



January 11, 2021

Senator Jonathan Dismang, Co-Chair
 Representative Lane Jean, Co-Chair
 Arkansas General Assembly
 Joint Budget Committee
 500 Woodlane Street
 Little Rock, AR 72201

Dear Senator Dismang and Representative Jean,

As required by Section 29 of Act 139 of 2020, I have enclosed two (2) Rural Broadband I.D. grant awards for approval by the Arkansas Legislative Council or Joint Budget Committee. The UAMS Institute for Digital Health & Innovation (IDHI) Technical Review Committee completed a thorough evaluation of the applications submitted by the cities and counties. I have enclosed copies of the successful applications with supporting information for your review.

Rural Broadband I.D. Grant Awards

Pulaski County Government– Primary Contact, Representative Fredrick Love – Award Amount \$41,035
 The City of Beebe, Arkansas – Primary Contact, Kristen Boswell – Award Amount \$75,000

The grants are available to help cities, incorporated towns, counties and unincorporated communities conduct broadband due-diligence business studies. The studies are required in federal grant and loan applications for broadband infrastructure. Communities can use their broadband due-diligence business studies to apply for funding from:

The Federal Communications Commission’s Rural Digital Opportunity Fund Program
 The U.S. Department of Agriculture’s Rural eConnectivity Pilot Program (ReConnect)
 The U.S. Department of Agriculture’s Farm Bill; and
 Other federal grants or loans for broadband development programs.

Sincerely,



Joseph A. Sanford Jr., M.D.
 Interim Director
 Institute of Digital Health and Innovation
 University of Arkansas for Medical Sciences

Rural Broadband I.D. Trust Fund Program

Applicant Name: Pulaski County Government

Applicant Address: c/o Fredrick Love
201 S. Broadway Suite 220
Little Rock, AR 72211

Applicant Phone Number: 501-340-3374

Applicant Email Address: flove@pulaskicounty.gov

Applicant Tax ID or EIN Number: 71-60064787

Key Contact Person: Fredrick Love

Total Amount Requested: \$41,035

Project Description:

The project will provide a full feasibility study of providing commercial broadband service in eastern Pulaski County, Arkansas, and adjacent areas. Mechanical skilled contractors will be contracted to manage the project, study existing service, review available technologies for broadband service, and recommend solutions.

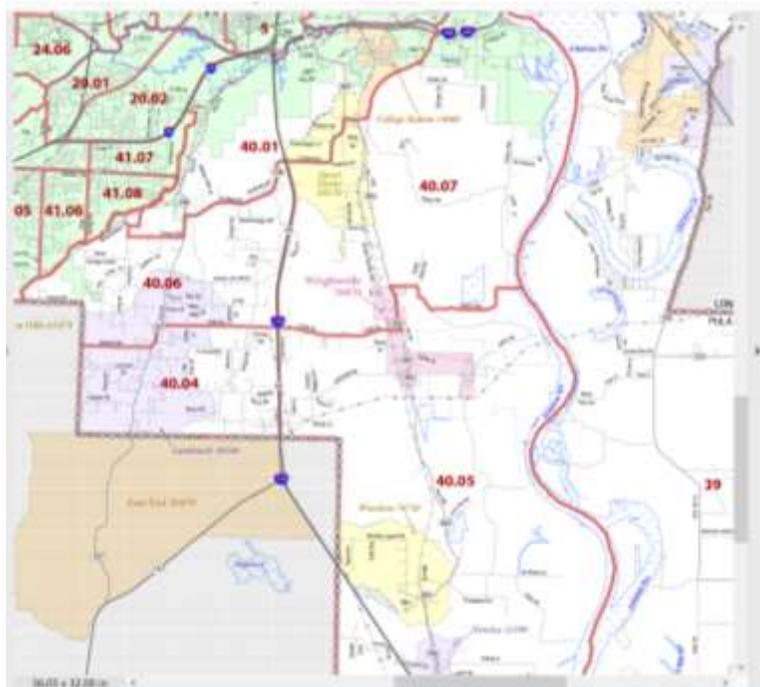
Project Narrative

INTRODUCTION

Proposed Service Area

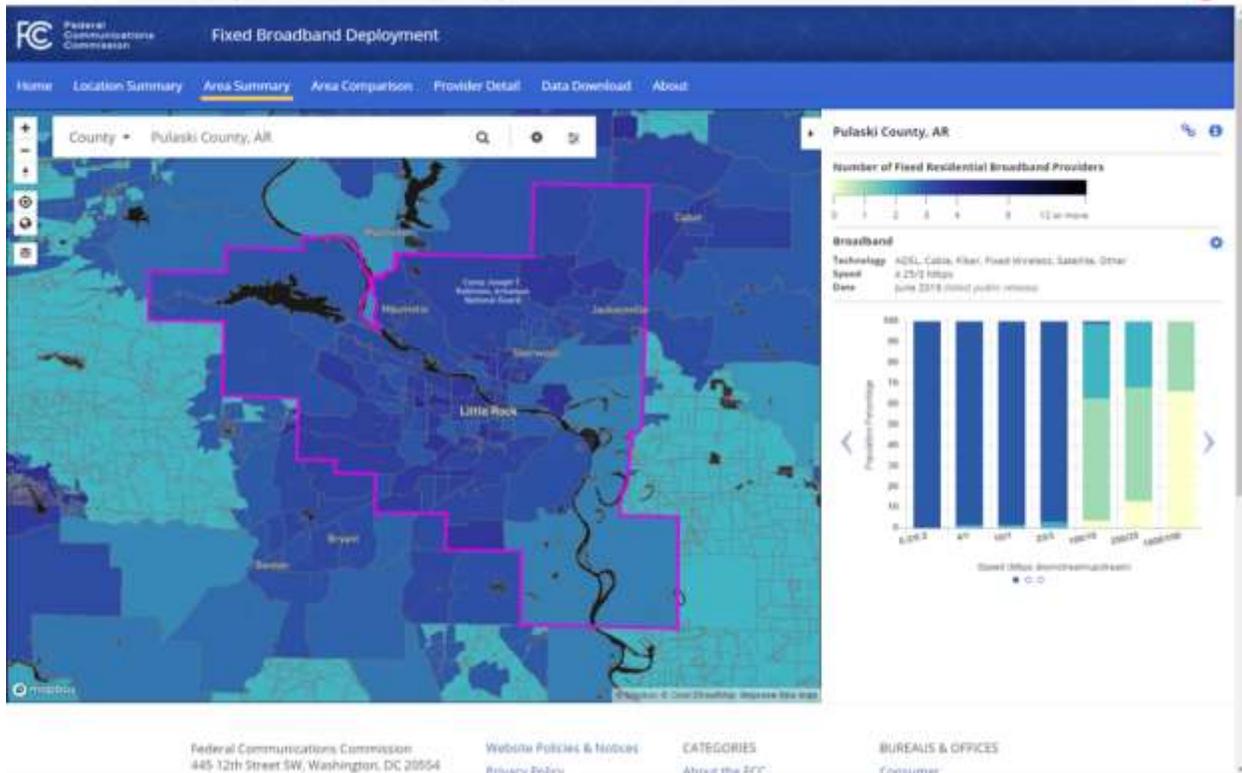
Pulaski County Government will serve the eastern area of Pulaski County covered by the U.S. Census tracts 40.01 and 40.05. The communities within these tracks include College Station, Sweet Home, Woodson and Hensley.

Approximately 10% of rural areas in Pulaski County are able to access Residential Broadband Providers. Pulaski County Government recognizes the need for a broadband solution especially now due to many students enrolled in virtual learning due to the Covid-19 Pandemic. To satisfy the needs of these communities Pulaski County would like to do a feasibility study see if Broadband services can be installed into homes that currently do not have an option for this service.



Percent of your proposed service area that is unserved

The following map illustrates Pulaski County, Arkansas, with census tracts 40.01 and 40.05 visible in the lower right corner of the county map, above. The map suggests that broadband service is available widely in the service area, however, the practical experience of many residents is quite different. A typical service may be 13.1 Mb download and 1.7 Mb upload speeds. Some locations may not have service at all. This rural area, in reality, has very limited broadband infrastructure.



This map does indicate 25/3 MB service, within the two-census tract service area but we are not sure if internet service is offered or available in all areas of eastern Pulaski County.

Total population, number of residents who are rural and urban

The population of tract 40.01 is 2,671, and tract 40.05 is 3,388, for a total service area population of **6,059**.

<http://www.usboundary.com/Areas/Census%20Tract/Arkansas/Pulaski%20County/Census%20tract%2040.01/434804>

<http://www.usboundary.com/Areas/Census%20Tract/Arkansas/Pulaski%20County/Census%20tract%2040.05/434823>

Percent of individuals in your proposed service area who are living in poverty

The percent of individuals below the poverty level in tract 40.01 is 30.6% (or 710 people) and in tract 40.05 is 25.5% (or 429 people).

<https://data.census.gov/cedsci/table?g=1400000US05119004001,05119004005&tid=ACSST5Y2018.S1701&hidePreview=false>

Medically underserved

The following data from <https://data.hrsa.gov/tools/shortage-area/mua-find> shows there are no healthcare providers or healthcare facility in these rural areas. Remote sections of the service area may require drive times of 20 minutes or more for a person to receive medical service.

The following table, generated from data.hrsa.gov/tools/shortage-area/by-address, lists the service areas in Pulaski County, some of which are adjacent to the service area

Discipline	MUA/P ID	Service Area Name	Designation Type	Primary State Name	County	Index of Medical Underservice Score	Status	Rural Status	Designation Date	Update Date
Primary Care	1053470285	Central Little Rock Service Area	Medically Underserved Area	Arkansas	Pulaski County, AR	53.8	Designated	Non-Rural	07/06/2018	07/06/2018
Primary Care	07551	Jacksonville Service Area	Medically Underserved Area	Arkansas	Pulaski County, AR	61.1	Designated	Non-Rural	07/27/2006	07/27/2006
Primary Care	00312	Pulaski Service Area	Medically Underserved Area	Arkansas	Pulaski County, AR	53.1	Designated	Non-Rural	05/11/1994	05/11/1994
Primary Care	00213	Pulaski Service Area	Medically Underserved Area	Arkansas	Pulaski County, AR	50.4	Designated	Non-Rural	05/11/1994	05/11/1994
Primary Care	00214	Pulaski Service Area	Medically Underserved Area	Arkansas	Pulaski County, AR	53.1	Designated	Non-Rural	05/11/1994	05/11/1994
Primary Care	07481	Southwest Little Rock Service Area	Medically Underserved Area	Arkansas	Pulaski County, AR	56.3	Designated	Non-Rural	05/24/2005	05/24/2005

DESCRIPTION OF NEED

Staffing needs:

Pulaski County Government will provide basic work of executing contracts and monitoring progress of the program. Pulaski County Government does not have staff to conduct technical aspects of the project but has a contract with Broadband Development Group, LLC. The Company will study the technologies that are in-place, or available, for delivering broadband Internet access to Census Tracts 40.01 and 40.05 in southern unincorporated Pulaski County, Arkansas.

Population needs:

The project target area has 6,059 residents in approximately 1809 households. Approximately 1,189 of the population is of school age (5-18 years). The race of residents is estimated at 3,875 total African American, and 1842 White, 29 American Indian, 64 Asian, some other Race alone 134, two or more races 113 while people of Hispanic origin comprise about 281 of the population.

Demographic information related to census tract 40.01 was retrieved from <http://www.usboundary.com/Areas/Census%20Tract/Arkansas/Pulaski%20County/Census%20Tract%2040.01/434804>

Demographic information related to census tract 40.05 was retrieved from <http://www.usboundary.com/Areas/Census%20Tract/Arkansas/Pulaski%20County/Census%20Tract%2040.05/434823>

There are no healthcare services located in the service area, which makes telemedicine of great potential benefit to many residents, especially elderly residents. The lack of healthcare services is not unusual in a rural area, but some of the residents live in remote locations where access can take significant time.

The ability to perform e-commerce in the service area is significantly limited due to the restricted broadband service capacity.

For residents who have more conventional employment, with the onset of the pandemic many have shifted to telecommuting arrangements. Limited broadband service can severely limit their ability to fully engage in work activities, trainings, meetings, and other requirements as described, above.

As stated above there are approximately 1,189 school age children from 5-18 years old included in the population included in both tracts. High-speed internet access is needed for most, if not all, distance learning courses, and for carrying out research projects and connecting to their instructors.

Broadband needs:

Pulaski County Government needs broadband to carry out all the same tasks that most other citizens in Pulaski County enjoy. Residents need to take advantage of the technological advances made over the past few years so we can participate in matters such as video conferencing, remote education, entertainment, remote worksites, and e-commerce just like other citizens in Arkansas.

Internet Service Provider relationship needs:

Pulaski County Government has a contract for Professional Services with the Broadband Development Group, LLC. Broadband Development Group, LLC will study the technologies that are in-place, or available, for delivering broadband Internet access to Census Tracts 40.01 and 40.05 in southern unincorporated Pulaski County, Arkansas.

Financial needs:

Currently Pulaski County Government does not have funds in the annual budget to support this project. Pulaski County Government would like financial assistance for the execution of the Scope of Services. It is not intended for the direct employment of staff by Pulaski County. As compensation for services provided, the Company shall be paid no more than \$31,035.00 for these services (Include annual operating budget). This amount includes \$10,000.00 for Pulaski County to secure audit, performance bond, and contingency. Any funding unspent will be de-obligated and returned to UAMS.

Community relationship needs:

Community leaders have contacted Pulaski County Government and expressed interest in improving broadband services in areas that have little access to no access to broadband services. Since the pandemic the community has expressed there is more of a need for broadband services for school age kids to attend virtual school as well as others in the community that need broadband services for telecommuting, video conference calls, and research.

DESCRIPTION OF PLAN

Pulaski County Government will use this grant to study the technologies that are in-place, or available, for delivering broadband Internet access to Census Tracts 40.01 and 40.05 in southern unincorporated Pulaski County, Arkansas.

The proposal will include an overview of the requirements and available technologies and a final report with conclusions and recommendations.

Summary of activity

Demographic Summary to include:

- Number of residents, including age statistics
- Number of households
- Number of housing units
- Income statistics
- Electronic devices per household (where available)
- Additional statistics as appropriate

Survey of available broadband offerings from any source

- Available technologies - including DSL, fiber optics, cellular, satellite, fixed wireless, and CATV
- Available service levels and prices
- Sample speed tests and coverage maps
- Sample polling of residents for user input

Summary of costs/feasibility of last-mile technologies

- Fiber-to-the-home
- Fixed wireless
- Satellite
- Etc.

High-level financial model

- Costs
- Revenues
- Sustainability

Proposed network approach

- High-level design in support of conclusions regarding available technologies

High-level financial model

- Funding requirements for a deployment project

The Company will conduct two meetings with interested parties to gather input, suggestions, and needs to be included as part of the data gathering phase. Milestone 1 will be to complete the above items as data gathering and designing. Milestone 2 will be to develop conclusions and write the final report. The Company will present a final report to the community and interested parties, as directed by community leaders.

BUDGET

Budget Categories	Cost
Personnel	\$0
Fringe Benefits	\$0
Travel	\$0
Equipment	\$0
Supplies	\$0
Contractual	\$31,035
Other	\$10,000
Total Request	\$41,035

BUDGET JUSTIFICATION

Pulaski County Government will subcontract project work to one contractor, as described in the **Description of Plan**, above. As such, the budget line item Contractual will not exceed \$31,035. Expenses have been budgeted for contractual services in this project, to provide project coordination, facilitation and communication, and technical and business expertise which are necessary for the scope of work as described. Pulaski County Government does not have adequate staff, time, or expertise to conduct critical elements of the project, and therefore, external expertise is required. The additional \$10,000.00 will include cost such as securing the bond, audit expenses, and any contingency that may come about as it relates to the project. All unexpended funding will either be returned or de-obligated once the project has been concluded.

SUPPORTING DOCUMENTS

- See attached letters
- Timeline

Rural Broadband I.D. Trust Fund Program

Applicant Name: The City of Beebe, Arkansas

Applicant Address: 321 N. Elm Street
Beebe, AR 72012

Applicant Phone Number: (501) 882-6295

Applicant Email Address: kristen@beebeark.org

Applicant Tax ID or EIN Number: 71-0513194

Key Contact Person: Kristen Boswell

Total Amount Requested: \$75,000

Project Description:

The project will study the feasibility of providing commercial broadband service in and around the City of Beebe in White County, Arkansas, and adjacent areas. Technical expertise will be contracted to manage the project, study existing service, review available technologies for broadband service, and recommend solutions.

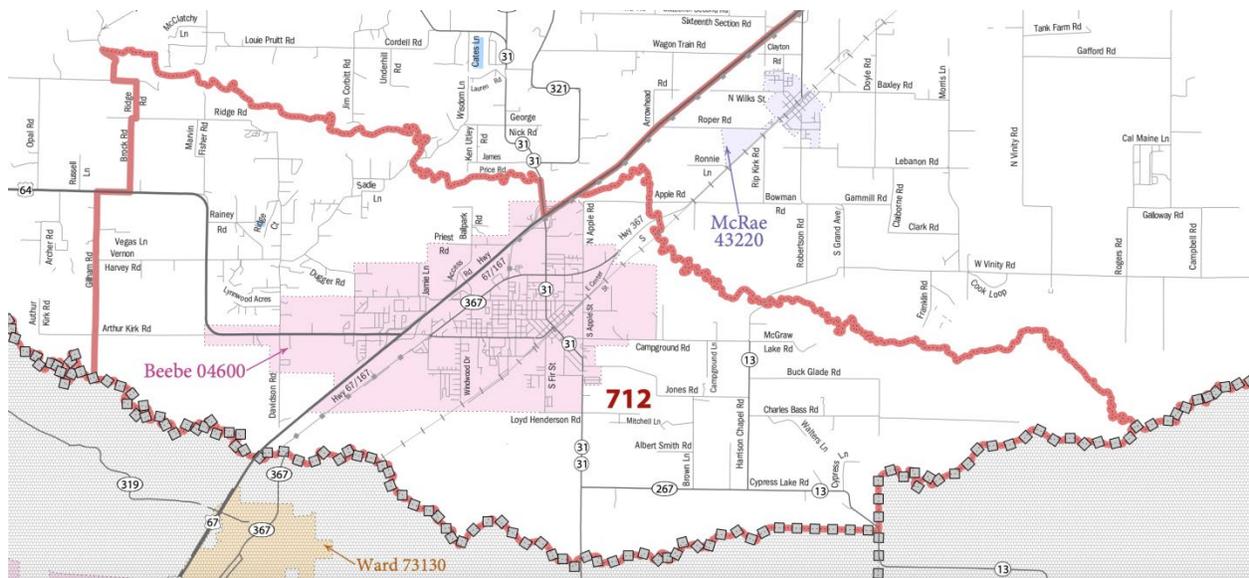
Project Narrative

INTRODUCTION

Proposed Service Area

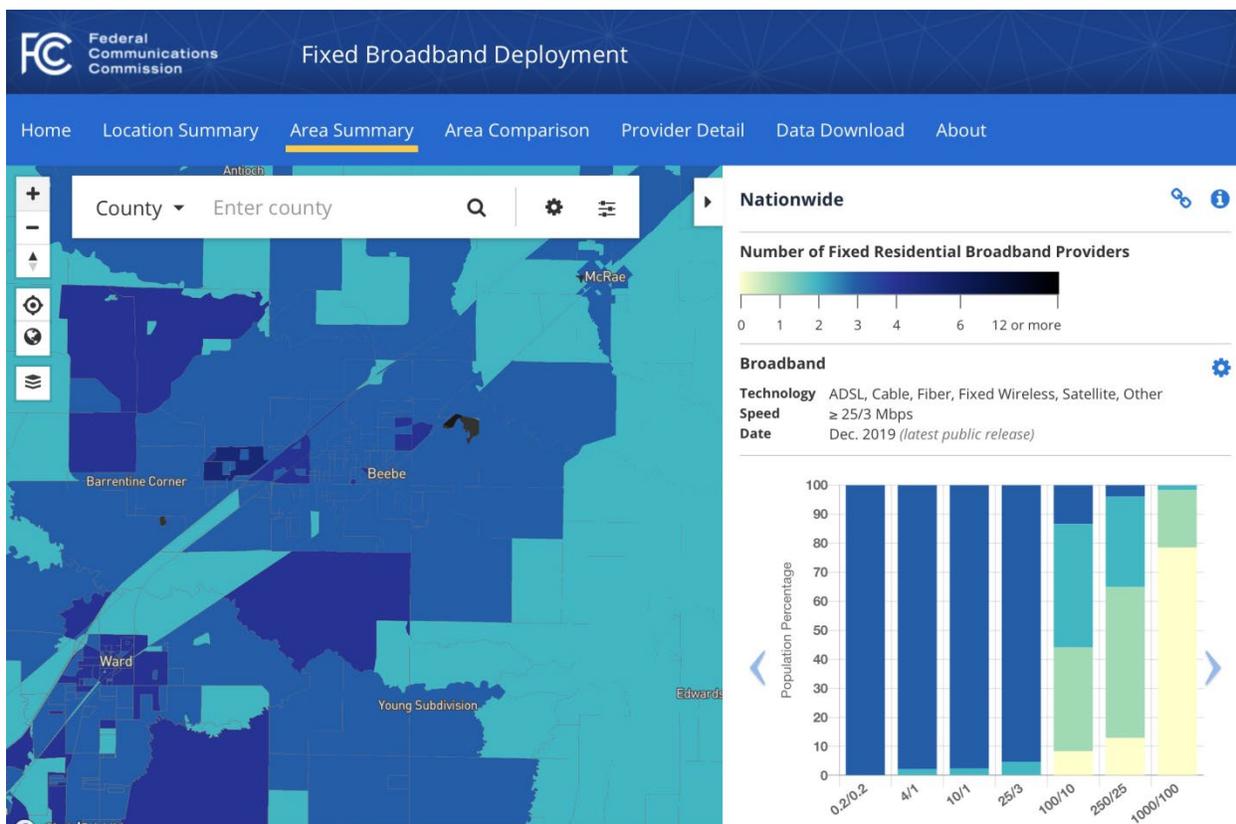
The project will serve an area of the City of Beebe, Arkansas in White County covered by U.S. Census Tract 712. The service area is centered on Beebe with a southern boundary of Cypress Bayou; a western boundary of approximately County Road 121; a northern boundary of approximately Bull Creek; and, an eastern boundary at approximately the intersection of Bull Creek and County Road 56. (see map below.) This tract includes large unincorporated, rural areas.

Census Tract 712 consists of approximately 3,957 single-family homes, 221 multi-family units, and 874 1q businesses. While this grant proposal is being made by the city, we recognize the need for a broadband solution that is commercially viable, and affordable, for residents outside of the city limits, proper.



Percent of your proposed service area that is unserved by 25/3 broadband

The following map illustrates southern portions of White County, Arkansas, with Census Tract 712 visible in the county map above. The map suggests that broadband service is available widely in the service area; however the practical experience of many residents is quite different. A typical service may be **25 M/kbps** download and **3 M/kbps** upload speeds. Some locations may not have service at all. This rural area, in reality, has very limited broadband infrastructure.



While the map indicates 25/3 Mbps service, within the service area the only internet service available in the area is **Fidelity Communications, AT&T and G5 Internet**, which are (**fiber cable TV/ADSL/fixed-wireless**) services. We do not believe the map to be accurate. While there are a few internet providers available in our community, reliable coverage is spotty. We have residents living in certain areas of our city that do not have a provider that services their location.

Residents of the area were asked to report the broadband measurements at their homes using the program speed test. The results are as follow:

Test Location	Download Speed	Upload Speed
A	49.9 Mbps	5.75 Mbps
B	0.45 Mbps	1.25 Mbps
C	0.8 Mbps	1.40 Mbps
D	10.36 Mbps	4.04 Mbps

Admittedly, this is an unscientific survey, but it gives a strong indication of the level of existing broadband service in our area.

Members of the community have experienced a range of problems related to limited broadband service, with implications for daily tasks which fall, generally, into these categories.

- Education:
Children are required to engage in online classes for their schooling, with much content now shifting to electronic format, especially during the pandemic. Slow internet speeds hamper access to online school platforms, and ultimately, can hinder learning. Missed educational opportunities are suspected, but difficult to quantify.
- Business/Work from Home:
Many residents either run small businesses or are telecommuting for company jobs. Slow speeds limit their ability to serve customers online (potential loss of business) with contemporary website or video productions, or reduce their capacity to engage in company activities (e.g. video conference meetings, which have become a standard meeting structure). Professional trainings online are the norm now but may be unavailable without broadband service (Zoom doesn't work on slow internet).
- Research/Study/Storage:
Contemporary functions of academic research and professional studies rely on good broadband connections for access to databases, team collaborations and interactions. Several residents indicate these functions are limited or unavailable. Additionally, electronic storage of photos, documents, etc., is increasingly common, which relies on access to cloud-based services.
- Entertainment/Leisure/Personal:
Many residents indicate that slow internet speeds limit their access to streaming videos, TV/movies, YouTube, and streaming of any kind. Library closures and increased distances of travel to other facilities have increased demand for online access which requires good bandwidth. In addition to entertainment, property values are also affected by lack of good internet access.
- Cost/Adaptive Approaches:
As internet service is limited on geography or variable across the time of day, some residents have attempted to patch services together to meet their needs. Some people use cellular service, which can be very expensive and have data limits on the plans. Such alternatives are used out of lack of options, not accessing optimal service.

A few area residents shared comments on how limited broadband service is affecting their lives; a few examples are included here. These stories illustrate typical frustrations faced by residents in the service area regarding the challenges of living in an area with limited broadband service and options. These frustrations underpin the necessity of this grant-funded project.

“While in college I would often have to drive to ASU, sit in the parking lot and connect to ASU Wi-Fi to submit assignments and take online assessments. At other times, I’ve had to travel to a friend’s house in a neighboring town to use their internet. Even paying bills online or ordering from Amazon sometimes has to be put off until the next day due to extremely slow internet. Some days I can scroll Instagram or watch YouTube with no issue, but most days nothing will load let

alone play a video. It sounds crazy but I've actually talked to someone who moved to Cabot from Beebe just because the internet here was so bad!" POA Resident – Harley

"Our internet is not always reliable. It can be very frustrating when trying to complete time-sensitive tasks such as ordering prescriptions or paying bills. Our grandson also needs reliable internet to complete his college coursework online when visiting. We need more consistent internet options." POA Resident – Milton

"Our child is homeschooled online and we have very limited internet options. The options we do have are not dependable and sometimes make it very difficult for our son to complete his assignments in a timely manner. Poor internet quality is also very frustrating when trying to watch a movie with my family or shop online." POA Resident – Dwayne

Total population, number of residents who are rural and urban

The population of Census Tract 712 is 10,084.

<https://data.census.gov/cedsci/table?q=Poverty&q=1400000US05145071200&tid=ACST5Y2018.S1701&hidePreview=false>

Label	Census Tract 712, White C...
Total	3,957
Urban	2,872
Inside urbanized areas	0
Inside urban clusters	2,872
Rural	1,085
Not defined for this file	0

Percent of individuals in your proposed service area who are living in poverty

The percent of individuals below the poverty level in tract 712 is 11% (or 1,114 people).

Medically underserved

The following map generated from data.hrsa.gov/tools/shortage-area/mua-find illustrates the general service area, with the address of area indicated. Since the service area is primarily rural,

practicalities of access are important. Remote sections of the service area may require drive times of 30 minutes or more for a person to receive medical service.



The following table, generated from data.hrsa.gov/tools/shortage-area/by-address, lists the service areas in underserved areas of this section of White County.

Discipline	MUA/ID	Service Area Name	Designation Type	Primary State Name	County	Index of Medical Underservice Score	Status	Rural Status	Designation Date	Update Date
Primary Care	00230	Big Creek Service Area	Medically Underserved Area	Arkansas	White County, AR	58.4	Designated	Rural	05/11/1994	04/29/2014
Primary Care	00210	Eastern White	Medically Underserved Area	Arkansas	White County, AR	55.3	Designated	Rural	03/12/2001	03/12/2001
Primary Care	00227	Kentucky Service Area	Medically Underserved Area	Arkansas	White County, AR	50.8	Designated	Rural	05/11/1994	03/21/2014
Primary Care	00211	Mc Rae Union Service Area	Medically Underserved Area	Arkansas	White County, AR	58.5	Designated	Rural	05/11/1994	05/11/1994

DESCRIPTION OF NEED

Staffing needs:

The City has no paid staff to conduct this study. We will depend largely on external support (i.e. The Consultant) to conduct technical aspects of the project, while the basic work of executing contracts and monitoring progress will be handled by the City Clerk Treasurer and Public Relations Director.

Population needs:

As noted in *Total Population* section above, the project target area has 10,084 residents in approximately 3,957 households. Approximately 35% of the population is of school age (5-19 years). The race of residents is estimated at 90% percent white, and 10% minority (African

American, American Indian, Asian, two or more races, etc.), while people of Hispanic origin comprise about 2% of the population.

Demographic information related to census tract 712 was retrieved from:

<http://www.usboundary.com/Areas/Census%20Tract/Arkansas/White%20County/Census%20Tract%20712/434767#Data>

The service area includes Beebe School District. The Beebe Schools are in a census tract that borders the service area but serve many students who live in the service area.

There are no healthcare services located in the service area, which makes telemedicine of great potential benefit to many residents, especially elderly residents. The lack of healthcare services is not unusual in a rural area, but some of the residents live in remote locations where access can take significant time.

The ability to perform e-commerce in the service area is significantly limited due to the restricted broadband service capacity.

For residents who have more conventional employment, with the onset of the pandemic many have shifted to telecommuting arrangements. Limited broadband service can severely limit their ability to fully engage in work activities, trainings, meetings, and other requirements as described, above.

Over 25% of the population is of school age as noted earlier. High-speed internet access is needed for most, if not all, distance learning courses, and for carrying out research projects and connecting to their instructors.

Broadband needs:

The area needs broadband to carry out all the same tasks that most other citizens in larger, more densely populated areas enjoy. Residents need to take advantage of the technological advances made over the past few years so we can participate in matters such as video conferencing, remote education, entertainment, remote worksites, and e-commerce just like other citizens in Arkansas.

Internet Service Provider relationship needs:

No Internet Service Providers have made any effort to provide service in this proposed area except for census tract 712 which is somewhat more densely populated than the remainder of the service area. Fidelity Communications does make service available in this area but at an inflated price of \$103.99 per month for high-speed internet. Other parts of the proposed service area have had no contact from any internet service provider. Fidelity Communications was contacted about establishing service in a particular area of census tract 712 and their representative responded: "We are not going to spend that kind of money to only service a few customers."

Financial needs:

The City budget does not have the funds required to conduct this study. There is no funding available to develop a broadband solution.

Community relationship needs:

The Mayor and Beebe City Council support this project. The lack of good broadband service is a prime topic of conversation once residents move in and experience satellite internet. Universal complaints are raised about the service and some people do sell their homes to move to an area with adequate service. Area residents will support this project.

DESCRIPTION OF PLAN

The City of Beebe will use this grant to study existing and potential upgraded broadband services for the project area. The City of Beebe has identified activities that will explore broadband service solutions.

The City of Beebe has identified several needs, as discussed above. The following activities are designed to address those needs.

- Survey residents:
The project will conduct a survey of local residents in the target service area to assess demographic and geographic characteristics of the area; service locations that exist today and potentially in the future; existing service levels; and overall broadband demand in the area. This information will document and illustrate the population living in the service area, as well as the scope of broadband internet demand, and allow for expected growth in the area and its associated internet demands. This data will be the basis for service providers to formulate plans for infrastructure investments. Understanding the extent of residential locations and the ways they use internet service are necessary starting points for developing a broadband business plan.
- Assess existing broadband providers:
The project will investigate and document the existing broadband services available in the service area. It is critical to have a clear picture of what is available in order to develop robust alternative services that are cost-competitive at the retail level, as well as feasible to develop the associated infrastructure.
- Last mile technologies:
The project will examine current, state-of-the-art technologies that can serve the 'last mile,' or the connecting infrastructure that links the main and branch line internet systems to retail customers. New service infrastructure may be needed to address a potential gap in broadband service. Examining these technologies is necessary to this project in order apply technological solutions that are appropriate to the setting, demand and cost structures.
- Financial modeling:
The project will develop financial models and business plans that apply the appropriate technology to serve the existing and anticipated residential or business demand in the area. The models will be valuable, if not necessary, to find funding for infrastructure development or to negotiate with new service providers.

The project will be implemented in the sequence as described above, although some elements may overlap in timing. The City of Beebe will be responsible for the prime grant award and communicating with UAMS and will monitor the subcontractor’s work.

The City of Beebe will administer the grant and the contracts. The City of Beebe has chosen to create this sole-source subcontract to ensure efficient, effective, and objective results from this grant project.

Activity	Month 1	Month 2	Month 3	Month 4	Month 5	Month 6
City of Beebe execute subcontract with Consultant	x					
City of Beebe monitor progress	x	x	x	x	x	x
Survey residents (Consultant)		x				
Assess existing broadband providers (Consultant)		x				
Last mile technologies (Consultant)			x	x		
Financial modeling (Consultant)			x	x		
Consultant develop and deliver report with analysis and recommendations					x	
City of Beebe review recommendations, and report to funder						x

After completing this feasibility study, and assuming the recommendations are suitable, the City of Beebe will use the information, data and knowledge gained to begin discussions with internet service providers that have the capacity to build new systems for the service area. Service providers, using the information from this study, may pursue grants from two likely sources: the AR Rural Connect grant program, and the U.S. Department of Agriculture’s Rural Connect grant program.

The project will result in a comprehensive report to include these products:

- An assessment, documentation and mapping of the service area, its residents and service needs.
- Documentation of existing of broadband service providers and detailed, accurate description of services.
- Analysis of technologies needed or applicable to the service needs of the area, infrastructure construction costs, and recommendations.
- Financial models to support infrastructure development and on-going retail service business, with recommendations.

BUDGET

Budget Categories	Cost
Personnel	\$0
Fringe Benefits	\$0
Travel	\$0
Equipment	\$0
Supplies	\$0
Contractual	\$75,000
Other	\$0
Total Request	\$75,000

BUDGET JUSTIFICATION

The City of Beebe will subcontract project work and management to one contractor, as described in the **Description of Plan**, above. As such, the Budget has one line item: *Contractual*.

Expenses have been budgeted for contractual services in this project, to provide project management, coordination, facilitation and communication, and technical and business expertise which are necessary for the deliverables as described. The City of Beebe, as a volunteer and minimally-staffed organization, does not have adequate staff time or expertise to conduct critical elements of the project, and therefore, external expertise is required.

The costs associated with the subcontract were determined to be reasonable by the City of Beebe based on market research into services available in the area, and for the period of performance.

SUPPORTING DOCUMENTS

See attached letters.