Project Information

Company: Comcast Cable Communications, LLC

Project Description

General Info

Project #: 160

Project Name: Comcast Bienville Parish

Total Project Cost:	6,117,989.00
Total project cost per prospective broadband recipient:	3,126.21
Infrastructure cost per prospective broadband recipient:	1,661.87
Number of households to be served:	2720
Number of businesses to be served:	155
GUMBO cost per prospective broadband recipient:	613.13
Number of GUMBO households to be served:	1852
Number of GUMBO businesses to be served:	105
General Location/Parishes:	Bienville
Base Speed (Minimum Download/Upload):	1 Gbps / 1 Gbps
Supported Scalability Speeds (Minimum Download/Upload):	1 Gbps / 1 Gbps

Qualifications and Experience:

Provide the following details:

- Number of years the applicant has provided internet services;
- A history of the number of households and consumers, by year of service, to which the applicant has provided broadband internet access, as well as the current number of households to which broadband internet access (at least 25:3 Mbps) is offered;
- The number of completed internet service infrastructure projects funded, in part, through federal or state grant programs, prior to the date of application submittal;
- Whether the applicant has ever participated in an internet service infrastructure project funded, in part, through federal or state grant programs, and if so, for each project, the nature and impact of the project, the role of the applicant, the total cost of the project, and the dollar amount of federal or state grant funding;
- The number of penalties paid by the applicant, a subsidiary or affiliate of the applicant, or the holding company of the applicant, relative to internet service infrastructure projects funded, in part, through federal or state grant programs, prior to the date of application submittal; and
- The number of times the applicant, a subsidiary or affiliate of the applicant, or the holding company of the applicant has ever been a defendant in any federal or state criminal proceeding or civil litigation as a result of its participation in an internet service infrastructure project funded, in part, through federal or state grant programs, prior to the date of application submittal

History Providing Internet Services Comcast has provided internet services for more than 25 years. Comcast was founded by Ralph Roberts with the purchase of American Cable Systems, a 1,200-subscriber cable system in Tupelo, Mississippi, in 1963. Comcast stock has been traded on the NASDAQ Stock Market under the ticker symbol CMCSA since 1972. From its beginnings as a single-system cable operator in Tupelo, Comcast has grown into a global leader in media, entertainment, and technology, driven by an entrepreneurial spirit to connect people to the moments that matter. Today, Comcast is a leading communications provider in the United States, currently operating throughout thirty-nine (39) states and the District of Columbia. With over 31.4 million residential and business services broadband customers, 19 million video customers, and 10.8 million voice customers, Comcast passes over 60 million homes and businesses. Since launching its first broadband product in 1996, Comcast has invested in technology to build an advanced, highly scalable network that delivers among the fastest broadband speeds in the country, ranging from 50Mbps to 1.2Gbps for residential customers and up to 100 Gbps for certain business customers. Comcast is the nation's largest gigabit internet provider, and nearly all of the 60 million homes and businesses passed in our service territory can access our ultra-fast Xfinity Gigabit Internet and Comcast Business Gigabit services, including our customers in Louisiana. Moreover, approximately eighty-five (85) percent of our residential high-speed internet customers subscribe to speeds of 100 Mbps or higher. Comcast's total number of broadband internet subscribers in the United States has continuously increased since we launched our broadband service in 1996. Over the last decade, our subscriber growth has continued to rise at a steady pace. Comcast customers have had the ability to access broadband speeds of 25/3 Mbps for over ten (10) years. We have attached a chart below that documents our broadband subscriber growth from the first quarter of 2011 through the first quarter of 2021. As of this submission, Comcast currently supports around 31 million broadband subscribers across its entire footprint. History of Infrastructure Projects Comcast has completed numerous broadband infrastructure projects which were funded, in part, through federal or state programs. Comcast has decades of experience building broadband networks and has a track record of success with completing projects on or ahead of schedule. Comcast has experience partnering with public agencies to deploy broadband infrastructure in unserved areas in sixteen (16) different states, including Alabama, Arkansas, Colorado, Georgia, Illinois, Michigan, South Carolina, Tennessee, and Virginia. In Virginia, Comcast was awarded four (4) Virginia Telecommunications Initiative ("VATI") grants from 2017 to 2020 by the Virginia Department of Housing and Community Development. Each of these projects is now complete with Internet service offered to residences and businesses throughout the project footprints. In Massachusetts, Comcast was awarded three (3) grants from 2016 to 2019 by the Massachusetts Technology Collaborative ("Mass Tech") for construction of line extensions to areas in nine (9) towns whose costs to construct exceeded Comcast's economic standards. Comcast completed the project on time, on budget, and reached twenty percent (20%) more homes than the 1,000 that were originally anticipated. In Tennessee, Comcast has been awarded four (4) grants from 2018 to 2020 including a Broadband Accessibility Grant by the Tennessee Department of Economic and Community Development, in the amount of $850,000, to extend broadband service to 2,258 homes and businesses in Tipton County, Tennessee. Comcast completed the project in under eighteen (18) months, connecting its first customers to the internet in June 2019. Comcast was awarded another Tennessee Broadband Accessibility Grant in 2020, in the amount of $568,510, to connect 2,184 homes and businesses in and around Cheatham County, Tennessee. Comcast completed the project in less than a year, connecting customers in February 2021. In Alabama in 2020, Comcast was awarded an Alabama Broadband Accessibility Grant by the Alabama Department of Economic and Community Affairs, in the amount of $820,750, to connect 1,427 locations in Dauphin Island, Alabama. Construction of this project was completed in September 2021, and Comcast is currently connecting customers to broadband services in the area. In Arkansas in 2020, Comcast was awarded an Arkansas Rural Connect Grant by the Arkansas Economic Development Commission, in the amount of $1,807,000, to connect 1,595 homes and businesses in Earle, Arkansas. Comcast completed the project in one (1) year, connecting customers in August 2021. Comcast received a second Arkansas Rural Connect Grant in early 2021, in the amount of $1,911,742, to extend broadband to 754 locations in Parkin, Arkansas. This project was completed in September 2021, within seven (7) months of receiving the award, and Comcast is now connecting customers to broadband services in the area. In 2021, Comcast was awarded a Rural Broadband Grant by the South Carolina Department of

Commerce, in the amount of $3,600,000 to extend broadband service to nearly 900 homes and businesses in Hampton County, South Carolina. The company anticipates completing this project within eighteen (18) months and connecting customers in October 2022. Recently, Comcast partnered with the several communities across the State of Georgia in applying to the Georgia Office of Planning and Budget for several State Fiscal Recovery Fund broadband infrastructure grants to reach a combined total of 13,597 rural, unserved households and businesses in Georgia. These communities include: 1) Warren County and the City of Warrenton, 2) McDuffie County, 3) the Cities of Grantville and Hogansville, and 4) Gordon County. Awards are expected to be announced in early January of 2022. A representative list of Comcast's completed internet service infrastructure projects funded, in part, through federal or state grant programs, is include below. • Virginia: o 2017 Virginia Telecommunications Initiative "VATI" grant from the Virginia Department of Housing and Community Development ($473,366 – 178 passings – Albemarle County) o 2017 Virginia Telecommunications Initiative "VATI" grant from the Virginia Department of Housing and Community Development ($167,260 – 207 passings – Spotsylvania County) o 2019 Virginia Telecommunications Initiative "VATI" grant from the Virginia Department of Housing and Community Development ($209,513 – 97 passings – Clarke County) o 2020 Virginia Telecommunications Initiative "VATI" grant from the Virginia Department of Housing and Community Development ($3,966,012 – 2,557 passings – Charles City County) • Tennessee o 2018 Broadband Accessibility Grant from the Tennessee Department of Economic and Community Development ($850,000 – 2,258 passings – Tipton County, TN) o 2020 Broadband Accessibility Grant from the Tennessee Department of Economic and Community Development ($568,510 – 2,184 passings – Cheatham County, TN) o 2020 Tennessee Emergency Broadband Fund Grant from the Tennessee Department of Economic and Community Development ($221,516 – 146 passings – Campbell County, TN) o 2020 Tennessee Emergency Broadband Fund Grant from the Tennessee Department of Economic and Community Development ($867,824 – 391 passings – Roane County, TN) • Alabama o 2020 Alabama Broadband Accessibility Grant by the Alabama Department of Economic and Community Affairs ($820,750 – 1,427 passings – Dauphin Island, AL) • Arkansas o 2020 Arkansas Rural Connect Grant by the Arkansas Economic Development Commission ($1,807,000 – 1,595 passings – Earle, AR) o 2021 Arkansas Rural Connect Grant by the Arkansas Economic Development Commission ($1,911,742 – 754 passings – Parkin, AR) • Massachusetts o 2016 Massachusetts Technology Collaborative grant awarded ($4,000,000 – 1,200 passings – 9 separate towns) o 2018 Massachusetts Technology Collaborative grant awarded ($2,213,809 – 637 passings – Worthington MA) o 2019 Massachusetts Technology Collaborative grant awarded ($1,007,680 – 280 passings – Middlefield MA) • Vermont o 2019 Vermont Connectivity Initiative Grant awarded ($300,00 – 114 passings – Cavendish VT) Legal Actions and Penalties To the best of Comcast's knowledge and belief, as of the submission date of this application Comcast has not paid any penalties relative to internet service infrastructure projects funded through federal or state grant programs. Further, to the best of Comcast's knowledge and belief, as of the submission date of this application Comcast has not been a defendant in any federal or state criminal proceeding or civil litigation because of its participation in an internet service infrastructure project funded through federal or state grant programs.

Financial Background:

- Provide five years of financial statements, pro forma statements, or financial audits to ensure financial and organizational strength regarding the ability of the applicant to successfully meet the terms of the grant requirements and the ability to meet the potential repayment of grant funds. If the applicant has been in business for less than five years, provide documentation for the number of years in business
- Indicate whether the applicant, a subsidiary or affiliate of the applicant, or the holding company of the applicant has ever filed for bankruptcy

Five Years of Financial Statements Comcast Cable Communications, LLC, is a wholly owned, indirect subsidiary of Comcast Corporation, a publicly traded company that files copies of its Form 10-K Annual Reports with the United States Securities and Exchange Commission. These reports serve as proof of financing, but because they are voluminous, Comcast is providing electronic links to the documents. All financial reports can be found at: http://www.cmcsa.com/annuals.cfm. Comcast's 10-K Annual Reports may be found specifically at: 2020:
https://www.cmcsa.com/static-files/0ff6a41f-c1ff-4c25-b07e-4ec8424907cf 2019:
https://www.cmcsa.com/sec-filings/sec-filing/10-k/0001166691-20-000008 2018:
https://www.cmcsa.com/static-files/54b28afa-2286-46bc-bca0-e35c9a4be739 2017:
https://www.cmcsa.com/static-files/111ba611-eb85-4edc-9000-3907c84697d8 2016:
https://www.cmcsa.com/static-files/cd9c1f30-3ea9-4075-a79e-2be0bc7ea701 Bankruptcy Comcast has not filed for bankruptcy as of the submission date of this application.

Partnerships:

Provide the identity of any partners or affiliates if the applicant is proposing a project for which the applicant affirms that a formalized agreement or letter of support exists between the provider and one or more unaffiliated partners where the partner is one of the following:

- a separate private provider of broadband service, requiring a formalized agreement; or
- a nonprofit or not-for-profit, or a for-profit subsidiary of either, and the applicant is:
  - being allowed access and use of the partner's infrastructure, on special terms and conditions designed to facilitate the provision of broadband services in unserved areas, requiring a formalized agreement;
  - utilizing a matching financial and/or in-kind contribution provided by one or more partners, requiring a formalized agreement; or
  - a parish, municipality, or school board, or any instrumentality thereof, may qualify as a nonprofit for the purposes of the GUMBO grant program. Letters of support by a parish, municipality, or school board, or any instrumentality thereof, supporting an application may be submitted as part of an application. A letter of support does not require a formalized agreement.
- Provide a brief narrative explaining how the partnership or affiliation will facilitate deployment and reduce cost per prospective broadband recipient. For applications or project areas where the nonprofit or not-for-profit partner provides only matching financial support, that information can be documented in the budget section within the relevant application or project area.

Comcast is not identifying any partners for this project.

For work being performed by Hudson Initiative or Veterans Initiative qualified applicants or contractors, provide documentation and/or a formalized agreement.

Project Area

Assessment of the Current Level of Broadband Access in the Proposed Deployment Area

Describe the current level of service within the area and provide the data source or methodology used to capture this information. Raw data may be submitted as part of the assessment. If data is available to support differences between advertised and transmission speeds, applicants may also submit applications for areas where transmission speeds are less than 25:3 Mbps.

Assessment of Service Level Comcast does not currently pass any homes or business within Bienville Parish. Through this project, Comcast proposes to deliver broadband service to 2,875 homes and businesses within Bienville Parish that do not have service today, 1,957 of which are outside RDOF award areas. In making its assessment of service levels in Bienville Parish, Comcast used a Parish provided tax digest of all known addresses that were then plotted on a map and scrubbed for unserviceable locations (examples of unserviceable locations include oil wells and livestock containment). Comcast then verified that all serviceable locations fell within the FCC's unserved census blocks. A map of the proposed service area is attached below. Format of Data Submission As part of this application, Comcast has submitted a GIS shapefile containing polygons outlining the specific areas to be served and referencing service to prospective broadband recipients, including: 1) Census block numbers of the project area; 2) Geospatial data in shapefile format depicting broadband coverage of the proposed project area; 3) Address-level data points of locations to be served; and 4) Geometric polygons corresponding to the locations where broadband service would be made available. Average Distance in Miles The average distance between prospective broadband recipients within the project area is 26.3 miles. Services Note (please see the attached attached chart for a detailed overview) The average consumer price of all residential broadband service packages offered to consumers across Louisiana by Comcast is $61.30. As detailed in the chart attached below (and entered manually within the Services Section) , upon completion of the project, Comcast will be able to offer prospective broadband recipients multiple choices of residential and commercial broadband services, depending on their specific needs.

Services

Provide a description of service options to be provided:

Service Name	Upload/download speed	Date of 1st Availability	Data Cap	# of recipients	Price
Internet Essentials	50/5 Mbps	Current	1.2 TB	2720	9.95
Connect	50/10 Mbps	Current	1.2 TB	2720	59.00
Connect More	100/10 Mbps	Current	1.2 TB	2720	79.00
Fast	300/10 Mbps	Current	1.2 TB	2720	89.99
Superfast	600/20 Mbps	Current	1.2 TB	2720	99.00
Ultrafast	900/20 Mbps	Current	1.2 TB	2720	109.00
Gigabit Extra	1.2 Gbps/35 Mbps	Current	1.2 TB	2720	119.00
Business Internet 35	35/5 Mbps	Current	1.2 TB	155	94.95
Business Internet 100	100/15 Mbps	Current	1.2 TB	155	159.95
Business Internet 200	200/20 Mbps	Current	1.2 TB	155	259.95
Business Internet 300	300/30 Mbps	Current	1.2 TB	155	309.95
Business Internet 600	600/35 Mbps	Current	1.2 TB	155	359.95
Business Internet 1 Gigabit	1 Gbps/35 Mbps	Current	1.2 TB	155	499.95
Gigabit Symmetrical	1 Gbps / 1 Gbps	Upon Project Completion	1.2 TB	2720	119.00

Marketing

Provide documentation for applicant engagement to connect consumers with community education forums, multimedia advertising, and marketing programs.

Marketing Comcast currently operates a state-of-the-art broadband network in Louisiana, and the teams behind this network possess the sales and marketing expertise to ensure new households and businesses are made aware of the connectivity options that best suit their needs. Connecting unserved and underserved households and businesses requires both an effort to create awareness of connectivity options and an investment in community impact initiatives. If Comcast is awarded a Gumbo grant for this project, Comcast would collaborate with local and state partners to launch awareness campaigns that connect prospective customers in the project area to these new services. These campaigns would also target income-constrained families, with a particular emphasis on income-constrained families with students. Campaign tactics would include television spots, social media outreach, and ground level grassroots outreach through local school districts, non-profit organizations, chambers, churches, and other relevant stakeholders. Comcast will invest in these campaign efforts by utilizing a dedicated marketing team made up of Comcast's local, regional, and corporate marketing employees. This team will help develop connectivity content with local and state partners while also tracking this content and its impact across the project area. These campaign efforts would be complemented by tactics to drive activations, including SMS text messages, direct mail, and outbound calling to households and businesses in the project area, as well as virtual and in-person sign-up events in neighborhoods where the greatest disparity in connectivity exists. Comcast could also explore hosting a ribbon cutting event with media, local and state leadership, and other stakeholders to drive broadband adoption and raise awareness about the state's investment and partnership with Comcast. A Comcast marketing example is attached below.

Adoption

Provide documentation that shows low-income household service offerings, digital equity or literacy support, or programs or partnerships to provide these services. The applicant should also indicate current participation in, or plans to, accept the federal Lifeline subsidy.

Adoption Comcast is committed to making broadband both accessible and affordable across both the country and in Bienville Parish. Ten (10) years ago, Comcast launched Internet Essentials, the nation's largest high-speed internet adoption program for low-income households. Comcast's Internet Essentials service offers 50/5 Mbps broadband access for $9.95 per month, plus applicable taxes, fees and surcharges, to eligible families, along with digital literacy training programs and access to low-cost computers, with no credit check, no term contract, and no cancellation fees. Since launching in 2011, Comcast has made dozens of improvements to the program, including expanding eligibility 12 times—bringing Internet Essentials to new audiences such as public housing residents, low-income veterans, seniors, community college students, and most recently, to all qualified low-income households within Comcast's service area. Comcast has also increased the speeds for Internet Essentials, with the most recent speed increase to the above-referenced 50 Mbps/5 Mbps occurring earlier this year. Comcast's Internet Essentials has connected a cumulative total of more than ten (10) million Americans and 132,000 Louisiana residents to the internet. Over the next ten (10) years, Comcast is committing $1 billion to reach 50 million Americans from low-income families with the connectivity tools and resources they need to succeed. Separate from our Internet Essentials program, Comcast also participates in the FCC's Emergency Broadband Benefit (EBB) Program. The EBB Programs gives qualifying low-income customers a temporary monthly credit towards their internet service. Comcast currently plans to participate in the FCC's Affordable Connectivity Program ("ACP") which is the planned, longer-term version of the temporary EBB Program rolling out in 2022. The ACP will provide a monthly credit to eligible customers towards their internet service. Current EBB customers who remain eligible for ACP will automatically be transferred into the new program when it becomes active. Comcast will also engage in separate conversations with churches, non-profits, and other community organizations to establish free Wi-Fi-connected "Lift Zones" around the project area. Across the state of Louisiana, four (4) Lift Zones have already been activated in partnership with community centers and the Salvation Army BGC of Shreveport. These Lift Zones promote service adoption but, more importantly, they help students get online, participate in distance learning, and do their schoolwork. The initiative provides not only free

internet connectivity, but also access to hundreds of hours of educational and digital skills content to help families and site coordinators navigate online learning. Lift Zones will augment the proposed project area by helping to connect low-income families to the internet so they can fully participate in the digital economy. Comcast adoption examples are attached below.

Community Support

Evidence of support for the project from citizens, local government, businesses, and institutions in the community, including letters of correspondence from citizens, local government, businesses, and institutions in the community that supports the project

Comcast has included several community letters of support for the project from the following individuals and organizations within this application: • Carol Brown - Bienville Parish Assessor • Eddie Holmes - Bienville Parish Clerk of Court • Rodney Warren - Secretary/Treasurer, Bienville Police Jury (sent on behalf of the Bienville Police Jury) • Jack McFarland - State Representative, District 13 • W. Jay Luneau - State Senator, District 29 Beyond the individuals and organizations listed above, Comcast will continue to engage with the local community to build upon this support and keep additional stakeholders informed on both the progress of this project and of other programs we provide to meet connectivity needs.

Local Workforce

Documentation of a workforce plan prioritizing the hiring of local, Louisiana resident workers, to include a signed letter of intent with a post-secondary educational institution that is a member of the Louisiana Community and Technical College System, containing an obligation upon the applicant, and contractors or subcontractors of the applicant, to put forth a good-faith effort to hire, when possible, recent graduates of broadband-related programs.

Comcast is committed to the development of a strong and local broadband related workforce. Comcast is willing to partner with the Louisiana Community and Technical College System, local K through 12 educational systems, and the greater Louisiana workforce development community in a way that prioritizes the hiring of local Louisiana residents during this project and beyond.

Technical Report

Reporting Requirements

Explain in technical detail the technologies to be used in the proposed project and the broadband transmission speeds offered to prospective broadband recipients as a result of the project. If it would be impracticable, because of geography, topography, or excessive cost to design a broadband infrastructure project that would deliver 100:100 Mbps, the applicant must provide an explanation. Transmission speeds of 100:20 Mbps are the minimum allowable under this grant program.

Technology Used and Scalability Comcast has built a fiber backbone at the core of its network that stretches across the country with more than 191,000 miles of fiber-optic and coaxial plant nationwide—using the industry's most advanced optics/lasers and Internet Protocol ("IP") routing technologies. Dozens of converged regional area networks interconnect to create this fiber backbone that delivers video, voice, and high-speed Internet services to tens of millions of customers throughout the country. IP technology ties all of this together, creating a highly scalable connectivity platform or "IP core." Furthermore, Comcast has been building fiber into its networks incrementally over the past decade and uses both Ethernet Passive Optical Network ("EPON") and Hybrid Fiber-Coax ("HFC") technologies within its network. Comcast proposes to construct this project using both its EPON and HFC technologies. EPON is based on the Ethernet standard and can be scaled quickly with simple, easy to manage connectivity to Ethernet-based IP equipment found at customer premises and Comcast's headends. EPON is a direct

fiber-to-the-premises connectivity technology. Fiber-optic cables emanating from Comcast's network hub will be constructed to terminals directly connected to subscribers' homes, businesses, and/or community anchor institutions in the project area. This pure fiber network will be future-proof and highly scalable permitting bandwidth potential well beyond foreseeable customer needs. This pure fiber network will also provide for fast symmetrical speeds and low latency. Over time, the network will be readily scalable to meet consumer demands for even higher speeds and more bandwidth simply by upgrading modulating electronics within the already-deployed network. An example Network Diagram illustrating the general EPON design is attached below. An engineered logical design for the proposed service area will be produced during the initial design phase of the project In some cases, the most cost-effective solution to extend broadband to certain homes and businesses may be through our HFC technology. This would principally be the case where currently unserved homes and businesses are intermingled with or adjacent to those locations that are already served by Comcast's existing network infrastructure. HFC infrastructure employs the Data Over Cable Service Interface Specifications ("DOCSIS") standard, which is an international telecommunications standard that permits the addition of high-bandwidth data transfer to an existing cable TV system. The DOCSIS standard has allowed Comcast to enhance the residential speeds it offers from 1.5 Mbps to 1.2 Gbps, an almost 1000-fold increase. DOCSIS is a proven, flexible protocol which offers the technological foundation upon which Comcast can meet any current or future anticipated need. In 2018, Comcast deployed the then latest version of the technology, DOCSIS 3.1, across the country, becoming the nation's largest provider of gigabit broadband. The industry continues to innovate, working through Cable Labs, a joint non-profit research and development laboratory, to develop the next iteration of DOCSIS, named 10G. The 10G platform is a combination of technologies that will deliver Internet speeds 10 times faster than today's networks and 100 times faster than what most consumers currently experience. This technological development will allow Comcast to offer symmetrical service over its existing HFC network throughout our entire footprint. Not only will 10G provide faster symmetrical speeds, but it will also lower latencies, enhanced reliability, and better security in a scalable manner. An Example Network Diagram illustrating the general HFC design is attached below. An engineered logical design for the proposed service area will be produced during the initial design phase of the project. Outside plant equipment used in Comcast's network includes modular optical nodes and power supplies with battery backup. Our nodes are optimized for performance in our current network infrastructure and will also support future network growth and expansion of services. Comcast power supplies allow for intelligent power management and enjoy industry leading efficiency ratings. All power supplies include battery back up in the event of a power outage. Comcast's commitment to protecting the environment is considered in selecting equipment as we strive to improve energy efficiency in our operations. Comcast's proposed infrastructure expansion will support internet speeds greater than 100/100 Mbps. The company is currently delivering 1.2 Gbps/35 Mbps data service in Louisiana. We will be providing symmetrical 1/1 Gig speeds upon completion of this project in the service area. We are committed to developing products and technology that will fully leverage this proposed infrastructure beyond the 100/100 Mbps mark.

Explain the scalability of the broadband infrastructure to be deployed to meet future bandwidth needs.

Comcast has included scalability information in the first narrative of this Technical Report Section. However, Comcast would like to include a brief note as to why symmetrical speeds are not currently included across all service tiers. Symmetrical Speed Note Currently, Comcast does not offer symmetrical speeds across all service tiers. Current customer traffic patterns have remained highly asymmetrical, even during the height of the Covid-19 Pandemic, as downstream traffic volumes were significantly higher than upstream. Historically, pure symmetrical speed requirements have diverted funding away from scalable enhancements that better meet evolving customer needs. While no single broadband technology holds all the advantages, Comcast leverages a flexible combination of technologies to bridge digital divides – not just symmetrical ones. Through our experience of building sustainable broadband networks around the country, we have seen the resiliency and flexibility of both our EPON and HFC network technologies. This resiliency and flexibility have allowed us to efficiently add additional fiber and capacity when and where it

is needed. In contrast to many traditional fiber to the home providers, we can complete these targeted upgrades in weeks rather than months or years. We are confident our EPON and HFC technologies will meet the project area's connectivity needs while remaining highly scalable and well positioned for future enhancements as we continue to improve our technology.

Provide a proposed construction timeline and duration of the deployment project period. The deployment project period is the time from award of the grant agreement to the time that service is available to the targeted prospective broadband recipients under the grant. Describe estimated timeline, deployment roll-out and number of end-users to be served in each phase (10 percent, 35 percent, 60 percent, 85 percent, 100 percent).

Construction Timeline The Comcast management team has substantial experience with projects similar to the one outlined in this application, including completing construction and providing broadband services to unserved areas on time and within budget. If received, a Gumbo grant will enable Comcast to extend broadband service at speeds ranging from 50/5 Mbps up to 1.2 Gbps / 35 Mbps to 1,957 unserved households and businesses in the proposed project area within thirteen (13) months to seventeen (17) months. The proposed project area will have access to some of the fastest and most reliable broadband speeds available nationwide. Comcast would begin construction within two (2) to four (4) months from the award of the grant agreement. Comcast has already completed the preliminary planning and cost assessment for the proposed project. Final walk-out and design of the project shall commence upon execution of a grant contract and alignment of the parties on the locations within the project area to be served. Based on our experience with similar broadband expansion projects, Comcast anticipates that the proposed project in Bienville Parish can be completed according to the following schedule after the award of a grant resulting from this application: BIENVILLE PARISH Months 1-4 Field Survey and Design Months 3-5 Material Procurement and Permitting Months 4-6 Phase 1 Construction and Make-Ready Months 4-6 Phase 1 Splicing, Activation, and Plant Testing (10% Activated) Months 6-8 Phase 2 Construction and Make-Ready Months 6-8 Phase 2 Splicing, Activation, and Plant Testing (35% Activated) Months 8-10 Phase 3 Construction and Make-Ready Months 8-10 Phase 3 Splicing, Activation, and Plant Testing (60% Activated) Months 10-12 Phase 4 Construction and Make-Ready Months 10-12 Phase 4 Splicing, Activation, and Plant Testing (85% Activated) Months 11-13 Phase 5 Construction and Make-Ready Months 11-13 Phase 5 Splicing, Activation, and Plant Testing (100% Activated) Months 12-13 Project Closeout and Public Event Total Estimated Project Completion = 13-17 Months As noted elsewhere, Comcast must apply for a license to attach its infrastructure to utility poles. Before the pole owner will grant a license to attach, the pole owner will ensure the pole is made ready for the attachment. This is known as the "make-ready" process and can prove lengthy and complex, as it depends not only on the pole owner but on third-party attachers to the pole as well. This is one aspect of an infrastructure buildout project over which Comcast has no control and cannot commit to timing. To complete the project as early as possible, Comcast may begin some materials procurement and pre-construction work simultaneously with many of the steps detailed in this application, completing make-ready work in accordance with its existing pole attachment agreements, or applying for local permits where it is an incumbent cable service provider. Upon completion of construction, typical customer installations may take anywhere from one (1) to seven (7) days for completion, varying based on additional construction requirements at the customer premise. To mitigate the need for additional construction to reach individual customers, Comcast will contact all "nonstandard drop" customers in the project area prior to the completion of the project to determine if they will be interested in Comcast services and if they would allow Comcast to perform work on their private property. The activation of all plant will be completed by both in-house Comcast employees and select business partners. The final quality control inspection of all new infrastructure will be completed by Comcast employees to ensure all new construction meets or exceeds FCC standards. Notice to potential customers of service availability will occur on a rolling basis as construction is completed. Throughout the duration of the project, a dedicated Comcast account team will be in contact providing status updates and answering any questions the community may have.

_X_ Wired Infrastructure **__ Fixed Wireless**

Wired Infrastructure Deployment Reporting Requirements

Describe the general design of the project and deployment plan and include the following:

- Explanation of the existing networks and equipment to be used for the project. If assets are owned by another entity, explain how they will be used for this project and, if applicable, provide a copy of the agreement between the applicant and the owner.
- Total number of miles of project infrastructure deployment, and the number of miles of project infrastructure deployment accounted for by preexisting infrastructure
- Detailed explanation of how the new or upgraded infrastructure will serve the prospective broadband recipients. In the case of the installation or upgrade of a specific site infrastructure, such as a point of presence or fiber hut (fiber), pedestal (cable), or a remote exchange/DSLAM (DSL), the applicant must include:
    - The number of prospective broadband recipients that will be served by that site infrastructure
    - The distance from the specific site infrastructure such as a POP, pedestal, or DSLAM to the end user(s) and the expected broadband speed that will be effectively delivered
- Detailed description of the design work needed for deployment, such as, but not limited to, pole work, acquiring or updating easements, and/or property acquisition.

Existing Network and Equipment Comcast will leverage fifty-nine (59) miles of existing network fiber that tie into its hub in Monroe, Louisiana, as part of this project (53.1% of the 111 Total Project Miles). Broadband infrastructure deployment involves many complex processes, including design and engineering, pole attachment agreements and licensing, pole make-ready, right-of-way authority and permitting, construction, testing, and activation. By far, the most time-consuming and complex of these processes is the pole licensing process. Comcast does not own the poles to which it attaches its plant. We depend on access to the utility poles, which are owned by electric companies or telephone companies. While Comcast has existing pole attachment relationships with pole-owning utilities in and around Bienville Parish including Claiborne EMC and Entergy of Louisiana, we will likely need to enter into new agreements with other pole-owning utilities. Under the terms of these agreements, Comcast must apply for a license to attach its infrastructure to specific poles. Copies of these Pole License Agreements are attached below. If awarded the Gumbo grant, Comcast will pursue franchise agreements within Bienville Parish that grant rights-of-way access that will allow for timely and efficient interconnection of the new network with its existing network and facilities in Monroe, Louisiana. Comcast's relationship with local government authorities will make applying for any necessary right-of-way permits a familiar process. Comcast’s Louisiana Business Continuity and Disaster Recovery Plan is attached below.

Wired Assets

Existing Network	Existing Equipment	New/Upgraded Infrastructure	Installation Type	Num of Recipients	Avg Distance in Miles Between Prospective Recipients	Expected Speed

Budget

Budget

The project budget should reflect all eligible project costs to be funded through the GUMBO Grant Program. Additionally, the project budget should include the minimum provider funding match of at least 20%, any local government funding match from a parish, municipality, and/or school board, or any instrumentality thereof, and the requested GUMBO Grant Program funding.

Comcast proposes to expand broadband to 1,957 unserved homes and businesses in Bienville Parish for a total cost of $6,117,989. If awarded a GUMBO grant, Comcast will contribute a 80% match to the project—a $4,918,089.11 private capital contribution that exceeds the 20% minimum match requirement by 60%. The proposed budget is as follows: BIENVILLE PARISH Project Expense Description Cost Design $126,175.86 Permits/Make-Ready/Survey $269,742.11 Inside Plant Construction $2,350,272.38 Outside Plant Construction $3,371,798.65 Total $6,117,989.00 Project Funding Cost Match % GUMBO Funds $1,199,899.89 20% Comcast Funds $4,918,089.11 80% Total $6,117,989.00 100%

Proof of Funding Availability

Provide a signed letter of funding availability from each source of funds committed for the project. If loan or other grant funds are pledged, a loan/grant commitment letter from each source of funds must be included. Should an applicant be an awardee of Universal Service, Connect American Phase II, Rural Digital Opportunity Fund, or other federal or non-federal funds for the deployment of broadband service, the applicant shall attest as to whether or not the applicant's GUMBO application and associated project's buildout is dependent upon such awarded funds.

Comcast’s matching contribution is not dependent upon a loan or other grant program. By submitting this Gumbo application, if approved, Comcast pledges to provide the project funding from its available capital budget as detailed in the budget section of this application. Further, Comcast’s Gumbo application is not dependent upon programs such as the Universal Service, Connect American Phase II, Rural Digital Opportunity Fund, or other federal or non-federal funds for the deployment of broadband service.