Massachusetts Broadband Institute (MBI) Broadband Equity Access and Deployment (BEAD) Challenge Evaluation Process

June 20, 2024

Standard Operating Procedure (SOP) & Evidence Submission Guidelines

Change Log

Updated on June 20, 2024

- Page 11: Evidence Requirements for Challengers Section was updated to reflect that zip files will *not* be an accepted file type.

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1 CHALLENGE PROCESS BACKGROUND

This section provides an overview of the MBI Challenge Evaluation Process, the purpose, the roles and responsibilities, and approximate process execution timeline.

The Broadband Equity Access and Deployment (BEAD) Program requires that all Eligible Entities run a fair and transparent challenge process to ensure the accuracy of broadband serviceable locations (BSLs) and community anchor institutions (CAIs) available for BEAD funding. The challenge process is designed to provide permissible challengers with an opportunity to challenge the eligibility of locations for BEAD funding based on availability, speed, latency, data caps, technology, business only service, enforceable commitments, and designation as a CAI. In addition, entities eligible to submit rebuttals have the opportunity to do so for challenges deemed to be inaccurate. To help ensure a consistent and fair standard of review, the Massachusetts Broadband Institute (MBI) has developed this standard operating procedure (SOP) to provide evaluators with a detailed procedure on how to evaluate challenges.

Questions related to this document or issues related to the portal should be directed to mapfeedback@masstech.org

1.1 PURPOSE

This section outlines the purpose of developing this standard operating procedure.

The purpose of this SOP is to document Massachusetts's BEAD program Challenge Evaluation Process. This document sets out the procedural and compliance guidance for MBI evaluators to review, adjudicate, and make a final determination on the BEAD eligibility of each challenged location. This SOP does not cover the entire challenge process but instead focuses on the evaluation of challenges, as required by the National Telecommunications and Information Administration (NTIA) BEAD model challenge process and detailed in Massachusetts Initial Proposal Volume I.

1.2 ROLES AND RESPONSIBILITIES

This section defines roles and responsibilities for the Challenge Evaluation Process. While these responsibilities are intended to be comprehensive, additional duties may arise, and all parties are responsible for partnering with each other to ensure all programmatic goals are met and all laws and regulations are followed.

Below are the roles and responsibilities of the parties involved in the Challenge Evaluation Process.

Table 1: Roles and Responsibilities

Role	Responsibilities
MBI	• Manage the challenge process from beginning to end. • Direct the development of an online portal for the submission and evaluation of challenges. • Facilitate the preregistration of Challengers and Rebutters. • Assess and determine if registered Challengers and Rebutters are eligible to participate in the challenge process.

Role	Responsibilities
	• Review all submitted challenges and rebuttals and make a final determination on BEAD eligible locations. • Submit challenge process results to NTIA for approval. • Publish final determinations.
NTIA	• Provide technical assistance, guidance, and clarifications. • Review and accept final challenge determinations.
Geospatial Contractor	• Compile list of all unserved and underserved locations using Federal Communications Commission (FCC) Broadband map and deduplicate locations that already have funding commitments. • Identify CAIs that lack 1 Gigabits per second (Gbps) symmetrical service. • Perform Geographic Information System (GIS) mapping and data support for challenge evaluations, including the development of an online portal to access and process challenges. • Provide technical assistance for the use of the online challenge portal. • Generate final location data to be submitted to NTIA in the required format.
Challenger[1]	• Register for the challenge process using the online challenge portal. • Complete and submit all required documentation requested as part of the challenge submission. • Submit challenges within 30 calendar days from the opening of the challenge submission window.
Rebutter[2]	• Respond to all challenges within 30 calendar days following the receipt of a challenge notice.
Challenge Evaluator	• Review challenge documentation provided by Challenger, and assess their completeness and permissibility. • Review rebuttal documentation provided by Rebutter, and assess their completeness and permissibility. • Recommend challenge determination for MBI's review and approval.
General Public (Residents and Businesses)	While residents and businesses are not allowed to submit challenges directly to the challenge portal, they are able to participate in the Challenge Process by submitting their challenges through MBI's contracted partner and non-profit. The general public is also encouraged to connect with their units of local or Tribal government

[1] Eligible Entities may only allow challenges from nonprofit organizations, units of local governments, tribal governments, and Internet Service Providers (ISPs).

[2] For challenges related to location eligibility, only the challenged service provider may rebut the reclassification of a location or area with evidence. If a provider claims gigabit service availability for a CAI or a unit of local government disputes the CAI status of a location, the CAI may rebut. All types of challengers may rebut planned service (P) and enforceable commitment (E) challenges.

Role	Responsibilities
	or nonprofit organizations in order to find out whether these local leaders are already engaged in the Challenge Process and planning to file challenges that include their location. The general public can submit challenges for code types A, S, L, T, D, B, C, and R. They are an essential part of the process and encouraged to participate by performing the following: • Collect and compile data at the premises of the resident or business to demonstrate the lack of service. • Identify Permissible Challengers in their areas, such as MBI's contracted partner and nonprofit. • Provide Permissible Challengers, such as MBI's contracted partner and nonprofit, with collected data to develop a successful challenge.
MBI's contracted partner and non-profit	• Review public submissions for accuracy and completeness of evidence and submit as necessary.

1.3 HIGH LEVEL CHALLENGE PROCESS TIMELINE

Provide a high-level timeline outlining the challenge process overview, including the following four phases: publication of eligible locations, challenge phase, rebuttal phase, and final determination phase.

MBI's challenge process consists of five phases that run over 120 days. The processing of challenges and rebuttals will be carried out in two distinct phases. Challenges will be assessed during the Challenge Window and the Challenge Validation period. Successful challenges will be open to all rebutters simultaneously at the start of the rebuttal window.

Ineligible challengers should reach out to their eligible challengers responsible for compiling and submitting individual challenges on their behalf to determine the deadlines for submitting challenges. After the Challenge Window closes, there will be a 4-day Challenge Validation period before the rebuttal window opens. During the Rebuttal Period, providers will be notified of challenges and will have 30 days to submit their rebuttals. Challengers and Rebutters are encouraged to submit their challenges and rebuttals early on in the process to provide MBI sufficient time to review the validity of the challenge and rebuttal.

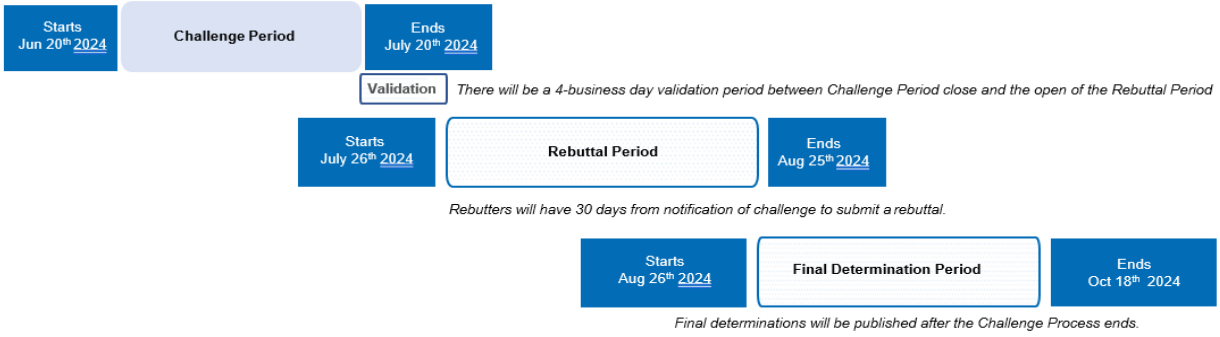
Once the Rebuttal Window closes, evaluators will adjudicate and make a final determination on the challenge. All final adjudications will be made public at the end of the challenge process. Below is a more detailed description of the challenge process:

1. **Publication of Eligible Locations:** The first phase is the publication of the state's map based on FCC's fixed broadband availability data as of December 31, 2024. The map will show the availability status of every location including the set of locations eligible for BEAD funding (unserved, underserved) and the locations considered served as the status of these locations can be challenged.
2. **Challenge Window:** The second phase is a 30-calendar day challenge submission window during which Challengers will submit their challenges through the portal. After a challenge is submitted, the Challenge Evaluator will review the challenge and associated evidence and determine if it meets the requirements. If a challenge does not meet the requirements, the Challenge Evaluator will reject the challenge by noting the reason of rejection and the Challenger will have the opportunity to resubmit a new one within the

challenge window. If a challenge is determined to meet the minimum level of evidence, it will be considered as a 'valid challenge' and submitted for rebuttal.

3. **Challenge Validation:** MBI will continue reviewing challenges submitted during the Challenge Window and evaluating the submitted evidence. At the end of this phase, MBI will publish all challenges on the BEAD Challenge Portal and prepare for Rebuttal Phase. Challenges will be open to rebutters at the same time once the rebuttal window opens.
4. **Rebuttal Window:** Providers will have 30-calendar days from the open of the rebuttal phase to submit their rebuttal. The rebuttal period begins once the 4-day challenge validation period ends. In the fourth phase, eligible Rebutters may rebut the challenge with evidence. Rebuttals that do not meet the requirements will be rejected and the challenge will be upheld. In the unlikely event that evaluators require additional time to review a challenge beyond the closing window of the challenge phase, the start of the rebuttal phase will be delayed to give rebutters 30 days to submit their rebuttal.
5. **Final Determination:** During the last phase, all challenges and rebuttals will be evaluated once all challenges and rebuttals are submitted, and MBI will make their final determination on the classification of the challenged locations within 60 days from rebuttal period close, either declaring the challenge "sustained" or "rejected". The final list of eligible locations will be posted on MBI's website at least 60 days before allocating grant funds for network deployment.

Figure 1: Overall Challenge Process Timeline



2 CHALLENGE PROCESS OVERVIEW AND APPROACH

This section provides an overview of the Challenge Evaluation Process.

This section of the SOP explains the process flow and guidelines for evaluating challenges submitted to the BEAD program. It covers pre-challenge activities, eligibility criteria for entities, documentation requirements for submitting challenges and rebuttals, as well as the final determination process.

2.1 PRE-CHALLENGE PROCESS ACTIVITIES OVERVIEW

This section provides a high-level overview of the activities that occur before the Challenge Evaluation Process.

Before the Challenge Evaluation Process can begin, several activities must take place:

1. **Develop Initial Proposal Volume I:** MBI identified unserved and underserved locations, identified eligible CAIs, and developed a challenge process using the NTIA model with additional proposed modifications.
2. **Submit Initial Proposal Volume I:** MBI submitted Initial Proposal Volume I on December 22, 2023.
3. **Submit Initial Proposal Volume II:** MBI submitted Initial Proposal Volume II for NTIA review and approval on December 22, 2023.
4. **Review and Approve the Initial Proposal Volume I:** NTIA reviewed Initial Proposal Volume I and provided two rounds of curing comments. Initial Proposal Volume I was approved on April 5th, 2024.
5. **Run Approved Modifications and Deduplication of Funding:** MBI modified the set of locations eligible for BEAD funding to reflect data that is not present in the National Broadband Map. MBI deduplicated past state funding areas under Last Mile Grant Programs, and qualifying federally funded programs as outlined in Volume I, and adjusted the status of locations that have funding commitments for deploying qualifying broadband service from these programs.
6. **Register Eligible Challengers:** Pre-registration of Challengers and Rebutters in the challenge portal will be carried out prior to launching the challenge process and will continue through the challenge period to allow Rebutters not already registered in the system to do so. MBI will proactively work to identify eligible challengers to register in the challenge portal.

2.2 ELIGIBILITY OF CHALLENGE AND CHALLENGING ENTITY

This section provides the eligibility of the challenging entity, including permissible challenges and challengers.

2.2.1 Permissible Challengers

During the BEAD challenge process, the MBI will only allow challenges from nonprofit organizations, units of local government, Tribal governments, and internet service providers (ISPs). It will be the responsibility of MBI to confirm eligibility of Challengers and Rebutters to participate in the challenge process. The following definitions should be used to evaluate eligible participants:

1. A nonprofit organization is formed for civic, charitable, or other public purposes and not for personal pecuniary gain. Some nonprofit organizations are operated primarily for the public benefit, while others advance the mutual interests of their members.[3] Eligible nonprofit organizations may or may not be located within Massachusetts. Challenge Evaluators should use this site to confirm if an entity is a nonprofit organization: Tax Exempt Organization Search | Internal Revenue Service (irs.gov)
2. A local government or governmental unit is defined as a town, city, district, commission, agency, authority, board or other instrumentality of the commonwealth or of any of its political subdivisions, including any regional local governmental unit[4].
3. Tribal government is defined as the recognized governing body of any Indian tribe; any legally established organization of Indians which is controlled, sanctioned, or chartered by such governing body or which is democratically elected by the adult members of the Indian community to be served by such organization and which includes the maximum participation of Indians in all phases of its activities: provided, that in any case where a contract is let or grant made to an organization to perform services benefiting more than one Indian tribe, the approval of each such Indian tribe shall be a prerequisite to the letting or making of such contract or grant.[5]
4. Internet service providers are defined by the NTIA as a company that provides users (individuals or businesses) with access (a connection) to the Internet and related services[6].

It is worth noting that individuals are not eligible to directly submit a challenge to MBI, however, they can collect the data (including the address of the BSL being challenged) and provide it to nonprofit organizations, such as MBI's contracted partner and nonprofit, or unit of local/tribal governments. Those entities can compile challenges and submit them through the portal on behalf of the public.

2.2.2 Permissible Challenges

According to the BEAD Notice of Funding Opportunity (NOFO) Section IV.B.6, and MBI's Volume 1, MBI will only accept challenges based on the defined challenge types included in the table below:

Table 2: Permissible Challenges

Code	Challenge Type	Description
A	Availability	*Availability – Service not Available:* Map shows that the location is served when in fact the broadband service identified is not offered at the location, including a unit of a multiple dwelling unit (MDU). *Availability – Service Available:* Map shows that the location is either unserved or underserved when in fact the broadband service identified is offered at the location, including a unit of a multiple dwelling unit (MDU).

[3] https://www.mass.gov/info-details/massachusetts-law-about-nonprofit-corporations-charitable-organizations

[4] General Law - Part I, Title III, Chapter 29C, Section 1 (malegislature.gov)

[5] NTIA Tribal Consultation Summary Report: https://broadbandusa.ntia.gov/sites/default/files/2021-08/Tribal%20Consultation%20Summary%20Report.pdf

[6] https://broadbandusa.ntia.doc.gov/sites/default/files/publication-pdfs/bbusa_broadband_glossary.pdf

Code	Challenge Type	Description
S	Speed	The actual speed of the service tier falls below the unserved or underserved thresholds.[7]
L	Latency	The round-trip latency of the broadband service exceeds 100 milliseconds (ms)[8].
D	Data cap	The only service plans marketed to consumers impose an unreasonable capacity allowance ("data cap") on the consumer.[9]
T	Technology	The technology indicated for this location is incorrect.
B	Business service only	The location is residential, but the service offered is marketed or available only to businesses.
E	Enforceable commitment	The challenger has knowledge that broadband will be deployed at this location by the date established in the deployment obligation.
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.)
P	Planned service	The challenger has knowledge that broadband will be deployed at this location by December 31, 2024, without an enforceable commitment or a provider is building out broadband offering performance beyond the requirements of an enforceable commitment.[10]
C	Location is a CAI	The location should be classified as a CAI.
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.
G	CAI: Qualifying broadband not available	The CAI cannot obtain qualifying broadband.
Q	CAI: Qualifying broadband available	The CAI can obtain qualifying broadband.

[7] The challenge portal must 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. 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.

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

[9] 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.

[10] The scheduled service dates have been revised from June 30, 2024, to December 31, 2024, to account for the updated Challenge Process timeline which is set to begin in June 2024 to capture seasonality in broadband usage that occurs in certain regions of the state. During the period between Memorial Day and Labor Day, certain regions of the state, including Cape Cod, Martha's Vineyard and Nantucket, experience a significant increase in the population due to tourism. These populations spikes place greater demands on broadband infrastructure, which could impact internet access for permanent residents as well as businesses. Due to the timing of MBI's planned challenge process commencing in June 2024, MBI has extended the "Planned Service" deadline to be approximately six months after commencing the challenge process, as the NTIA template originally contemplated.

Code	Challenge Type	Description
V	Digital Subscriber Line (DSL)	Pre-challenge modification for DSL technology. Note that this challenge is not Rebuttable.
F	Fixed Wireless	Pre-challenge modification for fixed wireless technology. Note that this challenge type does not require location-specific evidence to challenge but is rebuttable by an ISP.

2.3 EVIDENCE REQUIREMENTS FOR CHALLENGES

This section describes the documentation required for a challenge submission depending on the challenge type.

The documentation required for a challenge submission varies according to the type of challenge being submitted. This section provides a detailed breakdown of the specific documentation needed to support each challenge type.

Additional guidance about evidence:

Evidence to support any challenge or rebuttal must clearly identify the location(s) that are being challenged or rebutted. In addition, it must satisfy the specific requirements for the particular type of challenge or rebuttal. Challenge and rebuttal reviewers must be able to directly connect the challenged locations identified in the portal to the evidence based on information that appears within the evidence itself.

Challengers can include up to five separate evidence files. If a single file does not provide all the necessary evidence for the challenge, challengers must include additional evidence to ensure completeness and compliance with the requirements of the particular challenge type being filed. Acceptable file types include PDF, JPEG, PNG, BMP, and Word Documents.

Maps must contain a legend describing the various elements included on the map (e.g., fiber routes, drops, cabinets, etc.). Roads should also be labeled, and the challenged location(s) included in the challenge map should be labeled with their street address. Map elements and labels should be at a scale that are easily readable. Map legends and labels can also be included in supplemental evidence files if needed.

Screenshots from provider websites should include both the address and service availability for the specific location in a single screenshot. However, if this is not possible, evaluators should utilize the timestamp on the screenshot to accurately link the provided information. The designated timestamp interval between the first and second screenshot should not exceed 15 minutes.

2.3.1 Availability "Service Not Available" Challenge Evidence – Code A

Acceptable availability challenge submissions require the "Reason for the Challenge" to be documented, using the reason code field from the FCC Broadband Data Collection (BDC): Data Specifications for Bulk Fixed Availability Challenge and Crowdsource Data. Depending on the reason for the challenge, acceptable evidence for each Availability challenge type is provided in the table below:

Table 3: Acceptable Availability Challenge Evidence

Type	Challenge Reason	Acceptable Evidence, any of the following accepted (maximum days from evidence collection)
1	Provider failed to schedule a service installation within 10 business days of a request.	• Text message, email, or letter from provider *(365 days)* • Voicemail transcript from provider *(365 days)* • Documentation of phone call or in-person interaction *(365 days)*
2	Provider did not install the service at the agreed-upon time.	• Text message, email, or letter from provider *(180 days)* • Voicemail transcript from provider *(180 days)* • Documentation of phone call or in-person interaction *(180 days)*
3	Provider requested more than the standard installation fee to connect the location.	• Text message, email, or letter from provider *(365 days)*
4	Provider denied the request for service.	• Screenshot from provider website *(180 days)* • Text message, email, or letter from provider *(180 days)* • Voicemail transcript from provider *(180 days)* • Documentation of phone call or in-person interaction *(180 days)*
5	Provider does not offer the technology entered above at this location.	• Screenshot from provider website *(180 days)* • Text message, email, or letter from provider *(180 days)* • Voicemail transcript from provider *(180 days)* • Documentation of phone call or in-person interaction *(180 days)*
6	Provider does not offer the speed(s) shown on the Broadband Map for purchase at this location.	• Screenshot from provider website *(180 days)* • Text message, email, or letter from provider *(180 days)* • Voicemail transcript from provider *(180 days)* • Documentation of phone call or in-person interaction *(180 days)*
7	No wireless signal is available at this location (only for technology codes 71 and 72)[11].	• Infrastructure related evidence (*180 days*) ○ Screenshot of map indicating no nearby towers • Screenshot of heat / coverage map from provider website *(180 days)* • Text message, email, or letter from provider *(180 days)*

[11] Code 71 – Licensed Terrestrial Fixed Wireless and code 72 – Licensed-by-Rule Terrestrial Fixed Wireless

		• Voicemail transcript from provider *(180 days)* • Documentation of phone call or in-person interaction *(180 days)*
8	New, non-standard equipment had to be constructed at this location.	• Text message, email, or letter from provider *(180 days)* • Voicemail transcript from provider *(180 days)* • Documentation of phone call or in-person interaction *(180 days)*

In their review of evidence, evaluator should note the following maximum days from evidence collection:

- 60 days from June 20, 2024, is April 21, 2024
- 180 days from June 20, 2024, is December 23, 2023
- 365 days from June 20, 2024, is June 21, 2023

2.3.2 Availability "Service Available" Challenge Evidence – Code A

These challenges may be submitted for BSL(s) that the existing map shows as unserved or underserved by service providers that are currently providing or can provide, within 10 business days, service for this location. MBI may accept the any of the following evidence for these challenges:

- A copy of the customer bill that shows that the location subscribes or has subscribed to the providers service (365 days).
- A screenshot from the provider website that shows service availability at that location (365 days).
- A copy of an offer sent to the location that provides service is now available as a standard installation (365 days).
- Clearly marked as-built diagrams or files of infrastructure deployed to provide service to the location (365 days).
- For fixed wireless service, results from a mobile test unit that demonstrate service availability and speed at the challenged location (365 days).

All evidence for Availability – Service Is Available challenges must clearly show which BSL(s) it applies to and indicate:

- The type of technology that is available, and
- The download speeds, upload speeds, and latency that are available.

2.3.3 Speed Test Challenge Evidence – Code S

The Massachusetts Broadband Institute will accept speed tests as evidence for substantiating challenges and rebuttals. Speed tests cannot predate the beginning of the challenge period by more than 60 calendar days.

Speed Challenges must provide evidence that the download/upload speeds of the broadband service are materially lower than 100/20 Megabits per second (Mbps). This will require multiple speed tests by the subscriber at each challenged location. Each speed challenge must consist of three measurements, taken on different days. The measurements do not need to occur on consecutive days. The median of the three tests is used to trigger the challenge.

MBI requires the use of the following speed test applications: Ookla, M-Lab, Cloudflare, Netflix, or the speed test embedded in the Broadband Navigator tech portal. MBI encourages use of the speed test embedded in the Broadband Navigator tech portal.

For each speed test or group of speed tests, the following required content must be validated as part of the evaluation.

Table 4: Speed Test Challenge Evidence

Requirement	Required Content
Acceptable speed test forms (will accept any of these)	• A reading of the physical line speed provided by the residential gateway: e.g. modem or router. • Optic Network Terminal (for fiber to the home), or fixed wireless subscriber module. • A reading of the speed test available from within the residential gateway web interface. • A reading of the speed test found on the service provider's web page. • A speed test performed on a laptop or desktop computer within immediate proximity of the residential gateway (e.g. modem or router), using Ookla, M-Lab, Cloudflare, Netflix, or the speed test embedded in the Broadband Navigator tech portal. For more accurate results and to increase the likelihood of acceptance, MBI recommends performing a speed test using an ethernet cable as opposed to WiFi.
Speed test measurement requirements (must include all)	• Three tests must be conducted on three different days; the days do not have to be consecutive. • The test results must display the time and date of each speed test conducted. • The test results must include the download and upload speed results. • The median of the three tests (i.e., the second highest (or second lowest) speed) is used to trigger a speed-based (S) challenge, for either upload or download speeds. • The provider-assigned internet protocol (IP) address, either version 4 or version 6[12], identifying the residential gateway conducting the test.
Additional information requirements (must include all)	• 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). • A consent that grants the non-profit organization or local unit of government submitting the challenge on behalf of an individual (the Challenger), MBI, any contractors supporting the challenge process, and the service provider being challenged access to the information provided in the challenge.
Submission requirements	• Speed tests may be conducted by subscribers, but speed test challenges must be gathered and submitted by units of local government, Tribal government, nonprofit organizations, or an internet service provider. Additionally, the public may conduct

[12] Please refer to Appendix B: Glossary for the definition of Version 4 and Version 6.

	a speed test within the challenge portal and submit to MBI's contracted partner and nonprofit for evidence review and determination. • Subscribers submitting a speed test must indicate the speed tier they are subscribing to. *Note: If a particular service offering does not meet the advertised speed threshold, but is not the only service offering at that location, the eligibility status of the location may not change. For example, if a location is served by 100/20 Mbps licensed fixed wireless and 500/300 Mbps fiber, conducting a speed test on the fixed wireless network that shows a median speed of 70/10 Mbps does not change the status of the location from served to underserved because of the availability of 500/300 Mbps fiber.*

2.3.4 Latency Challenge Evidence – Code L

The challenge for Latency requires similar evidence and process as the Speed Challenge above. MBI requires a speed test by subscriber, showing the excessive latency. Speed tests cannot predate the beginning of the challenge period by more than 60 calendar days.

Latency challenges must provide evidence that the round-trip latency of the broadband service exceeds 100ms for any service subscription tier. This will require multiple speed tests by the subscriber at each challenged location, showing the excessive round-trip latency. The measurements do not need to occur on consecutive days. The median of the three tests is used to trigger the challenge.

MBI requires the use of the following speed test applications Ookla, M-Lab, Cloudflare, Netflix, or the speed test embedded in the Broadband Navigator tech portal. MBI encourages use of the speed test embedded in the Broadband Navigator tech portal.

For each speed test or group of speed tests submitted, the following required content must be validated as part of the evaluation:

Table 5: Latency Challenge Evidence

Requirement	Required Content
Acceptable speed test forms (will accept any of these)	• A reading of the physical line speed provided by the residential gateway: e.g. modem or router • Optic Network Terminal (for fiber to the home), or fixed wireless subscriber module. • A reading of the speed test available from within the residential gateway web interface. • A reading of the speed test found on the service provider's web page. • A speed test performed on a laptop or desktop computer within immediate proximity of the residential gateway (e.g. modem or router), using Ookla, M-Lab, Cloudflare, Netflix, or the speed test embedded in the Broadband Navigator tech portal. For more accurate results and to increase the likelihood of acceptance, MBI recommends performing a speed test using an ethernet cable as opposed to WiFi.
Speed test measurement requirements (must include all)	• The three tests must be conducted on three different days; the days do not have to be consecutive. • The test results must include the time and date of each speed test conducted.

	• The test result must include the latency results. • The median (middle value) of the three tests (i.e., the second highest (or second lowest) for round-trip latency) is used to trigger a latency-based (L) challenge, for either upload latency or download latency. • The provider-assigned internet protocol (IP) address, either version 4 or version 6, identifying the residential gateway conducting the test.
Additional information requirements (must include all)	• 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) a consent that grants a non-profit organization or local unit of government submitting the challenge on behalf of an individual (the Challenger), MBI, any contractors supporting the challenge process, and the service provider being challenged access to the information provided in the challenge.
Submission requirements	• Speed tests may be conducted by subscribers, but latency challenges must be gathered and submitted by units of local government, Tribal governments, nonprofit organizations, or an internet service provider. Additionally, the public may conduct a speed test within the challenge portal and submit to MBI's contracted partner and nonprofit for evidence review and determination. • Subscribers submitting a speed test must indicate the speed tier they are subscribing to.

2.3.5 Data Cap Challenge Evidence – Code D

A Data Cap Challenge refers to service plans marketed by providers to customers that impose an unreasonable capacity allowance on data usage. An unreasonable capacity allowance is defined as a data cap that falls below the monthly capacity allowance of 600 gigabytes (GB) as listed in the FCC 2023 Urban Rate Survey[13]. The evaluator may accept **any** of the following forms of evidence that indicates a monthly data cap of less than 600 GB has been imposed on a customer.

- Screenshot from provider website (*365 days*).
- Text message, email, or letter from the provider (*365 days*).
- Voicemail transcript from provider (*365 days*).
- Documentation of phone call or in-person interaction (*365 days*).
- Terms of Service or Service Description (*365 days*).
- End-User contract or offer (*365 days*).

2.3.6 Technology Challenge Evidence – Code T

The technology challenge is triggered when the provider for a specific BSL does not provide the same technology as the one included in the MBI challenge process map, therefore the technology indicated for this location is not offered. The evaluator may accept **any** of the following forms of evidence that indicates the technology type listed on the map included in the MBI challenge portal (DSL, Fiber, Fixed wireless, Cable etc.) is not actually available at

[13] DA-22-1338A1.pdf (fcc.gov)

the challenged location. The evidence cannot predate the beginning of the challenge period by more than *180 calendar days*:

- Infrastructure knowledge/evidence, including manufacturer and model number of residential gateway (CPE) that demonstrates the service is delivered via a specific technology.
- Screenshot from provider website showing the type of technology use for the specific location.
- Text message, email, or letter from the provider.
- Voicemail transcript from provider.
- Documentation of phone call or in-person interaction.
- Terms of Service or Service Description.
- End-User contract or offer.

2.3.7 Business Service Only Challenge Evidence – Code B

The business only challenge is triggered when the BSL is residential, but the service offered at that location is marketed or available only to businesses. The evaluator may accept **any** of the following forms of evidence that indicates the **only** service offered at that BSL is for businesses only. The evidence cannot predate the beginning of the challenge period by more than *180 calendar days*:

- Screenshots from the FCC BDC dataset that shows the provider only reporting to serve businesses for challenged locations.
- Screenshot from provider website showing the type of service available for the specific location.
- Text message, email, or letter from the provider.
- Voicemail transcript from provider.
- Documentation of phone call or in-person interaction.
- Terms of Service or Service Description.
- End-User contract or offer.

2.3.8 Enforceable Commitment Challenge Evidence – Code E

As part of the deduplication process, MBI is required to identify all BSLs that already were awarded funding through federal, state, and local broadband grant programs. The deduplication process applies to programs that require broadband providers to offer services with speeds of at least 100/20 Mbps. The Enforceable Commitment Challenge allows qualified organizations to prove that a location previously lacking these services, now has a commitment (funding through a grant) for the required infrastructure deployment and service.

The evaluator may accept evidence that indicates the challenged BSLs already has a funded commitment for infrastructure and service. The evidence must include **all** the following information:

- Authorization letter and/or executed agreement with funding entity that includes:
  - Required download and upload speeds in Mbps for deployment.
  - Technology used for deployment.
  - List of funded locations and if available methodology used to match awarded locations to Fabric IDs.
  - Type of service to be made available: residential service, business service, or both.

- An attestation from the service provider that confirms that the round-trip latency of service will be under 100ms. An attestation from the service provider that confirms the planned network will be fully deployed to the challenged locations by the dates required in the award agreement.
- If the challenge includes locations on Tribal Lands, the challenger will need to attach a legally binding agreement between the relevant Tribal Government and the service provider for the location(s) at issue.

2.3.9 Not Part of Enforceable Commitment Challenge Evidence – Code N

The Not Part of Enforceable Commitment Challenge allows challengers to provide evidence that a location is not or no longer covered by an Enforceable Commitment, as indicated by MBI as part of the deduplication process and displayed on the challenge portal map.

The evaluator may accept **any** of the following as evidence for this challenge type:

- Declaration by service provider subject to the enforceable commitment that they are no longer capable of meeting their commitments.
- Documentation that the provider has defaulted on the commitment or is otherwise unable to meet their grant commitments. This may include:
    - Public notice of default published by the funding agency.
    - Copy of the default notice sent to the provider.
- Documentation that less than 100% of locations in the area subject to the enforceable commitment are covered by that commitment.
- If locations are on Tribal lands, the Tribal Government may challenge based on a failure of the provider to obtain consent from the Tribal Council for the application and/or receiving the award.

2.3.10 Planned Service Challenge Evidence – Code P

The Planned Service Challenge will be triggered if a provider has or plans to deploy infrastructure and service to the challenged locations based on the following requirements:

The challenger plans to deploy or has knowledge that broadband will be deployed at challenged location by December 31, 2024, without an enforceable commitment or offering performance beyond the requirements of an enforceable commitment.

The evaluator may accept evidence that indicates service is planned for the challenged BSLs. The evidence must include **all** the following documentation:

- Construction contracts or similar evidence of on-going deployment, along with evidence that all necessary permits have been applied for and/or obtained.
- Information related to the Planned Service such as:
    - Required download and upload speeds in Mbps for deployment.
    - Technology used for deployment.
    - List of locations and if available methodology used to match awarded locations to Fabric IDs.
- An attestation from the service provider to confirm the following:

- Round-trip latency of service will be under 100ms.
- Service will be deployed to the challenged locations by the timeframe set above with the described technology, speeds, and latency parameters.

Commitment that planned service will meet the BEAD definition and requirements of reliable and qualifying broadband even if not required by its funding source (i.e., a separate federal grant program), including the expected date deployment will be completed.

- If the challenge includes locations on Tribal Lands, challenger will need to attach a legally binding agreement between the relevant Tribal Government and the service provider for the location(s) at issue.

2.3.11 Location is a CAI Challenge Evidence – Code C

Any Challenger can submit a challenge to a location to claim it is an eligible CAI. This challenge type is used to identify locations as CAIs based on the CAI definition included in Massachusetts's BEAD Initial Proposal Volume I[14] which includes:

CAI	Definition and Source
Schools 	Schools appearing in this data set are those attended by students in pre-kindergarten through high school, based on the Massachusetts Department of Elementary and Secondary Education (DESE) school profiles database. This includes public elementary, public secondary, public vocational/technical/ agricultural regional, private, charter, and special education schools. Data was acquired from MassGIS (Bureau of Geographic Information).
Libraries 	This dataset contains points which represent locations of all public and some special libraries currently registered with the Massachusetts Board of Library Commissioners (MBLC). Data was acquired from MassGIS (Bureau of Geographic Information).
Health clinic, health center, hospital, or other medical providers 	Data for hospitals, community health centers, and nursing facilities was acquired from MassGIS (Bureau of Geographic Information). Data for community behavioral health centers and clubhouses, categorized under community health center was gathered from Mass.gov and Massachusetts Clubhouse Coalition. Data for clinics was acquired from Massachusetts eHealth Institute (MeHi's) tracking of ambulatory medical practices for the Executive Office of Health and Human Services (EOHHS). Clinics included small to large ambulatory practices, those from 1-9 Medical Doctors (MDs), Doctor of Osteopathic Medicine (Dos), Nurse Practitioners (NPs), and Physicians Assistants (Pas) to at least 20 MDs, Dos, NPs, and Pas. Acute and Non-Acute care hospitals are those licensed under Massachusetts General Law Chapter 111, Section 51 and defined using the Massachusetts Department of Public Health (DPH) and Department of Mental Health (DMH) license criteria as well as a listing on the state's Bureau of Hospitals website.

[14] Massachusetts Initial Proposal Volume 1 (PDF)

CAI	Definition and Source
	Note: Community behavioral health centers and club houses were considered as CAIs for the following reasons. Community behavioral health centers provide mental health and substance abuse services and treatment through three service offerings: mobile crisis intervention, community crisis stabilization, and routine outpatient services. Routine outpatient services are offered in-person and in a telehealth setting, requiring access to reliable and high-speed internet. A key function of successful outpatient services includes obtaining all the necessary supportive services, such as housing and food assistance or care coordination, resources that typically rely on online applications. Similarly, clubhouses assist adults with major mental illnesses live full, productive, and meaningful lives in the community at varied levels of independence by providing resources such as employment opportunities, technology, and housing. Clubhouses serve vulnerable populations and having access to reliable, high-speed internet could expand the capability to provide technical assistance, coordinate services, and provide virtual resources.
Public safety entity 	Fire houses were sourced through the Department of Fire Services and acquired via MassGIS (Bureau of Geographic Information). Police Stations were provided by the Massachusetts Emergency Management Agency (MEMA) GIS Program in cooperation with the Regional Planning Agencies and participating communities. Data was acquired via MassGIS (Bureau of Geographic Information). Prison/Correctional Facilities were acquired via MassGIS (Bureau of Geographic Information) who verified locations from the websites of the Massachusetts Department of Correction (MADOC), Massachusetts Sheriffs' Association (MSA), Federal Bureau of Prisons (BOP) and individual facilities, and verbal communication with many of the facilities. This data was acquired from MassGIS (Bureau of Geographic Information).
Institutions of higher education 	Institutions of higher education include private and public universities and community colleges. Additionally, MBI has chosen to include minority serving institutions, trade schools, and adult education programs. This data is primarily based on all Massachusetts colleges listed in the National Center for Education Statistics with additional schools added from lists of professional occupational/vocational institutions compiled by the Massachusetts Office of Consumer Affairs and Business Regulation Division of Professional Licensure. Data was acquired from the National Aeronautics and Space Administration (NASA) and MassGIS.
Public housing organizations 	Public housing organizations were identified from the National Housing Preservation Database (NHPD) and include State-assisted Housing Organization and Department of Housing and Urban Development (HUD)-assisted Housing Organization.
Community support organizations	As explained above, community support organizations include senior centers, community centers, veterans centers, job training centers, and homeless shelters, as they facilitate greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals. Data for senior centers was acquired from the Massachusetts Office of Elder Affairs.

CAI	Definition and Source
	Data for community centers was available only for Boston and acquired from Boston's Open Data Portal. Data for veterans centers was sourced from Veterans Affairs. Job training centers data was sourced from MassHire. • Homeless shelters data was sourced from the Mass Dept of Health & Social Services.

The evidence submitted for this challenge type must include **all of** the information listed below:

- Official entity name of the institution
- The type of CAI, selecting from the categories listed above
- Explanation of how the institution facilitates greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals.
- Evidence that the location falls within the definitions of CAIs established by MBI in the Massachusetts BEAD Initial proposal Volume I. This can include:
    - Registration documents
    - Contact information to confirm CAI Status
    - Eligibility for FCC e-Rate or Rural Health Care Program

***Critical to Note**: This challenge type does not need to apply to existing BSLs. Challengers may submit new locations not currently identified as BSLs in the challenge portal map by emailing mapfeedback@mastech.org with a subject line: "CAI – Location addition". MBI requires the submission of the address and the coordinates (latitude and longitude) for the location in question.*

2.3.12 Location is Not a CAI Challenge Evidence – Code R

Any Challenger can submit a challenge that a location is not a CAI. Similar to the above challenge, the status of a location identified as a CAI in the challenge portal may also be challenged. If successful, this challenge will remove the location from the CAI BEAD eligibility list. It should be noted that a successful "Location is Not a CAI" challenge could still result in an unserved or underserved status as the location may still be considered as a BSL lacking the minimum speed requirements.

The evaluator may accept **any** of the following types of evidence:

- Location is a residence as documented by:
    - Property records or real estate listing showing the property as a single-family or multi-family dwelling.
    - Utility bills in the name of the occupant(s) showing usage consistent with residential occupancy.
    - Rental or lease agreement for the property.
    - Internet, cable, or phone bills indicating the location as a residential address.

- Location is a non-CAI business as documented by:
    - Screenshot of business's website including their location (address)
    - Business registration documents such as a business license or tax identification number.
    - The property being listed as a commercial property in property records or real estate listings.
    - Photo of address and signage indicating the name and type of business at the location.
    - Business cards or promotional materials that list the location as the business address.
    - Invoices, receipts, or other financial documents referring to the location as the business address.
- Institution does not fall under the CAI definition and listed categories of CAI types (identify the institution type that the location should be listed as)
- Evidence that the CAI has moved to a new location
- Evidence that demonstrates that the location is no longer in operation:
    - Local new source indicating closure of CAI.
    - Confirmation from local government CAI is no longer in operation.

2.3.13 CAI: Qualifying Broadband Unavailable Challenge Evidence – Code G

Any eligible Challenger may submit a "CAI: Qualifying Broadband Unavailable" challenge. "Qualifying Broadband" to a CAI is Reliable Broadband Service with (i) a speed of not less than 1 Gbps for downloads and uploads and (ii) latency less than or equal to 100 milliseconds.[15] This challenge contests that a CAI is not able to receive Qualified Broadband service.

The evaluator may accept evidence that shows Qualifying Broadband service is not available. Evidence must include **any** of the following:

- Screenshot from a provider's website indicating 1Gbps/1Gbps service is not available at the challenged location
- Communication directly from provider confirming 1Gbps/1Gbps service is not available at the challenged location
- If there is an available internet connection at the location, Challenger must provide:
    - The name of current provider.
    - The type of technology delivered with the current services.
    - The speed tier of the current plan.

[15] BEAD NOFO, p. 37.

2.3.14 CAI: Qualifying Broadband Available Challenge Evidence – Code Q

Any eligible Challenger may submit a "CAI: Qualifying Broadband Available" challenge. Similar to the challenge type above, the Qualifying Broadband service at a CAI location may be challenged, if the service in the challenge portal map is reported as unavailable but is in fact available at that location.

The evaluator may accept **any** the following evidence:

- An attestation that the selected CAI Location(s) have an existing connection capable of delivering 1 Gbps/1Gbps symmetrical speeds and a latency less than or equal to 100 milliseconds, or a connection that is readily scalable to these speeds at a higher tier of service over the existing infrastructure.
- If there is an available internet connection at the location, challenger must provide:
  - The name of current provider.
  - The type of technology delivered with the current services.
  - The speed tier of the current plan.
- A recent bill/invoice.
- Evidence that the CAI can acquire symmetric gigabit service, including a screenshot from providers website indicating service is available at that location(s), text message, email, letter, voicemail transcript, or other written documentation of phone call or in-person interaction with the provider confirming service availability.

2.3.15 Digital Subscriber Line (DSL) – Code V

MBI 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. This designation cannot be challenged or rebutted by the provider.

2.3.16 Fixed Wireless – Code F

MBI will identify locations currently showing as "served" by cellular fixed wireless technology only on the latest version of FCC National Broadband Map and reclassify these locations as "underserved" This is a pre-challenge modification that will pre-load Fixed Wireless challenges to identified locations prior to the opening of the challenge process.

2.3.17 Area and MDU Challenges

MBI 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 below.

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

An area challenge is triggered if six (6) or more BSLs using a particular technology and a single provider within a census block group are challenged.

MDU Challenges

An MDU challenge is similar to an area challenge in that it is also triggered if a threshold value is reached for a particular technology from a single provider. However, for MDU challenges, the area assessed is the units within a single MDU. It should be noted that MDUs are currently defined as one BSL in the BDC Fabric, so challenges will all be received against the same location or a single BSL. The threshold values for MDU challenges are as follows:

One (1) unit for MDUs having fewer than 15 units.

Two (2) units for MDUs of between 16 and 24 units.

At least three (3) units for MDUs with 25 units and above.

It should also be noted that MDU challenges count towards an Area Challenge. For example, six successful MDU Challenges in a census block group may trigger an Area Challenge.

Evaluating Area and MDU Challenges

Area and MDU challenges will be triggered once the threshold for a census block group or an MDU is reached.

The portal will monitor submitted challenges and automatically flag if the threshold of valid challenges for an area or MDU challenge have been met. If a threshold has been met, the portal will notify Challenge Evaluators who will then review the new challenges and confirm the threshold requirements are met prior to notifying the Rebutter of a valid Area or MDU Challenge. Evaluators need to review those challenges as they come in and not wait until the end of the challenge period.

The same challenge (and rebuttal) evidence that applies to challenge types A, S, L, D, and T, also applies in the case of Area and MDU challenges.

For MDU challenges, the Challenge Evaluator should review and confirm that the MDU is defined as one BSL on the challenge portal map. There may be examples where a complex of apartment buildings may be represented by multiple BSLs and should therefore be treated separately and not part of a single MDU.

2.4 EVIDENCE REQUIREMENTS FOR REBUTTALS

This section describes the required documentation to submit a rebuttal based on the submitted challenge type.

The rebuttal phase provides an opportunity for Rebutters to challenge the reclassification of a location or area through the submission of permissible evidence. A rebuttal must be submitted within a 30-day period after receiving a notification of the challenge through the challenge process portal. Challenge Evaluators will examine each submission for completeness, legibility, and validity, informing Rebutters in case of deficiencies by rejecting rebuttals through the portal. Rebutters have a total of 30 days from receiving a challenge notification to submit or resubmit a valid rebuttal.

Challenge Evaluators will assess permissible rebuttals according to pre-established criteria for each challenge type, using the information below to guide their evaluations.

2.4.1 Availability "Service Not Available" Rebuttal Evidence – Code A

Only the service provider whose service availability has been challenged can submit an availability challenge rebuttal. Acceptable rebuttal evidence for each Availability challenge type is provided in the table below:

Table 6: Acceptable Availability Rebuttal Evidence

Type	Challenge Reason	Acceptable Evidence (maximum days from evidence collection)
1	Provider failed to schedule a service installation within 10 business days of a request.	• A copy of the customer bill that shows that the location or an adjacent location has subscribed to the provider's service (*365 days*). • A screenshot from the provider website that shows service availability at that location (*365 days*). • A copy of an offer sent to the location that proves service is now available as a standard installation (*365 days*). • Clearly marked as-built drawings depicting the location or of infrastructure deployed to provide service to the location (*365 days*) AND an attestation from the service provider to confirm service will be deployed to the challenged locations within 10 business days. • For fixed wireless service, results from a mobile test unit that demonstrate service availability and speed at the challenged location (*365 days*).
2	Provider did not install the service at the agreed-upon time.	• A copy of the customer bill that shows that the location or an adjacent location has subscribed to the providers service (*180 days*). • A screenshot from the provider website that shows the location has service (*180 days)*.
3	Provider requested more than the standard installation fee to connect the location.	• A copy of an offer sent to the location that provides service is now available as a standard installation *(365 days)*.
4	Provider denied the request for service.	• A copy of the customer bill that shows that the location or an adjacent location subscribes or has subscribed to the providers service *(180 days*). • A screenshot from the provider website that shows service availability at that location *(180 days)*. • A copy of an offer sent to the location that proves service is now available as a standard installation *(180 days)*.
5	Provider does not offer the technology entered above at this location.	• Evidence from provider network management system showing an appropriate residential gateway (e.g. modem/router) that matches the provided service *(180 days)*.

6	Provider does not offer the speed(s) shown on the Broadband Map for purchase at this location.	• A copy of the customer bill that shows that the location or an adjacent location has subscribed to the speed tier (*180 days*). • A screenshot from the provider website that shows the speed tier is available at that location *(180 days)*. • A copy of an offer sent to the location that proves service is now available as a standard installation *(180 days)*.
7	No wireless signal is available at this location (only for technology codes 70 and above).	• Results from a mobile test unit that demonstrate service availability and speed at the challenged location (*180 days*).
8	New, non-standard equipment had to be constructed at this location.	• A copy of an offer sent to the location that proves service is now available as a standard installation *(180 days)*. • Clearly marked as-built diagrams or files of infrastructure deployed to provide service to the location (*365 days*) AND an attestation from the service provider to confirm service will be deployed to the challenged locations within 10 business days.

Area challenges for availability may be rebutted either in whole or by location with evidence that service is available for all BSLs within the census block group, e.g., by network diagrams that show fiber or HFC infrastructure or by subscriber information.

For fixed wireless service, the challenge system will offer representative random sample of the area in contention, but no fewer than 10 BSLs, where the provider must demonstrate service availability and speed (e.g., with a mobile test unit). For MDU challenges, the rebuttal must show that the inside wiring reaches all units and is of sufficient quality to support the claimed level of service.[16]

MBI will apply the following process to identify random locations. A representative, random sample of locations will be generated for unique combinations of block groups, providers and technologies. In order to ensure a fair and accurate rebuttal process, the (i) number of locations is based on total service and the individual locations are selected based on both (ii) service provision and (iii) spatial distribution.

i. Except in cases where the number of total locations served in the block group is less than 10, the number of locations provided shall be the greater of 10 or 10% of the locations served by that provider in the block group (with service above 25/3). If a provider reports service to less than 10 locations in a block group, but more than the number required to trigger an area challenge, all locations will be provided for rebuttal. In the event that there are less than 10 locations served in the block group by the provider/technology combination, all locations will be provided.

ii. Locations will be selected only for unique provider-technology combinations in each block group. Additionally, the locations will be selected only from locations where the provider reports service of 25 Mbps download and 3 Mbps upload or greater. All other service reported will be excluded.

iii. Provider locations are chosen based on their spatial distribution within the challenged census block group. All provider-technology combinations in the block group are given a value based on their distance to the centroid (central point) of the relevant census block group and broken into quintiles based on the

[16] 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.

distance of all provider-technology points in that census block group. Then 20% of the total of the required rebuttal locations are selected at random from each quintile to make the final sample of locations.

These locations will then be created in the Challenge Dashboard as challenges for the provider to rebut.

2.4.2 Availability "Service Available" Rebuttal Evidence – Code A

Availability – Service Is Available challenges may be rebutted with evidence of the same type as that which is acceptable for submission as evidence to support an Availability – Service Is Not Available Challenge.

Challenge Reason	Acceptable Evidence, any of the following accepted (maximum days from evidence collection)
Provider failed to schedule a service installation within 10 business days of a request.	• Text message, email, or letter from provider *(365 days)* • Voicemail transcript from provider *(365 days)* Documentation of phone call or in-person interaction *(365 days)*
Provider did not install the service at the agreed-upon time.	• Text message, email, or letter from provider *(180 days)* • Voicemail transcript from provider *(180 days)* • Documentation of phone call or in-person interaction *(180 days)*
Provider requested more than the standard installation fee to connect the location.	• Text message, email, or letter from provider (*365 days*)
Provider denied the request for service.	• Screenshot from provider website *(180 days)* • Text message, email, or letter from provider *(180 days)* • Voicemail transcript from provider *(180 days)* Documentation of phone call or in-person interaction *(180 days)*
Provider does not offer the technology entered above at this location.	• Screenshot from provider website *(180 days)* • Text message, email, or letter from provider *(180 days)* • Voicemail transcript from provider *(180 days)* • Documentation of phone call or in-person interaction *(180 days)*
Provider does not offer the speed(s) shown on the Broadband Map for purchase at this location.	• Screenshot from provider website *(180 days)* • Text message, email, or letter from provider *(180 days)* • Voicemail transcript from provider *(180 days)* • Documentation of phone call or in-person interaction *(180 days)*

No wireless signal is available at this location (only for technology codes 71 and 72)[11].	• Infrastructure related evidence *(180 days)* ○ Screenshot of map indicating no nearby towers • Screenshot of heat / coverage map from provider website *(180 days)* • Text message, email, or letter from provider *(180 days)* • Voicemail transcript from provider *(180 days)* • Documentation of phone call or in-person interaction *(180 days)*
New, non-standard equipment had to be constructed at this location.	• Text message, email, or letter from provider *(180 days)* • Voicemail transcript from provider *(180 days)* • Documentation of phone call or in-person interaction *(180 days)*

2.4.3 Speed Test Rebuttal Evidence – Code S

Only the service provider whose service speed has been challenged can submit a speed test rebuttal. For an individual location, the service provider can submit countervailing speed test from their own network management system[17] as evidence showing sufficient speed. The speed test results must include:

- Time and date the speed test was conducted (must be within the last 60 days).
- Location of the speed test or the provider-assigned internet protocol (IP) address identifying the residential gateway where the test is conducted.
- Download and upload speeds.

A service provider may rebut an area or MDU speed test challenge by providing speed tests, in the manner described above, for at least 10% of the customers in the challenged area or MDU. The customers must be randomly selected. Providers must apply the 80/80 rule, 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.

MBI will apply the same approach described in the Availability rebuttal section above to select random locations for speed test.

2.4.4 Latency Rebuttal Evidence – Code L

Only the service provider whose latency has been challenged can submit a countervailing speed test showing latency at or below 100ms. For an individual location, the service provider can submit countervailing speed test from their own network management system or the CAF performance measurements as evidence showing reasonable latency. The speed test results must include:

- Time and date the speed test was conducted (must be within the last 60 days)

[17] 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.

- Location of the speed test or the provider-assigned internet protocol (IP) address identifying the residential gateway where the test is conducted.
- Latency results.

A service provider may rebut an area or MDU latency challenge by providing speed tests, in the manner described above, for at least 10% of the customers in the challenged area or MDU. The customers must be randomly selected. 80% of these locations must experience a latency that is less than or equal to 100ms. 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.

MBI will apply the same approach described in the Availability rebuttal section above to select random locations for latency test.

2.4.5 Data Cap Rebuttal Evidence – Code D

Only the service provider whose service has been challenged can submit rebuttal to a data cap challenge. The provider must submit their terms of service for the challenged location showing that it does not impose an unreasonable data cap or offers another plan at the location without an unreasonable cap.

2.4.6 Technology Rebuttal Evidence – Code T

Only the service provider whose service has been challenged can submit rebuttal to a technology challenge. The provider can submit countervailing evidence from their network management system showing an appropriate residential gateway (e.g. modem/router) that matches the provided service.

2.4.7 Business Service Only Rebuttal Evidence – Code B

Only the service provider whose service has been challenged can submit rebuttal to a business only service challenge. The provider can submit documentation that the service listed in the BDC map is available at the challenged location to residential customers. Rebuttal evidence can include:

- A copy of the residential customer bill that shows that the location subscribes or has subscribed to the providers service within the last 12 months.
- A copy of an offer sent to the location that provides service is now available as a standard installation.
- Evidence from the provider's network management system showing an appropriate residential gateway (e.g. modem, router) that matches the provided service.

2.4.8 Enforceable Commitment Rebuttal Evidence – Code E

Any entity eligible to submit a challenge (Challenger) may rebut an enforceable commitment challenge. The Rebutter can submit documentation that demonstrates the provider has defaulted on their commitment or is otherwise unable to meet the commitment (e.g., is no longer a going concern). They may also submit evidence that the locations are in an area that are subject to an enforceable commitment to less than 100% of locations and the location(s) are not covered by that commitment. Evidence for this rebuttal may include:

- Text message, email, or letter from provider indicating they do not plan to meet their commitment.
- Voicemail transcript from provider indicating they do not plan to meet their commitment.
- Documentation of phone call or in-person interaction with the provider indicating they do not plan to meet their commitment.

- Documentation from the funding entity indicating the provider has defaulted on their commitment.

2.4.9 Not Part of Enforceable Commitment Rebuttal Evidence – Code N

No rebuttals may be submitted for Not Part of Enforceable Commitment Challenges.

2.4.10 Planned Service Rebuttal Evidence – Code P

Any eligible Challenger may rebut a planned service challenge. The Rebutter can submit 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. Evidence to rebut a planned service commitment may include:

- Construction contracts, permitting documentation, or similar evidence that Includes the deployment completion date.
- If the challenge includes locations on Tribal Lands, Rebutter may provide evidence that there is no legally binding agreement between the relevant Tribal Government and the service provider for the location(s) at issue.
- Acceptance or rejection of the rebuttal evidence will be at the discretion of MBI.

2.4.11 Location is a CAI Rebuttal Evidence – Code C

The CAI being challenged may rebut that the location does not fall within the definition of CAI defined in the approved version of Massachusetts's Initial Proposal Volume I, or is no longer in operation. Evidence that may support this rebuttal can include:

- Location is a residence as documented by:
    - Property records or real estate listing showing the property as a single-family or multi-family dwelling.
    - Utility bills in the name of the occupant(s) showing usage consistent with residential occupancy.
    - Rental or lease agreement for the property.
    - Internet, cable, or phone bills indicating the location as a residential address.
- Location is a non-CAI business as documented by:
    - Screenshot of business's website including their location (address)
    - Business registration documents such as a business license or tax identification number.
    - The property being listed as a commercial property in property records or real estate listings.
    - Photo of address and signage indicating the name and type of business at the location.
    - Business cards or promotional materials that list the location as the business address.
    - Invoices, receipts, or other financial documents referring to the location as the business address.
- Institution does not fall with the CAI definition and listed categories of CAI types (identify the institution type that the location should be listed as)

- Evidence that demonstrates that the location is no longer in operation:
    - Local news source indicating closure of CAI.
    - Confirmation from local government CAI is no longer in operation.

2.4.12 Location is a not CAI Rebuttal Evidence – Code R

The CAI being challenged may rebut that the location falls within the definition of a CAI in the approved version of Massachusetts's Initial Proposal Volume I, or is still operational. Evidence that may support this rebuttal must include:

- Official entity name of the institution
- The type of CAI, selecting from the categories defined above
- Explanation of how the institution facilitates greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals.
- Evidence that the location falls within the definitions of CAIs establish by MBI in the Massachusetts BEAD Initial Proposal Volume I. This can include:
    - Registration documents.
    - Contact information to confirm CAI status.
    - Eligibility for FCC e-Rate or Rural Health Care Program.

2.4.13 CAI: Qualifying Broadband Unavailable Rebuttal Evidence – Code G

The CAI being challenged may rebut that the location does not receive 1 Gbps/1Gbps speed service. The rebuttal evidence must include that qualifying broadband is available to the CAI and is capable of delivering 1 Gbps/1Gbps speed or a connection that is readily scalable to 1 Gbps symmetrical speeds at a higher tier of service over the existing infrastructure. Evidence that may support this rebuttal may include:

- Screenshot from a provider's website indicating 1Gbps/1Gbps service is available at the challenged location. Communication directly from provider confirming 1Gbps/1Gbps service is available at the challenged location.
- If there is an available Internet connection at the location, Rebutter must provide:
    - The name of current provider.
    - The technology delivered with the current services.
    - The speeds of the current plan.

2.4.14 CAI: Qualifying Broadband Available Rebuttal Evidence – Code Q

Only the CAI being challenged may rebut that the location does receive 1 Gbps Service. The rebuttal evidence must include that qualifying broadband capable of delivering 1 Gbps/1Gbps speed or a connection that is readily scalable to 1 Gbps symmetrical speeds at a higher tier of service over the existing infrastructure is not available at the CAI. Evidence that may support this rebuttal may include:

- Screenshot from a provider's website indicating 1Gbps/1Gbps service is not available at the challenged location.
- Communication directly from provider confirming 1Gbps/1Gbps service is not available at the challenged location.
- If there is an available internet connection at the location, Rebutter must provide:
  - The name of current provider.
  - The technology delivered with the current services.
  - The speeds of the current plan.

2.4.15 Digital Subscriber Line (DSL) – Code V

No rebuttals may be submitted for DSL challenges.

2.4.16 Fixed Wireless – Code F

Only the service provider whose service has been challenged may rebut Fixed Wireless challenges. Permissible rebuttals for this challenge type should demonstrate that the service provider is providing 100/20 Mbps or better at the relevant locations and has sufficient network capacity to simultaneously serve (i.e., as concurrently active subscribers) at least 80% of locations in the claimed coverage area reported as served only by cellular fixed wireless.

To successfully rebut this modification, the cellular fixed wireless provider must demonstrate that it:

a) is providing 100/20 Mbps or better service at the relevant locations. Example evidence includes:
   - Countervailing speed test from their own network management system as evidence showing sufficient speed. The speed test results must include:
   - Time and date the speed test was conducted (must be within the last 60 days).
   - Location of the speed test or the provider-assigned internet protocol (IP) address identifying the residential gateway (e.g. modem/router) where the test is conducted.

b) has sufficient network capacity to simultaneously serve (i.e., as concurrently active subscribers) at least 80% of locations in the claimed coverage area, including both those reported as served only by cellular fixed wireless and those reported as served by all other technologies. This will account for transient demand and those using cellular broadband as a secondary source of connectivity. As one option for making such a showing, a provider may describe how many fixed locations could be served from each cell tower and the amount of per-user averaged bandwidth to serve 80% of those locations. A capacity of 5 Mbps for each location is considered sufficient.

2.4.17 Area and MDU Rebuttals

Area challenges for availability may be rebutted either in whole or by location with evidence that service is available for all BSLs within the census block group, e.g., by network diagrams that show fiber or HFC

infrastructure or by subscriber information. For MDU challenges, the rebuttal must show that the inside wiring reaches all units and is of sufficient quality to support the claimed level of service.[18]

MBI will apply the following process to identify random locations. A representative, random sample of locations will be generated for unique combinations of block groups, providers and technologies. In order to ensure a fair and accurate rebuttal process, the (i) number of locations is based on total service and the individual locations are selected based on both (ii) service provision and (iii) spatial distribution.

i. The number of locations provided shall be the greater of 10 or 10% of the locations served by that provider in the block group (with service above 25/3). If a provider reports service to less than 10 locations in a block group, but more than the number required to trigger an area challenge, all locations will be provided for rebuttal.

ii. Locations will be selected only for unique provider-technology combinations in each block group. Additionally, the locations will be selected only from locations where the provider reports service of 25 Mbps download and 3 Mbps upload or greater. All other service reported will be excluded.

iii. Provider locations are chosen based on their spatial distribution within the challenged census block group. All provider-technology combinations in the block group are given a value based on their distance to the centroid (central point) of the relevant census block group and broken into quintiles based on the distance of all provider-technology points in that census block group. Then 20% of the total of the required rebuttal locations are selected at random from each quintile to make the final sample of locations.

These locations will then be created in the Challenge Dashboard as challenges for the provider to rebut.

2.4.18 Evaluating Bulk Challenges

Bulk Challenges involve submitting the same type of challenge for multiple broadband serviceable locations. This type of challenge represents a number of BSLs that are being challenged for the same reason. Typically, the challenger will upload the same evidence for all locations challenged in a bulk challenge. If a challenger submits a bulk challenge, evaluators will need to review the evidence once, but will need to ensure that it applies to all locations being challenged. Bulk challenges will be permissible for availability, enforceable commitment, and planned service challenge types.

2.4.19 Challenge Evaluation Process for CAIs

CAIs have a critical role in Massachusetts, and their participation in the challenge process is equally important. However, CAIs are not eligible to submit challenges directly but can still submit challenges by working with a local governments or non-profit organizations. CAIs are eligible to rebut challenges made against their locations, and they will also be able to track and submit rebuttal evidence through the MBI's Challenge Portal.

The Challenge Portal allows CAIs to verify whether their location has been correctly identified as a CAI and if their current service status is accurately represented. Challenge types that impact CAI eligibility in terms of classification and availability of qualifying broadband include:

- **Code C Location is a CAI:** The location should be classified as a CAI.
- **Code 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.
- **Code G CAI: Qualifying Broadband Unavailable:** The CAI cannot obtain qualifying broadband, ("Qualifying broadband" to a CAI is Reliable Broadband Service with (i) a speed of not less than 1 Gbps for downloads and uploads alike and (ii) latency less than or equal to 100 milliseconds.")
- **Code Q Qualifying Broadband Available:** The CAI can obtain qualifying broadband, ("Qualifying broadband" to a CAI is Reliable Broadband Service with (i) a speed of not less than 1 Gbps for downloads and uploads alike and (ii) latency less than or equal to 100 milliseconds.")

Once challenges are submitted and determined valid by MBI's evaluators, the challenged CAIs have an opportunity to provide a rebuttal within 30 days of the rebuttal period opening and receiving a challenge notification. For CAI's not already registered in the Challenge Portal, MBI will conduct best faith efforts to locate contact information for the challenged CAI. MBI may research contact details or contact relevant local organizations for help. Identified CAIs will be notified through email and invited to register for the challenge portal.

Additionally, CAI's will be required to submit rebuttals with the minimum level of acceptable evidence for each challenge type. Please see sections 2.4.11 – 2.4.14 for more details on acceptable rebuttal evidence for CAI specific challenges.

APPENDIX A: GLOSSARY

- Broadband Data Collection (BDC): The Broadband Data Collection (BDC) program will give the FCC, industry, state, local and Tribal government entities, and consumers the tools they need to improve the accuracy of existing maps.
- Broadband Equity, Access, and Deployment (BEAD) Program: The Broadband Equity, Access, and Deployment (BEAD) Program provides $42.45 billion to expand high-speed Internet access by funding planning, infrastructure deployment and adoption programs in all 50 states, Washington D.C., Puerto Rico, the U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands.
- Broadband Serviceable Location (BSL): A business or residential location in the United States at which fixed broadband Internet access service is, or can be, installed.
- Challenge Evaluator: The MBI staff who review the challenge and rebuttal documentation to assess their completeness and permissibility to make a challenge determination for the MBI's review.
- Challenger: The Eligible Entity challenging the eligibility of locations for BEAD funding based on availability, speed, latency, data caps, technology, business only service, enforceable commitments, and designation as a CAI.
- Community Anchor Institution (CAI): 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, HUD-assisted housing organization, or Tribal housing organization), or community support organization that facilitates greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals.
- Digital Subscriber Line (DSL): A family of technologies used to transmit data over telephone lines.
- Eligible Entities: The term "Eligible Entity" means any State of the United States, the District of Columbia, Puerto Rico, American Samoa, Guam, the U.S. Virgin Islands, and the Commonwealth of the Northern Mariana Islands or, in the case of an application failure, a political subdivision or consortium of political subdivisions that is serving as a Substitute Entity.
- Hybrid Fiber Coaxial (HFC): A broadband transmission technology combining optical fiber and coaxial cable.
- Multiple Dwelling Unit: Multiple separate residential units within a single or several buildings.
- National Broadband Map: Broadband DATA Maps: The term "Broadband DATA Maps" means the maps created by the Federal Communications Commission under Section 802(c)(1) of the Communications Act of 1934 (47 U.S.C. § 642(c)(1)).
- National Telecommunications and Information Administration (NTIA): The National Telecommunications and Information Administration (NTIA), located within the Department of Commerce, is the Executive Branch agency that is principally responsible by law for advising the President on telecommunications and information policy issues. NTIA's programs and policymaking focus largely on expanding broadband Internet access and adoption in America, expanding the use of spectrum by all users, and ensuring that the Internet remains an engine for continued innovation and economic growth.
- Rebutter: The service provider whose classification and/or service is being challenged and who therefore has the ability to rebut the challenge with evidence.

- Version 4 (IPv4): The old IP address system in which each IP address is composed of 32 bits, resulting in 4 billion IP addresses.
- Version 6 (IPv6): The new IP address system in which each IP address is composed of 128 bits (a 64 bit network prefix and a 64 bit interface ID), resulting in 340 undecillion IP addresses.