SECRETARY'S RECORD, PUBLIC SERVICE COMMISSION

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

In the Matter of the Nebraska)	Application No. NUSF-133
Public Service Commission, on)	Progression Order No. 1
its own motion, to implement)	
standards for the verification)	ORDER REVISING SPEED TESTING
of broadband service provider)	REQUIREMENTS
coverage and speed data.)	
)	
)	Entered: October 8, 2024

BY THE COMMISSION:

On March 15, 2022, the Nebraska Public Service Commission ("Commission") opened this proceeding on its own motion to implement standards for the verification of broadband service provider coverage and speed data in accordance with Neb. Rev. Stat. § 86-324.02. Notice of the application was published in The Daily Record, Omaha, Nebraska, on March 22, 2022. Following comments and a hearing in this matter, the Commission entered an order on November 8, 2022 ("Nov. 8 Order") setting speed test requirements for Nebraska Telecommunications Universal Service Fund ("NUSF") high-cost recipients and certain entities receiving funding from other Commission grant programs. Pursuant to the Nov. 8 Order, these entities are required to submit to the Commission speed testing data on an annual basis, by July 31 of each calendar year. 1

On June 25, 2024, the Commission entered an order ("June 25 Order") finding that the speed testing requirements set forth in the Nov. 8 Order should be reviewed to determine if any changes or improvements should be made. In that order, the Commission set forth several topics for comment and discussion, and set a hearing in this matter. Comments were received from Charter FiberLink-Nebraska, LLC and Time Warner Cable Information Services (Nebraska) (collectively "Charter"); Cox Nebraska Telcom, LLC ("Cox); the Nebraska Rural Independent Companies ("RIC"); the Rural Telecommunications Coalition of Nebraska ("RTCN"); Qwest Corporation d/b/a CenturyLink QC and United Telephone Company of the West d/b/a CenturyLink (collectively "CenturyLink"); and Windstream Nebraska, Inc. ("Windstream").

¹ For purposes of this docket, the phrases "speed testing" and "performance testing" are generally used interchangeably.

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HEARING

A hearing in this matter was held on August 6, 2024. Sallie Dietrich appeared on behalf of the Telecommunications and NUSF Department of the Commission. Andrew Pollock appeared on behalf of the Nebraska Rural Broadband Alliance ("NRBA"). Paul Schudel appeared on behalf of RIC. Kate McNamara appeared on behalf of CenturyLink. Exhibits numbered 1 through 8 were offered and accepted, including each of the above-described comments submitted in this matter.

Cullen Robbins, Director of the Communications and NUSF Department of the Commission ("Department"), testified on behalf of the Department. Mr. Robbins provided staff recommendations regarding the speed testing framework currently in place. Mr. Robbins stated that continual testing is justified, but agreed with some commenters that the frequency of testing could be adjusted for networks that have successfully passed the speed testing requirements.² Mr. Robbins stated that some level of continued testing is important to verify that networks are being maintained.³

With regard to latency testing, Mr. Robbins agreed with some commenters that the current latency testing requirements could be relaxed.⁴ He stated that the Commission should retain the ability to ask carriers to test for latency on a case-by-case basis, including in response to customer feedback or complaints.⁵ Mr. Robbins noted that latency testing may be more important for networks that are not fiber-based or are hybrid.⁶

Mr. Robbins also discussed the possibility of allowing carriers to perform file-based testing, wherein carriers submit speed testing based on file size rather than a continuous tensecond test. 7 Mr. Robbins stated that this is a reasonable

⁵ Id.

² Transcript at 13-14.

³ *Id.* at 14.

⁴ Id.

⁶ Id.

⁷ *Id.* at 14-15.

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suggestion and that carriers should be allowed to request to use file-based testing. 8

Next, Mr. Robbins discussed the current testing window. He recommended that the Commission expand its current testing window to allow carriers to perform speed tests for any consecutive six-hour testing period between 7:00 a.m. and midnight. Mr. Robbins stated that this adjustment would better test the capability of the network to test the speed requirements in place, and that customer experience at times of peak usage should not be the primary driver of speed testing. He also stated that this expansion of eligible hours for testing would reduce instances of "crosstalk," where existing traffic on the network interferes with speed tests. H

Mr. Robbins noted that some commenters described an issue in testing where carriers state they are limited to only testing the level of service to which a customer subscribes. ¹² Mr. Robbins recommended that carriers in this situation temporarily increase the speed for those customers in order to complete testing. ¹³

Next, Mr. Robbins addressed the "80/80 framework" currently in place. Under this framework, eighty percent of speed tests are required to meet eighty percent of the required speeds. Mr. Robbins recommended that this standard be adjusted so that at least one test per tested location must meet or exceed the minimum speed requirement. Description of the standard speed that the standard speed that the standard speed that the standard speed speed to speed the speed that the standard speed speed the speed that the standard speed that the standard speed that the standard speed that the speed tests are speed to speed tests are requirement. Speed tests ar

⁹ *Id.* at 15-16.

⁸ Id.

¹⁰ *Id.* at 16.

¹¹ Id.

¹² *Id.* at 16-17.

¹³ Id.

¹⁴ Nov. 8 Order at 2.

¹⁵ Transcript at 17.

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Mr. Robbins also discussed the number of locations required to be tested. He stated that carriers frequently do not have sufficient locations to test, particularly or recently completed projects. Mr. Robbins suggested that the number of locations to be tested be standardized across all programs subject to the speed testing requirement. Mr. Robbins recommended that all projects that serve fifty or fewer locations should be responsible for testing five locations, and projects serving more than fifty locations should test ten percent of the total number of subscribers. Projects serving five or fewer locations would be required to test all locations. With regard to the advertising of services, Mr. Robbins stated that although the Department is concerned about subscribers being slow to adopt Commission-funded projects, he did not recommend the Commission adopt a requirement to advertise services at this time.

Mr. Robbins also noted that the Department has received feedback from many carriers stating that it is challenging to obtain enough subscribers within thirty days of project completion. Because of this challenge, Mr. Robbins recommended that the Department be allowed discretion to work with carriers in cases where not enough tests can be performed in the standard thirty-day window. He agreed with commenters advocating that Commission guidelines be as uniform as possible, but recommended that the Department retain some discretion in processing speed tests, given the variety of challenges it has seen during the past year. 3

Following Mr. Robbins' testimony, Dan Davis, Director of Policy and Analysis at Consortia Consulting, testified on behalf of RIC. Mr. Davis recommended that the Commission utilize the FCC's

¹⁶ *Id.* at 18.

¹⁷ Id.

¹⁸ Id.

¹⁹ Id.

²⁰ *Id.* at 19.

²¹ Id.

²² Id. at 18-19.

²³ *Id.* at 19-20.

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performance measures testing framework.²⁴ He stated that doing so would minimize burdens on carriers and potentially eliminate duplicate testing caused by the need to satisfy differing federal and state requirements.²⁵ Mr. Davis specifically noted that the Commission currently requires providers to replace locations with significant observed crosstalk during testing, which the FCC does not require.²⁶

Mr. Davis also stated that some RIC member companies experience difficulty complying with the minimum number of locations to be tested.²⁷ He stated that the requirement to test a minimum of ten locations, regardless of project size, is especially problematic.²⁸ Mr. Davis further noted that the minimum number of locations to be tested varies between NUSF projects, Nebraska Broadband Bridge Program ("NBBP") projects, and Capital Projects Fund ("CPF") projects.²⁹ Mr. Davis recommended that the number of speed testing locations should be changed to ten percent of the locations in the project area, with a maximum of fifty locations.³⁰

Mr. Davis expressed opposition to the Commission's proposal that providers submit tests reflecting maximum network capabilities, stating that such testing does not provide useful information regarding the network. Mr. Davis also suggested that the Commission refine its requirements for speed testing rather than allotting discretion to the Department, in order to ensure fairness and uniformity of the rules. However, Mr. Davis recognized that several commenters did favor discretion to the Department, and suggested that the Commission could formulate testing rules that include considerations which would govern a request for waiver of testing requirements. Mr. Davis also noted

²⁴ *Id.* at 28.

²⁵ Id.

²⁶ *Id.* at 29.

²⁷ Id.

²⁸ *Id.* at 29-30.

²⁹ *Id.* at 30.

³⁰ *Id.* at 31.

³¹ *Id.* at 32-33.

 $^{^{32}}$ *Id.* at 33-34.

³³ *Id.* at 34.

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that projects with a very small number of locations may require a waiver of some requirements if there are issues with crosstalk at one of the locations. 34

Mr. Davis also noted that the RTCN recommended the creation of a safe harbor by which carriers could demonstrate compliance with FCC speed testing requirements. Mr. Davis agreed with this approach, advocating that if a location that has previously been tested under the FCC's testing process is selected for testing by the Commission, the carrier should be able to submit the results from the FCC's testing process or otherwise certify compliance. Mr.

On questioning, Mr. Davis expressed support for the Department's recommendation to expand the available testing window.³⁷ Mr. Davis also described challenges providers face in obtaining customers, noting that "it sometimes just takes time to get people to switch providers."³⁸ Mr. Davis noted that it is in a provider's best interest to get as high of a take rate as possible.³⁹

Next, Andy Pollock testified on behalf of the NRBA. Mr. Pollock stated that the NRBA would support RIC's position on Department discretion, where a waiver could be obtained by following guidelines. 40 Mr. Pollock further stated that the NRBA would support RIC's recommendations with regard to the minimum number of locations for speed testing. 41 With regard to take rate, Mr. Pollock described the approaches taken by some NRBA companies, to include the use of social media and billboards. 42 However, Mr.

³⁴ *Id.* at 37-38.

 $^{^{35}}$ Id. at 35. See Ex. 6 at 1-2 (RTCN proposing that carriers demonstrating compliance with FCC speed testing requirements over their served locations are deemed compliant with Nebraska speed testing requirements).

³⁶ Transcript at 35.

³⁷ *Id.* at 39-40.

³⁸ *Id.* at 40.

³⁹ *Id.* at 41.

⁴⁰ *Id.* at 49.

⁴¹ Id.

⁴² *Id.* at 51-52.

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Pollock recommended that the Commission not require any particular methods of publicizing projects and service availability. 43

Following Mr. Pollock's testimony, Kate McNamara testified on behalf of CenturyLink. Ms. McNamara stated that CenturyLink was in favor of removing the "blanket" requirement of latency testing. 44 Ms. McNamara further indicated that she was aligned with the previous testifiers with regard to Department discretion. 45

Following Ms. McNamara's testimony, no further evidence was adduced, and the hearing was adjourned.

OPINION AND FINDINGS

Nebraska law requires that recipients of ongoing high-cost NUSF support, Nebraska Broadband Bridge Program ("NBBP") grants, and precision agriculture ("PRO-AG") connectivity grants submit to speed tests as determined by the Commission. 46 In the Nov. 8 Order, the Commission found that the speed testing requirements set forth in that order should apply prospectively to all entities receiving ongoing high-cost support from the Nebraska Telecommunications Universal Service Fund ("NUSF"). The Commission further found that speed testing requirements should not apply to the NUSF-92 wireless infrastructure grant program. 47

In the June 25 Order, the Commission found that the existing requirements should be reviewed, in order to ensure that adequate connectivity is being provided to customers, without imposing requirements which would be overly burdensome to carriers. The Commission further sought to identify any impediments which carriers may experience in attempting to meet speed testing requirements. For that purpose, the Commission set forth several topics for discussion.

⁴⁴ *Id.* at 53.

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⁴³ *Id.* at 52.

⁴⁵ *Id.* at 53-54.

 $^{^{46}}$ Neb. Rev. Stat. § 86-324.02; Neb. Rev. Stat. § 86-1304(3); Neb. Rev. Stat. § 86-1405(2).

⁴⁷ Nov. 8 Order at 2.

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1. Distribution of Ongoing Support; Frequency of Testing

Currently, recipients of ongoing high-cost NUSF support are required to conduct annual testing, and must demonstrate speeds of at least 25 Mbps download and 3 Mbps upload. Recipients of ongoing high-cost NUSF support who completed a broadband deployment support ("BDS") project must meet the speed requirements required by that BDS project in the project area. In the June 25 Order, the Commission asked whether the distribution of ongoing NUSF high-cost support is currently distributed on a monthly basis, based on annual determinations of support. Recent statutory changes will require the Commission to only provide ongoing NUSF high-cost support for broadband serviceable locations that are capable of at least 100/20 Mbps. 1

In response to the questions posed, several parties encouraged the Commission to reduce the required frequency of testing. Some parties suggested that carriers providing services through a fiber network should be excused from the annual testing requirement. Windstream suggested that repeated testing should not be required "absent good cause to believe the location may not be receiving adequate services," stating that repeated testing results in increased costs to carriers. CenturyLink suggested that grant projects which have been completed three or more years prior should be exempted from speed testing. CenturyLink noted that fiber projects often offer speeds well beyond the 25/3 Mbps standard, and that testing can affect the quality of service provided to customers. Similarly, RIC advocated that speed

⁵⁰ Neb. Rev. Stat. § 86-324.02 requires that "Any recipient of ongoing high-cost support from the Nebraska Telecommunications Universal Service Fund shall agree to submit to speed tests as determined by the commission." The Commission interprets this requirement to provide broad leeway in setting forth speed testing requirements for recipients of ongoing high-cost support.

 $^{^{48}}$ Nov. 8 Order at 3.

⁴⁹ Td.

⁵¹ Neb. Rev. Stat. § 86-324.02(2)

⁵² See Ex. 5 at 2-3; Ex. 7 at 2.

⁵³ Ex. 8 at 3.

⁵⁴ Ex. 1 at 1-2.

⁵⁵ Id.

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testing "should be done once and not repeated," and that customers may reach out to their carrier's customer service department if issues with service arise. 56

The Commission recognizes the validity of the concerns described. However, the Commission also has a duty to ensure that networks built with public funds are adequately maintained. The Commission therefore declines to waive testing requirements for recipients of ongoing support and for past projects entirely. However, the frequency of testing may be reduced in certain circumstances. Recipients of NUSF support may request to waive speed testing for no more than two consecutive testing years, if the network or project area which would otherwise be tested has successfully demonstrated adequate performance within the past three calendar years. A waiver of speed testing will not be granted for any portion of a network which satisfied testing requirements through alternative means, as described below, within the past calendar year. The scheduled distribution of ongoing support and reimbursement for BDS projects will continue without adjustment.

As previously ordered, all ongoing high-cost recipients must submit a broadband customer list including all areas where testing is required to the Commission by April 30 of each year. If a carrier wishes to seek a waiver of speed testing, a request for waiver must be submitted in writing by February 28 of the year in which testing is required. If the waiver is granted, the customer list will not be required to be submitted.

The Commission maintains the right to request additional testing from carriers based on individual past performance and/or current circumstances. The Commission finds that the Department may use discretion in determining if some carriers, portions of networks, or project areas may require additional speed testing not otherwise required by this Order.

2. Minimum Number of Subscribers; Alternative Testing

In the June 25 Order, the Commission noted that some carriers have difficulty in obtaining a minimum number of subscribers required for testing. In comments and at hearing, interested

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⁵⁶ Ex. 5 at 9.

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parties described difficulties obtaining a minimum of ten locations to test, regardless of project size.⁵⁷ The Department also noted that there are discrepancies in the minimum number of subscribers required to be tested for different programs across the Commission, and recommended that the Commission adjust these requirements for the sake of consistency.⁵⁸

The Commission finds that the required number of test locations should be adjusted in accordance with feedback received. The number of locations to be tested shall therefore be adjusted as follows:

Number of locations in funded area	Number of test locations
5 or fewer	All locations in project area
6-50	5
51-500	10, or 10% of the total number of locations, whichever is greater
Over 500	50

Projects serving five or fewer locations must test all subscribed locations within the project area. If the carrier is unable to obtain sufficient subscribed locations within the time required, the carrier may work with the Department to determine appropriate alternative testing. Generally, in determining how alternative testing should be performed, the carrier must demonstrate that the project has been completed and is serving the

 $^{^{57}}$ See Transcript at 29-30. See also Ex. 3 at 3 (Charter discussing difficulties due to take rate and the level of service to which customers subscribe); Ex. 4 at 2-3 (Cox describing difficulty encouraging customers to allow in-home testing in a short period of time).

Serving 50 or fewer locations, NBBP only requires that five locations be tested in project areas serving 50 or fewer locations, NBBP only requires that five locations be tested in project areas with 50 or fewer locations. See Nov. 8 Order at 4; Commission Docket No. C-5484, In the Matter of the Nebraska Public Service Commission, on its own motion, to administer the Nebraska Broadband Bridge Program in the 2023 program year, Order Issuing Grant Awards and Results of Challenges (Jan. 9, 2024), at 6.

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entire project area at the required speeds. Requests for alternative testing must be communicated to the Department as soon as possible, but should in no event be submitted after the speed testing deadline has passed. Any carrier granted alternative testing will be subject to annual testing of the project in question until the carrier is able to meet the standard speed testing guidelines without a need for alternative testing.

The Commission recognizes that carriers may, in some circumstances, struggle to obtain sufficient subscribers immediately upon project completion. The Commission declines to enact advertising requirements at this time. However, recipients of grant funding are strongly encouraged to conduct proactive outreach to potential subscribers, local officials, local businesses, and other local stakeholders well in advance of project completion.⁵⁹

3. Allowable Testing Window; Testing Intervals

The current requirements for testing intervals and the allowable testing window were set by the Nov. 8 Order, and require that testing only take place between 6:00 p.m. and 12:00 a.m. daily. 60 At hearing, the Department advocated to adjust the allowable testing window, to allow carriers a greater window of time in which tests may be conducted. 61 The Department stated that this approach would remove the emphasis in testing from times of peak usage and could reduce instances of test failures. 62 On questioning, RIC expressed support for this proposal, noting that it may minimize issues of crosstalk. 63

 $^{^{59}}$ Although the Commission declines to enact blanket advertising and outreach requirements for all projects subject to NUSF-133 speed testing, some programs may have specific outreach requirements, which remain in place.

⁶⁰ Nov. 8 Order at 2.

⁶¹ Transcript at 15-16.

⁶² Id.

⁶³ Id. at 39. Crosstalk is defined as "[w]hen electromagnetic energy in one communication channel seeps into another communication channel." Crosstalk, Newton's Telecom Dictionary (32nd ed. 2021). In comments, RIC described issues of crosstalk where consumer internet usage during the testing window causing tests to be marked as unsuccessful. Ex. 5 at 3-4.

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The Commission finds that this adjustment is appropriate and should be adopted. Testing shall be performed on an hourly basis, for any six consecutive hours between 7:00 a.m. and 12:00 a.m. local time each day. Carriers may select the six-hour period to be tested, but must begin and conclude the testing during the allowable testing window. The other requirements relating to testing intervals shall remain in place.

4. Latency Testing

The Commission notes that in comments, CenturyLink suggested that latency testing is not necessary for fiber-to-the-premises ("FTTP") projects. ⁶⁴ At hearing, the Department agreed that latency testing may not be necessary in all circumstances, but requested the ability to request latency testing in the event of customer complaints. ⁶⁵ The Commission agrees that latency testing should not be required for FTTP projects. However, projects which are not FTTP will still be required to submit latency testing data. The Department may also request latency testing for networks or portions of networks in its discretion. If latency testing is required, at least 95% of test results must demonstrate 100 milliseconds latency or less.

5. Minimum Adequate Threshold

In the June 25 Order, the Commission proposed to adopt an 80/100 framework for performance testing, under which at least 80% of the tests are required to meet the speeds required by statute or grant program. In comments, RIC and Windstream opposed this proposal, noting that it would deviate from federal standards. 66 At hearing, the Department noted that under the existing 80/80 standard, a carrier could provide test results that did not contain any tests meeting the standard required by statute, but still be considered compliant. 67

The Commission finds that the minimum adequate threshold should be adjusted. While we recognize that some carriers urged us

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⁶⁴ Ex. 7 at 4.

⁶⁵ Transcript at 14-15.

⁶⁶ Ex. 5 at 8-9; Ex. 8 at 3.

⁶⁷ Transcript at 17-18.

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to follow the FCC's performance measures metrics as closely as possible, the Commission is also obligated to ensure that the networks it funds can offer speeds meeting statutory standards. For example, Neb. Rev. Stat. § 86-324.01 requires that NUSF funds distributed for construction of new broadband infrastructure shall go to projects providing 100/100 Mbps service or greater. Similarly, NBBP projects must be able to deliver 100/100 Mbps or greater, and certain challenges to NBBP projects – which are often the result of NUSF-funded infrastructure – can only be upheld if carriers can credibly demonstrate the challenger delivers 100/20 Mbps service in the project area.⁶⁸

The Commission therefore finds that while the 80/80 standard will, in large part, remain in place, at least one test per tested location within the tested area must meet or exceed the minimum speed requirements. This requirement is set in place to ensure the network tested is capable of meeting the speeds required by statute. Additionally, Type 1 challenges to NBBP projects submitted on January 1, 2025 or later which do not show at least one instance of 100/20 Mbps speeds or greater per tested subscriber location will not be found to be credible. Carriers are not required to demonstrate the maximum performance capabilities of the network if such capability is greater than the speeds required to be shown, but may elect to do so to ensure accurate data is collected.⁶⁹

If desired by the carrier, carriers may use file-based testing rather than continuous testing. If file-based testing is used and successfully demonstrates adequate network performance, it will not be considered alternative testing. The Department may request continuous testing be performed if file-based testing is unsuccessful or other issues arise.

⁶⁸ Neb. Rev. Stat. §§ 86-1304, 86-1307.

⁶⁹ The Commission encourages carriers to test to the maximum capability of the network regardless of applicable program requirements or the speed tier subscribed to at any given location. Testing maximum deliverable speeds will help ensure accuracy in state and federal broadband mapping. The Commission anticipates using speed testing data for purposes of mapping, NUSF support distribution, the assessment of NBBP challenges, and other matters of regulatory concern.

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6. Applicability

The revisions to the Commission's speed testing framework contained in this order are hereby adopted on a prospective basis. Speed testing results submitted to the Commission on or after the date of this order should conform to the requirements described above. The Commission has also compiled the effective requirements into a guidance document, which is available on the Commission's website. This document may be revised by the Department periodically, with updates posted to the Commission's website. Carriers are encouraged to contact the Department at psc.nusf@nebraska.gov if any questions arise during the speed testing process.

The Commission recognizes that some of the programs in which speed testing is a requirement prohibit the imposition of requirements retroactively. 70 However, the Commission understands that a unified, streamlined process may be desirable for carriers. Therefore, the Commission invites and encourages carriers to voluntarily utilize the speed testing framework adopted herein for outstanding grants the following programs: NBBP, CPF, NUSF-99, NUSF-108, and NUSF-131. If carriers do opt to utilize the updated framework, they must utilize it in its entirety. In other words, a carrier may not pick and choose certain aspects of the revised requirements to use or discard. Further, this framework will apply to all carriers on a prospective basis.

7. Conclusion

The Commission adopts the above-described changes in order to streamline the speed testing process for both carriers and Department staff, as well as to improve the accuracy of speed testing results. The Commission appreciates the work of all interested parties and participants in this docket in improving Nebraska's broadband networks and reporting data. We welcome continued discussion and feedback on this speed testing framework in the years to come.

 $^{^{70}}$ See Nev. Rev. Stat. § 86-1308(3) ("The commission shall not add to the obligations required of a grant recipient except as specifically authorized under the Nebraska Broadband Bridge Act or as required by federal law to access and distribute federal funds appropriated for the purpose of broadband expansion.").

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ORDER

IT IS THEREFORE ORDERED that the modifications to the NUSF-133 speed testing requirements set forth above shall be, and are hereby, adopted.

IT IS FURTHER ORDERED that all other speed testing requirements previously set forth in this docket shall continue without modification.

IT IS FURTHER ORDERED that any entity seeking a waiver of speed testing requirements must submit a request for waiver to psc.nusf@nebraska.gov by February 28 of the year in which testing would be required.

ENTERED AND MADE EFFECTIVE at Lincoln, Nebraska, this 8th day of October, 2024.

NEBRASKA PUBLIC SERVICE COMMISSION

COMMISSIONERS CONCURRING:

Chair

ATTEST:

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