National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
Iowa Communications Network
Bridging the Digital Divide for Iowa's Communities Project

Summary

Iowa Communications Network (ICN) applied to the Broadband Technology Opportunities Program (BTOP) for a grant to upgrade its existing 3,000 mile network by installing approximately 41.3 miles of fiber optic cable in three Iowa counties, Decatur, Tama, and Winneshiek. Underground fiber will be installed in public rights-of-way (ROWs) either along previously disturbed roadway ditches or within existing utility corridors. Aerial fiber to be installed in Winneshiek County will be lashed onto existing poles. This proposed action is referred to as the ICN Bridging the Digital Divide for Iowa's Communities Project (Project).

The National Telecommunications and Information Administration (NTIA) awarded a grant for the Project to ICN, through BTOP, as part of the American Recovery and Reinvestment Act (ARRA). The funding must be obligated and the Project completed within three years. This timeline is driven by the laws and regulations governing the use of this ARRA grant funding.

BTOP supports the deployment of broadband infrastructure in unserved and underserved areas of the United States and its Territories. As a condition of receiving BTOP grant funding, recipients must comply with all relevant Federal legislation, including the National Environmental Policy Act of 1969 (NEPA). Specifically, NEPA limits the types of actions that the grantee can initiate prior to completing required environmental reviews. Some actions may be categorically excluded from further NEPA analyses based on the specific types and scope of work to be conducted. For projects that are not categorically excluded from further environmental review, the grant recipient must prepare an Environmental Assessment (EA) that meets the requirements of NEPA. After a sufficiency review, NTIA may adopt the EA, use it as the basis for finding that the project will not have a significant impact on the environment, and issue a finding of no significant impact (FONSI). Following such a finding, the BTOP grant recipient may then begin construction or other activities identified in the EA as the preferred alternative, in accordance with any special protocols or identified environmental protection measures.

ICN completed an EA for this Project in January 2011. NTIA reviewed the EA, determined it is sufficient, and adopted it as part of the development of this FONSI.

The Project includes:

- Installing approximately 16.2 miles of buried fiber optic cable within existing ROWs between Lamoni and Leon in Decatur County;
- Installing approximately 4.2 miles of underground middle mile infrastructure on tribal lands of the Sac and Fox Tribe of the Mississippi in Tama County;

- Installing approximately 13 miles of underground fiber laterals and approximately 196 fiber drops to end user facilities located on tribal lands of the Sac and Fox Tribe of the Mississippi in Tama County;
- Installing approximately 7.9 miles of aerial and underground fiber laterals in Winneshiek County to connect up to 1,850 CAIs to the network backbone.

Based on a review of the analysis in the EA, NTIA has determined that the Project, if implemented in accordance with the preferred alternative and incorporating best management practices (BMPs) and protective measures identified in the EA, will not result in any significant environmental impacts. Therefore, the preparation of an EIS is not required. The basis for this determination is described in this FONSI.

Additional information and copies of the Executive Summary of the EA and FONSI are available to all interested persons and the public through the BTOP website (www2.ntia.doc.gov/) and the following contact:

Frank J. Monteferrante, Ph.D.
Environmental Compliance Specialist
Broadband Technology Opportunities Program
National Telecommunications and Information Administration
U.S. Department of Commerce
Room 2830B
1401 Constitution Avenue, NW
Washington, DC 20230
Tel. 202-482-4208
Fax 202-501-8009
Email FMonteferrante@ntia.doc.gov

Purpose and Need

The purpose of this Project is to bring fiber optic connectivity to portions of three Iowa Counties (Decatur, Tama, and Winneshiek) where such connectivity currently does not exist. ICN will expand their existing statewide network and build a scalable platform to provide new and/or improved broadband access to a variety of CAIs, including medical facilities, K-12 schools, a college, and public safety entities. In addition, this Project will provide fiber to end user premises in the currently underserved, low income tribal community of the Sac and Fox Tribe of the Mississippi.

Project Description

ICN will install approximately 16.2 miles of underground fiber optic cable along existing ROWs adjacent to U.S. Highway 69 between Lamoni and Leon in Decatur County, Iowa. ICN will also

build 4.2 miles of underground fiber on the tribal lands of the Sac and Fox Tribe of the Mississippi, in Tama County, to create middle mile access. In addition to the middle mile infrastructure, ICN will install 13.0 miles of distribution cable and approximately 196 fiber drops in Tama County. In Winneshiek County, ICN will construct a new fiber route of 7.9 miles of buried and aerial fiber to connect the network backbone to up to 1,850 CAIs in the town of Decorah.

Underground conduit and fiber will be installed within existing public ROWs along previously disturbed roadway ditches, utility corridors, and associated back slope areas in all three Iowa counties. This fiber will be installed via plowing and directional boring. No substantial amounts of soil will be moved as a result of this Project. A typical plowing blade, no more than 2-3 inches wide, will be employed to bury the cable. The blade acts like a knife during plowing, resulting in very minimal temporary disruption to the landscape. Where necessary to avoid disturbance of surface features, directional boring techniques will be used. This technique, commonly called horizontal directional drilling or HDD, is a steerable trenchless method of installing underground conduit and fiber along a prescribed bore path. Using HDD, a subsurface bore path for conduit and fiber can be drilled without significantly impacting sensitive surface features. Ground disturbance associated with HDD will be limited to the immediate vicinity of the excavated entry and exit pits. Underground cable will be placed at a minimum depth of 36 inches below ground surface and at approximately at the same vertical extent as existing cable in the ROWs.

In Winneshiek County, a portion of the new fiber will be hung aerially on existing utility poles. This method of construction involves lashing cable to the pole. No pole replacements are anticipated under this Project.

No buildings or huts will be constructed as part of the Project.

Alternatives

The EA includes an analysis of the alternatives for implementing the Project to meet the purpose and need. NTIA also requires that an EA include a discussion of the no action alternative. The following summarizes the alternatives analyzed in the EA.

Alternative 1 – Underground and Aerial Installation of Fiber Optic Cable (Preferred Alternative). The preferred alternative for this Project involves installation of both underground and aerial cable in three Iowa Counties. Underground cable placement is the preferred method of installation and will allow cable to easily be rerouted to avoid sensitive surface resources. ICN will consider rerouting the fiber optic cable and will consult with appropriate regulatory agencies to ensure minimal impact to the environment. Directional boring will be used as an additional mitigation measure to avoid critical habitats and other sensitive environmental resources by routing conduit and cable beneath the surface. In urban areas within Winneshiek

County, new cable will be installed aerially via lashing to existing utility poles. The preferred alternative does not include construction of new buildings or telecommunication huts.

No Action Alternative. No action was also considered. This alternative represents conditions as they currently exist in Decatur, Tama, and Winneshiek Counties. The no action alternative would not meet the stated need and would have an adverse effect on communities in these counties in Iowa because new and/or improved broadband services would not be provided. The EA examined this alternative as the baseline for evaluating impacts relative to other alternatives being considered.

Alternatives Considered But Not Carried Forward. During planning stages of this Project, ICN considered construction of an all-aerial network. However, aerial construction is not a feasible option in rural areas because utility poles are not present across much of the targeted service area. Furthermore, aerial cable is susceptible to severe weather damage, including icing that can break the cable or poles and cause network outages. Accordingly, only the preferred alternative was carried forward for further evaluation in the EA.

Findings and Conclusions

The EA analyzed existing conditions and environmental consequences of the preferred alternative in 11 major resource areas, including Noise, Air Quality (including greenhouse gas emissions), Geology and Soils, Water Resources, Biological Resources, Historic and Cultural Resources, Aesthetic and Visual Resources, Land Use, Infrastructure, Socioeconomic Resources, and Human Health and Safety. Cumulative impacts were also evaluated.

Noise
Fiber will be installed along existing highways and within urban areas that routinely experience noise associated with automobiles, other modes of transportation, and agricultural activities. Noise created during Project construction will be transient, temporary, and consistent with noise levels that currently exist along the planned route. Operation of the cable for data transmission will create no new long-term sources of noise. This Project will have minor short-term effects, and no long-term effects, on noise in the area. No significant impacts are anticipated.

Air Quality
Fiber will be installed along existing highways and within urban areas that routinely experience air pollution associated with automobiles, other modes of transportation, and agricultural activities. Although use of heavy equipment (e.g., trencher vehicles, cable plows, directional boring units, backhoes) will increase emissions of air pollutants and fugitive dust during the construction period, these emissions will be transient, temporary, and of a similar nature to those already experienced along the Project route. Short-term, minor increases in the use of fossil fuel during construction will result in increased greenhouse gas (GHG) emissions. Approximately 204 metric tons of equivalent carbon dioxide emissions will be generated during construction of

the underground and aerial fiber network. The Council on Environmental Quality (CEQ) has established a presumptive effects threshold of 25,000 metric tons of carbon dioxide equivalent emissions from an action. Because the anticipated volume of GHG emissions to be generated is well below the CEQ threshold, this Project will not contribute appreciably to climate change or global warming. Operation of the cable for data transmission will create no new, permanent sources of air pollution. Based on these analyses, no significant impacts on air quality are expected to result from this Project.

Geology and Soils

All ground disturbing activities will occur on previously developed soils and on back slope fill. The underground fiber installation methods will minimize disturbance of soil, and no area of ground disturbance will be greater than a few square yards. All intrusive work will be conducted in accordance with the State of Iowa Construction Site Erosion Control Manual. All soil disturbances will be temporary. Based on these considerations, the Project will not result in significant adverse impacts on geology and soils.

Water Resources

Several fresh water emergent wetlands, creeks, and rivers are located in the planned Project area. However, the Upper Iowa River in Winneshiek County and the Thompson River in Decatur County are the only significant bodies of water to be crossed by the Project route. ICN will cross the Upper Iowa River by installing fiber in existing conduit on a bridge in the City of Decorah. ICN will cross the Thompson River by installing fiber on existing bridge attachments in Davis City. All construction will be conducted in accordance with the State of Iowa Construction Site Erosion Control Manual.

The Rock Island District Regulatory Branch of U.S. Army Corps of Engineers (USACE) reviewed Project documents to evaluate permitting requirements. In a letter dated December 20, 2010, USACE indicated that a Section 404 permit was not required for planned Project activity in Tama County. In a letter dated January 3, 2011, USACE further indicated a Section 404 permit is not required for portions of the Project to be completed in Decatur County. This determination was based on ICN's plan to directionally drill beneath all water crossings in the county, except for Thompson River (which will be completed as an aerial crossing as described above). On January 6, 2011, USACE determined that portions of the Project to be completed in Winneshiek County will have no impact on jurisdictional waters. The St. Paul District of the USACE indicated no objections to the Project, as long as the ICN completes the Upper Iowa Bridge crossing via existing conduit.

By following USACE guidance and implementing appropriate erosion control measures, ICN anticipates no significant adverse impacts on water resources.

Biological Resources

No endangered species are known to exist in Tama or Winneshiek Counties, but the endangered Indiana bat (*Myotis sodalis*) is known to extend its range into Decatur County. Because the Project will be installed along existing road ROWs and associated back slope areas, no tree clearing will be needed. Accordingly, ICN determined that the Project will have no effect on listed species. In an email dated September 22, 2010, the U.S. Fish and Wildlife Service (USFWS) indicated that it has no objection to the no effect determination. However, the USFWS requested resumed consultation if the Project is modified or if new information suggests that listed species may be adversely affected. Based on these analyses and consultations, no significant impacts on biological resources are anticipated to result from this Project.

Historic and Cultural Resources

An Archeological Cultural Resources Record Search identified one site of archeological interest within or immediately adjacent to the Project's area of potential effect (APE) and 19 sites within 1 mile of the Project route in Decatur County. In Tama County, the search identified 16 sites within or immediately adjacent to the APE and 134 sites within 1 mile of the route. In Winneshiek County, 4 sites were recorded within or adjacent to the APE, along with 18 sites within 1 mile of the planned route. The report was forwarded to the Iowa State Historic Preservation Officer (SHPO) and the Tribal Director of Historic Preservation for the Sac and Fox Tribe of the Mississippi Meskwaki Settlement for review and comment.

In two separate letters dated December 13, 2010, the Iowa SHPO concurred with NTIA's determination that the Project will have no adverse effect on archaeological and historical property sites in Decatur and Winneshiek Counties. These determinations are contingent upon ICN's containment of all project activities to the disturbed portion of public ROWs and associated ditch back slopes.

In a letter dated December 14, 2010, the Iowa SHPO refused to concur with NTIA's proposed finding of no adverse effect on historic properties in Tama County. The SHPO's disagreement with the effect determination for Tama County was based on concern that: (1) construction of lateral fiber in this county has not been included as part of the evaluated APE, and (2) connections to private homes on the Meskwaki Settlement that have not been investigated for historic properties. Furthermore, the SHPO indicated concern that ICN had not made provisions for avoiding the 16 documented sites that are located within or immediately adjacent to the Project route. According to a letter from NTIA dated January 2, 2011, ICN committed to contain construction of the main cable trunk line to areas within existing disturbed back slopes. In a letter dated January 12, 2011, the SHPO agreed that installation of the main trunk line within disturbed ditches and road grades will have no adverse effects on historic properties, leaving the only open issue as the service drops to homes within the Meskwaki settlement.

The Iowa SHPO recommended that a formal archaeological survey be conducted prior to construction in all areas where Project activities on the Meskwaki Settlement will extend into

undisturbed portions of the public ROW (beyond the ditch back slope), into private easements that have not yet been investigated for historic properties. As the Meskwaki Settlement is the reservation of the Sac and Fox Tribe of the Mississippi, NTIA consulted with the tribe's historic preservation office regarding the SHPO's recommendation.

In a letter dated December 22, 2010, the Tribal Director of Historic Preservation for the Meskwaki Settlement, Mr. Johnathan Buffalo, concurred with NTIA's no adverse effect determination for the Project and provided information to address SHPO concerns presented in the December 14, 2010 letter. The tribe prefers not to disturb their settlement with archaeological investigations that may be more invasive than fiber installation along utility corridors adjacent to driveways, and committed to work with the recipient to ensure protection of cultural resources during construction.

Because the Sac and Fox do not have a federally recognized Tribal Historic Preservation Officer (THPO) and therefore have not assumed SHPO responsibilities for their reservation, and given the disagreement between the Sac and Fox and Iowa SHPO, NTIA requested that the Advisory Council on Historic Preservation (ACHP) review the Project and offer their opinion as to whether field survey on the reservation is required to fulfill Section 106 obligations for the project. On February 15, 2011, the ACHP concurred with NTIA's finding of "No Adverse Effect" provided that the following conditions are met during Project implementation:

- ICN restricts the placement of lateral cable to utility corridors adjacent to driveways;
- ICN conducts additional background research, in coordination with the SHPO and Sac and Fox Tribal Historic Preservation Director, to locate and avoid any previously identified archaeological sites in the vicinity of the Project alignment located within the Meskwaki Settlement; and
- ICN complies with Title 36, Section 800.13 of the Code of Federal Regulations, or a protocol developed in consultation with the SHPO and the Sac and Fox Tribe to address any historic properties that are discovered or unanticipated effects that are encountered, once the Project is underway.

ICN has committed to following this guidance from the ACHP, and NTIA has imposed a Special Award Condition on ICN to that effect.

NTIA also posted notice of the planned Project activity on the Tower Construction Notification System (TCNS) on September 15, 2010. The Winnebago Tribe and the Miami Tribe of Oklahoma responded to that notice, stating that they had no interest in the Project other than notification in the event that archaeological remains or resources are discovered during construction. The Iowa SHPO recommended that ICN contact the Ho-Chunk Tribe of Wisconsin. In an email dated December 14, 2010, the Ho-Chunk THPO indicated that the tribe had no questions or concerns but remains an interested party throughout the proposed undertaking. The Ho-Chunk Tribe THPO also requested inadvertent discovery notification.

ICN will ensure that an archaeologist, who meets the Secretary of the Interior's Professional Qualification Standards, monitors all Project-related ground disturbance in the vicinity of known archaeological sites or suspected or known burials. If ground disturbing activities completed during Project construction uncover cultural materials (i.e., structural remains, historic artifacts, or prehistoric artifacts), ICN and its contractors will stop all work in that area, and immediately notify interested Tribes, the Iowa SHPO, and NTIA so that the significance of the discovery can be properly assessed. If ground disturbing activities uncover human remains, all work will cease immediately, in accordance with the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) and relevant state statutes. The area around the discovery will be secured, and ICN will immediately notify appropriate law enforcement personnel (e.g. local police or County Coroner) and NTIA. In either case, Project construction activities will continue only with written approval of NTIA.

Based on the results of these consultations, and ICN's commitment to implement appropriate protective measures, the Project will have no significant impact on historic and cultural resources.

Aesthetic and Visual Resources

This Project will be constructed in both urban and rural portions of Iowa, all of which currently have visible utility distribution infrastructure. No wild or wilderness areas will be traversed by the Project route. Neither inside plant nor buried fiber optic cables to be deployed by the Project will be visible to the public after installation. However, maintenance access points will be installed and marking signs will be placed along the Project route. Maintenance access covers are similar to manhole covers and flush to the ground, but are rectangular and one foot by two feet in size. Marker signs are small and unobtrusive and will generally be placed on existing poles and fences. In Winneshiek County, some of the new fiber optic cables will be placed on existing utility poles. Overall, this Project will have only minor long-term effects on aesthetics and visual resources. Based on these design considerations, the Project will have no significant impacts on aesthetic or visual resources.

Land Use

This Project will be implemented within existing road and utility ROWs. Land adjacent to the planned construction corridor is currently used for residential, agricultural, commercial, and industrial purposes. No wild or wilderness areas will be traversed by the Project route. Existing land uses will not be altered by the Project. Consequently, this Project will have no impact on the land use resource area.

Infrastructure

This Project will extend communications infrastructure into three unserved and underserved Iowa counties, resulting in long-term improvements in the area. To avoid adverse effects on existing infrastructure, ICN will contact the Iowa "One Call Center" to locate subsurface utilities

prior to commencing plowing, excavation, or HDD operations. The Project will result in a minor and temporary increase in traffic during the construction period. Based on these analyses, no significant adverse impacts on infrastructure are anticipated to result from implementation of this Project.

Socioeconomic Resources

Completion of this Project will offer new and improved broadband access to CAIs including medical facilities, K-12 schools, a college, public safety entities, and a low income tribal community. Expanded internet access will have positive impacts on healthcare, education, economic opportunities, and public safety for these populations. Upgraded broadband services will provide incentives for attracting or retaining businesses, new and enhanced educational resources and opportunities, improved public safety services through coordinated actions and training among public safety agencies, better access to existing and new health services, and access speeds necessary to permit telecommuting and internet-based commerce. The Project will have no negative impacts on socioeconomic conditions in the targeted service area.

Human Health and Safety

The planned network will offer higher bandwidth connectivity to Decatur, Tama, and Winneshiek Counties in Iowa. This enhanced connectivity will allow rural health care facilities and their patients to access advanced and specialized services from larger medical institutions without having to travel, and greatly improve the speed at which medical images can be transferred and reviewed. These improved capabilities will have a positive impact on Iowa communities in the targeted service area.

Construction activities planned for this Project will have minimal impact on human health and safety. Because construction will be limited to ditches and utility corridors along highways and roads, ICN and its contractors will not be located directly in the path of traffic. Because there is no need to close or redirect traffic lanes, only minor impacts will be experienced by vehicles traveling on highways and roads adjacent to the Project route. Nevertheless, ICN and its contractors will promote highway safety and efficiency by providing warning and guidance to all elements of traffic, in accordance with the Federal Highway Administration (FHWA) requirements and the Manual on Uniform Traffic Control Devices. Furthermore, ICN and its contractors who are exposed either to traffic or construction equipment within the work area will wear high-visibility safety apparel. ICN and it contractors will also implement an accident prevention program that requires regular inspection of job sites, materials, and equipment. Finally, there are no known Brownfield sites within the planned Project area.

Based on these considerations, this Project will have no significant short-term adverse impacts and also would result in beneficial long-term impacts on human health and safety.

Cumulative Impacts

As described above, the Project will not have significant adverse impacts on any of the environmental resource areas evaluated in the EA. Additionally, ICN has identified and evaluated potential cumulative impacts associated with foreseeable projects in the three Iowa counties. The only major construction project currently planned within the Project area is a bridge replacement on the Thompson River at Davis City in Decatur County. Although attaching conduit and fiber to the bridge may slightly lengthen the duration of construction, the larger bridge replacement project is expected to overshadow the much smaller fiber build in all resource areas evaluated in the EA. Accordingly, no significant adverse cumulative impacts are anticipated with regard to the Project as currently planned.

Decision

Based on the above analysis, NTIA concludes that constructing and operating the Project as defined by the preferred alternative, any ACHP stipulations that may be received regarding the Meskwaki Settlement, identified BMPs, and protective measures will not require additional mitigation. A separate mitigation plan is not required for the Project. The analyses indicate that the proposed action is not a major Federal action that will significantly affect the quality of the human environment. NTIA has determined that preparation of an EIS is not required.

Issued:

Laura M. Pettus

Laura M. Pettus
Senior Communications Program Specialist
Office of Telecommunications and Information Applications
National Telecommunications and Information Administration

2/22/11
Date