

FINAL AGENCY DECISION

STATEWIDE BROADBAND AVAILABILITY MAP VERSION 4 APPEAL

September 14, 2021

DOCKET NO. 21-1021

A. APPELLANT INFORMATION

Company Name	Cumberland Telephone Company
Address	106 Washington St.
City	Cumberland
State	IA
Zip	50843

B. DESIGNATED CONTACT INFORMATION

Contact Name	Devan Amdor
Contact Phone Number	712-774-2221
Contact Email	amdor@netins.net

C. APPEAL TYPE

- ☐ Resident Challenge
- ☐ First-Party Provider Challenge
- ☒ Third-Party Provider Challenge

D. EVIDENCE CONSIDERED

With respect to the Census Blocks forming the basis of this Appeal, the Office has reviewed the evidence and information submitted by Appellant related thereto (see Appendix B for original submission), in conjunction with the maps and data sources originally utilized in determining the TSA designation of these Census Blocks, and made a determination as to the Census Block TSA Tier designations as set forth in Appendix A.

- ☒ If checked, Appellant submitted a Certification as part of its Appeal, affirming under penalty of perjury whether or not Broadband service was Facilitated, and at which tier level, in Census Blocks as of July 1, 2021.
- ☒ If checked, Appellant submitted additional information in support of its Appeal. This information has been considered by the Office in making its Final Decision.
- ☐ If checked, challenged Census Blocks within this Appeal overlap with other Appeals containing one or more of the same Blocks. The Office considered evidence submitted in connection with any overlapping Appeal in making its final decision for any overlapping Census Block.
- ☒ If checked, the Office sent requests for additional information to Third-Party Provider(s) concerning whether reported broadband service was Facilitated in one or more blocks of this Appeal as reflected on Map V4 as of July 1, 2021. The Office may have received Affirmation(s) and/or other evidence from Third-Party Provider(s) in response to such requests. Refer to Appendix C for a record of these efforts.

Go to <https://ocio.iowa.gov/broadband-availability-map-version-4-challenge-process> for more information regarding how the Office evaluates evidence and decides tier designations for appealed blocks.

E. TO APPEAL FURTHER

The Office will post its Final Decisions on its website at ocio.iowa.gov/broadband. If an Appellant wishes to appeal the Decision further Appellant must notify the Office in writing within thirty (30) days of the posting of the Decision. Iowa Admin. Code r. 129–20.5(5). A request for a contested case must be filed by mailing a written request to:

Office of the Chief Information Officer

c/o Matt Behrens

200 E. Grand Avenue

Des Moines, Iowa 50309

In so doing, the reason for further appealing this Decision must be stated, specifically identifying the particular aspects of the Decision with which Appellant disagrees and the reasons why, whether factual or legal in nature. The request for a contested case proceeding should state the name and address of the requester; identify the specific Office action which is disputed; and, where the requester is represented by a lawyer, identify the provisions of law or precedent requiring or authorizing the holding of a contested case proceeding in the particular circumstances involved, and include a short and plain statement of the issues of material fact in dispute. Iowa Admin. Code r. 129–6.4.

Upon receipt, the appeal will be forwarded to the Department of Inspections and Appeals where an Administrative Law Judge (“ALJ”) will perform an independent review. Iowa Admin. Code r. 129–20.6(1); Iowa Admin. Code r. 129–6.6. At that time, an ALJ will schedule a hearing. If Appellant does not exercise its appeal right within thirty (30) days of the posting of this Decision, this Decision shall become final and no longer subject to challenge. Iowa Admin. Code r. 129–20.5(5).

SIGNED

DATE

Matt Behrens
Deputy Chief Information Officer
State of Iowa

APPENDIX A - FINAL DECISION

DEFINITIONS

Targeted Service Area	A Targeted Service Area (TSA) is a census block within which no communications service provider offers or facilitates broadband service at or above the tier 1, tier 2, or tier 3 download and upload speeds, as applicable.					
Tier 1	A maximum download speed of less than 25 megabits per second (Mbps) and a maximum upload speed of less than 3 Mbps.					
Tier 2	A minimum download speed of greater than or equal to 25 Mbps but less than 50 Mbps. No minimum upload speed is applicable for Tier 2.					
Tier 3	A minimum download speed of greater than or equal to 50 Mbps but less than 80 Mbps. No minimum upload speed is applicable for Tier 3.					
Non-TSA	A non-TSA is a census block in which speeds are Facilitated at greater than or equal to 80 Mbps.					
Facilitate	A communication service provider's ability to provide broadband service at or above the download and upload speeds defined above to a home, farm, school, or business within a commercially reasonable time and at a commercially reasonable price upon request by a consumer. This does <i>not</i> pertain to the Broadband Infrastructure used to facilitate said service; Broadband Infrastructure is <i>not</i> a basis for appeal.					
Map V4 Designation	The speed tier reflected on the Map as of July 1, 2021.					
Decision Basis	The Decision Basis number reflected in this column corresponds to a general explanation for why this Office made its decision regarding the Block. The Decision Bases are posted on the website at https://ocio.iowa.gov/broadband-availability-map-version-4-challenge-process .					
Overlapping Appeal	Indicates the Docket Number in which the Census Block has been challenged in another Appeal. The Final Agency Decision may be impacted by additional or alternate information or affirmations received in conjunction with another Appeal for the same Block.					
Prior Reporting	The Prior Reporting column reflects information provided by Appellant on the Appeal. The Prior Reporting to FCC or Connected Nation may reflect one of the following:					
	In Error: Data was reported incorrectly to FCC or Connected Nation	Correct: Data was reported correctly to FCC or Connected Nation	No Response: Data was not reported to FCC or Connected Nation	Unknown: Data is incorrect for unknown reasons		

Docket No.	Census Block ID	Prior Reporting	Map V4 Designation	Appellant's Request	Final Agency Decision	Decision Basis	Overlapping Appeal
21-1021	190019602002083	Unknown	Non-TSA	Tier 1	Tier 3	2	
21-1021	190019602002109	Unknown	Non-TSA	Tier 1	Tier 1	1	
21-1021	190019602002307	Unknown	Non-TSA	Tier 1	Tier 1	1	
21-1021	190019602002075	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019602002054	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019602002079	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019602002077	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019602002303	Unknown	Non-TSA	Tier 1	Tier 1	1	

21-1021	190019602002210	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019602002067	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019603004114	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019603004087	Unknown	Non-TSA	Tier 1	Tier 1	1	
21-1021	190019603004089	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019603004110	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019602002020	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019602002021	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019603004007	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019602002022	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019602002060	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019602002035	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019603004017	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019603004003	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019603004004	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019603004016	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019603004005	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019602002030	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019602002029	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019602002028	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019602002027	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019602002032	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019603004138	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019603004080	Unknown	Non-TSA	Tier 1	Tier 1	1	
21-1021	190019603004085	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019603004175	Unknown	Non-TSA	Tier 1	Tier 1	1	
21-1021	190019603004083	Unknown	Non-TSA	Tier 1	Tier 1	1	
21-1021	190019602002041	Unknown	Non-TSA	Tier 1	Tier 1	1	
21-1021	190019603004174	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019603004164	Unknown	Non-TSA	Tier 1	Tier 1	1	
21-1021	190019603004000	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019602002305	Unknown	Non-TSA	Tier 1	Tier 2	2	
21-1021	190019603004053	Unknown	Non-TSA	Tier 1	Non-TSA	3	

21-1021	190019602002049	Unknown	Non-TSA	Tier 1	Tier 1	1	
21-1021	190019603004074	Unknown	Non-TSA	Tier 1	Tier 1	1	
21-1021	190019603004019	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019603004073	Unknown	Non-TSA	Tier 1	Non-TSA	3	
21-1021	190019603004014	Unknown	Non-TSA	Tier 1	Tier 2	2	

APPENDIX B
CERTIFICATION AND SUPPORTING INFORMATION



Grants, OCIO <ociogrants@iowa.gov>

Cumberland Telephone Company Contested area

1 message

Jeremy Hall <jhall@netins.net>

Mon, Jul 19, 2021 at 9:05 AM

To: ociogrants@iowa.gov

Attached is the Challenge form and explanation of challenge or Windstream for the area in the census blocks.

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Jeremy Hall
Cumberland Telephone Company

2 attachments**challenge (2).xlsx**

179K

**Fixed Wireless Notes 1.docx**

3440K



A. APPELLANT INFORMATION	
Company Name	Cumberland Telephone Company
Address	106 Washington St.
City	Cumberland
State	IA
Zip	50843
B. DESIGNATED CONTACT INFORMATION	
Contact Name	Devan Amdor
Contact Phone Number	712-774-2221
Contact Email	amdor@netins.net
C. CERTIFICATION/ATTESTATION/AFFIRMATION	
In signing and submitting this form, the above-identified company, and its duly authorized representative signing on behalf thereof, hereby affirms, attests, and certifies under penalty of perjury that, as represented in its submission: Choose one option that describes company/affiliation status.	
<p>Company, consistent with the representations made in this form, and regardless of whether your company's prior reporting to the FCC or State of Iowa was correct or in error as of July 1, 2021, either:</p> <p>(a.) Facilitated material Broadband service according to the designated Tier speed indicated on the Map; or <input type="checkbox"/></p> <p>(b.) Did NOT Facilitate Broadband according to the designated Tier speed in the identified census blocks.</p>	
<p>Another unaffiliated company, as of July 1, 2021, consistent with the representations made in this form, either: (a.) Facilitated material Broadband service according to the designated Tier speed indicated on the Map; or (b.) Did NOT Facilitate Broadband according to the designated Tier speed in the identified census blocks. <input checked="" type="checkbox"/></p>	
D. ADDITIONAL EXPLANATION (To the extent you believe additional explanation is required to ensure that you are communicating full and accurate information, please use the below space to further explain, qualify, or substantiate your above certification/attestation/affirmation. To the extent necessary, please feel free to upload additional explanations/supporting documentation.	
Cumberland Telephone Company no longer provides wireless internet in this area. Cumberland Telephone Company's Fiber is mainly used for transport between Bridgewater and Fontanelle.	
E. SIGNATURE* By typing your full name you are affixing your signature to this form and attesting to the accuracy of the information submitted herein.	
Authorized Signature:	Devan Amdor
Title:	General Manager
Date:	7/14/2021

*PLEASE READ BEFORE SIGNING: By signing and submitting this form, I, on my own behalf or as a representative of the company identified above, as applicable, expressly represent that I am authorized to make the above factual representation on behalf of said company and/or myself, as applicable, and under penalty of perjury as authorized by Iowa Code section 622.1 and pursuant to the laws of the state of Iowa, certify the following with respect to this form submitted on behalf of said company and/or myself: any statements, representations, warranties, certifications, or attestations made in this form, including any attachments or enclosures associated therewith, are true and accurate; I, on behalf of said company and/or myself, have not knowingly made any false statements or representations in this form. In addition to any criminal penalties authorized by Iowa Code section 720.2 that may result from any false statements of material fact made herein or any other remedies available at law, equity, or otherwise, if it is subsequently determined that I have made a statement, representation, warranty, certification, or attestation in this form, or any attachments or enclosures associated herewith, that is later proven untrue in any material respect, the company on which I submitted this form on behalf of may be disqualified from current incentive programs administered by the Office or may be ordered to repay the Office the entire amount of any funds previously distributed by the Office to said company in connection with any current incentive programs administered by the Office. OCIO makes no guarantees as to whether the information supplied by you will result in any change to the Broadband Availability Map V4 or the way any incentive decisions are reviewed, scored, or decided. This form, as completed, any attachments hereto, and any other information or materials submitted to the Office in connection with this form or related inquiry, shall be considered public records and shall be made available for public examination and/or disseminated upon request by third parties as required by Iowa Code chapter 22. The Office reserves the right to reject this form and related information considered any information communicated through this form as neither credible nor probative if this form is not fully and properly filled out.

Please familiarize yourself with the following terms prior to determining whether a broadband block may be appealed.

Targeted Service Area	A Targeted Service Area (TSA) is a census block within which no communications service provider offers or facilitates broadband service at or above the tier 1, tier 2, or tier 3 download and upload speeds.
Existing Broadband Speed Tiers	The speed tiers used to determine whether a broadband block qualifies as a Targeted Service Area on the Statewide Broadband Availability Map.
Tier 1	A maximum download speed of less than 25 megabits per second (Mbps) and a maximum upload speed of less than 3 Mbps.
Tier 2	A minimum download speed of greater than or equal to 25 Mbps but less than 50 Mbps. No minimum upload speed is applicable for Tier 2.
Tier 3	A minimum download speed of greater than or equal to 50 Mbps but less than 80 Mbps. No minimum upload speed is applicable for Tier 3.
Non-TSA	A non-TSA is a census block in which speeds are Facilitated at greater than equal to 80 Mbps
Facilitate	A communication service provider's ability to provide broadband service at or above the download and upload speeds defined above to a home, farm, school, or business within a commercially reasonable time and at a commercially reasonable price upon request by a consumer. This does <i>not</i> pertain to the Broadband Infrastructure used to facilitate said service; Broadband Infrastructure is <i>not</i> a basis for appeal.

CENSUS BLOCK ID	Prior Reporting to FCC or Connected Nation Definitions 1. <u>In Error</u> means data was reported incorrectly to FCC or Connected Nation. 2. <u>Correct</u> means data was reported coreectly to FCC or Connected Nation. 3. <u>No Response</u> means data was not reported to FCC or Connected Nation. 4. <u>Unknown</u> means data is incorrect for unknown reasons	Speed Tier that is reflected on Map v.4	What do you believe the Map should reflect for Facilitated service as of July1, 2021?
190019602002083	Unknown	non-TSA	Tier 1
190019602002109	Unknown	non-TSA	Tier 1
190019602002307	Unknown	non-TSA	Tier 1
190019602002075	Unknown	non-TSA	Tier 1
190019602002054	Unknown	non-TSA	Tier 1
190019602002079	Unknown	non-TSA	Tier 1
190019602002077	Unknown	non-TSA	Tier 1
190019602002303	Unknown	non-TSA	Tier 1
190019602002210	Unknown	non-TSA	Tier 1
190019602002067	Unknown	non-TSA	Tier 1
190019603004114	Unknown	non-TSA	Tier 1
190019603004087	Unknown	non-TSA	Tier 1
190019603004089	Unknown	non-TSA	Tier 1
190019603004110	Unknown	non-TSA	Tier 1
190019602002020	Unknown	non-TSA	Tier 1
190019602002021	Unknown	non-TSA	Tier 1
190019603004007	Unknown	non-TSA	Tier 1
190019602002022	Unknown	non-TSA	Tier 1
190019602002060	Unknown	non-TSA	Tier 1
190019602002035	Unknown	non-TSA	Tier 1
190019603004017	Unknown	non-TSA	Tier 1
190019603004003	Unknown	non-TSA	Tier 1
190019603004004	Unknown	non-TSA	Tier 1

[illegible]

Fixed Wireless Challenge

Fixed wireless has its place in the telecommunications arena. It can provide service to a number of subscribers using a shared bandwidth to provide data, voice and video. The access points can be located in elevated locations to provide service to a given areas. These systems can be installed relatively quickly, providing power, permits, clear line-of-sight and back-haul are available.

There are, however, a number of factors that will degrade the performance of a fixed wireless link. The following takes a look at some of these factors.

Free space loss is the starting point in determining the loss in signal strength and performance of the link between the transmitter and the receiver. Free space loss is dependent on frequency and distance. As these variables increase, the loss increases.

One of the general equations used to estimate free space loss is:

$$L_{FSL} = 92.45 + 20 \log \log f_{GHz} + 20 \log \log d_{km}$$

Where:

- L_{FSL} – total path loss in dB
- f – frequency in GHz
- d – distance in kilometers

An example: With a fixed frequency of $f = 5.8$ GHz and a distance varying from 0.5 km (0.31 miles) to 3 km (1.86 miles):

$$L_{FSL} = 92.45 + 20 \log \log (5.8) + 20 \log \log (0.5) = 101.70 \text{ dB}$$

$$L_{FSL} = 92.45 + 20 \log \log (5.8) + 20 \log \log (1.25) = 109.65 \text{ dB}$$

$$L_{FSL} = 92.45 + 20 \log \log (5.8) + 20 \log \log (2.0) = 113.78 \text{ dB}$$

$$L_{FSL} = 92.45 + 20 \log \log (5.8) + 20 \log \log (3.0) = 117.23 \text{ dB}$$

For a change of just over 1.55 miles, the results in an additional 15.53 dB of loss in the signal path.

Another factor that can have a major impact on system performance is vegetation attenuation. Vegetation loss is dependent on transmit frequency and the depth of the

Fixed Wireless Challenge

foliage that the signal is passing through. As can be seen from the equation below, the loss will increase with both frequency and depth of the foliage.

One of the equations used to determine the vegetation attenuation is:

$$L_{veg} = 0.2f^{0.3}d^{0.6}$$

Here:

- f – frequency in MHz
- d – depth of foliage

Using the same frequency as above, 5800 MHz (5.8 GHz) and depth of foliage between 5 and 20 feet.

$$L_{veg} = 0.2(5800)^{0.3}(5)^{0.6} = 3.47 \text{ dB}$$

$$L_{veg} = 0.2(5800)^{0.3}(10)^{0.6} = 5.25 \text{ dB}$$

$$L_{veg} = 0.2(5800)^{0.3}(15)^{0.6} = 6.70 \text{ dB}$$

$$L_{veg} = 0.2(5800)^{0.3}(20)^{0.6} = 7.96 \text{ dB}$$

This shows how quickly the loss increase as the depth of the foliage increase. This can be thought of as a tree growing between the transmitter and the receiver. The system performance drops off as the tree grows.

The vegetation can be related to the Fresnel zone. As seen in the figure below, the Fresnel zone expands as it moves away from the antennas. The Fresnel zone will be at its maximum diameter at the mid-point between the transmit and receive antennas. As can be seen in the figure below.

Fixed Wireless Challenge

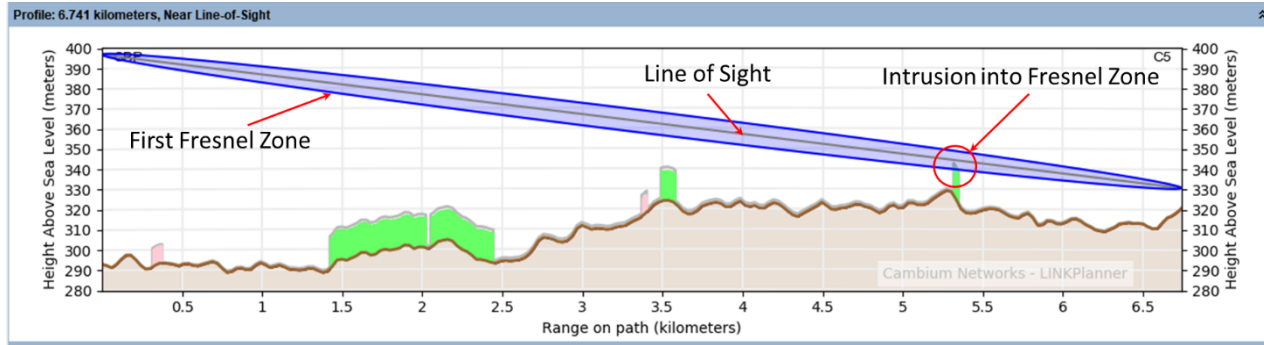


Figure 1 Fresnel Zone

As can be seen, the Line-of-Sight may be clear, but the Fresnel zone may not. The deeper the intrusion into the Fresnel zone the bigger the effect. This can run from 0 dB to the total blockage of the signal.

To see how these two factors affect the link, we add the losses together as 15.53 dB + 7.96 dB to obtain an additional loss of up to 23.49 dB. At 3 km the total path loss will increase from 117.23 dB up to 140.72 dB.

What does this mean? As the amount of loss increases, the signal level will decrease. As the signal level decreases, it approaches the noise floor. Once the signal reaches and drops below the noise floor, the signal is lost.

As the signal-to-noise ratio decreases, the channel capacity also decreases. This can be estimated using Shannon equation for channel capacity.

$$C \leq W \left[1 + \left(\frac{s}{n} \right) \right]$$

$$C \leq 3.322 W \left(\frac{s}{n} \right)$$

$$C \leq 0.3322 W \left[\frac{s}{N} (dB) \right]$$

Where:

C – channel capacity in (Mbps)

W – channel bandwidth (MHz)

s/n – channel signal to noise (power ratio)

S/N – channel signal to noise (dB)

The following table shows the effect of decreasing the signal power against a fixed noise floor.

Table 1 Channel Capacity vs. S/N Ratio

Fixed Wireless Challenge

Parameters	dBm	S/N (dB)	Capacity (Mbps)
Noise	-56	54	231.25
Signal	-110		
Noise	-75	35	206.8
Signal	-110		
Noise	-90	20	175.69
Signal	-110		
Noise	-100	10	138.38
Signal	-110		
Noise	-109	1	40
Signal	-110		

In addition to these, there are a number of other factors that impact the performance. Without going into details, the following include:

- Gas absorption
- Precipitation
 - Rain
 - Snow
 - Hail
 - Fog
 - Haze
- Obstacles
 - Buildings
 - Trees
 - Terrain
- Ground reflection
 - Water
 - Flat ground
 - Paved areas
- Fading
 - Atmospheric changes
 - Ground and water reflection changes
 - Flat fading
 - Frequency-selective fading
- Multipath fading
- Interference
 - Other transmitter on the same frequency
 - Transmitters located in the side-lobes
 - Background noise
 - Intentional interference

Fixed Wireless Challenge

All of these will have a detrimental effect on the system performance. Some factors will have more of an effect than other.

One method of increasing the through put is to use various modulation formats. For the equipment used in this document, Quadrature Amplitude Modulation (QAM). This format allows multiple bits of information to be transmitted at one time. The table below show how many bits can be transmitted for each of the modulation levels.

Table 2 QAM Modulations

Modulation	MIMO Type	Aggregated Max Data Rate	# BITS per symbol
256 QAM	B	271.97 Mbps	8
128 QAM	B	237.98 Mbps	7
64 QAM	B	203.98 Mbps	6
32 QAM	B	169.98 Mbps	5
16 QAM	B	135.99 Mbps	4
8 QUAM	B	101.99 Mbps	3
QPSK	B	67.99 Mbps	2
256 QAM	A	135.99 Mbps	8
64 QAM	A	101.99 Mbps	6
16 QAM	A	67.99 Mbps	4
QPSK	A	34.00 Mbps	2

These levels are affected by rain. The heavier the rain the lower the modulation level that can be used. The figure below provides an example of rain fade on the link.

Fixed Wireless Challenge

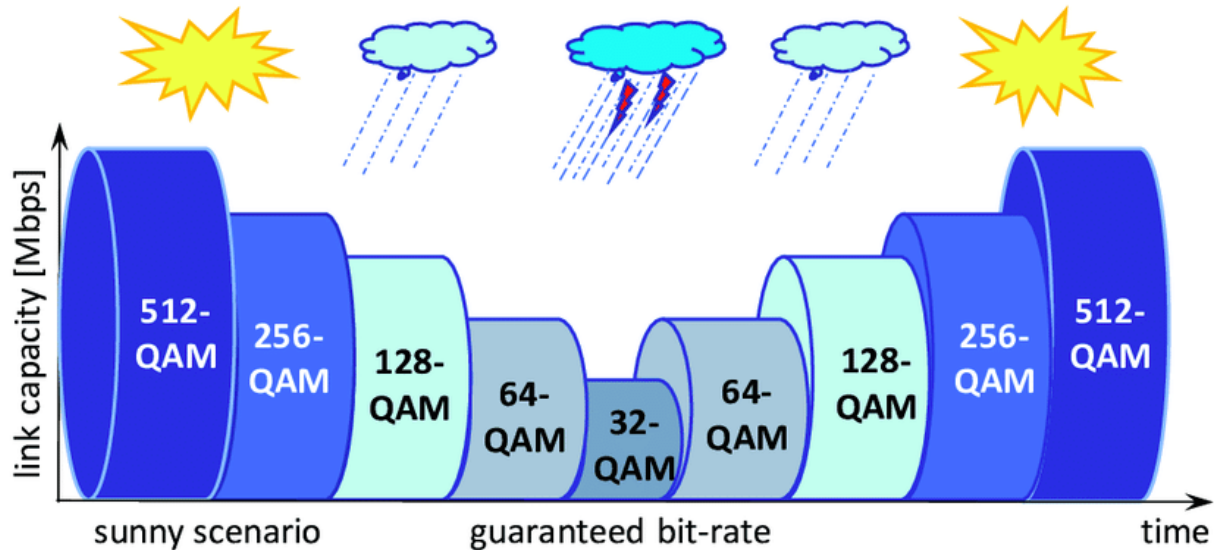


Figure 2 Rain Fade

The following looks at some simulations that demonstrate the effects. The tool used to generate the following: Cambium LINKPlanner 64-bit, 5.5.0 build date 2021-07-01.

The following simulations are based on a tower located between Dumont and Parkersburg; IA. Six potential subscriber locations were selected.

NOTE: This configuration does not represent the actual configuration for these locations, but is being used for demonstrations purposes only. This is being used to demonstrate the effects of some common variables on the link performance.

Fixed Wireless Challenge

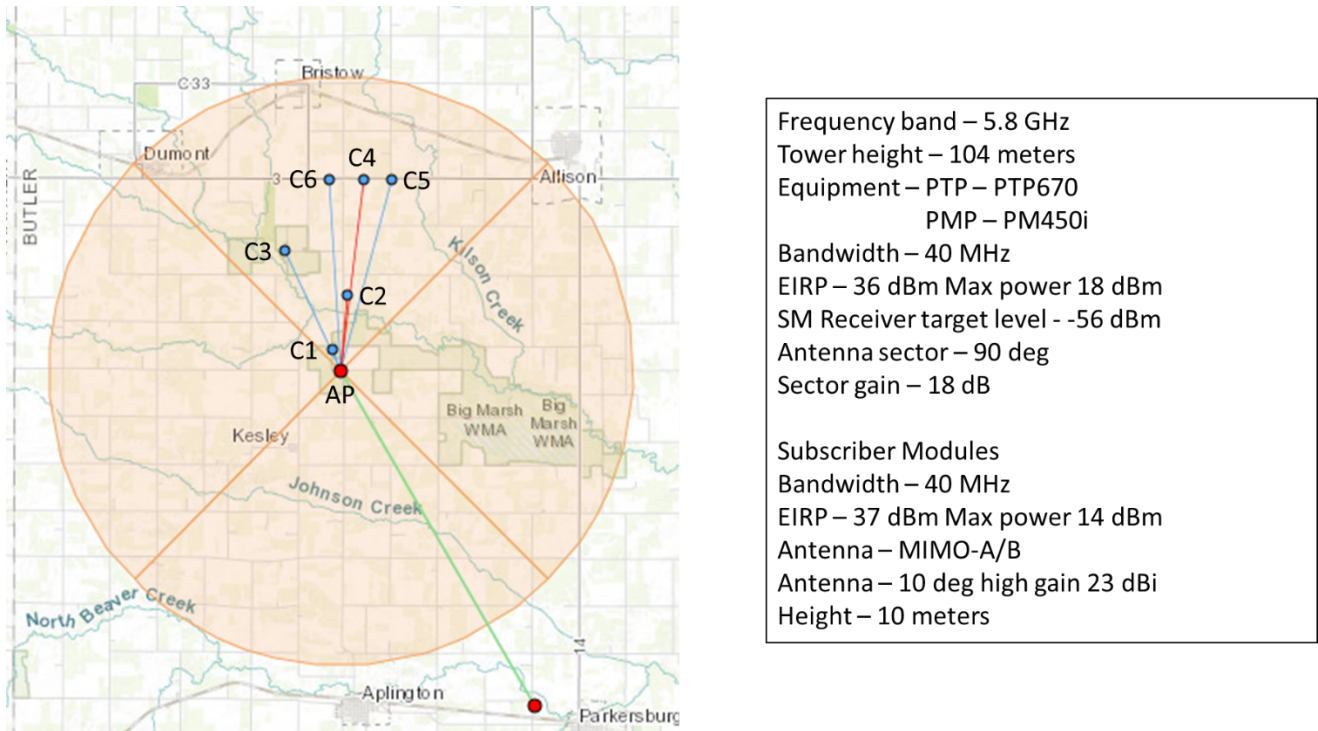


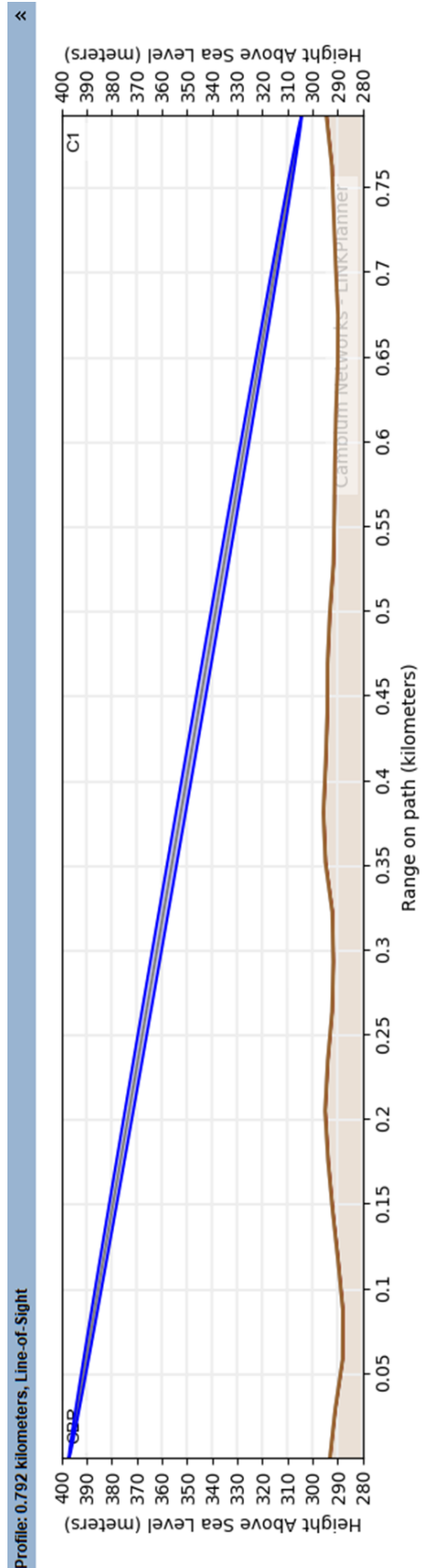
Figure 3 Baseline for Simulations

The following figures show the elevation view of the link. The access point is located on the left side of the figure and the subscriber is on the right side. Raised green areas indicate the presents of vegetation, trees in these cases. The red raised areas indicate the presents of different structures, homes, sheds, animal confinements, grain binds and the like.

The frequency, location, height of the antennas, transmit power, receive level and bandwidth are maintain through all simulations.

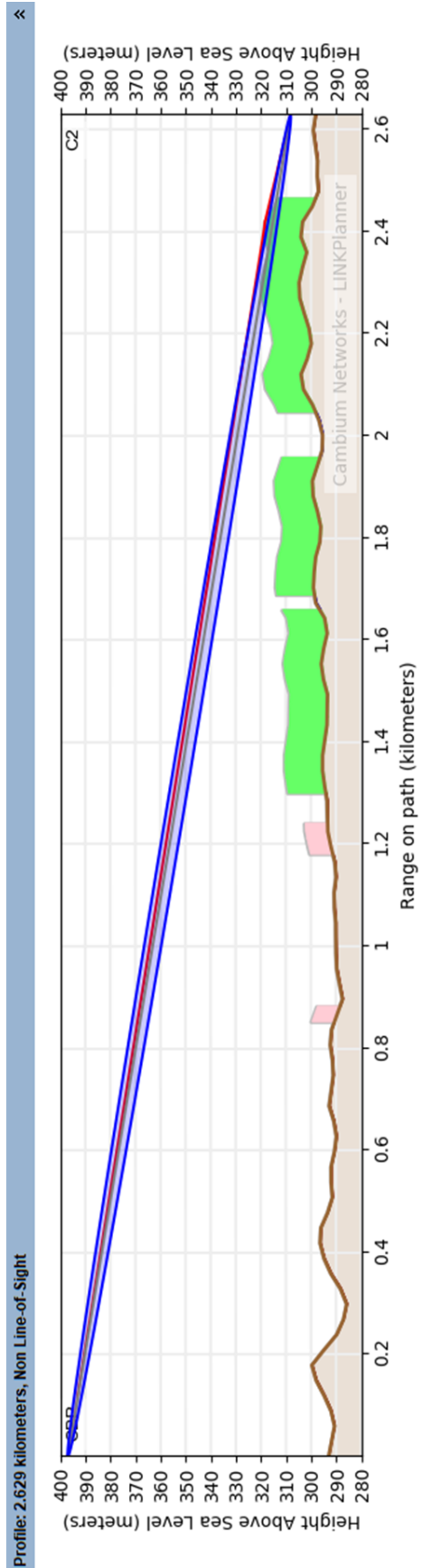
During the simulations, the percent availability and the interference levels were changed to show how some minor changes can have a large effect on the link budget.

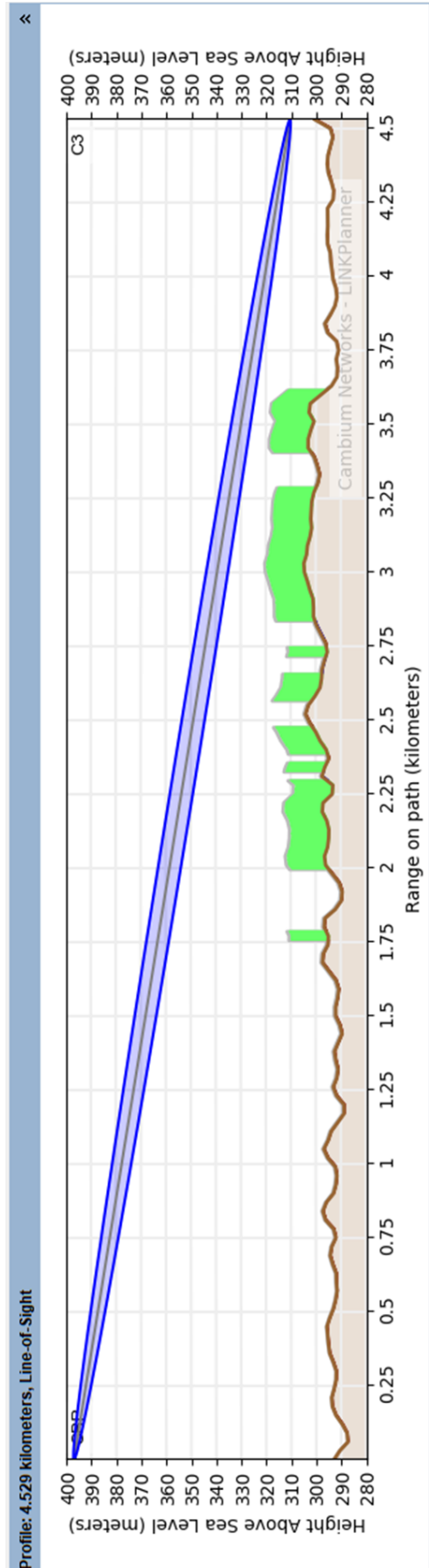
Fixed Wireless Challenge



Subscriber C1
Distance 0.96 km/0.60 miles
Clear Line-of-Sight and Fresnel zone
Fairly flat terrain

Fixed Wireless Challenge





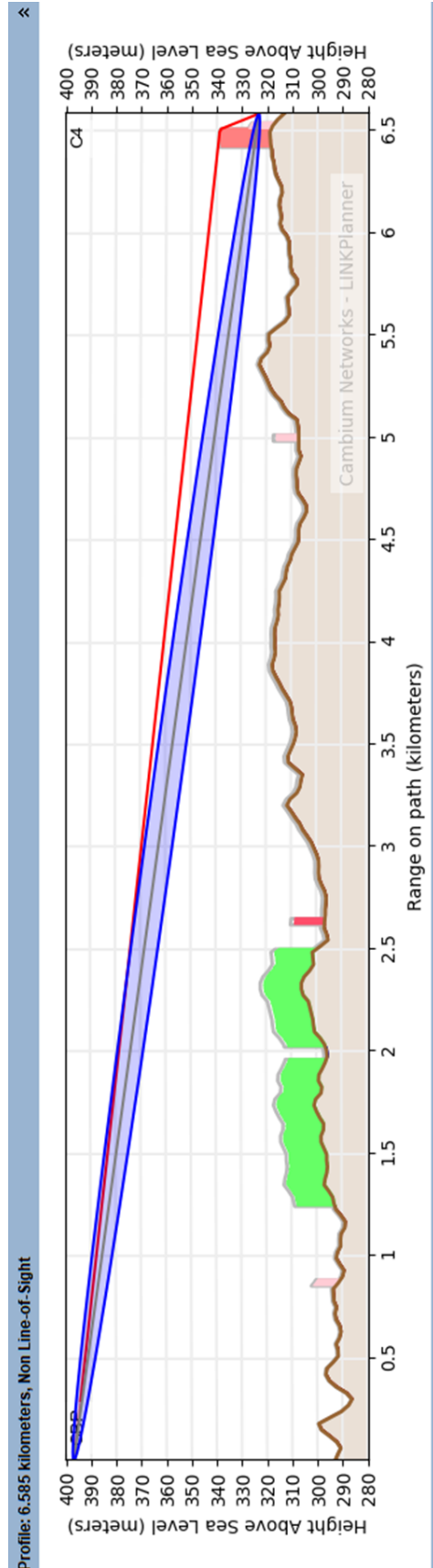
Subscriber C3

Distance 4.53 km/2.81 miles

Clear Line-of-Sight and Fresnel zone

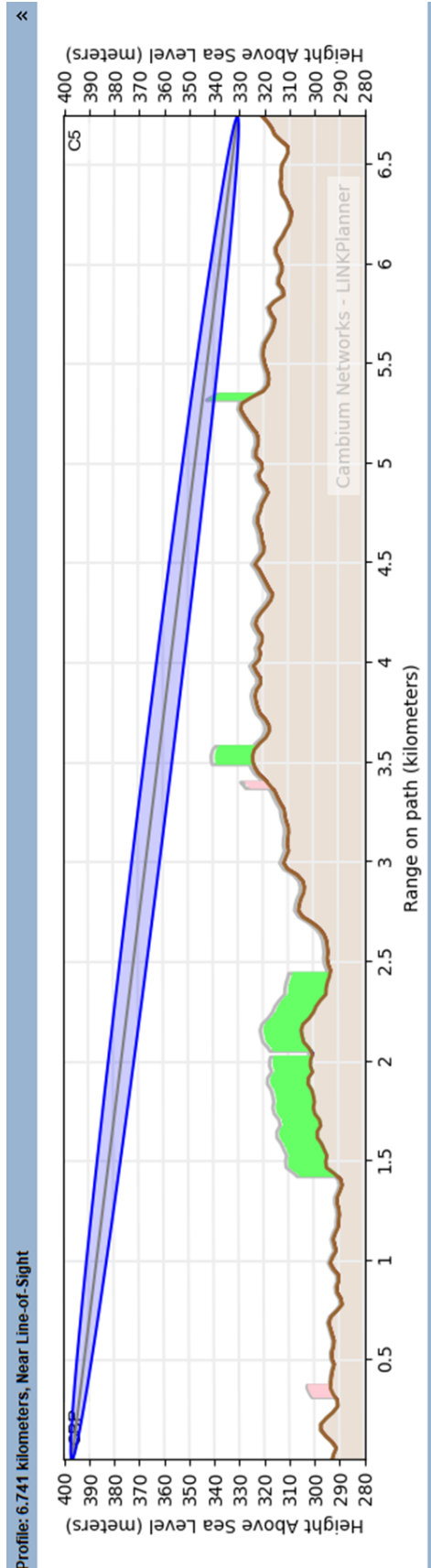
Terrain rough with trees along path

Fixed Wireless Challenge



Subscriber C4
Distance 6.53 km/4.06 miles
Site shadowed by another structure
Terrain rough with trees and other
structures along the path

Fixed Wireless Challenge



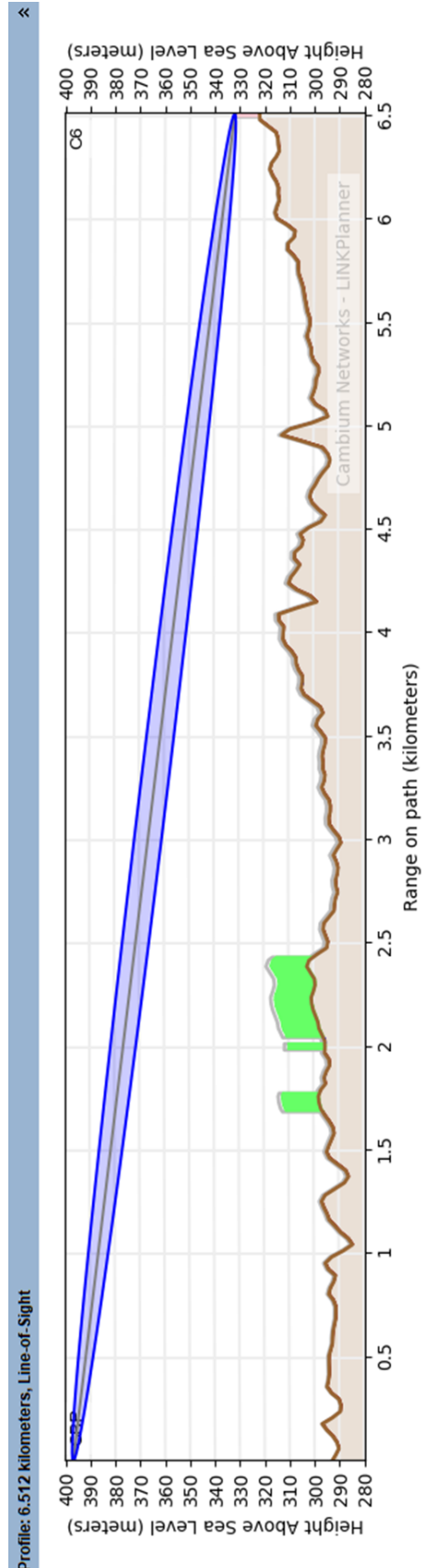
Subscriber C5

Distance 6.73 km/4.18 miles

Small tree entering the Fresnel zone

Terrain rough with increase in elevation and trees and other structures along the path

Fixed Wireless Challenge



Subscriber C6
Distance 6.51 km/4.04 miles
Clear Line-of-Sight and Fresnel zone
Rough terrain with trees along the path

Fixed Wireless Challenge

Fixed Wireless Simulation Initial Condition						
Parameters	C1	C2	C3	C4	C5	C6
AP Interference	-90 dBm	-90 dBm	-90 dBm	-90 dB	-90 dB	-90 dB
SM Interference	-90 dBm	-90 dBm	-90 dBm	-90 dB	-90 dB	-90 dB
Distance	0.96 km/0.60 miles	2.63 km/1.63 miles	4.53 km/2.81 miles	6.53 km/4.06 miles	6.73 km/4.18 miles	6.51 km/4.04 miles
Predicted Received Power	-53 dBm	-83 dBm	-64 dBm	-30.18 dBm	-72 dBm	-67 dBm
Min Availability Required	99.0000%	99.0000%	99.0000%	99.0000%	99.0000%	99.0000%
Max Usable Mode	x7 (128QAM MIMO-B)	N/A	x4 (16QAM MIMO-B)	N/A	x1(QPSK MIMO-A)	x4(16QAM MIMO-B)
Predicted Available	99.9995%	6.12%	100.0000%	0.0000%	99.9984%	99.3320%
System Gain Margin	22.48 dB	-2.58 dB	16.35 dB	-30.18 dB	7.74 dB	13.43 dB
Free Space Path Loss	105.68 dB	116.09 dB	120.82 dB	124.07 dB	124.27 dB	123.97 dB
Gaseous Absorption Loss	0.01 dB	0.02 dB	0.04 dB	0.06 dB	0.06 dB	0.06 dB
Excess Path Loss	0.00 dB	25.63 dB	0.00 dB	43.29 dB	4.87 dB	0.00 dB
Total Path Loss	105.68 dB	141.74 dB	120.86 dB	167.42 dB	129.20 dB	124.03 dB

Fixed Wireless Challenge

Fixed Wireless Simulation Increase in Availability						
Parameters	C1	C2	C3	C4	C5	C6
AP Interference	-90 dBm	-90 dBm	-90 dBm	-90 dB	-90 dB	-90 dB
SM Interference	-90 dBm	-90 dBm	-90 dBm	-90 dB	-90 dB	-90 dB
Distance	0.96 km/0.60 miles	2.63 km/1.63 miles	4.53 km/2.81 miles	6.53 km/4.06 miles	6.73 km/4.18 miles	6.51 km/4.04 miles
Predicted Received Power	-53 dBm	-83 dBm	-64 dBm	-30.18 dBm	-72 dBm	-67 dBm
Min Availability Required	99.9990%	99.9990%	99.9990%	99.9990%	99.9990%	99.9990%
Max Usable Mode	x6 (128QAM MIMO-B)	N/A	x2 (16QAM MIMO-B)	N/A	N/A	x2(QAM MIMO-B)
Predicted Available	99.9995%	6.12%	100.0000%	0.0000%	99.9984%	99.3320%
System Gain Margin	22.48 dB	-2.58 dB	16.35 dB	-30.18 dB	7.74 dB	13.43 dB
Free Space Path Loss	105.68 dB	116.09 dB	120.82 dB	124.07 dB	124.27 dB	123.97 dB
Gaseous Absorption Loss	0.01 dB	0.02 dB	0.04 dB	0.06 dB	0.06 dB	0.06 dB
Excess Path Loss	0.00 dB	25.63 dB	0.00 dB	43.29 dB	4.87 dB	0.00 dB
Total Path Loss	105.68 dB	141.74 dB	120.86 dB	167.42 dB	129.20 dB	124.03 dB
Number of seconds per year	31,557,600					
Outage at 99.0000%	315.576	3.6525	days			
Outage at 99.9000%	31,557.6	8.766	hours			
Outage at 99.9900%	3155.76	52.596	seconds			
Outage at 99.9990%	315.576	5.2596	seconds			
Outage at 99.9999%	31.5576	0.52596	seconds			

Fixed Wireless Challenge

Fixed Wireless Simulation Results Increase in Interference						
Parameters	C1	C2	C3	C4	C5	C6
AP Interference	-75 dBm	-75 dBm	-75 dBm	-75 dBm	-75 dBm	-75 dBm
SM Interference	-75 dBm	-75 dBm	-75 dBm	-75 dBm	-75 dBm	-90 dB
Distance	0.96 km/0.60 miles	2.63 km/1.63 miles	4.53 km/2.81 miles	6.53 km/4.06 miles	6.73 km/4.18 miles	6.51 km/4.04 miles
Predicted Received Power	-53 dBm	-83 dBm	-64 dBm	-110 dBm	-72 dBm	-67 dBm
Min Availability Required	99.0000%	99.0000%	99.0000%	99.0000%	99.0000%	99.0000%
Max Usable Mode	x4 (16QAM MIMO-B)	N/A	x1 (QAM MIMO-B)	N/A	N/A	N/A
Predicted Available	99.9831%	0.0000%	99.9762%	0.0000%	0.0126%	0.0001%
System Gain Margin	10.75 dB	-14.46 dB	4.47 dB	-42.06 dB	-4.14 dB	1.55 dB
Free Space Path Loss	105.68 dB	116.09 dB	120.82 dB	124.07 dB	124.27 dB	123.97 dB
Gaseous Absorption Loss	0.01 dB	0.02 dB	0.04 dB	0.06 dB	0.06 dB	0.06 dB
Excess Path Loss	0.00 dB	25.63 dB	0.00 dB	43.29 dB	4.87 dB	0.00 dB
Total Path Loss	105.68 dB	141.74 dB	120.86 dB	167.42 dB	129.20 dB	124.03 dB
Increase AP interference	-75 dB					
Increase SM interference	-75 dB					

Fixed Wireless Challenge

In summary, what this shows is that there are a number of variables that have a detrimental effect on the performance of fixed wireless networks. The networks will work well as long as the conditions are near ideal. As can be seen above, each variable can have an affect on the link by its self. However, in the operating environment, each variable not only has its own effect on the link, but will also affects other parameters which results in more degradation of the signal.

For example, the signal-to-noise (S/N) ratio will cause the signal power level to decrease, it also effects the Bit Error Rate (BER). Thus, with a high S/N ratio in addition to losing power the number of errors will increase also. This will result in the loss of usable information.

Another example is rain fade. As the perception increases, the amount of data that can be transmitted over the link decreases. This means that the amount of bandwidth available to each user on that link will be reduced. If this happens to the backhaul channel, all access point associated with that back haul link will be affected. This results in a lowering of the bandwidth available to each subscriber.

A fixed wireless link will behave in a manner similar to an xDSL link. As the length of a xDSL link increases, the uplink and downlink speeds decrease. A wireless link will behave in a similar manner. This is due to the spreading of the pulses. Each pulsed in made up of a number of different frequencies that are centered on the center frequency. As the pulse propagates through a medium, (air or copper in this case) each frequency will travel as a slightly different velocity. As the distance gets longer, the pulses will spread until they begin to interfere with the pulses on either side. In addition to the spreading, the power of the pulse will also decrease. This results in an increase in the BER, resulting in the loss of usable information.

The performance for a wireless network can not be given in general terms, covering a large area. Each location needs to be evaluated on its own. Two subscribes using the same equipment and at the same distance from the access point can have very different levels of performance. The difference between the two can be as simple as a tree in the path at is intruding into the Fresnel zone.

The fixed wireless performance will be affected by changes during the seasons, the weather, new construction in the area, addition of new service provides located in the general area, and the stability of the power to the equipment. All will have an effect on the performance of the fixed wireless link.

APPENDIX C
THIRD-PARTY AFFIRMATIONS AND SUPPLEMENTAL EVIDENCE

July 28, 2021

Office of the Chief Information Officer of the State of Iowa
c/o Matt Behrens
200 E. Grand Avenue
Des Moines, IA 50309

Massena Telephone Company
Mike Klocke
mike@massenatelephone.com

To whom it may concern:

This is a letter of inquiry concerning your firm's prior reporting to the State of Iowa Office of the Chief Information Officer ("OCIO" or "Office") regarding the availability of Broadband service in certain United States Census Block(s) within Iowa. Our Office received a formal notice of appeal challenging information reported on the Broadband Availability Map Version 4 ("V4") of the Statewide Broadband Availability Map ("Map"). The data reflected on V4 of the Map was either (1) provided by you to the Office's contractor ("Connected Nation") during the data collection window of April 15 through April 30, 2021, (2) gathered from other sources (such as FCC) that collected data from you, or (3) carried forward from prior reporting made to this Office by you under a previous Map version. Map V4 categorizes census blocks according to the facilitated speed offered within the block. The publication of V4 triggered a formal appeal window, as explained in more detail below, during which time we received this appeal. The appeal we received claims that the data reflected on V4 of the Map is inaccurate. This appeal can be found at <https://ocio.iowa.gov/broadband-availability-map-version-4-challenge-process> (see Docket Numbers 21-1021). **To resolve this matter, the Office requests that your firm provide information concerning your service in the affected Census Blocks as further identified and described below by August 11, 2021.**

On July 1, 2021, the Office officially published the final version of V4 of the Map, which identifies where Broadband service was offered or Facilitated at a tier 1, tier 2, or tier 3 speed as of July 1, 2021.¹ V4 of the Map is based primarily on data submitted to Connected Nation and/or FCC by Communication Service Providers concerning their service capabilities in the State of Iowa² and on informal comments/feedback supplied by interested parties as part of the informal comment/feedback process described above and in which your firm may have participated. V4 of the Map, and a detailed background of the same, can be found at: <https://ocio.iowa.gov/broadband-availability-map-version-4>. Overall, the new map reflects Targeted Service Areas defined as a census block within which no communications service provider offers or facilitates broadband service at or above the tier 1, tier 2, or tier 3 download and upload speeds. The tier speeds are defined as follows:

"Tier 1" means a maximum download speed of less than 25 Mbps and a maximum upload speed of less

¹See Iowa Code §§ 8B.1(12), 8B.10. *See also* Iowa Admin. Code r. 129—20.1, 20.3, 20.4.

²See Iowa Admin. Code r. 129—20.3.

than three Mbps.

“**Tier 2**” means a minimum download speed of greater than or equal to 25 Mbps but less than 50 Mbps. No minimum upload speed is applicable for Tier 2.

“**Tier 3**” means a minimum download speed of greater than or equal to 50 Mbps but less than 80 Mbps. No minimum upload speed is applicable for Tier 3.

“**Non-TSA**” means a census block in which speeds are facilitated at greater than or equal to 80 Mbps.

Through the official publication of V4 of the Map, the Office triggered the challenge process it is required by law to administer.³ Pursuant to applicable administrative rules, within 20 days after the Office’s official publication of V4 of the Map, “any person or party aggrieved or adversely affected by such determination may challenge the office’s finding by filing a notice of appeal with the office” along with all evidence or information supporting their appeal. Iowa Admin. Code r. 129—20.5(1). Specifically, interested parties were permitted to provide the Office with evidence and information of the following: broadband is unavailable from a provider listed for the area (census block); or, that broadband speed is not as advertised.

V4 of the Map currently shows that service is Facilitated at either a tier 1, tier 2, or tier 3 speed per designated census block. As part of the above-outlined process, OCIO received a formal notice of appeal and supporting evidence or information from one or more Iowa residents or Communications Service Provider, claiming that Broadband service is not offered or Facilitated at that speed tier.

At this time, the Office requests your assistance in making an accurate determination as to whether your firm facilitates broadband service at the designated speed tier for 10% or more of the geographic area of each challenged census block as of July 1, 2021 to the Census Blocks identified in Exhibit A. To that end, the Office requests that you:

- 1) Complete and return the attached Affirmation of Service or Lack of Service in Census Blocks Broadband Grants Program Broadband Availability Map Challenge Process Form (see Exhibit A, Affirmation tab), by **August 11, 2021**. Pursuant to this form, OCIO requests that a representative with legal authority to bind your firm:
 - a) Confirm that your firm Facilitated Broadband service to the Census Blocks identified in Exhibit A as of July 1, 2021, and indicate the speeds at which your firm facilitated broadband service in those blocks. For purposes of this representation, “‘Facilitate’ means a communication service provider’s ability to provide broadband service at or above the download and upload speeds specified in the definition of targeted service area in this section to a home, farm, school, or business **within a commercially reasonable time and at a commercially reasonable price upon request by a consumer.**” Iowa Code § 8B.1(5) (emphasis added).
 - b) Fully complete all other aspects of the Form.
- 2) In addition to the form, please also submit any other evidence or information in your possession to the Office that supports your prior representations to the Office regarding the Census Blocks identified in Exhibit A. Examples of evidence and information the Office would consider particularly probative include “Bills or invoices provided to or received by customers in the

³See Iowa Code § 8B.10(2); Iowa Admin. Code r. 129—20.5.

applicable census block(s) which identify the specific download and upload speeds provided or received as of [July 1, 2021].” Iowa Admin. Code r. 129—20.5(8).

Please return the completed form and any supporting evidence or information to ociogrants@iowa.gov.

Please note that you are under no legal obligation to respond to this request for information. Generally, pursuant to applicable administrative rules, any affected person or party is free to submit evidence or information to the Office in support of or in opposition to an appeal within 20 days after the appeal has been posted to ocio.iowa.gov/broadband. Iowa Admin. Code r. 129—20.5(3). However, this Office is affirmatively reaching out to notify you of the appeal, of the circumstances surrounding the appeal, and to solicit your feedback and position. If this Office does not receive your response via Exhibit A of the Form by **August 11, 2021** (10 business days from the date of this letter), the Office will make a final decision based on the evidence and information currently available to it. Iowa Admin. Code r. 129—20.5(4), (5).

OCIO strives at all times to produce and disseminate accurate information. We appreciate your assistance in helping us achieve our statutory mandate.

Sincerely,

Office of the Chief Information Officer,
State of Iowa

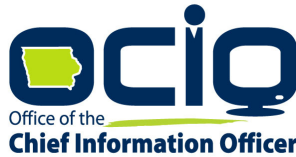


EXHIBIT A

**Affirmation of Service or Lack of Service in Census Blocks
Broadband Grants Program Broadband Availability Map Challenge Process**

A. RESPONDENT INFORMATION

Company Name	Massena Telephone Company
Address	211 Main Street
City	Massena
State	Iowa
Zip	50853

B. DESIGNATED CONTACT INFORMATION

Contact Name	Mike Klocke
Contact Phone Number	712-779-2227
Contact Email	mike@massenatelephone.com

C. AFFIRMATION

In signing and submitting this form, the above-identified company, and its duly authorized representative signing on behalf thereof, hereby affirms under penalty of perjury that, as represented in its submission:

Company, consistent with the representations made in this form, and regardless of whether your company's prior reporting to the FCC or State of Iowa was correct or in error, meets one of the following criteria in each of the identified census blocks as of July 1, 2021:

1. Company Facilitated service at the indicated speeds on the Affirmation tab as of July 1, 2021 to more than 10% of the census block; or
2. Company did NOT offer or Facilitate material Broadband service.

Please indicate the speeds offered for each census block on the Affirmation tab.

D. ADDITIONAL EXPLANATION (To the extent you believe additional explanation is required to ensure that you are communicating full and accurate information, please use the below space to further explain, qualify, or substantiate your above affirmation. To the extent necessary, please feel free to upload additional explanations/supporting documentation.)

We do not serve at least 10% of the area of these CBs. We serve one customer in one block, but we must stop short of committing to serving 10% of the CB. The other appears to be a mistake or miscommunication between MTC and Connected Nation.

E. SIGNATURE* By typing your full name you are affixing your signature to this form and attesting to the accuracy of the information submitted herein.

Authorized Signature:	Mike Klocke
Title:	CEO
Date:	8/4/2021

*PLEASE READ BEFORE SIGNING: By signing and submitting this form, I, on my own behalf or as a representative of the company identified above, as applicable, expressly represent that I am authorized to make the above factual representation on behalf of said company and/or myself, as applicable, and under penalty of perjury as authorized by Iowa Code section 622.1 and pursuant to the laws of the state of Iowa, certify the following with respect to this form submitted on behalf of said company and/or myself: any statements, representations, warranties, certifications, or attestations made in this form, including any attachments or enclosures associated therewith, are true and accurate; I, on behalf of said company and/or myself, have not knowingly made any false statements or representations in this form. In addition to any criminal penalties authorized by Iowa Code section 720.2 that may result from any false statements of material fact made herein or any other remedies available at law, equity, or otherwise, if it is subsequently determined that I have made a statement, representation, warranty, certification, or attestation in this form, or any attachments or enclosures associated herewith, that is later proven untrue in any material respect, the company on which I submitted this form on behalf of may be disqualified from current incentive programs administered by the Office or may be ordered to repay the Office the entire amount of any funds previously distributed by the Office to said company in connection with any current incentive programs administered by the Office. OCIO makes no guarantees as to whether the information supplied by you will result in any change to the Broadband Availability Map V4 or the way any incentive decisions are reviewed, scored, or decided. This form, as completed, any attachments hereto, and any other information or materials submitted to the Office in connection with this form or related inquiry, shall be considered public records and shall be made available for public examination and/or disseminated upon request by third parties as required by Iowa Code chapter 22. The Office reserves the right to reject this form and relatedly consider any information communicated through this form as neither credible nor probative if this form is not fully and properly filled out.

Please familiarize yourself with the following terms prior to determining whether broadband service is being Facilitated to the census block.

Facilitate	<p>A communication service provider's ability to provide broadband service at or above the download and upload speeds defined above to a home, farm, school, or business within a commercially reasonable time and at a commercially reasonable price upon request by a consumer. This does <i>not</i> pertain to the Broadband Infrastructure used to facilitate said service; Broadband Infrastructure is <i>not</i> a basis for appeal.</p>
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Facilitate	<p>A communication service provider's ability to provide broadband service at or above the download and upload speeds defined above to a home, farm, school, or business within a commercially reasonable time and at a commercially reasonable price upon request by a consumer. This does <i>not</i> pertain to the Broadband Infrastructure used to facilitate said service; Broadband Infrastructure is <i>not</i> a basis for appeal.</p>
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[illegible]

July 28, 2021

Office of the Chief Information Officer of the State of Iowa
c/o Matt Behrens
200 E. Grand Avenue
Des Moines, IA 50309

Mediacom Communications
Thomas Larsen
tlarsen@mediacomcc.com

To whom it may concern:

This is a letter of inquiry concerning your firm's prior reporting to the State of Iowa Office of the Chief Information Officer ("OCIO" or "Office") regarding the availability of Broadband service in certain United States Census Block(s) within Iowa. Our Office received a formal notice of appeal challenging information reported on the Broadband Availability Map Version 4 ("V4") of the Statewide Broadband Availability Map ("Map"). The data reflected on V4 of the Map was either (1) provided by you to the Office's contractor ("Connected Nation") during the data collection window of April 15 through April 30, 2021, (2) gathered from other sources (such as FCC) that collected data from you, or (3) carried forward from prior reporting made to this Office by you under a previous Map version. Map V4 categorizes census blocks according to the facilitated speed offered within the block. The publication of V4 triggered a formal appeal window, as explained in more detail below, during which time we received this appeal. The appeal we received claims that the data reflected on V4 of the Map is inaccurate. This appeal can be found at <https://ocio.iowa.gov/broadband-availability-map-version-4-challenge-process> (see Docket Numbers 21-1002, 21-1014, 21-1021, 21-1023, 21-1031, 21-1037, 21-1038, 21-1044). **To resolve this matter, the Office requests that your firm provide information concerning your service in the affected Census Blocks as further identified and described below by August 11, 2021.**

On July 1, 2021, the Office officially published the final version of V4 of the Map, which identifies where Broadband service was offered or Facilitated at a tier 1, tier 2, or tier 3 speed as of July 1, 2021.¹ V4 of the Map is based primarily on data submitted to Connected Nation and/or FCC by Communication Service Providers concerning their service capabilities in the State of Iowa² and on informal comments/feedback supplied by interested parties as part of the informal comment/feedback process described above and in which your firm may have participated. V4 of the Map, and a detailed background of the same, can be found at: <https://ocio.iowa.gov/broadband-availability-map-version-4>. Overall, the new map reflects Targeted Service Areas defined as a census block within which no communications service provider offers or facilitates broadband service at or above the tier 1, tier 2, or tier 3 download and upload speeds. The tier speeds are defined as follows:

¹See Iowa Code §§ 8B.1(12), 8B.10. See also Iowa Admin. Code r. 129—20.1, 20.3, 20.4.

²See Iowa Admin. Code r. 129—20.3.

“**Tier 1**” means a maximum download speed of less than 25 Mbps and a maximum upload speed of less than three Mbps.

“**Tier 2**” means a minimum download speed of greater than or equal to 25 Mbps but less than 50 Mbps. No minimum upload speed is applicable for Tier 2.

“**Tier 3**” means a minimum download speed of greater than or equal to 50 Mbps but less than 80 Mbps. No minimum upload speed is applicable for Tier 3.

“**Non-TSA**” means a census block in which speeds are facilitated at greater than or equal to 80 Mbps.

Through the official publication of V4 of the Map, the Office triggered the challenge process it is required by law to administer.³ Pursuant to applicable administrative rules, within 20 days after the Office’s official publication of V4 of the Map, “any person or party aggrieved or adversely affected by such determination may challenge the office’s finding by filing a notice of appeal with the office” along with all evidence or information supporting their appeal. Iowa Admin. Code r. 129—20.5(1). Specifically, interested parties were permitted to provide the Office with evidence and information of the following: broadband is unavailable from a provider listed for the area (census block); or, that broadband speed is not as advertised.

V4 of the Map currently shows that service is Facilitated at either a tier 1, tier 2, or tier 3 speed per designated census block. As part of the above-outlined process, OCIO received a formal notice of appeal and supporting evidence or information from one or more Iowa residents or Communications Service Provider, claiming that Broadband service is not offered or Facilitated at that speed tier.

At this time, the Office requests your assistance in making an accurate determination as to whether your firm facilitates broadband service at the designated speed tier for 10% or more of the geographic area of each challenged census block as of July 1, 2021 to the Census Blocks identified in Exhibit A. To that end, the Office requests that you:

- 1) Complete and return the attached Affirmation of Service or Lack of Service in Census Blocks Broadband Grants Program Broadband Availability Map Challenge Process Form (see Exhibit A, Affirmation tab), by **August 11, 2021**. Pursuant to this form, OCIO requests that a representative with legal authority to bind your firm:
 - a) Confirm that your firm Facilitated Broadband service to the Census Blocks identified in Exhibit A as of July 1, 2021, and indicate the speeds at which your firm facilitated broadband service in those blocks. For purposes of this representation, “‘Facilitate’ means a communication service provider’s ability to provide broadband service at or above the download and upload speeds specified in the definition of targeted service area in this section to a home, farm, school, or business **within a commercially reasonable time and at a commercially reasonable price upon request by a consumer.**” Iowa Code § 8B.1(5) (emphasis added).
 - b) Fully complete all other aspects of the Form.
- 2) In addition to the form, please also submit any other evidence or information in your possession to the Office that supports your prior representations to the Office regarding the Census Blocks identified in Exhibit A. Examples of evidence and information the Office would consider particularly probative include “Bills or invoices provided to or received by customers in the

³See Iowa Code § 8B.10(2); Iowa Admin. Code r. 129—20.5.

applicable census block(s) which identify the specific download and upload speeds provided or received as of [July 1, 2021].” Iowa Admin. Code r. 129—20.5(8).

Please return the completed form and any supporting evidence or information to ociogrants@iowa.gov.

Please note that you are under no legal obligation to respond to this request for information. Generally, pursuant to applicable administrative rules, any affected person or party is free to submit evidence or information to the Office in support of or in opposition to an appeal within 20 days after the appeal has been posted to ocio.iowa.gov/broadband. Iowa Admin. Code r. 129—20.5(3). However, this Office is affirmatively reaching out to notify you of the appeal, of the circumstances surrounding the appeal, and to solicit your feedback and position. If this Office does not receive your response via Exhibit A of the Form by **August 11, 2021** (10 business days from the date of this letter), the Office will make a final decision based on the evidence and information currently available to it. Iowa Admin. Code r. 129—20.5(4), (5).

OCIO strives at all times to produce and disseminate accurate information. We appreciate your assistance in helping us achieve our statutory mandate.

Sincerely,

Office of the Chief Information Officer,
State of Iowa

**EXHIBIT A****Affirmation of Service or Lack of Service in Census Blocks
Broadband Grants Program Broadband Availability Map Challenge Process****A. RESPONDENT INFORMATION**

Company Name	Mediacom Iowa LLC
Address	1 Mediacom Way
City	Mediacom Park
State	NY
Zip	10918

B. DESIGNATED CONTACT INFORMATION

Contact Name	Thomas Larsen
Contact Phone Number	845-443-2754
Contact Email	tlarsen@mediacomcc.com

C. AFFIRMATION

In signing and submitting this form, the above-identified company, and its duly authorized representative signing on behalf thereof, hereby affirms under penalty of perjury that, as represented in its submission:

Company, consistent with the representations made in this form, and regardless of whether your company's prior reporting to the FCC or State of Iowa was correct or in error, meets one of the following criteria in each of the identified census blocks as of July 1, 2021:


1. Company Facilitated service at the indicated speeds on the Affirmation tab as of July 1, 2021 to more than 10% of the census block; or
2. Company did NOT offer or Facilitate material Broadband service.

Please indicate the speeds offered for each census block on the Affirmation tab.

D. ADDITIONAL EXPLANATION (To the extent you believe additional explanation is required to ensure that you are communicating full and accurate information, please use the below space to further explain, qualify, or substantiate your above affirmation. To the extent necessary, please feel free to upload additional explanations/supporting documentation.)

Mediacom facilitates material broadband service at speeds of 1000 Mbps down by 50 Mbps up in 185 of the census blocks identified on the affirmation page. Mediacom does not facilitate material broadband service to 37 of the census blocks identified on the affirmation page. As supporting documentation, Mediacom is attaching a list of serviceable addresses from our billing system within the 185 census blocks in which we facilitate material broadband services.

E. SIGNATURE* By typing your full name you are affixing your signature to this form and attesting to the accuracy of the information submitted herein.

Authorized Signature:	
Title: SVP, Government & Public Relations	Thomas J. Larsen
Date:	29-Jul-21

*PLEASE READ BEFORE SIGNING: By signing and submitting this form, I, on my own behalf or as a representative of the company identified above, as applicable, expressly represent that I am authorized to make the above factual representation on behalf of said company and/or myself, as applicable, and under penalty of perjury as authorized by Iowa Code section 622.1 and pursuant to the laws of the state of Iowa, certify the following with respect to this form submitted on behalf of said company and/or myself: any statements, representations, warranties, certifications, or attestations made in this form, including any attachments or enclosures associated therewith, are true and accurate; I, on behalf of said company and/or myself, have not knowingly made any false statements or representations in this form. In addition to any criminal penalties authorized by Iowa Code section 720.2 that may result from any false statements of material fact made herein or any other remedies available at law, equity, or otherwise, if it is subsequently determined that I have made a statement, representation, warranty, certification, or attestation in this form, or any attachments or enclosures associated herewith, that is later proven untrue in any material respect, the company on which I submitted this form on behalf of may be disqualified from current incentive programs administered by the Office or may be ordered to repay the Office the entire amount of any funds previously distributed by the Office to said company in connection with any current incentive programs administered by the Office. OCIO makes no guarantees as to whether the information supplied by you will result in any change to the Broadband Availability Map V4 or the way any incentive decisions are reviewed, scored, or decided. This form, as completed, any attachments hereto, and any other information or materials submitted to the Office in connection with this form or related inquiry, shall be considered public records and shall be made available for public examination and/or disseminated upon request by third parties as required by Iowa Code chapter 22. The Office reserves the right to reject this form and relatedly consider any information communicated through this form as neither credible nor probative if this form is not fully and properly filled out.

Please familiarize yourself with the following terms prior to determining whether broadband service is being Facilitated to the census block.

Facilitate

A communication service provider's ability to provide broadband service at or above the download and upload speeds defined above to a home, farm, school, or business within a commercially reasonable time and at a commercially reasonable price upon request by a consumer. This does *not* pertain to the Broadband Infrastructure used to facilitate said service; Broadband Infrastructure is *not* a basis for appeal.

CENSUS BLOCK ID	Do you Facilitate service to more than 10% of the geographic area of the Census Block?	Download Speed	Upload Speed
190019603004073	Correct	1000	50
190019603004074	In Error	N/A	N/A
190019603004083	In Error	N/A	N/A
190019603004164	In Error	N/A	N/A
190019603004174	In Error	N/A	N/A
190019603004175	In Error	N/A	N/A
190059603001001	Correct	1000	50
190059603001002	Correct	1000	50
190059603001003	Correct	1000	50
190059603001004	Correct	1000	50
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190059603001007	Correct	1000	50

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190059603001010	Correct	1000	50
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190059603001020	Correct	1000	50
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190059603002005	In Error	N/A	N/A
190059603002006	Correct	1000	50
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190059603002008	Correct	1000	50
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190059603002019	Correct	1000	50
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190059603002022	Correct	1000	50
190059603002023	Correct	1000	50
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190059603002032	Correct	1000	50
190059603002033	Correct	1000	50
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190059603003013	Correct	1000	50

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190059603003015	Correct	1000	50
190059603003016	Correct	1000	50
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190059603004011	Correct	1000	50
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190059603004015	Correct	1000	50
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190059603004033	Correct	1000	50
190059603004034	Correct	1000	50
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190059603004041	In Error	N/A	N/A
190059603004042	In Error	N/A	N/A
190119607001002	Correct	1000	50
190119607002007	In Error	N/A	N/A
190119607003065	In Error	N/A	N/A
190130027002014	No	N/A	N/A
190130027002016	No	N/A	N/A
190130027002019	No	N/A	N/A
190490502003003	In Error	N/A	N/A
190490503003007	In Error	N/A	N/A
190959601003030	In Error	N/A	N/A
190959601003032	In Error	N/A	N/A
190959601003033	In Error	N/A	N/A
190959602004001	Correct	1000	50
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190959602004021	Correct	1000	50
190959602004024	Correct	1000	50
190959602004025	Correct	1000	50
190959602004026	In Error	N/A	N/A
190959602004143	In Error	N/A	N/A
190959602004145	Correct	1000	50
190959602004147	In Error	N/A	N/A

190959602004150	In Error	N/A	N/A
190959602004159	In Error	N/A	N/A
190959602004160	In Error	N/A	N/A
191070801001004	No	N/A	N/A
191070801001006	Yes	1000	50
191070801001007	No	N/A	N/A
191070801001008	No	N/A	N/A
191070801001009	Yes	1000	50
191070801001010	Yes	1000	50
191070801001011	Yes	1000	50
191070801001012	Yes	1000	50
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191070801001014	Yes	1000	50
191070801001015	Yes	1000	50
191070801001016	Yes	1000	50
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191070801001027	Yes	1000	50
191070801001028	Yes	1000	50
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191070801001030	Yes	1000	50
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191070801001032	Yes	1000	50
191070801001033	Yes	1000	50
191070801001034	Yes	1000	50
191070801001035	Yes	1000	50
191070801001036	Yes	1000	50
191070801001037	Yes	1000	50

191070801001038	Yes	1000	50
191070801001039	Yes	1000	50
191070801001040	Yes	1000	50
191070801001041	Yes	1000	50
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191070801001061	In Error	N/A	N/A
191070801001062	Correct	1000	50
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191070801001064	Correct	1000	50
191839605001168	In Error	N/A	N/A
191839605001169	In Error	N/A	N/A
191839605001170	In Error	N/A	N/A

July 28, 2021

Office of the Chief Information Officer of the State of Iowa
c/o Matt Behrens
200 E. Grand Avenue
Des Moines, IA 50309

United States Cellular Corporation
Kathy Hust
kathy.hust@uscellular.com

To whom it may concern:

This is a letter of inquiry concerning your firm's prior reporting to the State of Iowa Office of the Chief Information Officer ("OCIO" or "Office") regarding the availability of Broadband service in certain United States Census Block(s) within Iowa. Our Office received a formal notice of appeal challenging information reported on the Broadband Availability Map Version 4 ("V4") of the Statewide Broadband Availability Map ("Map"). The data reflected on V4 of the Map was either (1) provided by you to the Office's contractor ("Connected Nation") during the data collection window of April 15 through April 30, 2021, (2) gathered from other sources (such as FCC) that collected data from you, or (3) carried forward from prior reporting made to this Office by you under a previous Map version. Map V4 categorizes census blocks according to the facilitated speed offered within the block. The publication of V4 triggered a formal appeal window, as explained in more detail below, during which time we received this appeal. The appeal we received claims that the data reflected on V4 of the Map is inaccurate. This appeal can be found at <https://ocio.iowa.gov/broadband-availability-map-version-4-challenge-process> (see Docket Numbers 21-1021, 21-1030, 21-1031, 21-1032, 21-1033, 21-1034, 21-1037, 21-1038). **To resolve this matter, the Office requests that your firm provide information concerning your service in the affected Census Blocks as further identified and described below by August 11, 2021.**

On July 1, 2021, the Office officially published the final version of V4 of the Map, which identifies where Broadband service was offered or Facilitated at a tier 1, tier 2, or tier 3 speed as of July 1, 2021.¹ V4 of the Map is based primarily on data submitted to Connected Nation and/or FCC by Communication Service Providers concerning their service capabilities in the State of Iowa² and on informal comments/feedback supplied by interested parties as part of the informal comment/feedback process described above and in which your firm may have participated. V4 of the Map, and a detailed background of the same, can be found at: <https://ocio.iowa.gov/broadband-availability-map-version-4>. Overall, the new map reflects Targeted Service Areas defined as a census block within which no communications service provider offers or facilitates broadband service at or above the tier 1, tier 2, or tier 3 download and upload speeds. The tier speeds are defined as follows:

¹See Iowa Code §§ 8B.1(12), 8B.10. See also Iowa Admin. Code r. 129—20.1, 20.3, 20.4.

²See Iowa Admin. Code r. 129—20.3.

“**Tier 1**” means a maximum download speed of less than 25 Mbps and a maximum upload speed of less than three Mbps.

“**Tier 2**” means a minimum download speed of greater than or equal to 25 Mbps but less than 50 Mbps. No minimum upload speed is applicable for Tier 2.

“**Tier 3**” means a minimum download speed of greater than or equal to 50 Mbps but less than 80 Mbps. No minimum upload speed is applicable for Tier 3.

“**Non-TSA**” means a census block in which speeds are facilitated at greater than or equal to 80 Mbps.

Through the official publication of V4 of the Map, the Office triggered the challenge process it is required by law to administer.³ Pursuant to applicable administrative rules, within 20 days after the Office’s official publication of V4 of the Map, “any person or party aggrieved or adversely affected by such determination may challenge the office’s finding by filing a notice of appeal with the office” along with all evidence or information supporting their appeal. Iowa Admin. Code r. 129—20.5(1). Specifically, interested parties were permitted to provide the Office with evidence and information of the following: broadband is unavailable from a provider listed for the area (census block); or, that broadband speed is not as advertised.

V4 of the Map currently shows that service is Facilitated at either a tier 1, tier 2, or tier 3 speed per designated census block. As part of the above-outlined process, OCIO received a formal notice of appeal and supporting evidence or information from one or more Iowa residents or Communications Service Provider, claiming that Broadband service is not offered or Facilitated at that speed tier.

At this time, the Office requests your assistance in making an accurate determination as to whether your firm facilitates broadband service at the designated speed tier for 10% or more of the geographic area of each challenged census block as of July 1, 2021 to the Census Blocks identified in Exhibit A. To that end, the Office requests that you:

- 1) Complete and return the attached Affirmation of Service or Lack of Service in Census Blocks Broadband Grants Program Broadband Availability Map Challenge Process Form (see Exhibit A, Affirmation tab), by **August 11, 2021**. Pursuant to this form, OCIO requests that a representative with legal authority to bind your firm:
 - a) Confirm that your firm Facilitated Broadband service to the Census Blocks identified in Exhibit A as of July 1, 2021, and indicate the speeds at which your firm facilitated broadband service in those blocks. For purposes of this representation, “‘Facilitate’ means a communication service provider’s ability to provide broadband service at or above the download and upload speeds specified in the definition of targeted service area in this section to a home, farm, school, or business **within a commercially reasonable time and at a commercially reasonable price upon request by a consumer.**” Iowa Code § 8B.1(5) (emphasis added).
 - b) Fully complete all other aspects of the Form.
- 2) In addition to the form, please also submit any other evidence or information in your possession to the Office that supports your prior representations to the Office regarding the Census Blocks identified in Exhibit A. Examples of evidence and information the Office would consider particularly probative include “Bills or invoices provided to or received by customers in the

³See Iowa Code § 8B.10(2); Iowa Admin. Code r. 129—20.5.

applicable census block(s) which identify the specific download and upload speeds provided or received as of [July 1, 2021].” Iowa Admin. Code r. 129—20.5(8).

Please return the completed form and any supporting evidence or information to ociogrants@iowa.gov.

Please note that you are under no legal obligation to respond to this request for information. Generally, pursuant to applicable administrative rules, any affected person or party is free to submit evidence or information to the Office in support of or in opposition to an appeal within 20 days after the appeal has been posted to ocio.iowa.gov/broadband. Iowa Admin. Code r. 129—20.5(3). However, this Office is affirmatively reaching out to notify you of the appeal, of the circumstances surrounding the appeal, and to solicit your feedback and position. If this Office does not receive your response via Exhibit A of the Form by **August 11, 2021** (10 business days from the date of this letter), the Office will make a final decision based on the evidence and information currently available to it. Iowa Admin. Code r. 129—20.5(4), (5).

OCIO strives at all times to produce and disseminate accurate information. We appreciate your assistance in helping us achieve our statutory mandate.

Sincerely,

Office of the Chief Information Officer,
State of Iowa



Grants, OCIO <ociogrants@iowa.gov>

UScellular response - V4 Map Challenges

Hulings, Thomas C <Thomas.Hulings@uscellular.com>

Wed, Aug 11, 2021 at 7:22 PM

To: "ociogrants@iowa.gov" <ociogrants@iowa.gov>

Cc: "Frakes, Justin C" <Justin.Frakes@uscellular.com>

Hello,

Attached please find UScellular's response to The OCIO's Letter of Inquiry dated July 28, 2021. We will be responding to the August 11 letter very shortly.

Regards

UScellular attests to facilitating service at a minimum of 25/3 Mbps in 31 of the census blocks identified in the OCIO's July 28 letter.

These blocks were upgraded to 25/3 Mbps Broadband as part of USCC's NOFA #003 submission and were in service on July 1, 2021.

The challengers to these census blocks appear to be unfamiliar with UScellular's service offerings, which is understandable given the recency of these deployments. Some challengers, while not mentioning UScellular, appear to have conflated existing WISP offerings with UScellular's 3GPP 5G FWA product. Such offerings are not comparable in performance, reliability, or scalability.

Thomas Hulings
Director of Business Development & Partnerships

UScellular**Desk: 773-355-3265****Mobile: (773) 450-6045****US Cellular Response - V4 Appeal Notice to Respondent 8-11-2021.xlsx**

232K

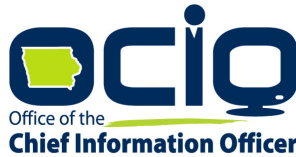


EXHIBIT A

**Affirmation of Service or Lack of Service in Census Blocks
Broadband Grants Program Broadband Availability Map Challenge Process**

A. RESPONDENT INFORMATION

Company Name	United States Cellular Corporation
Address	8410 W. Bryn Mawr
City	Chicago
State	Illinois
Zip	60631

B. DESIGNATED CONTACT INFORMATION

Contact Name	Thomas Hulings
Contact Phone Number	773-355-3625
Contact Email	thomas.hulings@uscellular.com

C. AFFIRMATION

In signing and submitting this form, the above-identified company, and its duly authorized representative signing on behalf thereof, hereby affirms under penalty of perjury that, as represented in its submission:

Company, consistent with the representations made in this form, and regardless of whether your company's prior reporting to the FCC or State of Iowa was correct or in error, meets one of the following criteria in each of the identified census blocks as of July 1, 2021:

1. Company Facilitated service at the indicated speeds on the Affirmation tab as of July 1, 2021 to more than 10% of the census block; or
2. Company did NOT offer or Facilitate material Broadband service.

Please indicate the speeds offered for each census block on the Affirmation tab.

D. ADDITIONAL EXPLANATION (To the extent you believe additional explanation is required to ensure that you are communicating full and accurate information, please use the below space to further explain, qualify, or substantiate your above affirmation. To the extent necessary, please feel free to upload additional explanations/supporting documentation.)

UScellular attests to facilitating service at a minimum of 25/3 Mbps in 31 of the census blocks identified in the OCIO's July 28 letter. These blocks were upgraded to 25/3 Mbps Broadband as part of USCC's NOFA #003 submission and were in service on July 1, 2021. The challengers to these census blocks appear to be unfamiliar with UScellular's service offerings, which is understandable given the recency of these deployments. Some challengers, while not mentioning UScellular, appear to have conflated existing WISP offerings with UScellular's 3GPP 5G FWA product. Such offerings are not comparable in performance, reliability, or scalability.

E. SIGNATURE* By typing your full name you are affixing your signature to this form and attesting to the accuracy of the information submitted herein.

Authorized Signature:	Thomas C. Hulings
Title:	Dir. Business Development & Partnerships
Date:	8/11/2021

*PLEASE READ BEFORE SIGNING: By signing and submitting this form, I, on my own behalf or as a representative of the company identified above, as applicable, expressly represent that I am authorized to make the above factual representation on behalf of said company and/or myself, as applicable, and under penalty of perjury as authorized by Iowa Code section 622.1 and pursuant to the laws of the state of Iowa, certify the following with respect to this form submitted on behalf of said company and/or myself: any statements, representations, warranties, certifications, or attestations made in this form, including any attachments or enclosures associated therewith, are true and accurate; I, on behalf of said company and/or myself, have not knowingly made any false statements or representations in this form. In addition to any criminal penalties authorized by Iowa Code section 720.2 that may result from any false statements of material fact made herein or any other remedies available at law, equity, or otherwise, if it is subsequently determined that I have made a statement, representation, warranty, certification, or attestation in this form, or any attachments or enclosures associated herewith, that is later proven untrue in any material respect, the company on which I submitted this form on behalf of may be disqualified from current incentive programs administered by the Office or may be ordered to repay the Office the entire amount of any funds previously distributed by the Office to said company in connection with any current incentive programs administered by the Office. OCIO makes no guarantees as to whether the information supplied by you will result in any change to the Broadband Availability Map V4 or the way any incentive decisions are reviewed, scored, or decided. This form, as completed, any attachments hereto, and any other information or materials submitted to the Office in connection with this form or related inquiry, shall be considered public records and shall be made available for public examination and/or disseminated upon request by third parties as required by Iowa Code chapter 22. The Office reserves the right to reject this form and relatedly consider any information communicated through this form as neither credible nor probative if this form is not fully and properly filled out.

Please familiarize yourself with the following terms prior to determining whether broadband service is being Facilitated to the census block.

Facilitate

A communication service provider's ability to provide broadband service at or above the download and upload speeds defined above to a home, farm, school, or business within a commercially reasonable time and at a commercially reasonable price upon request by a consumer. This does *not* pertain to the Broadband Infrastructure used to facilitate said service; Broadband Infrastructure is *not* a basis for appeal.

CENSUS BLOCK ID	Do you Facilitate service to more than 10% of the geographic area of the Census Block?	Download Speed	Upload Speed
190019602002020	Yes	25	3
190019602002021	Yes	25	3
190019602002022	Yes	25	3
190019602002027	Yes	25	3
190019602002028	Yes	25	3
190019602002029	Yes	25	3
190019602002030	Yes	25	3
190019602002032	Yes	25	3
190019602002035	Yes	25	3
190019602002049	No		
190019602002054	Yes	25	3
190019602002060	Yes	25	3
190019602002067	Yes	25	3

190019602002077	Yes	25	3
190019602002079	Yes	25	3
190019602002083	No		
190019602002109	No		
190019602002210	Yes	25	3
190019602002305	Yes	25	3
190019603004000	No		
190019603004003	No		
190019603004004	Yes	25	3
190019603004005	No		
190019603004007	No		
190019603004014	Yes	25	3
190019603004016	Yes	25	3
190019603004017	No		
190019603004019	No		
190019603004053	No		
190019603004073	No		
190019603004074	No		
190019603004080	No		
190019603004083	No		
190019603004085	Yes	25	3
190019603004087	No		
190019603004089	No		
190019603004110	Yes	25	3
190019603004114	Yes	25	3
190019603004138	Yes	25	3
190019603004164	No		
190019603004174	Yes	25	3
190019603004175	No		
190693601001144	No		
190693601001145	No		
190693601001168	No		
190693601001169	No		
190693601001172	No		
190693601001174	No		
190693601002118	No		

190693601002119	No		
190693601002122	No		
190693601002138	No		
190693601002142	No		
190693601002144	No		
190693601002151	No		
190693601002153	No		
190693601002159	No		
190693601003017	No		
190693601003018	No		
190693601003019	No		
190693601003020	No		
190693601003024	No		
190693601003026	No		
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190693601003292	No		
190693601003293	No		
190693602001086	No		
190693602001092	No		
190119606002006	No		
190119606002007	No		
190119606002008	No		
190119606002009	No		
190119606002012	No		
190119606002013	No		
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190119606002015	No		
190119606002016	No		
190119606002017	No		
190119606002018	No		
190119606002020	No		
190119606002029	No		
190119606002032	No		
190119606002039	No		

190119606002083	No
190119606002084	No
190119606002085	No
190119606002087	No
190119606003105	No
190119606003106	No
190119606003109	No
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190119606003117	No
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190119607001001	No
190119607001002	No
190119607001003	No
190119607002000	No
190119607002001	No
190119607002002	No
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190119607002007	No
190119607002009	No
190119607003065	No
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190959601003030	Yes
190959601003032	No
190959601003033	No
190959601003035	No
190959601003058	No
190959601003060	No
190959602001084	No

25

3

190959602001085	No
190959602001086	No
190959602001087	No
190959602001089	No
190959602001095	No
190959602001096	No
190959602001097	No
190959602001098	No
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190959602002020	No
190959602002021	No
190959602002022	No
190959602002023	No
190959602002024	No
190959602002025	No
190959602002026	No

190959602002027	No		
190959602002028	No		
190959602002029	No		
190959602002030	No		
190959602002032	No		
190959602002033	No		
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190959602004000	Yes	25	3
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190959602004012	No		
190959602004017	No		
190959602004018	No		
190959602004019	No		
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191712906003089	No
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191130102001036	No
191130102001038	No
191130102001040	No
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191130102001039	No
191130102001041	No

191130102001044	No		
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190150206001251	No		
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190490505002063	No
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190490505002066	No
190490505002070	No
190490505002119	No
190490505002120	No
190490505002128	No
190490507001003	No

July 28, 2021

Office of the Chief Information Officer of the State of Iowa
c/o Matt Behrens
200 E. Grand Avenue
Des Moines, IA 50309

West Iowa Telephone Company
Bob Gannon
bgannon@westelsystems.com

To whom it may concern:

This is a letter of inquiry concerning your firm's prior reporting to the State of Iowa Office of the Chief Information Officer ("OCIO" or "Office") regarding the availability of Broadband service in certain United States Census Block(s) within Iowa. Our Office received a formal notice of appeal challenging information reported on the Broadband Availability Map Version 4 ("V4") of the Statewide Broadband Availability Map ("Map"). The data reflected on V4 of the Map was either (1) provided by you to the Office's contractor ("Connected Nation") during the data collection window of April 15 through April 30, 2021, (2) gathered from other sources (such as FCC) that collected data from you, or (3) carried forward from prior reporting made to this Office by you under a previous Map version. Map V4 categorizes census blocks according to the facilitated speed offered within the block. The publication of V4 triggered a formal appeal window, as explained in more detail below, during which time we received this appeal. The appeal we received claims that the data reflected on V4 of the Map is inaccurate. This appeal can be found at <https://ocio.iowa.gov/broadband-availability-map-version-4-challenge-process> (see Docket Numbers 21-1021). **To resolve this matter, the Office requests that your firm provide information concerning your service in the affected Census Blocks as further identified and described below by August 11, 2021.**

On July 1, 2021, the Office officially published the final version of V4 of the Map, which identifies where Broadband service was offered or Facilitated at a tier 1, tier 2, or tier 3 speed as of July 1, 2021.¹ V4 of the Map is based primarily on data submitted to Connected Nation and/or FCC by Communication Service Providers concerning their service capabilities in the State of Iowa² and on informal comments/feedback supplied by interested parties as part of the informal comment/feedback process described above and in which your firm may have participated. V4 of the Map, and a detailed background of the same, can be found at: <https://ocio.iowa.gov/broadband-availability-map-version-4>. Overall, the new map reflects Targeted Service Areas defined as a census block within which no communications service provider offers or facilitates broadband service at or above the tier 1, tier 2, or tier 3 download and upload speeds. The tier speeds are defined as follows:

"Tier 1" means a maximum download speed of less than 25 Mbps and a maximum upload speed of less

¹See Iowa Code §§ 8B.1(12), 8B.10. *See also* Iowa Admin. Code r. 129—20.1, 20.3, 20.4.

²See Iowa Admin. Code r. 129—20.3.

than three Mbps.

“**Tier 2**” means a minimum download speed of greater than or equal to 25 Mbps but less than 50 Mbps. No minimum upload speed is applicable for Tier 2.

“**Tier 3**” means a minimum download speed of greater than or equal to 50 Mbps but less than 80 Mbps. No minimum upload speed is applicable for Tier 3.

“**Non-TSA**” means a census block in which speeds are facilitated at greater than or equal to 80 Mbps.

Through the official publication of V4 of the Map, the Office triggered the challenge process it is required by law to administer.³ Pursuant to applicable administrative rules, within 20 days after the Office’s official publication of V4 of the Map, “any person or party aggrieved or adversely affected by such determination may challenge the office’s finding by filing a notice of appeal with the office” along with all evidence or information supporting their appeal. Iowa Admin. Code r. 129—20.5(1). Specifically, interested parties were permitted to provide the Office with evidence and information of the following: broadband is unavailable from a provider listed for the area (census block); or, that broadband speed is not as advertised.

V4 of the Map currently shows that service is Facilitated at either a tier 1, tier 2, or tier 3 speed per designated census block. As part of the above-outlined process, OCIO received a formal notice of appeal and supporting evidence or information from one or more Iowa residents or Communications Service Provider, claiming that Broadband service is not offered or Facilitated at that speed tier.

At this time, the Office requests your assistance in making an accurate determination as to whether your firm facilitates broadband service at the designated speed tier for 10% or more of the geographic area of each challenged census block as of July 1, 2021 to the Census Blocks identified in Exhibit A. To that end, the Office requests that you:

- 1) Complete and return the attached Affirmation of Service or Lack of Service in Census Blocks Broadband Grants Program Broadband Availability Map Challenge Process Form (see Exhibit A, Affirmation tab), by **August 11, 2021**. Pursuant to this form, OCIO requests that a representative with legal authority to bind your firm:
 - a) Confirm that your firm Facilitated Broadband service to the Census Blocks identified in Exhibit A as of July 1, 2021, and indicate the speeds at which your firm facilitated broadband service in those blocks. For purposes of this representation, “‘Facilitate’ means a communication service provider’s ability to provide broadband service at or above the download and upload speeds specified in the definition of targeted service area in this section to a home, farm, school, or business **within a commercially reasonable time and at a commercially reasonable price upon request by a consumer.**” Iowa Code § 8B.1(5) (emphasis added).
 - b) Fully complete all other aspects of the Form.
- 2) In addition to the form, please also submit any other evidence or information in your possession to the Office that supports your prior representations to the Office regarding the Census Blocks identified in Exhibit A. Examples of evidence and information the Office would consider particularly probative include “Bills or invoices provided to or received by customers in the

³See Iowa Code § 8B.10(2); Iowa Admin. Code r. 129—20.5.

applicable census block(s) which identify the specific download and upload speeds provided or received as of [July 1, 2021].” Iowa Admin. Code r. 129—20.5(8).

Please return the completed form and any supporting evidence or information to ociogrants@iowa.gov.

Please note that you are under no legal obligation to respond to this request for information. Generally, pursuant to applicable administrative rules, any affected person or party is free to submit evidence or information to the Office in support of or in opposition to an appeal within 20 days after the appeal has been posted to ocio.iowa.gov/broadband. Iowa Admin. Code r. 129—20.5(3). However, this Office is affirmatively reaching out to notify you of the appeal, of the circumstances surrounding the appeal, and to solicit your feedback and position. If this Office does not receive your response via Exhibit A of the Form by **August 11, 2021** (10 business days from the date of this letter), the Office will make a final decision based on the evidence and information currently available to it. Iowa Admin. Code r. 129—20.5(4), (5).

OCIO strives at all times to produce and disseminate accurate information. We appreciate your assistance in helping us achieve our statutory mandate.

Sincerely,

Office of the Chief Information Officer,
State of Iowa

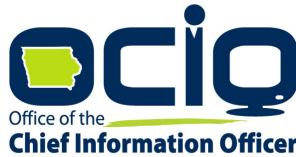


EXHIBIT A

**Affirmation of Service or Lack of Service in Census Blocks
Broadband Grants Program Broadband Availability Map Challenge Process**

A. RESPONDENT INFORMATION

Company Name	West Iowa Telephone Company
Address	012 E. 3rd St., PO Box 330
City	Remsen
State	IA
Zip	51050

B. DESIGNATED CONTACT INFORMATION

Contact Name	Bob Gannon
Contact Phone Number	712-786-5572
Contact Email	bgannon@westelsystems.com

C. AFFIRMATION

In signing and submitting this form, the above-identified company, and its duly authorized representative signing on behalf thereof, hereby affirms under penalty of perjury that, as represented in its submission:

Company, consistent with the representations made in this form, and regardless of whether your company's prior reporting to the FCC or State of Iowa was correct or in error, meets one of the following criteria in each of the identified census blocks as of July 1, 2021:

1. Company Facilitated service at the indicated speeds on the Affirmation tab as of July 1, 2021 to more than 10% of the census block; or
2. Company did NOT offer or Facilitate material Broadband service.

Please indicate the speeds offered for each census block on the Affirmation tab.

D. ADDITIONAL EXPLANATION (To the extent you believe additional explanation is required to ensure that you are communicating full and accurate information, please use the below space to further explain, qualify, or substantiate your above affirmation. To the extent necessary, please feel free to upload additional explanations/supporting documentation.)

The northwest part of this census block falls within our serving territory; however, the only household is located on the southeast side of the block. If service was requested, we likely would not offer to build out to this location due to the geographical location and distance required to reach the household.

E. SIGNATURE* By typing your full name you are affixing your signature to this form and attesting to the accuracy of the information submitted herein.

Authorized Signature:	Robert Gannon
Title:	Chief Executive Officer
Date:	30-Jul-21

*PLEASE READ BEFORE SIGNING: By signing and submitting this form, I, on my own behalf or as a representative of the company identified above, as applicable, expressly represent that I am authorized to make the above factual representation on behalf of said company and/or myself, as applicable, and under penalty of perjury as authorized by Iowa Code section 622.1 and pursuant to the laws of the state of Iowa, certify the following with respect to this form submitted on behalf of said company and/or myself: any statements, representations, warranties, certifications, or attestations made in this form, including any attachments or enclosures associated therewith, are true and accurate; I, on behalf of said company and/or myself, have not knowingly made any false statements or representations in this form. In addition to any criminal penalties authorized by Iowa Code section 720.2 that may result from any false statements of material fact made herein or any other remedies available at law, equity, or otherwise, if it is subsequently determined that I have made a statement, representation, warranty, certification, or attestation in this form, or any attachments or enclosures associated herewith, that is later proven untrue in any material respect, the company on which I submitted this form on behalf of may be disqualified from current incentive programs administered by the Office or may be ordered to repay the Office the entire amount of any funds previously distributed by the Office to said company in connection with any current incentive programs administered by the Office. OCIO makes no guarantees as to whether the information supplied by you will result in any change to the Broadband Availability Map V4 or the way any incentive decisions are reviewed, scored, or decided. This form, as completed, any attachments hereto, and any other information or materials submitted to the Office in connection with this form or related inquiry, shall be considered public records and shall be made available for public examination and/or disseminated upon request by third parties as required by Iowa Code chapter 22. The Office reserves the right to reject this form and relatedly consider any information communicated through this form as neither credible nor probative if this form is not fully and properly filled out.

Please familiarize yourself with the following terms prior to determining whether broadband service is being Facilitated to the census block.

<p>Facilitate</p>	<p>A communication service provider's ability to provide broadband service at or above the download and upload speeds defined above to a home, farm, school, or business within a commercially reasonable time and at a commercially reasonable price upon request by a consumer. This does <i>not</i> pertain to the Broadband Infrastructure used to facilitate said service; Broadband Infrastructure is <i>not</i> a basis for appeal.</p>
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Facilitate	<p>A communication service provider's ability to provide broadband service at or above the download and upload speeds defined above to a home, farm, school, or business within a commercially reasonable time and at a commercially reasonable price upon request by a consumer. This does <i>not</i> pertain to the Broadband Infrastructure used to facilitate said service; Broadband Infrastructure is <i>not</i> a basis for appeal.</p>
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[illegible]

July 28, 2021

Office of the Chief Information Officer of the State of Iowa
c/o Matt Behrens
200 E. Grand Avenue
Des Moines, IA 50309

Windstream Communications
Trent Fellers
trent.fellers@windstream.com

To whom it may concern:

This is a letter of inquiry concerning your firm's prior reporting to the State of Iowa Office of the Chief Information Officer ("OCIO" or "Office") regarding the availability of Broadband service in certain United States Census Block(s) within Iowa. Our Office received a formal notice of appeal challenging information reported on the Broadband Availability Map Version 4 ("V4") of the Statewide Broadband Availability Map ("Map"). The data reflected on V4 of the Map was either (1) provided by you to the Office's contractor ("Connected Nation") during the data collection window of April 15 through April 30, 2021, (2) gathered from other sources (such as FCC) that collected data from you, or (3) carried forward from prior reporting made to this Office by you under a previous Map version. Map V4 categorizes census blocks according to the facilitated speed offered within the block. The publication of V4 triggered a formal appeal window, as explained in more detail below, during which time we received this appeal. The appeal we received claims that the data reflected on V4 of the Map is inaccurate. This appeal can be found at <https://ocio.iowa.gov/broadband-availability-map-version-4-challenge-process> (see Docket Numbers 21-1011, 21-1013, 21-1014, 21-1017, 21-1018, 21-1019, 21-1021, 21-1031, 21-1032, 21-1033, 21-1034, 21-1037, 21-1038, 21-1044). **To resolve this matter, the Office requests that your firm provide information concerning your service in the affected Census Blocks as further identified and described below by August 11, 2021.**

On July 1, 2021, the Office officially published the final version of V4 of the Map, which identifies where Broadband service was offered or Facilitated at a tier 1, tier 2, or tier 3 speed as of July 1, 2021.¹ V4 of the Map is based primarily on data submitted to Connected Nation and/or FCC by Communication Service Providers concerning their service capabilities in the State of Iowa² and on informal comments/feedback supplied by interested parties as part of the informal comment/feedback process described above and in which your firm may have participated. V4 of the Map, and a detailed background of the same, can be found at: <https://ocio.iowa.gov/broadband-availability-map-version-4>. Overall, the new map reflects Targeted Service Areas

¹See Iowa Code §§ 8B.1(12), 8B.10. See also Iowa Admin. Code r. 129—20.1, 20.3, 20.4.

²See Iowa Admin. Code r. 129—20.3.

defined as a census block within which no communications service provider offers or facilitates broadband service at or above the tier 1, tier 2, or tier 3 download and upload speeds. The tier speeds are defined as follows:

“**Tier 1**” means a maximum download speed of less than 25 Mbps and a maximum upload speed of less than three Mbps.

“**Tier 2**” means a minimum download speed of greater than or equal to 25 Mbps but less than 50 Mbps. No minimum upload speed is applicable for Tier 2.

“**Tier 3**” means a minimum download speed of greater than or equal to 50 Mbps but less than 80 Mbps. No minimum upload speed is applicable for Tier 3.

“**Non-TSA**” means a census block in which speeds are facilitated at greater than or equal to 80 Mbps.

Through the official publication of V4 of the Map, the Office triggered the challenge process it is required by law to administer.³ Pursuant to applicable administrative rules, within 20 days after the Office’s official publication of V4 of the Map, “any person or party aggrieved or adversely affected by such determination may challenge the office’s finding by filing a notice of appeal with the office” along with all evidence or information supporting their appeal. Iowa Admin. Code r. 129—20.5(1). Specifically, interested parties were permitted to provide the Office with evidence and information of the following: broadband is unavailable from a provider listed for the area (census block); or, that broadband speed is not as advertised.

V4 of the Map currently shows that service is Facilitated at either a tier 1, tier 2, or tier 3 speed per designated census block. As part of the above-outlined process, OCIO received a formal notice of appeal and supporting evidence or information from one or more Iowa residents or Communications Service Provider, claiming that Broadband service is not offered or Facilitated at that speed tier.

At this time, the Office requests your assistance in making an accurate determination as to whether your firm facilitates broadband service at the designated speed tier for 10% or more of the geographic area of each challenged census block as of July 1, 2021 to the Census Blocks identified in Exhibit A. To that end, the Office requests that you:

- 1) Complete and return the attached Affirmation of Service or Lack of Service in Census Blocks Broadband Grants Program Broadband Availability Map Challenge Process Form (see Exhibit A, Affirmation tab), by **August 11, 2021**. Pursuant to this form, OCIO requests that a representative with legal authority to bind your firm:
 - a) Confirm that your firm Facilitated Broadband service to the Census Blocks identified in Exhibit A as of July 1, 2021, and indicate the speeds at which your firm facilitated broadband service in those blocks. For purposes of this representation, “‘Facilitate’ means a communication service provider’s ability to provide broadband service at or above the download and upload speeds specified in the definition of targeted service area in this section to a home, farm, school, or business **within a commercially reasonable time and at a commercially reasonable price upon request by a consumer.**” Iowa Code § 8B.1(5) (emphasis added).
 - b) Fully complete all other aspects of the Form.
- 2) In addition to the form, please also submit any other evidence or information in your possession to the Office that supports your prior representations to the Office regarding the Census Blocks

³See Iowa Code § 8B.10(2); Iowa Admin. Code r. 129—20.5.

identified in Exhibit A. Examples of evidence and information the Office would consider particularly probative include “Bills or invoices provided to or received by customers in the applicable census block(s) which identify the specific download and upload speeds provided or received as of [July 1, 2021].” Iowa Admin. Code r. 129—20.5(8).

Please return the completed form and any supporting evidence or information to ociogrants@iowa.gov.

Please note that you are under no legal obligation to respond to this request for information. Generally, pursuant to applicable administrative rules, any affected person or party is free to submit evidence or information to the Office in support of or in opposition to an appeal within 20 days after the appeal has been posted to ocio.iowa.gov/broadband. Iowa Admin. Code r. 129—20.5(3). However, this Office is affirmatively reaching out to notify you of the appeal, of the circumstances surrounding the appeal, and to solicit your feedback and position. If this Office does not receive your response via Exhibit A of the Form by **August 11, 2021** (10 business days from the date of this letter), the Office will make a final decision based on the evidence and information currently available to it. Iowa Admin. Code r. 129—20.5(4), (5).

OCIO strives at all times to produce and disseminate accurate information. We appreciate your assistance in helping us achieve our statutory mandate.

Sincerely,

Office of the Chief Information Officer,
State of Iowa



EXHIBIT A

**Affirmation of Service or Lack of Service in Census Blocks
Broadband Grants Program Broadband Availability Map Challenge Process**

A. RESPONDENT INFORMATION

Company Name	Windstream Corporation
Address	115 S. 2nd Ave W
City	Newton
State	Iowa
Zip	50208

B. DESIGNATED CONTACT INFORMATION

Contact Name	Logan Shine
Contact Phone Number	515-321-0194
Contact Email	logan.shine@windstream.com

C. AFFIRMATION

In signing and submitting this form, the above-identified company, and its duly authorized representative signing on behalf thereof, hereby affirms under penalty of perjury that, as represented in its submission:

Company, consistent with the representations made in this form, and regardless of whether your company's prior reporting to the FCC or State of Iowa was correct or in error, meets one of the following criteria in each of the identified census blocks as of July 1, 2021:

1. Company Facilitated service at the indicated speeds on the Affirmation tab as of July 1, 2021 to more than 10% of the census block; or
2. Company did NOT offer or Facilitate material Broadband service.

Please indicate the speeds offered for each census block on the Affirmation tab.

D. ADDITIONAL EXPLANATION (To the extent you believe additional explanation is required to ensure that you are communicating full and accurate information, please use the below space to further explain, qualify, or substantiate your above affirmation. To the extent necessary, please feel free to upload additional explanations/supporting documentation.)

E. SIGNATURE* By typing your full name you are affixing your signature to this form and attesting to the accuracy of the information submitted herein.

Authorized Signature:	Logan Shine
Title:	Vice President Government Affairs
Date:	8/16/2021

*PLEASE READ BEFORE SIGNING: By signing and submitting this form, I, on my own behalf or as a representative of the company identified above, as applicable, expressly represent that I am authorized to make the above factual representation on behalf of said company and/or myself, as applicable, and under penalty of perjury as authorized by Iowa Code section 622.1 and pursuant to the laws of the state of Iowa, certify the following with respect to this form submitted on behalf of said company and/or myself: any statements, representations, warranties, certifications, or attestations made in this form, including any attachments or enclosures associated therewith, are true and accurate; I, on behalf of said company and/or myself, have not knowingly made any false statements or representations in this form. In addition to any criminal penalties authorized by Iowa Code section 720.2 that may result from any false statements of material fact made herein or any other remedies available at law, equity, or otherwise, if it is subsequently determined that I have made a statement, representation, warranty, certification, or attestation in this form, or any attachments or enclosures associated herewith, that is later proven untrue in any material respect, the company on which I submitted this form on behalf of may be disqualified from current incentive programs administered by the Office or may be ordered to repay the Office the entire amount of any funds previously distributed by the Office to said company in connection with any current incentive programs administered by the Office. OCIO makes no guarantees as to whether the information supplied by you will result in any change to the Broadband Availability Map V4 or the way any incentive decisions are reviewed, scored, or decided. This form, as completed, any attachments hereto, and any other information or materials submitted to the Office in connection with this form or related inquiry, shall be considered public records and shall be made available for public examination and/or disseminated upon request by third parties as required by Iowa Code chapter 22. The Office reserves the right to reject this form and relatedly consider any information communicated through this form as neither credible nor probative if this form is not fully and properly filled out.

191839605001169	Yes	183.501	51.773	Windstream is capable of providing 25/3 service to >=10% of the locations in this census block
191839605001170	Yes	183.501	51.773	Windstream is capable of providing 25/3 service to >=10% of the locations in this census block
191839605001174	Yes	183.501	51.773	Windstream is capable of providing 25/3 service to >=10% of the locations in this census block
191839605001180	Yes	111.28	31.982	Windstream is capable of providing 25/3 service to >=10% of the locations in this census block
191839605001181	Yes	111.28	31.982	Windstream is capable of providing 25/3 service to >=10% of the locations in this census block
191839605001182	Yes	123.208	51.773	Windstream is capable of providing 25/3 service to >=10% of the locations in this census block
191839605002017	Yes	183.501	51.773	Windstream is capable of providing 25/3 service to >=10% of the locations in this census block
191839605002018	Yes	183.501	128	Windstream is capable of providing 25/3 service to >=10% of the locations in this census block
191839605002023	Yes	85.721	17.039	Windstream is capable of providing 25/3 service to >=10% of the locations in this census block
191839605002024	Yes	85.721	17.039	Windstream is capable of providing 25/3 service to >=10% of the locations in this census block
191839605002029	Yes	183.501	51.773	Windstream is capable of providing 25/3 service to >=10% of the locations in this census block

July 28, 2021

Office of the Chief Information Officer of the State of Iowa
c/o Matt Behrens
200 E. Grand Avenue
Des Moines, IA 50309

Cumberland Telephone Company **OCIO did not receive a response from this provider.**
Jeremy Hall
jhall@netins.net

To whom it may concern:

This is a letter of inquiry concerning your firm's prior reporting to the State of Iowa Office of the Chief Information Officer ("OCIO" or "Office") regarding the availability of Broadband service in certain United States Census Block(s) within Iowa. Our Office received a formal notice of appeal challenging information reported on the Broadband Availability Map Version 4 ("V4") of the Statewide Broadband Availability Map ("Map"). The data reflected on V4 of the Map was either (1) provided by you to the Office's contractor ("Connected Nation") during the data collection window of April 15 through April 30, 2021, (2) gathered from other sources (such as FCC) that collected data from you, or (3) carried forward from prior reporting made to this Office by you under a previous Map version. Map V4 categorizes census blocks according to the facilitated speed offered within the block. The publication of V4 triggered a formal appeal window, as explained in more detail below, during which time we received this appeal. The appeal we received claims that the data reflected on V4 of the Map is inaccurate. This appeal can be found at <https://ocio.iowa.gov/broadband-availability-map-version-4-challenge-process> (see Docket Numbers 21-1021). **To resolve this matter, the Office requests that your firm provide information concerning your service in the affected Census Blocks as further identified and described below by August 11, 2021.**

On July 1, 2021, the Office officially published the final version of V4 of the Map, which identifies where Broadband service was offered or Facilitated at a tier 1, tier 2, or tier 3 speed as of July 1, 2021.¹ V4 of the Map is based primarily on data submitted to Connected Nation and/or FCC by Communication Service Providers concerning their service capabilities in the State of Iowa² and on informal comments/feedback supplied by interested parties as part of the informal comment/feedback process described above and in which your firm may have participated. V4 of the Map, and a detailed background of the same, can be found at: <https://ocio.iowa.gov/broadband-availability-map-version-4>. Overall, the new map reflects Targeted Service Areas defined as a census block within which no communications service provider offers or facilitates broadband service at or above the tier 1, tier 2, or tier 3 download and upload speeds. The tier speeds are defined as follows:

"Tier 1" means a maximum download speed of less than 25 Mbps and a maximum upload speed of less

¹See Iowa Code §§ 8B.1(12), 8B.10. *See also* Iowa Admin. Code r. 129—20.1, 20.3, 20.4.

²See Iowa Admin. Code r. 129—20.3.

than three Mbps.

“**Tier 2**” means a minimum download speed of greater than or equal to 25 Mbps but less than 50 Mbps. No minimum upload speed is applicable for Tier 2.

“**Tier 3**” means a minimum download speed of greater than or equal to 50 Mbps but less than 80 Mbps. No minimum upload speed is applicable for Tier 3.

“**Non-TSA**” means a census block in which speeds are facilitated at greater than or equal to 80 Mbps.

Through the official publication of V4 of the Map, the Office triggered the challenge process it is required by law to administer.³ Pursuant to applicable administrative rules, within 20 days after the Office’s official publication of V4 of the Map, “any person or party aggrieved or adversely affected by such determination may challenge the office’s finding by filing a notice of appeal with the office” along with all evidence or information supporting their appeal. Iowa Admin. Code r. 129—20.5(1). Specifically, interested parties were permitted to provide the Office with evidence and information of the following: broadband is unavailable from a provider listed for the area (census block); or, that broadband speed is not as advertised.

V4 of the Map currently shows that service is Facilitated at either a tier 1, tier 2, or tier 3 speed per designated census block. As part of the above-outlined process, OCIO received a formal notice of appeal and supporting evidence or information from one or more Iowa residents or Communications Service Provider, claiming that Broadband service is not offered or Facilitated at that speed tier.

At this time, the Office requests your assistance in making an accurate determination as to whether your firm facilitates broadband service at the designated speed tier for 10% or more of the geographic area of each challenged census block as of July 1, 2021 to the Census Blocks identified in Exhibit A. To that end, the Office requests that you:

- 1) Complete and return the attached Affirmation of Service or Lack of Service in Census Blocks Broadband Grants Program Broadband Availability Map Challenge Process Form (see Exhibit A, Affirmation tab), by **August 11, 2021**. Pursuant to this form, OCIO requests that a representative with legal authority to bind your firm:
 - a) Confirm that your firm Facilitated Broadband service to the Census Blocks identified in Exhibit A as of July 1, 2021, and indicate the speeds at which your firm facilitated broadband service in those blocks. For purposes of this representation, “‘Facilitate’ means a communication service provider’s ability to provide broadband service at or above the download and upload speeds specified in the definition of targeted service area in this section to a home, farm, school, or business **within a commercially reasonable time and at a commercially reasonable price upon request by a consumer.**” Iowa Code § 8B.1(5) (emphasis added).
 - b) Fully complete all other aspects of the Form.
- 2) In addition to the form, please also submit any other evidence or information in your possession to the Office that supports your prior representations to the Office regarding the Census Blocks identified in Exhibit A. Examples of evidence and information the Office would consider particularly probative include “Bills or invoices provided to or received by customers in the

³See Iowa Code § 8B.10(2); Iowa Admin. Code r. 129—20.5.

applicable census block(s) which identify the specific download and upload speeds provided or received as of [July 1, 2021].” Iowa Admin. Code r. 129—20.5(8).

Please return the completed form and any supporting evidence or information to ociogrants@iowa.gov.

Please note that you are under no legal obligation to respond to this request for information. Generally, pursuant to applicable administrative rules, any affected person or party is free to submit evidence or information to the Office in support of or in opposition to an appeal within 20 days after the appeal has been posted to ocio.iowa.gov/broadband. Iowa Admin. Code r. 129—20.5(3). However, this Office is affirmatively reaching out to notify you of the appeal, of the circumstances surrounding the appeal, and to solicit your feedback and position. If this Office does not receive your response via Exhibit A of the Form by **August 11, 2021** (10 business days from the date of this letter), the Office will make a final decision based on the evidence and information currently available to it. Iowa Admin. Code r. 129—20.5(4), (5).

OCIO strives at all times to produce and disseminate accurate information. We appreciate your assistance in helping us achieve our statutory mandate.

Sincerely,

Office of the Chief Information Officer,
State of Iowa