This area was reviewed in 2019 by Orange County as a Proposed Economic Development Area (Area 7) it was determined to be a possible future economic development area with concerns regarding the acreage located within the State's critical watershed and proximity to the City of Mebane's corporate limits restricting annexation.

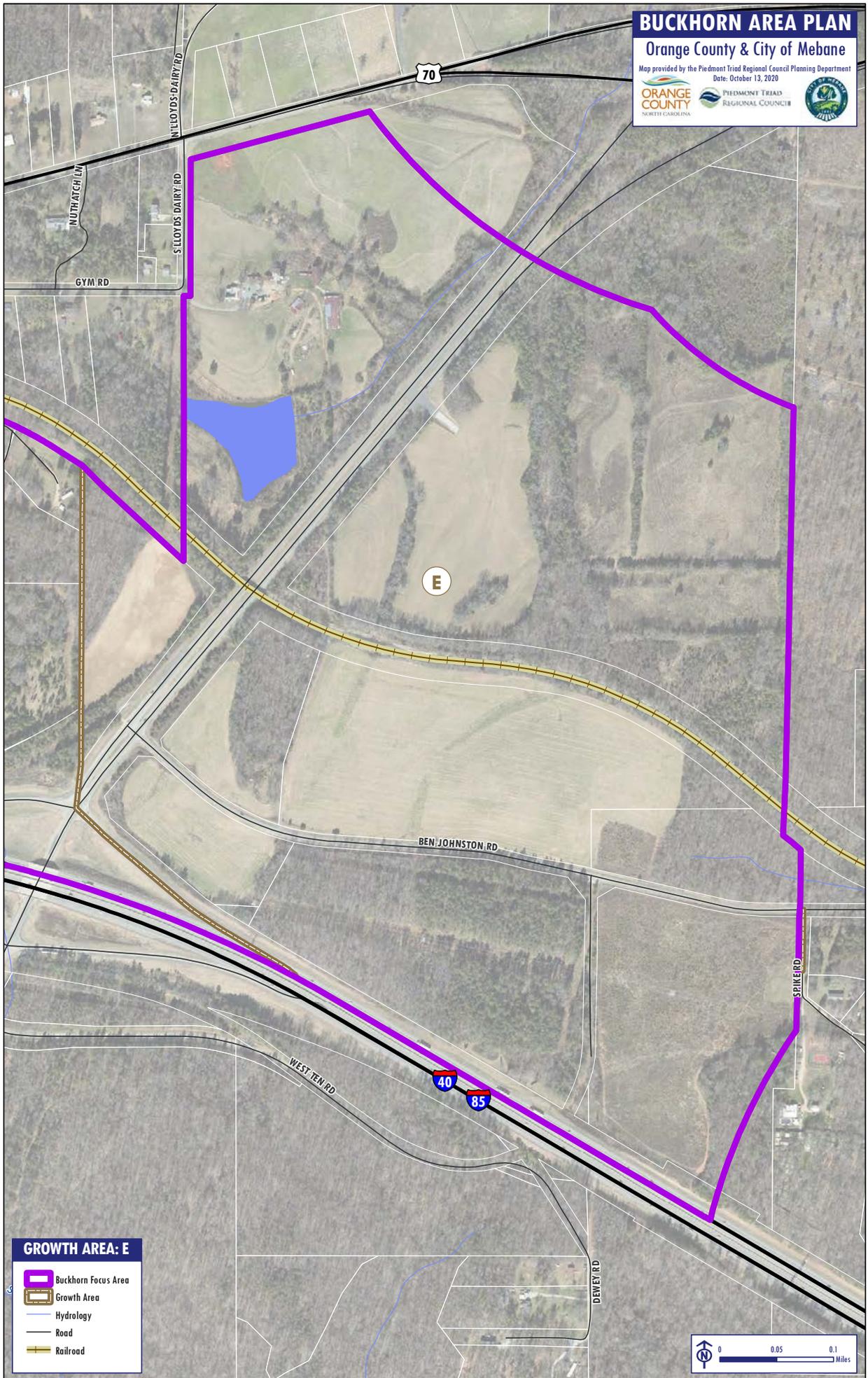
The parcel in the northeast corner is located in a Voluntary Agriculture District (VAD). VADs in Orange County are for a period of ten years. VADs encourage the preservation and protection of farmland, allows landowners to publicly recognize their farms, and protect farms from negative impacts. No parcels are located in a conservation easement or have a Natural Heritage Element Occurrence or Area.

This area is located in the Neuse River Basin and is classified as nutrient sensitive waters (NSW). This classification may affect land use, buffer requirements, impervious surface limitations, and stormwater management requirements.

Due to the distance from both the existing Mebane City limits and utility networks, it is unlikely that Mebane will provide water or sewer services to these properties. The Town Of Hillsborough will need to provide utility service to this area or they are unlikely to be developed in the near future. Due to the unlikelihood of service with City of Mebane utilities, Growth Area E should not be included in the City's Comprehensive Land Development Plan's scope, including its Future Growth Area.

These parcels are all within a 1.5 mile drive from the interstate and the southern parcels border I-40, providing interstate visibility. All parcels within this growth area are currently accessible by at least one road, Ben Johnston Road or the I-85 Connector/US 70. Five parcels are adjacent to the existing rail line.

Map 26: Growth Area E



## 2. FUTURE LAND USE DISTRICTS

The Mebane By Design CLP identified this area for future economic development purpose, because of the proximity to I-40/85 and Orange County policy of wastewater service to the area for industrial development. The CLP has other goals and objectives including open space preservation, trail and multi-modal connectivity.

It is recommended that the City of Mebane provide a development ordinance update to incorporate ~~two~~ **a** new zoning district that encourages documented research, office and manufacturing facilities and also support walkability, mixing of uses and practical design that is compatible with the surrounding land uses. The following proposed district modelled from the 2020 Orange County Unified Development Ordinance O/RM ~~and Rural Residential~~ districts with some minor modifications. In addition further application of open space provisions and rural or agricultural zoning districts should also be encouraged for parcels that have a lower suitability value in Map 19: Final Suitability Values.

### ***DEVELOPMENT STANDARDS***

**Lighting** - The City of Mebane and Orange County Development Standards both require outdoor lighting to direct appropriate levels of illumination upon intended target structures. All lighting should be located, angled, shielded, or limited in intensity so as to cast no direct light upon adjacent properties. Light pollution should be limited to preserve the nighttime environment.

**Trails** - The addition of trails and greenways should be encouraged where possible. existing utility easements are ideal trail locations. The sewer easement from the Medline property is an excellent example of such an opportunity and should be further explored to connect nearby residential and institutional properties.

**Buffers** - At least 100' should be accommodated for property developed adjacent to existing residential land use or residential zoning districts. The buffers may be a combination of natural vegetative buffer that exists or the installation of vegetation identified in the unified development ordinance. For particularly high buildings that are close to the maximum height limit of the zoning district, additional buffer distance may be required to appropriately protect residential areas from noise, light or other nuisances created by the new development for the residential district. In addition, floodplain, wetland and natural heritage occurrence areas should also be discouraged from disturbance, potentially increasing buffer requirements for new development. Mebane UDO strongly prefers tree preservation wherever possible for buffering purposes. Note that fencing is not an appropriate substitute for vegetation in buffering Manufacturing from Residential uses.

**Traffic** - Traffic is important to address in protecting existing residential quality of life. Traffic impacts should be minimized at Gravelly Hill Middle School, with attention to drop-off and pick-up hours. The City of Mebane will continue to require a Traffic Impact Analysis (TIA) for applications for preliminary plat or rezoning requests that are anticipated to generate 100 or more undisturbed peak hour vehicle trips or 1,000 or more undisturbed average daily trips (ADT). Primary access points should be directed to W Ten

and Buckhorn Rd and away from Bushy Cook and Mt Willing Road. To improve traffic flow and safety, a shared driveway requirement for contiguous non-residential land uses should be considered whenever feasible. The City of Mebane and Orange County will continue to work with NCDOT as they make the final determination for road improvements.

### *OFFICE AND RESEARCH (O-R)*

**Purpose** - The purpose of the Office and Research (O-R) District is to provide locations for medium and high intensity office, service, research, and light manufacturing land uses in areas where utilities are available or are to be made available as part of the development process. This district is intended to provide for employment centers near transportation routes. The O-R district should require accessibility for pedestrians to navigate to and from major transportation corridors, **existing and planned transit hubs**, and existing and future trail connections from future development adjacent or behind the major transportation corridors as the area develops to ensure connectivity. Safety and connectivity of pedestrian, bicycle and transit users should be utilized to identify pedestrian connection points. Secondary uses such as retail services, restaurants and convenience services that support the primary use should be encouraged. Buffers from residential areas should be enhanced from areas that are not residential. Outdoor storage areas or warehouse or freight areas should be located away from pedestrian corridors, open space/recreation locations and roadways as much as possible.

**A method for incorporating primary and secondary uses for future development may include application of a Planned Unit Development (PUD). The PUD application when filed will identify standards and metrics of density, roadways, trails, etc. upon application for a mix of uses and application of development standards that should meet or exceed the base level of development standards.**

Allowable uses should include: Child Care Facilities, Schools, Libraries, Universities, Hotels, Motels, Offices and Personal Services, Warehouses, Wholesale Trade, Governmental Facilities, Winery, Light Industrial (Assembly/Packaging), Parks, Botanical Gardens and Arboretums, Farmer's Markets, Hospitals, Health Services, Bus Shelter, Parcel Delivery Services, Clubs/Lodges, Community Center, Research and Manufacturing Facility, and Utilities. **Incorporation of multi-family, townhomes or limited single-family residential uses may be incorporated as part of a Planned Unit Development (PUD) process.**

**Dimensional Standards** - Substantial setbacks from residential areas are necessary of at least 100' ~~70'~~; with narrower setbacks allowed for non-residential land uses. The district encourages the land owner or prospective developer to take advantage of and preserve existing vegetative barriers through incentives that allow flexibility and transferability to other requirements in the district standards. These standards should protect property values, minimize light and noise pollution to residential areas, but also allow flexibility. Street design standards should incorporate Complete Streets principles, allowing multiple uses or roadway corridors, but also buffering pedestrians and bicyclists from higher speed automobile traffic.

**Applicability** - This district will be encouraged where adequate water and sewer service is available or

will be available during the development process, or less than 5 years from initial permitting is begun. Most Suitable Parcels Map 18 showing the teal “development ready” parcels and 5 primary growth areas could utilize O-R on suitable parcels that could be served by wastewater.

### ***RURAL RESIDENTIAL***

~~**Purpose** – The purpose of the Rural Residential District is to provide locations for rural non-farm residential development, at very low intensities, at no greater than 1 dwelling unit per acre (du/ac). This zoning district would be used in the event of annexation into the City of Mebane to use municipal utilities for detached single-family residential purposes.~~

~~**Dimensional Standards** – Consistent with the City of Mebane UDO, the setbacks that apply to the R-20 zoning districts will apply to Rural Residential but density will be limited to 1 du/ac. All Designs and Subdivision Standards within the Mebane UDO shall apply to all uses and development activities within these zoning districts unless a use is a bona fide farm activity, as defined and exempted from local ordinances by NC General Statutes.~~

~~**Applicability** – Any detached single-family residential use or development within the study area of this plan that is annexed into the City of Mebane and thereby subject to its ordinances and adopted plans.~~

### ***EXISTING MEBANE ZONING DISTRICTS APPROPRIATE FOR GROWTH AREAS***

~~There are other existing commercial and industrial zoning districts appropriate for the 5 primary growth areas. In addition,~~ Residential zoning districts including multi-family and possibly townhomes could be appropriately located to meet housing demand near the Interstate and existing commercial and industrial development, but analysis of school location, walkability and availability of open space areas for new multi-family developments will be strongly considered during the development process. Residential developments that integrate non-residential features in a Planned Unit Development will be preferred.

### ***TRANSPORTATION CONSIDERATIONS:***

The Buckhorn Interchange will likely face increased traffic as the area develops. Analysis of freight and automobile traffic and capacity will need to be analysed not just for that Buckhorn Road interchange, but also for other roadways such as Mattress Factory Road. Service roads and access management will be integral to each development analysis, but may be better served through a scenario plan of two or three build out scenarios.

The Mountains-to-Sea Trail crosses through the study area on Mt Willing Road and West Ten Road. This section of trail is on-road. An off-road route would be ideal for recreation needs and coordination with state partners is encouraged to discuss an off-road rural route connecting Mebane and Hillsborough for MST designation.

### **3. WATER SEWER AGREEMENT EXTENSION**

The availability of water and sewer systems is one of the primary factors in developing a site/property's development potential. Areas that are not served by water and sewer systems generally develop at very

low densities because water must be obtained from individual wells and sewage must be disposed of on-site via, predominantly on-site septic systems for residential properties.

This area plan looks to update the Buckhorn Economic Development District plan, Efland Small Area plan and the 2012 utility services agreement. The City of Mebane and Orange County should address changes to the service area agreement from 2012, to both recognize continued interest in a variety of light industrial, institutional and commercial uses in the study area of this plan, but also the need to preserve the rural character of existing residential areas, less suitable for industrial growth.

#### **4. ORANGE COUNTY PLANNING ASPECTS**

**Orange County should reevaluate related plans and agreements to inform any updates that may be required as a result of the Buckhorn Small Area Plan adoption by the City of Mebane and Orange County after full public input.**

~~While a coordinated effort to prepare this Buckhorn Area Plan, the following recommendations are provided to help inform possible future planning initiatives of Orange County:~~

~~The City of Mebane is not a party to the Water and Sewer Management, Planning and Boundary Agreement (WASMPBA). Following the update and renewal of the 2012 Utility Service Agreement, which currently addresses Potential Urban Growth Annexation and Excluded Area, the County should consider initiating an amendment to the WASMPBA map for consistency. Absent any formal request from Mebane to extend its Extraterritorial Jurisdiction (ETJ), it is the WASMPBA and Utility Service Agreement that work together to inform Orange County's residents of Mebane's directions for future growth.~~

~~Until such time as the Utility Service Agreement and WASMPBA is amended, the Orange County Planning Department shall use this Buckhorn Area Plan as a key guiding document for any courtesy review comments it may prepare on development proposals processed by the City of Mebane in Orange County.~~

~~Orange County should consider the relationship between this Buckhorn Area Plan and the Efland-Mebane Small Area Plan. Both plans will continue to inform planning within the geography. If or when an inconsistency is identified, the most recent Buckhorn Area Plan shall take precedence.~~

~~Upon completion of the City's update to its Comprehensive Land Development Plan, which this Buckhorn Area Plan is intended to inform, Orange County Planning shall determine its recommendations for any amendments that may be needed to the 2030 Comprehensive Plan Future Land Use Map.~~

# 8 | APPENDIX

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MAPS

