Rice County's leaders understand broadband is just as vital to the county's development and economic vigor as roads and bridges. But due to this area's mostly rural composition, few providers offer true broadband Internet service in our communities. Thus the County is working to 'jump-start' a build out of broadband capacity by putting in place a county-spanning middle mile fiber optic system. This network would immediately put in place dark fiber connecting anchor institutions throughout Rice County, plus links to 4 adjoining counties. Among Rice County's sites are 3 towers that provide public safety backbone connectivity for our 800 MHz radio system - part of the state's interoperable communications network. Our public partners include 2 K-12 school districts, 1 hospital, 2 libraries, 4 State of Minnesota agencies, including the Minnesota State Colleges & Universities system (MnSCU) which includes South Central (community) College, 11 Public Safety agencies, 3 cities, and 4 adjacent counties. Our network would also connect the Minnesota State Academies for the Blind and Deaf, which are located in Faribault, the county seat of Rice County. Further, by interconnecting to surrounding counties, our network would become part of a regional system of fiber controlled by local governments. And last, but not least, the private provider will lease dark fiber to ISPs, businesses and carriers which will greatly expand the competitive market for Internet services in the Rice County. Some of those carriers will use the leased fiber to connect tower sites from which they will provide broadband (3G and 4G) wireless services across large portions of the county, reaching both residents and businesses, especially in rural areas, that now have few broadband options. Proposed Services and Applications The public partners can choose to light up their fiber at whatever speed they need. Our network will provide a fiber linkage to this region's primary ISP and carrier interconnection point (co-location facility) in downtown Minneapolis. The public partners will have a choice of several Internet service providers at that site, and can also subscribe to managed network services through the Minnesota Office of Enterprise Technology (a state agency). Selecting the OET option could reduce duplication of services and allow municipalities to concentrate more on core services that directly benefit our communities. Dark fiber will enable the public and non-profit partners to use and to share applications and services that cannot be supported via current connections. This will allow these public entities to be more efficient and to focus even more on core services to residents including vulnerable populations. The partner public safety agencies would be able to share video files such as from cameras in patrol vehicles. Being able to view real-time video would help dispatchers, commanders, and officers respond even more quickly and appropriately. The new fiber link would also provide a high capacity connection to the Consolidated 911 Center which is a 10 year old collaboration (the first of its kind in Minnesota) shared between Rice and Steele counties but located in Owatonna (Steele County). Additionally, the public partners may develop shared data centers.
for disaster recovery/business continuity purposes. This is something that cannot even be considered now due to lack of adequate bandwidth among the partners. The network will also facilitate collaborative learning such as the sharing of instructors. Both the K-12 and higher education partners will be able to collaborate and share resources similar to the municipalities, but also have the ability to offer media-rich shared classes (for example via video-based education). Non-discrimination and Interconnection We do not believe it is the County's role to compete with private sector companies by being a provider of Internet services. For that reason, we chose to partner with a private company, which will install the system, offer dark fiber and backhaul services, and interconnect commercial Internet service providers on a non-discriminatory basis. These ISPs could choose to extend additional fiber 'legs' to reach additional businesses and residential areas, or to use the already built backbone fiber as a jumping off point to bring wireless Internet or new cable-based service to businesses and residents. In fact, one potential customer of the private backhaul network is a national provider that would like to begin offering high-speed wireless '4G' services in our area within the next two years, but first needs high-capacity backhaul to its wireless towers. Implementation, Operation and Sustainability Rice County has already conducted an RFP for the fiber system and selected a vendor/partner. We are in a position to implement the project immediately upon notice of award of grant funds. In exchange for a portion of the fiber count in the County's network, the private partner in its RFP response offered to reduce the ongoing fees paid by Rice County by 80%. The County accepted this alternate offering, because it means Rice County can readily afford services over the long term, ensuring the public network system will be properly maintained. The private partner will offset this reduction in ongoing revenue by providing services over its portion of the fiber to customers on the private network. This agreement is patterned on a project in Scott County, just north of us. That project has been in operation for four years and has been successful for the private partner to the point that it is willing to extend this type of arrangement into Rice County. The system would consist of two buried 1.25 inch ducts, one containing at least 96 fibers. Rice County would own that duct and 48 of the fibers. The second duct is for future expansion. The ducts will be installed in established public rights of way, avoiding potential permitting and environmental issues. The topology is a multiple ring design with one large ring (core or 'B' ring) traversing much of the county. Attached to that core ring would be a secondary ring connecting Rice County's sites. Additionally there would be direct (non-ring) connections to Goodhue, Steele and Waseca County government sites. In the cases of these counties, our fiber would interconnect to fiber already in place, thus ultimately linking to many public facilities within each of those counties, including Riverland Community College in Steele County. Within Rice County, the partner cities and public schools would each have a connection to the core ring. Other partners including South Central (community) College, Northfield Hospital, the Academy for the Blind, the Academy for the Deaf would be connected via spurs off the core ring. The City of Northfield may also choose to have fiber installed to the rest of its sites, depending on availability of funds. In fact, any of the partners that initially chose just one connection will have the opportunity to expand their networks prior to final system design and build out. To help ensure highly reliable access we will also interconnect to 4 surrounding counties - Goodhue, Scott, Steele, and Waseca. Through these links Rice County and our public partners will have multiple paths to ISP services and to the State of Minnesota. The private partner currently owns and operates a fiber network of more than 1,200 miles serving large portions of the Minneapolis-St. Paul area. Building and operating such a network within Rice County is a natural extension of the company's business
model. Overall Infrastructure Cost, Jobs Created and Expected Subscriber Projections The project total cost is $8,285,690. We have identified matching funds of $2,531,294 equaling 30.55% of the overall cost. Of that match, our public partners are contributing $1,657,138 and the private partner is providing $874,156. This project will only be able to go forward if awarded the requested federal grant funds because Rice County and our public partners simply cannot afford to fund it internally. Using the model developed by the Office of the President Council of Economic Advisors, we estimate this project will provide 90 direct job-years, 58 indirect jobs and 32 induced jobs. The private partner expects to sign agreements with multiple private businesses, including tower owners and providers of cellular voice and data services. While the private network is not part of the immediate project, these contracts will help sustain the Fiber Forward system over the long term.