

**Boycom Cablevision Southeast Missouri Comprehensive Communities Project
Easy Grants ID: 5662**

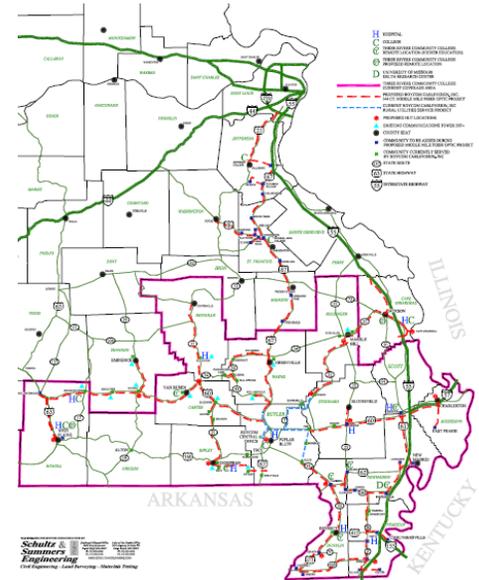


The Boycom BTOP CCI application is a coordinated private/public partnership that presents a comprehensive plan to build a continuous middle mile fiber infrastructure in economically distressed Southeastern Missouri where none exists today.

Fills a Key Gap

Middle mile infrastructure is a prerequisite for competitive last-mile broadband services, connected key community anchors, job creation and economic development. In rural southeastern Missouri, the most economically distressed region of the state, continuous full-fiber middle mile infrastructure is nonexistent and alternative bandwidth sources are expensive to access and lack the capacity to keep up with future bandwidth needs. Area residents, businesses and anchors have few viable alternatives.

The Southeast Missouri Comprehensive Communities Project will directly address this problem by constructing a 719 mile, 144-count, carrier-grade Ethernet fiber backbone, able to supply 100 Mbps Internet connections to households and 1GigE connections to businesses and anchor institutions. The project includes its own 315 mile Last Mile component, but is firmly committed to open access and neutral interconnection by existing and new last mile broadband service providers including planned fiber connectivity for the Roberts Companies Tower Division for wireless opportunities.



Meets Serious Economic/Social Needs

This region is severely economically distressed. Eleven of the state’s fifteen persistent poverty-designated counties are in the PFSA. The population density of the southern corridor is 34.2 persons per sq. mi. compared with 95.4 for the rest of Missouri. Compared to state and national averages, the region’s population is older; less educated, and has a higher poverty rate. These facts present Southeast Missouri with serious broadband challenges, including the fact that the majority of the region has limited or no access to high-speed broadband.

Connects Prioritized Anchors

The Project includes 1,683 anchor institutions. Working closely with the State and with MOREnet, the Missouri Research and Education Network, we have targeted a prioritized cross section of 474 key anchor institutions, with a special focus on connecting the region’s community colleges and universities. In turn, our Community College Consortium will tailor curriculum to emphasize emerging broadband-enabled technologies in healthcare and clean energy/SmartGrid and increase end-user broadband demand by offering computer classes for targeted older, unemployed and undereducated residents.

Offers Scalable, Competitive Products

Anchor institutions and businesses - Standard package: 20 Mbps, 50 Mbps or 100 Mbps, scaling to 1GigE, and a point-to-point solution. Last mile service providers – Standard package: 50 Mbps, 100 Mbps, 500 Mbps and 1 GigE, scaling to 10 GigE, and two point-to-point solutions. We expect to provide service to 423 customers by the end of quarter sixteen; 286 anchors, 130 businesses and five last mile providers.

Statistics

- Counties – 21
- Square miles – 14,000
- Communities – 75
- Anchors – 1,683
- Households – 261,495
- Business – 23,282
- Total cost - \$58.5 million
- Last mile portion - \$8.9 million
- Grant request - \$46.8 million

Unique Private/Public Partnerships with Aligned Interests

The Project has been selected by the State of Missouri as a primary state partner, and will interconnect with the State's two other MoBroadbandNow Middle Mile applicants (Easygrants #6519 and 4521) to eliminate overlap, increase reliability, create redundant state-wide fiber rings, and potentially pool bandwidth costs. The Project will also maximize the impact of other federal and state dollars, including leveraging Missouri's first round BTOP Broadband Mapping Award, Federal Grant Award # 29-50-M09022.

The project is led by Boycom Cablevision, one of the region's primary rural telecommunication service providers. Boycom has engaged Missouri-based Pulse Broadband to design, engineer and oversee network construction. Pulse Broadband is the primary partner with MoBroadbandNow BIP Round One winner, Ralls County Electric, Easygrants #928, and is a partner with three other BIP Second Round MoBroadbandNow Last Mile applicants: CoMo Electric, #5443; United Electric, #6310; and Cass County, #6019.

State partners include MOREnet, which will connect community colleges and universities through a dedicated fiber network embedded in the backbone. In return, MOREnet will provide the connection equipment, and will pay to maintain the network. MoDOT, the Missouri Department of Transportation will connect state transportation and public safety agencies through a separate fiber network embedded in the backbone. In return, MoDOT will provide right-of-way access along state highway routes and hut location property at key points of presence sites. MoDOT will also pay for connection equipment installation and power and provide permitting assistance. The project's third state partner is the State Office of Administration Information Technology, which will provide project coordination with other state agency organizations such as Homeland Security, Conservation, etc.

Other partners include a consortium of the area's community colleges, Three Rivers Community College, Mineral Area College and Jefferson College, and Missouri State University-West Plains whose districts span the project area. The final partner is the Ozark Foothills Regional Planning Commission (OFRPC). The Project will direct 5% of free-cash-flow for its first ten years into a local economic development fund managed by the OFRPC through its existing business incubator with an emphasis on Small Disadvantaged Businesses.

Proven Team

The Project team is extraordinarily qualified. Boycom Cablevision owns cable television and broadband systems in 32 communities and 13 counties throughout southern Missouri and northern Arkansas since 1992, and has deep experience in telecommunications operations and construction. Pulse Broadband principals have managed the design and engineering for over 50,000 miles of plant and for networks serving 12 million customers. Its senior engineering team created the first deployment of fiber optic technology in the cable TV industry at Time Warner Cable. Finally, all key construction, OSP, electronic equipment and NOC contractors are lined up to start the project. All have direct experience with government contracts, compliance and Davis Bacon reporting. The OFRPC will provide grant administration, reporting and compliance oversight and will interface with state agencies during construction.

Conclusion

Left solely to market forces, Southeast Missouri, and other rural areas like it, likely will have inferior technology, prohibitively expensive technology, or none at all. BTOP funding for the Southeast Missouri CCI Project presents the best and perhaps last opportunity to fill this gap.

MoBroadbandNow

“Sho-Me MO” Middle Mile Project

100

Community Anchor
Institutions

288

Job-Years Impacted

136

Directly Connected
Communities

93%

Of the Proposed Service
Area is Economically
Distressed

1,380

Total Fiber Miles

\$26.6

Million

Federal Grant Request

About the Project

The MoBroadbandNow “Sho-Me MO” Middle Mile Project seeks to enhance and expand a regional fiber optic network to deliver reliable, affordable and abundant interconnection points for last mile service in south-central rural Missouri. The project intends to improve broadband service in under-served areas and stimulate economic growth and job creation in thirty counties in Missouri. This project will support and complement several other Recovery Act projects, including the DoE Smart Grid initiatives, the Title XIII health information technology initiatives and the Title VIII education programs.

- 288 job-years will be impacted in areas such as fiber installation technicians, construction workers, project managers and network operators.
- The population of the proposed service area is well over 1,000,000 citizens of Missouri.
- 100 community anchor institutions and critical community facilities will be connected directly to the proposed network.
- This project covers nearly 30% of the land base of Missouri which is composed of 30 counties, 229 communities, 66,000 businesses and over 260,000 households.
- Strategic interconnects with two partner projects with BlueBird Media (Northern Missouri Ultra-High Capacity Middle Mile) and Boycomm Cablevision (The Southeast Missouri Comprehensive Communities Project).
- \$26.6 million in Federal Grant Request with \$11.4 million in kind matching for a total project cost of \$38 million dollars.
- The network is designed to not favor any specific applications and/or content over others. This specific network design is intended to be purely “open-access” with the potential for any last mile service provider to utilize its benefit.
- Sho-Me Technologies is providing a 30% contributory match and is committed to a project completion of 12 months.

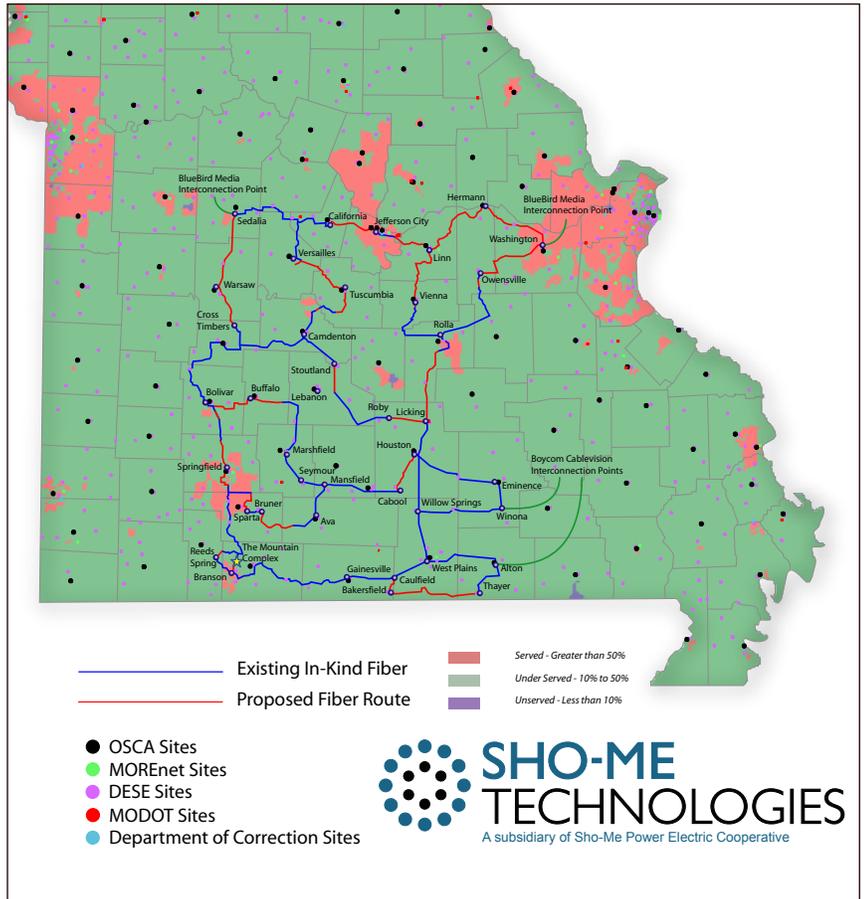
About Sho-Me Technologies

Sho-Me Technologies, LLC, (SMT) a telecommunications provider certified and regulated by the Missouri Public Service Commission since 1997, provides managed bandwidth and dark fiber services to schools, broadcast operators, health care providers, internet service providers, telephone companies, cellular service providers, manufacturing and financial institutions, government agencies and more. SMT has crossed both the Missouri and Mississippi Rivers, constructed fiber in some of the most difficult downtown urban areas of the largest cities, and extended through some of the most remote and harshest parts of rural Missouri. Valuable experience like this comes from a commitment to provide a reliable network capable of supporting carrier class services and smart grid technologies. After all, SMT was born out of a need in the rural electric cooperative industry to provide secured, robust telecommunications. Whether it is building fiber optics into the State Capitol Building in Jefferson City or to a residential home in Raymondville, SMT has a proven track record to ensure the success of the broadband ARRA efforts in Missouri.

- SMT and member cooperatives have already connected over 1/3 of the county courthouses with fiber optics. Fiber has also been installed to the Capitol with redundant routes connecting important facilities like the State Data Center. The groundwork is already in place to expand to other agencies and departments like Agriculture and Natural Resources.
- SMT is already equipped with quality tools and test equipment required to proactively monitor and maintain their existing fiber network as well as this proposed network expansion.
- SMT owns and operates a state-of-the-art 24 x 7 x 365 primary network operations center (NOC) as well as a backup NOC facility for redundancy.
- SMT currently serves 2,300 customer sites, 600 cellular towers, 250 schools, 300 banks, 150 government sites, 11,000 splices/access points and 25 interconnects with other carriers all through SMT's 2,000+ miles of owned and interconnected fiber.
- SMT operates with the mission of providing fiber optics to rural parts of Missouri. To monitor and maintain that network with the same consideration and dedication as the electric grid and to have in place the tools, talent and core infrastructure to provide quality broadband access to rural Missourians.

Sho-Me MO Project Supporters

Senator Claire McCaskill
 Missouri Governor Jay Nixon
 Missouri Department of Higher Education
 State of Missouri Office of Homeland Security
 Missouri Primary Care Association
 State of Missouri Department of Corrections
 Missouri Department of Elementary and Secondary Education
 25th Judicial Circuit Court of Missouri
 32nd Judicial Circuit Court of Missouri
 35th Judicial Circuit Court of Missouri
 37th Judicial Circuit Court of Missouri
 42nd Judicial Circuit Court of Missouri
 44th Judicial Circuit Court of Missouri
 Crawford Electric Cooperative
 Gascoage Electric Cooperative
 Howell-Oregon Electric Cooperative
 Intercounty Electric Cooperative
 Laclede Electric Cooperative
 Se-Ma-No Electric Cooperative
 Southwest Electric Cooperative
 Webster Electric Cooperative
 White River Valley Electric Cooperative
 Sho-Me Power Electric Cooperative
 BlueBird Media
 Boycomm Cablevision



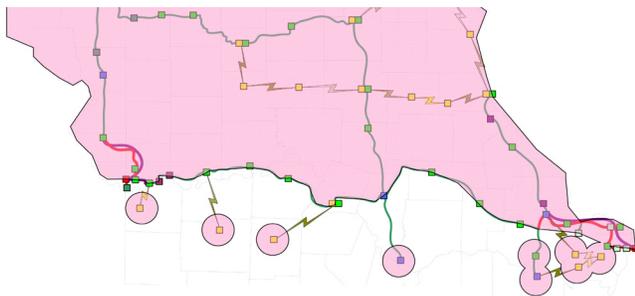


Northern Missouri Middle-Mile Broadband Network

BlueBird Media is a public-private partnership, dedicated to developing an ultra-high capacity GigE middle-mile network throughout underserved and disadvantaged areas in Northern Missouri. Our broadband fiber network will offer last-mile providers next generation bandwidth speeds at economically competitive prices. Additionally, our service will provide support to local community anchor

institutions, including local governments, schools and hospitals, to promote the creation of jobs and a greater quality of life.

BlueBird Media is committed to expanding broadband infrastructure and high-speed internet access throughout rural and underserved areas. We believe that our plan to increase broadband Internet access will benefit the citizens, businesses, and the State of Missouri.



Proposed BlueBird Media Service Area

bluebird will:

- Service internet providers in rural and underserved communities
- Be carrier neutral, allowing access to ALL service providers
- Be the first truly statewide fiber GigE network in Northern Missouri



Proposed Services: BlueBird plans on developing a comprehensive network that is comprised mainly of Ethernet Broadband Technology. BlueBird will provide bandwidth at a low cost to last-mile providers and institutions. Additional services available will include video and Voice over IP. Service will be available at speeds of 30 Meg, 100 Meg, 500 Meg and 1 GigE throughout our coverage area.

BlueBird will use a reliable and cost effective hybrid IT Ethernet broadband solution together with a proven fiber/microwave network. The network will have a minimum of 1GigE access expandable to 1 Terabit level which

will help develop all last mile networks to support data, voice, and video communication, enabling a broad range of fixed and mobile application for public and private systems.

Coverage: The geographical area that will be affected is Northern Missouri, covering 46 counties and over 6,250 total square miles. The total population affected is 2.3 million residents, and equates to approximately 840,000 households and 57,000 businesses.



Community Anchor Institutions: The collective geographical area represented in this network has well over 576 critical community institutions ranging from fire, police, libraries, schools, courthouses, water utilities and waste water treatment facilities.

Interconnect Obligations: BlueBird will be building a robust infrastructure network that will be able to service multiple providers. This additional capacity will allow easy expansion for any new entrant in the service area.

Broadband System: BlueBird's innovative broadband network solutions are the ideal technology for delivering high-demand applications such as broadband Internet access, video services, security surveillance, telemedicine, VOIP, GPON, and emerging technologies.

BlueBird's broadband technology combines field proven toughness with exceptional performance, security, ease-of-use and cost effectiveness. It significantly reduces the time to design and deploy new commercial and enterprise broadband networks. It also seamlessly integrates with existing network systems and management tools, extending and augmenting existing service with a simpler and less cost-intensive solution.





American Fiber Systems ARRA/NTIA/BTOP/CCI Kansas City Round 2 Application Summary

Opening Statement

American Fiber Systems, Inc. (“AFS”) in partnership with the Missouri Research and Educational Network (MOREnet), Clay County and Jackson County in Missouri, Leavenworth County, Platte County, Wyandotte County and Johnson County in Kansas and the Mid-America Regional Council seeks \$10,573,085 in BTOP Middle Mile Infrastructure funding from the ARRA to complete a fiber-based network in the states of Kansas and Missouri. AFS is providing a funding match of \$8,405,771 or 44% of the Total Project Cost. The “shovel ready” build out of the Missouri and Kansas Community Broadband Network (“MO/KS-Net”) will connect 44 community anchor institutions (“CAIs”) in MO and KS. In addition, MO/KS-Net will provide advanced fiber-based broadband services to the communities, CAIs, and businesses along and near the project route. The project is a collaborative public-private effort establishing partnerships between multiple municipal, community organizations, and AFS, an industry leading fiber service carrier, to provide reliable, scalable, and cost-effective high-speed middle mile broadband connectivity.

Problem Statement

Kansas City and the surrounding communities have been hit hard by the deep recession. The five counties comprising the proposed service area have lost over 15,000 net jobs from December 2008 to January 2010. In fact, Jackson County, MO and Wyandotte County, KS were designated economically distressed areas based on high unemployment and low median income. While other larger metropolitan areas throughout the US have extensive fiber networks forming the basis of a digital economy, Kansas City has fallen behind. The Kansas City MSA ranks 68th among U.S. MSAs in terms of total middle mile fiber mileage. The Kansas City metropolitan region is in dire need of a major upgrade to the ramps to the information superhighway to foster rapid economic development. The Kansas City metropolitan region needs to replace these lost jobs with higher paying jobs predicated on the information-based economy, which has gone underdeveloped relative to other areas. Additionally, Missouri and Kansas’ government facilities and public safety entities are exposed to potential connectivity failures given current limited points of access as well as bandwidth constraints on the existing network. These critical facilities need a high-speed communications network with route diversity available at a reasonable cost to communicate, coordinate, and respond more effectively. In fact, Missouri and Kansas’ public safety agencies are facing the daunting challenge of adhering to regional interoperability mandates from the Federal government by 2012 while saddled with the handicap of having far less core fiber network than other parts of the USA.

Proposed Solution

MO/KS-Net will provide a fiber-optic platform that provides the proposed funded service area with a future-proofed, technology-agnostic platform with a lifespan of well over 40 years. It will build 105 miles of new fiber utilizing the local labor force connecting 44 CAIs. In addition, MO/KS-Net will connect with 5 interconnection points along the fiber route ensuring middle mile fiber is available to other communities, CAIs, and businesses. The CAIs connected initially are the highest bandwidth and greatest need facilities defined by project partners. More CAIs will be connected after the funding period as the needs arise. It is expected that that the project will be complete within 30 months and create 144 jobs.

Proof of Readiness

Since its inception in 2000 AFS is a financially successful and community supportive company. AFS's keys to success include highly competitive pricing to the customers, extremely high reliability, on time & on budget delivery, proactive customer support and the entire AFS team being customer focused. AFS has successfully designed, deployed middle mile fiber-based networks and delivered customer solutions in 9 metro markets across the USA, including over 1,110 route miles and 1,764 on-net locations including customer facilities, carrier hotels, central offices, data centers and cell towers. AFS successfully operates metro fiber networks in Kansas City, Atlanta, Nashville, Cleveland, Minneapolis/St. Paul, Salt Lake City, Boise, Reno and Las Vegas and operates an intercity network connecting Las Vegas, Reno, Boise and Salt Lake City. Over the last 5 years AFS has significantly and successfully expanded the networks in all of its markets and completed over 100 fiber projects of varying scale and complexity.

Project Impact

The project will initially connect a total of 40 CAIs including government facilities, public safety facilities, healthcare facilities and K-12 school sites in the proposed service area, providing these institutions reliable and route-diversified access to the critical data that they require. The fiber connectivity will enhance planning, coordination, and responsiveness of first responders across all communities and enable more coordinated and efficient law enforcement and emergency response. In addition, it will also connect 5 MOREnet community colleges providing these institutions access to broadband capacity needed to drive innovation and control costs. The project will create immediate jobs and the bandwidth capacity will enable the creation high-paying "knowledge jobs" in years to come.

MO/KS-Net will dramatically improve last mile broadband access particularly for underserved communities along the fiber route (8 communities within the service area are underserved). To accomplish this, MO/KS-Net will enable further competition and investment for Fiber-To-The-Home (FTTH) companies. It will make available 24 strands of dark fiber from its existing backbone along with 24 strands from this proposal to FTTH providers at a lease cost of \$1 for 40 years of use. This will make available, at virtually no cost, more than 125 route miles of backbone fiber to FTTH providers, thus eliminating millions of dollars of costs typically incurred in a network build. This proposal will enable and encourage competition to enter the market, resulting in lower prices, better choices, and increased service reliability.

Proposed Funded Service Area & Project Budget

The project application contains one proposed funded service area consisting of 105 route miles of new fiber build in Kansas City Metropolitan area including both Missouri and Kansas as well as the AFS existing network of 60 plus route miles. The new fiber build passes communities that include 316,439 households, 26,804 businesses, and 2,168 CAIs. The project includes existing AFS fiber miles and equipment as in-kind contributions, but these figures are associated only with the new fiber build.

The Total Project Cost of this build is \$18,980,856 of which AFS will be providing a cash match and an in-kind contribution for a total AFS match of \$8,405,771 or 44%. Therefore, the Federal BTOP grant request is for \$10,575,085 or 56% of the total project cost.

Network Components & Service Availability

The project will use fiber-optic network cables and equipment from manufactures including Nokia-Siemens and Ciena, which were selected based on quality and reliability. For CAIs and businesses along the fiber, AFS will make the following transport services available: Ethernet private line, virtual private line, virtual LAN, internet access; managed wavelength service; TDM / SONET transport; dark fiber. Bandwidth available ranges from 10Mb to 10Gb and soon 100Gb.

AFS is a non-discriminatory open access provider of wholesale transport services to any party interested in purchasing capacity, including carriers, last mile providers, businesses, and institutions. AFS does not discriminate against potential customers and makes available dark fiber strand leases on a non-discriminatory basis to any party. AFS' approach to selling bandwidth adheres to the non-discrimination and interconnection requirements of the BTOP NOFA.

Partners & Community Support

The project is a public-private partnership with MOREnet, Leavenworth County, Clay County, Platte County, the Mid-America Regional Council, and AFS. The project has received overwhelming support from state, county, and city agencies and community anchor institutions



City Utilities of Springfield, Missouri
Broadband Technology Opportunities Program
Comprehensive Community Infrastructure
SpringNet 10 Gig / 1 Gig Fiber Network Expansion

City Utilities of Springfield's Broadband Technology Opportunities Program (BTOP) project will result in a ten-fold increase in capacity for the fiber network currently serving 186 community anchor institution locations. This funding will also permit the establishment of fiber service to an additional 34 unserved anchor institution locations. Additionally, the SpringNet 10 Gig / 1 Gig Fiber Network Expansion project achieves several significant upgrades, including increasing the operating backbone to 10 Gig, providing 1 Gig access to **all** community anchor institutions and constructing over 100 additional miles of fiber.

Listed below are some of the other significant benefits achieved by this project:

- The network enhancements will provide opportunities for our community to foster its economic growth. Our community's labor rates are significantly below national and state averages.
- Ozarks Technical Community College, which currently serves over 12,000 students, will benefit from increased network speeds and expanded capabilities to provide improved online opportunities to better serve students in the fastest growing region in the State of Missouri.
- This upgrade benefits police, fire and other public safety organizations' critical communications (data and multimedia transmissions). In addition, this project will connect currently unserved public safety locations, such as



- the Greene County Office of Emergency Management and police department neighborhood substations.
- The expanded capabilities of the network will allow local health care providers to adopt advanced medical technologies that enhance patient care.
 - The Honorable Governor Jeremiah Nixon of the State of Missouri supports this project.
 - This project is estimated to add 143 job years to our economy.
 - Enclosed in our application were multiple letters of commitment from partner community anchor institutions.
 - City Utilities will provide **over 30 percent** in matching funds for this project.
 - While this project provides enormous benefits for our state and community, it is not economically viable without the BTOP grant.

The overall cost of this project is \$19.2 million of which City Utilities will commit \$6.1 million. While BTOP requires only 20 percent matching funds, City Utilities will provide **over 30 percent** in matching funds for this project.

City Utilities of Springfield is a multi-disciplined municipal utility that provides electric, natural gas, water, transit and broadband telecommunications services. The utility's willingness to invest \$6.1 million in this endeavor is indicative of its community commitment and operational sustainability.



Roberts-Roberts & Associates, LLC



Roberts-Roberts & Associates [RRA], a Missouri certified minority-owned firm, was founded by Michael and Steven Roberts in 1974 and today serves as the overall managing entity for all other Roberts Companies. Those companies include Roberts Broadcasting; Roberts Hotels Group; Roberts Brothers Properties; ***Roberts Tower Management and Roberts Tower Company which has built over two hundred communication towers in Missouri, Illinois, Kansas, Oklahoma, South Carolina, New Mexico, and Utah.*** Roberts-Roberts & Associates were selected by the State of

Missouri as a partner in Round 1 of the *MOBROADBANDNOW* initiative. In Round 2, they have a contractual relationship with both BlueBird and Boycom to provide towers for the broadband initiative.

In 1995-1996, RRA competed in the FCC Auctions for PCS Spectrum in the C Block “Entrepreneurs” Auction. RRA won six PCS licenses in Missouri – Cape Girardeau, Jefferson City, Quincy-Hannibal, Rolla, Sedalia and West Plains. In 1998, Roberts became one of the first Sprint PCS affiliates. This affiliation substantially increased the scope of Roberts’ communication system build-out responsibilities and cost of same. Roberts doubled their footprint (from six to thirteen license areas known as BTAs) covering approximately 1.3 million people and requiring the construction of 178 cell sites/towers and engineering of the backhaul system.

After numerous meetings with a variety of banks and asset based lenders, Roberts negotiated a \$56 million loan from Lucent Technologies based on purchase of Lucent equipment. The loan amount and draws were negotiated by Michael Roberts and Kay Gabbert and structured to ensure funding of each phase of the build-out schedule. Loan repayment schedules were negotiated by Kay Gabbert based on the business plan projected cash flow. Roberts hired highly skilled and experienced RF and Environmental Engineers to design and manage construction of our main switch in Jefferson City. They were also responsible for oversight of subcontractors working in the field.

Steve Roberts was instrumental in securing cell sites, particularly in populated areas where community and elected official support was necessary. During his tenure as a member of the St. Louis Board of Aldermen (City Council), Steve was an active participant in the Missouri Municipal League. His relationships with elected officials in the small towns of rural Missouri were critical to Roberts’s ability to secure and build cell sites on schedule which contributed substantially to budget compliance.

And, during this build-out, under the direction of Kay Gabbert, Roberts opened five Sprint PCS retail stores in Jefferson City, Columbia, Springfield, St. Joseph and Cape Girardeau for the purpose of meeting cash flow projections.

By late 2000, Roberts was meeting its business plan objectives and seized an opportunity to merge with Sprint PCS’s largest affiliate, Alamosa PCS. The merger was completed in February, 2001.



Tower Provider

