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The Story of North Carolina Counties  
**County** QUARTERLY  
MAGAZINE

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## SETTING SIGHTS HIGH

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# Chatham County's Quest for Internet Connectivity

By Lacy Pate | NCACC Public Relations Manager



**Long before Darlene Yudell became the Director of Management and Information Systems for Chatham County, she was a citizen-advocate for internet access in rural areas.** Having lived in many places that offered reliable and affordable high-speed internet service, she was flummoxed to learn how difficult it was to find a provider that would adequately serve her farmstead home when she moved to rural North Carolina.

She did her homework and met with providers in the area to try to resolve the problem, but none would offer the level of service she needed. For Yudell, access to high speed internet was not just a quality of life issue so she could watch Netflix. It was about providing educational and economic opportunities for her children.

“Years ago, when my son’s educational materials became electronic, he ended up going to school and printing out entire books and then bringing them home so he had something to use to study,” said Yudell. Much to Yudell’s dismay, there was no resolution to the problem, and to

*In rural areas of North Carolina, it may be very difficult to find a reliable and affordable high-speed internet service.*

this day, her internet service is limited by data caps, which ration her access.

Internet access remains an economic concern for Yudell, who is unable to work from home, and her son, who has a burgeoning graphic design business. Unfortunately, the amount of data her son needs to conduct business far exceeds the data limit allowed by the provider. Ultimately, Yudell’s son had to relocate to an area of North Carolina where he can get internet access at the speed he needs for his business.

In 2014, Yudell went to work for Chatham County. Although her job responsibilities were not focused on this issue, she was determined to address broadband gaps because she knew from personal experience that disadvantages in education and business were looming over the county. She discussed her interest in tackling this issue, and gained the support of Chatham’s County Manager, Renee Paschal, who clearly understands the problem.

Yudell was able to leverage the knowledge she acquired through her own challenges with internet access.

The first thing she recognized was that she couldn’t solve the problem alone. Motivated by the adverse effects of the digital divide and with the support of the county manager and board of commissioners, she dove right in.

She proactively reached out to the economic development community, school system, community college, and libraries to learn about who the providers were and what challenges existed. She also attended seminars and talked to other counties to learn how they were dealing with this issue. As broadband is known to be so important in economic development, the President of the County Economic Development Corporation, Kyle Touchstone, became a key partner in this effort with Yudell.

One important thing she learned was that the numbers used by the U.S. Federal Communications Commission (FCC) to report internet coverage in a particular area did not match what she was hearing on the ground. As Yudell explained, the National Broadband Map (available here: <https://broadbandmap.fcc.gov/#/>) which is the federal government’s authoritative

database to track information on high-speed internet access, largely relies on reporting by internet service providers, rather than users.

The tool allows the public to search broadband access by entering a particular address, and it displays “broadband providers that reported offering service in the census block or for blocks larger than two square miles road segment.”<sup>1</sup> According to Yudell, this means if a provider offers service to just one home in the census block, the map will reflect that an entire area is “served” by the provider.

While the map may show coverage for the whole neighborhood, there could be certain homes in that block that actually get no service. And, since there is nothing that requires the provider to fully serve the entire census block for which they claim to serve, we simply don’t have a clear picture of actual broadband service.

“To get a complete accounting would almost require canvassing every home and so many boots on the ground would be needed for that,” explained Yudell. Furthermore, updates to the National Broadband Map are less comprehensive now, because the data collection grant program, which was part of the State Broadband Initiative, ended on June 30, 2014, and its funding was not renewed by Congress.

Yudell explained that providers typically determine the boundaries for their services based on what makes good business sense. And, if expanding internet infrastructure to reach outlying homes within a “served” census block isn’t financially feasible for the incumbent

provider, those homeowners often have nowhere else to turn for reliable, high speed internet. She emphasized the lack of competition among providers in rural areas, which leaves customers with no other choice but to rely solely on the incumbent provider for service.

According to a 2016 FCC report<sup>2</sup> “only 38 percent of Americans have more than one choice of providers for fixed advanced telecommunications capability. The competitive options for advanced telecommunications capability are even more limited in rural areas with only 13 percent of Americans living in rural areas having more than one choice of providers of these services compared to 44 percent of Americans living in urban areas.”

In an effort to gain a better understanding of the gaps in internet access throughout Chatham County and to find solutions, Yudell immediately sought assistance from the North Carolina Department of Information Technology’s Broadband Infrastructure Office (BIO). She worked closely with Glenn Knox, Technical Assistance Director for the BIO’s Central Region, to navigate options for the county.

“We keep him involved at every step and we definitely listen to his guidance. The roadmap that the BIO office has out there now is so extensive. They have basically taken what is needed from step one to success and mapped it out with templates and all kinds of other resources,” said Yudell. BIO’s website features a “playbook” with templates, check lists and other materials to guide the county through the process of

establishing public-private partnerships to expand broadband access, available here: [www.ncbroadband.gov/playbook/](http://www.ncbroadband.gov/playbook/).

Yudell explained that public-private partnerships hold the most promise for counties to expand broadband access because under current state law, North Carolina counties have limited authority to act. Counties can provide grants to private providers for establishing equipment or infrastructure, and offer access to county assets or free space as an in-kind contribution to a provider.

The legislation that imposed limits on public sector investment in internet access was intended to protect private companies from having to compete with

tax-subsidized government providers. However, from Yudell’s perspective, counties don’t have the resources to get in the highly technical business of providing internet service. She sees the county as a partner for internet service providers to be able to deliver the last mile solution to connect and serve the underserved rural areas of Chatham County.

In 2016, Yudell met with local internet service providers to find out what they would need to grow and to meet FCC broadband benchmark speeds of 25 megabits per second for downloads and 3 megabits for uploads. Yudell described the purpose of the meeting: “You [providers] tell us what you need in order



1. [www.broadbandmap.gov/faq](http://www.broadbandmap.gov/faq)  
2. [apps.fcc.gov/edocs\\_public/attachmatch/FCC-16-6A1.pdf](http://apps.fcc.gov/edocs_public/attachmatch/FCC-16-6A1.pdf)



*“There are people that can’t sell their house...they get offers on their house and when the prospective buyer asks about internet access and they’re told they have DSL, the buyer says ‘we don’t want that house.’”*

to grow in this county.”

And the county listened to their comments. They discussed the concept of laying conduit, which was an idea Yudell kept hearing. “But you know what these providers said? They said no,” recalled Yudell. During the course of the conversation it became clear that the phrase made popular by the movie, *Field of Dreams* - “If You Build It They Will Come” - does not necessarily apply to broadband.

The providers said that laying conduit sounded like a good idea conceptually and they would be open to it. However, they explained that in order to lay conduit to build out their services, the specifications for its installation, such as trenching depth, would be unique to each provider. Furthermore, the providers said they would prefer to have control over decisions about where to place points of entry into the conduit and connection points.

Providers also said they would need to find ways to make it financially feasible to expand service to areas with low population densities. They wanted to know what county assets might be available to help them. The county offered to map its assets using Geographic Information System Mapping technology (GIS) to identify vertical assets, including possible rooftops for antennas and towers, as well as office space, and other assets that could be used by a private provider

to help them install their infrastructure. The asset mapping also provides valuable information about elevation and topography.

Additionally, providers said they would need to know where the needs exist in the county. The companies would have to determine how many customers they could expect to gain through infrastructure expansion. One of the concerns they raised was customer reliability or the “take rate.” They discussed the challenge of ensuring interested customers would actually sign up for service if investments were made to expand infrastructure.

The county quickly got to work to help answer the providers’ questions, moving forward with the asset mapping conducted by its GIS Department. At the same time, Yudell led a project with help from the BIO to conduct a customer survey to get firsthand feedback from residents and businesses about their internet access to gauge customer demand. The survey was mailed and made available by online. Yudell worked with schools, libraries and other community locations to distribute hard copies of the survey to enable those without internet access to participate. Over 1500 responses were received.

The survey found that 88% of respondents were unserved or dissatisfied with their current service. Some reported no service at all, while others reported having minimal service, or data caps that limit their capacity to upload and download, making it untenable to work from home (see map on page 47).

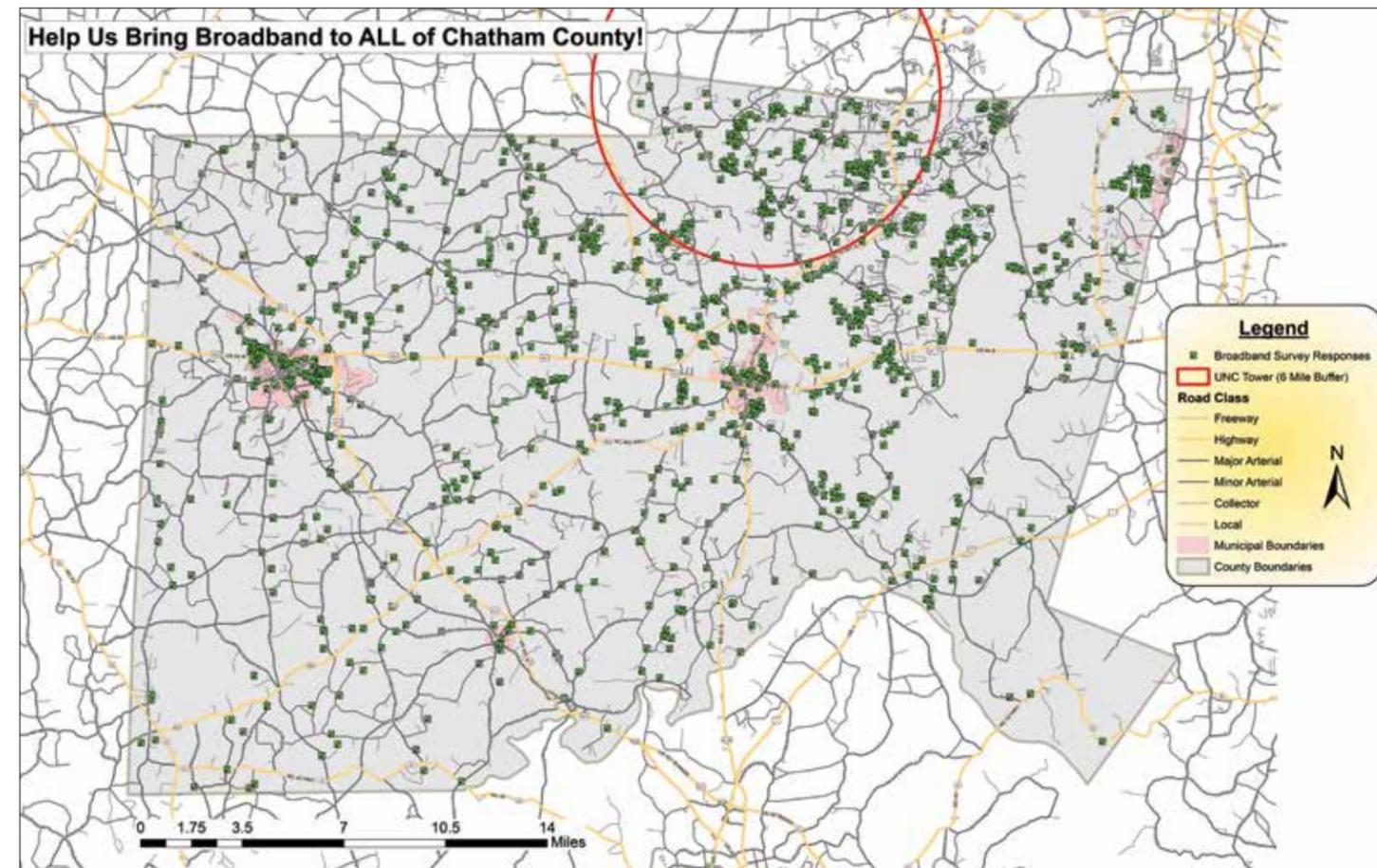
“There are people that can’t sell their house...they get offers on their house and when the prospective buyer asks about internet access and they’re told they have DSL, the buyer says ‘we don’t want that house.’”

“The responses were spread all across the county and not in pockets as we expected. I personally read every survey. People were generally thoughtful and respectful, and many even included hand written notes expressing their frustration,” said Yudell.

When the asset mapping and

customer survey were complete, the county gave the results to providers to analyze and show where the potential customers were located. The goal was to equip providers with the information they needed to submit proposals for a public-partnership with the county. Last November, the county put that goal into action and released a Request for Information (RFI) to solicit proposals from providers in Chatham County.

The RFI asked providers to spell out what they needed from the county in order to grow. The county received



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proposals from five respondents and while no one provider could address the entire county, they all provided realistic proposals with a vision to grow. “They put real mental energy to their thoughts and showed a genuine willingness to work with the county,” said Yudell.”

Using the results from the asset mapping, the survey and the RFI, Chatham County is developing recommendations for the County Manager and the Board of Commissioners to review and consider. The Chair of the Chatham County Board of Commissioners, Diana Hales is hopeful that progress is within reach. “All Chatham Commissioners, some of whom do not have cell service, are optimistic that this approach may relieve disparities

across our county. Just like our roadways the information highway could connect all citizens no matter where they live in North Carolina,” said Hales.

Yudell says there is no silver bullet and over the years, she has seen a lot of ups and downs. She is cautiously optimistic and remains committed to making a difference. “In pursuing this over all these years going back to 2008, I feel like I’m pushing the boulder up a hill. I get up the hill, it looks positive, and then rug is pulled out, and I’m back at the bottom of the hill. I keep pushing that boulder all over again, trying to get up there, trying to find that stability so the next boulder goes up higher. I’m way beyond starting from the bottom of the hill. We need to see some results.” ■



### Look Who Found Albert Coates!

In 2008, Amanda Varner began working for Randolph County, where she currently serves as Clerk to the Randolph County Board of Commissioners, and Executive Assistant to the County Manager. She was born and raised in the area, and is continuing a longstanding family tradition of public service - her mother was town clerk for Ramseuer, NC for 47 years. In addition to Varner’s service with the county, she is an active volunteer in her community, and was recognized by the Asheboro/Randolph Chamber of Commerce as Volunteer of the Year in 2016.

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# DIRECTOR'S CUT



**KEVIN LEONARD**  
Executive Director

As the General Assembly convenes for its short session this spring, we will need your help to build support for a statewide school construction bond. We have a short window of time to pass HB 866/SB 542 – the Public School Building Bond Act, which would put a \$1.9 billion school construction bond on the ballot this November.

As you know, there is a backlog of over \$8.1 billion in documented needs for school construction, and facility renovation and maintenance throughout the state. This number is likely already out of date and will continue to grow as school districts implement the new mandate to lower class sizes in kindergarten through third grade over the next four years.

The last time a school construction bond was passed in 1996, the average price for a gallon of gas was just \$1.23, the iPhone and iPad had not been invented yet, and people didn't have a clue what the term broadband meant. Since then, the traditional public school population has grown 24.3 %, technology has increased at an unimaginable pace, and our state population has greatly increased.

Now is the time to act because interest rates are low and North Carolina currently has the debt capacity to support the \$1.9 billion bond proposal. This means no tax increase is necessary for the state to meet its debt obligations under this proposed bond.

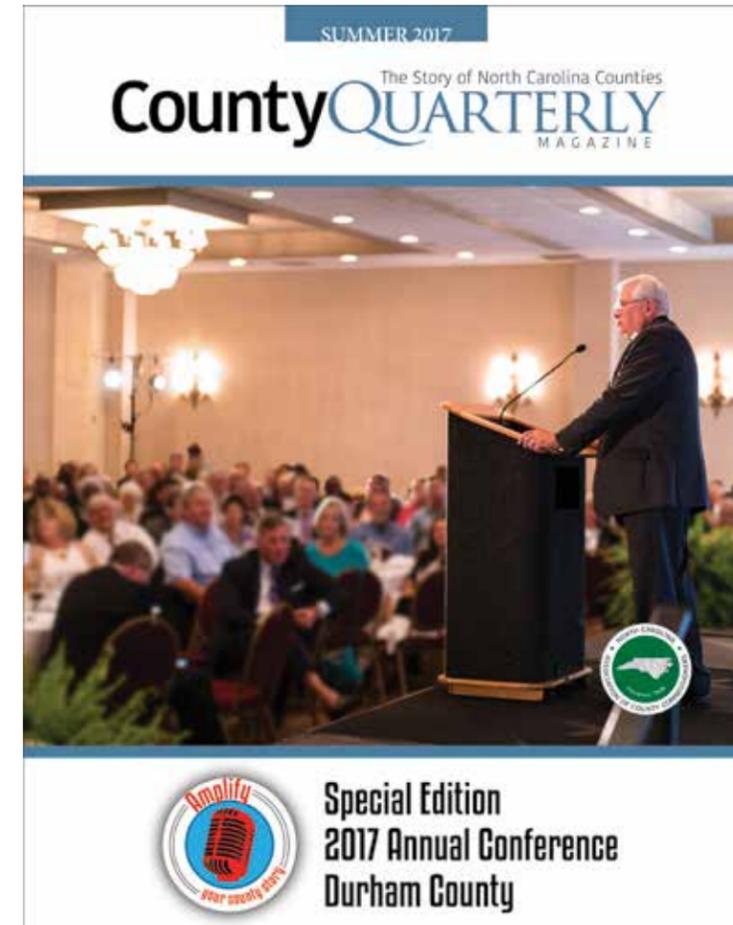
Whether your county needs to build new schools, consolidate facilities, make repairs or invest in upgrades, our state legislators need to hear from you. It's important to raise awareness about your school construction needs and invite legislators to tour schools in your county to see the needs firsthand. NCACC is here to help you tell your story, so please let us know of any support you may need.

## NCACC Mission Statement

*Support and promote the well-being of all North Carolina counties through advocacy, education, research, and member services.*

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CountyQuarterly is distributed Spring, Summer, Fall and Winter to county commissioners, managers and clerks, legislators and public libraries, as well as others interested in the county story. The magazine seeks to bring the county story to life with a focus on the leaders that make county government tick, innovative programs that improve services to citizens, and county history.

For information on subscribing and advertising, go to [www.ncacc.org/countyquarterly](http://www.ncacc.org/countyquarterly)



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