Applicant Name: Hall County

Project Title: Hall County BTOP

Project Type: Middle Mile

Executive Summary

The proposed project seeks to provide wireless broadband access to underserved communities and areas of the county by deploying a Point-To-Point, Point-To-Multipoint county wide Broadband loop. This redundant dual path Broadband loop would allow county facilities as well as residential and commercial access at broadband speeds, projected 10Mbps aggregate (5Mbs upload and 5Mbs download) throughput. The proposed system would connect fifteen county fire stations, East Hall Community Center, South Hall Community Center and eleven other Hall County facilities together securely and at faster speeds that we are currently commercially leasing. The proposed network deployment would also provide free open standard 802.11 Wi-Fi internet accesses in the following areas of the county: East Hall Community Center, South Hall Community Center, Historical Downtown Gainesville and all fifteen county fire stations. The proposed system will be comprised of Point-To-Point, Point-To-Multipoint OSI networking model layer two (2) Ethernet bridges along with wireless local area network (WLAN) Wi-Fi access points and wireless switching as well as MESH wireless broadband network elements and server management suite. The intent of this network is to allow for the distribution of LAN as well as Internet access throughout the county with certain defined areas of coverage providing open standard (IEEE Standard 802.11 a/g/b) Wi-Fi network access at 2.4GHz for end users. An estimated 1400 initial subscribers not including the 802.11 network will be given wireless broadband access to both the county network and well as internet access. An estimated eight jobs would be created during the deployment of the system with the possibility of establishing a secondary county department consisting of four more information technology specialist’s dependant on subscriber response and call volume. The proposed system would have a three year manufactures warranty and/or maintenance. Hall Counties IT department, managed information systems (MIS) would manage and maintain the network at the conclusion of warranty. This system is engineered to 99.999% (5-9’s) uptime performance (as measured in seconds/yr) for RF link performance as well as 99.999% of our defined data throughput rates both up and down the data stream. The Proposed network would transverse several under-served areas of Hall County including Murrayville, Clermont, Lula and Chestnut Mountain. These areas contain approximately 10,100 household and business locations. These areas contain a population of approximately 19,900. Core demographic data is based on information taken from the 2000 Census with an estimated annual increase. A budgeted amount of $3,257,227.30 with a in-kind match of $875,835.00 bringing the total budget to $4,133,062.30 will be use to deploy 44 fixed Point-To-Point 5.8 GHz wireless radios, 70 Point-To-Multipoint 5.4 GHz OFDM radios, 2 5.4 GHz Backhaul units, 4 Dual Radio High Performance Access Outdoor Access Points, 10 MESH Duo units and 117 802.11 a/b/g Wireless Access Points thought the county. Behind the scenes infrastructure would include 2
servers, 64 Wireless Switches and 8 Routers. The in-kind match will consist of three towers and two equipment buildings to be used as part of the backbone infrastructure.