Environmental Assessment for the Installation of Fiber Optic Cable and Supporting Facilities for the Illinois Broadband Opportunity Partnership - East Central

Prepared for the

National Telecommunications and Information Administration (NTIA)

Department of Commerce

1401 Constitution Avenue, N.W., Washington D.C. 20230

Under direction of the

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CONNECT ILLINOIS NETWORK DESIGNERS

EXECUTIVE SUMMARY

The Illinois Department of Central Management Services (CMS) was awarded a grant by the National Telecommunications and Information Administration (NTIA) to provide fiber optic cable infrastructure to a 55-county service area in Central and Eastern Illinois, in order to better support the information technology (IT) needs of communities in the service area. This grant is part of the Broadband Technology Opportunities Program (BTOP).

Under the National Environmental Policy Act (NEPA) of 1969 (PL 91-190), the NTIA must conduct an Environmental Assessment (EA) of the proposed action and evaluate environmental consequences of the proposed action against alternative actions that meet the purpose and need of the project. In addition to the preferred alternative, other alternatives were evaluated in the EA. These include the required No Action alternative, the use of aerial and wireless alternatives, and alternatives that may arise during the design and construction progress (design changes to ameliorate local environmental issues or minor realignments to also mitigate potential environmental conflicts).

Broadband information technology (IT) services in many Illinois communities are often limited in geographic coverage, suffer from inadequate bandwidth capabilities, or are priced beyond the means of many organizations that need access to this important technology. Community anchor institutions (CAIs), such as educational and health care facilities, need more broadband capabilities to enhance the delivery of their services, lower operational costs, and improve the quality of their offerings. Also rural communities increasingly need greater connectivity to retain businesses and people who drive economic growth. For all of these purposes, bandwidth-intensive applications require stable, synchronous connections with high quality-of-service guarantees.

The proposed project entails route design, infrastructure design, and installation of approximately 1,117 miles of new fiber optic cable along various existing highway right-of-ways and utility easements throughout eastern and central Illinois. (It should be noted that, since the grant award, CMS undertook a “due diligence” process which resulted in some modifications in project scope

and network mileage. In particular, 91 wireless lateral miles have been added to the total network miles.) The proposed 55-county service area has a population of 3.9 million (2000 U.S. Census) and includes Metro Chicago as well as most of the State's other population centers including: Springfield, Peoria-Pekin, Champaign-Urbana, Bloomington-Normal, Decatur, Kankakee-Burbonnais, Charleston, Effingham, Quincy and the East St. Louis-Granite City areas.

This project also includes Illinois State University (ISU) in Normal and the Central Illinois Regional Broadband Network (CIRBN) which encompasses the six-county area around Bloomington-Normal. ISU has proposed a network plan for serving this area and will receive considerable backbone and lateral support as part of the proposed project. This network will serve ISU as well as numerous local corporations and businesses, many of which are national and international in scope.

The fiber optic cable will be installed using vibratory slit trench plow and directional drilling technologies. While the vibrating plow will be the predominant method of installation, directional drilling will be used in locations where surface disturbances must be minimized, such as central business districts within existing communities (with extensive infrastructure) and near sensitive environmental locations, such as wetlands, stream crossings, or sensitive species habitats. These technologies are discussed in detail in Section 2.

Some minor surface disturbance and vegetation removal will occur during construction. This disruption will be of short duration and Best Management Practices (BMPs) will be applied to preclude any soil erosion and subsequent sedimentation issues. These BMPs that will be used are defined and discussed in Section 4.3 Geology and Soils.

This EA analyzes the impacts of the Preferred Alternative, alternative technologies, a No Action alternative, and an approach to design alternatives that may arise during design or installation of the network infrastructure. Various aspects of the affected environment are analyzed and include: Noise, Air Quality, Geology and Soils, Water Resources, Biological Resources, Historic and Cultural Resources, Aesthetic and Visual Resources, Land Use, Infrastructure, Socioeconomic Resources, and Health and Human Safety.

This analysis indicated no significant adverse impacts during installation or operation for the Preferred Alternative on any of the subject resource areas. This determination is based primarily on (1) the location of the project within existing rights-of-ways or easements that have been previously disturbed, (2) the minimally disruptive nature of the selected installation procedures, and (3) the guidelines that will be established for the minor construction associated with ancillary facilities. Similarly, the impacts of other alternatives are very minor. The No Action alternative will represent the status quo conditions, which also includes inadequate technological support for the affected communities.

This EA also provides for augmentation of the environmental analysis as the final, detailed designs proceed. These updated considerations will be formally documented and provided to NTIA as the proposed action is implemented, to ensure that the conclusions of this EA remain valid throughout the life of the project. These provisions are documented in Section 2.2.3 as a specialized alternative.