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**State of Ohio
Initial Proposal, Volume I
Broadband Equity, Access,
and Deployment (BEAD)
Program**

July 2023



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Introduction

BroadbandOhio has drafted the following document to meet the requirements for Volume 1 of the Broadband Equity, Access and Deployment (BEAD) Initial Proposal:

- Requirement 3 – Identification of existing broadband efforts
- Requirement 5 – Identification of existing unserved and underserved locations
- Requirement 6 – Identification and application of community anchor institutions
- Requirement 7 – Detailed challenge process plan, including Ohio’s selection of the following optional modules:
 - DSL Modifications (to phase out older technology)
 - Fixed Wireless Modifications (to prioritize the utilization of fiber optic cable for last mile connections, except in extremely high cost per location areas, as required by Ohio House Bill 33¹)
 - Speed Test Modifications (to better reflect actual broadband speeds)
 - Area and MDU Challenge (to reverse the burden of proof for availability, speed, latency, data caps, and technology if a defined number of challenges for a particular category, across all challengers, have been submitted for a provider)
 - Speed Test (to be accepted as evidence for substantiating challenges and rebuttals, to better reflect actual broadband speeds)

Ohio will incorporate any guidance received from the National Telecommunications and Information Association (NTIA) on this draft of Volume I of the BEAD Initial Proposal to ensure compliance with the BEAD requirements, as enabled by existing provisions.²

¹ [Ohio House Bill 33, Section 122.40-122.4077.](#)

² [Ohio House Bill 33 by the 135th General Assembly, Section 122.4017.](#)

Following a 30-day public comment period, and review and consideration of received comments, BroadbandOhio plans to submit this document to NTIA, in partial fulfillment of the BEAD Initial proposal requirements.

Volume 2 of the BEAD Initial Proposal will be released for public comment at a later date.

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Existing Broadband Funding (Requirement 3)

In Ohio's Five-Year Action Plan, submitted on June 27, 2023, Ohio provided information pertaining to existing broadband funding, including:

- Sources of funding;
- A brief description of the broadband deployment and other broadband-related activities;
- The total funding of broadband activities;
- The funding amount expended; and
- The remaining funding amount available.

This information has been augmented with recent awards and appropriations, and is provided in the attachment [Ohio BEAD Initial Proposal_Volume I_Existing Broadband Funding Sources Template.xlsx], as well as in Appendix A (Req 1.1.1).

Unserved and Underserved Locations (Requirement 5)

In the attached csv files (Req 1.2.1), Ohio has provided the location IDs for all unserved [Ohio_unserved.csv] and underserved [Ohio_underserved.csv] broadband serviceable locations in Ohio.

This information was determined through analysis of the FCC National Broadband Map data, accessed on July 10, 2023, which includes data as of Dec 31, 2022, that was last updated on Jun 15, 2023 (Req. 1.2.2).

The definitions of unserved and underserved locations are taken from the BEAD Notice of Funding Opportunity (NOFO), published by NTIA on May 13, 2022.

Community Anchor Institutions (Requirement 6)

Based on the statutory definition of “community anchor institution” as defined in 47 USC 1702 (a)(2)(E), BroadbandOhio applied the definition of “community anchor institution” to mean a school, library, health clinic, health center, hospital or other medical provider, public safety entity, institution of higher education, public housing organization (including any public housing agency or HUD-assisted housing organization), or community support organization that facilitates greater use of broadband service by vulnerable populations, including, but not limited to, low- income individuals, unemployed individuals, children, the incarcerated, and aged individuals.

Based on the statutory definition above, the following criteria were used to determine the inclusion or exclusion of community support organizations not specifically listed in 47 USC 1702(a)(2)(E):

- Whether the community support organization facilitates greater use of broadband service by vulnerable populations, including, but not limited to, low- income individuals, unemployed individuals, children, the incarcerated, and aged individuals.

The following definitions and sources were used to identify the types of community anchor institutions:

- **Schools:** All public and private K-12 schools in the state of Ohio. Compiled with support from the Management Council - Ohio Education Computer Network and the Homeland Infrastructure Foundation-Level Data (HIFLD).
- **Libraries:** All public libraries in Ohio, identified in partnership with the Ohio Public Library Information Network, which facilitates e-Rate for libraries in Ohio, and by leveraging data from Data Ohio and the Ohio Public Library Systems Directory.

- **Local government building / county seats:** Local county office government buildings, identified via Ohio Secretary of State’s Official Roster of Ohio Officers.³
- **Health clinic, health center, hospital, or other medical providers:** The category also includes Public Health Departments, Urgent Care Facilities, and Federally Qualified Health Centers (FQHC). Hospital, Urgent Care Facilities, Public Health Departments, and Nursing Home data are from HIFLD; Rural Clinics and FQHC data have been provided by the Ohio Department of Health.
- **Public safety entity:** The list includes entities such as fire houses, emergency medical service stations, police stations, and public safety answering points (PSAP), based on information from HIFLD.
- **Institutions of higher education:** Institutions of higher education include all institutions that have an NCES ID in the category “college”, including junior colleges, community colleges, minority serving institutions, historically black colleges and universities, other universities, or other educational institutions. Detailed information was obtained from HIFLD.
- **Public housing organizations:** Public housing organizations are being identified through state contacts with the local U.S. Department of Housing and Urban Development (HUD) agencies within various Ohio counties, and via a survey that was distributed by the Ohio Housing Finance Agency.
- **Community support organizations:** Ohio included the following organizations that facilitate greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals:
 - Job training centers
 - Senior centers

³ <https://ohioroster.ohiosos.gov/reports.aspx>

- Childcare centers, identified via Ohio Department of Job and Family Services and Ohio Department of Education⁴
- Ohio Community Action Agencies⁵

Ohio plans to use the Initial Proposal public comment process to ensure that all relevant institutions meeting the CAI criteria are included.

The broadband office evaluated whether houses of worship should be included as a category of community anchor institutions but declined to do so. The broadband office decided that churches, as part of their mission, do not involve activities that facilitate greater use of broadband service by vulnerable populations. Thus, while these are important institutions for our communities, they do not qualify under the existing definition of community anchor institutions.

To assess the network connectivity needs of the types of eligible community anchor institutions listed above, BroadbandOhio:

- **Engaged government agencies.** BroadbandOhio engaged Ohio Public Library Information Network (OPLIN), Ohio Department of Health officials, OARnet, and the Management Council – Ohio Education Computer Network to understand what information they have pertaining to the service availability for community anchor institutions. For libraries and K-12 public schools, service availability and need have been determined from e-Rate data. OARnet shared the organizations for which they provide middle mile access, and the corresponding service availability.
- **Conducted a survey.** Between April 12th and June 30th 2023, BroadbandOhio conducted an online survey aimed at identifying Community Anchor Institutions in Ohio, and understanding service availability. BroadbandOhio received approximately 130 responses to

⁴ <http://childcaresearch.ohio.gov/export>

⁵ <https://oacaa.org/>

the survey, and the information on access to 1 Gbps symmetrical service are included in the csv file described below [Ohio_cai.csv].

- **Geospatial proximity analysis:** A geospatial analysis was conducted to understand each CAI's proximity to BSLs served with mass market 1Gbps symmetrical service, with the assumption that those that are located within a certain distance likely have access to 1Gbps symmetrical broadband. In order to determine this, Ohio was divided into hexagons with side length of 0.33 miles, and BSLs served with 1Gbps symmetrical reliable broadband (per the FCC National Broadband Map) were plotted against these. The entire area of hexagons that contain a BSL(s) served by 1Gbps symmetrical service was considered as likely served with 1Gbps symmetrical technology. Then, identified CAIs were overlayed to the hexagons, and those CAIs that fell within hexagons with a BSL served with 1Gbps symmetrical broadband were flagged as likely served by 1Gbps symmetrical broadband.

Using the feedback from government agencies, survey responses, and the geospatial analysis described above, BroadbandOhio compiled the list of those CAIs that likely do not have 1Gbps symmetrical broadband service, in the attached csv file [Ohio_cai.csv] (Requirement 1.3.2).

After the statutorily defined, eligible CAIs are identified and then funded during the BEAD sub-grantee process, Ohio may consider other CAIs in coordination with local government leaders and communities that help Ohio achieve its goals to:

- Ensure that there is a CAI with access to at least 1 Gigabit symmetrical service within 5 miles of every household; and
- Make CAIs digital hubs, where residents can get access to devices and digital skills trainings.

The approach to achieve the goal that there is a CAI with access to at least 1 Gigabit symmetrical service within 5 miles of every Ohio household, after statutorily defined CAIs are identified and funded, is as follows:

- Convene local government leaders, Regional Digital Inclusion Alliance leads, local digital opportunity practitioners, and local residents to determine which community anchors institution is best positioned to achieve the goals above;
- Convene ISPs to understand relative subsidy levels (grant) required to meet the goal; and
- Open the sub-grantee selection process to CAIs in the identified neighborhoods, and weigh community support as part of the selection criteria.

A preliminary analysis has showed that there are approximately 260 neighborhoods across Ohio where there could be a need for the identification of a suitable, proximate community anchor institution to receive a grant for broadband expansion (after the statutorily defined CAIs are connected).

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Challenge Process (Requirement 7)

NTIA BEAD Model Challenge Process Adoption (Requirement 1.4.1)

Yes, Ohio plans to adopt the NTIA BEAD Model Challenge process for Requirement 7 (NTIA BEAD Model Challenge Process Adoption (requirement 1.4.1)); but plans to:

- a. use 14-day durations for the challenge and rebuttal phases, as described in the BEAD Challenge Process Policy Notice; and,
- b. incorporate a Fixed Wireless Modification.

Modifications to Reflect Data Not Present in the National Broadband Map (Requirement 1.4.2)

DSL Modifications

- The broadband office will treat locations that the National Broadband Map shows to have available qualifying broadband service (i.e., a location that is “served”) delivered via DSL as “underserved.” This modification will better reflect the locations eligible for BEAD funding because it will facilitate the phase-out of legacy copper facilities and ensure the delivery of “future-proof” broadband service.

Fixed Wireless Modifications

- The broadband office will treat locations that the National Broadband Map shows to have available qualifying broadband service (i.e., a location that is “served”) delivered via Licensed Fixed Wireless technologies as “unserved.” This modification is consistent with Ohio’s requirements defined in Ohio House Bill 33,⁶ which state that eligible addresses for broadband expansion are in an unserved area or a tier one area, subject to the following definitions:

⁶ [Ohio House Bill-33, “Establishes operating appropriations for fiscal years 2024-2025”](#)

- "Tier one broadband service" means a retail wireline broadband service capable of delivering internet access at speeds of at least twenty-five but less than one hundred megabits per second downstream and at least three but less than twenty megabits per second upstream.
- "Tier two broadband service" means a retail wireline broadband service capable of delivering internet access at speeds of one hundred megabits per second or greater downstream and twenty megabits per second or greater upstream. "Tier two broadband service" may include, in an extremely high cost per location threshold area, fixed wireless broadband service.
- "Tier one area" means an area that has access to tier one broadband service but not tier two broadband service. "Tier one area" includes an area where construction of a network to provide tier one broadband service is in progress and is scheduled to be completed within a two-year period. "Tier one area" excludes an area where construction of a network to provide tier two broadband service is in progress and is scheduled to be completed within a two-year period.
- "Unserved area" means an area without access to either tier one broadband service or tier two broadband service. "Unserved area" excludes an area where construction of a network to provide tier two broadband service is in progress and is scheduled to be completed within a two-year period.
- These provisions of House Bill 33 align with the state's priority to utilize fiber optic cable for last mile connections, except in extremely high cost per location areas.⁷

Speed Test Modifications

- The broadband office will treat as "underserved" locations that the National Broadband Map shows to be "served" if rigorous speed test methodologies (i.e., methodologies aligned to the

⁷ [Ohio House Bill-33, Sec. 122.407.\(I\).](#)

BEAD Model Challenge Process Speed Test Module) demonstrate that the “served” locations actually receive service that is materially below 100 Mbps downstream and 20 Mbps upstream. This modification will better reflect the locations eligible for BEAD funding because it will consider the actual speeds of locations.

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Deduplication of Funding (Requirement 1.4.3)

Yes, Ohio plans to use the BEAD Eligible Entity Planning Toolkit to identify existing federal enforceable commitments.

NTIA BEAD Model Challenge Process (Requirement 1.4.4)

BroadbandOhio will enumerate locations subject to enforceable commitments by using the BEAD Eligible Entity Planning Toolkit, and consult at least the following data sets:

1. The Broadband Funding Map published by the FCC pursuant to IIJA § 60105.⁸
2. Data sets from state broadband deployment programs that rely on funds from the Capital Projects Fund and the State and Local Fiscal Recovery Funds administered by the U.S. Treasury.
3. State of Ohio and local data collections of existing enforceable commitments.

BroadbandOhio will make a best effort to create a list of BSLs subject to enforceable commitments based on state/territory or local grants or loans. If necessary, the broadband office will translate polygons or other geographic designations (e.g., a county or utility district) describing the area to a list of Fabric locations. The broadband office will submit this list, in the format specified by the FCC Broadband Funding Map, to NTIA.

BroadbandOhio will review its repository of existing state and local broadband grant programs to validate the upload and download speeds of existing binding agreements to deploy broadband infrastructure. In situations in which the State of Ohio or local program did not specify broadband speeds, or when there was reason to believe a provider deployed higher broadband speeds than required, the broadband office will reach out to the provider to verify the deployment speeds of the binding commitment. The broadband office will document this process by requiring providers to sign a binding agreement certifying the actual broadband deployment speeds deployed.

⁸ The broadband funding map published by FCC pursuant to IIJA § 60105 is referred to as the “FCC Broadband Funding Map.”

BroadbandOhio drew on these provider agreements, along with its existing database on state and local broadband funding programs' binding agreements, to determine the set of State of Ohio and local enforceable commitments.

Deduplication of Funding (Requirement 1.4.5)

The List the federal, state, or territorial, and local programs that will be analyzed to remove enforceable commitments from the set of locations eligible for BEAD funding is provided in the attached file [Ohio BEAD Initial Proposal_Volume I_Deduplication of Funding Programs Template.xlsx] (Requirement 1.4.5).

Challenge Process Design

NTIA BEAD Model Challenge Process (Requirement 1.4.6)

Based on the NTIA BEAD Challenge Process Policy Notice, as well as the broadband office's understanding of the goals of the BEAD program, the proposal represents a transparent, fair, expeditious and evidence-based challenge process.

Permissible Challenges

BroadbandOhio will only allow challenges on the following grounds:

- The identification of eligible community anchor institutions, as defined by the Eligible Entity,
- Community anchor institution BEAD eligibility determinations,
- BEAD eligibility determinations for existing broadband serviceable locations (BSLs),
- Enforceable commitments, or
- Planned service.

Permissible Challengers

During the BEAD Challenge Process, the broadband office will only allow challenges from nonprofit organizations, units of local and tribal governments, and broadband service providers.

Challenge Process Overview

The challenge process conducted by the broadband office will include four phases, spanning approximately 70 days starting from the challenge process⁹:

1. **Publication of Eligible Locations:** Prior to beginning the Challenge Phase, the broadband office will publish the set of locations eligible for BEAD funding, which consists of the locations resulting from the activities outlined in Sections 5 and 6 of the NTIA BEAD Challenge Process Policy Notice (e.g., administering the deduplication of funding process). The office will also publish locations considered served, as they may be challenged. BroadbandOhio aims to publish this information on September 1st, 2023.
2. **Challenge Phase:** During the Challenge Phase, the challenger will submit the challenge through the broadband office challenge portal. This challenge will be visible to the service provider whose service availability and performance is being contested. The portal will notify the provider of the challenge through an automated email, which will include related information about timing for the provider's response. After this stage, the location will enter the "challenged" state.
 - a. Minimum Level of Evidence Sufficient to Establish a Challenge: The challenge portal will verify that the address provided can be found in the Fabric and is a BSL. The challenge portal will confirm that the challenged service is listed in the National Broadband Map and meets the definition of reliable broadband service. [The challenge will confirm that the email address is reachable by sending a confirmation message to the listed contact email.] For scanned images, the challenge portal will determine whether the quality is sufficient to enable optical character recognition

⁹ The NTIA BEAD Challenge Process Policy Notice allows *up to* 120 days. Broadband offices may modify the model challenge process to span up to 120 days, as long as the timeframes for each phase meet the requirements outlined in the NTIA BEAD Challenge Process Policy Notice.

(OCR). For availability challenges, the broadband office will manually verify that the evidence submitted falls within the categories stated in the NTIA BEAD Challenge Process Policy Notice and the document is unredacted and dated.

- b. Timeline: Challengers will have 15 calendar days to submit a challenge from the time the initial list of unserved and underserved locations, community anchor institutions, and existing enforceable commitments are posted. BroadbandOhio aims to run the Challenge Phase from September 11 to September 25, 2023.
3. **Rebuttal Phase**: Only the challenged service provider may rebut the reclassification of a location or area with evidence, causing the location or locations to enter the “disputed” state. If a challenge that meets the minimum level of evidence is not rebutted, the challenge is sustained. A provider may also agree with the challenge and thus transition the location to the “sustained” state. Providers must regularly check the challenge portal notification method (e.g., email) for notifications of submitted challenges.
 - a. Timeline: Providers will have 15 calendar days from notification of a challenge to provide rebuttal information to the broadband office. BroadbandOhio aims to run the Challenge Phase from October 2 to October 16, 2023.
4. **Final Determination Phase**: During the Final Determination phase, the broadband office will make the final determination of the classification of the location, either declaring the challenge “sustained” or “rejected.”
 - a. Timeline: Following intake of challenge rebuttals, the broadband office will make a final challenge determination within 45 calendar days of the challenge rebuttal. Reviews will occur on a rolling basis, as challenges and rebuttals are received. BroadbandOhio aims to run the Final Determination Phase from October 17 to November 16, 2023.

Evidence & Review Approach

To ensure that each challenge is reviewed and adjudicated based on fairness for all participants and relevant stakeholders, the broadband office will review all applicable challenge and rebuttal information in detail without bias, before deciding to sustain or reject a challenge. The

broadband office will document the standards of review to be applied in a Standard Operating Procedure and will require reviewers to document their justification for each determination. The broadband office plans to ensure reviewers have sufficient training to apply the standards of review uniformly to all challenges submitted. The broadband office will also require that all reviewers submit affidavits to ensure that there is no conflict of interest in making challenge determinations.

Code	Challenge type	Description	Specific examples	Permissible rebuttals
A	Availability	The broadband service identified is not offered at the location, including a unit of a multiple dwelling unit (MDU).	<ul style="list-style-type: none"> • Screenshot of provider webpage. • A service request was refused within the last 180 days (e.g., an email or letter from provider). • Lack of suitable infrastructure (e.g., no fiber on pole). • A letter or email dated within the last 365 days that a provider failed to schedule a service installation or offer an installation date within 10 	<p>Provider shows that the location subscribes or has subscribed within the last 12 months, e.g., with a copy of a customer bill.</p> <p>If the evidence was a screenshot and believed to be in error, a screenshot that shows service availability.</p> <p>The provider submits evidence that service is now available as a standard installation, e.g., via a copy of an offer sent to the location.</p>

			<p>business days of a request.¹⁰</p> <ul style="list-style-type: none"> • A letter or email dated within the last 365 days indicating that a provider requested more than the standard installation fee to connect this location or that a Provider quoted an amount in excess of the provider's standard installation charge in order to connect service at the location. 	
S	Speed	The actual speed of the service tier falls below the unserved	Speed test by subscriber, showing the insufficient speed and meeting the requirements for speed tests.	Provider has countervailing speed test evidence showing sufficient speed, e.g., from their

¹⁰ A standard broadband installation is defined in the Broadband DATA Act (47 U.S.C. § 641(14)) as “[t]he initiation by a provider of fixed broadband internet access service [within 10 business days of a request] in an area in which the provider has not previously offered that service, with no charges or delays attributable to the extension of the network of the provider.”

		or underserved thresholds. ¹¹		own network management system. ¹²
L	Latency	The round-trip latency of the broadband service exceeds 100 ms ¹³ .	Speed test by subscriber, showing the excessive latency.	Provider has countervailing speed test evidence showing latency at or below 100 ms, e.g., from their own network management system or the CAF performance measurements. ¹⁴
D	Data cap	The only service plans marketed to consumers impose an unreasonable capacity allowance (“data cap”) on the consumer. ¹⁵	<ul style="list-style-type: none"> • Screenshot of provider webpage. • Service description 	Provider has terms of service showing that it does not impose an unreasonable data cap or offers another plan at

¹¹ The challenge portal has to gather information on the subscription tier of the household submitting the challenge. Only locations with a subscribed-to service of 100/20 Mbps or above can challenge locations as underserved, while only locations with a service of 25/3 Mbps or above can challenge locations as unserved. Speed challenges that do not change the status of a location do not need to be considered. For example, a challenge that shows that a location only receives 250 Mbps download speed even though the household has subscribed to gigabit service can be disregarded since it will not change the status of the location to unserved or underserved.

¹² As described in the NOFO, a provider’s countervailing speed test should show that 80 percent of a provider’s download and upload measurements are at or above 80 percent of the required speed. See *Performance Measures Order*, 33 FCC Rcd at 6528, para. 51. See BEAD NOFO at 65, n. 80, Section IV.C.2.a.

¹³ *Performance Measures Order*, including provisions for providers in non-contiguous areas (§21).

¹⁴ *Ibid.*

¹⁵ An unreasonable capacity allowance is defined as a data cap that falls below the monthly capacity allowance of 600 GB listed in the FCC 2023 Urban Rate Survey (FCC Public Notice DA 22-1338, December 16, 2022). Alternative plans without unreasonable data caps cannot be business-oriented plans not commonly sold to residential locations. A successful challenge may not change the status of the location to unserved or underserved if the same provider offers a service plan without an unreasonable capacity allowance or if another provider offers reliable broadband service at that location.

			provided to consumer.	the location without an unreasonable cap.
T	Technology	The technology indicated for this location is incorrect.	Manufacturer and model number of residential gateway (CPE) that demonstrates the service is delivered via a specific technology.	Provider has countervailing evidence from their network management system showing an appropriate residential gateway that matches the provided service.
B	Business service only	The location is residential, but the service offered is marketed or available only to businesses.	Screenshot of provider webpage.	Provider documentation that the service listed in the BDC is available at the location and is marketed to consumers.
E	Enforceable Commitment	The challenger has knowledge that broadband will be deployed at this location by the date established in the deployment obligation.	Enforceable commitment by service provider (e.g., authorization letter). In the case of Tribal Lands, the challenger must submit the requisite legally binding agreement between the relevant Tribal	Documentation that the provider has defaulted on the commitment or is otherwise unable to meet the commitment (e.g., is no longer a going concern).

			Government and the service provider for the location(s) at issue (see Section 6.2 above).	
P	Planned service	The challenger has knowledge that broadband will be deployed at this location by June 30, 2024, without an enforceable commitment or a provider is building out broadband offering performance beyond the requirements of an enforceable commitment.	<ul style="list-style-type: none"> • Construction contracts or similar evidence of on-going deployment, along with evidence that all necessary permits have been applied for or obtained. • Contracts or a similar binding agreement between the Eligible Entity and the provider committing that planned service will meet the BEAD definition and requirements of reliable and qualifying broadband even if not required by its funding source (<i>i.e.</i>, a 	Documentation showing that the provider is no longer able to meet the commitment (e.g., is no longer a going concern) or that the planned deployment does not meet the required technology or performance requirements.

			separate federal grant program), including the expected date deployment will be completed, which must be on or before June 30, 2024.	
N	Not part of enforceable commitment.	This location is in an area that is subject to an enforceable commitment to less than 100% of locations and the location is not covered by that commitment. (See BEAD NOFO at 36, n. 52.)	Declaration by service provider subject to the enforceable commitment.	
C	Location is a CAI	The location should be classified as a CAI.	Evidence that the location falls within the definitions of CAIs set by the Eligible Entity. ¹⁶	Evidence that the location does not fall within the definitions of CAIs set by the Eligible Entity or is no longer in operation.

¹⁶ For example, eligibility for FCC e-Rate or Rural Health Care program funding or registration with an appropriate regulatory agency may constitute such evidence, but the Eligible Entity may rely on other reliable evidence that is verifiable by a third party.

R	Location is not a CAI	The location is currently labeled as a CAI but is a residence, a non-CAI business, or is no longer in operation.	Evidence that the location does not fall within the definitions of CAIs set by the Eligible Entity or is no longer in operation.	Evidence that the location falls within the definitions of CAIs set by the Eligible Entity or is still operational.
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Area and MDU Challenge

The broadband office will administer area and MDU challenges for challenge types A, S, L, D, and T. An area challenge reverses the burden of proof for availability, speed, latency, data caps and technology if a defined number of challenges for a particular category, across all challengers, have been submitted for a provider. Thus, the provider receiving an area challenge or MDU must demonstrate that they are indeed meeting the availability, speed, latency, data cap and technology requirement, respectively, for all (served) locations within the area or all units within an MDU. The provider can use any of the permissible rebuttals listed above.

An area challenge is triggered if 6 or more broadband serviceable locations using a particular technology and a single provider within a census block group are challenged.

An MDU challenge requires challenges by at least 3 units or 10% of the unit count listed in the Fabric within the same broadband serviceable location, whichever is larger.

Each type of challenge and each technology and provider is considered separately, i.e., an availability challenge (A) does not count towards reaching the area threshold for a speed (S) challenge. If a provider offers multiple technologies, such as DSL and fiber, each is treated separately since they are likely to have different availability and performance.

Area challenges for availability need to be rebutted with evidence that service is available for all BSL within the census block group, e.g., by network diagrams that show fiber or HFC infrastructure or customer subscribers. For fixed wireless service, the challenge system will offer

representative random, sample of the area in contention, but no fewer than [10], where the provider has to demonstrate service availability and speed (e.g., with a mobile test unit).¹⁷

Speed Test Requirements

BroadbandOhio will accept speed tests as evidence for substantiating challenges and rebuttals. Each speed test consists of three measurements, taken on different days. Speed tests cannot predate the beginning of the challenge period by more than 60 days.

Speed tests can take four forms:

1. A reading of the physical line speed provided by the residential gateway, (i.e., DSL modem, cable modem (for HFC), ONT (for FTTH), or fixed wireless subscriber module.
2. A reading of the speed test available from within the residential gateway web interface.
3. A reading of the speed test found on the service provider's web page.
4. A speed test performed on a laptop or desktop computer within immediate proximity of the residential gateway, using speed test applications from the list of applications approved by NTIA.

Each speed test measurement must include:

- The time and date the speed test was conducted.
- The provider-assigned internet protocol (IP) address, either version 4 or version 6, identifying the residential gateway conducting the test.

Each group of three speed tests must include:

- The name and street address of the customer conducting the speed test.
- A certification of the speed tier the customer subscribes to (e.g., a copy of the customer's last invoice).

¹⁷ A mobile test unit is a testing apparatus that can be easily moved, which simulates the equipment and installation (antenna, antenna mast, subscriber equipment, etc.) that would be used in a typical deployment of fixed wireless access service by the provider.

- An agreement, using an online form provided by the Eligible Entity, that grants access to these information elements to the Eligible Entity, any contractors supporting the challenge process, and the service provider.

The IP address and the subscriber's name and street address are considered personally identifiable information (PII) and thus are not disclosed to the public (e.g., as part of a challenge dashboard or open data portal).

Each location must conduct three speed tests on three different days; the days do not have to be adjacent. The median of the three tests (i.e., the second highest (or lowest) speed) is used to trigger a speed-based (S) challenge, for either upload or download. For example, if a location claims a broadband speed of 100 Mbps/25 Mbps and the three speed tests result in download speed measurements of 105, 102 and 98 Mbps, and three upload speed measurements of 18, 26 and 17 Mbps, the speed tests qualify the location for a challenge, since the measured upload speed marks the location as underserved.

Speed tests may be conducted by subscribers, but speed test challenges must be gathered and submitted by units of local government, nonprofit organizations, or a broadband service provider.

Subscribers submitting a speed test must indicate the speed tier they are subscribing to. If the household subscribes to a speed tier of between 25/3 Mbps and 100/20 Mbps and the speed test results in a speed below 25/3 Mbps, this broadband service will not be considered to determine the status of the location. If the household subscribes to a speed tier of 100/20 Mbps or higher and the speed test yields a speed below 100/20 Mbps, this service offering will not count towards the location being considered served or underserved. However, even if a particular service offering is not meeting the speed threshold, the eligibility status of the location may not change. For example, if a location is served by 100 Mbps licensed fixed wireless and 500 Mbps fiber, conducting a speed test on the fixed wireless network that shows an effective speed of 70 Mbps does not change the status of the location from served to underserved.

A service provider may rebut an area speed test challenge by providing speed tests, in the manner described above, for at least 10% of the customers in the challenged area. The

customers must be randomly selected. Providers must apply the 80/80 rule¹⁸, i.e., 80% of these locations must experience a speed that equals or exceeds 80% of the speed threshold. For example, 80% of these locations must have a download speed of at least 20 Mbps (that is, 80% of 25 Mbps) and an upload speed of at least 2.4 Mbps to meet the 25/3 Mbps threshold and must have a download speed of at least 80 Mbps and an upload speed of 16 Mbps to be meet the 100/20 Mbps speed tier. Only speed tests conducted by the provider between the hours of 7 pm and 11 pm local time will be considered as evidence for a challenge rebuttal.

Transparency Plan

To ensure that the challenge process is transparent and open to public and stakeholder scrutiny, the broadband office will, upon approval from NTIA, publicly post an overview of the challenge process phases, challenge timelines, and instructions on how to submit and rebut a challenge. This documentation will be posted publicly for at least a week prior to opening the challenge submission window. The broadband office also plans to actively inform all units of local government of its challenge process and set up regular touchpoints to address any comments, questions, or concerns from local governments, nonprofit organizations, and Internet service providers. Relevant stakeholders can sign up on the broadband office website (<https://broadband.ohio.gov/>) for challenge process updates and newsletters. They can engage with the broadband office by a designated email address (broadbandohio@development.ohio.gov).

Beyond actively engaging relevant stakeholders, the broadband office will also post all submitted challenges and rebuttals before final challenge determinations are made, including:

- The provider, nonprofit, or unit of local government that submitted the challenge,
- The census block group containing the challenged broadband serviceable location,
- The provider being challenged,

¹⁸ The 80/80 threshold is drawn from the requirements in the CAF-II and RDOF measurements. See BEAD NOFO at 65, n. 80, Section IV.C.2.a.

- The type of challenge (e.g., availability or speed), and
- A summary of the challenge, including whether a provider submitted a rebuttal.

The broadband office will not publicly post any personally identifiable information (PII) or proprietary information, including subscriber names, street addresses and customer IP addresses. To ensure all PII is protected, the broadband office will review the basis and summary of all challenges and rebuttals to ensure PII is removed prior to posting them on the website. Additionally, guidance will be provided to all challengers as to which information they submit may be posted publicly.

The broadband office will treat information submitted by an existing broadband service provider designated as proprietary and confidential consistent with applicable federal law. If any of these responses do contain information or data that the submitter deems to be confidential commercial information that should be exempt from disclosure under state open records laws or is protected under applicable state privacy laws, that information should be identified as privileged or confidential. Otherwise, the responses will be made publicly available.

APPENDIX A: Existing Broadband Funding

Source	Purpose	Total	Expended	Available
House Bill 2 of the 134th General Assembly	Provision of ORBEG grants to internet service providers to fund the infrastructure cost of broadband projects in unserved and underserved areas of the state. ¹⁹	\$232,849,488.15	\$232,849,488.15 (disbursement pending)	\$0
	Deployment of various state pilot projects by BroadbandOhio for broadband deployment, adoption, and digital opportunity. Pending and ongoing projects include: <ul style="list-style-type: none"> • ACCESS/United LSD • Cuyahoga County Connectivity Project • Dayton Recreation Centers Project • Creative Housing Pilot • (Complete) Regional Council of Eastgate, Lake-to-River Broadband Corridor 	\$34,650,511.85	\$13,314,000.00	\$21,336,511.85

¹⁹ <https://broadband.ohio.gov/grant-opportunities/grant-opportunities-1/grant-opportunities-1>

Source	Purpose	Total	Expended	Available
	<ul style="list-style-type: none"> • (In progress) State Telehealth Administrator with OCHIN • (In progress) OSU Molly Caren Pilot • (In progress) BASCOM / Seneca County Project • (Complete) Mt Healthy Project • (Pending finalization) MARCS Towers, Jackson • (Pending finalization) Ohio Department of Natural Resources (ODNR) Lodges pilots 			
FCC Rural Development Opportunity Fund (RDOF) Phase I Auction	Provision of high speed fixed broadband service to rural homes and small businesses in census blocks that are entirely unserved.	\$123,585,126 ²⁰ (note, excludes defaults as of April 2022)	n/a – Federally administered program directly to providers	n/a
CARES Act ²¹	Provision of hotspots and internet-enabled devices to students for purchases made between July 1, 2020 and	\$50,000,000.00	\$50,000,000.00	\$0.00

²⁰ <https://www.fcc.gov/document/auction-904-winning-bidders/attachment-b>; <https://www.fcc.gov/document/auction-904-winning-bidders/attachment-a>. Excludes defaults.

²¹ <https://broadband.ohio.gov/explore-broadband/broadbandohios-projects/riverside-connectivity-pilot>; <https://ohio-k12.help/broadbandohio-connectivity-grant/>

Source	Purpose	Total	Expended	Available
	December 30, 2020 through the BroadbandOhio Connectivity Grant. Federal legislation has extended the grant opportunity through November 22, 2021.			
State Digital Opportunity Capacity Grant Program ²²	Development of a statewide plan for achieving digital opportunity goals and closing the digital divide.	\$1,470,550.76	\$726,801.60	\$743,749.16
Connect America Fund Phase II ²³	Provision of fixed broadband and voice services across the United States	\$13,186,434.40	n/a – Federally administered	n/a
National Telecommunications and Information Administration (NTIA) Connecting Minority	Expansion of high-speed Internet access and connectivity to eligible Historically Black Colleges and Universities (HBCUs), Tribal Colleges or Universities (TCUs), and other Minority-serving institutions (MSIs).	\$2,066,822.86 (Awarded to Wilberforce University)	n/a – not administered by the state	n/a

²² <https://broadband.ohio.gov/grant-opportunities/state-digital-equity-grant/state-digital-equity-planning-grant>

²³ From Connect America Fund Phase II Auction (Auction 903) results page (<https://www.fcc.gov/auction/903>), award amount by state found here (<https://docs.fcc.gov/public/attachments/DA-18-887A3.pdf>).

Source	Purpose	Total	Expended	Available
Communities Pilot Program (CMC) ²⁴				
(Application in process) Appalachian Regional Initiative for Stronger Economies (ARISE) Grant ²⁵	Cross-state development of a large-scale middle-mile network across Ohio, Pennsylvania, Kentucky, and West Virginia designed to create a multistate ecosystem.	Concept paper accepted and finalizing grant application	n/a	n/a
(Application in process) Coronavirus Capital Projects Fund (CPF)	Enhancement of broadband deployment by funding broadband infrastructure projects aimed at affordability, fiber construction, infrastructure upgrade, and more. Projects include: <ul style="list-style-type: none"> • Ohio's Affordability and Digital Equity Grant (\$20 million); • Multi-County Last Mile Fiber Build Pilot (\$60 million); 	\$268,578,200.00	\$0.00	To be confirmed – currently curing the application with Treasury

²⁴ <https://www.internetforall.gov/news-media/biden-harris-administration-announces-more-175-million-internet-all-grants-61-minority>

²⁵ <https://www.arc.gov/arise/>

Source	Purpose	Total	Expended	Available
	<ul style="list-style-type: none"> • Shovel Ready School District Project (\$7 million); • Western Ohio Infrastructure Upgrade Pilot Project (\$3 million); • Ohio Broadband Expansion Grant Program (\$80M); • Line Extension Program (\$10M); and • Creation of Appalachian Community Innovation Centers (\$90M) 			
House Bill 33 of the 135th General Assembly ²⁶	Establishment of the Ohio Broadband Pole Replacement and Undergrounding Program to advance the provision of qualifying broadband service access to residences and businesses in an unserved area by reimbursing certain costs of pole replacements, mid-span pole installations, and undergrounding	\$50,000,000	\$0.00	\$50,000,000
U.S. Department of Agriculture (USDA) ReConnect Program	Provision of loans and grants to provide funds for the costs of construction, improvement, or acquisition of	\$21,341,792.00	n/a – not administered by the state	n/a

²⁶ https://search-prod.lis.state.oh.us/solarapi/v1/general_assembly_135/bills/hb33/EN/06/hb33_06_EN?format=pdf

Source	Purpose	Total	Expended	Available
	facilities and equipment needed to provide broadband service in eligible rural areas			

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