

Michigan Department of Labor and
Economic Opportunity (LEO)

Michigan High-Speed Internet Office



**Broadband Equity, Access, and Deployment
(BEAD)**

Initial Proposal Volume I - Final

February 2024



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1 Introduction

This document is the first of two submissions which together will comprise Michigan’s Broadband Equity, Access, and Deployment (BEAD) Initial Proposal to the National Telecommunications and Information Administration (NTIA). This first volume (Volume I) responds to four of nineteen requirements for the Initial Proposal as per the Notice of Funding Opportunity (NOFO). These requirements are:

- **Existing Broadband Funding (Requirement 3)** - Identify existing efforts funded by federal, state, and local governments to deploy broadband and close the digital divide.
- **Unserved and Underserved Locations (Requirement 5)** - Identify each unserved location and underserved location.
- **Community Anchor Institutions (Requirement 6)** - Describe how the Eligible Entity applied the statutory definition of the term “community anchor institution” and identified all eligible CAIs.
- **Challenge Process (Requirement 7)** - Include a detailed plan as to how the Eligible Entity will conduct a challenge process for eligible locations and CAIs.

The Michigan High-Speed Internet Office has chosen to adopt the NTIA BEAD Model Challenge Process with the optional modules and two additional modifications. The Michigan High-Speed Internet Office will also plan to use the BEAD Eligible Entity Planning Toolkit provided by the NTIA to support the deduplication of funding where existing federally enforceable commitments may exist.

Following a 30-day public comment period, this proposal will be submitted to NTIA for approval. Following approval of Volume 1 (this document, with changes made based on public comments) and the submission of Volume 2, the Michigan High-Speed Internet Office will run the challenge process to determine the eligible unserved and underserved locations and CAIs for BEAD deployment projects.

2 Existing Broadband Funding (Requirement 3)

Michigan has received funding from various sources that are currently available for broadband deployment or that have already been committed for broadband deployment and other related activities in the state. As shown, most of the funding for deployment or related activities apart from BEAD funding has already been expended. All funds listed are federal unless otherwise noted.

Source	Purpose	Total	Expended	Available
Broadband Equity, Access, and Deployment Program (BEAD)	Funded through IJA, this program is the largest source of broadband funding. Priority in this program is given to building networks that connect unserved and underserved locations and community anchor institutions. This program will be implemented as a subgrant program to a variety of entities including private ISPs, nonprofits, communities, cooperatives, and others. Michigan requested and received \$5M in Bead Initial Planning Funds.	\$1.559B	\$5M	\$1.554B
US Dept. of Treasury, Coronavirus Capital Projects Fund	Realizing Opportunity with Broadband Infrastructure Networks (ROBIN) Program is a last mile and middle mile broadband infrastructure grant program. Applications were accepted from 01/13/2023 through 03/14/2023. Announcements of first round grants totaling \$166.3M and a 45-day comment-and-objection period for additional awards to complete this \$238M grant program will be made in early November, with second round grants expected to be finalized in early 2024. The second round became necessary due to changes in eligible locations related to the FCC's Enhanced ACAM program, which was announced during the initial comment-and-objection period. Michigan High-Speed Internet Office anticipates being able to connect 80k-90k locations with the ROBIN program.	\$238M	\$166.3M	\$71.7M
State Digital Equity Planning and Capacity Grant Programs (SDEPG & SDECG)	The State Digital Equity Planning Grant Program provided funding to develop the State Digital Equity Plan. The State Capacity Program will fund the implementation of this Plan and digital equity projects. Amounts are estimates.	\$32M	\$1.3M	\$30.7M

Source	Purpose	Total	Expended	Available
United States Department of Agriculture (USDA) ReConnect	The USDA ReConnect program is a federal initiative that provides loans and grants to expand access to broadband services in rural communities. The program aims to improve economic and educational opportunities, as well as healthcare and public safety, by supporting the development of high-speed internet infrastructure in underserved areas. Eligible entities can apply for funding to construct, improve, or acquire broadband facilities and provide broadband service to rural households, businesses, and farms. Eleven entities have received ReConnect funds since 2020 in Michigan.	\$89.7M	\$89.7M	\$0
Federal Communications Commission (FCC) Emergency Connectivity Fund (ECP)	The FCC's ECP is a \$7.17 billion program that aims to help schools and libraries provide internet connectivity and devices to students and staff who lack access to them. The program provides funding to educational institutions to purchase and distribute laptops, tablets, Wi-Fi hotspots, modems, routers, and other necessary equipment. The ECP was launched in response to the COVID-19 pandemic. Since its launch, 373 schools and libraries in Michigan have received ECP funds. Data provides is aggregated across the state.	\$158M	\$158M	\$0
FCC Rural Digital Opportunity Fund (RDOF) ¹	The FCC's Rural Digital Opportunity Fund (RDOF) is a program designed to expand high-speed internet access in unserved rural areas of the United States. The program offered up to \$20.4 billion in funding over 10 years to internet service providers (ISPs) to deploy broadband infrastructure in eligible areas. ISPs in Michigan won \$363M in RDOF awards in 2020 and are currently building to meet their obligations. For years 2020-2023 FCC High Cost Claims reports show Michigan has received approximately \$36.7M of those obligated funds.	\$363M	\$36.7M	\$0

¹ Currently Michigan is obligated to receive a total of \$363M in RDOF funds. Michigan expects to receive the remaining \$326.3 overtime.

Source	Purpose	Total	Expended	Available
FCC Enhanced Alternative Connect America Cost Model	The FCC’s Enhanced Alternative Connect America Cost Model (E-ACAM) is a program designed to provide funding to telecommunications providers that serve high-cost, rural areas of the United States. The program offers predictable, ongoing support for the deployment and maintenance of broadband infrastructure in these areas. Providers that accept the E-ACAM offer commit to deploying broadband with specified speeds and latency, and to meet certain build-out requirements over a fifteen-year period. The funds indicated are annual estimates of the on-going subsidy in Michigan.	\$42.5M	\$42.5M	\$0
FCC Supply Chain Reimbursement Program	The FCC’s Supply Chain Reimbursement Program is an initiative aimed at helping small and rural communications providers remove and replace equipment that poses a national security risk. The program provides funding to cover the costs of removing and replacing equipment from certain designated companies that pose a risk to national security. This program does <u>not</u> constitute a federally enforceable commitment for deploying service. One entity has received funds from this program.	\$21M	\$21M	\$0
FCC E-Rate Program	The E-Rate program is an initiative that provides funding to help schools and libraries obtain affordable access to broadband internet and other telecommunications services. The program is administered by the Universal Service Administrative Company and is funded by fees charged to telecommunications providers. E-Rate funding can be used to pay for services such as broadband internet access, Wi-Fi networks, and internal connections like routers and switches. Data is from 2020-2023 and is aggregated among all E-Rate participating entities.	\$124M	\$124M	\$0

Source	Purpose	Total	Expended	Available
FCC Rural Healthcare Program	The FCC Rural Health Care Program is an initiative aimed at helping healthcare providers in rural areas obtain affordable access to telecommunications and broadband services. The program is administered by the Universal Service Administrative Company and is funded through the Universal Service Fund. The program provides funding for eligible healthcare providers to help cover the costs of broadband connectivity, network equipment, and other related expenses. Data is from 2020-2023.	\$85k	\$85k	\$0
American Rescue Plan Act (ARPA) State and Local Fiscal Recovery Funds	The State and Local Fiscal Recovery Fund is a program created by ARPA that provides funding to states, territories, and eligible local governments to help them recover from the economic impacts of the COVID-19 pandemic. The program aims to support public health efforts, replace lost revenue, and address negative economic impacts such as job loss and decreased economic activity. Several Michigan communities have used these funds for broadband expansion.	\$26M	\$26M	\$0
National Telecommunications and Information Administration (NTIA) Connecting Minority Communities Pilot Program	The NTIA's Connecting Minority Communities Pilot Program is an initiative aimed at addressing the digital divide in communities that are traditionally underserved or underrepresented in broadband adoption. The program provides \$268 million in funding to support broadband infrastructure deployment, digital inclusion activities, and workforce development in minority communities, including those with high poverty rates. One entity in Michigan received an award in this program in 2023.	\$3M	\$3M	\$0
NTIA Broadband Infrastructure Program	The NTIA's broadband infrastructure program provides grants to support broadband deployment and adoption in unserved and underserved areas. The grants can be used for a range of activities, such as building and upgrading broadband infrastructure, establishing public computer centers, and providing digital skills training. One entity received funding through this program in 2022.	\$22M	\$22M	\$0

Source	Purpose	Total	Expended	Available
NTIA Tribal Broadband Connectivity Program	The NTIA's Tribal Broadband Connectivity Program is an initiative that provides grants to support broadband deployment and adoption in tribal communities across the United States. The program offers \$1 billion in funding to tribal governments and tribal organizations to expand access to high-speed internet and improve digital inclusion. The grants can be used for a range of activities, such as building and upgrading broadband infrastructure, establishing public computer centers, and providing digital skills training. Four entities have received an award through this program for deployment.	\$2.7M	\$2.7M	\$0
NTIA Enabling Middle Mile Broadband Infrastructure Program	NTIA's Middle Mile Broadband Infrastructure Program provides \$1B from the Bipartisan Infrastructure Law to reduce the cost of bringing high-speed internet service to unserved and underserved communities by connecting local networks to major networks. Peninsula Fiber Network was awarded \$61.2M in funding to construct middle mile networks connecting the Upper and Lower Peninsulas with fiber via Beaver Island to create new redundant routes from Benton Harbor to Chicago. New overland routes are also planned to provide greater capacity to unserved areas of the state.	\$61.2M	\$61.2M	\$0
Connecting Michigan Communities (CMIC) Program (State funding)	CMIC was created in late 2018 as Michigan's first broadband infrastructure grant program and seeded with \$20M in initial funds. An additional \$14.3M was added to the program in mid-2020. The program has issued three rounds of grants with the last occurring in 2022.	\$34.4M	\$34.4M	\$0
Alternative Connect America Cost Model (ACAMII)	The ACAMII was established by the 2018 Rate-of-Return Reform Order. This program provides funding to rare-of-return carriers that voluntarily elected to transition to a new cost model for calculating High-Cost support in exchange for meeting defined broadband build-out obligations. Since 2019, claims by Michigan ISP's have received approximately \$25.4M.	\$25.4M	\$25.4M	\$0

Source	Purpose	Total	Expended	Available
Alternative Connect America Cost Model (ACAM)	The ACAM was established in 2016 by the 2016 Rate-of-Return Reform Order. This fund provides funding to rate-of-return carriers that voluntarily elected to transition to a new cost model for calculating High-Cost support in exchange for meeting defined broadband build-out obligations. Since 2017, Michigan ISP's have received approximately \$137.8M in claims	\$137.9M	\$137.9M	\$0
Connect America Cost Model (CACM)	The Connect America Fund (Phase II) Model (CACM) provided support from 2015 to 2020 with a select number of ISP's receiving support for 2021. Michigan carriers have received approximately \$418.5M from the period of 2015-2021.	\$418.5M	\$418.5M	\$0
Connect America Fund Auction (CAFII_AUC)	The CAF II Auction provides support to carriers to deliver service in areas where the incumbent price cap carrier did not accept CAF Phase II model-based funding and in extremely high-cost areas located within the service areas of the incumbent price cap carriers.	\$12.1M	\$12.1M	\$0
Rural Broadband Experiments (RBE)	The Rural Broadband Experiments (RBE_ provides funding for experiments in price-cap areas to bring robust, scalable broadband networks to residential and small business locations in rural communities. Michigan recipients of the RBE have received approximately received \$162,085 since 2016.	\$162.1k	\$162.1k	\$0

3 Unserved and Underserved Locations (Requirement 5)

To identify all unserved² and underserved³ locations in the State of Michigan, the Michigan High-Speed Internet Office has provided two .csv files which list each location and provides a unique location ID. A copy of these files can be found here:

Unserved Locations:

<https://www.michigan.gov/leo/~media/Project/Websites/leo/Documents/MIHI/Unserved.csv>

Underserved Locations:

<https://www.michigan.gov/leo/~media/Project/Websites/leo/Documents/MIHI/Underserved.csv>

When identifying all unserved and underserved locations for purposes of preparing this draft version of Volume I as well as the .csv files identified in Section 2.1 for public comment and review by the NTIA, the

² Defined as a location without any broadband service at all or with internet service offering speeds below 25/3 Mbps, as per the BEAD NOFO. ³ Defined as a location as one without broadband service offering speeds of 100/20 Mbps, as per the BEAD NOFO.

Michigan High-Speed Internet Office utilized the Broadband Data Collection (BDC) data as of December 31st, 2022 last updated on November 28, 2023 from the National Broadband Map.**

In order to base the state challenge process on the most current information available, MIHI plans to utilize the BDC data as of November 28, 2023 (BDC Version 3) as the baseline for the state challenge process. MIHI encourages those who are participating in the public comment process to focus their comments on the process described in this document, and plan to use the state challenge process itself for providing feedback on whether certain broadband serviceable locations have been correctly identified as served, underserved, or unserved.

4 Community Anchor Institutions (Requirements 6)

4.1 Definition and sources of CAIs in Michigan

Based on the statutory definition of “community anchor institution” as defined in 47 USC 1702 (a)(2)(E), the Michigan High-Speed Internet Office finds “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, HUD-assisted housing organization, or Tribal 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.

In addition to the definition above, the Michigan High-Speed Internet Office defines public-facing and utilized government facilities and agricultural labor camps as community anchor institutions. These organizations can serve as hubs for digital access in their communities and often have specialized technology needs and require affordable, high-speed, reliable broadband connections to provide their services effectively.

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.

MIHI contemplated identifying religious facilities as CAIs. Given the vast differences in digital inclusion support offered by these facilities, religious organizations are not included outright in the definition of CAIs. However, MIHI has identified “Organizations offering digital inclusion services (not included in other CAI definitions)” as part of the CAI definition for Community Support Organizations. This allows for religious facilities, and others, that may not be specifically defined as a CAI to self-identify as an organization offering digital inclusion services to be included as a CAI.

MIHI used geographic information systems (GIS) technology to map each of the identified CAIs. MIHI took special interest in mapping the identified CAIs on tribal lands to ensure that such institutions were appropriately included. MIHI specifically asked about identification of CAIs during Tribal Consultation; tribal leaders raised tribal health centers and tribal libraries as being of particular interest, and these locations are included in our dataset.


The following definitions and sources were used to identify the types of community anchor institutions for inclusion in each category:


** In accordance with section 5.1 of the BEAD Challenge Process Policy Notice, MIHI has elected to use the more recent version of FCC data updated February 7, 2024

CAI	Definition and Source
<p data-bbox="266 275 350 302">Schools</p> 	<p data-bbox="453 275 1445 369">K-12 schools include all K-12 schools participating in the FCC E-Rate program or that have an NCES (National Center for Education Statistics) ID in the categories “public schools” or “private schools”.</p>
<p data-bbox="261 470 355 497">Libraries</p> 	<p data-bbox="453 470 1445 564">Including all libraries participating in the FCC E-Rate program as well as all member libraries, and their branches, of the American Library Association (ALA). Data acquired from the Library of Michigan.</p>
<p data-bbox="212 648 412 772">Health clinic, health center, hospital, or other medical providers</p> 	<p data-bbox="453 648 1445 842">Includes health clinics, health centers, hospitals and other medical providers, and other institutions that have a Centers for Medicare and Medicaid Services (CMS) identifier, as well as crisis centers and facilities, hospice facilities, nursing homes and assisted living facilities, public health offices, board and care homes, continuing care retirement facilities, and other social service facilities. Additional data acquired from Michigan State Police Michigan Critical Incident Management System.</p>
<p data-bbox="204 953 396 980">Public safety entity</p> 	<p data-bbox="453 953 1445 1115">The list includes entities such as fire houses, emergency medical service stations, police stations, correctional facilities, and public safety answering points (PSAP). The list of public safety answering points (PSAPs) includes all PSAPs in the FCC PSAP registry [911 Master PSAP Registry Federal Communications Commission (fcc.gov). Additional data was acquired from the Michigan State Police - Michigan Critical Incident Management System.</p>
<p data-bbox="212 1199 412 1257">Institutions of higher education</p> 	<p data-bbox="453 1199 1445 1325">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, Hispanic-Serving Institutions, Tribal Colleges and Universities, other universities, or other educational institutions.</p>
<p data-bbox="237 1440 388 1499">Public housing organizations</p> 	<p data-bbox="453 1440 1445 1535">Public Housing Authority administration locations were identified by the Department of Housing and Urban Development (https://www.hud.gov/sites/dfiles/PIH/documents/PHA_Contact_Report_MI.pdf).</p>
<p data-bbox="212 1677 412 1736">Community support organizations</p> 	<p data-bbox="453 1677 1445 1803">The Michigan High-Speed Internet Office included any organizations that facilitate greater use of broadband service by vulnerable populations, including low-income individuals, unemployed individuals, and aged individuals. The Michigan High-Speed Internet Office included the following organizations as community support organizations:</p> <ul data-bbox="453 1824 1445 1885" style="list-style-type: none"> <li data-bbox="453 1824 1445 1885">• <u>Senior centers</u>: Senior centers can facilitate greater use of broadband service and digital inclusion among aged individuals by providing a comfortable environment for seniors to

access the internet and learn digital skills. These centers often offer training programs, workshops, and support for using digital devices, education on cybersecurity, and generally helping seniors become more comfortable using technology. Additionally, senior centers may host social and educational activities that promote digital engagement, making it easier for older adults to access online resources and connect with others digitally. Data acquired from the Michigan Association of Senior Centers and the National Council on Aging Map of Partners and Programs.

- Job training centers: Job training centers can facilitate greater use of broadband service among vulnerable populations by offering digital literacy courses and job readiness programs that incorporate online skills. They may also provide access to computers and internet connectivity, reducing barriers for low-income, unemployed, and aged individuals to acquire essential digital skills for employment, daily life, and the pursuit of employment. Data acquired from the Michigan Works! Association and cross referenced with the American Job Center Finder.
- Boys and Girls Clubs and YMCAs: These organizations facilitate greater use of broadband service among low-income and vulnerable individuals by often providing access to computer labs and internet connectivity, allowing these populations to access online resources and educational materials. They often offer after-school programs and mentorship that teach digital skills, fostering digital literacy among youth. Data acquired from Boys and Girls Clubs Michigan Alliance and State Alliance of Michigan YMCAs, respectively.
- Community centers: Community centers facilitate greater use of broadband service vulnerable populations by oftentimes providing public access to computers and the internet, increasing access for those who may not have these resources at home. They often organize digital literacy workshops and assist with online job searches and accessing government services, particularly benefiting low-income and unemployed individuals. Additionally, community centers located in low-income areas may offer social programs that help seniors and other disadvantaged groups become more comfortable with digital technology, enhancing their connectivity and access to vital online services. Data acquired from the Michigan State Police Michigan Critical Incident Management System and staff research regarding community centers located within Public Housing Authorities.
- Homeless service agencies, food banks, and pantries: Agencies serving the unhoused can facilitate greater use of broadband service among some of the most vulnerable populations by providing access to computers and the internet for job searches, housing applications, and accessing other social services. They may also offer digital literacy training to help those they serve improve their online skills and connect with resources that can lead to those experiencing homelessness to finding stable housing and employment. Additionally, food banks and pantries are a critical touchpoint for vulnerable populations to access vital services beyond nutritional assistance. These organizations often facilitate greater use of broadband service among those they serve by providing access to the internet and digital resources. They may also provide computer access for job searching, online benefit applications, and educational opportunities. Data acquired through staff research.
- Zoos, aquariums, museums, and wildlife centers: These facilities can foster greater use of broadband service several ways including by providing public Wi-Fi access, enhancing the visitor experience via connected technology, and making digital resources available for learning and enjoyment to all, including vulnerable populations. These facilities

	<p>regularly offer educational apps, virtual tours, and online content that can be accessed through visitors' smartphones, allowing low-income, unemployed, and aged individuals to engage with technology in an educational and recreational context. Michigan has a thriving tourism industry for both in-state and out-of-state travelers. Ensuring and offering these digital amenities at outdoor recreational facilities and educational establishments promotes equitable connectivity and makes outdoor recreation more accessible and enjoyable for a broader range of visitors. Data acquired from the Michigan State Police Michigan Critical Incident Management System.</p> <ul style="list-style-type: none"> • <u>Organizations offering digital inclusion services (not included in other CAI definitions):</u> There are several organizations throughout the state offering digital inclusion services and facilitating greater use of broadband among vulnerable populations that do not fall into other CAI definitions. MIHI wants to ensure these organizations have an opportunity to identify themselves during the state challenge process. MIHI will include as CAIs non-residential, permanent physical locations where an organization is conducting one or more digital inclusion activities that serve one or more vulnerable populations including, but not limited to, low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals.. Digital inclusion activities, as described by MIHI, are activities that are necessary to ensure that individuals and communities have the tools and resources to access and meaningfully use the internet and related technology and comprise of primary elements of advancing digital inclusion including: access to reliable internet, access to internet-enabled devices that meet a user's needs, availability of basic digital literacy training and technical support, use of applications and online content designed to enable and encourage self-sufficiency, participation, and collaboration, as well as advance basic awareness of online safety and related matters. Data acquired through staff research and from organizations that have self-identified their digital inclusion work for purposes of joining the Michigan Statewide Digital Inclusion Network. • <u>Childcare Centers:</u> Childcare/preschool centers can facilitate greater use of broadband service among vulnerable populations by offering parents and caregivers access to the internet, enabling them to search for jobs, access online educational resources, and connect with essential services. This support can be particularly valuable for low-income, unemployed, and aged individuals who may face digital barriers. Additionally, childcare centers frequently require ongoing certifications and training for staff often delivered online further contributing to the digital literacy of staff and caretakers. Data acquired from Early Childhood Investment Corporation.
<p>Government facilities</p> 	<p>Michigan High-Speed Internet Office selected to include the following government and related facilities that support the greater use of broadband service among the public and vulnerable populations including low-income individuals, unemployed individuals, and aged individuals. The government facilities identified as CAIs are those that are publicly facing and utilized by vulnerable populations. Government facilities that do not interface with nor provide direct support or services to the public are not included as CAIs within this definition. For example, vehicle maintenance facilities and water treatment facilities are not included as they do not interface directly with the public, whereas social security administration offices are public facing and often access by low-income population.</p> <p>Public facing government facilities often provide free public Wi-Fi access, access to public computers, and provide digital access to government services and proceedings. For example, through a "Welcoming Courthouses" initiative, Michigan courts provide computer access with trained navigators to help litigants and members of the public find legal information.</p>

CAI	Definition and Source
	<p>The Michigan Department of Natural Resources' "Nature Awaits" initiative seeks to ensure that all Michigan children have an equal opportunity to engage with our state's remarkable natural spaces and requires enhanced connectivity at visitor centers to host and implement the curriculum. Easing access to judicial and legal services and increasing digital civic engagement provides opportunities for vulnerable populations to participate in government and access critical services;</p> <ul style="list-style-type: none"> • Tribal, township, village, city, and county public-facing and utilized facilities; (data acquired from multiple sources including the United Tribes of Michigan, Michigan Townships Association, Michigan Association of Counties, and the Michigan Municipal League); • State government public-facing and utilized facilities; (data acquired from the Michigan Department of Technology, Management, and Budget, the Michigan State Police Michigan Critical Incident Management System, and Michigan Department of Natural Resources); • Federal government public-facing and utilized facilities; (data acquired from the General Services Administration); • Courthouse facilities, legal self-help centers, and "front of court" offices facilities; (data acquired from Michigan Courts); and • Polling locations (not included in other CAI definitions); (data acquired from the Michigan Department of State).
<p>Agricultural labor camps</p> 	<p>Agricultural labor camps that house migrant farm workers identified through the Migrant Labor Housing have been included as CAIs. Agricultural labor camps often support low-income and vulnerable populations, and connectivity at these facilities expands the use of broadband by providing educational and economic opportunities, as well as critical access to services and resources for those living and working in these camps. Data acquired from the Michigan Department of Agriculture and Rural Development.</p>

4.2 Determining connectivity of CAIs

To assess the network connectivity needs of the types of eligible community anchor institutions listed above, the Michigan High-Speed Internet Office:

- **Engaged government agencies.** The Michigan High-Speed Internet Office reached out to several state agencies to understand what records they have available regarding relevant community anchor institutions 1 Gbps broadband service availability. Ultimately, the Michigan High-Speed Internet Office coordinated with the Michigan Department of Education to determine which schools and libraries do not currently have access to 1 Gbps symmetrical broadband service. Further, the Michigan High-Speed Internet Office reached out to the provider of connectivity to each PSAP in the state to determine 1 Gbps availability to each PSAP. Lastly, the Michigan High-Speed Internet Office reached out to the Department of Technology, Management, and Budget to obtain availability and network connectivity needs based on existing records of procured broadband service for state-affiliated community anchor institutions.
- **Engaged relevant umbrella organizations and nonprofits.** The Michigan High-Speed Internet Office engaged with umbrella and nonprofit organizations that work with community anchor

institutions to coordinate and obtain 1 Gbps broadband service availability data. Specifically, the Michigan High-Speed Internet Office requested information related to availability needs from the member organizations across all geographic regions. Organizations contacted include: AARP Michigan, Community Economic Development Association of Michigan, Michigan Municipal League, Michigan Townships Association, Michigan Association of Counties, Michigan Courts, State Education Network, Michigan Coalition Against Homelessness, and Michigan State University, among others.

- **Conducted spatial analysis.** The Michigan High-Speed Internet Office conducted a detailed spatial analysis to determine high-speed fiber availability to CAIs. Using fiber availability data from the FCC National Broadband Map, field-collected fiber facility location data, and third-party fiber location data, the Michigan-High-Speed Internet Office calculated the proximity of each CAI to fiber facilities and used that proximity to determine the availability of 1 Gbps fiber connectivity to the identified CAIs. CAIs within 500 ft. of a FTTP network are considered to have 1 Gbps fiber available to their location.

Using the responses received and analysis conducted, the Michigan High-Speed Internet Office then compiled the list of CAIs and indicated those that do not have adequate broadband service, attached in Section 4.3.

4.3 List of CAIs in Michigan

Based on the Michigan High-Speed Internet Office definition of CAI, a .csv file has been provided which lists locations. A copy of these files can be found here:

CAIs: <https://www.michigan.gov/leo/~media/Project/Websites/leo/Documents/MIHI/CAI.csv>

5 Challenge Process (Requirement 7)

5.1 NTIA BEAD Model Challenge Process Adoption

The Michigan High-Speed Internet Office intends to adopt the NTIA BEAD Model Challenge Process

Yes

N

o

5.2 Modifications to Reflect Data Not Present in the National Broadband Map (Please see Appendix A for additional information).

MIHI will include the following modifications to reflect data not present in the National Broadband Map:

Modification 1: DSL Modification: The purpose of this modification is to facilitate the phase-out of legacy copper infrastructure that no longer meets today's definition of a served location.

Modification 2: Speed Test Modification: The purpose of this modification is to consider actual speed experienced at locations using evidence to determine if a location is served and is eligible for funding.

Modification 3: Business-Only Services to Residential Locations Modification: The purpose of this modification is to ensure that business-only service availability is not considered when determining the “unserved,” “underserved,” or “served” nature of residential locations.

Modification 4: Cellular Fixed Wireless Access (CFWA) Pre-challenge Modification: The purpose of this modification is to ensure that locations served only by cellular fixed wireless technology can receive the reported service.

5.2.1 Modification 1: DSL served locations reclassified as underserved

The Michigan High-Speed Internet 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. This designation cannot be challenged or rebutted by the provider.

5.2.2 Modification 2: Speed test materially below “served” speeds

The Michigan High-Speed Internet 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 BEAD Model Challenge Process Speed Test Module detailed 5.4.5 of this document), 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. As described below, such speed tests can be rebutted by the provider during the rebuttal period.

5.2.3 Modification 3: Business-only services to residential locations modification

As per NTIA’s Business-Only Service challenge type (Code B), the Michigan High-Speed Internet Office will consider as “unserved” any residential location where the internet service offered by a business-only provider is marketed or available only to businesses. This modification will better reflect the locations eligible for BEAD funding because it will prevent locations from being incorrectly designated as served based on service that is not actually available at that location.

Residential locations often cannot order internet service from a business-only provider/network. The Michigan High-Speed Internet Office has identified that business-only internet service was included when determining whether locations identified as “residential” on the National Broadband Map were placed in the unserved and underserved datasets provided by NTIA through the Initial Proposal Planning Toolkit.

Using the availability data from the National Broadband Map, the Michigan High-Speed Internet Office identified internet service providers in the state that report providing internet service only to businesses. The Michigan High-Speed Internet Office will disregard service availability from these identified internet service providers when determining the “unserved,” “underserved,” or “served” nature of “residential” locations. MIHI will take the following steps to identify locations impacted by this modification:

1. Identify internet service providers that only reports providing service to locations with the type “Business” to the FCC’s Broadband Data Collection. Examples of internet service providers preliminarily identified include, but are not limited to, Crown Castle Fiber LLC, US Signal, and Zayo Group LLC. Service providers that report service to any residential locations will not be included.
2. Identify locations with type “Residential” that only have service availability from one of the business-only service providers identified at a speed of at least 100/20 Mbps.
3. Record the service availability of the identified locations as “unserved.”

As described below, such determinations can be rebutted by the provider during the rebuttal period.

5.2.4 Modification 4: Cellular Fixed wireless access

The MIHI Office will treat as “underserved” locations that the National Broadband Map shows to have available qualifying broadband service (i.e., a location that is “served”) due solely to the availability of CFWA as “underserved.” MIHI has determined that this modification, and the corresponding rebuttal opportunity, will assist the office in determining the availability of networks with sufficient capacity to meet the expected consumer demand for qualifying broadband in the relevant area. The broadband office has determined that 21,878 BSLs are affected by this modification. The affected CFWA provider will have an opportunity to rebut this modification. Further details on acceptable rebuttals are included in the table of Section 5.4.4. below.

5.3 Deduplication of Funding

The Michigan High-Speed Internet Office intends to use the BEAD Eligible Entity Planning Toolkit to identify existing federal enforceable commitments.

Yes

N

The Michigan High-Speed Internet Office 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 IJA § 60105.⁴
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 and local data collections of existing enforceable commitments, unless evidence is presented that indicates state or local grantees are not in compliance with the terms of their respective programs.

Michigan High-Speed Internet Office will make a best effort to create a list of BSLs subject to enforceable commitments based on state or local grants or loans. If necessary, the Michigan High-Speed Internet 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 Michigan High-Speed Internet Office will submit this list, as an attachment, in the format specified by the FCC Broadband Funding Map, to NTIA.⁵

5.3.1 Speed Validation

The Michigan High-Speed Internet Office 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 state or local program did not specify broadband speeds, or when there was reason to believe a provider deployed higher broadband speeds than required, the Michigan High-Speed Internet Office will reach out to the provider to verify the deployment speeds of the binding commitment. The Michigan High-Speed Internet Office will document this process by requiring providers to sign a binding agreement certifying the actual broadband deployment speeds deployed.

⁴ The broadband funding map published by FCC pursuant to IJA § 60105 is referred to as the “FCC Broadband Funding Map.”

⁵ Guidance on the required format for the locations funded by state or territorial and local programs will be specified at a later date, in coordination with FCC.

The Michigan High-Speed Internet Office 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 and local enforceable commitments.

5.3.2 Funding Programs

Programs included in the deduplication of enforceable commitments are included below. Only locations included in these programs with enforceable commitments to provide at least 100/20 Mbps using a reliable broadband technology are used for deduplication:

Federal

- FCC Rural Digital Opportunity Fund (RDOF) with the exception of areas identified with the performance tier "Above Baseline."
- FCC Connect America Fund Phase II (CAFII).
- FCC Enhanced Alternative Connect America Cost Model (EA-CAM).
- NTIA Tribal Broadband Connectivity Program
- USDA Community Connect Grant Program (ReConnect)
- USDA Rural E-Connectivity Program
- USDA Telephone Loan Program

State

- Connecting Michigan Communities Grant Program
- Realizing Opportunity with Broadband Infrastructure Networks (ROBIN) Grant Program (funded by the US Treasury Capital Projects Fund)

Local projects for deduplication funded by the State and Local Fiscal Recovery Fund program included in the American Rescue Plan Act as identified by the Brookings Institution Local Government ARPA Investment Tracker and researched further by staff.⁶

5.4 Challenge Process Design

Based on the NTIA BEAD Challenge Process Policy Notice, as well as the Michigan High-Speed Internet Office's understanding of the goals of the BEAD program, this proposal represents a transparent, fair, expeditious and evidence-based challenge process.

5.4.1 Permissible Challenges

The Michigan High-Speed Internet Office will only allow challenges on the following grounds:

- The identification of eligible community anchor institutions, as defined by the Michigan High-Speed Internet Office;
- Community Anchor Institution BEAD eligibility determinations,

⁶ <https://www.brookings.edu/articles/arpa-investment-tracker/>

- BEAD eligibility determinations for existing broadband serviceable locations (BSLs);
- Enforceable commitments; or
- Planned service.

5.4.2 Permissible Challengers

During the BEAD Challenge Process, the Michigan High-Speed Internet Office will only allow challenges from nonprofit organizations, units of local and tribal governments, and broadband service providers.

5.4.3 Challenge Process Overview

The challenge process conducted by the Michigan High-Speed Internet Office will include four phases, spanning up to 120 days⁷:

1. **Publication of Eligible Locations:** Prior to beginning the Challenge Phase, the Michigan High-Speed Internet 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. Estimated to be 1/22/2024.⁸
2. **Challenge Phase:** During the Challenge Phase, the challenger will submit the challenge through the Michigan High-Speed Internet 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 portal will confirm that the email address of the challenger 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 (OCR). For availability challenges, the Michigan High-Speed Internet 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 30 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. Estimated to be 1/22/2024 to 2/21/2024.
3. **Rebuttal Phase:** 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

⁷ 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.

⁸ This date is an estimate and depends on the date NTIA approves Michigan’s Initial Proposal Volume I.

commitment (E) challenges. 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 30 calendar days from notification of a challenge to provide rebuttal information to the Michigan High-Speed Internet Office. Estimated to be 2/21/2024 to 4/3/2024.
4. **Final Determination Phase:** During the Final Determination phase, the Michigan High-Speed Internet 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 Michigan High-Speed Internet Office will make a final challenge determination within 30 calendar days of the challenge rebuttal. Reviews will occur on a rolling basis, as challenges and rebuttals are received. Estimated to be 4/3/2024 to 5/21/2024.

To further MIHI’s focus on transparency, MIHI will release the final determination of eligible locations on its website after finalizing the challenge process. These locations will be posted at least 60 days before allocating grant funds for network deployment.

5.4.4 Evidence & Review Approach

To ensure that each challenge is reviewed and adjudicated based on fairness for all participants and relevant stakeholders, the Michigan High-Speed Internet Office will review all applicable challenge and rebuttal information in detail without bias, before deciding to sustain or reject a challenge. The Michigan High-Speed Internet 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 Michigan High-Speed Internet Office plans to ensure reviewers have sufficient training to apply the standards of review uniformly to all challenges submitted. The Michigan High-Speed Internet 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).	<p>Screenshot of provider webpage captured within the last 60 days indicating service is not available, or that service availability cannot be determined from the webpage alone, or that indicates there is no guarantee that service can be delivered within 10 business days will be considered indeterminant results. Additionally, a screenshot that indicates that further analysis or study is needed to determine service availability for the location is considered to be an indeterminant result. Indeterminant results will be considered valid challenges.</p> <ul style="list-style-type: none"> • 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). 	<ul style="list-style-type: none"> • Provider shows that the location subscribes or has subscribed within the last 12 months, e.g., with a copy of a customer bill. • If the evidence was a screenshot and believed to be in error, a screenshot that shows service availability. • 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. • Provider submits geospatial, as-built diagrams or files of infrastructure deployed to provide service to the location. • For fixed wireless service, an internet service provider can demonstrate service availability and speed at the challenged location (e.g., with a mobile test unit).⁹

⁹ 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.

Code	Challenge Type	Description	Specific Examples	Permissible rebuttals
			<ul style="list-style-type: none"> • 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 business days of a request.¹⁰ • 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. 	<ul style="list-style-type: none"> •
S	Speed	The actual speed of the service tier falls below the unserved or underserved thresholds. ¹¹	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 own network management system. ¹²

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.”

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. 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.

Code	Challenge Type	Description	Specific Examples	Permissible rebuttals
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 provided to consumer. 	Provider has terms of service showing that it does not impose an unreasonable data cap or offers another plan at 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.

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.

Code	Challenge Type	Description	Specific Examples	Permissible rebuttals
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 Government and the service provider for the location(s) at issue (see Section 6.2 above).	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).

<p>P</p>	<p>Planned service</p>	<p>For all wired and licensed fixed wireless technologies: 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.</p> <p>For end-to-end fiber networks delivering a minimum of 1/1 Gbps: 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. MIHI has established a longer planned service period for end-to-end fiber networks due to the</p>	<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 separate federal grant program), including the expected date deployment will be completed, which must be on or before June 30, 2024. 	<p>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.</p>
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Code	Challenge Type	Description	Specific Examples	Permissible rebuttals
		typically longer deployment schedules for fiber networks and Michigan’s seasonally shortened construction season. Additionally, MIHI is prioritizing end-to-end fiber deployment in the BEAD Subgrantee Selection process and extending the planned service deadline for end-to-end fiber aligns with that prioritization.		
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.

Code	Challenge Type	Description	Specific Examples	Permissible rebuttals
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.
G	CAI: Qualifying broadband unavailable. ("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." NOFO, p. 37.)	The CAI cannot obtain qualifying broadband.	Evidence that the CAI has tried to acquire qualifying broadband but has been unsuccessful.	Evidence that qualifying broadband is available to the CAI.
Q	CAI: Qualifying broadband available.	The CAI can obtain qualifying broadband.	Evidence that the CAI can acquire symmetric gigabit service.	Evidence that qualifying broadband is not available at the CAI.

Code	Challenge Type	Description	Specific Examples	Permissible rebuttals
F	Fixed Wireless	Pre-challenge modification for cellular fixed wireless technology.	No location-specific evidence required.	<p>To successfully rebut this modification, the cellular fixed wireless provider must demonstrate that it:</p> <ol style="list-style-type: none"> 1. is providing 100/20 Mbps or better service at the relevant locations (using the rebuttal approach for the speed test area challenge); and 2. 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. As one option for making such a showing, a provider may describe how many fixed locations it serves from each cell tower and the amount of per-user averaged bandwidth it uses for capacity planning. A capacity of 5 Mbps for each claimed location is considered sufficient."

5.4.5 Area and MDU Challenge

MIHI 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 challenge must demonstrate that they are indeed meeting the availability, speed, latency, data cap and technology requirement, respectively, for all locations it serves 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 a threshold value or more broadband serviceable locations using a particular technology and a single provider within a census block group are challenged. The state of Michigan has been divided into 2861 census block groups; they range in size from 0.01 square miles to 964.7 square miles and in broadband serviceable location count from 0 to 2,413. The relationship

between geographic size and BSL count for each census block group is neither directly nor inversely proportional; in fact, a GIS analysis indicates that many of the lowest-count census block groups are found in suburban areas of the state, as can be clearly seen in the graphic uploaded in Attachment 1. With that said, MIHI notes that there is a clear correlation between the density of BSLs in a census block group and whether the area meets the definition of “rural.” Low-density/rural areas often have access to fewer internet service providers and those providers have fewer customers. This will make triggering an area challenge in these areas burdensome for eligible challengers seeking to ensure their residents, businesses, and institutions are receiving the reported service and ensuring those locations are BEAD-eligible if service is not available. In order to ensure that “persons living in a rural area” – an “underrepresented community” for purposes of the BEAD Program – have a meaningful opportunity to make use of area challenges, the threshold will depend on the density of broadband serviceable locations within the census block group. For most census block groups, the threshold will be six (6). For the least-dense/most-rural 20% of census block groups in the state – which are those with fewer than 65 BSLs per square mile – the threshold will be three (3). An MDU challenge requires challenges for one unit for MDUs having fewer than 15 units, for two units for MDUs of between 16 and 24 units, and at least three units for larger MDUs. Here, the MDU is defined as one broadband serviceable location listed in the Fabric. An MDU challenge counts towards an area challenge (i.e., three/six successful MDU challenges in a census block group may trigger an area challenge).

Each type of challenge and each technology and provider is considered separately, e.g., 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 cable and fiber, each is treated separately since they are likely to have different availability and performance.

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.¹⁷

5.4.6 Speed Test Requirements

The Michigan High-Speed Internet Office 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 calendar days.

Speed tests can take the following 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.

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.

4. A speed test performed on a laptop or desktop computer within immediate proximity of the residential gateway, using a commonly used speed test application¹⁸.

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. Speed tests must be accompanied by a certified attestation from the customer that states the following: "I hereby certify, under penalty of perjury, that the download and upload speed indicated in this submission are the true and correct speeds to which I subscribe at the location where the speed tests included in this submission were measured. The entry of my name above constitutes my electronic signature to this certification. Persons making willful false statements in this form can be punished by fine or imprisonment under 18 U.S.C. § 1001." A copy of the customer's latest internet bill would also provide certification of the speed tier to which the customer subscribes.
- An agreement, using an online form provided by Michigan High-Speed Internet Office, that grants access to these information elements to the Michigan High-Speed Internet Office, 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. Since speed tests can only be used to change the status of locations from "served" to "underserved", only speed tests of subscribers that subscribe to tiers at 100/20 Mbps and above are considered. 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. 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.

¹⁸ Commonly used speed test applications include, but are not limited to, Ookla, speedtest.net, M-lab Speed Test by Measurement Lab, Cloudflare Internet Speed Test, and Netflix Fast.com

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 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 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.

5.4.7 Transparency Plan

To ensure that the challenge process is transparent and open to public and stakeholder scrutiny, the Michigan High-Speed Internet 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 Michigan High-Speed Internet 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 for the [Michigan High-Speed Internet Office newsletter on the website](#) challenge process updates and newsletters. They can engage with the Michigan High-Speed Internet Office by the designated email address LEO-MIHighSpeedInternet@michigan.gov. Providers will be notified through the challenge portal via email when a challenge is submitted. All required documentation related to the challenge process will be made available on the MIHI website here: <https://www.michigan.gov/leo/bureaus-agencies/mihi>. The specific sub-address is still in development.

Beyond actively engaging relevant stakeholders, the Michigan High-Speed Internet 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,
- the type of challenge (e.g., availability or speed), and
- a summary of the challenge, including whether a provider submitted a rebuttal.

The Michigan High-Speed Internet 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 Michigan High-Speed Internet 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 Michigan High-Speed Internet 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.

The Michigan High-Speed Internet Office will comply with all state and federal laws regarding the protection of PII including:

- Identity Theft Protection Act - Michigan Legislature - Section 445.72
- Social Security Number Privacy Act - Michigan Compiled Laws § 445.83 (2022)

5.5 Challenge Process Answer

5.5.1 Model Challenge Process Answer:

Michigan High-Speed Internet Office will be adopting the BEAD Model Challenge Process.

6 Volume 1 Public Comment

6.1 Public Comment Period Overview

As part of the Broadband Equity Access and Deployment (BEAD) program requirements, pursuant to Division F, Title I, Section 60102, Public Law 117-58, 135 Stat. 429 of the Infrastructure Investment and Jobs Act, MIHI published the draft Initial Proposal Volume 1 for public comment on [its website](#). The 34-day public comment period ran from September 27th, 2023, through October 31st, 2023. Throughout this time, interested parties were able to provide feedback and suggestions by submitting questions and comments electronically through the website. MIHI worked to raise awareness of the public comment opportunity by hosting [a Partnership Roundtable meeting](#) specifically focused on the contents of draft Initial Proposal Volume 1 and how to submit comments effectively, sending emails to all available MIHI distribution lists alerting recipients to the public comment opportunity, including the public comment opportunity in the MIHI newsletter, encouraging relevant membership organizations (e.g., the Michigan Association of Regions, Michigan Association of Counties, Michigan Townships Association, Michigan Municipal League, *et al*) to promote the public comment opportunity to their members, and issuing a press release about the public comment period that was picked up by several news outlets.

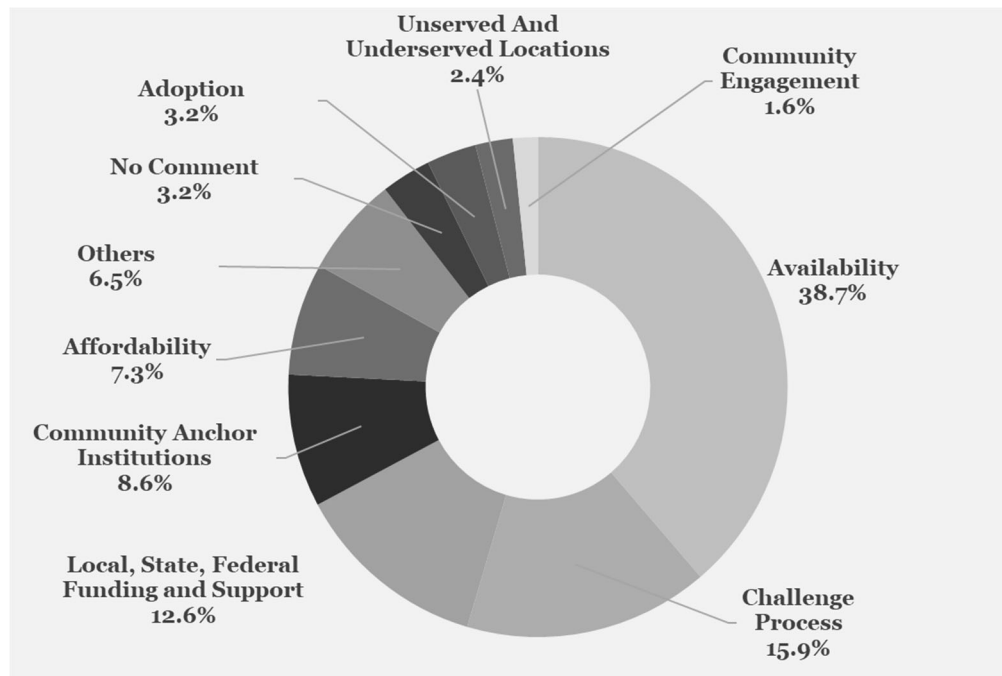


Figure 1: Public Comment Focus Areas

A total of 62 public comments were received, of which 20 included attachments. As seen in Figure 1 above, the majority of the comments focused on broadband availability and the challenge process. Comments related to availability were largely focused on the lack of internet access in the commenters' own homes and neighborhoods, as well as limited internet coverage by ISPs. The comments on the Challenge Process centralized around the proposed modifications to reflect data not present in the national broadband map, including DSL, speed test, multi-dwelling units, and fixed wireless service availability. Additional key themes included organizations expressing interest in affordability, community engagement, unserved and underserved locations, adoption, community anchor institutions and local, state, and federal funding support.

MIHI responded directly to each commenter; a summary of the themes of the responses are listed below:

- In response to comments related to broadband availability, we have assisted commenters in verifying their broadband serviceable location's connectivity status on the FCC Broadband Data Collection Map and, when appropriate, to submit a challenge. We also encouraged these commenters to engage in the State Challenge Process that MIHI will soon administer.
- In response to comments related to affordability, we assisted commenters in determining whether they are eligible for the Affordable Connectivity Program.
- In response to concern about ensuring that private investment in high-speed internet infrastructure is appropriately reflected in the State Challenge Process, we updated challenge type "P" to extend the completion date for challenges to be submitted based on planned service.
- Comments related to community anchor institutions generally focused on concern about the overall size of the list (and whether that would result in either unserved/underserved locations being excluded from funding or de-prioritization of adoption-related efforts) and concern about whether certain entities were appropriately included. We have in fact removed certain categories from the list. Our response to these comments included explanation of the necessity of including

all entities that fall within the CAI list but noted that a large proportion of them already have a qualifying connection. We also indicated that the final version of Initial Proposal Volume 1 would contain additional explanation as to how each of the categories we listed as community support organizations do in fact support the use of high-speed internet service among vulnerable populations. Finally, we explained to those concerned about adoption that the preponderance of MIHI's work in that area will be administered through the State Digital Equity Capacity Grant and to those concerned about the potential exclusion of unserved or underserved BSLs that those locations must in fact be prioritized before any connections to CAIs must be funded.

- Responses to comments related to the DSL modification and to speed tests expressed that we had adopted these optional modules as developed by the NTIA and that they would remain unchanged.
- Responses to comments that objected to our proposed multi-dwelling unit modification noted that this modification would be removed from Initial Proposal Volume 1 before it was submitted to NTIA.
- Responses to comments that expressed concern about our fixed wireless service availability modification noted that this modification was substantially revised before Initial Proposal Volume 1 was submitted to NTIA. Rather than a general reclassification of all locations that are served only by licensed fixed wireless, we have updated this modification to reflect that MIHI will research each of the locations that according to the FCC BDC Version 3 have only licensed fixed wireless service available. In the event that available information shows that broadband service is not available or may not be available at a particular BSL, MIHI will list that location as "underserved." This designation may be challenged with appropriate evidence from the internet service provider.

MIHI is grateful to each commenter who took time to review the Initial Proposal Volume I and submit a public comment. We appreciate the feedback received and have taken the comments and perspectives that were shared into consideration throughout the process of finalizing this document before submission, including by making revisions as appropriate. MIHI is committed to making sure that Michigan's BEAD program reflects the shared aspirations of all Michiganders to ensure that every home, business, individual, and community in our state have access to an affordable, reliable high-speed internet connection and are empowered to use this technology to improve their lives.

Appendix A:

This appendix is not part of Michigan's Initial Proposal Volume 1 but provides additional context and information regarding pre-challenge modifications and subsequent work of the MIHI Office.

In the public comment draft of the BEAD Initial Proposal Volume 1, and the draft submitted to NTIA for approval in December 2023, MIHI included a pre-challenge modification that proposed the following:

5.2.4 Modification 4: Fixed wireless service availability

The Michigan High-Speed Internet Office will treat as "underserved" locations that the National Broadband Map shows to be "served" only by licensed fixed wireless service if availability evidence (aligned to the BEAD Model Challenge Process evidence detailed in 5.4.4 of this document) demonstrates that the identified broadband service may not be offered or is not available at the "served" locations. MIHI will conduct research related to this modification prior to the start of the challenge process and modify locations accordingly. This modification follows the same methodology that MIHI used when engaging in the FCC BDC Version 2 challenge process and that was accepted by the Federal Communications Commission.

To challenge this designation, internet service providers can provide evidence via the challenge portal equivalent to the permissible rebuttal evidence for challenge type "A" found in section 5.4.4.

The purpose of this modification was to ensure the accuracy of licensed fixed wireless availability across the state. MIHI's justification for inclusion of this modification included the following research that occurred prior to the development and submission of the BEAD Initial Proposal Volume 1:

1. MIHI engaged in careful examination of the service availability that was included in the FCC's Broadband Data Collection map (BDC) by fixed wireless internet service providers in Michigan following the publication of BDC Version 1 in November 2022. MIHI identified discrepancies between reported availability on the FCC map and the actual service availability according to the providers' own websites. One hundred percent of the 39,804 FCC availability challenges MIHI filed related to fixed wireless availability were upheld by the FCC.
2. MIHI also conducted fixed wireless service availability research following the publication of BDC Version 2 in June 2023. MIHI employed the same methodology as in November 2022 and conducted research comparing the service availability of locations on the FCC map to the availability offered on the fixed wireless internet service provider's respective websites, and again found discrepancies. Of the 21,032 location availability tests conducted by MIHI, 8,296 were returned as "service not available" (39.4%) on the internet service provider's respective websites. MIHI contacted and worked with the relevant internet service providers to encourage a reexamination of their FCC BDC reporting. The providers subsequently updated their BDC filing with the FCC to represent their availability more accurately.

This proposed modification was initially rejected by the NTIA, but MIHI's concerns about fixed wireless availability remained.

After denial of the pre-challenge modification, the NTIA informed MIHI that it would be acceptable for MIHI to gather data/information in the same manner as proposed in the pre-challenge modification, and then provide that information to be used by eligible challengers who could review that data/information and

determine whether to use it when filing official challenges in the challenge process. Regarding the data and methodology, the NTIA stated that, 'in order to maintain a fair, open, and transparent process:

1. The decision to file a challenge must rest on the eligible challenger and cannot be a requirement to receive/use the data.
2. MIHI must ensure, operationally, that there is no conflict of interest between staff involved in adjudicating challenges and the collection of data/information.
3. MIHI must make data available to all challengers who want it.'

Working within these guidelines, MIHI again initiated a research project to gather availability data on locations where fixed wireless technology was the only BEAD-qualifying internet service available to a location. After identifying these locations, MIHI took the following steps:

1. Assigned staff to serve as researchers for identified locations. These staff members will not serve as adjudicators for challenges based on data/information collected during this research in the MIHI challenge process.
2. Identified the website of the internet service provider for each location.
3. Entered the location address into the availability confirmation tool on the provider's website (if available).
4. If the result indicated service as not available, or if service availability could not be determined from the webpage alone, or that further analysis or study was needed to determine availability, or if there was no guarantee that service could be delivered within 10 business days (all examples of valid availability challenges per MIHI's approved state challenge process), a screenshot of the webpage was captured and the results of the search were recorded for the location to serve as evidence for a challenge.

Per NTIA guidelines, MIHI will make this research available to any eligible challenger that submits an email to leo-mihighspeedinternet@michigan.gov with the subject line: Request for Fixed Wireless Data. The decision to file a challenge using the data is not a requirement to receive/use the data and is at the discretion of the eligible challenger. Additionally, MIHI staff that conducted the research will not be assigned the task of validating any challenges based on the data/information collected during the research.