
INTERNET FOR ALL

Workforce Planning Guide

Guidance for BEAD Program Eligible
Entities



U.S. Department of Commerce
National Telecommunications and Information Administration

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Executive Summary

The Bipartisan Infrastructure Law (BIL) will transform the landscape of high-speed Internet in America, improving access to health care, education, and civic engagement while connecting families and communities across the country. To support BIL projects, the Biden-Harris Administration has pushed for the creation of good jobs through initiatives such as the White House Talent Pipeline Challenge and other workforce efforts. The National Telecommunications and Information Administration (NTIA) at the Department of Commerce (DOC) supports the Administration's commitment to equitable and highly skilled jobs in shaping the future of the telecommunications workforce.

NTIA offers this Workforce Planning Guide as a resource for Eligible Entities completing submissions for Internet For All programs. This guide intends to primarily support Eligible Entities developing submissions to the Broadband Equity, Access, and Deployment (BEAD) program but may also be applicable as entities develop their Digital Equity Plans. It supports Eligible Entities in developing their workforces for grant implementation as well as designing workforce plans and standards for subgrantees.

The Workforce Planning Guide includes:

- **Components of a Workforce Plan** for the BEAD Program
- **Developing a BEAD Workforce Plan** guidance, including proposed planning steps and pacing suggestions for completing BEAD submissions and key integration points with the Digital Equity Program
- **Strategies and Examples** that offer a range of approaches for meeting workforce requirements
- **Additional Resources** to support the workforce planning and implementation process

NTIA supports the development of an equity-driven telecommunications workforce that offers good jobs and opportunities to workers in America, especially for populations who have been historically underserved by public policy initiatives. By following the requirements and steps outlined in the Workforce Planning Guide, Eligible Entities will help achieve a more equitable, diverse, and inclusive telecommunications industry.

The below guide is for informational purposes only and is intended solely to assist potential applicants in better understanding the NTIA BEAD program and the application requirements set forth in the Notice of Funding Opportunity (NOFO) for this program. The guide does not and is not intended to supersede, modify, or otherwise alter applicable statutory or regulatory requirements, or the specific application requirements set forth in the NOFO. In all cases, statutory and regulatory mandates, and the requirements set forth in the NOFO, shall prevail over any inconsistencies contained in the below guide.



Message from the Secretary

Equity is at the heart of everything we do at the Department of Commerce.¹ Through the leadership of the Biden-Harris Administration, we have committed to building a more dynamic economy that enables American workers and businesses to compete, and creating economic opportunity for women, people of color, and people in overlooked communities.

The Internet For All initiative, authorized by President Biden's Bipartisan Infrastructure Law (BIL),² represents a once-in-a-generation investment toward achieving universal access to affordable, high-speed Internet service in the United States and closing the digital divide. High-speed Internet across the country will ensure that everyone in America has access to technologies that allow them to attend class, start a small business, visit with their doctor, and participate in the modern economy. It will also create jobs and economic opportunities in the United States that are equitable, inclusive, and accessible.

The National Telecommunications and Information Administration's (NTIA) \$42.45 billion Broadband Equity, Access, and Deployment (BEAD) Program will drive historic investment in a skilled, competitive, and diverse workforce. In addition to helping close the digital divide in the United States, the billions of dollars in funding made available will create opportunities for good jobs supported by equitable hiring, fair compensation, safe workplaces, and the tools and training needed for long-term success. Good jobs are the foundation of an equitable economy that lifts up workers and families and makes businesses more competitive globally. The BEAD Program's funding promises to transform the lives of workers, their families, and their communities, as the telecommunications workforce powers our nation's journey toward universal access to high-speed Internet.

Developed by NTIA, this Workforce Planning Guide offers direction for states and territories as they respond to the requirements outlined in the BEAD Notice of Funding Opportunity. By intentionally planning for how BEAD funds will impact the workforce, Eligible Entities can develop and support a skilled, diverse, equitable, and inclusive American workforce.

The telecommunications workforce will build the future of accessible, high-speed Internet. Thank you for your role in making that vision a reality.

Secretary Gina M. Raimondo

¹ *Equity*, U.S. DEPARTMENT OF COMMERCE, <https://www.commerce.gov/equity>.

² Infrastructure Investment and Jobs Act, Division F, Title I, Section 60102, Pub. L. No. 117-58, 135 Stat. 429 (November 15, 2021).



1. NTIA's Workforce Values

High-speed Internet access supported by the Internet For All initiative will change the ways people in America connect to one another, access education, receive health care, and participate in civic engagement.³ To advance equity and help close the digital divide, these programs will require a highly trained workforce and workplaces that are diverse, equitable, inclusive, and accessible to every worker.⁴ Furthermore, the jobs created through investments in high-speed Internet must be good jobs that offer fair compensation, a safe workplace, equitable access, and opportunities for long-term advancement. These efforts will have lasting positive economic, social, and health benefits for years to come.

The Departments of Commerce and Labor have partnered to identify what comprises a good job through their publication of the Good Jobs Principles, depicted in the eight principles below. The National Telecommunications and Information Administration (NTIA) prioritizes these principles as core values in building a stronger, more diverse telecommunications workforce:⁵

Recruitment and Hiring: Qualified applicants are actively recruited – especially those from historically underserved communities. Applicants are free from discrimination, including unequal treatment or application of selection criteria that are unrelated to job performance. Applicants are evaluated with relevant skills-based requirements. Unnecessary educational, credentials and experience requirements are minimized.

Benefits: Full-time and part-time workers are provided family-sustaining benefits that promote economic security and mobility. These include health insurance, a retirement plan, workers' compensation benefits, work-family benefits such as paid leave and caregiving supports, and others that may arise from engagement with workers. Workers are empowered and encouraged to use these benefits.

Diversity, Equity, Inclusion, and Accessibility (DEIA): All workers have equal opportunity. Workers are respected, empowered, and treated fairly. DEIA is a core value and practiced norm in the workplace. Individuals from underserved communities do not face systemic barriers in the workplace. Underserved communities are persons adversely affected by persistent poverty, discrimination, or inequality, including Black, Indigenous, people of color; LGBTQ+ individuals; women; immigrants; veterans; individuals with disabilities; individuals in rural communities; individuals without a college degree; individuals with or recovering from substance use disorder; and justice-involved individuals.

Empowerment and Representation: Workers can form and join unions. Workers can engage in protected, concerted activity without fear of retaliation. Workers contribute to decisions about their work, how it is performed, and organizational direction.

Job Security and Working Conditions: Workers have a safe, healthy, and accessible workplace, built on input from workers and their representatives. Workers have job security without arbitrary or discriminatory discipline or dismissal. They have adequate hours and

³ "FACT SHEET: Biden Harris Administration Releases Agency Equity Action Plans to Advance Equity and Racial Justice Across the Federal Government," *The White House*, April 14, 2022, www.whitehouse.gov/briefing-room/statements-releases/2022/04/14/fact-sheet-biden-harris-administration-releases-agency-equity-action-plans-to-advance-equity-and-racial-justice-across-the-federal-government/.

⁴ *Equity*, U.S. DEPARTMENT OF COMMERCE, <https://www.commerce.gov/equity>.

⁵ "Good Jobs Principles," *U.S. Departments of Commerce and Labor*, www.dol.gov/sites/dolgov/files/goodjobs/Good-Jobs-Summit-Principles-Factsheet.pdf.

predictable schedules. The use of electronic monitoring, data, and algorithms is transparent, equitable, and carefully deployed with input from workers. Workers are free from harassment, discrimination, and retaliation at work. Workers are properly classified under applicable laws. Temporary or contractor labor solutions are minimized.

Organizational Culture: All workers belong, are valued, contribute meaningfully to the organization, and are engaged and respected especially by leadership.

Pay: All workers are paid a stable and predictable living wage before overtime, tips, and commissions. Workers' pay is fair, transparent, and equitable. Workers' wages increase with increased skills and experience.

Skills and Career Advancement: Workers have equitable opportunities and tools to progress to future good jobs within their organizations or outside them. Workers have transparent promotion or advancement opportunities. Workers have access to quality employer- or labor-management-provided training and education.

NTIA encourages Eligible Entities, subgrantees, and partners to embrace these principles throughout BEAD projects and other Internet For All activities to best support the future of the telecommunications workforce.



2. Components of a Workforce Plan

The Internet For All programs represent an opportunity to strengthen and build the existing and future telecommunications workforce. To do so, Eligible Entities are required to develop a workforce plan to achieve a diverse, skilled, and sufficient workforce for building and maintaining high-speed Internet infrastructure, including both specialized telecommunications and construction jobs.

This section of the Workforce Planning Guide highlights the core components of a workforce plan, as outlined in the BEAD NOFO. While a compliant BEAD workforce plan must incorporate baseline requirements outlined the BEAD NOFO, Eligible Entities are encouraged to follow additional guidance to support a thriving telecommunications workforce. The submission requirements for the Five-Year Action Plan, Initial Proposal, and Final Proposal can be found in *Section 3.2: BEAD Submission Preparation*.

The BEAD NOFO outlines four categories of workforce requirements and guidance for Eligible Entities as they prepare submissions and design and implement projects:

1. **Federal labor and employment laws**, which are legal requirements that apply to all employers in the United States.
2. **Skilled workforce** activities, which include how employers hire, pay, and consider skills of workers and subcontractors.
3. **Equitable training and workforce development** activities, which offer on-the-job and professional skills development for all workers.
4. **Contracting** requirements and guidance concerning direct employment and contracting as well as partnering with minority-owned businesses and other socially and economically disadvantaged businesses.

By successfully achieving these four types of requirements and guidance, Eligible Entities will develop legally compliant BEAD projects that enhance workplace experiences, offer good jobs, and commit to building a more highly skilled and equitable telecommunications workforce.

2.1 Federal Labor and Employment Laws

Federal labor and employment laws mandate minimum safety, wage, anti-discrimination, and other workplace standards for all businesses in the United States. Eligible Entities should also be aware of broadly applicable federal labor and employment laws such as federal fair labor practices, civil rights, and nondiscrimination, and prepare to evaluate subgrantees on their adherence. Eligible Entities must abide by all applicable Federal laws, executive orders, regulations and policies governing this program. This section intends to detail relevant federal law for BEAD projects; however, states, territories, and Tribal Entities may have additional applicable labor and employment requirements to which Eligible Entities and subgrantees alike must adhere.⁶

⁶ Tribal Entities may have a Tribal Employment Rights Office (TERO) that monitors and enforces Tribal employment rights and ordinances and facilitates the employment of American Indians and Alaska Natives in businesses and industries operating within the geographical boundaries of the reservation, For more on TERO and Tribal Entity labor and employment law, *see Frequently Asked Questions About Indian Tribes and Tribal Employment Rights Offices*, U.S. EQUAL EMPLOYMENT OPPORTUNITY COMMISSION,

Eligible Entities must outline their approach to comply with and oversee subgrantee adherence to the following laws:

Act	Summary
Fair Labor Practices	
Fair Labor Standards Act	Establishment of minimum wage, overtime pay, recordkeeping, and child labor standards affecting full-time and part-time workers across private and public sectors
Occupational Safety and Health Act	Establishment of safe and healthy workplace standards
Service Contract Act	Establishment of standards for contractors and subcontractors performing services on prime contracts in excess of 2,500
Civil Rights and Nondiscrimination	
Title VI of the Civil Rights Act of 1964 (See also 15 C.F.R. Part 8)	Prohibition on discrimination on the basis of race, color, or national origin under programs or activities receiving federal financial assistance, including from the Department of Commerce
Title IX of the Education Amendments of 1972	Prohibition of discrimination on the basis of sex under federally assisted education programs or activities
The Americans with Disabilities Act of 1990	Prohibition of discrimination on the basis of disability under programs, activities, and services provided or made available by Eligible Entities and local governments or instrumentalities or agencies thereto, as well as public or private entities that provide transportation
Section 504 of the Rehabilitation Act of 1973	Prohibition of discrimination on the basis of handicap under any program or activity receiving or benefiting from federal assistance
The Age Discrimination Act of 1975	Prohibition of discrimination on the basis of age in programs or activities receiving federal financial assistance
Additional Authorities	
Parts II and III of Executive Order 11246, Equal Employment Opportunity	Requires that federally assisted construction contracts incorporate and fulfill the nondiscrimination provisions of §§ 202 and 203 of E.O. 11246 and Department of Labor regulations implementing E.O. 11246 (41 C.F.R. § 60-1.4(b))
Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency	Requires federal agencies to examine the services that they provide, identify any need for services to those with limited English proficiency (LEP), and develop and implement a system to provide those services so LEP persons can have meaningful access to them

available at www.eeoc.gov/frequently-asked-questions-about-indian-tribes-and-tribal-employment-rights-offices; *Indian and Native American Employment Rights Program*, OFFICE OF FEDERAL CONTRACT COMPLIANCE PROGRAMS, available at www.dol.gov/sites/dolgov/files/ofccp/INAERP/files/INAERP_ESQA508c.pdf; *Indian Preference FAQs*, OFFICE OF FEDERAL CONTRACT COMPLIANCE PROGRAMS, available at www.dol.gov/agencies/ofccp/faqs/indian-preference.



<p>Executive Order 13798, Promoting Free Speech and Religious Liberty (see also OMB M-20-09 Guidance Regarding Federal Grants and Executive Order 13798)</p>	<p>States or other public grantees may not condition sub-awards of federal grant money in a manner that would disadvantage grant applicants based on their religious character</p>
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Requirements from the BEAD NOFO

Eligible Entities are held to federal labor and employment laws. In addition, Eligible Entities will also be required to evaluate prospective subgrantee submissions to ensure the subgrantees are capable of carrying out funded activities in a competent manner in compliance with all applicable federal, state, territorial, and local laws. This includes appropriate adherence to relevant federal labor and employment laws.

- All subgrantees and their projects funded through BEAD must have a demonstrated record of compliance with federal labor and employment laws and plans to continue compliance.⁷
- Eligible Entities must get records from prospective subgrantees and any other entities that may participate in projects, such as contractors and subcontractors. These records must include, at a minimum, information on organizational compliance with federal labor and employment laws on high-speed Internet deployment projects for the last three years.⁸
- Eligible Entities must prioritize compliance with federal, state, and local laws in considering applications.⁹
- In Initial and Final Proposals, Eligible Entities must describe the information they will require prospective subgrantees to provide in their applications, including the following:
 - Certification from an Officer/Director-level employee (or equivalent) on past compliance with federal labor and employment laws
 - Disclosure of any violations of labor and employment laws in the last three years, or written confirmation of no such violations
 - Applicable wage scales and wages and overtime payment practices for each class of employee that will be directly in the physical construction of high-speed Internet
 - Plans for the implementation of workforce safety committees that will be authorized to raise any health and safety concerns
- Entities must also describe how they will weigh this information in their competitive selection process. When evaluating subgrantee applications, NTIA requires that Eligible Entities give priority to fair labor practices, based on records of and plans to be in compliance with federal labor and employment laws. See BEAD NOFO Section IV.C.1.e

⁷ BEAD NOFO Section IV.C.1.e Program Structure, Sequencing, and Requirements; Program Requirements; Eligible Entity Obligations; Fair Labor Practices and Highly Skilled Workforce, pp.56-57.

⁸ Ibid.

⁹ BEAD NOFO Section IV.B.7.b Program Structure, Sequencing and Requirements; Program Sequencing Subgrantee Selection Process, Prioritization and Scoring in Selection of Last-Mile Broadband Deployment Projects, pp.43-45.

for additional details, including recommendations for effective plans for federal labor and employment law compliance.¹⁰

- Subgrantees must permit workers to create worker-led health and safety committees that management will meet with upon reasonable request to ensure compliance with occupational safety and health requirements.¹¹

2.2 Skilled Workforce

A highly skilled workforce will help ensure job applicants have the skills and training they need to be competitive in the telecommunications labor market while creating a strong talent pool for subgrantees when implementing BEAD funding. A highly skilled workforce can create a local or regional pipeline that encourages further high-speed Internet investment.

Eligible Entities will each define skilled workforce requirements and guidance for their subgrantees that will shape the experiences of workers on-site who will build and service high-speed Internet infrastructure. These requirements may vary by state, and each Eligible Entity can set requirements for subgrantee participation and evaluation for BEAD funding that will be approved by NTIA throughout the BEAD submission process. Setting strong requirements for skilled workforce in areas such as pay and credentialing will ensure that Internet For All projects balance worker competence, training, and certifications with a competitive and attractive environment for workers in local and regional markets.

Requirements from the BEAD NOFO

- Eligible Entities must build and develop a highly skilled workforce and ensure that subgrantees do the same.
- Each subgrantee must certify that it will use an appropriately skilled and credentialed workforce that is technically qualified to complete all funded activities in a competent manner.¹²

Additional Guidance from the BEAD NOFO

An approach for a highly skilled workforce may include the following activities:¹³

- Establishing or using Registered Apprenticeships or other joint labor management training programs.
- Ensuring project workforce has appropriate credentials, including pre-existing occupational training, certification, and licensure.
- Ensuring subgrantees offer jobs that exceed the local prevailing wage for an industry in the region, offers benefits, and helps the employee develop skills for career growth.
- Further requirements and guidance can be found in Section IV.C.1.e of the NOFO.

¹⁰ Ibid.

¹¹ BEAD NOFO Section IV.D.2.d Program Structure, Sequencing and Requirements; Subgrantee Qualifications; Specific Qualification for Subgrantees Deploying Network Facilities; Compliance with Laws, pp.74.

¹² The definition of “appropriately skilled and credentialed” can be defined by Eligible Entities and will be approved by NTIA throughout the BEAD submission process.

¹³ BEAD NOFO Section IV.C.1.e Program Structure, Sequencing, and Requirements; Program Requirements; Eligible Entity Obligations; Fair Labor Practices and Highly Skilled Workforce, pp.57.

2.3 Equitable Training and Workforce Development

Equitable training and workforce development activities help Eligible Entities and subgrantees find and employ the workforce needed to execute BEAD project plan objectives. While specific workforce development solutions will vary depending on an Eligible Entity's needs and the local context, some strategies include equitable and targeted recruitment efforts, training and education initiatives, and workforce retention and up-skilling initiatives.¹⁴ Together, equitable training and workforce development initiatives can help create and retain a local and regional telecommunications workforce and provide critical pathways for improving geographical, cultural, and economic diversity to the telecommunications workforce. These activities will require outreach and coordination with workforce-related partners across sectors.

2.3.1 Workforce Readiness

Workforce readiness programs can help facilitate an active and competitive telecommunications workforce prepared to meet the challenges of high-speed Internet implementation. Investing in workforce readiness both makes workers more competitive in the job market and creates a more skilled and ready workforce for subgrantees to employ.

Guidance from the BEAD NOFO

- NTIA encourages Eligible Entities to consider workforce development goals when selecting subgrantees, setting standards and requirements for subgrantees, and establishing submission scoring factors. See BEAD NOFO Section IV.C.1.f for additional details. This may include:
 - Adopting selection criteria for subgrantees related to advancing equitable workforce development and job quality objectives¹⁵
 - Ensuring subgrantees require Registered Apprenticeships and pre-apprenticeships, joint labor management partnerships, and other high-quality on-the-job training opportunities¹⁶
- NTIA permits the following use of funds to support workforce readiness:
 - Initial planning funds for training employees of the high-speed Internet program, Eligible Entity office, political subdivisions of Eligible Entity, and/or related staffing capacity or consultant or contractor support to achieve BEAD program goals¹⁷
 - Last-mile deployment funds for workforce development, including training for cybersecurity professionals working on BEAD-funded networks, Registered Apprenticeships and pre-apprenticeships, and community college and/or

¹⁴ "Workforce Development Solutions," *Employment and Training Administration*, U.S. Department of Labor, www.dol.gov/agencies/eta/employers/workforce-development-solutions.

¹⁵ BEAD NOFO Section IV.B.7.b Program Structure, Sequencing, and Requirements; Program Sequencing; Subgrantee Selection Process; Prioritization and Scoring in Selection of Last-Mile Broadband Deployment Projects Selection Among Other Last-Mile Broadband Deployment Projects, pp. 44.

¹⁶ BEAD NOFO Section IV.C.1.f Program Structure, Sequencing and Requirements; Program Requirements; Eligible Entity Obligations; Advancing Equitable Workforce Development and Job Quality Objectives, pp.59-60.

¹⁷ BEAD NOFO Section IV.B.2 Program Structure, Sequencing, and Requirements; Program Sequencing; Request for Initial Planning Funds, pp.24.



vocational for telecommunications-related occupations to support deployment, maintenance, and upgrades¹⁸

- Other non-deployment activities including upskilling, cybersecurity education, and prisoner education to support job skills (see BEAD NOFO Section IV.B.7.a for additional details)

2.3.2 Supporting a Diverse Workforce

The historic investment in high-speed Internet infrastructure and adoption through the Internet For All programs offers the opportunity to attract, recruit, and retain historically underrepresented groups into the telecommunications workforce. These efforts can include creating on-ramps into telecommunications jobs by removing barriers to entry, such as limitations on hiring people who have previously been incarcerated, unneeded degree requirements, and promoting pre-apprenticeship programs.

Requirements from the BEAD NOFO

- Eligible Entities must confirm their commitment to promote the recruitment of women and other historically marginalized groups for the job opportunities created via BEAD program funding.¹⁹
- Eligible Entities must describe plans to create equitable on-ramps into telecommunications jobs.²⁰
- Eligible Entities must ensure the job opportunities created by the BEAD Program and other Internet For All programs are available to a diverse pool of workers, including by engaging in targeted outreach, and seek subgrantees with effective plans for outreach, to populations that have traditionally been underrepresented in telecommunications and information technology jobs.²¹
- Eligible Entities should be prepared to report on demographics of their subgrantee workforce.²²

Additional Guidance from the BEAD NOFO

- Eligible Entities are encouraged to implement requirements for subgrantees, such as those that prioritize local workers and require robust plans to recruit historically underrepresented populations facing labor market barriers and ensure that they have reasonable access to the job opportunities created by subgrantees.²³

2.3.3 Outreach and Engagement

Engaging local workforce partners in the planning and execution process for BEAD projects gives community members a voice in shaping the training and employment opportunities coming to their community.

¹⁸ BEAD NOFO Section IV.B.7.a Program Structure, Sequencing and Requirements; Program Requirements; Subgrantee Requirements; General Principles Governing Subgrantee Selection, pp.39-40

¹⁹ BEAD NOFO Section IV.C.1 Program Structure, Sequencing and Requirements, Program Requirements; Eligible Entity Obligations, pp.55-56.

²⁰ BEAD NOFO Section IV.C.1.f Program Structure, Sequencing and Requirements; Program Requirements; Eligible Entity Obligations; Advancing Equitable Workforce Development and Job Quality Objectives, pp.59-60.

²¹ Ibid.

²² Ibid.

²³ Ibid.

Requirements from the BEAD NOFO

- Throughout its local coordination and outreach activities, each Eligible Entity must ensure that diverse stakeholders, including workforce stakeholders, participate throughout the BEAD program lifecycle.²⁴

Additional Guidance from the BEAD NOFO

- Eligible Entities should seek to engage with workforce-related stakeholders including civil-rights and equity-focused organizations, community-based organizations, unions and worker organizations, workforce boards, economic development organizations, schools, and community colleges.²⁵ See BEAD NOFO Section IV.C.1 for additional details on stakeholder engagement.

2.3.4 Worker Protections

NTIA supports strong labor standards to protect the individual worker and broader project workforce and create a safe but competitive job environment that benefits both worker and employer. Protecting the workforce can help promote talent retention, job competitiveness, and equity in worker treatment.

Activities may include:

- **Project Labor Agreements**, such as pre-hire collective bargaining agreements between unions or community organizations and contractors, which govern terms and conditions of employment for all workers on site.²⁶
- **Local Hire Provisions**, which give preference to job applicants from the area in order to reduce unemployment and create a local and sustainable telecommunications workforce.²⁷
- **Labor Peace Agreements**, which negotiate terms between an employer and a union, in which an employer agrees to be neutral during a union organizing campaign and not interfere with union organizing. In return, the union may agree to not engage in picketing, work stoppages, boycotts, and other economic interference with the employer.²⁸

Requirements from the BEAD NOFO

- Eligible Entities must coordinate with and engage unions and worker organizations within their territory throughout the BEAD planning deployment process.²⁹
- An Eligible Entity or a subgrantee may not use grant funds, whether directly or indirectly, to support or oppose collective bargaining.³⁰

²⁴ BEAD NOFO Section IV.C.1 Program Structure, Sequencing and Requirements, Program Requirements; Eligible Entity Obligations, pp.53-54.

²⁵ BEAD NOFO Section I.B.2 Program Description; Overview; Process Overview, pp.8-11.

²⁶ See the Additional Resources section for more information on Project Labor Agreements.

²⁷ Jennifer D. Cantrell and Suparna Jain, "Enforceability of Local Hire Preference Programs," *National Cooperative Highway Research Program*, Legal Research Digest No. 59, April 2013, www.apta.com/wp-content/uploads/Resources/gap/fedreg/Documents/Legal%20Research%20Digest%20No.59%20-%20Enforceability%20of%20Local%20Hire%20Preferences%20Programs.pdf.

²⁸ See the Additional Resources section for more information on Labor Peace Agreements.

²⁹ BEAD NOFO Section IV.C.1.c Program Structure, Sequencing and Requirements Program Requirements; Eligible Entity Obligations; Local Coordination, pp.52.

³⁰ BEAD NOFO Section V.H.2.c Application and Submission Information; Funding Restrictions; Ineligible Costs; Prohibition on Use of Grant Funds to Support or Oppose Collective Bargaining, pp.82.

Additional Guidance from the BEAD NOFO

- When creating an effective plan for compliance with federal labor and employment laws, Eligible Entities should consider the following labor coordination efforts:³¹
 - Use of project labor agreements (i.e., pre-hire collective bargaining agreements between unions and contractors that govern terms and conditions of employment for all workers on a construction project)
 - Use of local hire provisions
 - Commitments on union neutrality
 - Use of labor peace agreements
- If an Eligible Entity includes any labor coordination and labor standards activities as a mandatory requirement for subgrantees, it should describe these requirements in detail in the Initial Proposal and Final Proposal and explain how it will incorporate them in as binding legal commitments in the subgrants it makes.³²

2.4 Contracting

When developing strategies to assure a highly skilled, diverse, and equitable workforce, Eligible Entities must consider not only directly employed workers but also contractors and subcontractors in their workforce development standards and activities. Importantly, working with contractors and subcontractors does not excuse Eligible Entities from complying with workforce requirements of the BEAD NOFO.

NTIA will share additional information on contracting and working with disadvantaged businesses, beyond complying with workforce requirements, in subsequent materials.

2.4.1 Contractor Considerations

While Eligible Entities themselves will be subject to standards set forth in their BEAD workforce plans, contractors and subcontractors also serve as critical members of the BEAD project workforce and are therefore also subject to the workforce requirements laid out in the NOFO. These entities will be considered as NTIA evaluates Five-Year Action Plans, Initial Proposals, and Final Proposals, as outlined in the BEAD NOFO.

Requirements from the BEAD NOFO

- Eligible Entities, through their Five-Year Action Plans, must identify current contracted support for their program office and any planned contractor workforce expansion.³³
- Eligible Entities must evaluate subgrantees' plans for contractors and subcontractors and ensure that they align to requirements that the respective Eligible Entity imposed on its subgrantees as outlined in the Eligible Entity's Initial and Final Proposals.³⁴

³¹ BEAD NOFO Section IV.C.1.e Program Structure, Sequencing and Requirements; Program Requirements; Eligible Entity Obligations; Fair Labor Practices and Highly Skilled Workforce, pp.57.

³² Ibid.

³³ BEAD NOFO Section IV.B.3.b Program Structure, Sequencing, and Requirements; Program Sequencing; Five-Year Action Plan; Five-Year Action Plan Form and Content, pp.26.

³⁴ BEAD NOFO Section IV.C.1.e Program Structure, Sequencing, and Requirements; Program Requirements; Eligible Entity Obligations; Fair Labor Practices and Highly Skilled Workforce, pp.57-58.

- Eligible Entities must ensure all direct and subgrantee contractors and subcontractors comply with federal labor and employment laws, skilled workforce requirements, and labor coordination requirements.³⁵

Additional Guidance from the BEAD NOFO

- Eligible Entities are encouraged to provide equitable workforce development training to all contractors and subcontractors.³⁶

2.4.2 Equity in Contracting

NTIA encourages contracting with Small and Minority Business Enterprises (MBE), Women’s Business Enterprises (WBE) and Labor Surplus Area (LSA) firms as part of the execution of all BEAD project plan activities in addition to those related to workforce. Contracting with these businesses offer opportunities for economic growth, job creation, and to improve equity in the telecommunications workforce.

- **A Small Business** is a business so designated by the Small Business Administration. See the SBA’s website for more details.³⁷
- **A Minority Business Enterprise** is a business enterprise that is not less than 51% owned by one or more socially or economically disadvantaged individuals; and the management and daily business operations of which are controlled by one or more socially or economically disadvantaged individuals.³⁸
- **A Women’s Business Enterprise** is a business at least 51% owned and controlled by women who are U.S. citizens, and in which women manage day-to-day operations and make long-term decisions.³⁹
- **A Labor Surplus Area** is a town, county, or city in which the average unemployment rate is significantly higher than the average civilian unemployment rate nationwide.⁴⁰ The Department of Labor maintains LSA designations and offers a list of these areas on their website to support programs and projects looking to increase employment in areas of need.

Eligible Entities may also encourage subgrantee applications from other disadvantaged businesses to promote equitable job growth and economic benefits in local areas.

³⁵ BEAD NOFO Section IV.C.1.e Program Structure, Sequencing, and Requirements; Program Requirements; Eligible Entity Obligations; Fair Labor Practices and Highly Skilled Workforce, pp.56.

³⁶ *Ibid.*

³⁷ “Size standards,” *U.S. Small Business Administration*, <https://www.sba.gov/federal-contracting/contracting-guide/size-standards>.

³⁸ Infrastructure Investment and Jobs Act (IIJA), Division K, Section 10002.9(A).

³⁹ See “Women-Owned Small Business Federal Contracting Program,” *U.S. Small Business Administration*, www.sba.gov/federal-contracting/contracting-assistance-programs/women-owned-small-business-federal-contracting-program.

⁴⁰ See Labor Surplus Area Classification Correction, 86 Fed. Reg. 227 (Nov. 30, 2021); see also “Frequently Asked Questions: What is a Labor Surplus Area?,” *Employment and Training Administration*, U.S Department of Labor, www.dol.gov/agencies/eta/lisa/faq.

Requirements from the BEAD NOFO

- Eligible Entities must assure that minority business enterprises, women’s business enterprises, and labor surplus area firms are used whenever possible.⁴¹ Affirmative steps to that end include:⁴²
 - Place them on solicitation lists
 - Solicit them whenever they are potential sources
 - Divide total requirements into smaller tasks or quantities to maximize their participation
 - Establish delivery schedules that encourage their participation
 - Use services of organizations such as the Small Business Administration and Minority Business Development Agency of the Department of Commerce
 - Require subgrantees to take these affirmative steps as they relate to contractors and subcontractors

Additional Guidance from the BEAD NOFO

- NTIA encourages Eligible Entities to invite a broad cross-section of subgrantees into BEAD projects, including minority-owned businesses and other socially and economically disadvantaged businesses, including through incorporating standards for utilization plans for these businesses.⁴³

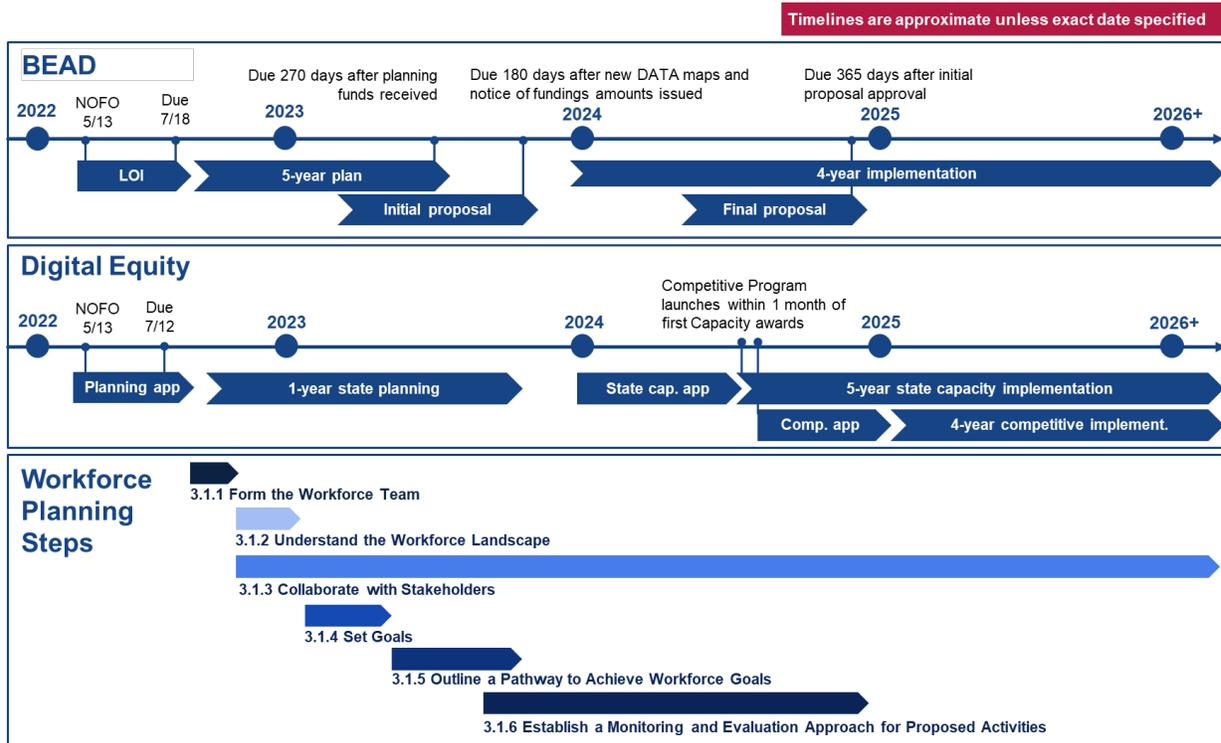
⁴¹ 2 CFR 200.321(a); BEAD NOFO Section VII.D.7.

⁴² 2 CFR 200.321(b); BEAD NOFO Section VII.D.7 Federal Award Administration Information; Administrative and National Policy requirements; Contracting with Small and Minority Businesses, Women’s business Enterprises, and Labor Surplus Area Firms, pp.88-89.

⁴³ BEAD NOFO Section IV.B.7 Program Structure, Sequencing, and Requirements; Program Sequencing; Subgrantee Selection Process, pp.35; BEAD NOFO Section IV.B.7.a Program Structure, Sequencing, and Requirements; Program Sequencing; Subgrantee Selection Process; General Principles Governing Subgrantee Selection, pp.40; BEAD NOFO Section VII.D.7 Federal Award Information; Administrative and National Policy Requirements; Contracting with Small and Minority Businesses, Women’s Business Enterprises, and Labor Surplus Area Firms, pp.88-89.

3. Developing a BEAD Workforce Plan

NTIA recognizes that workforce plans are ambitious, long-term efforts that will support jobs across a range of fields from construction to telecommunications to education and will vary based on the unique circumstances of each state and territory. To support these efforts, the following sections provide suggested steps that Eligible Entities can take to develop a workforce plan and prepare a BEAD Five-Year Action Plan, Initial Proposal, and Final Proposal.



3.1 Proposed Planning Steps for BEAD Workforce Plans

Below are proposed planning steps for BEAD workforce plans. While these are suggested steps, following them can help the Eligible Entity’s BEAD program team develop a strong Five-Year Action Plan, Initial Proposal, and Final Proposal. Teams following these steps can reference the activities below as they develop the application components and should keep in mind NOFO workforce requirements. Additional guidance and resources on the proposed planning steps can be found in Part 5 of this guide.

3.1.1 Form the Workforce Team

Assemble a team to scope workforce-related project activities and develop workforce standards.

Example Activities:

- Designate certain individuals to be specifically responsible for the BEAD telecommunications workforce plan, including a workforce lead on the program team. These individuals should be intimately familiar with both the BEAD NOFO and the telecommunications workforce landscape in their state or territory.
- Outline their responsibilities associated with developing the workforce plan.

- Identify and engage with other agencies or offices engaging in workforce activities within the state or territory, including labor or workforce departments, adult and higher education agencies or boards, economic development agencies, or Workforce Development Boards.⁴⁴
- Begin to identify and develop relationships with telecommunications employers around workforce planning.
- Begin to identify and develop relationships with non-governmental partners engaging on workforce issues within the state or territory, such as industry groups, workforce intermediary organizations, community-based organizations, community advocates, representatives from labor and union organizations, and educational institutions. These groups will have insight into workforce capabilities and gaps in the state or territory and experience with workforce development and training. They may also have established, trusting relationships with workers and communities that can benefit BEAD collaborations.
- Invite collaborators to join the workforce planning team, as appropriate.

3.1.2 Understand the Workforce Landscape⁴⁵

Review the state or territory workforce landscape to understand the telecommunications workforce, analyze workforce policies, and identify challenges and ongoing initiatives.

Example Activities:

- Identify existing workforce goals and measures currently tracked at the state/territory and local level. For example, Eligible Entities may consult the state’s Workforce Innovation and Opportunity Act (WIOA) plan and any postsecondary attainment goal established by the governor’s office or higher education officials.⁴⁶
- Conduct a policy scan of workforce laws, regulations, and skilled workforce standards in the state or territory, including wages, contracting, and labor coordination provisions.
- Conduct a scan of existing and planned local, state, and federal funding to support telecommunications workforce development, both training costs and support services, that can be blended and/or braided with BEAD funding.
- Identify existing and planned equitable training and workforce development activities and programs at the state/territory and local levels, including on-ramps for training and recruitment pipelines already in place that can support program activities. These activities can also include workforce development activities designed to support other infrastructure projects and programs.
- Assess workforce needs across all infrastructure programs to enable a holistic understanding of the landscape.
- Identify barriers to work and training faced by groups historically underrepresented in the telecommunications workforce.

⁴⁴ “Workforce Development Board Finder,” *CareerOneStop*, U.S Department of Labor, www.careeronestop.org/LocalHelp/WorkforceDevelopment/find-workforce-development-boards.aspx

⁴⁵ Additional resources and guidance on understanding the workforce landscape can be found in Section 5.2 of this guide.

⁴⁶ “The Workforce Innovation and Opportunity Act State Plan,” *WIOA State Plan Portal*, U.S. Department of Education, wioaplans.ed.gov; “States with Higher Education Attainment Goals,” *Lumina Foundation*, September 7, 2021, www.luminafoundation.org/stronger-nation/report/static/States_with_Higher_Education_Attainment_Goals.pdf.

- Define the full scope of occupations needed to implement BEAD projects. Note that a full range of occupations are needed to fully implement BEAD projects, not only specialized occupations related to telecommunications. America Achieves and Rural Innovation Strategies developed the following list of occupations that Eligible Entities may consider as a starting point in determining the scope of the workforce: ⁴⁷
 - Construction Laborers
 - Customer Service Representatives
 - Electrical Power-Line Installers and Repairers
 - Electrical, Electronic, and Electromechanical Assemblers
 - Electricians
 - First-Line Supervisors of Construction Trades
 - First-Line Supervisors of Mechanics and Installers
 - Miscellaneous Assemblers and Fabricators
 - Operating Engineers and Other Construction Operators
 - Personal Service Managers
 - Project Management and Business Operations Specialists
 - Sales Representatives of Services
 - Telecommunications Equipment Installers and Repairers
 - Telecommunications Line Installers and Repairers
- Analyze telecommunications workforce data to identify potential workforce-related challenges to high-speed Internet implementation plan, including acute shortages by occupation. Available telecommunications workforce data may include:
 - Types of currently available jobs and roles related to high-speed Internet deployment, including those with similar skills that could act as feeder occupations
 - Types of forecasted jobs and roles related to high-speed Internet deployment efforts, including five-year trends in total employment in each occupation category
 - Types of forecasted jobs and roles related to general infrastructure deployment efforts that will require similar skills to those required for high-speed Internet deployment (i.e., Construction Laborers), including five-year trends in total employment in each occupation category
 - Skills, credentials, and education that may be required for some occupations
 - Typical training progression for telecommunications occupations, including consideration of transferrable skill sets from non-telecommunications occupations
 - Unemployment rate
 - Underemployment rates
 - Average salary
 - Workforce demographics
 - Average age of retirement

⁴⁷ “Creating and Expanding a Diverse Broadband Workforce with Good Jobs and Career Pathways: Broadband Equity, Access, and Deployment (BEAD) Program Playbook for Eligible Entities,” First Edition, *America Achieves and Rural Innovation Strategies*, June 22, 2022, pp.24, americaachieves.org/wp-content/uploads/2022/06/America-Achieves-Broadband-Workforce-Report-June-2022.pdf.

3.1.3 Collaborate with Partners

Engage and regularly convene federal, state, territorial, Tribal, and local partners to gather consensus and support collaboration.

Example Activities:

- Engage partners from relevant federal, state, territorial, Tribal, regional, or local agencies that interface with telecommunications workforce policies and the telecommunications workforce itself, as well as representatives from the Governor's office.
- Convene key partner groups appropriate to the state or territory that can help develop and execute the state/territory's telecommunications workforce policy. Examples of these groups may include:
 - Employers and industry leaders, such as those from Internet Service Providers (ISPs), construction contractors, electric and utility companies, and local manufacturers
 - Employers' associations, such as local Chambers of Commerce
 - Trade and labor associations
 - Unions and other organized labor groups
 - State and local educational agencies
 - Public colleges and universities that support workforce development programs
 - Economic development organizations
 - Community-based organizations that support local populations in accessing training and employment opportunities
 - State and local government high-speed Internet and workforce agencies
 - Local workforce development boards and agencies
 - Workforce intermediaries
- Gather consensus from partners in workforce, particularly employers, to help achieve workforce goals. These may include expanding and diversifying talent pipelines, expanding earn and learn opportunities, partnering with training providers, sharing data, or aligning around targeted outcomes.
- Involve diverse partners in decision-making to promote meaningful collaboration. Solicit ongoing communication and incorporate partner feedback continuously through the development of the workforce plan.
- Consider conducting outreach to organizations and employers who have previously developed workforce programs using federal funds to incorporate lessons learned from their projects.
- Consider conducting outreach to other states to develop or work with existing multi-state collaboration approaches and partnerships.
- Create a process to address conflicting perspectives amongst partners, including establishing a meeting cadence to regularly bring together workforce partners.

3.1.4 Set Goals

Establish a vision and clear, attainable goals for the telecommunications workforce.

Example Activities:

- Set a vision for the telecommunications workforce in the state or territory, including the ideal scenario for the workforce to achieve. The vision should address how the state or territory plans to ensure an available, diverse, and highly skilled workforce to meet its high-speed Internet project needs.

- Confirm whether existing workforce goals tracked at the state/territory and local level align to BEAD program needs. If not, identify the adjustments that need to be made.
- Establish outcome-driven goals to guide implementation of the workforce plan in alignment with the components of a workforce plan. Topic areas for workforce goals may include but are not limited to workforce diversity, equitable training opportunities, job creation, and contracting. Achieving the goals developed by the Eligible Entity will close the gap between the state or territory's current telecommunications workforce landscape and the vision for the future by setting requirements and guidance or subgrantees, contractors, and subcontractors.
 - Goals should be Specific, Measurable, Attainable, Realistic, and Time-Bound, and consider partner input, BEAD project objectives, and workforce needs identified in the state/territory.
 - Specific goals for a telecommunications workforce consider the findings of the workforce landscape assessment, including workforce demographics, goals currently in use, and regional, state, territorial, and local barriers that affect the plan.
 - Measurable goals should consider tracking workforce progress and how to measure success, such as by tracking workforce expansion, the amount of training programs available, or the number of MBEs and WBEs involved in the project.
 - Attainable goals for a telecommunications workforce need to consider timelines, resources, partner capacity, and skills available to ensure that goals are doable, such as considering funding limitations and the current state of workforce demographics.
 - Relevant goals need to ensure that all planned workforce objectives and targets align properly with the broader workforce plan, including requirements and additional guidance.
 - Time-bound goals for a telecommunications workforce need to comply with relevant BEAD Program timelines and fit properly within all deadlines.

3.1.5 Outline a Pathway to Achieve Workforce Goals

Set realistic milestones and map out activities to attain the workforce goals.

Example Activities:

- Determine the initiatives, programs, and efforts needed to meet workforce goals and objectives. These should consider both project and employer needs and may include:
 - a. Targeted recruitment, retention, and advancement efforts
 - b. Workforce training and development activities
 - c. Organizational partnership agreements
 - d. Provision of wrap-around or support services and other initiatives that may address challenges that historically underrepresented groups in the telecommunications workforce experience
- Begin to outline steps to achieve workforce goals and how these should be translated into subgrantee requirements. These should include strategies to adhere to federal, state, and local labor and employment laws; to enforce skilled workforce standards; and to provide equitable training and workforce development opportunities.

- Engage workforce partners to offer feedback on workforce goals and activities, including skilled workforce standards in development, and identify areas for partnership on these goals and activities.

3.1.6 Establish a Monitoring and Evaluation Approach for Proposed Activities

Create a monitoring and evaluation plan to track proposed activities.

Example Activities:

- Understand the baseline for telecommunications workforce in the state, using data from the workforce analysis, including workforce demographics.
- Establish and track success measures to monitor progress towards workforce plan goals. Eligible Entities may incorporate metrics already being used in the state/territory as identified through the workforce landscape analysis.
- Create early feedback loops on recruiting numbers, training completion, and job persistence numbers to help focus and deepen recruiting efforts as needed as well as supports during training and into and through initial employment.
- Regularly reassess workforce strategies and activities based on reported performance metrics for program quality improvement.

3.2 BEAD Submission Preparation

When developing each submission, Eligible Entities can reference the checklists below to understand how the workforce requirements and guidance listed in Section 2 must be presented in the Five-Year Action Plan, Initial Proposal, and Final Proposal.

Five-Year Action Plan Submission

Workforce Plan Pacing: By the submission of the Five-Year Action Plan, Eligible Entities should have their team in place, understand the workforce landscape, and set workforce goals. They should be starting to think about strategies they will use to promote fair labor standards, ensure a highly skilled workforce, and encourage equitable training and workforce development. At this point, Eligible Entities should have engaged partners and collaborated with them to understand the workforce landscape and set goals; engagement is expected to continue throughout the BEAD award performance.

Workforce Requirements Checklist

- A list of full-time, part-time employees, and contractors of the Eligible Entity who will assist in implementing and administering the BEAD program, their duties, and any plans for expansion of the team.⁴⁸
- Identification and plans to address known or potential obstacles to successful project implementation, which may involve challenges related to workforce.⁴⁹
- A description of external engagement process, including to underrepresented communities, unions, and worker organizations.⁵⁰
- Strategies to ensure an available and highly skilled workforce to complete BEAD projects, including through partnerships and training programs (See BEAD NOFO Section IV.B.3.b.f for additional details):⁵¹
 - Plans to ensure strong labor standards
 - Plans to attract, retain, or transition the skilled workforce needed to achieve the plan's goals
 - Involvement and partnerships of subgrantees, contractors, and subcontractors with existing in-house skills training programs, unions, and worker organizations
 - Involvement and partnerships of community colleges, public school districts, supportive services providers, Registered Apprenticeship programs and other labor-management training programs, and other quality workforce training providers
- Alignment of the Five-Year Action Plan with other existing and planned workforce development efforts and priorities.⁵²

⁴⁸ BEAD NOFO Section IV.B.3.b Program Structure, Sequencing, and Requirements; Program Sequencing; Five-Year Action Plan; Five-Year Action Plan Form and Content, pp. 26.

⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ BEAD NOFO Section IV.B.3.b Program Structure, Sequencing, and Requirements; Program Sequencing; Five-Year Action Plan; Five-Year Action Plan Form and Content, pp. 27.

⁵² BEAD NOFO Section IV.B.3.b Program Structure, Sequencing, and Requirements; Program Sequencing; Five-Year Action Plan; Five-Year Action Plan Form and Content, pp. 28.

Initial Proposal Submission

Workforce Plan Pacing: By the submission of the Initial Proposal, Eligible Entities should have developed strategies and specific plans to promote fair labor standards, ensure a highly skilled workforce, and encourage equitable training and workforce development. At this point, Eligible Entities should have developed goals and pathways to achieve goals in collaboration with all partners.

Workforce Requirements Checklist

The Initial Proposal submission must include:

- Long-term objectives for enhancing economic growth and job creation, including any information from the Five-Year Action Plan and other related strategic plans developed by the Eligible Entities.⁵³
- Certification that the Eligible Entity has coordinated with unions and worker organizations, including:⁵⁴
 - A description of coordination activities
 - A summary of the impacts this coordination had on the Initial Proposal,
 - A description of ongoing coordination efforts
 - A plan for how the Eligible Entity will meet the coordination requirements for the Final Proposal
- A description of how the Eligible Entity will ensure that subgrantees, contractors, and subcontractors use strong labor standards and protections and how they will use the labor-related subgrantee selection criteria.⁵⁵
- The process, strategy, and data tracking methods that will be used to ensure minority businesses, women-owned business enterprises, and labor surplus area firms are being recruited, used, and retained throughout the project.⁵⁶
- Selection process requirements for subgrantees related to workforce, including any approach to encourage participation by minority-owned businesses and other socially or economically disadvantaged individual-owned businesses and standards for equitable workforce development and job quality.⁵⁷
- A description of how the Eligible Entity will ensure and support the development of an available, diverse, and highly skilled workforce.⁵⁸ This description should include:

⁵³ BEAD NOFO Section IV.B.5.b Program Structure, Sequencing and Requirements; Program Sequencing; Initial Proposal; Form and Content of Initial Proposal, pp.30.

⁵⁴ BEAD NOFO Section IV.B.5.b Program Structure, Sequencing and Requirements; Program Sequencing; Initial Proposal; Form and Content of Initial Proposal, pp.31.

⁵⁵ BEAD NOFO Section IV.B.5.b Program Structure, Sequencing and Requirements; Program Sequencing; Initial Proposal; Form and Content of Initial Proposal, pp.32.

⁵⁶ Ibid.

⁵⁷ BEAD NOFO Section IV.B.7 Program Structure, Sequencing, and Requirements; Program Sequencing; Subgrantee Selection Process, pp.35; BEAD NOFO Section IV.B.7.b Program Structure, Sequencing, and Requirements; Program Sequencing; Subgrantee Selection Process; Prioritization and Scoring in Selection of Last-Mile Broadband Deployment Projects Selection Among Other Last-Mile Broadband Deployment Projects, pp. 44-45.

⁵⁸ Ibid; BEAD NOFO Section IV.C.1.f Program Structure, Sequencing and Requirements, Program Requirements; Eligible Entity Obligations; Advancing Equitable Workforce Development and Job Quality.

- How Eligible Entities will ensure that subgrantees, contractors, and subcontractors use strong labor standards and protections for the project workforce and apply labor-related subgrantee selection criteria
- How Eligible Entities will develop and promote sector-based partnerships among workforce organizations that provide relevant training, such as Registered Apprenticeships and pre-apprenticeship programs, and offer wrap-around services to support workers
- How Eligible Entities plan to create equitable on-ramps into telecommunications jobs and maintain job quality for new and current workers
- How Eligible Entities plan to engage with labor organizations and community-based organizations throughout planning and implementation
- How Eligible Entities will ensure job opportunities created are available to a diverse pool of workers, including by engaging with targeted outreach, and how Eligible Entities have sought out subgrantees with effective outreach plans to traditionally underrepresented populations in telecommunications and information technology jobs, such as women and people of color

Final Proposal Submission

Workforce Plan Pacing: By the submission of the Final Proposal, Eligible Entities will have started to implement their workforce plans. Eligible Entities must provide updates on the status of their plans from the Initial Proposal and their selection of subgrantees. Eligible Entities should be actively working towards their goals and be implementing their monitoring and evaluation approach in collaboration with all partners.

Workforce Requirements Checklist

The Final Proposal submission must include:

- Updates on the status of plans from the Initial Proposal on the use and incorporation of minority businesses, women-owned business enterprises, and labor surplus area firms.⁵⁹
- How the Eligible Entity has coordinated with Tribal Governments, local community organizations, and unions and worker organizations, including a description of coordination activities, and a summary of the impacts this coordination had on the content of the Final Proposal.⁶⁰
- Updates on the status of labor and workforce readiness plans, including plans for equitable workforce development, job quality, and the development of an available, diverse, and highly skilled workforce, from the Initial Proposal, including how the Eligible Entity implemented and applied all the labor-related subgrantee selection criteria.⁶¹

Objectives, pp.59-60; Eligible Entities need to be prepared to report the demographics of all workers engaged in the BEAD program. These data will be aggregated, anonymized (all PII removed), and made public.

⁵⁹ BEAD NOFO Section IV.B.9.b Program Structure, Sequencing and Requirements; Program Sequencing; Final Proposal; Form and Content of Final Proposal, pp.47-48.

⁶⁰ Ibid.

⁶¹ BEAD NOFO Section IV.B.9.b Program Structure, Sequencing and Requirements; Program Sequencing; Final Proposal; Form and Content of Final Proposal, pp.47-48; BEAD NOFO Section IV.C.1.f Program Structure, Sequencing and Requirements, Program Requirements; Eligible Entity Obligations; Advancing Equitable Workforce Development and Job Quality Objectives, pp.59-60.

- For all projects over \$5,000,000, subgrantee reports must include either certification that all workers are paid at or above prevailing wage rates (as per the Davis-Bacon Act and State prevailing-wage-in-construction laws) or must provide a project employment and local impact report including the following information:⁶²
 - The number of contractors and subcontractors
 - The number of workers hired directly vs. by a third party
 - A list of wages and benefits of all workers, organized by job classification
 - Whether those workers are paid at prevailing wages based on their corresponding classes of laborers and mechanics compared to similar projects in the State or District of Columbia. If a subgrantee has not provided a certification that the project will use a unionized workforce or includes a project labor agreement, the report must also include a project workforce continuity plan. See BEAD NOFO Section VII.E.2 for additional details.

Integrating Digital Equity and Workforce Development

At its core, building a diverse and skilled workforce furthers the equity-driven ambitions of the Internet For All program. NTIA supports the development of an inclusive telecommunications workforce that offers good jobs and opportunities to workers in the United States, which will advance the goal of achieving digital equity across the country.

Successful workforce policy implementation is one lever Eligible Entities can use to build equity into all Internet For All programs. NTIA expects that Eligible Entities applying for both BEAD and State Digital Equity Planning Grant funding will align their activities on workforce requirements and workforce partner coordination.

State Digital Equity Planning Grant Workforce Requirements Include:^a

- Consideration of the state's economic and workforce development goals, plans, and outcomes in the context of digital equity barriers and program objectives.
- Collaboration with key stakeholders through workforce development programs and other means.
- Partnerships with workforce agencies, labor organizations, educational institutions, and other groups for strategy implementation.
- Taking affirmative steps to contract with minority businesses, women businesses, and labor surplus area firms, when possible.

NTIA recommends that Eligible Entities coordinating between BEAD planning teams and State Digital Equity Planning Grant Program teams establish regular direct communications and standing collaboration touchpoints throughout the entire planning and submission processes for the BEAD and Digital Equity Programs, particularly to reduce burden and confusion on community partners that may be involved in both programs.

^a State Digital Equity Planning Grant Program NOFO Sections IV.C.1bi, IV.C.1bii, and VI.D.5

⁶² BEAD NOFO Section VII.E.2 Federal Award Administration Information; Reporting; Reporting Requirements for Subgrantees, pp.91.

4. Strategies and Examples

This section offers proposed strategies and examples for ways to meet workforce requirements outlined in the BEAD NOFO. Eligible Entities may adapt these strategies for their own use, consider approaches taken by example programs provided, or develop their own approaches for meeting workforce requirements across the Internet For All programs.

4.1 Federal Labor and Employment Laws

Strategies to Consider

- **Appropriately Classify Jobs:** Job classification can depend on job responsibilities, scope, and complexity.⁶³ Appropriately classifying different job types helps to ensure employees receive equitable protections and compensations for their work. Eligible Entities can encourage subgrantees to submit job classifications for review.
- **Engage Labor Experts:** State labor departments and offices may be able to provide additional support, resources, and guidance to Eligible Entity project teams across many labor and employment laws, such as fair labor laws, the Americans with Disabilities Act (ADA), civil rights law, Occupational Safety and Health Administration (OSHA) requirements, and others that affect the telecommunications workforce.⁶⁴
- **Set Requirements:** Eligible Entities may set requirements for proof of legal adherence for themselves in addition to those required for BEAD submissions. For example, subgrantees may describe whether and how their project plan includes training for worksites on anti-harassment and other strategies (including third-party reporting procedures and robust anti-retaliation measures) to prevent and address hostility and harassment based on race, gender, ethnicity, or other factors protected under law.

Examples of Programs at the Federal, State, or Local Level

- **Job Accommodation Network (JAN) Provides Guidance on Regulations:** JAN, a service provided by the Department of Labor in partnership with industry, offers free services to organizations with questions about Equal Employment Opportunity Commission (EEOC) and ADA regulations.⁶⁵ They offer consultation and resources such as information on reasonable accommodations for applications, interviews, and for current employees, and other ADA technical assistance.
- **OSHA Training Institute Education Centers Support Nation-Wide Occupational Health and Safety Training:** OSHA authorizes select national nonprofits to deliver occupational safety and health training for all levels of workers, including tailored trainings for those in construction-related industries that may support subgrantee

⁶³ “Job Quality Toolkit: Strategies and Actions to Help Small-to-Medium Sized Organizations Recruit and Retain a High-Performing Workforce,” *U.S. Department of Commerce*, August 2022, p.11 www.commerce.gov/sites/default/files/2022-08/Job-Quality-Toolkit.pdf; “Creating and Expanding a Diverse Broadband Workforce with Good Jobs and Career Pathways,” First Edition, *America Achieves and Rural Innovation Strategies*, June 22, 2022, www.americaachieves.org/wp-content/uploads/2022/06/America-Achieves-Broadband-Workforce-Report-June-2022.pdf.

⁶⁴ “State Labor Offices,” *Wage and Hour Division*, U.S Department of Labor, www.dol.gov/agencies/whd/state/contacts.

⁶⁵ *Job Accommodations Network*, askjan.org/index.cfm.

training.⁶⁶ Programs offer different features to workers, such as Spanish-language courses, evening and weekend courses, and online courses, depending on location.

4.2 Skilled Workforce

Strategies to Consider

- **Connect with Federally Funded Career Services:** Eligible Entities can work with federally funded job readiness programs, such as Workforce Innovation and Opportunity Act (WIOA) Programs, to offer relevant career and training services to job seekers.⁶⁷
- **Engage with Coalitions and Nonprofits:** Many organizations, such as the National Skills Coalition, offer resources for state-level workforce issues.⁶⁸ These organizations provide information about effective models to help address skills gaps, provide examples of training approaches, develop program outcome measures, and offer other resources to help Eligible Entities understand the current state of training and certification in their areas and design and implement workforce development policies and programs.
- **Promote Use of an Appropriately Trained, Certified, and Credentialed Workforce:** Eligible Entities can implement training, certification, and credentialing standards for subgrantees to encourage or support the development and use of a highly skilled telecommunications workforce.⁶⁹

Examples of Programs at the Federal, State, or Local Level

- **Louisiana GUMBO Grant for Broadband Opportunities Prioritizes Technical Graduates:** In Louisiana, the Granting Unserved Municipalities Broadband Opportunities (GUMBO) Grant Program prioritized subgrantee hiring requirements for local graduates of telecommunications technical programs in the area.⁷⁰ In addition, the GUMBO Grant Program encouraged subgrantees to pay at or above prevailing wage rates, making GUMBO jobs an attractive option for workers.
- **Fiber Broadband Association (FBA) Creates Certification Program:** Due to the increasing need of professional fiber optic technicians across the country, FBA and its affiliate, the Fiber Optic Sensing Association, developed a certification course for

⁶⁶ “OSHA Training Institute Education Centers,” *Occupational Safety and Health Administration*, U.S. Department of Labor, www.osha.gov/otiec.

⁶⁷ “American Job Center Finder,” *CareerOneStop*, U.S. Department of Labor, www.careeronestop.org/LocalHelp/AmericanJobCenters/find-american-job-centers.aspx; “WIOA Workforce Programs,” *Employment and Training Administration*, U.S. Department of Labor, www.dol.gov/agencies/eta/wioa/programs.

⁶⁸ National Skills Coalition, nationalskillscoalition.org/

⁶⁹ “Creating and Expanding a Diverse Broadband Workforce with Good Jobs and Career Pathways,” First Edition, *America Achieves and Rural Innovation Strategies*, June 22, 2022, pp. 32-35, www.americaachieves.org/wp-content/uploads/2022/06/America-Achieves-Broadband-Workforce-Report-June-2022.pdf.

⁷⁰ “Notice of Intent: Granting Unserved Municipalities Broadband Opportunities (GUMBO),” *Office of Broadband Development and Connectivity*, Office of the Governor of Louisiana, August 12, 2021, connect.la.gov/media/daipdxrl/2110emr058.pdf; “Creating and Expanding a Diverse Broadband Workforce with Good Jobs and Career Pathways,” First Edition, *America Achieves and Rural Innovation Strategies*, June 22, 2022, p. 36, www.americaachieves.org/wp-content/uploads/2022/06/America-Achieves-Broadband-Workforce-Report-June-2022.pdf.

technicians to help them provide complete training and take their certification exams.⁷¹ This course provides future technicians with the required knowledge and skills to implement today's high speed fiber optic networks while also giving them opportunities into professional careers with organizations such as telecommunications service providers, Internet Service Providers, and contractors. Eligible Entities can work with associations and certification programs that of FBA as partners in their workforce planning efforts.

4.3 Equitable Training and Workforce Development

4.3.1 Workforce Readiness

Strategies to Consider

- **Incorporate Apprenticeships and Pre-Apprenticeships:** Apprenticeship and pre-apprenticeship programs can actively support job skills development as well as diversity, equity, accessibility, and inclusion in the workplace.⁷² Equal Employment Opportunity (EEO) regulations set by the Department of Labor for Registered Apprenticeship Programs can help provide a pipeline for women, people of color, formerly incarcerated individuals, and people with disabilities to more easily enter the telecommunications workforce. Eligible Entities may consider developing minimum requirements or utilization goals for apprenticeships to support their use on BEAD projects.
- **Promote Flexible, Tailored Training Opportunities:** Flexible job training opportunities offered virtually and onsite can help further develop workers' skills and prepare them for taking on additional responsibilities in the future.⁷³ Additional benefits such as tuition assistance and sponsorship for relevant coursework can help remove barriers for workers looking to take advantage of training opportunities and can make these opportunities more accessible for all workers.
- **Provide Wrap-Around or Support Services:** Eligible Entities can encourage subgrantee provision of wrap-around or support services for trainees.⁷⁴ Wrap-around services such as on-site childcare or stipends for childcare, learning materials, and transportation to training programs create a stronger labor pipeline by helping workers get the certifications and relevant experience they need to be competitive in a

⁷¹ "Optical Telecom Installer Certification: Course Description," *Fiber Optic Sensing Association*, July 13, 2022, www.fiberopticsensing.org/page/fba-optic-optical-telecom-installation-certification; "IJA Broadband Program Pre-NOFO Technical Assistance Webinar 5: Supply Chain and Workforce Development," *National Telecommunications and Information Administration*, U.S. Department of Commerce, broadbandusa.ntia.gov/news/latest-news/ija-broadband-program-pre-nofo-technical-assistance-webinar-5-supply-chain-and.

⁷² "How You Can Benefit From Diversity, Equity, Inclusion, and Accessibility in Apprenticeship," *U.S. Department of Labor*, www.apprenticeship.gov/employers/diversity-equity-inclusion-accessibility; "Creating and Expanding a Diverse Broadband Workforce with Good Jobs and Career Pathways," First Edition, *America Achieves and Rural Innovation Strategies*, June 22, 2022, pp. 28-33, www.americaachieves.org/wp-content/uploads/2022/06/America-Achieves-Broadband-Workforce-Report-June-2022.pdf.

⁷³ "Job Quality Toolkit," *U.S. Department of Commerce*, August 2022, p.18 www.commerce.gov/sites/default/files/2022-08/Job-Quality-Toolkit.pdf.

⁷⁴ "Rural Services Integration Toolkit: Wraparound Programs," *Rural Health Information Hub*, <https://www.ruralhealthinfo.org/toolkits/services-integration/2/care-coordination/wraparound>.

telecommunications labor market and overcome challenges to and barriers to employment in a telecommunications occupation.

- **Encourage Establishment of Strong Career Pathways:** Eligible Entities can work with employers to encourage job training and workforce development programs that offer workers an opportunity to not only obtain one job, but also to enter a pathway to advancement and increased wages. These programs can promote career progression either with the same employer or prepare workers for other jobs. Additionally, Eligible Entities can look to data on “feeder occupations” with adjacent or relevant skills sets to better understand potential paths for workers.⁷⁵

Examples of Programs at the Federal, State, or Local Level

- **The White House Talent Pipeline Challenge:** The Biden-Harris Administration launched the Talent Pipeline Challenge in June 2022 to support employer investments in equitable workforce development for infrastructure jobs.⁷⁶ This challenge asks all employers, education providers, training providers, local and regional governments, and philanthropic organizations nationwide to make tangible commitments that support equitable workforce development in telecommunications, construction, and electric vehicle infrastructure in each region in which the employer operates. Through the challenge, employers partner with training providers and hire workers that have completed sponsored programs, such as Registered Apprenticeship programs.
- **U.S. Department of Labor (DOL) Launches Cybersecurity Apprenticeship Sprint:** DOL partnered with DOC and the White House to address cybersecurity job openings, quality, and retention with the Cybersecurity Apprenticeship Sprint.⁷⁷ The sprint program includes partnerships across many industries seeking to train a skilled and diverse cybersecurity workforce. This collaboration will increase awareness of current successful apprenticeship programs; advance diversity, equity, inclusion, and accessibility across cybersecurity occupations; educate the public on cybersecurity careers; recruit employers to explore Registered Apprenticeship programs and partner with the government; and connect job seekers to cybersecurity apprenticeship opportunities.
- **Ohio Incorporates Workforce Development in Broadband Strategy:** The state of Ohio released a Broadband Strategy Report in 2021 that underscores significant investments being made in high-speed Internet and pressing workforce needs in the state.⁷⁸ Based on this strategy, Ohio has developed an approach for increasing

⁷⁵ “Feeder Occupations and Next Steps for Broadband Initiatives,” Lightcast (formerly Emsi Burning Glass), prepared for America Achieves, February 2021, www.americaachieves.org/wp-content/uploads/2022/06/Broadband-Feeders-and-Next-Steps-EBG-1.pdf.

⁷⁶ “FACT SHEET: The Biden-Harris Administration Launches the Talent Pipeline Challenge,” *The White House*, June 2022, www.whitehouse.gov/briefing-room/statements-releases/2022/06/17/fact-sheet-the-biden-harris-administration-launches-the-talent-pipeline-challenge-supporting-employer-investments-in-equitable-workforce-development-for-infrastructure-jobs/.

⁷⁷ “Cybersecurity Apprenticeship Sprint,” *U.S. Department of Labor*, www.apprenticeship.gov/cybersecurity-apprenticeship-sprint.

⁷⁸ “Strengthening Ohio’s Broadband & 5G Workforce,” *BroadbandOhio*, Ohio Governor’s Office of Workforce Transformation, broadband.ohio.gov/wps/wcm/connect/gov/7bb60dea-a273-4622-9d0c-67e7201a8016/Strengthening-OhiOs-Broadband-5G-Workforce-09072021.pdf?MOD=AJPERES&CONVERT_TO=url&CACHEID=ROOTWORKSPACE.Z18_K9I401S01H7F40QBNJU3SO1F56-7bb60dea-a273-4622-9d0c-67e7201a8016-n.Q-v.B.

awareness of telecommunications careers and training programs available and begun establishing cross-sector partnerships to achieve workforce goals.⁷⁹

- **Northwood Technical College and Wisconsin State Telecommunication Association Partner on Broadband Academy:** Northwood Technical College in Wisconsin provides a two-level training program for entry and senior-level personnel.⁸⁰ The program is offered online to eliminate travel time and reduce expenses and is available “a la carte” to increase flexibility. Northwood Technical College partners with the Wisconsin State Telecommunications Association and other local telecommunications companies to offer scholarships and grants for the program.
- **Verizon and GenerationUSA Offer Free Technical Training:** A nonprofit that provides workforce training to its students aged 18 and older, GenerationUSA partners with Verizon to offer free, fully online programs that teach technical and soft skills and helps place students in technical roles throughout the country.⁸¹
- **Telecommunications Industry Registered Apprenticeship Program:** Stood up in 2012, the Telecommunications Industry Registered Apprenticeship Program is a joint venture of telecommunications companies, industry associations, and DOL to close the skill gap in the nation’s ability to expand wireless high-speed Internet coverage. The program currently offers more than 2,900 apprenticeships across 74 employers for telecommunications occupations, including telecommunications tower technician, wireless technician, and fiber optic technician.⁸²
- **Vermont Explores the Feasibility of a Pay-It-Forward Fund to Support Workforce Training Programs:** The Vermont Community Broadband Board is collaborating with Social Finance, an advisory and finance group based in Boston; the Vermont Community Foundation; and the Communications Workers of America union to grow Vermont’s telecommunications workforce through Career Impact Bonds (CIBs). CIBs allow individuals to enroll in training programs at no upfront cost; the students or their future employers need only to pay back the cost of training if students become employed. These “Pay-It-Forward” models shift risk away from students and employers and encourages the creation and retention of a ready and skilled workforce.⁸³

⁷⁹ “Creating and Expanding a Diverse Broadband Workforce with Good Jobs and Career Pathways,” First Edition, *America Achieves and Rural Innovation Strategies*, June 22, 2022, pp. 16, 20, 26, 40, 51, 52, 56, 59, www.americaachieves.org/wp-content/uploads/2022/06/America-Achieves-Broadband-Workforce-Report-June-2022.pdf.

⁸⁰ “Broadband Academy,” *Northwood Technical College*, www.northwoodtech.edu/continuing-education-and-training/professional-development/broadband-academy.

⁸¹ “Training Accelerator Programs,” *GenerationUSA*, usa.generation.org/prospective-students/training-accelerator-programs/; “IJA Broadband Program Pre-NOFO Technical Assistance Webinar 5: Supply Chain and Workforce Development,” *National Telecommunications and Information Administration*, U.S. Department of Commerce, May 11, 2022, broadbandusa.ntia.gov/news/latest-news/ija-broadband-program-pre-nofo-technical-assistance-webinar-5-supply-chain-and.

⁸² “Build Your Workforce with Registered Apprenticeship,” *Telecommunications Industry Registered Apprenticeship Program*, www.tirap.org/; “Telecommunications,” *U.S. Department of Labor*, www.apprenticeship.gov/apprenticeship-industries/telecommunications.

⁸³ Christine Hallquist, “2022 Legislative Annual Report,” *Vermont Community Broadband Board*, State of Vermont, 2022, legislature.vermont.gov/assets/Legislative-Reports/2022-annual-report-to-the-legislature-Final.pdf; Jake Vern, “Broadband Workforce Development,” *Pew Charitable Trusts*, April 29, 2022, [/www.pewtrusts.org/-/media/assets/2022/08/beti-memo---workforce.pdf](http://www.pewtrusts.org/-/media/assets/2022/08/beti-memo---workforce.pdf).

- **Wilson Community College Pilots FBA Certification:** Wilson Community College will provide 144 hours of instruction by piloting FBA’s certification as part of the White House Talent Pipeline Challenge. Industry leaders designed this program to address the current gap in fiber technician skills.⁸⁴ The certification program also plans to add a 2,000-hour apprenticeship and hopes to continue implementing these programs across the country.
- **Oklahoma State University Institute of Technology’s (OSUIT) Workforce & Economic Development Training Programs:** The OSUIT Workforce & Economic Development Department has developed custom training programs for fiber optic technicians.⁸⁵ OSUIT specifically developed two certificate programs for the Cherokee Nation, as well as a fiber lineman program developed for the Muscogee Nation Reintegration Program (MN-RIP) for people who were previously incarcerated. Both programs have led to an over 97% job placement rate.
- **West Virginia’s Learn and Earn Program:** West Virginia developed the Learn and Earn Program to help workers gain access to associate degrees at the state’s community and technical colleges.⁸⁶ The program pays workers for the training they complete in a part-time job while studying for their degrees. The pay ranges from \$10 to \$27 per hour, and the opportunities focus on growing fields and economic development priorities, such as computer information technology.
- **Montana Registered Apprenticeship Program:** The State of Montana created a Registered Apprenticeship program, whereby apprentices can receive both On-the-Job Training and related college-level coursework to learn specific job and technical skills unique to the employer’s profession.⁸⁷ Program sponsors and employers (including unions) are located in nearly every county in Montana. Apprentices can find sponsors and employers through the Montana Department of Labor & Industry.
- **Laramie County Community College Offers OSHA/Safety Training Courses:** Laramie County Community College in Cheyenne, Wyoming, offers a variety of safety, health, and environmental courses to meet OSHA training requirements.⁸⁸ Courses cover OSHA policies, procedures, standards, and general industry safety and health principles, and are offered in an “a la carte” model for those who wish to enroll. Additionally, class material may be customized according to desired content.

⁸⁴ “FACT SHEET: The Biden-Harris Administration Launches the Talent Pipeline Challenge,” *The White House*, June 2022, www.whitehouse.gov/briefing-room/statements-releases/2022/06/17/fact-sheet-the-biden-harris-administration-launches-the-talent-pipeline-challenge-supporting-employer-investments-in-equitable-workforce-development-for-infrastructure-jobs/.

⁸⁵ “Oklahoma State University Institute of Technology Connects Rural Students and Trains Fiber Technicians,” *Benton Institute for Broadband & Society*, August 2022, www.benton.org/blog/oklahoma-state-university-institute-technology-connects?utm_campaign=Newsletters&utm_source=sendgrid&utm_medium=email.

⁸⁶ “Creating and Expanding a Diverse Broadband Workforce with Good Jobs and Career Pathways,” First Edition, *America Achieves and Rural Innovation Strategies*, June 22, 2022, p. 37, www.americaachieves.org/wp-content/uploads/2022/06/America-Achieves-Broadband-Workforce-Report-June-2022.pdf; “Learn & Earn Program Connecting Local Business with Community and Technical College Talent,” *State of West Virginia*, June 20, 2021, www.wv.gov/daily30c4/archives/Pages/Learn-&-earn-program-connecting-local-businesses-with-community-and-technical-college-talent-.aspx.

⁸⁷ “Montana Registered Apprenticeship,” *Department of Labor & Industry Divisions*, State of Montana, apprenticeship.mt.gov/.

⁸⁸ “OSHA/Safety Training,” *Laramie County Community College*, lccc.wy.edu/workforce/development/OSHA.aspx.

4.3.2. Supporting a Diverse Workforce

Strategies to Consider

- **Partner with Pre-Apprenticeship Programs for Underrepresented Groups:** Pre-apprenticeship programs for women and other underrepresented groups offer workers industry-recognized credentials that will bolster candidate experience and can create a more accessible pipeline into the telecommunications industry.⁸⁹ Eligible Entities can require or encourage these partnerships and activities to support a diverse and representative workforce.
- **Provide Equipment:** In addition to wrap-around services, providing laptops and electronics required onsite or for training programs and personal protective equipment such as hard hats, safety glasses, and gloves, as well as boots available in all sizes for both men and women, can reduce the financial barriers for individuals seeking to join trades and/or workforce development programs.⁹⁰
- **Support Workforce Diversity in Hiring Practices:** Eligible Entities may require or strongly encourage subgrantees to make documented and measured efforts to hire and retain workers from historically underserved groups, which could include women, people of color, veterans, and people with disabilities. Ensure such outreach, labor standards, and investment requirements flow to contractors and subcontractors.
- **Cultivate a Supportive Working Environment:** Cultivating an inclusive environment that does not tolerate harassment and discrimination promotes retention of employees from underrepresented and historically disadvantaged groups. Clearly stating and promoting inclusive workplace policies such as anti-harassment policies, offering equitable training opportunities, and providing employee benefits such as childcare and pregnancy and parental support can help create a more supportive working environment.⁹¹
- **Offer Targeted Mentorship:** Mentorship programs have shown to be an important factor in recruitment, advancement, and retention of women in the trades. Eligible Entities may develop mentorship programs and encourage their use by subgrantees in order to support diverse and inclusive workplaces.⁹²
- **Sponsor Diversity, Equity, Inclusion, and Accessibility (DEIA) Training Programs:** Make training on DEIA available to all workers, and align that training to the organization's approach, values, and understanding of what constitutes acceptable behavior.⁹³
- **Promote Accountability and Transparency:** Publish aggregate workforce data, including information on demonstrating good faith efforts for bringing in women, people of color, and other underserved groups. Data should be collected and reported

⁸⁹ Ariane Hegewisch and Eve Mefferd, "A Future Worth Building: What Tradeswomen Say about the Change They Need in the Construction Industry," *Institute for Women's Policy Research*, 2021, https://iwpr.org/wp-content/uploads/2022/02/A-Future-Worth-Building_What-Tradeswomen-Say_FINAL.pdf.

⁹⁰ "Identify, Train, Place: A Playbook to Build Tomorrow's Highway Construction Workforce," *Federal Highway Administration*, U.S. Department of Transportation, February 2021, https://www.fhwa.dot.gov/innovativeprograms/centers/workforce_dev/hcwp/pdfs/hcwp_playbook.pdf

⁹¹ Ibid.

⁹² Ibid.

⁹³ "Job Quality Toolkit," *U.S. Department of Commerce*, August 2022, Pg.5 www.commerce.gov/sites/default/files/2022-08/Job-Quality-Toolkit.pdf.

frequently enough to permit course correction and deploying new strategies as needed to ensure that employment opportunities are available to historically underserved workers in the communities in which projects are contemplated.

Examples of Programs at the Federal, State, or Local Level

- **Nonprofit and Industry Groups Partner to Offer Women-Only Apprenticeships:** Due to the historic lack of women represented and supported in trade professions, the Chicago Women in Trades, Nontraditional Employment for Women, and Oregon Tradeswomen Inc. created a network of allied organizations.⁹⁴ This industry group focuses on the recruitment and development of tradeswomen, along with supporting several cohorts of skilled tradeswomen in women-only apprenticeships and jobs within the trades community.
- **Women in Telecom Program Offers Mentorship Program to Empower Women in the Industry:** NTCA – The Rural Broadband Association, a consortium of nearly 850 independent, family-owned and community-based telecommunications companies, runs a Women in Telecom Program to support women in the industry.⁹⁵ As part of the program, NTCA runs a Women in Telecom leadership video series and a women mentorship program that connects women in industry to share knowledge and experience with one another.
- **FBA’s Women in Fiber Committee Convene to Retain Women in Telecommunications:** The FBA established the Women in Fiber Committee to identify, develop, and promote women in technology, telecommunications, construction, and manufacturing.⁹⁶ To do so, FBA provides networking and mentorship opportunities, delivers professional development and leadership programs, and spotlights different career paths held by women in fiber in their communications.
- **DOL Program Creates Pathways to Recruit People with Disabilities:** DOL stood up the Workforce Recruitment Program to connect federal and private-sector employers nationwide with highly motivated college students and recent graduates with disabilities for employment opportunities.⁹⁷ The program has been recognized by the U.S. Office of Personnel Management as a model strategy in its guidance to federal agencies on the recruitment and hiring of people with disabilities.
- **Moore Community House Offers Funding for Childcare as part of its Women in Construction (WiC) Program:** Based in Biloxi, Mississippi, Moore Community House helps create economic security for women by offering affordable childcare and job training for work that pays a living wage. Moore Community House’s WiC Program is a pre-apprenticeship job training program designed to prepare women for careers in

⁹⁴ ‘Case Studies: Chicago Women in Trades’, *U.S. Department of Labor*, 2022, www.apprenticeship.gov/case-studies/chicago-women-trades-0.

⁹⁵ “Women in Telecom,” *NCTA – The Rural Broadband Association*, www.ntca.org/member-services/getin/women-in-telecom.

⁹⁶ Women in Fiber Committee, *Fiber Broadband Association*, www.fiberbroadband.org/page/women-in-fiber.

⁹⁷ ‘Workforce Recruitment Program’, *U.S. Departments of Labor and Defense*, www.wrp.gov/wrp.



apprenticeship and nontraditional career pathways. As part of the program, Moore Community House offers childcare assistance for eligible participants.⁹⁸

- **KentuckianaWorks Tracks and Reports Job Placements and Wage Rates by Worker Demographics to Improve Equity:** KentuckianaWorks, the Workforce Development Board for the Louisville region, has incorporated commitments to racial equity in workforce development as a key component of their mission.⁹⁹ To support their goals, they measure and publicly report on workforce demographics in the region, using that information to strategically drive their programs to make positive change.
- **Virginia Department of Veteran Services Helps Transitioning Service Members Enter the Workforce:** The Virginia Department of Veteran Services facilitates the Virginia Values Veterans (V3) Transition Program, in which transitioning service members and their spouses are provided peer-to-peer support in seeking employment, education, and entrepreneurship.¹⁰⁰ Examples of support that the V3 Transition Program offers include resume review, introduction to the Virginia Labor Market index, and connection with V3 certified companies for employment.
- **JFF Builds an Equity Community of Practice:** In partnership with 14 other intermediary organizations such as CareerWise Colorado, Jobs for the Future (JFF) has created a Building Equitable Pathways community of practice that works to bring together key players and mobilize cross-sector partnerships to advance equitable pathways into the education system and workforce.¹⁰¹ Specifically, Building Equity Pathways focuses on ensuring that Black and Latinx youth and young people who are experiencing poverty can access the knowledge, skills, development opportunities, support, and relationships necessary to thrive in education and the workforce.
- **Warriors4Wireless Develops Career Pathway for Veterans:** Warriors4Wireless, a nonprofit organization, bridges the gap between demand for wireless technicians and veterans seeking civilian employment. The organization provides training and advanced certification and transitional support, offering an entryway into telecommunications employment.¹⁰²

4.3.3. Outreach and Engagement

Strategies to Consider

- **Commit to Transparency:** Eligible Entities should communicate early and often with various partners on their workforce goals and values, including offering clear expectations for partners involved in workforce planning.¹⁰³ Consider sharing plans while

⁹⁸ “Women in Construction,” *Moore Community House*, www.moorecommunityhouse.org/winc; Eve Mefferd, “Building Blocks: Child Care Solutions that Work for Tradeswomen,” *Institute for Women’s Policy Research*, iwpr.org/media/in-the-lead/childcare-webinar/.

⁹⁹ “Equity and Inclusion,” *KentuckianaWorks*, www.kentuckianaworks.org/equity.

¹⁰⁰ “Benefits: Employment,” *Virginia Department of Veteran Services*, Commonwealth of Virginia, www.dvs.virginia.gov/benefits/employment.

¹⁰¹ “Building Equitable Pathways,” *Jobs For the Future*, www.jff.org/what-we-do/impact-stories/building-equitable-pathways/.

¹⁰² *Warriors 4 Wireless*, www.warriors4wireless.org/.

¹⁰³ “Stakeholder Engagement Overview: In Preparation for IIJA Broadband Programs,” *National Telecommunications and Information Administration*, U.S. Department of Commerce, March 2022, broadbandusa.ntia.doc.gov/sites/default/files/2022-03/Engagement%20Overview%20for%20States%20%20Localities_FINAL.pdf.

they are still under development to build strong working relationships and establish trust between Eligible Entities and local partners.

- **Create a Feedback Loop:** Eligible Entities will need to proactively solicit input to develop workforce plans, incorporate feedback, communicate changes, and continue providing options for engagement throughout implementation of high-speed Internet projects. Eligible Entities should offer updates to partners on how they have acted on feedback, as creating a feedback loop with partners helps them become partners in the process and helps to engender trust.¹⁰⁴
- **Give Partners a Seat at the Table:** Active partnership approaches include shared decision-making practices among partners, and potentially involving them directly as program team members. Beyond offering opportunities to share perspectives, consider adopting mechanisms to encourage partner action and participation in next steps. Offer flexibility to partner organizations when seeking input given possible burdens on organizational capacity.
- **Use Local Coordination to Further Workforce Goals:** When approaching partners for BEAD and Digital Equity projects, incorporate workforce into conversations and encourage participation in workforce goals.

Examples of Programs at the Federal, State, or Local Level

- **The PGTI Model Promotes Engaged Solution Development:** Comprised of local employers, universities, trades councils, union representatives, and labor groups in Massachusetts, the Policy Group on Tradeswomen’s Issues (PGTI) meets bi-monthly to develop solutions to different barriers faced by women entering the industry across Massachusetts.¹⁰⁵ From this collaboration, the PGTI introduced a set of best practice checklists that have been adopted in whole or in part on approximately \$7 billion worth of construction in Massachusetts and have resulted in a steady rise in participation of women in Registered Apprenticeship programs since 2012 and increased employment where the practices have been implemented.
- **Minnesota Governor’s Task Force on Broadband Access Drives Change Collaboratively:** Launched in March 2019, the Minnesota Governor’s Task Force on Broadband Access meets monthly to review the current state of high-speed Internet access in the state. The task force serves as a forum for collaboration for 15 diverse partner representatives, including employers and educational institutions.¹⁰⁶ Through the forum, the state publishes an annual report on its activities as well as the needs, barriers, issues, and goals for high-speed Internet access, including workforce challenges such as labor shortages.¹⁰⁷

¹⁰⁴ Ibid.

¹⁰⁵ “The PGTI Model: Integrating Supply and Demand for Women in the Construction Industry,” *The Policy Group on Trade Women*, July 2020, policygroupontradeswomen.org.

¹⁰⁶ “Stakeholder Engagement Overview: In Preparation for IIJA Broadband Programs,” *National Telecommunications and Information Administration*, U.S. Department of Commerce, March 2022, broadbandusa.ntia.doc.gov/sites/default/files/2022-03/Engagement%20Overview%20for%20States%20%20Localities_FINAL.pdf.

¹⁰⁷ “Minnesota Governor’s Task Force on Broadband: 2021 Annual Report,” *Employment and Economic Development*, State of Minnesota, Pp.1-31 mn.gov/deed/assets/broadband-task-force-2021_tcm1045-515055.pdf.

- **Oakland Undivided Partners for Digital Skills and Education:** A coalition of community-based organizations – including Oakland Promise, Oakland Public Education Fund, Oakland Unified School District, Tech Exchange, and the City of Oakland’s Office of Education – coordinates to offer trainings, digital skills development, and technology troubleshooting for all students from Pre-K through college in Oakland.¹⁰⁸ The coalition also collects information about Internet and device access in the area. The coalition plans to provide 25,000 laptops and Internet to Oakland households and will create a more inclusive environment for successful digital skills development for students.¹⁰⁹

4.3.4 Worker Protections

Strategies to Consider

- **Require or Encourage Prevailing Wages:** Eligible Entities may encourage or require prevailing wage standards for subgrantees, which can help improve desirability of jobs and ensure fair wages on BEAD projects.¹¹⁰ When coupled with local hire provisions, paying prevailing wages can create a diverse and competitive local labor market. Where applicable, Eligible Entities may implement provisions of the [Davis-Bacon Act](#) in their Internet For All programs.¹¹¹ The Davis-Bacon Act requires contractors and subcontractors to pay state prevailing wages to all laborers and mechanics on federally funded public works projects, as applicable based on legislative context.
- **Promote Project Labor Agreements:** Eligible Entities may consider using Project Labor Agreements (PLAs) to set terms and employment conditions on BEAD projects, whether with union or non-union organizations.¹¹² PLAs can offer stability, higher wages, and additional training to workers, while minimizing the likelihood of worker disputes and strikes.¹¹³
- **Promote Labor Peace Agreements:** Eligible Entities may consider proactive engagement with local unions through Labor Peace Agreements to protect local financial interests while advancing worker rights.¹¹⁴
- **Encourage Robust Benefits:** Eligible Entities may require or strongly encourage subgrantees to offer robust benefits that allow workers to balance their job and family commitments, such as ample sick leave, family leave, vacation days, retirement

¹⁰⁸ “Stakeholder Engagement Overview: In Preparation for IJA Broadband Programs,” *National Telecommunications and Information Administration*, U.S. Department of Commerce, March 2022, broadbandusa.ntia.doc.gov/sites/default/files/2022-03/Engagement%20Overview%20for%20States%20%20Localities_FINAL.pdf

¹⁰⁹ “Oakland Undivided,” *City of Oakland*, www.oaklandedfund.org/oaklandundivided/

¹¹⁰ BEAD NOFO Section IV.C.1.f Program Structure, Sequencing and Requirements, Program Requirements; Eligible Entity Obligations; Advancing Equitable Workforce Development and Job Quality Objectives, pp.59-60.

¹¹¹ The Davis-Bacon Act, Pub. L. No. 107-217 (August 21, 2002).

¹¹² “Construction Program Guide: Project Labor Agreement,” *Federal Highway Administration*, U.S. Department of Transportation, February 10, 2022, www.fhwa.dot.gov/construction/cqit/pla.cfm.

¹¹³ “FACT SHEET: President Biden Signs Executive Order to Boost Quality of Federal Construction Projects,” *The White House*, February 3, 2022, www.whitehouse.gov/briefing-room/statements-releases/2022/02/03/fact-sheet-president-biden-signs-executive-order-to-boost-quality-of-federal-construction-projects/.

¹¹⁴ “Labor Peace Agreements: Local Government As Union Advocate,” U.S. Chamber of Commerce, 2016, Pp.1-18, www.uschamber.com/assets/archived/images/documents/files/laborpeaceagreements.pdf.

matching, and pensions. They may also seek out partnerships with industry leaders, trade associations or other organizations offering these services to their workers or members.

Examples of Programs at the Federal, State, or Local Level

- **Boston Housing Authority Establishes Successful Project Labor Agreement with Amaresco:** In 2014, the city of Boston completed a \$66.7M energy efficiency rehabilitation of 13 public housing properties owned by the Boston Housing Authority.¹¹⁵ The city entered into a project labor agreement with the contractor, Amaresco, which helped create approximately 600 jobs for local union workers, public housing and low-income city residents, and small and minority owned businesses.
- **Virginia Requires Contractors and Subcontractors to Pay Prevailing Wage:** The Commonwealth of Virginia passed a prevailing wage statute that requires contractors and subcontractors working on state public projects in excess of \$250,000 to pay prevailing wage rates to any “mechanic, laborer, or worker” providing labor or services in connection with the project.¹¹⁶ The Commonwealth calculates prevailing wage rates on the basis of geographic area of the project and the job classification of mechanics, laborers, and workers to which the rate applies.
- **NTCA – The Rural Broadband Association Offers Pensions to Members:** As part of a suite of benefits, NTCA – The Rural Broadband Association gives members the opportunity to join a group health program, a retirement and security (pension) plan, savings, and other employee benefit plans.¹¹⁷ In addition, NTCA – the Rural Broadband Association offers members regulatory and compliance support, education, and consulting resources for their benefit plans.

4.4 Contracting

Strategies to Consider

- **Engage Contracting Experts:** Federal offices such as the Small Business Administration and state offices on acquisitions may be able to offer advice and guidance on how to shape contracting requirements for MBEs, WBEs, and other small or economically disadvantaged businesses.¹¹⁸
- **Consider Impact of Timelines on Different Subgrantees:** To best support engagement with diverse subgrantee organizations, Eligible Entities should ensure

¹¹⁵ “City Celebrates Largest Public Housing Energy Efficiency Project in Nation’s History,” *Office of the Mayor*, City of Boston, May 19, 2014, www.ameresco.com/wp-content/uploads/2017/03/sm_news_coverage_bha_epc_ribbon_cutting.pdf.

¹¹⁶ Kristina H. Vaquera and Shaun M. Bennett, “Virginia Updates Wage and Hour Requirements,” *SHRM*, 2021, <https://www.shrm.org/resourcesandtools/legal-and-compliance/state-and-local-updates/pages/virginia-updates-wage-and-hour-requirements.aspx>; “Prevailing Wage Law,” *Department of Labor and Industry*, Commonwealth of Virginia, <https://www.doli.virginia.gov/prevailing-wage-law/>.

¹¹⁷ “Providing Outstanding Benefit Plans for Rural Telcos and Your Employees,” NTCA – The Rural Broadband Association, www.ntca.org/insurance-and-benefits.

¹¹⁸ “Contracting Guide,” *U.S Small Business Association*, www.sba.gov/federal-contracting/contracting-guide.

sufficient lead time and notice for collaboration with these organizations.¹¹⁹ Unlike larger organizations, smaller businesses may not have staff members dedicated solely to the procurement and partnership process.

- **Set Participation Goals:** Set participation goals for subgrantees or encourage contractors and subcontractors to set goals for working with MBEs, WBEs, and other small or economically disadvantaged businesses.¹²⁰ Work with subgrantees to help them understand the barriers that small and disadvantaged businesses typically experience in contracting, offering feedback on areas where subgrantees can improve participation by disadvantaged businesses.
- **Conduct Outreach to Worker Associations:** Eligible Entities and subgrantees can identify and proactively communicate with local and regional labor associations that work with underrepresented groups to socialize contracting opportunities and increase representation of MBEs and WBEs.¹²¹

Examples of Programs at the Federal, State, or Local Level

- **New York City Selects Small Business Emphasizing Local Engagement and Hiring to Implement High-Speed Internet:** The New York City Housing Authority (NYCHA) contracted with SpotOn, a local ISP and small business, to deliver high-quality service in New York public housing.¹²² SpotOn was chosen due to their local engagement approach, which included hiring residents as workers in the demonstration project, and their approach to equity-based customer service. SpotOn also provided service to high-end residential properties in the city and committed to providing public housing residents the same quality service as those with high incomes.
- **Dallas Partners with the Regional Black Contractors Association:** In 2020, the Dallas City Council awarded the Regional Black Contractors Association (RBCA) a grant to expand support its Second Chance Hiring Program. Through the program, RBCA offers workforce development training and programs to individuals released from prison within the past three years. Through this program, RBCA helps create a pipeline to advance and support black contractors and black-owned businesses in the Dallas metro area.¹²³
- **Illinois Capital Development Board Sets Utilization Goals for Underrepresented Businesses:** The state of Illinois sets thresholds for projects to contract with minority-

¹¹⁹ “Broadband Infrastructure Playbook: Implementing BEAD and Other Broadband Deployment Programs,” *Fiber Broadband Association* and *NTCA – The Rural Broadband Association*, July 2022, pp.38, www.fiberbroadband.org/page/playbook.

¹²⁰ “Workforce Goals,” *Department of Human Rights*, State of Minnesota, mn.gov/mdhr/certificates/workforce-goals/.

¹²¹ “Identify, Train, Place,” *Federal Highway Administration*, U.S. Department of Transportation, February 2021, pp.16, www.fhwa.dot.gov/innovativeprograms/centers/workforce_dev/hcwp/pdfs/hcwp_playbook.pdf.

¹²² Rakeen Mabud and Marybeth Seitz-Brown, “Wired: Connecting Equity to a Universal Broadband Strategy,” *Roosevelt Institute*, September 2017, rooseveltinstitute.org/wp-content/uploads/2017/09/RI-Wired-201709.pdf.

¹²³ “Investing in New Beginnings: City of Dallas Provides Funding for RBCA’s Second Chance Hiring Program,” *Dallas Doing Good*, December 3, 2020, www.dallasdoinggood.com/doing-good/investing-in-new-beginnings-city-of-dallas-provides-funding-for-rbcas-second-chance-hiring-program; “Identify, Train, Place,” *Federal Highway Administration*, U.S. Department of Transportation, February 2021, pp.16, www.fhwa.dot.gov/innovativeprograms/centers/workforce_dev/hcwp/pdfs/hcwp_playbook.pdf.

owned businesses, women-owned businesses, and businesses owned by persons with disabilities on Capital Development Board projects. The State's Fair Employment Practices Unit ensures contracts awarded reflect and adhere to the business enterprise program participation goals.¹²⁴

- **Portland Sets Minority and Female Participation Targets in Construction Trades:** The City of Portland, Oregon, has created the Community Benefits Agreement and Community Equity and Inclusion Plan to increase minority and female participation in construction trades. Depending on the value of the contract, minorities must perform at least 22% of total apprentice hours and total journey level hours, while women must perform between 6% and 9%.¹²⁵

¹²⁴ "Diversity: Fair Employment Practices," *Capital Development Board*, State of Illinois, www2.illinois.gov/cdb/business/Pages/MinorityBusiness.aspx.

¹²⁵ "Equity, Diversity, and Inclusion in Contracting," *City of Portland*, www.portland.gov/businessopportunities/equity-contracting#toc-community-benefits-agreement-cba-and-community-equity-and-inclusion-plan-ceip-.

5. Additional Resources

5.1 Federal and State Agencies and Local Organizations

When looking to develop a telecommunications workforce plan, federal and state agency contacts and local organizations can offer support and answer questions. Use the list below to help source contacts who can help with different parts of the workforce plan.

Workforce Component	Ask About...	Who to Contact
Federal Labor and Employment Laws	Fair Labor Standards Act	<ul style="list-style-type: none"> DOL
	Occupational health and safety rules	<ul style="list-style-type: none"> OSHA State Departments of Labor State Departments of Health
	Civil rights and EEOC	<ul style="list-style-type: none"> Department of Justice (DOJ) – <i>Office of Justice Programs</i> Local civil rights groups
Skilled Workforce	State specific workforce requirements	<ul style="list-style-type: none"> State Departments of Labor State Departments of Education
	Highly skilled workforce standards, wage requirements	<ul style="list-style-type: none"> DOL – <i>Office of Worker's Compensation Programs</i>
Equitable Training and Workforce Development	Attracting and recruiting a diverse workforce	<ul style="list-style-type: none"> DOL – <i>Employment and Training Administration</i> State Departments/Offices of Workforce Development DOC – <i>Minority Business Development Agency</i> SBA – <i>Small Business Administration</i> Workforce Development Boards Economic Development Agencies Local job centers Citizen re-entry programs Veterans' associations Disability-based workforce programs Educational Institutions
	Workforce retention	<ul style="list-style-type: none"> DOL – <i>Employment and Training Administration, Office of Disability Employment Policy</i> State Departments/Offices of Workforce Development Workforce Development Boards Economic Development Agencies Local business associations
	Training and upskilling	<ul style="list-style-type: none"> DOL – <i>Employment and Training Administration</i> Department of Education – <i>Office of Career, Technical, and Adult Education</i> State Departments of Education

		<ul style="list-style-type: none"> • Workforce Development Boards • Economic Development Agencies • Community colleges and technical schools • Citizen re-entry programs • Veterans' associations • Workforce readiness organizations • Educational Institutions
	Workforce inclusion	<ul style="list-style-type: none"> • DOL – <i>Office of Disability Employment Policy</i> • DOC – <i>Minority Business Development Agency</i> • SBA – <i>Small Business Administration</i> • Workforce Development Boards • Economic Development Agencies • Citizen re-entry programs • Veterans' associations • Disability-based workforce programs • Faith-based organizations • Local women's groups
	Working with unions and worker organizations	<ul style="list-style-type: none"> • DOL – <i>Office of Labor-Management Standards</i>) • State Offices/Departments of Labor • State Offices/Departments of Acquisitions • Local unions and worker organizations • Trade associations
	Local unions, local hire provisions	<ul style="list-style-type: none"> • State Offices/Departments of Acquisitions • State Offices/Departments of Labor • Local unions and worker organizations • Trade associations • Local business districts
Contracting	Working with contractors, ways to connect with MBE, WBE, and other disadvantaged businesses	<ul style="list-style-type: none"> • DOC – <i>Minority Business Development Agency</i> • State Offices/Departments of Acquisitions • Local women's groups • Local business associations • Veterans' associations • Chambers of commerce
	Contractor standards	<ul style="list-style-type: none"> • DOL • State Departments of Labor • State Offices/Departments of Acquisitions

5.2 Resources for Workforce Planning

Eligible Entities may consider using the following resources to better understand the requirements and additional guidance in the BEAD NOFO:

Resource	Source	Description
Federal Labor and Employment Laws		
Handy Reference Guide to the Fair Labor Standards Act	DOL	Reference guide to sections of the Fair Labor Standards Act.
Prohibited Employment Policies/Practices	U.S. Equal Employment Opportunity Commission (EEOC)	Explanations and additional information on prohibited employment policies and practices per the laws enforced by EEOC.
Job Accommodation Network	DOL	Resources about the ADA and strategies to accommodate employees with disabilities. The Job Accommodation Network also offers consulting services for organizations with questions.
Skilled Workforce		
Train and Retain	DOL	Customized employment solutions to develop and upskill your current workforce and promote employee retention.
American Job Center	DOL	Federal program with offices nationwide to offer support to job seekers for a variety of career and employment-related needs, including training.
Workforce Innovation and Opportunity Act (WIOA) Workforce Programs	DOL	List of WIOA programs administered by DOL that provide career and training services such as job search assistance, workforce preparation, and career development services.
Equitable Training and Workforce Development		
Diversity and Inclusion	DOL	Guidance and resources for fostering a diverse and inclusive workplace.
Diversity, Equity, Inclusion, and Accessibility	DOL	Information on how including diversity, equity, inclusion, and accessibility in apprenticeships is beneficial, along with case studies.
Build Together: Diversity, Equity & Inclusion in Construction	National Center for Construction Education & Research	Key takeaways and examples of how construction companies can implement DEI initiatives and improve workplace inclusion for their employees.
SkillSPAN	National Skills Coalition	A national network of non-partisan coalitions focused on advancing state skills policies to expand economic opportunities for workers while boosting local workforce capacity.
Designing Inclusive Apprenticeships	Partnership on Inclusive Apprenticeship	A guide to recruiting and training apprentices with disabilities.

USDA Resource Guide for Rural Workforce Development	U.S. Department of Agriculture (USDA)	Outlines programs and services available at USDA and other federal departments/agencies to support rural workforce development.
Explore Pre-Apprenticeships	DOL	Resource to support the development of high-quality apprenticeship and pre-apprenticeship programs, including case studies and examples.
Prevailing Wage Information and Resources	DOL	A guide with information, tools, and additional resources specifically related to prevailing wage.
Labor-Management Relations	DOC	An explanation of labor-management relations and best practices.
Construction Program Guide: Project Labor Agreement	DOT	Provides a description of Project Labor Agreements (PLAs) and relevant Executive Orders and legislation.
Labor Peace Agreements	U.S. Chamber of Commerce	Describes a Labor Peace Agreement and provides multiple case studies of successful Labor Peace Ordinances.
<i>Contracting</i>		
An Overview of Small Business Contracting	Congressional Research Service	Descriptions of federal small business designations, example federal funding programs for small businesses, and related requirements.
MBDA Programs/Business Centers	DOC	A list of Minority Business Development Agency (MBDA) programs and business centers across the country by state.
Contracting Guide	SBA	A list of state and local SBA offices, which can offer support for connecting with small businesses.

5.3 Resources for Understanding the Workforce Landscape

The workforce landscape analysis should include a thorough scan of workforce laws and regulations in the state, territory, or tribal community; employment and workforce demographic data; and potential collaborators on workforce initiatives. Use the guiding questions and resources below to help support a landscape analysis.¹²⁶

Guiding Questions	Resources
Laws and Regulations	
<ul style="list-style-type: none"> • What are the laws and regulations that govern labor and workforce in your state, territory, or tribal community? • How do these laws and regulations relate to contracting and subcontracting? • Are there any workforce laws or regulations currently under consideration? 	<p>State Workplace Safety and Health Program Plans (OSHA)</p> <p>State Labor Laws (DOL)</p>
Labor Market	
<ul style="list-style-type: none"> • What are the dominant industries and occupations in the labor market in your state, territory, or tribal community? • What are occupations likely to be required for in the telecommunications labor market? What are other industries that currently rely on these roles within your region? • What are the unemployment and underemployment rates? • What are five-years trends for employment in each occupation? • What are the leading barriers to employment in the telecommunications labor market? • What are the prevailing wages for telecommunications workforce jobs? <ul style="list-style-type: none"> • How do these compare to other jobs in the workforce? • How do these compare to regional and national wages for each occupation? • What is the variation in these trends across your state, territory, or tribal community? 	<p>Unemployment Rate by State (DOL)</p> <p>Prevailing Wage Resources (National Conference of State Legislatures)</p> <p>O*NET OnLine Job Searcher (O*NET)</p> <p>Longitudinal Employer-Household Dynamics (Census)</p>
Workforce Demographics	
<ul style="list-style-type: none"> • Who are the workers in your state, territory, or tribal community? What are their characteristics (e.g., age, gender, ethnicity, race)? • What groups are underrepresented in the workforce? Why are they underrepresented? • What recruitment pipelines and workforce retention programs exist to promote a diverse and skilled workforce? 	<p>Workforce Data by State (DOL)</p> <p>Guide to State and Local Workforce Data (DOL)</p> <p>Burning Glass Data (Emsi)</p>

¹²⁶ The BEAD Program Playbook by America Achieves contains additional guidance and resources for conducting a workforce landscape analysis. For more information, see “Creating and Expanding a Diverse Workforce with Good Jobs and Career Pathways,” *America Achieves and Rural Innovation Strategies*, pp. 17-27 <https://americaachieves.org/wp-content/uploads/2022/06/America-Achieves-Broadband-Workforce-Report-June-2022.pdf>.

	State Labor Market Information Contact List (Bureau of Labor Statistics)
Workforce Initiatives	
<ul style="list-style-type: none"> • What are existing workforce goals and measures currently tracked at the state, territorial, or tribal level? At the local level? • What are ongoing and planned training and workforce development activities and programs in the state, territory, or tribal community? • What are training and workforce development programs that typically feed into the local telecommunications industry? Are there programs that feed into similar industries that could support telecommunications careers? • What has success looked like in the past for your state, territory, or tribal community for workforce initiatives? How might that success be replicated in the telecommunications workforce? • What are potential barriers that may prevent a worker from joining or completing a training program? 	Job to Job Explorer (Census) Longitudinal Employer-Household Dynamics (Census) Quarterly Workforce Indicators (Census)
Potential Collaborators	
<ul style="list-style-type: none"> • Who are current partner groups (e.g., governmental offices and programs, unions and labor organizations, non-profits, educational institutions) involved in workforce in your state, territory, or tribal community? • How are these various partners engaged? • What are potential opportunities for your workforce team to collaborate with these partners groups? • Who are new businesses, industries, and other potential collaborators to engage in workforce planning? • Are these groups trusted among the communities where these jobs will be placed? • What process will you use when conflict arises among contributors? 	National Association of State Workforce Board Chairs (NGA) Workforce Development Technical Assistance Program (NGA) America Achieves



5.4 Best Practices Checklist for Telecommunications Training & Workforce Development Programs

The following checklist supports Eligible Entities as they evaluate existing workforce development programs and determine the initiatives, programs, and efforts needed to ensure an available and highly skilled telecommunications workforce. While most programs will not check every box, this checklist can help compare programs in consideration to meet their workforce goals and objectives as BEAD partners, including recruitment, retention, and advancement efforts, workforce training and development activities, and organizational partnership activities. See Section 3.1.3 - 3.1.6 for additional details on recommended approach to partnership, goals, and measurement.

As a threshold matter, the workforce development investment must be tailored to address a specific need required for high-speed Internet deployment. Once that threshold is met, states should carefully examine key aspects of a proposed or existing workforce program's design and the role of employer partners in the design and implementation of that program. High quality workforce development programs originate from partnerships that are carefully built to include all necessary partners (employers, unions/labor, training providers, community-based organizations, etc.) who work together to cut across traditional economic development, workforce, education, and social services system silos to design and implement training pathways to high quality jobs. High quality workforce development programs implement strategies that meet employers' workforce needs and advance the skills and employment prospects of workers and jobseekers. There are several different training models that have proved to be effective. However, in all models, a key component is upfront employer engagement and employer commitments to hire workers.

Telecommunications Training & Workforce Development Program Best Practices Checklist

High-Speed Internet Application:

- Focused on fulfilling a need required for high-speed Internet deployment

Program Design:

- Industry-led sectoral partnership that brings together multiple community partners, including employers, unions/labor, and training providers
- Employer-led curriculum development
- Utilize proven earn and learn models like Registered Apprenticeships
- Direct-to-employment (hired when training begins or guaranteed placement when training ends)
- Lead to stackable, industry-recognized credentials or other evidence that candidates will have tools to progress to future good jobs
- Recruit candidates from the areas where the projects will take place (local hire)
- Recruit candidates from underserved communities, including women and people of color
- Provide wrap-around support services
- Measure and evaluate outcomes (such as employment and earnings)

Employer Partners:

- Have unmet workforce needs that the training will fill

- Are deeply engaged in the sector partnership, identifying specific roles they need to fill, the skills necessary to be successful in those roles, and demonstrable commitments to hire
- Actively recruit diverse applicants, including women and people of color
- Recruit candidates from the areas where projects will take place (local hire)
- Evaluate applicants based on skills
- Provides an equitable living wage (prevailing wages) and family-sustaining benefits to all workers

NTIA will release case studies to illustrate how to use this Best Practices Checklist to evaluate a Telecommunications Training & Workforce Development program opportunity at a later date.



Appendix

Acronyms

ADA	Americans with Disabilities Act
BEAD	Broadband Equity, Access, and Deployment Program
BIL	Bipartisan Infrastructure Law
DEIA	Diversity, Equity, Inclusion, and Accessibility
DOC	U.S. Department of Commerce
DOJ	U.S. Department of Justice
DOL	U.S. Department of Labor
DOT	U.S. Department of Transportation
EEOC	Equal Employment Opportunity Commission
FCC	Federal Communications Commission
FTE	Full-Time Equivalent
IIJA	Infrastructure Investment and Jobs Act
LPA	Labor Peace Agreement
MBDA	Minority Business Development Agency
MBE	Minority Business Enterprise
NOFO	Notice of Funding Opportunity
NTIA	National Telecommunications and Information Administration
OSHA	Occupational Safety and Health Administration
PLA	Project Labor Agreement
SBA	Small Business Administration
USDA	U.S. Department of Agriculture
WBE	Women's Business Enterprise
WIOA	Workforce Innovation and Opportunity Act

BEAD NOFO Consolidated Workforce Requirements and Guidance

The table below provides an overview of the workforce requirements and guidance outlined in the BEAD NOFO, organized by topic area. For additional details and context, see Section 2 of the Workforce Planning Guide. A checklist of BEAD submission requirements can be found in Section 3.2 of the Workforce Planning Guide.

Workforce Requirements & Guidance from the BEAD NOFO
Federal Labor and Employment Laws
<p>Eligible Entities are held to federal labor and employment laws. In addition, Eligible Entities will also be required to evaluate prospective subgrantee submissions to ensure the subgrantees are capable of carrying out funded activities in a competent manner in compliance with all applicable federal, state, territorial, and local laws. This includes appropriate adherence to relevant federal labor and employment laws.</p> <ul style="list-style-type: none">• All subgrantees and their projects funded through BEAD must have a demonstrated record of compliance with federal labor and employment laws and plans to continue compliance.¹²⁷• Eligible Entities must get records from prospective subgrantees and any other entities that may participate in projects, such as contractors and subcontractors. These records must include, at a minimum, information on organizational compliance with federal labor and employment laws on high-speed Internet deployment projects for the last three years.¹²⁸• Eligible Entities must prioritize compliance with federal, state, and local laws in considering applications.¹²⁹• In Initial and Final Proposals, Eligible Entities must describe the information they will require prospective subgrantees to provide in their applications, including the following:<ul style="list-style-type: none">• Certification from an Officer/Director-level employee (or equivalent) on past compliance with federal labor and employment laws• Disclosure of any violations of labor and employment laws in the last three years, or written confirmation of no such violations• Applicable wage scales and wages and overtime payment practices for each class of employee that will be directly in the physical construction of high-speed Internet• Plans for the implementation of workforce safety committees that will be authorized to raise any health and safety concerns• Entities must also describe how they will weigh this information in their competitive selection process. When evaluating subgrantee applications, NTIA requires that Eligible Entities give priority to fair labor practices, based on records of and plans to be in compliance with federal labor and employment laws. See BEAD NOFO Section IV.C.1.e for additional details, including recommendations for effective plans for federal labor and employment law compliance.¹³⁰

¹²⁷ BEAD NOFO Section IV.C.1.e Program Structure, Sequencing, and Requirements; Program Requirements; Eligible Entity Obligations; Fair Labor Practices and Highly Skilled Workforce, pp.56-57.

¹²⁸ Ibid.

¹²⁹ BEAD NOFO Section IV.B.7.b Program Structure, Sequencing and Requirements; Program Sequencing Subgrantee Selection Process, Prioritization and Scoring in Selection of Last-Mile Broadband Deployment Projects, pp.43-45.

¹³⁰ Ibid.

- Subgrantees must permit workers to create worker-led health and safety committees that management will meet with upon reasonable request to ensure compliance with occupational safety and health requirements.¹³¹

Skilled Workforce

- Eligible Entities must build and develop a highly skilled workforce and ensure that subgrantees do the same.
- Each subgrantee must certify that it will use an appropriately skilled and credentialed workforce that is technically qualified to complete all funded activities in a competent manner.¹³²
- An approach for a highly skilled workforce may include the following activities:¹³³
 - Establishing or using Registered Apprenticeships or other joint labor management training programs.
 - Ensuring project workforce has appropriate credentials, including pre-existing occupational training, certification, and licensure.
 - Ensuring subgrantees offer jobs that exceed the local prevailing wage for an industry in the region, offers benefits, and helps the employee develop skills for career growth.
 - Further requirements and guidance can be found in Section IV.C.1.e of the NOFO.

Equitable Training and Workforce Development

Workforce Readiness

- NTIA encourages Eligible Entities to consider workforce development goals when selecting subgrantees, setting standards and requirements for subgrantees, and establishing submission scoring factors. See BEAD NOFO Section IV.C.1.f for additional details. This may include:
 - Adopting selection criteria for subgrantees related to advancing equitable workforce development and job quality objectives¹³⁴
 - Ensuring subgrantees require Registered Apprenticeships and pre-apprenticeships, joint labor management partnerships, and other high-quality on-the-job training opportunities¹³⁵
- NTIA permits the following use of funds to support workforce readiness:
 - Initial planning funds for training employees of the high-speed Internet program, Eligible Entity office, political subdivisions of Eligible Entity, and/or

¹³¹ BEAD NOFO Section IV.D.2.d Program Structure, Sequencing and Requirements; Subgrantee Qualifications; Specific Qualification for Subgrantees Deploying Network Facilities; Compliance with Laws, pp.74.

¹³² The definition of “appropriately skilled and credentialed” can be defined by Eligible Entities and will be approved by NTIA throughout the BEAD submission process.

¹³³ BEAD NOFO Section IV.C.1.e Program Structure, Sequencing, and Requirements; Program Requirements; Eligible Entity Obligations; Fair Labor Practices and Highly Skilled Workforce, pp.57.

¹³⁴ BEAD NOFO Section IV.B.7.b Program Structure, Sequencing, and Requirements; Program Sequencing; Subgrantee Selection Process; Prioritization and Scoring in Selection of Last-Mile Broadband Deployment Projects Selection Among Other Last-Mile Broadband Deployment Projects, pp. 44.

¹³⁵ BEAD NOFO Section IV.C.1.f Program Structure, Sequencing and Requirements; Program Requirements; Eligible Entity Obligations; Advancing Equitable Workforce Development and Job Quality Objectives, pp.59-60.

related staffing capacity or consultant or contractor support to achieve BEAD program goals¹³⁶

- Last-mile deployment funds for workforce development, including training for cybersecurity professionals working on BEAD-funded networks, Registered Apprenticeships and pre-apprenticeships, and community college and/or vocational for telecommunications-related occupations to support deployment, maintenance, and upgrades¹³⁷
- Other non-deployment activities including upskilling, cybersecurity education, and prisoner education to support job skills (see BEAD NOFO Section IV.B.7.a for additional details)

Supporting a Diverse Workforce

- Eligible Entities must confirm their commitment to promote the recruitment of women and other historically marginalized groups for the job opportunities created via BEAD program funding.¹³⁸
- Eligible Entities must describe plans to create equitable on-ramps into telecommunications jobs.¹³⁹
- Eligible Entities must ensure the job opportunities created by the BEAD Program and other Internet For All programs are available to a diverse pool of workers, including by engaging in targeted outreach, and seek subgrantees with effective plans for outreach, to populations that have traditionally been underrepresented in telecommunications and information technology jobs.¹⁴⁰
- Eligible Entities should be prepared to report on demographics of their subgrantee workforce.¹⁴¹
- Eligible Entities are encouraged to implement requirements for subgrantees, such as those that prioritize local workers and require robust plans to recruit historically underrepresented populations facing labor market barriers and ensure that they have reasonable access to the job opportunities created by subgrantees.¹⁴²

Outreach and Engagement

- Throughout its local coordination and outreach activities, each Eligible Entity must ensure that diverse stakeholders, including workforce stakeholders, participate throughout the BEAD program lifecycle.¹⁴³
- Eligible Entities should seek to engage with workforce-related stakeholders including civil-rights and equity-focused organizations, community-based organizations, unions and worker organizations, workforce boards, economic development organizations,

¹³⁶ BEAD NOFO Section IV.B.2 Program Structure, Sequencing, and Requirements; Program Sequencing; Request for Initial Planning Funds, pp.24.

¹³⁷ BEAD NOFO Section IV.B.7.a Program Structure, Sequencing and Requirements; Program Requirements; Subgrantee Requirements; General Principles Governing Subgrantee Selection, pp.39-40

¹³⁸ BEAD NOFO Section IV.C.1 Program Structure, Sequencing and Requirements, Program Requirements; Eligible Entity Obligations, pp.55-56.

¹³⁹ BEAD NOFO Section IV.C.1.f Program Structure, Sequencing and Requirements; Program Requirements; Eligible Entity Obligations; Advancing Equitable Workforce Development and Job Quality Objectives, pp.59-60.

¹⁴⁰ Ibid.

¹⁴¹ Ibid.

¹⁴² Ibid.

¹⁴³ BEAD NOFO Section IV.C.1 Program Structure, Sequencing and Requirements, Program Requirements; Eligible Entity Obligations, pp.53-54.

schools, and community colleges. ¹⁴⁴ See BEAD NOFO Section IV.C.1 for additional details on stakeholder engagement.
Worker Protections
<ul style="list-style-type: none"> • Eligible Entities must coordinate with and engage unions and worker organizations within their territory throughout the BEAD planning deployment process.¹⁴⁵ • An Eligible Entity or a subgrantee may not use grant funds, whether directly or indirectly, to support or oppose collective bargaining.¹⁴⁶ • When creating an effective plan for compliance with federal labor and employment laws, Eligible Entities should consider the following labor coordination efforts:¹⁴⁷ <ul style="list-style-type: none"> • Use of project labor agreements (i.e., pre-hire collective bargaining agreements between unions and contractors that govern terms and conditions of employment for all workers on a construction project) • Use of local hire provisions • Commitments on union neutrality • Use of labor peace agreements • If an Eligible Entity includes any labor coordination and labor standards activities as a mandatory requirement for subgrantees, it should describe these requirements in detail in the Initial Proposal and Final Proposal and explain how it will incorporate them in as binding legal commitments in the subgrants it makes.¹⁴⁸
Contracting
Contractor Considerations
<ul style="list-style-type: none"> • Eligible Entities, through their Five-Year Action Plans, must identify current contracted support for their program office and any planned contractor workforce expansion.¹⁴⁹ • Eligible Entities must evaluate subgrantees' plans for contractors and subcontractors and ensure that they align to requirements that the respective Eligible Entity imposed on its subgrantees as outlined in the Eligible Entity's Initial and Final Proposals.¹⁵⁰ • Eligible Entities must ensure all direct and subgrantee contractors and subcontractors comply with federal labor and employment laws, skilled workforce requirements, and labor coordination requirements.¹⁵¹ • Eligible Entities are encouraged to provide equitable workforce development training to all contractors and subcontractors.¹⁵²
Equity in Contracting

¹⁴⁴ BEAD NOFO Section I.B.2 Program Description; Overview; Process Overview, pp.8-11.

¹⁴⁵ BEAD NOFO Section IV.C.1.c Program Structure, Sequencing and Requirements Program Requirements; Eligible Entity Obligations; Local Coordination, pp.52.

¹⁴⁶ BEAD NOFO Section V.H.2.c Application and Submission Information; Funding Restrictions; Ineligible Costs; Prohibition on Use of Grant Funds to Support or Oppose Collective Bargaining, pp.82.

¹⁴⁷ BEAD NOFO Section IV.C.1.e Program Structure, Sequencing and Requirements; Program Requirements; Eligible Entity Obligations; Fair Labor Practices and Highly Skilled Workforce, pp.57.

¹⁴⁸ *Ibid.*

¹⁴⁹ BEAD NOFO Section IV.B.3.b Program Structure, Sequencing, and Requirements; Program Sequencing; Five-Year Action Plan; Five-Year Action Plan Form and Content, pp.26.

¹⁵⁰ BEAD NOFO Section IV.C.1.e Program Structure, Sequencing, and Requirements; Program Requirements; Eligible Entity Obligations; Fair Labor Practices and Highly Skilled Workforce, pp.57-58.

¹⁵¹ BEAD NOFO Section IV.C.1.e Program Structure, Sequencing, and Requirements; Program Requirements; Eligible Entity Obligations; Fair Labor Practices and Highly Skilled Workforce, pp.56.

¹⁵² *Ibid.*

- Eligible Entities must assure that minority business enterprises, women’s business enterprises, and labor surplus area firms are used whenever possible.¹⁵³ Affirmative steps to that end include:¹⁵⁴
 - Place them on solicitation lists
 - Solicit them whenever they are potential sources
 - Divide total requirements into smaller tasks or quantities to maximize their participation
 - Establish delivery schedules that encourage their participation
 - Use services of organizations such as the Small Business Administration and Minority Business Development Agency of the Department of Commerce
 - Require subgrantees to take these affirmative steps as they relate to contractors and subcontractors
- NTIA encourages Eligible Entities to invite a broad cross-section of subgrantees into BEAD projects, including minority-owned businesses and other socially and economically disadvantaged businesses, including through incorporating standards for utilization plans for these businesses.¹⁵⁵

¹⁵³ 2 CFR 200.321(a); BEAD NOFO Section VII.D.7.

¹⁵⁴ 2 CFR 200.321(b); BEAD NOFO Section VII.D.7 Federal Award Administration Information; Administrative and National Policy requirements; Contracting with Small and Minority Businesses, Women’s business Enterprises, and Labor Surplus Area Firms, pp.88-89.

¹⁵⁵ BEAD NOFO Section IV.B.7 Program Structure, Sequencing, and Requirements; Program Sequencing; Subgrantee Selection Process, pp.35; BEAD NOFO Section IV.B.7.a Program Structure, Sequencing, and Requirements; Program Sequencing; Subgrantee Selection Process; General Principles Governing Subgrantee Selection, pp.40; BEAD NOFO Section VII.D.7 Federal Award Information; Administrative and National Policy Requirements; Contracting with Small and Minority Businesses, Women’s Business Enterprises, and Labor Surplus Area Firms, pp.88-89.