FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF THE
CHAIRWOMAN

February 10, 2023

The Honorable Maria Cantwell
United States Senate
511 Hart Senate Office Building
Washington, DC 20510

Dear Senator Cantwell:

Thank you for your letter regarding the work to develop an iterative National Broadband Map at the Federal Communications Commission. Today, broadband service is vital for school, work, healthcare, and more. Connecting everyone to high-speed service is essential for everyone, everywhere to have the opportunities made possible by the digital age. That is why I share your commitment to making sure that broadband connectivity is available across the country.

As Congress recognized in the Broadband DATA Act, in order to connect everyone, everywhere, we need to develop accurate information about where broadband service is and is not available across the country. With better data, we can more precisely target our policymaking efforts and financial resources, including the Commission's universal service funding system and the grant projects in the Bipartisan Infrastructure Law, to areas where support is needed most. Better data will also help other federal agencies, state and local governments, and Tribal entities target their own broadband mapping and deployment efforts.

Since the passage of the Broadband DATA Act in March 2020, the Commission has perpetually worked to implement the requirements of the law and to begin the iterative data collection and challenge processes envisioned by the Act through the creation of its Broadband Data Collection (BDC) program. The BDC is a significant departure from the Commission's previous Form 477 process used for identifying the state of broadband deployment. The Form 477 process, which was used by the agency in various formats for decades, collected data only at the census-block level. If there was a single subscriber in the census block, the agency assumed service was available throughout. As a result, the Form 477 process systematically overstated the presence of broadband, particularly in rural areas. In addition, this process lacked a mechanism to verify that data based on the on-the-ground experience of consumers and other stakeholders.

This is no longer the case. As required by the Broadband DATA Act, the Commission has built an entirely new data-collection system for ingesting, validating, and aggregating provider data for download and publication on the National Broadband Map. This system is also designed to incorporate data submitted by individual consumers and by State and Tribal governments and other stakeholders challenging a provider's availability submissions at

particular locations. In addition, the Broadband DATA Act required the Commission to develop the Broadband Serviceable Location Fabric (Fabric). The Fabric is a common dataset of all broadband serviceable locations (BSLs) in the United States where mass market fixed broadband internet access service is available or could be installed. The Fabric dataset supports location-by-location reporting of available fixed broadband services by internet service providers. To be clear, the Fabric itself is not a map. It is an evolving database of all BSLs nationwide that is used in the production of the map when combined with information from service providers and data from the challenge process.

On June 23, 2022, shortly before the opening of the filing window for reporting broadband availability data as of June 30, the Commission made the initial production version of the Fabric (Version 1) available to both internet service providers and to state, local, and Tribal governments. Internet service providers used Version 1 of the Fabric to report their fixed broadband availability data on or before the close of the inaugural filing window on September 1, 2022.

On November 18, 2022, the Commission released a pre-production draft of its new National Broadband Map depicting broadband availability, as of June 30, 2022, from over 2,500 facilities-based providers of fixed and mobile mass-market broadband Internet access services. The release of the pre-production draft of the map was a major milestone in the development of what will be the most accurate and granular dataset of internet availability across the United States to date. However, as you acknowledge, the Broadband DATA Act envisions the Commission's BDC efforts to be an iterative process through which these maps evolve as the facts on the ground change, and incorporates improvements and refinements that are a result of the ongoing challenge and crowdsource processes. Our release of the pre-production draft of the new National Broadband Map on November 18 kicked off the opportunity for challengers to dispute the accuracy of the availability data.

I appreciate your sharing your concerns regarding the "deadline" for submitting location and availability challenges to the National Broadband Map as well as with the accuracy of the location and availability data shown on the map. At the outset, I want to clarify that the January 13, 2023 date was not a deadline because the Commission continues to accept and resolve location and availability challenges so that they may be included in future iterations of the map. The Commission rules make clear that the agency will accept challenges to the Fabric and availability data on a rolling basis, at any time.

As you may know, under its authority under the Bipartisan Infrastructure Law, the National Telecommunications and Information Administration (NTIA) continues to target June 30 as the date by which it will allocate each state and territory's funding under the Broadband Equity, Access, and Deployment (BEAD) program (see NTIA blog post at https://ntia.gov/blog/2023/advancing-internet-all). January 13, 2023 was identified as the target date by which availability challenges had the best opportunity to be fully addressed and incorporated into the map, if necessary, ahead of NTIA's plan to allocate funds by June 30.

However, the Broadband DATA Act envisions ongoing challenges to the map, and the Commission stands ready to continue to work with all stakeholders to receive feedback and continue to improve our map over time. In the meantime, I can provide some additional information in response to the other issues referenced in your letter.

Broadband Serviceable Location Fabric

As noted above, the Fabric is an evolving dataset of all BSLs in the United States, and substantial improvements have been made to it since its first pre-production release. It is the product of integrating a wide range of data sources, including address records, information about parcel boundaries, tax assessment records, imagery and building footprint data, Census data, land use records, and geo-spatial road and street data. In fact, to build the Fabric more than 200 data attributes are assessed using artificial intelligence and machine learning to identify the precise geocoordinates of each BSL included in the dataset. The first version of the Fabric contained more than 113.2 million BSLs.

Last summer, I personally reached out to broadband leaders in all fifty states and U.S. territories to encourage them to review the Fabric and, if needed, to plan to file Fabric challenges as early as possible after the opening of the challenge window. Two months after making the data available in June 2023, the FCC opened a process on September 12, 2022 for governmental entities, internet service providers, and other entities to begin submitting challenges for multiple broadband-serviceable locations (i.e., "bulk" Fabric challenges). The Commission held a webinar on September 7, 2022 to assist bulk Fabric challengers on how to submit their challenge data and hosted a follow-up workshop on September 28, 2022 to further assist entities with preparing such challenges. Commission staff also published an FAQ document, multiple articles, and other resources on its BDC Help Center (https://help.bdc.fcc.gov/) to provide technical assistance to potential bulk Fabric challengers. The BDC Help Center also posted a link to enable stakeholders to submit questions or requests for assistance with the challenge process.

Governmental entities, including 20 states, submitted 1.11 million individual challenges to the Version 1 of the Fabric data that were processed in anticipation of preparation of Version 2 of the Fabric. Many internet service providers also submitted challenges to Version 1 of the Fabric. These challenges were predominately challenges to add missing locations but included challenges to correct information associated with existing locations as well. Many of these challenges require identifying differences in the data collection practices used by governmental entities and providers and those required for the BDC. In other words, in many cases we have the same data but in a different format or may require slight latitude and longitude adjustments to the BSLs. To put these challenges in context, it is important to note that they sought corrections for records corresponding to less than1% of the total number of locations identified in Version 1 of the Fabric. Of these 1.11 million challenges, more than half were for locations that were either already included in Version 1 of the Fabric or that CostQuest, the vendor selected to develop the Fabric in accordance with the Broadband DATA Act, had independently identified through its own efforts for inclusion in Version 2 of the Fabric. Successful location challenges

from state governments resulted in approximately 122,000 new locations being added into Version 2 of the Fabric (or slightly more than 0.1% of the number of locations included in Version 1).

Version 2 of the Fabric includes 1.04 million more locations than the version currently shown on the National Broadband Map. These additional locations are primarily the result of CostQuest's ongoing efforts to update and improve the Fabric by refining the models and processes for creating the Fabric and using updated and improved input data sources such as new and more granular parcel data. Version 2 also incorporates millions of adjustments to the data associated with locations that were already included in Version 1 of the Fabric, including, for example, changes to address fields, unit counts, secondary addresses, BSL status, building and land use codes, etc. These ongoing efforts to improve the Fabric—alongside the Fabric challenge process—will continue and remain an important tool for the improvement of the National Broadband Map. Version 2 of the Fabric is currently available to states, governmental entities and all Fabric license holders.

Meaningful changes have been made to the Fabric as a result of these efforts. For example, in in Mineral County, Nevada (which includes part of the Walker River Tribal Lands) the number of BSLs increased 17.9% from Version 1 of the Fabric to Version 2. We believe Version 2 of the dataset, which reflects changes like these, will address most, if not all, of the outstanding concerns. On top of that, any remaining issues will continue to be addressed through our continued efforts to improve and refine the data in future versions of the Fabric in addition to the challenge process that is an integral part of our BDC endeavor.

As noted above, the Commission will accept location challenges from all stakeholders at any time—on a rolling basis. But Fabric dataset adjustments from the vendor and challenge process are only pushed through to the official National Broadband Map twice a year, after providers have reported their availability data based on the revisions. This is consistent with the statute, which states that the Fabric shall "serve as the foundation upon which all data relating to the availability of fixed broadband internet access service collected . . . shall be reported and overlaid." 47 U.S.C. § 642(b)(1)(B)(ii). Proceeding in this way, the map will accurately reflect providers' account of the availability of their services on the as-of date. Continually updating the National Broadband Map to reflect changes to the Fabric would create anomalies in the data because the map would contain locations for which providers have not had an opportunity to report availability, causing the maps to be less useful as a depiction of availability on the as-of date.

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therefore am pleased to provide an update about the improvements made in Version 2 of the Fabric for each of the locations you identified.

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These examples illustrate both how the challenge process is intended to work under the Broadband DATA Act and how the interactive back and forth between state and local authorities and the Commission is resulting in improvements to the BDC effort. For this reason, I encourage all stakeholders, especially state and local broadband offices to review Version 2 of the Fabric. In addition to the existing resources available to inform stakeholders on how to view and interact with the Fabric, the Broadband Data Task Force stands ready to continue to work with states and other stakeholders to help them use the best tools and methods for mapping the Fabric data and corresponding information on BSLs with other datasets that stakeholders have on locations where broadband service is needed. I recognize that not every state and territory collects their own data in the same way that we are amassing it for this national effort, but we are ready, willing and able to work with them to align our efforts.

Fixed Availability Data

With respect to fixed broadband availability reporting, under the Commission's rules, service is considered to be "available" if the provider has an existing connection at that location, or the provider could (and is willing to) connect that location to service within 10 business days for a standard installation fee. Availability is reported by technology type and the maximum advertised speed at each location. Based upon these guidelines, fixed broadband service providers should not report their service being available where: (1) an individual has attempted to request service but the ISP cannot deliver the service within 10 business days; or (2) in the case of a satellite or terrestrial fixed wireless provider, a provider's signals cannot in fact be received at the location. It is worth noting that this site-specific standard is substantially more precise than the one that preceded it in the Form 477 process, which required providers to characterize service as available throughout entire census block if they served at least one location within that census block. Moreover, should a provider claim that it can make service available to a location under either of these circumstances, that information can be challenged using either the map interface or via a bulk availability challenge. Such feedback, and other crowdsource and verification tools that are built into the new BDC process, were not available to the FCC in the prior Form 477 context.

Your letter also indicates you have heard of inaccuracies in the availability data filed in the map in some areas. I anticipate that, over time, the challenge process will serve to correct many of the inaccuracies in the current iteration of the map. Nevertheless, I plan on using every tool at the Commission's disposal to correct the map and appreciate you highlighting areas where you believe widespread inaccuracies may exist. This includes enforcement action when providers do not comply with our rules when they file availability data and, to this end, we already have an enforcement investigation that is ongoing.

Your letter notes that Microsoft's data show that under 20 percent of the population in Stevens County, Washington are actually using the internet at broadband speeds. Both the Microsoft digital equity tool, and the FCC's draft map indicates that 100 percent of Stevens County has broadband availability at speeds of 25/3 or greater. The 20 percent metric cited refers to the percentage of the population that uses the internet at broadband speeds. The difference may indicate a lack of adoption or affordability of broadband services in addition to availability. The same Microsoft digital equity tool, indicates that over 25% of households in the county do not subscribe to broadband of any type and that over 26% do not own a laptop or desktop computer, measures of adoption and affordability. Digital equity is a wholistic and important conversation, but not within the scope of the FCC's Broadband Data Collection and the data shown on our current maps. Moreover, there are significant differences in data sources used to compile the two sets—Microsoft appears to include FCC Form 477 data, census data, and other consumer surveys, while the Commission's new maps are based on granular location-by-location availability data reported by providers based on Fabric points. It may also be worth noting that the map data show all broadband technologies that were reported to the Commission. When the map data are filtered to show only the speeds and technologies that NTIA identified as

reliable broadband services in its BEAD Notice of Funding Opportunity (i.e., wired or licensed fixed wireless services), the map indicates that roughly 38% of locations are served by such services with speeds of 25/3 or greater in Stevens County.

Similarly, in Grainger County, Tennessee, the Microsoft digital equity tool relies on older FCC form 477 data as well as a range of other data sources to measure digital equity and broadband access more generally. The Commission's maps are based on a new, granular, location-by-location data collection. Comparison of the two tools may be useful, but in light of these differences, they are unlikely to yield a similar result.

Using the Challenge Process

Consistent with the Broadband DATA Act, any individual may file a Fabric or availability challenge directly through the National Broadband Map interface simply by clicking on the map at their location and filling out a short web form. Service providers, governments, and other entities may file challenges in bulk by uploading data files in the BDC system.

Under Commission rules, once accepted, fixed availability challenges will be sent to the relevant provider for a response, and the provider will have 60 days to review and either concede the challenge (in which case they must remove that location from their availability data within 30 days) or dispute it. If a provider disputes the challenge, the provider must provide evidence in the BDC system and to the challenger to rebut the challenge. The provider and challenger then have 60 days to attempt to resolve the challenge. If the provider and challenger cannot resolve the challenge, the Commission will adjudicate the challenge based on the evidence and, pursuant to changes made by Congress in the Bipartisan Infrastructure Law, make a determination within 90 days after a provider submits its final response to a challenge. If a provider loses a challenge, it must revise its data consistent with the decision within 30 days and the Commission will update the map accordingly. Any availability challenges that are upheld will carry into future iterations of the map unless and until the provider demonstrates changed circumstances that would substantiate reporting availability at that location (such as deployment of new infrastructure). Despite these timelines, we expect that many challenges will be resolved more quickly, especially if providers respond promptly to challenges or are able to mediate challenges in advance of adjudication.

Given the importance of the availability challenge process in refining the data depicted on the map and ensuring that the map is as accurate as possible, we have conducted extensive outreach to state, local, and Tribal governmental entities, service providers, and others to inform stakeholders about how they can participate in the process. Commission staff have held hundreds of meetings with congressional offices, service providers, public interest groups, and governmental entities across the nation to be sure we are offering support throughout the BDC process. We have also made available web tutorials, one-pagers, FAQs, data specifications, and a series of knowledge base articles to walk consumers and bulk challengers through the entire availability challenge process. Additionally, we have posted outreach materials that state and local governments, community organizations and others may use to help educate consumers on

how to file a challenge and engage with the FCC's map. To date, we have received over 4 million availability challenges. Many of these have already been resolved between the carrier and the challenger and will be reflected in future maps.

It is more important than ever for us to know where broadband is, and is not, available throughout the nation. Far too many households remain unconnected, and accurately showing where they are located is an important part of directing funding into the communities that need it the most. The map we have is a work that is always in progress, just as Congress designed it to be in the Broadband DATA Act. I am confident that the BDC process we have established will help improve the map just as Congress envisioned. I also will continue to ensure that the Broadband Data Task Force makes itself available to all stakeholders interested in offering challenges to the current iteration of our data.

I hope the above is helpful. Please let me know if you have any further questions. I look forward to continuing to work with you to help close the digital divide.

Sincerely,

Jessica Rosenworcel

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Fixed Availability Data

With respect to fixed broadband availability reporting, under the Commission's rules, service is considered to be "available" if the provider has an existing connection at that location, or the provider could (and is willing to) connect that location to service within 10 business days for a standard installation fee. Availability is reported by technology type and the maximum advertised speed at each location. Based upon these guidelines, fixed broadband service providers should not report their service being available where: (1) an individual has attempted to request service but the ISP cannot deliver the service within 10 business days; or (2) in the case of a satellite or terrestrial fixed wireless provider, a provider's signals cannot in fact be received at the location. It is worth noting that this site-specific standard is substantially more precise than the one that preceded it in the Form 477 process, which required providers to characterize service as available throughout entire census block if they served at least one location within that census block. Moreover, should a provider claim that it can make service available to a location under either of these circumstances, that information can be challenged using either the map interface or via a bulk availability challenge. Such feedback, and other crowdsource and verification tools that are built into the new BDC process, were not available to the FCC in the prior Form 477 context.

Your letter also indicates you have heard of inaccuracies in the availability data filed in the map in some areas. I anticipate that, over time, the challenge process will serve to correct many of the inaccuracies in the current iteration of the map. Nevertheless, I plan on using every tool at the Commission's disposal to correct the map and appreciate you highlighting areas where you believe widespread inaccuracies may exist. This includes enforcement action when providers do not comply with our rules when they file availability data and, to this end, we already have an enforcement investigation that is ongoing.

Your letter notes that Microsoft's data show that under 20 percent of the population in Stevens County, Washington are actually using the internet at broadband speeds. Both the Microsoft digital equity tool, and the FCC's draft map indicates that 100 percent of Stevens County has broadband availability at speeds of 25/3 or greater. The 20 percent metric cited refers to the percentage of the population that uses the internet at broadband speeds. The difference may indicate a lack of adoption or affordability of broadband services in addition to availability. The same Microsoft digital equity tool, indicates that over 25% of households in the county do not subscribe to broadband of any type and that over 26% do not own a laptop or desktop computer, measures of adoption and affordability. Digital equity is a wholistic and important conversation, but not within the scope of the FCC's Broadband Data Collection and the data shown on our current maps. Moreover, there are significant differences in data sources used to compile the two sets—Microsoft appears to include FCC Form 477 data, census data, and other consumer surveys, while the Commission's new maps are based on granular location-by-location availability data reported by providers based on Fabric points. It may also be worth noting that the map data show all broadband technologies that were reported to the Commission. When the map data are filtered to show only the speeds and technologies that NTIA identified as

reliable broadband services in its BEAD Notice of Funding Opportunity (i.e., wired or licensed fixed wireless services), the map indicates that roughly 38% of locations are served by such services with speeds of 25/3 or greater in Stevens County.

Similarly, in Grainger County, Tennessee, the Microsoft digital equity tool relies on older FCC form 477 data as well as a range of other data sources to measure digital equity and broadband access more generally. The Commission's maps are based on a new, granular, location-by-location data collection. Comparison of the two tools may be useful, but in light of these differences, they are unlikely to yield a similar result.

Using the Challenge Process

Consistent with the Broadband DATA Act, any individual may file a Fabric or availability challenge directly through the National Broadband Map interface simply by clicking on the map at their location and filling out a short web form. Service providers, governments, and other entities may file challenges in bulk by uploading data files in the BDC system.

Under Commission rules, once accepted, fixed availability challenges will be sent to the relevant provider for a response, and the provider will have 60 days to review and either concede the challenge (in which case they must remove that location from their availability data within 30 days) or dispute it. If a provider disputes the challenge, the provider must provide evidence in the BDC system and to the challenger to rebut the challenge. The provider and challenger then have 60 days to attempt to resolve the challenge. If the provider and challenger cannot resolve the challenge, the Commission will adjudicate the challenge based on the evidence and, pursuant to changes made by Congress in the Bipartisan Infrastructure Law, make a determination within 90 days after a provider submits its final response to a challenge. If a provider loses a challenge, it must revise its data consistent with the decision within 30 days and the Commission will update the map accordingly. Any availability challenges that are upheld will carry into future iterations of the map unless and until the provider demonstrates changed circumstances that would substantiate reporting availability at that location (such as deployment of new infrastructure). Despite these timelines, we expect that many challenges will be resolved more quickly, especially if providers respond promptly to challenges or are able to mediate challenges in advance of adjudication.

Given the importance of the availability challenge process in refining the data depicted on the map and ensuring that the map is as accurate as possible, we have conducted extensive outreach to state, local, and Tribal governmental entities, service providers, and others to inform stakeholders about how they can participate in the process. Commission staff have held hundreds of meetings with congressional offices, service providers, public interest groups, and governmental entities across the nation to be sure we are offering support throughout the BDC process. We have also made available web tutorials, one-pagers, FAQs, data specifications, and a series of knowledge base articles to walk consumers and bulk challengers through the entire availability challenge process. Additionally, we have posted outreach materials that state and local governments, community organizations and others may use to help educate consumers on

how to file a challenge and engage with the FCC's map. To date, we have received over 4 million availability challenges. Many of these have already been resolved between the carrier and the challenger and will be reflected in future maps.

It is more important than ever for us to know where broadband is, and is not, available throughout the nation. Far too many households remain unconnected, and accurately showing where they are located is an important part of directing funding into the communities that need it the most. The map we have is a work that is always in progress, just as Congress designed it to be in the Broadband DATA Act. I am confident that the BDC process we have established will help improve the map just as Congress envisioned. I also will continue to ensure that the Broadband Data Task Force makes itself available to all stakeholders interested in offering challenges to the current iteration of our data.

I hope the above is helpful. Please let me know if you have any further questions. I look forward to continuing to work with you to help close the digital divide.

Sincerely,

Jessica Rosenworcel

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF THE
CHAIRWOMAN

February 10, 2023

The Honorable Ben Ray Lujan
United States Senate
B40C Dirksen Senate Office Building
Washington, DC 20510

Dear Senator Lujan:

Thank you for your letter regarding the work to develop an iterative National Broadband Map at the Federal Communications Commission. Today, broadband service is vital for school, work, healthcare, and more. Connecting everyone to high-speed service is essential for everyone, everywhere to have the opportunities made possible by the digital age. That is why I share your commitment to making sure that broadband connectivity is available across the country.

As Congress recognized in the Broadband DATA Act, in order to connect everyone, everywhere, we need to develop accurate information about where broadband service is and is not available across the country. With better data, we can more precisely target our policymaking efforts and financial resources, including the Commission's universal service funding system and the grant projects in the Bipartisan Infrastructure Law, to areas where support is needed most. Better data will also help other federal agencies, state and local governments, and Tribal entities target their own broadband mapping and deployment efforts.

Since the passage of the Broadband DATA Act in March 2020, the Commission has perpetually worked to implement the requirements of the law and to begin the iterative data collection and challenge processes envisioned by the Act through the creation of its Broadband Data Collection (BDC) program. The BDC is a significant departure from the Commission's previous Form 477 process used for identifying the state of broadband deployment. The Form 477 process, which was used by the agency in various formats for decades, collected data only at the census-block level. If there was a single subscriber in the census block, the agency assumed service was available throughout. As a result, the Form 477 process systematically overstated the presence of broadband, particularly in rural areas. In addition, this process lacked a mechanism to verify that data based on the on-the-ground experience of consumers and other stakeholders.

This is no longer the case. As required by the Broadband DATA Act, the Commission has built an entirely new data-collection system for ingesting, validating, and aggregating provider data for download and publication on the National Broadband Map. This system is also designed to incorporate data submitted by individual consumers and by State and Tribal governments and other stakeholders challenging a provider's availability submissions at

particular locations. In addition, the Broadband DATA Act required the Commission to develop the Broadband Serviceable Location Fabric (Fabric). The Fabric is a common dataset of all broadband serviceable locations (BSLs) in the United States where mass market fixed broadband internet access service is available or could be installed. The Fabric dataset supports location-by-location reporting of available fixed broadband services by internet service providers. To be clear, the Fabric itself is not a map. It is an evolving database of all BSLs nationwide that is used in the production of the map when combined with information from service providers and data from the challenge process.

On June 23, 2022, shortly before the opening of the filing window for reporting broadband availability data as of June 30, the Commission made the initial production version of the Fabric (Version 1) available to both internet service providers and to state, local, and Tribal governments. Internet service providers used Version 1 of the Fabric to report their fixed broadband availability data on or before the close of the inaugural filing window on September 1, 2022.

On November 18, 2022, the Commission released a pre-production draft of its new National Broadband Map depicting broadband availability, as of June 30, 2022, from over 2,500 facilities-based providers of fixed and mobile mass-market broadband Internet access services. The release of the pre-production draft of the map was a major milestone in the development of what will be the most accurate and granular dataset of internet availability across the United States to date. However, as you acknowledge, the Broadband DATA Act envisions the Commission's BDC efforts to be an iterative process through which these maps evolve as the facts on the ground change, and incorporates improvements and refinements that are a result of the ongoing challenge and crowdsource processes. Our release of the pre-production draft of the new National Broadband Map on November 18 kicked off the opportunity for challengers to dispute the accuracy of the availability data.

I appreciate your sharing your concerns regarding the "deadline" for submitting location and availability challenges to the National Broadband Map as well as with the accuracy of the location and availability data shown on the map. At the outset, I want to clarify that the January 13, 2023 date was not a deadline because the Commission continues to accept and resolve location and availability challenges so that they may be included in future iterations of the map. The Commission rules make clear that the agency will accept challenges to the Fabric and availability data on a rolling basis, at any time.

As you may know, under its authority under the Bipartisan Infrastructure Law, the National Telecommunications and Information Administration (NTIA) continues to target June 30 as the date by which it will allocate each state and territory's funding under the Broadband Equity, Access, and Deployment (BEAD) program (see NTIA blog post at https://ntia.gov/blog/2023/advancing-internet-all). January 13, 2023 was identified as the target date by which availability challenges had the best opportunity to be fully addressed and incorporated into the map, if necessary, ahead of NTIA's plan to allocate funds by June 30.

However, the Broadband DATA Act envisions ongoing challenges to the map, and the Commission stands ready to continue to work with all stakeholders to receive feedback and continue to improve our map over time. In the meantime, I can provide some additional information in response to the other issues referenced in your letter.

Broadband Serviceable Location Fabric

As noted above, the Fabric is an evolving dataset of all BSLs in the United States, and substantial improvements have been made to it since its first pre-production release. It is the product of integrating a wide range of data sources, including address records, information about parcel boundaries, tax assessment records, imagery and building footprint data, Census data, land use records, and geo-spatial road and street data. In fact, to build the Fabric more than 200 data attributes are assessed using artificial intelligence and machine learning to identify the precise geocoordinates of each BSL included in the dataset. The first version of the Fabric contained more than 113.2 million BSLs.

Last summer, I personally reached out to broadband leaders in all fifty states and U.S. territories to encourage them to review the Fabric and, if needed, to plan to file Fabric challenges as early as possible after the opening of the challenge window. Two months after making the data available in June 2023, the FCC opened a process on September 12, 2022 for governmental entities, internet service providers, and other entities to begin submitting challenges for multiple broadband-serviceable locations (i.e., "bulk" Fabric challenges). The Commission held a webinar on September 7, 2022 to assist bulk Fabric challengers on how to submit their challenge data and hosted a follow-up workshop on September 28, 2022 to further assist entities with preparing such challenges. Commission staff also published an FAQ document, multiple articles, and other resources on its BDC Help Center (https://help.bdc.fcc.gov/) to provide technical assistance to potential bulk Fabric challengers. The BDC Help Center also posted a link to enable stakeholders to submit questions or requests for assistance with the challenge process.

Governmental entities, including 20 states, submitted 1.11 million individual challenges to the Version 1 of the Fabric data that were processed in anticipation of preparation of Version 2 of the Fabric. Many internet service providers also submitted challenges to Version 1 of the Fabric. These challenges were predominately challenges to add missing locations but included challenges to correct information associated with existing locations as well. Many of these challenges require identifying differences in the data collection practices used by governmental entities and providers and those required for the BDC. In other words, in many cases we have the same data but in a different format or may require slight latitude and longitude adjustments to the BSLs. To put these challenges in context, it is important to note that they sought corrections for records corresponding to less than1% of the total number of locations identified in Version 1 of the Fabric. Of these 1.11 million challenges, more than half were for locations that were either already included in Version 1 of the Fabric or that CostQuest, the vendor selected to develop the Fabric in accordance with the Broadband DATA Act, had independently identified through its own efforts for inclusion in Version 2 of the Fabric. Successful location challenges

from state governments resulted in approximately 122,000 new locations being added into Version 2 of the Fabric (or slightly more than 0.1% of the number of locations included in Version 1).

Version 2 of the Fabric includes 1.04 million more locations than the version currently shown on the National Broadband Map. These additional locations are primarily the result of CostQuest's ongoing efforts to update and improve the Fabric by refining the models and processes for creating the Fabric and using updated and improved input data sources such as new and more granular parcel data. Version 2 also incorporates millions of adjustments to the data associated with locations that were already included in Version 1 of the Fabric, including, for example, changes to address fields, unit counts, secondary addresses, BSL status, building and land use codes, etc. These ongoing efforts to improve the Fabric—alongside the Fabric challenge process—will continue and remain an important tool for the improvement of the National Broadband Map. Version 2 of the Fabric is currently available to states, governmental entities and all Fabric license holders.

Meaningful changes have been made to the Fabric as a result of these efforts. For example, in in Mineral County, Nevada (which includes part of the Walker River Tribal Lands) the number of BSLs increased 17.9% from Version 1 of the Fabric to Version 2. We believe Version 2 of the dataset, which reflects changes like these, will address most, if not all, of the outstanding concerns. On top of that, any remaining issues will continue to be addressed through our continued efforts to improve and refine the data in future versions of the Fabric in addition to the challenge process that is an integral part of our BDC endeavor.

As noted above, the Commission will accept location challenges from all stakeholders at any time—on a rolling basis. But Fabric dataset adjustments from the vendor and challenge process are only pushed through to the official National Broadband Map twice a year, after providers have reported their availability data based on the revisions. This is consistent with the statute, which states that the Fabric shall "serve as the foundation upon which all data relating to the availability of fixed broadband internet access service collected . . . shall be reported and overlaid." 47 U.S.C. § 642(b)(1)(B)(ii). Proceeding in this way, the map will accurately reflect providers' account of the availability of their services on the as-of date. Continually updating the National Broadband Map to reflect changes to the Fabric would create anomalies in the data because the map would contain locations for which providers have not had an opportunity to report availability, causing the maps to be less useful as a depiction of availability on the as-of date.

We also have acknowledged that there were a few discrete instances where these data in Version 1 of the Fabric did not meet our expectations. The known instances correspond to areas in the United States where the underlying datasets used to create the Fabric (parcel data, tax assessor data, high-resolution imagery data) were either outdated or simply not available. To improve the Fabric data in these areas, the and our contractor, CostQuest, have invested significant resources since the release of the first version of the Fabric to undertake manual review above and beyond the baseline methodology to identify additional BSLs in these areas. I

therefore am pleased to provide an update about the improvements made in Version 2 of the Fabric for each of the locations you identified.

In Washington State, I understand that researchers found that a significant number of residences and businesses in a town on Tribal lands were missing entirely from the new map. My understanding from both your letter and from other sources is that these concerns relate specifically to the Spokane Reservation, which sits at the southern part of Stevens County. As a general matter, Tribal lands within the continental United States have seen significant increases in the number of BSLs between Version 1 and Version 2 of the Fabric. In Stevens County, for instance, we have added 191 locations in Version 2, including many locations within the Spokane Reservation boundaries.

In Mississippi, the state broadband office called attention to addresses missing in "high-growth areas of the state" and I understand that there are particular concerns with Desoto and Madison counties. After careful review and analysis, in Desoto County, we added 3,039 BSLs (a 4.5% increase in Version 2 of the Fabric) and in Madison County, there was a slight drop in the number of BSLs (116 fewer in Version 2 than in Version 1, including the addition of 548 new BSLs offset by the removal of 664 locations that were not BSLs).

In New Mexico, in Version 1 of the Fabric, the entire Pueblo of Cochiti and the town of Shiprock were missing from the Fabric, and in total, the New Mexico Office of Broadband Access and Expansion determined that thousands of locations were missing. However, Version 2 of the Fabric reflects significant improvement to the data for these areas. Cochiti, NM had an increase of 180 BSLs from Version 1 to Version 2 of the Fabric, and Sandoval County, NM saw an increase of 830 BSLs. BSLs in the town of Shiprock, NM increased by 2,394 and in San Juan County, NM we added 8,568 BSLs from Version 1 to Version 2. Overall the state of New Mexico gained 20,456 BSLs from Version 1 to Version 2.

In Nebraska, several rural villages in need of broadband connectivity, such as Arthur, showed no serviceable locations for nearly the entire town in Version 1 of the Fabric. Arthur, which is the county seat of Arthur County, increased by 153 BSLs between Version 1 and Version 2 of the Fabric, and BSLs in Arthur County increased from 192 BSLs in Version 1 to 345 BSLs in Version 2.

These examples illustrate both how the challenge process is intended to work under the Broadband DATA Act and how the interactive back and forth between state and local authorities and the Commission is resulting in improvements to the BDC effort. For this reason, I encourage all stakeholders, especially state and local broadband offices to review Version 2 of the Fabric. In addition to the existing resources available to inform stakeholders on how to view and interact with the Fabric, the Broadband Data Task Force stands ready to continue to work with states and other stakeholders to help them use the best tools and methods for mapping the Fabric data and corresponding information on BSLs with other datasets that stakeholders have on locations where broadband service is needed. I recognize that not every state and territory collects their own data in the same way that we are amassing it for this national effort, but we are ready, willing and able to work with them to align our efforts.

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Sincerely,

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FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF THE
CHAIRWOMAN

February 10, 2023

The Honorable Martin Heinrich
United States Senate
303 Hart Senate Office Building
Washington, DC 20510

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Broadband Serviceable Location Fabric

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Last summer, I personally reached out to broadband leaders in all fifty states and U.S. territories to encourage them to review the Fabric and, if needed, to plan to file Fabric challenges as early as possible after the opening of the challenge window. Two months after making the data available in June 2023, the FCC opened a process on September 12, 2022 for governmental entities, internet service providers, and other entities to begin submitting challenges for multiple broadband-serviceable locations (i.e., "bulk" Fabric challenges). The Commission held a webinar on September 7, 2022 to assist bulk Fabric challengers on how to submit their challenge data and hosted a follow-up workshop on September 28, 2022 to further assist entities with preparing such challenges. Commission staff also published an FAQ document, multiple articles, and other resources on its BDC Help Center (https://help.bdc.fcc.gov/) to provide technical assistance to potential bulk Fabric challengers. The BDC Help Center also posted a link to enable stakeholders to submit questions or requests for assistance with the challenge process.

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from state governments resulted in approximately 122,000 new locations being added into Version 2 of the Fabric (or slightly more than 0.1% of the number of locations included in Version 1).

Version 2 of the Fabric includes 1.04 million more locations than the version currently shown on the National Broadband Map. These additional locations are primarily the result of CostQuest's ongoing efforts to update and improve the Fabric by refining the models and processes for creating the Fabric and using updated and improved input data sources such as new and more granular parcel data. Version 2 also incorporates millions of adjustments to the data associated with locations that were already included in Version 1 of the Fabric, including, for example, changes to address fields, unit counts, secondary addresses, BSL status, building and land use codes, etc. These ongoing efforts to improve the Fabric—alongside the Fabric challenge process—will continue and remain an important tool for the improvement of the National Broadband Map. Version 2 of the Fabric is currently available to states, governmental entities and all Fabric license holders.

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Fixed Availability Data

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Your letter also indicates you have heard of inaccuracies in the availability data filed in the map in some areas. I anticipate that, over time, the challenge process will serve to correct many of the inaccuracies in the current iteration of the map. Nevertheless, I plan on using every tool at the Commission's disposal to correct the map and appreciate you highlighting areas where you believe widespread inaccuracies may exist. This includes enforcement action when providers do not comply with our rules when they file availability data and, to this end, we already have an enforcement investigation that is ongoing.

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reliable broadband services in its BEAD Notice of Funding Opportunity (i.e., wired or licensed fixed wireless services), the map indicates that roughly 38% of locations are served by such services with speeds of 25/3 or greater in Stevens County.

Similarly, in Grainger County, Tennessee, the Microsoft digital equity tool relies on older FCC form 477 data as well as a range of other data sources to measure digital equity and broadband access more generally. The Commission's maps are based on a new, granular, location-by-location data collection. Comparison of the two tools may be useful, but in light of these differences, they are unlikely to yield a similar result.

Using the Challenge Process

Consistent with the Broadband DATA Act, any individual may file a Fabric or availability challenge directly through the National Broadband Map interface simply by clicking on the map at their location and filling out a short web form. Service providers, governments, and other entities may file challenges in bulk by uploading data files in the BDC system.

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Given the importance of the availability challenge process in refining the data depicted on the map and ensuring that the map is as accurate as possible, we have conducted extensive outreach to state, local, and Tribal governmental entities, service providers, and others to inform stakeholders about how they can participate in the process. Commission staff have held hundreds of meetings with congressional offices, service providers, public interest groups, and governmental entities across the nation to be sure we are offering support throughout the BDC process. We have also made available web tutorials, one-pagers, FAQs, data specifications, and a series of knowledge base articles to walk consumers and bulk challengers through the entire availability challenge process. Additionally, we have posted outreach materials that state and local governments, community organizations and others may use to help educate consumers on

how to file a challenge and engage with the FCC's map. To date, we have received over 4 million availability challenges. Many of these have already been resolved between the carrier and the challenger and will be reflected in future maps.

It is more important than ever for us to know where broadband is, and is not, available throughout the nation. Far too many households remain unconnected, and accurately showing where they are located is an important part of directing funding into the communities that need it the most. The map we have is a work that is always in progress, just as Congress designed it to be in the Broadband DATA Act. I am confident that the BDC process we have established will help improve the map just as Congress envisioned. I also will continue to ensure that the Broadband Data Task Force makes itself available to all stakeholders interested in offering challenges to the current iteration of our data.

I hope the above is helpful. Please let me know if you have any further questions. I look forward to continuing to work with you to help close the digital divide.

Sincerely,

Jessica Rosenworcel

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF THE
CHAIRWOMAN

February 10, 2023

The Honorable Ron Wyden
United States Senate
221 Dirksen Senate Office Building
Washington, DC 20510

Dear Senator Wyden:

Thank you for your letter regarding the work to develop an iterative National Broadband Map at the Federal Communications Commission. Today, broadband service is vital for school, work, healthcare, and more. Connecting everyone to high-speed service is essential for everyone, everywhere to have the opportunities made possible by the digital age. That is why I share your commitment to making sure that broadband connectivity is available across the country.

As Congress recognized in the Broadband DATA Act, in order to connect everyone, everywhere, we need to develop accurate information about where broadband service is and is not available across the country. With better data, we can more precisely target our policymaking efforts and financial resources, including the Commission's universal service funding system and the grant projects in the Bipartisan Infrastructure Law, to areas where support is needed most. Better data will also help other federal agencies, state and local governments, and Tribal entities target their own broadband mapping and deployment efforts.

Since the passage of the Broadband DATA Act in March 2020, the Commission has perpetually worked to implement the requirements of the law and to begin the iterative data collection and challenge processes envisioned by the Act through the creation of its Broadband Data Collection (BDC) program. The BDC is a significant departure from the Commission's previous Form 477 process used for identifying the state of broadband deployment. The Form 477 process, which was used by the agency in various formats for decades, collected data only at the census-block level. If there was a single subscriber in the census block, the agency assumed service was available throughout. As a result, the Form 477 process systematically overstated the presence of broadband, particularly in rural areas. In addition, this process lacked a mechanism to verify that data based on the on-the-ground experience of consumers and other stakeholders.

This is no longer the case. As required by the Broadband DATA Act, the Commission has built an entirely new data-collection system for ingesting, validating, and aggregating provider data for download and publication on the National Broadband Map. This system is also designed to incorporate data submitted by individual consumers and by State and Tribal governments and other stakeholders challenging a provider's availability submissions at

particular locations. In addition, the Broadband DATA Act required the Commission to develop the Broadband Serviceable Location Fabric (Fabric). The Fabric is a common dataset of all broadband serviceable locations (BSLs) in the United States where mass market fixed broadband internet access service is available or could be installed. The Fabric dataset supports location-by-location reporting of available fixed broadband services by internet service providers. To be clear, the Fabric itself is not a map. It is an evolving database of all BSLs nationwide that is used in the production of the map when combined with information from service providers and data from the challenge process.

On June 23, 2022, shortly before the opening of the filing window for reporting broadband availability data as of June 30, the Commission made the initial production version of the Fabric (Version 1) available to both internet service providers and to state, local, and Tribal governments. Internet service providers used Version 1 of the Fabric to report their fixed broadband availability data on or before the close of the inaugural filing window on September 1, 2022.

On November 18, 2022, the Commission released a pre-production draft of its new National Broadband Map depicting broadband availability, as of June 30, 2022, from over 2,500 facilities-based providers of fixed and mobile mass-market broadband Internet access services. The release of the pre-production draft of the map was a major milestone in the development of what will be the most accurate and granular dataset of internet availability across the United States to date. However, as you acknowledge, the Broadband DATA Act envisions the Commission's BDC efforts to be an iterative process through which these maps evolve as the facts on the ground change, and incorporates improvements and refinements that are a result of the ongoing challenge and crowdsource processes. Our release of the pre-production draft of the new National Broadband Map on November 18 kicked off the opportunity for challengers to dispute the accuracy of the availability data.

I appreciate your sharing your concerns regarding the "deadline" for submitting location and availability challenges to the National Broadband Map as well as with the accuracy of the location and availability data shown on the map. At the outset, I want to clarify that the January 13, 2023 date was not a deadline because the Commission continues to accept and resolve location and availability challenges so that they may be included in future iterations of the map. The Commission rules make clear that the agency will accept challenges to the Fabric and availability data on a rolling basis, at any time.

As you may know, under its authority under the Bipartisan Infrastructure Law, the National Telecommunications and Information Administration (NTIA) continues to target June 30 as the date by which it will allocate each state and territory's funding under the Broadband Equity, Access, and Deployment (BEAD) program (see NTIA blog post at https://ntia.gov/blog/2023/advancing-internet-all). January 13, 2023 was identified as the target date by which availability challenges had the best opportunity to be fully addressed and incorporated into the map, if necessary, ahead of NTIA's plan to allocate funds by June 30.

However, the Broadband DATA Act envisions ongoing challenges to the map, and the Commission stands ready to continue to work with all stakeholders to receive feedback and continue to improve our map over time. In the meantime, I can provide some additional information in response to the other issues referenced in your letter.

Broadband Serviceable Location Fabric

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Given the importance of the availability challenge process in refining the data depicted on the map and ensuring that the map is as accurate as possible, we have conducted extensive outreach to state, local, and Tribal governmental entities, service providers, and others to inform stakeholders about how they can participate in the process. Commission staff have held hundreds of meetings with congressional offices, service providers, public interest groups, and governmental entities across the nation to be sure we are offering support throughout the BDC process. We have also made available web tutorials, one-pagers, FAQs, data specifications, and a series of knowledge base articles to walk consumers and bulk challengers through the entire availability challenge process. Additionally, we have posted outreach materials that state and local governments, community organizations and others may use to help educate consumers on

how to file a challenge and engage with the FCC's map. To date, we have received over 4 million availability challenges. Many of these have already been resolved between the carrier and the challenger and will be reflected in future maps.

It is more important than ever for us to know where broadband is, and is not, available throughout the nation. Far too many households remain unconnected, and accurately showing where they are located is an important part of directing funding into the communities that need it the most. The map we have is a work that is always in progress, just as Congress designed it to be in the Broadband DATA Act. I am confident that the BDC process we have established will help improve the map just as Congress envisioned. I also will continue to ensure that the Broadband Data Task Force makes itself available to all stakeholders interested in offering challenges to the current iteration of our data.

I hope the above is helpful. Please let me know if you have any further questions. I look forward to continuing to work with you to help close the digital divide.

Sincerely,

Jessica Rosenworcel

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF THE
CHAIRWOMAN

February 10, 2023

The Honorable Bob Casey
United States Senate
393 Russell Senate Office Building
Washington, DC 20510

Dear Senator Casey:

Thank you for your letter regarding the work to develop an iterative National Broadband Map at the Federal Communications Commission. Today, broadband service is vital for school, work, healthcare, and more. Connecting everyone to high-speed service is essential for everyone, everywhere to have the opportunities made possible by the digital age. That is why I share your commitment to making sure that broadband connectivity is available across the country.

As Congress recognized in the Broadband DATA Act, in order to connect everyone, everywhere, we need to develop accurate information about where broadband service is and is not available across the country. With better data, we can more precisely target our policymaking efforts and financial resources, including the Commission's universal service funding system and the grant projects in the Bipartisan Infrastructure Law, to areas where support is needed most. Better data will also help other federal agencies, state and local governments, and Tribal entities target their own broadband mapping and deployment efforts.

Since the passage of the Broadband DATA Act in March 2020, the Commission has perpetually worked to implement the requirements of the law and to begin the iterative data collection and challenge processes envisioned by the Act through the creation of its Broadband Data Collection (BDC) program. The BDC is a significant departure from the Commission's previous Form 477 process used for identifying the state of broadband deployment. The Form 477 process, which was used by the agency in various formats for decades, collected data only at the census-block level. If there was a single subscriber in the census block, the agency assumed service was available throughout. As a result, the Form 477 process systematically overstated the presence of broadband, particularly in rural areas. In addition, this process lacked a mechanism to verify that data based on the on-the-ground experience of consumers and other stakeholders.

This is no longer the case. As required by the Broadband DATA Act, the Commission has built an entirely new data-collection system for ingesting, validating, and aggregating provider data for download and publication on the National Broadband Map. This system is also designed to incorporate data submitted by individual consumers and by State and Tribal governments and other stakeholders challenging a provider's availability submissions at

particular locations. In addition, the Broadband DATA Act required the Commission to develop the Broadband Serviceable Location Fabric (Fabric). The Fabric is a common dataset of all broadband serviceable locations (BSLs) in the United States where mass market fixed broadband internet access service is available or could be installed. The Fabric dataset supports location-by-location reporting of available fixed broadband services by internet service providers. To be clear, the Fabric itself is not a map. It is an evolving database of all BSLs nationwide that is used in the production of the map when combined with information from service providers and data from the challenge process.

On June 23, 2022, shortly before the opening of the filing window for reporting broadband availability data as of June 30, the Commission made the initial production version of the Fabric (Version 1) available to both internet service providers and to state, local, and Tribal governments. Internet service providers used Version 1 of the Fabric to report their fixed broadband availability data on or before the close of the inaugural filing window on September 1, 2022.

On November 18, 2022, the Commission released a pre-production draft of its new National Broadband Map depicting broadband availability, as of June 30, 2022, from over 2,500 facilities-based providers of fixed and mobile mass-market broadband Internet access services. The release of the pre-production draft of the map was a major milestone in the development of what will be the most accurate and granular dataset of internet availability across the United States to date. However, as you acknowledge, the Broadband DATA Act envisions the Commission's BDC efforts to be an iterative process through which these maps evolve as the facts on the ground change, and incorporates improvements and refinements that are a result of the ongoing challenge and crowdsource processes. Our release of the pre-production draft of the new National Broadband Map on November 18 kicked off the opportunity for challengers to dispute the accuracy of the availability data.

I appreciate your sharing your concerns regarding the "deadline" for submitting location and availability challenges to the National Broadband Map as well as with the accuracy of the location and availability data shown on the map. At the outset, I want to clarify that the January 13, 2023 date was not a deadline because the Commission continues to accept and resolve location and availability challenges so that they may be included in future iterations of the map. The Commission rules make clear that the agency will accept challenges to the Fabric and availability data on a rolling basis, at any time.

As you may know, under its authority under the Bipartisan Infrastructure Law, the National Telecommunications and Information Administration (NTIA) continues to target June 30 as the date by which it will allocate each state and territory's funding under the Broadband Equity, Access, and Deployment (BEAD) program (see NTIA blog post at https://ntia.gov/blog/2023/advancing-internet-all). January 13, 2023 was identified as the target date by which availability challenges had the best opportunity to be fully addressed and incorporated into the map, if necessary, ahead of NTIA's plan to allocate funds by June 30.

However, the Broadband DATA Act envisions ongoing challenges to the map, and the Commission stands ready to continue to work with all stakeholders to receive feedback and continue to improve our map over time. In the meantime, I can provide some additional information in response to the other issues referenced in your letter.

Broadband Serviceable Location Fabric

As noted above, the Fabric is an evolving dataset of all BSLs in the United States, and substantial improvements have been made to it since its first pre-production release. It is the product of integrating a wide range of data sources, including address records, information about parcel boundaries, tax assessment records, imagery and building footprint data, Census data, land use records, and geo-spatial road and street data. In fact, to build the Fabric more than 200 data attributes are assessed using artificial intelligence and machine learning to identify the precise geocoordinates of each BSL included in the dataset. The first version of the Fabric contained more than 113.2 million BSLs.

Last summer, I personally reached out to broadband leaders in all fifty states and U.S. territories to encourage them to review the Fabric and, if needed, to plan to file Fabric challenges as early as possible after the opening of the challenge window. Two months after making the data available in June 2023, the FCC opened a process on September 12, 2022 for governmental entities, internet service providers, and other entities to begin submitting challenges for multiple broadband-serviceable locations (i.e., "bulk" Fabric challenges). The Commission held a webinar on September 7, 2022 to assist bulk Fabric challengers on how to submit their challenge data and hosted a follow-up workshop on September 28, 2022 to further assist entities with preparing such challenges. Commission staff also published an FAQ document, multiple articles, and other resources on its BDC Help Center (https://help.bdc.fcc.gov/) to provide technical assistance to potential bulk Fabric challengers. The BDC Help Center also posted a link to enable stakeholders to submit questions or requests for assistance with the challenge process.

Governmental entities, including 20 states, submitted 1.11 million individual challenges to the Version 1 of the Fabric data that were processed in anticipation of preparation of Version 2 of the Fabric. Many internet service providers also submitted challenges to Version 1 of the Fabric. These challenges were predominately challenges to add missing locations but included challenges to correct information associated with existing locations as well. Many of these challenges require identifying differences in the data collection practices used by governmental entities and providers and those required for the BDC. In other words, in many cases we have the same data but in a different format or may require slight latitude and longitude adjustments to the BSLs. To put these challenges in context, it is important to note that they sought corrections for records corresponding to less than1% of the total number of locations identified in Version 1 of the Fabric. Of these 1.11 million challenges, more than half were for locations that were either already included in Version 1 of the Fabric or that CostQuest, the vendor selected to develop the Fabric in accordance with the Broadband DATA Act, had independently identified through its own efforts for inclusion in Version 2 of the Fabric. Successful location challenges

from state governments resulted in approximately 122,000 new locations being added into Version 2 of the Fabric (or slightly more than 0.1% of the number of locations included in Version 1).

Version 2 of the Fabric includes 1.04 million more locations than the version currently shown on the National Broadband Map. These additional locations are primarily the result of CostQuest's ongoing efforts to update and improve the Fabric by refining the models and processes for creating the Fabric and using updated and improved input data sources such as new and more granular parcel data. Version 2 also incorporates millions of adjustments to the data associated with locations that were already included in Version 1 of the Fabric, including, for example, changes to address fields, unit counts, secondary addresses, BSL status, building and land use codes, etc. These ongoing efforts to improve the Fabric—alongside the Fabric challenge process—will continue and remain an important tool for the improvement of the National Broadband Map. Version 2 of the Fabric is currently available to states, governmental entities and all Fabric license holders.

Meaningful changes have been made to the Fabric as a result of these efforts. For example, in in Mineral County, Nevada (which includes part of the Walker River Tribal Lands) the number of BSLs increased 17.9% from Version 1 of the Fabric to Version 2. We believe Version 2 of the dataset, which reflects changes like these, will address most, if not all, of the outstanding concerns. On top of that, any remaining issues will continue to be addressed through our continued efforts to improve and refine the data in future versions of the Fabric in addition to the challenge process that is an integral part of our BDC endeavor.

As noted above, the Commission will accept location challenges from all stakeholders at any time—on a rolling basis. But Fabric dataset adjustments from the vendor and challenge process are only pushed through to the official National Broadband Map twice a year, after providers have reported their availability data based on the revisions. This is consistent with the statute, which states that the Fabric shall "serve as the foundation upon which all data relating to the availability of fixed broadband internet access service collected . . . shall be reported and overlaid." 47 U.S.C. § 642(b)(1)(B)(ii). Proceeding in this way, the map will accurately reflect providers' account of the availability of their services on the as-of date. Continually updating the National Broadband Map to reflect changes to the Fabric would create anomalies in the data because the map would contain locations for which providers have not had an opportunity to report availability, causing the maps to be less useful as a depiction of availability on the as-of date.

We also have acknowledged that there were a few discrete instances where these data in Version 1 of the Fabric did not meet our expectations. The known instances correspond to areas in the United States where the underlying datasets used to create the Fabric (parcel data, tax assessor data, high-resolution imagery data) were either outdated or simply not available. To improve the Fabric data in these areas, the and our contractor, CostQuest, have invested significant resources since the release of the first version of the Fabric to undertake manual review above and beyond the baseline methodology to identify additional BSLs in these areas. I

therefore am pleased to provide an update about the improvements made in Version 2 of the Fabric for each of the locations you identified.

In Washington State, I understand that researchers found that a significant number of residences and businesses in a town on Tribal lands were missing entirely from the new map. My understanding from both your letter and from other sources is that these concerns relate specifically to the Spokane Reservation, which sits at the southern part of Stevens County. As a general matter, Tribal lands within the continental United States have seen significant increases in the number of BSLs between Version 1 and Version 2 of the Fabric. In Stevens County, for instance, we have added 191 locations in Version 2, including many locations within the Spokane Reservation boundaries.

In Mississippi, the state broadband office called attention to addresses missing in "high-growth areas of the state" and I understand that there are particular concerns with Desoto and Madison counties. After careful review and analysis, in Desoto County, we added 3,039 BSLs (a 4.5% increase in Version 2 of the Fabric) and in Madison County, there was a slight drop in the number of BSLs (116 fewer in Version 2 than in Version 1, including the addition of 548 new BSLs offset by the removal of 664 locations that were not BSLs).

In New Mexico, in Version 1 of the Fabric, the entire Pueblo of Cochiti and the town of Shiprock were missing from the Fabric, and in total, the New Mexico Office of Broadband Access and Expansion determined that thousands of locations were missing. However, Version 2 of the Fabric reflects significant improvement to the data for these areas. Cochiti, NM had an increase of 180 BSLs from Version 1 to Version 2 of the Fabric, and Sandoval County, NM saw an increase of 830 BSLs. BSLs in the town of Shiprock, NM increased by 2,394 and in San Juan County, NM we added 8,568 BSLs from Version 1 to Version 2. Overall the state of New Mexico gained 20,456 BSLs from Version 1 to Version 2.

In Nebraska, several rural villages in need of broadband connectivity, such as Arthur, showed no serviceable locations for nearly the entire town in Version 1 of the Fabric. Arthur, which is the county seat of Arthur County, increased by 153 BSLs between Version 1 and Version 2 of the Fabric, and BSLs in Arthur County increased from 192 BSLs in Version 1 to 345 BSLs in Version 2.

These examples illustrate both how the challenge process is intended to work under the Broadband DATA Act and how the interactive back and forth between state and local authorities and the Commission is resulting in improvements to the BDC effort. For this reason, I encourage all stakeholders, especially state and local broadband offices to review Version 2 of the Fabric. In addition to the existing resources available to inform stakeholders on how to view and interact with the Fabric, the Broadband Data Task Force stands ready to continue to work with states and other stakeholders to help them use the best tools and methods for mapping the Fabric data and corresponding information on BSLs with other datasets that stakeholders have on locations where broadband service is needed. I recognize that not every state and territory collects their own data in the same way that we are amassing it for this national effort, but we are ready, willing and able to work with them to align our efforts.

Fixed Availability Data

With respect to fixed broadband availability reporting, under the Commission's rules, service is considered to be "available" if the provider has an existing connection at that location, or the provider could (and is willing to) connect that location to service within 10 business days for a standard installation fee. Availability is reported by technology type and the maximum advertised speed at each location. Based upon these guidelines, fixed broadband service providers should not report their service being available where: (1) an individual has attempted to request service but the ISP cannot deliver the service within 10 business days; or (2) in the case of a satellite or terrestrial fixed wireless provider, a provider's signals cannot in fact be received at the location. It is worth noting that this site-specific standard is substantially more precise than the one that preceded it in the Form 477 process, which required providers to characterize service as available throughout entire census block if they served at least one location within that census block. Moreover, should a provider claim that it can make service available to a location under either of these circumstances, that information can be challenged using either the map interface or via a bulk availability challenge. Such feedback, and other crowdsource and verification tools that are built into the new BDC process, were not available to the FCC in the prior Form 477 context.

Your letter also indicates you have heard of inaccuracies in the availability data filed in the map in some areas. I anticipate that, over time, the challenge process will serve to correct many of the inaccuracies in the current iteration of the map. Nevertheless, I plan on using every tool at the Commission's disposal to correct the map and appreciate you highlighting areas where you believe widespread inaccuracies may exist. This includes enforcement action when providers do not comply with our rules when they file availability data and, to this end, we already have an enforcement investigation that is ongoing.

Your letter notes that Microsoft's data show that under 20 percent of the population in Stevens County, Washington are actually using the internet at broadband speeds. Both the Microsoft digital equity tool, and the FCC's draft map indicates that 100 percent of Stevens County has broadband availability at speeds of 25/3 or greater. The 20 percent metric cited refers to the percentage of the population that uses the internet at broadband speeds. The difference may indicate a lack of adoption or affordability of broadband services in addition to availability. The same Microsoft digital equity tool, indicates that over 25% of households in the county do not subscribe to broadband of any type and that over 26% do not own a laptop or desktop computer, measures of adoption and affordability. Digital equity is a wholistic and important conversation, but not within the scope of the FCC's Broadband Data Collection and the data shown on our current maps. Moreover, there are significant differences in data sources used to compile the two sets—Microsoft appears to include FCC Form 477 data, census data, and other consumer surveys, while the Commission's new maps are based on granular location-by-location availability data reported by providers based on Fabric points. It may also be worth noting that the map data show all broadband technologies that were reported to the Commission. When the map data are filtered to show only the speeds and technologies that NTIA identified as

reliable broadband services in its BEAD Notice of Funding Opportunity (i.e., wired or licensed fixed wireless services), the map indicates that roughly 38% of locations are served by such services with speeds of 25/3 or greater in Stevens County.

Similarly, in Grainger County, Tennessee, the Microsoft digital equity tool relies on older FCC form 477 data as well as a range of other data sources to measure digital equity and broadband access more generally. The Commission's maps are based on a new, granular, location-by-location data collection. Comparison of the two tools may be useful, but in light of these differences, they are unlikely to yield a similar result.

Using the Challenge Process

Consistent with the Broadband DATA Act, any individual may file a Fabric or availability challenge directly through the National Broadband Map interface simply by clicking on the map at their location and filling out a short web form. Service providers, governments, and other entities may file challenges in bulk by uploading data files in the BDC system.

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FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF THE
CHAIRWOMAN

February 10, 2023

The Honorable Gary Peters
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These examples illustrate both how the challenge process is intended to work under the Broadband DATA Act and how the interactive back and forth between state and local authorities and the Commission is resulting in improvements to the BDC effort. For this reason, I encourage all stakeholders, especially state and local broadband offices to review Version 2 of the Fabric. In addition to the existing resources available to inform stakeholders on how to view and interact with the Fabric, the Broadband Data Task Force stands ready to continue to work with states and other stakeholders to help them use the best tools and methods for mapping the Fabric data and corresponding information on BSLs with other datasets that stakeholders have on locations where broadband service is needed. I recognize that not every state and territory collects their own data in the same way that we are amassing it for this national effort, but we are ready, willing and able to work with them to align our efforts.

Fixed Availability Data

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Your letter notes that Microsoft's data show that under 20 percent of the population in Stevens County, Washington are actually using the internet at broadband speeds. Both the Microsoft digital equity tool, and the FCC's draft map indicates that 100 percent of Stevens County has broadband availability at speeds of 25/3 or greater. The 20 percent metric cited refers to the percentage of the population that uses the internet at broadband speeds. The difference may indicate a lack of adoption or affordability of broadband services in addition to availability. The same Microsoft digital equity tool, indicates that over 25% of households in the county do not subscribe to broadband of any type and that over 26% do not own a laptop or desktop computer, measures of adoption and affordability. Digital equity is a wholistic and important conversation, but not within the scope of the FCC's Broadband Data Collection and the data shown on our current maps. Moreover, there are significant differences in data sources used to compile the two sets—Microsoft appears to include FCC Form 477 data, census data, and other consumer surveys, while the Commission's new maps are based on granular location-by-location availability data reported by providers based on Fabric points. It may also be worth noting that the map data show all broadband technologies that were reported to the Commission. When the map data are filtered to show only the speeds and technologies that NTIA identified as

reliable broadband services in its BEAD Notice of Funding Opportunity (i.e., wired or licensed fixed wireless services), the map indicates that roughly 38% of locations are served by such services with speeds of 25/3 or greater in Stevens County.

Similarly, in Grainger County, Tennessee, the Microsoft digital equity tool relies on older FCC form 477 data as well as a range of other data sources to measure digital equity and broadband access more generally. The Commission's maps are based on a new, granular, location-by-location data collection. Comparison of the two tools may be useful, but in light of these differences, they are unlikely to yield a similar result.

Using the Challenge Process

Consistent with the Broadband DATA Act, any individual may file a Fabric or availability challenge directly through the National Broadband Map interface simply by clicking on the map at their location and filling out a short web form. Service providers, governments, and other entities may file challenges in bulk by uploading data files in the BDC system.

Under Commission rules, once accepted, fixed availability challenges will be sent to the relevant provider for a response, and the provider will have 60 days to review and either concede the challenge (in which case they must remove that location from their availability data within 30 days) or dispute it. If a provider disputes the challenge, the provider must provide evidence in the BDC system and to the challenger to rebut the challenge. The provider and challenger then have 60 days to attempt to resolve the challenge. If the provider and challenger cannot resolve the challenge, the Commission will adjudicate the challenge based on the evidence and, pursuant to changes made by Congress in the Bipartisan Infrastructure Law, make a determination within 90 days after a provider submits its final response to a challenge. If a provider loses a challenge, it must revise its data consistent with the decision within 30 days and the Commission will update the map accordingly. Any availability challenges that are upheld will carry into future iterations of the map unless and until the provider demonstrates changed circumstances that would substantiate reporting availability at that location (such as deployment of new infrastructure). Despite these timelines, we expect that many challenges will be resolved more quickly, especially if providers respond promptly to challenges or are able to mediate challenges in advance of adjudication.

Given the importance of the availability challenge process in refining the data depicted on the map and ensuring that the map is as accurate as possible, we have conducted extensive outreach to state, local, and Tribal governmental entities, service providers, and others to inform stakeholders about how they can participate in the process. Commission staff have held hundreds of meetings with congressional offices, service providers, public interest groups, and governmental entities across the nation to be sure we are offering support throughout the BDC process. We have also made available web tutorials, one-pagers, FAQs, data specifications, and a series of knowledge base articles to walk consumers and bulk challengers through the entire availability challenge process. Additionally, we have posted outreach materials that state and local governments, community organizations and others may use to help educate consumers on

how to file a challenge and engage with the FCC's map. To date, we have received over 4 million availability challenges. Many of these have already been resolved between the carrier and the challenger and will be reflected in future maps.

It is more important than ever for us to know where broadband is, and is not, available throughout the nation. Far too many households remain unconnected, and accurately showing where they are located is an important part of directing funding into the communities that need it the most. The map we have is a work that is always in progress, just as Congress designed it to be in the Broadband DATA Act. I am confident that the BDC process we have established will help improve the map just as Congress envisioned. I also will continue to ensure that the Broadband Data Task Force makes itself available to all stakeholders interested in offering challenges to the current iteration of our data.

I hope the above is helpful. Please let me know if you have any further questions. I look forward to continuing to work with you to help close the digital divide.

Sincerely,

Jessica Rosenworcel

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF THE
CHAIRWOMAN

February 10, 2023

The Honorable Raphael G. Warnock
United States Senate
B40D Dirksen Senate Office Building
Washington, DC 20510

Dear Senator Warnock:

Thank you for your letter regarding the work to develop an iterative National Broadband Map at the Federal Communications Commission. Today, broadband service is vital for school, work, healthcare, and more. Connecting everyone to high-speed service is essential for everyone, everywhere to have the opportunities made possible by the digital age. That is why I share your commitment to making sure that broadband connectivity is available across the country.

As Congress recognized in the Broadband DATA Act, in order to connect everyone, everywhere, we need to develop accurate information about where broadband service is and is not available across the country. With better data, we can more precisely target our policymaking efforts and financial resources, including the Commission's universal service funding system and the grant projects in the Bipartisan Infrastructure Law, to areas where support is needed most. Better data will also help other federal agencies, state and local governments, and Tribal entities target their own broadband mapping and deployment efforts.

Since the passage of the Broadband DATA Act in March 2020, the Commission has perpetually worked to implement the requirements of the law and to begin the iterative data collection and challenge processes envisioned by the Act through the creation of its Broadband Data Collection (BDC) program. The BDC is a significant departure from the Commission's previous Form 477 process used for identifying the state of broadband deployment. The Form 477 process, which was used by the agency in various formats for decades, collected data only at the census-block level. If there was a single subscriber in the census block, the agency assumed service was available throughout. As a result, the Form 477 process systematically overstated the presence of broadband, particularly in rural areas. In addition, this process lacked a mechanism to verify that data based on the on-the-ground experience of consumers and other stakeholders.

This is no longer the case. As required by the Broadband DATA Act, the Commission has built an entirely new data-collection system for ingesting, validating, and aggregating provider data for download and publication on the National Broadband Map. This system is also designed to incorporate data submitted by individual consumers and by State and Tribal governments and other stakeholders challenging a provider's availability submissions at

particular locations. In addition, the Broadband DATA Act required the Commission to develop the Broadband Serviceable Location Fabric (Fabric). The Fabric is a common dataset of all broadband serviceable locations (BSLs) in the United States where mass market fixed broadband internet access service is available or could be installed. The Fabric dataset supports location-by-location reporting of available fixed broadband services by internet service providers. To be clear, the Fabric itself is not a map. It is an evolving database of all BSLs nationwide that is used in the production of the map when combined with information from service providers and data from the challenge process.

On June 23, 2022, shortly before the opening of the filing window for reporting broadband availability data as of June 30, the Commission made the initial production version of the Fabric (Version 1) available to both internet service providers and to state, local, and Tribal governments. Internet service providers used Version 1 of the Fabric to report their fixed broadband availability data on or before the close of the inaugural filing window on September 1, 2022.

On November 18, 2022, the Commission released a pre-production draft of its new National Broadband Map depicting broadband availability, as of June 30, 2022, from over 2,500 facilities-based providers of fixed and mobile mass-market broadband Internet access services. The release of the pre-production draft of the map was a major milestone in the development of what will be the most accurate and granular dataset of internet availability across the United States to date. However, as you acknowledge, the Broadband DATA Act envisions the Commission's BDC efforts to be an iterative process through which these maps evolve as the facts on the ground change, and incorporates improvements and refinements that are a result of the ongoing challenge and crowdsource processes. Our release of the pre-production draft of the new National Broadband Map on November 18 kicked off the opportunity for challengers to dispute the accuracy of the availability data.

I appreciate your sharing your concerns regarding the "deadline" for submitting location and availability challenges to the National Broadband Map as well as with the accuracy of the location and availability data shown on the map. At the outset, I want to clarify that the January 13, 2023 date was not a deadline because the Commission continues to accept and resolve location and availability challenges so that they may be included in future iterations of the map. The Commission rules make clear that the agency will accept challenges to the Fabric and availability data on a rolling basis, at any time.

As you may know, under its authority under the Bipartisan Infrastructure Law, the National Telecommunications and Information Administration (NTIA) continues to target June 30 as the date by which it will allocate each state and territory's funding under the Broadband Equity, Access, and Deployment (BEAD) program (see NTIA blog post at https://ntia.gov/blog/2023/advancing-internet-all). January 13, 2023 was identified as the target date by which availability challenges had the best opportunity to be fully addressed and incorporated into the map, if necessary, ahead of NTIA's plan to allocate funds by June 30.

However, the Broadband DATA Act envisions ongoing challenges to the map, and the Commission stands ready to continue to work with all stakeholders to receive feedback and continue to improve our map over time. In the meantime, I can provide some additional information in response to the other issues referenced in your letter.

Broadband Serviceable Location Fabric

As noted above, the Fabric is an evolving dataset of all BSLs in the United States, and substantial improvements have been made to it since its first pre-production release. It is the product of integrating a wide range of data sources, including address records, information about parcel boundaries, tax assessment records, imagery and building footprint data, Census data, land use records, and geo-spatial road and street data. In fact, to build the Fabric more than 200 data attributes are assessed using artificial intelligence and machine learning to identify the precise geocoordinates of each BSL included in the dataset. The first version of the Fabric contained more than 113.2 million BSLs.

Last summer, I personally reached out to broadband leaders in all fifty states and U.S. territories to encourage them to review the Fabric and, if needed, to plan to file Fabric challenges as early as possible after the opening of the challenge window. Two months after making the data available in June 2023, the FCC opened a process on September 12, 2022 for governmental entities, internet service providers, and other entities to begin submitting challenges for multiple broadband-serviceable locations (i.e., "bulk" Fabric challenges). The Commission held a webinar on September 7, 2022 to assist bulk Fabric challengers on how to submit their challenge data and hosted a follow-up workshop on September 28, 2022 to further assist entities with preparing such challenges. Commission staff also published an FAQ document, multiple articles, and other resources on its BDC Help Center (https://help.bdc.fcc.gov/) to provide technical assistance to potential bulk Fabric challengers. The BDC Help Center also posted a link to enable stakeholders to submit questions or requests for assistance with the challenge process.

Governmental entities, including 20 states, submitted 1.11 million individual challenges to the Version 1 of the Fabric data that were processed in anticipation of preparation of Version 2 of the Fabric. Many internet service providers also submitted challenges to Version 1 of the Fabric. These challenges were predominately challenges to add missing locations but included challenges to correct information associated with existing locations as well. Many of these challenges require identifying differences in the data collection practices used by governmental entities and providers and those required for the BDC. In other words, in many cases we have the same data but in a different format or may require slight latitude and longitude adjustments to the BSLs. To put these challenges in context, it is important to note that they sought corrections for records corresponding to less than1% of the total number of locations identified in Version 1 of the Fabric. Of these 1.11 million challenges, more than half were for locations that were either already included in Version 1 of the Fabric or that CostQuest, the vendor selected to develop the Fabric in accordance with the Broadband DATA Act, had independently identified through its own efforts for inclusion in Version 2 of the Fabric. Successful location challenges

from state governments resulted in approximately 122,000 new locations being added into Version 2 of the Fabric (or slightly more than 0.1% of the number of locations included in Version 1).

Version 2 of the Fabric includes 1.04 million more locations than the version currently shown on the National Broadband Map. These additional locations are primarily the result of CostQuest's ongoing efforts to update and improve the Fabric by refining the models and processes for creating the Fabric and using updated and improved input data sources such as new and more granular parcel data. Version 2 also incorporates millions of adjustments to the data associated with locations that were already included in Version 1 of the Fabric, including, for example, changes to address fields, unit counts, secondary addresses, BSL status, building and land use codes, etc. These ongoing efforts to improve the Fabric—alongside the Fabric challenge process—will continue and remain an important tool for the improvement of the National Broadband Map. Version 2 of the Fabric is currently available to states, governmental entities and all Fabric license holders.

Meaningful changes have been made to the Fabric as a result of these efforts. For example, in in Mineral County, Nevada (which includes part of the Walker River Tribal Lands) the number of BSLs increased 17.9% from Version 1 of the Fabric to Version 2. We believe Version 2 of the dataset, which reflects changes like these, will address most, if not all, of the outstanding concerns. On top of that, any remaining issues will continue to be addressed through our continued efforts to improve and refine the data in future versions of the Fabric in addition to the challenge process that is an integral part of our BDC endeavor.

As noted above, the Commission will accept location challenges from all stakeholders at any time—on a rolling basis. But Fabric dataset adjustments from the vendor and challenge process are only pushed through to the official National Broadband Map twice a year, after providers have reported their availability data based on the revisions. This is consistent with the statute, which states that the Fabric shall "serve as the foundation upon which all data relating to the availability of fixed broadband internet access service collected . . . shall be reported and overlaid." 47 U.S.C. § 642(b)(1)(B)(ii). Proceeding in this way, the map will accurately reflect providers' account of the availability of their services on the as-of date. Continually updating the National Broadband Map to reflect changes to the Fabric would create anomalies in the data because the map would contain locations for which providers have not had an opportunity to report availability, causing the maps to be less useful as a depiction of availability on the as-of date.

We also have acknowledged that there were a few discrete instances where these data in Version 1 of the Fabric did not meet our expectations. The known instances correspond to areas in the United States where the underlying datasets used to create the Fabric (parcel data, tax assessor data, high-resolution imagery data) were either outdated or simply not available. To improve the Fabric data in these areas, the and our contractor, CostQuest, have invested significant resources since the release of the first version of the Fabric to undertake manual review above and beyond the baseline methodology to identify additional BSLs in these areas. I

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I hope the above is helpful. Please let me know if you have any further questions. I look forward to continuing to work with you to help close the digital divide.

Sincerely,

Jessica Rosenworcel

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF THE
CHAIRWOMAN

February 10, 2023

The Honorable Jacky Rosen
United States Senate
144 Russell Senate Office Building
Washington, DC 20510

Dear Senator Rosen:

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Fixed Availability Data

With respect to fixed broadband availability reporting, under the Commission's rules, service is considered to be "available" if the provider has an existing connection at that location, or the provider could (and is willing to) connect that location to service within 10 business days for a standard installation fee. Availability is reported by technology type and the maximum advertised speed at each location. Based upon these guidelines, fixed broadband service providers should not report their service being available where: (1) an individual has attempted to request service but the ISP cannot deliver the service within 10 business days; or (2) in the case of a satellite or terrestrial fixed wireless provider, a provider's signals cannot in fact be received at the location. It is worth noting that this site-specific standard is substantially more precise than the one that preceded it in the Form 477 process, which required providers to characterize service as available throughout entire census block if they served at least one location within that census block. Moreover, should a provider claim that it can make service available to a location under either of these circumstances, that information can be challenged using either the map interface or via a bulk availability challenge. Such feedback, and other crowdsource and verification tools that are built into the new BDC process, were not available to the FCC in the prior Form 477 context.

Your letter also indicates you have heard of inaccuracies in the availability data filed in the map in some areas. I anticipate that, over time, the challenge process will serve to correct many of the inaccuracies in the current iteration of the map. Nevertheless, I plan on using every tool at the Commission's disposal to correct the map and appreciate you highlighting areas where you believe widespread inaccuracies may exist. This includes enforcement action when providers do not comply with our rules when they file availability data and, to this end, we already have an enforcement investigation that is ongoing.

Your letter notes that Microsoft's data show that under 20 percent of the population in Stevens County, Washington are actually using the internet at broadband speeds. Both the Microsoft digital equity tool, and the FCC's draft map indicates that 100 percent of Stevens County has broadband availability at speeds of 25/3 or greater. The 20 percent metric cited refers to the percentage of the population that uses the internet at broadband speeds. The difference may indicate a lack of adoption or affordability of broadband services in addition to availability. The same Microsoft digital equity tool, indicates that over 25% of households in the county do not subscribe to broadband of any type and that over 26% do not own a laptop or desktop computer, measures of adoption and affordability. Digital equity is a wholistic and important conversation, but not within the scope of the FCC's Broadband Data Collection and the data shown on our current maps. Moreover, there are significant differences in data sources used to compile the two sets—Microsoft appears to include FCC Form 477 data, census data, and other consumer surveys, while the Commission's new maps are based on granular location-by-location availability data reported by providers based on Fabric points. It may also be worth noting that the map data show all broadband technologies that were reported to the Commission. When the map data are filtered to show only the speeds and technologies that NTIA identified as

reliable broadband services in its BEAD Notice of Funding Opportunity (i.e., wired or licensed fixed wireless services), the map indicates that roughly 38% of locations are served by such services with speeds of 25/3 or greater in Stevens County.

Similarly, in Grainger County, Tennessee, the Microsoft digital equity tool relies on older FCC form 477 data as well as a range of other data sources to measure digital equity and broadband access more generally. The Commission's maps are based on a new, granular, location-by-location data collection. Comparison of the two tools may be useful, but in light of these differences, they are unlikely to yield a similar result.

Using the Challenge Process

Consistent with the Broadband DATA Act, any individual may file a Fabric or availability challenge directly through the National Broadband Map interface simply by clicking on the map at their location and filling out a short web form. Service providers, governments, and other entities may file challenges in bulk by uploading data files in the BDC system.

Under Commission rules, once accepted, fixed availability challenges will be sent to the relevant provider for a response, and the provider will have 60 days to review and either concede the challenge (in which case they must remove that location from their availability data within 30 days) or dispute it. If a provider disputes the challenge, the provider must provide evidence in the BDC system and to the challenger to rebut the challenge. The provider and challenger then have 60 days to attempt to resolve the challenge. If the provider and challenger cannot resolve the challenge, the Commission will adjudicate the challenge based on the evidence and, pursuant to changes made by Congress in the Bipartisan Infrastructure Law, make a determination within 90 days after a provider submits its final response to a challenge. If a provider loses a challenge, it must revise its data consistent with the decision within 30 days and the Commission will update the map accordingly. Any availability challenges that are upheld will carry into future iterations of the map unless and until the provider demonstrates changed circumstances that would substantiate reporting availability at that location (such as deployment of new infrastructure). Despite these timelines, we expect that many challenges will be resolved more quickly, especially if providers respond promptly to challenges or are able to mediate challenges in advance of adjudication.

Given the importance of the availability challenge process in refining the data depicted on the map and ensuring that the map is as accurate as possible, we have conducted extensive outreach to state, local, and Tribal governmental entities, service providers, and others to inform stakeholders about how they can participate in the process. Commission staff have held hundreds of meetings with congressional offices, service providers, public interest groups, and governmental entities across the nation to be sure we are offering support throughout the BDC process. We have also made available web tutorials, one-pagers, FAQs, data specifications, and a series of knowledge base articles to walk consumers and bulk challengers through the entire availability challenge process. Additionally, we have posted outreach materials that state and local governments, community organizations and others may use to help educate consumers on

how to file a challenge and engage with the FCC's map. To date, we have received over 4 million availability challenges. Many of these have already been resolved between the carrier and the challenger and will be reflected in future maps.

It is more important than ever for us to know where broadband is, and is not, available throughout the nation. Far too many households remain unconnected, and accurately showing where they are located is an important part of directing funding into the communities that need it the most. The map we have is a work that is always in progress, just as Congress designed it to be in the Broadband DATA Act. I am confident that the BDC process we have established will help improve the map just as Congress envisioned. I also will continue to ensure that the Broadband Data Task Force makes itself available to all stakeholders interested in offering challenges to the current iteration of our data.

I hope the above is helpful. Please let me know if you have any further questions. I look forward to continuing to work with you to help close the digital divide.

Sincerely,

Jessica Rosenworcel

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF THE
CHAIRWOMAN

February 10, 2023

The Honorable Deb Fischer
United States Senate
454 Russell Senate Office Building
Washington, DC 20510

Dear Senator Fischer:

Thank you for your letter regarding the work to develop an iterative National Broadband Map at the Federal Communications Commission. Today, broadband service is vital for school, work, healthcare, and more. Connecting everyone to high-speed service is essential for everyone, everywhere to have the opportunities made possible by the digital age. That is why I share your commitment to making sure that broadband connectivity is available across the country.

As Congress recognized in the Broadband DATA Act, in order to connect everyone, everywhere, we need to develop accurate information about where broadband service is and is not available across the country. With better data, we can more precisely target our policymaking efforts and financial resources, including the Commission's universal service funding system and the grant projects in the Bipartisan Infrastructure Law, to areas where support is needed most. Better data will also help other federal agencies, state and local governments, and Tribal entities target their own broadband mapping and deployment efforts.

Since the passage of the Broadband DATA Act in March 2020, the Commission has perpetually worked to implement the requirements of the law and to begin the iterative data collection and challenge processes envisioned by the Act through the creation of its Broadband Data Collection (BDC) program. The BDC is a significant departure from the Commission's previous Form 477 process used for identifying the state of broadband deployment. The Form 477 process, which was used by the agency in various formats for decades, collected data only at the census-block level. If there was a single subscriber in the census block, the agency assumed service was available throughout. As a result, the Form 477 process systematically overstated the presence of broadband, particularly in rural areas. In addition, this process lacked a mechanism to verify that data based on the on-the-ground experience of consumers and other stakeholders.

This is no longer the case. As required by the Broadband DATA Act, the Commission has built an entirely new data-collection system for ingesting, validating, and aggregating provider data for download and publication on the National Broadband Map. This system is also designed to incorporate data submitted by individual consumers and by State and Tribal governments and other stakeholders challenging a provider's availability submissions at

particular locations. In addition, the Broadband DATA Act required the Commission to develop the Broadband Serviceable Location Fabric (Fabric). The Fabric is a common dataset of all broadband serviceable locations (BSLs) in the United States where mass market fixed broadband internet access service is available or could be installed. The Fabric dataset supports location-by-location reporting of available fixed broadband services by internet service providers. To be clear, the Fabric itself is not a map. It is an evolving database of all BSLs nationwide that is used in the production of the map when combined with information from service providers and data from the challenge process.

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reliable broadband services in its BEAD Notice of Funding Opportunity (i.e., wired or licensed fixed wireless services), the map indicates that roughly 38% of locations are served by such services with speeds of 25/3 or greater in Stevens County.

Similarly, in Grainger County, Tennessee, the Microsoft digital equity tool relies on older FCC form 477 data as well as a range of other data sources to measure digital equity and broadband access more generally. The Commission's maps are based on a new, granular, location-by-location data collection. Comparison of the two tools may be useful, but in light of these differences, they are unlikely to yield a similar result.

Using the Challenge Process

Consistent with the Broadband DATA Act, any individual may file a Fabric or availability challenge directly through the National Broadband Map interface simply by clicking on the map at their location and filling out a short web form. Service providers, governments, and other entities may file challenges in bulk by uploading data files in the BDC system.

Under Commission rules, once accepted, fixed availability challenges will be sent to the relevant provider for a response, and the provider will have 60 days to review and either concede the challenge (in which case they must remove that location from their availability data within 30 days) or dispute it. If a provider disputes the challenge, the provider must provide evidence in the BDC system and to the challenger to rebut the challenge. The provider and challenger then have 60 days to attempt to resolve the challenge. If the provider and challenger cannot resolve the challenge, the Commission will adjudicate the challenge based on the evidence and, pursuant to changes made by Congress in the Bipartisan Infrastructure Law, make a determination within 90 days after a provider submits its final response to a challenge. If a provider loses a challenge, it must revise its data consistent with the decision within 30 days and the Commission will update the map accordingly. Any availability challenges that are upheld will carry into future iterations of the map unless and until the provider demonstrates changed circumstances that would substantiate reporting availability at that location (such as deployment of new infrastructure). Despite these timelines, we expect that many challenges will be resolved more quickly, especially if providers respond promptly to challenges or are able to mediate challenges in advance of adjudication.

Given the importance of the availability challenge process in refining the data depicted on the map and ensuring that the map is as accurate as possible, we have conducted extensive outreach to state, local, and Tribal governmental entities, service providers, and others to inform stakeholders about how they can participate in the process. Commission staff have held hundreds of meetings with congressional offices, service providers, public interest groups, and governmental entities across the nation to be sure we are offering support throughout the BDC process. We have also made available web tutorials, one-pagers, FAQs, data specifications, and a series of knowledge base articles to walk consumers and bulk challengers through the entire availability challenge process. Additionally, we have posted outreach materials that state and local governments, community organizations and others may use to help educate consumers on

how to file a challenge and engage with the FCC's map. To date, we have received over 4 million availability challenges. Many of these have already been resolved between the carrier and the challenger and will be reflected in future maps.

It is more important than ever for us to know where broadband is, and is not, available throughout the nation. Far too many households remain unconnected, and accurately showing where they are located is an important part of directing funding into the communities that need it the most. The map we have is a work that is always in progress, just as Congress designed it to be in the Broadband DATA Act. I am confident that the BDC process we have established will help improve the map just as Congress envisioned. I also will continue to ensure that the Broadband Data Task Force makes itself available to all stakeholders interested in offering challenges to the current iteration of our data.

I hope the above is helpful. Please let me know if you have any further questions. I look forward to continuing to work with you to help close the digital divide.

Sincerely,

Jessica Rosenworcel

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF THE
CHAIRWOMAN

February 10, 2023

The Honorable Marsha Blackburn
United States Senate
357 Dirksen Senate Office Building
Washington, DC 20510

Dear Senator Blackburn:

Thank you for your letter regarding the work to develop an iterative National Broadband Map at the Federal Communications Commission. Today, broadband service is vital for school, work, healthcare, and more. Connecting everyone to high-speed service is essential for everyone, everywhere to have the opportunities made possible by the digital age. That is why I share your commitment to making sure that broadband connectivity is available across the country.

As Congress recognized in the Broadband DATA Act, in order to connect everyone, everywhere, we need to develop accurate information about where broadband service is and is not available across the country. With better data, we can more precisely target our policymaking efforts and financial resources, including the Commission's universal service funding system and the grant projects in the Bipartisan Infrastructure Law, to areas where support is needed most. Better data will also help other federal agencies, state and local governments, and Tribal entities target their own broadband mapping and deployment efforts.

Since the passage of the Broadband DATA Act in March 2020, the Commission has perpetually worked to implement the requirements of the law and to begin the iterative data collection and challenge processes envisioned by the Act through the creation of its Broadband Data Collection (BDC) program. The BDC is a significant departure from the Commission's previous Form 477 process used for identifying the state of broadband deployment. The Form 477 process, which was used by the agency in various formats for decades, collected data only at the census-block level. If there was a single subscriber in the census block, the agency assumed service was available throughout. As a result, the Form 477 process systematically overstated the presence of broadband, particularly in rural areas. In addition, this process lacked a mechanism to verify that data based on the on-the-ground experience of consumers and other stakeholders.

This is no longer the case. As required by the Broadband DATA Act, the Commission has built an entirely new data-collection system for ingesting, validating, and aggregating provider data for download and publication on the National Broadband Map. This system is also designed to incorporate data submitted by individual consumers and by State and Tribal governments and other stakeholders challenging a provider's availability submissions at

particular locations. In addition, the Broadband DATA Act required the Commission to develop the Broadband Serviceable Location Fabric (Fabric). The Fabric is a common dataset of all broadband serviceable locations (BSLs) in the United States where mass market fixed broadband internet access service is available or could be installed. The Fabric dataset supports location-by-location reporting of available fixed broadband services by internet service providers. To be clear, the Fabric itself is not a map. It is an evolving database of all BSLs nationwide that is used in the production of the map when combined with information from service providers and data from the challenge process.

On June 23, 2022, shortly before the opening of the filing window for reporting broadband availability data as of June 30, the Commission made the initial production version of the Fabric (Version 1) available to both internet service providers and to state, local, and Tribal governments. Internet service providers used Version 1 of the Fabric to report their fixed broadband availability data on or before the close of the inaugural filing window on September 1, 2022.

On November 18, 2022, the Commission released a pre-production draft of its new National Broadband Map depicting broadband availability, as of June 30, 2022, from over 2,500 facilities-based providers of fixed and mobile mass-market broadband Internet access services. The release of the pre-production draft of the map was a major milestone in the development of what will be the most accurate and granular dataset of internet availability across the United States to date. However, as you acknowledge, the Broadband DATA Act envisions the Commission's BDC efforts to be an iterative process through which these maps evolve as the facts on the ground change, and incorporates improvements and refinements that are a result of the ongoing challenge and crowdsource processes. Our release of the pre-production draft of the new National Broadband Map on November 18 kicked off the opportunity for challengers to dispute the accuracy of the availability data.

I appreciate your sharing your concerns regarding the "deadline" for submitting location and availability challenges to the National Broadband Map as well as with the accuracy of the location and availability data shown on the map. At the outset, I want to clarify that the January 13, 2023 date was not a deadline because the Commission continues to accept and resolve location and availability challenges so that they may be included in future iterations of the map. The Commission rules make clear that the agency will accept challenges to the Fabric and availability data on a rolling basis, at any time.

As you may know, under its authority under the Bipartisan Infrastructure Law, the National Telecommunications and Information Administration (NTIA) continues to target June 30 as the date by which it will allocate each state and territory's funding under the Broadband Equity, Access, and Deployment (BEAD) program (see NTIA blog post at https://ntia.gov/blog/2023/advancing-internet-all). January 13, 2023 was identified as the target date by which availability challenges had the best opportunity to be fully addressed and incorporated into the map, if necessary, ahead of NTIA's plan to allocate funds by June 30.

However, the Broadband DATA Act envisions ongoing challenges to the map, and the Commission stands ready to continue to work with all stakeholders to receive feedback and continue to improve our map over time. In the meantime, I can provide some additional information in response to the other issues referenced in your letter.

Broadband Serviceable Location Fabric

As noted above, the Fabric is an evolving dataset of all BSLs in the United States, and substantial improvements have been made to it since its first pre-production release. It is the product of integrating a wide range of data sources, including address records, information about parcel boundaries, tax assessment records, imagery and building footprint data, Census data, land use records, and geo-spatial road and street data. In fact, to build the Fabric more than 200 data attributes are assessed using artificial intelligence and machine learning to identify the precise geocoordinates of each BSL included in the dataset. The first version of the Fabric contained more than 113.2 million BSLs.

Last summer, I personally reached out to broadband leaders in all fifty states and U.S. territories to encourage them to review the Fabric and, if needed, to plan to file Fabric challenges as early as possible after the opening of the challenge window. Two months after making the data available in June 2023, the FCC opened a process on September 12, 2022 for governmental entities, internet service providers, and other entities to begin submitting challenges for multiple broadband-serviceable locations (i.e., "bulk" Fabric challenges). The Commission held a webinar on September 7, 2022 to assist bulk Fabric challengers on how to submit their challenge data and hosted a follow-up workshop on September 28, 2022 to further assist entities with preparing such challenges. Commission staff also published an FAQ document, multiple articles, and other resources on its BDC Help Center (https://help.bdc.fcc.gov/) to provide technical assistance to potential bulk Fabric challengers. The BDC Help Center also posted a link to enable stakeholders to submit questions or requests for assistance with the challenge process.

Governmental entities, including 20 states, submitted 1.11 million individual challenges to the Version 1 of the Fabric data that were processed in anticipation of preparation of Version 2 of the Fabric. Many internet service providers also submitted challenges to Version 1 of the Fabric. These challenges were predominately challenges to add missing locations but included challenges to correct information associated with existing locations as well. Many of these challenges require identifying differences in the data collection practices used by governmental entities and providers and those required for the BDC. In other words, in many cases we have the same data but in a different format or may require slight latitude and longitude adjustments to the BSLs. To put these challenges in context, it is important to note that they sought corrections for records corresponding to less than1% of the total number of locations identified in Version 1 of the Fabric. Of these 1.11 million challenges, more than half were for locations that were either already included in Version 1 of the Fabric or that CostQuest, the vendor selected to develop the Fabric in accordance with the Broadband DATA Act, had independently identified through its own efforts for inclusion in Version 2 of the Fabric. Successful location challenges

from state governments resulted in approximately 122,000 new locations being added into Version 2 of the Fabric (or slightly more than 0.1% of the number of locations included in Version 1).

Version 2 of the Fabric includes 1.04 million more locations than the version currently shown on the National Broadband Map. These additional locations are primarily the result of CostQuest's ongoing efforts to update and improve the Fabric by refining the models and processes for creating the Fabric and using updated and improved input data sources such as new and more granular parcel data. Version 2 also incorporates millions of adjustments to the data associated with locations that were already included in Version 1 of the Fabric, including, for example, changes to address fields, unit counts, secondary addresses, BSL status, building and land use codes, etc. These ongoing efforts to improve the Fabric—alongside the Fabric challenge process—will continue and remain an important tool for the improvement of the National Broadband Map. Version 2 of the Fabric is currently available to states, governmental entities and all Fabric license holders.

Meaningful changes have been made to the Fabric as a result of these efforts. For example, in in Mineral County, Nevada (which includes part of the Walker River Tribal Lands) the number of BSLs increased 17.9% from Version 1 of the Fabric to Version 2. We believe Version 2 of the dataset, which reflects changes like these, will address most, if not all, of the outstanding concerns. On top of that, any remaining issues will continue to be addressed through our continued efforts to improve and refine the data in future versions of the Fabric in addition to the challenge process that is an integral part of our BDC endeavor.

As noted above, the Commission will accept location challenges from all stakeholders at any time—on a rolling basis. But Fabric dataset adjustments from the vendor and challenge process are only pushed through to the official National Broadband Map twice a year, after providers have reported their availability data based on the revisions. This is consistent with the statute, which states that the Fabric shall "serve as the foundation upon which all data relating to the availability of fixed broadband internet access service collected . . . shall be reported and overlaid." 47 U.S.C. § 642(b)(1)(B)(ii). Proceeding in this way, the map will accurately reflect providers' account of the availability of their services on the as-of date. Continually updating the National Broadband Map to reflect changes to the Fabric would create anomalies in the data because the map would contain locations for which providers have not had an opportunity to report availability, causing the maps to be less useful as a depiction of availability on the as-of date.

We also have acknowledged that there were a few discrete instances where these data in Version 1 of the Fabric did not meet our expectations. The known instances correspond to areas in the United States where the underlying datasets used to create the Fabric (parcel data, tax assessor data, high-resolution imagery data) were either outdated or simply not available. To improve the Fabric data in these areas, the and our contractor, CostQuest, have invested significant resources since the release of the first version of the Fabric to undertake manual review above and beyond the baseline methodology to identify additional BSLs in these areas. I

therefore am pleased to provide an update about the improvements made in Version 2 of the Fabric for each of the locations you identified.

In Washington State, I understand that researchers found that a significant number of residences and businesses in a town on Tribal lands were missing entirely from the new map. My understanding from both your letter and from other sources is that these concerns relate specifically to the Spokane Reservation, which sits at the southern part of Stevens County. As a general matter, Tribal lands within the continental United States have seen significant increases in the number of BSLs between Version 1 and Version 2 of the Fabric. In Stevens County, for instance, we have added 191 locations in Version 2, including many locations within the Spokane Reservation boundaries.

In Mississippi, the state broadband office called attention to addresses missing in "high-growth areas of the state" and I understand that there are particular concerns with Desoto and Madison counties. After careful review and analysis, in Desoto County, we added 3,039 BSLs (a 4.5% increase in Version 2 of the Fabric) and in Madison County, there was a slight drop in the number of BSLs (116 fewer in Version 2 than in Version 1, including the addition of 548 new BSLs offset by the removal of 664 locations that were not BSLs).

In New Mexico, in Version 1 of the Fabric, the entire Pueblo of Cochiti and the town of Shiprock were missing from the Fabric, and in total, the New Mexico Office of Broadband Access and Expansion determined that thousands of locations were missing. However, Version 2 of the Fabric reflects significant improvement to the data for these areas. Cochiti, NM had an increase of 180 BSLs from Version 1 to Version 2 of the Fabric, and Sandoval County, NM saw an increase of 830 BSLs. BSLs in the town of Shiprock, NM increased by 2,394 and in San Juan County, NM we added 8,568 BSLs from Version 1 to Version 2. Overall the state of New Mexico gained 20,456 BSLs from Version 1 to Version 2.

In Nebraska, several rural villages in need of broadband connectivity, such as Arthur, showed no serviceable locations for nearly the entire town in Version 1 of the Fabric. Arthur, which is the county seat of Arthur County, increased by 153 BSLs between Version 1 and Version 2 of the Fabric, and BSLs in Arthur County increased from 192 BSLs in Version 1 to 345 BSLs in Version 2.

These examples illustrate both how the challenge process is intended to work under the Broadband DATA Act and how the interactive back and forth between state and local authorities and the Commission is resulting in improvements to the BDC effort. For this reason, I encourage all stakeholders, especially state and local broadband offices to review Version 2 of the Fabric. In addition to the existing resources available to inform stakeholders on how to view and interact with the Fabric, the Broadband Data Task Force stands ready to continue to work with states and other stakeholders to help them use the best tools and methods for mapping the Fabric data and corresponding information on BSLs with other datasets that stakeholders have on locations where broadband service is needed. I recognize that not every state and territory collects their own data in the same way that we are amassing it for this national effort, but we are ready, willing and able to work with them to align our efforts.

Fixed Availability Data

With respect to fixed broadband availability reporting, under the Commission's rules, service is considered to be "available" if the provider has an existing connection at that location, or the provider could (and is willing to) connect that location to service within 10 business days for a standard installation fee. Availability is reported by technology type and the maximum advertised speed at each location. Based upon these guidelines, fixed broadband service providers should not report their service being available where: (1) an individual has attempted to request service but the ISP cannot deliver the service within 10 business days; or (2) in the case of a satellite or terrestrial fixed wireless provider, a provider's signals cannot in fact be received at the location. It is worth noting that this site-specific standard is substantially more precise than the one that preceded it in the Form 477 process, which required providers to characterize service as available throughout entire census block if they served at least one location within that census block. Moreover, should a provider claim that it can make service available to a location under either of these circumstances, that information can be challenged using either the map interface or via a bulk availability challenge. Such feedback, and other crowdsource and verification tools that are built into the new BDC process, were not available to the FCC in the prior Form 477 context.

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Sincerely,

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FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF THE
CHAIRWOMAN

February 10, 2023

The Honorable Patty Murray
United States Senate
154 Russell Senate Office Building
Washington, DC 20510

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reliable broadband services in its BEAD Notice of Funding Opportunity (i.e., wired or licensed fixed wireless services), the map indicates that roughly 38% of locations are served by such services with speeds of 25/3 or greater in Stevens County.

Similarly, in Grainger County, Tennessee, the Microsoft digital equity tool relies on older FCC form 477 data as well as a range of other data sources to measure digital equity and broadband access more generally. The Commission's maps are based on a new, granular, location-by-location data collection. Comparison of the two tools may be useful, but in light of these differences, they are unlikely to yield a similar result.

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Given the importance of the availability challenge process in refining the data depicted on the map and ensuring that the map is as accurate as possible, we have conducted extensive outreach to state, local, and Tribal governmental entities, service providers, and others to inform stakeholders about how they can participate in the process. Commission staff have held hundreds of meetings with congressional offices, service providers, public interest groups, and governmental entities across the nation to be sure we are offering support throughout the BDC process. We have also made available web tutorials, one-pagers, FAQs, data specifications, and a series of knowledge base articles to walk consumers and bulk challengers through the entire availability challenge process. Additionally, we have posted outreach materials that state and local governments, community organizations and others may use to help educate consumers on

how to file a challenge and engage with the FCC's map. To date, we have received over 4 million availability challenges. Many of these have already been resolved between the carrier and the challenger and will be reflected in future maps.

It is more important than ever for us to know where broadband is, and is not, available throughout the nation. Far too many households remain unconnected, and accurately showing where they are located is an important part of directing funding into the communities that need it the most. The map we have is a work that is always in progress, just as Congress designed it to be in the Broadband DATA Act. I am confident that the BDC process we have established will help improve the map just as Congress envisioned. I also will continue to ensure that the Broadband Data Task Force makes itself available to all stakeholders interested in offering challenges to the current iteration of our data.

I hope the above is helpful. Please let me know if you have any further questions. I look forward to continuing to work with you to help close the digital divide.

Sincerely,

Jessica Rosenworcel

FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON

OFFICE OF THE
CHAIRWOMAN

February 10, 2023

The Honorable John W. Hickenlooper
United States Senate
B85 Russell Senate Office Building
Washington, DC 20510

Dear Senator Hickenlooper:

Thank you for your letter regarding the work to develop an iterative National Broadband Map at the Federal Communications Commission. Today, broadband service is vital for school, work, healthcare, and more. Connecting everyone to high-speed service is essential for everyone, everywhere to have the opportunities made possible by the digital age. That is why I share your commitment to making sure that broadband connectivity is available across the country.

As Congress recognized in the Broadband DATA Act, in order to connect everyone, everywhere, we need to develop accurate information about where broadband service is and is not available across the country. With better data, we can more precisely target our policymaking efforts and financial resources, including the Commission's universal service funding system and the grant projects in the Bipartisan Infrastructure Law, to areas where support is needed most. Better data will also help other federal agencies, state and local governments, and Tribal entities target their own broadband mapping and deployment efforts.

Since the passage of the Broadband DATA Act in March 2020, the Commission has perpetually worked to implement the requirements of the law and to begin the iterative data collection and challenge processes envisioned by the Act through the creation of its Broadband Data Collection (BDC) program. The BDC is a significant departure from the Commission's previous Form 477 process used for identifying the state of broadband deployment. The Form 477 process, which was used by the agency in various formats for decades, collected data only at the census-block level. If there was a single subscriber in the census block, the agency assumed service was available throughout. As a result, the Form 477 process systematically overstated the presence of broadband, particularly in rural areas. In addition, this process lacked a mechanism to verify that data based on the on-the-ground experience of consumers and other stakeholders.

This is no longer the case. As required by the Broadband DATA Act, the Commission has built an entirely new data-collection system for ingesting, validating, and aggregating provider data for download and publication on the National Broadband Map. This system is also designed to incorporate data submitted by individual consumers and by State and Tribal governments and other stakeholders challenging a provider's availability submissions at

particular locations. In addition, the Broadband DATA Act required the Commission to develop the Broadband Serviceable Location Fabric (Fabric). The Fabric is a common dataset of all broadband serviceable locations (BSLs) in the United States where mass market fixed broadband internet access service is available or could be installed. The Fabric dataset supports location-by-location reporting of available fixed broadband services by internet service providers. To be clear, the Fabric itself is not a map. It is an evolving database of all BSLs nationwide that is used in the production of the map when combined with information from service providers and data from the challenge process.

On June 23, 2022, shortly before the opening of the filing window for reporting broadband availability data as of June 30, the Commission made the initial production version of the Fabric (Version 1) available to both internet service providers and to state, local, and Tribal governments. Internet service providers used Version 1 of the Fabric to report their fixed broadband availability data on or before the close of the inaugural filing window on September 1, 2022.

On November 18, 2022, the Commission released a pre-production draft of its new National Broadband Map depicting broadband availability, as of June 30, 2022, from over 2,500 facilities-based providers of fixed and mobile mass-market broadband Internet access services. The release of the pre-production draft of the map was a major milestone in the development of what will be the most accurate and granular dataset of internet availability across the United States to date. However, as you acknowledge, the Broadband DATA Act envisions the Commission's BDC efforts to be an iterative process through which these maps evolve as the facts on the ground change, and incorporates improvements and refinements that are a result of the ongoing challenge and crowdsource processes. Our release of the pre-production draft of the new National Broadband Map on November 18 kicked off the opportunity for challengers to dispute the accuracy of the availability data.

I appreciate your sharing your concerns regarding the "deadline" for submitting location and availability challenges to the National Broadband Map as well as with the accuracy of the location and availability data shown on the map. At the outset, I want to clarify that the January 13, 2023 date was not a deadline because the Commission continues to accept and resolve location and availability challenges so that they may be included in future iterations of the map. The Commission rules make clear that the agency will accept challenges to the Fabric and availability data on a rolling basis, at any time.

As you may know, under its authority under the Bipartisan Infrastructure Law, the National Telecommunications and Information Administration (NTIA) continues to target June 30 as the date by which it will allocate each state and territory's funding under the Broadband Equity, Access, and Deployment (BEAD) program (see NTIA blog post at https://ntia.gov/blog/2023/advancing-internet-all). January 13, 2023 was identified as the target date by which availability challenges had the best opportunity to be fully addressed and incorporated into the map, if necessary, ahead of NTIA's plan to allocate funds by June 30.

However, the Broadband DATA Act envisions ongoing challenges to the map, and the Commission stands ready to continue to work with all stakeholders to receive feedback and continue to improve our map over time. In the meantime, I can provide some additional information in response to the other issues referenced in your letter.

Broadband Serviceable Location Fabric

As noted above, the Fabric is an evolving dataset of all BSLs in the United States, and substantial improvements have been made to it since its first pre-production release. It is the product of integrating a wide range of data sources, including address records, information about parcel boundaries, tax assessment records, imagery and building footprint data, Census data, land use records, and geo-spatial road and street data. In fact, to build the Fabric more than 200 data attributes are assessed using artificial intelligence and machine learning to identify the precise geocoordinates of each BSL included in the dataset. The first version of the Fabric contained more than 113.2 million BSLs.

Last summer, I personally reached out to broadband leaders in all fifty states and U.S. territories to encourage them to review the Fabric and, if needed, to plan to file Fabric challenges as early as possible after the opening of the challenge window. Two months after making the data available in June 2023, the FCC opened a process on September 12, 2022 for governmental entities, internet service providers, and other entities to begin submitting challenges for multiple broadband-serviceable locations (i.e., "bulk" Fabric challenges). The Commission held a webinar on September 7, 2022 to assist bulk Fabric challengers on how to submit their challenge data and hosted a follow-up workshop on September 28, 2022 to further assist entities with preparing such challenges. Commission staff also published an FAQ document, multiple articles, and other resources on its BDC Help Center (https://help.bdc.fcc.gov/) to provide technical assistance to potential bulk Fabric challengers. The BDC Help Center also posted a link to enable stakeholders to submit questions or requests for assistance with the challenge process.

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