



## Case study

# Bonfire Fiber

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IQGeo's Comsof Fiber product allows Bonfire Fiber to generate detailed deployment cost insights and automatically provide more accurate and reliable numbers to strengthen their business case and minimize risks



# Overview

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**Bonfire Fiber is reimagining the connectivity conduit—empowering homes, businesses, communities, municipalities, and ISPs with high-speed fiber solutions. Bonfire Fiber believes there is a better way to broadband. To do this, Bonfire Fiber minimizes capital investment for communication service providers (CSPs) by building fiber infrastructure capable of delivering up to 10 Gbps services in rural communities.**

In this Open Access Network model, Bonfire Fiber provides an on-ramp for CSPs to provide next generation broadband that supports the growth of every citizen and connects rural America to the world.

Bonfire Fiber was formed by the experienced broadband design and construction team from Bonfire Engineering and Construction. Bonfire believes that all Americans should have access to affordable high-speed Internet because it makes their lives better. Early on, Bonfire Fiber recognized their unique ability to upend digital inequities by intelligently designing and efficiently building fiber infrastructure. Then using their collaborative industry approach, they bring trustworthy service providers to supply communities with vital broadband services.



## Product

Comsof Fiber

## Function

Comsof Fiber provides substantial time savings and improved accuracy in the fiber network design and documentation processes. Comsof Fiber's automated design platform easily integrates into GIS-based software for walkout surveys, permitting, and construction staking workflows.

## Industries supported

Telecoms, electric coops, municipalities, and any other industry needing fiber optic network design.

# The challenge

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Bonfire Fiber immediately recognized the manual processes for fiber planning and design was not scalable to meet the needs of the service providers or consumers. What the team proposed was a well-thought-out, high-level plan which will inevitably change and lead to a full or partial redesign. The need for change often happens when building broadband in rural communities and comes in the form of physical obstacles such as rock outcrops, waterways, utilities, permitting restrictions, and numerous other causes. Furthermore, when building fiber to connect rural America, plans also pivot quickly when encountering environmental and cultural resources such as habitats of endangered species, designated wetland areas, archeological sites, and several other factors.

Not only was the constant element of change an issue to growing the network, but the inability to quickly obtain the accurate locations of the community's anchor institutions such as schools, libraries, hospitals, etc. would prove to be a major obstacle in establishing preliminary designs. Bonfire Fiber knew this was critical for planning fiber routes and this would serve as the base design to connect the business and residential locations that needed access to vital broadband services.

Understanding the need to use accurate data, share information across the organization, and automate repeatable tasks led Bonfire Fiber to look towards GIS-based technology to support their journey.

**“Redesigns now take a quarter of the time as compared to a traditional manual design workflow”**

*- Brian Hollister*

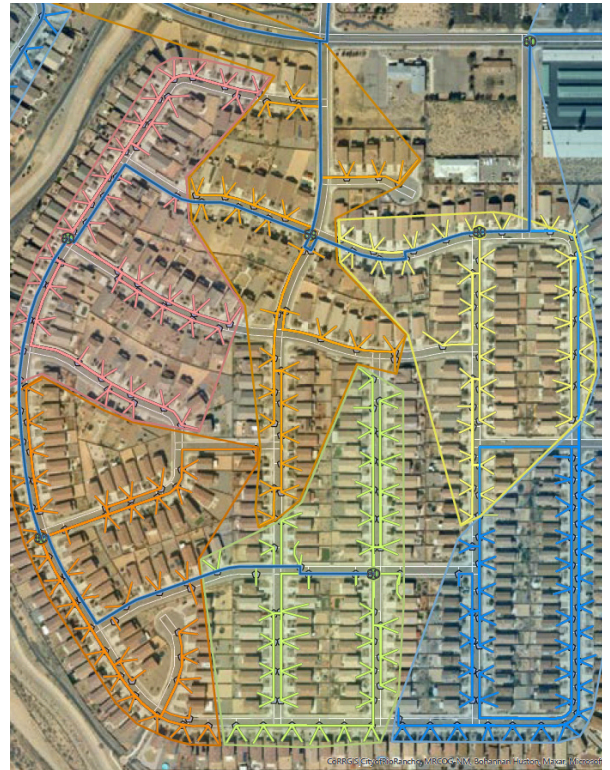
# The solution

To address the challenge, Bonfire Fiber, partnered with IQGeo, utilizing the Comsof Fiber product to connect the underserved. Combining our best-in-class solutions with a 20+ year track record, we assessed Bonfire Fiber's processes and advised on areas to improve.

Bonfire Fiber can now plan their fiber network route with Comsof Fiber - the GIS-based platform is being used to visualize and edit the GIS data in the Comsof Fiber workspace. With the new solution, Bonfire Fiber will now be able to:

- Manage underserved locations, fiber plant, and recorded ground truths
- Host data throughout the organization
- Enable mobile use by design, construction, and inspection teams for real-time reference and capture of data
- Allow for designs to be easily accessible from the field for refinement
- Boost reporting with detailed Bill of Material (BOM) to automatically estimate costs

**"If you want to go fast and have agility,  
Comsof Fiber is your answer"**  
*- Justin Roller*



# The results

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The company adopted a solutions-based approach that involved identifying the underlying business problem to make the right decisions using accurate and reliable cost information. After the solution was implemented and deployed, Bonfire Fiber was able to quickly determine anchor locations in underserved communities, rapidly produce network feasibility information, and take high level designs to the field for permitting, construction, and operation.

In addition to faster network designs, Bonfire Fiber is now able to deal with the inevitable and often frequent changes to preliminary and existing network designs. Instead of having to start the design process from scratch, Bonfire Fiber can now change a few rules or data inputs and re-run designs in Comsof Fiber to take an agile approach to connecting the underserved.

Once the automated design from Comsof Fiber is accepted, Bonfire Fiber crews can easily take this data to the field to make necessary changes to go into low-level designs for permitting and construction. Once construction is completed, the task of as-building has taken the process down from weeks to days which has a real impact on when underserved locations can be connected to broadband.

Bonfire Fiber can now perform all phases to provide equitable access to broadband services, from initial project scope to fulfillment and install. By leveraging Comsof Fiber, the team at Bonfire Fiber can easily utilize partners with the expertise to solve business problems and rapidly modernize workflows while retaining ownership and responsibility of information within the only comprehensive GIS ecosystem available.

Furthermore, by deploying Comsof Fiber, Bonfire Fiber more than achieved their initial goal of speeding up test design. They also realized an unexpected efficiency gain. Bonfire Fiber found that by using Comsof Fiber, it provided them with a wide range of timesaving features which allowed them to create, render, and share project visualizations. Additionally, Comsof Fiber allows Bonfire Fiber to generate detailed deployment cost insights and automatically provide more accurate and reliable numbers to strengthen their business case and minimize risks.

