

Broadband USA Applications Database

Applicant Name: KTKA Holdings LLC

Project Title: Rural WISP

Project Type: Last Mile Remote

Executive Summary

KTKA Holdings, LLC plans to expand broadband access to rural “unserved” and underserved regions of Tippecanoe County Indiana. We have future plans to duplicate the successful project to adjacent counties. We feel the best approach to broadband deployment as well as good stewards of public funds, is to service the entire county in each project. After initial build out of Tippecanoe is completed and the benefits of broadband access is experienced by residents & businesses we feel the survey results of adjacent county residents will prove the business case of rural wireless broadband to every address. Tippecanoe County is made up of at least 75% rural households, businesses (mostly agricultural operations), and public service entities (police, fire, local government, small medical and public schools). In the county the project will pass 58,343 households and 5,500 businesses of various size and needs. With agricultural business being the predominant operations in the county the remainder of the business supports the agricultural operations. Accurate, reliable and timely information between the agricultural operations will ensure efficient and effective use of public funds by enabling business operations to focus on the primary purpose of their business. Many rural operations depend on timely reports of crop prices, weather situations and supply markets such as feed, seed and equipment. Broadband will interconnect the rural businesses and households to urban centers where a majority of the data is available. Operations within a business in rural Tippecanoe can benefit internally through feed automation, feed allocation measurements and veterinary record maintenance. Rural households in Tippecanoe County support the local agricultural industry with labor and product demand. Income levels will improve as a benefit of broadband in multiple ways. Primarily rural households will reduce the need to travel into urban areas for educational, medical, and consumer needs because broadband will promote distance education as a best solution to traveling into urban regions for training. Distant education is spreading worldwide as the best option for rural residents due to the reduce cost in travel as well as the reduced cost for the educator in facilities to hold training and. With virtual or distance education the educator needs only to deliver material “online” in electronic format. Electronic format reduces paper waste, fuel usage for shipping and student travels are just a few examples of reduction in carbon foot print reduction benefits. Broadband will benefit rural businesses and household through electronic based deliver of medical best practices, medical preventive maintenance, and first responder’s access to life saving information in during disaster recovery operations. Rural medical operations will be able to review medial information stored online through HIPPA compliant systems which will allow the local medical professional to make effective and timely decisions based on all relevant information. Broadband also opens distant markets where product pricing may be more beneficial to the end-user. Research competitive pricing online promotes competition which present the

best price model for the consumer. In rural Tippecanoe County a consumer must purchase product at the local rate or travel into urban areas for pricing which benefited from competition. Standard of living increases when the end-user (resident and businesses) are able to reduce expenditures on commonly used goods and services. Although an exact count of community anchor institutions, public safety entities, and critical community organizations is unavailable as of this writing, we anticipate there are 150 or more of these community anchor institutions, public safety entities, and critical community organizations which the project will pass. However we are diligently seeking a resource for an exact count. Service to each community anchor institutions, public safety entities, and critical community organizations will be a high priority for the project with the intent to best serve the community needs as it relates to safety, health care, education and libraries. The broadband project will employ WiMAX 802.16e architecture with plans to add mobile capability in the near future. Fixed based WiMAX broadband service is the conduit for all voice, video and internet utilities which the project will deliver initially to each rural region in the proposed service area (Tippecanoe County). Fiber alternative equipment by DragonWave and BridgeWave will be employed to permit a 1000Mbps backhaul solution as well as fiber replace for rural delivery where speed in excess of 100Mbps is required. The project topology is designed first for complete 802.16e coverage in Tippecanoe County from a point to multipoint (hub and spoke) design. Each spoke with redundantly serviced in case of an outage, which eliminates a single point of failure. Interconnection to the internet and other local networks for the Lafayette MSA is through WinTek and L3 Communications. Using two vendors for interconnects is the best shield against not only a single point of failure, it reducing the effect on the network during maintenance windows, economic failures of either WinTek or L3 as well as geographic issues for single origination. The network was designed from the ground up to ensure there will not be any discrimination or interconnection preferences over another provider. The team prides itself in being open to all with a common goal of improving education, health care and public safety. The team for this project has a combined 45 years of computer network infrastructure experience, each hold a degree in computer infrastructure technologies of various types. The CEO of the team holds dual BS degrees in global business management and information technology management, with 17 years of large team project successes. The core team has worked together for 10 years under the employment of Purdue University and The University of Chicago in compatible job functions with this project. KTKA Holdings, LLC is a new venture with an experienced management which embraces change in a methodical way in order to reduce or eliminate service disruptions. The team will continuously seek advances in technology as a possible solution for each business case. The proposed project has a total cost of public and private funding of \$2,903,950. The cost of infrastructure is primarily in the radio frequency equipment such as access points and backhaul equipment. We have sought community involvement through surveys to help offset the cost of tower rents and in some cases we have secured no cost sites for middle mile and final mile delivery. The community demands the benefits of broadband and WiMax is the best solution to cover the funding area in the least amount of time and cost, in accordance with meeting the funding requirements of effective and efficient broadband solutions with a focus on improving standard of living of all residents. Over a five year period we expect to achieve a subscriber take rate of 3 to 5 % each year which will yield 165 business end-users and 1126 residential end-users each year with a total in 5 years to be 825 business end-users and 5628 residential end-users generating average revenue of \$2,098,320 annually in the 5th year. Initially the project will generate 10 deployment

jobs with retention of the labor for future deployments in adjacent counties. Long term operations will generate 5 positions which will have an hourly rate of \$25 dollars per hour and higher. Additionally the management team jobs will be saved from downsizing at Purdue University as well as create a job for one currently unemployed management team member. Total job creation is 20 positions with 10 positions for long term management of the solution and 10 for deployment jobs in future markets. Labor cost for the project is scheduled at \$520000 for deployment staff (12 months/2080 hours) and \$450,000 for long term project management for a total of \$970,000 annually for the first 12 months and \$450,000 for the remainder.