Lit Communities

Delaware County, OH
Broadband Plan

January 2024

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Introduction

On July 6, 2023, the Delaware County Board of Commissioners, Delaware County, Ohio hired Lit Communities ("Lit") to conduct a broadband community assessment to provide the County with the information needed to determine the need, feasibility, and justification for providing affordable broadband high-speed internet access for Delaware County residents and businesses. The project team was charged with providing an analysis to assist the County in realizing its mission to ensure that Delaware County is well-positioned to meet the current and future needs of its residents, businesses, and anchor institutions.

Broadband networks are community assets that enhance the quality of life for residents and catalyze economic growth in the 21st century global marketplace. It allows real-time and constant communication, and knowledge and data sharing via text, voice and video. This facilitates e-commerce, remote work and learning opportunities, telehealth and entrepreneurial innovation, and more, all of which contributes to societal progress. Today's broadband users expect a connection that is accessible, affordable, and reliable, which was amplified by the COVID-19 pandemic and its impact on day-to-day lives. **The project team conducted a landscape analysis of the current internet service providers and service offerings, community outreach by way of public surveys and focus groups, and determined applicable federal, state, and local grant funding options for a comprehensive approach to financing, deploying, operating, and maintaining a network that addresses connectivity needs of the entire County.**

However, careful consideration is required before embarking on the construction of a new fiber network. Although there are areas of Delaware County that experience gaps in coverage, particularly in the more rural areas, the county overall boasts a growing and expanding community, upgrading the existing legacy infrastructure and expanding service options and competition are vital to meet the demands of the digital experience, as well as, ensuring that all residents and businesses have the proper access and support to thrive in the digital world is imperative. Given this context, it is essential to evaluate the necessity and cost-effectiveness of a new fiber network or infrastructure. **While we have detailed recommendations within this plan, our focus is on identifying potential service providers to invest in broadband infrastructure, collaboration amongst jurisdictions within the county, exploring public private partnerships, and establishing digital equity and inclusion initiatives.** This can be achieved through several avenues, such as through issuing a

Request for Information (RFI) or Request for Proposals (RFP) to determine whether a private Internet Service Provider partner would be willing to fund last-mile expansion, or pursuing grant funding for last-mile service to the designated “high priority” areas outlined in this report.

Ultimately, a competitive broadband market in Delaware County will lead to a more connected and technologically advanced society.

Disclaimer

The purpose and Scope of this Broadband Feasibility Study is to provide the County with the information needed to determine the need, feasibility, and justification for providing affordable broadband high-speed internet access for Delaware County residents and businesses. All of the information included in this study is based on data and information gathered from various sources, including research and public forums, and is based on certain assumptions. Although due care and diligence has been taken in compiling this document, the contained information may vary as a result of changes in the local broadband landscape. Lit Communities does not assume any liability for any financial or other loss resulting from this study. The prospective user of this document is encouraged to carry out his/her own due diligence and gather any information he/she considers necessary for making an informed decision, including consulting with legal counsel.

The information contained in this study is for general information purposes only. The information is provided by Lit Communities and while we endeavor to keep the information up-to-date and accurate, we make no representations or warranties of any kind, express or implied, about the completeness, accuracy, reliability, suitability, or availability with respect to the information contained herein for any purpose. Any reliance placed on such information is therefore done so strictly at the user’s own risk.

In no event shall Lit Communities be liable for any loss or damage including without limitation, indirect or consequential loss or damage, or any loss or damage whatsoever arising from loss of data or profits arising out of, or in connection with, the use of this study.

1 Market Service Incumbent Analysis

Objective

This analysis aims to provide Delaware County with a diagnosis of the current health of broadband infrastructure and services in the community. The results of this study will enable the County to strategically target and prioritize areas to bridge the digital divide and offer equitable broadband opportunities to all residents and businesses, while minimizing risk and amplifying the County's likelihood of success.

Methodology

Lit Communities collected and evaluated data from publicly available broadband data sources and subscription-based tools to thoroughly understand the existing Internet Service Provider (ISP) landscape in Delaware County and then coalesced these sources to review the competitive landscape, including:

1. Completing an inventory of existing fiber networks within the county, including ownership and availability for use by other network providers.
2. Providing an overview of current broadband providers' services, pricing strategies and coverage areas.
3. Where possible, determine and analyze the investment and deployment plans of incumbent providers.
4. Map the location of existing fiber and broadband-related electronics and available broadband speeds by provider.

In the sections that follow we identify current ISP service offerings and pricing; local fiber networks, including long haul fiber and middle mile fiber networks and their redundancy; and priority areas within Delaware County for additional broadband infrastructure investment.

Results

1. ISP Catalog

The Federal Communications Commission (FCC) Fixed Broadband Deployment Data identifies the following ISPs in Delaware County with the corresponding broadband technology and speeds they are currently providing.

Coaxial Cable / HFC	Max Speed
Charter Communications Inc	1000, 35
Copper Wire	**Max Speed**
FRONTIER	115, 115
Fiber	**Max Speed**
Charter Communications Inc	1000, 500
Consolidated Fiber, Inc.	1000, 1000
FRONTIER	5000, 5000
Starry Inc.	200, 200
Geostationary Satellite	**Max Speed**
Viasat, Inc.	50, 3
Licensed Terrestrial Fixed Wireless	**Max Speed**
Starry Inc.	200, 200
VERIZON	1000, 50
Non-geostationary Satellite	**Max Speed**
Starlink	50, 10
Unlicensed Terrestrial Fixed Wireless	**Max Speed**
Agile Networks	25, 5
Jenco Wireless LLC	100, 20
Speedwavz	25, 10

According to this table, there are currently five technologies deployed in the Delaware County, both for residential and business purposes, which can be categorized as follows:

1. Wired Broadband: DSL, Cable, and Fiber
2. Wireless Broadband: Fixed Wireless and Satellite

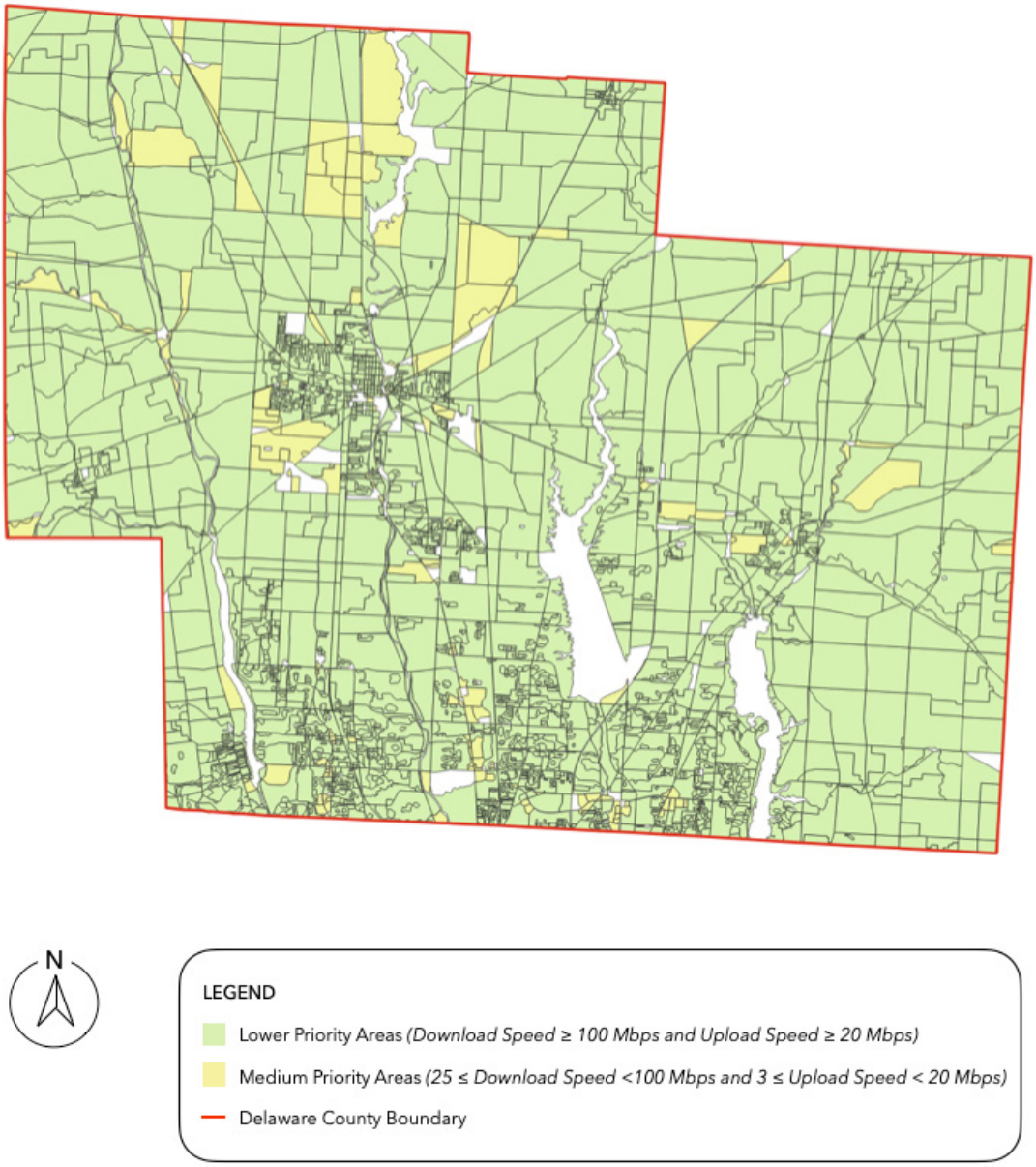
These broadband services are offered by eleven (11) ISPs: AT&T, Breezeline, Brightspeed, Byhalia.net, Charter Communications (Spectrum), Consolidated Fiber, Frontier, HughesNet, T-Mobile, Verizon, and Watch.

Based on the maximum download and upload speeds advertised by these ISPs, several providers offer broadband speeds equal to or higher than 100 Mbps download and equal to or higher than 20 Mbps upload in Delaware County. However, this is challenged by the broadband technology types available in Delaware County and, as these are advertised speeds, they may not align with end-user experiences.

2. Broadband Priority Areas

The following broadband speed map is based on the FCC Fixed Broadband Deployment data,[1] representing the highest ISP-reported speed per census block and prioritizing areas based on the definition specified in the map legend.

Priority Areas based on Maximum ISP Speed per Census Block

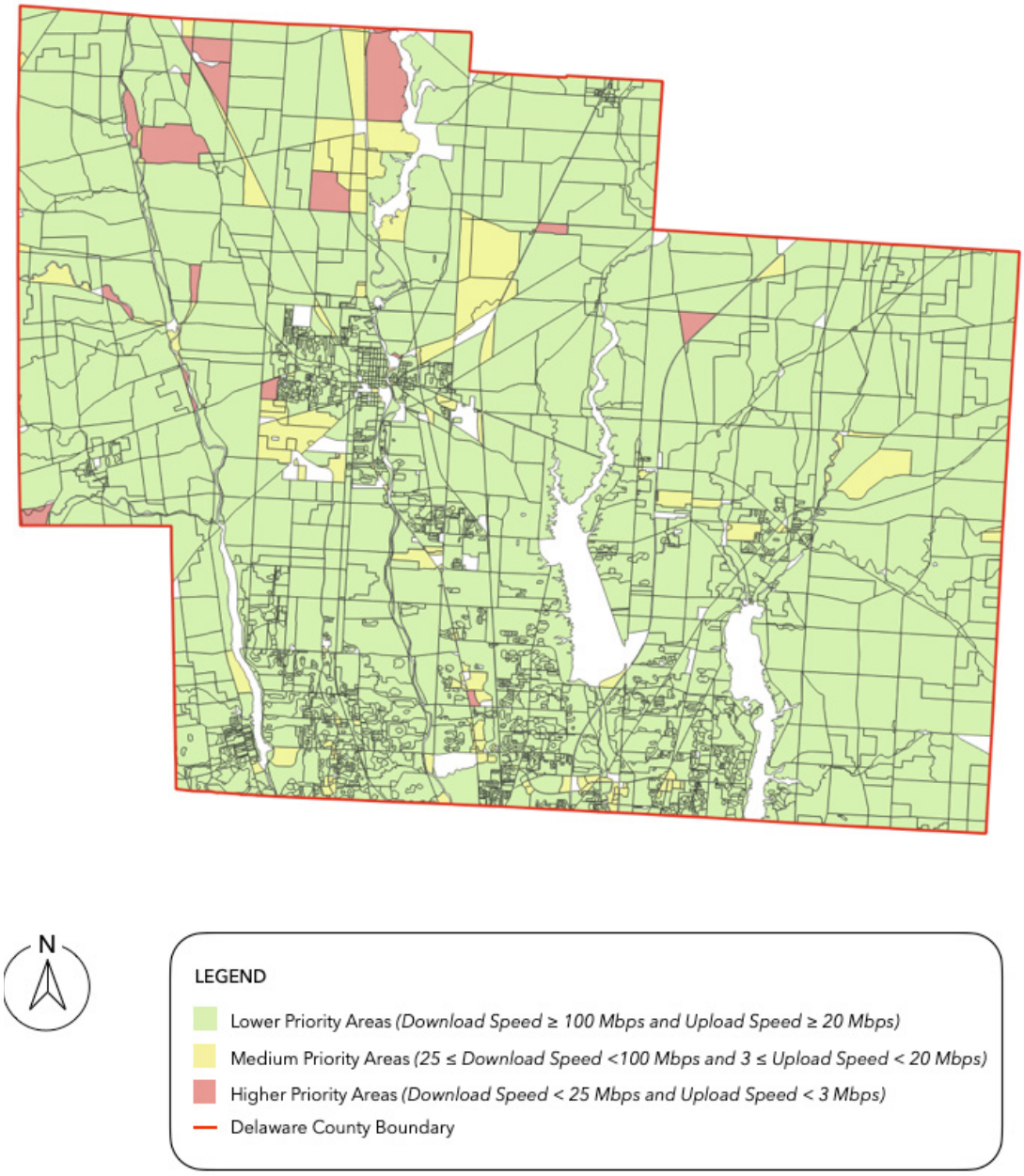


The map above depicts a few medium-priority areas dispersed throughout the county. However, when the census blocks are instead categorized based on the reported technology[2] (and the speeds that technology is actually able to provide), the picture in Delaware County changes, as depicted in the following map:

[1] Federal Communications Commission (2022). FCC – Open Data. Available at: https://opendata.fcc.gov/Wireline/Fixed-Broadband-Deployment-Data-December-2020/hicn-aujz/data

[2] Lit Communities has developed a weighting system to catalog census blocks based on the speed each technology is expected to achieve according to their corresponding material and medium throughout information is transmitted and received. The technology sequence from the highest to the lowest speed is as follows: 1) Fiber; 2) Cable Modem; 3) DSL; 4) Other Copper Lines; 5) Terrestrial Fixed Wireless; 6) Satellite.

Priority Areas based on Maximum ISP Technology per Census Block

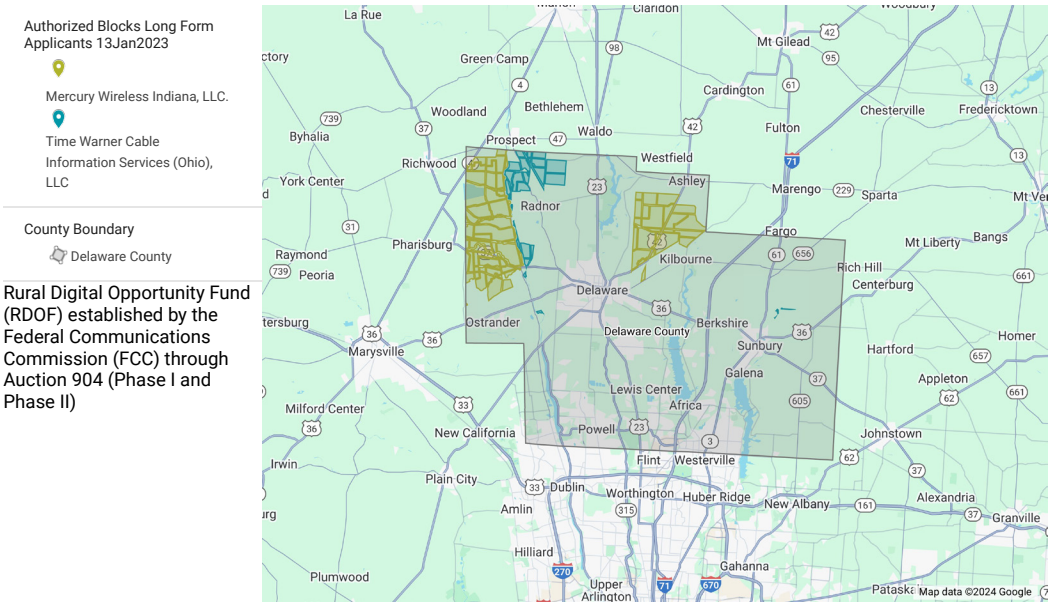


This map demonstrates that there are actually areas of high priority on the northwestern side of the county. However, as the following map depicts, some areas in the northwest corner of Delaware County are projected for build out under the FCC's Rural Digital Opportunity Fund (RDOF) Program.

As of January 2023, the FCC has fully authorized the following RDOF awards within the County:

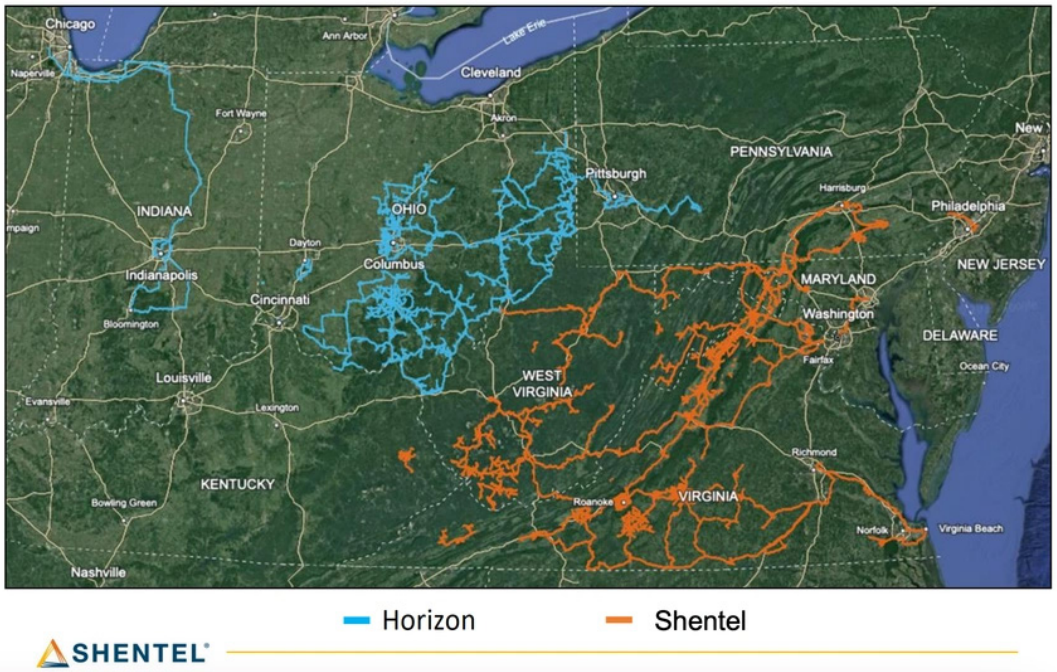
- CCO Holdings, LLC (Charter/Spectrum) will utilize the RDOF award to deploy fiber-to-the-premise to 193 locations in the northwest corner of the County.

Delaware County (OH) - RDOF Map



- Mercury Wireless, Inc. will utilize the RDOF award to deploy fiber-to-the-premise to 643 locations along the northwest County border and 402 locations in the north central portion of the County.
- Connect Everyone, LLC and the Rural Electric Cooperative Consortium were initially awarded RDOF funding, but their respective bids are currently in default.

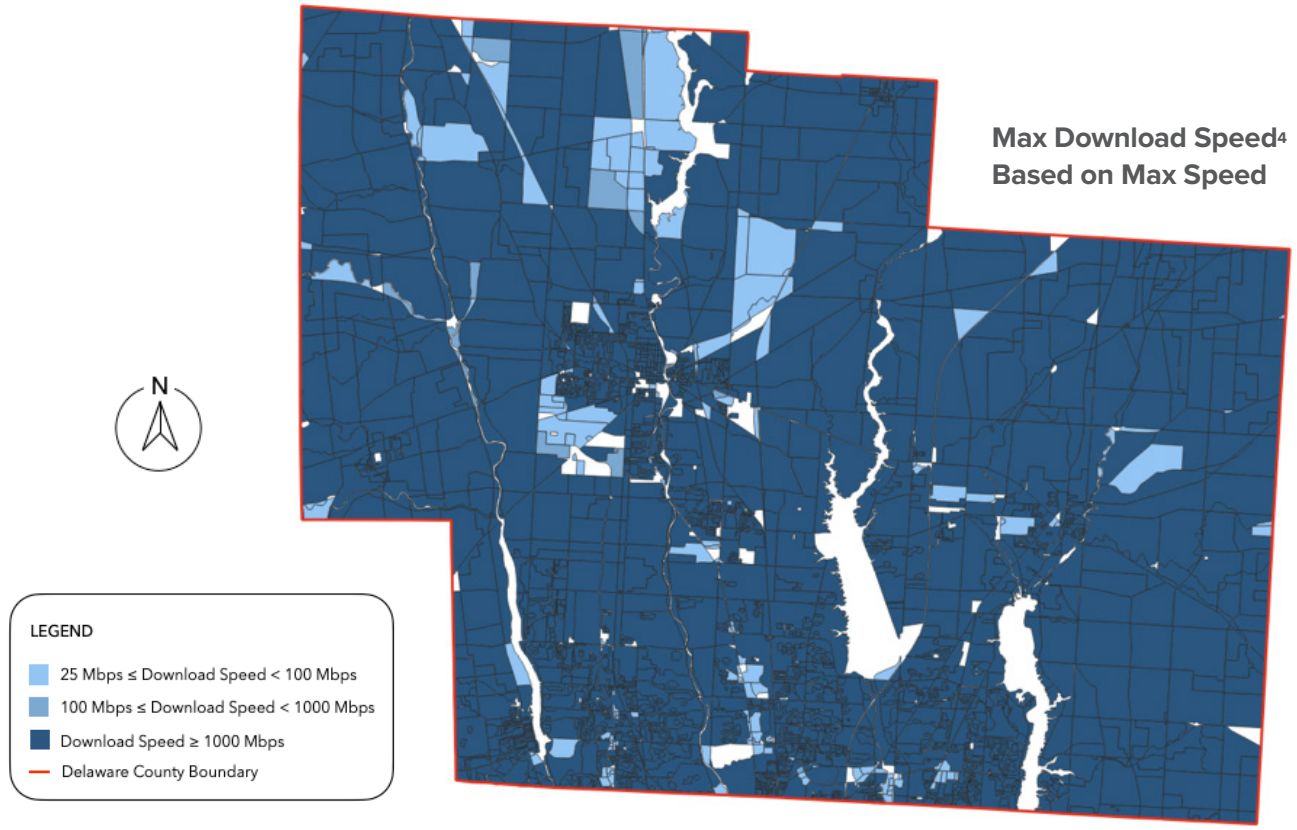
It was also recently announced Shenandoah Telecommunications Company (Shentel) would acquire Horizon Telecom.[3] The projected Horizon footprint in Ohio as a result is included in the map below and impacts Delaware County. Although this map does not clearly depict which areas in the county will be addressed, we reached out to Horizon Telecom as part of the Partner Engagement/ Focus Group component of this project. More information regarding their expansion is included therein. Further, Horizon's middle mile presence in Delaware County is discussed below and included in the appendix.



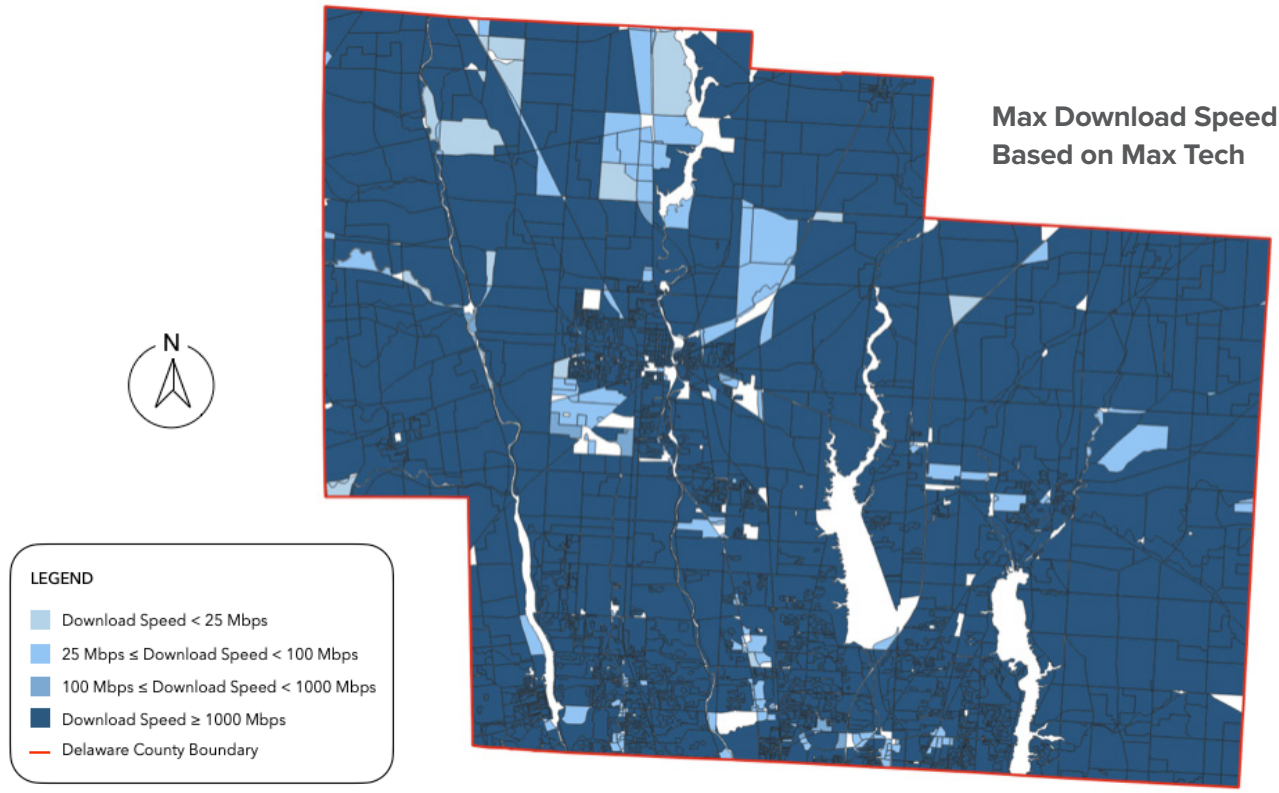
[3] Dano, Mike, Shentel to double fiber reach with $380M purchase of Horizon, LIGHT READING (Oct. 25, 2023), available at https://www.lightreading.com/fttx/shentel-to-double-fiber-reach-with-380m-purchase-of-horizon.
[4] *Id.*

The breakdown of download and upload speeds in the maps below (expanded off of the two maps above) allows us to better target and prioritize the census blocks in need of enhanced broadband. In the case of download speeds, mapping the maximum speed per census block (top map) again provides a very different picture than mapping the maximum technology per census block (bottom maps).

Max Download Speed[4] Based on Max Speed



Max Download Speed Based on Max Tech

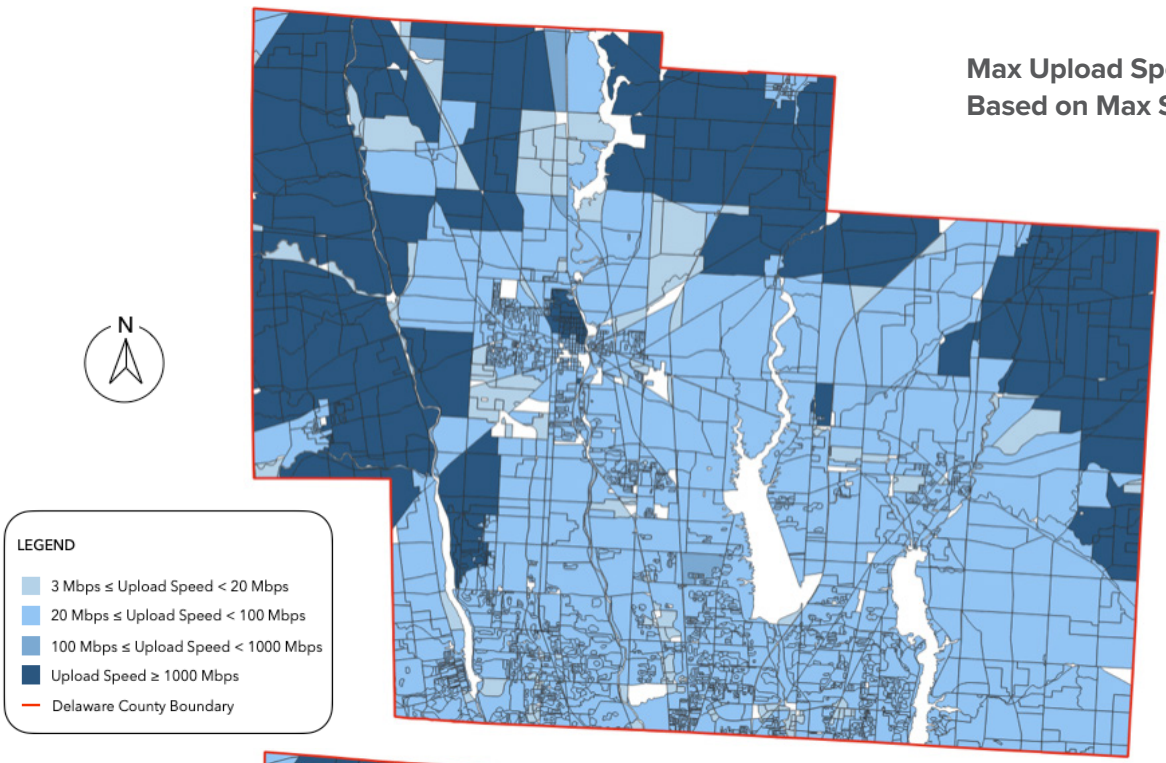


[4] *Id.*

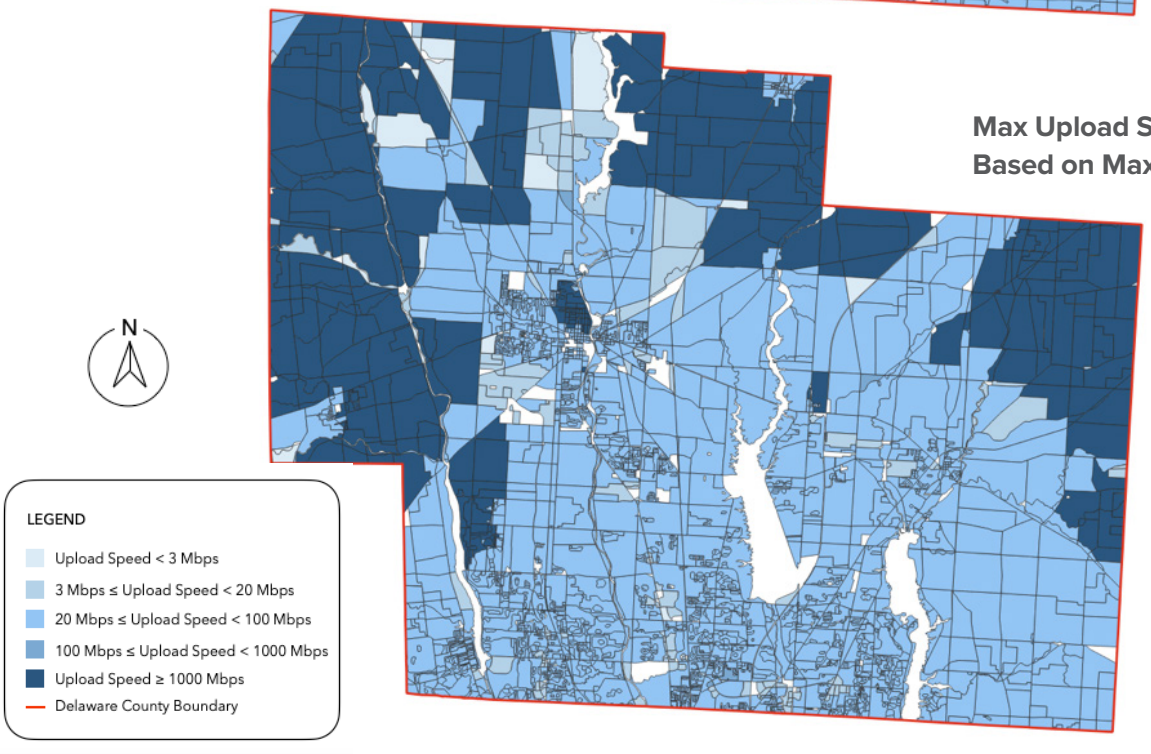
In the top map, it would appear that nearly the entire county has access to 1 Gigabit per second (1 Gbps) service. However, the latter map reveals that the majority of the county most likely does not have access to this speed tier.[5]

Symmetrical download and upload broadband speeds best provide robust, reliable, and fast service. The maps below depict county upload speeds for comparison purposes to the download speeds above.

Max Upload Speed Based on Max Speed

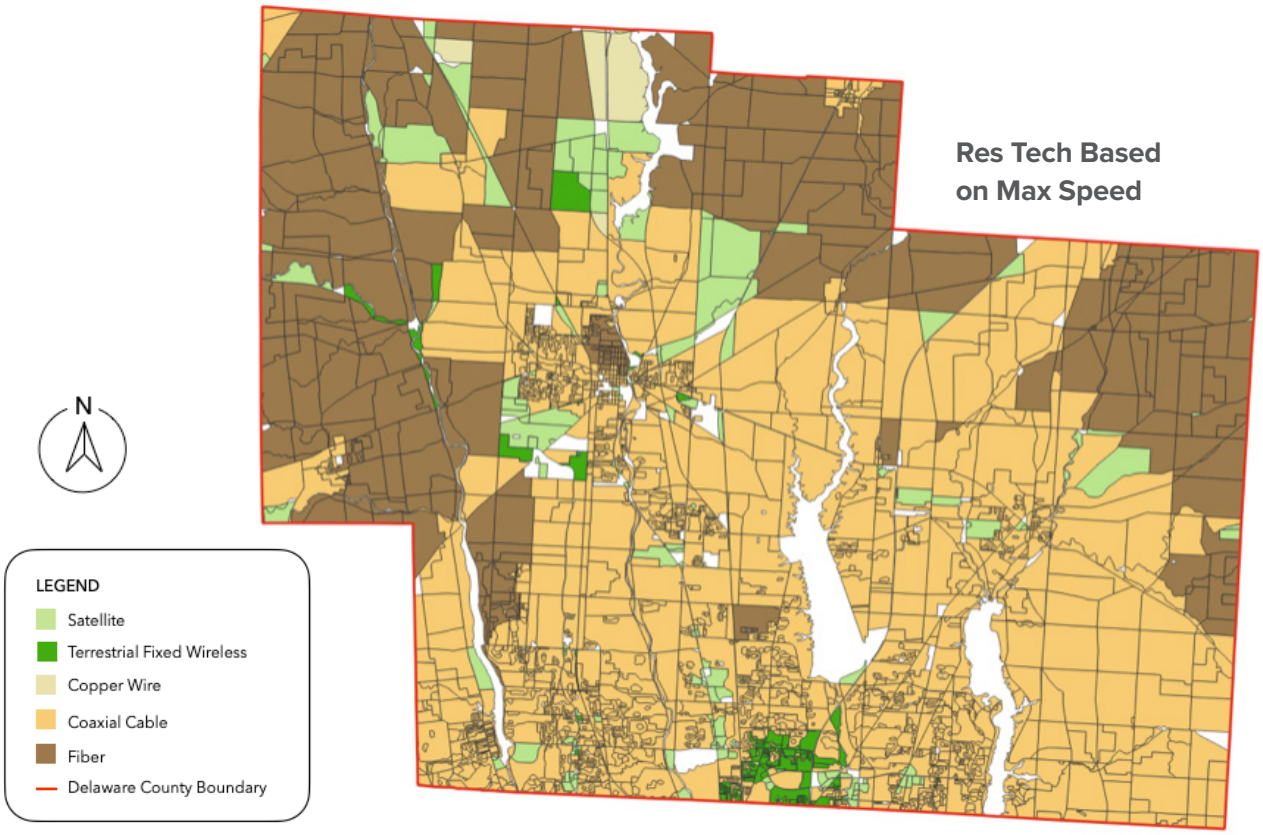


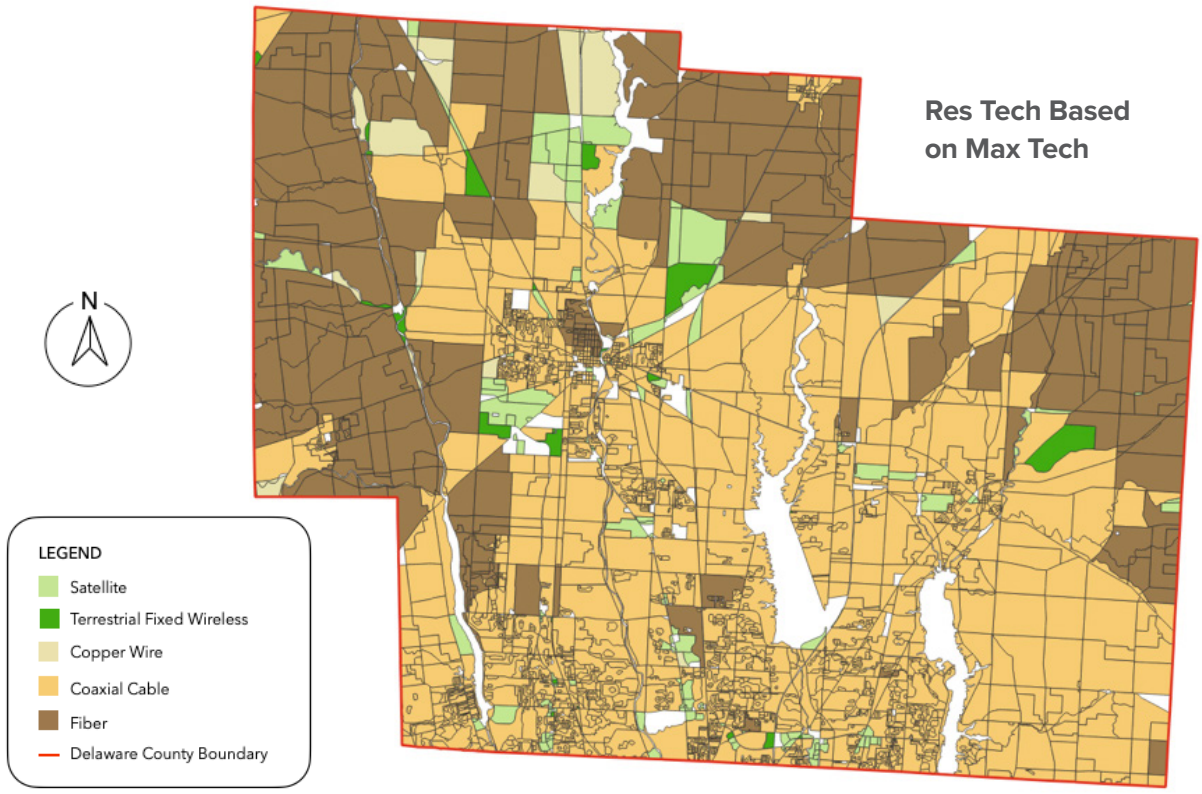
Max Upload Speed Based on Max Tech



[5] In instances of such divergence between the maps, we recommend deferring to the map that depicts maximum technology per census block.

As the following maps indicate, when service in Delaware County is categorized by maximum speed, cable and fiber are the prevalent technologies. However, when service in Delaware County is categorized by maximum technology, fixed wireless becomes a bit more prevalent.





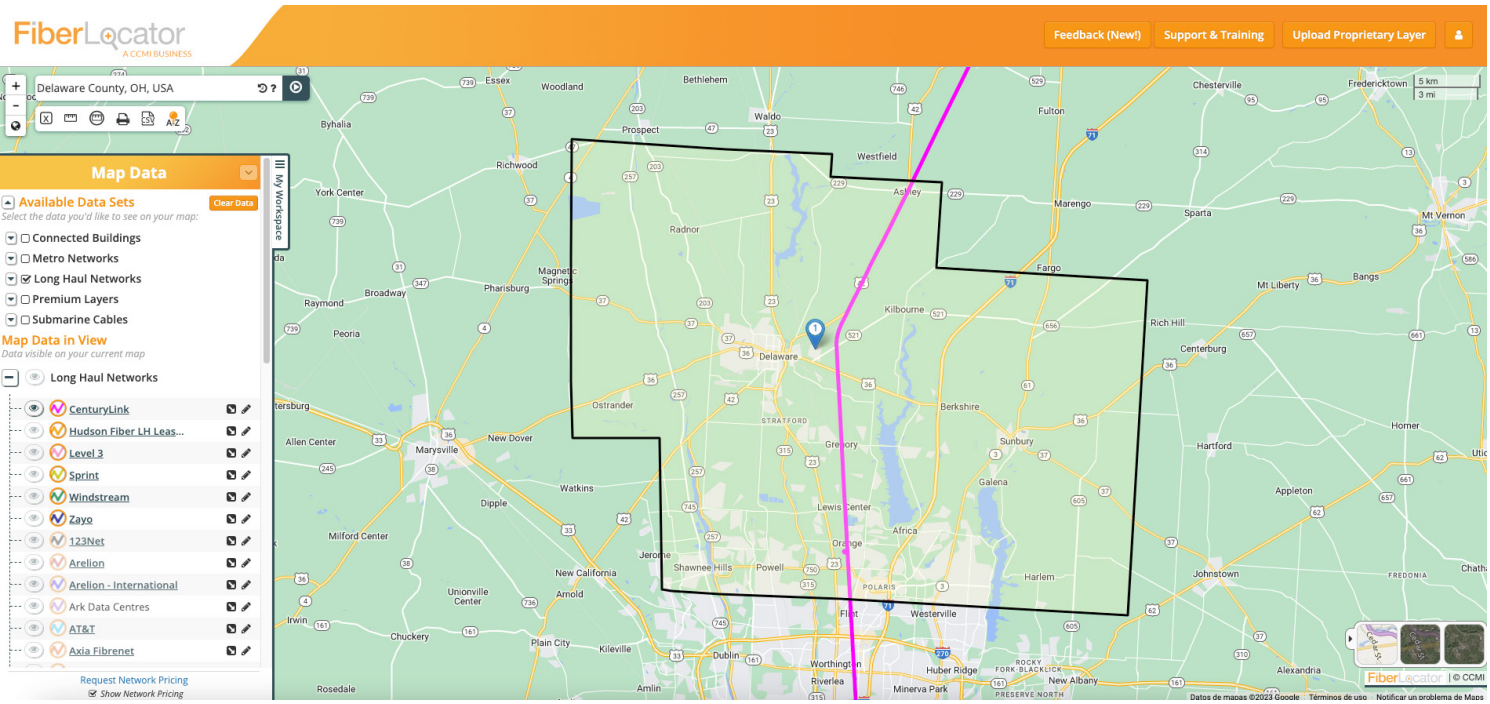
However, this changes the closer we look at the more dense regions of Delaware County where fiber is present and additional expansion is anticipated.[6] Given that it is well-known and documented that fiber provides the highest speed broadband service, this shows the need for fiber expansion beyond the population-dense areas of the county. We recommend that these areas are particularly targeted for future intervention and broadband expansion.

3. Existing Fiber Infrastructure in Delaware County

Fiber is widely accepted to be the fastest, longest lifespan, robust, most reliable, and most secure broadband technology and it is capable of providing high symmetrical download and upload speeds.

According to FiberLocator (see map legend below), there are multiple long haul fiber[7] networks running through Delaware County. While long-haul networks do not provide end-user services (and thus will not be reflected in the earlier broadband coverage maps), **evaluating these networks is important because they may be leveraged to build middle mile networks, which ultimately facilitate more last-mile service.**

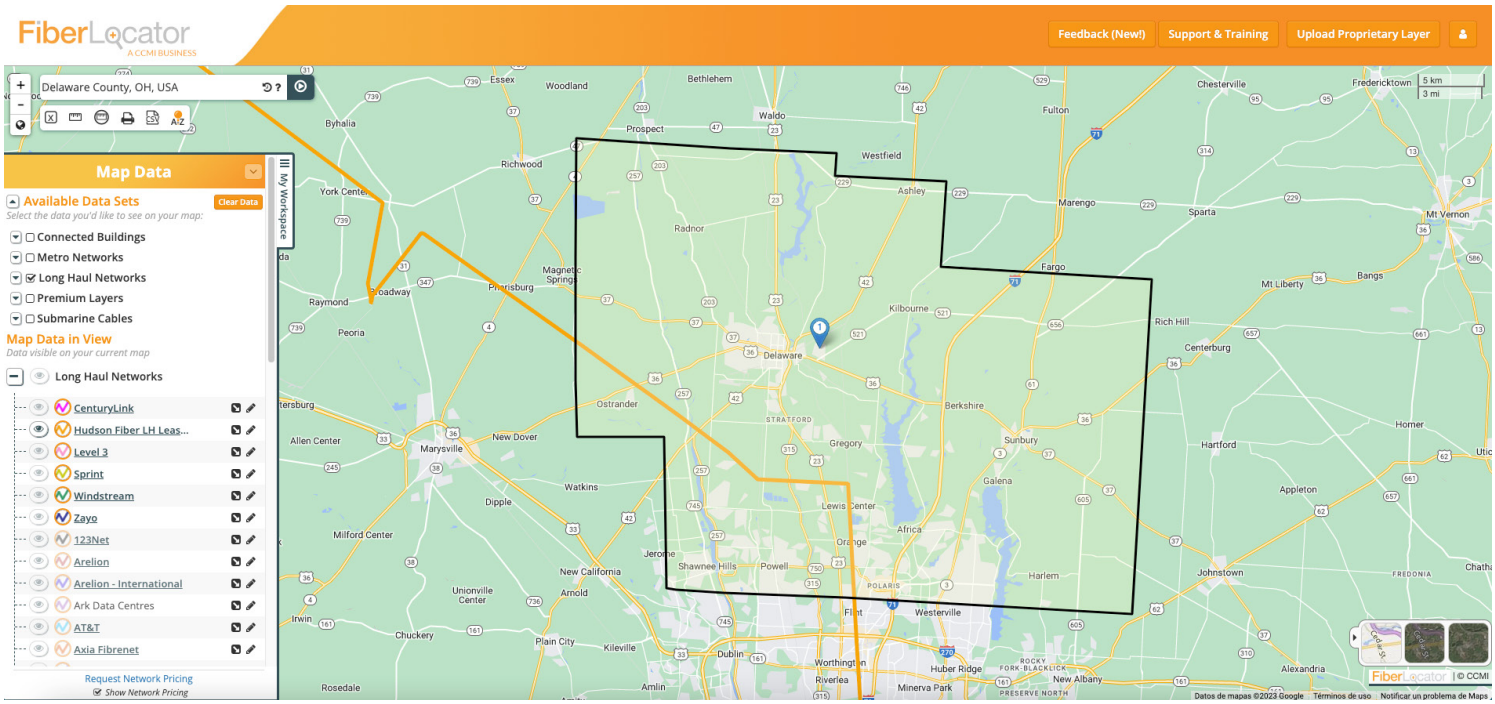
Long Haul Networks 1



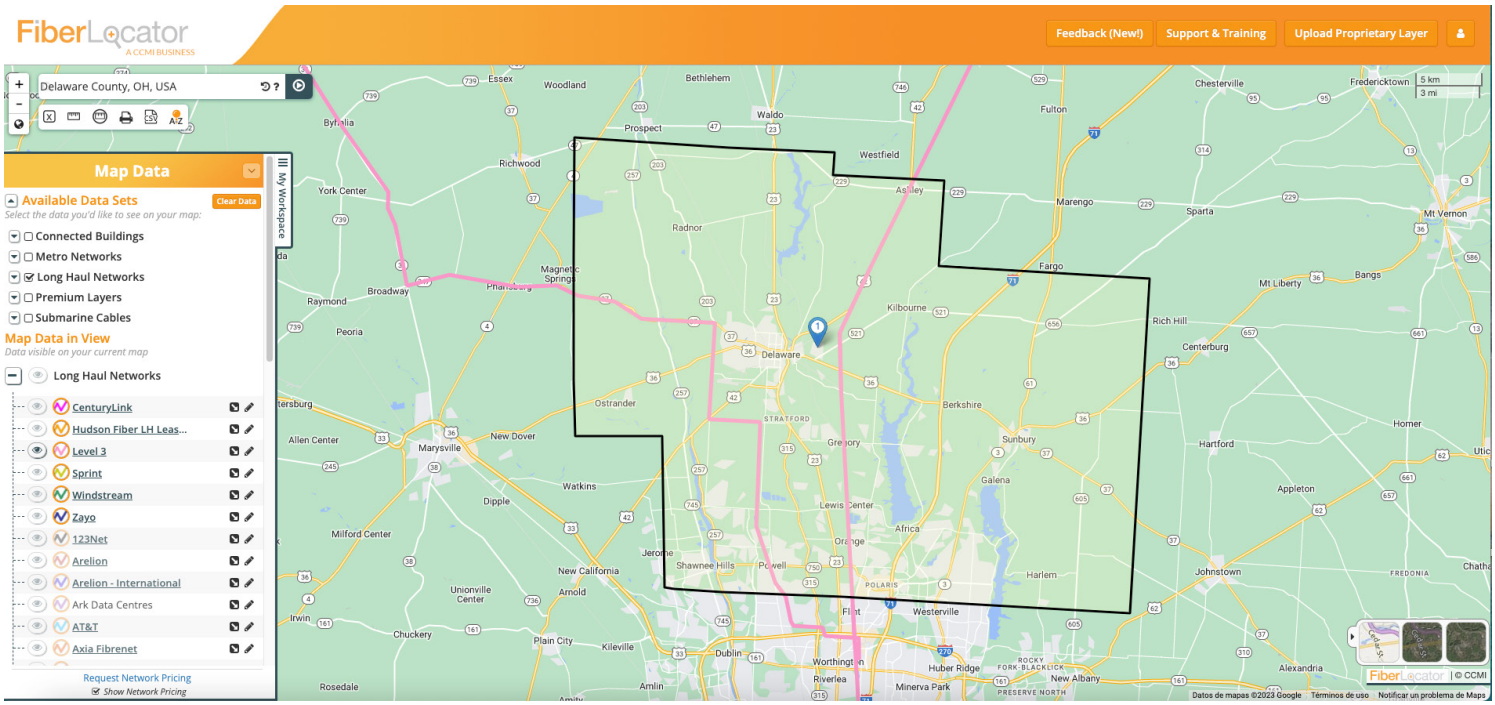
[6] AltaFiber announced on 10/25/23 that they will be expanding in Delaware County in 2024 in Concord and Liberty Townships.

[7] Long-haul refers to the network connection over long distances, such as nationwide, between various towns, cities, and other political subdivisions. Middle-mile refers to the network connection between the last-mile and the internet. For example, in a rural area, the middle mile would connect the town's network to a larger metropolitan area where it interconnects with major broadband carriers' long-haul networks. Last-mile is the final leg of an internet connection between a service provider and the customer. For example, the last-mile is the connectivity (from a service provider) that passes a home or business that allows them to use the internet once connected through what is called a "lateral" connection.

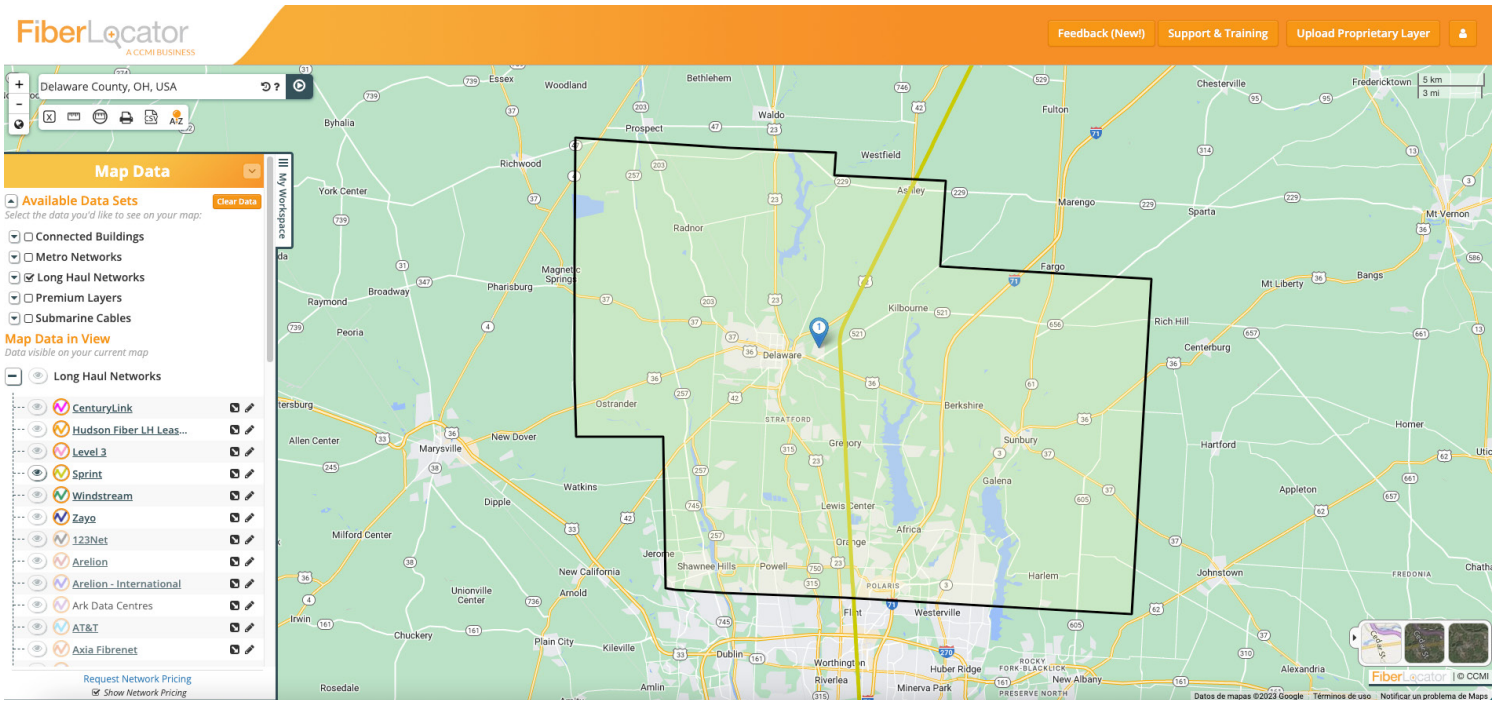
Long Haul Networks 2



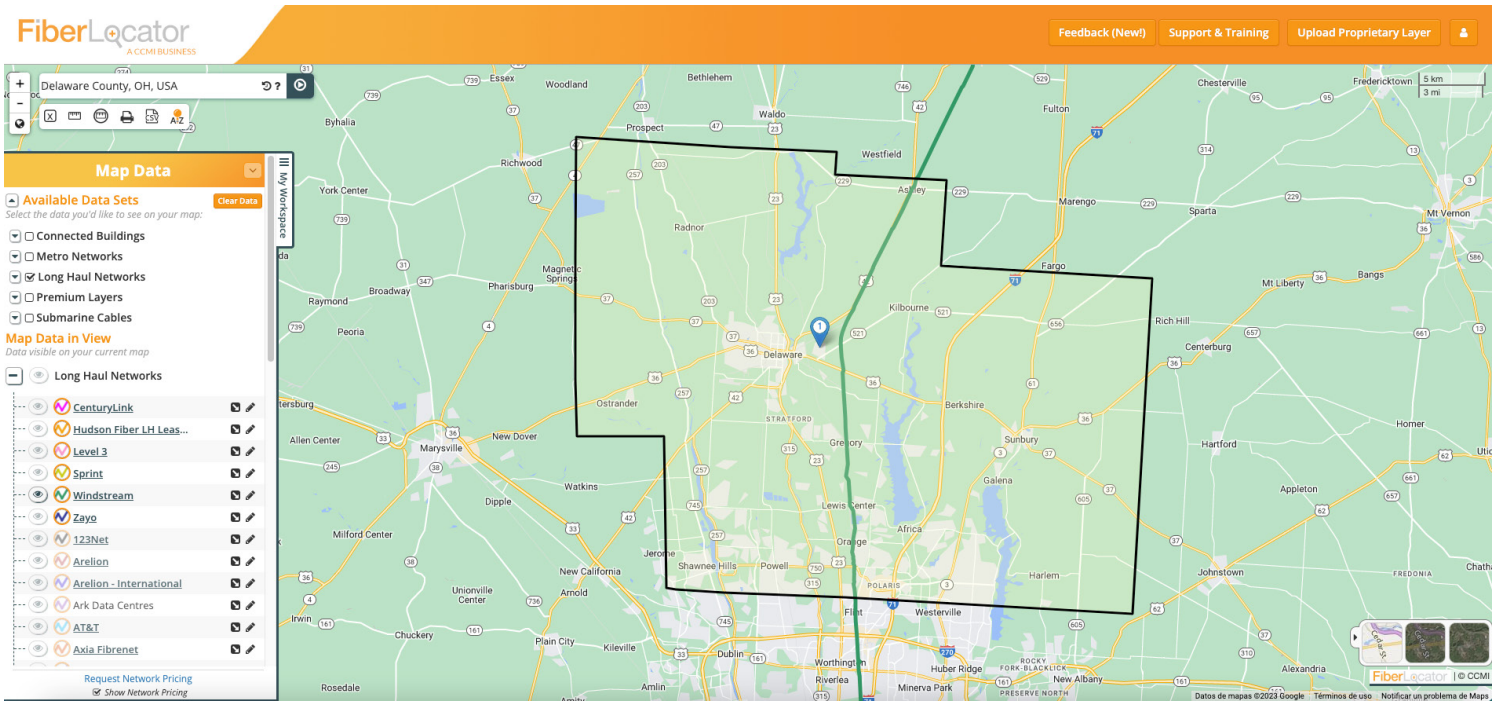
Long Haul Networks 3



Long Haul Networks 4



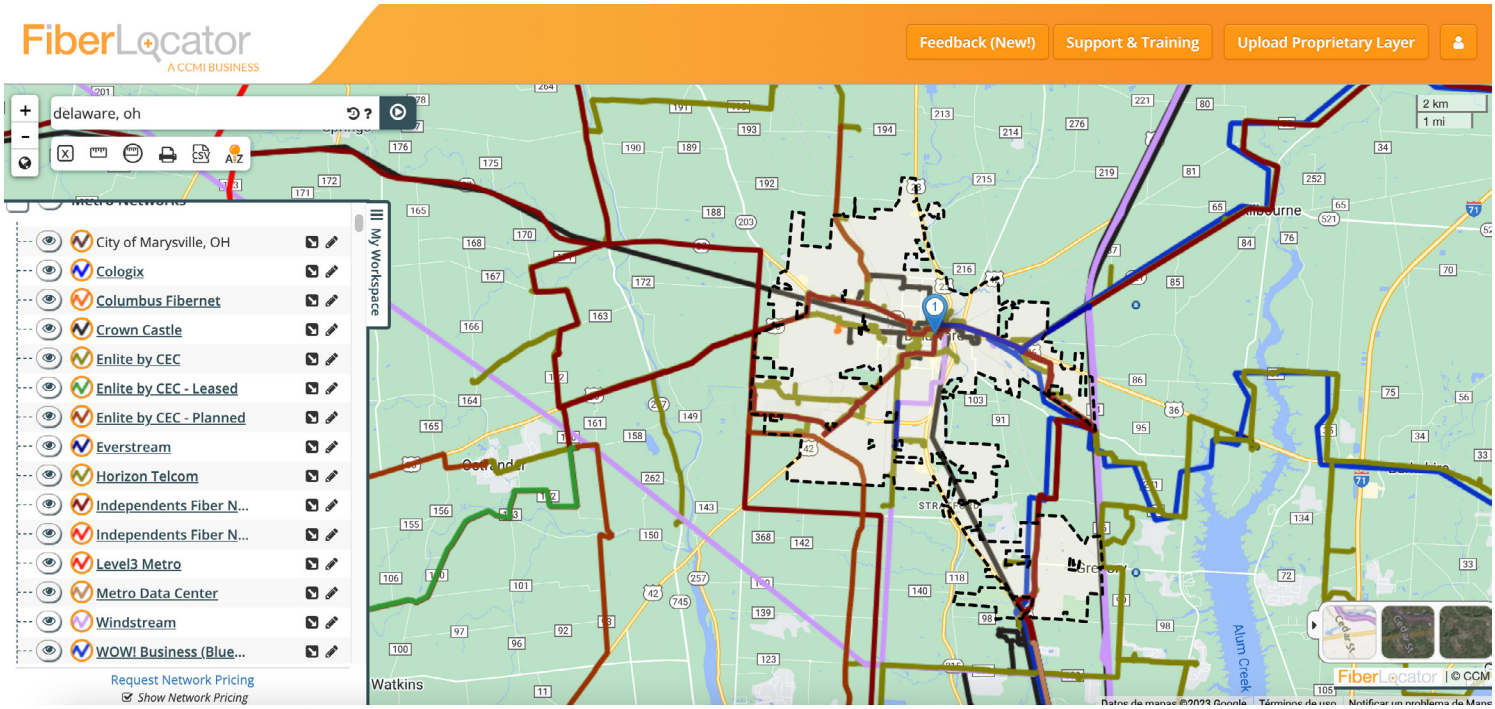
Long Haul Networks 5



Robust middle mile fiber acts as the core broadband infrastructure from which ISPs provide last-mile service, and, particularly when constructed in a “ring” fashion, offers secure, redundant networks for anchor institutions (especially emergency services, hospitals, fire stations, and police).

There are multiple middle mile networks present in Delaware County that could potentially be leveraged for additional last-mile expansion (see map legend of the following maps).

All Metro Networks 3



Additional Metro Fiber Networks are included in Appendix 50.

Conclusions

Broadband technologies such as fiber, cable, DSL, fixed wireless, and satellite are all currently available in Delaware County. The predominant transmission type and the speed thereof is dependent on the location and the categorization analysis (maximum ISP speed per census block versus maximum ISP technology per census block). Among these broadband connection types, fixed wireless and cable are the predominant technologies, but their prevalence varies largely by geography (i.e., fiber is available closer to the City of Delaware). Delaware County should seek to enhance broadband speeds and symmetry in the census blocks where fiber is not the dominant technology, particularly in the northern half of the county.

2 Demand Aggregation

Survey Result Overview

Participation

The Delaware County Broadband Survey launched on October 4th, 2023 and was available to residents and commercial entities in the study areas until December 4th, 2023. The survey was made available in both English and Spanish, with 100% of responses submitted in English and 0% submitted in Spanish.

The survey received a total of **554 completed responses**[1]. A breakdown of those responses is as follows:

- Residential Single Family Home = **651 responses**
- Residential Multi Dwelling Unit = **53 response**s
- Hybrid Home/Business (own/operate business from residence) = **20 responses**
- Government = **10 responses**
- Business = **3 responses**
- Non-Profit = **2 responses**

Delaware County, Ohio Survey Analysis

Service Availability in Delaware County:

- **97.8%** of residential respondents indicated that they currently have internet services at the location being surveyed

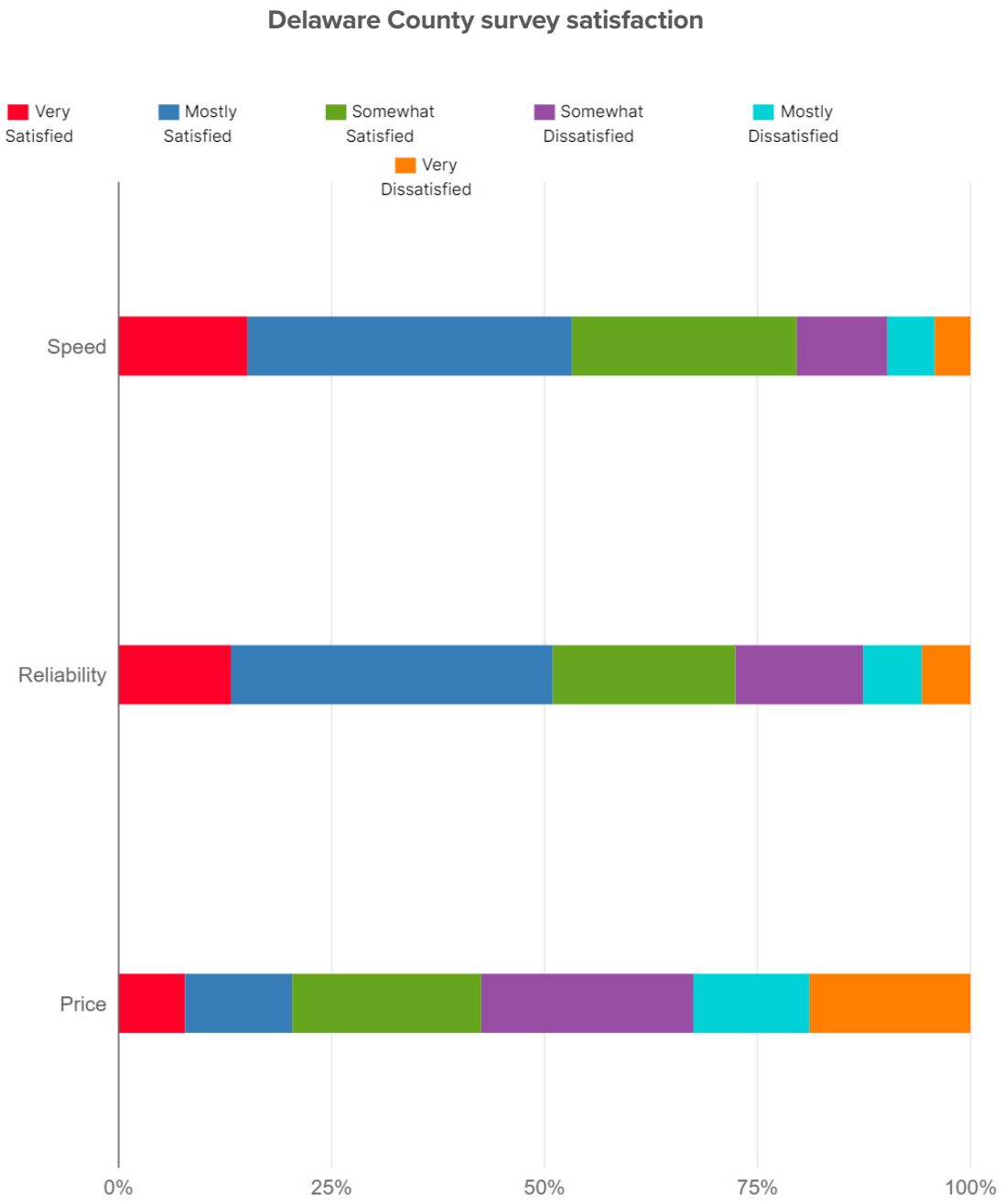
[1] The number of completed surveys meets the threshold for statistical confidence.

Services Currently Offered in Delaware County:

62.1% of survey respondents reported that they currently subscribe to cable modem service, **11.2%** reported they subscribe to WISP (wireless internet) service, and **9.3%** reported using a cellular hotspot, **7.2%** indicated they are using fiber services, **4.2%** reported using DSL service, 3.6% did not know what type of service they have, **2.3%** indicated subscribing to satellite services, and 1 respondent uses dial-up service..

Service Satisfaction in Delaware County:

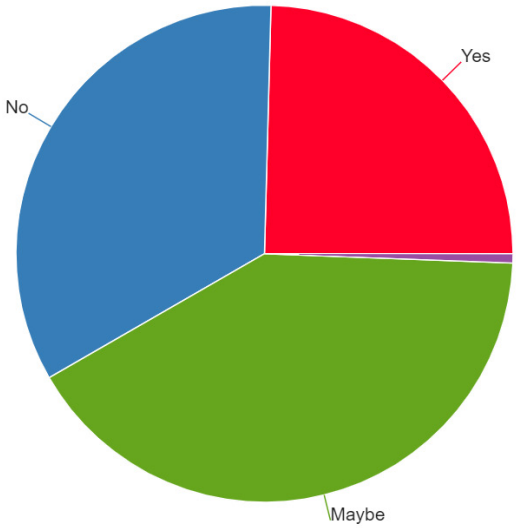
- The majority of survey participants indicated satisfaction with the speed (**79.6%**) and reliability (**72.4%**) of the internet services currently available to them.
- The survey responses show higher levels of dissatisfaction (**57.4%**) regarding the prices paid for current internet services as seen in the accompanying graphs.



User Experience with Internet Services in Delaware County

Only 24.6% of all Delaware County survey respondents indicated that they would pay more for a faster, more reliable service if it were made available to them, with 33.4% indicating "no" to paying more.

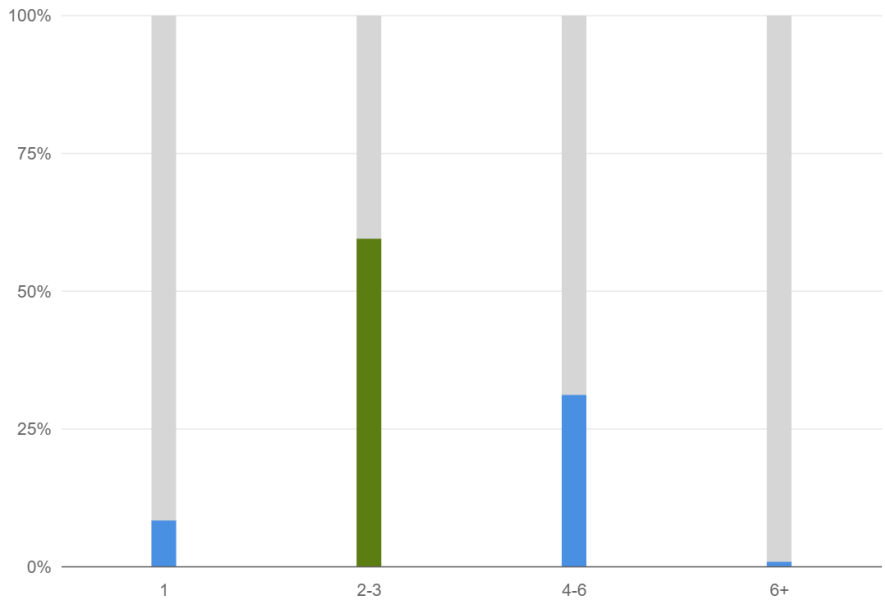
Delaware County survey pay more



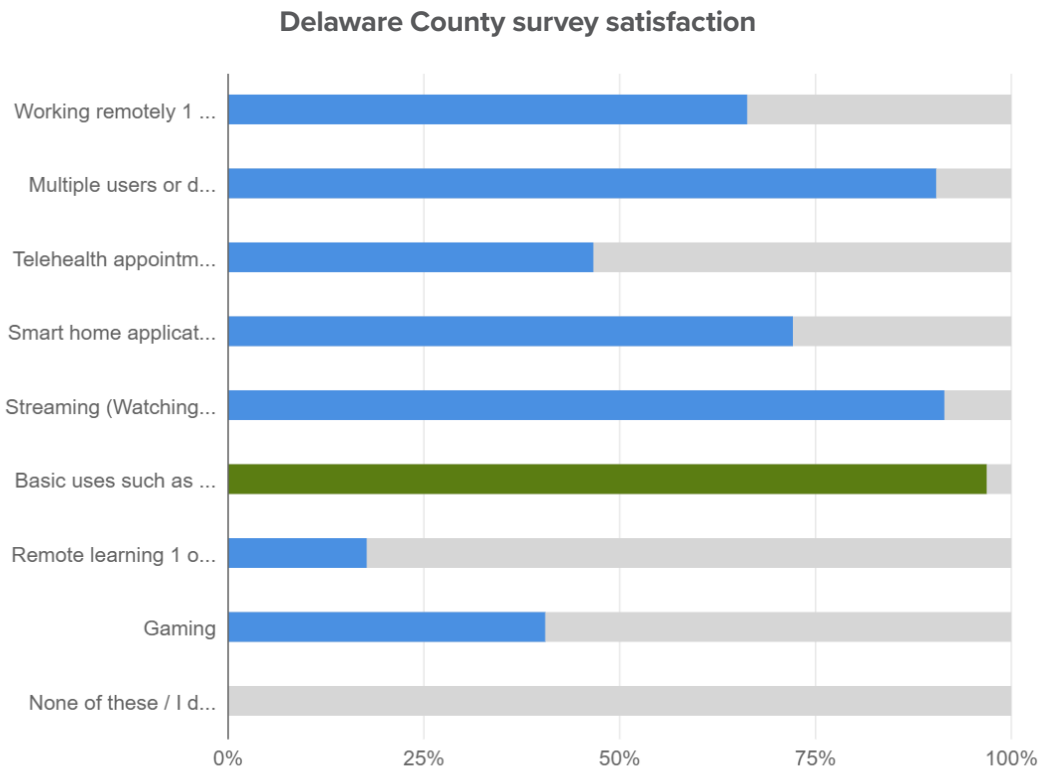
The majority of participants **41.1% reported "maybe" to paying more**, which is in line with feedback received in the community survey that having options, specifically different internet service providers to choose from, was consistently raised. Competition has typically been a driver of lower pricing and more service types offered to customers. Of those participants the majority indicated that they are currently paying in the range between $60-$100 per month.

Internet utilization data shows that **90.7%** of participants have between 2-6 people using the internet at home on a regular basis, with the majority being between 2-3 users (59.5%).

Delaware County survey internet utilization rates



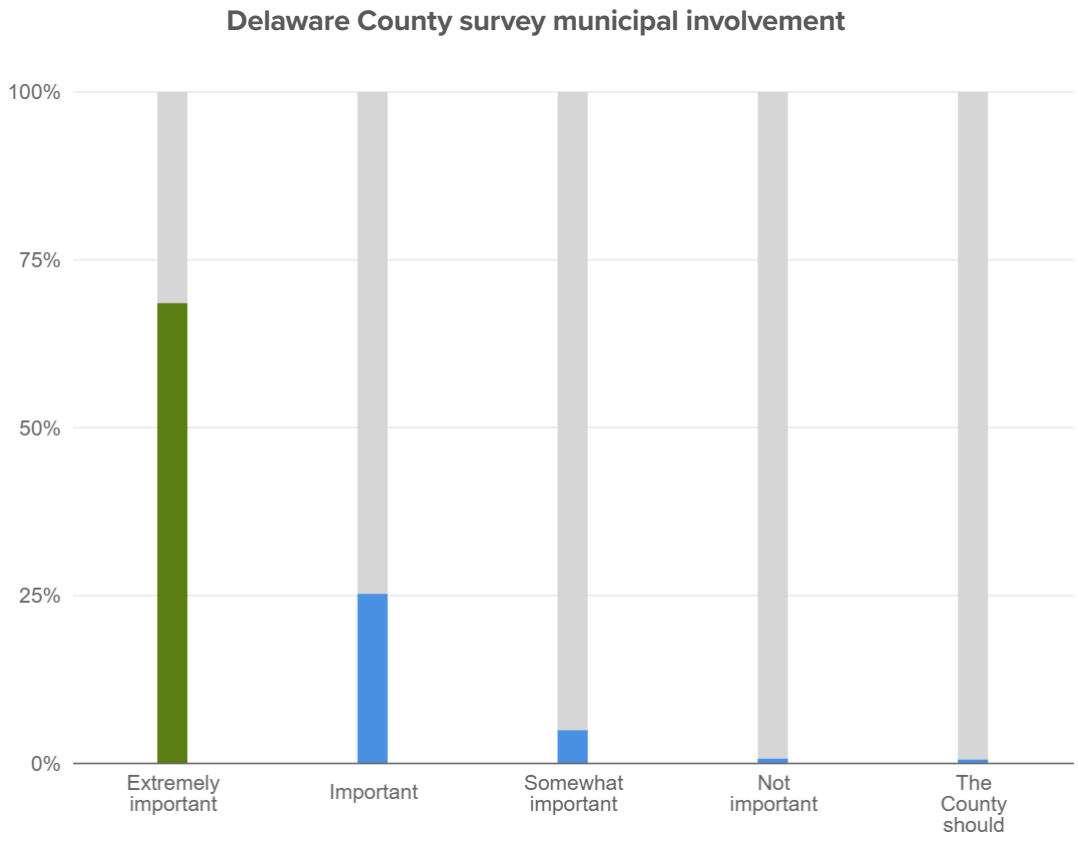
The majority of respondents (**96.9%**) reported they use the internet at home for basic uses such as email, social media, reading news, or online shopping, while **46.6%** use the internet at home for telehealth appointments and services. Additionally, **66.3%** indicated they use the internet at home to work remotely 1 or more days per week and 17.7% use the internet for remote learning 1 or more days per week.



Understanding utilization rates can help properly determine how much bandwidth is necessary in order for optimal performance of the internet service be realized. Knowing the amount of bandwidth needed can prevent overspending on service packages that far exceed what is actually required to execute day-to-day digital tasks.

Importance of the Broadband Initiative and Support in Delaware County

Respondents indicated a high level of support, **93.8%,** that it is "extremely important" or "important" for Delaware County being involved with bringing better broadband to the study area.



Comments

348 of the survey respondents in Delaware County left comments, which surfaced some key trends to inform the project.

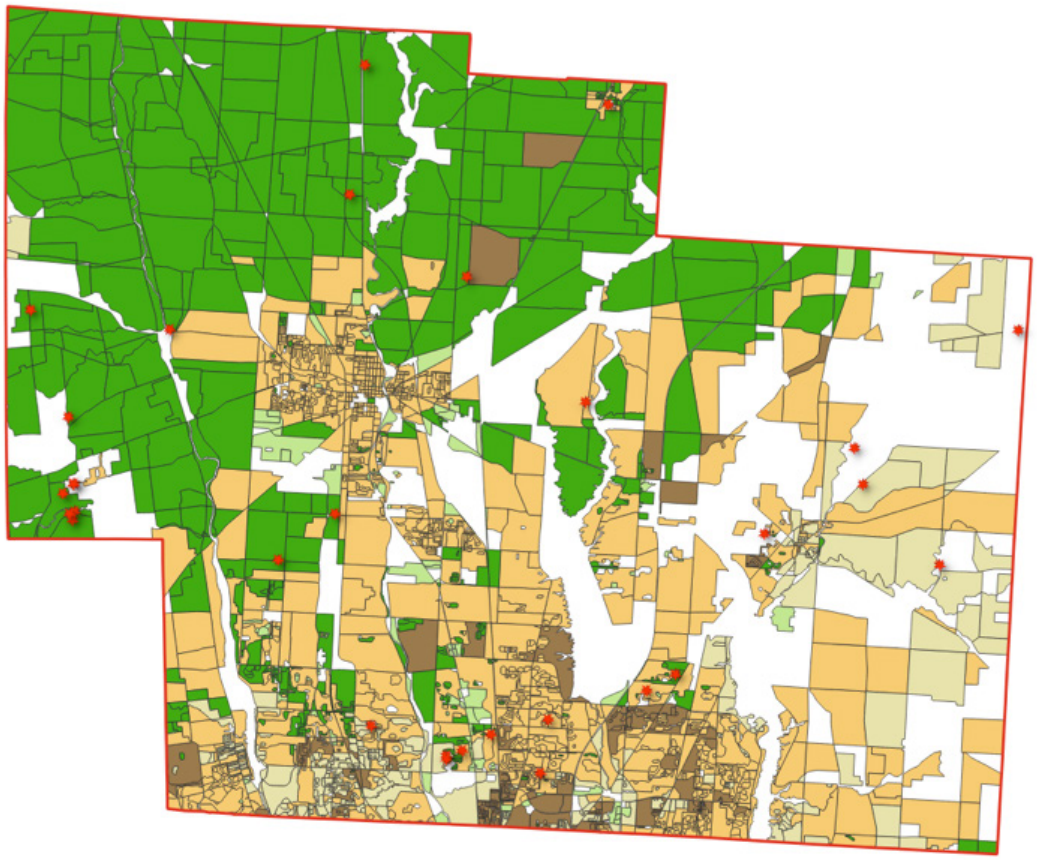
While many of these spoke to more fiber services, themes also point to concerns regarding competition:

- 72.4% of all comments mentioned either choice or options, for broadband services
- Many comments indicated challenges with single source internet service providers, with 21 comments referencing a monopoly with existing service providers.
- The need for fiber was amongst 80 comments made, which is consistent with the fact that only about 7% report that they currently are using fiber services at home.
- Of the comments made, there were 146 mentions relating to pricing, cost, or affordability.
- Many comments indicated dissatisfaction with current internet service providers and how the lack of competition has driven costs up compared to the service speeds being offered.

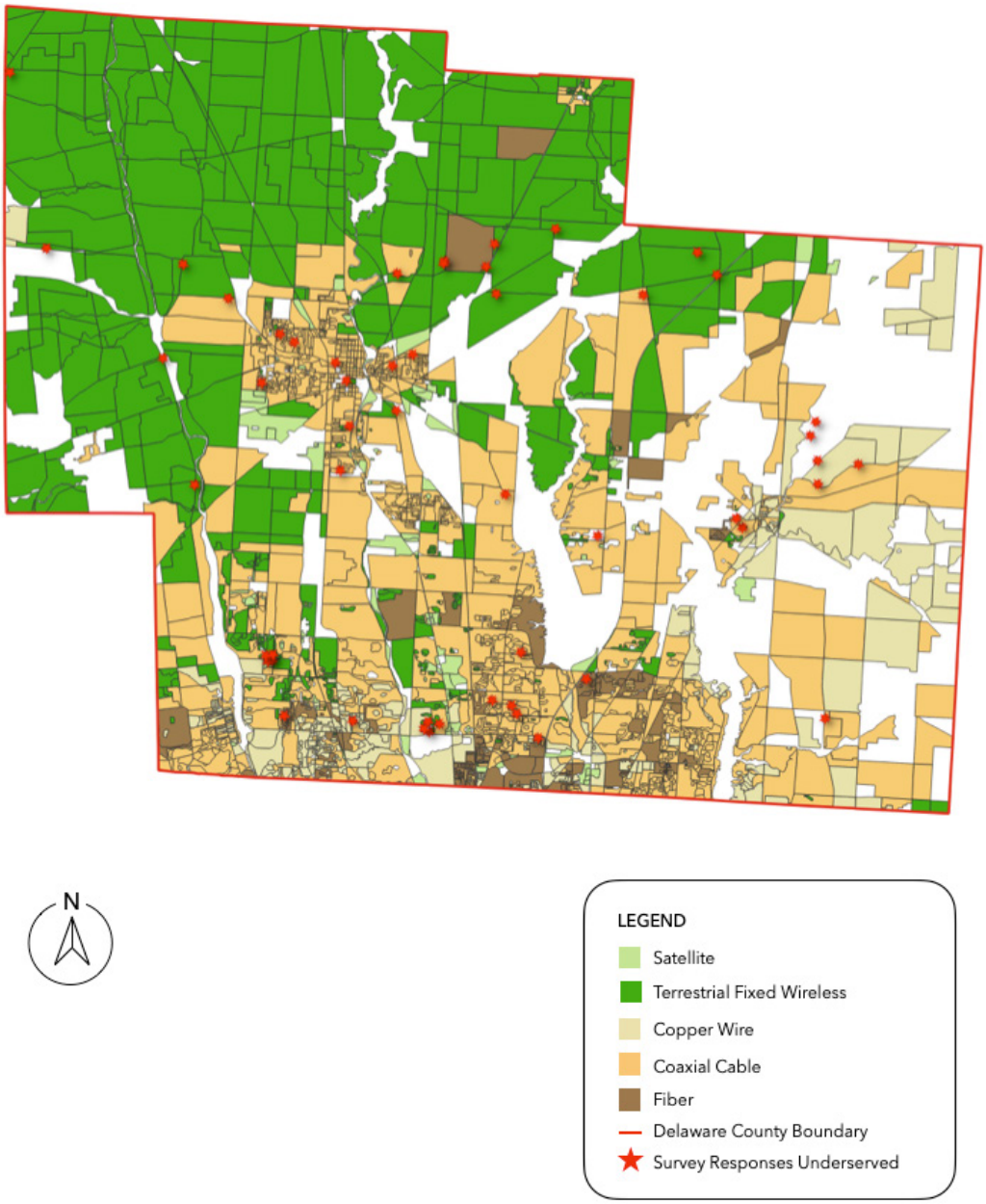
Speed Tests in Delaware County:

- The survey collected a total of 478 speed tests in Delaware County, which indicated an **average download speed of 198.18 Mbps and average upload speed of 48.80 Mbps.**
- **56.28%** of speed tests had a download speed of 100Mbps or faster. Likewise, **99.79% of the speed tests collected had a download speed of less than 1 Gbps.**
- **82.84%** of all speed tests recorded **meet the current FCC broadband speed requirements of 25 Mbps download / 3 Mbps upload**. The remaining percentage of responses **(17.16 %) are below those speed ranges or are underserved**. It should be noted that, according to FCC data, these responses –unserved and underserved– are located in areas served by copper wire, coaxial cable, satellite, fiber, and terrestrial fixed wireless (see maps below). This survey data helps Delaware County to better target areas with broadband needs, even in those zones whose existing broadband technologies are supposed to adequately serve the community –coaxial cable and fiber– as shown before.

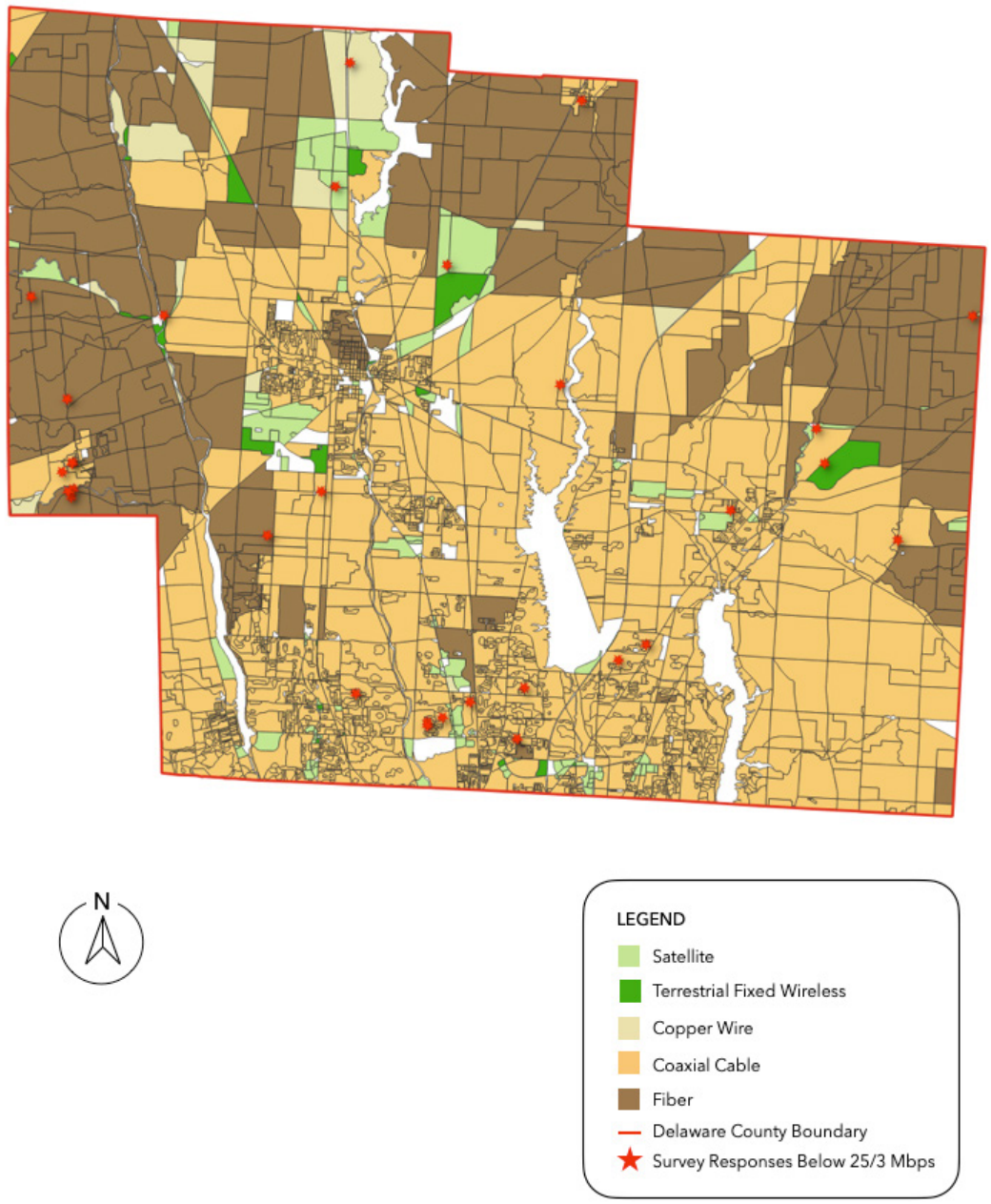
Business & Residential Delaware Survey Results Below 25-3 Mbps



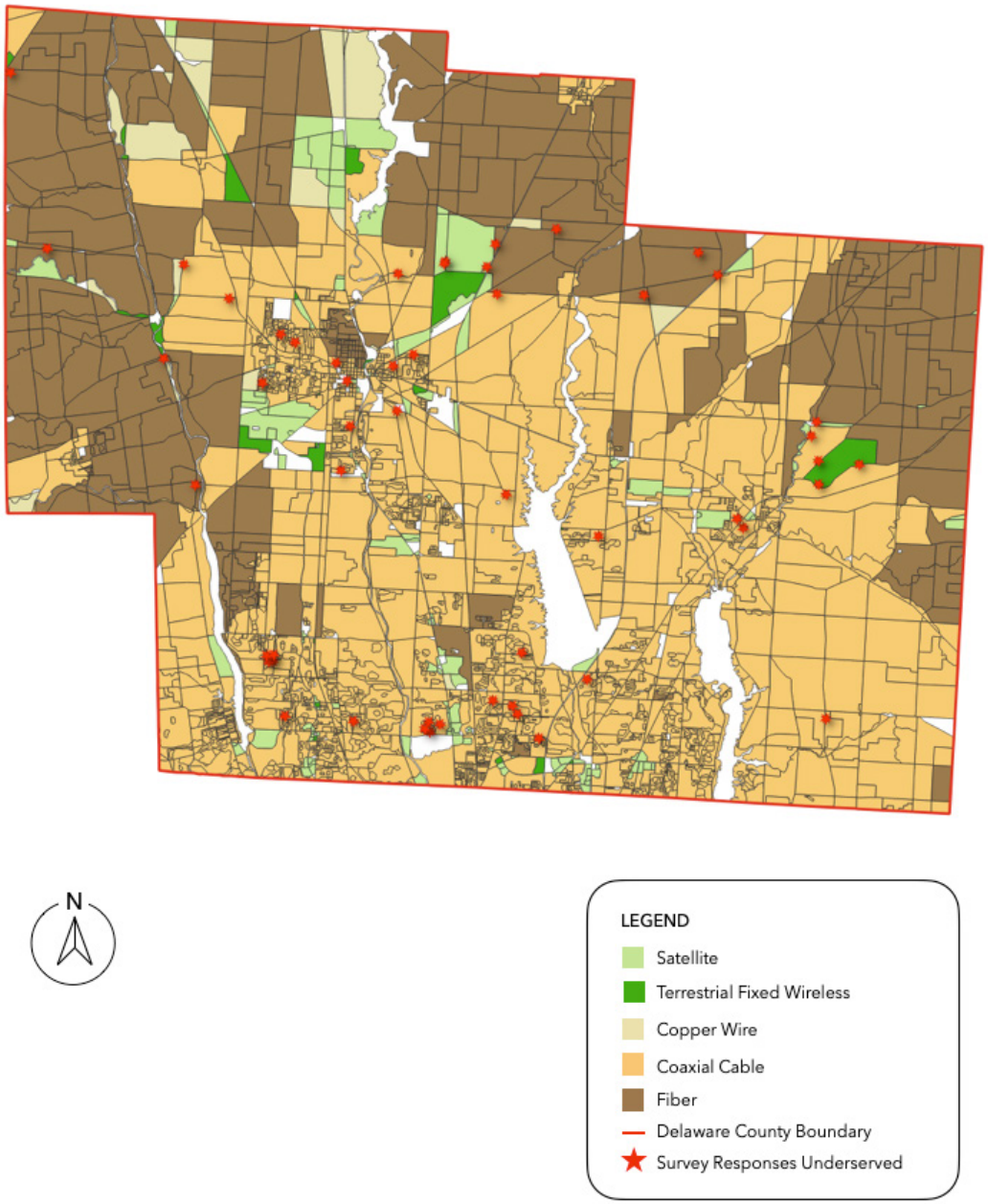
Business & Residential Delaware Survey Results Underserved



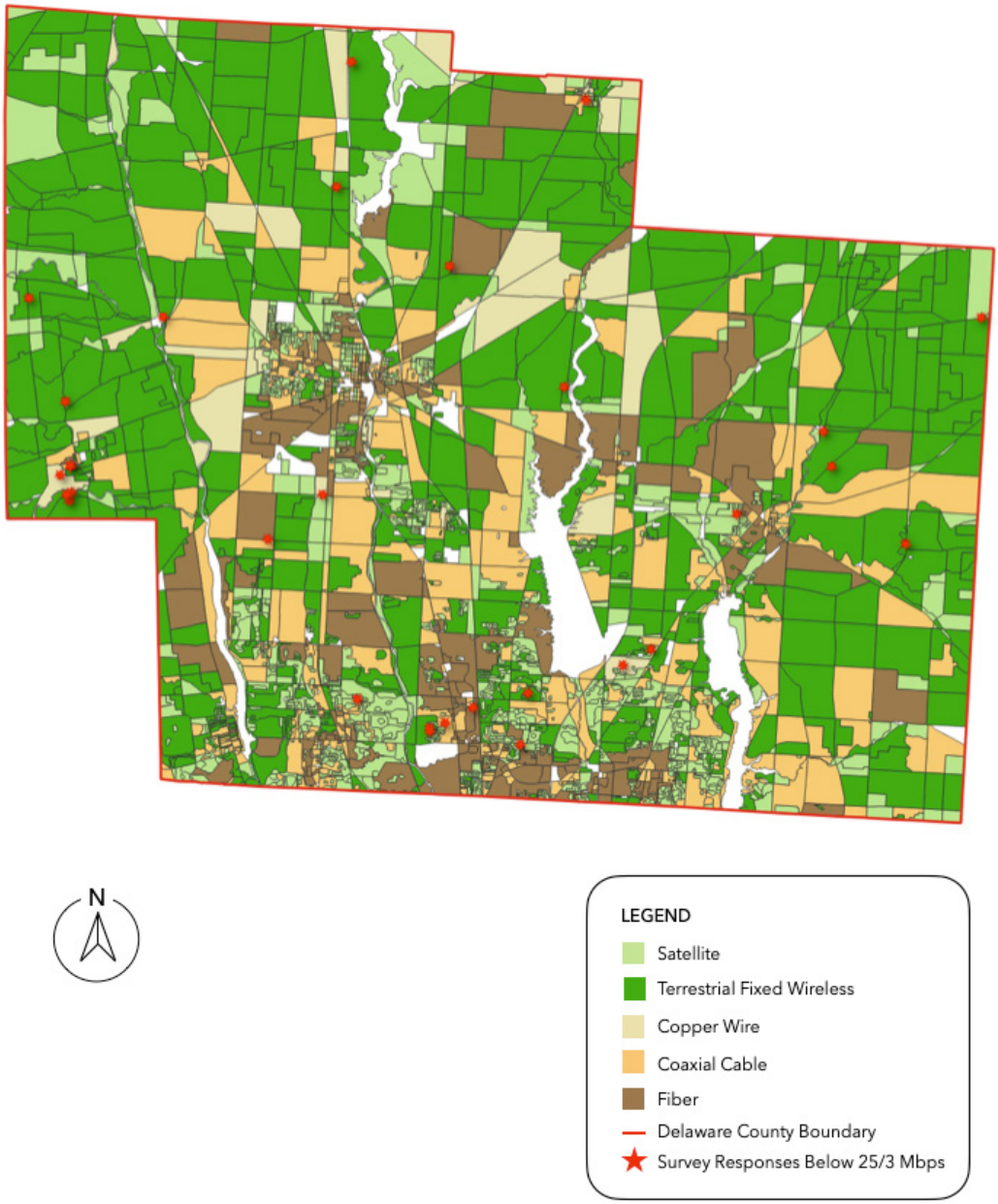
Residential Delaware Survey Results Below 25-3 Mbps



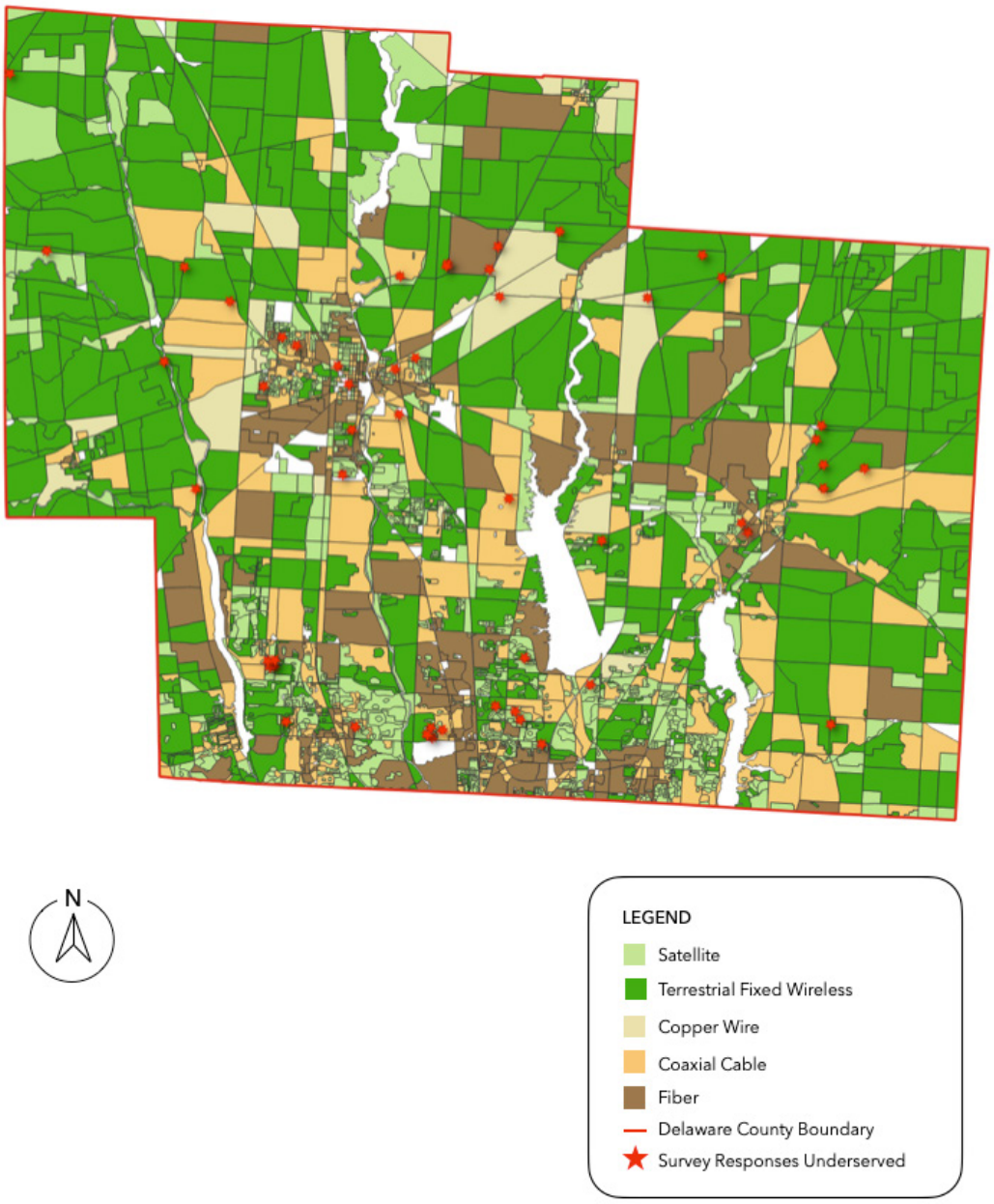
Residential Delaware Survey Results Underserved



Business Delaware Survey Results Below 25-3 Mbps



Business Delaware Survey Results Underserved



3 Digital Equity and Inclusion Assessment

Introduction

Digital equity and inclusion refer to the fair and equal access, adoption, and usage of digital technologies and the internet. In this analysis, we will assess the existing landscape of digital equity and inclusion in Delaware County, OH. Understanding the current state will help identify areas of improvement to ensure all residents can benefit from the opportunities presented by access and affordability to broadband services and the digital age.

Social Determinants of Digital Health

- Population = 226,296
- Minority Rate = 19.4%
- Homeownership Rate = 78.9%
- ESL Rate = 10%
- Broadband Rate = 95.9%
- Education Rate (Bachelor's Degree or higher) = 57.4%
- Health Insurance Rate (under age 65) = 96.6%
- Disability Rate (under age 65) = 5.5%
- Employment Rate = 70.2%
- Poverty Rate = 4.6%
- Density Rate (population per square mile) = 483.2

Strengths

High Internet Penetration

- Delaware County generally enjoys high internet penetration, with many households having access to broadband or high-speed internet connections. This is crucial for participation in the digital age.

Strong Education Infrastructure

- The county hosts various educational institutions, including public schools and colleges. This infrastructure plays a vital role in promoting digital literacy and skills development.

Growing Technology Sector

- The presence of technology companies, such as Amazon, and startups in the region can contribute to job creation and the availability of digital resources.

Community Engagement

- Local community organizations and initiatives are actively working to bridge the digital divide by providing resources, training, and support to underserved populations, including the Delaware Entrepreneurial Center at Ohio Wesleyan University and the free hotspot programs at the Delaware District Library and Delaware City Schools.

Weaknesses

Rural-urban Digital Divide

- While urban areas within Delaware County often have access to high-speed internet, some rural areas still lack adequate broadband infrastructure. This urban-rural divide is a significant challenge.

Affordability

- Internet service costs can be prohibitive for low-income residents, limiting their access to digital resources.

Limited Digital Literacy

- Not all residents possess the necessary digital skills to fully engage with online services and job opportunities. Recent data indicates that 11 out of the top 45 workforce skills on resumes in Delaware County includes a technology related skill set. There is a need for widespread digital literacy programs to maintain a viable and competitive workforce.

Device Access

- Many residents, especially those from lower-income backgrounds, may lack access to personal computers or devices, hindering their ability to participate in digital activities.

Underrepresented Groups

- Certain demographic groups, such as elderly individuals, who make up 15.2% of the population, and people with disabilities, may face additional barriers to digital inclusion. Efforts to address their specific needs are crucial.

Language and Cultural Barriers

- For non-English speakers or immigrant communities, language and cultural barriers can affect their ability to access and utilize digital resources effectively.

Data Privacy and Security

- Ensuring that residents' digital information is protected and secure is a growing concern that must be addressed to build trust in digital systems.

Recommendations

Expand Broadband Infrastructure

- Collaborate with internet service providers to expand broadband access in underserved rural areas.

Affordability Programs

- Develop and promote low-cost internet plans for low-income households and explore partnerships with ISPs to subsidize access.

Digital Literacy Initiatives

- Invest in community-based digital literacy training programs, targeting all age groups, and provide resources in multiple languages.

Device Access

- Establish device lending programs or partnerships with organizations to provide low-cost or free devices to underserved communities.

Inclusive Design

- Ensure that digital services and websites are designed with accessibility in mind, accommodating the needs of people with disabilities.

Community Outreach

- Continue supporting community organizations and initiatives that work to bridge the digital divide, especially among marginalized groups.

Data Privacy Education

- Promote digital literacy programs that include education on data privacy and online security.

Monitoring and Evaluation

- Implement regular assessments and surveys to track progress in digital equity and inclusion efforts and adjust strategies accordingly.

Collaborative Partnerships

- Engage with local businesses, educational institutions, nonprofits, and government agencies to develop a coordinated approach to addressing digital equity and inclusion challenges.

Conclusion

Delaware County, Ohio, has made strides in promoting digital equity and inclusion but faces significant challenges, including the urban-rural digital divide and digital literacy. By leveraging its strengths and implementing targeted strategies, the county can work towards a more equitable and inclusive digital future for all its residents. Continued collaboration and commitment from various stakeholders will be essential to achieve these goals.

4 Grant Development

Broadband Grant Development

The grant research deliverable in the Appendix can be used as a guide and reference when pursuing grant opportunities and accompany this business plan as a separate attachment.

Methodology and Terms:

- Lit Communities maintains a database of nearly 60 federal grant programs that fund aspects of broadband deployment across 15 federal agencies.
- Lit screened community-specific criteria against its database of active federal grants for eligibility based on factors such as location, per capita income, unemployment rate, low to moderate income data, broadband access, and rural designation status.
- Programs deemed applicable (i.e., those in which Delaware County can be the direct applicant) are identified as “Primary Matches”.
- Programs that partner entities can apply for are identified as “Secondary Matches”.
- From a State broadband grant perspective, the first round of the Residential Broadband Expansion Grant program awardees did not include any locations in Delaware County; however, BroadbandOhio has several programs that would be strong matches to address the County’s broadband needs.

Results and Recommendations:

- Delaware County is eligible for 12 Primary Matches and 19 Secondary Matches (see attached Primary Grant matrix)
- Key programs to consider:
  - **US Department of Agriculture - ReConnect Program**
  - **Federal Emergency Management Agency (FEMA) - Building Resilient Infrastructure and Communities (BRIC)**
  - **Department of Commerce - National Telecommunications and Information Administration (NTIA) - Broadband Equity, Access and Deployment (BEAD)**
- The County has indicated that it may utilize up to $5.5 million in remaining American Rescue Plan Act (ARPA) State and Local Fiscal Recovery Funding towards meeting broadband needs within the County.
- Additionally, the State of Ohio has multiple robust broadband grant and financial assistance programs that should be considered in combination with federal opportunities:
  - **BroadbandOhio - Ohio Residential Broadband Expansion Grant (ORBEG) Program**
  - **BroadbandOhio - Broadband Infrastructure Program**
  - **Ohio Facilities Construction Commission - Multi Purpose Community Facilities Program**

Section I. Federal and State Broadband Grant Program Research

Federal Broadband Grant Program Eligibility

Lit has prepared a matrix, included herein, with high-level details on each program including;

- Maximum funding amount
- Annual program capacity
- Eligible applicants
- Eligible activities
- Matching requirements

Federal Broadband Grant Program Matrix (Primary)

As referenced above, Delaware County is eligible for 12 Primary Matches (see attached "Primary Matches Matrix").

For each Primary Match, Lit has prepared grant synopses with additional information including:

- Program purpose and overview
- Application deadlines
- Expanded list of eligible project activities
- Special requirements
- Agency contact information

Synopses were prepared for the following federal and state agencies and programs as Primary Matches:

1. United States Department of Agriculture - Rural Development [X.1]

- Community Connect Grant Program [X.2]
- Distance Learning and Telemedicine Grant Program [X.3]
- ReConnect Program [X.4]
- Rural Broadband Access Loans and Loan Guarantees [X.5]
- Telecommunication Infrastructure Loans and Loan Guarantees [X.6]

2. Department of Commerce - National Telecommunications and Information Administration (NTIA) [X.7]

- Broadband Equity, Access and Deployment (BEAD) Program [X.8]

3. United States Department of Housing and Urban Development [X.9]

- Community Development Block Grant (CDBG) – Non-Entitlement Communities [X.10]
- Choice Neighborhoods – Planning [X.11]
- Choice Neighborhoods – Implementation [X.12]

4. United States Department of Transportation [X.13]

- Rebuilding American Infrastructure With Sustainability and Equity (RAISE) Grant Program [X.14]
- Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program [X.15]

5. United States Department of Homeland Security - Federal Emergency Management Agency [X.16]

- Building Resilient Infrastructure and Communities [X.17]

Federal Broadband Grant Programs (Secondary)

In addition to the Primary Matches, Delaware County may consider seeking additional funding in partnership with eligible applicants through the following agencies and programs:

1. United States Department of Education

- Governor's Emergency Education Relief Fund (GEER)
- Elementary and Secondary School Emergency Relief Fund (ESSER)
- Higher Education Emergency Relief Fund
- Impact Aid Programs
- Promise Neighborhoods Programs
- Rural, Low-Income School (RLIS) Program
- Small, Rural School Achievement (SRSA) Program
- Title I, Part A. Improving Basic Programs Operated by Local Education Agencies Program
- Title III, Part A. Strengthening Institutions Program
- Title IV, Part A. Student Support and Academic Enrichment Program

2. United States Department of Labor – Employment and Training Administration

- Workforce Development in Telecommunications Sector: Apprenticeship Investments in Support of Broadband and 5G

3. United States Department of Treasury – Office of the Comptroller of the Currency (OCC)

- Community Reinvestment Act (CRA) Program

4. Federal Communications Commission – Universal Service Administrative Company

- E-Rate (Schools and Libraries) Program
- High Cost Program (CAF, RDOF & 5G Fund)
- Rural Health Care Program

5. National Science Foundation (NSF)

- Campus Cyberinfrastructure (CC*) Program
- Smart and Connected Communities (S&CC) Program
- Spectrum and Wireless Innovation Enabled by Future Technologies (SWIFT) Program

Section II. Evaluation of Project Opportunities

Lastly, Lit identified potential grant opportunities for middle mile, last mile, and related economic development, telehealth, and emergency response efforts and matched them with programs from the Primary Matches matrix.

Project	Needs	Agency	Potential Funding Program(s)
Middle Mile (Backbone)	Planning, Design, Construction & Equipment	DHS-FEMA USDA-RD USDOC-NTIA	• Building Resilient Infrastructure and Communities (BRIC) • ReConnect Pilot Program • Rural Broadband Access Loan and Loan Guarantees • Broadband Equity, Access, and Deployment (BEAD) Program

Project	Needs	Agency	Potential Funding Program(s)
Last Mile (FTTP)	Planning, Design, Construction & Equipment	USDOC-NTIA USDA-RD USHUD	• Broadband Equity, Access, and Deployment (BEAD) Program • ReConnect Pilot Program • Rural Broadband Access Loan and Loan Guarantees • Telecommunications Infrastructure Loans and Loan Guarantees • Community Development Block Program • Choice Neighborhoods - Implementation • Choice Neighborhoods - Planning
Telehealth Economic Development Emergency Response Distance Learning	Planning, Design, Construction & Devices	FCC-USAC USDA-RD USDHUD DHS-FEMA	• Rural Health Care Program • E-Rate (Schools and Libraries) Program • Community Connect Grant Program • Distance Learning and Telemedicine Grant • ReConnect Pilot Program • Rural Broadband Access Loan and Loan Guarantees • Community Development Block Program • Choice Neighborhoods - Implementation • Choice Neighborhoods - Planning • Building Resilient Infrastructure and Communities (BRIC)

DHS - FEMA Department of Homeland Security - Federal Emergency Management Agency

FCC - USAC Federal Communications Commission - Universal Service Administrative Company

USDA-RD United States Department of Agriculture - Rural Development

USDOC-EDA United States Department of Commerce - Economic Development Administration

USDOC-NTIA National Telecommunications and Information Administration

USDHUD United States Department of Housing and Urban Development

Section III. Preparing for Grant Funding Opportunities

Through our experience applying for and obtaining financial assistance, we have consistently observed that **communities who have the proper engineering and technical information required to apply completed ahead of time are most prepared, confident, and competitive when seeking grant funding**. Often, federal agencies only provide between 45 - 60 days for application submission which leaves very little time to begin these studies and assessment while the application period is open. Therefore, if Delaware County is strongly interested in seeking grant funding to address its broadband infrastructure and accessibility gaps, we recommend that Delaware County conduct these efforts as soon as possible so they are prepared and ready for future funding opportunities.

Additionally, prior to applying for State grant funding, it is strongly recommended that Delaware County coordinate closely with BroadbandOhio and other key stakeholders to ensure that the proposal is aligned with State planning efforts and County's needs with respect to project costs are included.

It is also important to note that **partnerships with related stakeholders can possibly strengthen potential applications for funding;** however, more weight is given to partnerships that have been formally established prior to applying for funding.

Lastly, due to the varying amount of local matching funds required to pursue these opportunities, we suggest that Delaware County identify local sources and amounts of matching funds to determine its respective capacity to secure grant funding.

SYNOPSES REFERENCES

[X.1] Rural Development, U.S. Department of Agriculture (2023). Available at: https://www.rd.usda.gov/

[X.2] Rural Development, U.S. Department of Agriculture (2023). Community Connect Grants. Available at: https://www.rd.usda.gov/programs-services/telecommunications-programs/community-connect-grants

[X.3] Rural Development, U.S. Department of Agriculture (2023). Distance Learning & Telemedicine Grants. Available at: https://www.rd.usda.gov/programs-services/telecommunications-programs/distance-learning-telemedicine-grants

[X.4] U.S. Department of Agriculture (2023). ReConnect Loan and Grant Program. Available at: https://www.usda.gov/reconnect

[X.5] Rural Development, U.S. Department of Agriculture (2023). Rural Broadband Loans, Loan/Grant Combinations, and Loan Guarantees. Available at: https://www.rd.usda.gov/programs-services/telecommunications-programs/rural-broadband-loans-loangrant-combinations-and-loan-guarantees

[X.6] Rural Development, U.S. Department of Agriculture (2023). Telecommunications Infrastructure Loans & Loan Guarantees. Available at: https://www.rd.usda.gov/programs-services/telecommunications-programs/telecommunications-infrastructure-loans-loan-guarantees

[X.7] Department of Commerce - National Telecommunications and Information Administration (NTIA) (2023). Available at: https://www.ntia.doc.gov/

[X.8] Department of Commerce - National Telecommunications and Information Administration (NTIA) (2023). Broadband Equity, Access and Deployment (BEAD) Program. Available at: https://broadbandusa.ntia.doc.gov/taxonomy/term/158/broadband-equity-access-and-deployment-bead-program

[X.9] U.S. Department of Housing and Urban Development (2023). Available at: https://www.hud.gov/

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[X.12] U.S. Department of Housing and Urban Development (2023). FY2023 Notice of Funding Availability (NOFA) Information. Available at: https://www.hud.gov/program_offices/public_indian_housing/programs/ph/cn/fy23funding

[X.13] U.S. Department of Transportation (2023). Available at: https://www.transportation.gov/

[X.14] U.S. Department of Transportation (2023). RAISE Discretionary Grants. Available at: https://www.transportation.gov/RAISEgrants

[X.15] U.S. Department of Transportation (2023). Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program. Available at: https://www.transportation.gov/grants/SMART

[X.16] U.S. Department of Homeland Security (2023). Available at: https://www.fema.gov/

[X.17] U.S. Department of Homeland Security (2023). Building Resilient Infrastructure and Communities. Available at: https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities

5 Financial Model

Financial Estimations

The estimations used in the following financial numbers are based solely on Lit's experience in the industry working with communities of similar sizes and demographics. We recommend the County pursue completing a high level network design for both the middle and last mile networks in order to best determine actual financial forecasts.

LAST MILE FTTH - ASSUMPTIONS

Demand Points

Total Demand Points	90,897

Right of Way Preliminary Design Results

Aerial Length Network Footage - 30%	2,376,000
Underground Length Network Footage - 70%	5,544,000
Total Network Length - Feet	7,920,000
Total Network Length - Miles	1,500

Additional Network Assumptions

Estimated Pole Count	13,365
Cabinets	36
Engineering Duration (months)	36
Make Ready Duration (months)	60
Construction Duration (months)	60
Financial Duration (months)	240
Take Rate Duration (months)	72

Operating Expenses	Avg. Annual Cost
General Operations (Ongoing)	$2,258,247
ISP Operations (Ongoing)	$2,064,592
Est. Total Annual Operational Expenses	**$4,322,839**

Capital Expenditures	Total Estimated Cost
Engineering (Upfront)	$11,534,450
Construction (Upfront)	$172,883,425
ISP Construction (Upfront)	$39,307,442
Estimated Total Capital Costs	**$223,725,317**
Estimated Cost Per Demand Point	**$1,869.18**

Cost per Demand Point Differences for ISPs	Total Estimated Cost	Est. Total Cost to Cover
Large ISP - Ideal Cost per Demand Point	$750	
Small ISP - Ideal Cost per Demand Point	$1,100	
Large ISP Difference	**($1,119)**	**$101,729,874**
Small ISP Difference	**($769)**	**$69,915,924**

Last Mile FTTH Assumptions

Demand Points
Total number of addresses within the County.

Right of Way Preliminary Design Results
The metrics in this table are derived from high level estimates and comparison of similar projects completed in the past.

These metrics all feed directly into the financial model. Specifically they help determine the estimated engineering and construction costs.

Additional Network Assumptions
The estimates in this section also feed into the financial projections, but are more related to the duration of expenses throughout the model, including engineering, construction, and revenue generation. The financial duration is a 20 year model.

Operating Expenses
Included in the general operations expenses are items such as overhead costs for personnel to operate and maintain the network, software and subscription costs, network operations center fees, etc. The ISP operations expenses include personnel such as customer service representatives, installation technicians, sales teams, marketing fees, local store fronts, etc.

Capital Expenditures
The estimated total capital expenses include the labor and materials costs for the engineering and construction of the network in the right of way. Also included in these costs are the expenses related to the installation of the modeled take rate of subscribers on the network.

Estimated Cost Per Demand Point
The cost per demand point is an important metric private equity investors and ISPs are very interested in. It is a calculation of the total cost to build past all address points divided by the total number of addresses you plan to build past. This does not include the expense to build from the Right of Way to the house (i.e. the installation costs). Most private equity investors and established ISPs look for that cost to be below $1,100.

Cost per Demand Point Differences for ISPs
WIthin this table, Lit shows the difference between what a large ISP and a small ISP view as the “Ideal Cost per Demand Point” rate. Using the estimated Cost per Demand Point we calculated for the County in this financial model, we can approximate the amount the County and/or a partner would need to cover in order to make this market an attractive area for either a small or large ISP to deploy a last mile network. We show this estimation both by a per demand point value as well as an expected total capital cost.

MIDDLE MILE - ASSUMPTIONS

Demand Points

Anchor Institutes	200

Right of Way Preliminary Design Results

Aerial Length ROW Footage - 10%	118,800
Underground Length ROW Footage - 90%	1,069,200
Total ROW Length (Feet)	1,188,000
Total ROW Length (Miles)	225

Additional Network Assumptions

Estimated Pole Count	792
Engineering Duration (months)	24
Make Ready Duration (months)	24
Construction Duration (months)	36
Financial Duration (months)	240
Take Rate Duration (months)	48

Operating Expenses[1]	Avg. Annual Cost
General Operations (Ongoing)	$141,971
Est. Total Annual Operational Expenses	**$141,971**

Capital Expenditures	Total Estimated Cost
Engineering (Upfront)	$2,420,624
Construction (Upfront)	$29,415,904
Anchor Site Installations (Upfront)	$551,590
Estimated Total Capital Costs	**$32,388,118**

Potential Revenue

FTTH Partner (30% Take Rate)	$16,550,157
Dark Fiber lease revenue	$14,126,400
Total 20 Year Revenue	**$30,676,557**

Initial Investment

Possible Debt Raise	$33,994,331
Total Initial Investment	**$33,994,331**

[1] If the County were to provide Lit services to the anchor sites on the middle mile network there would be additional operating expenses directly related to a Lit fiber network vs a Dark fiber network.

Middle Mile Assumptions

Demand Points
These anchor institutes consist of places like schools, hospitals, government buildings, and first responders. The number of anchors used in this model were estimated by Lit based on the size of the County and our knowledge from past projects of similar size.

Right of Way Preliminary Design Results
The metrics in this table are derived from high level estimates and comparison of similar projects completed in the past.

These metrics all feed directly into the financial model. Specifically these help determine the estimated engineering and construction costs.

Additional Network Assumptions
The estimates in this section also feed into the financial projections, but are more related to the duration of expenses throughout the model, including engineering, construction, and revenue generation. The financial duration is a 20 year model.

Operating Expenses
The estimated annual operating expenses for the Middle Mile include items such as overhead costs for personnel to operate and maintain the network, software and subscription costs, etc.

Capital Expenditures
The estimated total capital costs include the labor and materials costs for the engineering and construction of the network in the right of way. The installations from the right of way into the anchor site locations are also included in these expenses.

Potential Revenue
Within this financial model, Lit portrayed a revenue sharing model wherein the County would partner with an ISP which would connect into the middle mile network to reach all of the homes and businesses in the County with their last mile network. For each subscriber the ISP gets on their network, the ISP would pay the County a certain fee per subscriber. This is the FTTH Partner fee.

Another source of revenue for the County is simply leasing out their dark fiber to entities throughout the County which may be interested in directly connecting their facilities. This is the Dark Fiber Lease Revenue. This could be large enterprise businesses with multiple locations, hospitals owned by a larger corporation, etc.

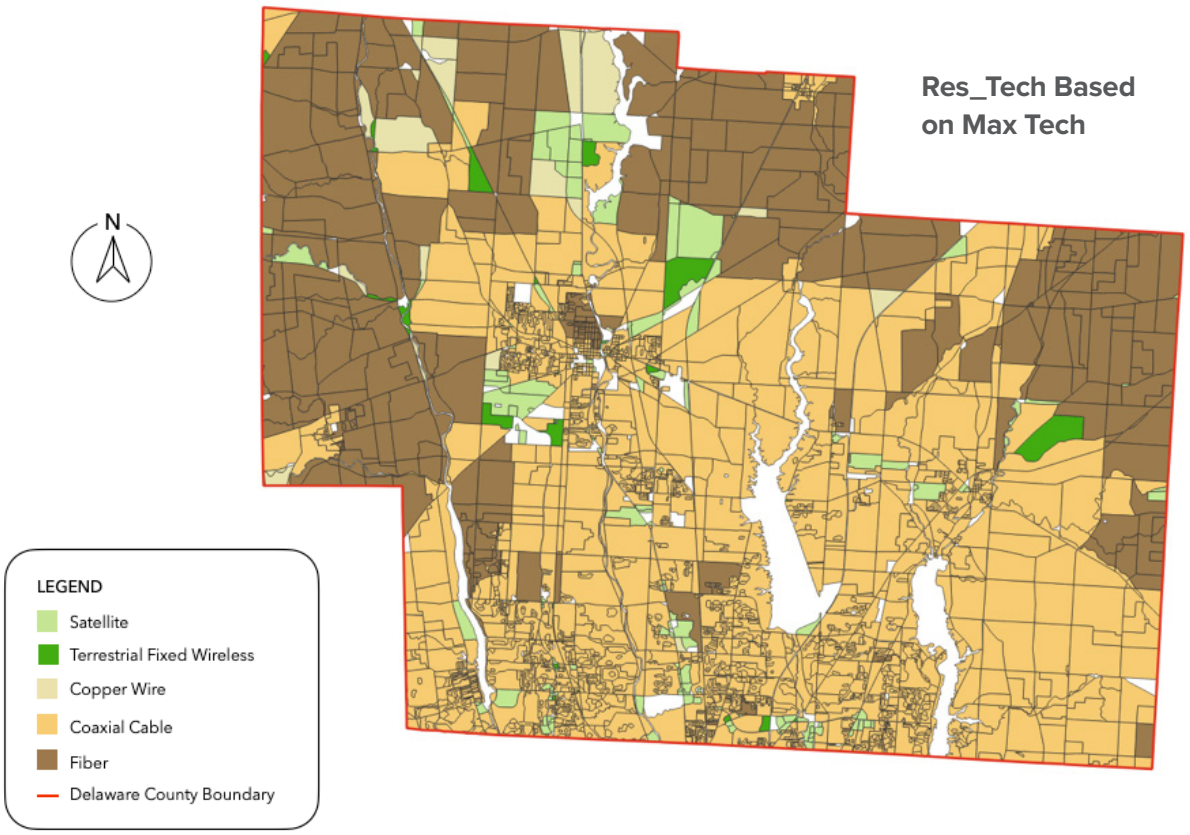
Initial Investment
The total initial investment is the estimated amount the County would need to put forth in order to build, operate, and maintain the Middle Mile network up until the network is generating enough revenue wherein the revenue streams would cover the costs of the operating expenses on an annual basis. We estimate this to take place around year 4-5 of the network.

6 Recommendations

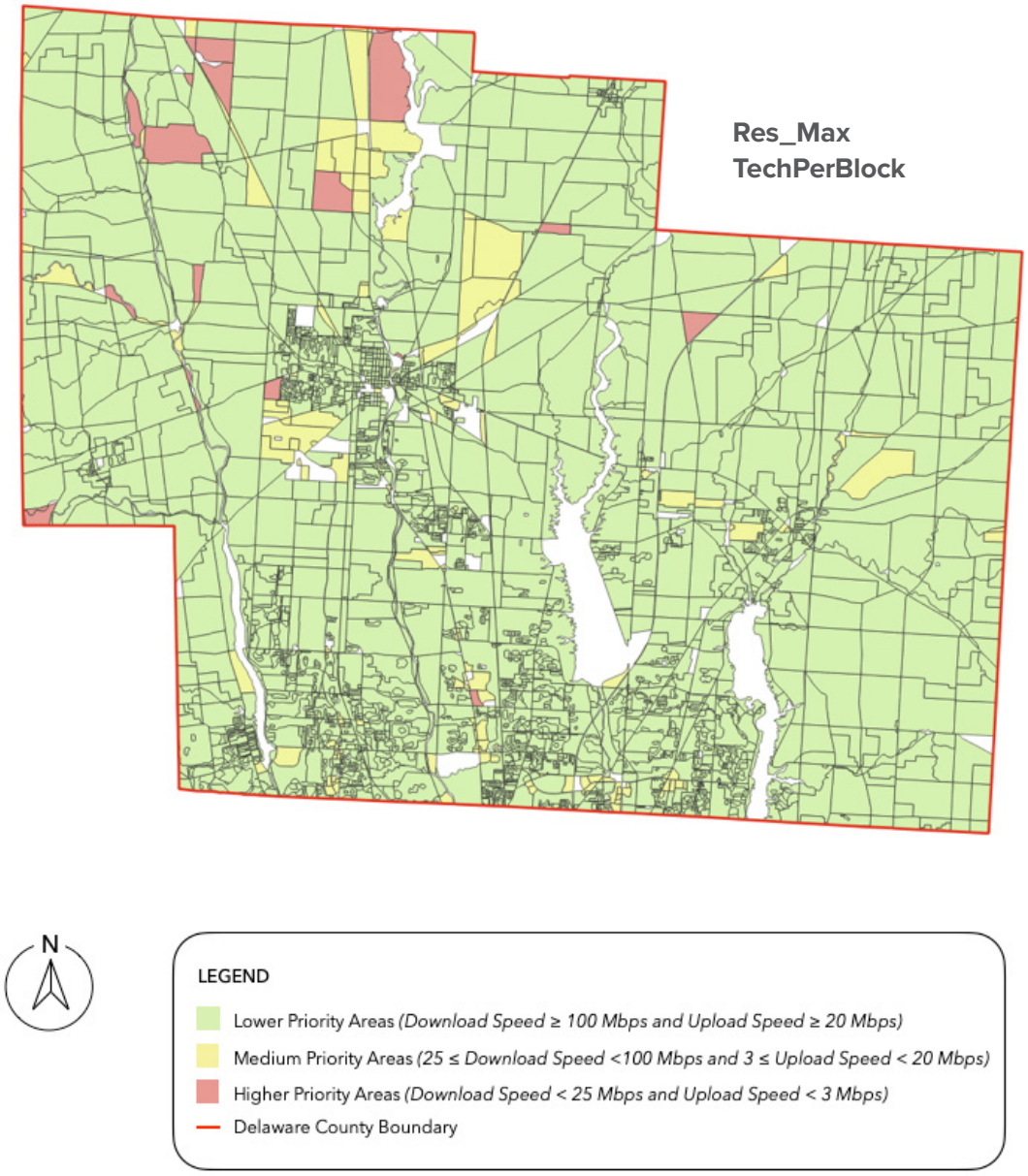
Background for Recommendations

As provided in the current assessment and Market Service section of this report, cable, fiber, DSL, fixed wireless, and satellite broadband technologies are all currently available in Delaware County; however, the predominant transmission type and the speed thereof is dependent on the location. Among the broadband connection types, fixed wireless and cable are the predominant technologies, but their prevalence varies largely by geography (i.e., fiber is available closer to the City of Delaware). Symmetrical download and upload broadband speeds best provide robust, reliable, and fast service and **only fiber can provide such experience.**

Marked increases in remote work, education, and healthcare, combined with the proliferation of connected devices has heightened demand for higher bandwidth and internet speeds. **We therefore recommend that Delaware County seek to enhance broadband speeds and symmetry in the census blocks where fiber is not the dominant technology**, particularly the areas still displaying copper wire, coaxial cable, fixed wireless, and satellite as the prevalent technology. Such census blocks are depicted in the map that follows:



Delaware County contains areas of true need for broadband intervention where satellite or copper wire is still the prevalent technology. The county shows some yellow/ medium priority areas and some areas with red/ high priority suggesting that the ongoing presence of copper wire and satellite will need to be addressed. This is demonstrated in the map below.



Anecdotal evidence from survey participants also supported the need for improved infrastructure in the study area.[1]

[1] A complete analysis of the survey is provided in the Demand Aggregation section of the Study.

Comments from Community Survey:

"I don't think it's a black and white solution - what will work in our urban areas won't necessarily work in our rural areas. And, in addition to service, how can we make it affordable?"

"We've made changes to our business because of the lack of internet. For example, online ticketing is a problem and we can't run credit cards at kiosks around the farm. We can't expand the way we want because of lack of connectivity. I have concerns about larger farmers trying to run GIS technology because of the lack of connectivity."

"Based on the younger population being served, they expect a need for more digital offerings. That may not be possible based on the lack of viable service options available."

Overall, our analysis consistently demonstrated that, while there are areas needing further investment and broadband enhancement, particularly in rural areas of the county, the lack of competition signifies enhanced attention also needed on broadband service options. Therefore, **we recommend that the communities explore partnership opportunities to address both access and digital equity and inclusion.**

Recommendations

Delaware County stands at a pivotal crossroads in its journey towards broadband access, digital equity and digital inclusion. Recognizing the importance of accessible and affordable broadband internet, the County has embarked on a comprehensive plan to address the digital divide.

Overall, and as further explained in the sections that follow, we do not recommend that the County undertake last-mile broadband build-out given the existing provider presence, unprecedented funding levels available for broadband expansion, and interest in expansion in Delaware County among the current provider community.

Instead, **we recommend forging partnerships with private broadband providers who can leverage their expertise, infrastructure, and investments to extend services to underserved areas** using an RFI/ RFP process, as outlined below, to ensure that the County's build-out expectations are met. This approach will optimize efficiency, reduce costs, and expedite broadband expansion.

Below we outline additional key recommendations for broadband expansion, taking into account service providers, cross-jurisdiction collaboration, and commitment to digital equity and inclusion.

Such projects can be complex and require careful planning and execution, but it is well-documented that broadband services enhance quality of life for communities of all sizes. Access to high-speed broadband is often seen as a critical factor in attracting businesses and supporting local economic growth. Broadband infrastructure is an investment in the county's long-term future and can provide a foundation for innovation, education, telehealth services, and improved quality of life for residents. Even with the existence of private broadband providers, expanded broadband services can stimulate competition and potentially lead to better services and pricing.

The importance of ensuring digital equity and providing affordable broadband access to all Delaware County residents, regardless of income or geographic location, is also a critical aspect to the long term viability of any community in the 21st century global digital economy.

Broadband Access

As depicted in the Financial Models provided in the Study, the "cost per household passed" or "cost per demand point" in Delaware County is higher than is typically palatable for private investment in today's broadband market. To encourage additional broadband investment in the county, we have to figure out a way to lower these estimates.

There are two principal government interventions to encourage private provider investment in areas that have yet to see build-out due to a challenging return on investment:

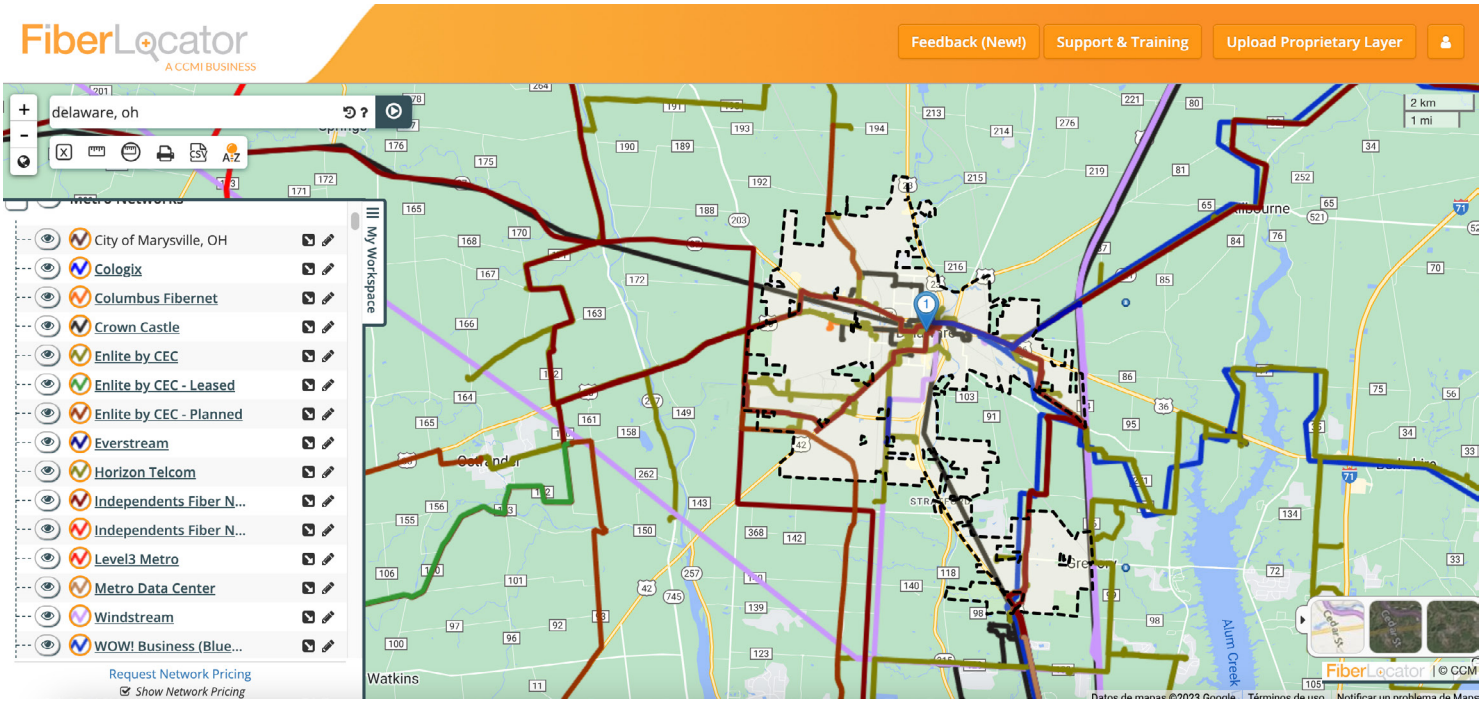
1. Reduce build-out costs; and/ or
2. Financially incentivize investment.

Essentially, work with the provider community to get the cost per household passed figure lower through reduced capital expenditures, or through financial contribution. Each of these approaches will be further discussed in the sections that follow.

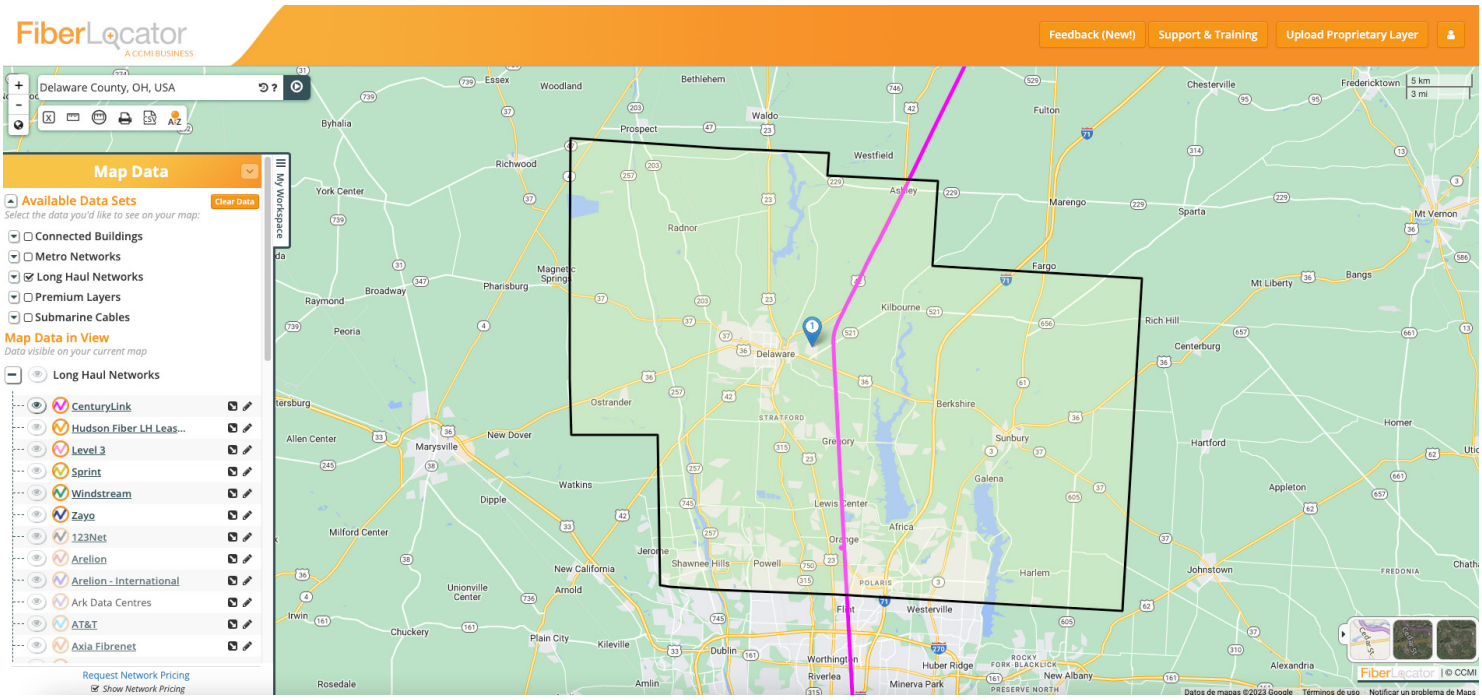
Reduce build-out costs

One way to reduce last-mile deployment costs is to ensure access to sufficient, redundant middle mile networks. Last-mile is the final leg of an internet connection between a service provider and the customer. For example, last-mile is the connectivity (from a service provider) that passes a home or business that allows them to use the internet once connected through what is called a "lateral" connection to that last-mile network. Middle-mile refers to the network connection between the last-mile and the greater internet. For example, in a rural area, the middle mile would connect the town's network to a larger metropolitan area where it interconnects with major broadband carriers' long-haul or nationwide networks. There are currently multiple middle-mile (metro) and long-haul providers running through Delaware County, as discussed on the Market Analysis section and again provided below.

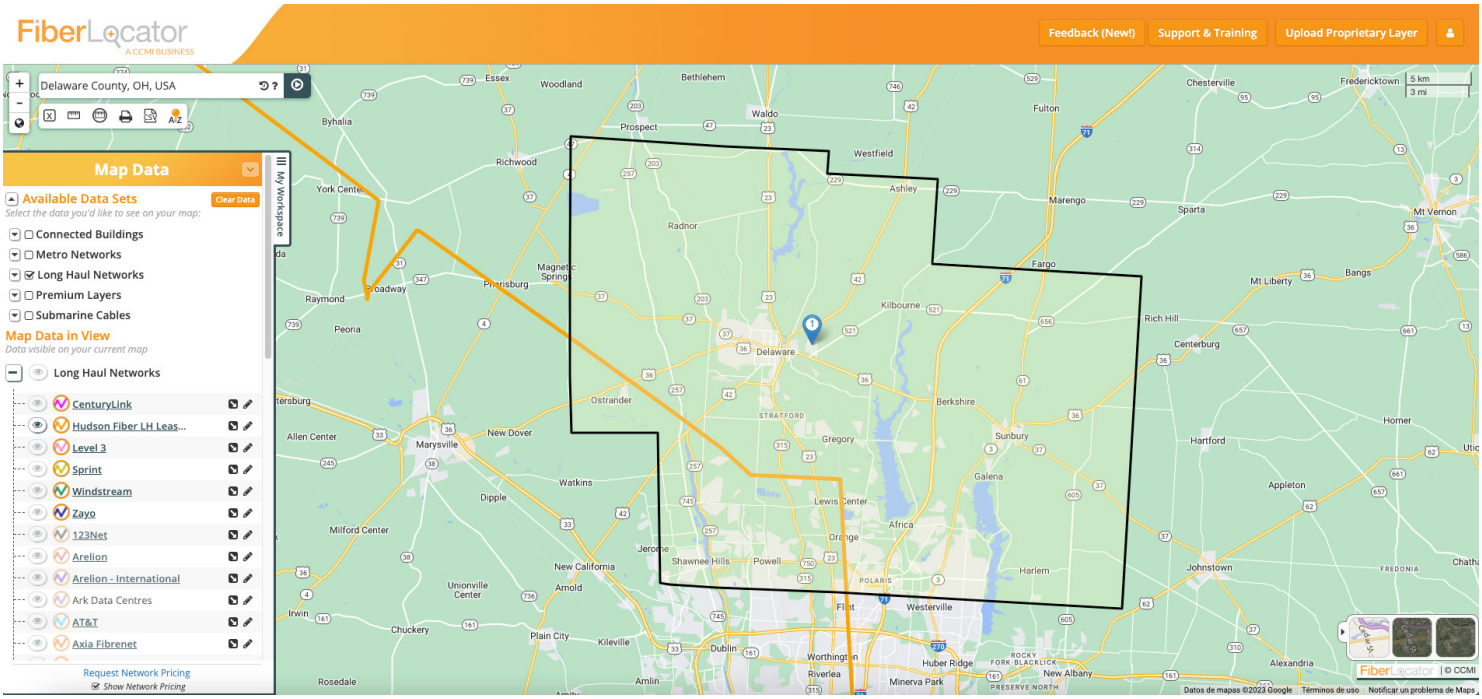
All Metro Networks



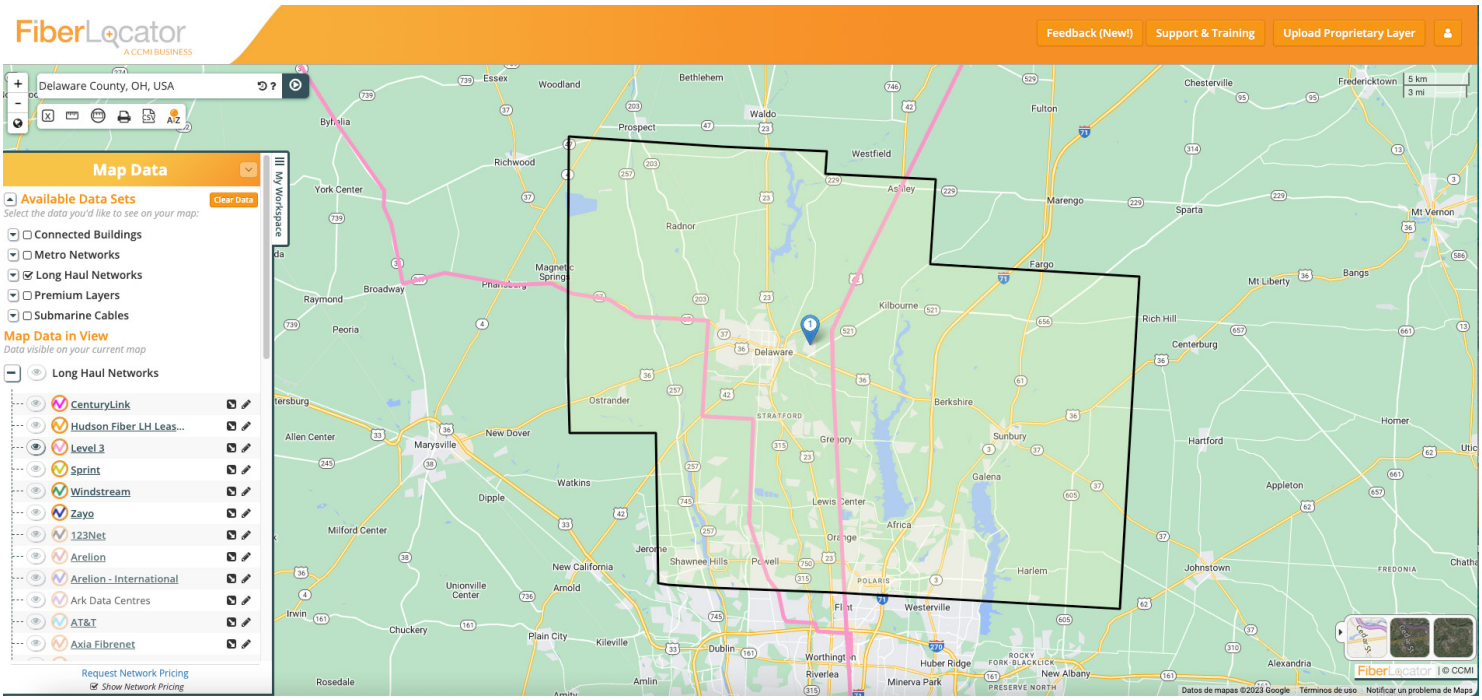
Long Haul Networks 1



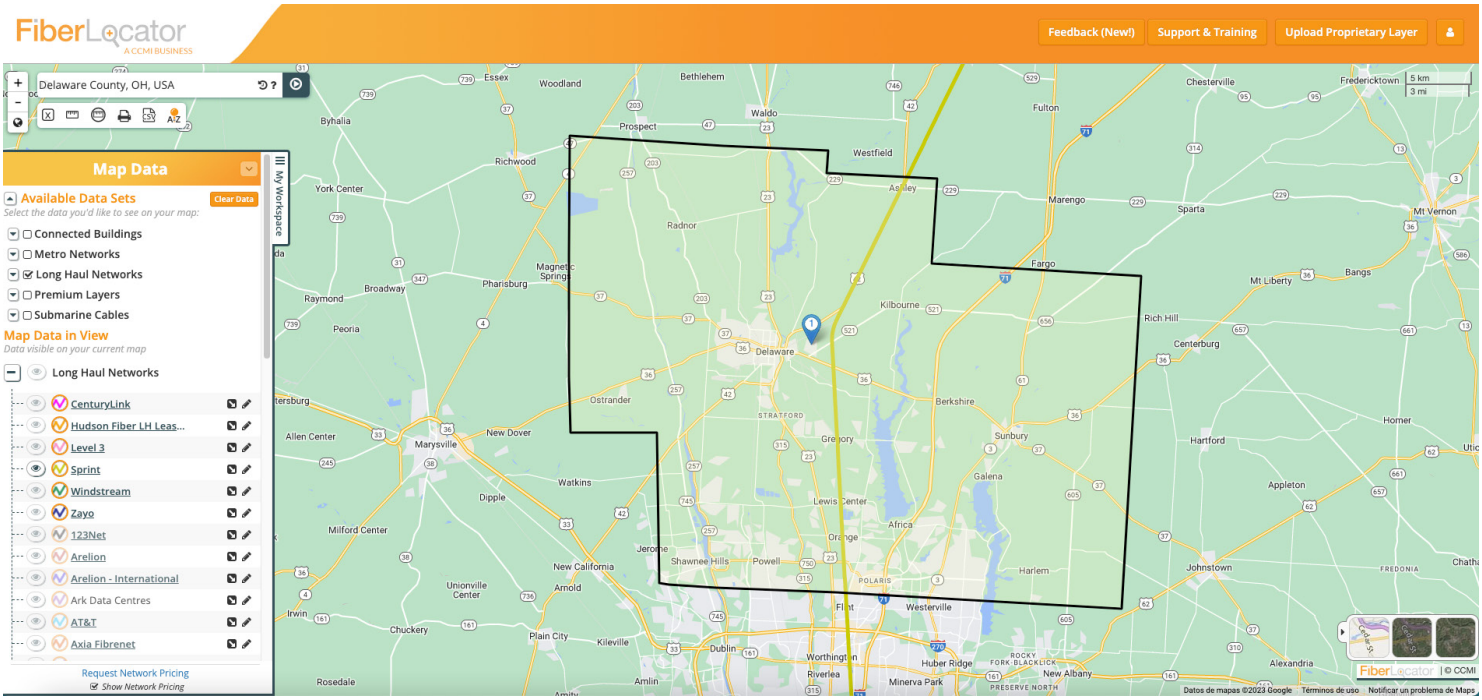
Long Haul Networks 2



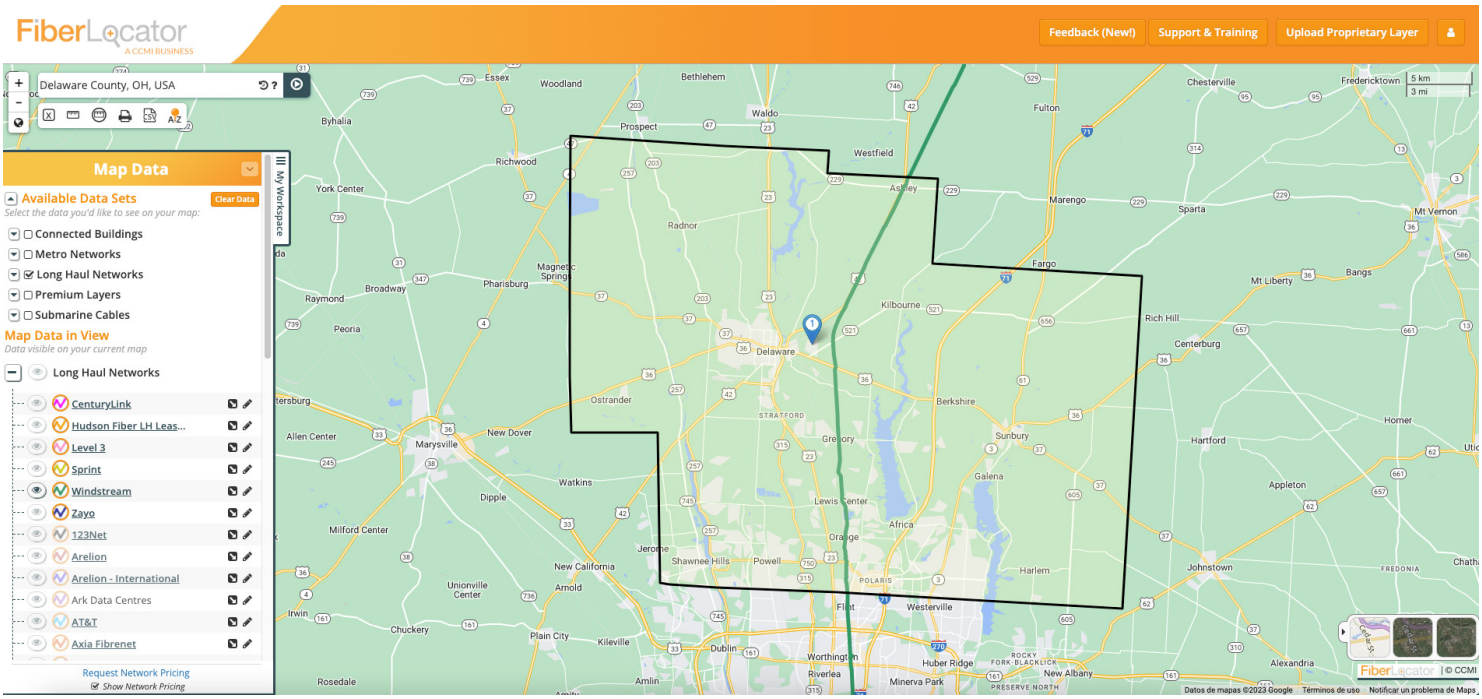
Long Haul Networks 3



Long Haul Networks 4



Long Haul Networks 5



Although individual broadband access is provided via these networks, expanded last-mile service, fiber or otherwise, will ultimately need to connect into a backhaul/ middle mile network. Enhancing such middle mile or "backbone" access in Delaware County could encourage last-mile build-out by internet service providers by reducing their costs.

For some communities, it may make sense to construct such middle mile infrastructure to encourage additional private last-mile expansion. **However, investment in the middle mile is not a recommended investment for Delaware County, unless the County is interested in expanded middle mile service to connect its own facilities.** This is based on several factors:

1. The strong presence of middle mile networks currently in the county;
2. The length of time that expanded middle mile networks in Delaware County would require before last-mile service would be available using them; and
3. The financial investment that would be required that could otherwise be put toward quicker last-mile expansion.

A significantly lower-cost and quicker approach to reducing provider build-out costs is for the local governments to consider one or more of the following:

1. Providing guidance on and streamlining local permitting processes;
2. Streamlining the utility locates;
3. Assisting with space for materials during the build;
4. Providing access to existing and future infrastructure; and/ or
5. Identifying or providing co-location space for electronics.

These could also be included as further incentives should the communities seek to financially incentivize local

build-out utilizing the recommendations provided below.

While the incentives can help in some ways to address broadband infrastructure challenges, the **recommended approach to securing private partners for access is to issue a Request for Information ("RFI") and/ or Request for Proposals ("RFP")** to determine whether a private sector partner would be willing to fund last-mile expansion in the higher priority areas of the county. These documents will provide a clear roadmap for service providers, detailing the county's broadband infrastructure goals, areas requiring attention, and the availability of ARP and/or BEAD funds to incentivize provider involvement. This recommendation is further supported by our analysis, which indicates a robust amount of existing middle mile infrastructure in the County, as well as, existence of the remaining ARP funding.

Recognizing the potential scale and complexity of a broadband expansion project, it is **recommended that Delaware County collaborate with its various jurisdictions** throughout this process:

1. This collaboration ensures that the financial burden does not fall solely on the county government, and that there is buy-in across the county.
2. We heard continually in the Focus Groups that many of the residual broadband issues remain in the Townships, and this was supported by our Market Analysis.
3. Working in concert enables the county, townships, municipalities, and other local authorities/ stakeholders to pool resources, expertise, and funding streams.

To coordinate and facilitate such a process, we further **recommend the establishment of a Broadband Task Force** consisting of representatives from all participating jurisdictions. This can assist with promoting equitable broadband access, contribute to the economic and social well-being of residents and businesses, and address the digital divide. Key considerations:

1. The task force should consist of a diverse group of stakeholders with expertise in various relevant areas, such as local government representatives, community advocates, and industry experts.
2. Prioritize community engagement and outreach efforts. Seek input by holding public hearings or town hall meetings, maintain open communication with the community about the progress and planning, and collaborate with local organizations to leverage their networks and resources.
3. Establish clear goals and objectives that are part of an education and awareness campaign to inform residents about the nature of the work and the benefits to the community.

Within the RFI/ RFQ document, we particularly recommend that the County clearly designate the areas where additional private development is being encouraged (for example, those in red in the maps above). To encourage build-out in these areas, the County and local governments could offer incentives, **including contributing residual ARP allocations; and streamlining permitting processes and access to public assets, such as utility poles, for fiber deployment.**

- An RFI/RFP allows the community to assess the feasibility of deploying or expanding broadband networks.
- RFI/RFP processes attract proposals from experienced broadband providers who have the technical expertise, resources, and knowledge to deploy and manage networks effectively.
- By inviting multiple broadband providers to submit proposals, the community fosters competition, which can lead to cost savings.
- RFI/RFP documents can outline specific community needs, such as coverage areas, speed requirements, or digital inclusion initiatives.
- RFI/RFPs can include requirements for providers to address digital inclusion and equity issues, such as offering affordable plans, providing digital literacy training, and reaching underserved populations.

If the private providers are unable to justify investment in those areas using private capital and/ or if ARP dollars are no longer available, the County and the selected provider(s) can pursue grants and other funding/ financing tools, as outlined in the Funding Sources section, namely:

- US Department of Agriculture - ReConnect Program
- Federal Emergency Management Agency (FEMA) - Building Resilient Infrastructure and Communities (BRIC)
- Department of Commerce (NTIA) - Broadband Equity, Access and Deployment (BEAD)[2]
- BroadbandOhio - Ohio Residential Broadband Expansion Grant (ORBEG) Program
- BroadbandOhio - Broadband Infrastructure Program
- Ohio Facilities Construction Commission - Multi Purpose Community Facilities Program

Diversity, Equity, and Inclusion (DEI)

Digital equity is of paramount importance as it serves as the cornerstone for fostering a thriving, inclusive, and interconnected community. In an increasingly digital world, equitable access to technology and the internet is not just a convenience but a fundamental necessity. It empowers individuals of all backgrounds, regardless of their age, income, or geographic location, to access educational resources, employment opportunities, health-care services, and civic engagement platforms. By prioritizing digital equity, Delaware County can bridge the gaps that exist, ensuring that every resident has the chance to unlock their full potential, contribute to the local economy, and actively participate in the digital age, thereby creating a stronger, more resilient, and equitable community for all to thrive in.

To ensure that broadband initiatives promote inclusivity, we **recommend the following digital equity and inclusion initiatives:**

Community Engagement: Actively engage with underrepresented communities to understand their unique needs and challenges related to broadband access.

- As evidenced by the responses received in the stakeholder engagement, where the overwhelming majority of respondents indicated that it is important Delaware County is working to bring better broad-band to its communities, there is strong interest in addressing gaps in service, lack of competition, and municipal involvement providing an opportunity to work with residents and businesses to develop solutions.

Digital Literacy and Training: Develop digital literacy programs tailored to various age groups and communi-ties. Offer accessible training in multiple languages to empower all residents with the necessary digital skills.

- Our analysis shows that digital literacy programming is lacking in Delaware County. Supplementing such instruction can be an effective tool in improving telehealth utilization, access to workforce oppor-tunities, and increasing educational outcomes.
- The Delaware County Foundation, Ohio Health Delaware, and Mid-Ohio Regional Planning Commission support equity and inclusion efforts through their research, programming and funding efforts. These organizations have strong ties with the community and could assist with program funding, development of DEI initiatives, and facilitating community engagement.

[2] All of these programs are detailed in full in the Funding Sources section of the report.

Affordability: Work with broadband providers to establish affordable internet plans for low-income households, ensuring that cost is not a barrier to access.

- Encourage ACP utilization by fostering an education and awareness campaign.
- Promote infrastructure sharing agreements among ISPs, allowing them to share network facilities and reduce deployment costs.
- Consider pricing models that charge based on data usage to allow customers to pay for what they consume, making plans more affordable for light users.
- Many of the comments made as part of our community survey and stakeholder engagement spoke to the desire for more service provider options. A competitive service provider environment can drive costs down and increase plan offerings.

Access to Devices: Continue programs for distributing or lending digital devices to residents who lack access to personal computers or smartphones.

- The County has active participants in device distribution programs that include the libraries and schools, such as, Liberty Branch Library and Buckeye Valley High School.
- Sage Sustainable Electronics works with the community organizations and businesses through its Good Together program to refurbish used electronics so they are more affordable in commerce and assist with lowering the carbon footprint.

Workforce Development: Continue to collaborate with educational institutions, such as Ohio Wesleyan University, and workforce development agencies to provide training in digital skills and support pathways to tech-related careers. The following organizations offer workforce support programs:

- Ohio Means Jobs
- OARnet
- Delaware Area Career Center
- Columbus State Community College
- Delaware Entrepreneurial Center at OWU
- Goodwill Industries

Appendix A

Aug 31, 2023

Community Assessment Process

01 Kick-Off Meeting & Data Collection	**02 Market Service & Incumbent Analysis**	03 Preliminary Design	04 Construction Ride Out & Make Ready	05 Financial Model & Business Plan
06 Strategy Session	07 Demand Aggregation	08 Stakeholder & Partner Engagement	09 Grant Services	

Broadband Definition [1], [2]

- Broadband is the transmission of a large volume of data of a different nature (voice, video, etc.) through a continuously active high-bandwidth and high-speed internet connection
- FCC establishes Broadband for Internet Access ≥ 25 Mbps Download Speed and ≥ 3 Mbps Upload Speed

Broadband Transmission Technologies [1]

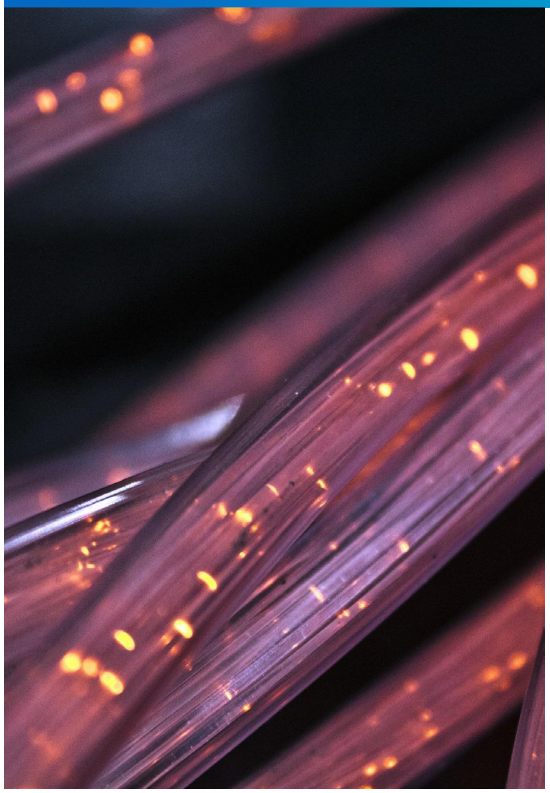
1. FIXED (WIRED) BROADBAND: CABLES

- Fiber Optic Cables
- Coaxial Cables (Cable-Modem)
- Copper Phone Lines (DSL - Digital Subscriber Line)

2. WIRELESS BROADBAND: RADIO WAVES

- Mobile Wireless
  - Fixed Wireless
  - 5G
- Satellite

[1] Federal Communications Commission (2014). Types of Broadband Connections. Available at: https://www.fcc.gov/general/types-broadband-connections
[2] Fernando, K. (2021). Broadband Definition. Available at: https://www.investopedia.com/terms/b/broadband.asp



Why Fiber?

- It is the fastest broadband Internet transmission technology
- Fiber cables are stronger
- Fiber cables can carry more volume of data
- Fiber is not susceptible to interference
- Minimization of fire hazards as no electricity is passed through optical cables

Market Service and Incumbent Analysis

DATA SOURCES

- FCC Form 477
- FiberLocator

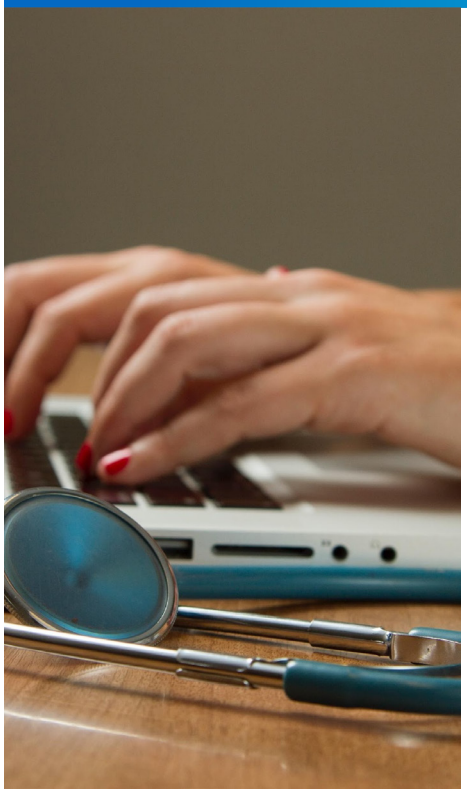
Purpose

Analyze the County's broadband health status across different data sources

Demand Aggregation Survey

DATA SOURCES

- Residents and Businesses Survey Responses



Market Service & Incumbent Analysis

Metrics

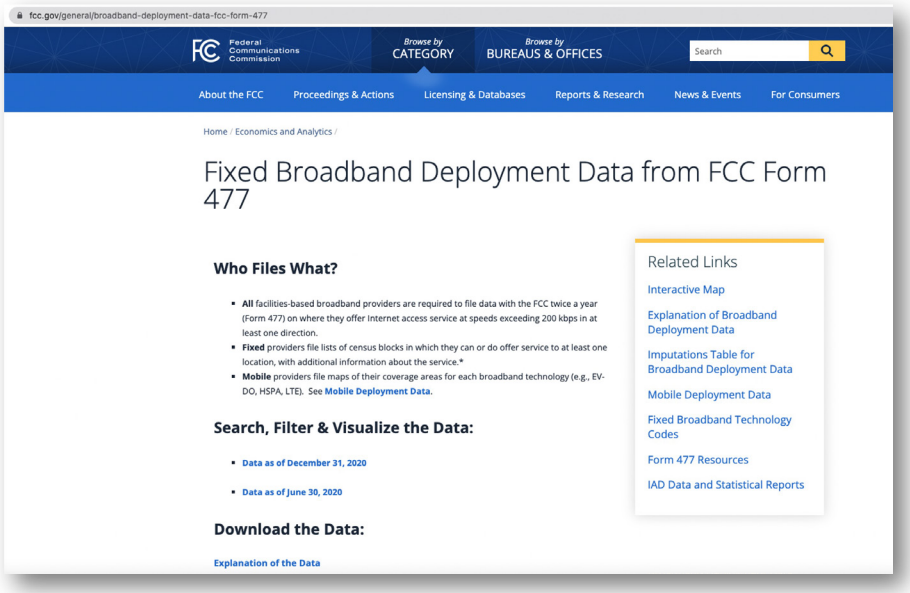
DATA SOURCES

1. FCC Form 477
1. FiberLocator

METRICS

1. Speeds, Technology Penetration, Internet Service Providers
2. Existing Long Haul & Metro Networks

FCC Form 477



Data Source: https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477

FCC Form 477

Broadband Providers

Internet Service Providers

Coaxial Cable / HFC	Max Speed
Breezeline	1000, 50
Charter Communications Inc	1000, 35
Copper Wire	**Max Speed**
AT&T Inc	100, 20
Brightspeed	80, 10
FRONTIER	115, 115
Geostationary Satellite	**Max Speed**
HughesNet	25, 3
Licensed Terrestrial Fixed Wireless	**Max Speed**
T-Mobile US	100, 20
VERIZON	50, 4
W A T C H TV	100, 10
Fiber	**Max Speed**
AT&T Inc	5000, 5000
Breezeline	1000, 600
Brightspeed	940, 940
Charter Communications Inc	1000, 500
Unlicensed Terrestrial Fixed Wireless	**Max Speed**
Byhalia.net LLC	100, 25

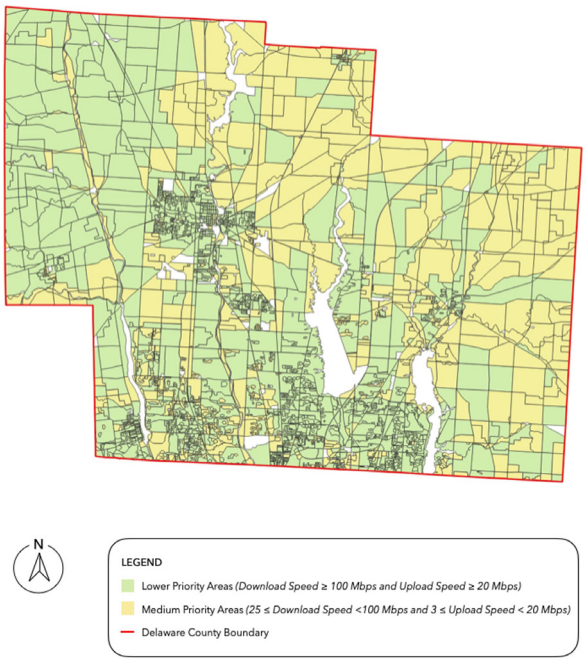
Data Analyzed: Federal Communications Commission (2022). FCC – Open Data. Available at: https://broadbandmap.fcc.gov/data-download/nationwide-data?version=dec2022

FCC Form 477

Service Speeds

Data Analyzed: Federal Communications Commission (2022). FCC – Open Data. Available at: https://broadbandmap.fcc.gov/data-download/nationwide-data?version=dec2022

Census Blocks Categorization based on Maximum Speed per Census Block



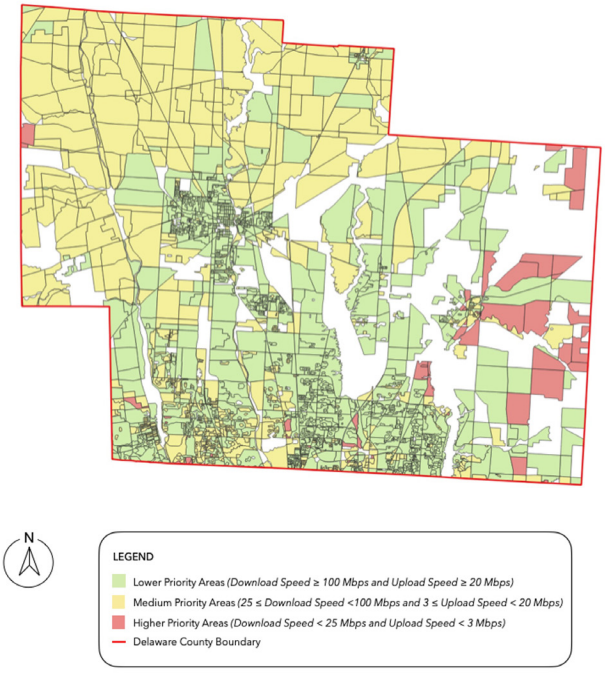
FCC Form 477

Service Speeds

Data Analyzed: Federal Communications Commission (2022). FCC – Open Data. Available at: https://broadbandmap.fcc.gov/data-download/nationwide-data?version=dec2022

Better Definition in Areas with Broadband Need (Medium and Higher Priority Areas)

Census Blocks Categorization based on Maximum Technology per Census Block

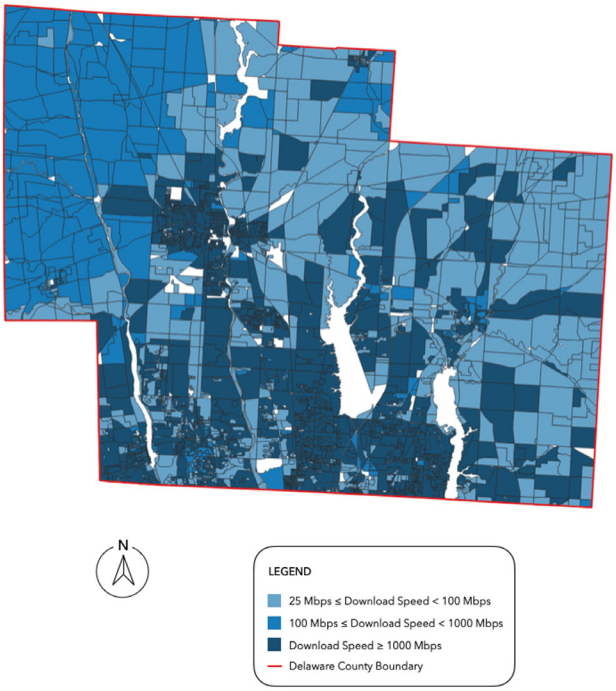


FCC Form 477

Service Speeds

Data Analyzed: Federal Communications Commission (2022). FCC – Open Data. Available at: https://broadbandmap.fcc.gov/data-download/nationwide-data?version=dec2022

Census Blocks Categorization based on Maximum Speed per Census Block: *Maximum Download Speed*

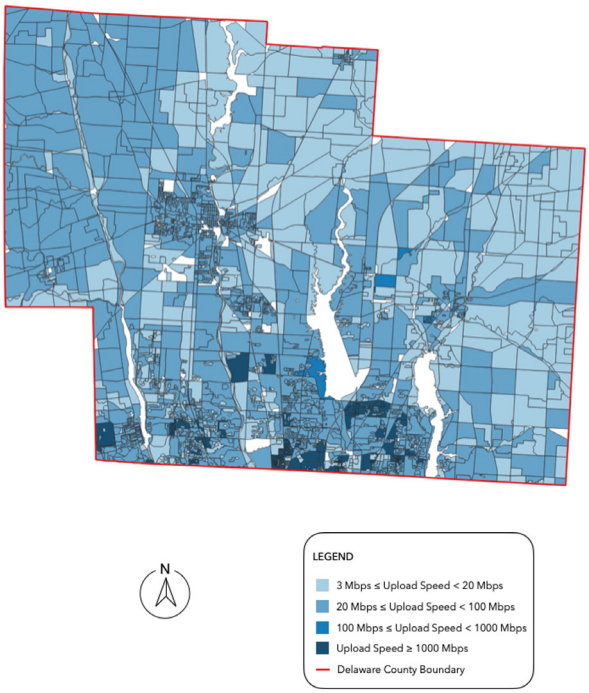


FCC Form 477

Service Speeds

Data Analyzed: Federal Communications Commission (2022). FCC – Open Data. Available at: https://broadbandmap.fcc.gov/data-download/nationwide-data?version=dec2022

Census Blocks Categorization based on Maximum Speed per Census Block: *Maximum Upload Speed*



FCC Form 477

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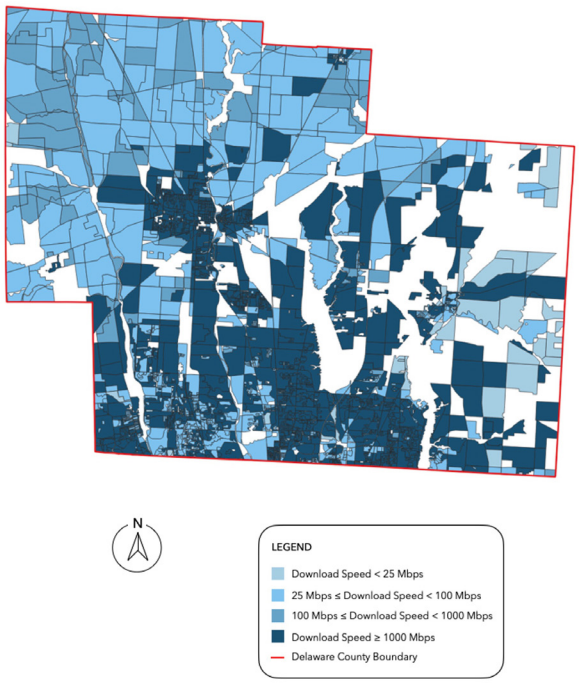
Census Blocks Categorization based on Maximum Technology per Census Block: *Maximum Download Speed*



FCC Form 477

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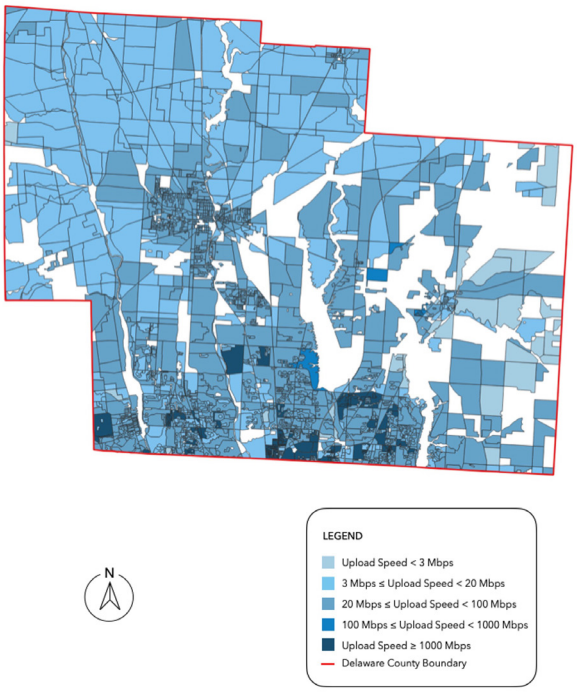
Census Blocks Categorization based on Maximum Technology per Census Block: *Maximum Upload Speed*

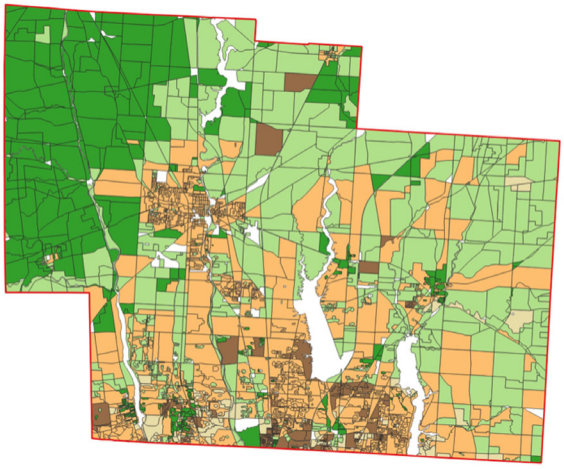


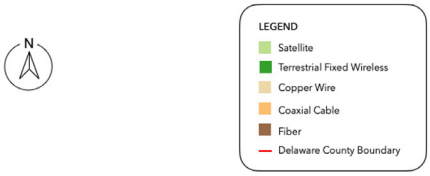
FCC Form 477

Access Types

Data Analyzed: Federal Communications Commission (2022). FCC – Open Data. Available at: https://broadbandmap.fcc.gov/data-download/nationwide-data?version=dec2022

Technology Categorization Based on Maximum Speed per Census Block





Satellite, Fixed Wireless and Copper Wire Zones correspond to Areas with Broadband Need

FCC Form 477

Access Types

Data Analyzed: Federal Communications Commission (2022). FCC – Open Data. Available at: https://broadbandmap.fcc.gov/data-download/nationwide-data?version=dec2022

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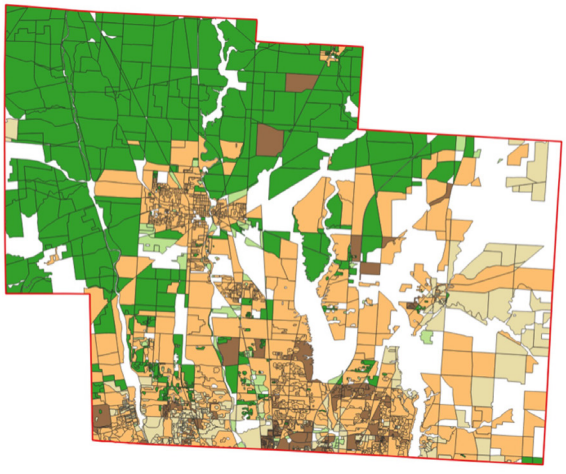

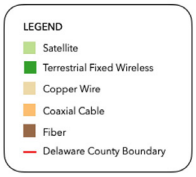

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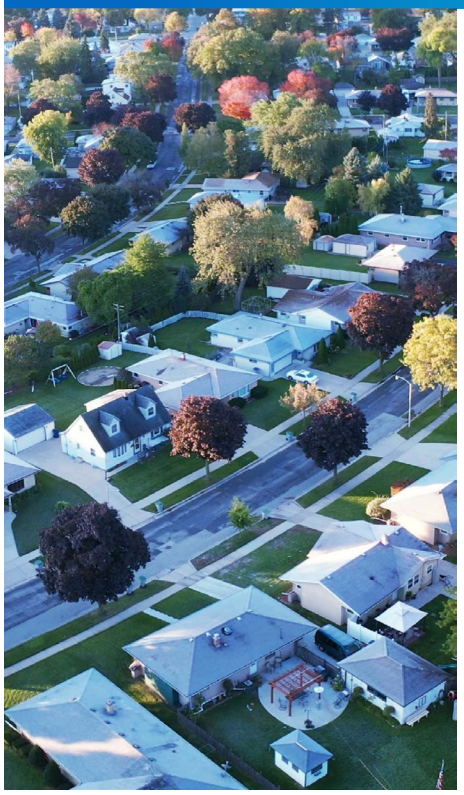
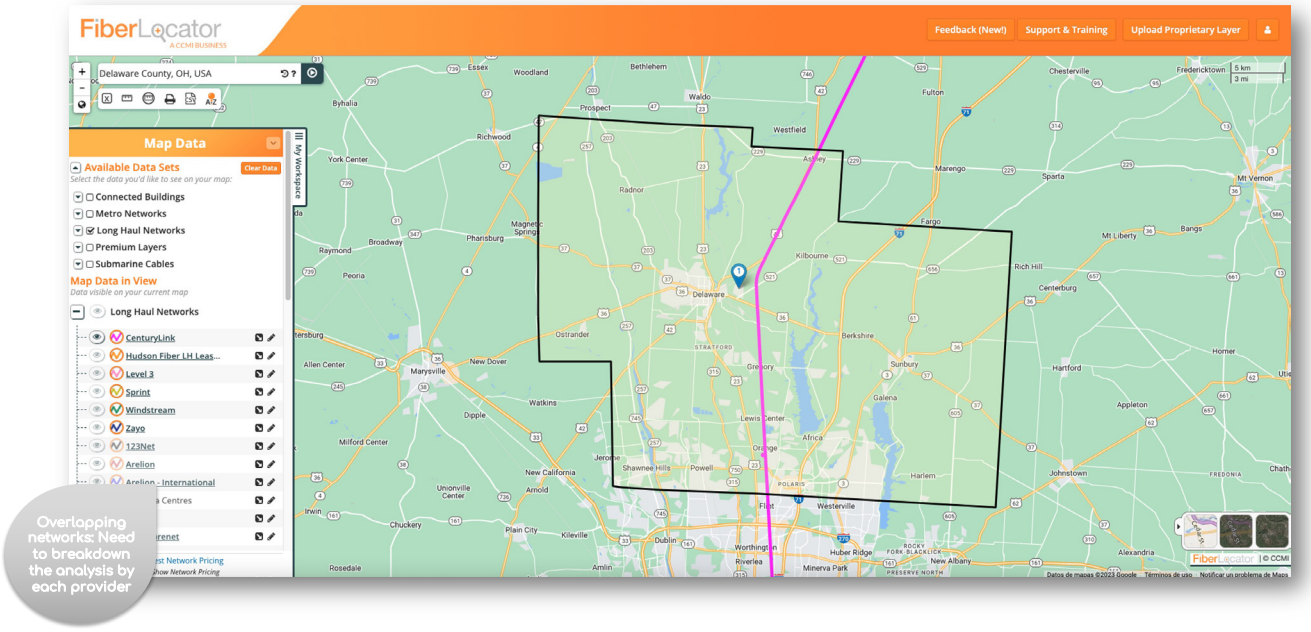


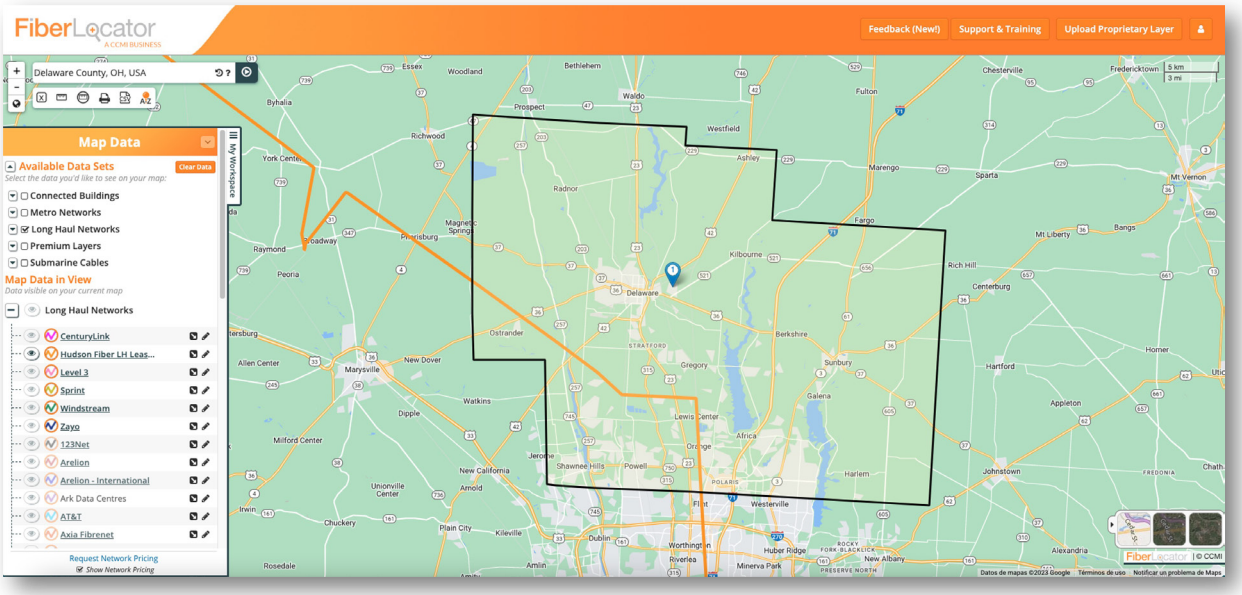
Fiber Connectivity Levels

- Tier 1: Intercontinental Level (Global Backbone)
- Tier 2: National Level (Long Haul)
- Tier 3: Regional Level (Middle Mile)
- Tier 4: Local Level (Last Mile)

FiberLocator: Long Haul Fiber Networks I/V



FiberLocator: Long Haul Fiber Networks II/V



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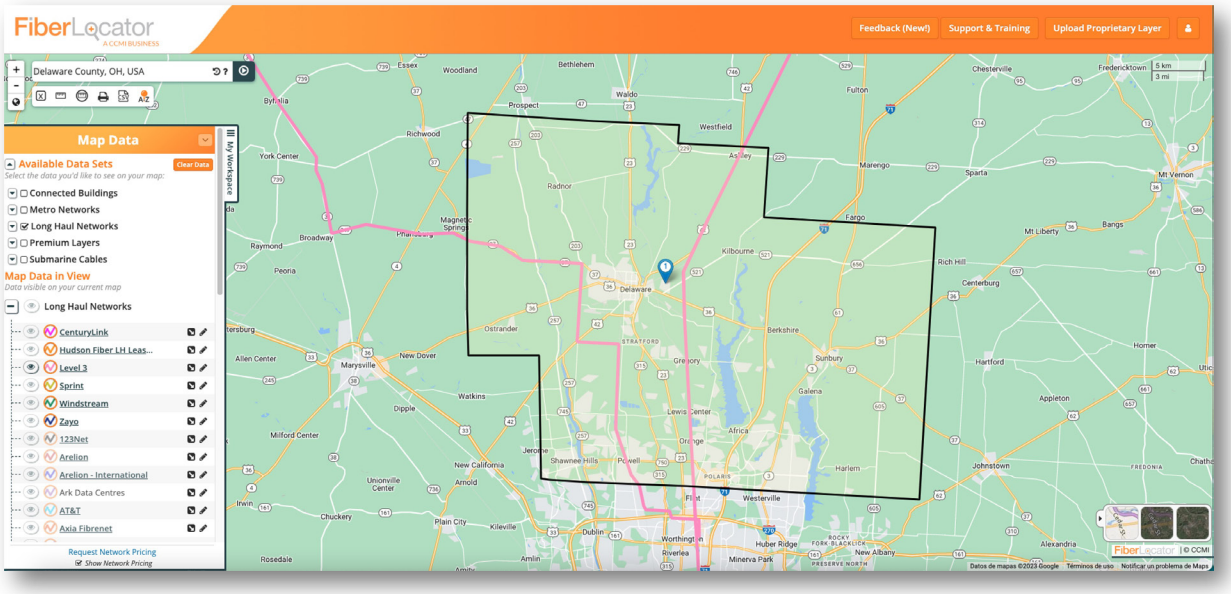
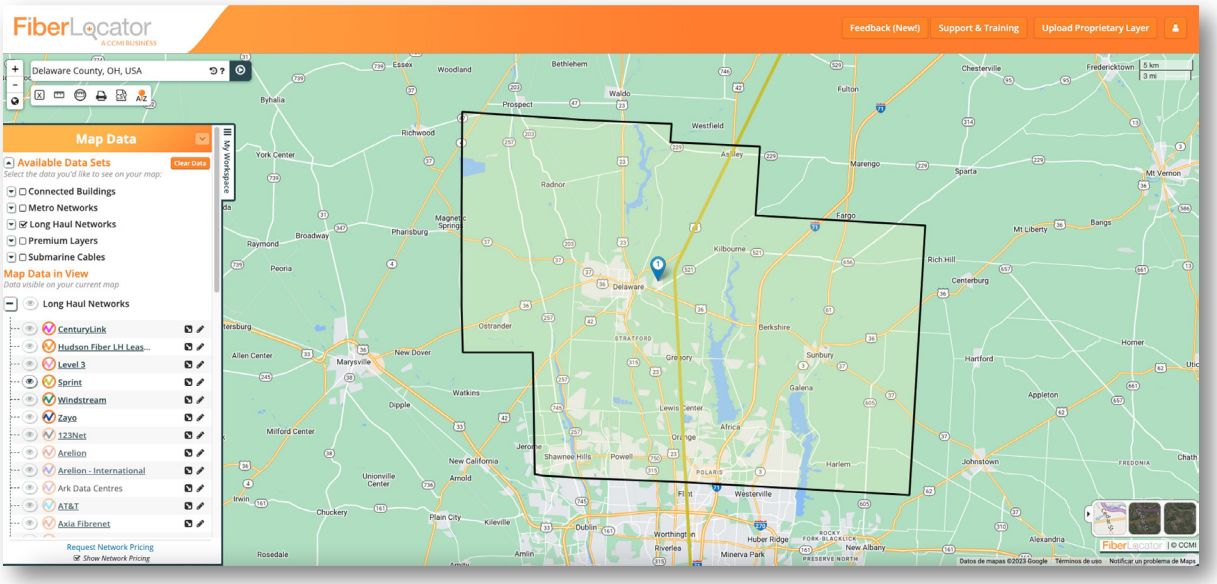
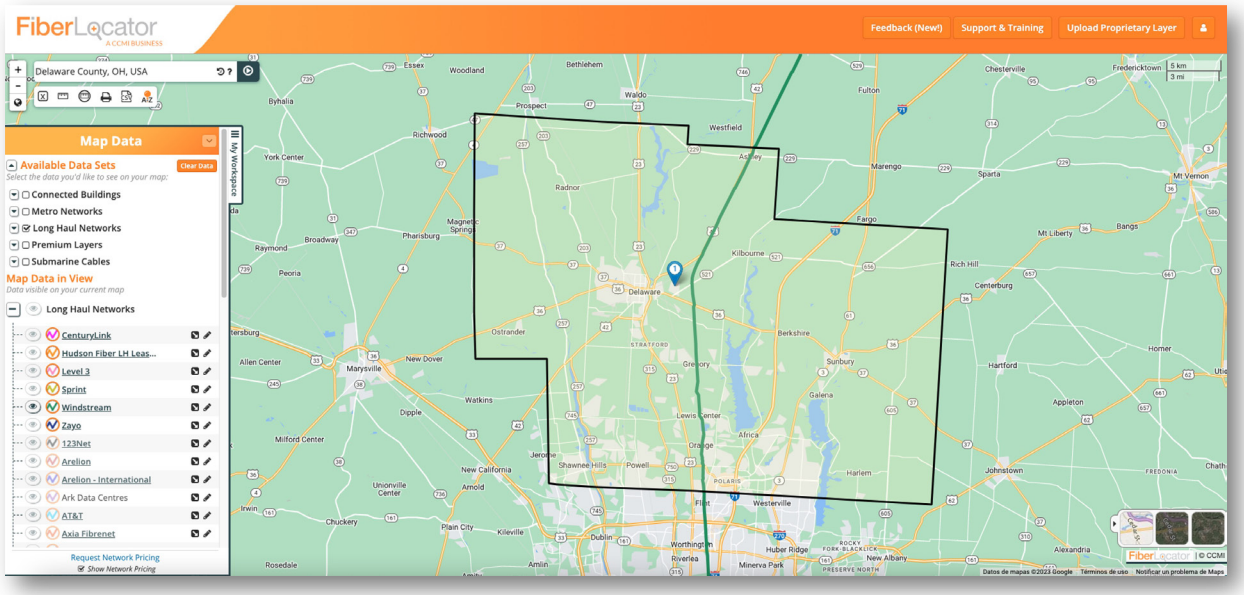


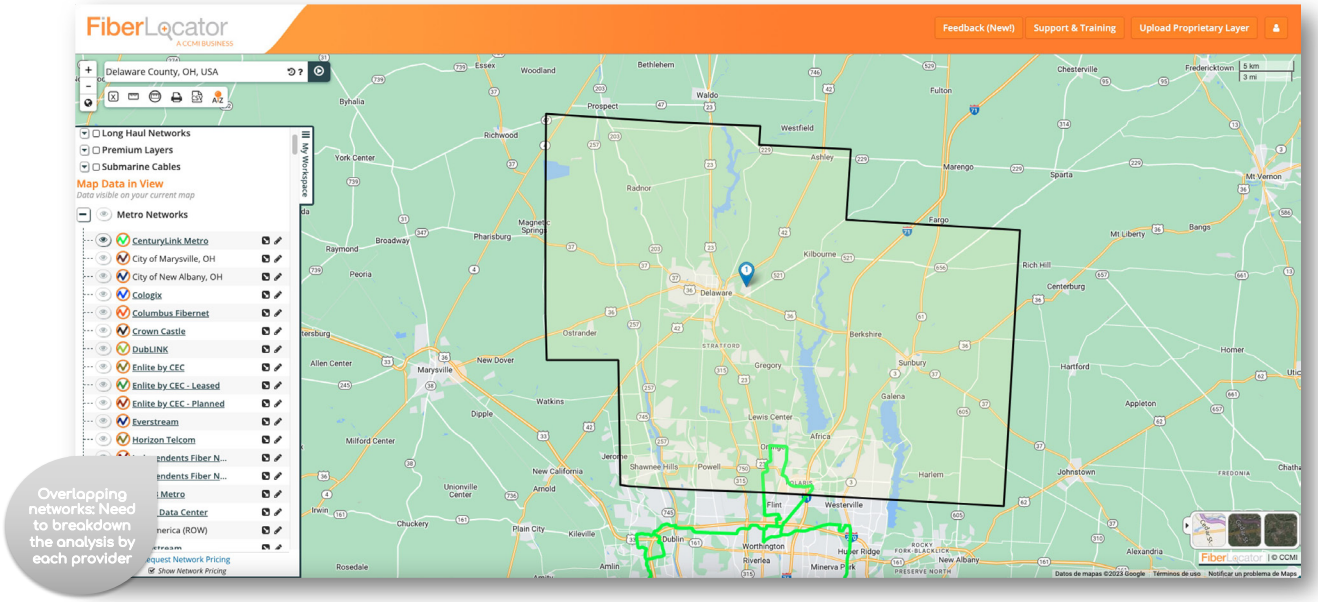
FiberLocator: Long Haul Fiber Networks IV/V



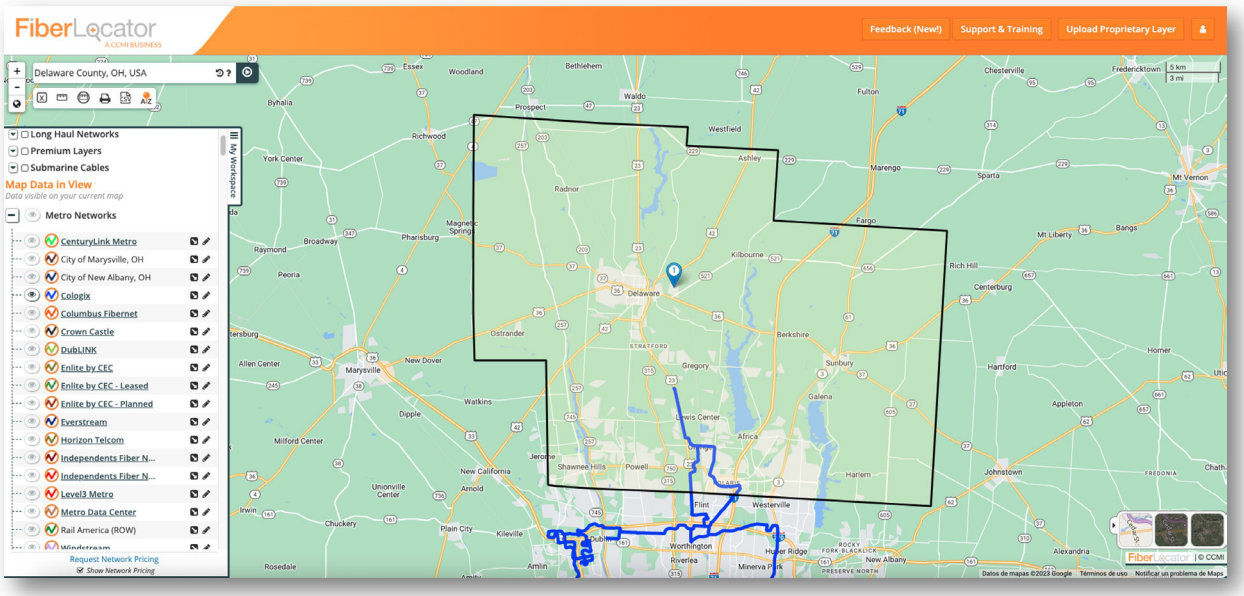
FiberLocator: Long Haul Fiber Networks V/V



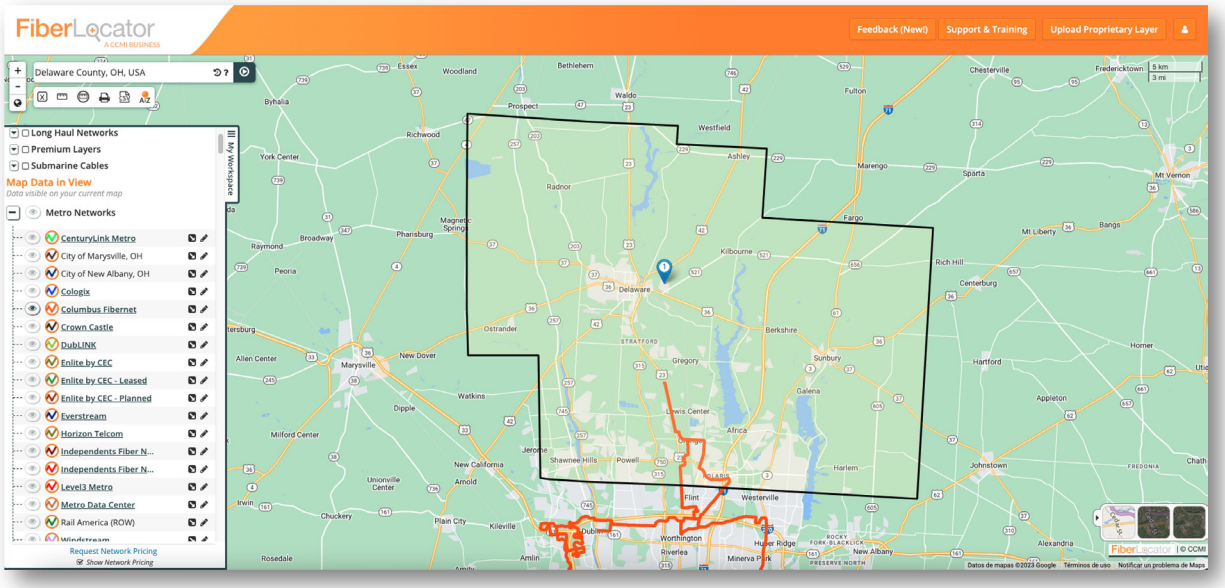
FiberLocator: Metro Fiber Networks (Middle & Last Mile) I/XVIII



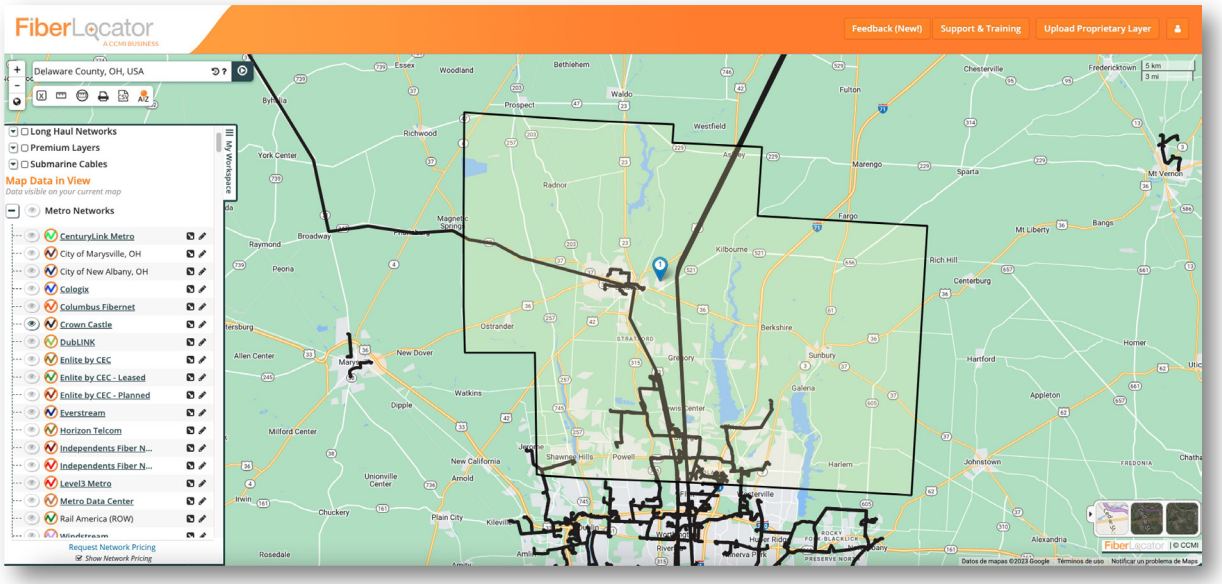
FiberLocator: Metro Fiber Networks (Breakdown) II/ XVIII



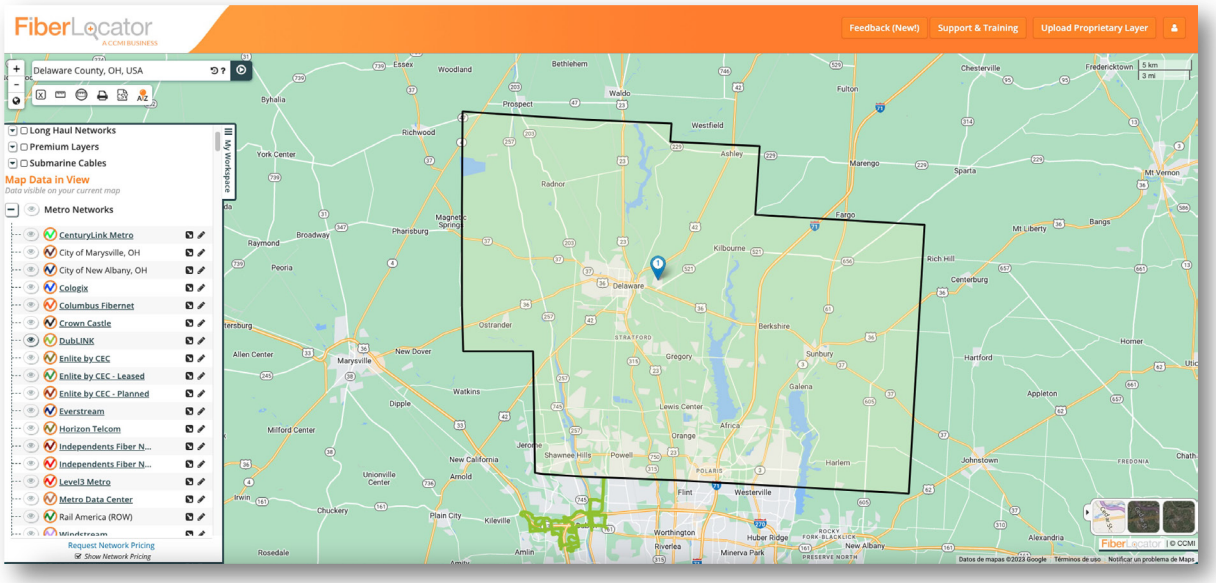
FiberLocator: Metro Fiber Networks (Breakdown) III/ XVIII



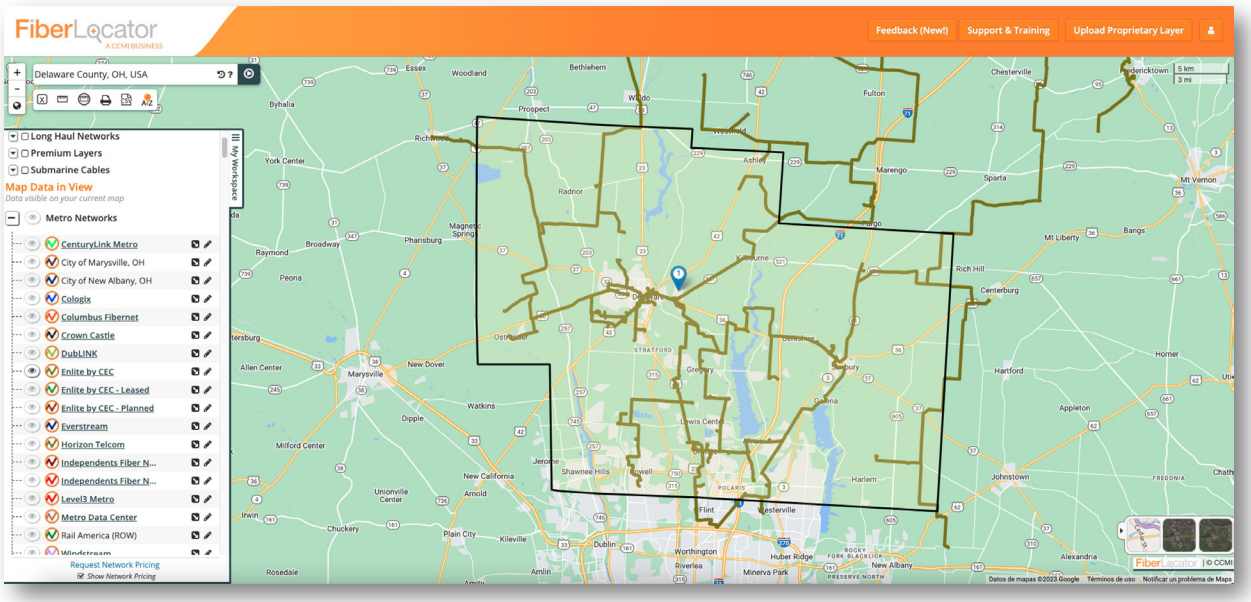
FiberLocator: Metro Fiber Networks (Breakdown) IV/ XVIII



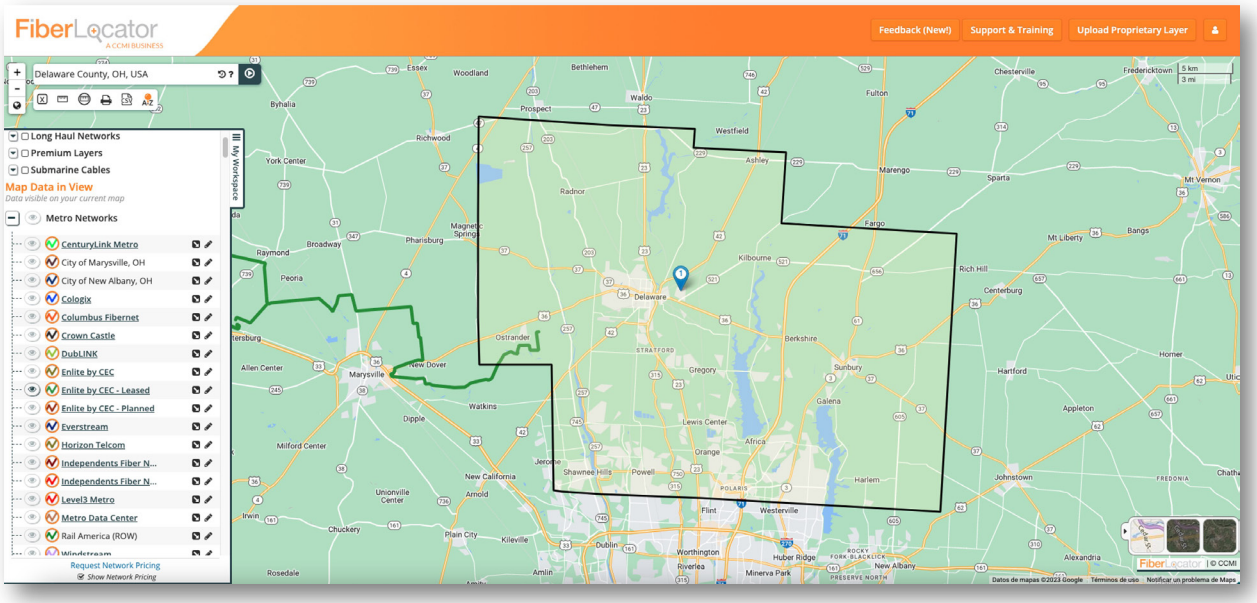
FiberLocator: Metro Fiber Networks (Breakdown) V/ XVIII



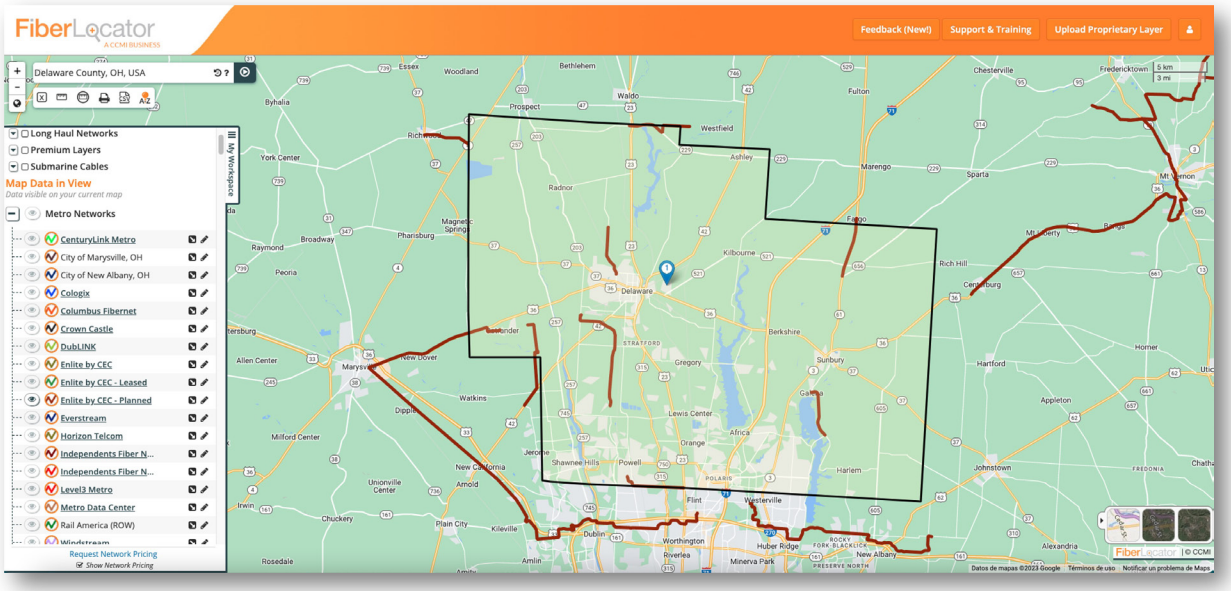
FiberLocator: Metro Fiber Networks (Breakdown) VI/ XVIII



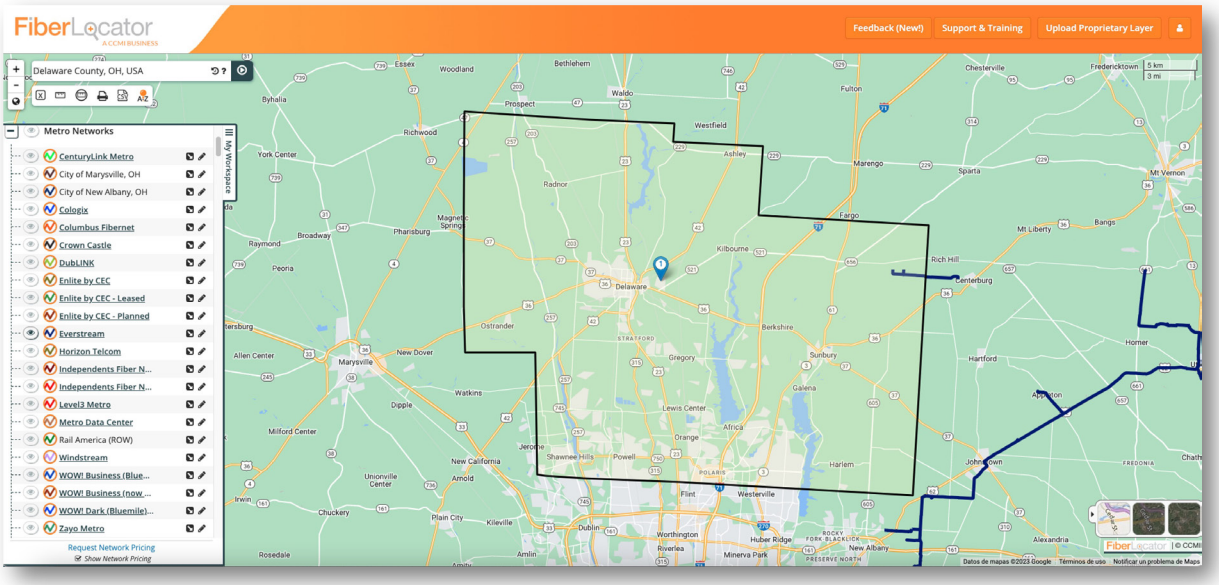
FiberLocator: Metro Fiber Networks (Breakdown) VII/ XVIII



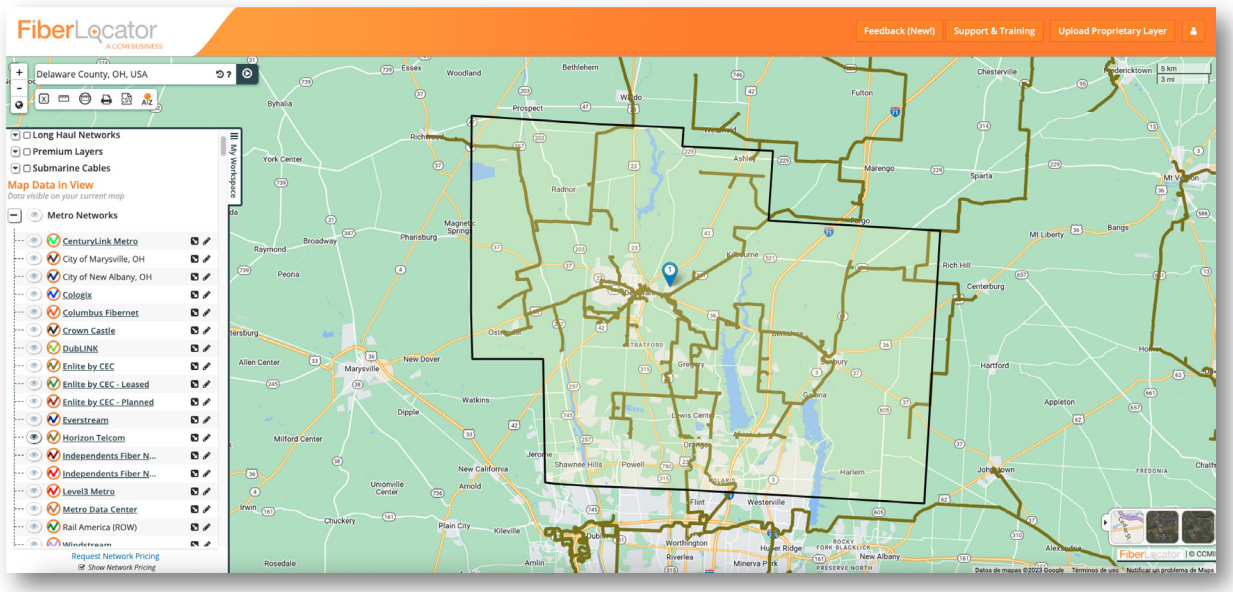
FiberLocator: Metro Fiber Networks (Breakdown) VIII / XVIII



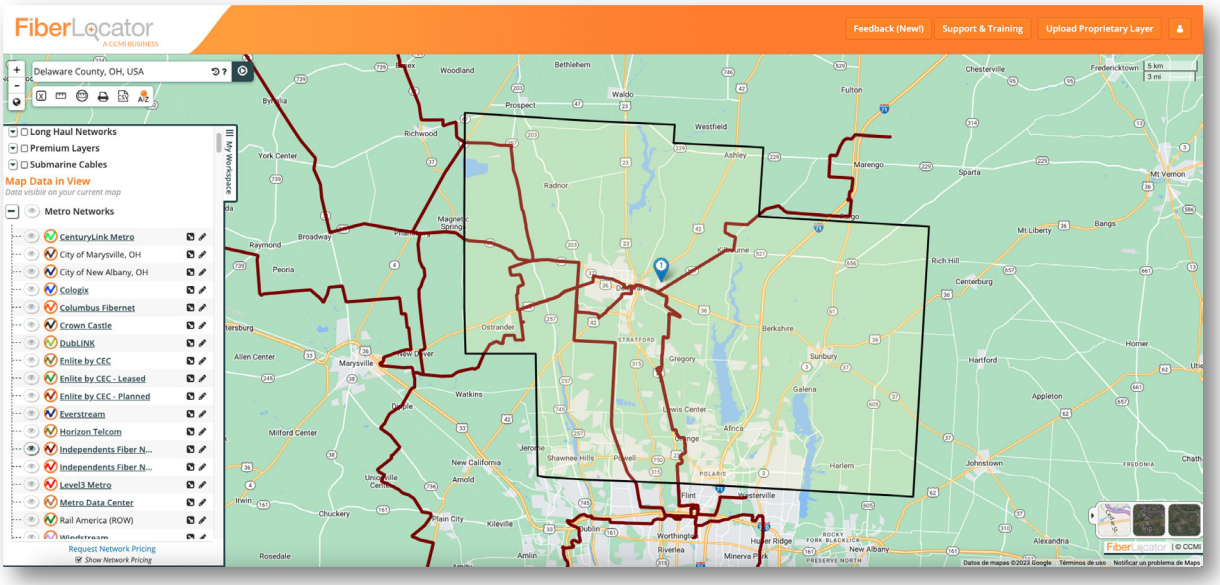
FiberLocator: Metro Fiber Networks (Breakdown) IX / XVIII



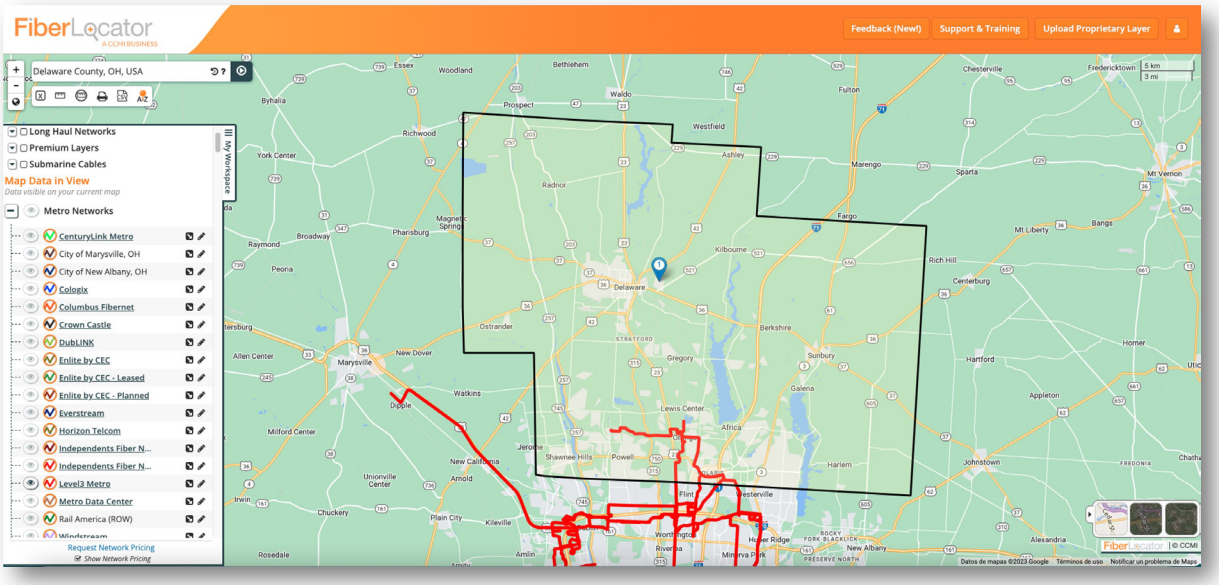
FiberLocator: Metro Fiber Networks (Breakdown) X / XVIII



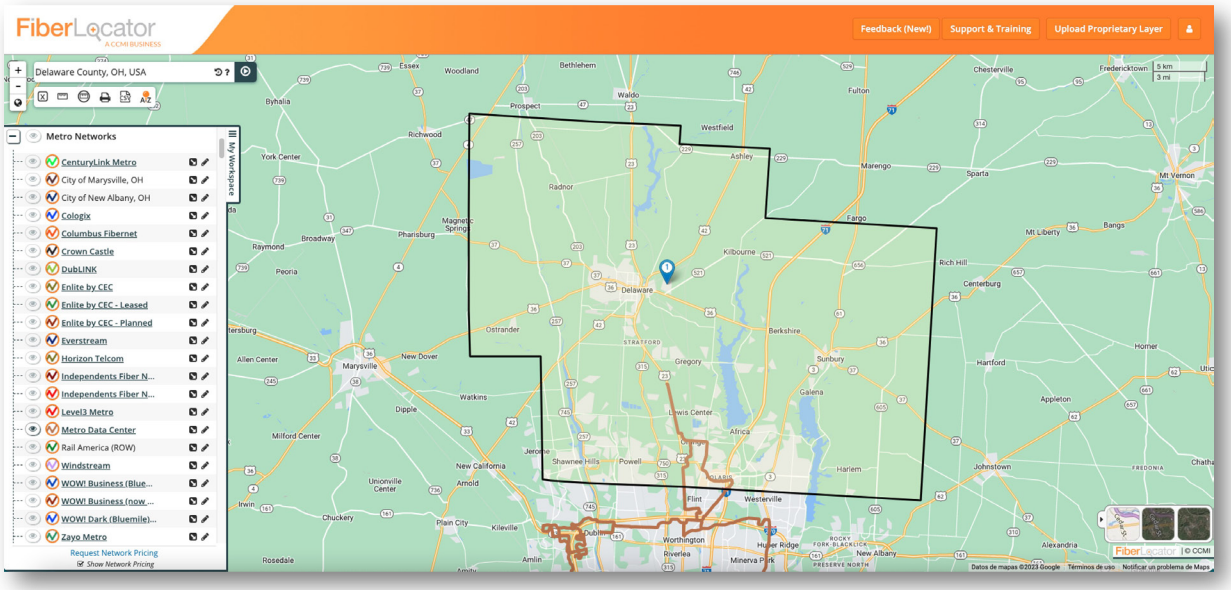
FiberLocator: Metro Fiber Networks (Breakdown) XI / XVIII



FiberLocator: Metro Fiber Networks (Breakdown) XII / XVIII



FiberLocator: Metro Fiber Networks (Breakdown) XIII / XVIII



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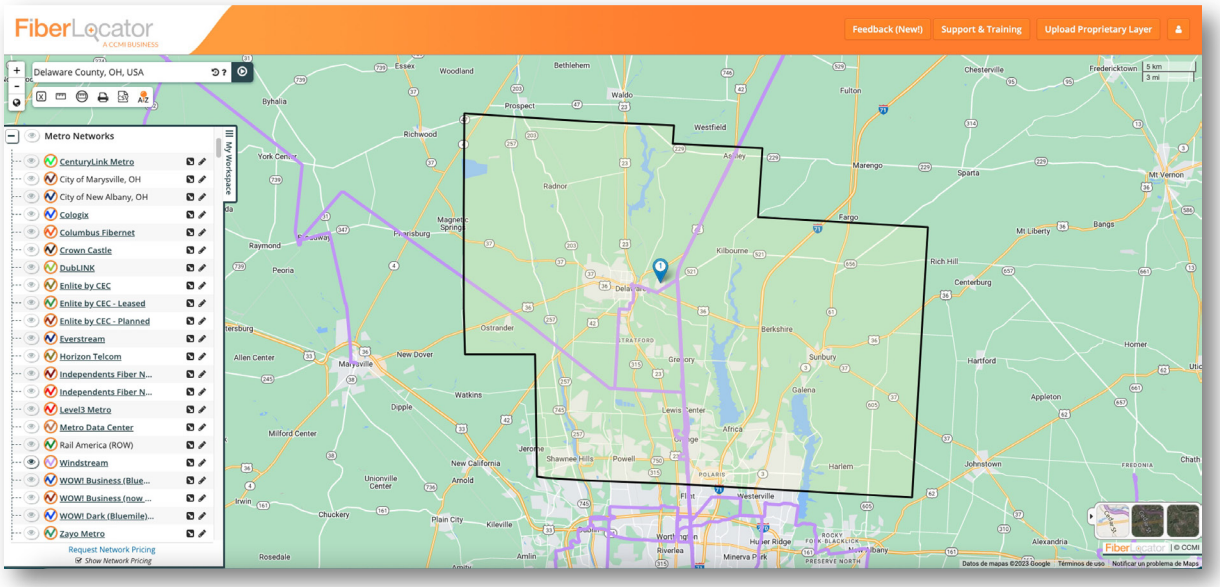
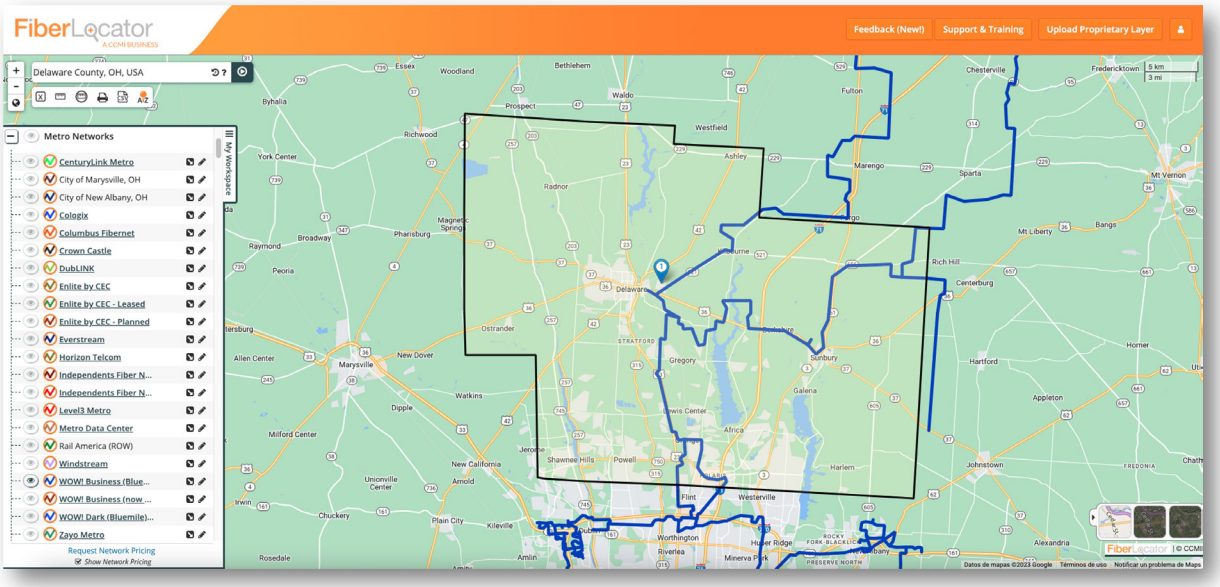
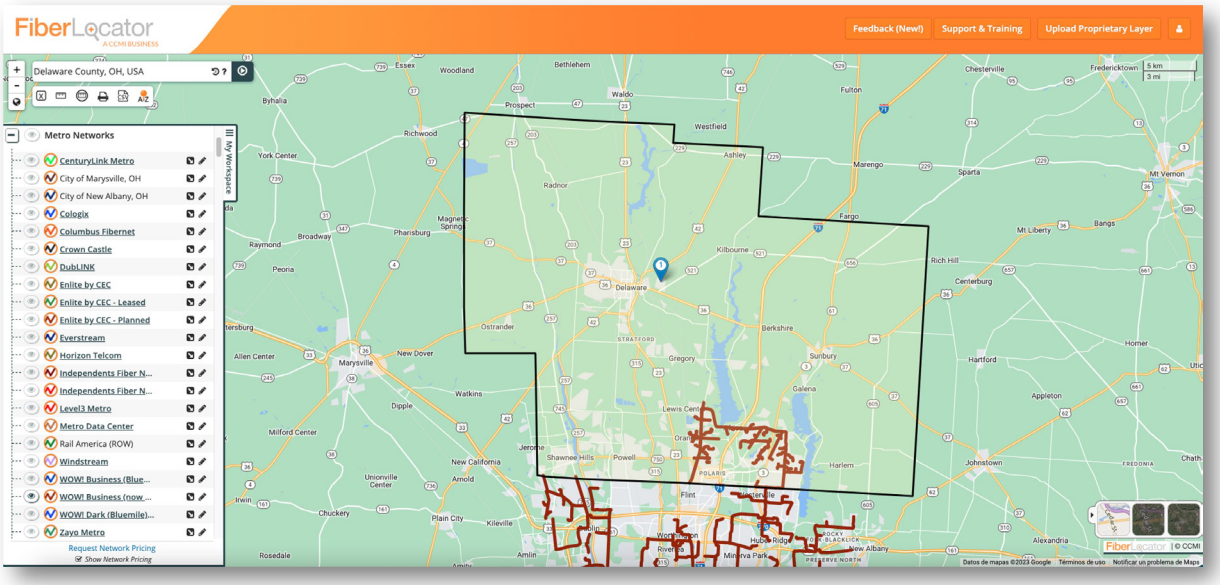


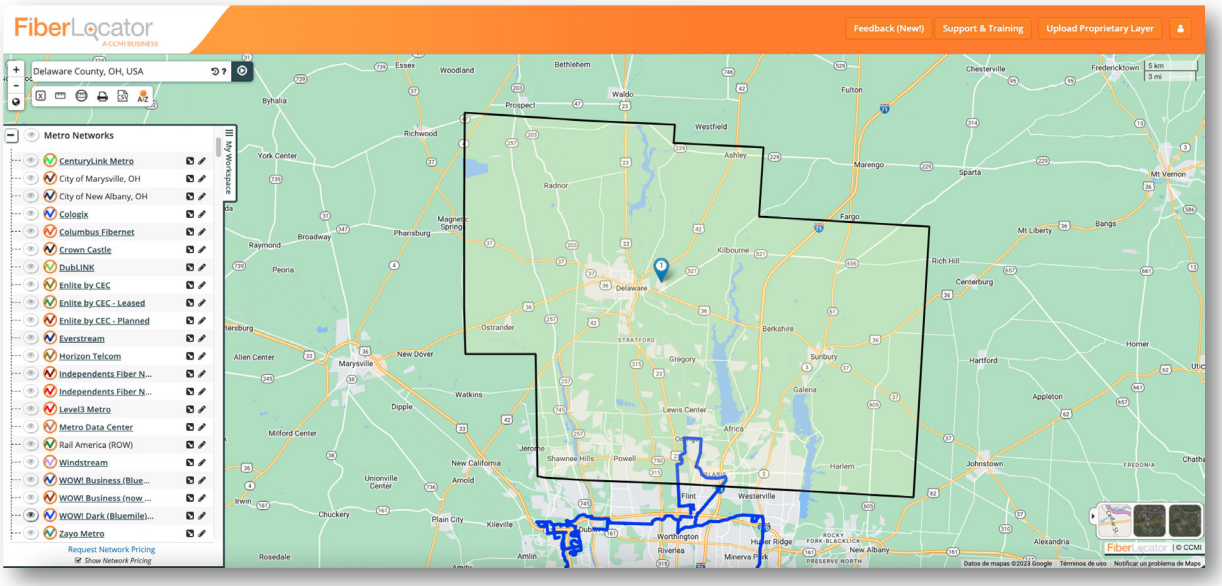
FiberLocator: Metro Fiber Networks (Breakdown) XV / XVIII



FiberLocator: Metro Fiber Networks (Breakdown) XVI / XVIII



FiberLocator: Metro Fiber Networks (Breakdown) XVII / XVIII



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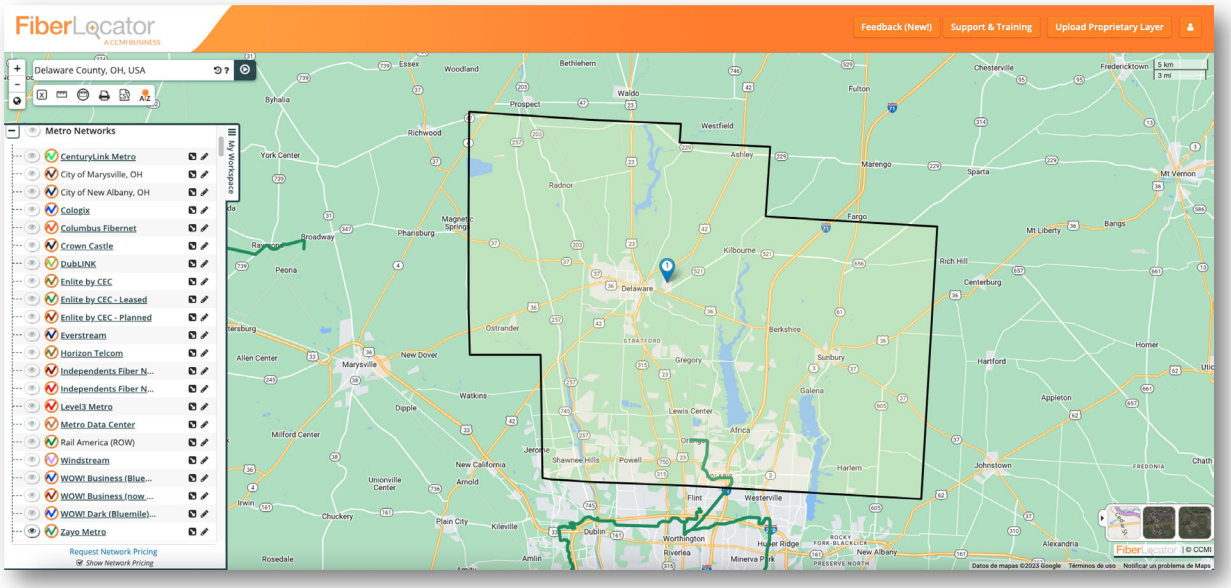



Questions?
Lit Communities

Appendix B

Dec 11, 2023 | Delaware County Virtual Focus Group

Attendees: Aaron Jackson Lindsay Miller

Notes

Q1: Are the existing broadband speeds in the county sufficient to meet local broadband needs? Are there online tasks that you are unable to perform as a result of insufficient broadband access?

- Mark Almendinger, Trenton Township Trustee: Have folks that come to meetings using Spectrum, but it's 4 Mbps, which is 90's connectivity. This is up along Creek Road. Some people are trying to use T-Mobile and/ or Verizon. It's the only option, unless you want to sign up for Starlink, which has a $120 sign-up fee. Have heard from other residents that Spectrum is too expensive ($4-5,000 for line connection). Cost and access are both a problem. I live right on St. Rt. 3 and don't have an option to bundle service and don't want to pay over $100 for internet and over $100 for television each month. Ultimately it's about user experience.
- Kevin Hennessee, Delaware Township: Depending on where you are in the county, you're going to get different answers. In our township, because we're near the City of Delaware, we've had various options over the years (DSL → cable → wireless). But, even in Delaware Township, the cellular carriers are not offering home internet off of the cellular connections. Most customers in our township only have 1 option (Spectrum), which impacts our pricing. If the county does it, those with service will also want more options and have it not just focused on rural areas of the county.
- Gwyn Stetler, Executive Director of Family Promise of Delaware County (emergency housing provider): There is also a workforce issue. We have several employees who live nearby the shelter and with a lack of space, we have employees that need to be able to work from home. It is an issue for many in Delaware County and some contiguous areas. There are a lot of complicated webs in which we need to work together to address many outstanding needs. I was told that a regional approach with multiple counties was needed to address broadband issues.
- Wes Blake, City of Powell: Geographically neighbors with the City of Dublin, who recently announced their partnership with Altafiber for FTTH. We've had conversations with Altafiber and other providers, which has been drummed up from this partnership. From my perspective, internet service is a utility and required of the City to be able to provide, not only for the residents, but for economic development and growth. It needs to reach our entire population and not just a backbone that runs our main streets. We're looking to have full footprint coverage, similar to Dublin, but where do you start? There are so many companies out there that claim they can do this - who do you go with? Everyone wants to be the initial provider in an area and have their infrastructure in place.

Q2: On a scale of 1-5, with 1 being the lowest interest and 5 being the greatest interest, what is your level of interest for higher speed broadband?

- Nine 5's; Two 4's
- Connie Skinner: I want to let everyone know that the Delaware District Library does rent WiFi hotspots for 2 weeks at a time for no cost. There is typically a waiting list, but turnaround is under two weeks wait time.
- Jen Frye: Delaware City Schools also provide hotspots to students with no connectivity. They're not a great solution, but they help.

Q3: Is the existing broadband infrastructure in the county sufficient to meet local broadband needs?

- Josie Bonnette, City of Delaware resident, but representing county health dept.: We consider in-home broadband access as a social determinant of health. Based on the data, we see pockets with low access. Similar to Connie's comment, when we are going to offer programming that requires the internet, we refer folks to the library to get the connectivity they need.
- Wes Blake: We have a train track that runs through the community and struggle with connectivity on both sides of the track. We have tried to negotiate with CNX, but it's been a roadblock. It cuts our city in half of being able to provide the full experience for everyone.
- Mark Almendinger: I feel it's rural access for the eastern part of the county (Trenton Township)

Q4: How do your stakeholders without at-home broadband service access the internet?

- Josie Bonnette: We hear of internet sharing among family members.
- Mark Almendinger: My wife is a teacher and during COVID we had to subscribe to two different service providers because we couldn't get the performance on one. She used one connection and I used the other.
- Jen Fry, Delaware City Schools: We try to direct our families to the Affordable Connectivity Program (ACP) because they'll get better connectivity than our hotspots. We've been offering hotspots to our kids since COVID. They're not great, but it is some degree of connectivity. We probably have 30 checked out at one time. However, our funding source for this is not unlimited and won't go beyond this year.

What has the response been when you make that recommendation?

- Jen Fry: We don't really have a sense.
- Connie Skinner: Many school-age children can access WiFi from the school or library parking lot.
- Kevin Hennessee: Churches offer free Wi-Fi, and our building does as well if you get close enough. First question is, is there any internet? This is usually an issue in rural areas. Second question is, can you afford it if it's there? This usually comes up in more populated areas. Third question then is, where are you going to get it if you don't have connectivity? We have an access problem and a price point problem.

Q5: How do the broadband services that are currently available impact local stakeholders in setting and realizing short term objectives and long range plans (positively or negatively)?

- Kevin Hennessee: As much as you need roads, you also need broadband for economic development. If you don't have broadband, and really fiber, companies aren't going to consider your sites. This falls more into an economic development challenge for the county from that perspective, but I

don't think the County is going to put fiber everywhere, probably only along corridors. We need to coordinate build-out with economic development approaches.

- Wes Blake: Over the next 5 years this will become a mandatory, minimum requirement. Not only for economic development of the area/ region, but to also drive population count. If there's a location that's an additional 10-15 minute drive but it includes reliable fiber, it will win out.
- Mark Alemdinger: I echo the previous comments on economic development, but the townships are limited/ don't have the funds to address these issues. It's only going to continue to be more of a challenge being on the edge of the Intel bubble. It has to be a greater initiative than just the townships.

Q6: What educational, economic, public health, civic engagement, and other goals would stakeholders wish to address with wider broadband access and/or adoption?

- Josie Bonnette: I don't think it's a black and white solution - what will work in our urban areas won't necessarily work in our rural areas. And, in addition to service, how can we make it affordable?
- Wes Blake: How can we incentivize? What strategies do we have out there and are available to us as an entire county to take a larger approach to affect every resident in the county? Right now, local jurisdictions are really just worried about their immediate connectivity. How can we all work together?
- Connie Skinner: The county just released the beginning stages of their economic development community plan and there will be committees in the new year. Perhaps one of these committees could be dedicated to broadband.

Who would be in favor of a broader approach?

- Nearly half of hands raised.
- Kevin Hennessee: I came to this call with the idea of filing in the gaps in the community. If we're talking about fiber in the community to attract businesses, that's a bigger discussion and we need to walk before we run. We have internet deserts in areas of the county. Talking about getting some folks fiber when some don't even have basic internet access doesn't seem like the right priority. Building out fiber is a separate discussion.
- Jen Fry: If we can get to the "broadband as a utility" piece and consider it from that perspective that would be good from the schools' perspective. Right now, if families don't have the internet, we give them a hotspot. This wouldn't be the case if they didn't have gas, etc. But again, this isn't sustainable and doesn't help the household long term.

Q7: What are your expectations for the Delaware County Broadband Community Assessment?

- Wes Blake: Broadband access is paramount to the county. On the other hand, if we're talking about gaining access to broadband now, but by the time we have it, it will be obsolete. Fiber and replacing broadband. Are we too late to the party on broadband and we need to be looking at fiber.
- Kevin Hennessee: Let's think of filling in the holes first. Don't let perfect be the enemy of the good. Even if it's not going to be the best solution long term, we need to get those areas filled in. To me, that's the #1 goal so they have some access to the internet. And, the next problem to solve is whether there is a program at the county level to help folks afford it.

Dec 12, 2023 | Delaware County Virtual Focus Group

Attendees: Aaron Jackson Lindsay Miller

Notes

Q1: Are the existing broadband speeds in the county sufficient to meet local broadband needs? Are there online tasks that you are unable to perform as a result of insufficient broadband access?

- Justin LaRosa: Lack of competition. The broadband provider we have, Spectrum, isn't bad, but they're our only option and there are outages at times. We would like to see a fiber provider or someone come in and offer a secondary option. If we could get a fiber option, we would have more speeds. If you have multiple people using the network at the same time it clogs up the network. If you had multiple providers it would open up doors.
- Rob Leeds: We're as far west as you can get in Delaware County, almost Union County, and we have nothing. Starlink is an option and fiber runs around us, but it's very segmented our way and even cell service is spotty from Ostrander to Delaware along 36.
- Al: In Porter Township we have fiber through Consolidated, but it's not available to all, leaving Starlink the only option for many. How do you get service to the people who are way off the road where the cost to get from the road to the dwelling is cost prohibitive?

Q2: On a scale of 1-5, with 1 being the lowest interest and 5 being the greatest interest, what is your level of interest for higher speed broadband?

- Four 5's, one 4
- Joe: Access over speed. Not so much concerned with quality and speed, just having the ability to function and have business. If we didn't have our Verizon hook up for our business, we wouldn't be able to function with Spectrum alone. Troutman Rd. off 23 - no reliability through Spectrum.

Is there a distinction between your access at home and at work?

- Joe: I live at Polaris and service is fantastic.
- Holly: The geography is what it is. Where geography is lacking, it's going to lack for everything.

Q3: Is the existing broadband infrastructure in the county sufficient to meet local broadband needs?

- Rob Leeds: There are gaps around the county and it's inconsistent. I also have an office in Delaware and the service is fantastic. When you talk to legislators they think Delaware is completely covered and they don't realize the gaps that we have.

Q4: How do your stakeholders without at-home broadband service access the internet?

- Rob Leeds: We use Starlink and Verizon, but neither can address our needs on their own. We have to have both to use credit card machines, etc.. Our farm is both personal and business.
- Al: Starlink is all we have

Q5: How do the broadband services that are currently available impact local stakeholders in setting and realizing short term objectives and long range plans (positively or negatively)?

- Rob Leeds: We've made changes to our business because of the lack of internet. For example, online ticketing is a problem and we can't run credit cards at kiosks around the farm. We can't expand the way we want because of lack of connectivity. I have concerns about larger farmers trying to run GIS technology because of the lack of connectivity.

- Al: I just had a knee replacement and my child couldn't come stay with me because I don't have sufficient internet for her to work remotely. And, there is an affordability concern.
- Holly: It's hard to believe we're still having this conversation in 2023. But, in a positive, when there's business recruitment and retention is electric, water, sewer, fiber and in the areas where we have fiber, it is strong. So that's helpful for business recruitment and retention. Where we have it, it's a strong plus for us.
- Justin LaRosa: I work for a telecommunications company and I'm surprised at some of the areas being spoken of because I know there is wireless availability. I'm curious if it's a factor of these companies not sufficiently marketing their service. The WISPS seem to be on the smaller side and seem to have a harder time targeting their customers - you almost have to know they're there to know they're there. Whereas, your developed carriers have been there for years and you know they're there. It would be nice if the county put something together that said "in this zip code you have service from X, Y, Z provider". The difference would also be cost - a WISP would be maybe $50/ month where Starlink would be $120.

Q6: What educational, economic, public health, civic engagement, and other goals would stakeholders wish to address with wider broadband access and/or adoption?

- Rob Leeds: When fiber went around us we hoped we'd be able to connect, but we couldn't. The fiber, in my experience, is the best. The wireless is the best, but has some hits and misses. In terms of education, if we can get more fiber into the county that would be great, and if we have to do wireless, how do we get the most from it?
- Rory Gaydos: I probably speak for all K-12 that many families simply can't afford service. Working with companies and organizations where there are subsidies available is huge. 1:1 devices throughout Delaware County are very high. We need less red tape to get assistance with carriers. One of my locations is Camp Lazarus off 23 and they didn't have fiber so we ended up funding that for their Boy Scout camp facility. That took me a substantial amount of time so I cannot imagine the amount of time it would take without the resources/ knowledge.
- Justin LaRosa: I'm in Shawnee Hills and we're looking for resources to build our own. We're too small to apply for grants. For us, it's a funding issue.

Q7: What are your expectations for the Delaware County Broadband Community Assessment?

- Al: I want a report on where broadband is available and where it is not, how long it would take to get those services to be available, and a listing of who the players are, and an idea of cost.
- Rory Gaydos: Expectations - to find gaps in service and redundant availability. work with state and federal agencies to find funding to close those gaps. a heat map of where services are would be amazing.

Dec 14, 2023 | Delaware County In-Person Focus Group

Attendees: Aaron Jackson Lindsay Miller

Notes

Q1: Are the existing broadband speeds in the county sufficient to meet local broadband needs? Are there online tasks that you are unable to perform as a result of insufficient broadband access?

- We have Spectrum. The area they are in is near the Ymca or airport. It is not uncommon to have outages. They have gone digital for most things work related. The internet is often extremely slow. They pay for higher speed service. The Y also reports similar experiences. Switched phone system to 8x8. Phone system is an internet based.system. Changed from one provider to Spectrum.
- Lives in a neighborhood with only one option. Spectrum.
- Has difficulty doing electronic work in the field. Service when in the field is a hit or miss.
- Operate in a census zone that shows as served.
- Pockets that are unserved in their township. An outage occurred with pole issues that called for a two week turnaround for repairs.
- Wes Blake, City of Powell: Geographically neighbors with the City of Dublin, who recently announced their partnership with Altafiber for FTTH. We've had conversations with Altafiber and other providers, which has been drummed up from this partnership. From my perspective, internet service is a utility and required of the City to be able to provide, not only for the residents, but for economic development and growth. It needs to reach our entire population and not just a backbone that runs our main streets. We're looking to have full footprint coverage, similar to Dublin, but where do you start? There are so many companies out there that claim they can do this - who do you go with? Everyone wants to be the initial provider in an area and have their infrastructure in place.

Q2: On a scale of 1-5, with 1 being the lowest interest and 5 being the greatest interest, what is your level of interest for higher speed broadband?

- All 5's

Q3: Is the existing broadband infrastructure in the county sufficient to meet local broadband needs?

- I will switch from Spectrum to Verizon hot spot depending on location to get day to day work done.
- No. The infrastructure does not meet the need. There are a lot of areas north and south that lack competition for choice.

Q4: How do your stakeholders without at-home broadband service access the internet?

- Library; will help one on one with some electronic tasks
- Some schools are still offering wifi

Q5: How do the broadband services that are currently available impact local stakeholders in setting and realizing short term objectives and long range plans (positively or negatively)?

- Based on younger population being served, they expect a need for more digital offerings. That may not be possible based on lack of viable service options available
- Keeping an eye on what's happening around and adjusting accordingly
- Imperative we have broadband in rural areas
- Communities may be more attractive to more residents if they can offer broadband along with water, electricity, utilities, etc.
- Many people we serve are negatively impacted based on lack of knowledge. Challenging for some folks to decide.
- May not be educated enough to assist with service questions. Will direct people to the library when unable to provide guidance
- Recently started offering technology assistance programs. Seen an increase in participation in those classes. Classes led by tech professionals.

Q6: What educational, economic, public health, civic engagement, and other goals would stakeholders wish to address with wider broadband access and/or adoption?

- Boils down to economic equity
- Rural areas don't have the money so they just learn to deal with the lack of viable service

Q7: What are your expectations for the Delaware County Broadband Community Assessment?

- Would like to see the county wide data from the surveys
- Seeing some change, even on a small scale, can help give hope that things will get better with internet service offerings. People hear what the issues are and
- Hoping for transparency around how money will be spent; especially for the areas that are un and underserved.

Delaware County

Community Broadband Focus Groups

December 14, 2023

Lit Communities

Questions/Responses

Whether personal or professional, are the existing broadband service options in the County sufficient to meet your needs?

Questions/Responses

On a scale of 1-5, with 1 being the lowest interest and 5 being the greatest interest, what is your level of interest for higher speed broadband?

Questions/Responses

Is the existing broadband infrastructure in the County sufficient to meet local broadband needs? What or where are the perceived gaps?

Questions/Responses

When deciding on your internet services, do you or your stakeholders feel like they are able to make an informed decision about which provider or service package to choose?

Questions/Responses

How do you, or your stakeholders, without at-home broadband service, access the internet?

Questions/Responses

How do the broadband services that are currently available impact local stakeholders in setting and realizing short term objectives and long range plans (positively or negatively)?

Questions/Responses

What educational, economic, public health, civic engagement, and other goals would stakeholders wish to address with wider broadband access and/or adoption?

Questions/Responses

What are your expectations for the Delaware County Broadband Community Assessment?

Next Steps - Recap

Thank you.

Appendix

Section I. Federal and State Broadband Grant Program Research

Federal Broadband Grant Program Eligibility

Federal Agency	Grant Program	Eligibility Status	Notes
Appalachian Regional Commission (ARC)	Appalachian Regional Initiative for Stronger Economies (ARISE)	No	Not located in ARC footprint
	Area Development & Distressed Counties Programs	No	Not located in ARC footprint
	Central Appalachia & North Central/North Appalachia Broadband	No	Not located in ARC footprint
	Partnerships for Opportunity and Workforce and Economic Revitalization (POWER) Program	No	Not located in ARC footprint
Delta Regional Authority (DRA)	States Economic Development Assistance Program & Community Infrastructure Fund Program	No	Not located in DRA footprint
Department of Agriculture - Rural Development (USDA-RD)	Community Connect Grant Program	Yes (Select Areas)	Rural and must have 90 to 100% unserved at 10 Mbps / 1 Mbps. Cannot overlap RDOF funded areas.
	Distance Learning and Telemedicine Grants	Yes (Select Areas)	Rural and must have 90 to 100% unserved at 10 Mbps / 1 Mbps. Cannot overlap RDOF funded areas.
	ReConnect Program	Yes (Select Areas)	Rural and must have 50% unserved at 100 Mbps / 20 Mbps (previous round). Cannot overlap RDOF areas.
	Rural Broadband Access Loans and Loan Guarantees	Yes (Select Areas)	Rural and must have 90 to 100% unserved at 10 Mbps / 1 Mbps. Cannot overlap RDOF funded areas.
	Rural Economic Development Loan and Grant (REDLG) Program	No	Not an eligible applicant
	Rural Housing Service (RHS) Community Facilities (CF) Direct Loan and Grant Program	No	Not an eligible applicant
	Telecommunication Infrastructure Loans and Loan Guarantees	Yes (Select Areas)	Population cap is 5,000. Cannot overlap RDOF funded areas.
Department of Commerce - Economic Development Administration (EDA)	FY 2023 Public Works and Economic Adjustment Assistance Program	No	Deleware County is not eligible based on Per Capita Income or unemployment rate requirements.
Department of Commerce - National Telecommunications and Information Administration (NTIA)	Broadband Equity, Access, and Deployment (BEAD) Program	Yes	Deleware County is an eligible applicant

Federal Agency	Grant Program	Eligibility Status	Notes
Department of Education (DOEd)	Alaska Native and Native Hawaiian-Serving Institutions Program	No	Not an eligible applicant
	American Indian Tribally Controlled Colleges and Universities Program	No	Not an eligible applicant
	Asian American and Native American Pacific Islander-Servicing Institutions Program	No	Not an eligible applicant
	Governor's Emergency Education Relief Fund (GEER)	Yes (Secondary)	Local education agencies who recieve funding from the State of Ohio can utilize program for broadband infrastructure deployment
	Elementary and Secondary School Emergency Relief Fund (ESSER)	Yes (Secondary)	Local education agencies who recieve funding from the Department of Education can utilize program for broadband infrastructure deployment
	Higher Education Emergency Relief Fund	Yes (Secondary)	In partnership with an IHE
	Impact Aid Programs	Yes (Secondary)	Eligible local education agencies can apply for assistance to support educational technology needs
	Native American-Serving Non-Tribal Institutions Program	No	Not an eligible applicant
	Promise Neighborhoods Program	Yes (Secondary)	Eligible local education agencies can apply for assistance to support educational technology needs
	Rural, Low-Income School (RLIS) Program	Yes (Secondary)	Eligible local education agencies can apply for assistance to support educational technology needs
	Small, Rural School Achievement (SRSA) Program	Yes (Secondary)	Eligible local education agencies can apply for assistance to support educational technology needs
	Title I, Part A. Improving Basic Programs Operated by Local Education Agencies Program	Yes (Secondary)	Eligible local education agencies can apply for assistance to support educational technology needs
	Title III, Part A. Strengthening Institutions Program	Yes (Secondary)	In partnership with an IHE
	Title III, Part B. Strengthening Historically Black Colleges and Universities Program	No	Not an eligible applicant
	Title IV, Part A. Student Support and Academic Enrichment Program	Yes (Secondary)	State education agencies can apply for funding to support the use of technology in order to improve the academic achievement and digital literacy for all students.
Department of Housing and Urban Development (HUD)	Community Development Block Grant (CDBG)	Yes (Non-Entitlement)	In Low to Moderate Income areas in Deleware County.
	Choice Neighborhoods - Planning	Yes	In Low to Moderate Income areas in Deleware County.
	Choice Neighborhoods - Implementation	Yes	In Low to Moderate Income areas in Deleware County.
	Indian Community Development Block Grant	No	Not an eligible applicant
	Indian Housing Block Grant	No	Not an eligible applicant
	Title VI Loan Guarantee (IHBG)	No	Not an eligible applicant
Department of Labor - Employment and Training Administration (ETA)	Workforce Development in Telecommunications Sector: Apprenticeship Investments in Support of Broadband and 5G	Yes (Secondary)	In partnership with a local community college.

Federal Agency	Grant Program	Eligibility Status	Notes
Department of Transportation	Rebuilding American Infrastructure With Sustainability and Equity (RAISE) Grant Program	Yes	Innovative technologies are eligible funding activities as part of a transportation infrastructure project
	Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program	Yes	Innovative technologies are eligible funding activities as part of a transportation infrastructure project
Department of Treasury	Community Reinvestment Act (CRA) Program	Yes (Secondary)	In partnership with a CDE in eligible areas designated by the U.S. Treasury in predominant Low to Moderate Income areas
Federal Communications Commission (FCC) - Universal Service Administrative Co.	E-Rate (Schools and Libraries) Program	Yes (Secondary)	Local education agencies can apply for subsidies to reduce internet connectivity and devices for students on campus only.
	5G Fund for Rural America	Yes (Secondary)	ISPs can apply to the FCC and USAC for subsidies in certain eligible areas
	Rural Health Care Program	Yes (Secondary)	Rural public health authorities can apply to the FCC and USAC for subsidies to enhance connectivity to support telehealth in select census tracts.
	Rural Digital Opportunity Fund (RDOF)	Yes (Secondary)	ISPs can apply to the FCC and USAC for subsidies in certain eligible areas
Department of Homeland Security - Federal Emergency Management Agency	Building Resilient Infrastructure and Communities	Yes	Project must be tied to resiliency, support enhanced connectivity for emergency responders and be included in a FEMA approved Hazard Mitigation Action Plan.
Office of Library Services - Institute of Museum and Library Services (IMLS)	Native American Library Services: Basic Grants	No	Not an eligible applicant
	Native American Library Services: Enhancement Grants	No	Not an eligible applicant
National Science Foundation (NSF)	Campus Cyberinfrastructure (CC*) Program	Yes (Secondary)	In partnership with an IHE.
	Smart and Connected Communities (S&CC) Program	Yes (Secondary)	In partnership with an IHE.
	Spectrum and Wireless Innovation Enabled by Future Technologies (SWIFT) Program	Yes (Secondary)	In partnership with an IHE.
Northern Border Regional Commission	Economic and Infrastructure Development (EID) Program	No	Not located in the NBRC footprint

Federal Broadband Grant Program Matrix (Primary)

Federal Agency	Grant Program	Max. Grant	Program Capacity	Funding Type	Eligible Project Activities	Eligible Entities	Match Required
Department of Agriculture - Rural Development (USDA-RD)	Community Connect Grant Program	$3,000,000	$35,000,000	Grants	Infrastructure Development, Adoption & Digital Literacy and Public Computer Access	State and Local Government, Tribal Entities, Non-Profits, Private Corporations, LLCs	15%
	Distance Learning and Telemedicine Grants	$1,000,000	$64,991,000	Grants	Infrastructure Development, Adoption & Digital Literacy and Distance Learning & Telemedicine Equipment	State and Local Government, Tribal Entities, Non-Profits, Private Corporations, LLCs	15%
	ReConnect Program	$25,000,000 (Grant) / $50,000,000 (Loan)	$363,512,317	Grants, Combination Grant/Loan and Loans Only	Infrastructure Development, Acqusition of Facilities, Equipment and Professional Services	State and Local Government, Tribal Entities, Non-Profits, Private Corporations, LLCs	25%
	Rural Broadband Access Loans and Loan Guarantees	N/A	$11,500,000	Loan and Loan Guarantees	Infrastructure Development	State and Local Government, Tribal Entities, Private Corporations, LLCs	N/A
	Telecommunication Infrastructure Loans and Loan Guarantees	N/A	$690,000,000	Loan and Loan Guarantees	Infrastructure Development	State and Local Government, Tribal Entities, Private Corporations, LLCs	N/A
Department of Commerce - National Telecommunications and Information Administration (NTIA)	Broadband Equity, Access, and Deployment (BEAD) Program	Not Specified	$42,450,000,000	Grants	Planning & Broadband Infrastructure	States (Formula Allocation), Subgrantees: Local Government, Utility Company, Non-Profits, Co-Ops, For-Profits, Regional Planning Commissions	25%
Department of Housing and Urban Development (HUD)	Community Development Block Grant (CDBG)	Amounts Vary (Typical Award is <$500,000)	$3,300,000,000	Grants & Loan Guarantees (Sec. 108)	Infrastructure Development, Adoption & Digital Literacy, Planning and Public Computer Access	Local Government	0% (Entitlement Communities)
	Choice Neighborhoods - Planning	$450,000	$10,000,000	Grants	Planning	Local Government	0%
	Choice Neighborhoods - Implementation	$35,000,000	$379,000,000 (over 5 years)	Grants	Infrastructure Development, Adoption & Digital Literacy	Local Government	5%

Federal Agency	Grant Program	Max. Grant	Program Capacity	Funding Type	Eligible Project Activities	Eligible Entities	Match Required
Department of Transportation	Rebuilding American Infrastructure With Sustainability and Equity (RAISE) Grant Program	$1,000,000 (Rural) $5,000,000 (Urban)	$1,500,000,000	Grants	Planning, Capital Projects (Surface transportation projects), Innovative Technologies	State and Local Government, Transit Agencies, Port Authorities, and MPOs	20%
	Strengthening Mobility and Revolutionizing Transportation (SMART) Grants Program	$2,000,000 (Stage 1) $15,000,000 (Stage 2)	$100,000,000	Grants	Planning, Capital Projects (Surface transportation projects), Innovative Technologies	State and Local Government, Transit Agencies, Port Authorities, and MPOs	0% (Stage 1)
Department of Homeland Security - Federal Emergency Management Agency	Building Resilient Infrastructure and Communities	$600,000 (State) $50,000,000 (Competitive)	$2,295,000,000	Grants	Infrastructure Development and Planning	State and Local Government	25%

Federal Broadband Grant Program Synopses

United States Department of Agriculture - Rural Development

Community Connect Grant Program

CFDA Number: 10.863

Application Deadline: Spring 2024 (Anticipated)

Overview: The Community Connect Grant Program is authorized by the Consolidated Appropriations Acts of 2004 (P.L. 108-199), 2017 (P.L. 115-31) and 2018 (P.L. 115-141) to finance broadband transmission infrastructure in rural areas.

Purpose: The purpose of this grant program is to provide funding for broadband service in rural, economically-challenged communities where service does not currently exist.

Description: The program funds the following eligible project categories:

- Infrastructure Development
- Adoption and Digital Literacy and
- Public Computer Access

Eligible Project Activities:

- Construction, acquisition or leasing of facilities, including spectrum, land, towers or building used to deploy service to all residential and business customers in the proposed service area,
- Improvement, expansion, construction or acquisition of a Community Center to provide free access to broadband for public access 7 days a week. Grant funds provided for the Community Center cannot exceed the lesser of 10% of the total grant amount requested or $150,000,
- Funding for at least two but no more than ten Computer Access Points to be used in the Community Center and
- Cost of providing the necessary bandwidth to provide service free of charge to the Critical Community Facilities for two years.

Eligible Applicants: Eligible applicants include:

- Incorporated organization,
- Indian Tribe or Tribal Organization, as defined in 25 U.S.C. 450b(e),
- State or Local unit of Government
- Cooperative, private corporation or limited liability company organized on a for-profit or non-profit basis.

In addition to eligibility requirements listed above, applicants must also meet the following eligibility requirements:

- A project must also be located in rural areas with a population of 20,000 or less (map),
- Serve a Proposed Funded Service Area where broadband services (10 Mbps / 1 Mbps) do not currently exist (map),
- The applicant must agree to offer service at 25 Mbps / 3 Mbps to all residential and business customers within the service area,
- Provide broadband service at no charge for at least two years for each Critical Community Facility located within the service area,
- Provide a Community Center in the service area with at least two Computer Access Points and wireless access at 25 Mbps / 3 Mbps at no charge for at least two years and
- Not overlap with the service areas of current USDA Rural Utilities Service borrowers and grantees.

Total Funding Available: $35 Million

Award Floor: $100,000

Award Ceiling: $3,000,000

Grant Match: Grant recipients are required to provide matching contributions in cash or in-kind equal to 15% of the grant amount requested.

Period of Performance: Not specified

Special Requirements: The program requires Grant recipients to comply with various federal statutes and regulations including,

- NEPA Environmental Requirements,
- Flood Hazard Area Precautions,
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,
- Americans with Disabilities Act and
- Non-Duplication of Services

Program Point of Contact(s): A listing of USDA – RD State Offices can be found here.

Distance Learning and Telemedicine Grant Program

CFDA Number: 10.855

Application Deadline: Fall 2023 (Anticipated)

Overview: Since 1994, the Distance Learning and Telemedicine (DLT) Grant program has helped to establish hundreds of distance learning and telemedicine systems improving the quality of life for thousands of residents in rural communities across the United States.

Purpose: The purpose of this grant program is to assist rural communities in acquiring distance learning and telemedicine technologies to provide the link between local teachers and medical service providers who serve rural residents and other professionals located at distances too far to access otherwise.

Description: The program funds the following eligible project categories:

- Acquiring, by lease or purchase, eligible equipment,
- Acquiring instructional programming, and
- Providing technical assistance and instruction for using eligible equipment.

Eligible Project Activities:

- Computer hardware and software
- Site licenses and maintenance contracts
- Extended warranties (up to 3 years)
- Audio and video equipment
- Computer network components
- Telecommunications terminal equipment
- Data terminal equipment
- Interactive audio/visual equipment
- Inside wiring
- Broadband facilities, if owned by the applicant (20% of project budget limit)
- Instructional programming that is a capital asset, including the purchase or lease of instructional programming already on the market,
- Related software,
- Providing engineering and environmental studies relating to the establishment or expansion of the phase of the project to be financed with the grant (not to exceed 10% of the grant amount requested)

Eligible Applicants: Eligible applicants include:

- An Indian Tribe or Tribal Organization
- State or Local unit of Government
- Consortium
- Other legal entity, including a private corporation organized on a for-profit or non-profit basis

A project must also be located in rural areas with a population of 20,000 or less (map).

Total Funding Available: $64.9 Million

Award Floor: $50,000

Award Ceiling: $1,000,000

Grant Match: Grant recipients are required to provide matching contributions in cash or in-kind equal to 15% of the grant amount requested.

Period of Performance: Not specified

Special Requirements: For FY 2023, only one application per applicant is eligible for approval.

Additionally, the program requires Grant recipients to comply with various federal statutes and regulations including,

- NEPA Environmental Requirements,
- Flood Hazard Area Precautions,
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,
- Americans with Disabilities Act and
- Non-Duplication of Services

Program Point of Contact(s): A listing of USDA – RD State offices can be found here.

ReConnect Program

CFDA Number: 10.752

Application Deadline: Late Fall 2023 (Round 5)

Overview: The ReConnect Grant Program is authorized by the Consolidated Appropriations Acts of 2018 (P.L. 115-141) and the Rural Electrification Act of 1936, 7 U.S.C. 901 et seq. to finance broadband transmission infrastructure in rural areas.

Purpose: The purpose of this grant program is to expand broadband service in rural areas without sufficient access to broadband, defined as 100 megabits per second (Mbps) downstream and 20 Mbps upstream.

Description: The ReConnect Program furnishes loans and grants to provide funds for the costs of construction, improvement, or acquisition of facilities and equipment needed to provide broadband service in eligible rural areas.

Eligible Project Activities:

- Construction, acquisition or leasing of facilities, including spectrum, land, towers or building used to deploy service to all residential and business customers in the proposed

service area,
- Pre-application expenses (up to 5% of the award amount),
- Acquisition and improvement of an existing system that is currently providing insufficient broadband service (100% Loan option only) and
- Terrestrial based facilities that support the provision of satellite broadband service.

Eligible Applicants: Eligible applicants include:
- Cooperatives, non-profits or mutual associations,
- For-profit corporations or limited liability companies,
- States, local governments or any agency, subdivision, or political subdivision thereof,
- A territory or possession of the U.S. and
- An Indian Tribe or Tribal Organization, as defined in 25 U.S.C. 450b.

In addition to eligibility requirements listed above, applicants must also meet the following eligibility requirements:
- A project must also be located in rural areas with a population of 20,000 or less (map),
- Serve a Proposed Funded Service Area where broadband services (100 Mbps / 20 Mbps) do not currently exist (map):
  - 50% of the service area (50% Grant / 50% Loan Option and 100% Loan Option)
  - 90-100% of the service area (100% Grant Option)
- The applicant must agree to offer service at a minimum of 100 Mbps / 100 Mbps to all residential and business customers within the service area and
- Not overlap with the service areas of current USDA Rural Utilities Service borrowers and grantees.

Total Funding Available (Based on FY 2023 Appropriations): $363.5 Million

Award Floor: $100,000

Award Ceiling: $35 Million (100% Grant Option); $50 Million (50% Grant / 50% Loan Option); $50 Million (100% Loan Option)

Grant Match: Recipients of the 100% Grant Option are required to provide matching contributions in cash or in-kind equal to 25% of the grant amount requested.

Period of Performance: 60 Months

Special Requirements: The program requires Grant recipients to comply with various federal statutes and regulations including,
- NEPA Environmental Requirements,
- Flood Hazard Area Precautions,
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,
- Americans with Disabilities Act and
- Non-Duplication of Services

Program Point of Contact(s): A listing of USDA – RD State offices can be found here.

Rural Broadband Access Loans and Loan Guarantees

CFDA Number: 10.886

Application Deadline: Applications are accepted on a rolling basis through September 30, 2024.

Overview: The Rural Broadband Access Loan and Loan Guarantee Program is authorized by the Rural Electrification Act (7 U.S.C. 901 et seq.), as amended by the Agricultural Act of 2014 (Pub. L. 113– 79), also referred to as the 2014 Farm Bill. The program was also reauthorized in the 2018 Farm Bill, through fiscal year 2023.

Purpose: The purpose of this grant program is to provide funding for projects that offer broadband service at or beyond specific broadband lending speeds, which are determined by the RUS in the respective publication in the Federal Register. RUS established the minimum rate-of-data transmission of 25 megabits downstream and 3 megabits upstream for both mobile and fixed service.

Description: The program funds the following eligible loan types:
- Cost-of-Money Loans in the form of direct loans from the USDA Rural Utilities Service,
- Direct 4-Percent Loans which bear interest at 4 percent on each advance made to the borrower and
- Other Loan Guarantees provided by third party lenders, of which the RUS will guarantee up to 80 percent of the principal amount of the loan.

Eligible Project Activities:
- Construction, improvement and acquisition of all facilities required to provide service at the minimum speed established by the USDA,
- Cost of leasing facilities required to provide service is the lease qualifies as a capital lease under Generally Acceptable Accounting Procedures (GAAP),
- Acquisition of facilities, portions of an existing system and/or another company (up to 50% of the requested loan amount),
- Refinancing of an outstanding obligation from another telecommunications loan made by the USDA (up to 40% of the requested amount) and
- Pre-loan expenses including market surveys, consultant costs and fees (up to 5% of the requested amount).

Eligible Applicants: Eligible applicants include:
- Corporation,
- Limited Liability Company,
- Cooperative or mutual organization,
- Indian Tribe or Tribal Organization, as defined in 25 U.S.C. 450b and
- State or Local unit of Government.

In addition to eligibility requirements listed above, applicants must also meet the following eligibility requirements:
- A project must also be located in rural areas with a population of 20,000 or less (map),
- At least 15% of the households in the Proposed Funded Service Area do not have access to broadband service (map),
- No part of the Proposed Funded Service Area has three or more incumbent service providers and
- Non-duplicative of other borrowers or service areas funded by the RUS Telecommunications Program.

Total Funding Available: $11.5 Million (Based on FY 2023 Appropriations)

Award Floor: $100,000

Award Ceiling: N/A

Grant Match: As a condition to financing, an applicant must demonstrate an equity contribution in an amount that is at least 10% of the requested loan amount at the time of application submission.

Period of Performance: Loan terms are based upon the USDA's determination of the project's useful life plus three years.

Special Requirements: The program requires Grant recipients to comply with various federal statutes and regulations including,

- NEPA Environmental Requirements,
- Flood Hazard Area Precautions,
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,
- Americans with Disabilities Act and
- Non-Duplication of Services

Program Point of Contact(s): A listing of USDA – RD State offices can be found here.

Telecommunication Infrastructure Loans and Loan Guarantees

CFDA Number: 10.851

Application Deadline: Applications are accepted on a rolling basis through September 30, 2024.

Overview: The Telecommunications Infrastructure Loan and Loan Guarantee Program is authorized by the Rural Electrification Act (7 U.S.C. 901 et seq.), Titles II and III, 7 U.S.C. 921, 922-924, and 930-940.

Purpose: The purpose of this grant program is to provide financing for the construction, maintenance, improvement and expansion of telephone service and broadband in rural areas

Description: The program funds the following eligible loan types:

- Cost-of-Money Loans in the form of direct loans from the USDA Rural Utilities Service,
- Loan Guarantees through the Federal Financing Bank (FFB), and
- Hardship Loans in the form of direct loans from the USDA Rural Utilities Service.

Eligible Project Activities:

- Construction, improvement and acquisition of all facilities required to provide service at the minimum speed established by the USDA,
- Acquisition of facilities, portions of an existing system and/or another company (up to 50% of the requested loan amount), and
- Refinancing of an outstanding obligation from another telecommunications loan made by the USDA (up to 40% of the requested amount).

Eligible Applicants: Eligible applicants include:

- Corporation,
- Limited Liability Company,
- Cooperative or mutual organization,
- Indian Tribe or Tribal Organization, as defined in 25 U.S.C. 450b and
- State or Local unit of Government.

In addition to eligibility requirements listed above, applicants must also meet the following eligibility requirements:

- A project must also be located in rural areas with a population of 5,000 or less (map),
- Non-duplicative of other borrowers or service areas funded by the RUS Telecommunications Program.

Total Funding Available: $690 Million

Award Floor: $50,000

Award Ceiling: No limit has been specified by the USDA for this program.

Grant Match: As a condition to financing, an applicant must demonstrate an equity contribution in an amount that is at least 10% of the requested loan amount at the time of application submission.

Period of Performance: Loan terms are based upon the USDA's determination of the project's useful life plus three years.

Special Requirements: The program requires Grant recipients to comply with various federal statutes and regulations including,

- NEPA Environmental Requirements,
- Flood Hazard Area Precautions,
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,
- Americans with Disabilities Act and
- Non-Duplication of Services

Program Point of Contact(s): A listing of USDA – RD State offices can be found here.

Department of Commerce - National Telecommunications and Information Administration (NTIA)

Broadband Equity, Access, and Deployment Program (BEAD)

CFDA Number: 11.035

Application Deadline: Varies by State

Overview: The Broadband Equity, Access, and Deployment (BEAD) Program (Program), authorized by the Infrastructure Investment and Jobs Act of 2021, Division F, Title I, Section 60102, Public Law 117-58, 135 Stat. 429 (November 15, 2021) (Infrastructure Act or Act) also known as the Bipartisan Infrastructure Law. The BEAD Program provides new federal funding for NTIA to grant to all fifty states, the District of Columbia, and Puerto Rico (States), as well as American Samoa, the Commonwealth of the Northern Mariana Islands, Guam, and the United States Virgin Islands (Territories), and in certain circumstances political subdivisions of these States and Territories, for broadband planning, deployment, mapping, equity, and adoption activities.

Purpose: The purpose of the BEAD is to provide federal funding to States and U.S. Territories to deploy broadband infrastructure to eligible service areas of the country. Funding is distributed primarily based on the relative number of "unserved" locations (i.e., broadband-serviceable locations that lack access to Reliable Broadband Service at speeds of at least 25 Mbps downstream and 3 Mbps upstream and latency levels low enough to support real time, interactive applications) in each State and Territory.

Description: The program funds the following eligible project activities:

- Planning (e.g., feasibility)
- Broadband Infrastructure (e.g., construction)

Eligible Project Activities:

- At this time, only the Planning Grant NOFO has been released by NTIA. NTIA is expected to issue further NOFOs with additional details for State-level eligibility and project activities based on their 5-Year Action Plans, Initial Proposal and Final Proposal.

Eligible Applicants:

- States
- Washington, DC
- U.S. Territories
- The Commonwealth of the Northern Mariana Islands

Total Funding Available: $41,601,000,000

Award Floor: $100,000,000 (see special requirements)

Award Ceiling: Final State Allocations

Grant Match: 25%, unless designated as a "high-cost area" as defined in Section 60102(a)(2)(G), and other cases in which NTIA has waived the matching requirement pursuant to Section 60102(h)(3)(A)(ii)).

Period of Performance: 60 months

Special Requirements: Each State is eligible to receive a minimum allocation of $100,000,000. Each State may request up to $5,000,000 of its minimum allocation in Initial Planning Funds. American Samoa, Guam, the U.S. Virgin Islands, and the Commonwealth of the Northern Mariana Islands each are eligible to receive a minimum allocation of $25,000,000. Each of those territories may request up to $1,250,000 of its minimum allocation in Initial Planning Funds. Not less than twenty percent of the total allocation for a State or Territory will be made available at the approval of the Initial Proposal with remaining funds released upon approval of the Final Proposal.

The program requires also grant recipients to comply with various federal statutes and regulations including:

- NEPA Environmental Requirements,
- Flood Hazard Area Precautions,
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,
- Americans with Disabilities Act, and
- Appendix A. Certifications Regarding Federal Felony and Federal Criminal Tax Convictions, Unpaid Federal Tax Assessments and Delinquent Federal Tax Returns.

Program Point of Contact(s): The Office of Internet Activity and Growth can be contacted by E-mail here.

United States Department of Housing and Urban Development

Community Development Block Grant (CDBG) – Non-Entitlement Communities

CFDA Number: 14.218

Application Deadline: March 2024 (Anticipated)

Overview: The Community Development Block Grant (CDBG) Program provides annual grants on a formula basis to states, cities, and counties to develop viable urban communities by providing decent housing and a suitable living environment, and by expanding economic opportunities, principally for low- and moderate-income persons. The program is authorized under Title 1 of the Housing and Community Development Act of 1974, Public Law 93-383, as amended 42 U.S.C. 5301 et seq.

Purpose: The purpose of this grant program is to assist in the development of communities with respect to the development of housing, suitable living environments and economic opportunities primarily for persons with low and moderate incomes.

Description: The program funds the following eligible project categories:

- Economic Development,
- Homeownership Assistance,
- House Rehabilitation,
- Housing Acquisition,
- Land Acquisition to Support New Housing
- Microenterprise Programs,
- New Housing Construction or
- Public Facilities and Improvements

Eligible Project Activities:

- Acquisition of real property,
- Disposition of real property,
- Acquisition, construction, reconstruction, rehabilitation or installation of public facilities and improvements,
- Clearance, demolition and removal of buildings and improvements,
- Provision of public services which are directed toward improving the community's public services and facilities,
- Privately owned utilities including the acquisition, construction, reconstruction, rehabilitation or installation of distribution lines and facilities of privately-owned utilities,
- Assistance to facilitate economic development,
- Technical assistance,
- Digital literacy classes as a public service under 24 CFR 570.201(e),
- Assistance to Higher Education Institutions;
- Homeownership assistance.

Eligible Applicants:

- Principal cities of Metropolitan Statistical Areas (MSAs)
- Other metropolitan cities with populations of at least 50,000
- Qualified urban counties with populations of at least 200,000 (excluding the population of entitled cities)

Eligibility for participation as an entitlement community is based on population data provided by the U.S. Census Bureau and metropolitan area delineations published by the Office of Management and Budget. HUD determines the amount of each entitlement grantee's annual funding allocation by a statutory dual formula which uses several objective measures of community needs, including the extent of poverty, population, housing overcrowding, age of housing and population growth lag in relationship to other metropolitan areas.

Total Funding Available: $3.3 Billion

Award Floor: Not specified

Award Ceiling: Limit determined by formula-based allocation

Grant Match: No match or cost share is required for this program, however applicants who leverage other funds.

Period of Performance: The length of the project period is generally based on the implementation schedule submitted by the applicant and approved by HUD.

Special Requirements: It is required that the applicant demonstrate that at least 70% of the grant funding will be utilized for activities that benefit Low-to-Moderate Income persons in accordance with 24 CFR 1003.208. Low-to-Moderate Income means a family, household or individual whose income does not exceed 80% of the median income for the area.

The program requires Grant recipients to comply with various federal statutes and regulations including,

- NEPA Environmental Requirements,
- Flood Hazard Area Precautions,
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,
- Americans with Disabilities Act and
- Non-Duplication of Services

Program Point of Contact(s): A listing of U.S. Department of Housing and Urban Development offices can be found here.

Choice Neighborhoods – Planning

CFDA Number: 14.892

Application Deadline: Summer 2024 (Anticipated)

Overview: This program helps communities transform neighborhoods by redeveloping severely distressed public and/or HUD assisted housing and catalyzing improvements in the neighborhood, property, housing, businesses, services and schools.

Purpose: The purpose of this grant program is to leverage public and private investment to support locally driven strategies that address struggling neighborhoods through a comprehensive approach for transformation.

Description: The program funds the following eligible project categories:

- Planning and
- Action Activities

Eligible Project Activities (Planning Category):

- Performing comprehensive needs assessments to inform the development of the Transformation Plan,
- Performing comprehensive and integrated planning that addresses the challenges and gaps in services and assets identified through the needs assessments,
- Conducting technical planning studies concerning local development issues, priorities or suggested approaches,
- Developing Transformation Plans, including governance strategy that will provide long-term accountability and secure commitments to collaborate long-term to ensure successful implementation,
- Conducting public hearings, meetings, websites, etc. for stakeholder involvement regarding the Transformation Plan,
- Data collection and analysis to track impacts and
- Conducting site visits, research or participating in community of practice.

Eligible Project Activities (Action Activities Category):

- Reclaiming and recycling vacant property into community gardens, pocket parks, farmers markets or land banking (with maintenance),
- Beautification, placemaking and community arts projects, such as creative signage to enhance neighborhood branding, murals and sculptures, specialty streetscaping or garden tool loan programs,
- Owner-occupied home or business façade improvement programs,
- Neighborhood broadband/WiFi infrastructure and installation (service not eligible through the grant),
- Fresh food initiatives, such as farmers markets and mobile fresh food vendors and
- Gap financing for economic development projects that are ready for implementation.

Eligible Applicants: Eligible applicants include:

- Public Housing Authorities,
- Local governments,
- Tribal entities and
- Non-profits who hold a 501(c) status.

Regarding Public Housing Authorities in Troubled Status, HUD will determine whether the entity is eligible to apply for the grant.

Total Funding Available: $10 Million

Award Floor: Not specified

Award Ceiling: $450,000

Grant Match: 5%

Period of Performance: 24 Months (Planning Grant); 42 Months (Planning and Action Grant)

Special Requirements: The program requires Grant recipients to comply with the following special statutes and regulations including:

- Resolution of Civil Rights Matters,
- Outstanding Delinquent Federal Debts,
- Debarments and/or Suspensions,
- Pre-selection Review of Performance,
- Sufficient of Financial Management System,
- False Statements,
- Mandatory Disclosure Requirement,
- Prohibition Against Lobbying Activities and
- Equal Participation of Faith-Based Organizations in HUD Programs and Activities

The program also requires Grant recipients to comply with the following additional requirements:

- NEPA Environmental Requirements,
- Flood Hazard Area Precautions,
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,
- Americans with Disabilities Act and
- Non-Duplication of Services.

Program Point of Contact(s): The Choice Neighborhoods Program Office can be contacted by E-mail here.

Choice Neighborhoods – Implementation

CFDA Number: 14.889

Application Deadline: March 4, 2024

Overview: This program helps communities transform neighborhoods by redeveloping severely distressed public and/or HUD assisted housing and catalyzing improvements in the neighborhood, property, housing, businesses, services and schools.

Purpose: The purpose of this grant program is to leverage public and private investment to support locally driven strategies that address struggling neighborhoods through a comprehensive approach for transformation.

Description: The Choice Neighborhoods is focused on three core goals:

1. Housing: Replace severely distressed public and assisted housing with high-quality mixed-income housing that is well-managed and responsive to the needs of the surrounding neighborhood;

2. People: Improve outcomes of households living in the target housing related to employment and income, health, and children's education; and

3. Neighborhood: Create the conditions necessary for public and private reinvestment in distressed neighborhoods to offer the kinds of amenities and assets, including safety, good schools, and commercial activity, that are important to families' choices about their community.

Eligible Project Activities:

- Construction, acquisition or rehabilitation of public, assisted, and affordable housing (available to households earning 80 -120 percent of AMI) that incorporates sustainable design principles, including energy efficiency,
- Acquisition, demolition or disposition of properties, including Federal Housing Administration-Real Estate Owned properties,
- Providing supportive supports for residents,
- Partnering with employers and for-profit and non-profit organizations to create jobs and job training opportunities,
- Relocation assistance under Section 8 of the United States Housing Act of 1937,
- Activities that promote sustainable neighborhoods and incorporate principles of sustainable design and development,
- Critical community improvements as define further below,
- Endowments,
- Conversion of vacant or foreclosed properties,
- Architectural and engineering work,
- Administrative costs and
- Legal fees.

The program also allows for up to 15% of funding to be utilized for Critical Community Improvements for the following activities:

- Financing for commercial and economic development projects,
- Neighborhood business façade improvement programs,
- Place-making projects,
- Neighborhood broadband,
- Revolving loan funds for business attraction and retention,
- Streetscape improvements above and beyond the locality's norm,
- Programs to improve housing in the neighborhood surrounding the target housing subject of this application and
- Acquisition of underutilized land for new parks, community gardens, community facilities or other uses approved by HUD.

Eligible Applicants: Eligible applicants include:

- Public Housing Authorities,
- Local governments,
- Tribal entities and
- Non-profits who hold a 501(c) status.

Total Funding Available: $379 Million (over 5 years)

Award Floor: Not specified

Award Ceiling: $35 Million

Grant Match: 5%

Period of Performance: 72 Months

Special Requirements: The program requires Grant recipients to comply with the following special statutes and regulations including:

- Resolution of Civil Rights Matters,
- Outstanding Delinquent Federal Debts,
- Debarments and/or Suspensions,
- Pre-selection Review of Performance,
- Sufficient of Financial Management System,
- False Statements,
- Mandatory Disclosure Requirement,
- Prohibition Against Lobbying Activities and
- Equal Participation of Faith-Based Organizations in HUD Programs and Activities

The program also requires Grant recipients to comply with the following additional requirements:

- NEPA Environmental Requirements,
- Flood Hazard Area Precautions,
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,
- Americans with Disabilities Act and
- Non-Duplication of Services.

Program Point of Contact(s): The Choice Neighborhoods Program Office can be contacted by E-mail here.

U.S. Department of Transportation

Rebuilding American Infrastructure With Sustainability and Equity (RAISE) Grant Program

CFDA Number: 20.933

Application Deadline: March 2024 (Anticipated)

Overview: The Consolidated Appropriations Act, 2021 (Pub. L. 116-260) appropriated $1 billion to be awarded by the U.S. Department of Transportation ("DOT") for National Infrastructure Investments (now known as Rebuilding American Infrastructure with Sustainability and Equity (RAISE) Grants.) RAISE Grants (formerly known as the BUILD grant) are for capital investments in surface transportation that will have a significant local or regional impact.

Purpose: The focus of this program is to fund critical improvements to local, state, and federal transportation infrastructure that result in good-paying jobs, improve safety, apply transformative technology, and explicitly address climate change and racial equity.

Description: The program funds the following eligible broadband related project aspects:

- Innovative Technologies including:
  - Conflict detection and mitigation technologies (e.g., intersection alerts and signal prioritization);
  - Dynamic signaling, smart traffic signals, or pricing systems to reduce congestion;
  - Traveler information systems, to include work zone data exchanges;
  - Signage and design features that facilitate autonomous or semi-autonomous vehicle technologies;
  - Applications to automatically capture and report safety-related issues (e.g., identifying and documenting near-miss incidents);
  - Vehicle-to-Everything V2X Technologies (e.g. technology that facilitates passing of information between a vehicle and any entity that may affect the vehicle);
  - Vehicle-to-Infrastructure (V2I) Technologies (e.g., digital, physical, coordination, and other infrastructure technologies and systems that allow vehicles to interact with transportation infrastructure in ways that improve their mutual performance);
  - Vehicle-to-Grid Technologies (e.g., technologies and infrastructure that encourage electric vehicle charging, and broader sustainability of the power grid);
  - Cybersecurity elements to protect safety-critical systems;
  - Broadband deployment and the installation of high-speed networks concurrent with the transportation project construction;
  - Technology at land and sea ports of entry that reduces congestion, wait times, and delays, while maintaining or enhancing the integrity of our border;
  - Work Zone data exchanges or related data exchanges; or
  - Other Intelligent Transportation Systems (ITS) that directly benefit the project's users.

Eligible Project Activities:

- Planning

Activities eligible for funding under RAISE planning grants are related to the planning, feasibility, preparation, or design of eligible surface transportation capital projects.

- Capital Projects

Eligible projects for RAISE grants are surface transportation capital projects within the United States or any territory or possession of the United States that include, but are not limited to:

1. 1. highway, bridge, or other road projects eligible under title 23, United States Code;
2. 2. public transportation projects eligible under chapter 53 of title 49, United States Code;
3. 3. passenger and freight rail transportation projects;
4. 4. port infrastructure investments (including inland port infrastructure and land ports of entry);
5. 5. intermodal projects; and
6. 6. projects investing in surface transportation facilities that are located on Tribal land and for which title or maintenance responsibility is vested in the Federal Government.

Eligible Applicants: Eligible applicants include:

- State, local, Tribal and U.S. territories' governments
- Transit agencies
- Port Authorities
- Metropolitan Planning Organizations (MPOs)
- Other political subdivisions of State or local governments

Total Funding Available: $1 Billion

Award Floor:

- Capital Projects: $5 Million/$1 Million (Rural Areas)
- Planning: There is no minimum award size for RAISE planning grants, regardless of location.

Award Ceiling: $25 Million

Grant Match: 20%

Period of Performance: All RAISE funds must be expended by September 30, 2029.

Special Requirements:

The primary selection criteria are:

- safety,
- environmental sustainability,
- quality of life,

- economic competitiveness, and
- state of good repair.

The secondary selection criteria are:

- partnership and
- innovation.
- If an applicant is proposing to adopt innovative technology, the application should demonstrate the applicant's capacity to implement those innovations and understanding of applicable Federal requirements, including permitting, approvals, exemptions, waivers, or other procedural actions, and the effects of those innovations on the project delivery timeline. Additionally, each applicant selected for RAISE grant funding must demonstrate effort to consider climate change and environmental justice impacts and improve racial equity and reduce barriers to opportunity.

The program also requires Grant recipients to comply with the following additional requirements:

- NEPA Environmental Requirements,
- Flood Hazard Area Precautions,
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,
- Americans with Disabilities Act and
- Non-Duplication of Services.

Program Point of Contact(s): The RAISE Grant Program Office can be contacted by E-mail here.

Strengthening Mobility and Revolutionizing Transportation (SMART) Grant Program

CFDA Number: 20.941

Application Deadline: October 10, 2023

Overview: Section 25005 of the Infrastructure Investment and Jobs Act (Pub. L. 117–58, November 15, 2021; also referred to as the "Bipartisan Infrastructure Law" or "BIL") authorized and appropriated $100 million to be awarded by the Department of Transportation (DOT) for FY 2022 for the SMART Grants Program. The FY22 funding will be implemented, as appropriate and consistent with law, in alignment with the priorities in Executive Order 14052, Implementation of the Infrastructure Investment and Jobs Act (86 FR 64355).

Purpose: The purpose of the SMART Grants Program is to conduct demonstration projects focused on advanced smart city or community technologies and systems in a variety of communities to improve transportation efficiency and safety. The program funds projects that are focused on using technology interventions to solve real-world challenges and build data and technology capacity and expertise in the public sector.

Description: Eligible development and construction activities for grant funding are the following:

- planning;
- feasibility analyses;
- revenue forecasting;
- environmental review;
- permitting;
- preliminary engineering and design work;
- systems development or information technology work;
- acquisition of real property (including land and improvements to land relating to an eligible project);
- construction;
- reconstruction;
- rehabilitation;
- replacement;
- environmental mitigation;
- construction contingencies; and
- acquisition of equipment, including vehicles.

The following are not eligible costs for SMART Grants Program funding:

- reimbursement of any pre-award costs or application preparation costs of the SMART grant application;
- traffic or parking enforcement activity; or
- purchase or lease of a license plate reader.

Federal funds may not be used to support or oppose union organizing, whether directly or as an offset for other funds. For grant recipients receiving an award, project evaluation costs are allowable costs (either as direct or indirect), unless prohibited by statute or regulation, and such costs may include the personnel and equipment needed for data infrastructure and expertise in data analysis, performance, and evaluation. (2 CFR Part 200).

Eligible Project Activities: A SMART grant may be used to carry out a project that demonstrates at least one of the following:

- Coordinated automation- Use of automated transportation and autonomous vehicles while working to minimize the impact on the accessibility of any other user group or mode of travel.
- Connected vehicles- Vehicles that send and receive information regarding vehicle movements in the network and use vehicle-to-vehicle and vehicle-to-everything communications to provide advanced and reliable connectivity.
- Sensors- Deployment and use of a collective intelligent infrastructure that allows sensors to collect and report real-time data to inform everyday transportation-related operations and performance.
- Systems integration- Integration of intelligent transportation systems with other existing systems and other advanced transportation technologies.
- Delivery/logistics- Innovative data and technological solutions supporting efficient goods movement, such as connected vehicle probe data, road weather data, or global positioning data to improve on-time pickup and delivery, improved travel time reliability, reduced fuel consumption and emissions, and reduced labor and vehicle maintenance costs.
- Innovative aviation- Leveraging the use of innovative aviation technologies, such as unmanned aircraft systems, to support transportation safety and efficiencies, including traffic monitoring and infrastructure inspection.
- Smart grid- Developing a programmable and efficient energy transmission and distribution system to support the adoption or expansion of energy capture, electric vehicle deployment, or freight or commercial fleet fuel efficiency
- Traffic signals- Improving the active management and functioning of traffic signals, including through:
  - Use of automated traffic signal performance measures;

- Implementing strategies, activities, and projects that support active management of traffic signal operations, including through optimization of corridor timing; improved vehicle, pedestrian, and bicycle detection at traffic signals; or the use of connected vehicle technologies;
- Replacement of outdated traffic signals; or
- For an eligible entity serving a population of less than 500,000, paying the costs of temporary staffing hours dedicated to updating traffic signal technology.

Eligible Applicants: Eligible applicants include:

- State, local, Tribal and U.S. territories' governments
- Transit agencies
- Port Authorities
- Metropolitan Planning Organizations (MPOs)
- Other political subdivisions of State or local governments

Total Funding Available: $100 Million

Award Floor: $2 Million: Stage 1 Grant

Award Ceiling: $15 Million: Stage 2 Grant

Grant Match: Cost sharing or matching is not required for Stage I: Planning and Prototyping.

Period of Performance: 18 Months: Stage 1 Grant

Special Requirements:

SMART Grants Program Priorities

As established in BIL, projects funded by the SMART Grants Program use advanced data, technology, and applications to provide significant benefits to a local area, a State, a region, or the United States. These benefits are identified in BIL and align to the following categories:

- Safety and reliability: Improve the safety of systems for pedestrians, bicyclists, and the broader traveling public. Improve emergency response.
- Resiliency: Increase the reliability and resiliency of the transportation system, including cybersecurity and resiliency to climate change effects.
- Equity and access: Connect or expand access for underserved or disadvantaged populations. Improve access to jobs, education, and essential services.
- Climate: Reduce congestion and/or air pollution, including greenhouse gases. Improve energy efficiency.
- Partnerships: Contribute to economic competitiveness and incentivize private sector
- investments or partnerships, including technical and financial commitments on the proposed solution. Demonstrate committed leadership and capacity from the applicant, partners, and community.
- Integration: Improve integration of systems and promote connectivity of infrastructure, connected vehicles, pedestrians, bicyclists, and the broader traveling public.

The Department will prioritize SMART grants funding applications that demonstrate the following characteristics, identified in BIL:

- Fit, scale, and adoption: Right-size the proposed solution to population density and demographics, the physical attributes of the community and transportation system, and the transportation needs of the community. Confirm technologies are capable of being integrated with existing transportation systems, including transit. Leverage technologies in repeatable ways that can be scaled and adopted by communities.
- Data sharing, cybersecurity, and privacy: Promote public and private sharing of data and best practices and the use of open platforms, open data formats, technology-neutral requirements, and interoperability. Promote industry best practices regarding cybersecurity and technology standards. Safeguard individual privacy.
- Workforce development: Promote a skilled and inclusive workforce.
- Measurement and validation: Allow for the measurement and validation of the cost savings and performance improvements associated with the installation and use of smart city or community technologies and practices.

To accomplish these objectives, the SMART Grants Program will fund projects that focus on using technology interventions to solve real-world challenges facing communities.

The program also requires Grant recipients to comply with the following additional requirements:

- NEPA Environmental Requirements,
- Flood Hazard Area Precautions,
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,
- Americans with Disabilities Act and
- Non-Duplication of Services.

Program Point of Contact(s): The SMART Grant Program Office can be contacted by E-mail here.

United States Department of Homeland Security - Federal Emergency Management Agency

Building Resilient Infrastructure and Communities

CFDA Number: 97.047

Application Deadline: February 29, 2024

Overview: The Building Resilient Infrastructure and Communities (BRIC) program makes federal funds available to states, U.S territories, Indian tribal governments, and local communities for pre-disaster mitigation activities.

Purpose: The guiding principles of the program are to:

(1) support state and local governments, tribes, and territories through capability- and capacity-building to enable them to identify mitigation actions and implement projects that reduce risks posed by natural hazards;

(2) encourage and enable innovation while allowing flexibility, consistency, and effectiveness;

(3) promote partnerships and enable high-impact investments to reduce risk from natural hazards with a focus on critical services and facilities, public infrastructure, public safety, public health, and communities;

(4) provide a significant opportunity to reduce future losses and minimize impacts on the Disaster Relief Fund; and

(5) support the adoption and enforcement of building codes, standards, and policies that will protect the health, safety, and general welfare of the public, take into account future conditions, and have long-lasting impacts on community risk reduction, including for critical services and facilities and for future disaster costs.

Description: The program funds the following eligible project categories:

- Capacity and Capacity-Building (C&CB)
  - Activities which enhance the knowledge, skills, expertise, etc., of the current workforce to expand or improve the administration of mitigation assistance.
  - This includes activities in the following sub-categories:

  - building codes activities,
  - partnerships,
  - project scoping,
  - mitigation planning and planning-related activities,
  - and other activities
- Mitigation Projects
  - Cost-effective projects designed to increase resilience and public safety; reduce injuries and loss of life; and reduce damage and destruction to property, critical services, facilities, and infrastructure.
- Management Costs
  - Financial assistance to reimburse the Recipient and subrecipient for eligible and reasonable indirect costs, direct administrative costs, and other administrative expenses associated with a specific mitigation measure or project
- Direct Technical Assistance
  - Assistance to build a community's capacity and capability to improve its resiliency to natural hazards and to ensure stakeholders are capable of building and sustaining successful mitigation programs, submitting high-quality applications, and implementing new and innovative projects that reduce risk from a wide range of natural hazards.

Eligible Applicants: Eligible applicants include:

- States,
- District of Columbia,
- U.S. Territories and
- Indian Tribal Governments, as defined in 25 U.S.C. 450b

According to the Notice of Funding Opportunity, local governments, including cities, townships, counties, special district governments, and Indian tribal governments (including federally recognized tribes who choose to apply as subapplicants) are considered subapplicants and must submit subapplications for financial assistance or letters of interest for non-financial Direct Technical Assistance to their state/territory/tribal Applicant agency.

In addition to eligibility requirements listed above, applicants must also meet the following eligibility requirements:

- States and territories that have had a major disaster declaration under the Stafford Act in the 7 years prior to the annual application period start date are eligible to apply to FEMA for federal assistance under BRIC (applicants). As a result of numerous major disaster declarations, ALL states, territories, the District of Columbia, and all federally recognized tribal governments are eligible to apply in FY 2021.
- Local governments are eligible to apply to eligible states and territories for federal assistance under BRIC (subapplicants). Individuals, businesses, and non-profit organizations are not eligible to apply for BRIC funds; however, an eligible applicant or subapplicant may apply for funding on behalf of individuals, businesses, and nonprofit organizations.
- Applicants are required to have a FEMA-approved State or Tribal Hazard Mitigation Plan in accordance with Title 44 of the Code of Federal Regulations (C.F.R.) Part 201 by the application deadline and at the time of obligation of the award.
- Subapplicants are required to have a FEMA-approved Local or Tribal Hazard Mitigation Plan in accordance with 44 CFR Part 201 by the Application deadline and at the time of obligation of grant funds for mitigation projects and C&CB activities (with the exception of mitigation planning).
- To be considered for financial assistance, all applicants must submit their FY2023 BRIC grant applications to FEMA via FEMA GO.

Total Funding Available: $2.295 Billion

Award Floor: Not specified

Award Ceiling:

- $1,000,000 (State Allocation)
- $50,000,000 (National Competition)

Grant Match: 25% (General), 10% (Economically Disadvantaged Rural Communities), 0% (Insular Areas)

Period of Performance: 36 Months

Special Requirements: The program requires Grant recipients to comply with the following special statutes and regulations including:

- Resolution of Civil Rights Matters,
- Outstanding Delinquent Federal Debts,
- Debarments and/or Suspensions,
- Pre-selection Review of Performance,
- Sufficient of Financial Management System,
- False Statements,
- Mandatory Disclosure Requirement,
- Prohibition Against Lobbying Activities and
- Equal Participation of Faith-Based Organizations in HUD Programs and Activities

The program also requires Grant recipients to comply with the following additional requirements:

- NEPA Environmental Requirements,
- Flood Hazard Area Precautions,
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970,
- Buy American
- Americans with Disabilities Act and
- Non-Duplication of Services.

Mitigation projects must be cost-effective and designed to increase resilience and reduce risk of injuries, loss of life, and damage and destruction of property, including critical services and facilities. This means the project, as documented by the Applicant, achieves the following goals:

- Addresses a problem that has been repetitive or that poses a risk to public health and safety and improved property if left unresolved;
- Satisfies applicable cost-effectiveness requirements through completion of a Benefits-to-Cost Analysis (BCA) conducted in compliance with OMB Circular A-94 as discussed in Section A.10, Performance Metrics;
- Contributes, to the extent practicable, to a long-term solution to the problem it is intended to address; and
- Accounts for long-term changes to the areas and entities it protects and has manageable future maintenance and modification requirements.

Program Point of Contact(s): A listing of State Hazard Mitigation Officers (SHMOs) can be found here.

Federal Broadband Grant Programs (Secondary)

In addition to the federal broadband grant programs listed as primary matches, Delaware County may consider seeking additional funding opportunities through the following agencies and programs with other eligible applicants:

United States Department of Education

- Governor's Emergency Education Relief Fund (GEER)
- Elementary and Secondary School Emergency Relief Fund (ESSER)
- Higher Education Emergency Relief Fund
- Impact Aid Programs
- Promise Neighborhoods Programs
- Rural, Low-Income School (RLIS) Program
- Small, Rural School Achievement (SRSA) Program
- Title I, Part A. Improving Basic Programs Operated by Local Education Agencies Program
- Title III, Part A. Strengthening Institutions Program
- Title IV, Part A. Student Support and Academic Enrichment Program

United States Department of Labor – Employment and Training Administration

- Workforce Development in Telecommunications Sector: Apprenticeship Investments in Support of Broadband and 5G

United States Department of Treasury – Office of the Comptroller of the Currency (OCC)

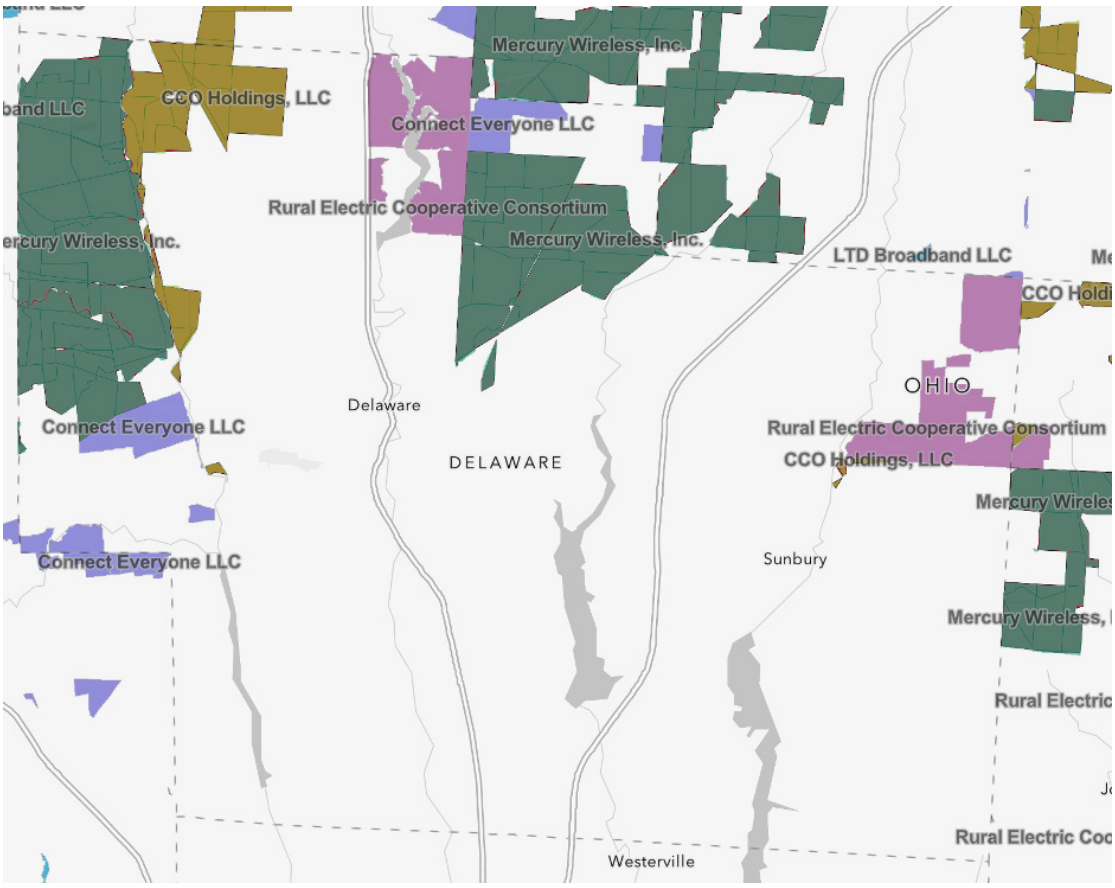
- Community Reinvestment Act (CRA) Program

Federal Communications Commission – Universal Service Administrative Company

- E-Rate (Schools and Libraries) Program
- High Cost Program (CAF, RDOF & 5G Fund)
- Rural Health Care Program
- Rural Digital Opportunity Fund (RDOF)

The map below illustrates the awards from the RDOF program located within Delaware County:

Please note that Connect Everyone, LLC was not fully authorized by the Federal Communications Commission as of the date of publication, however the following providers have



received full approval to commence their RDOF deployments:

- Mercury Wireless, Inc.
- Charter/Spectrum (CCO Holdings, LLC)
- Conexon (Rural Electric Cooperative Consortium)

Additional information regarding individual RDOF awards, number of locations funded, and technology type can be found here: https://experience.arcgis.com/experience/0b324cabf7b94d9ca34caa9361122d94/

State Broadband Grant Program Eligibility

Ohio Department of Development - BroadbandOhio

Ohio Residential Broadband Expansion Grant Program

Purpose: The first round of the Ohio Residential Broadband Expansion Grant Program (ORBEG) awarded grants to internet service providers to fund the construction of broadband projects in unserved (areas below 10 Mbps download and 1 Mbps upload) and underserved (areas below 25 Mbps download and 3 Mbps upload) areas of the state. The program is administered by BroadbandOhio, a division of the Ohio Department of Development.

Grants are provided to internet service providers to help with the cost of expanding into unserved and underserved areas of Ohio. The grants are designed to help with the infrastructure costs of the project and help build the networks in areas that lack high-speed internet. The grants will cover the "broadband funding gap," which is the difference between the total amount of money a broadband provider calculates is necessary to construct the last mile of a specific broadband network and the total amount of money that the provider has determined is the maximum amount of money that is cost effective for the provider to invest in last mile construction for that network.

Through funding made available through the U.S Department of Treasury's American Rescue Plan Act (ARPA) Capital Projects Fund, BroadbandOhio is providing $77.5 million in funding for a second round of the ORBEG Program. For the second round, BroadbandOhio is targeting locations within the State that are considered underserved (areas below 100 Mbps download and 20 Mbps upload) and unserved (areas below 25 Mbps download and 3 Mbps upload). Due to ARPA requirements, applicants must propose a project that provides broadband service at a minimum of 100 Mbps symmetrical. The grant funding supports the development of and construction of broadband network infrastructure and equipment (e.g., switching, routing, access, transport, etc.). Lastly, internet service providers utilizing investments funded by the second round of ORBEG will be required to participate in the Federal Communications Commission's (FCC) Affordable Connectivity Program (ACP) – a $30 per month subsidy for low-income families.

Eligible Applicants: Only broadband providers are eligible to apply for the program.

Total Funding Available:

- $250 Million (Round 1)
- $77.5 Million (Round 2)

Grant Match: No grant match was specified during the initial or second rounds of ORBG funding due to the program being a funding gap program.

The first round of ORBEG grant applications were requested by BroadbandOhio on August 6, 2021 and awards were finalized in late March 2022. A second round of ORBEG will open on November 6, 2023 and close on January 5, 2024 with awards expected to be announced by the end of Q2 2024.

Additional information, including the Application Packet, guidelines, scoring criteria, and broadband mapping data are available at: https://broadband.ohio.gov/grant-opportunities/grant-opportunities-1/grant-opportunities-1

Section II. Evaluation of Project Opportunities

Funding Needs Matrix

Opportunity	Planning	Design	Construction
Middle Mile (Backbone)	X	X	X
Last Mile (FTTP)	X	X	X
Wireless	X	X	X
Telehealth	X	X	X
Economic Development	X	X	X
Emergency Response	X	X	X
Distance Learning	X	X	X

Eligible Project Activities

Project	Needs	Agency	Potential Funding Program(s)
Middle Mile (Backbone)	**Planning, Design, Construction & Equipment**	**DHS-FEMA** **USDA-RD** **USDOC-NTIA**	• **Building Resilient Infrastructure and Communities (BRIC)** • **ReConnect Pilot Program** • **Rural Broadband Access Loan and Loan Guarantees** • **Broadband Equity, Access, and Deployment (BEAD) Program**

Last Mile (FTTP)	**Planning, Design, Construction & Equipment**	**USDOC-NTIA** **USDA-RD** **USDHUD**	• **Broadband Equity, Access, and Deployment (BEAD) Program** • **ReConnect Pilot Program** • **Rural Broadband Access Loan and Loan Guarantees** • **Telecommunications Infrastructure Loans and Loan Guarantees** • **Community Development Block Program** • **Choice Neighborhoods - Implementation** • **Choice Neighborhoods - Planning**
Telehealth **Economic Development** **Emergency Response** **Distance Learning**	**Planning, Design, Construction & Devices**	**FCC-USAC** **USDA-RD** **USDHUD** **DHS-FEMA**	• **Rural Health Care Program** • **E-Rate (Schools and Libraries) Program** • **Community Connect Grant Program** • **Distance Learning and Telemedicine Grant** • **ReConnect Pilot Program** • **Rural Broadband Access Loan and Loan Guarantees** • **Community Development Block Program** • **Choice Neighborhoods - Implementation** • **Choice Neighborhoods - Planning** • **Building Resilient Infrastructure and Communities (BRIC)**

ACRONYMS:
DHS - FEMA: Department of Homeland Security - Federal Emergency Management Agency
FCC - USAC: Federal Communications Commission - Universal Service Administrative Company
USDA-RD: United States Department of Agriculture - Rural Development
USDOC-EDA: United States Department of Commerce - Economic Development Administration
USDOC-NTIA: National Telecommunications and Information Administration
USDHUD: United States Department of Housing and Urban Development

Section III. Preparing for Grant Funding Opportunities

Based on our previous experience working with other communities regarding the development of funding applications, we would like to propose several studies that we recommend completing prior to applying for federal grant funding opportunities. Each of these documents are required by the funding agencies in order to satisfy various programmatic and federal requirements and their completion ahead of time provides greater flexibility for Delaware County when considering multiple avenues of funding the proposed network solution.

Below are several studies that are uniform requirements for seeking federal funding:

- Preliminary and Final Engineering Feasibility Report (EFR)
  - The Preliminary and Final EFR is the document that is utilized by the funding agencies to understand the needs and existing conditions of the community and the proposed solution to address those needs. The EFR includes an overview of the project's scope, size, cost and alignment with the communities' priorities (i.e. closing the Digital Divide, economic development, workforce development, etc.). Typically, funders will accept a Preliminary EFR during the grant application phase and once funding is awarded, the agency will provide comments based on their review to finalize the document. Prior to the release of funding for construction, most funding agencies will require the EFR to be approved to ensure project feasibility.
- General Application Information
  - Depending on the nature of the grant, applicants are required to provide some general application information including a project description, stakeholders involved, documenting public and business support, anticipated economic impact, alignment with the agency and grant programs goals and objectives, project schedule, and proposed equipment.
- Proforma
  - Federal agencies typically request a proforma that projects fiscal expenditures (planning/design, construction, and operations) and revenue over a long-term period, 10 - 20 years, etc., to understand the financial sustainability of the project.
- Environmental Narrative
  - To satisfy National Environmental Policy Act requirements, applicants seeking federal funding must provide information to the funding agency regarding the project's potential impact on the environment. Since a variety of federal regulations exist, such as the Clean Water Act, Clean Air Act, Endangered Species Act, etc. it is important for the applicant to document how the proposed project impacts the environment. For projects that are located in environmentally sensitive areas such as wetlands, brownfields, preservation areas, etc. it is critical that the applicant document how the project will not negatively impact the environment. Typically, the federal funding agency will review the Environmental Narrative/Questionnaire to determine if any additional studies are required prior to issuing a Finding of No Significant Impact (FONSI). If additional studies are required such as Archeological, Air Quality, or Geotechnical surveys, the federal funding agency will require that these be completed prior to issuing a FONSI and beginning construction activities. Additionally, the federal funding agency may require coordination with other federal agencies (i.e. United States Army Corps of Engineers, Fish and Wildlife, Department of Interior, etc.) for their respective reviews prior to issuing a FONSI.

Through our team's past experience applying and obtaining financial assistance, we have consistently observed that communities who have the proper engineering and technical information required to apply completed ahead of time are most prepared, confident, and competitive when seeking grant funding. Often, federal agencies only provide between 45 - 60 days for application submission which leaves very little time to begin these studies and assessment while the application period is open.

Therefore, if Delaware County is strongly interested in seeking grant funding to address its broadband infrastructure and accessibility gaps, we recommend that they conduct these efforts as soon as possible so they are prepared and ready for future funding opportunities. Additionally, prior to applying for grant funding, it is strongly recommended that Delaware County coordinate closely with BroadbandOhio and other key stakeholders to ensure that the proposal is aligned with State planning efforts and to include the County's needs with respect to project costs to reach unserved and underserved areas. It is also important to note that partnerships with related stakeholders can possibly strengthen potential applications for funding, however more weight is given to partnerships that have been formally established prior to applying for funding. Lastly, due to the varying amount of local matching funding required to pursue these opportunities, we suggest that the County identify sources and amounts of matching funding to determine the respective capacity to secure grant funding.