

Broadband USA Applications Database

Applicant Name: City of Tulsa

Project Title: Tulsa Conduit System, Phase II

Project Type: Middle Mile

Executive Summary

The City of Tulsa intends to construct a middle mile project which extends the current fiber conduit system and expands coverage to the City's North and West. Collaborating with telecom providers, the City expects to connect anchor institutions as well as industrial and business districts to stimulate the demand for broadband while encouraging economic growth, job creation and competition a) Opportunity the proposed system seeks to address. Major sectors of the City of Tulsa, including underserved residential areas, businesses, health care facilities, schools, public safety entities and government offices currently have inadequate access to state-of-the art broadband services. Access for these users is not consistent or readily available because the City lacks the necessary infrastructure. To address this issue, the City intends to construct a middle mile project that extends the current fiber conduit system and expands coverage to the underserved proposed funded service area, encompassing the North and West areas of the City. Partnering with telecom providers, Cox Communications and tw telecom, the City expects to connect anchor institutions as well as industrial and business districts to stimulate the demand for broadband while encouraging economic growth, job creation and competition. This project will advance four BTOP statutory goals by: 1) providing broadband access to the undeserved proposed funded service area; 2) providing broadband access to anchor institutions; 3) providing broadband access to public safety entities and; 4) stimulating the demand for broadband economic growth and creating or retaining thousands of jobs. b) A general description of the proposed funded services areas (location, number of communities, etc.) The proposed project, Tulsa Conduit System (TCS) Phase II, is a sixty-two (62) mile expansion of the current conduit system built in 2008, TCS Phase I, that serves the central business district. TCS Phase II will serve as the "backbone" for providing state-of-the-art broadband access to the underserved proposed funded service area of North and West Tulsa, with a special concentration on connecting community anchor institutions, public safety entities, and government agencies. The North and West routes to be served by TCS Phase II historically contain the highest concentration of poverty, crime, and underserved citizens. This system will enable increased access to advanced public safety services thereby offering new levels of protection to residents. The capacity of the conduit will allow the City to meet the anticipated growth of customers for the next 50 years and will allow for regional expansion in the future. c) Number of households and businesses passed. The conduit system will pass approximately 201,000 households and 2,771 businesses in North and West Tulsa. d) Number of community anchor institutions, public safety entities, and critical community organizations passed and/or involved with the project (e.g. health care, education, libraries, etc.). The conduit system will enable broadband access for 19 universities, 15 public safety facilities, 13 government offices, 24 libraries/community centers, 16 hospitals/health care centers, and 72 schools.

(Question #18 of this application contains a complete list of the institutions that will benefit from this project) e) Proposed services and applications for the proposed funded services areas and users. This project will provide a path for market entrance within the proposed service area for broadband connectivity services including entry level DSL up to 10 Gbps dedicated service lines. In addition, the conduit will allow for emerging next-generation applications for education, telehealth/telemedicine, public safety and first responders. f) Approach to addressing the non-discrimination and interconnection obligations. The City of Tulsa will operate this project in accordance with the principles contained in the FCC's Internet Policy Statement adopted August 5, 2005. This will be done by ensuring the lessees contained within the proposed TCS II conduit infrastructure provide consumers access to the lawful Internet content of their choice and that those same consumers receive the benefit of competition among network providers, application and service providers, and content providers. The City-owned TCS Phase II infrastructure will be open to lease and in compliance with FCC non-discrimination and interconnection policy. The City does not restrict any lessee applications as long as tenant provides legal broadband services through fiber facilities. The conduit system is designed with points of interconnection offered approximately every 600 feet through manholes. Tenants of the system can choose how many points they wish to interconnect and with whom to interconnect with, based on a contract-by-contract basis. All TCS Phase II lessees will be required to adopt and post their non-discrimination and network management practices online, based on their respective business models and NTIA policies. Lessees will also be required to have practices in place to block access to illegal or harmful content, based on their respective FCC licenses. g) Type of broadband system that will be deployed (network type and technology standard). This proposed conduit system will house fiber optic cable, which provides the highest possible connection speed at the lowest overall costs. The conduit system is designed as a two redundant rings, constructed to interconnect with multiple carrier points of presence (POPs) and the existing Phase I system. This system design allows for redundancy, security, and upgradeability. Fiber optic cable (or future transmission medium) is the only network cable allowed in the conduit system. h) Qualifications of the applicant that demonstrate the ability to implement and operate broadband infrastructure, and/or be a sustainable broadband services provider. The experience gained from the development and implementation of the proposed project will be invaluable in future extensions of the conduit. As noted, the proposed TCS Phase II is modeled after the successful TCS Phase I. It is expected that the City will gain additional experience and knowledge from TCS Phase II as the conduit extends to areas outside the central business district of the City. In addition, the proposed extension will make any future regional interconnection less costly and easier to implement due to the geographic range of the project to be funded under this grant. City personnel slated to work on this project have a combined 50+ years of experience in network and infrastructure construction projects. The TCS management team created, designed and implemented the original TCS project. The same TCS management team will be utilized to ensure the success of the proposed TCS Phase II project. Industry collaborators, tw telecom and Cox Communications, will lend their personnel and expertise to the project as well. i) Overall infrastructure cost of the broadband system. The overall infrastructure cost of the proposed TCS Phase II broadband system is \$46.4 million dollars. This cost structure is described in detail in Attachment G of this document. The cost breakdown at a high-level is as follows: \$44.07 million Outside Plant, \$58,500 Operating Equipment, and \$2.27 million Professional Services j) Overall expected subscriber projections for the project. The number of subscribers expected to obtain access to

broadband services made possible by the construction of the conduit system is expected to be in the range of 150,000 to 200,000 household and business customers. This number is based a 50% subscriber penetration over the next five (5) years. k) Number of jobs estimated to be created or saved as a result of this project. It is estimated that a total of 3500 jobs will be created or saved as a result of this project. Specifically, 200 construction jobs will be created in the building of the conduit. An additional 15 technology jobs will be created in the maintenance of the system. 100 jobs will be created or retained in the underserved proposed funded service area due to the improved broadband access and related economic development. Finally, three new municipal positions will be created by this project. In closing, The City of Tulsa is pleased to submit this middle mile infrastructure application for consideration by the NTIA within the Broadband Technology Opportunities Program and look forward to the second phase of the application process.