Missoula Fiber Initiative

Overview of the Project

Missoula Fiber: Mapping Network Access - Detail Network Architecture
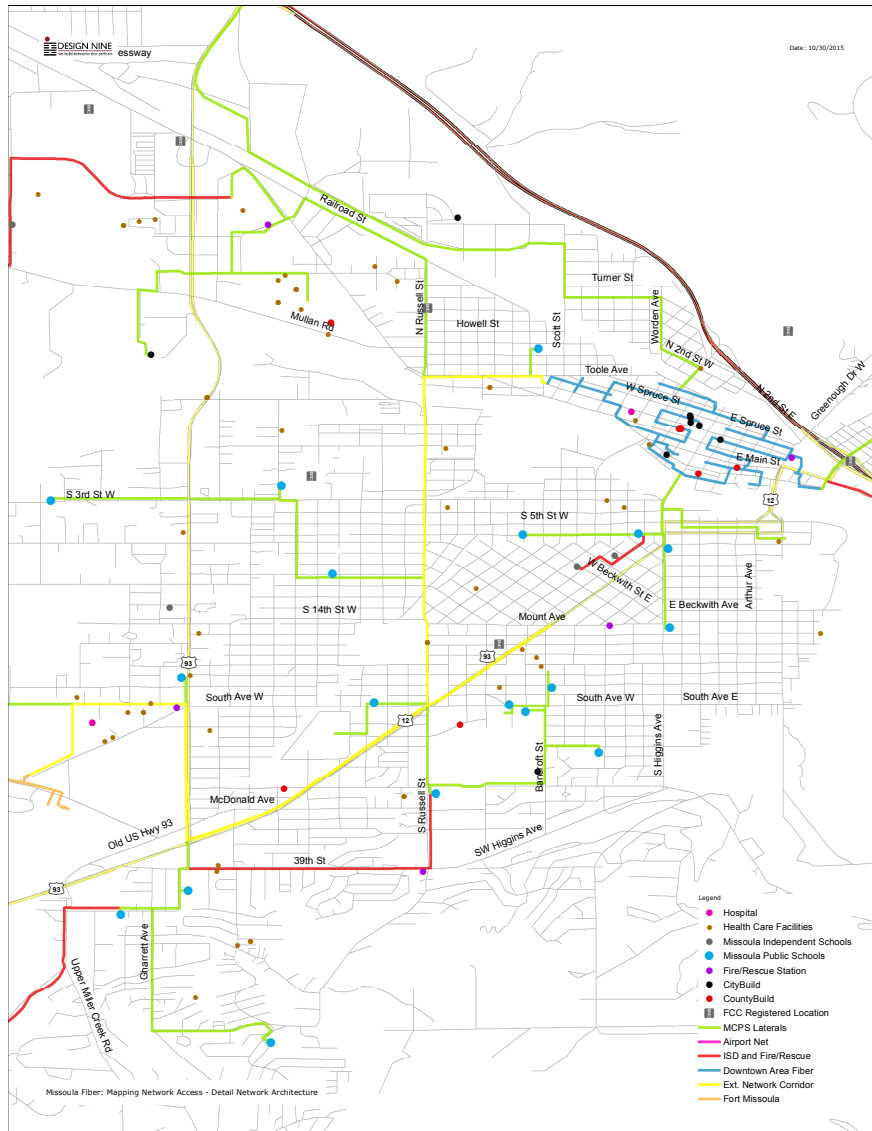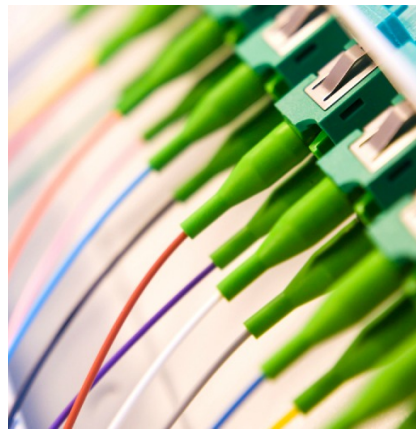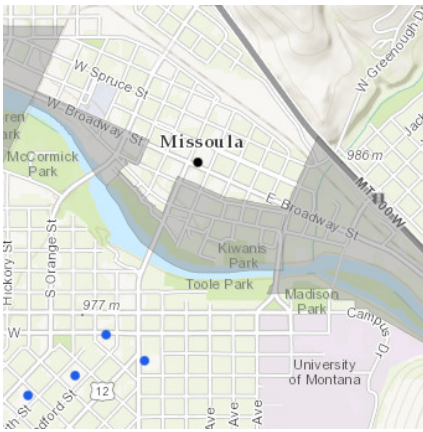
Recommendation

Missoula currently has limited fiber availability in some parts of the city and the surrounding region, but access is spotty and businesses lack competitive and affordable options for high performance Internet and related network-delivered services.

A well-designed business class Gigabit lit network will meet the needs of large and small businesses, government, health care, entrepreneurs, schools, work/business from home users, and residents.

This network should be operated using a multi-provider multi-service business model (open access). All existing incumbent and competitive telecom providers should be invited to use the network to reach new customers, expand their service offerings, and lower the cost of reaching the next customer.

KEY CHARACTERISTICS OF THE PLAN

- Build the network in phases that match available funding and high priority economic development goals.
- Build an active Ethernet network that can deliver high quality business class services to any connected business or resident.
- Use key public and private stakeholders as anchor customers to create a base of revenue to support network growth and expansion.
- Focus first on business and commercial areas but design the network for rapid demand-based expansion to residential neighborhoods.
- Fund the project with a "basket" of financing strategies that provide a path to long term sustainability.
- Operate as a community enterprise. Local governments should not compete with the private sector.
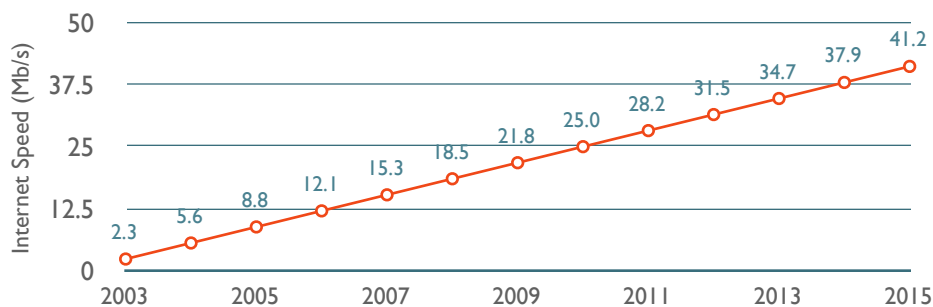
Why Build Community Fiber?

A community-owned high performance fiber network gives the Missoula region a future-proof infrastructure that will support the area's long term economic and community development goals.

Bandwidth Growth by Market Sector

User Type	Now	Next decade	Twenty years
Small business needs (1-9 employees)	10-25 megabits of symmetric bandwidth and 10-20 megabits of Internet access	100 megabits of symmetric bandwidth and 20-40 megabits of Internet access	Gigabit+ symmetric bandwidth and 50 to 100 megabits of Internet access
Medium-sized business needs (10-100 employees)	50-100 megabits of symmetric bandwidth and 25-50 megabits of Internet access	Gigabit symmetric bandwidth and 50 to 100 megabits of Internet access	Multiple gigabit symmetric circuits and lightpaths and 100+ megabits of Internet access
Large business needs (100-1000+ employees)	Gigabit+ symmetric bandwidth and 100+ megabits of Internet access	Multiple gigabit symmetric connections and 250 to 500 megabits of Internet access	Multiple gigabit symmetric circuits and lightpaths and 1 Gigabit+ of Internet access
Residential needs	25-50 megabits of symmetric bandwidth and 10-20 megabits of Internet access	100 megabits of symmetric bandwidth and 20-30 megabits of Internet access	A Gigabit symmetric circuit and/or lightpaths, with 50 to 100 megabits of Internet access

Trend of Internet Speed from 2003 to 2015

Internet Speed (Mb/s)

2.3, 5.6, 8.8, 12.1, 15.3, 18.5, 21.8, 25.0, 28.2, 31.5, 34.7, 37.9, 41.2

2003, 2005, 2007, 2009, 2011, 2013, 2015

What Can You Do With Fiber?

- Work from home--full time, part time, or nights/weekends. We give you the freedom to choose!
- Run a business from home, or run a server from home.
- Connect more TVs, laptops, computers, tablets, printers, and servers and have them all work at the speed of light!
- Use all the bandwidth you want without worrying about slowdowns, overage charges, or data caps.
- Watch TV, movies, sports, and video at the highest possible quality--a better entertainment experience!
- Put home security cameras around your house and get notifications, live HD video, and sound right on your tablet or smartphone, wherever you are.

- Connect to your company VPN as if you were sitting in your office at work.
- Make full use of cloud services at blazing fast speed.
- Seamlessly connect multiple business locations and offices.
- Home-based employees can fully participate in company activities because videoconferencing works like it is supposed to with no stuttering, drop outs, or slowdowns.
- Get an inexpensive home phone line that actually provides a high quality connection without annoying drops.
- Fiber makes back up services like Carbonite, Amazon, and Mozy work the way they are supposed to with no waiting.