

Cumberland County Community Development Program
2019 Pre-Application
Due December 12, 2018

Application Type: General Public Service Planning

Project Name: Expanding access to broadband in central Cumberland County

Lead Community: Cumberland County Government

Additional Communities: X

Subrecipient Organization: X

Project Location (Address): Windham-Gray

Contact Information: Name: Travis Kennedy Email: kennedy@cumberlandcounty.org

Phone: 297-871-8380 Title: Dir. Of Public Affairs

Project Summary:

Cumberland County is applying to supplement funds that would extend fiber INTERNET from North Windham to Gray, delivering service to Gray and serving as a key stretch on a regionwide broadband expansion plan.

HUD National Objective: Benefit Low/Mod Clientele Low/Mod Area Benefit Spot Slum and Blight

HUD Program Objective: Suitable Living Environment Decent Housing Economic Opportunity

Project Goal: Affordable Housing Public Facility Improvements Public Infrastructure Improvements
 Public Services Economic Development Community Planning

Total Clients Served (unduplicated): _____ **Percentage LMI:** _____

Funding: CDBG Request: \$229,623 **Total Project Cost:** \$1.6m

Leveraged Funds:

\$ 141,308	Federal	\$	Other grants
\$	State	\$	Endowment
\$	County (not CDBG)	\$	Private Funds
\$	City	\$	Gifts in kind

Name of Authorized Official: James Gailey

Signature of Authorized Official: 

Cumberland County Community Development Program

2018 CDBG General Program Application

Regional Cover Page

Project Title Funds to Expand Gigabit-Speed Fiber Across Cumberland County

Regional Applicant Cumberland County Commissioners

Non-Profit Entity

Contact Information Name Travis Kennedy, Director of Public Affairs

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Program Category

Public Infrastructure/Facility Downtown Revitalization

Housing Economic Development

CDBG "National Objective"

Low/Moderate Income: Area-Wide 67% Limited Clientele

Direct Benefit: Presumed Group (Identify Group)

Slum/Blight: Area-Wide N/A Spot Basis N/A

Amount of CDBG Funds Requested \$228,983

Total Estimated Project Cost \$1.6 million

Name of Authorized Official James Gailey, County Manager

Signature of Authorized Official



1. Project Summary:

The purpose of this grant is to support construction of open-source dark fiber from the southern shore of Lower Bay on Sebago Lake to the town center in Gray.

This project would be performed in conjunction with the communities that make up the Lakes Region Broadband Partnership (LRBP) - Gray, Raymond, Standish and Windham. Since May of 2015, the Partnership have been meeting with stakeholders representing residents, businesses, the Sebago Lakes Region Chamber of Commerce, public schools, Saint Joseph's College, municipalities, and municipal economic development agencies and committees to better understand the current capacity of and the needs for broadband access in the four-town region.

The LRBP has produced the study "High Speed Broadband in the Lakes Region," and has completed a preliminary design of 40 miles of fiber backbone with service provider access points and the review of and enhancement of Digital Inclusion services throughout the region. The Partnership is committed to expanding access from the open source "Three-Ring Binder" at the intersection of Routes 35 and 114, approximately seven miles to the intersection of Routes 302, 115 and 35 at "Boody's Corner" in North Windham.

From there, the project would extend fiber from Boody's Corner north along Route 302 to Raymond, South on Route 302 to Windham Center, and Northeast along Route 115 to the intersection of Routes 202, 115 and 100 in Gray.

Cumberland County Government is applying for \$228,983 to fund a portion of the stretch along Route 115 between Boody's Corner and Gray. This investment, combined with funds earned through CDBG/HUD in 2018, represents a fraction of the cost of the entire regional project that it will help to enable. The balance of costs will be covered by those participating towns and potentially the county through a regional utility.

This project has excellent strategic appeal for Cumberland County Government's goal to spread fiber access across the entire county. Boody's Corner is supremely positioned at the near-geographic center of the county, with major arteries running North/South and East/West. Delivering fiber to that intersection - and extending it to downtown Gray - will create the center of a countywide wheel-and-spoke broadband network, making the resource available to low and moderate income neighborhoods immediately and enabling future projects to extend high-speed fiber to other communities across Cumberland County.

In 2018 Cumberland County earned a planning grant from CDBG to perform a thorough resource map of Cumberland County, including available broadband assets; the cost to construct new high speed service to each town in the County; methods of funding such work; and guidance on how communities can work collectively to create utilities and share costs. We also earned a grant totaling \$141,308 out of a total bid for \$370,291 to partially support the stretch of fiber from North Windham to Gray, a route that is critical to extending service through the heart of Cumberland County and enabling the wheel-and-spoke concept outlined above. The results of

that study will be complete in April 2019 - at which point communities will have the necessary tools to begin planning regional projects if the study proves such work to be viable. We are applying for the rest of the cost of installing fiber on the stretch along Route 115 from North Windham to Gray, in order to guarantee fast action on that key stretch.

2. Justification of Need

Access to high-speed broadband is a necessity for businesses and households across America. Communities with spotty coverage or slower speeds than their urban neighbors are at an immediate competitive disadvantage; they are less appealing locations to grow businesses, ensure educational opportunity, attract homeowners and professionals, and develop smart grid infrastructure.

Outside of Greater Portland, maximum download speeds as slow as 3 megabytes per-second (MBPS) are common, which is below the state's definition of broadband as at least 10MBPS, and significantly below the Federal Government's definition of 25MBPS. Higher speeds are either cost-prohibitive, or not available at all. Countywide, access to the nationally-competitive speed of at least 1 gigabit-per-second (GBPS) is almost non-existent.

Slow Internet speeds impact every facet of a community, but are disproportionately harmful to households and neighborhoods with low to moderate incomes. A home that cannot access high speed Internet - or can access it, but at a cost-prohibitive rate – are put at an immediate disadvantage. Students who need the Internet to connect to school programming, or perform research for school projects or personal enrichment will meet a digital barrier that does not impact households with the means to connect at higher speeds. Slow or unreliable Internet access prevents parents in low and moderate income families from getting jobs that may allow them to do some work from home, eliminating several job opportunities.

This lack of access also prevents low and moderate income neighborhoods from starting or attracting the kind of businesses that would help them raise their economic standing. Access to reliable, high speed Internet is a necessity for a growing business, and is also a top priority for new home buyers. A 2015 study commissioned by the LRBP and performed by Tilson Technologies in 2015 reported that most of the businesses they surveyed expect to outgrow their private Internet service within the next two years, a deadline that has already passed. Low-speed Internet begets low house values and empty Main Streets; improving access reverses those trends.

The state defines broadband as download and upload speeds of at least 10 Megabytes per Second (MBPS). The Federal Government defines broadband as download and upload speeds of at least 25 MBPS and 3 MPBS, respectively. According to the "Broadband USA" division of the U.S. Department of Commerce (DOC), recommended download speeds required for a small business are estimated to be at least 50MBPS, for services such as inventory management, operating Point-Of-Sale terminals and delivery management. The DOC's recommended download speed for a household is at least 25MBPS, as homes rely more on the Internet for completing homework, streaming entertainment, browsing the web, managing online accounts, paying bills, applying for jobs and working from home. These household needs will increase dramatically in the years to come.

The Tilson study revealed that roughly 40% of customers in Gray - the target community for this grant - did not have access to Internet speeds above 12MBPS. While the other communities in the LRBP program are not the focus on this project, their connection rates are often even worse - and highlight the critical need for this project to be successful. Less than 18 percent of the premises in Windham offer speeds of at least 12MBPS; a speed that the Department of Commerce estimates is only HALF the necessary download speed for a connected household.

These numbers are deeply concerning. These communities are already behind, and the need for bandwidth at the household and business levels is growing at exponential speed. As education platforms continue to shift into the digital space, students without reliable high-speed access at home will be at an immediate disadvantage to learn. As business operations rely more and more on cloud-based software and storage management, rural downtowns like Gray, Standish, Raymond and Windham will lose local businesses and be unable to support professionals working from home. As an example, Orthopedic Associates (OA) is a highly specialized medical practice that offers the latest orthopedic diagnostic and treatment options available. OA has a central office, clinic and surgery center in Portland and satellite facilities in Saco, Brunswick and Windham. OA transmits large amounts of data, including X-Rays and MRI images, and needs to assure the confidentiality of this data. This makes high speed, reliable and secure Internet service a necessity. OA has built a private fiber line to maintain their Windham office, at a cost of \$1500 per month. Other medical establishments in the Lakes Region will have similar Internet needs, and few will have the resources to invest in a private line.

And as rural hospitals close or reduce services and the population of Maine continues to age, telemedicine resources will shift from an optional curiosity to a pure necessity. Vulnerable populations – the elderly, children, and people on low to moderate incomes – will have the greatest need for affordable connected services, and the biggest challenges in accessing them.

Open fiber is not far out of reach. The “Three-Ring Binder,” an open source fiber network funded through the American Recovery and Reinvestment Act to create fiber access in rural Maine, runs frames the County along the coast to the east and up Route 114 along the western border. Several communities have attempted to solve the challenge of slow Internet speeds, but only those who are in proximity to the Three Ring Binder have had success. Building out fiber is prohibitively expensive, especially for small communities with limited resources; they need to collaborate in order to afford the significant up-front costs associated with stringing fiber lines across long stretches of road to access their customer base.

What is missing is a collaborative, unified approach to connect the county’s central communities. Cumberland County recognizes our responsibility to view high-speed Internet as something akin to a critical utility, and we know that partnering with the municipalities to deliver service to Gray and beyond will serve as a model for future development across Maine. In 2018 The County launched *Project: Connect Cumberland*. This initiative will, for the first time, create a centralized resource for communities interested in improving their Internet speed by developing collaborative resources and contributing financially to research and construction.

Project: Connect Cumberland sees the LRBP’s four-community project as key to serving not only the communities in the four participating towns, but also making access a possibility to extend

fiber to other towns within the county over the next several years. The Boody's Corner intersection is the near-geographic center of the county, and a connection there creates new routes to CDBG focus areas in Westbrook, Naples, Casco and Harrison; improved access could be made available to other towns including North Yarmouth, Gorham and Cumberland as well.

While the population served by the entire LRBP project is roughly 41,525 residents, the funding to support delivery to Gray would reach the center of that town, making expansion possible to Gray's 7,761 residents – of which, the moderate to low income population is 67 percent according to the Department of Housing and Urban Development's list of designated Block Grant Places.

The project would also serve those properties located directly along Route 115. Low to Moderate income rates are difficult to calculate along that route, because Block Grant districts in the Lakes Region are massive and include several valuable lakefront properties miles away from the region that would actually be serviced by this grant; upon successful award, Cumberland County would perform a thorough survey to determine the actual rate of low to moderate income served directly along Route 115.

This construction project would fit in nicely with the region's long range planning. The town of Gray specifically has identified broadband expansion as a potential key component to the Gray Village Area Master Plan, the Route 26 Corridor Rezoning Project, the Route 26 Corridor Collaborative and the Gray Comprehensive Plan. Project-wide, Raymond lists this initiative as a valuable contributor to the Raymond Comprehensive Plan. Standish lists the Standish Corner District Village Plan, the Sebago Lake Village Plan, the Steep Falls Village Plan and the Standish Comprehensive Plan. Windham's long term planning would incorporate broadband to the Economic Development Strategic Plan, the 21st Century Downtown Plan, the Route 302 North Plan and the South Windham / Little Falls Revitalization Plan.

While the prospect of falling further behind in connectivity is chilling, the potential that would blossom from development will immediately turn that weakness into a community strength. The Lakes Region welcomes more than 500,000 visitors annually, and community access to gigabit-speed fiber in conjunction with access to breathtaking vistas, boating, fishing, skiing, snowmobiling, traditional downtowns and everything else the region has to offer will make for a compelling argument to site or grow local businesses, expand access to work-from-home solutions and telemedicine, and make investments in forward-thinking smart infrastructure projects.

The DOC estimates that communities with broadband adoption rates above 80 percent have 2,000 more businesses than their counterparts. Small business owners report that using broadband increases sales and cost savings, creates jobs and retains sales and jobs. Broadband enables emergency services to utilize one integrated network for coordinated responses times, improving public safety. "Going digital" can save schools as much as \$600 per student per year on materials. Telehealth reduces hospital admissions by 25 percent, and overall length of stay by 59 percent. These are permanent, transformative changes that will have an impact on the lives and pocketbooks of everyone that these investments touch, both with the LRBP project and the ones it enables down the road. Beginning with this significant investment, the communities in Cumberland County can position themselves on the right side of the digital divide.

For a thorough visual demonstration of this project and its enabling power for future expansion, review the four maps attached to this document.

- Map 1 is the current location of public access broadband. The Three Ring Binder is highlighted in two shades of blue, running along the Western Coast of Sebago Lake along Route 114, and principally along the coast of Route 1, with lines connecting Routes 1 and 22 through South Portland.
- Map 2 is a close-up of the initial stretch of construction to be funded through this grant. Point “A” represents the spot where the project will access the Three Ring Binder and build a line to “Point “B” at the intersection at Boody’s Corner, where the CDBG funds would then enable construction along Route 115 to downtown Gray.
- Map 3 shows the completed major construction of the entire LRBP project; the Northeast Line from the Three Ring Binder to Gray, and the North-South line along Route 302 from Raymond to Windham Center.
- Map 4 demonstrates the kind of future projects that this construction effort could enable over the next several years. The line on Route 302 could easily be extended south into Westbrook and North through Casco and Naples, and reconnect with the Three Ring Binder in Bridgton. From Gray, fiber could be routed through North Yarmouth and Cumberland to reconnect with the Three Ring Binder in Yarmouth. A second entry point from the East could make expansion to Gorham a more viable opportunity. All of these loops that connect stretches of fiber back to the Three Ring Binder create resiliency in the case of line damage or failure, supporting reliability for the entire region.

3. Management of the Proposed Activity

The grant-funded project would be managed by the winning contractor of a competitive Request for Proposals. Cumberland County Executive Staff and staff within the LRBP will remain engaged with the chosen contractor to ensure costs, schedules and deliverables remain on track.

Several Maine-based, nationally recognized contractors with experience building municipally-supported and rural broadband projects are capable of this work, have performed some research and planning services within the area already, and have expressed interest in this project.

4. Project Readiness

This proposal is the culmination of a multi-year process, performed by the Lakes Region Broadband Partnership to determine ideal investments and identify the need and willingness of their communities to invest. The Lakes Region Broadband Partnership earned ConnectME funds in 2017, which funded work with Axiom Technologies to perform initial design and cost estimates for the entire LRBP project.

Based on the timing of the award, forming a regional utility, selecting a contractor and performing necessary planning we expect construction to begin within 18 months of earning the award.

While this project would not require a match as the County is the applicant, the funds being requested only represent a fraction of the total cost of the entire project. Axiom estimates the

cost to bring fiber to Boody's Corner in North Windham to be \$330,000. The stretch from Boody's Corner to downtown Gray would cost approximately \$370,291, which is the only portion of this project that we are applying for funds to support. While estimates for building North/South along Route 302 to Raymond and Windham Center are not available, based on the distance of that route and the likelihood that poles on Route 302 in North Windham will require more complicated pole attachment negotiations, that stretch will likely increase the total cost of the project by at least double; as such, this creates a rough estimate of a 3:1 match from the region for every CDBG dollar committed.

5. Budget for project:

Submitted in the attached form. Funds for the project from CDBG and the eventual regional utility would be distributed to the single contractor selected for this project. Keep in mind, while Cumberland County is applying for the full cost of the Route 115 portion of the project, CDBG requests that the budget form be restricted to only the portion of the project for which those funds would apply. Significant local resources will be required to bring fiber to North Windham where this investment will pick up, and to reach the Northern and Southern neighborhoods.

6. Implementation Schedule

Submitted in attached form.

7. Need for CDBG Funds

CDBG funds are critical for this project. The County is the applicant for this project, but is incapable of paying for the construction work to be done and the participating towns cannot support it on their own, either. Reaching all four LRBP communities is key to maintaining the regional commitment that must be in place for fiber expansion to be successful. A commitment to fund a major trunk of the project will reduce the burden on the participating towns and ease the tension of funding parts of the project that don't directly contribute to their communities.

Without these funds, the communities may not be able to support the full cost of the project; and if pieces of it are delayed or removed, it could be damaging to the regional partnership.

As previously mentioned, the regional utility will commit a roughly 3:1 match for this work.

The project is not eligible for federal Connect America Funds, but Cumberland County will continue to research other options for financial assistance for this and future stages of expansion.

8. Distress Score

This is a county project serving region-wide initiatives, which qualifies for 6 points.

The Cumberland County Commissioners are scheduled to meet on Monday, February 11, 2019, at which point they will cast a formal vote to endorse this application.

References: "Broadband USA" U.S. Department of Commerce. <https://www2.ntia.doc.gov/resources>; "High Speed Broadband in the Lakes Region" by Tilson Technologies (report begins on page 51 of document): <https://www.maine.gov/connectme/grants/community-planning/docs/lakesregionwebsite.pdf>

Project Implementation Schedule

<u>Activity</u>	Q #1 J – S 2019	Q #2 O – D 2019	Q #3 J – M 2020	Q #4 A – J 2020	Q #5 J – S 2020	Q #6 O – D 2020	Q #7 J – M 2021	Q #8 A – J 2021
Contractor Selection	X	X						
Contract Start		X						
Local Approvals and Permits		X						
Design Phase		X	X					
Construction			X	X	X	X		
Construction Wrap						X		
Project Completion							X	
Reporting		X	X	X	X	X	X	X
Project Completed:								X

<u>Construction Projects</u>				
Cost Category	CDBG Funds <i>(includes already-awarded funds from 2018)</i>	Municipal Funds	Other Funds	Total
Design/Engineering	\$54,450 (make ready)	0	0	\$54,450
Land Costs	0	0	0	0
Materials/Supplies	\$192,197	0	0	\$192,197
Construction Costs	\$123,644			\$123,644
Project Management				
Other				
1.				
2.				
3.				
4.				
Total Costs	370,291			370,291
Provide the basis for determination of budget amounts:				
<p>The Lakes Region Broadband Partnership funded an estimated cost proposal from Axiom Technologies with ConnectME funds. No other funds identified because this ONLY represents the portion of fiber being constructed from North Windham to Gray. Other funds will support the balance of the LRBP project.</p>				



