



**Community Assessments  
& Broadband Profiles:  
*Planning and Considerations  
for Counties and Region***

**For the Southwestern Commission, November 2017**



# County-Level & Regional Planning

*Taking the time to understand the current broadband coverage and assets within your region can help you develop a more comprehensive approach to attracting the desired middle-mile or last-mile broadband providers to your area*

## Where Are You Now?

Recommended Steps to Consider:

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# County-Level & Regional Planning

## **Broadband Assessment**

- **Research Existing Broadband Providers**
- **Evaluate Broadband Service Gaps**
- **Research Underutilized Broadband Infrastructure**

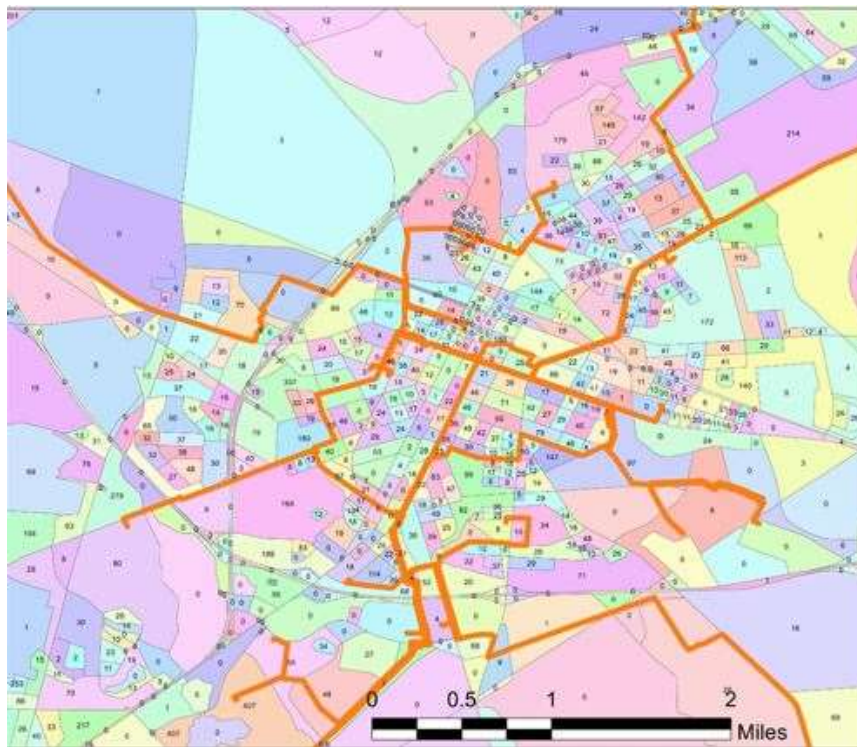
Meet with County, education, healthcare, government and the business community to review public infrastructure, assets, and resources that may have the potential to support broadband initiatives. The purpose of these meetings will be to understand and document possible assets such as fiber, pole, conduit, vertical assets and Right-of-Way access and more.

- **Community-wide Infrastructure Inventory and Database**
- **Evaluate Infrastructure Gaps**

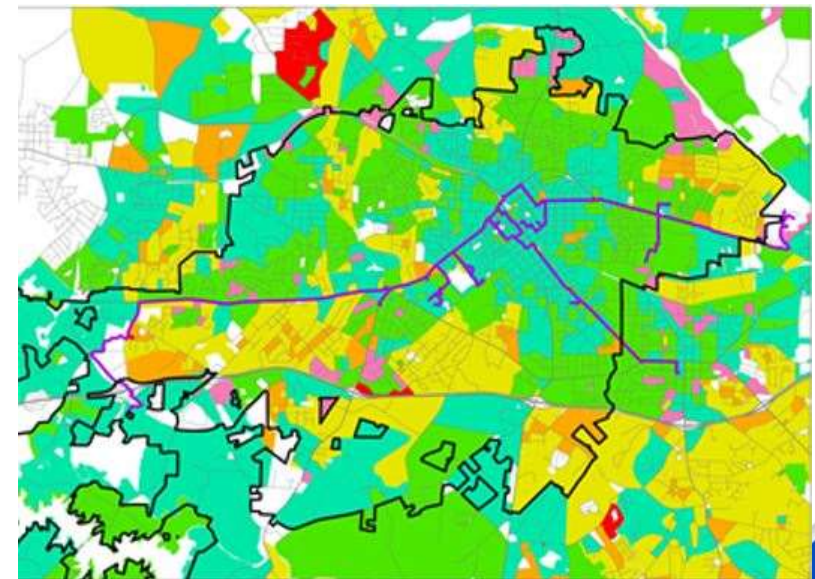
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# County-Level & Regional Planning

- **Broadband Assessment Examples** – Population Density, Broadband Coverage, Speeds



*Population per Census Block*



*Broadband Coverage  
by Provider by  
Census Block*

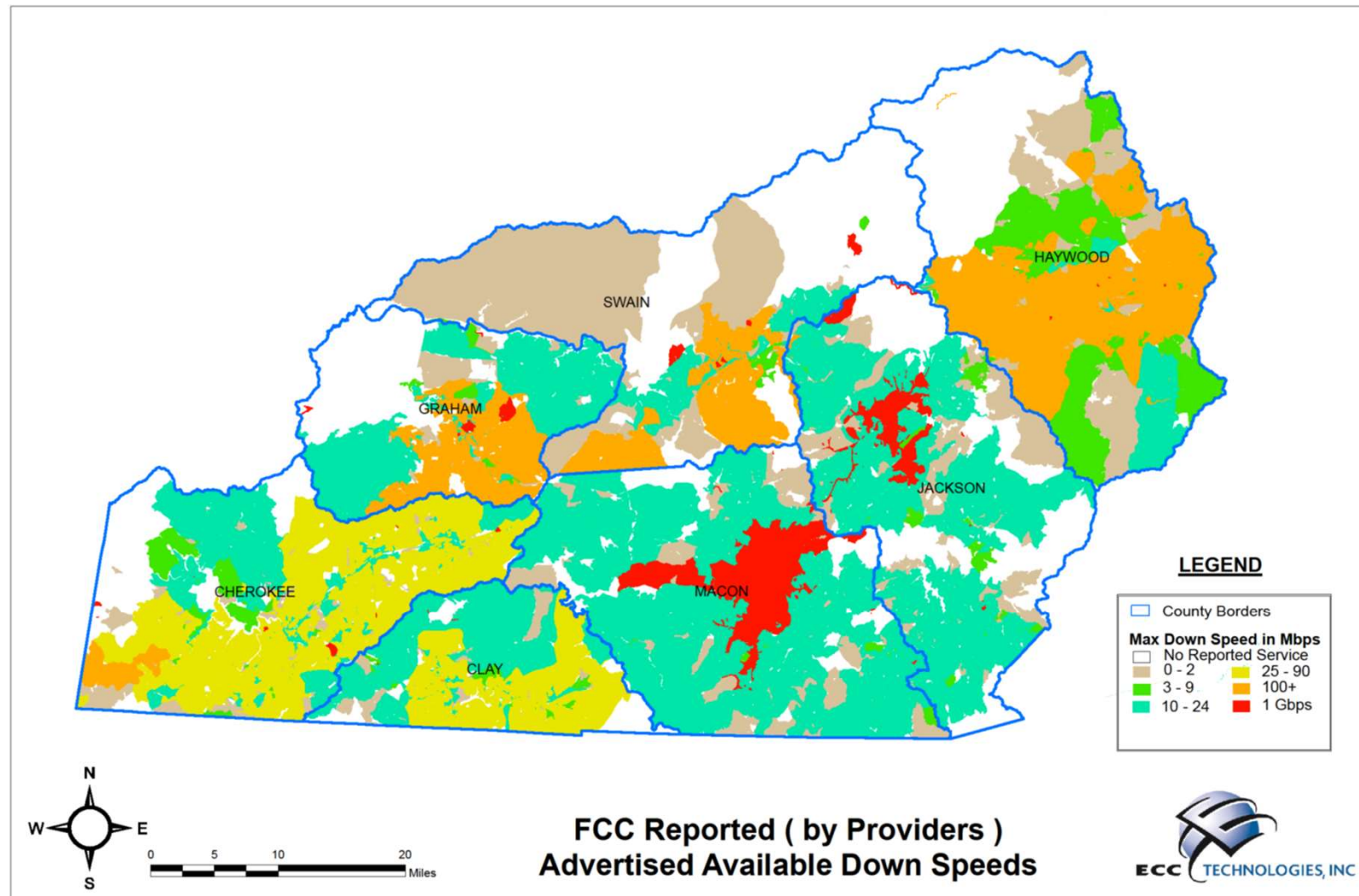


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# County-Level & Regional Planning

- **Broadband Assessment** – Research Existing Providers, Coverage and Service Gaps



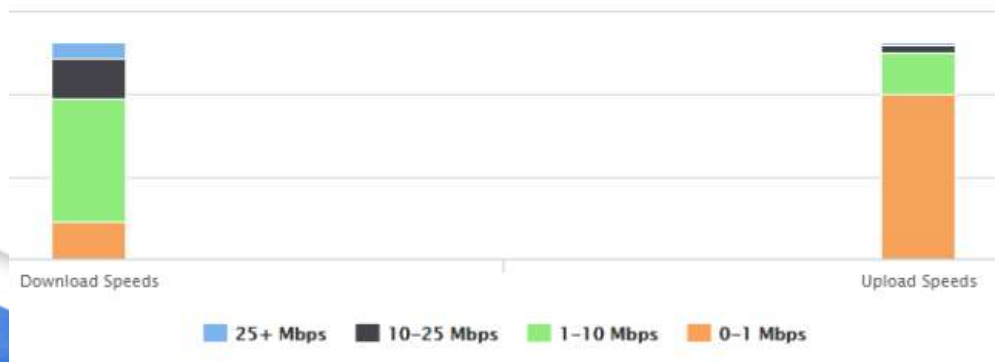
# County-Level & Regional Planning

- **Broadband Assessment** – Research Existing Providers, Coverage and Service Gaps



Prov_Cent	CenturyLink
Cent_Avail	yes
Cent_Subs	yes
Cent_Suff	no
Prov_Medi	Mediacom
Medi_Avail	yes
Medi_Subs	no
Medi_Suff	no

Speedtest by Download and Upload Speed

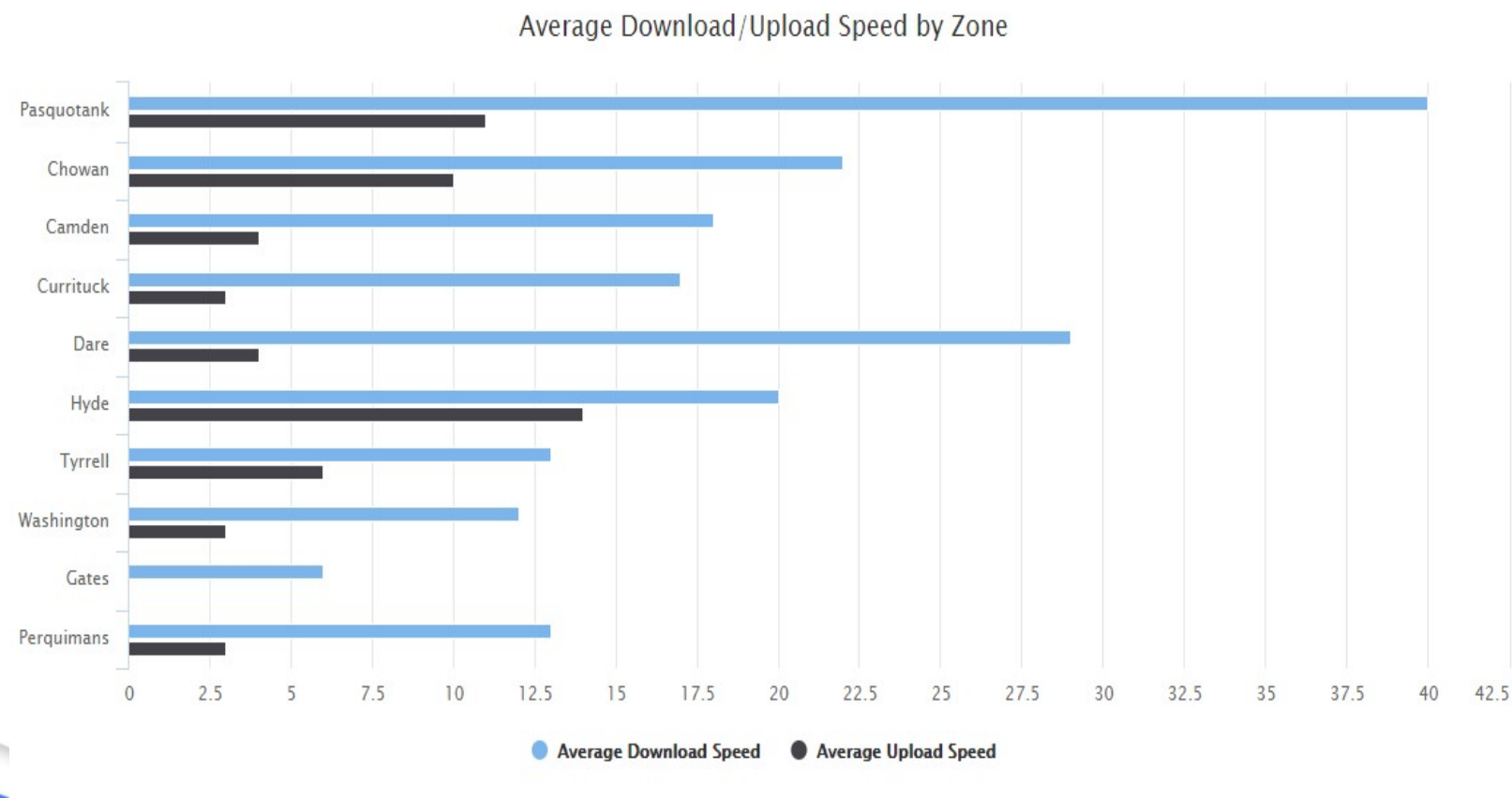


Latitude	36.2599
Longitude	-76.0958
County	Camden
SpeedDown	7.49
SpeedUp	0.57

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# County-Level & Regional Planning

- **Broadband Assessment** – Research Existing Providers, Coverage and Service Gaps

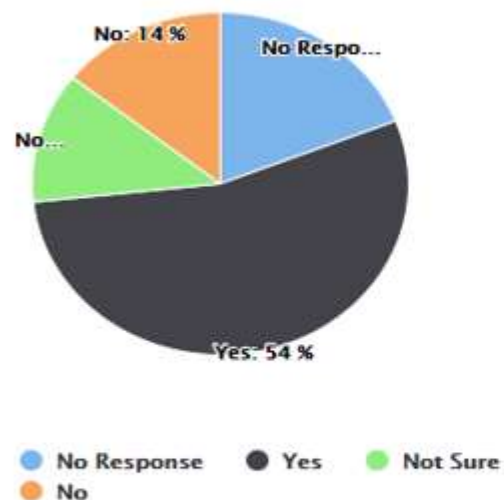


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# County-Level & Regional Planning

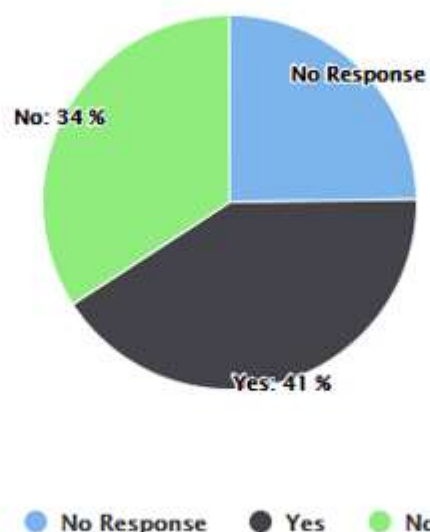
- **Broadband Assessment** – Research Existing Providers, Coverage and Service Gaps

Is Service Available To You?



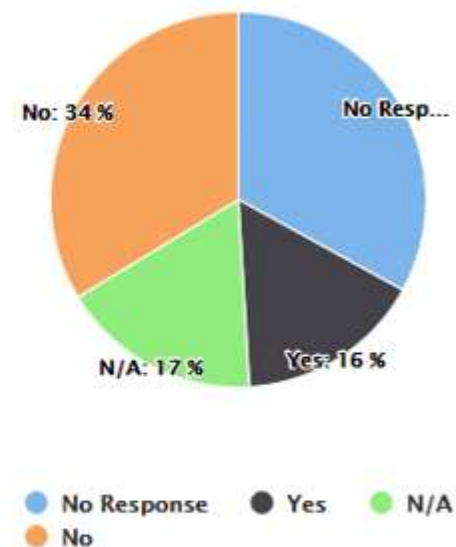
No Response = 665  
No = 502  
Yes = 1897  
Not Sure = 431

Do You Subscribe?



No Response = 866  
No = 1194  
Yes = 1435

Is Service Sufficient?



No Response = 1154  
No = 1178  
Yes = 561  
Not Applicable = 602

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# Southwestern Commission Broadband Survey

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# Southwestern Commission Broadband Survey

## Broadband Aggregation & Adoption Tool

mountainwest.baar-campaign.com



Please take our short survey!

ALREADY REGISTERED? | SIGN IN HERE

Main Zones **7** Updates **1** Comments **0** Backers **2,321**



The Southwestern Commission, in conjunction with MountainWest Partnership, is asking local citizens and businesses to participate in a broadband assessment for the region. To participate, please start by entering your home or business address to the right and clicking the "Search for My Address" button.

### Enter Your Address To Start

Enter Your Street Address

Apartment/Suite #

Enter your ZIP Code

☐ Residential ☒ Commercial

Search for my Address

7 Zones

2321 Backers Registered



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# Broadband Aggregation & Adoption Tool

## ▼ Services in your area

According to data from the Federal Communications Commission, the following services are available in your area. Please confirm whether they are available at your actual address, as the FCC data is based on census blocks and not by individual address.

Provider	Max Download	Available to You?	Do You Subscribe?	Sufficient for your Needs?
Time Warner Cable Inc Cable Modem – DOCSIS 3.0	300.0Mbps	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not Sure	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A
AT&T North Carolina VDSL	75.0Mbps	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not Sure	<input type="radio"/> Yes <input type="radio"/> No	<input type="radio"/> Yes <input type="radio"/> No <input type="radio"/> N/A

Source: [FCC Broadband Availability](#)

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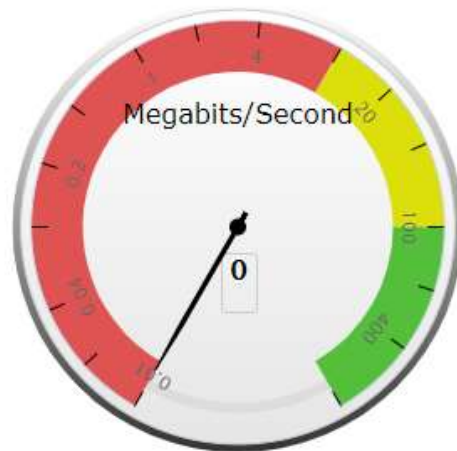
# Broadband Aggregation & Adoption Tool

## ▼ Your Current Speed

This will test the speed of your current Internet connection. The test requires just a click of the button and takes only about a minute to run. To get the most accurate speed test, make sure 1) you are taking the test from the address you provided on the homepage and 2) pause streaming video, gaming, music, or other heavy uses of the network. If you are not taking this survey from the address you entered on the homepage, please remember to un-check the box below before continuing.

☒ I am performing this test at the address I entered on the homepage.

START TEST



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# Broadband Aggregation & Adoption Tool

## Residential

▼ Questions

Please answer the questions below.

**1. Do you currently have Internet service at your home?**

- ☐ Yes
- ☐ No

**1a. If not, what is the primary reason?**

- ☐ Not available
- ☐ Too expensive
- ☐ Not relevant or needed
- ☐ Lack of skills/knowledge to use it
- ☐ No computer or device
- ☐ Not applicable (I currently have service)

**2. Please select the type of service to which you currently subscribe:**

- ☐ Wired (cable, DSL)
- ☐ Cellular data (mobile phone)
- ☐ Fixed wireless (from a local Wireless Internet Service Provider)
- ☐ Satellite
- ☐ A combination (wireless and wired, wireless and cellular, satellite and cellular, etc.)
- ☐ I don't have service

**3. What is the download speed you currently pay for?**

- ☐ 1.5Mbps to 3Mbps
- ☐ 3Mbps to 6Mbps
- ☐ 6Mbps to 10Mbps
- ☐ 10Mbps to 25Mbps
- ☐ 25Mbps to 50Mbps
- ☐ 50Mbps to 100Mbps
- ☐ 100Mbps to a Gigabit or more
- ☐ I don't know
- ☐ I don't have service

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# Broadband Aggregation & Adoption Tool

## Residential

**4. Does the speed you currently subscribe to meet your needs?**

- ☐ Yes
- ☐ No
- ☐ I don't have service

**5. On average, how many devices do you have that connect to your Internet service (including laptops, tablets, smart phones, televisions, etc.)?**

- ☐ 1-2
- ☐ 3-4
- ☐ 5 or more
- ☐ I don't have service

**6. If additional competitive services were available to you, to which package would you subscribe?**

- ☐ Internet only
- ☐ Internet and TV
- ☐ Internet and home phone
- ☐ Internet, TV, and home phone
- ☐ TV only
- ☐ None of the above

**7. Who are or would be the primary users of Internet at your address?  
(Please check all that apply.)**

- ☐ School age child(ren) - K-12
- ☐ Adult(s) - Ages 19-35
- ☐ Adult(s) - Ages 36-50
- ☐ Adult(s) - Ages 50-65
- ☐ Adult(s) - Ages 66 and older
- ☐ No one would use this service

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# Broadband Aggregation & Adoption Tool

## Residential

**8. Would anyone in your household take online classes if sufficient Internet service were available?**

- ☐ Yes
- ☐ No

**8a. Would anyone in your household telecommute or start a home-based business if sufficient Internet service were available?**

- ☐ Yes
- ☐ No

**8b. Would anyone in your home use telemedicine or social support applications (e.g. "virtual doctor visits") if sufficient Internet service were available?**

- ☐ Yes
- ☐ No

**9. How important is Internet access to your ability to earn a living?**

- ☐ Critical
- ☐ Very important
- ☐ Somewhat important
- ☐ Neutral
- ☐ Not important

**9a. How important is Internet access to your quality of life?**

- ☐ Critical
- ☐ Very important
- ☐ Somewhat important
- ☐ Neutral
- ☐ Not important

**10. Are there any comments you wish to share regarding broadband service or Internet access in your region?**

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# Broadband Aggregation & Adoption Tool

## Commercial

### ▼ Questions

Please answer the questions below.

**1. Do you currently have Internet service at your business?**

- ☐ Yes
- ☐ No

**1a. If no, what is the primary reason?**

- ☐ Not available
- ☐ Too expensive
- ☐ Not relevant or needed
- ☐ Lack of skills/knowledge to use it
- ☐ No computer or device
- ☐ Not applicable (I currently have service)

**2. What Internet connection speed are you paying for (download speed)?**

- ☐ Level 1 (768Kbps to 1.5Mbps)
- ☐ Level 2 (1.5Mbps to 4Mbps)
- ☐ Level 3 (4Mbps to 10Mbps)
- ☐ Level 4 (10Mbps to 100Mbps)
- ☐ Level 5 (more than 100Mbps)
- ☐ I don't know
- ☐ We do not have Internet service

**3. How important is an Internet connection to your business/ability to earn a living?**

- ☐ Critical
- ☐ Very important
- ☐ Somewhat important
- ☐ Neutral
- ☐ Not important

**4. Would anyone in your company telecommute if sufficient Internet service were available?**

- ☐ Yes
- ☐ No

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# Broadband Aggregation & Adoption Tool

## Commercial

**5. Which of the following categories best describes your type of business?**

- ☐ Agriculture
- ☐ Retail
- ☐ Construction
- ☐ Service industry/Hospitality
- ☐ Manufacturing
- ☐ Professional Services
- ☐ Government/Industry
- ☐ Healthcare
- ☐ Real estate
- ☐ Other

**6. How many employees (full and part-time) do you currently have at this location?**

- ☐ 1-5
- ☐ 6-25
- ☐ 26-50
- ☐ Over 50

**7. Are there any other comments regarding broadband in your region that you wish to express?**

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# Southwestern Commission Broadband Survey

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# County-Level & Regional Planning

## **Broadband Assessment**

- **Research Underutilized Broadband Infrastructure**

Meet with County, education, healthcare, government and the business community to review public infrastructure, assets, and resources that may have the potential to support broadband initiatives. The purpose of these meetings will be to understand and document possible assets such as fiber, pole, conduit, vertical assets and Right-of-Way access and more.

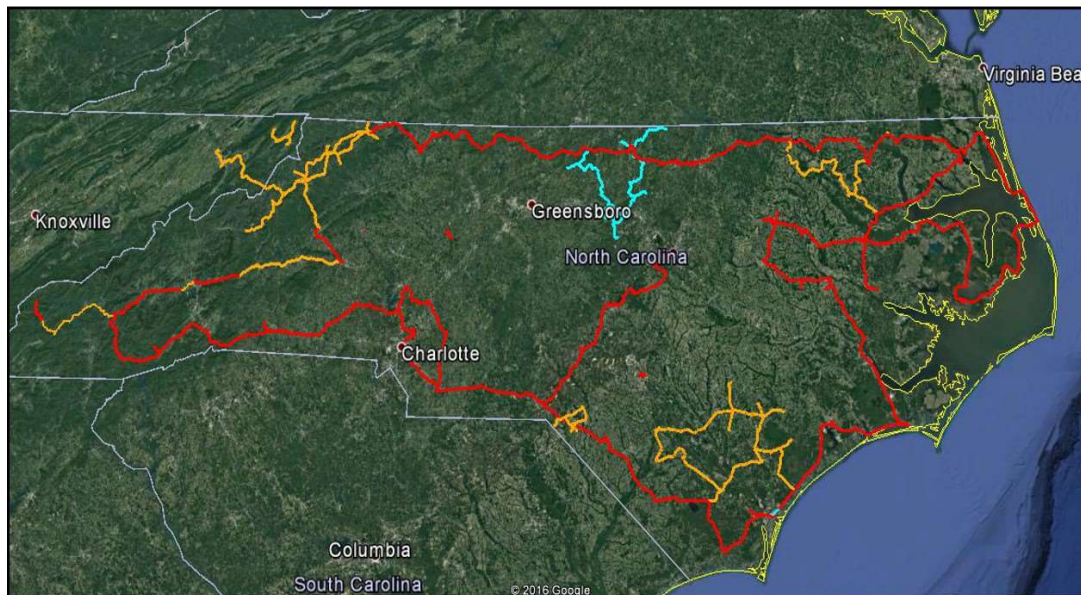
- **Community-wide Infrastructure Inventory and Database**

- **Evaluate Infrastructure Gaps**

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# County-Level & Regional Planning

- **Research Underutilized Broadband Infrastructure**  
Identify Existing Assets: Fiber Connections, Towers, etc.



*Fiber Connections Available*



*Existing Water Towers and Wireless Towers*

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## County-Level & Regional Planning

# Sample Cherokee County Infrastructure Map

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# County-Level & Regional Planning

## **Broadband Assessment**

### **Demand Aggregation and Market Opportunities**

(Documenting Potential Adoption)

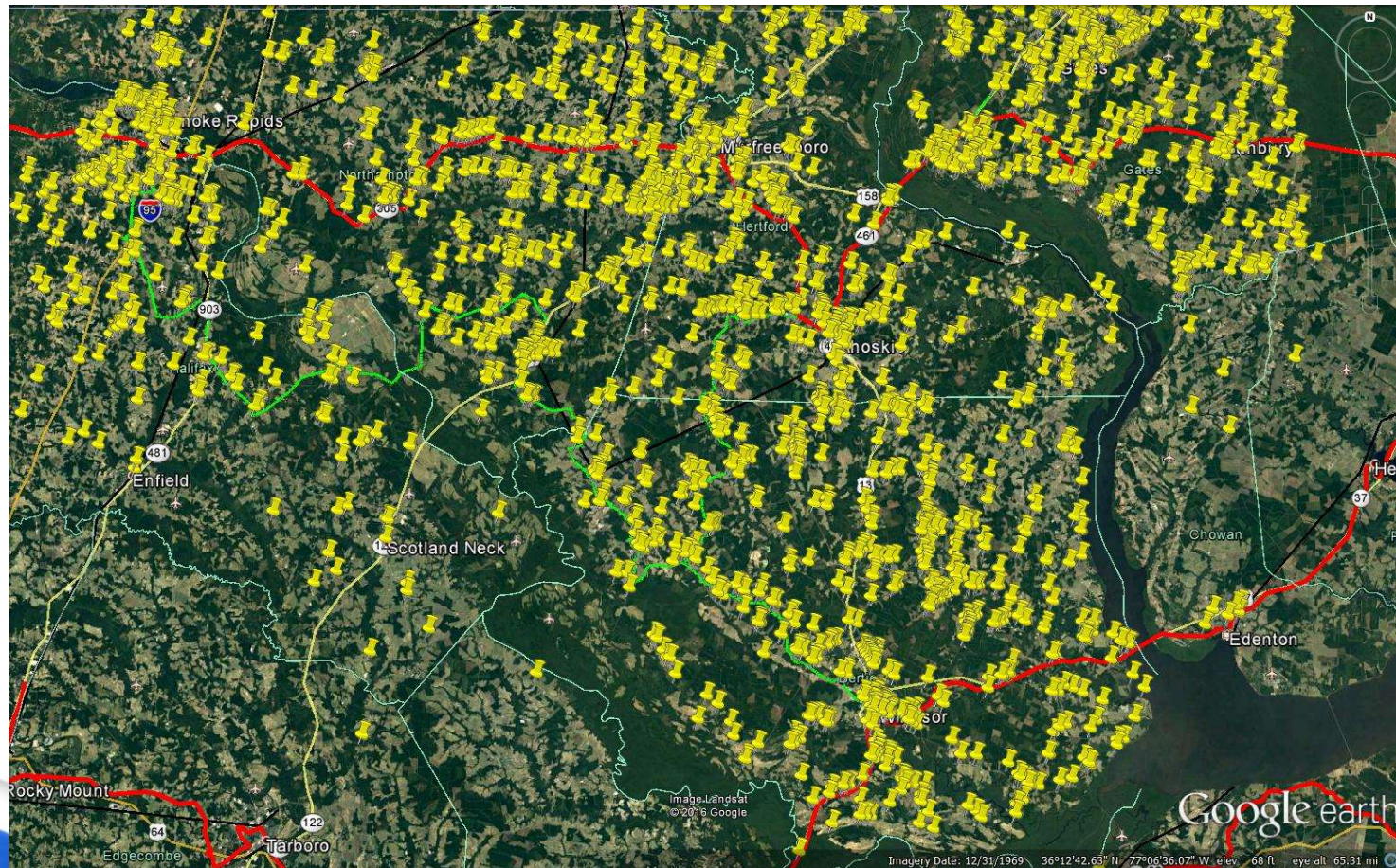
- Survey local residents and businesses to understand what type of service they want and will subscribe to (ECC Broadband Aggregation & Adoption Tool)
- Identify Community Anchor Institutions and commercial locations close to potential fiber routes that represent immediate market opportunities
- This data can then be packaged to help make the business case for last-mile service, and can be utilized to attract providers to the region

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# County-Level & Regional Planning

**Demand Aggregation and Market Opportunities – ECC Broadband Aggregation & Adoption Tool**

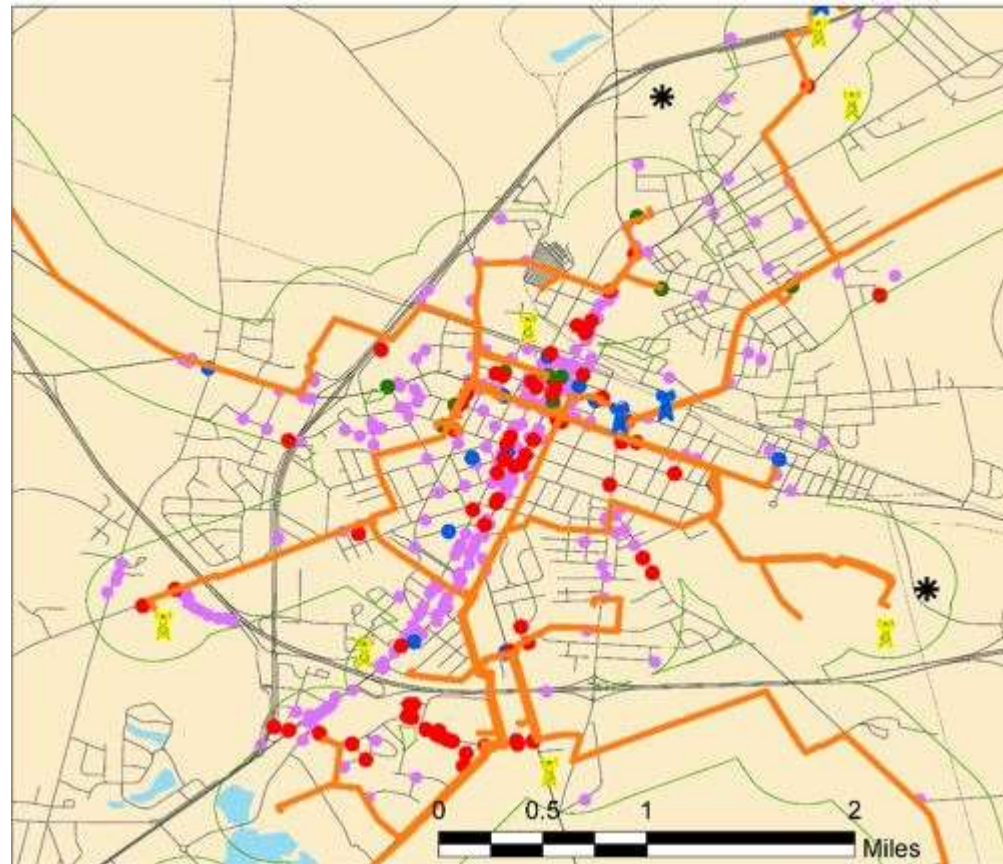


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# County-Level & Regional Planning

- **Market Opportunities**



*Market Opportunities  
within 1/4 Mile of Fiber  
Network*

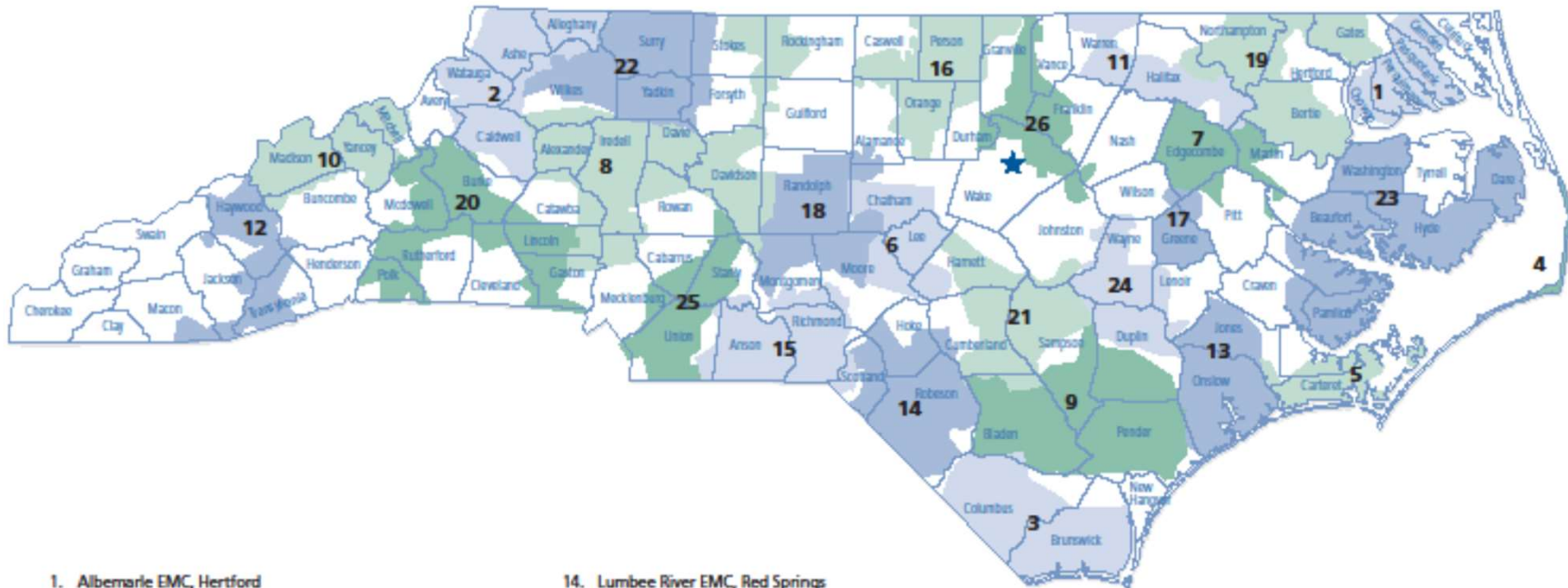
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Those are some of the key planning steps

What are some big projects, potential models or partners around the state?...

# North Carolina's Electric Cooperatives



1. Albemarle EMC, Hertford
2. Blue Ridge Electric, Lenoir
3. Brunswick EMC, Shallotte
4. Cape Hatteras Electric Cooperative, Buxton
5. Carteret-Craven Electric Cooperative, Newport
6. Central EMC, Sanford
7. Edgecombe-Martin County EMC, Tarboro
8. EnergyUnited, Statesville
9. Four County EMC, Burgaw
10. French Broad EMC, Marshall
11. Halifax EMC, Enfield
12. Haywood EMC, Waynesville
13. Jones-Onslow EMC, Jacksonville

14. Lumber River EMC, Red Springs
15. Pee Dee EMC, Wadesboro
16. Piedmont EMC, Hillsborough
17. Pitt & Greene EMC, Farmville
18. Randolph EMC, Asheboro
19. Roanoke Electric Cooperative, Ahoskie
20. Rutherford EMC, Forest City
21. South River EMC, Dunn
22. Surry Yadkin EMC, Dobson
23. Tideland EMC, Pantego
24. Tri-County EMC, Dudley
25. Union Power Cooperative, Monroe
26. Wake EMC, Wake Forest

★ North Carolina Electric Membership Corporation (NCEMC)  
3400 Sumner Blvd., Raleigh, NC 27616

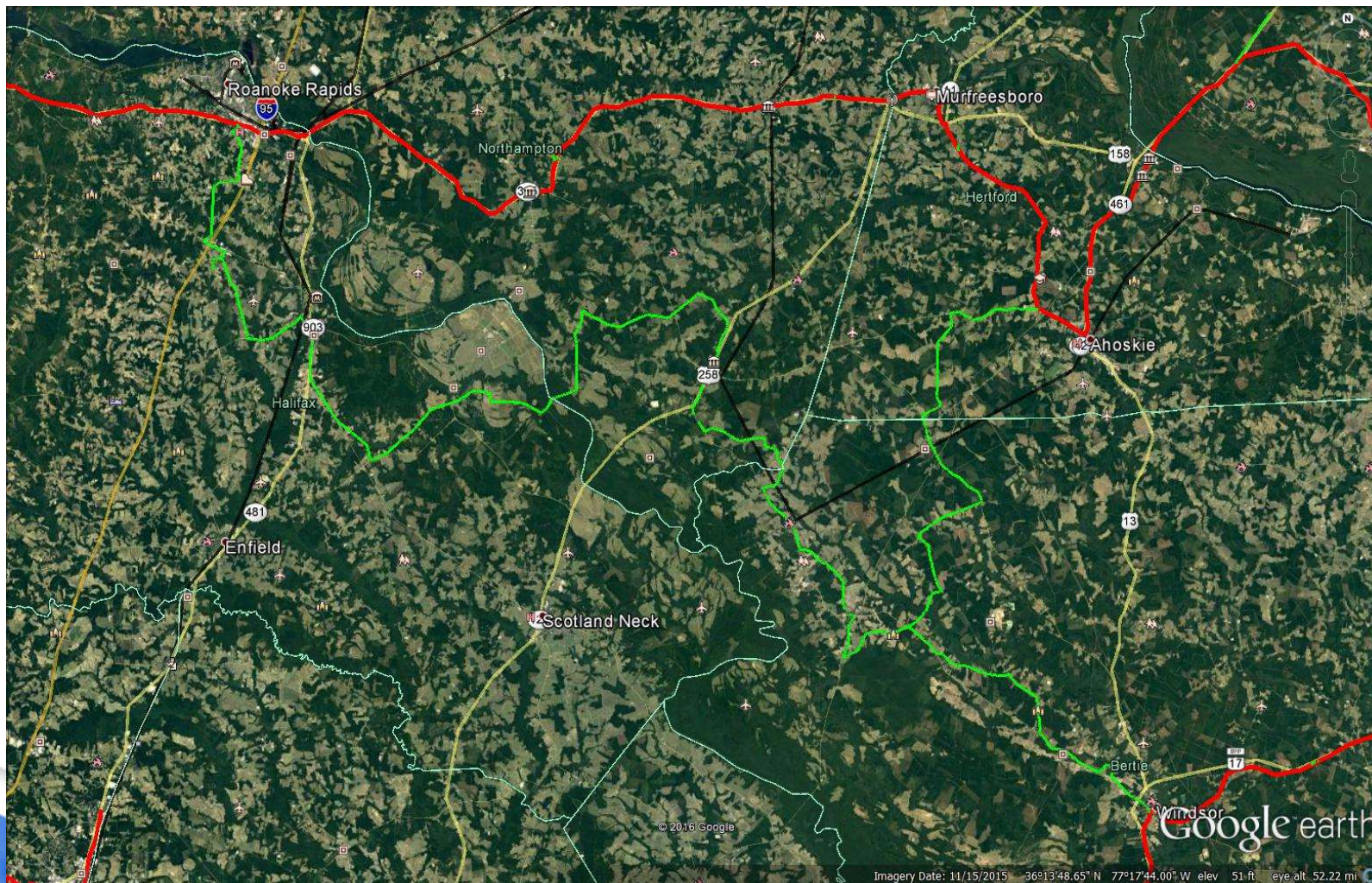
Tarheel Electric Membership Association Inc. (TEMA)  
8730 Wadford Dr., Raleigh, NC 27616

North Carolina Association of Electric Cooperatives, Inc. (NCAEC)  
3400 Sumner Blvd., Raleigh, NC 27616

GreenCo Solutions, Inc. (GreenCo)  
3400 Sumner Blvd., Raleigh, NC 27616



# Roanoke Electric Cooperative



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# Wireless Ring off of Fiber Backbone







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# NC Telephone Cooperatives



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# Electri-Cities of North Carolina



## North Carolina Public Power Communities



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# Orange County & Town of Hillsborough



Orange County  
Financial Services Department – Purchasing Division

## **REQUEST FOR QUALIFICATIONS**

Design, Permitting, & Construction Administration for Orange County – Town of  
Hillsborough Fiber Optic Network  
October 13, 2017

### **Summary**

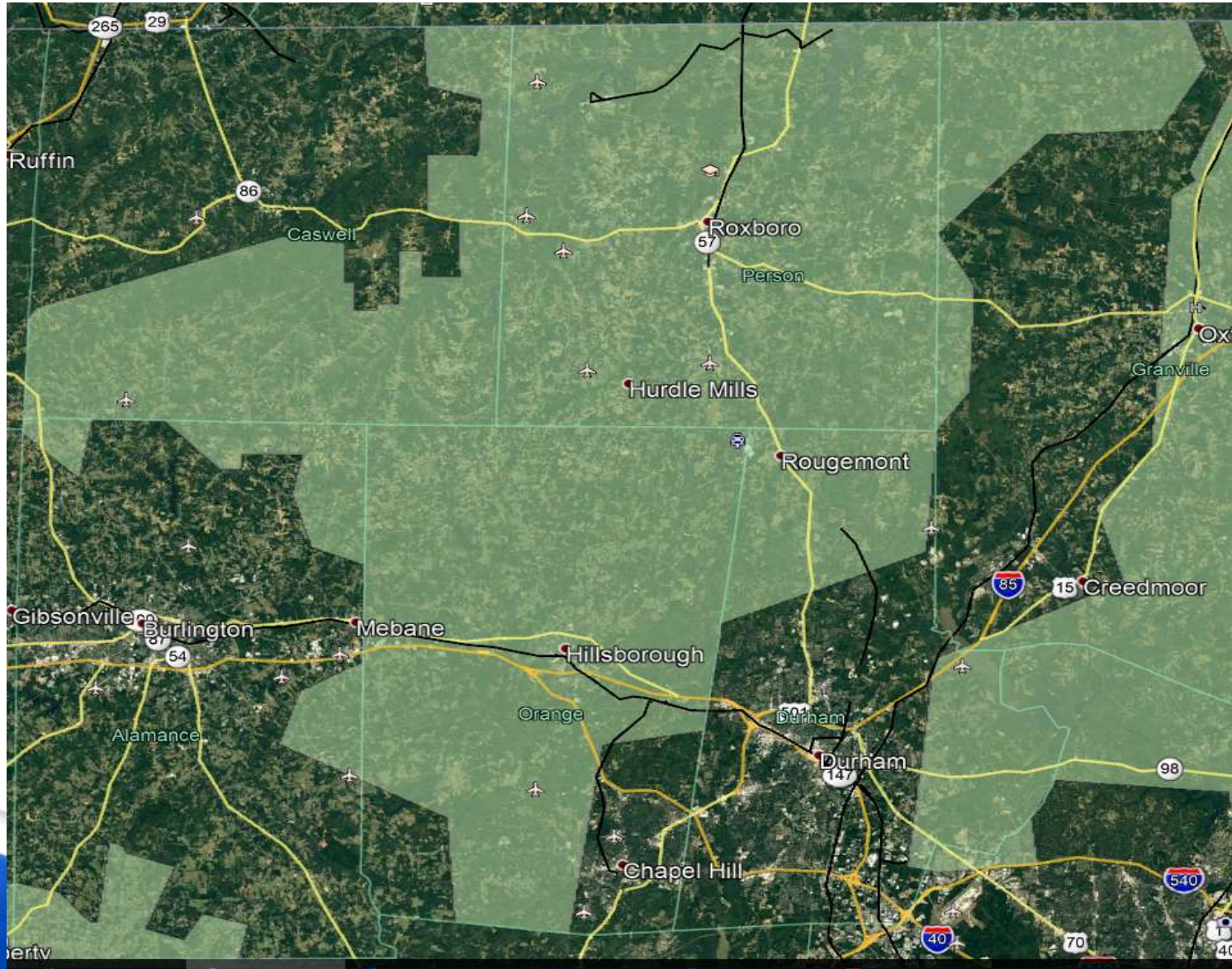
Orange County and the Town of Hillsborough are collaborating on a joint fiber optic network project to connect our respective facilities. Hillsborough is the county seat of Orange County and as such, our two governments share Hillsborough's downtown. Many of our other facilities are also located in close proximity to each other and/or potentially share a common route for fiber. We would like to collaborate on the design and build out of our respective fiber networks to take advantage of economies of scale.

We anticipate that routes in common will be primarily underground in separate conduits, with unique Orange County routes being aerial and unique Town of Hillsborough routes being underground. The Town of Hillsborough would like to build a redundant loop that has excess capacity to allow for future needs as well as the option to lease to a third-party last mile provider.

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# Piedmont Electric Membership Corporation



# So What Now?

## **Determine Where You Are**

- Where Is Your County Now with Information Gathering?  
(Broad, Detailed)
- County Assets and Fiber – What do you have, what are you considering?
- What Are Your Other Local and Regional Assets?  
Who are Your “Alternative Providers”?
- What Are Your Goals? What Is A Good Starting Point?  
County-facility Project, Particular Community of Focus, Homework Gap,  
Adoption & Digital Inclusion...

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For questions please contact:

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Email: [abailey@ecctec.com](mailto:abailey@ecctec.com)  
[www.ecctec.com](http://www.ecctec.com)



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