

**Report of
Broadband Business Planning Task Force
March 22, 2022**

The Broadband Business Planning Task Force ("Task Force") was created by Resolution 49-19 that was adopted on April 14, 2019. The resolution contained five purposes of the Task Force, as follows.

- **Review and evaluate current and possible future state and federal regulations governing broadband communications for municipalities.**
- **Review Columbia's existing fiber optic system and service offerings to customers.**
- **Review the current offers by incumbent service providers and any opportunities for public/private partnerships.**
- **Evaluate the feasibility of additional fiber optic deployment by the City.**
- **If fiber optic deployment is deemed feasible, formulate and recommend a Broadband Business Plan for the community.**

Through this report and document, the Broadband Business Planning Task Force respectfully submits to the City Council that the Task Force has largely served its original purposes and found the following:

Review and evaluate current and possible future state and federal regulations governing broadband communications for municipalities.

Members of the City's Legal Department and representatives from the Missouri Public Utility Alliance presented information regarding state and federal regulations governing municipalities providing broadband service. That presentation concluded the following:

There are legal and regulatory restrictions that might limit the ability of the city to establish a municipal broadband option. Section 392.410(7) RSMo. for years has been interpreted to mean that municipalities could not build and own a telecommunications network. This was challenged by the FCC and then went to federal court. The United States Supreme Court issued a decision the state has a right to regulate its political subdivisions and the City of Columbia is considered a subdivision of the state. Internet type services had an exception.

The legal analysis set out in the 2014 Columbia Broadband Needs Assessment and Planning Study concluded that the City of Columbia was able to provide a lit fiber open access platform to telecommunications service providers. An analysis provided by Marc McCarty, the Senior Consultant, for the University of Missouri System's Broadband Initiatives reached a conclusion that Section 392.410.7 is not an express prohibition.¹

Regardless of their interpretation, Cities do provide broadband service using various business models. Cities including Monett, Marshall, Carthage, Springfield, Rolla, Kennett, Houston, West Plains and possibly others are all providing some type of direct lit fiber broadband service at a retail level. Lebanon, Fulton, Columbia and possibly others provide dark fiber leases. The City of Springfield is constructing a fiber network in partnership with CenturyLink. KC Fiber, LLC provides fiber service through a partnership with North Kansas City, Missouri.

However, as long as the current law is effective, there is always a risk that the City could be challenged if it tries to provide broadband service. In previous years, there have been and there are currently proposed legislative efforts to prohibit municipalities from providing broadband service. There are currently two bills, House Bill 1488 and Senate Bill 1074, which would prohibit municipalities from providing broadband service in specific circumstances.

If it is determined the City should be involved in broadband deployment in the future, additional legal research into any specific proposed broadband deployment and business model would be necessary to determine if it is allowed by regulations in place at the time.

Review Columbia's existing fiber optic system and service offerings to customers.

A number of presenters provided information on the various technologies used for providing a Fiber to the Home ("FTTH") network. There are two primary technology methods. One is using a Passive Optical Network ("PON") GPON is the technology most providers use to provide customers with symmetric 1 Gigabit per second (Gbps) broadband service, but it can provide speeds of 2.4 Gbps upload and 1.0 Gbps download. The newer XGS-GPON can provide customers with speeds up to 10 Gbps. One advantage of PON networks is that they can use a single fiber to split into 64 separate connections using a passive optical splitter. This means that one fiber path can be split into 64 separate paths and serve up to 64 end-user locations.

¹ <https://mobroadband.org/no-missouri-law-does-not-prohibit-political-subdivisions-from-offering-internet-service-to-its-residents-and-businesses/>

The second method for providing FTTH service is through an Active Ethernet network, which is essentially a fiber “home run” from the central electronics core, meaning that one fiber goes from the core electronics directly to each customer. Regardless of the technology used, FTTH networks require cable with large counts of fiber and frequent access points to reach homes. The City’s current network has neither of these.

Representatives from the City’s Utilities Department provided the following information and recommendation:

The City’s current fiber optic system was created for communications between electric facilities and was expanded for communications between all City facilities. It was never intended to provide broadband services to the community. While some dark fiber has been leased to the school district, educational institutions, area hospitals, and broadband providers, there is not sufficient capacity in the existing system to provide broadband to the community. If the City were to desire to become a broadband provider or even construct a major broadband “backbone” for lease to internet service providers, the entire system would have to be more or less abandoned and a new system constructed. The City’s estimated cost to provide service to the entire city is over \$100,000,000.

Columbia’s Utilities Department recommended the City should however continue with the current practice of providing fiber to city owned facilities where feasible with a partnership between the Utilities Department and Information Technology Department. The City should also continue to provide fiber to existing customers already under contract. It should be noted that commercial broadband service providers have significantly reduced or entirely stopped relying on City owned fiber as they deploy their own fiber optic networks.

Review the current offers by incumbent service providers and any opportunities for public/private partnerships.

The Task Force invited all local internet service providers and those in the process of constructing broadband networks in Columbia and surrounding areas. Information was received from many of these providers. That testimony included the following:

- A review of the City of Columbia’s Code of Ordinance Article XI – Construction of and Deployment of Small Cell Wireless Facilities and a sample agreement that applies to all utility providers desiring to construct, operate, or maintain small wireless facilities with the City.
- Columbia’s Water & Light Department presented a list identifying the addresses of where 5G sites are or will be deployed based upon the location

of electric meters needed to provide electricity to the wireless facilities. The list indicated broad 5G and advanced wireless coverage in Columbia.

- Bluebird Network ("Bluebird") made a presentation stating that it has built over 94 miles of fiber throughout the City of Columbia and continues to build within the City to support 5G and advanced technology for wireless providers and enterprise customers within Columbia. Bluebird has lit and dark fiber within the city, including to some neighborhoods, for lease to other Service Providers, which may be used to support residential broadband services.
- Mediacom provided a presentation discussing network upgrades and expansions. Mediacom's representative stated that they do not provide a FTTH network, but instead rely upon DOCSIS 3.1 technology to deliver broadband at speeds up to 1 Gbps. The network upgrades currently underway include installing fiber-optic cable between network nodes. The presenter stated this will improve network performance and reliability.
- Sho-Me Technologies ("Sho-Me") provided a presentation stating they offer the following services: point to point transfer, internet, firewall, time-division multiplexing ("TDM"), voice, and co-location services primarily to wireless providers and enterprise level customers. Sho-Me provides broadband services that can go from 10 Megabit per second (Mbps) up to 100 Gbps. Their infrastructure is only fiber optics and they have a standard service level agreement. Mr. Young stated the four things that drive their costs are railways, asphalt, permitting and taxation.
- Socket Telecom provided a presentation on the criteria it uses to determine where to construct its FTTH network. The presentation included maps showing its current FTTH network, the FTTH network currently under construction, and the planned construction to be completed in the next 18 months. Upon completion of the already planned construction, Socket stated that its FTTH network will pass approximately 50% of the households in Columbia. When combined with its estimate that 25% of the households in Columbia already have FTTH available from other providers, Socket estimates the City of Columbia will have 70% to 75% of homes passed with FTTH. Socket's presentation also indicated it was going to continue with additional construction beyond what was shown on the provided maps.
- Spectrum, previously known as Charter, also provided information on its broadband service, the areas it serves and how many miles of fiber Spectrum had in its service area. It reported having broadband service offerings at speeds from 100 Mbps to 940 Mbps.
- Two other providers, i3 Broadband and CoMo Connect presented their service offerings to the Task Force, however, while they do offer FTTH services, neither provides services in Columbia.

Based upon a review of the minutes, Columbia residents attended five of the Task Force meetings and spoke during the GENERAL COMMENTS BY PUBLIC, MEMBERS AND STAFF section of the meetings. Most spoke about their frustration with current Internet option, complaining about the available speeds and reliability, lack of choice, and wanting to know what the City could do to solve this problem. It is worth noting that often policymakers focus on speed as the Internet problem when reliability is just as important.

The City's 2017 Columbia High-Speed Broadband Planning Study – Broadband Market Analysis Update expressed concern that Columbia's downtown area lacked access to broadband because deployment could be cost-prohibitive. Based upon information provided, Socket reports to have deployed more than 7 miles of fiber in the downtown area. Mediacom and CenturyLink also reported installing additional broadband facilities in the downtown area since the 2017 report was released.

Evaluate the feasibility of additional fiber optic deployment by the city.

Based on the current service offerings of existing providers and planned expansion of fiber to other areas of the City, the state of broadband availability in Columbia is quickly evolving, changing, and improving and is far different from when this Task Force was originally established.

In addition, the Task Force requested network maps from the providers offering service in Columbia. While some providers were agreeable to providing networks maps, others were not or required a Non-Disclosure Agreement. For that reason, complete network mapping of current fiber offerings by providers throughout the City was not feasible, thus any potential deployment of a City-owned FTTH service offering runs the risk of significant duplication.

At this time the majority of the task force members do not believe it is feasible or necessary for the City to entertain the idea of expanding or rebuilding the City's fiber system or increasing its network operations department to provide broadband services to the community. A minority of the task force members believe more study is necessary to determine if it is feasible for the City to expand or rebuild the City's fiber system or increase its network operations department to provide broadband services to the community.

Other Considerations that Could Benefit Columbians Seeking Broadband Services

Affordable Connectivity Program

The Affordable Connectivity Program ("ACP") is an FCC benefit program that helps ensure that households can afford the broadband they need for work, school, healthcare and more.

The benefit provides a discount of up to \$30 per month toward internet service for eligible households. Eligible households can also receive a one-time discount of up to \$100 to purchase a laptop, desktop computer, or tablet from participating providers if they contribute more than \$10 and less than \$50 toward the purchase price.

The Affordable Connectivity Program is limited to one monthly service discount and one device discount per household.

A household is eligible for the Affordable Connectivity Program if the household income is at or below 200% of the Federal Poverty Guidelines, or if a member of the household meets at least *one* of the criteria below:

- Participates in certain assistance programs, such as SNAP, Medicaid, Federal Public Housing Assistance, SSI, WIC, or Lifeline program.
- Participates in the National School Lunch Program or the School Breakfast Program, including through the USDA Community Eligibility Provision;
- Received a Federal Pell Grant during the current award year; or
- Meets the eligibility criteria for a participating provider's existing low-income internet program.

CenturyLink, MediaCom, Socket, and Spectrum currently participate in the service portion of the ACP program.

State of Missouri Broadband Investments

The Missouri Municipal League provided additional information on broadband resources and Governor Parson's proposed \$400 million in ARPA funds to increase broadband internet access, adoption and assistance statewide. For details on the three core program areas, see <https://ded2.mo.gov/one-stop-arpa-resources-broadband>.

Task Force Recommendations to the City Council

1. Promote the Affordable Connectivity Plan as described above, including the following proposed actions:
 - a. Work with governmental agencies, non-profits, schools and libraries to promote the plan (intergovernmental discussion).

- b. Provide information about the program in residential utility bills issued by the City.
 - c. Partner with providers, through a public/private partnership to provide information about participating service providers' offerings and process for applying for the ACP program.
 - d. In addition to addressing the service affordability portion of the ACP program, the City should also look for ways to promote the device purchasing portion of the ACP program and consider providing additional subsidization to qualifying individuals or households for the purchase of a laptop, desktop computer, or tablet.
2. Formalize joint trenching and dig once policies/practice.
 - a. City Utilities currently notifies providers located on City-owned poles of projects to remove the poles and bury utilities. This process could be expanded to notify interested broadband providers of upcoming projects and provide them with the opportunity to place facilities jointly at the same time. This will lower the cost for broadband providers and potentially avoid repeated disruptions caused by multiple construction projects.
3. Complete the pending RFP to provide high-speed broadband services at subsidized rates to areas deemed underserved by the City.
4. Evaluate City fees for equity across providers to ensure all types of providers are paying similar fees, such as similar pole attachment and permitting fees, and how those fees compare to other cities.
5. Monitor future third-party funding opportunities
 - a. The City should monitor and seek opportunities for third-party funding that could enable public private partnerships for future identified broadband needs. The City could potentially do this by designating a particular staff person to monitor existing web and centralized resources that gather and publish such opportunities for Missourians. As an example, the Missouri Department of Economic Development's Office of Broadband Development maintains funding resources and hosts informational meetings for various parties. See <https://ded.mo.gov/content/broadband-development> for additional information. The University of Missouri presented testimony on the tools they have in place, such as the [Missouri Broadband Resource Rail](#), which is maintained and offers similar information on funding opportunities. This also includes access to their Digitally Connected Community Guide - <https://mobroadband.org/digitally-connected-community-guide>.

6. The City should consider a future review of the state of broadband deployment throughout the City. This review should ensure that the ongoing provider network expansion as presented to the Task Force occurs as planned and whether Columbia's broadband needs are being met.
7. As part of the future review, the City should consider incorporating broadband-related access and adoption questions into the City's existing utilities survey, which is currently administered every two years.

Summary

As noted above, the Task Force members believe they have largely completed the Task Force's first three directives from the City Council. There is disagreement between the members on whether they have completed the last two directives. If the City Council desires additional information, the Task Force requests further guidance or directives.