King and Queen County is located in the Middle Peninsula of Virginia. As of the census of 2000, there were 6,630 people and 3,010 households within the county, thus qualifying the county as a rural county. There are four unincorporated communities within the county; King and Queen Court House, Newtown, St. Stephen's Church, and Shacklefords. The Broadband Initiatives Program and Broadband Technology Opportunities Program was designed for areas such as King and Queen County, Virginia. Citizens within the county rely on slow connections including dial-up access for internet and on-line transactions. These slow connections make it difficult for numerous activities that other areas in the county perform daily. Within the King and Queen School System the current K-12 curriculum, pacing guides, student report cards, teacher resource material, and lesson planning applications are web-based systems. Teachers and school administrators that currently reside in the county can only access these systems through a dial-up connection. All of the division’s student record management applications and quarterly benchmark assessments are conducted online. This means the applications have to be used at the school building or someone has to travel outside the county to access the applications. In addition, the annual Standards of Learning grade level state tests are administered online to all children in grades 3-8 and at the conclusion of high school courses. Homebound students and others who are unable to travel an hour to reach a school building must take all of their required tests with paper and pencil. Rural school divisions such as King and Queen need broadband access to compete in the 21st Century. The children need this access to continue to expand their learning at home, preparing them for post secondary education and the world of work. The parents need this access to better connect with the schools and teachers to help each child succeed. The citizens need this access to understand the vital role education plays in the future and economic development of the county. The county has been contacted by both community support organizations and businesses via official letters and unofficial communications voicing their need for broadband type services in the community. Support organizations and agencies have expressed their desire to provide the citizens of King and Queen County, low-income, unemployed, and aged citizens with low to no cost broadband access. Broadband services are critical for economic growth and job creation. Without broadband, the county is at a great disadvantage when it comes to business attraction and development efforts. Several businesses have bypassed the county due to its lack of broadband infrastructure. King and Queen County is currently the home to approximately 53 businesses. Without broadband infrastructure in the county law enforcement agencies are denied access to currently offered tools readily available to other law enforcement agencies throughout the nation. Fire departments and other public safety agencies in the county also are denied access to broadband applications currently provided free of charge from FEMA and other Federal agencies. It is the county’s
intention to deploy a broadband network within the county that would allow these Public Safety agencies access to broadband applications that would greatly increase the level of service given to the residents of the county. The county currently has 19 public safety departments including Sheriff’s Office, Fire Rescue and Ambulance Service personnel. The county has approach several broadband providers. Cox Communications was the only service provider with an interest in joining in a partnership to provide the county with a broadband infrastructure. The Cox team has in-depth experience in every aspect of voice and data networking as well as operational support, with additional and ongoing experience in; technical/non-technical training, contract logistics and customer service. Their depth in personnel resources will provide the county with the confidence and full assurance that Cox can meet all contract service commitments over the period of performance and successfully support all efforts with the certainty that the job will be accomplished correctly the first time and every time. The main component of this broadband infrastructure is the installation of a new 144 count fiber cable that will transverse the county North and South along Route 14. This fiber cable will have splice points on average of two per mile and at major intersections, business areas and government building locations. Off of this 144 count fiber Cox will install 12 and 24 count fiber spurs that will feed its Hybrid Fiber Coax nodes. The nodes will convert fiber services to coax services. The coax services will be use to supply at least 95% of the county with Cox’s broadband services including broadband internet at multiple levels, telephone service with all the feature classes and the latest two-way video with over 200 channels, on demand and premium channels. Although 95% of the county will be covered it is anticipated that these services will be available to all 3,010 households, 53 businesses, 19 public safety entities and the entire population of 6,630 citizens. Of these locations these services will be available to it is anticipated that all 53 businesses will take advantage of these services and almost 75% of the households. The second need for the fiber spurs will be to provide very high speed services to business that needs greater capacity. Feeds for large PBX’s, High bandwidth needs to the internet and private networks. Multiplexing equipment will be placed in this business’ to provide the necessary TDM (Time Division MultiPlexing) or IP (Internet Protocol) based services. The third use of the spurs will be to create a dedicated private network for the County Government buildings. Linking all schools, libraries, office buildings and recreation facilities into a metro Ethernet network to carry all County business and distribute Internet throughout the County infrastructure. An IP based Ethernet Network with appropriate routers and switches in each building will be built. Fiber will also be used for interconnect services. Services would include fiber to each Cell site or radio tower to provide both TDM and IP services to interconnect cell towers back to the appropriate Wireless Carrier switches so that these companies can offer wireless networks throughout the county. Finally fiber will be available for the customer that has a need for dark fiber or a very private network. The county will lease the dark fiber to the user as well as bill them for the fiber extension from the main route to their site. The customer will provide their own electronics to handle their services. If managed services are required they can be obtained from Cox. This network does not exist today. This network will bring King and Queen County into the 21st century as well as be positioned to offer new services as they are developed in the future. The estimated cost of this broadband infrastructure is just over $59,000,000.00. If awarded this grant, the installation of the broadband network and the maintenance required for such a network would employ a large number of employees. One business that is hesitant to move into the county, due to the county’s lack of broadband, has estimated a total of over 100 employees would be needed for their proposed operation.