



City of Boulder

Request for Information

RFI No. 06-2016

**Partnership for Deployment of
Citywide Fiber to the Premises
(FTTP)**

Issue Date: January 25, 2016

Due Date: February 25, 2016, 4 p.m. (Mountain Time)

CITY OF BOULDER, COLORADO

NOTICE OF CALL FOR RESPONSES - RFI NO. 06-2016

CONSULTING/PROFESSIONAL SERVICES

The City of Boulder, Colorado, is seeking responses for:

Partnership for Deployment of Citywide Fiber to the Premises (FTTP)

In accordance with the specifications of the RFI, sealed responses will be received in the office of the Purchasing Coordinator until 4 P.M. Mountain Time, Friday, February 25, 2016. Late responses will not be considered.

A copy of this Request for Information (RFI) may be obtained from the Rocky Mountain e-Purchasing System website at:

www.rockymountainbidsystem.com

Sealed responses shall be plainly marked "RFI No. 06-2016, Partnership for Deployment of Citywide Fiber to the Premises (FTTP), 4 P.M., Friday, February 25, 2016". Responses can be mailed to:

Pam Andrus
City of Boulder – Purchasing Division
P.O. Box 791
Boulder, Colorado 80306-0791

Hand delivered responses or those not delivered by the USPS must be delivered to the office of the Purchasing Coordinator, 1777 Broadway, Boulder, Colorado 80302.

Responses shall be prepared at the bidder's expense and becomes a city record and therefore a public record. Any trade secrets, privileged information or confidential commercial or financial information that the bidder believes would not be subject to disclosure pursuant to the Colorado Open Records Act should be marked "Confidential" prior to submittal pursuant to the terms of the Mutual Non-Disclosure Agreement attached as Appendix B.

The services upon which responses are submitted shall equal or exceed the specifications outlined in the RFI. Preference is hereby given to labor, materials, supplies or provisions produced, manufactured or grown in Colorado, quality and price being equal to articles or services offered by competitors outside the State of Colorado.

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I. Introduction

The City of Boulder (the “city”) issues this Request for Information (RFI) for the purpose of gauging the interest of for-profit and nonprofit entities in forming potential public–private partnerships (PPP) with the city to make Gigabit per second-class bandwidth available to all Boulder homes and businesses. This initiative, which envisions a citywide fiber-to-the-premises (FTTP) deployment, will **enhance the broadband connectivity of the city’s residents, businesses, and anchor institutions** by expanding the range and quality of available broadband and data transport services.

The city has initiated this RFI to identify one or more potential private partners to enable or directly provide high-capacity broadband services over fiber to end users within the city. The city seeks input from potential providers regarding the terms and conditions under which they would participate in such a project. **We are interested in providers who will use a fiber infrastructure to provide ubiquitous Gigabit per second-class broadband access.**

We seek successful respondents who will consider a variety of business models that share technological and operational responsibilities and financial risk between the successful respondent(s) and the city in innovative ways.

The goal of this project is to provision 21st century communications services to residents, businesses, and visitors. Broadband can enable communities otherwise at a disadvantage to participate on a more equal footing in the emerging global economy. The Internet can enable many types of businesses to locate anywhere—as long as there is enough bandwidth at an affordable price. High-tech firms and other companies that rely on high connection speeds will go where they can flourish. Residential rental property owners understand that many of their potential tenants require broadband for entertainment and to stay connected to their work. Broadband-enabled communities generally have higher property values, improved job creation and retention, and better quality of life.

Responses to this RFI should state how the respondent’s approach will further the city’s goals of attracting businesses, residents, and visitors, and encouraging economic vitality.

Boulder is already an attractive and thriving city; through this FTTP initiative, we seek to make Boulder an even more desirable place for visitors, businesses, and residents—who will see the quality-of-life benefits of broadband, both directly through home connections and through enhanced services provided by the business community.

We encourage respondents to share their expertise, which may be used to shape the direction and form of the network. Respondents may work together to respond to this RFI. The city is open to creative solutions that will maximize the efficiency of the investment while providing reliable and high-quality services to meet the needs of its citizens.

We welcome the responses of all respondents, including incumbent service providers, as well as competitive providers, nonprofit organizations, public cooperatives, and entities that are not traditional Internet service providers (ISPs) but are interested in offering service under innovative

business models. Nontraditional providers may respond as part of a partnership with an ISP, or may provide separate responses outlining their approaches.

The city will review and rank responses based on the successful respondents' experience, how well the responses address the city's objectives, how the proposed solutions balance and share risks and rewards, and other factors. Following the evaluation, the city may initiate negotiations with one or more respondents by providing more detailed information on available city assets and asking the selected respondent(s) to refine their responses. The city may also issue to selected respondents to this RFI a more detailed Request for Proposal (RFP) relating to the city-initiated project; may issue an open RFP relating to the city-initiated project; cancel or delay plans to obtain an FTTP network in the city; or choose another direction that is deemed in the community's best interest.

Responding to the RFI is not a guarantee of a contract award. Further, there is no guarantee an RFP will be developed as a result of this RFI. The city reserves the right to withdraw the RFI and/or any subsequent RFP, or decline to award a contract.

All respondents must complete all requirements specified in Section IX, complete the attached responsibility matrix (Appendix A), provide an executed non-disclosure agreement (Appendix B), and provide an executed non-collusion affidavit certificate (Attachment C). All responses must follow the format specified in the RFI instructions.

II. City Vision

Our vision is to provide a world-class community telecommunications infrastructure to Boulder for the 21st century and beyond, facilitated by newly available access to the public's local telecommunications assets. Boulder's citizens voted in 2014 to authorize the city to provide high-speed Internet services, thereby granting the city "autonomy for investing in community broadband services formerly limited by Colorado Senate Bill 152."¹ The vote passed by nearly 84 percent, and allows the city to leverage our assets to work with a successful respondent(s) to deliver service. Respondents are encouraged to review the city's comprehensive website for its broadband efforts at <https://bouldercolorado.gov/connect-boulder>.

We acknowledge that broadband is a critical service for quality of life, on par with roads, water, sewer, and electricity. Every home, business, nonprofit organization, government entity, and place of education should have the opportunity to connect affordably, easily, and securely. Boulder's broadband service will be shaped by the community's values.

We intend to empower our citizens and local businesses to be network economy producers, not just consumers of network information and data services. Further, we intend to provide our stakeholders with the broadband capacity, affordability, and local, regional, and national connectivity they need to compete successfully in the global marketplace.

¹ "2C Ballot Information," *City of Boulder Colorado*, <https://bouldercolorado.gov/connect-boulder/2c-ballot-information>.

To reach these goals, we are seeking to work with the successful respondent(s) to deliver:

- **Ubiquitous access to Gigabit per second-class broadband infrastructure:** The partnership will provide the infrastructure to enable every Boulder home, business, visitor, and public or private institution the opportunity to access affordable high-speed broadband connections to the Internet and other networks
- **Open access:** The partnership will demonstrate, support, and build a non-discriminatory, open-access infrastructure that should, to the maximum extent possible, be open to all users, service providers, content providers, and application providers, and be usable via all standard commercial devices
- **A competitive local broadband marketplace:** The partnership will facilitate a local broadband marketplace that is as competitive as reasonably possible
- **Unfettered access:** The FTTP network will deliver competitive unfettered data offering that does not impose caps or usage limits on one use of data over another (i.e., does not limit streaming). All application providers (data, voice, video, cloud services) are equally able to provide their services, and the consumer's access to advanced data opens up the marketplace.

One of our key priorities is that *all* members of the community have access to broadband service. The network should be built everywhere with no redlining or “cherry picking”—building to the most traditionally affluent areas of a community where there is a higher likelihood of obtaining subscribers willing to pay for service, and thus seeing a return on capital investment. Citizens in low-income neighborhoods and housing developments are particularly vulnerable, and broadband is important to level the playing field. As the world becomes increasingly connected, broadband access is key to education, job training, and even access to one's own medical records.

We understand that ubiquitous access may seem implausible for some providers, and we are prepared to work with the successful respondent(s) to make this an attainable goal. Respondents that believe this goal to be a barrier to their ability to successfully partner with the city should clearly articulate their reasoning, and describe how they may provide a “good-enough” contingency plan for ubiquitous access. We stress that ubiquitous access is an important component of our vision, but the city is willing to consider creative alternatives to traditional ubiquity.

We envision significant progress toward an operational network in one to two years, with commitments from providers, community stakeholders, and regional partners, and a shared common vision to make Gigabit per second-class bandwidth available to all residents, workers, and visitors in Boulder.

The community interest in obtaining a Gbps service that meets the above goals was highlighted in a recent survey. Please see for Appendix D for additional details.

III. Background: The City of Boulder

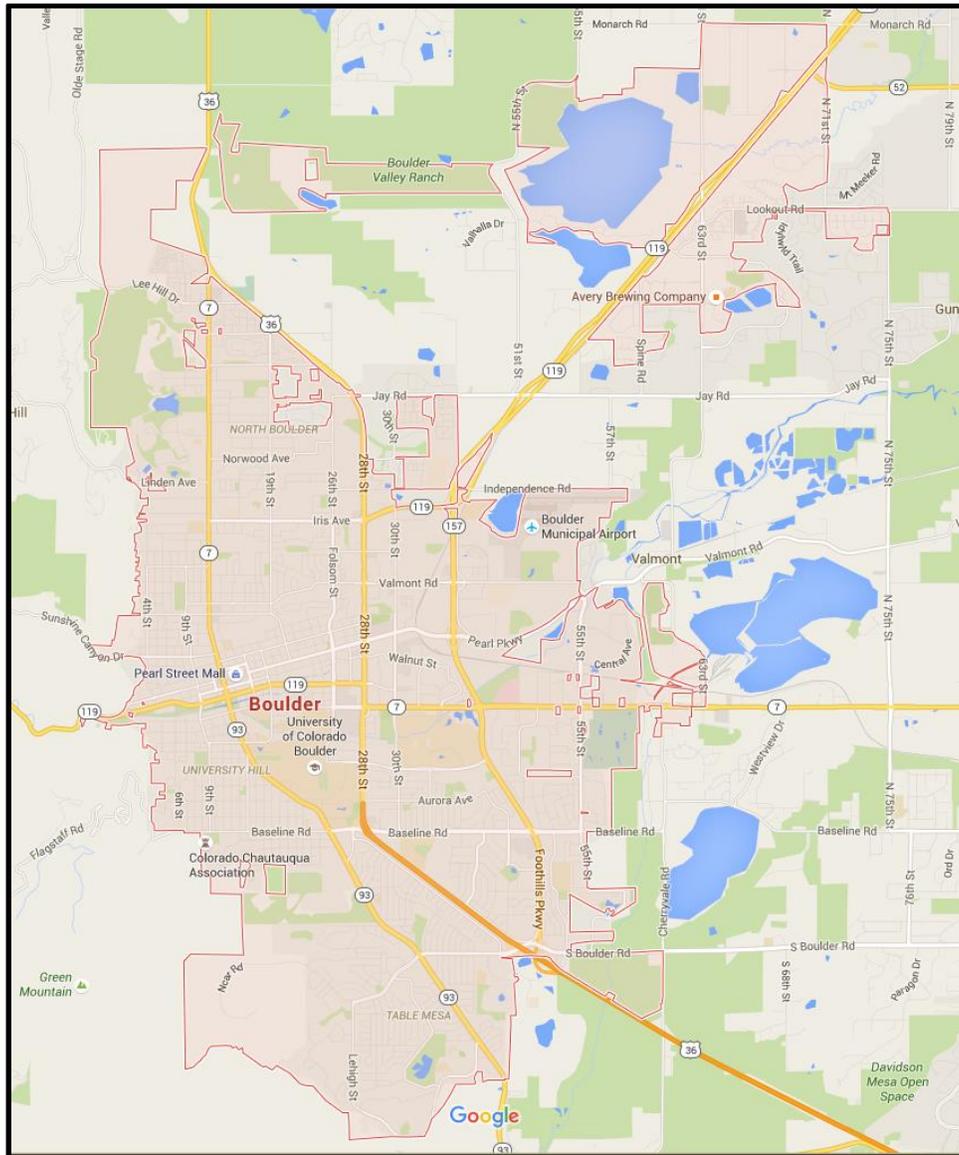
Boulder is a thriving city at the base of the foothills of the Rocky Mountains. Located 25 miles northwest of Denver, it is the eleventh most populous city in Colorado, with a population of approximately 105,000 residing in roughly 43,500 housing units as of 2014.

The city is home to about 16,800 businesses,² supporting a diverse economy and a vibrant start-up community. With industries ranging from natural and organic products, clean-tech, biotech, and high-tech, to aerospace and federal laboratories, Boulder is a center of innovation and entrepreneurship. Owing in part to these diverse employers, Boulder's population spikes during the workday by more than 40 percent (43,900).³

² *United States Census Bureau*, "State & County QuickFacts: Boulder (city), Colorado," 2014 estimate, <http://quickfacts.census.gov/qfd/states/08/0807850.html>.

³ *City-data.com*, "Boulder, Colorado," <http://www.city-data.com/city/Boulder-Colorado.html#b#ixzz3rstPoY00>.

Figure 1: Boulder and Surrounding Area



The city's largest employer is the Boulder Valley School District. Other leading employers include multinational technology and consulting corporation IBM; global health care product manufacturer Covidien; the international operator of one of the world's largest Internet backbones, Level 3; Ball Aerospace; Oracle; Walmart; Whole Foods; and Amgen.⁴ Thanks to the contribution of these leading employers and others, the Boulder Metropolitan Statistical Area boasted a gross metropolitan product of \$18.3 billion in 2010, making it the 110th largest

⁴ Wallace, Alicia, "Top 50 employers in Boulder and Broomfield counties: IBM back on top," *Daily Camera*, July 26, 2010, http://www.dailycamera.com/ci_15589565.

metropolitan economy in the United States.⁵ Boulder's thriving economy prompted *Forbes* magazine to identify the city as the best place in the United States to start a business in 2015.⁶

This moniker is well earned. In 2013, *Inc.* magazine declared, "Boulder is an entrepreneurial powerhouse like no other."⁷ In another recent study, the city was found to have supported six times more high-tech start-ups per capita than the national average.⁸ The city is among the top 20 most productive metropolitan areas in the nation,⁹ with unemployment (3.5 percent) substantially lower than the national average (5.5 percent).¹⁰

The City of Boulder is frequently heralded as one of the most desirable places to live and work in the U.S., and it has been the recipient of a number of awards recognizing its community assets and quality of life. Notably, Boulder was identified as:

- One of the seven best cities in which to launch a startup in 2016¹¹
- One of the best college towns in which to live (2015)¹²
- One of the 100 best places to live overall¹³
- Among the top 10 cities in the U.S. for small business friendliness¹⁴
- Among the best housing markets for growth and stability¹⁵

⁵ *Greyhill Advisors*, "Gross Metropolitan Product," 2010, <http://greyhill.com/gross-metropolitan-product>.

⁶ Dill, Kathryn, "The Best Places for Starting a Business In 2015," *Forbes*, April 30, 2015, http://www.forbes.com/sites/kathryndill/2015/04/30/the-best-places-for-starting-a-business-in-2015/?utm_campaign=ForbesTech&utm_source=TWITTER&utm_medium=social&utm_channel=Technology&linkid=13888201.

⁷ Helm, Burt, "How Boulder Became America's Startup Capital," *Inc.*, December 2013, <http://www.inc.com/magazine/201312/boulder-colorado-fast-growing-business.html>.

⁸ Lindenstein, Joshua, "Boulder ranks 2nd, Fort Collins 6th on Most Innovative Tech Hubs list," *Boulderopolis*, <http://boulderopolis.com/boulder-ranks-2nd-fort-collins-6th-on-most-innovative-tech-hubs-list/>.

⁹ *Ibid.*

¹⁰ *United States Department of Labor, Bureau of Labor Statistics*, "Economy at a Glance: Boulder, CO," http://www.bls.gov/eag/eag.co_boulder_msa.htm#eag_co_boulder_msa1.f.2, with "Economy at a Glance: United States" (reporting May 2015 data), <http://www.bls.gov/eag/eag.us.htm>.

¹¹ Alton, Larry, "The 7 Best Cities to Launch a Startup in 2016," *Small Business Trends*, Nov. 15, 2015, <http://smallbiztrends.com/2015/11/best-cities-to-launch-a-startup-2016.html>.

¹² Wallace, Nick, "The Best College Towns to Live In," *SmartAsset*, October 19, 2015, <https://smartasset.com/mortgage/best-college-towns-2015>.

¹³ Carmichael, Matt, "Why Boulder, Colo., Is a Top 100 Best Place to Live 2015," *Livability*, Sept. 15, 2014, <http://www.livability.com/co/boulder/real-estate/why-boulder-colo-top-100-best-place-live-2015>.

¹⁴ Winkell, Vince, "Boulder ranks high in small business survey," *Longmont, Colorado Times-Call*, Aug. 18, 2015 (citing Thumbtack, Inc. survey), http://www.timescall.com/business/ci_28655753/boulder-ranks-high-small-business-survey.

¹⁵ Garrison, Trey, "These are the 10 best housing markets for growth and stability," *HousingWire*, July 8, 2015 (citing SmartAsset data), <http://www.housingwire.com/articles/print/34445-these-are-the-10-best-housing-markets-for-growth-and-stability>.

Potential residents and business owners recognize Boulder’s attributes—and the city’s population is steadily increasing, with the city’s growth (7.8 percent) more than double that of the U.S. as a whole (3.3 percent) from April 1, 2010 to July 1, 2014.¹⁶ Moreover, Boulder’s population is younger than the national average, owing in part to the large number of university students. The median age of Boulder residents was 28.7 years in 2010,¹⁷ compared to 37.7 years nationwide.¹⁸

As the city continues to expand, its numerous local technical and scientific industries will likely also grow. Robust, citywide connectivity will support growth in new and burgeoning high-tech industries. The expertise to advance these and other industries already exists in Boulder, and the city’s goal is to nurture an environment conducive to further economic expansion.

The city has a number of communications service providers in the area, including Comcast, CenturyLink, MegaPath, Zayo (headquartered in Boulder), and Level 3. Per discussions with local businesses and residents, it appears that the local appetite and need for greater and more uniformly available broadband services both now and in the future cannot be met with current and projected service levels.

The educational needs of Boulder residents—from K–12 through higher education—are also a factor in the city’s broadband goals. The Boulder Valley School District (BVSD) encompasses 56 schools, approximately 30,000 students, and more than 4,000 employees. BVSD supports a growing reliance on connectivity. The use of technology in the classroom and beyond is steadily increasing in the region. BVSD is implementing a one-to-one technology initiative, and ultimately plans to provide iPads to the youngest students and Chromebooks to all students from third grade through high school. The initiative was launched last fall with a pilot program at Centaurus High School, in which freshmen were issued their own Chromebooks for school and home use.¹⁹ Over the past five years, BVSD has added roughly 10,000 Chromebooks and that number is expected to grow as the one-to-one program is fully implemented.²⁰

Boulder is also home to several higher education institutions, including the University of Colorado Boulder, with 30,000 undergraduate students, 7,000 graduate students, and 10,000 staff and faculty members. Naropa University, a private university in Boulder, has approximately 400

¹⁶ *United States Census Bureau*, “QuickFacts Beta: United States: Boulder City, Colorado,” <http://www.census.gov/quickfacts/table/PST045214/00,0807850>.

¹⁷ *City-data.com*, “Boulder, Colorado,” <http://www.city-data.com/city/Boulder-Colorado.html#b>.

¹⁸ *Statista*, “Median age of the resident population of the United States from 1960 to 2014,” <http://www.statista.com/statistics/241494/median-age-of-the-us-population/>.

¹⁹ Bounds, Amy, “Local school districts using one-to-one technology to bring world to students,” *Daily Camera: Boulder County News*, August 16, 2014, http://www.dailycamera.com/boulder-county-news/ci_26343916/local-school-districts-using-one-one-technology-bring.

²⁰ Bounds, Amy, “Boulder Valley adding bandwidth to accommodate tech usage at schools,” *Daily Camera: Boulder County News*, July 8, 2015, http://www.dailycamera.com/boulder-county-schools/ci_28455505/boulder-valley-adding-bandwidth-accommodate-tech-usage-at.

undergraduate and more than 600 graduate students. World-class telecommunications infrastructure is needed to support these populations.

Boulder is also noted for its wealth and educational attainment, as reflected in the table below.

Table 1: Wealth Indicators, U.S. versus Boulder (2010–2014)^{21, 22}

	United States	Boulder
Bachelor’s Degree or Higher, Percent of Persons Age 25+	29.3%	71.5%
Median Value of Owner-Occupied Housing Units	\$175,700	\$499,200
Per Capita Annual Income (2014 dollars)	\$28,555	\$38,401
Median Household Income	\$53,482	\$92,951

²¹ *United States Census Bureau*, “QuickFacts Beta: United States: Boulder City, Colorado,” <http://www.census.gov/quickfacts/table/PST045214/00,0807850> (visited Dec. 3, 2015).

²² “*Demographic and Economic Data*,” Boulder Economic Council,” <http://bouldereconomiccouncil.org/boulder-economy/demographic-economic-data/> (visited January 18, 2016).

IV. Project Need

The City of Boulder, Colorado seeks a successful respondent(s) to operate fast, affordable broadband Internet and data services over publicly and/or privately constructed fiber optics to meet the city's broadband goals. City officials have prioritized pursuing the deployment of an FTTP network that will connect to every home and business and will:

- 1) Serve the growing demands in the private sector for affordable, reliable, and sophisticated broadband technology; and
- 2) Support a thriving business environment.

The city will consider a range of construction, operation, and ownership models for the FTTP network. The city and the selected successful respondent(s) will collaboratively determine the most mutually beneficial partnership structure, which may include cost-sharing, infrastructure leasing, and profit-sharing arrangements. The city is prepared to consider various business models, which could include, but are not limited to, the following scenarios:

- Private construction, operation, and maintenance of privately owned fiber optic infrastructure
- Public construction and private operation and maintenance of fiber optic infrastructure, and private operation of services over the public infrastructure
- Private provisioning of services over public infrastructure

The city will also consider any combination of these models as well as alternative suggestions proposed by respondents.

V. Project Goals

Respondents to this RFI should indicate whether and how their responses serve the city's goals:

1. Provide the infrastructure to every Boulder home, business, public facility, and private institution to enable residents, workers, and visitors the opportunity to access affordable, high-speed broadband connections to the Internet and other networks
2. Respond to the needs of Boulder's broadband user groups, including:
 - a. Health care providers and patients
 - b. The research and development community
 - c. K-12 and higher-education institutions
 - d. Large and small businesses
3. Offer non-discriminatory, open access to all users, service providers, content providers, and application providers connected to the citywide fiber network. Serving only limited areas of the city or specific types of customers is less desirable. Further, the network should be usable via all standards-based commercial devices.

4. Offer unique services and speeds not currently provided in the city (e.g., gigabit per second (Gbps) speeds, symmetrical services, services that continue operating when commercial power fails, service level agreements, and direct connectivity between locations on the network).
5. Consider innovative models, including, but not limited to:
 - a. Leasing city-built and -owned dark fiber to provide services
 - b. Partnering with the city to construct and operate an FTTP network
 - c. Contracting with the city to manage and provide services on a fiber network built, owned, and operated by the city
6. Consider ways for the city and the successful respondent(s) to share financial and operational risks
7. Respond to the needs of the businesses connected to the fiber network
8. Provide cost-effective services for price-sensitive customers and flexible pricing plans to help narrow the digital divide and ensure access to all city residents
9. Facilitate a local broadband marketplace that is as competitive as reasonably possible
10. Provide stakeholders with the broadband capacity, affordability, and local, regional, and national connectivity they need to compete successfully in the global marketplace

For the network to have the intended economic and quality-of-life impacts, we consider both cost and availability of service to be important. We encourage responses that address both to maximize adoption of service.

All respondents must fully complete Appendix A, Appendix B (including two signed copies of the Mutual Non-Disclosure Agreement) Appendix C (including two signed copies of the Non-Collusion Affidavit Certificate) and fully comply with the instructions in Section VIII.

VI. General Network Design and Construction Parameters

Though the city is willing to consider all responses for partnerships, we prefer that the successful respondent(s) perform network construction and installation and that required city resources be minimal. Given that we expect the successful respondent(s)—and potentially subcontractors—to perform construction and installation, the city will dedicate resources to support its successful respondent(s) through plan review, coordination, and inspection services to assure an expedited approach to construction and installation in the public right-of-way and will work with the successful respondent(s) to facilitate work.

The city is seeking a successful respondent(s) willing to deliver game-changing services using a best-in-class technical approach, as defined below. Respondents are expected to base their design on a fully fiber-based architecture providing long-term scalability and reliability. It is important for broadband service to extend to new residents and businesses as Boulder continues

to grow in population, and network design and implementation should take these growth factors into consideration.

The following baseline technical attributes are preferred:

- Fully fiber-based connectivity to residential and business customers alike
- Fiber strand capacity capable of providing direct homerun connections to businesses and residential “power” users
- Fiber strand capacity and physical architecture (e.g., handhole placement, backbone routes, etc.) anticipating full deployment to all homes and businesses
- Fiber strand capacity to each customer that is sufficient to provide redundancy and support for future unknown applications, especially current and potential intensive city applications (e.g., smart grid)
- Low latency to reduce the number of hops to the Internet backbone
- Backbone topology capable of supporting connections over diverse paths from one or more central hub locations to fiber distribution cabinets distributed throughout the city to facilitate high-availability service offerings
- Fiber distribution plant placed in underground conduit (as opposed to direct burial cable) to more readily facilitate repairs and capacity upgrades
- Aerial fiber distribution plant constructed on utility poles where beneficial²³
- Active components placed in environmentally hardened shelters and/or cabinets equipped with backup power generation and/or batteries, as appropriate, capable of sustaining services in the event of extended power outages
- Fiber path diversity to public facilities in order to maintain continuous service even if one path is broken
- Underground communications conduit pathways that can be utilized by the city for future scalability
- Fiber routes that are aligned with existing city conduit and coincide with planned city utility, roadway, and related capital improvement projects to reduce cost and minimize disruption where possible

²³ Xcel energy owns and operates the electric infrastructure in Boulder—the existing plant is 65 percent underground and 35 percent aerial.

VII. Contributions and Assets

While only at an early stage of defining its specific role in promoting enhanced broadband access for its businesses and residents, the city understands the critical role that broadband connectivity plays in its continued prosperity and quality of life for its residents. At this stage, the city itself does not wish to provide services to end users, but will work with the successful respondent(s) to help facilitate broadband deployment.

The city will work with the successful respondent(s) to facilitate the smoothest possible access in construction and installation of the network. Once we have selected the successful respondent(s), the city is prepared to promptly move forward with the partnership. An important component of any fiber build is franchising and permitting. As part of the partnership, the city will assign a point of contact (POC) for each successful respondent and/or its contractor(s), and commits to provide services to help prevent or lessen conflicts in the successful respondent's construction schedule.

For selected respondent(s) and under a non-disclosure agreement (Appendix B), the city will provide access to its GIS resources and, where available, access to existing conduit infrastructure. Map layers include but are not limited to traffic, sewer, water, and storm-drainage facilities. Conduit size and available capacity vary. The city has over 100 miles of existing fiber. Respondents may leverage this existing middle-mile fiber to provide an FTTP network for city residents and businesses.

Respondents should also identify any existing assets they may have in the Boulder area and how they intend to leverage those for this project. The successful respondent(s) may be asked to pay franchise fees to the city and pole attachment fees to the appropriate utility. Respondents should consider whether they propose to offset the fees with in-kind contributions, including conduit and dark fiber.

VIII. RFI Response Requirements

The City of Boulder requests the following information—in concise and clear detail—from respondents. **All responses must adhere to the following response requirements and page requirements.** All responses must follow the exact order below and use the appropriate response headers. Start a new page for each response header. All responses must adhere to 1" margins and use 12-point Times New Roman font. Failure to follow these instructions may result in rejection of the response.

We do expect that each response is likely to take some exceptions to the project goals and requirements listed above (Sections V and VI).

1. **Cover Letter:** Please include company name, address of corporate headquarters, address of nearest local office, contact name for response, and that person's contact information (address, phone, cell, email, other). Keep response to one (1) page.

2. **Business Model Summary:** Summarize the business model you intend to use for the partnership. This should be a concise explanation of the key components of your business model, including but not limited to the division of network and operations responsibility and ownership. Keep response to two (2) pages.
3. **Affirmation:** Affirm that you are interested in this partnership and address the core project goals and requirements listed above (Sections V and VI). If you cannot meet any of those requirements, indicate the requirements to which you take exception, and provide an explanation of the exceptions. Keep response to no more than two (2) pages.
4. **Experience:** Provide a statement of experience discussing your firm's past performance, capabilities, and qualifications. Identify other networks your firm has designed, built, maintained, or operated; include the levels of broadband speed, availability, and adoption among different categories of end users and unique capabilities or attributes. Discuss partnerships with other service providers, government, or nonprofit entities you have undertaken, particularly any involving dark fiber leasing. Describe the nature of the projects and your firm's role. For entities currently providing communication services in or near Boulder, describe your current service footprint in the city, including a description of the type of infrastructure and services you currently offer and the technology platform(s) used. Explain how your firm is a suitable respondent for this project. Keep response to no more than three (3) pages.
5. **Technical and Operations:** At a high level, summarize the technological and operational approach you would use for this project.
 - a. How would you use technology to meet the city's goals? Keep response to one (1) page.
 - b. What approach would you use to interconnect with the Internet and other public networks? Keep response to one (1) page.
 - c. How would you perform network management? Keep response to one (1) page.
 - d. Under what scenarios would you require route diversity or other special features in the city fiber? At what sort of facility (or facilities) would you place network electronics? Keep response to one (1) page.
 - e. Provide a proposed network diagram. Keep response to one (1) page.
6. **Business Structure:** Summarize the business approach you would use for the project. How would your business plan help to meet the city's goals? What are the key assumptions? What are your main areas of risk, and how can the city help reduce the risks? What are the city's main areas of risk, and how can you help reduce the risks? Keep response to no more than three (3) pages. Also complete Appendix A to clarify areas of responsibility.

7. **Open Access:** If you currently operate communications facilities, indicate whether they are operated on an open-access basis. Describe whether and, if so, how you would support open access to infrastructure in the city. Keep response to one (1) page.
8. **Unfettered Access:** Describe what technical and practical solutions you will provide to prioritize unfettered data access. Keep response to one (1) page.
9. **Competitive Marketplace:** Explain how your business structure and partnership plan will create a competitive local broadband marketplace, consistent with the city's vision and goals for the partnership. Keep response to one (1) page.
10. **Schedule:** Describe your proposed schedule for implementing service. Offer a timeline with key milestones. Would you be able to begin service before the entire network is constructed? Are there areas of the city you would recommend be constructed first? Keep response to two (2) pages (one page for response, one page for schedule).
11. **Ubiquitous Access:** Explain how your business plan and schedule for network construction and service implementation will support the city's vision of ubiquitous access to Gigabit per second-class broadband infrastructure. Keep response to one (1) page.
12. **Maintenance:** If you are proposing to perform fiber network maintenance, describe your ability to perform maintenance on an ongoing and as-needed basis. If you are not performing maintenance, who is? Keep response to one (1) page.
13. **Privacy:** Describe your ability to provide secure network service or infrastructure that complies with public safety and other security and privacy regulations and requirements. Also, please describe how you will protect the privacy of network users—an extremely important issue for providers today. Keep response to a maximum of two (2) pages.
14. **Financing and Funding:** List any requirements the city must meet for you to partner with the city on this project.
 - a. What, if any, financial requirements do you have of the city in order to enter into a partnership?
 - b. How do you propose to finance the network build-out?
 - i. If you intend to borrow funds, how will those monies be secured, and by whom? (Financing is any borrowing required.)
 - c. How is the project funded? (Funding is the cash flow that includes investment funds, subscriber revenues, taxes, or other sources that are used to cover operation, maintenance, debt service, and other expenses.)

- d. Please provide a one-page flow chart that shows the flow of funds between all parties in your response. Include all sources and uses of funds.

If you intend to provide financing directly or through a third-party partner, please indicate how these funds will be secured. While third-party financing options may not require the city to directly bond through a public approval process, this form of financing still impacts the city's borrowing capacity and its credit rating.

If your response does not address this question regarding financial requirements, we will assume that you are interested in the partnership but have no financial requirements whatsoever of the city. Please keep response to no more than three (3) pages, plus the one-page flowchart.

15. **Services:** Describe the service options you plan to offer over this network (for example, data only; voice and data; a triple play of voice, data, and cable television; etc.). What download/upload or symmetrical speeds would you offer and guarantee to end users? How will your residential and business offerings differ? What types of service level agreements (for lit services: availability, packet delivery, packet loss, latency, jitter, and other; for dark fiber: repair time, other) would you be prepared to offer? If you plan to use the city fiber, what types of service level agreements would you need? Keep response to two (2) pages.
16. **Pricing:** Provide your approach to pricing the proposed services. For managed services, please describe factors impacting non-recurring costs (estimated fiber path distances, equipment redundancy, etc.); recurring costs for varying capacity levels; and any key technical assumptions upon which prices are based. For dark fiber offerings, please describe desired pricing models. Keep response to two (2) pages.
17. **Local Participation and Economic Vitality:** Provide a statement of how your proposed participation would help the city's economic vitality goals. Describe your interests and plans to hire local contractors and providers in the City of Boulder, and how your participation would help local job creation. Describe your relationships with local businesses in the city, if any, as well as your interest and plans to engage them in this project. Keep response to no more than three (3) pages.
18. **References:** Provide a minimum of three (3) references, including contact information, from previous contracts or partnerships. Keep response to two (2) pages.

IX. Administrative Information and Requirements

1. **RFI Official Contact:** Upon release of this RFI, all vendor communications should be directed to the RFI Coordinator listed below. Unauthorized contact regarding this RFI with other city employees may result in disqualification. Any oral communications will be considered unofficial and non-binding on the city. Vendors should rely only on

written statements issued by the RFI Coordinator.

Name: RFI Coordinator
Don Ingle, Director of IT

Address: City of Boulder
Information Technology
3065 Center Green Drive, 2nd Floor
Boulder, Colorado 80301

Telephone: 303.441.4183

E-mail: ingled@bouldercolorado.gov

2. Schedule: The schedule for this project is as follows:

Note: The city reserves the right to adjust this schedule as necessary.

Milestone	Date
Release RFI to Vendors	January 25, 2016
Vendor Questions (if any) Due	February 10, 2016
Answers to RFI Questions Released	February 15, 2016
Responses Due	February 25, 2016

- 3. Questions Regarding This RFI:** Vendors who request clarification of the RFI’s requirements may submit written questions to the RFI Coordinator by 4 p.m. (Mountain Time) on February 10, 2016. An email attachment sent to ingled@bouldercolorado.gov is preferred. The compiled questions and answers will be included in an addendum that will be posted on the Rocky Mountain e-Purchasing System by 5 p.m. (Mountain Time) on February 15, 2016.
- 4. Response Preparation:** Please prepare RFI response in PDF and Excel (Appendix A) format. All responses must adhere to instructions in Section VIII, including all formatting requirements.
- 5. Response Submission:** The following provides specific instructions for submitting your sealed response.

<p>Due Date: <i>Sealed Responses must be received by the Purchasing Coordinator no later than February 25, 2016, at 4 p.m. (Mountain Time).</i> Sealed responses shall be plainly marked</p>

	<p>“RFI No. 06-2016, Partnership for Deployment of Citywide Fiber to the Premises (FTTP)”. Late responses will not be accepted nor will additional time be granted to a specific vendor. All responses and accompanying documentation will become the property of the city and will not be returned.</p>
<p>Number of Copies:</p>	<p>A total of two (2) paper copies and an electronic copy (CD or thumb drive) of the vendor’s response, in its entirety, must be received as specified above.</p> <p>The city will not accept facsimiles.</p>
<p>Address for Submission:</p>	<p><u>Mailed Responses:</u> Pam Andrus City of Boulder – Purchasing Division Attn: RFI No. 06-2016 P.O. Box 791 Boulder, Colorado 80306-0791</p> <p><u>Hand delivered responses:</u> Office of the Purchasing Coordinator Attn: RFI No. 06-2016 1777 Broadway Boulder, Colorado 80302</p>

6. Mutual Non-Disclosure Agreement: Respondents must complete and attach two signed copies of the Mutual Non-Disclosure Agreement included as Appendix B.

7. Non-Collusion Affidavit Certificate: Respondents must complete and attach two signed copies of the Non-Collusion Affidavit Certificate included as Appendix C.

X. Personal Presentations

At its discretion, the city may request that vendors and other parties that provide a timely response to this RFI make an individual and personal presentation to better explain information or solutions identified in the RFI. These presentations, if requested by the city, shall be held at a time and place of mutual convenience.

Appendix A: Responsibility Matrix

Appendix A is included as a separate file.

Note that Appendix A **must** be submitted in its native Microsoft Excel format. Failure to follow submission instructions may result in rejection of the response.

Appendix B: Mutual Non-Disclosure Agreement

Please provide two signed copies of the following Mutual Non-Disclosure Agreement.

MUTUAL NON-DISCLOSURE AGREEMENT

THIS MUTUAL NON-DISCLOSURE AGREEMENT (this "Agreement"), effective as of the ____ day of _____ 2016, is between the City of Boulder, a Colorado home rule municipal corporation (the "City"), and _____ ("Vendor"). The City and Vendor may hereinafter be referred to individually as a "Party" or collectively as the "Parties."

WHEREAS, Vendor and the City are involved in telecommunications-related design projects (the "Purpose"); and

WHEREAS, in the course of negotiations or communications, each Party may disclose to and/or receive from the other Party certain information belonging to the disclosing Party or its affiliates (collectively, the "Discloser") that includes trade secrets, privileged information, or confidential commercial, financial, geological, or geophysical data, including insurance policies and social security numbers ("Confidential Information");

NOW, THEREFORE, in consideration of the foregoing and of the mutual covenants and promises set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

1. Records maintained by the City are subject to public disclosure pursuant to the Colorado Open Records Act ("CORA"). Certain confidential business records are exempt. If Vendor provides to the City documents that include trade secrets, privileged information, or confidential commercial, financial, geological, or geophysical data, including insurance policies or social security numbers, Vendor shall segregate any documents including such information from other documents provided to the City and shall clearly identify such documents with a stamp, watermark or other clear mark identifying the documents as confidential pursuant to CORA.

2. The Party receiving Confidential Information (the "Recipient") (i) shall use such Confidential Information only for the Purpose; (ii) shall reproduce such Confidential Information only to the extent necessary for the Purpose; (iii) shall restrict disclosure of such Confidential Information to its, and its affiliates', employees and agents who need to know such Confidential Information to carry out the Purpose and who are not direct competitors of the Discloser (and require such employees and agents to undertake confidentiality and use obligations at least as restrictive as those Recipient assumes herein); (iv) shall not disclose such Confidential Information to any other Party without prior written approval of Discloser; and (v) shall protect such Confidential Information with at least the same degree of care as it normally exercises to protect its own proprietary information of a similar nature, which shall be no less than reasonable care. If Recipient discloses Confidential Information to an employee, affiliate, or other person in accordance with the terms of this Agreement, any subsequent disclosure or use of such Confidential Information by such employee, affiliate, or other person shall be deemed a disclosure or use by Recipient and Recipient shall be responsible for such disclosure or use. The Recipient shall immediately notify the Discloser upon the discovery of any loss or unauthorized disclosure or use of the Confidential Information of the Discloser.

3. The restrictions on use and disclosure of Confidential Information shall not apply unless such Confidential Information, when in tangible, electronic or viewable form is marked confidential or proprietary by Discloser, or when disclosed only orally is both identified as confidential or proprietary at the time of disclosure and summarized in a writing so marked and provided to Recipient within thirty (30) days following the oral disclosure; except that any unmarked material and any verbally disclosed information that Recipient knows or reasonably should know to contain Confidential Information of the

Discloser, including but not limited to business or technical information not generally known to the public, such as patents, copyrights, trademarks and trade secrets, as well as all written or oral pricing and contract proposals exchanged between the Parties shall be subject to the use and disclosure restrictions of this Agreement. Within the 30-day period referenced above, all Confidential Information communicated only orally shall be subject to the use and disclosure restrictions of this Agreement.

4. The restrictions on the use or disclosure of Confidential Information shall not apply to any information:
 - a. Which is independently developed by the Recipient as evidenced by documentation in such Party's possession; or
 - b. Which is lawfully received from another source free of restriction and without breach of this Agreement by the Recipient; or
 - c. After it has become generally available to the public without breach of this Agreement by the Recipient; or
 - d. Which at the time of disclosure to the Recipient was known to the Recipient free of restriction as evidenced by documentation in such Party's possession; or
 - e. Which the Discloser agrees in writing is free of such restrictions.
5. All Confidential Information shall remain the exclusive property of the Discloser, and no license under any intellectual property right is either granted or implied by this Agreement or the conveying of Confidential Information to Recipient hereunder. Discloser makes no representations, warranties, assurances, guarantees or inducements of any kind, and, in particular, with respect to the non-infringement of any intellectual property rights, or other rights of third persons or of Discloser.
6. Neither this Agreement nor the disclosure or receipt of Confidential Information hereunder shall constitute or imply any promise or intention by either Party to enter into any transaction or business relationship, nor is it an inducement for either Party or its affiliated companies to spend funds or resources or purchase or provide products or services, nor is it any commitment by either Party or its affiliated companies with respect to the present or future marketing of any product or service. No such agreement will be binding unless and until stated in a separate writing signed by authorized representatives of both Parties.
7. Each Party agrees not to announce or disclose to any other person (other than persons described in Section 1(iii), above) the Confidential Information or the nature of any discussions concerning the Purpose without first securing the prior written approval of the other Party. All Confidential Information furnished hereunder shall be returned or destroyed upon written request or upon Recipient's determination that it no longer has a need for such Confidential Information, except that Recipient's legal counsel may retain one copy in counsel's files solely to provide a record of such Confidential Information for archival purposes.
8. The restrictions on use and disclosure of Confidential Information disclosed hereunder shall survive for a period of three (3) years from the date of last disclosure of any such Confidential Information (except in the case of software, for an indefinite period). Either Party may terminate this Agreement upon thirty (30) days advance written notice to the other.
9. All notices or communications required or permitted as a part of this Agreement shall be in writing (unless another verifiable medium is expressly authorized) and shall be deemed delivered when:
 - A. actually received,
 - B. upon receipt by sender of a certified mail, return receipt signed by an employee or agent of the Party,
 - C. upon receipt by sender of proof of email receipt, or
 - D. if not actually received, ten (10) days after deposit with the United States Postal Service authorized mail center with proper postage (certified mail, return receipt requested) affixed and addressed to the respective other party at the address set forth in this Agreement or such other address as the Party may have designated by notice or Agreement amendment to the other Party.

The consequences of failure to receive a notice due to improper notification by the intended Recipient of a new address will be borne by the intended Recipient. The addresses of the Parties to this Agreement are as follows:

<Vendor Name>	City of Boulder
<Vendor Address Line 1>	1777 Broadway
<Vendor Address Line 2>	Boulder, CO 80302
Attention: Project Manager	Attention: Project Manager

10. This Agreement shall not be construed to limit either Party's right to independently develop or acquire products or services without use of the other Party's Confidential Information.

11. The restrictions on disclosure of Confidential Information under this Agreement shall not preclude Recipient, on the advice of counsel, from complying with applicable law, regulation, other governmental requirement or other demand under lawful process, including a discovery request in a civil litigation, if Recipient first gives Discloser notice of the required disclosure and cooperates with Discloser, at Discloser's expense, in seeking reasonable protective arrangements. In no event shall Recipient be required to take any action which, on the advice of Recipient's counsel, could result in the imposition of any sanctions or other penalties by a court or government body.

12. Neither Party has any obligation to disclose Confidential Information to the other. Either Party may, at any time: (i) cease giving Confidential Information to the other Party without any liability, or (ii) request in writing return of Confidential Information previously disclosed.

13. Recipient acknowledges that Confidential Information provided under this Agreement may be subject to U.S. export laws or regulations. Recipient shall not use, distribute, transfer or transmit Confidential Information (even if incorporated into products, software or other information) except in compliance with such laws and regulations. If requested, Recipient shall sign written assurances and other export-related documents as may be required to comply with such laws or regulations.

14. Each Party agrees that all of its obligations undertaken herein as Recipient shall survive and continue after any termination of this Agreement, subject to Section 8 above.

15. No amendment or modification of this Agreement shall be valid or binding on the Parties unless made in writing and signed by duly authorized representatives of each Party.

16. Subject to the limitations set forth in this Agreement, this Agreement will inure to the benefit of and be binding upon the Parties. This Agreement may not be assigned by one Party without the other Party's prior written consent.

17. If any provision of this Agreement shall be held by a court of competent jurisdiction to be illegal, invalid or unenforceable, the remaining provisions shall remain in full force and effect to the greatest extent permitted by law.

18. No forbearance, failure or delay in exercising any right, power or privilege is waiver thereof, nor does any single or partial exercise thereof preclude any other or future exercise thereof, or the exercise of any other right, power or privilege. This Agreement is binding upon and inures to the benefit of the Parties and their heirs, executors, legal and personal representatives, successors and assigns, as the case may be.

19. This Agreement shall be governed by the laws of the State of Colorado, U.S.A., without regard to its conflicts of law principles. Each Party acknowledges and agrees that a breach by it or one of its affiliates, employees or representatives of any of the covenants set forth in this Agreement will cause irreparable injury to the other Party and its business for which damages, even if available, will not constitute an adequate remedy. Accordingly, each Party, for itself and its affiliates, employees and representatives, agrees that the other Party, in addition to any other remedy available at law or in equity, shall be entitled

to the issuance of injunctive relief (including, without limitation, specific performance) by a court of competent jurisdiction in order to enforce the covenants and agreements contained herein.

20. Any judicial proceeding brought by or against any of the Parties on any dispute arising out of this Agreement or any matter related hereto shall be brought exclusively in the state district court sitting in Boulder County, Colorado, and by execution and delivery of this Agreement, each of the Parties accepts for itself the exclusive jurisdiction and venue of the aforesaid court as trial courts. Each Party expressly waives any objection (including, without limitation, objections based on *forum non conveniens*) which any Party may have now or hereafter to the laying of venue or to the jurisdiction of any such suit, action, or proceeding, and irrevocably submits generally and unconditionally to the jurisdiction of any such court in any such suit, action, or proceeding. Each Party agrees that its attorneys shall accept service of process.

21. This Agreement constitutes the entire understanding between the Parties as to the treatment of Confidential Information disclosed for the Purpose and merges all prior discussion between them relating thereto. Each Party has read this Agreement, understands it and agrees to be bound by its terms and conditions. This Agreement may be executed in counterparts, each of which shall be deemed an original, but all of which taken together shall constitute one single agreement between the Parties. Signatures exchanged by facsimile or other electronic means are effective for all purposes hereunder to the same extent as original signatures.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the date first set forth above.

By: _____

(Typed or printed name)

(Title)

City of Boulder, Colorado

By: _____

(Typed or printed name)

(Title)

Appendix C: Non-Collusion Affidavit Certificate

Please provide two signed copies of the following Non-Collusion Affidavit Certificate.

NON-COLLUSION AFFIDAVIT CERTIFICATE

STATE OF _____)

ss.

COUNTY OF _____)

The undersigned, being duly sworn, deposes and says that the person, firm, association, co-partnership or corporation herein named, has not, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in the preparation and submission of a response to the City of Boulder for consideration in the award of a contract on the improvement described as follows:

Partnership for Deployment of Citywide Fiber to the Premises (FTTP)

(Firm Name)

By: _____
(Authorized Signature)

Title _____

Sworn to before me this _____ day of _____, _____.

Notary Public

CORPORATE SEAL:

Appendix D: Survey Results – Community Interest in Broadband

Appendix D is included as a separate file.