National Telecommunications and Information Administration
Broadband Technology Opportunities Program
Finding of No Significant Impact
DeltaCom Inc., East Tennessee Middle Mile Fiber Broadband Project

Summary

DeltaCom, Inc. applied to the Broadband Technology Opportunities Program (BTOP) for a grant to provide high bandwidth middle mile connectivity on a new fiber optic route across eastern Tennessee from Chattanooga through Knoxville to Johnson City and Blountville/Bristol. The Project will also add interconnection points on an existing fiber optic route between Nashville and Knoxville. The proposed action will deploy a high-capacity fiber optic broadband Internet network covering approximately 544 miles within the State, and is called the East Tennessee Middle Mile Fiber Broadband Project (Project).

The National Telecommunications and Information Administration (NTIA) awarded a grant for the Project to DeltaCom, 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 (74 *FR* 32876 and 74 *FR* 33204). 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.

DeltaCom completed an EA for this Project in September 2010. NTIA reviewed the EA, determined it is sufficient, and adopted it as part of the development of this FONSI.

The Project includes:

- Deploying a high-capacity broadband Internet service network consisting of approximately 544 miles of new fiber optic cable and existing dark fiber in seven major segments across the eastern half of Tennessee;
- Using direct boring techniques to install underground portions of the planned buried fiber optic infrastructure;

- Installing new utility poles and replacing existing poles to support aerial fiber optic infrastructure;
- Clearing property and constructing prefabricated buildings to house telecommunications equipment, racks, and utility support; and
- Installing new equipment racks and placing new switching equipment and optical transport technology in pre-existing DeltaCom buildings in Chattanooga, Crossville, Knoxville, Nashville, and Watertown.

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

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Purpose and Need

The purpose of this Project is to install a middle mile network capable of providing next generation high capacity broadband services to last mile providers and community anchor institutions in underserved areas of eastern Tennessee. The new infrastructure will provide up to ten gigabit Ethernet wavelength services suitable for telemedicine, health record digital transfer technologies, distance learning solutions, and other education and healthcare applications. Targeted community anchor institutions include schools, libraries, hospitals, and public safety facilities. DeltaCom's proposed broadband infrastructure will provide competitive alternatives to the current limited and high-cost broadband access in underserved areas. Residents and businesses will be able to choose from multiple service providers, resulting in lower prices and a greater diversity of services. Competitive service choices for consumers and businesses will also support technologically savvy students, more efficient small businesses, and greater sharing of

resources among non-profit and community anchor institutions in distant locations. Through implementation of this Project, DeltaCom expects to connect 52 community anchor institutions in five eastern Tennessee communities. Through partnerships with last mile providers, DeltaCom expects to reach an additional 271 community anchor institutions, 5,119 businesses, and 34,858 households in eastern Tennessee.

Project Description

The Project plans to provide high bandwidth middle mile connectivity by deploying a high-capacity broadband network consisting of approximately 544 miles of new fiber optic cable and existing dark fiber infrastructure. Fiber construction activities will focus on seven major segments in eastern Tennessee: Cleveland, Sweetwater, Morristown, Johnson City, Blountville/Bristol, Cookeville, and Oak Ridge. New fiber infrastructure will be installed aerially and underground, and Project activities will be conducted in accordance with Rural Utilities Service guidelines. All of the proposed work will be completed in either a public right-of-way (ROW); within an existing easement; or within land that is already leased, owned, or optioned by DeltaCom. Project activities with the potential to affect environmental and other resources include installation of new poles, replacement of existing poles, excavation of direct-bored underground pathways for buried fiber, and installation of new, small prefabricated buildings.

Underground placement of fiber for this Project will be accomplished using direct boring techniques. A boring machine will be placed along the Project route, and a small receiving pit will be excavated to facilitate boring operations. Directional boring will be conducted to establish an open underground pathway for the fiber and conduit. Both the pit and pathway will extend to a depth of approximately three feet, in accordance with applicable guidance and permitting requirements. If obstructions are encountered during direct boring, a limited amount of trenching may be completed to investigate the cause of the obstruction. Efforts will be taken to minimize disturbance of the soil surface. Hand holes will be placed at either end of the buried fiber pathway for transitioning from aerial to buried fiber line, and to house maintenance fiber coils for future cable repair. All areas disturbed during placement of buried fiber and hand holes will be graded and re-seeded. Disturbance to existing trees will be avoided at all costs.

The fiber optic cable will also be run through existing conduit along bridges, placed on existing bridge brackets, and attached to existing and or new poles along an aerial pathway. A reel trailer will be used to run fiber across bridges with the assistance of the local utility departments. No soil will be disturbed when the network is run across bridges. Aerial fiber will be secured to utility poles using standard industry guidelines, and new or replacement utility poles will be installed, if necessary, to support the aerial infrastructure. In general, an area of approximately 5 feet by 5 feet will be disturbed for pole installation or replacement. A new hole will be augered within a few feet of the existing pole; at a minimum, a 24-inch diameter boring will be excavated to a depth of 6 feet for this purpose. The utility company will then transfer power and other

utilities over to the new pole. Once all of the utilities are moved, the old pole will be pulled out, the hole will be backfilled, and the area will be regraded for proper drainage.

Small, climate-controlled, prefabricated buildings (with dimensions of 12 feet by 20 feet, 12 feet by 36 feet, or 12 feet by 60 feet) will be installed at several sites. These locations will be prepared by leveling and scraping vegetation from the building location. Concrete forms will be installed, a 6-mil poly film vapor barrier will be placed, and a 4"-6" reinforced concrete slab foundation will be poured. The building will then be installed and secured to the foundation. With the exception of the Morristown site, a gravel access driveway will be installed at each building site. At the Morristown site, an existing driveway will be reconditioned. A 10-foot high perimeter security chain link fence with drive gate will be installed at each site. A trench or bore conduit no more than 2 feet wide and 4 feet deep will be excavated for electrical connection. Fiber will be extended into the new prefabricated buildings from Tennessee Valley Authority power structures, with minor buried and/or aerial fiber construction anticipated. The buildings will not be served by water, sewer, or septic services. Telecommunications equipment will be installed in the six new buildings and into new racks at five existing DeltaCom point-of-presence (POP) buildings to support service delivery. Backup generators, which may be diesel powered, will also be installed at the six new building locations to provide emergency power in the event of an extended power outage.

Alternatives

The EA includes an analysis of the alternatives for implementing the proposed 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.

In addition to the no action alternative, the EA documents the evaluation of the Original Network Build (Alternative 1) that incorporates infrastructure similar to that described in the Project Description and follows the original planned route through eastern Tennessee. DeltaCom developed the First Choice Network Build (Alternative 2) in an effort to reduce potential adverse impacts to eastern Tennessee communities and the environment along the original route. Under Alternative 2, the original route for fiber installation was modified for three city segments. The linear fiber path between the DeltaCom POP and the incumbent local exchange carrier (ILEC) location would be rerouted on the Morristown segment to reduce the required mileage from 27 miles to 20 miles. Rerouting this segment also reduces the number of pole replacements (from 80 under Alternative 1 to 4 under Alternative 2) and bridge crossings (from 3 under Alternative 1 to 2 under Alternative 2). Rerouting along the Cookeville segment resulted in a slightly longer fiber path (with Alternative 2 approximately 0.4 miles longer than Alternative 1), but significantly reduces the need for buried infrastructure. The Oak Ridge segment was also rerouted between Alternatives 1 and 2, significantly reducing the route miles (from 12 miles under Alternative 1 to 3.3 miles under Alternative 2) and crossing significantly fewer streams. Additionally, none of the streams to be crossed along the Oak Ridge segment under Alternative 2

were identified as protected. Several other alternatives were also considered but not carried forward for this Project. Installing the First Choice Network Build (Alternative 2) was chosen as the preferred alternative. Key components of the two alternatives are noted in the table below.

City Segment	Route Miles		Aerial Miles		Buried Miles		Poles Replaced		New Building?	
	Alt 1	Alt 2	Alt 1	Alt 2	Alt 1	Alt 2	Alt 1	Alt 2	Alt 1	Alt 2
Cleveland	9	9	7	7	1.3	1.3	0	0	Yes	Yes
Sweetwater	8	8	7.1	7.1	0.5	0.5	4	4	Yes	Yes
Morristown	27	20	19.9	20	7.1	0.2	> 80	4	Yes	Yes
Johnson City	0	0	0	0	0.1	0.1	0	0	Yes	Yes
Blountville/Bristol	0	0	0	0	0.2	0.2	0	0	Yes	Yes
Cookeville	3	3.4	1.9	3.2	1.1	0.2	0	0	No	No
Oak Ridge	12	3.3	10.1	2.6	2.2	0.6	0	0	No	Yes

Alternative 1 – Original Network Build. This alternative involves construction of approximately 59 new network miles, including 46 aerial fiber miles and 12.5 buried fiber miles. Over 84 pole replacements would be needed to accommodate this route. In addition, 5 new prefabricated buildings would be constructed. Differences between the original network route (Alternative 1) and the preferred route (Alternative 2) are largely the result of rerouting. By changing the specific path of fiber installation on three of the planned network segments, DeltaCom shortened the total route miles, substantially reduced the number of pole replacements (as determined by an assessment of the specific design path), and avoided a significant number of bridge and stream crossings.

Alternative 2 – First Choice Network Build (Preferred Alternative – described above in Project Description). This alternative involves construction of 43.7 new network miles, including 39.9 aerial fiber miles and 3.1 buried fiber miles. A total of 8 pole replacements will be needed to accommodate this route. In addition, 6 new prefabricated buildings will be constructed.

No Action Alternative. No action was also considered. This alternative represents conditions as they currently exist for the residents and institutions in eastern Tennessee. Under the no action alternative, connection and availability of broadband services would not be improved.

Alternatives Considered But Not Carried Forward. During the Project planning stage, DeltaCom evaluated several alternatives for Project implementation. These alternatives included a microwave transmission network, a completely aerial fiber network, and a completely buried fiber network. Because a dark fiber route is currently in place and constitutes approximately 92% of the total mileage of the Project, implementation of a microwave transmission network for this middle mile Project was determined to be an inefficient alternative. In addition, unlike fiber optic networks, microwave signals must have a straight line-of-sight path for transmissions. Solid obstructions, heavy rain, sleet, or snow can degrade or obliterate the microwave signal, which is of concern when providing services to public safety entities. Microwave transmission

capacity is limited typically to 10 gigabits, and microwave networks require higher energy consumption per gigabit of transmission than fiber optic networks. Therefore, microwave transmission can lead to increased greenhouse gas (GHG) emissions. Microwave towers can create aesthetic eyesores in the community, as compared to aerial fiber optic cable which is relatively unobtrusive, particularly when it is hung on existing structures.

Implementing a completely aerial network build was considered to have the least potential for ground disturbance and adverse environmental impacts. However, a completely aerial network build was infeasible for crossing existing infrastructure along the route, including power transmission line corridors. A completely buried fiber route was also considered, but determined to be infeasible due to the large number of subsurface obstacles (e.g., utility pole bases) that would have to be avoided during boring operations.

Based on these considerations, it was determined that the most feasible approach was to construct the network backbone route using aerial fiber on existing utility poles as much as possible, and to keep the buried fiber sections to a minimum.

Findings and Conclusions

The EA analyzes existing conditions and environmental consequences of the Original Network Build (Alternative 1), the preferred First Choice Network Build (Alternative 2), and the no action alternative. Eleven major resource areas were analyzed, 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. Cumulative impacts of each alternative were also evaluated.

The EA supports a determination that implementation of the Project as defined by the preferred alternative, and incorporating protective measures identified in the EA, will not result in any significant direct or indirect effects on the evaluated resource areas. Alternative 1 presents a greater risk for potential adverse environmental impacts.

Noise

There is no significant difference in anticipated noise levels between Alternatives 1 and 2. Because the Project area is located within ROWs along roadways, neither alternative would significantly increase ambient noise levels in the long term. Short-term effects on noise are anticipated to occur during construction of the new buildings and bored underground cable pathways. Special care will be taken to limit construction to normal working hours during weekdays, and local noise and disturbance guidelines will be followed throughout the construction period. Backup generators to be co-located with the new buildings will also result in short-term and intermittent increases in ambient noise levels. These units will be tested for one hour during start-up and will typically run for one hour each month for maintenance. Noise abatement measures will be implemented for generators in areas zoned as residential, or where

zoning restrictions require generator noise suppression. Monthly testing of the generators will be conducted during daytime work hours to minimize the impact. Placement of supporting telecommunications equipment in existing buildings will not result in any temporary or new permanent sources of noise. With implementation of these mitigation measures, neither of the two build alternatives will have significant impacts on noise in the Project area.

No fiber or building construction would occur under the no action alternative. Accordingly, there would be no direct or indirect effects on noise levels.

Air Quality

Neither of the build alternatives would result in any new permanent direct or indirect impacts to air quality. Nevertheless, there will be temporary increases in air emissions (e.g., vehicle emissions and fugitive dust) during the construction phase. Exhaust emissions associated with operation of heavy equipment are expected to be minor and will not affect attainment of applicable air quality standards. Fugitive dust emissions will be minimized by deploying best management practices (BMPs) for controlling dust generation. Backup generators to be collocated with the new network buildings will also result in new, but intermittent and minor, sources of GHG emissions. The interconnection or operation of new fiber optic cable will not result in any new air emissions. Both alternatives under consideration would result in short-term, minor increases in fossil fuel use and associated GHG emissions during construction; no long-term effects on GHG emissions are anticipated. Neither of the build alternatives under consideration will have significant adverse impacts on air quality.

No fiber or building construction would occur under the no action alternative. For this reason, the no action alternative would have no impacts on air quality in the Project area, and would result in no increased GHG emissions.

Geology and Soils

Implementation of either Alternative 1 or 2 may result in minor adverse impacts on soil in areas that require installation of new utility poles, replacement of existing poles, or boring for installation of underground fiber. However, nearly all such areas are located within the existing ROW along roadways and have already experienced some level of disturbance. In addition, a small amount of buried fiber cable will be placed within maintained turf areas or agricultural fields that have a significant disturbance history. Any additional impacts to soil and geology should be minimal and extend only through the short-term, as soils will be regraded to original condition in any excavated areas.

There is also a potential for minor adverse impacts to prime or unique farmland along the Project route to be followed under both build alternatives. The Steadman (St) soil type is mapped as prime farmland and occurs within a portion of the Blountville/Bristol segment. Although the planned building site occurs on the mapped St soil unit, the lot is small and not contiguous with actively farmed areas, suggesting that it has negligible potential to be converted to agricultural

use. Furthermore, this property is currently zoned residential, and underground boring for buried cable at this location is minimal. Within the Johnson City segment, buried cable will go through the mapped Lindside prime farmland soil type. However, this property is already owned by DeltaCom and would not be utilized for agriculture. The prefabricated building planned for the Johnson City segment will be located within an area of the property classified as the Braxton soil type (not prime farmland), and therefore would not impact potential future agricultural use of prime farmland. The planned Project configuration under either build alternative will not prohibit ongoing or future use of mapped prime farmland for agriculture.

No significant direct or indirect adverse impacts on geology and soil are anticipated under either of the build alternatives. However, because Alternative 2 (i.e., the preferred alternative) requires less boring for underground pathways than Alternative 1, Alternative 2 will have less potential for impacts on soil and geology resources than Alternative 1. The no action alternative involves no construction or ground disturbing activity. Thus, the no action alternative would have no direct or indirect significant effects on geology and soils in the Project area.

Water Resources

Alternative 1 (Original Network Build) would cross a total of 80 streams; Alternative 2 (First Choice Network Build) will cross a total of 55 streams. To span these streams (under either alternative), aerial fiber cable will be strung from one pole to another on the opposite bank, routed through existing bridge conduit, or placed on a bracket on the side of the bridge. These methodologies for stream spanning are not expected to impact the streams. Furthermore, heavy equipment will not enter stream and wetland areas under either alternative.

Under both build alternatives, excavations will be limited to depths from 3 to 6 feet in a limited number of locations throughout the Project area. With groundwater typically encountered at depths ranging from 50 to 350 feet below ground surface, neither alternative is expected to have any contact with or effect on groundwater resources. No existing buildings and no new building structures associated with either alternative are located in mapped floodplains. Portions of the Clinch River, the Hiwassee River, and Tuckahoe Creek are considered State Scenic Rivers and may lie within the Project area, but these scenic features will not be crossed by planned routes under either Alternative 1 or 2.

Potential emergent wetland areas were identified in several locations within 100 feet of the Project area of the two build alternatives. Two potential wetland areas are located along the Cleveland route where aerial fiber will be installed, but no pole replacements are needed. Along the Cookeville route, one potential wetland area is located on the opposite side of the public road from a planned buried fiber install. Along the Morristown route, one potential wetland area is located on the opposite side of the public road from an aerial fiber install. Under either alternative being considered, and along each of these segments, potential wetland areas will not be approached, entered, or disturbed by construction of the Project. DeltaCom is currently

consulting with the U.S. Army Corps of Engineers as to whether permitting is required pursuant to Section 404 of the Clean Water Act.

As part of the Project, regardless of the alternative selected, DeltaCom will file a Notice of Intent with the Tennessee Department of Environment and Conservation (TNDEC) for coverage under the Construction Storm Water General National Pollutant Discharge Elimination System (NPDES) Permit. This permit is required because the Project's ground disturbing activities will cumulatively exceed one acre in size, although the activities are widely separated geographically. BMPs for storm water sedimentation and erosion control (e.g., silt fencing, straw bales) will also be implemented for the Project. A Storm Water Pollution Prevention Plan filed with TNDEC will detail BMPs to be used at each area that soil will be disturbed.

Based on these analyses, neither build alternative is anticipated to have significant direct or indirect impacts on water resources. However, by reducing potential impacts on streams, Alternative 2 will protect natural resources to a greater extent than Alternative 1. The no action alternative would require no construction, excavation, or stream crossings. Accordingly, the no action alternative would result in no impacts on water resources.

Biological Resources

As part of the planning process, the Project area was screened for potential habitat for species listed by the U.S. Fish and Wildlife Service (USFWS). Listed species with fluvial aquatic habitats (including mussels, fish, and one snail species) were eliminated from further assessment with regard to the preferred alternative because water resource protections to be implemented with this alternative will eliminate the potential for impacts to streams, even when the Project route crosses such waterways. There is a potential for adverse impacts on fluvial aquatic species under Alternative 1 (the Original Network Build).

Forested habitat types within the Project area are not suitable as habitat for the bald eagle (*Haliaeetus leucocephalus*), and no bald eagles or nests were observed. Nevertheless, where impacts to mature forest are unavoidable, a more localized survey will be conducted and the potential for disturbance of this species assessed. To protect preferred habitat for the Indiana bat (*Myotis sodalis*) in the vicinity of planned construction, the Project will include measures for avoiding and minimizing impacts to trees in and near the ROWs. Selective and limited limb cutting will occur where such limbs are determined to pose a threat to the network fiber. If more extensive impacts are found to be unavoidable at certain locations, additional site-specific habitat characterization will be performed in consultation with the USFWS. No cave entrances or caves were identified along the Project route that might serve as habitat for the Gray bat (*Myotis grisescens)*, and the potential to adversely affect this species is considered negligible. In the event that cave entrances or caves are identified during construction, activity will be halted and the area will be evaluated by a wildlife biologist for its potential to constitute gray bat habitat. If the potential for gray bat habitat is confirmed or suspected, USFWS will be contacted and any USFWS recommendations will be implemented prior to continuing with construction.

The majority of areas where Project-related ground disturbance is likely to occur contains plant communities with low ecological sensitivity, and low or very low potential to support federally listed species. Wetlands are the preferred habitat for the white fringeless orchid (*Platanthera integrilabia*), which is a federally listed plant species within the Project area. The potential for adverse impact on the white fringeless orchid is considered negligible because wetland impacts will be minimized under either alternative.

A letter concurring with the finding of no significant impact was received from USFWS on August 30, 2010. Nonetheless, the USFWS states that the grantee has an obligation, under the Endangered Species Act, to reconsider new information suggesting the potential for impacts to listed species becomes available, if the Project is modified to include activities not considered during USFWS review, or if new species or critical habitats are designated and might be affected.

Species listed as endangered or threatened by the TNDEC's Natural Heritage Program were also screened using habitat information gathered along the Project route. Sensitive habitat types likely to support such species are uncommon or nonexistent within the Project area. Furthermore, minimal ground disturbance will occur in these areas. Therefore, none of the species listed by the Natural Heritage Program is likely to be adversely affected by implementation of the Project under the preferred alternative. Based on the extent of boring activity, Alternative 1 (the Original Network Build) has a greater, but still small, potential to impact species listed by the Natural Heritage Program.

Based on these analyses, the preferred alternative will have no significant direct or indirect adverse effects on biological resources. Due to the smaller scope of work and reduced intrusive boring activity called for under the First Choice Network Build design, the preferred alternative will result in less potential damage to biological resources than Alternative 1. No construction, excavation, or fiber installation would occur under the no action alternative; therefore, this alternative would have no impact on biological resources.

Historic and Cultural Resources

No protected lands listed or eligible for listing on the National Register of Historic Places will be impacted by the Project under either build alternative. Moreover, no buildings of potential historical significance were identified during the field reconnaissance. The Tennessee State Historic Preservation Office documented their concurrence with these conclusions in a letter dated July 26, 2010. In addition, the placement of equipment in existing switch and POP buildings will not result in any modifications to, or penetration of, historic structures.

Furthermore, although the Project route crosses over bridges in Hamblen County and in Putnam County, the *Tennessee Survey Report for Historic Highway Bridges* indicates that there are no

historic bridges in either of these counties. The Tennessee Department of Transportation (TDOT) supervisor for historic bridges has confirmed this information.

NTIA used the Federal Communication Commission's automated Tower Construction Notification System (TCNS) to facilitate and expedite outreach to federally recognized tribes and other Native American groups. Mr. Bryant Celestine, Tribal Historic Preservation Officer (THPO) of the Alabama-Coushatta Tribe of Texas requested that he be copied on correspondence regarding the Project. Information was provided to Mr. Celestine via mail, phone, and email. No stipulations or restrictions on Project activities have been requested by this THPO.

All work will be completed in either a public ROW; within an existing easement; or within land that is already leased, owned, or optioned by DeltaCom. By reducing the amount of boring needed for underground pathways, and by avoiding disturbance to private property owners to the extent practicable, the preferred alternative (Alternative 2) will preserve historic and cultural resources to a greater extent than Alternative 1. The no action alternative would have no impacts to historic and cultural resources because no construction or intrusive activities would occur.

Aesthetic and Visual Resources

Implementation of either network build alternative would subtly impact this resource area during and after construction. The Project area spans approximately 544 miles through mixed commercial, industrial, residential, agricultural, and forested areas. Construction of the Project is expected to result in some short-term impacts on aesthetic and visual resources. The typical time period for new building site preparation and construction is 20 business days per site. To minimize aesthetic and visual impacts viewed from the roadway, all contractors will remove their equipment at the end of each workday. The area of visual disruption will be limited within the construction site to the new driveway area and the area of the building pad. All of the proposed work will be completed in either a public ROW (which has already been disturbed); within an existing easement; or within land that is already leased, owned, or optioned by DeltaCom. Construction of planned prefabricated buildings will be completed on property that is already owned by DeltaCom, with the exception of the Blountville/Bristol site. This site is currently zoned residential and has been optioned for purchase by DeltaCom.

Implementation of Alternative 1 (the Original Network Build) would more significantly impact aesthetic and visual resources than the preferred alternative (Alternative 2), particularly in the cities of Morristown, Oak Ridge, and Cookeville. The Alternative 1 route would involve disturbing private property for placement of over 80 new poles in Morristown, crossing several protected streams in Oak Ridge, and conducting a significant amount of boring for underground pathways in Cookeville. Conversely, although far fewer replacement utility poles are proposed under Alternative 2 (the First Choice Network Build), that design includes installation of an additional building at Oak Ridge. The potential for this additional building to adversely impact aesthetic and visual resources is minimal, as the building will be relatively small and set back

from the public road. The new building will not require clearing of trees, and will be partially screened from view from the public road by trees. Alternative 2 also involves changing the fiber routes in Morristown, Cookeville, and Oak Ridge. The revised route will not have a significant effect on the aesthetic and visual resources these cities.

By avoiding disturbance to private property owners to the extent practicable, Alternative 2 will protect aesthetic and visual resources to a greater extent than Alternative 1. The no action alternative would have no adverse impacts on aesthetic and visual resources in the Project area because no changes would be made to the existing environment.

Land Use

All of the proposed work will be completed in either a public ROW; within an existing easement; or within land that is already leased, owned, or optioned by DeltaCom. Implementation of this Project in accordance with either Alternative 1 or Alternative 2 (the preferred alternative) will not affect the current land use. Similarly, the no action alternative will not change or otherwise affect land use in the Project area.

Infrastructure

Implementation of either build alternative will have a significant beneficial impact on the availability of telecommunications and broadband services. Nevertheless, construction of the Project has the potential to result in temporary adverse impacts. Some of the fiber builds and new telecom shelter builds will require blocking off a lane of traffic to facilitate the work in a safe manner. For example, off-loading of telecom shelters will require the use of a crane. Lane closures will be done only when deemed necessary and will be conducted in accordance with valid permits issued by the state, county, or city. The permits will detail proper flagging, proper signage, safety clothing needed by workers, and hours of lane closure to avoid impeding traffic during expected heavy traffic times. If county or city police are utilized, the contractor will include this provision in the permit and adhere to all laws governing the use of these public safety officers. With implementation of these measures, no significant adverse impacts on infrastructure are anticipated as a result of either build alternative.

Under the no action alternative, no construction activities would be implemented. Accordingly, no traffic restrictions would be necessary. Thus, the no action alternative would not adversely impact existing infrastructure. However, the no action alternative would not beneficially enhance telecommunications infrastructure in the Project area.

Socioeconomic Resources

The percentage of families below the poverty level within the Project area ranges from 9.5% in Blountville/Bristol to 22.7% in Morristown. Completion of either Alternative 1 (the Original Network Build) or Alternative 2 (the First Choice Network Build) will positively impact these communities by providing broadband internet services suitable for telemedicine, health record digital transfer technologies, distance learning solutions, and other education and healthcare

applications. Through DeltaCom's partnerships with last mile providers, residents and businesses will be offered lower prices for broadband access and a greater diversity of services. Competitive service choices for consumers and businesses will also support technologically savvy students, more efficient small businesses, and greater sharing of resources among non-profit and community anchor institutions in distant locations. Based on the range of types of institutions to be directly served and an evaluation of their accessibility to economically disadvantaged and minority groups, the no action alternative is expected to have a disproportionate adverse socioeconomic impact on disadvantaged population groups.

Human Health and Safety

No National Priorities List sites have been identified in any of the counties encompassing the Project area, and no Brownfields are located within ¼-mile of the planned routes. All of the proposed work will be completed in either a public ROW; within an existing easement; or within land that is already leased, owned, or optioned by DeltaCom.

Project construction activities under both the preferred alternative (the First Choice Network Build) and Alternative 1 (the Original Network Build) have the potential to impact human health and safety. Mobilization and operation of construction equipment may impact traffic and, therefore, create a temporary adverse impact on public and worker safety. For example, some of the fiber builds, bridge work, and telecom shelter builds will require blocking off a single lane of traffic. Lane closures will be done only when deemed necessary and will be conducted in accordance with applicable permits. The permit will detail proper flagging, proper signage, safety clothing needed by workers, and hours of lane closure to avoid impeding traffic during expected heavy traffic times. If county or city police are utilized, the contractor or utility will include this provision in the permit and adhere to all laws governing the use of these public safety officers. For the bridge work on the Morristown route, the utility will perform the work under a valid permit and will have full responsibility for the lane closure, and proper adherence to public and worker safety requirements according to regulations and OSHA requirements for the work. Construction sites will be secured for public safety by posting various signs against trespassing during evening and nighttime hours, fencing, and moving all construction equipment to a fenced central area to deter public access during non-working hours.

Based on implementation of these mitigation and protective measures, neither of the two build alternatives would have a significant adverse impact on human health and safety. Similarly, the no action alternative would have no adverse impacts on human health and safety.

Cumulative Impacts

DeltaCom consulted with TDOT and numerous county and city planning departments to determine whether any construction projects are planned in or near the Project area during the construction phase of the fiber network build. The only identified work currently scheduled within the Project area involves tree trimming activities and resurfacing activities. DeltaCom

will work with the affected cities to ensure coordination of activities and avoid or minimize cumulative impacts.

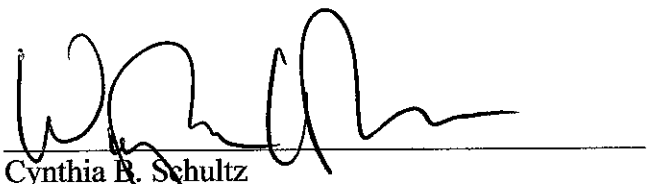
Once the Project is completed, currently underserved areas will have access to broadband services that are highly adaptable to the needs of business and public anchor institutions. These beneficial results of the Project are likely to result in increased development of these portions of the State. As the areas are developed, increased noise, traffic, visual clutter, and impacts to air and water quality may occur. Existing federal, state, county, and local regulations will control and moderate these impacts associated with economic development.

No cumulative impacts are anticipated with respect to other resource areas under either build alternative considered in the EA, or with regard to the no action alternative.

Decision

Based on the above analysis, NTIA concludes that with the protocols and environmental protection measures proposed for implementing the Project using the preferred alternative, the construction and operation of the Project 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 significantly affecting the quality of the human environment. NTIA has determined that preparation of an EIS is not required.

Issued:



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Broadband Technology Opportunities Program

9/30/2010
Date