

**National Telecommunications and Information Administration  
Broadband Technology Opportunities Program  
Finding of No Significant Impact  
Peoples Telephone Cooperative, East Texas Medical and Educational Fiber Optic Network**

**Summary**

Peoples Telephone Cooperative (Peoples), applied to the Broadband Technology Opportunities Program (BTOP) for a grant to install 646 miles of new fiber. The new fiber will pass 100,815 households, 10,326 businesses, and 191 community anchor institutions (CAIs). These 191 CAIs will be directly connected to the network. The new fiber network will be installed underground, except when it will be attached to bridges at water crossings. In addition, nine telecommunication huts will be constructed along the Project route. The proposed action passes through 14 counties in northeast Texas, and is referred to as the East Texas Medical and Educational Fiber Optic Network (Project).

The National Telecommunications and Information Administration (NTIA) awarded a grant for the Project to Peoples, 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.

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

The Project includes:

- Installing 646 miles of broadband network primarily in existing public rights-of-way (ROWs) throughout 14 counties in northeast Texas;
- Attaching fiber to bridges at certain water crossings;
- Installing buried fiber by plowing, trenching, or directional boring;
- Directly connecting 191 CAIs by bringing fiber underground to existing utility connections; and
- Constructing nine telecommunication huts in public utility easements along the Project route.

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Based on a review of the analysis in the EA, NTIA has determined that the Project, 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/](http://www2.ntia.doc.gov/)) and the following contact:

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### **Purpose and Need**

The purpose of the Project is to bring affordable broadband service to unserved and underserved communities in northeast Texas. The Project will deploy fiber in areas where, to date, it has not been economically feasible to install telecommunications infrastructure. The new middle mile and last mile infrastructure will pass through 14 counties, providing opportunities associated with broadband technology to 100,815 households, 10,326 businesses, and 191 CAIs.

### **Project Description**

The Project involves installing 646 miles of new fiber, constructing nine telecommunication huts, and connecting 191 CAIs throughout northeast Texas. The majority of the fiber network will be buried via plowing, trenching, or directional boring. At certain water crossings, the fiber will be attached or hung from bridges. Construction will take place primarily within existing public ROWs.

Approximately 646 miles of buried fiber optic cable will be installed along the Project route. Buried cable will be installed by plowing, trenching, or directional boring. When plowing, a 3" to 4" wide trench is opened by the plow. The fiber is spooled off an attached reel, travels down through an adapter connected to the plow blade, and is placed in the slit trench between 36" to 48" in depth. When trenching, a 12" to 18" wide open-cut hole is created to connect fiber optic

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cables placed by boring or plowing. When complete, the disturbed area will be backfilled and compacted to its original condition. Directional boring will be used to cross major roads and other existing infrastructure that requires avoidance. This method involves drilling a horizontal cable pathway from one access point along the route to another, installing conduit to house the cable, and then pulling the cable back through the conduit. Boring will be used along the portion of the fiber route that is immediately adjacent to select cemeteries and specific documented National Register of Historic Places (NRHP) eligible sites. Where water crossings are encountered, fiber will be either bored under the waterway or attached to bridges.

In addition, nine telecommunication huts will be constructed adjacent to the ROW in public utility easements. The huts will be approximately 10' wide by 10' long by 10' tall. The buildings will be placed on a concrete slab or crushed rocks. A generator will be placed at the site and a 20' by 20' fence will be installed around the perimeter for security purposes. No access roads will be constructed.

At CAIs, cable will be installed using existing utility corridors. Typically, fiber will be installed via boring or plowing from the Project route to a new hand hole installed outside the CAI. The fiber will be brought from the hand hole to a metal box on the wall outside of the CAI. The conduit will be brought inside the CAI by drilling through the outside wall.

#### **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 – Buried Fiber Installation with Bridge Attachments (Preferred Alternative).* As noted in the Project Description, this effort will include installation of 646 miles of new fiber, connecting 191 CAIs, and constructing nine telecommunications huts. The new fiber optic cable will be buried via plowing, trenching, and directional boring along the Project route. Where water crossings are encountered, fiber will be either bored or attached to bridges.

*Alternative 2 – Buried Fiber Installation without Bridge Attachments (Non-Preferred Alternative).* In contrast to the Preferred Alternative, fiber lines would not be hung from existing bridge structures at select locations. All water resources would be crossed using directional boring; long distance bores would be necessary in select locations. After evaluation against the EA resource areas, Alternative 2 was eliminated due to increased cost associated with long distance bores and the increased impacts to waters, wetlands, and other surface and subsurface features.

*Alternative 3 – Aerial Fiber Installation (Non-Preferred Aerial Alternative).* In contrast to the Preferred Alternative, this alternative would install fiber on new and existing utility poles. New poles would need to be installed along the majority of the route, due to the limited availability of existing poles. If implemented, this alternative would require approximately 484 miles of new aerial lines, or 8,526 additional poles to be installed. Alternative 3 would be substantially more

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expensive due to the cost to improve existing utility pole infrastructure and install new utility pole infrastructure. Additionally, compared to buried cable, aerial lines are susceptible to failure due to weather and other disruptions. Based on this, it was determined the Alternative 3 does not satisfactorily meet the purpose and need, specifically, the elements of affordability and reliability.

*Alternative 4 – Wireless Installation (Non-Preferred Wireless Alternative).* The Wireless Alternative would send data wirelessly via microwave or cellular technology, rather than rely on a fiber network. Existing towers and tower sites would be used to the extent possible to minimize permitting, infrastructure, and expenses. To provide broadband across the 646 miles of alignment, approximately 81 towers would need to be constructed in the Project area. The new towers would be installed on a 50' by 50' lot of land. Alternative 4 was eliminated from further consideration because it could not support the requisite bandwidth capacity and therefore, failed to meet the purpose and need of the project.

*No Action Alternative.* No action was also considered. This alternative represents conditions as they currently exist in northeast Texas. Under the no action alternative, new fiber infrastructure would not be constructed. Many rural communities would continue to be unserved or underserved with respect to broadband internet access. Additionally, broadband services would not be provided to CAIs in the Project area. The EA examined this alternative as the baseline for evaluating impacts related to other alternatives being considered.

*Alternatives Considered But Not Carried Forward.* Peoples considered installing the network along FM 849, approximately one mile northwest of Lindale in Smith County, Texas. However, a review of the Texas Parks and Wildlife National Diversity Database showed an occurrence of the rough-leaf aster, a rare vascular plant, within the FM 849 ROW. Based on the potential occurrence of this species along the proposed alignment, Peoples eliminated the alignment to avoid any potential impacts.

## **Findings and Conclusions**

The EA analyzed existing conditions and environmental consequences of the preferred alternative and the no action alternative in 11 major resource areas, including Noise, Air Quality, 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.

### **Noise**

Short-term increases in ambient noise levels are expected during the Project's construction period. Noise created by machinery used during installation will be temporary and localized in nature. To lessen noise impacts, construction activities will occur during daylight hours and construction equipment will be maintained in good repair. The Project will also have minimal long-term noise impacts due to the operation of the backup electric-power generators installed at the nine telecommunication huts. The generators will only be activated 15 minutes per week and

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in the event of a power loss. Based on these considerations, no significant impacts on noise are expected to occur as a result of Project implementation.

***Air Quality***

Potential impacts to air quality will be both short-term impacts related to construction and long-term impacts related to operation of this Project. Fiber will be installed underground via plowing, trenching, and directional boring. These techniques will result in minor disturbance of the ground surface. There will also be negligible fugitive dust emissions resulting from construction of nine telecommunication huts. Fugitive dust emissions will be minimized by dust control measures such as covering or treating disturbed areas with dust suppression techniques, sprinkling, covering loaded trucks, and other dust abatement controls. A short-term minor increase in the use of fossil fuel and associated greenhouse gas (GHG) emissions will occur as a result of Project construction. Emissions will be minimized through implementation of BMPs such as placing limits on idling and using clean burning diesel engines. There will also be long-term impacts to air quality from the diesel-powered generators installed at the nine telecommunication huts. The generators will only run during a power outage and 15 minutes per week for periodic testing. Based on implementation of these BMPs, construction and operation of the planned network is not expected to have significant adverse impacts on air quality.

***Geology and Soils***

The Project's fiber route will be installed primarily by plowing and directional boring in existing transportation ROWs. Plowing, trenching, and directional boring techniques result in minor, temporary disruption of the soils. All disturbed areas will be compacted and returned to its original condition. The nine telecommunication huts will be constructed on previously disturbed land immediately adjacent to the transportation ROW in public utility easements. Approximately 100 square feet of soil will be disturbed to construct each hut. Appropriate BMPs will be implemented to minimize sedimentation or turbidity impacts from construction of the Project. Consequently, the Project is not expected to result in significant adverse impacts on geology or soils.

***Water Resources***

Project construction activities could result in short-term minor impacts on water resources within the Project area. The Project will intersect at least 651 streams and rivers, as well as adjacent wetlands, during installation. Impacts to streams and rivers and adjacent wetlands will be avoided with the use of horizontal directional boring or by hanging the fiber optic line on an existing bridge or crossing structure. Peoples provided the U.S. Army Corps of Engineers (USACE) an assessment of water resources and a discussion of the avoidance procedures. In a letter dated December 22, 2010, the USACE confirmed that this Project would not involve activities subject to the requirements of Section 404 or Section 10, and would not require their authorization, because all impacts to waters of the United States will be avoided. Fiber optic cables will be placed at a minimum depth of 36 to 42 inches below the surface. Construction at this depth is not anticipated to disrupt groundwater flows. As such, no impacts to groundwater are anticipated. There are no coastal management zones located within the Project area, therefore, no impacts to coastal management zones are anticipated. The Project will cross

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identified floodplains. Fiber installation in floodplains will be beneath grade and will result in no substantial fills or other grading revisions. As such, no impacts to floodplains are anticipated. No National Wild and Scenic Rivers are located within the Project area. There is potential for a temporary increase in stormwater discharge during construction, but appropriate BMPs will minimize erosion, sedimentation, and turbidity in receiving waters. BMPs used during construction may include backfilling trenches, silt fences, straw bales, straw mat blanketing, replacement of or reseeding of existing grass, and replacement of existing flora. By avoiding construction through waterways, and implementing erosion and sediment control BMPs, Peoples will be able to construct the network with no significant adverse impacts on water resources.

***Biological Resources***

Peoples consulted with the Texas Parks and Wildlife Department (TPWD) and the U.S. Fish and Wildlife Service (USFWS) regarding biological resources. Noise and human activity associated with fiber installation are expected to disturb some wildlife species, but these effects will be minor and temporary. Some disturbance to the ground surface and vegetation associated with the Project will be limited to transportation ROWs that are previously disturbed areas. The Project route crosses seven reservoirs where there is a potential for bald eagles to be present during mating and nesting activities. If a nest is encountered, the Project will proceed in accordance with the guidelines set forth in the National Bald Eagle Management Guidelines. Structures that may contain migratory birds, including bridges, are within the Project area. In the event that migratory birds are encountered during Project construction, every effort will be made to avoid harm to protected birds, active nests, eggs, and young. A previously considered Project route showed an occurrence of the rough-leaf aster, a rare vascular plant, within the ROW. Based on the potential occurrence of this species along the alignment, Peoples eliminated the alignment from the Project route to avoid any potential impacts. In a letter dated November 4, 2010, the TPWD determined that the Project should have little impact on fish and wildlife resources. Peoples provided the USFWS with Project documentation and suggested that they make a no effect determination. In an email dated December 27, 2010, the USFWS confirmed that they had reviewed the information provided to them and no further consultation was necessary. Based on this analysis, Peoples will be able to construct the fiber network with no significant adverse impacts on biological resources.

***Historic and Cultural Resources***

On October 22, 2010, a consultation initiation letter, including a detailed Project description, was sent by NTIA to the Texas State Historic Preservation Officer (SHPO). Following the initiation letter, Peoples engaged qualified staff at ACI Consulting to analyze the archeological and architectural resources in the Project area. They identified over 300 archeological sites within a one-mile buffer of the Project area. After further coordination with the SHPO, the area of potential effect (APE) was reduced to approximately 100 feet adjacent to the fiber line and intersecting the centerline of the Project alignment. Out of the eight sites identified, the SHPO recommended that only four were eligible as historic or prehistoric cultural resources. All direct impacts to National Register eligible or potentially eligible archeological sites will be avoided through implementation of measures agreed upon by Peoples and the SHPO. These measures will include either plowing on the other side of the ROW or boring under the site sufficiently as

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to not disturb any intact deposits. Qualified staff from ACI Consulting will identify the entry and exit points for the boring or plowing to Peoples without disclosing the location of the archeological sites. Thus, the Project will not have significant adverse impact on historic properties or archeological resources.

Peoples also identified 47 architectural resources within a mile of the fiber route. Similarly, two National Register Historic Districts coincide with the ROW of the fiber optic line on alternate routes. If the Project is constructed in the Historic Commercial Districts, the impacts will be minimal as boring is planned for those areas. Indirect, visual impacts would be temporary and cease when construction was complete in the area. One telecommunications hut is 0.35 miles from an identified architectural resource, the Sam Rayburn House. Due to the size of the hut and distance from the site, the hut is not expected to have any impact on this site. With the identified avoidance measures in place such as boring under the roads and the temporary or limited nature of visual impacts, there will be no adverse impacts to architectural resources along the Project route.

There are also 52 cemeteries within the Project's APE or adjacent to the ROW. In coordination with the SHPO, avoidance measures are required so that unmarked burials are not inadvertently disturbed. Avoidance strategies include constructing the fiber optic line on the other side of the ROW, or in cases where the cemetery boundary is not clear, boring underneath the surface to a depth of at least 10 to 15 feet. Peoples will also coordinate with the Texas Department of Transportation to determine if additional information regarding cemetery boundaries is available. With implementation of the identified protective measures, the Project will not have significant adverse impacts on cemeteries and unmarked burials.

Peoples submitted survey results on protected resources and identified avoidance measures to the SHPO for their concurrence. On December 31, 2010, the SHPO responded and concurred with the determination that no historic properties will be affected by this Project.

Through the Tower Construction Notification System, NTIA provided Project details to 11 tribes interested in the Project's geographical location (northeast Texas). Of the 11 tribes notified, 10 tribes responded to the notification and 1 (one) tribe did not respond to the notification or provide contact information. Seven tribes requested additional information regarding the Project. These tribes have been contacted and provided additional information. Three tribes requested that if any human skeletal remains or any protected Native objects are uncovered during construction, construction should stop immediately, and state and tribal representatives should be contacted.

All construction will be restricted to previously disturbed areas. If any cultural material is discovered during construction, the SHPO will be notified immediately and all activities halted until a qualified archaeologist assesses the cultural remains. If any human skeletal remains or protected Native objects are uncovered during construction, construction will stop immediately, and all consulting parties will be contacted. Based on these consultations, guidance from the

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commenting agencies, and additional mitigation measures to be implemented by Peoples, the Project is not expected to have significant adverse impacts on historic and cultural resources.

***Aesthetic and Visual Resources***

The Project involves installing fiber optic cable by burying the cable underground in ROWs. Fiber installation will have a short-term, minor, and temporary impact on aesthetic and visual resources due to the presence of construction equipment and limited soil disturbance. In addition, nine telecommunication huts will be constructed adjacent to the ROW in public utility easements. One telecommunication hut is located about 0.35 miles from the Sam Rayburn House site. However, due to the relatively small size of the hut and the distance from the site, it is unlikely that the hut will have any visual impact on the Sam Rayburn house. At stream and river crossings, cables may alternatively be attached to bridges. Bridge attachments are also expected to have minimal aesthetic impacts. Accordingly, the Project is not expected to have a significant adverse impact on aesthetic and visual resources in the Project area.

***Land Use***

The Project's fiber route will be installed primarily in ROWs. The nine telecommunication huts will be constructed next to the ROW in public utility easements. Implementation of this Project will not modify the current land use. Therefore, the Project will have no significant adverse impact on land use.

***Infrastructure***

Project construction activities may result in temporary impacts to existing roadways along the Project route. Any disturbance to pavement or concrete will be repaired as appropriate, and directional boring will be used to place cable under large roads where necessary. The telecommunication huts will be served by existing electric power and no access roads are required. The Project will improve communications infrastructure and is expected to improve the transfer of information between CAIs, businesses, and individuals residing within the communities along the Project route. Overall, the Project will have a positive impact on infrastructure in northeast Texas.

***Socioeconomic Resources***

The Project will provide improved communications infrastructure to residents who do not have access to broadband services in northeast Texas. The network will also benefit these communities by establishing broadband connections at 191 CAIs. An increase in both short-term and long-term employment opportunities are also anticipated as a result of Peoples' Project. The Project will have positive impacts on socioeconomic resources.

***Human Health and Safety***

Although there are 10 regulated hazardous waste sites within 100 feet of the Project route, these sites do not fall within the ROW and no impacts are anticipated. BMPs for workplace safety will be implemented to protect workers and the public along the Project route. A detailed Safety Manual was developed for this Project. The Safety Manual includes BMPs such as wearing safety vests and helmets, signage, temporary road closures, detouring, use of barriers, flaggers,



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access to first aid, and extensive safety training. With implementation of the protection measures, the Project will not generate any significant adverse worker or traffic-related health or safety issues.

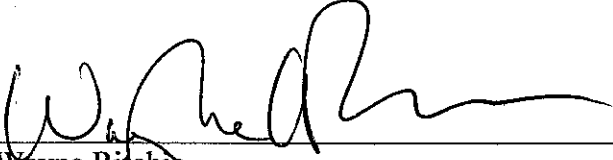
***Cumulative Impacts***

As described above, the Project will not have significant adverse impacts on any of the environmental resource areas evaluated in the EA. As such, no cumulative impacts on the environment are anticipated.

**Decision**

Based on the above analysis, NTIA concludes that constructing and operating the Project as defined by the preferred alternative, 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:



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Wayne Ritchie  
Chief Administrative Officer  
Office of Telecommunications and Information Applications  
National Telecommunications and Information Administration

3/28/2011  
Date