

Attachment A, Project Description



Attachment A, Project Description - Certified Preliminary Technical Evaluation

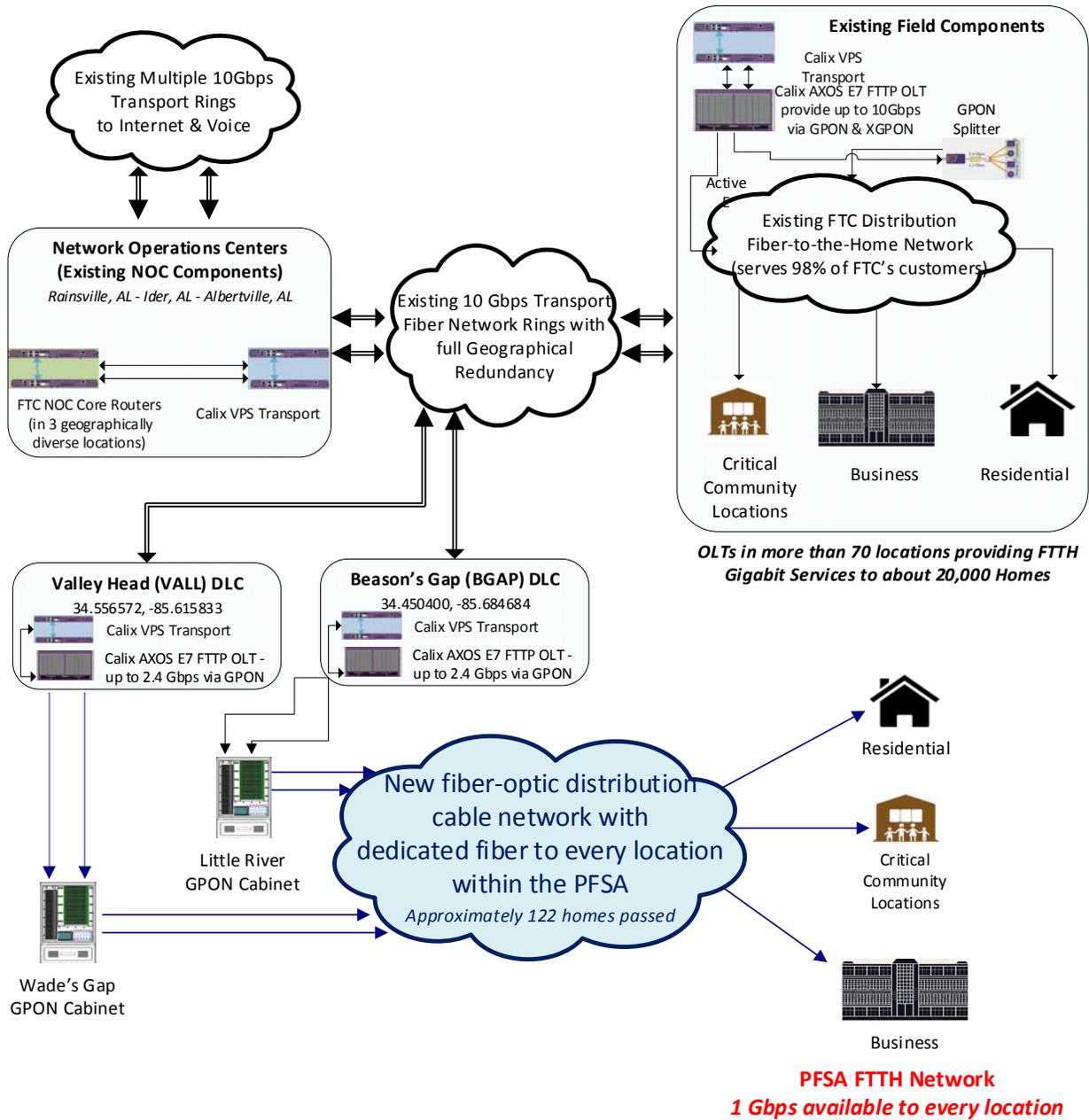
CERTIFICATION

I, the undersigned Professional Engineer, have reviewed and do hereby certify that the data included in this ADECA Broadband Grant Application is correct to the best of my knowledge and belief and that the costs and timeline for construction are reasonable and prudent. I based my technical evaluation of this project on my years of experience of working on similar projects in size and scope.

2/5/21
Date

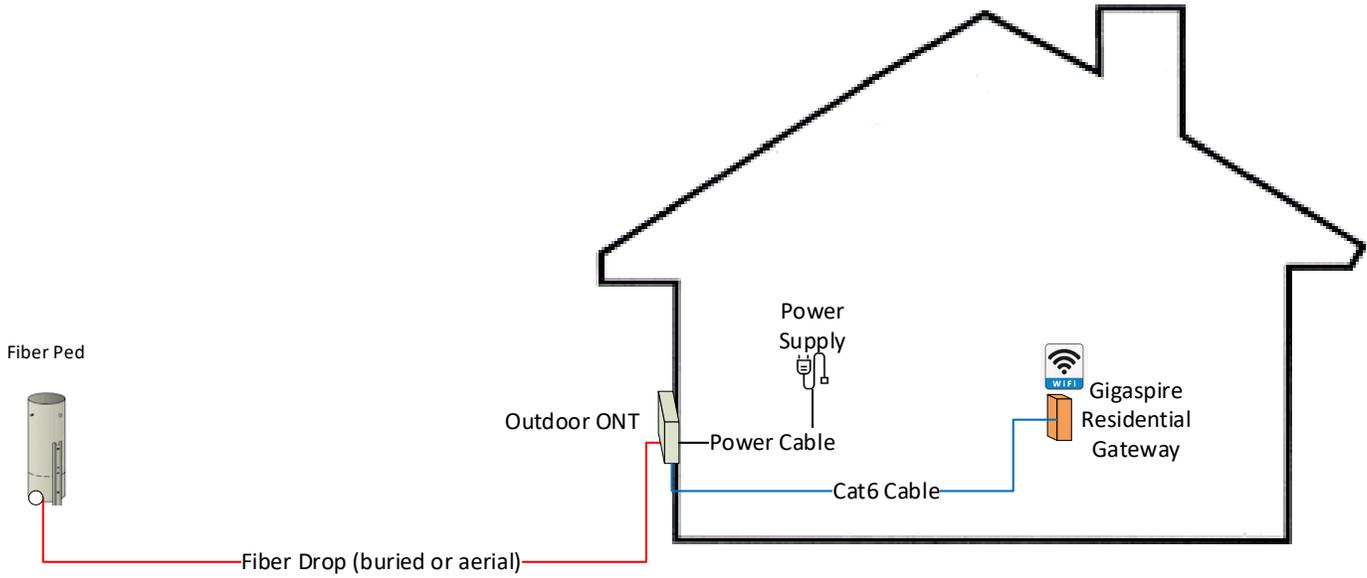
Carol Leigh Brackett
No. 25055
PROFESSIONAL
ENGINEER
ALABAMA REGISTERED ENGINEER No. 25055
CAROL LEIGH BRACKETT

Attachment A, Project Description - Proposed Network

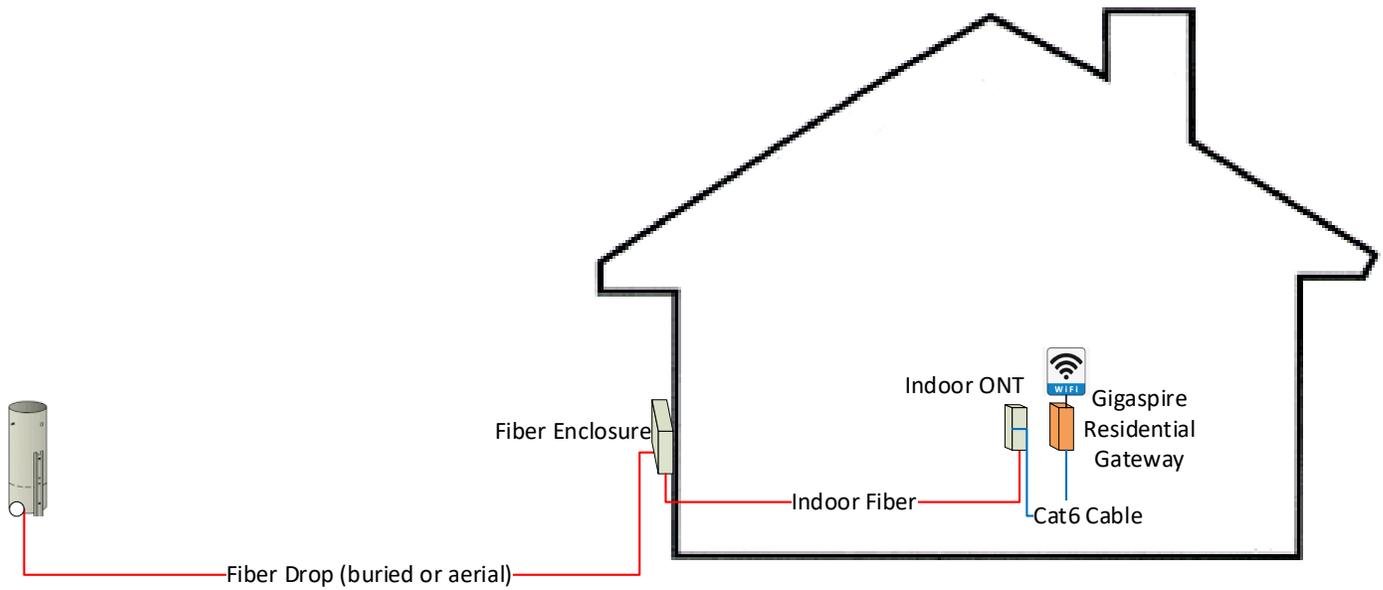


Attachment A, Project Description – Home Connectivity Options

Outdoor ONT Home Diagram



Indoor ONT Home Diagram



Attachment A, Project Description – Survey Results

Lookout Mountain PFSA - Survey Results						
Address	Who is your Internet Service Provider?	What is your download speed (Mbps)?	What is your upload speed (Mbps)?	What problems do you or your household face due to the unavailability of broadband?	How would having access to broadband in your area increase your quality of life?	Have you experienced any hardships during the COVID-19 pandemic due to the lack of adequate broadband access?
4367 County Road 166 Fort Payne AL 35967	* Registered before survey was available					
4086 County Road 166 Fort Payne AL 35967	* Registered before survey was available					
140 Road 9078 Fort Payne AL 35967	* Registered before survey was available					
3818 Co Rd 166 Ft Fort Payne AL 35968	* Registered before survey was available					
4039 County Road 166 Fort Payne AL 35967	* Registered before survey was available					
1068 Co Rd 153 Fort Payne AL 35967	* Registered before survey was available					
346 County Road 153 Fort Payne AL 35967	* Registered before survey was available					
945 County Road 618 Fort Payne AL 35967	* Registered before survey was available					
3900 County Road 166 Fort Payne AL 35967	Only have a Verizon Hotspot	Don't know...has to be below 10	very low -	Doctors appointments - Teledoc Working remote is nearly impossible We need to be able to stream weather conditions, especially in tornado weather when we're in the shelter. Teaching on line classes and holding meetings	It would bring us into the 21st century. We hear all of our neighbors stating how they are using the internet and we are only able to do the minimum. Not having broadband limits our resources on many levels. With the pandemic, not having broadband exposes us to many people whom we would not be exposed to if we could consistently work from home.	Lack of Teledoc service We have to travel 30 mins to a relative's house to "work from home" Placing on line orders for groceries Zoom or teams meetings are almost impossible
3946 Cr-166 Fort Payne AL 35967	Hughes Net	test would not work (too slow)	test would not work error #7	I am unable to work from home forcing me to use public wifi	i could work form home and have more time with my family	yes having to leave the house and go to a public area and use public wifi
3946 County Road 166 Fort Payne AL 35967	Hughes Satellite	Test would not work Error #7	Test did not work	Healthcare caregiver for my mother. Requires telemedicine and virtual dr visits.	Working from home during pandemic would make life much easier	Yes...internet connection not reliable for business and health issues
3900 County Road 166 Fort Payne AL 35967	Only have hotspot from Verizon	Less than 10	less than 3	Zoom with healthcare providers Teaching PLM classes working from home unable to get signal for sever weather	Doctor visit Could take CE on line classes in lieu of attending in person Teach PLM classes Work from home	Oh my gosh yes. Sketch service has decreases my life span due to the constant lack of speed to access information and to work efficiently from home. Dropping doctors calls due to lack of service.
3677 County Road 166 Fort Payne AL 35967	Do not have one	None	None	Talking with grand children and great grandchildren Face to face dr calls Pharmacy needs Boy Scout duties	All of the above	All of the above
4314 County Road 166 Fort Payne AL 35967	Hughes Net	2.5 Mbps	868 kbps	I teach for the Department of Homeland Security (Leidos) and Texas A&M University (TEEX). I must be able to have a reliable high-speed internet service to support the many ZOOM type meetings and classes that I am required to do. We also try to use the internet for all things COVID 19 related, like virtual doctors visits, ordering groceries, paying bills, etc.	it would allow me to teach from home, instead of having to travel to a public location for reliable and fast internet service. It would also support our security devices and systems and make our home safer.	Absolutely, I have not been able to teach from home. While I might be able to start a class, all it takes is for the wind to blow or a small rain cloud to pass over and all signal is lost. Therefore, I am forced to travel to another location that has adequate internet service. Being over 65 years of age, this defeats our state's stay at home order for older citizens. The graduate level classes that I deliver cannot be interrupted due to an inferior internet provider. During perfect weather, their is just not enough bandwidth to support the delivering of a class. The internet we have is constantly buffering.

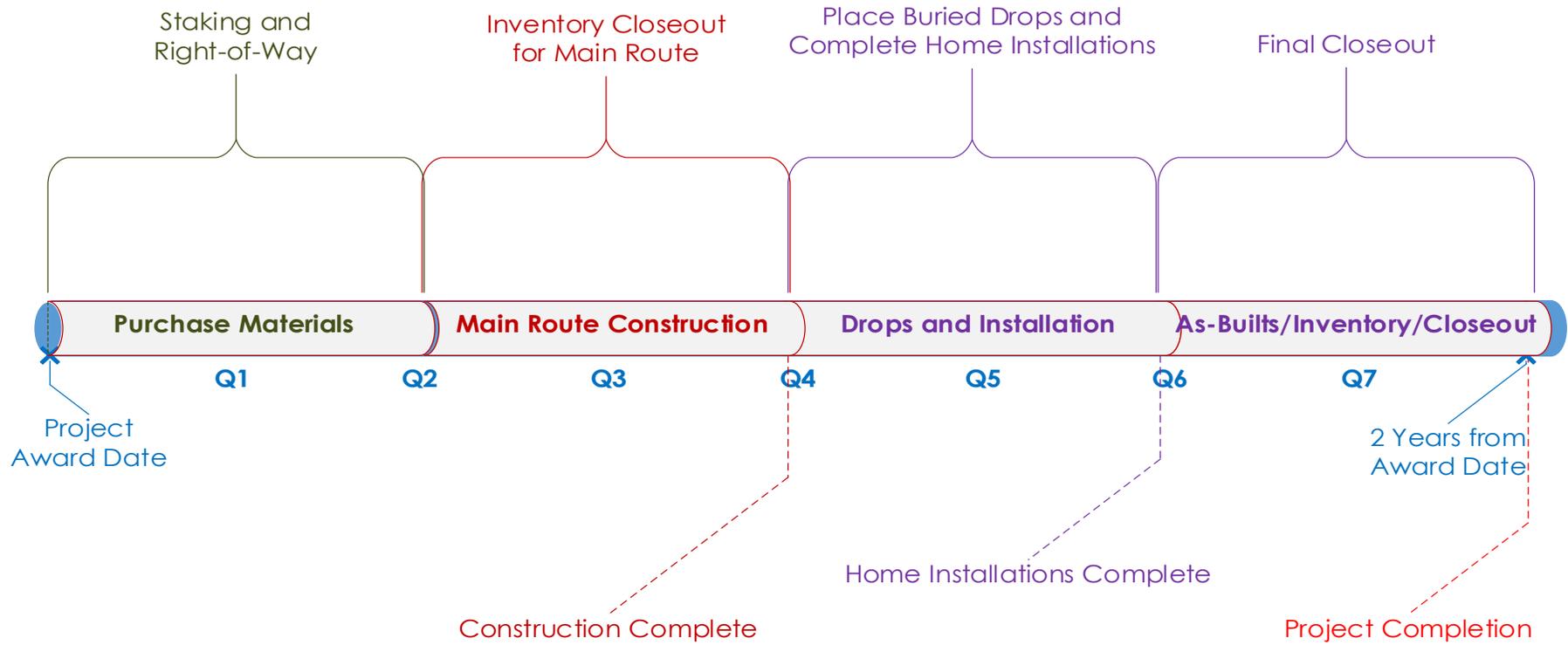
4408 County Road 166 Fort Payne AL 35967	Hughes Net	2.5 Mbps	868 kbps	when I retired from teaching, I was looking forward to teaching and tutoring online as a way to supplement our income. Because of the unavailability of broadband, these doors were not open to me. I am unable to work at home in any way that involves the internet. Not having adequate internet access negatively impacts my health by limiting virtual fitness classes, doctor visits, and educational courses pertaining to my specific issues.	I would be able to teach/tutor from home. I would have daily access to exercise programs that are necessary to my overall well-being. I would be able to have virtual doctor visits. I would have better access to virtual visits with my extended family. I would be able to keep mentally active by taking online courses. I would be able to stay connected with friends, family, church, etc. no matter what my physical condition was.	Because of COVID-19, I have been unable to continue my gym membership. I have arthritis and it is vital that I work out every day in order to stay mobile. There are many good workout programs available through the internet - but I have not been able to truly depend on our internet because of a lack of adequate broadband access. Due to shutdowns and safer at home orders, I have not been able to attend my church physically. However, the services are available through the internet. But, because of the lack of adequate broadband access, I don't get to worship with my church in this way. The internet has been an important way for me to be able to stay in contact with my extended family during this pandemic. Many times the "visits" have been interrupted and delayed because of inadequate access. My doctor wanted to set up virtual visits to monitor my health issues, but this was not possible because of the unreliability of our internet access.
23 County Road 660 Fort Payne AL 35967	FTC (boonlink) radio transmission technology	25mbytes	3 mbytes	The existing service will not be available in the near future. Another similar service is available indefinitely, but with speed less than the minimum 25mb up/3mb down. low-quality satellite dish service is available with low speeds.	Broadband service positions my family for live streaming service not currently available. Important for emerging tv service technologies and communications.	Current Farmerstel radio technology is unreliable for ZOOM communications needed for church related functions. Cannot get service support except during regular hours.
218 County Road 66 Fort Payne AL 35967	Killian Electronics	4 mbps	6 mbps	Gets slow if a few people are on at the same time	Hope to get away from satellite TV	No
4123 County Road 166 Fort Payne AL 35967	FTC / former BoonLink	20MB (on average when working -- BoonLink goes out regularly)	2.5MB (on average when working -- BoonLink goes out regularly)	I have been working from home greater than 50% of the time. When BoonLink goes down (which happens frequently), I am unable to check email and download sizable attachments, and more importantly cannot use Zoom which has become for my company the go-to communication tool for video meetings. Our daughter has also had to do her college work remotely for several months. When BoonLink would go down, she was unable to log into her classes. The instability of our FTC BoonLink service has caused serious issues for both education and work from home, which could be solved if broadband internet were available.	Stable internet connection is now critical in this new world, for work from home, education and just being able to stream content.	YES -- inability to download email attachments, being knocked out of key business Zoom meetings, our daughter being unable to join virtual college classes.
4081 County Road 166 Fort Payne AL 35967	Verizon	unknown	unknown	tele- communicating with my oncologist in Huntsville, who has been treating me since 2017 for colon cancer.	I would be able to tele - communicate with my daughter, grandchildren and family in Michigan.	
4081 County Road 166 Fort Payne AL 35967	Verizon	i dont know	I dont know	tele medical visits with my Gadsden pulmonologist treating me for stage 4 COPD	tele medical vists would limited my outside exposure during COVID pandemic	
4090 County Road 166 Fort Payne AL 35967	No internet	0	0	We cannot keep connected in any reliable way to internet. This means no educational access, no current news, no connection to household necessity resources.	Our quality of life would increase tremendously! We are hoping to start a small business at our location and without internet this would be impossible!	If I don't have my phone with me I cannot order food from the grocery store.

3666 County Road 166 Fort Payne AL 35967	Verizon hot-spot	0.38	0.65	Poor and very limited internet access as well as slow speeds.	It would increase the use of technology and the availability of being able to use our electronics as well as our smart devices.	Being in quarantine there was limited access to being able to access the internet. While being at home more often it would be very useful to have better/more internet access for being able to stream and download.
610 County Road 153 Fort Payne AL 35967	None	N/A	N/A	We are a home business that relies on internet, We have a college student that is having virtual classes and is dependent on reliable internet service which we do not have in this area and we have a therapist who provides virtual treatments from home. We receive our internet from a hotspot from a mobile carrier and it is very limited and not dependable at times.	It would give us access to dependable internet so that we don't have to find internet service elsewhere. Like I mentioned before We are a home based business and I have a college student child that does virtual classes and another child that treats children virtually	Yes, My sons college classes are online and is dependent on Internet, My daughter is a therapist and does virtual treatments and we are a home run business and if our internet is limited we can't go to the library or any public place to get access
734 County Road 153 Fort Payne AL 35967	verizon	?	?	Two family members working from home. Grandchildren needing to do homework on line	It work make our work load turn over much faster. By the end of month our hot spots are so slow.	Yes, we are having to work from home the only access we have are hot spots
367 Co Rd 153 Fort Payne AL 35967	Hughes Net	2.8	3.7	Education barriers for virtual learning, Healthcare barriers due to not being able to download and upload documents pertaining to my special needs son, and unfortunately able to work from home due to slow speeds	My children could partake in virtual learning at home rather than having to find a community Hotspot in town, we'd be able to better maintain my son's health care information with faster internet, and I'd be able to work from home if I had faster internet services.	Absolutely! Anytime my children need to do there school work for their virtual learning we have to drive down off the mountain and try to locate a community Hotspot or go to a friend's home in town to use the internet.
489 County Road 153 Fort Payne AL 35967	We do not have an internet provider.	N/A	N/A	All listed above.	Well considering the time we live in with all things concentrated around the internet, from education, working from home and doctors appts now being done by telemed it would be a great difference.	Yes, absolutely. Being home more now in order to stay healthy and safe because of this pandemic requires a much needed access to the internet from home. Regardless, my community and I myself would greatly appreciate the chance to have the same options of internet as the rest of DeKalb and now Marshall County has been provided. Somewhere for some reason we got left out!!
485 County Road 474 Fort Payne AL 35967	killians electronics	18	2	home security, educational, live Tv	tremendously	no
168 Co Rd 474 Fort Payne AL 35967	killians	dont know	dont know	none yet		
1652 Co Rd 153 Fort Payne AL 35967	na	na	na	education barriers ,worship barriers	allow grand children that spend time here to do home work	no
1662 Cord153 Fort Payne AL 35967	na	na	na	education	research	no
1654 Co Rd 153 Fort Payne AL 35967	na	na	na	daughters school work	virtual school	no
1094 County Road 153 Fort Payne AL 35967	Hughes Net	2.75	1.5	I work from home part time, and the only mean to do it is use my Verizon hotspot on my phone. Translates to paying even more just to get a decent connection online. Cannot watch any streaming services, from Netflix to simple YouTube is a waste of time, with constant stopping and catching up.	Would be able to use the services like Netflix, and shrink my monthly cell plan.	No, the pain of satellite internet service has gone on since buying my house up here in 2017.
56 Road 1917 Fort Payne AL 35967	Hugesnet	Presently I do not know.	Not sure.	Buffering when playing a song. Many times I do not have internet, when needed. Since my neighbor also received Hughesnet, my quality has not be the same.	I am a writer and it would help me greatly.	

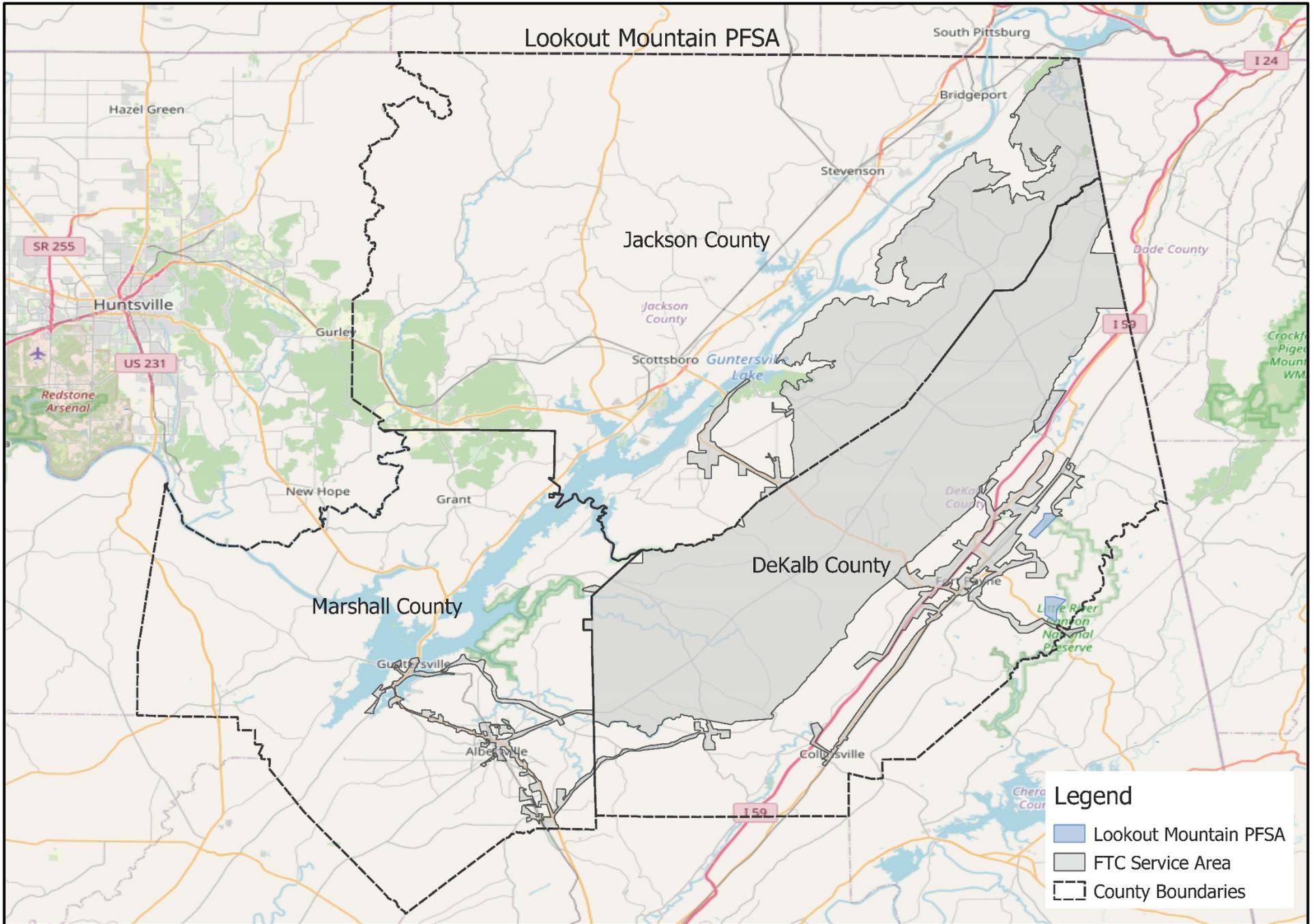
41 Road 9073 Fort Payne AL 35967	Hughes net	Do not know	Do not know poo	On line banking and shopping	Faster	No
67 Road 9073 Fort Payne AL 35967	None	None	None	Education	It would help my child with school work.	
858 Co Rd 474 Ft Fort Payne AL 35967	FTC	0	0	Slow internet sometimes doesn't work	Would make things easier and more comfortable knowing we have access to fast high quality internet	
1658 County Road 153 Fort Payne AL 35967	None	0	0	Education Barriers, Healthcare Barriers I am a Paramedic, Working from Home Barriers, Grandchildren and School Barriers, Safety Barriers	It would fix all of the above listed problems	Not able to do online bill payments, grocery shopping, medication shopping
67 Road 1917 Fort Payne AL 35967	hughesnet	I don't know as it says my browser cannot reach all 10. So I went in with google and it said could not find my zip code? Yet the old internet explorer located my zip code.	dont know	can't stream...get too much buffering.	Since retired on a fixed income it would be nice to have faster speeds without increasing my bill.	
420 County Road 474 Fort Payne AL 35967	Killians	n/a	n/a	Very limited service with extreme upload and download speeds. There are often times in which the service will "glitch" out for extended periods of time and we will be unable to complete important jobs. There are also two teenage boys in house and they are unable to complete school assignments if both are trying to use the wifi at the same time.	ABSOLUTELY!!! It is much needed for school and work.	Yes, difficult to complete school assignments due to inconsistency or having to use hotspots on cell phone.
153 Road 911 Fort Payne AL 35967	HughesNet	10	2	Can't work from home (a big problem in relation to Covid). When bad storms are in the area, especially tornadoes, we can't get internet service to check radar. There are constant breaks in service in my home security monitoring.	Yes, ESPECIALLY during severe weather.	There is no possibility of working from home due to my poor connection speeds. My cell phone connection is poor as well (two bars of service is the most I can get)

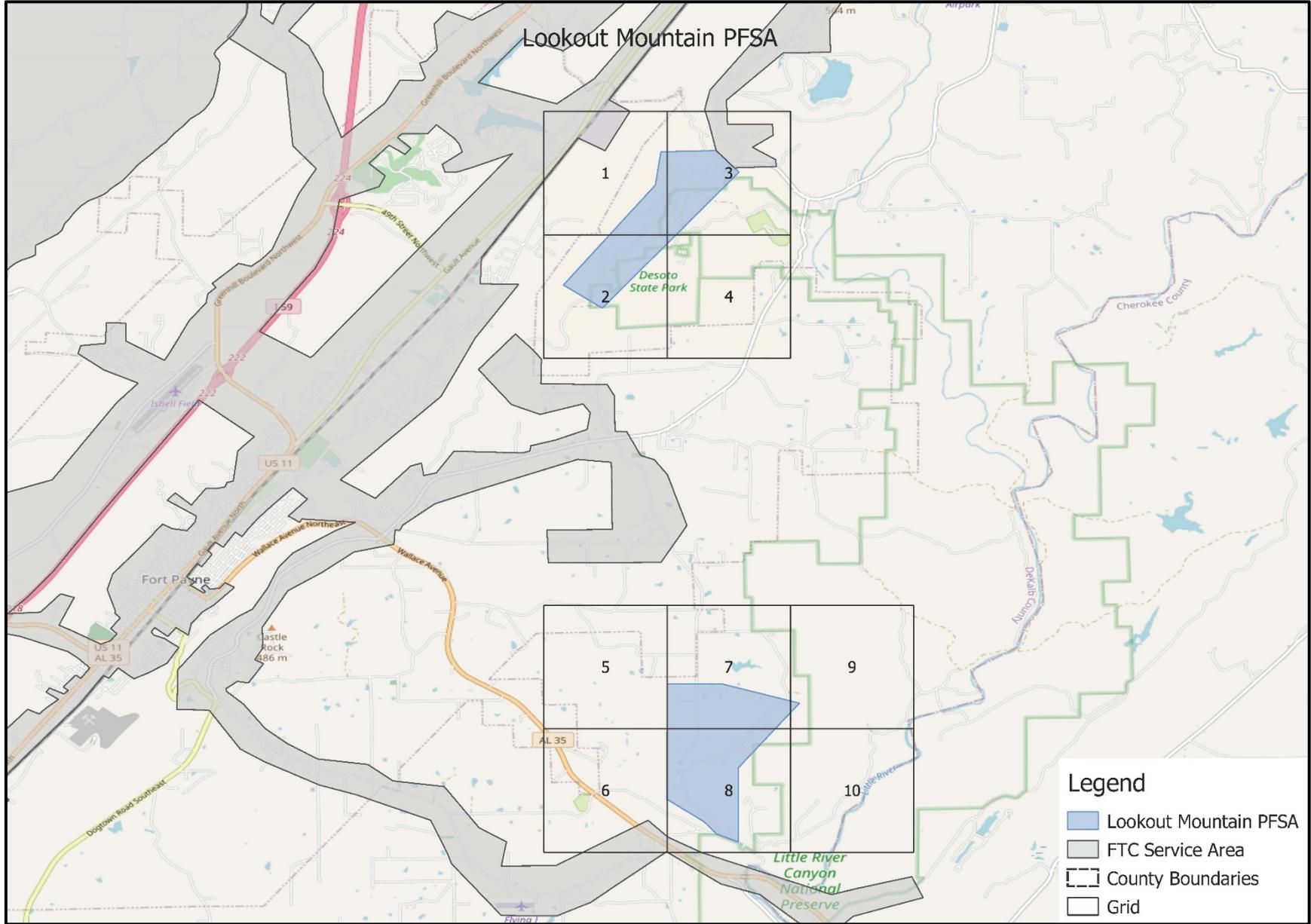
*Those highlighted in green above registered before the survey was available

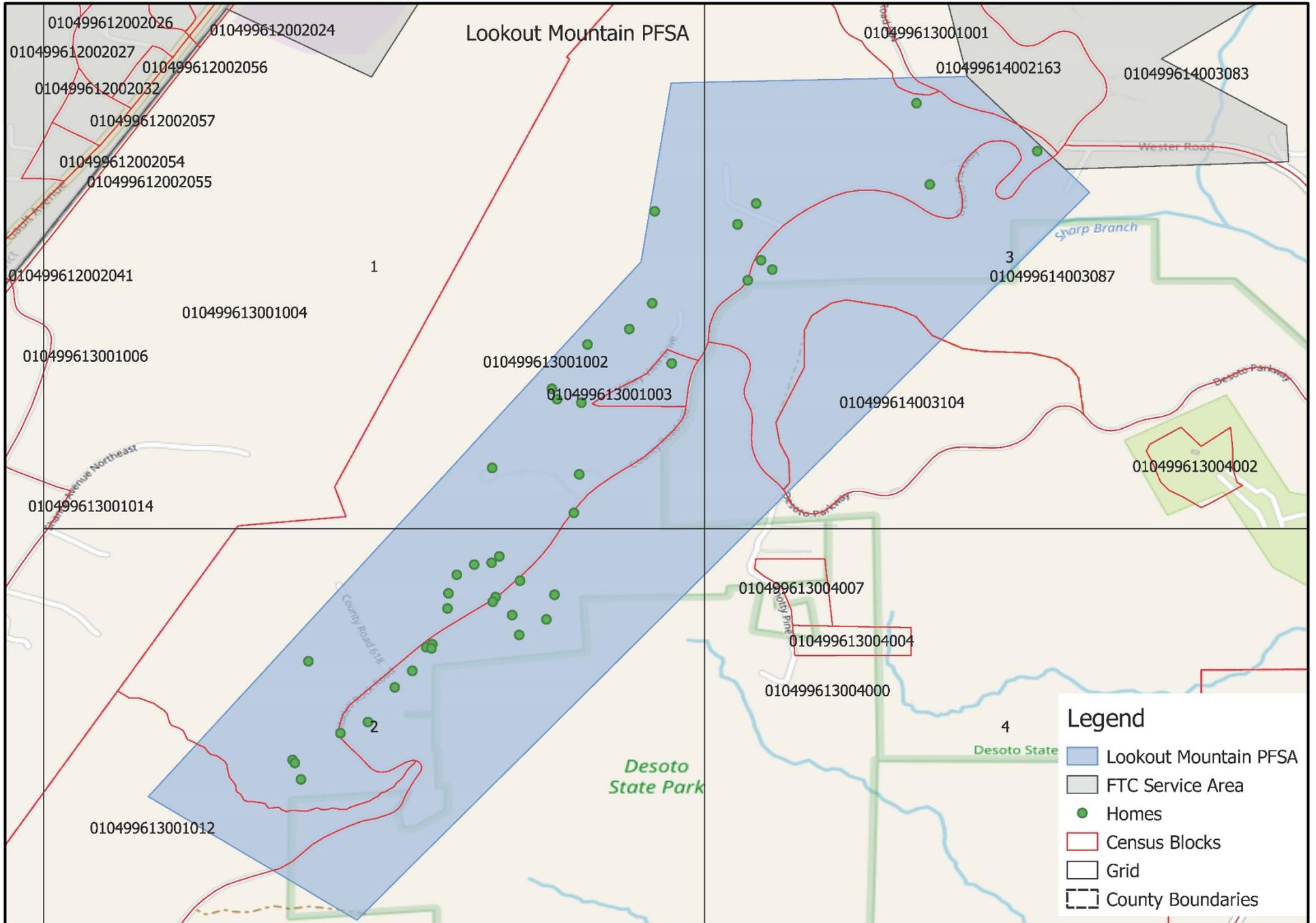
Attachment A, Project Description – Project Schedule and Timeline



Attachment A, Project Description – Lookout Mountain PFSA Maps



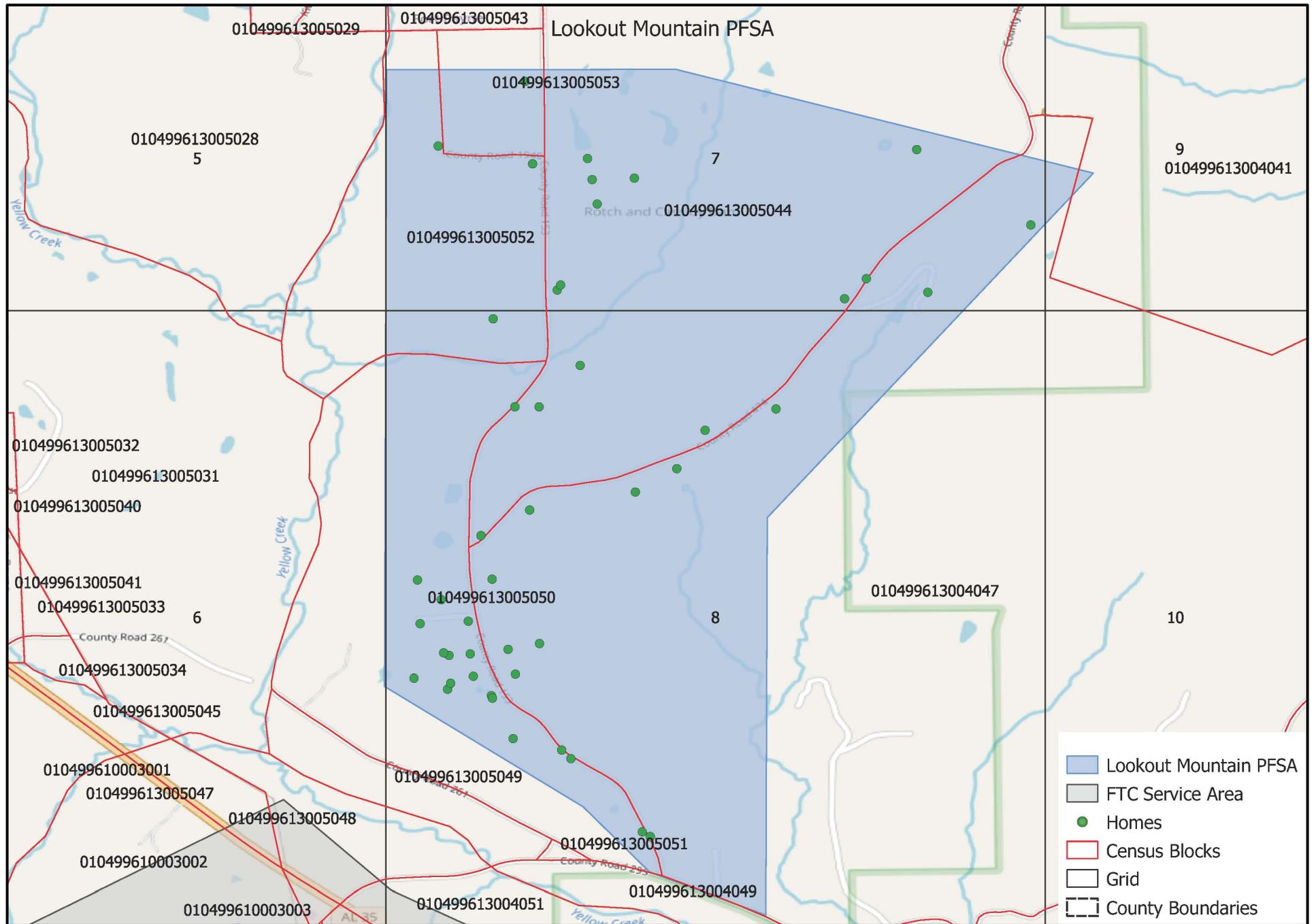




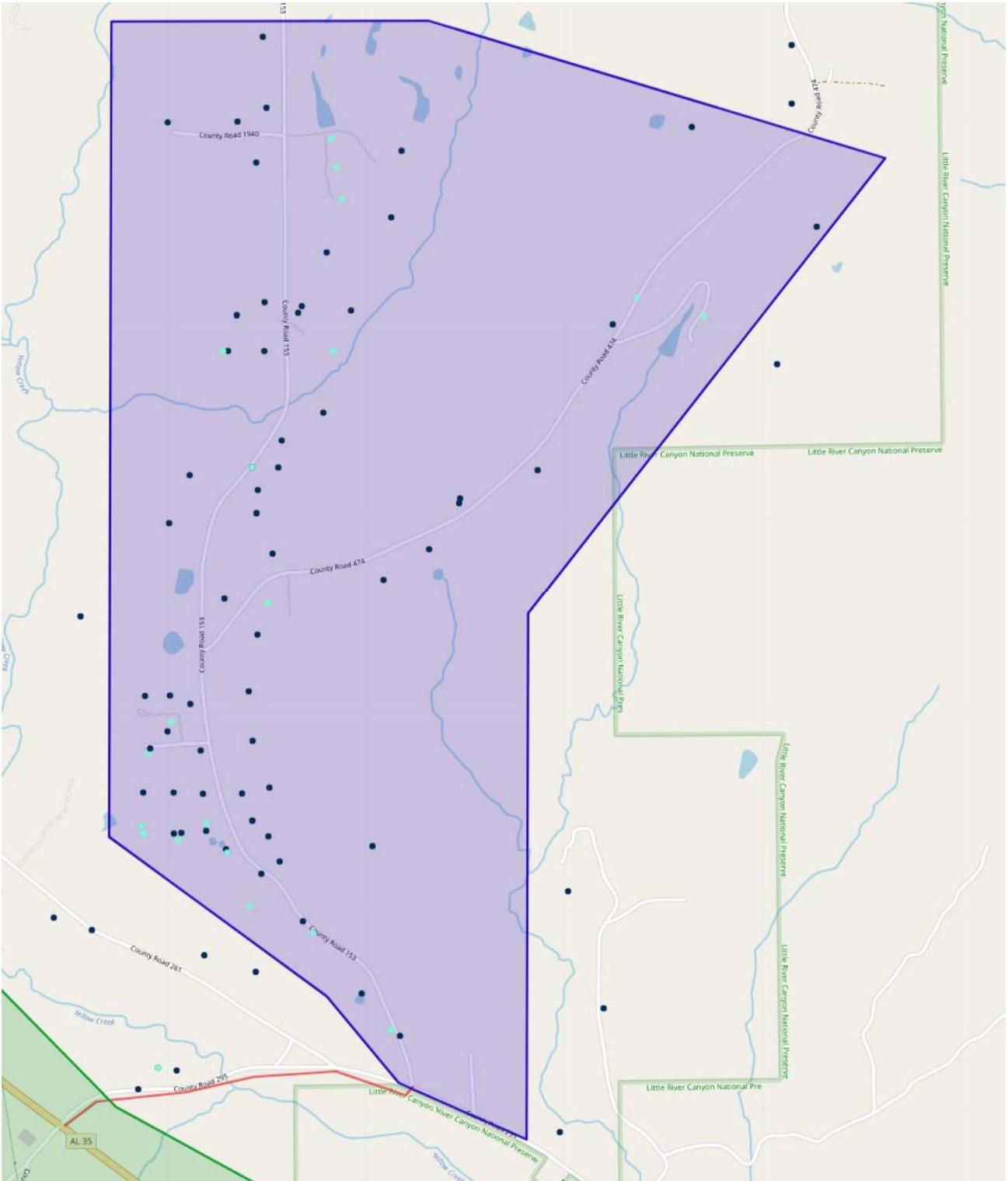
Lookout Mountain PFSA

Legend

- Lookout Mountain PFSA
- FTC Service Area
- Homes
- Census Blocks
- Grid
- County Boundaries



Attachment A, Project Description – Middle Mile Map



Legend

	Proposed Grant Area (PFS) Little River North Portion
	Current FTC Fiber Availability
	Middle Mile Area (has 25/3 broadband available)
	Middle Mile - New PFS Feeder Fibers