



Lee County
Southwest Florida

LOCAL TECHNOLOGY PLANNING TEAM

Executive Summary

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Executive Summary

Lee County formed a Broadband Services Local Technology Planning Team (LTPT) as part of our efforts to ensure all County residents have availability to fast (100/20 Mbps minimum & 100/100 Mbps desired) broadband services and, where their income is below 200% of the poverty level, access to affordable services. We used the Florida Department of Economic Development's (DEO) Office of Broadband Planning Toolkit as a guide for creating the LTPT process and are in full compliance with their program which will have over a billion dollars available to award to qualifying projects.

The process steps from the Planning Toolkit that were (or will be) conducted by Lee County are:



Figure 1

Our LTPT Team has completed Steps 1 through 7 and has detailed the results in this document. In addition to the Planning Toolkit, the State Broadband Office provides a Speed Test so that upload and download speed data can be collected to define those areas of the State that are Unserved or Underserved from a broadband perspective.

Here is the link to the [Office of Broadband's Planning Toolkit](#).

Here is the link to the [Office of Broadband's Speed Test](#).

After executing the first 7 Steps from the Planning Toolkit, the key finding from the LTPT's study is that over 24,000 households fit the definition of Unserved by the Federal Broadband guidelines. These homes are eligible for funding to get them up to a minimum of 100 Mbps download by 20 Mbps upload speeds and a goal of being gigabit capable.

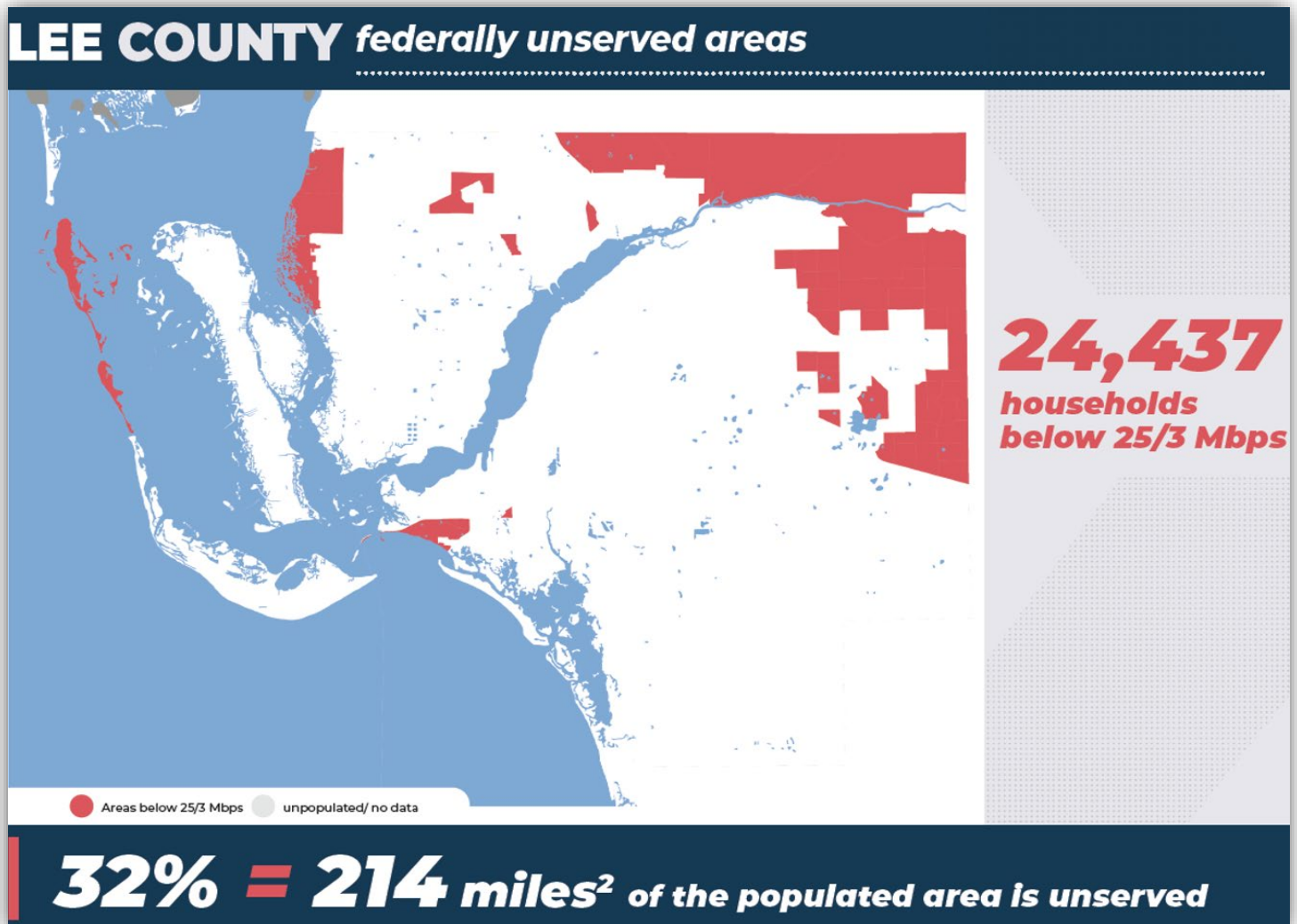


Figure 2

The team also determined that the areas of need were concentrated in Northern Cape Coral and the Eastern areas of the County from Alva and Lehigh Acres in the north, to SR 82 and the Hendry Canal in the south. The area in Northern Cape Coral has work already being done by Lumen and Comcast. We expect that area to be in full service before the end of 2023, so the focus should now be on the Eastern segment of the County.

The report also documents areas considered to be underserved – which is defined as homes / areas that do not receive consistent 100/20 Mbps speeds; with a goal of 100 Mbps upload. Our study found that in much of this area the services provided can exceed 100 Mbps download but do not reliably provide upload speeds of >20 Mbps throughput from the device and many have outdated wi-fi equipment that should be upgraded.

The LTPT conducted over 20 meetings with County Departments and Anchor Institutions. This provided valuable information on the current state of network and user needs in Lee County. It also enabled us to form an operational plan by working with the Transportation and Public Works Departments to ensure we utilize a “Dig Once” program as well as an extensive conduit system. As part of this program, we will ensure that the plan includes a standard strand count that is greater than or equal to 144. Our preference is buried fiber but recognize in some areas that aerial fiber will be the only option.

The LTPT also identified significant needs for connectivity at Community and Senior Centers, Parks, Libraries, non-profits such as United Way Homes, and Healthcare Facilities that can be addressed by both fixed and mobile network technologies. In a follow-up to this report, we will focus on specific digital equity and literacy programs and telehealth and social services solutions for remote and County community center access. Lee Health and Lee County Human & Veteran Services are part of the team.

We are also reviewing Workforce Development and Training programs and have started discussions with the Wireless Infrastructure Association and the Fiber Broadband Association to determine how to integrate their training and apprentice programs into our efforts. Additionally, we are aware of the Florida REACH program and are focusing on how to integrate their Fort Myers location into our programs.

Comcast, Lumen, Summit Broadband and T-Mobile have been most active in helping us complete our study and plan for solutions. Comcast has specifically agreed to match a minimum of \$5 million in funding and if more funding were available, they would provide additional funding that would eliminate over 50% of the unserved area in 2 years.

Key Factors regarding Lee County and Broadband Services:

- Lee County is the 9th fastest growing County in the United States. Its population is expected to grow from 783k in 2021 to 978k in 2030 (~25% growth). Its current broadband and mobile network infrastructure is insufficient to service this growth.
- 24,000+ unserved homes exist with the largest concentration east of I75 and North and East of SR 82.
- Lee County Schools have leased fiber to every school in the County (supplied by Summit Broadband) and has built very strong digital capability including a 1 to 1 computer to student ratio. The only limitation is home and remote access for some students due to affordability and / or availability issues.
- Comcast has been active in the County and has coverage of 90%+ of the County. It has also been involved in digital affordability and adoption and has been enrolling residents in the Affordable Connectivity Program (ACP). They have also provided free wi-fi and other services to the Fort Myers PAL, Fort Myers Quality Life Center and the Boys and Girls Club of Bonita Springs locations.
- Lee County IT's Fiber Optic Network is one of the most reliable methods to service government, libraries and healthcare facilities. Lee Health's new data center and the Lee County Utilities data center are the most critical to be added to the network and to engineer diverse routes to these locations.
- Numerous County Facilities are on DSL, or have unreliable network designs, which provide poor service and slow speeds particularly to libraries and healthcare facilities.
- Primary business corridors west of I75 generally have access to at least 1 source of fiber optic and >100 Mbps services. No major business corridors exist east of I75 today, but the limitations of broadband in this area significantly impact agriculture, small business and home businesses and inhibit future business growth.

- Lee Health and Lee County Human & Veteran Services have significant need for programs to address broadband network quality and availability for telehealth, quality of life programs and skill development such as workforce and basic bill paying.
- Human touch points are essential to enabling our residents with limited to no digital literacy that may have never owned a computer. Lee Health currently has a technical helpdesk and we are exploring how to utilize that service to aid citizens participating in our programs. We believe this helpdesk function is key to sustaining skills learned from the programs.
- Lee County would benefit from working with established equipment recyclers to refurbish and distribute digital devices donated by corporations and businesses.
- Multiple Lee County Library locations are currently serviced by commercial providers with slow internet connections. Library locations that currently use Lee County's fiber have high quality speeds. However, the internal wi-fi systems at many Lee County Library sites need to be upgraded to take advantage of these higher quality speeds. Options to improve performance speeds include transitioning all Library sites to County fiber and upgrading their internal wi-fi systems or we can work with current service providers to improve the broadband services they provide. Grant funding would be pursued to support any of the options identified. We can apply for grants to build out our own fiber, to buy dark fiber or lease services from the service providers.

Lee County will be pursuing grant funding through multiple State and Federal programs (Appendix D). The most immediate request will be through the Florida DEO's Office of Broadband which is administering \$866 million in funding over the next 2 to 3 years and over \$1.5 billion (estimated) over 5 years.

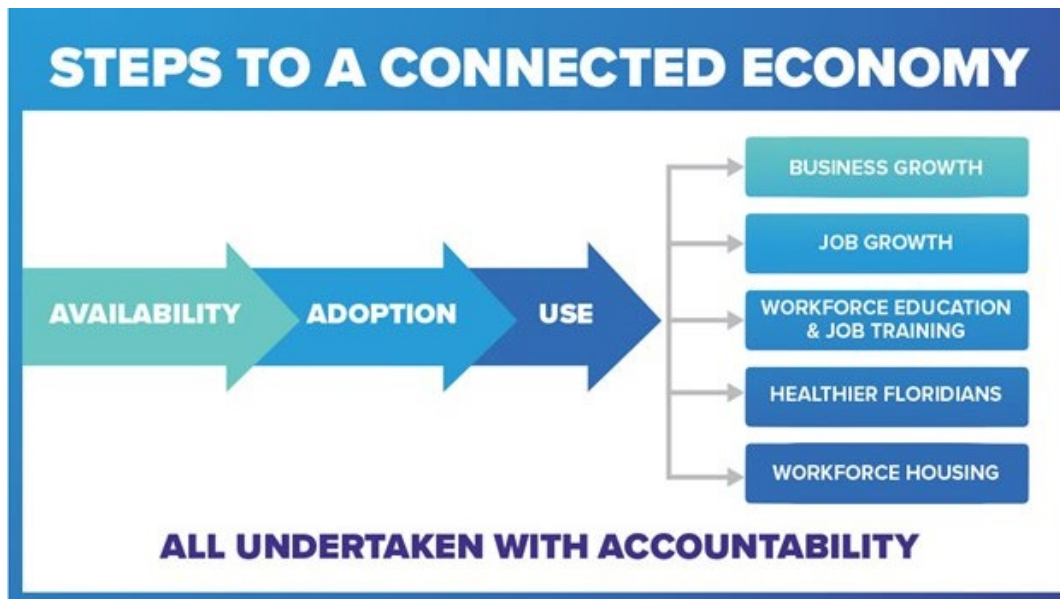


Figure 3

Recommendations for a Strategic Action Plan

Summary

Lee County has completed the first phase of an exhaustive planning process and has recommended the following activities for additional investigation. All recommendations are contingent on cross-departmental agreement, BoCC approval, grant applications being accepted and funding approved by the State or Federal government and may include some percentage of matching cost to Lee County.

(Appendix D provides timeframes and deadlines required for each grant listed below. The initial grant for which we will apply does not open for application submittal until early to mid-2023.)

- Submit the first draft of the Lee County Broadband Plan to the State’s Office of Broadband.
- Address the 24,000 Unserved Homes in the County by working with Service Providers.
- Develop programs with Lee Health, Lee County Human & Veteran Services, non-profits such as United Way to deliver broadband via fixed and mobile technologies that include their existing telehealth and “client” apps for Seniors, Disabled, Homeless and other socially and economically disadvantaged citizens. These programs would target remote use from residences and anywhere in the County.
- Pilot a Digital Super Center as a model for digital skills and literacy training, telehealth uses and workforce development programs targeting the same disadvantaged populations but through a fixed County facility. We will identify potential sites and work with Lee Health and Human & Veteran Services and Parks & Rec to determine feasibility of a project and what functionality will be included. Detailed solutioning would then take place and with Board approval would culminate in an application for grant funding for CPF and BEAD grant programs. The process for grant application would include:
 - Meeting with the key stakeholders to develop needs assessment
 - Board approval
 - Application for grant funding for CPF and BEAD grant programs
 - Detailed costs to add or remodel a room to be used as the Super Center ‘center’ which could include:
 - telehealth booth
 - job training
 - remote learning
 - Details of the infrastructure and staffing costs for the Super Center
- Establish programs for helpdesk, literacy and device acquisition through partners.
- Ensure all departments are engaged in the roll out of the new fiber infrastructure to ensure “Dig Once” and that proper conduits are used to limit disruption to our roadways and to ensure timely delivery of new Broadband Services.

- Accelerate our Public Safety Cell Tower plans to help bring services to a broader geographic area. We would work with service providers to lease them tower space. A Cell Tower can be considered an anchor institution – this would be the basis for any grant applications pursued. Applications for grant funding would require matching funds. Repairing and rebuilding existing towers would not be covered by grant funds unless we introduce a method where the towers could be used for Broadband. The technology being used on towers today is CBRS (Citizens Band Radio Service) and not necessarily fiber.
- Provide grant applications to the Florida Broadband Office and Federal Agencies as appropriate. Specific areas to pursue grant funding include:
 - i. Planning Grants – further planning and analysis of specific issues and solutions.
 - ii. BOP and BEAD – East County Residential fiber build for 12,000+ households. Comcast has agreed to the 50% matching requirements as needed.
 - iii. BOP and BEAD – East County Residential fiber build for 6,000+ households. (Lumen)
 - iv. BEAD – Adoption, Affordability (ACP) and Literacy Campaign to new households added in East County as well as existing areas in East County.
 - v. CPF, BEAD, and Digital Equity (Capacity and Competitive) – Lee Health, 5 County Community Centers, 1 Senior Center and 3 United Way Houses – Anchor Institution fiber and wi-fi connectivity to enable telehealth, workforce development and digital equity programs.
 - vi. CPF, E-Rate and BEAD – 8 County Libraries to be connected to the County’s fiber backbone to improve connectivity and enable workforce development programs.
 - vii. BEAD, Digital Equity and Telehealth – Digital Adoption & Literacy programs and Telehealth & Workforce programs can be accessed at a Digital Super Center or with mobile devices that have Lee Health and Human & Veteran Services apps installed. Human & Veteran Services is working with suppliers to develop the proper blend of hardware and software and is very focused on privacy requirements and have evaluated both custom and off the shelf solutions. Below is a solution provided by Jabrrbox.



Figure 4



Figure 5

Timelines and Milestones

Broadband Services Timelines and Milestones	2022		2023				2024			
	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr	1st Qtr	2nd Qtr	3rd Qtr	4th Qtr
Complete Survey Data Collection	x									
Tabulate Survey Results and Revise Stage 1 Plan	x									
Submit Plan to Commission	x									
Gain Approval to Move forward with BOP Applications	x									
Submit Plan to State DEO	x									
Review Mapping and Plan with DEO	x									
Refine Network Plans with Comcast	x									
Refine Network Plans with Lumen	x									
Form Grants Team	x									
Provide Required information and approvals for BOP Applications	x									
Review Digital Equity and Literacy Programs with LTPT	x									
Review Library Solutions with Library Team	x									
Review Telehealth and Social Services programs with Lee Health and H&VS	x									
Meet with Procurement to define potential Bids and RFP's	x									
Convene Full LTPT Meeting	x									
Hold bi-weekly meetings for Grants Team		x								
Service Providers submit BOP Applications		x								
Meet with OEM's and solutions providers to refine solutions		x								
Define specifics of Anchor Institution Network Augmentation with Lee Health		x								
Define specifics of Library Network Augmentation Fiber and Wi-fi		x								
Issue Formal RFI to all Service Providers for Anchor Institutions		x								
Design first Community Super Center		x								
Convene Full LTPT Meeting		x								
Hold monthly meetings of Grants Team		x								
Submit Appropriate Grants for Capital Projects Fund (CPF) to DEO			x							
Support E-Rate application with Libraries			x							
Evaluate Anchor Institution Responses and prepare solutions for funding			x							
Work with Community Engagement on Communications Strategy and tactics for adoption, affordability, literacy and equity programs			x							
Convene Full LTPT Meeting			x							
Hold monthly meetings of Grants Team			x							
Launch Affordability Campaign throughout the County			x							
Hold planning meeting with Comcast and Lumen and other Service Providers				x						
Prepare Grants for BEAD				x						
Convene Full LTPT Meeting				x						
Kick-off BOP builds if Grant funding is awarded					x					
Convene Full LTPT Meeting					x					
Hold monthly meetings of Grants Team					x					
Convene Full LTPT Meeting						x				
Kick-off CPF builds if Grant funding is awarded						x				
Kick-off Adoption Programs for new Broadband builds with Service Provider						x				
Hold monthly meetings of Grants Team							x			
Prepare grants for Digital Equity Capacity (State)							x			
Convene Full LTPT Meeting							x			
Support E-Rate application with Libraries							x			
Hold monthly meetings of Grants Team							x			
Submit First BEAD Grant Application to State							x			
Convene Full LTPT Meeting								x		
Hold monthly meetings of Grants Team								x		
Submit Digital Equity Capacity Grant to State								x		
Hold monthly meetings of Grants Team									x	
Convene Full LTPT Meeting									x	
Prepare Grants for Digital Equity - Competitive Grants (Federal)										x

Appendix D – Grant Fund Matrix

Broadband Services Grant Fund Information							August 2, 2022	
Grant Name	Description	Source	Total \$ Available	Matching?	Matching %	Grant Submitter	Key Submittal Information	Comments
Broadband Opportunity Program (BOP)	Funding for infrastructure improvements to areas unserved by Broadband (<25 Mbps Download and <3 Mbps Upload speeds).	State	\$ 400,000,000	Yes	50%	Internet Service Provider to State	The timeframe for the Service Provider to submit the Grant Application is expected in the 4th quarter of 2022.	<ul style="list-style-type: none"> - This grant fund requires a 50% match. - A single project may not be awarded a grant in excess of \$5 million. - Comcast has presented a plan that would match up to \$5 million of grant funds for a total of \$10 million in funds to build out a portion of the unserved Lehigh Acres Zone. - Lumen / CenturyLink and Summit have expressed interest in pursuing other unserved areas but have not presented a plan yet. - Lee County will be asked by the provider for a letter of support and a prioritized list of areas to build out. The prioritized list will need to go to the Board for approval.
Capital Projects Fund (CPF)	<ul style="list-style-type: none"> - Funding may be used for broadband infrastructure deployment projects, multi-purpose community facility projects and for digital connectivity technology projects. - All projects must enable work, education and health monitoring. 	Federal through the State	\$ 366,036,869	No	N/A	State submits to Federal and Lee County submits to State	<ul style="list-style-type: none"> - The deadline for the State to submit its Grant Plan is September 24, 2022. - Rules for Lee County's Grant Application to the State? - The anticipated timeframe for Lee County to submit a Grant Application is in the next 4 - 7 months. 	<ul style="list-style-type: none"> - \$366,036,869 has been allocated to Florida. - The State will need to apply to the Feds for their allocation. To date, 8 States have been awarded funds. - These funds are from the US Treasury's ARPA program. - States are the eligible entities to apply for the CPF and may award the funds to subrecipients (such as local governments). - No matching funds are required.
NTIA's Broadband, Equity, Access and Deployment Fund (BEAD)	<ul style="list-style-type: none"> - These funds will have a number of components which will address broadband infrastructure and programs. - This funding will be available to address a Lee County Fiber Optic Network expansion that could include critical facilities for Libraries, Healthcare, Utilities, Transportation and Public Safety. 	Federal through the State	\$ 100,000,000	All programs except Digital Equity (which will not require a match) will require a match between 20% and 30%.	20% - 30% (if a match is required)	Lee County submits to State. This program will receive additional funds of up to \$800 million in 2024.	<ul style="list-style-type: none"> - Funds are from the Department of Commerce's National Telecommunications and Information Administration. - \$100,000,000 is in the first tranche of funds to the State, with up to \$1 billion more expected to be allocated to Florida over the next 24 months. 	
NTIA's Digital Equity Capacity Grant	Funding for broadband and digital connectivity programs that target disadvantaged citizens from groups such as Seniors, Veterans, Racial or Ethnic Minorities, Disabled and the incarcerated.	Federal through the State	\$1,440,000,000	No	N/A	Lee County submits to State after Federal Allocation to State	These programs kick off 1 year after the state submits its Digital Equity Plan. Expected in early to mid 2024.	<ul style="list-style-type: none"> - The Federal Government has \$1.4B to allocate to the States. - Florida has been allocated \$2.4 million for planning this program and it's expected to be awarded in 2023. The state has 1 year to submit its plan and then administer grants within the following year.
NTIA's Digital Equity Competitive Grant	Funding for broadband and digital connectivity programs that target disadvantaged citizens from groups such as Seniors, Veterans, Racial or Ethnic Minorities, Disabled and the incarcerated.	Federal NTIA	\$1,250,000,000	No	N/A	Lee County submits to the NTIA	This program will begin 30 days after the Capacity grants start to be awarded. Likely to be submitted in 2025.	<ul style="list-style-type: none"> - The Federal Government has \$1.25B to allocate to the States. - This program is direct to the NTIA and follows the same guidelines as the Capacity Grants.