

Fall 2021

Carroll County Feasibility Findings

ValleyNet + Rural Innovation Strategies, Inc.



Foundational assumptions in the Feasibility Analysis

- All towns in Carroll County were included in the analysis
- Network will need to be built to prioritize reaching the unserved areas due to constraints on funding sources,
 - However it will need to pass through already served areas to reach all unserved areas
- Network will be fiber optic, built aerially (on poles) when possible, and use Passive Optical Network (PON) engineering, which is best practice for rural areas
- Other key assumptions, such as cost of construction per mile, cost of installation, penetration (subscription rates) and many other factors, were based on historical averages for comparable NH networks, standard best practices for fiber planning, and current observed industry trends

Penetration and Service Tier Assumptions

	cost per mo	subscription mix
base offering	\$65.00	50%
tier 1	\$95.00	35%
tier 2	\$125.00	15%
phone service	\$25.00	50%
Average Revenue Per User (ARPU)	\$97.00	

Penetration Rate Assumptions - First 4 years		
	Already Served Areas	Unserved Areas
Year		
1	11%	22%
2	19%	38%
3	25%	50%
4	30%	60%

Work that contributed to the Feasibility Analysis

- Combined the Community Survey, RFI responses from select towns, and FCC data to establish understanding of un- and underserved areas
- Used GIS software and data on unserved areas, Carroll County premises, and roads, to create fiber network route map to reach all unserved areas as efficiently as possible
- Used route mapping tool to generate anticipated network statistics such as total network miles, total potential customers in served areas (e.g., with current access to cable), and anticipated customers in unserved areas
- Created an excel model based on network statistics and Carroll County make-up to understand and test viability of a network under different conditions
- Excel model outputs include total customers, capex and opex needs, and long term network financial health

Feasibility Findings

Two major scenarios were investigated for Carroll County towns, one where the county has access to very favorable capital, and one where the county does not.

Favorable Capital Scenario:

\$18.5M grants matched against General Obligation bonds (3% interest) for building all unserved areas;
Revenue bonds used to overbuild in year 4

- Unserved areas built in 3 years
- Cash and bonding ability indicates overbuilding already served areas very viable starting in year 4-5;
- Very healthy financial indicators along the way

Challenging Capital Scenario:

\$7.5M grants + \$9.5M high cost unsecured debt (8% interest), transition to revenue bonds in year 3 for finishing build of unserved locations

- Unserved areas built in 5 years, may begin overbuilding cabled areas at that point
- Likely need to slow down construction to accommodate more challenging funding outlook

Variables to Watch

Changing the cost of capital (as we did) is one way to test the sensitivity of the model - put another way - to test how fragile the network is.

Other variables that will impact the viability of the network include:

- Amount of overbuilding allowed under funding parameters
 - If the NH grants do not allow any overbuilding, network will need other (likely higher cost) sources of funding to connect unserved areas
- Construction (labor and materials) costs
- Rates network owner will need to pay an operator

What happens if the variables are more challenging than modeled?

- Slowing build speed is one “lever” the network can pull to accommodate more challenging conditions
- The assumed cost to customers can also be raised - they have significant room to grow (clearly the downside is people have to pay more)



Next Steps: Business Plan

Carroll County Broadband should move forward with the creation of a business plan. The business plan should clearly outline the plan that the Communications District or municipal entity will take, and contain the following:

- Clear service area delineation
- Pro forma financial projections
- Summary of ISP/operator partner(s) and partnership model
- Roles and responsibilities of partners and entities involved
- Clearly defined funding sources and funding stack objectives
- Plan for executing pre-construction and construction
- Marketing plan and marketing strategies
- Risks and risk mitigation strategies

In addition, it is common practice to request a high level design as part of the business planning phase. This can add an additional \$50-70K on the cost, however, the high level design will provide another level of detail to the cost estimates to make the business plan and financial stack more fine tuned.

Key Questions for the Committee to Answer to Inform Business Plan

- **Is the Communications District Model right for Carroll County towns? Or, is it possible to use the County itself as the public partner instead?** Key considerations for this decision include:
 - Are there essential sources of funding that are available to one entity but not the other?
 - What is the anticipated administrative burden? which entity would be best suited to handle that work?
 - Could one entity move faster or more nimbly than the other?
 - Are there scenarios where the focus area expands to include towns outside the county, or some towns *within* the county do not want to participate, and does this impact the viability of using the county as the vehicle?
 - Will there be enough time to get the establishment of a Communication District on the ballot, and ensure public support?
- **What - if any - amount of overbuilding will be allowed under the terms of the NH grant program?** Will the terms be so strict that the region will need to find another source of financing to build the infrastructure needed to *reach* the unserved areas?
- Given the lack of RFI response from Spectrum for most jurisdictions, **do the towns in the District have an appetite for bonding to build infrastructure to the entirety of towns, to the extent allowed under NH law?**
- **What types of match will be required against the state grant program?** It is not yet known if in a Public/Private partnership, the Private funding can count to the 50% match.
- **Do individual towns have ARPA funding to contribute to the project?**
- **What are NHEC's plans and how should the region coordinate with NHEC** so as to prevent significant overbuilding?

Thank you

Email:

alex.kelley@ruralinnovation.us

carole.monroe@valley.net

Website:

<https://ruralinnovation.us>

<https://valley.net>

Social:

[LinkedIn](#) | [Twitter](#) | [Facebook](#) | [Instagram](#) | [YouTube](#)

