

Broadband USA Applications Database

Applicant Name: Zayo Bandwidth, LLC

Project Title: Indiana Middle Mile fiber for Schools, Communities and Anchor Institutions

Project Type: Middle Mile

Executive Summary

Introduction Zayo Bandwidth, LLC in partnership with I-Light seeks funding from the American Recovery and Reinvestment Act to complete the “shovel ready” build out of the I-Light optical network to connect 21 Ivy Tech Community College campuses in the state of Indiana. In addition, Zayo will make broadband services available to all the intermediate communities, businesses and anchor institutions between the Ivy Tech Community Colleges. Connecting Ivy Tech community colleges is especially critical for the state. The career and technical education offered at the community colleges represents a flexible, tailored solution to an urgent need. Their ability to quickly design curriculum that meets the job retraining needs will play a vital role in the economic recovery. With Indiana’s loss of traditional manufacturing, Ivy Tech has become a critical tool in the effort to retrain workers for the new 21st Century careers in the technology and life sciences sectors. Ivy Tech has empowered thousands of Hoosiers who were previously displaced by massive layoffs or industry change. Ivy Tech is the state’s largest workforce training provider, offering nearly 20,000 certifications and one million hours of training annually. One core element of Ivy Tech's mission as a state-wide community college system is helping Indiana's businesses (small, medium, and large) improve the quality and competitiveness of their workforces and stimulating economic development throughout the state. Objectives address expanding and focusing workforce and economic development activities, fully supporting Indiana's economic development goals and strategies. They have developed and successfully offered targeted retraining programs that have enabled laid-off Hoosiers find new jobs in high-impact industries like biotech and advanced manufacturing. Zayo Bandwidth, LLC will build 626 miles of new 96 strand fiber connecting 21 Ivy Tech Community Colleges throughout the state of Indiana. Following build-out, the 21 Ivy Tech community colleges will be connected to the I-Light network and have access to all the research facilities and educational networks available via I-Light. Each Ivy Tech community college will be provided two strands of fiber with I-Light providing the 1G – 10G internet services for each college. The remaining strands of fiber will be available for Zayo Bandwidth, LLC to provide services to unserved and underserved communities along the fiber path. Each unserved/underserved community will have an interconnect point on the fiber; and in addition, there will be an interconnect point every two miles along the fiber route; ensuring middle mile fiber is available to communities, businesses and anchor institutions. The network will be operated by Zayo Bandwidth Indiana LLC, a wholly owned subsidiary of Zayo Bandwidth LLC. Zayo Bandwidth Indiana LLC has a public utility license from the state of Indiana. It is expected that that the project will be complete within 18 months, and create a total of 28 jobs and save a total of 35 jobs. I-Light The state of Indiana has invested \$18M to create the I-Light fiber optic network and connections to institutions, but a slowing economy has impeded plans to complete the work. Currently

33 of Indiana's public colleges and universities are connected directly to the I-Light network. The funding requested in this proposal will be used to further complete the I-Light network by providing direct fiber connections for 21 Ivy Tech community colleges throughout the state of Indiana. The I-Light network connects community anchor institutions and is a unique collaboration in Indiana between colleges and universities, state government, and private sector broadband providers. I-Light has enabled a statewide community forum by connecting colleges and universities directly to I-Light at 1-10 Gigabit speeds with the ability to provide even larger, on-demand wavelengths, and very high capacity connectivity between research and learning communities.

Proposed Funded Service Area There is one funded service area proposed in this application. The associated fiber consists of new fiber build (626 miles) as well as existing Zayo fiber (481 miles), that will be provided as an in-kind contribution. The contiguous census blocks associated with the service area correspond to both the new and existing fiber. Zayo Bandwidth LLC will be providing a cash match equal to 20% of the new fiber build cost, thus, taking account of the existing Zayo fiber in kind contribution, the grant request is for 70.2% of total project cost. The new fiber build passes 80 communities that include 480,358 households, 49,071 businesses, 3,271 health centers, 423 public safety centers, 1070 education centers and 2388 government centers. Please note that these figures are associated only with the new fiber build, and not the existing in-kind contribution fiber. This is to show the incremental impact of the new fiber. The two strands of fiber provided to each Ivy Tech community college will be managed by I-Light. Zayo Bandwidth, LLC will provide I-Light with a 10 year Indefeasible Right to Use (IRU) for the two dark fiber strands. I-Light will then provide the necessary fiber optic equipment, internet services and NOC services to each community college. Zayo will provide ongoing maintenance of the fiber route, including locates associated with the "Call Before You Dig" program, relocations due to municipal requirements, repair and replacement of damaged fiber due to weather, vandalism, and accidents. Services provided by I-Light to each Ivy Tech community college include : Gb/s bandwidth to other I-Light members, connectivity to educational and research networks Internet 2 and National LambdaRail and commodity internet access. Network management for I-Light is provided by the Global Research Network Operations Center (GRNOC) at Indiana University, a premier provider of highly responsive network coordination, engineering, monitoring and installation services that support the advancement of Research and Education networking. The Global GRNOC has become an unrivaled provider of 24x7x365 expert support for the most advanced research networks in the country. For communities, businesses and anchor institutions along the fiber, Zayo Bandwidth, LLC will make available the following services at each interconnect point: (i) Dedicated Internet Access (ii) SONET Private Line (iii) Wavelengths (iv) Ethernet (v) Dark fiber. Bandwidth available ranges from 10 Mb/s to 10Gb/s.

Non-Discrimination and Interconnection The core competency of Zayo Bandwidth, LLC is the provision of bandwidth to other carriers, last mile providers, businesses and anchor institutions. Zayo does not discriminate between potential customers, and will sell broadband services to any party wanting to interconnect to the Zayo network. Zayo's approach to the sale of broadband services is completely in line with the non-discrimination and interconnection requirements of the BTOP NOFA. Zayo already provides wholesale broadband services to other wireless and wireline last mile and middle mile providers, showing Zayo has experience negotiating interconnection rates, and welcomes interconnection by other parties.

Type of Broadband System Deployed The broadband system deployed will be a 96 strand fiber based middle mile network. Two strands of fiber will be used by I-Light for the provision of 1G – 10G services to each Ivy Tech community college, and interconnection to the current I-

Light optical network. The remaining fibers will be used to provide lit services or dark fiber to the communities, businesses and anchor institutions along the fiber route. These lit services include advanced data protection architectures for maximum reliability and will include the Zayo operations support and billing services. It will be possible to provide each end point with at least 100Mb/s bandwidth. Qualifications of the Applicant Launched in 2006, Zayo Bandwidth, LLC is managed by a seasoned group of industry veterans. Zayo has grown both organically and by acquisition. Since May of 2007, Zayo has completed acquisitions of eleven businesses. Zayo's recent organic growth includes the following (i) On June 22, 2009 it was announced that Zayo Bandwidth is adding approximately 80 cell towers and commercial buildings to its network in the greater Indianapolis metropolitan area. Zayo's expansion into Indianapolis is their third large-scale Fiber to the Tower (FTT) deployment. (ii) On June 23, 2009 it was announced that Zayo Bandwidth will begin providing fiber-based bandwidth services to the Youngstown, Ohio metro area and providing access to key locations in the greater Youngstown area, including mobile switching centers, central offices and data centers. In addition, Zayo Bandwidth, LLC network statistics include 18,895 Fiber route miles, 1,958 On-Net buildings, 772 On-Net cell sites, 106 LSOs, 354 Interconnects and 776 Additional Buildings. (Interconnects includes: Carrier Hotels/Data Centers, Wireless MSCs, Carrier POPs, Zayo POPs/Huts and CATV Head-Ends.) Overall Infrastructure Cost of the Broadband System The overall cost of the broadband network proposed by this project is \$35.82M. This includes an in-kind cost contribution of \$4.4M for the existing Indiana Zayo fiber. The cost for the new fiber build is \$31.42M. The in-kind contribution with the Zayo proposed cash match of \$6.28M is 29.8 % of the overall total project cost. Overall Expected Subscriber Projections for the Project Most of Zayo Bandwidth, LLC last mile provider customers in Indiana also serve the last mile areas related to this middle mile project. It is expected that introduction of middle mile fiber as proposed by this project will result in additional broadband connectivity to 151K households, 11.8K business customers and 1567 strategic institutions by end of year 2015.