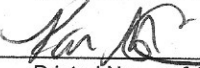
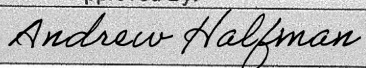


Attachment C: Quarterly Program Report (QPR)

I. Grantee Information			
1. Grant Number CMIC-2021-003		2. Grantee Company Barger Creek Wireless	
3. Address 16998 81 st Ave N		4. City Maple Grove	5. State MN
		6. ZIP Code 55311	
II. Progress Report (Due 30 Days After the End of a Reporting Period)			
7. Reporting Period			
<input type="checkbox"/> 11/1/2020 – 1/31/2021	<input type="checkbox"/> 11/1/2020 – 1/31/2021	<input type="checkbox"/> 11/1/2020 – 1/31/2021	
<input checked="" type="checkbox"/> 2/1/2021 – 4/30/2021	<input type="checkbox"/> 2/1/2021 – 4/30/2021	<input type="checkbox"/> 2/1/2021 – 4/30/2021	
<input type="checkbox"/> 5/1/2021 – 7/31/2021	<input type="checkbox"/> 5/1/2021 – 7/31/2021	<input type="checkbox"/> 5/1/2021 – 7/31/2021	
<input type="checkbox"/> 8/1/2021 – 10/31/2021	<input type="checkbox"/> 8/1/2021 – 10/31/2021	<input type="checkbox"/> 8/1/2021 – 10/31/2021	
8. Please summarize current reporting period activities. Please see attached document for answers to questions 8 - 11			
9. Have you encountered roadblocks to the implementation of this project? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No If yes, please provide details and describe your plan for overcoming the listed roadblocks.			
10. Is your project on track with the overall project timeline? If no, please provide details and describe your plan for moving the project back on track. No			
11. Please provide a narrative to accompany Attachment D. Complete and include Attachment D, indicating the census blocks with service available this reporting period, the speed of service offered, the price of service offered, the number of locations subscribing to your service this quarter, and the cumulative number of locations subscribing to your service.			
III. Certification			
I certify all statements in this report, including all requested supplemental information, are true, complete, and accurate to the best of my knowledge. I understand failure to submit any required reports may result in the termination of the grant. I understand this grant may be terminated if DTMB concludes I am not in compliance with the conditions and provisions required by the contract covering this grant, or have falsified any information. By way of signature, I agree with all the conditions of this grant program.			
Grantee Authorized Official Signature 		Date May 31, 2021	
Printed Name of Authorized Official Kathleen Cadwallader		Title of Authorized Official or Financial Officer Grant Administrator	
For DTMB Use Only			
Reviewed	Approved By:		Date:
			6/15/2021

8. The following is a list of grant project work completed from February 1 through April 30 2021.

- Construction of 190' tower at Mouch Rd, Atlanta, has been completed with the exception of security fence. This is the main backhaul tower for all other towers covered in this grant. The backhaul to the CML tower on north M-33 has been turned up.
- Telrad base stations have been installed on the Mouch tower to provide broadband for the grant coverage areas immediately adjacent to the tower. This has proved to be very effective.
- Construction of the tower on Camp 3 Road in Vienna Township has been completed except fencing and the backhaul link between Mouch and Camp 3 has been turned up. Telrad gear has also been added to the tower to cover the immediate area.
- Construction of the Lewiston tower is underway.
- Steel for the towers at the MOA Landfill and in Comins is onsite
- The network engineering required to pass internet traffic to the towers and customers beyond the Mouch tower is ongoing.
- Installs for new customers and upgrade of current customers to broadband capable technology has continued.
- A site for the tower in Hillman has been located and a lease has been negotiated with the land owner. Zoning changes are required and are underway.
- BCW has negotiated a lease with Briley Township to repair and equip a tower owned by the township that will assist with backhaul to Hillman.
- Backhaul technology for the backhaul links to MOA and Comins has been acquired and is ready when tower construction is complete
- Adaptrum whitespace technology provided by Adaptrum as in-kind for the grant work has begun deployment
- Three power poles for local deployment to the Canada Creek Ranch area are installed and power has been connected
- A power pole for local deployment in the Crooked Lake region of Briley Township is operational and customer installs are underway

9. As with any project of this complexity, we have run into several factors making this project much more complex but not insurmountable. These are issues resulting from the ongoing fallout from the Covid pandemic, unrelated changes in the availability of noise free wireless spectrum, and locating qualified labor.

Currently labor in the underserved rural community is very hard to come by. Labor with a background in internet technology is difficult to find, even when offering wages that equate with wages found in a more populated, urban setting. This is also true for contract help. Those contractors qualified to do the work are in high demand and have schedules that are very full. We have been fortunate to have good relationships with a general contractor well-connected to subcontractors in our area and also to have a solid working relationship with the contractor we work with for tower builds and equipment installs. That requires a certified tower climber with a

proven safety record. Our network complexity requires internet engineers with experience in connecting large systems using very different technologies, also in short supply.

Our solution to finding labor to work on installations has been to take a chance on hiring employees without experience but willing to learn and providing considerable hours of on the job training. Currently the demand for installs of new customers in reachable areas has far outpaced the available personnel to do the work and keep up with ongoing maintenance for current customers. We are adding staff during the summer months on break from school but that help is temporary and in need of much training. The pandemic added complexity to this in needing to provide employees with safe work environments. Fortunately a lot of our work is outside, reducing the risk of virus spread.

The pandemic has also had a huge impact on the global supply chain for manufactured goods, particularly in chips which are required by most of the equipment we use for infrastructure and at the customer premise. This has introduced long lead times required for purchased technology and slowing construction requiring those components. It has had an impact on the availability of commodity products like steel and timber leading to rapidly increasing costs for basic construction materials. The price of the steel for a tower has doubled in the last few months having a huge impact on projections for budgeting and construction timing. With the current influx of government funding into national infrastructure with an emphasis on expanding broadband, our portion of the economy is seeing an increase in demand and price of a dwindling supply of components at all levels of construction. We are fortunate to have placed orders for and received components prior to some of the largest price increases and can store these components until construction.

The final challenge faced by wireless ISPs (WISPs) throughout the country is the fight for affordable access to the frequencies required for solid broadband transmission. Licensed frequencies effective in covering more area with higher speeds have been purchased by large corporations at auction and have little interest in providing a service for a region less likely to generate a profit, leaving the rural population with few options. WISPs often utilize frequencies that are unlicensed and available for anyone to use but have to compete with the vastly growing internet of things also using the same frequencies making the available spectrum noisy and in some cases unusable. We have had 2 direct challenges with this. The FCC took a portion of the available whitespace frequencies and put them up for a licensing auction making them unavailable to us even if no one is broadcasting locally in that area. This took our available frequency range for a technology effective for tree cover penetration and cut it in half. We were also using 900 MHz technology which is able to deliver broadband speed in an unlicensed frequency and that has been made unusable by the installation of remotely monitored power meters by the local power company. Our Telrad technology is licensed making it a bit more secure as an ongoing option and we are finding it to be a good solution but even with it's higher power option, we still have tree coverage which can block its transmission.

At this time, the main impact from all of these challenges is to our construction timeline and overall budget and necessitates creativity for success.

10. Because of challenges listed above, our overall timeline for completion of our construction has been set back considerably, however we do feel we have the time built into the schedule going forward to still complete the work within the 3 year grant window. We had initially proposed having the construction phase completed in the first quarter of 2021. Instead, we have revised our plan to the following for our towers. Pole construction and customer installs will continue as service is available in each area.

	Quarter						
	2021			2022			
Tower location	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Camp 3							
Lewiston							
MOA							
Comins							
Hillman							
Rust							

11. Attachment D shows that we added coverage to one more census block than reported last quarter. We also have several blocks where we have more households served than the data suggests are possible. The region is seeing some population growth. For the quarter, we added 19 customers, most at broadband speed and upgraded 37 current customers to broadband speed technology. In addition, we became eligible to help our customers through the FCC's EBB program and reduced the package price of our 15 x 3 service to \$79 per month.