



BROADBAND FEASIBILITY STUDY EXECUTIVE SUMMARY TOWN OF BLUE RIVER

June 2023

Abstract

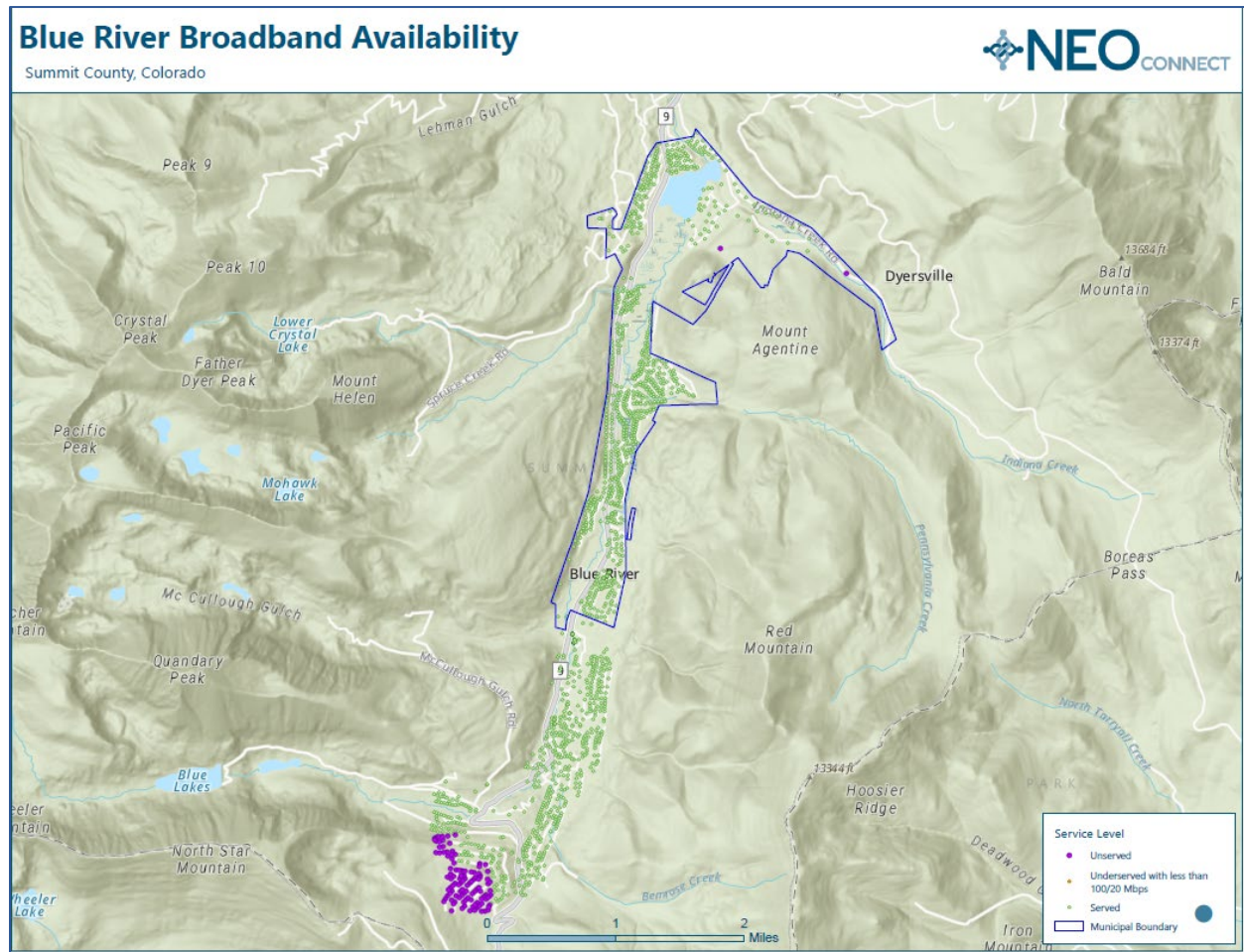
Municipalities are taking a more active role in ensuring their communities have reliable, abundant and affordable broadband services for their citizens. This Broadband Assessment discusses current environment, estimated capital costs for broadband infrastructure, models and approaches for the town to consider and provides a platform to evaluate financing options, models and strategies, public-private partnership and options for implementation.

Prepared for the Town of Blue River

Broadband Feasibility Study Town of Blue River, Executive Summary

The Town of Blue River has hired NEO Fiber, doing business as NEO Connect (“NEO”) to provide strategic planning for facilitation of better broadband services for the community. There are a number of activities that were undertaken to put together the Broadband Feasibility Study for improving broadband services in the town and determining the best approach to do so. Below is a list of activities and a summary of the results.

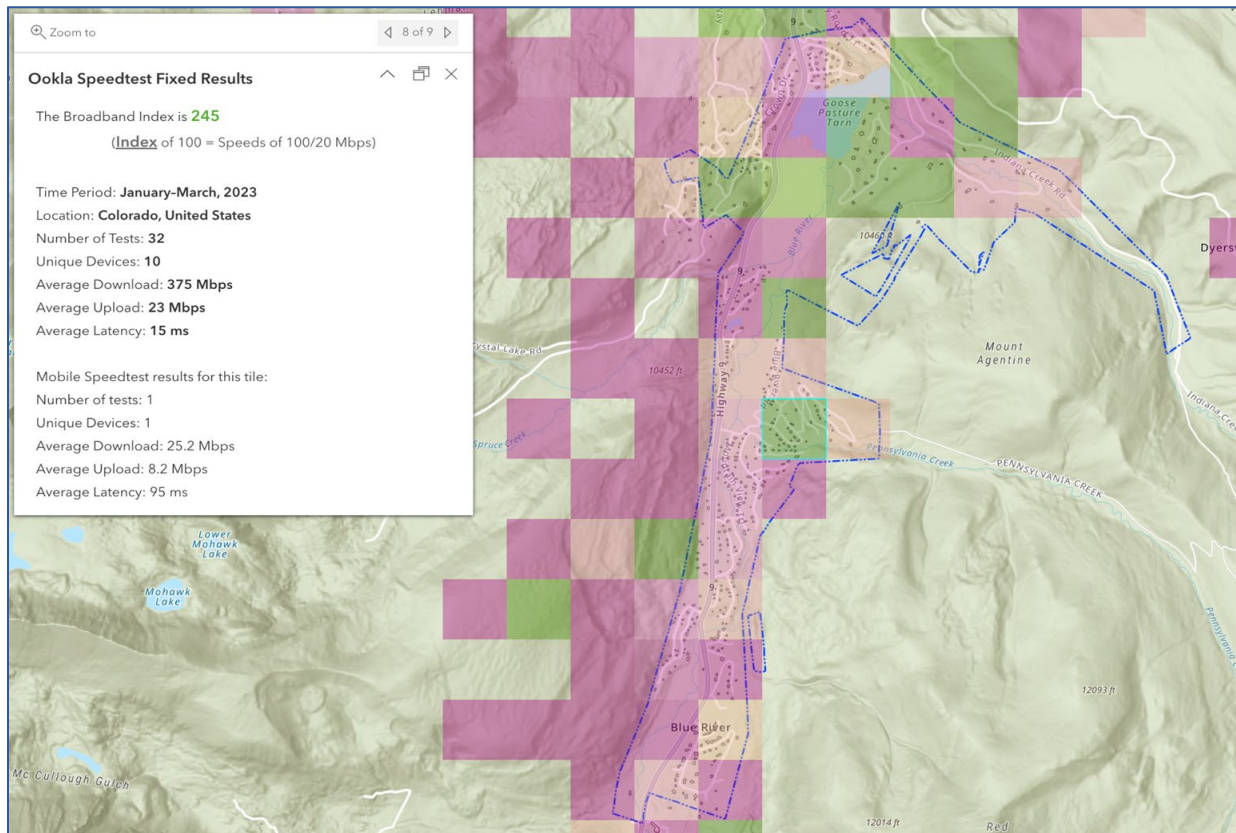
1. **Broadband Availability.** NEO’s team assembled maps showing the broadband availability within the community. According to FCC and the State of Colorado, all homes within the Town of Blue River are showing availability of a minimum of 100/20 Mbps of service. Households shown in green below are “served.” Purple dots depict households that are “unserved” with less than 25/3 Mbps south of Blue River.



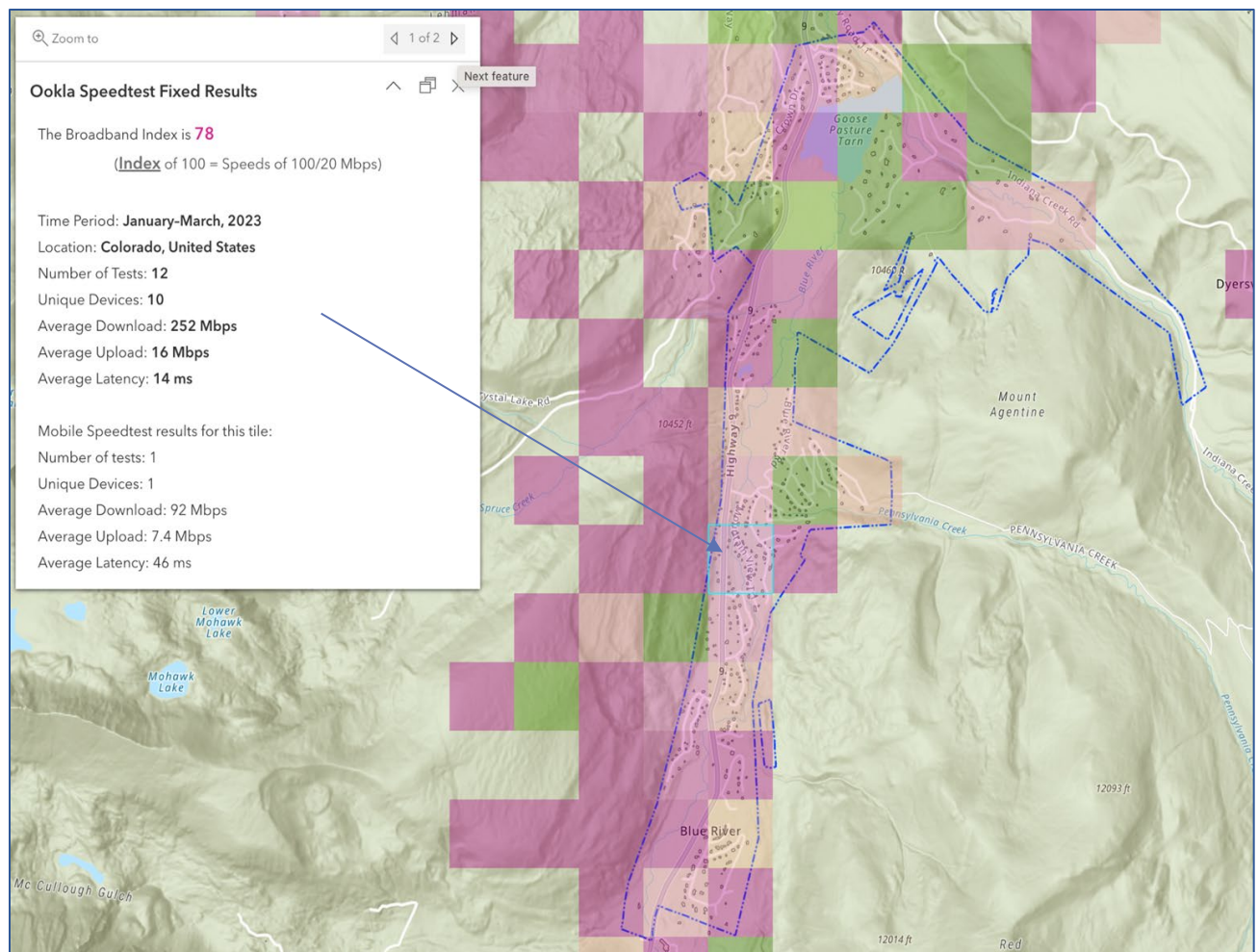
- a. Comcast reports it provides residential Gigabit services (1200 Mbps) throughout the community for \$80/month

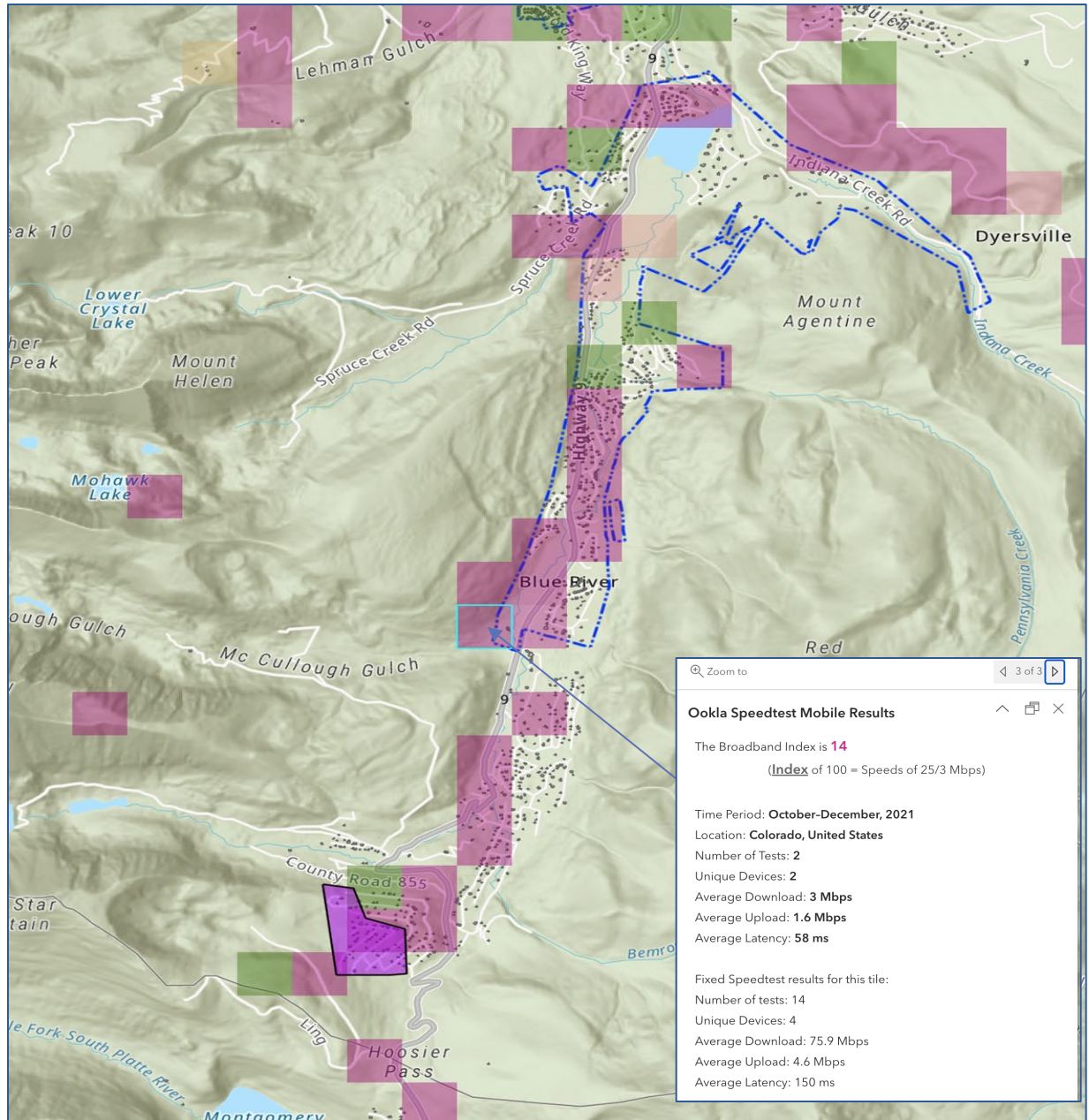
- b. CenturyLink reports it provides up to 100 Mbps for residential service for \$55/month; however, when several addresses were entered into its website to check service, no service can be ordered for internet.
- c. Other providers include satellite providers HughesNet and ViaSat, and T-Mobile has a home-based internet offering as well as Sky Fiber. Starlink is also available in the area.

2. **Speed test data from Ookla conflicts with Advertised Speeds**, showing average download speed test results greater than 100 Mbps; however, upload speeds are less than 20 Mbps.



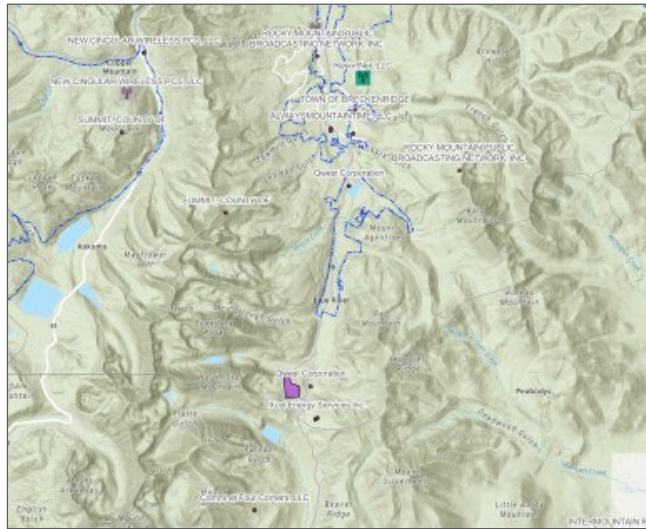
Census blocks shown in green above, have Ookla speeds tests meeting the greater than 100/20 Mbps threshold. However, areas depicted in pink and purple have Ookla speeds tests that are lower than this threshold.



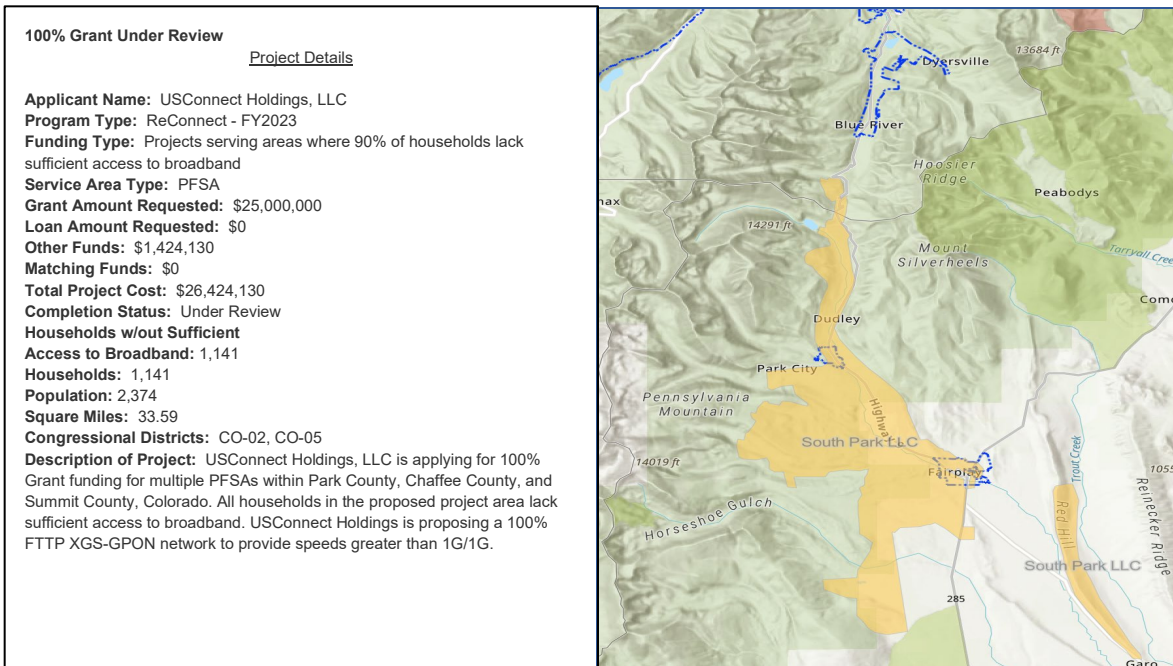


3. **Need to Improve Cellular Services.** NEO met with cellular provider, Verizon. Verizon confirmed that the Town of Blue River is lacking cell service coverage. In addition to not serving the public's cell phone needs, other impacts include public safety, traffic management, and the ability to send text messages. NEO researched potential towers for Verizon, AT&T and T-Mobile to improve their coverage. The map below provides all of the towers available in the surrounding areas in and near Blue River.

Wireless Infrastructure- Cellular & Microwave



4. **Providers in the Surrounding Areas.** There are several companies in addition to CenturyLink (Lumen) and Comcast who are providing Gigabit services.
- a. **Breckenridge's Allo Partnership.** The Town of Breckenridge is committed to build out a Fiber to the Premise Gigabit network to all homes and businesses with the Town. Capital costs have been underestimated and currently the Town has built approximately 1/3 of the community and has stopped construction due to lack of funds. Allo established a partnership with the Town to provide service and operate the network, providing a 5% revenue share to the Town.
 - b. **ITC Highline/US Connect** has applied for a \$25 Million Reconnect grant in the area south of Blue River, surrounding its current service areas of Park City and Fairplay. Funding has not yet been approved.



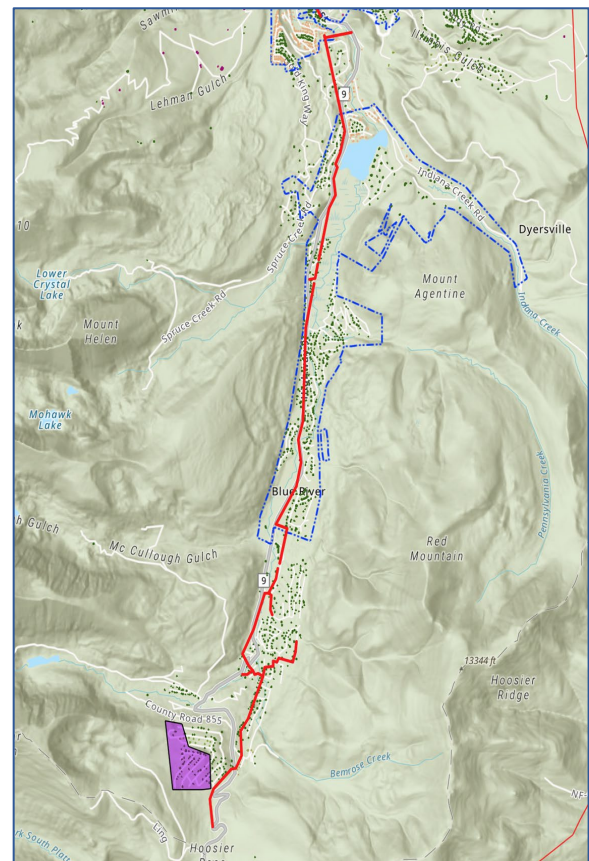
5. **“Middle Mile” Fiber Efforts.** The Town of Breckenridge is planning to apply for Department of Local Affairs (DOLA) funding to build “middle mile” fiber to the Dam.

Capital costs vary greatly depending upon the construction methodology used. The most expensive construction method, yet with the least amount of uncertainty is underground construction using direction boring.

Initial cost estimates for building this route are approximately \$1.655 Million using underground construction using directional boring methods.

Estimated capital costs to build to the Quandary Trailhead is another \$1.12 Million.

As mentioned, underground construction estimates are the most certain. Aerial construction is less capital-intensive; however, there is some uncertainty in estimating make ready expenses -expenses required to prepare the existing utility poles for placement of fiber optic cable.



Xcel Energy is the electric provider and there is a mostly-contiguous aerial path existing between Breckenridge and the southern project boundary of the Town of Blue River. Most poles appear to have sufficiently few attachments that make-ready expenses reasonable. Aerial construction costs would reduce the middle mile construction from \$2.7 Million for these two routes to approximately \$558,000.

6. **Last Mile, Fiber to the Premise Capital Cost Estimates.** NEO provided high-level capital cost estimates for building a Fiber to the Premise Gigabit network to all homes within the Town. Again, there is greater certainty in the capital cost estimates using 100% underground construction, using direction boring methods. The estimated capital costs for this method are \$11.8 Million; a total of \$13.47 Million with the middle mile added in.

		Blue River - Complete
Capital Costs, FTTP		Un, Under, & Served
Overall	Project Cost	\$11,831,992
	Cost per HHP	\$13,904
	Cost per HHS	\$34,759
	Cost per MI	\$520,774
Engr. Labor	Project Cost	\$299,904
Aerial Labor	Project Cost	\$0
UG Labor	Project Cost	\$9,049,899
Tech Services Labor	Project Cost	\$59,997
Customer Premise Labor and Install Materials including Splitters	Project Cost	\$383,464
OSP Materials	Project Cost	\$2,038,727
Electronics	Project Cost	\$0
Middle Mile Costs		\$1,655,835
Total Project Costs		\$13,487,827

The impact of using rock-saw construction methods versus directional boring could reduce the capital costs by 41%, down to \$7.954 Million with the middle-mile costs.

An even greater amount of capital costs can be reduced with the use of rock-saw construction and the use of aerial construction, resulting in a 73.76% cost reduction, with projected costs to be \$3.539 Million.

7. **Financial Feasibility.** NEO provided numerous financial models to determine whether it is feasible for the Town of Blue River to build the middle mile fiber and Fiber to the Premise network. Given that the Town only has 851 homes, the model is not feasible without grant or other subsidies, or some other form of revenue, rather than relying solely on internet services revenue or a revenue-share from the ISP. Several models were run and a summary of the results is provided below. The results and the financial assumptions will be discussed in detail during the Work Session.

Financial Implications	City as an ISP	City as an ISP	City as an ISP	Absorbed into an Existing ISP
Projected Capital Costs	\$13 Million	\$8 Million	\$3.3 Million	\$3.3 - \$8 Million
# of Years to Break Even	Never	Never	Never	Yes
Annual Revenue, Year 5	\$390,000	\$390,000	\$390,000	\$390,000
EBITDA, Year 5 (Before Principal and Interest Payments)	(\$507,000)	(\$507,000)	(\$507,000)	=
Annual Profit/Loss, Year 5 (After Principal and Interest Payments)	(\$1,700,000)	(\$1,200,000)	(\$802,000)	-
Debt Coverage Ratio, Greater than 200% on all tranches	Never	Never	Never	Yes
Additional Payments to Principal?	No	No	No	Yes
Cummulative Profit, Year 10	(\$7 Million)	(\$7 Million)	(\$7 Million)	??
Debt Balance, Year 10	(\$13 Million)	(\$7.8 Million)	(\$3.2 Million)	??
Feasible?	No	No	No	Probably

8. **Grant Funding is Available through the Colorado Broadband Office.** The Colorado Broadband Office (CBO) is administering two upcoming grant programs: the Capital Projects Fund (CPF) and the Broadband Equity, Access and Deployment (BEAD) Program.

Capital Projects Fund

The State of Colorado is receiving \$171 Million in CPF; of which, \$162 Million is available for grants to build out broadband infrastructure. The program has been designed to fund the construction and deployment of broadband infrastructure to deliver service that reliably meets or exceeds symmetrical speeds of 100 Mbps. Eligible areas include underserved and unserved households and businesses.

Recipients are encouraged to prioritize investments in fiber-optic infrastructure where feasible, as such advanced technology better supports future needs. The CPF will also fund middle-mile broadband grant projects, however; recipients need to focus on projects that will achieve last-mile.

The State will allocate roughly 75% of Advance-CPF funding, or \$121,660,567, to the Tier 1 counties, based on the counties with the highest above median percentage of Unserved, and other qualitative information.

The State will allocate the remaining 25% of Advance-CPF funding, or \$40,553,522, to the Tier 2 counties, across all counties based on need articulated in the application. Summit County is located in a Tier 2 county. The match for Tier 1 counties is 25% match; the match for Tier 2 counties is 50%. The match may be waived under certain circumstances.

Grant applications are due August 21st.

Broadband Equity, Access and Deployment (BEAD) Program

The BEAD Program provides \$42.45 billion in funding to expand high-speed Internet access in all 50 states, Washington D.C., Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands. Each State can apply for a portion of this funding based upon the number of unserved and underserved households. The State of Colorado will receive a minimum of \$100 Million in funding. Program rules will be announced later this year with grant applications due sometime in 2024.

9. **Recommended Next Steps, a Formal Request for Proposal or Invitation to Negotiate from the Service Providers.** NEO suggests conducting a formal invitation to negotiate with the Town to identify a potential partner to build out the infrastructure.