


FORM CD-450 (REV. 10/18)		U.S. DEPARTMENT OF COMMERCE		X GRANT		COOPERATIVE AGREEMENT	
FINANCIAL ASSISTANCE AWARD				FEDERAL AWARD ID NUMBER			
				04-40-MM588			
RECIPIENT NAME				PERIOD OF PERFORMANCE			
Pima County				07/01/2023 - 06/30/2028			
STREET ADDRESS				FEDERAL SHARE OF COST			
130 W. Congress St., 3rd Floor				\$30,281,277.00			
CITY, STATE ZIP				RECIPIENT SHARE OF COST			
Tucson, AZ 85701-1317				\$13,002,677.00			
AUTHORITY				TOTAL ESTIMATED COST			
47 U.S.C. Sec. 1741				\$43,283,954.00			
CFDA NO. AND NAME							
11.033 Middle Mile (Broadband) Grant Program							
PROJECT TITLE:							
Pima County Regional Middle Mile Fiber Optic Ring							
<p>This Award Document (Form CD-450) signed by the Grants Officer constitutes an obligation of Federal funding. By signing this Form CD-450, the Recipient agrees to comply with the Award provisions checked below and attached. Upon acceptance by the Recipient, the Form CD-450 must be signed by an authorized representative of the Recipient and returned to the Grants Officer. If not signed and returned without modifications by the Recipient within 30 days of receipt, the Grants Officer may unilaterally withdraw this Award offer and de-obligate the funds.</p>							
<p>X DEPARTMENT OF COMMERCE FINANCIAL ASSISTANCE STANDARD TERMS AND CONDITIONS</p> <p>R &amp; D AWARD</p> <p>FEDERAL-WIDE RESEARCH TERMS AND CONDITIONS, AS ADOPTED BY THE DEPT. OF COMMERCE</p> <p>X SPECIFIC AWARD CONDITIONS</p> <p>X LINE ITEM BUDGET</p> <p>X 2 CFR PART 200, UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS, AS ADOPTED PURSUANT TO 2 CFR § 1327.101</p> <p>48 CFR PART 31, CONTRACT COST PRINCIPLES AND PROCEDURES</p> <p>MULTI-YEAR AWARD. PLEASE SEE THE MULTI-YEAR SPECIFIC AWARD CONDITION.</p> <p>X OTHER(S): GENERAL TERMS AND CONDITIONS for the NTIA MIDDLE MILE GRANT PROGRAM, April 2023</p>							
SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER						DATE	
Andrew Rittgers						06/15/2023	
PRINTED NAME, PRINTED TITLE, AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL						DATE	
ANDREW RITTGERS  Digitally signed by ANDREW RITTGERS Date: 2023.06.15 12:49:39 -06'00'							

Award Number: 04-40-MM588, Amendment Number 0  
Federal Program Officer: Joshua Deixler  
Requisition Number: MM588  
Employer Identification Number: 866000543  
UEI Number: JBMBVGUK5LF1  
Recipient ID:  
Requestor ID:

Award ACCS Information

Bureau	FCFY	Project-Task	Organization	Object Class	Obligation Amount
61	2023	4720001-000	06-00-0000-00-00-00-00	41-19-00-00	\$30,281,277.00

Award Contact Information

Contact Type	Contact Name	Email	Phone
Administrative	Michelle Simon	michelle.simon@pima.gov	5205945654

**NIST Grants Officer:**  
Andrew Rittgers  
100 Bureau Drive, MS 1650  
Gaithersburg, MD 20899-1650

**NIST Grants Specialist:**  
Kelley Boatwright  
100 Bureau Drive, MS 1650  
Gaithersburg, MD 20899-1650  
(301) 975-4201



**NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY  
MIDDLE MILE GRANT PROGRAM  
FINANCIAL ASSISTANCE  
SPECIFIC AWARD CONDITIONS**

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**1. Introduction:**

The National Institute of Standards and Technology (NIST), servicing for the National Telecommunications and Information Administration (NTIA), hereby enters into this Grant number 04-40-MM588 with Pima County to support the work described in the proposal entitled "Pima County Regional Middle Mile Fiber Optic Ring" dated 09/30/2022 and revised 05/23/2023, which are hereby incorporated into this award by reference. Where the terms of this award and the proposal differ, the terms of this award shall prevail.

**2. Recipient Contact Information:**

**Administrative:**

Michelle Simon  
Deputy Director, Support Services  
Pima County  
130 W Congress Street  
Floor 6  
Tucson, Arizona 85701-1317  
Telephone: 520-594-5654  
Email: [Michelle.Simon@pima.gov](mailto:Michelle.Simon@pima.gov)

**3. NTIA Contact Information:**

**Federal Program Officer**

Josh Deixler  
National Telecommunications and Information Administration  
US Department of Commerce  
1401 Constitution Ave., NW, Ste. 4078  
Washington, DC 20230  
Telephone: 202-430-7842  
Email: [jdeixler@ntia.gov](mailto:jdeixler@ntia.gov)

**4. NIST Contact Information:**

**Grants Officer:**

Andrew Rittgers  
National Institute of Standards and Technology  
325 Broadway  
Boulder, CO 80305  
Telephone: 303-497-7307  
Email: [andrew.rittgers@nist.gov](mailto:andrew.rittgers@nist.gov)

**Grants Specialist:**

Kelley Boatwright

National Institute of Standards and Technology

100 Bureau Drive, Mail Stop 1650

Gaithersburg, MD 20899-1650

Telephone: 301-975-4201

Email: [Kelley.Boatwright@nist.gov](mailto:Kelley.Boatwright@nist.gov)

**5. Award Payments:**

This award is hereby funded through advanced payments using the Department of Treasury's Automated Standard Application for Payments (ASAP) system. Payments will be issued in accordance with 2 CFR § 200.305 and the Department of Commerce Financial Assistance Standard Terms and Conditions, B.02, dated November 12, 2020.

Payments for allowable costs may be drawn down as needed by the Recipient enrolled in ASAP. Funds may be requested through ASAP by the authorized *Payment Requestor* who is the individual designated by the Recipient to access Federal funds.

This award has the following control or withdrawal limits set in ASAP:

☐ None

☐ Agency Review required for all withdrawals (see explanation below)

☐ Agency Review required for all withdrawal requests over \$ \_\_\_\_\_ (see explanation below)

☒ Maximum Draw Amount controls (see explanation below)

\$ \_\_\_\_\_ each month

\$ \_\_\_\_\_ each quarter

\$ 0.00 Max drawdown amount

**Explanation:**

**Environmental Assessment & National Historic Preservation Act Compliance Requirements restriction**

The total amount of Federal funding is hereby withheld until the requirements identified in the National Institute of Standards and Technology General Terms and Conditions for the NTIA Middle Mile Grant Program, Term #11 – Environmental Assessment and #12 – National Historic Preservation Act (Six-Month Expenditure Plan), are satisfied.

**Contingency Costs**

Federal funding in the amount of \$906,847 is hereby withheld until approval of SAC #19 Contingency Costs to request drawdown of funds designed specifically for contingency costs.

**6. Return Payments for Funds Withdrawn through ASAP:**

Funds that have been withdrawn through ASAP may be returned to ASAP via the Automated Clearing House (ACH) or via FEDWIRE. The ACH or FEDWIRE

transaction may only be completed by the Recipient's financial institution. Full or partial amounts of payments received by a Payment Requestor/Recipient Organization may be returned to ASAP. All funds returned to the ASAP system will be credited to the ASAP Suspense Account. The Suspense Account allows the Regional Financial Center to monitor returned items and ensure that funds are properly credited to the correct ASAP account. Returned funds that cannot be identified and classified to an ASAP account will be dishonored and returned to the originating depository financial institution (ODFI). The Payment Requestor/Recipient Organization should notify the NIST Grants Office and provide a reason whenever return payments are made.

It is essential that the Payment Requestor/Recipient Organization provide its financial institution with ASAP account information (ALC, Recipient ID and Account ID) to which the return is to be credited. Additional detailed information is accessible at: <https://www.fiscal.treasury.gov/asap/>.

**7. Period of Performance and Funding Limitations:**

The period of performance and budget incorporated into this award cover a 5-year period of performance and provide for a maximum total amount of \$30,281,277.00 in Federal funding. This award is being fully funded via this award action.

The maximum amount of NTIA funding in support of this award will not exceed the amount specified in the award documents, unless otherwise amended in writing by the NIST Grants Officer. The Department of Commerce is not liable for any obligations, expenditures, or commitments which involve any amount in excess of the Federal funds being made available pursuant to this award.

**8. Federal and Non-Federal Cost Sharing:**

As directed by Section 60401(f) of the Infrastructure Act, each recipient must commit to a non-federal cost share of no less than 30 percent of the total project cost, unless exempted through a partial or complete waiver for Tribal governments and Native entities.

Pursuant to this award, NIST hereby approves the committed non-federal cost share in the amount of \$13,002,677.00 per the proposal's budget on the part of the recipient and becomes a binding requirement under subject award (*see* 2 CFR §200). The cost sharing ratio for this award is 69.96% Federal share and 30.04% Non-Federal share. See 2 CFR §200.306 and Department of Commerce Financial Assistance Standard Terms and Conditions, Section B.03 for the treatment of cost sharing.

**9. Notice of Funding Opportunity – Middle Mile Grant Program**

The Department of Commerce, National Telecommunications Information Administration Notice of Funding Opportunity (NOFO) No. NTIA-MMG-2-2022, Middle Mile Grant Program, dated May 13, 2022, is incorporated by reference into this award. It is accessible at: <https://www.grants.gov/web/grants/view->

[opportunity.html?oppId=340300](#). Select “Closed” or “Archived” Opportunity Status to view the NOFO.

**10. Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements:**

The Department of Commerce Pre-Award Notification Requirements for Grants and Cooperative Agreements as published in the Federal Register on December 30, 2014 (79 FR 78390) is incorporated by reference into this award. It is accessible at:

<http://www.gpo.gov/fdsys/pkg/FR-2014-12-30/pdf/2014-30297.pdf>.

**11. Department of Commerce Financial Assistance Standard Terms and Conditions:**

As indicated on the Form CD-450 for this award, the Department of Commerce Financial Assistance Standard Terms and Conditions (ST&C) issued November 12, 2020 are incorporated by reference into this award. The Department’s ST&C, as well as a link to 2

CFR Part 200, are accessible at: <https://www.commerce.gov/oam/policy/financial-assistance-policy>

**12. Bi-annual Performance and Financial Reporting Requirements**

The Recipient must submit a Federal Financial Report (SF-425), and Performance Progress Report on a semi-annual basis for the periods ending March 31 and September 30, or any portion thereof.

Reports are due no later than 30 calendar days following the end of each reporting period. A final SF-425 and Performance Progress Report (Closeout) must be submitted within 120 days after the expiration of the period of performance. Subrecipients are required to submit their final performance report to the pass-through entity within 90 calendar days unless an extension has been granted.

All SF-425 and Performance Progress Reports must, at minimum, comply with the reporting requirements and contain all information and certifications specified in the NOFO.

All SF-425 and Performance Progress Reports must be submitted to the NTIA Grants Portal at <https://grants.ntia.gov/>, with copy to the Federal Program Officer, within the prescribed timeframes identified in the terms and conditions of the award.

The Recipient organization name, NIST award number, and reporting period must be included in the submission. The Recipient contact information should be included in the body of the message. To the greatest extent possible, SF-425 and Performance Progress Reports should be submitted together in the same submission.

SF-425 and Performance Progress Reports must not be sent directly to NIST/NTIA personnel, other than when copying the Federal Program Officer on submissions to the <https://grants.ntia.gov/> Portal.



Any SF-425 or Performance Progress Reports sent directly to NIST/NTIA personnel will be returned to the sender with instructions on how to submit through the <https://grants.ntia.gov/> Portal.

No other correspondence may be sent through this Portal; timely responses to any other inquiries received in this mailbox are not guaranteed. The Portal will not be used for any other purpose *except* for purposes identified above.

Eligible entities that receive an award shall comply with any other reasonable reporting requirements determined necessary by the NTIA Assistant Secretary.

**13. Department of Commerce Financial Assistance Standard Terms and Conditions  
Section B.06 Indirect or Facilities and Administrative Costs:**

NIST will reimburse the Recipient for indirect or F&A costs in accordance with 2 C.F.R. § 200.414 and Section B.06. of the Department of Commerce Financial Assistance Standard Terms and Condition, dated November 12, 2020.

If an indirect cost rate has not been established, and NIST is identified as the cognizant agency for indirect costs in accordance with 2 C.F.R. § 200.1, “Cognizant agency for indirect costs,” within 90 calendar days of the award start date, the Recipient must electronically submit to [gmdaudit@nist.gov](mailto:gmdaudit@nist.gov) the documentation (indirect cost rate proposal, cost allocation plan, etc.) necessary to allow NIST to perform an indirect cost rate proposal review. Organizations that have previously established indirect cost rates with NIST must submit a new indirect cost rate proposal for indirect costs within six months after the end of the organization’s fiscal year.

If your submission includes Personally Identifiable Information (PII) or Business Identifiable Information (BII), please send an email to [gmdaudit@nist.gov](mailto:gmdaudit@nist.gov) to request a secure link.

The requirements for determining the relevant cognizant agency and for developing and submitting indirect (F&A) cost rate proposals and cost allocation plans are contained in 2 C.F.R. § 200.414 and in Appendices III-VII to 2 C.F.R. Part 200. For additional guidance on preparing indirect cost proposals, please review the Department of Labor’s Guide for Indirect Cost Determination at: <https://www.dol.gov/oasam/boc/dcd/np-comm-guide.htm>. Section I.B and I.C lists the various types of indirect cost rates and the circumstances under which such rates would apply. The guide also addresses common indirect cost problems and contains useful FAQs.

**14. Unfunded Grant Actions Mailbox (UGAM):**

Requests for unfunded award actions, which include, but are not limited to, requests for no-cost extension, change in key personnel, change in scope of work, budget revisions, award transfer, and novation, must be submitted to: [UGAM@nist.gov](mailto:UGAM@nist.gov), within the prescribed timeframes identified in the terms and conditions of the award.

Unfunded award action requests and related correspondence, including justification to support the request, sent to the mailbox must contain the following information in the email subject line: (1) Recipient name; (2) NIST award number; (3) Principal Investigator/Project Director; and (4) Action being requested (e.g. no cost extension, change in key personnel, etc.).

Unfunded award action requests must not be sent directly to NIST personnel (e.g. Grants Specialist, Grants Officer, Administrative Assistant, GMD Division Chief, Federal Program Officer, etc.).

Any requests sent directly to NIST personnel will be returned to the sender with instructions on how to submit through the [UGAM@nist.gov](mailto:UGAM@nist.gov) mailbox.

No other correspondence may be sent through this mailbox; timely responses to any other inquiries received in this mailbox are not guaranteed. The mailbox will not be used for any other purpose except for purposes identified above.

Requests that are processed will be authorized via a Form CD-451 Amendment to the Financial Assistance Award or a Non-Funded Administrative Change Letter.

#### **15. Climate Resilience**

Because retrofitted and new infrastructure for broadband might be expected to have a lifetime of 20 years or more, the Recipient must account not only for current risks but also for how the frequency, severity, and nature of these extreme events may plausibly evolve as our climate continues to change over the coming decades.

Accordingly, the recipient must develop a plan for regularly assessing the changing weather and climate risks that could impact the network. Such a plan must demonstrate that the risks are understood and characterized to account for and respond to these areas for the 20 years following deployment, utilizing at least one resource or tool at <https://toolkit.climate.gov/content/understanding-climate-risk-resources-ntia-applicants>. The plan should also detail how the weather and climate risks identified are addressed through avoidance and/or mitigation for the network. The plan should articulate how this process of evaluating the updated climate and weather risk and incorporating that information into the network design, maintenance, upgrades, or similar will be performed at least once during the period of performance and periodically over the life of the project.

The recipient is to report on its climate risk reanalysis in the biannual performance reports.

#### **16. No Duplication of Federal Funding**

No federal funds may be used to duplicate costs, services, connections, facilities, or equipment that have been authorized through another federal program. To the extent that a Middle Mile Program project is later deemed to include duplicate funding from another

federal program, the NIST Grants Office and NTIA reserve the right to disallow the costs associated with the duplication of federal funds or service and/or to reallocate the funds to allowable activities within the project.

**17. Signage and Public Acknowledgements:**

The Recipient is required to post project signage and to include public acknowledgments in published and other collateral materials (e.g., press releases, marketing materials, webpages, plaques) satisfactory in form and substance to NIST, that identifies the nature of the project and indicates that the project is funded by the Infrastructure Investment and Jobs Act. The Recipient employing project signage is required to use the official Investing in America emblem in accordance with the Official Investing in America Emblem Style Guide: <https://www.whitehouse.gov/wp-content/uploads/2023/02/Investing-in-America-Brand-Guide.pdf>. Costs associated with signage and public acknowledgments must be reasonable and limited. Signs or public acknowledgments should not be produced, displayed or published if doing so results in unreasonable cost, expense, or recipient burden. The Recipient is encouraged to use recycled or recovered materials when procuring signs. Any construction site signage should be displayed throughout the construction phase of the project in an easily visible location directly linked to the work taking place. The Recipient is responsible to maintain the signage in good condition throughout the construction period.

**18. Publication Disclaimers:**

Pursuant to Section G.05.k of the DOC Standard Terms and Conditions, the recipient is required to submit a copy(ies) to the funding agency and when releasing information related to a funded project include a statement that the project or effort undertaken was or is sponsored by DOC. The recipient is also responsible for assuring that every publication of material (including Internet sites) based on or developed under an award, except scientific articles or papers appearing in scientific, technical or professional journals, contains the following disclaimer:

*This [report/video/etc.] was prepared by [recipient name] using funds under award [number] from the National Telecommunications and Information Administration (NTIA), U.S. Department of Commerce (DOC). The statements, findings, conclusions, and recommendations are those of the author(s) and do not necessarily reflect the views of the NTIA or DOC*

This also applies to videos produced under DOC financial assistance awards.

**19. Contingency Costs:**

To the extent provided in the approved budget, contingency costs are generally allowable under the Middle Mile Program.

NIST Financial Assistance Award Number: 04-40-MM588  
Amendment: NEW  
Recipient: Pima County

The Recipient's use of federal award funds for contingency costs must be pre-approved by the Grants Officer prior to the Recipient drawing down federal award funds for such costs. A Recipient request to draw down federal award funds for contingency costs must be made in writing to the Grants Officer, who shall approve or disapprove the Recipient's request in writing.

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**End of Specific Award Conditions**



**U.S. DEPARTMENT OF COMMERCE  
NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY  
GENERAL TERMS AND CONDITIONS  
for the  
NTIA MIDDLE MILE GRANT PROGRAM**

**April 2023**

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## **1. Project Management Conference**

Shortly after approval of the award, NIST (on behalf of NTIA) may contact the Recipient to arrange a project management conference. The purpose of the project management conference is to explain to the Recipient its post-approval responsibilities for administration of the award, including its responsibilities with respect to the Terms and Conditions of the award and applicable Federal requirements. The Recipient's authorized representative, architect/engineer, financial representative, and possibly the Recipient's legal counsel should attend.

## **2. Property Trust Relationship and Public Notice Filings for Grant-Acquired Property**

In accordance with 2 CFR § 200.316 (Property trust relationship), real property, equipment, and intangible property, that are acquired or improved with a Federal award must be held in trust by the non-Federal entity (*i.e.*, Recipient or Subrecipient) as trustee for the beneficiaries of the project or program under which the property was acquired or improved. This trust relationship exists throughout the duration of the property's estimated useful life, as determined by the Grants Officer in consultation with the Program Office, during which time the Federal Government retains an undivided, equitable reversionary interest in the property (Federal Interest). The non-Federal entity must comply with all use and disposition requirements and restrictions as set forth in 2 C.F.R. §§ 200.310 (Insurance coverage) through 200.316 (Property trust relationship), as applicable, and in the terms and conditions of the Federal award.

The Grants Officer may require a non-Federal entity (*i.e.*, a Recipient or Subrecipient) to execute and to record (as applicable) a statement of interest, financing statement (Form UCC-1), lien, mortgage or other public notice of record to indicate that real or personal property acquired or improved in whole or in part pursuant to a Middle Mile Grant Program award is subject to the Federal Interest, and that certain use and disposition requirements apply to the property. The statement of interest, financing statement (Form UCC-1), lien, mortgage or other public notice must be acceptable in form and substance to NTIA and to the NIST Grants Officer and must be placed on record in accordance with applicable State and local law, with continuances re-filed as appropriate. In such cases, the NIST Grants Officer may further require the non-Federal entity to provide NTIA and the NIST Grants Officer with a written statement from a licensed attorney in the jurisdiction where the property is located, certifying that the Federal Interest has been protected, as required under the award and in accordance with applicable State and local law. The attorney's statement, along with a copy of the instrument reflecting the recordation of the Federal Interest, must be promptly returned to the Grants Officer. The non-Federal entity may use model documentation made available by NTIA.

Without releasing or excusing the non-Federal entity from these obligations, the non-Federal entity, by execution of the financial assistance award or by expending Federal financial assistance funds (in the case of a subrecipient), authorizes NTIA and/or the NIST Grants Officer to file such notices and continuations as it determines to be necessary or convenient to disclose and protect the Federal Interest in the property. The NIST Grants Officer may elect not to release any or a portion of the Federal award funds until the non-Federal entity has complied with this provision and any other applicable award terms or conditions, unless other arrangements satisfactory to the NIST Grants Officer are made.

### 3. **Land, Easements, and Rights of Way**

The Recipient must disclose all encumbrances to NIST. NIST will not accept any encumbrance that interferes with the construction, intended use, operation, or maintenance of the project during its estimated useful life.

### 4. **Project Sign**

The Recipient is responsible for constructing, erecting, and maintaining in good condition throughout the construction phase of the project a sign(s) satisfactory to NIST that identifies the project and indicates that the project is Federally funded. The sign shall:

- Be designed in accordance with the guidelines and design specifications found in the Building A Better America Brand Guide found here: <https://www.whitehouse.gov/wp-content/uploads/2022/08/Building-A-Better-America-Brand-Guide.pdf>
- Be placed in an easily visible location that can be directly linked to the work taking place; and,
- Identify the project as a “project funded by President Biden’s Bipartisan Infrastructure Law.”

The recipient should use best effort to use recycled or recovered materials when procuring signs. The recipient shall also ensure costs associated with signage are reasonable and limited,

NIST also may require that the Recipient maintain a permanent plaque or sign at the project site with the same or similar information.

### 5. **Eminent Domain**

In accordance with Executive Order 13406, “*Protecting the Property Rights of the American People*” (June 28, 2006), the Recipient agrees:

- (a) Not to use any power of eminent domain available to the Recipient (including the commencement of eminent domain proceedings) for use in connection with the Project for the purpose of advancing the economic interests of private parties;
- (b) Not to accept title to land, easements, or other interest in land acquired by the use of any power of eminent domain for use in connection with the Project for such purposes; and
- (c) Any use of the power of eminent domain to acquire land, easements or interests in land, whether by the Recipient or any other entity that has the power of eminent domain, in connection with the Project without prior written consent of NIST constitutes an unauthorized activity and/or use of funds under the award, and subjects the recipient to appropriate enforcement action by the Grants Officer, including but not limited to the disallowance of award costs and the termination of an award.

**6. Construction Contract Security Bond**

Pursuant to 2 CFR § 200.326, for construction or facility improvement contracts or subcontracts exceeding the Simplified Acquisition Threshold (currently \$250,000), the Recipient may submit its bonding policy and requirements to the Grants Officer for a determination whether the Federal Government's interest is adequately protected. If such a determination has not been made, the minimum bonding requirements of 2 CFR § 200.326 (Bonding requirements) shall apply.

**7. Inspection And Testing of Materials**

The Recipient shall ensure that all materials and equipment used in the completion of the work shall be subject to adequate inspection and testing in accordance with accepted standards. Materials of construction, particularly those upon which the strength and durability of any structure may depend, shall be subject to inspection and testing to establish conformance with specifications and suitability for intended uses. The Recipient shall ensure that documentation of same is cataloged and retained.

**8. Energy Efficiency**

The Recipient shall apply, where feasible, sustainable, and energy efficient, design principles for the purpose of reducing pollution and energy costs and optimizing lifecycle costs associated with the construction.

**9. Requirements During Construction**

During construction, the Recipient is responsible for:

- (a) Ensuring project completion in accordance with approved plans and specifications;
- (b) Monitoring project progress and reporting progress to NTIA and NIST;
- (c) Providing for required construction permits and adequate construction inspection;
- (d) Promptly paying costs incurred for the project purposes;
- (e) Monitoring contractors' compliance with Federal, State, and local requirements; and
- (f) Constructing and maintaining in good condition throughout the construction period, of a sign or signs, at the project site in a conspicuous place indicating that the Federal Government is participating in the project.

**10. Recipient and Contractor Compliance with Applicable Requirements**

The Recipient shall comply, and must require each subrecipient or contractor, including lower tier subrecipients or subcontractors, to comply with all applicable Federal, state, and local laws and regulations. The Recipient is responsible for ensuring that all contracts necessary for design and construction of the Project facilities are implemented in compliance with the Terms and Conditions of this Award.

**11. Environmental Assessment**

The Recipient must comply with all environmental standards and identify to NTIA any impact a proposed infrastructure project may have on the environment. The Recipient may not expend



any federal infrastructure funds other than for engineering design, permitting and work related to environmental, historical and cultural reviews, and limited, preliminary procurement funds, as described below, prior to the following:

- The completion of environmental review and issuance of a Categorical Exclusion (Cat Ex) Decision Memo, Record of Consideration (REC), Finding of No Significant Impact (FONSI), or Record of Decision (ROD) (hereinafter “decision documents”) that meets the requirements of the National Environmental Policy Act of 1969 (42 U.S.C. 4321, *et seq.*);
- The completion of any required consultations, to include consultations with the State Historic Preservation Office (SHPO) and the appropriate federally recognized Native American tribes, under Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470, *et seq.*) (NHPA), and/or consultations with the U.S. Fish and Wildlife Service (USFWS) under Section 7 of the Endangered Species Act (16 U.S.C. 1531, *et seq.*), and/or consultations with the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (33 U.S.C. 1251, *et seq.*); and/or
- Demonstration of compliance with all other applicable federal, state, and local environmental laws and regulations.

**Project implementation (site preparation, demolition, construction, ground disturbance, or any other project implementation activities) may not begin prior to the completion of the above activities. The completion of a draft environmental assessment (EA) or equivalent document, and completion of any required consultations under Section 106 of the NHPA, must be completed no later than six months after the award date unless a formal request for extension is submitted and approved by the Grants Officer. The Recipient must comply with all conditions placed on the project as the result of consultation processes.**

Subject to the Grants Officer’s approval of the Recipient’s 6-month expenditure plan (described below), the allowable use of award funds prior to beginning project implementation includes, but is not limited to, activities necessary for the completion of the following:

- Pre-construction project planning, including collecting environmentally-related information;
- Applications for environmental permits;
- Studies such as an Environmental Assessment (EA), and any wetland delineations, biological assessments, archaeological surveys, or other required analyses;
- Administrative costs;
- Pre-award application costs; and/or
- Required consultation activities.

The allowable use of funds for limited, preliminary procurements prior to beginning project implementation includes, but is not limited to, the initiation of activities necessary to meet the project completion requirements as specified in the award, including the following:

- Purchase or lease of equipment, or entering into binding contracts to do so;

- Purchase of applicable or conditional insurance; and/or
- Funds used to secure land or building leases, including right-of-way easements.

The allowable use of preliminary procurement funds is limited; must not result in an irrevocable commitment of resources; and is only allowed after inclusion in and approval of an initial 6-month expenditure plan. The initial 6-month expenditure plan is due in advance of any infrastructure funds draw down from ASAP and will be reviewed by the Federal Program Officer, who will make recommendations to the Grants Officer (who has final approval authority) to ensure all proposed procurement funds are reasonable and necessary to ensure that the project completion deadline requirements are met. All contracts must contain early termination clauses with termination costs clearly specified. All equipment purchased or leased in advance of project implementation and before issuance of the decision documents and completion of applicable consultations must be stored in locations other than the proposed project site and where there will be no impact to the environment, human health, or cultural resources (in most cases, this means equipment must be stored in existing warehouses). Under no circumstances will grant funds be drawn down for clearing or excavating land, or demolition or construction of buildings or towers, before all environmental SACs are completed and cleared. This limited, preliminary allowable use of funds for purchases and leases is designed for recipient flexibility and to streamline preparation for project implementation simultaneously during environmental review and conducting of consultations; the clause, and all applicable restrictions, is lifted once the decision document and applicable consultations are complete and approved.

While this SAC is in effect, the Recipient shall submit, in advance of any drawdowns of funds from ASAP, an initial 6-month expenditure plan that presents the proposed planning and design activities and limited, preliminary procurement activities and costs. The initial 6-month expenditure plan will be submitted via email to the Federal Program Officer, who will review it and provide recommendations to the Grants Officer for final approval to ensure that the proposed activities and expenditures are reasonable and necessary in the context of environmental compliance. The Federal Program Officer must review and recommend, and the Grants Officer must approve the initial 6-month expenditure plan prior to fund drawdowns through ASAP.

The completion of a draft EA will be submitted via email to the Environmental Federal Program Officer and Federal Program Officer. Once the environmental review has been completed, NTIA will review all documentation and determine whether the review sufficiently addresses all resource areas and whether the project may qualify for approval decision. Projects found to have significant impacts to environmental or historic resources may face de-obligation of funding if impacts cannot be mitigated. The Recipient is required to provide any information requested by NTIA to ensure both initial and ongoing compliance with environmental and historic preservation laws, regulations, and best practices. The Recipient shall notify NTIA within 24 hours upon receipt of any notices of foreclosure; notices for continuing consultation received from the SHPO, Tribal Historic Preservation Office (THPO), USFWS, or other consulting party; or notices of noncompliance received from consulting authorities or regulatory agencies.

Any change to the approved project scope that has the potential for altering the nature or extent of environmental or cultural resources impacts must be brought to the attention of NTIA and will be re-evaluated for compliance with applicable regulatory requirements.

For all ground disturbing activities that occur during project implementation in the vicinity of known archaeological sites or suspected or known burials, the Recipient must ensure that an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards monitors ground disturbance, and if any potential archeological resources or buried human remains are discovered, then the Recipient must immediately cease construction in that area and notify NTIA and the interested SHPO, THPO, and tribes. Such construction activities may then only continue with the written approval of NTIA.

A revised 6-month expenditure plan is due within 30 days of submitting a FONSI to NTIA. The revised 6-month expenditure plan must outline how the Recipient plans on expending the remaining budget costs related to construction-type activities. This plan should be submitted via email to the Federal Program Officer who will review it and provide recommendations to the Grants Officer for final approval to ensure that the proposed activities and expenditures are reasonable and necessary. The Federal Program Officer must review and recommend, and the Grants Officer must approve, the revised 6-month expenditure plan prior to fund drawdowns through ASAP.

## **12. National Historic Preservation Act**

The Recipient may not expend any federal infrastructure funds other than for engineering design, permitting and work related to environmental, historical and cultural reviews, and limited, preliminary procurement funds prior to the following:

- The completion of any required consultations, to include consultations with the State Historic Preservation Officer (SHPO) and the appropriate federally recognized Native American tribes, under Section 106 of the National Historic Preservation Act of 1966 (16 U.S.C. 470, *et seq.*) (NHPA); and/or
- Demonstration of compliance with all other applicable Federal, State, and local environmental laws and regulations.

**Project implementation (site preparation, demolition, construction, ground disturbance, or any other project implementation activities) may not begin prior to the completion of the above activities. The completion of any required consultations under Section 106 of the NHPA must be completed no later than six months after the award date unless a formal request for extension is submitted and approved by the Grants Officer. The Recipient must comply with all conditions placed on the project as the result of consultation processes.**

Subject to the Grants Officer's approval of the Recipient's 6-month expenditure plan (described below), the allowable use of funds for planning and design activities prior to beginning project implementation includes, but is not limited to, activities necessary for the completion of the following:

- Pre-construction project planning, including collecting culturally-related information;



- Applications for cultural resource approvals and/or permits;
- Studies and any archaeological, architectural history, or traditional cultural property surveys, or other required analyses;
- Administrative costs;
- Pre-award application costs; and/or
- Required consultation activities.

The allowable use of funds for limited, preliminary procurements prior to beginning project implementation includes, but is not limited to, the initiation of activities necessary to meet the project completion requirements as specified in the award, including the following:

- Purchase or lease of equipment, or entering into binding contracts to do so;
- Purchase of applicable or conditional insurance; and/or;
- Funds used to secure land or building leases, including right-of-way easements.

While this SAC is in effect, the Recipient shall submit, in advance of any drawdowns of funds from ASAP, an initial 6-month expenditure plan that presents the proposed planning and design activities and limited, preliminary procurement activities and costs. The initial 6-month expenditure plan will be submitted via email to the Federal Program Officer, who will review it and provide recommendations to the Grants Officer for final approval to ensure that the proposed activities and expenditures are reasonable and necessary in the context of environmental compliance. The Federal Program Officer must review and recommend, and the Grants Officer must approve the initial 6-month expenditure plan prior to fund drawdowns through ASAP.

The allowable use of preliminary procurement funds is limited; must not result in an irrevocable commitment of resources; and is only allowed after inclusion in and approval of an initial 6-month expenditure plan. The initial 6-month expenditure plan is due in advance of any infrastructure funds draw down from ASAP and will be reviewed by the Federal Program Officer, who will make recommendations to the Grants Officer (who has final approval authority) to ensure all proposed procurement funds are reasonable and necessary to ensure that the project completion deadline requirements are met. All contracts must contain early termination clauses with termination costs clearly specified. All equipment purchased or leased in advance of project implementation and before completion of applicable consultations must be stored in locations other than the proposed project site and where there will be no impact to the environment, human health, or cultural resources (in most cases, this means equipment must be stored in existing warehouses). Under no circumstances will grant funds be drawn down for clearing or excavating land, or demolition or construction, before all environmental SACs are completed and cleared. This limited, preliminary allowable use of funds for purchases and leases is designed for recipient flexibility and to streamline preparation for project implementation simultaneously during consultations; the clause, and all applicable restrictions, is lifted once the applicable consultations are complete, and decision document is issued.

Consultation documentation will be submitted via email to the Environmental Federal Program Officer and Federal Program Officer. Once the consultation activities have been completed, NTIA will review all documentation and determine whether the consultation activities sufficiently address historical and/or cultural resource impacts. Projects found to have

significant impacts to environmental or historic resources may face de-obligation of funding if impacts cannot be mitigated. The Recipient is required to provide any information requested by NTIA to ensure both initial and ongoing compliance with environmental and historic preservation laws, regulations, and best practices. The Recipient shall notify NTIA within 24 hours upon receipt of any notices of foreclosure; notices for continuing consultation received from the SHPO, Tribal Historic Preservation Officer (THPO), or other consulting party; or notices of noncompliance received from consulting authorities or regulatory agencies.

For all ground disturbing activities that occur during project implementation in the vicinity of known archaeological sites or suspected or known burials, the Recipient must ensure that an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards monitors ground disturbance, and if any potential archeological resources or buried human remains are discovered, then the Recipient must immediately cease construction in that area and notify NTIA and the interested SHPO, THPO, and tribes. Such construction activities may then only continue with the written approval of NTIA.

Any change to the approved project scope that has the potential for altering the nature or extent of cultural resources impacts must be brought to the attention of NTIA and will be re-evaluated for compliance with applicable regulatory requirements.

A revised 6-month expenditure plan is due within 30 days of submitting a FONSI to NTIA. The revised 6-month expenditure plan must outline how the Recipient plans on expending the remaining budget costs related to construction-type activities. This plan should be submitted via email to the Federal Program Officer who will review it and provide recommendations to the Grants Officer for final approval to ensure that the proposed activities and expenditures are reasonable and necessary. The Federal Program Officer must review and recommend, and the Grants Officer must approve, the revised 6-month expenditure plan prior to fund drawdowns through ASAP.

### **13. Tribal Employment Rights Ordinances**

In accordance with Departmental policy, NIST must recognize Tribal Employment Rights Ordinances (TEROs), which may provide for preferences in contracting and employment, in connection with its financial assistance awards. Tribal ordinances requiring preference in contracting, hiring, and firing and the payment of a TERO fee are allowable provisions under Federal awards and is incorporated by NTIA into Middle Mile Grant Program grants with Native American/Alaska Native/Native Hawaiian entities. The payment of the TERO fee, which supports the tribal employment rights office to administer the preferences, should generally be allowable as an expense that is "necessary and reasonable for proper and efficient performance and administration" of an award, as provided under as provided under 2 CFR § 200.403.

### **14. Scheduling Inspection for Final Acceptance**

The Recipient will schedule its final inspection when all construction has been completed, the architect/engineer has conducted its own final inspection, and any deficiencies have been corrected. Representatives of the Recipient, the architect/engineer, and the contractor(s) will make the Recipient's final inspection. NTIA must be given advance notice of the final inspection so that a representative of NTIA may participate.

**15. Build America, Buy America – Required Use of Domestic Fiber Optic Glass and Fiber Optic Cable**

A. Applicability & Scope: Pursuant to the Infrastructure Investment and Jobs Act, 2021, Pub. L. No. 117-58, 135 Stat. 429 (Nov. 15, 2021) (IIJA) including the Build America, Buy America Act, Pub. L. No. 117-58, §§ 70901-52 (BABA), as well as guidance provided by Memorandum for Heads of Executive Departments and Agencies, Initial Implementation Guidance on Application of Buy America Preference in Federal Financial Assistance Programs for Infrastructure, Executive Office of the President, Office of Management and Budget (April 18, 2022) (OMB M-22-11), recipients of a federal financial assistance award from the U.S. Department of Commerce (DoC) are hereby notified that none of the funds provided under this award may be used for a Middle Mile (MM) infrastructure project unless all of the fiber optic glass and fiber optic cable used in the project is produced in the United States. The Buy America domestic content procurement preference only applies to fiber optic glass and to fiber optic cable that are consumed in, incorporated into, or affixed to a MM infrastructure project. As applicable, the requirements of this subsection must be included in all subawards and contracts, including all contracts and purchase orders for work or products pursuant to this program.

B. Waivers: When necessary, recipients may apply for, and DoC may grant, a waiver from the Buy America domestic content procurement preference applicable to MM awards. When DoC has made a determination that one of the following exceptions applies, the awarding official may waive the application of the Buy America domestic content procurement preference in any case in which DoC determines that:

- 1) applying the Buy America domestic content procurement preference to the fiber optic glass and/or fiber optic cable needed for the MM project would be inconsistent with the public interest;
- 2) the fiber optic glass and/or fiber optic cable needed for the MM project are not produced in the United States in sufficient and reasonably available quantities or of a satisfactory quality; or
- 3) the inclusion of fiber optic glass and/or fiber optic cable needed for the MM project and produced in the United States will increase the cost of the overall project by more than 25 percent.

A request to waive the application of the Buy America domestic content procurement preference must be submitted in writing. The NTIA Federal Program Officer will provide instructions on the format, contents, and supporting materials required for any waiver request. Waiver requests are subject to public comment periods of no less than 15 days and must be reviewed by the Office of Management and Budget Made in America Office. There may be instances where an award qualifies, in whole or in part, for an existing waiver accessible at: <https://www.whitehouse.gov/omb/management/made-in-america/build-america-buy-america-act-federal-financial-assistance/>.

Please note that NTIA has waived the Buy America domestic content procurement preference requirement for all iron, steel, manufactured products, and construction

materials used in MM infrastructure projects, with the exceptions of fiber optic glass and fiber optic cable. See *Limited Applicability Nonavailability Waiver of the Buy America Domestic Content Procurement Preference as Applied to Recipients of Middle Mile Grant Program Awards*, which was issued by the Assistant Secretary of Commerce for Communications and Information on April 18, 2023 and is accessible at: <https://www.commerce.gov/oam/build-america-buy-america>.

Notwithstanding the NTIA waiver and excepting fiber optic glass and fiber optic cable used in a MM project, the Recipient should, as appropriate and consistent with law and to the greatest extent practicable, provide a preference for the purchase, acquisition, or use of goods, products, or materials produced in the United States (including, but not limited to, iron, aluminum, steel, cement, and other manufactured products). As applicable, the requirements of this subsection must be included in all subawards, including all contracts and purchase orders for work or products pursuant to this program. See 2 CFR § 200.322, *Domestic preference for procurements*.

**C. Definitions:**

“Construction materials” includes an article, material, or supply—other than an item of primarily iron or steel; a manufactured product; cement and cementitious materials; aggregates such as stone, sand, or gravel; or aggregate binding agents or additives<sup>1</sup>—that is or consists primarily of:

- non-ferrous metals;
- plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
- glass (including optic glass);
- lumber; or
- drywall.

In the case of construction materials, all manufacturing processes for the construction material must have occurred in the United States.<sup>2</sup>

“Domestic content procurement preference” means all iron and steel used in the project are produced in the United States; the manufactured products used in the project are produced in the United States; or the construction materials used in the project are produced in the United States.

“Infrastructure” includes, at a minimum, the structures, facilities, and equipment for, in the United States, roads, highways, and bridges; public transportation; dams, ports, harbors, and other maritime facilities; intercity passenger and freight railroads; freight and intermodal facilities; airports; water systems, including drinking water and wastewater systems; electrical transmission facilities and systems; utilities; broadband infrastructure;

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<sup>1</sup> IIIJA, § 70917(c)(1).

<sup>2</sup> *Id.* at § 70912(6)(C).



and buildings and real property. Infrastructure includes facilities that generate, transport, and distribute energy.

“Project” means the construction, alteration, maintenance, or repair of infrastructure in the United States.

D. Recordkeeping and Reporting: In accord with 2 C.F.R. § 200.334, *Retention requirements for records*, the recipient is required to maintain detailed records pertinent to a MM award, including financial records, procurement records, and real property/equipment records. In this connection, the recipient is required to maintain detailed records concerning the acquisition of all iron, steel, manufactured products, and construction materials used in MM projects. For fiber optic glass and fiber optic cable used in a MM project, this includes but is not limited to the: acquisition date; acquisition price; verification of domestic sourcing (unless DoC issues a waiver); how it was used in the project; and current location. Additionally, the recipient is required to maintain detailed records concerning the acquisition of iron, steel, manufactured products, and construction materials from foreign sources that are used in a MM project, including but not limited to: acquisition date; acquisition price; efforts to source domestically; foreign source(s); how it was used in the project; and current location. NTIA may require the recipient to report such information to the Agency at a time and in the format specified by the NTIA Federal Program Officer.

E. Questions: Questions concerning the Buy America domestic content procurement preference requirements applicable to MM awards should be addressed to the NTIA Federal Program Officer.

#### **16. Contracting with Small and Minority Businesses, Women’s Business Enterprises, and Labor Surplus Area Firms**

Pursuant to 2 CFR § 200.321, the Recipient and its subrecipients must take all necessary affirmative steps (as described in 2 CFR § 200.321) to assure that minority businesses, women's business enterprises, and labor surplus area firms are used when possible.

#### **17. Open Network Requirements**

The Recipient must comply with NTIA’s open network requirements, which allows all other broadband service providers to interconnect with networks and other broadband infrastructure deployed using funds from this grant program on fair and non-discriminatory terms and conditions. The requirement to interconnect will apply to Recipients that deploy middle mile networks or submarine cable landing stations and not last mile networks.

- **Interconnection**: Recipients shall allow interconnection in perpetuity to grant-funded facilities at any technically feasible point along the network (without exceeding current or reasonably anticipated capacity limitations). This duty includes, at a minimum, the physical interconnection of the Recipient’s facilities to a requesting party’s facilities for the exchange of traffic. In addition, Recipients shall connect to the public Internet directly or indirectly and provide requesting parties with an ability to connect to the

Internet. Rates and terms for interconnection shall be reasonable and nondiscriminatory.

- **Negotiate in Good Faith:** Recipients shall negotiate in good faith with all requesting parties (*i.e.*, public, private, non-profit, or other parties) making a bona fide request for interconnection or wholesale services.
- **Wholesale Broadband Service:** NTIA encourages Recipients to offer wholesale broadband services at rates and terms that are reasonable and nondiscriminatory

## **18. Prohibition on Use for Covered Communications Equipment or Services**

A Recipient or subrecipient may not use grant funds received under the Middle Mile Grant Program to purchase or support any covered communications equipment or service (as defined in section 9 of the Secure and Trusted Communications Networks Act of 2019 (47 U.S.C. 1608)). *See also* 2 C.F.R. 200.216 (Prohibition on certain telecommunications and video surveillance services or equipment), which also applies to this award.

## **19. Prevention of Waste, Fraud, and Abuse**

Consistent with the principles in 2 CFR part 200, at any time(s) during the grant period of performance, NTIA may direct a Recipient's key personnel to take a Government-provided training on preventing waste, fraud and abuse. Key personnel include those responsible for managing the Recipient's finances and overseeing any contractors, sub-contractors or sub-recipients (for financial matters and/or general oversight related to the grant). NTIA will provide instructions on when and how to take such training(s), and costs incurred by a Recipient relative to the training (*e.g.*, staff time) are eligible for reimbursement pursuant to the NTIA award.

Further, recipients must monitor award activities for common fraud schemes, including but not limited to:

- false claims for materials and labor;
- bribes related to the acquisition of materials and labor;
- product substitution;
- mismarking or mislabeling on products and materials; and
- time and materials overcharging.

Should a Recipient detect any fraud schemes or any other suspicious activity, the grant recipient must contact its assigned NTIA Federal Program Officer and the Department of Commerce, Office of Inspector General Hotline, as indicated at <https://www.oig.doc.gov/Pages/Contact-Us.aspx>, as soon as possible. Additionally, in accordance with 2 CFR § 200.113, an applicant or recipient must disclose, in a timely manner, in writing to the Federal awarding agency or pass-through entity all violations of Federal criminal law involving fraud, bribery, or gratuity violations potentially affecting the Federal award. Non-Federal entities that have received a Federal award are required to report certain civil, criminal, or administrative proceedings to SAM.gov. Failure to make required disclosures can result in any of the remedies described in Section 200.339. (*See also* 2 CFR Part 180, 31 U.S.C. § 3321, and 41 U.S.C. § 2313.)

## **20. Protection of Whistleblowers**

The Department of Commerce Financial Assistance Standard Terms and Conditions are incorporated into every NTIA grant award. Section F.05 of these Terms and Conditions states that each award is subject to the whistleblower protections afforded by 41 U.S.C. § 4712 (Enhancement of contractor protection from reprisal for disclosure of certain information).

Generally, this law provides that an employee or contractor (including subcontractors and personal services contractors) of a non-Federal entity may not be discharged, demoted, or otherwise discriminated against as a reprisal for disclosing to a person or body information that the employee reasonably believes is evidence of gross mismanagement of a Federal award, subaward, or a contract under a Federal award or subaward, a gross waste of Federal funds, an abuse of authority relating to a Federal award or subaward or contract under a Federal award or subaward, a substantial and specific danger to public health or safety, or a violation of law, rule, or regulation related to a Federal award, subaward, or contract under a Federal award or subaward.

Non-Federal entities and contractors under Federal awards and subawards must inform their employees in writing of the rights and remedies provided under 41 U.S.C. § 4712, in the predominant native language of the workforce.

A person that believes they have been the subject of retaliation for protected whistleblowing can contact the Department of Commerce, Office of Inspector General Hotline, as indicated at <https://www.oig.doc.gov/Pages/Hotline.aspx>, or the U.S. Office of Special Counsel, toll free at 1-800-872-9855.

BUDGET INFORMATION - Construction Programs

NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.

COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b)
1. Administrative and legal expenses	\$ 2,458,377	\$	\$ 2,458,377
2. Land, structures, rights-of-way, appraisals, etc.	\$ 0	\$	\$ 0
3. Relocation expenses and payments	\$ 0	\$	\$ 0
4. Architectural and engineering fees	\$ 4,181,443	\$	\$ 4,181,443
5. Other architectural and engineering fees	\$	\$	\$ 0
6. Project inspection fees	\$	\$	\$ 0
7. Site work	\$	\$	\$ 0
8. Demolition and removal	\$	\$	\$ 0
9. Construction	\$ 35,456,163	\$	\$ 35,456,163
10. Equipment	\$	\$	\$ 0
11. Miscellaneous	\$	\$	\$ 0
12. SUBTOTAL (sum of lines 1-11)	\$ 42,095,983	\$ 0	\$ 42,095,983
13. Contingencies	\$ 1,187,971	\$	\$ 1,187,971
14. SUBTOTAL	\$ 43,283,954	\$ 0	\$ 43,283,954
15. Project (program) income	\$ 0	\$	\$ 0
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 43,283,954	\$ 0	\$ 43,283,954
FEDERAL FUNDING			
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.	Enter eligible costs from line 16c Multiply X <u>69.96</u> %		\$ 30,281,277



FORM CD-451 (REV. 11/18)		U.S. DEPARTMENT OF COMMERCE		X GRANT      COOPERATIVE AGREEMENT	
<b>AMENDMENT TO FINANCIAL ASSISTANCE AWARD</b>				<b>AWARD NUMBER</b> 04-40-MM588	
<b>CFDA NO. AND NAME</b> 11.033 - Middle Mile (Broadband) Grant Program					
<b>PROJECT TITLE</b> Pima County Regional Middle Mile Fiber Optic Ring					
<b>RECIPIENT NAME</b> Pima County				<b>AMENDMENT NUMBER</b> 1	
<b>STREET ADDRESS</b> 130 W. Congress St., 3rd Floor				<b>EFFECTIVE DATE</b> 12/01/2023	
<b>CITY, STATE ZIP</b> Tucson, AZ 85701-1317				<b>EXTEND PERIOD OF PERFORMANCE TO (IF APPLICABLE)</b>	
<b>COSTS ARE REVISED AS FOLLOWS:</b>		<b>PREVIOUS ESTIMATED COST</b>	<b>ADD</b>	<b>DEDUCT</b>	<b>TOTAL ESTIMATED COST</b>
<b>FEDERAL SHARE OF COST</b>		\$30,281,277.00	\$0.00	\$0.00	\$30,281,277.00
<b>RECIPIENT SHARE OF COST</b>		\$13,002,677.00	\$0.00	\$0.00	\$13,002,677.00
<b>TOTAL ESTIMATED COST</b>		\$43,283,954.00	\$0.00	\$0.00	\$43,283,954.00
<b>REASON(S) FOR AMENDMENT</b>  The reason for this amendment is to add Specific Award Condition #20 Equipment.  All other terms and conditions remain unchanged.					
<p>This Amendment Document (Form CD-451) signed by the Grants Officer constitutes an Amendment of the above-referenced Award, which may include an obligation of Federal funding. By signing this Form CD-451, the Recipient agrees to comply with the Amendment provisions checked below and attached, as well as previous provisions incorporated into the Award. If not signed and returned without modification by the Recipient within 30 days of receipt, the Grants Officer may unilaterally withdraw this Amendment offer and de-obligate any associated funds.</p> <p>X SPECIFIC AWARD CONDITION(S)</p> <p>LINE ITEM BUDGET</p> <p>OTHER(S)</p>					
<b>SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER</b>  Andrew Rittgers <b>ANDREW RITTGERS</b> <small>Digitally signed by ANDREW RITTGERS Date: 2023.12.01 08:58:53 -07'00'</small>				<b>DATE</b>  12/1/2023	
<b>TYPED NAME, TYPED TITLE, AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL</b>				<b>DATE</b>	

Award Number: 04-40-MM588, Amendment Number 1  
Federal Program Officer: Joshua Deixler  
Requisition Number: MM588  
Employer Identification Number: 866000543  
UEI Number: JBMBVGUK5LF1  
Recipient ID: 1132101  
Requestor ID: 1132101

Award ACCS Information

Bureau Code	FCFY	Project-Task	Org Code	Obj Class	Obligation Amount
61	2023	4720001-000	06-00-0000-00-00-00-00	41-19-00-00	\$0.00

Award Contact Information

Contact Name	Contact Type	Email	Phone
Michelle Simon	Administrative	michelle.simon@pima.gov	5205945654

NIST Grants Officer:

Andrew Rittgers  
100 Bureau Drive, MS 1650  
Gaithersburg, MD 20899-1650  
(303) 497-7307

NIST Grants Specialist:

Gordana Zuber  
100 Bureau Drive, MS 1650  
Gaithersburg, MD 20899-1650  
(301) 975-4141

**NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY  
MIDDLE MILE GRANT PROGRAM  
FINANCIAL ASSISTANCE  
SPECIFIC AWARD CONDITIONS**

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**20. Equipment:**

A. Estimated Useful Life and Compliance with 2 C.F.R. § 200.313. For purposes of this award, the estimated useful life of the equipment to be acquired by the recipient varies from the date that such equipment is placed into service on the project. Additional useful life guidance will be forthcoming. During the estimated useful life of the equipment, the recipient must adhere to the requirements contained in the terms and conditions of the award, including adherence to the use, management, and disposition requirements set forth in 2 C.F.R. § 200.313.

B. UCC-1 Filing & Attorney's Certification. Pursuant to 2 C.F.R. § 200.316, after acquiring all or any portion of the equipment under this award, the recipient shall properly file a UCC-1 with the appropriate State office where the equipment will be located in accordance with the State's Uniform Commercial Code (UCC). This security interest shall be executed in advance of any sale or lease and not later than closeout of the grant. The UCC filing(s) must include the below or substantively similar language providing public notice of the Federal Interest in the equipment acquired with NTIA Middle Mile funding. Also, a clear and accurate inventory of the subject equipment must be attached to and filed with the UCC-1.

*The Equipment set forth at Attachment A hereto was acquired with funding under a financial assistance award (Award Number 04-40-MM588) issued by the National Institute of Standards and Technology, U.S. Department of Commerce. As such, the U.S. Department of Commerce retains an undivided equitable reversionary interest (Federal Interest) in the Equipment for the estimated useful life thereof, from when the equipment is placed into service on the project.*

In addition, within 15 calendar days following the required UCC filing(s), the recipient must be ready if requested by the Grants Officer to provide the Grants Officer with complete and certified copies of the filed UCC forms and attachments for the equipment acquired with NTIA Middle Mile funding, along with a certification from legal counsel, licensed by the State within which the filings were made (Attorney's Certification), that the UCC filing was properly executed and filed in accordance with applicable state law. The Attorney's Certification must include the below or substantively similar language:

NIST Award Number: 04-40-MM588

*Pursuant to 28 U.S.C. § 1746, I hereby certify as follows:*

*I am legal counsel at \_\_\_\_\_.*

*I am licensed to practice law in the State of \_\_\_\_\_ having been a license holder of said state and in good standing since \_\_\_\_\_.*

*Attached hereto is a certified copy of UCC-1 form(s) reflecting that this document was filed in the \_\_\_\_\_ on \_\_\_\_\_, 202x, bearing the following filing information [insert filing data, e.g., instrument number, etc.] and consists of \_\_\_\_\_ recorded pages as certified by the Secretary of State of \_\_\_\_\_.*

*I certify that this UCC-1 form(s) has/have been validly executed and properly recorded as noted above.*

*I certify under the penalty of perjury that the foregoing is true and correct.*

*Executed on this \_\_\_\_\_ day of \_\_\_\_\_.*

\_\_\_\_\_  
*(Attorney name and title)*

*(Address and phone number)*

In addition, during the estimated useful life of the equipment, the recipient is hereby authorized and directed by the Grants Officer to timely file any necessary UCC-3 continuation statements (or other filings) for the subject equipment consistent with the requirements set forth in this specific award condition. If requested by the Grants Officer, copies of all filed UCC continuation statements, together with an Attorney's Certification, must be submitted to the Grants Officer within 15 calendar days following each such filing. The UCC filing(s) and the accompanying Attorney's Certification(s) must be acceptable in form and in substance to the NIST Grants Officer. If the Grants Officer does not request the UCC filing(s) and Attorney's Certification, the recipient must continue to maintain records of the filing(s) and Attorney's Certification in compliance with 2 CFR § 200.334 Retention requirements for records.

## MMG Budget Narrative Template

Applicant Name: **Pima County, Arizona**

Applicant Type: **Single Entity**

Proposed Period of Performance: **March 1, 2023 – April 30, 2028**

Total Project Costs: **\$43,283,954**

Total Federal Grant Request: **\$30,281,277**

Total Matching Funds (Cash): **\$9,202,380**

Total Matching Funds (In-Kind): **\$3,800,297**

Total Matching Funds (Cash + In-Kind): **\$13,002,677**

Total Matching Funds (Cash + In-Kind) as Percentage of Total Project Costs: **30.04%**

As required in the Notice of Funding Opportunity, the Pima County Middle Mile Network Project will adopt fiscally sustainable middle mile strategies to ensure long-term provision of service in light of reasonably anticipated costs. The Pro Forma financial projections are attached to the application showing net revenue after initial construction of the middle mile network infrastructure. The county's historical and audited financial statements are also included as an attachment showing the strong financial position of the county and substantiating the county's ability to sustain the proposed project long term.

There are two source of funds proposed to meet the cash match requirements

- Pima County will utilize primary and secondary property tax.
- Municipalities will utilize local sales tax

No federal funds will be used as match for the grant

The sources of cash match are well established funding streams to the county and local municipalities. Revenue forecasts are stable and propose low risk to the availability of funds for the project. To mitigate risk, a capital improvement project account will be established in a restrictive fund to hold matching funds and will be disbursed in accordance with the capital investment schedule.

### **1. Administrative and Legal Expenses - \$2,458,377**

Provide a narrative that includes a detailed description and justification of the estimated costs, proposed activities, and additional information as needed.

Activity	Total Time	Rate	Total Cost
----------	------------	------	------------

Project Manager	10,400 hrs (5 yrs x 2080 hrs/yr)	\$47/hr (2,080 hrs x 5 yrs) Plus 35% Fringe Benefit Cost	\$488,800 Salary <u>\$171,080 Fringe</u> \$659,880 Total
Construction Specialist	10,400 hrs (5 yrs x 2080 hrs/yr)	\$30/hr (2,080 hrs x 5 yrs) Plus 35% Fringe Benefit Cost	\$312,000 Salary <u>\$109,200 Fringe</u> \$421,200 Total
Administrative Specialist	10,400 hrs (5 yrs x 2080 hrs/yr)	\$22/hr (2,080 hrs x 5 yrs) Plus 35% Fringe Benefit Cost	\$228,800 Salary <u>\$ 80,080 Fringe</u> \$308,880 Total
Administrative Support Specialist	10,400 hrs (5 yrs x 2080 hrs/yr)	\$18/hr (2,080 hrs x 5 yrs) Plus 35% Fringe Benefit Cost	\$187,200 Salary <u>\$ 65,520 Fringe</u> \$252,720 Total
Program Lead Deputy Director, Library Services	2,080 hrs (5 yrs x 2,080 hrs/yr x 20%)	\$47.95/hr (416 hrs x 5 yrs) Plus 35% Fringe Benefit Cost	\$97,736 Salary <u>\$34,908 Fringe</u> \$134,644 Total
IT Director	1,040 hrs (5 yrs x 2080 hrs/yr x 10%)	\$62.32/hr (208 hrs x 5 yrs) Plus 35% Fringe Benefit Cost	\$64,813 Salary <u>\$22,684 Fringe</u> \$87,497 Total
Grant Manager	520 hrs (5 yrs x 2080 hrs/yr x 5%)	\$20.45/hr (104 hrs x 5 yrs) Plus 35% Fringe Benefit Cost	\$10,634 Salary <u>\$ 3,722 Fringe</u> \$14,356 Total
Finance/Procurement	104 hrs \$2,716 per year	(20.8 hrs x 5 yrs) Plus 35% Fringe Benefit Cost	\$10,060 Salary <u>\$ 3,520 Fringe</u> \$13,580 Total

County Communications Services	\$4,319.00 per year (5 yrs x 2080 hrs/yr x 2%)	(41.60 hrs x 5 yrs)	\$21,595
County Web Team Services	\$3,250.00 per year (5 yrs x 2080 hrs/yr x 2%)	(41.60 hrs x 5 yrs)	\$16,250
County Real Property & Planning	\$3,320.00 per year (5 yrs x 2080 hrs/yr x 1%)	(20.80 hrs x 5 yrs)	\$16,600
Computer/Software Usage	3.41 FTEs	\$2,500 per FTE (3.41 FTEs x \$2,500 x 5 yrs)	\$42,625
Supplies Usage	3.41 FTEs	\$1,000 per FTE (3.41 FTEs x \$1,000 x 5 yrs)	\$17,050
Equipment Usage	\$150/month	\$150/mo x 12 months x 5 yrs	\$ 9,000
Facilities Usage	\$500/month	\$500/mo x 12 months x 5 yrs	\$30,000
Municipality Planning & Zoning/ROW oversight	\$6,000/year	\$6,000 per year x 4 years during construction period	\$24,000
Project Collaborators - Meeting Participation	\$2,500/year	\$2,500 per year x 5 years	\$12,500
Program Manager - Office of Conservation & Sustainability	\$42,000/year	\$42,000 per year x 3 years	\$126,000
NEPA Compliance Consultant	One time	\$250,000	\$250,000
		<b>Total Administrative</b>	<b>\$2,458,377</b>

Budget Justification for Federally funded activities:

Project Manager (\$659,880) – Staff time estimated 2,080 hours @ \$47 per hour (exact staff TBD) for 5 years to oversee the implementation of the project. The request include fringe benefit charges at 35% and includes Mandatory Retirement Plan Contribution, FICA, Medicare, Health Benefits, Workers Compensation. This position will be funded by the applicant and used as matching funds.

Construction Specialist (\$421,200) - Staff time estimated 2,080 hours @ \$30 per hour (exact staff TBD) for 5 years to provide construction support services for the project. The request include fringe benefit charges at 35% and includes Mandatory Retirement Plan Contribution, FICA, Medicare, Health Benefits, Workers Compensation. This position will be funded by the applicant and used as matching funds.

Administrative Specialist (\$308,880) - Staff time estimated 2,080 hours @ \$22.00 per hour (exact staff TBD) for 5 years to provide senior administrative support for the project manager. The request include fringe benefit charges at 35% and includes Mandatory Retirement Plan Contribution, FICA, Medicare, Health Benefits, Workers Compensation. This position will be funded by the applicant and used as matching funds.

Administrative Support Specialist (\$252,720) - Staff time estimated 2,080 hours @ \$18.00 per hour (exact staff TBD) for 5 years to provide administrative support for the project manager. The request include fringe benefit charges at 35% and includes Mandatory Retirement Plan Contribution, FICA, Medicare, Health Benefits, Workers Compensation. This position will be funded by the applicant and used as matching funds.

Program Lead - Deputy Director, Library Services (\$134,644) - Staff time estimated at 20% or 416 hours per year @ \$47.95 per hour (exact staff TBD) for 5 years to provide leadership oversight and direction for the project manager and staff. The request include fringe benefit charges at 35% and includes Mandatory Retirement Plan Contribution, FICA, Medicare, Health Benefits, Workers Compensation. This position will be funded by the applicant and used as matching funds.

IT Director (\$87,497) - Staff time estimated at 10% or 208 hours per year @ \$62.32 per hour for 5 years to provide technical oversight for the project manager and staff. The request include fringe benefit charges at 35% and includes Mandatory Retirement Plan Contribution, FICA, Medicare, Health Benefits, Workers Compensation. This position will be funded by the applicant and used as matching funds.

Grant Manager (\$14,356) - Staff time estimated at 5% or 104 hours per year @ \$20.45 per hour for 5 years to provide post award grant management for the project. The request include fringe benefit charges at 35% and includes Mandatory Retirement Plan Contribution, FICA, Medicare, Health Benefits, Workers Compensation. This position will be funded by the applicant and used as matching funds.



Finance/Procurement (\$13,580) - Staff time estimated at 1% or 20.8 hrs per year for 5 years to facilitate the RFP process for the project. The request include fringe benefit charges at 35% and includes Mandatory Retirement Plan Contribution, FICA, Medicare, Health Benefits, Workers Compensation. This position will be funded by the applicant and used as matching funds.

County Communications Services (\$21,595) - Staff time estimated at 2% or 41.6 hrs per year for 5 years to provide communication support for the project. The request include fringe benefit charges at 35% and includes Mandatory Retirement Plan Contribution, FICA, Medicare, Health Benefits, Workers Compensation. This position will be funded by the applicant and used as matching funds.

County Web Team Services (\$16,250) - Staff time estimated at 2% or 41.6 hrs per year for 5 years to maintain web updates for the project. The request include fringe benefit charges at 35% and includes Mandatory Retirement Plan Contribution, FICA, Medicare, Health Benefits, Workers Compensation. This position will be funded by the applicant and used as matching funds.

County Real Property & Planning (\$16,600) - Staff time estimated at 1% or 20.8 hrs per year for 5 years to provide communication support for the project. The request include fringe benefit charges at 35% and includes Mandatory Retirement Plan Contribution, FICA, Medicare, Health Benefits, Workers Compensation. This position will be funded by the applicant and used as matching funds.

Computer/Software Usage (\$42,625) – An allocation of \$2,500 per FTE for county support and software licensing for each of the 3.41 FTEs employee for the 5 year project period. This will be funded by the applicant and used as matching funds.

Supplies Usage (\$17,050) - An allocation of \$1,000 per FTE for usage of supplies such as paper, toner, and general office supplies for each of the 3.41 FTEs employee for the 5 year project period. This will be funded by the applicant and used as matching funds.

Equipment Usage (\$9,000) - An allocation of \$150 per month for 12 months for general equipment usage for project staff for the 5 year project period. This will be funded by the applicant and used as matching funds.

Facilities Usage (\$30,000) - An allocation of \$500 per month for 12 months for general facilities usage for project staff for the 5 year project period. This will be funded by the applicant and used as matching funds.

Municipality Planning & Zoning/ROW oversight (\$24,000) - An allocation of \$6,000 per year for 4 years during the pre-construction and construction months for general facilities usage for project staff. This will be funded by the applicant through in-kind contributions from local municipalities and used as matching funds.

Project Collaborators - Meeting Participation (\$12,500) - An allocation of \$2,500 per year for 5 years for quarterly stakeholder meetings during the project period. Four meetings per year x 5 years 15 participants @ \$50/hr that include average salary and fringe rates for the participants.

This will be funded by the applicant through in-kind contributions from local municipalities and used as matching funds.

Program Manager - Office of Conservation & Sustainability (\$126,000) - An allocation of \$42,000 per year for 3 years during the pre-construction and construction months for environmental oversight including NEPA compliance. This will be funded by the applicant through in-kind contributions from the county and used as matching funds.

NEPA Compliance Consultant – A one-time cost of \$250,000 to hire an expert consultant to conduct an environmental assessment for NEPA Compliance. The cost of the consultant is requested from federal sources.

Federal Funds - \$ 250,000

Match Funds - \$2,208,377

Total - \$2,458,377

## **2. Land, structures, rights-of-way, appraisals, etc. - \$0.00**

Provide a narrative that includes a detailed description and justification of the estimated costs, proposed activities, and additional information as needed.

N/A

## **3. Relocation expenses and payments - \$0.00**

Provide a narrative that includes a detailed description and justification of the estimated costs, proposed activities, and additional information as needed.

N/A

## **4. Architectural and engineering fees - \$4,181,443**

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
Survey/Design Engineering	Linear Feet	2.91	707,520	\$2,058,883
Permitting Fees	Linear Feet	3.00	707,520	\$2,122,560
			<b>TOTAL</b>	<b>\$4,181,443</b>

Budget Justification for Federally funded activities:

Survey/Design Engineering (\$2,058,883) - To comply with Arizona Department of Transportation, Pima County Transportation Department and City/town ordinance the entire

project path must be fully engineered defining exact path, depth, crossing, construction material and methods. Before any other project activity can begin, a full engineering design is required to obtain proper project permitting. As part of this process the project path is surveyed, and current utilities and infrastructure is marked. Twenty percent or \$411,777 of the cost will be used as a cash match.

Permitting Fee (\$2,122,560) – In order to obtain road rights-of-way permits, easements and construction permits to begin the project various fees must be paid to respective state, county, city and towns. Seventy five (75%) or \$1,591,920 of the cost of permitting fees will waived by the county and municipalities and used as in-kind match.

Federal Funds - \$2,177,746

Match Funds - \$2,003,697

Total - \$4,181,443

**5. Other architectural and engineering fees - \$0.00**

Provide a narrative that includes a detailed description and justification of the estimated costs, proposed activities, and additional information as needed.

N/A

**6. Project Inspection fees - \$0.00**

Provide a narrative that includes a detailed description and justification of the estimated costs, proposed activities, and additional information as needed.

N/A

**7. Site work - \$0.00**

N/A

**8. Demolition and removal - \$0.00**

N/A

**9. Construction - \$36,644,134**

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
Plow	Linear Feet	9.00	237,000	\$2,133,000
Urban	Linear Feet	31.57	211,200	\$6,667,584
Suburbs	Linear Feet	25.00	237,600	\$5,940,000
Rock	Linear Feet	90.00	21,120	\$1,900,800
Long Bores	Linear Feet	500.00	5,280	\$2,640,000

6'x4'x7' Manhole	Each	15,059.00	56	\$ 843,304
(2) Fiber Placement +10%	Linear Feet	1.25	778,272 x 2	\$1,945,680
Fiber Splicing	Each	30.00	12,528 x 2	\$ 751,680
Fiber Testing	Each	25.00	12,528 x 2	\$ 626,400
Lumen CO Entrance	Each	32,000	4	\$ 128,000
			Total Construction	\$23,576,448
Construction Materials				
2'x6'x4' Vault	Each	1,800.00	472	\$ 849,600
6'x4'x7' Manhole	Each	10,916.00	56	\$ 611,296
Conduit	Linear Feet	2.30	1,556,544	\$3,580,051
(2) 432 Microfiber	Linear feet	4.03	813,648 x 2	\$6,558,003
Splice Cases	Each	450.00	100	\$ 45,000
Misc. Materials	Each	235,764.48	1	\$ 235,764
Materials Contingency			10%	\$1,187,971
			Total Construction Materials	\$13,067,686
			<b>TOTAL</b>	<b>\$36,644,134</b>

Budget Justification for Federally funded activities:

Plowing will be used as the construction method on the west side of the project where the ground is level, soft and very little infrastructure is present. This segment has the greatest distance and the lowest cost per foot but is limited to this region because of favorable soil conditions. Some boring may be required to cross roadways but would be limited and weighed against cutting the road for access.

Urban, Suburbs will be the time-consuming portion of the project involving the Southern, Eastern and Northern portion of the project. The construction technology in these regions will involve both trenching and boring. Trenching will be utilized in open areas and along

roadways wherever possible. All road crossings, washes, and sidewalks will require boring.

Rock due to rocky areas along the mountain range on the North/East portion of the project an approx. 4-mile area will require heavy rock boring. This is very costly due to the difficulty of the bore and the equipment required to penetrate solid rock. It is a relatively small section of the project but necessary to service the North/East region.

Long Bore at two points in the project it is necessary to perform an extended bore. Both locations involve Interstate freeways where the project must go under the freeway. At the North I-10 crossing not only is it necessary to cross the freeway but also a CAP canal and a railroad that both run along the side of the I-10 freeway. The second crossing is at the Valencia Rd and I-19 crossing. Due to the congestion and infrastructure located at this point, in order to facilitate the I-19 and Valencia exchange a long bore is also required to accommodate the infrastructure span.

Fiber placement, Splicing and Testing the placement, splicing and testing at each of the distribution and backbone vaults is covered in this budget line. At each of the vaults (2) 432 micro-fiber SMF-28 Ultra Fiber must be spliced and tested. The backbone vaults will have a splice point at 25,000 feet. The distribution vaults will be at 3,000 feet to feed the splice and distribution cases. The spacing of the vaults also facilitates the reel size of the conduit to minimize loss.

Based on the Operational Manual and best practices of a Tier 1 carrier, it was confirmed that 15% slack fiber is sufficient to address the interconnection needs of other providers. Fifty feet for every 1,000 feet is the standard. The proposed network design includes a ground vault at approximately every 3,000 feet. The slack fiber proposed is 150 feet, which meets the best practice standard 50ft/1,000ft. Calculations for the units for splices and testing is included as an attachment.

Lateral to Lumen Central Office (CO) the project initially builds (4) lateral builds from the project ring to Lumen Tier 1 point of presence (POP) CO sights. This will be increased once the project is complete and resource swapping can be utilized to open up additional paths to multiple COs farther into the Tucson metro area.

The proposed points of interconnection have sufficient space for providers to interconnect. This was confirmed by Lumen Technologies. The interconnect points terminate at Tier 1 co-location points. The dedicated Lumen co-location point addresses are included as an attachment.

Materials project materials consist of 472 2'x6'x4 distribution vaults every 3,000 ft., 56 6'x4'x7' splice vaults every 25,000 ft., Conduit providing two separate redundant fiber paths and separation between public fiber resources and commercially available lease resources for carriers for a total of 1,556,544 ft. In addition to conduit, one of each of the two conduit pathways will be loaded with 432 micro-fiber SMF-28 Ultra Fiber 813,648 x (2) with corresponding splice cases.



Each conduit will be occupied by 1-432 strand fiber cable leaving zero idle capacity to ensure compliance with 2 CFR part 200.446

Miscellaneous materials are consumable materials used in the construction process such as necessary small tools, fasteners, fixtures, sealants, adhesives, etc. There is a 10% contingency added to the total materials cost to cover inflationary price increases.

Federal Funds - \$27,853,531

Match Funds - \$ 8,790,603

Total - \$36,644,134

**10. Equipment - \$0**

Description	Unit Basis	Unit Cost	Number of Units	Total Cost
			<b>Total Equipment</b>	<b>\$0</b>

Budget Narrative:

Federal Funds - \$0

Match Funds - \$0

Total - \$0

**11. Miscellaneous - \$0.00**

N/A

**12. SUBTOTAL (sum of lines 1-11) - \$43,283,954**

**13. Contingencies -**

Provide a narrative that includes a detailed description and justification of the estimated contingency costs, if any, and additional information as needed. Any contingency costs must be reasonable.

**14. SUBTOTAL (sum of lines 12-13) - \$43,283,954**

**15. Project (program) income - \$0.00**

Provide a narrative that includes a detailed description of the estimated program income, if any, to be earned during the grant period and additional information as needed.

N/A

**16. TOTAL PROJECT COSTS - \$43,283,954**

Application for Federal Assistance SF-424		
<b>* 1. Type of Submission:</b> <input type="checkbox"/> Preapplication <input checked="" type="checkbox"/> Application <input type="checkbox"/> Changed/Corrected Application		
<b>* 2. Type of Application:</b> <input checked="" type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision		
<b>* If Revision, select appropriate letter(s):</b> <input type="text"/> <b>* Other (Specify):</b> <input type="text"/>		
<b>* 3. Date Received:</b> 04-05-2023		<b>4. Applicant Identifier:</b> <input type="text"/>
<b>5a. Federal Entity Identifier:</b> <input type="text"/>		<b>5b. Federal Award Identifier:</b> <input type="text"/>
<b>State Use Only:</b>		
<b>6. Date Received by State:</b> <input type="text"/>		<b>7. State Application Identifier:</b> <input type="text"/>
<b>8. APPLICANT INFORMATION:</b>		
<b>* a. Legal Name:</b> Pima County		
<b>* b. Employer/Taxpayer Identification Number (EIN/TIN):</b> 86-6000543		<b>* c. UEI:</b> JBMBVGUK5LF1
<b>d. Address:</b>		
<b>* Street1:</b> 130 W. Congress St., 3rd Floor		
<b>Street2:</b> <input type="text"/>		
<b>* City:</b> Tucson		
<b>County/Parish:</b> <input type="text"/>		
<b>* State:</b> Arizona		
<b>Province:</b> <input type="text"/>		
<b>* Country:</b> USA: UNITED STATES		
<b>* Zip / Postal Code:</b> 85701-1317		
<b>e. Organizational Unit:</b>		
<b>Department Name:</b> <input type="text"/>		<b>Division Name:</b> <input type="text"/>
<b>f. Name and contact information of person to be contacted on matters involving this application:</b>		
<b>Prefix:</b> <input type="text"/>		<b>* First Name:</b> Michelle
<b>Middle Name:</b> <input type="text"/>		
<b>* Last Name:</b> Simon		
<b>Suffix:</b> <input type="text"/>		
<b>Title:</b> Deputy Director, Support Services		
<b>Organizational Affiliation:</b> <input type="text"/>		
<b>* Telephone Number:</b> 5205945654		<b>Fax Number:</b> <input type="text"/>
<b>* Email:</b> michelle.simon@pima.gov		

Application for Federal Assistance SF-424

\* 9. Type of Applicant 1: Select Applicant Type:

B: County Government

Type of Applicant 2: Select Applicant Type:

Type of Applicant 3: Select Applicant Type:

\* Other (specify):

\* 10. Name of Federal Agency:

US Department of Commerce (DOC)

11. Catalog of Federal Domestic Assistance Number:

11.033

CFDA Title:

Middle Mile Grant Program

\* 12. Funding Opportunity Number:

NTIA-MMG-2022

\* Title:

Middle Mile Grant Program

13. Competition Identification Number:

Title:

14. Areas Affected by Project (Cities, Counties, States, etc.):

Add Attachment

Delete Attachment

View Attachment

\* 15. Descriptive Title of Applicant's Project:

Pima County Regional Middle Mile Fiber Optic Ring

Attach supporting documents as specified in agency instructions.

Add Attachments

Delete Attachments

View Attachments

**Application for Federal Assistance SF-424****16. Congressional Districts Of:**\* a. Applicant **AZ-03**\* b. Program/Project **AZ-03**

Attach an additional list of Program/Project Congressional Districts if needed.

AZ-01, AZ-02

Add Attachment

Delete Attachment

View Attachment

**17. Proposed Project:**\* a. Start Date: **05-01-2023**\* b. End Date: **04-30-2028****18. Estimated Funding (\$):**\* a. Federal **30,281,277**\* b. Applicant **13,002,677**\* c. State **0**\* d. Local **0**\* e. Other **0**\* f. Program Income **0**\* g. TOTAL **43,283,954****\* 19. Is Application Subject to Review By State Under Executive Order 12372 Process?**☐ a. This application was made available to the State under the Executive Order 12372 Process for review on .☒ b. Program is subject to E.O. 12372 but has not been selected by the State for review.☐ c. Program is not covered by E.O. 12372.**\* 20. Is the Applicant Delinquent On Any Federal Debt? (If "Yes," provide explanation in attachment.)**☐ Yes ☒ No

If "Yes", provide explanation and attach

Add Attachment

Delete Attachment

View Attachment

21. \*By signing this application, I certify (1) to the statements contained in the list of certifications\*\* and (2) that the statements herein are true, complete and accurate to the best of my knowledge. I also provide the required assurances\*\* and agree to comply with any resulting terms if I accept an award. I am aware that any false, fictitious, or fraudulent statements or claims may subject me to criminal, civil, or administrative penalties. (U.S. Code, Title 218, Section 1001)

☒ \*\* I AGREE

\*\* The list of certifications and assurances, or an internet site where you may obtain this list, is contained in the announcement or agency specific instructions.

**Authorized Representative:**Prefix: Middle Name: \* First Name: **Michelle**

Middle Name:

\* Last Name: **Simon**

Suffix:

\* Title: **Deputy Director, Support Services**\* Telephone Number: **5205945654**

Fax Number:

\* Email: **michelle.simon@pima.gov**\* Signature of Authorized Representative: **Michelle Simon**\* Date Signed: **04-05-2023**



BUDGET INFORMATION - Construction Programs			
NOTE: Certain Federal assistance programs require additional computations to arrive at the Federal share of project costs eligible for participation. If such is the case, you will be notified.			
COST CLASSIFICATION	a. Total Cost	b. Costs Not Allowable for Participation	c. Total Allowable Costs (Columns a-b)
1. Administrative and legal expenses	\$ 2,458,377	\$	\$ 2,458,377
2. Land, structures, rights-of-way, appraisals, etc.	\$ 0	\$	\$ 0
3. Relocation expenses and payments	\$ 0	\$	\$ 0
4. Architectural and engineering fees	\$ 4,181,443	\$	\$ 4,181,443
5. Other architectural and engineering fees	\$	\$	\$ 0
6. Project inspection fees	\$	\$	\$ 0
7. Site work	\$	\$	\$ 0
8. Demolition and removal	\$	\$	\$ 0
9. Construction	\$ 36,644,134	\$	\$ 36,644,134
10. Equipment	\$	\$	\$ 0
11. Miscellaneous	\$	\$	\$ 0
12. SUBTOTAL (sum of lines 1-11)	\$ 43,283,954	\$ 0	\$ 43,283,954
13. Contingencies	\$	\$	\$ 0
14. SUBTOTAL	\$ 43,283,954	\$ 0	\$ 43,283,954
15. Project (program) income	\$ 0	\$	\$ 0
16. TOTAL PROJECT COSTS (subtract #15 from #14)	\$ 43,283,954	\$ 0	\$ 43,283,954
FEDERAL FUNDING			
17. Federal assistance requested, calculate as follows: (Consult Federal agency for Federal percentage share.) Enter the resulting Federal share.		Enter eligible costs from line 16c Multiply X 69.96 %	\$ 30,281,277

# NTIA MMG Program Table of Funded Project Participants & Unfunded Collaborators

OMB Control No. 0680-0046

\*entries highlighted in grey are examples

Expiration Date: 11/30/2022

Administrative Role	Organization	Street Address	City	State	Zip Code	Details on Role	Scope of Work Description:	Scope of Work: Total Project Cost	Scope of Work: Federal Funding Amount Requested	Applicant's In-Kind Match Valuation	Applicant's Cash match
Applicant	Provider XYZ						For example, Providers should list route segments by city and state	\$ 3,000,000.00	\$ 3,000,000.00		\$ 1,500,000.00
Applicant	State Economic Development Dept.	101 Main St.	Capital City	State	1010		Grant administrator and fiscal agent for the NTIA MMG program. If awarded, will manage funds to sub-recipients.	\$ 37,000.00	\$ 37,000.00		\$ -
Applicant	Pima County		Tucson	AZ	85737		Grant administrator and fiscal agent for the NTIA MMG program. Responsible for managing funds for the project	\$ 42,807,994.00	\$ 30,081,377.00	\$ 2,082,377.00	\$ 9,302,880.00
Match Providers	Town of Oro Valley - Match Contributor	11000 N La Cañada Dr	Tucson	AZ	85737		Provide waiver of permitting fees and access to right of ways			\$ 799,960.00	\$ -
Match Providers	Town of Sahuarita - Match Contributor	375 W Sahuarita Center Way	Sahuarita	AZ	85629		Provide waiver of permitting fees and access to right of ways			\$ 799,960.00	
Unfunded Collaborators	City of Tucson	255 W Alameda St	Tucson	AZ	85701		Provide access to right of ways				
Unfunded Collaborators	Arizona Broadband Stakeholders Network COVID-19 Digital Access Task Force	2149 N Sonoma Ave	Tucson	AZ	85712		Advisory body, community input				
Unfunded Collaborators	Arizona Community Action Agencies	2797 E Aljo Way	Tucson	AZ	85713		Advisory body, community input				
Unfunded Collaborators	Arizona Department of Education - Office of Digital Teaching and Learning	416 W Congress	Tucson	AZ	85701		Advisory body, community input				
Unfunded Collaborators	Arizona State Library	101 N Stone Ave	Tucson	AZ	85701		Advisory body, community input				
Unfunded Collaborators	Arizona Tech Council	1215 E Pennsylvania St	Tucson	AZ	85714		Advisory body, community input				
Unfunded Collaborators	ATC, IRC	1011 N Craycroft Rd	Tucson	AZ	85711		Advisory body, community input				
Unfunded Collaborators	Boys and Girls Club	3155 E Grant Rd	Tucson	AZ	85716		Advisory body, community input				
Unfunded Collaborators	Chicanos Por La Causa	1325 N Oracle Rd	Tucson	AZ	85705		Advisory body, community input				
Unfunded Collaborators	City of Tucson Housing and Community Development	310 N Commerce Park Loop	Tucson	AZ	85745		Advisory body, community input				

Unfunded Collaborators	City of Tucson Office of Economic Initiatives	255 W Alameda St	Tucson	AZ	85701		Advisory body, community input				
Unfunded Collaborators	Community Action Programs and Services OCHER	2797 E Aljo Way	Tucson	AZ	85718		Advisory body, community input				
Unfunded Collaborators	Goodwill Industries of Southern Arizona	1940 E Silverlake Rd	Tucson	AZ	85718		Advisory body, community input				
Unfunded Collaborators	Insight	1038 E Fort Lowell Rd	Tucson	AZ	85719		Advisory body, community input				
Unfunded Collaborators	Interfaith Community Services	2820 W Ina Rd	Tucson	AZ	85741		Advisory body, community input				
Unfunded Collaborators	Jobcorps	901 S Campbell Ave	Tucson	AZ	85719		Advisory body, community input				
Unfunded Collaborators	Kajast	7901 Jones Branch Drive	McLean	VA	22102		Advisory body, community input				
Unfunded Collaborators	Kevin Dahl - Ward 3	1510 E Grant Rd	Tucson	AZ	85719		Advisory body, community input				
Unfunded Collaborators	Literacy Connects	200 E Yavapai Rd	Tucson	AZ	85705		Advisory body, community input				
Unfunded Collaborators	Pima Community College - Adult Basic Education for College and Career	4905 E Broadway Blvd	Tucson	AZ	85709		Advisory body, community input				
Unfunded Collaborators	Pima Community College - Workforce Development	4905 E Broadway Blvd	Tucson	AZ	85709		Advisory body, community input				
Unfunded Collaborators	Pima Council on Aging	8487 E Broadway Blvd	Tucson	AZ	85710		Advisory body, community input				
Unfunded Collaborators	PPER, Inc	802 E 48th St	Tucson	AZ	85713		Advisory body, community input				
Unfunded Collaborators	Sahuarita Unified School District	350 W Sahuarita Rd	Sahuarita	AZ	85629		Advisory body, community input				
Unfunded Collaborators	Tohono O'odham Nation, Department of Health and Human Services	Sells Business Loop	Sells	AZ	85834		Advisory body, community input				
Unfunded Collaborators	United Way of Tucson & Southern Arizona	330 N Commerce Park Loop	Tucson	AZ	85743		Advisory body, community input				
Unfunded Collaborators	University of Arizona - College of Education	1430 E 2nd St	Tucson	AZ	85721		Advisory body, community input				
Unfunded Collaborators	We Care Tucson	3029 N Stone Ave	Tucson	AZ	85705		Advisory body, community input				

Unfunded Collaborators	YWCA	525 N Bonita Ave	Tucson	AZ	85748		Advisory body, community input				
Unfunded Collaborators	Prima County Adult Probation	2699 E Aldo Way	Tucson	AZ	85718		Advisory body, community input				
Unfunded Collaborators	Prima County Economic Development Office	130 W Congress St	Tucson	AZ	85701		Advisory body, community input				
Unfunded Collaborators	Prima County Health Department	3950 S Country Club Rd	Tucson	AZ	85714		Advisory body, community input				
Unfunded Collaborators	Prima County Natural Resources, Parks and Recreation	3500 W River Rd	Tucson	AZ	85741		Responsible for compliance standards and working as subject matter experts				
Unfunded Collaborators	Prima County Public Library	101 N Stone Ave	Tucson	AZ	85701		Advisory body, community input				
Unfunded Collaborators	Prima County Transportation	201 N Stone Ave	Tucson	AZ	85701		Responsible for compliance standards and working as subject matter experts				
Unfunded Collaborators	Prima County Community and Workforce Development	2797 E Aldo Way	Tucson	AZ	85713		Responsible for compliance standards and working as subject matter experts				
Unfunded Collaborators	Prima County Finance	130 W Congress St	Tucson	AZ	85701		Responsible for compliance standards and working as subject matter experts				
Unfunded Collaborators	Prima County Human Resources	130 W Congress St	Tucson	AZ	85701		Responsible for compliance standards and working as subject matter experts				
Unfunded Collaborators	Prima County Office of Sustainability and Conservation	201 N Stone Ave	Tucson	AZ	85701		Responsible for compliance standards and working as subject matter experts				
Unfunded Collaborators	Prima County Superintendents of Schools	200 N Stone Ave	Tucson	AZ	85701		Advisory body, community input				
Unfunded Collaborators	Prima County Development Services	201 N Stone Ave	Tucson	AZ	85701		Responsible for compliance standards and working as subject matter experts				
Unfunded Collaborators	Prima County Grants Management and Innovation	97 E Congress St	Tucson	AZ	85701		Responsible for compliance standards and working as subject matter experts				
Unfunded Collaborators	Prima County Information and Technology Department	33 S Stone Ave	Tucson	AZ	85701		Responsible for compliance standards and working as subject matter experts				
Unfunded Collaborators	Prima County Procurement	130 W Congress St	Tucson	AZ	85701		Responsible for compliance standards and working as subject matter experts				
Unfunded Collaborators	Prima County Superior Court	110 W Congress St	Tucson	AZ	85701		Advisory body, community input				



Note: Form instructions and definitions will be created to support the report. Instructional guidance and training will be developed. Numbering to be updated based on final approved form.

RECIPIENT NAME:

OMB Control No.   
Expiration Date:

Middle Mile Grant Program Bi-Annual Performance Report				
<b>SECTION 1: IDENTIFICATION</b>				
GENERAL INFORMATION	1a. Recipient Organization:	Pike County	1b. Award Identification Number:	14-00-000000
	1c. Recipient Street Address:	100 W. Congress St., 3rd Floor	1d. Report Date (MM/DD/YYYY):	10/02/2023
	1e. City, State, and Zip Code:	Harrods, KY 40324-1337	1f. Final Report:	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
	1g. Unique Entity Identification (UEI) Number:	000000000000	1h. Report Period Start Date (MM/DD/YYYY):	7/1/2023
	1i. Award Start Date (MM/DD/YYYY):	7/1/2023	1j. Report Period End Date (MM/DD/YYYY):	9/30/2023
	1k. Award End Date (MM/DD/YYYY):	6/30/2024		
1l. Name of Person Completing Report: <input type="text" value="Michelle Simon"/>				
<b>SECTION 2: PROJECT INFORMATION</b>				
Please use the written below to provide a project narrative of the project(s). This section aims to help reviewers better understand what project is being completed and steps taken to achieve this goal.				
PROJECT NARRATIVE	2a. A brief description of the recipient's organization and scope of work/project activities:	Pike County, the second largest county in Kentucky, comprises 1,100 square miles. The county network, which is a blend of fiber, copper, and satellite, is the largest in the state. The county network is the largest in the state, with over 1,100 miles of fiber and 1,100 miles of copper. The county network is the largest in the state, with over 1,100 miles of fiber and 1,100 miles of copper. The county network is the largest in the state, with over 1,100 miles of fiber and 1,100 miles of copper.		
	2b. An overview of the significant outputs and outcomes to be accomplished in the project:	The major output from this grant will be the construction of a 100-mile fiber optic network. The network will be constructed in a way that will be able to serve the needs of the county. The network will be constructed in a way that will be able to serve the needs of the county. The network will be constructed in a way that will be able to serve the needs of the county.		
	2c. How would the project meet the recipient's business and/or administrative needs?	The project will meet the recipient's business and/or administrative needs by providing a reliable and secure network. The project will meet the recipient's business and/or administrative needs by providing a reliable and secure network. The project will meet the recipient's business and/or administrative needs by providing a reliable and secure network.		
	2d. Provide an overview of key accomplishments achieved for this reporting period on the MMR infrastructure project.	The project has achieved several key accomplishments during this reporting period. The project has achieved several key accomplishments during this reporting period. The project has achieved several key accomplishments during this reporting period.		



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B. INFRASTRUCTURE MILESTONE CATEGORIES AND PROJECT TIMELINE													
Please use the chart below to provide the start date and end date of your project.													
OVERALL PROJECT	PROJECT DURATION	% PROJECT START DATE	% PROJECT END DATE										
	3/2/21	7/1/2023	6/30/2028										
Please provide the start and end dates for each milestone category of your project. The duration is based on the start and end dates of each category.													
Please use the table provided to indicate your EXPECTED percentage of completion as a bi-annual basis for each year of your project. Year 1 begins with your award start date.													
The percentage of completion should be based primarily on the expenditure of your project budget and should be reported cumulatively from award inception through the end of each semi-annual reporting period. For example, if you expect to complete a particular milestone within the first three periods of your project, the third period end and all subsequent periods should state 100%.													
Please write "0" in the duration field if your project does not include an activity. If necessary, please insert additional milestones at the end.													
ACTIVITIES PROJECT MILESTONES				Year 1 Duration		Year 2 Duration		Year 3 Duration		Year 4 Duration		Year 5 Duration	
% MILESTONE CATEGORIES	% DURATION (START)	% START DATE	% END DATE	Period 1	Period 2	Period 1	Period 2	Period 1	Period 2	Period 1	Period 2	Period 1	Period 2
Overall Project	100%	July 1, 2021	June 30, 2028	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%
Environmental Assessment	40%	October 1, 2021	January 31, 2022	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%
Network Design	70%	October 24, 2021	January 31, 2022	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%
Right of Way	70%	August 14, 2021	September 30, 2022	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%
Construction Permits and Other Approvals	70%	October 24, 2021	October 31, 2022	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%
Site Preparation	100%	March 15, 2022	June 30, 2022	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%
Equipment Procurement	100%	March 15, 2022	June 30, 2022	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%
Network Build (all components - owned, leased, independent rights of way, etc.)	100%	January 1, 2022	June 30, 2022	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%
Equipment Deployment	100%	March 15, 2022	June 30, 2022	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%
Network Testing	100%	July 1, 2022	June 30, 2023	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%
Status of Procurement	100%	July 1, 2022	June 30, 2023	0%	100%	0%	100%	0%	100%	0%	100%	0%	100%
Other (please specify)													
Please use the table provided to indicate your ACTUAL percentage of completion on a bi-annual basis for each year of your project. Year 1 begins with your award start date.													
The percentage of completion should be based primarily on the expenditure of your project budget and should be reported cumulatively from award inception through the end of each semi-annual reporting period. For example, if you expect to complete a particular milestone within the first three periods of your project, the third period end and all subsequent periods should state 100%.													
Please provide a brief description of the primary activities involved in meeting each milestone in single description should be provided for each milestone, covering all periods in years one through five. Please write the number "0" if your project does not include an activity. If necessary, please insert additional milestones at the bottom of the chart. Please add additional milestones as applicable.													
ACTUAL PROJECT MILESTONES				Year 1		Year 2		Year 3		Year 4		Year 5	
% MILESTONE	% DESCRIPTION	Period 1	Period 2	Period 1	Period 2	Period 1	Period 2	Period 1	Period 2	Period 1	Period 2	Period 1	Period 2
Overall Project	Plan, design, and construct 134 mile open access ring	0%											
Environmental Assessment	Begin contract NDPA and other assessments, obtain approvals	0%											
Network Design	Complete design of network route and design elements	0%											
Right of Way	Obtain rights of way and easements to construct the connection	0%											
Construction Permits and Other Approvals	Obtain all construction approvals and other approvals	0%											
Site Preparation	On-site work on right of way for necessary construction	0%											
Equipment Procurement	Procurement of materials for network's buildout	0%											
Network Build (all components - owned, leased, independent rights of way, etc.)	Construct route	0%											
Equipment Deployment	Deploy, install and test equipment along route	0%											
Network Testing	Test equipment for efficiency, speed, reliability	0%											
Status of Procurement	Overall project status	0%											
Other (please specify)													

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Use of non-federally appropriated funds										
Assurance projects remain to your subrecipient or subrecipient associated with grant; expenditure grant funds, and expenditures to date										
Education and Research	% Project Report	% Project Direct Grant	% Subrecipient	% Money by Business Enterprise (MBE)	% Woman's Business Enterprise (WBE)	% Labor Surplus Area Firm	% Awarded Funds	% Expenditures to Date	% Remaining End Balance	% % of work complete
	Not applicable	Not applicable	None	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Not applicable	Not applicable	Not applicable	Not applicable
				Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>				
				Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>				
				Yes <input type="checkbox"/>	Yes <input type="checkbox"/>	Yes <input type="checkbox"/>				
INFRASTRUCTURE BUDGET EXCELLENCE DETAILS										
Please provide details below on your total budget and total fund expended to date for each budget element, including detailed disbursements of both matching funds approved and federal funds obligated from project inception through end of this reporting period. Figures should be reported cumulatively from award inception to the end of the applicable reporting period.										
Infrastructure Budget Expenditure Details	% Project Budget Element	% Federal Funds		% Non-Federal Funds	% Total Project Budget	% Total Federal Funds Expended to Date		% Total Non-Federal Funds Expended to Date	% Total Funds Expended	% Percent of Federal Funding Expended to Date (if awarded)
	Administration and legal expenses	\$	250,000.00	\$	3,209,877.00	\$	2,549,977.00	\$	-	-
	Cost Allocation, Support & other support costs	\$	-	\$	-	\$	-	\$	85,833.97	0%
	Production equipment and payments	\$	1,777,766.00	\$	2,063,897.00	\$	4,141,663.00	\$	-	100%
	Architectural and engineering fees	\$	-	\$	-	\$	-	\$	-	0%
	Other architectural and engineering fees	\$	-	\$	-	\$	-	\$	-	0%
	Project equipment lease	\$	-	\$	-	\$	-	\$	-	0%
	Rise work	\$	-	\$	-	\$	-	\$	-	0%
	Construction and material	\$	-	\$	-	\$	-	\$	-	0%
	Construction	\$	10,440,484.00	\$	6,926,470.00	\$	89,454,763.00	\$	-	0%
	Equipment	\$	-	\$	-	\$	-	\$	-	0%
	Miscellaneous	\$	-	\$	-	\$	-	\$	-	0%
	Travel	\$	26,214,948.00	\$	17,869,053.00	\$	44,184,001.00	\$	-	0%
	Utilities	\$	20,847.00	\$	10,128.00	\$	1,187,091.00	\$	15,832.97	100%
	Vehicle	\$	50,450,477.00	\$	13,998,477.00	\$	63,177,454.00	\$	15,832.97	100%
	C. COMMUNITY BENEFIT ASSURANCE									
Community Benefit Assurance	Description of Community Agreement									
	A. Community benefit group Name: *Please provide the name of the community benefit group. None									
	B. Developer Name: Please provide the name of the Developer None									
	C. Community Benefit Group and Developer Partnership: Please describe in the space below the nature of the partnership and how the WBE grant funds being used are assisting to provide community support for the infrastructure project. Not applicable									

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CLIMATE RESILIENCE

Resiliency must demonstrate that they have sufficiently accounted for current and future weather and climate related risks to new MBI infrastructure projects. At present, weather and climate related risks to broadband networks include wildfires, extreme heat and cold, inland and coastal flooding, and the extreme winds produced by weather events such as tornadoes, hurricanes, and other weather events. Because retrofitting and new infrastructure for broadband might be expected to have a lifetime of 25 years or more, resiliency must account not only for current risks but also for how the frequency, severity, and nature of these extreme events may plausibly evolve as our climate continues to change over the coming decades.

**Climate Resiliency Risk Mitigation**

The purpose of this section is for the recipient to demonstrate that they have sufficiently accounted for current and future weather and climate related risks to new MBI infrastructure projects. In particular, each recipient should demonstrate how they've addressed the known and identifiable risks of current and future projected weather and climate conditions through measures such as (but not limited to) choice of a technology platform suitable to the climate risk of the region, selection or alterations along of facilities (e.g., underground construction where appropriate), overbuilding or hardening of existing assets, and use of inherent redundancy to safeguard against threats to infrastructure.

Are there any geographic areas identified for this reporting period subject to an initial and/or updated hazard screening for future weather and climate related risk? If so, please provide the date of the screening and provide related documentation as an attachment to this report.

Using the NTIA National Risk Index and the County's multi-hazard mitigation plan (which has received FEMA approval), Pima County assessed on October 6, 2023, that the County was at "moderately moderate" risk of weather and climate conditions, irrespective of where one is in the County. For the NTIA National Risk Index, Pima has a moderate moderate exposure around the but very high social vulnerability and relatively low community resilience. The County's National Index was 18.87, which suggests that 59% of all counties have a lower risk index, 19% of counties is closer have a lower risk index. Climate/weather conditions constituting high risks include drought, heat, lightning, hail, intense flooding, and wildfire threats, threats that were confirmed as part of the County's 2022 Multi-hazard Mitigation Plan. Pima County was aware of these conditions at the time it submitted its application and structured its proposal (including a fiber optic network) to help protect the infrastructure from most of these severe threats. Most of the conditions listed are risks to infrastructure that is above ground and subject to the ongoing weather and natural events. Pima's plan is to locate the fiber optic network along right of way, and not necessarily below roadway surface, so should not be impacted by road.

Climate Resiliency Category	Date of Most Recent Hazard Screening	Name and Title of Representative Completing Most Recent Hazard Screening	Date of Report Completion
Indirectly moderate	9-06-23	Jeffrey Hahn, Grant Manager	9-06-23

18. Identified Risk: For your MBI project, what are the potential weather and climate hazards that may be most expected to be addressed that could impact the reliability of the middle mile infrastructure deployed (i.e., wildfires, extreme heat and cold, inland and coastal flooding, extreme winds, tornadoes, hurricanes and other weather events)?

The following climate/weather risks are either either moderate or relatively high for Pima County, based on the NTIA National Risk Index: Drought (relatively high), earthquake (relatively moderate), extreme heat (relatively high), landslide (relatively moderate), lightning (relatively high), wildfire (relatively high) and winter weather (relatively moderate). These conditions have been long standing threats in Pima County and were considered during

19. Weather and Climate Hazards: Were any significant climate or weather hazards experienced during this reporting period (i.e., floods, tornadoes) impacting infrastructure deployed or service? Briefly describe how you monitored for weather and climate related issues for the reliability of the system. If so, please provide the date of the disaster, location and backup documentation related (i.e., news articles).

Pima County experienced its seasonal monsoon storms and record-setting, extended heat during the reporting period but as we are in the initial planning and design phases, there were no reliability impacts experienced.

20. Risk to Deployment of New Infrastructure: Has the team identified any risks impacting the deployment of new or required infrastructure due to current and future weather and climate related threats during this reporting period?

No

21. Risk Mitigation: How will the project avoid and/or mitigate the risk cited (if)? If not available, please explain why.

No risks were identified during the reporting period that require mitigation.

22. Additional Information: Is there any additional information you want to share during this reporting period that the grant team should be aware of regarding the management of sustainable climate resiliency for your MBI project?

No

23. Additional Resources

Has the team utilized the available resources to assist with mitigation and long-term planning efforts for this reporting period? If so, which resources?

2023 National Climate Assessment  
NOAA's 2022 State Climate Summaries  
NOAA Disaster and Risk Mapping Tool  
NOAA's Storm Event Database  
NOAA Climate Explorer and Digital Coast  
FEMA National Risk Index  
Consulted FEMA approved Hazard Mitigation Plans prepared by states in which they propose to build middle mile infrastructure to help identify key risk and hazards

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<b>1. Overview</b>																																																																																																																																																																																																					
All projects receiving over \$2,000,000 (based on expected total cost), as determined by the U.S. Secretary of Labor by rule under 16 of Chapter 11 of Title 40, United States Code (commonly known as the "Davis Bacon Act"), all laborers and mechanics employed by contractors and subcontractors in the performance of each project are paid wages at rates not less than those prevailing.																																																																																																																																																																																																					
<b>Davis Bacon Act Certification</b>																																																																																																																																																																																																					
2b. Have the recipient been aware of the information requirements of laborers and mechanics employed by contractors and subcontractors in the performance of each project are paid wages at rates not less than those prevailing?	Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																																																																																																																				
<b>Local Hire Prioritization and Impact</b>																																																																																																																																																																																																					
Local hiring is a goal or requirement to hire people who live close to the place of work. This aim is often more specifically structured as a requirement for contractors awarded certain types of publicly funded projects to recruit a certain proportion of the people working on the project from a particular area. Please provide all direct hires and contractors supporting the MM infrastructure project. Please use the table below to describe how the project prioritizes local hiring.																																																																																																																																																																																																					
<b>LOCAL HIRE PRIORITIZATION AND IMPACT</b>	<table border="1"> <thead> <tr> <th colspan="2" rowspan="3">Hires by Race, Ethnicity and Gender</th> <th colspan="18">Number of Hires</th> <th rowspan="3">Totals</th> </tr> <tr> <th colspan="9">Hispanic or Latino</th> <th colspan="9">Non-Hispanic/Latino</th> </tr> <tr> <th colspan="3">Hispanic or Latino</th> <th colspan="3">White</th> <th colspan="3">Black or African American</th> <th colspan="3">Native Hawaiian or Pacific Islander</th> <th colspan="3">Asian</th> <th colspan="3">Two or More Races</th> </tr> <tr> <th>Male</th> <th>Female</th> <th>Other</th> <th>Male</th> <th>Female</th> <th>Other</th> <th>Male</th> <th>Female</th> <th>Other</th> <th>Male</th> <th>Female</th> <th>Other</th> <th>Male</th> <th>Female</th> <th>Other</th> <th>Male</th> <th>Female</th> <th>Other</th> </tr> </thead> <tbody> <tr> <td>Number of Local Direct Hires</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Number of Hires Local Direct Hires</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Percentage of Local Direct Hires on Award</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> <tr> <td>Number of Local Subcontractors</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Number of Hires Local Subcontractors</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> </tr> <tr> <td>Percentage of Local Subcontractors on Award</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> <td>0%</td> </tr> </tbody> </table>	Hires by Race, Ethnicity and Gender		Number of Hires																		Totals	Hispanic or Latino									Non-Hispanic/Latino									Hispanic or Latino			White			Black or African American			Native Hawaiian or Pacific Islander			Asian			Two or More Races			Male	Female	Other	Male	Female	Other	Male	Female	Other	Male	Female	Other	Male	Female	Other	Male	Female	Other	Number of Local Direct Hires	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Number of Hires Local Direct Hires	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Percentage of Local Direct Hires on Award	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	Number of Local Subcontractors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Number of Hires Local Subcontractors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	Percentage of Local Subcontractors on Award	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	
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	Number of Local Direct Hires	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																																																																																																	
	Number of Hires Local Direct Hires	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																																																																																																	
	Percentage of Local Direct Hires on Award	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%																																																																																																																																																																																	
	Number of Local Subcontractors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																																																																																																	
	Number of Hires Local Subcontractors	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0																																																																																																																																																																																	
Percentage of Local Subcontractors on Award	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%																																																																																																																																																																																		
<b>Davis Bacon Act Wages</b>																																																																																																																																																																																																					
Please confirm if wages are at least prevailing?																																																																																																																																																																																																					
2c. Are wages rates at least the Davis Bacon prevailing wage for all laborers?																																																																																																																																																																																																					
Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																																																																																																																					
2d. Are wages rates at least the prevailing wage for all mechanics?																																																																																																																																																																																																					
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2e. Please cite your source of how this information was gathered for 2d.																																																																																																																																																																																																					
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2g. If you answered "No" to either 2d, or 2e, please provide an attachment regarding the wages and benefits of workers on the project by job classification, and whether those wages are less than the prevailing wage.																																																																																																																																																																																																					
<b>Workforce Demographic Data</b>																																																																																																																																																																																																					
<b>WORKFORCE DEMOGRAPHICS</b>	<table border="1"> <thead> <tr> <th colspan="2" rowspan="3">Hires by Race, Ethnicity and Gender</th> <th colspan="18">Number of Hires</th> <th rowspan="3">Totals</th> </tr> <tr> <th colspan="9">Hispanic or Latino</th> <th colspan="9">Non-Hispanic/Latino</th> </tr> <tr> <th colspan="3">Hispanic or Latino</th> <th colspan="3">White</th> <th colspan="3">Black or African American</th> <th colspan="3">Native Hawaiian or Pacific Islander</th> <th colspan="3">Asian</th> <th colspan="3">Two or More Races</th> </tr> <tr> <th>Male</th> <th>Female</th> <th>Other</th> <th>Male</th> <th>Female</th> <th>Other</th> <th>Male</th> <th>Female</th> <th>Other</th> <th>Male</th> <th>Female</th> <th>Other</th> <th>Male</th> <th>Female</th> <th>Other</th> <th>Male</th> <th>Female</th> <th>Other</th> </tr> </thead> <tbody> <tr> <td>John Doe</td> <td>0</td> <td>0</td> <td>0</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> </tr> <tr> <td>Jane Doe</td> <td>1</td> <td>1</td> <td>0</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> <td>0.00</td> </tr> </tbody> </table>	Hires by Race, Ethnicity and Gender		Number of Hires																		Totals	Hispanic or Latino									Non-Hispanic/Latino									Hispanic or Latino			White			Black or African American			Native Hawaiian or Pacific Islander			Asian			Two or More Races			Male	Female	Other	Male	Female	Other	Male	Female	Other	Male	Female	Other	Male	Female	Other	Male	Female	Other	John Doe	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	Jane Doe	1	1	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																																																																																			
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	John Doe	0	0	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																																																																																																																																																																																		
	Jane Doe	1	1	0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00																																																																																																																																																																																		
	2h. Does this project include some workforce elements that are unique?																																																																																																																																																																																																				
	Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																																																																																																																				
	2i. Are workers provided access to union education/legislation on employer property or during the work day?																																																																																																																																																																																																				
Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																																																																																																																					
2j. Does your MM project offer a project labor agreement?																																																																																																																																																																																																					
Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																																																																																																																					
2k. Did workers receive additional information or training about their workplace rights in addition to already required notice postings?																																																																																																																																																																																																					
Yes <input type="checkbox"/> No <input type="checkbox"/>																																																																																																																																																																																																					

*As stated in the NLRB NLRD, if a request has not provided a certification that a project either will use a selected project number or is included a project labor agreement, meaning a pre-hire collective bargaining agreement consistent with section 8(f) of the National Labor Relations Act (29 U.S.C. 158(f)), then the request must provide a project workers' contract plan.*

For your MM project, please provide a brief description of efforts made to attract, train or retain a skilled and credentialed workforce.

- In-House Training
- Registered Apprenticeships
- Labor-Management Partnerships

workers. All employees are given the ability to learn about the applicable union and given a free and fair choice whether to join. During employer onboarding, union representatives participate in the onboarding process and are given ample time to present to employees as to the benefits of participation in the union.

The entity within Pima County that helps ensure the County has an appropriately skilled labor force is the County's Community and Workforce Development Department (CWDD). Its mission is to connect local individuals, families, neighborhoods and community-based organizations to a network of resources, supports and services essential not just for working, but for learning, living and thriving in Pima County. For workers, CWDD offers different tiers of services. At the lowest level, CWDD provides employment resources (such as, without limitation, job links, job matches, workshops, resumes and career counseling). CWDD also offers intensive career services, which includes vocational assessments, individualized career planning, pre-vocational adult education, job search and placement. These services are provided based on eligibility for a variety of guests targeting out-of-school youth and low

resolution of issues, with the likelihood of a positive outcome for all participants. The County also has strict rules in place to prevent retaliation, including the possibility of employment termination. The County also has mechanisms in place to work with its union partners cooperatively to create a harmonious working environment that leads to improved providers of county services. Called the Meet & Confer Committee, this group meets to confer regarding labor-management relations by fostering a forum for the free discussion of mutual concerns and ideas. These policies and mechanisms allow for the County to address labor concerns before they reach a disruptive level.

Dr. Please describe below the steps to ensure a safe and healthy workplace that avoids delays and costs associated with workplace diseases, injuries, and fatalities.

For procurement contracts, the County includes labor and employment compliance requirements in the contracts, including compliance with all federal requirements (such as compliance with Davis-Bacon prevailing wage/certification/payroll/signage requirements and Build America/Buy America). The County also investigates potential contractors to ensure that partner is in good standing with the federal government and has not been suspended

Has the team offered any of the following resources to assist with maintaining a safe and healthy workplace for this reporting period? If so, which resources (please provide a brief description of any of the following that apply):

Pima County's goal is to provide a comfortable, clean, safe and functioning work environment. One core function of the County's Facilities Management Department is to assure the safety of all Pima County employees in their work activities and areas of employment. The County fulfills this goal in several ways. First, it maintains a number of administrative procedures to assure safety protocols are followed, contained in Title 30, Risk Management,

*journey-level experience in the same, five years of journey-level experience in industrial and commercial electrical installation and repair, and several other means to meet the qualification that all require some level of training in the specific job category.*

Name of Subcontracted Entity Performing Work	Total Number of Workers within this Subcontract	Job Categories of Workers Supporting Project within this Subcontract
None	0	Not applicable


Contractors engaged to work on the program will be required to comply with Davis-Bacon and related ACT agreements, which will require the payment of prevailing wages, which will help ensure that our CONTRACTORS have an appropriate workforce for the project.

Please provide Anchor Institution (AI) data for the current period only (not cumulative). Please add rows as needed.						

						Q4 Symbolical Service	
ii	None						



[illegible]

BROADBAND ACCESS KEY INDICATOR NETWORK BUILD PROGRESS											
NETWORK BUILD PROGRESS	Please use the following table to provide anticipated key indicators and progress of your infrastructure project. Except as indicated, information should be reported cumulatively from award inception through the end of the bi-annual period. Please write the number "0" if your project does not include this indicator.										
	KEY INDICATOR	Year 1		Year 2		Year 3		Year 4		Year 5	
		Period 1	Period 2	Period 1	Period 2	Period 1	Period 2	Period 1	Period 2	Period 1	Period 2
	31a. Total of new fiber miles (total or leased)	0	0	0	10	30	50	70	90	110	134
	31b. Total of fiber miles leased	0	0	0	0	0	0	0	0	0	0
	31c. Total of existing fiber miles upgraded	0	0	0	0	0	0	0	0	0	0
	31d. Total of new microwave links	0	0	0	0	0	0	0	0	0	0
	31e. Total of new towers	0	0	0	0	0	0	0	0	0	0
	31f. Total of new interconnection points	0	0	0	3	14	19	22	35	42	48
	31g. Total of signed agreements with broadband subscribers or last mile providers	0	0	0	0	0	2	3	5	7	
	31h. Total of potential agreements (i.e., agreements currently being negotiating) with broadband subscribers or last mile providers (This total should NOT be reported cumulatively)	0	0	0	0	0	0	2	2	3	2

Quantifiable Metrics – Section designed to assist with reporting and audit purpose to quantify how much progress was made and track the location of where the progress was made.

National Telecommunications and Information Administration (NTIA)  
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21a-6. Deployment cost per mile of buried fiber optics	0																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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**National Telecommunications and Information Administration (NTIA)  
Middle Mile Grant Program  
Bi-Annual Performance Report**

		Year 1		Year 2		Year 3		Year 4		Year 5	
		Period 1	Period 2	Period 1	Period 2	Period 1	Period 2	Period 1	Period 2	Period 1	Period 2
MICROWAVE DATA	17b. Microwave Band										
	17b-1. How many microwave nodes have been deployed?	0	0	0	0	0	0	0	0	0	0
	17b-2. How many microwave nodes are operating for reporting period?	0	0	0	0	0	0	0	0	0	0
	17b-3. Installation cost per microwaveable node	0	0	0	0	0	0	0	0	0	0
	17b-4. Number of new towers built to support microwave structure	0	0	0	0	0	0	0	0	0	0
	17b-5. If applicable, what type(s) of tower were constructed? (a) Monopole (b) Self-Supporting tower or (c) Other during this reporting period?	0	0	0	0	0	0	0	0	0	0
	17b-6. Average cost per tower installed	0	0	0	0	0	0	0	0	0	0
	17b-7. Total spend on tower deployment this reporting period	0	0	0	0	0	0	0	0	0	0
	17b-8. Total spend on microwave deployment this reporting period										
	17b-9. If you answered "Other" to question 17b-5 or if it is a combination of multiple types, please provide a detailed narrative description detailing what type of tower or what combination of towers is used for the project and the total associated costs. (200 words or less)										
17b-10. Please provide the digital mappings (e.g., CAD, Revit, BIM, etc.) for the microwave nodes created during this reporting period.											
SATELLITE	17c. Satellite										
	17c-1. What satellite provider is being used?	0	0	0	0	0	0	0	0	0	0
	17c-2. What is the estimated capacity of the satellite link (i.e., throughput)?	0	0	0	0	0	0	0	0	0	0
	17c-3. What is the associated cost to use this satellite service?	0	0	0	0	0	0	0	0	0	0
	17c-4. Please provide any additional information about the satellite deployment (200 words or less)										
17c-5. Please provide the digital mappings (e.g., CAD, Revit, BIM, etc.) for the satellite network created during this reporting period.											
CERTIFICATION	18a. Please provide certification endorsing compliance with Federal labor and employment laws along with the requirements of Infrastructure Investment and Jobs Act and Middle Mile Grant Program, for the bi-annual period for which this report is being filed.										
	I certify to the best of my knowledge and belief that the Pima County Middle Mile Fiber Optic Project is in compliance with Federal labor and employment laws along with the requirements of Infrastructure Investment and Jobs Act and Middle Mile Grant Program, for the bi-annual period of 7/1/2023-6/30/2023.										
	18b. Please provide certification endorsing compliance with the Build America, Buy America Act. The Build America, Buy America Act requires that all of the iron, steel, manufactured products (including but not limited to fiber optic communications facilities), and construction materials used in the project or other eligible activities are produced in the United States unless a waiver is granted.										
	I certify to the best of my knowledge and belief that the Pima County Middle Mile Fiber Optic Project is in compliance with the Build America, Buy America Act.										
SIGNATURE AND ADDRESS OF CERTIFYING OFFICIAL	19. I certify to the best of my knowledge and belief that this report is correct and complete for performance of activities for the purposes set forth in the award documents.					20a. Signature (print name, title and address)		530-831-3645			
	20b. Typed or Printed Name and Title of Authorized Certifying Official:					20c. Email Address:		msimon@pima.gov			
	Michelle Simon, Director, Office of Digital Inclusion										
	20d. Signature of Certifying Official					20e. Date:		11/29/2023			
<b>Michelle Simon</b> Digitally signed by Michelle Simon Date: 2023.11.29 14:51:37 -07'00'											

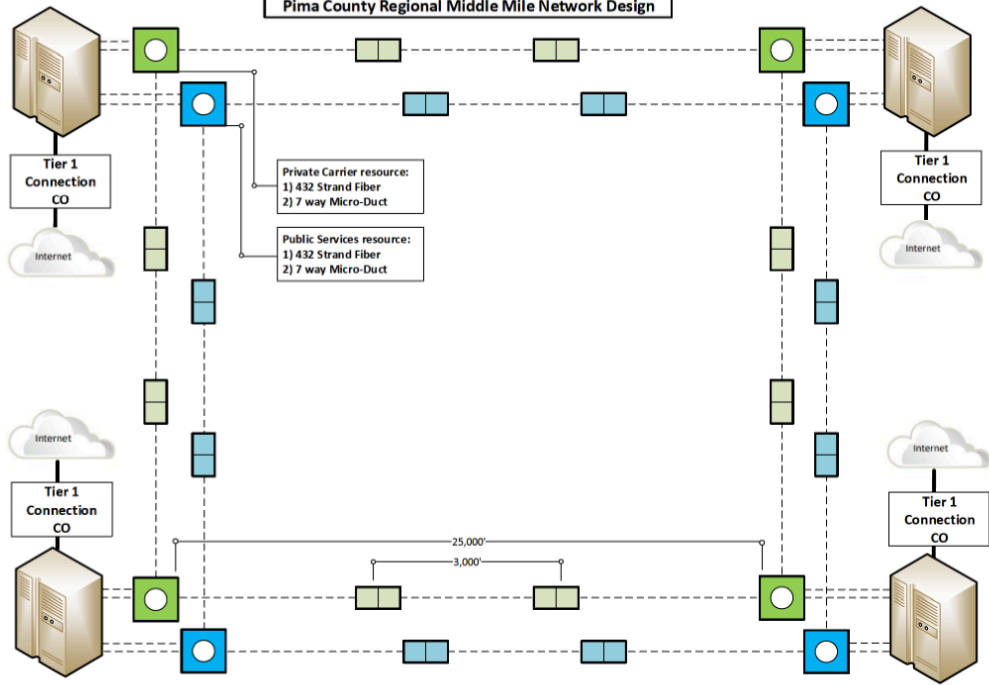
OMB Control No. 0560-0046  
Expiration Date: 11/30/2022

Total Demolition and Removal															
9. Construction															
Plow		LF	\$	9.00	237,000	\$	2,133,000.00								
Urban		LF	\$	31.57	211,200	\$	6,667,584.00								
Suburbs		LF	\$	25.00	237,600	\$	5,940,000.00								
Rock		LF	\$	90.00	21,120	\$	1,900,800.00								
Long Bores		MI	\$	500.00	5,280	\$	2,640,000.00								
6"x4"x7" Manhole		EA	\$	15,059.00	56	\$	843,304.00								
Fiber Placement + 10%		LF	\$	1.25	778,272	\$	972,840.00								
Fiber Placement + 10%		LF	\$	1.25	778,272	\$	972,840.00								
Fiber Splicing		EA	\$	30.00	12,528	\$	375,840.00								
Fiber Testing		EA	\$	25.00	12,528	\$	313,200.00								
Fiber Splicing		EA	\$	30.00	12,528	\$	375,840.00								
Fiber Testing		EA	\$	25.00	12,528	\$	313,200.00								
Lateral to Lumen CO		EA	\$	32,000.00	4	\$	128,000.00								
2"x6"x4" Vault		EA	\$	1,800.00	472	\$	849,600.00								
6"x4"x7" Manhole		EA	\$	10,916.00	56	\$	611,296.00								
Conduit		LF	\$	2.30	1,556,544	\$	3,580,051.00								
432 Micro Fiber		LF	\$	4.03	813,648	\$	3,279,002.00								
432 Micro Fiber		LF	\$	4.03	813,648	\$	3,279,002.00								
Splice Cases		EA	\$	450.00	50	\$	22,500.00								
Splice Cases		EA	\$	450.00	50	\$	22,500.00								
Misc. Material		EA	\$	235,764.00	1	\$	235,764.00								
						\$	26,946,684.00	\$	8,509,479.00	\$	-	Cash	24.00%	\$	35,456,163.00
Total Construction															
10. Equipment															
Total Equipment															
11. Miscellaneous															
Total Miscellaneous															
12. SUBTOTAL															
13. Contingencies															
Contingency for Supply Chain Increase 10%		EA	\$	1,187,971	1	\$	1,187,971.00	\$906,847	\$281,124			23.66%	\$1,187,971		
Total Contingencies															
14. SUBTOTAL															
15. Project (program) income															
Total Project (program) income															
16. PROJECT TOTAL															





Pima County Regional Middle Mile Network Design



LEGEND

- FuturePath
- 7-Way 18/14mm
- 2"x6"x4"
- Concrete Vault
- Carrier Distribution
- Points
- 6"x8"x7"
- Concrete Manhole
- Backbone Splice

## Federal Financial Report

(Follow form Instructions)

OMB Number: 4040-0014  
Expiration Date: 02/28/2025

<b>1. Federal Agency and Organizational Element to Which Report is Submitted</b> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">U.S. Department of Commerce, National Telecommunications &amp; Information Administration</div>		<b>2. Federal Grant or Other Identifying Number Assigned by Federal Agency (To report multiple grants, use FFR Attachment)</b> <div style="border: 1px solid black; padding: 2px; margin-top: 5px;">04-40-MM588</div>	
<b>3. Recipient Organization (Name and complete address including Zip code)</b> Recipient Organization Name: <div style="border: 1px solid black; padding: 2px; display: inline-block;">Pima County</div> Street1: <div style="border: 1px solid black; padding: 2px; display: inline-block;">130 W. Congress St., 3rd Floor</div> Street2: <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> City: <div style="border: 1px solid black; padding: 2px; display: inline-block;">Tucson</div> County: <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> State: <div style="border: 1px solid black; padding: 2px; display: inline-block;">Arizona</div> Province: <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> Country: <div style="border: 1px solid black; padding: 2px; display: inline-block;"></div> ZIP / Postal Code: <div style="border: 1px solid black; padding: 2px; display: inline-block;">85701-1317</div>			
<b>4a. UEI</b> <div style="border: 1px solid black; padding: 2px; display: inline-block;">JBMBVGUK5LF1</div>		<b>4b. EIN</b> <div style="border: 1px solid black; padding: 2px; display: inline-block;">866000543</div>	
<b>5. Recipient Account Number or Identifying Number (To report multiple grants, use FFR Attachment)</b> <div style="border: 1px solid black; padding: 2px; display: inline-block;">GLIB28 OT2328</div>			
<b>6. Report Type</b> <input type="checkbox"/> Quarterly <input checked="" type="checkbox"/> Semi-Annual <input type="checkbox"/> Annual <input type="checkbox"/> Final		<b>7. Basis of Accounting</b> <input checked="" type="checkbox"/> Cash <input type="checkbox"/> Accrual	
<b>8. Project/Grant Period</b> From: <div style="border: 1px solid black; padding: 2px; display: inline-block;">7/1/23</div> To: <div style="border: 1px solid black; padding: 2px; display: inline-block;">6/30/28</div>		<b>9. Reporting Period End Date</b> <div style="border: 1px solid black; padding: 2px; display: inline-block;">09/30/2023</div>	
<b>10. Transactions</b>			
<i>(Use lines a-c for single or multiple grant reporting)</i>			
<b>Federal Cash (To report multiple grants, also use FFR attachment):</b>			
a. Cash Receipts			0.00
b. Cash Disbursements			0.00
c. Cash on Hand (line a minus b)			0.00
<i>(Use lines d-o for single grant reporting)</i>			
<b>Federal Expenditures and Unobligated Balance:</b>			
d. Total Federal funds authorized			30,281,277.00
e. Federal share of expenditures			0.00
f. Federal share of unliquidated obligations			0.00
g. Total Federal share (sum of lines e and f)			0.00
h. Unobligated balance of Federal Funds (line d minus g)			30,281,277.00
<b>Recipient Share:</b>			
i. Total recipient share required			13,090,177.00
j. Recipient share of expenditures			15,322.37
k. Remaining recipient share to be provided (line i minus j)			13,074,854.63
<b>Program Income:</b>			
l. Total Federal program income earned			
m. Program Income expended in accordance with the deduction alternative			
n. Program Income expended in accordance with the addition alternative			
o. Unexpended program income (line l minus line m or line n)			

11. Indirect Expense						
a. Type	b. Rate	c. Period From	Period To	d. Base	e. Amount Charged	f. Federal Share
g. Totals:				0.00	0.00	0.00

12. Remarks: Attach any explanations deemed necessary or information required by Federal sponsoring agency in compliance with governing legislation:

13. Certification: By signing this report, I certify to the best of my knowledge and belief that the report is true, complete, and accurate, and the expenditures, disbursements and cash receipts are for the purposes and objectives set forth in the terms and conditions of the Federal award. I am aware that any false, fictitious, or fraudulent information, or the omission of any material fact, may subject me to criminal, civil or administrative penalties for fraud, false statements, false claims or otherwise. (U.S. Code Title 18, Section 1001 and Title 31, Sections 3729-3730 and 3801-3812).

a. Name and Title of Authorized Certifying Official

Prefix:  Dr. First Name:  Shanika Middle Name:

Last Name:  Serial Suffix:

Title:  Deputy Director, GMI Finance & Risk Management

b. Signature of Authorized Certifying Official

Digitally signed by Shanika R. Serial  
Date: 2023.10.26 11:40:33 -07'00'

c. Telephone (Area code, number and extension)

520-724-2188

d. Email Address

Shanika.Serial@pima.gov

e. Date Report Submitted

14. Agency use only:

Applicants should also review the instructions for certification included in the regulations before completing this form. Signature on this form provides for compliance with certification requirements under 15 CFR Part 28, 'New Restrictions on Lobbying.' The certifications shall be treated as a material representation of fact upon which reliance will be placed when the Department of Commerce determines to award the covered transaction, grant, or cooperative agreement.

**LOBBYING**

As required by Section 1352, Title 31 of the U.S. Code, and implemented at 15 CFR Part 28, for persons entering into a grant, cooperative agreement or contract over \$100,000 or a loan or loan guarantee over \$150,000 as defined at 15 CFR Part 28, Sections 28.105 and 28.110, the applicant certifies that to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

(2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, 'Disclosure Form to Report Lobbying,' in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

**Statement for Loan Guarantees and Loan Insurance**

The undersigned states, to the best of his or her knowledge and belief, that:

In any funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this commitment providing for the United States to insure or guarantee a loan, the undersigned shall complete and submit Standard Form-LLL, 'Disclosure Form to Report Lobbying,' in accordance with its instructions.

Submission of this statement is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required statement shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure occurring on or before October 23, 1996, and of not less than \$11,000 and not more than \$110,000 for each such failure occurring after October 23, 1996.

As the duly authorized representative of the applicant, I hereby certify that the applicant will comply with the above applicable certification.

\* NAME OF APPLICANT

Pima County

\* AWARD NUMBER

NTIA-MMG-2022

\* PROJECT NAME

Pima County Regional Middle Mile Fiber Optic Ring

Prefix:

\* First Name:

Middle Name:

Michelle

\* Last Name:

Suffix:

Simon

\* Title:

Deputy Director, Support Services

\* SIGNATURE:



\* DATE:

11/14/2022

Grant Request Number	GRN-000588
Funding Program Name	Middle Mile Broadband Infrastructure Grant Program
Funding Request Name	Pima County - Middle Mile - GRN-000588
Applying Organization	Pima County
Applicant Name	Michelle Simon

### Primary Applicant Type

Identify the primary applicant type:

Single Entity

— — —

### Primary Entity Type

Type of entity: Primary entity type, (A) a State, political subdivision of a State, Tribal government, technology company, electric utility, utility cooperative, public utility district, telecommunications company, telecommunications cooperative, nonprofit foundation, nonprofit corporation, nonprofit institution, nonprofit association, regional planning council, Native entity, or economic development authority; or (B) a partnership of two (2) or more entities described in (A).

What is the primary applicant's entity type?

Political subdivision of a state

— — —

Is parent/owner of applicant a foreign entity?

No

— — —

### Managerial Capability

Applicants shall submit to the Assistant Secretary one-page resumes for (a) all key management personnel and (b) all key personnel of subcontractors or other entities that will play substantial roles in building, managing, or operating the middle mile network built using Middle Mile Grant (MMG) Program funding.

Key Personnel - Ellen Moulton; Pima County; Finance/Risk Management; ellen.moulton@pima.gov

KeyPersonnel\_Resume\_Ellen\_Moulton

— — —

## **Managerial Capability**

**Applicants shall submit to the Assistant Secretary one-page resumes for (a) all key management personnel and (b) all key personnel of subcontractors or other entities that will play substantial roles in building, managing, or operating the middle mile network built using Middle Mile Grant (MMG) Program funding.**

Key Personnel - John Lucas; Community Broadband Advocates LLC; Project Consultant;

jclucas@cbadvocates.com

KeyPersonnel\_Resume\_John\_Lucas

— — —

## **Managerial Capability**

**Applicants shall submit to the Assistant Secretary one-page resumes for (a) all key management personnel and (b) all key personnel of subcontractors or other entities that will play substantial roles in building, managing, or operating the middle mile network built using Middle Mile Grant (MMG) Program funding.**

Key Personnel - Katherine Hahn; Pima County; Grant Administration Lead; katherine.hahn@pima.gov

KeyPersonnel\_Resume\_Katherine\_Hahn

— — —

## **Managerial Capability**

**Applicants shall submit to the Assistant Secretary one-page resumes for (a) all key management personnel and (b) all key personnel of subcontractors or other entities that will play substantial roles in building, managing, or operating the middle mile network built using Middle Mile Grant (MMG) Program funding.**

Key Personnel - Mark Hayes; Pima County; Information Technology Lead; mark.hayes@pima.gov

KeyPersonnel\_Resume\_Mark\_Hayes

— — —

## **Managerial Capability**

**Applicants shall submit to the Assistant Secretary one-page resumes for (a) all key management personnel and (b) all key personnel of subcontractors or other entities that will play substantial roles in building, managing, or operating the middle mile network built using Middle Mile Grant (MMG) Program funding.**

Key Personnel - Michelle Simon; Pima County; Project Lead; michelle.simon@pima.gov

KeyPersonnel\_Resume\_Michelle\_Simon

— — —



## Managerial Capability

Applicants shall submit to the Assistant Secretary one-page resumes for (a) all key management personnel and (b) all key personnel of subcontractors or other entities that will play substantial roles in building, managing, or operating the middle mile network built using Middle Mile Grant (MMG) Program funding.

Key Personnel - Terri Spencer; Pima County; Lead Procurement; terri.spencer@pima.gov  
KeyPersonnel\_Resume\_Terri\_Spencer

## Organizational Charts

Each applicant shall submit any necessary organizational chart(s) detailing all of its parent companies, subsidiaries, and affiliates.

This upload section should also be used for any letters of support from the organizations that will be involved in the project as a community stakeholder.

MMI Pima County Admin Org Chart 2022-09-18-2022 07-36-Pima County-GRN-000588.pdf

## Organizational Details

Each applicant must also provide a narrative describing the applicant's readiness to manage a middle mile broadband network. This narrative should describe the experience and qualifications of key management set to undertake this project, the applicant's experience undertaking projects of similar size and scope, recent and upcoming organizational changes including mergers and acquisitions, relevant organizational policies, and ownership information consistent with 47 CFR § 1.2112.

This narrative shall denote who will own the assets at the end of award period. This response is limited to 6000 characters as an open field narrative.

Pima County has extensive experience in undertaking and managing large scale projects. Pima County intends to issue a Request For Proposals (RFP) for the construction and operation of the proposed middle mile network. As a government agency, contracting for the construction and operational management through a competitive RFP process will ensure that the awarded entity is the most qualified and will execute the project efficiently, effectively and in accordance with all federal and state laws and requirements. Pima County utilizes the RFP process for all major projects and has extensive experience in writing, advertising and evaluating proposals as well as award management. Although the construction and operational management will be contracted to a qualified vendor(s), Pima County will own the assets at the end of the project and retain full control of the network assets for the life of the network.

Revision: None of the situations listed in 47 CFR 1.2112(a)(1)-(7) apply to network ownership.

The construction projects listed below are examples of projects with similar size and scope:

□ Kolb Road: Sabino Canyon to Sunrise Drive: A current \$19.527 million project to widen approximately 1.9 miles of Kolb Road from a 2-lane roadway to a 3-lane roadway with multi-use paved shoulders suitable for bicycle use, sidewalk, drainage and landscaping. Construction began fall of 2020 and is in its final stages of completion. Funding was provided through the Arizona Highway User Revenue Fund (HURF) that fund the state's highway system and are used for construction and improvement projects.

□ South Houghton Road Widening Project: A \$30 million project to widen approximately 3 miles of Houghton Road, from the I-10 Interchange funded from local development impact fees. These improvements are necessary to improve an important arterial route that was subject to frequent flooding, debris, and closure, impacting the area's mobility and economic development. Construction began in the fall of 2021 and the project is on schedule to conclude on time in early 2023.

□ Valencia Road: Wade Road to Ajo Way: A \$26.2 million project to widen Valencia Road, to improve safety, reduce congestion, improve operations and increase mobility. Improvements included additional travel lanes, raised landscape median, bike lanes in each direction, and a multi-use pathway for pedestrians. The project, funded through the Regional Transportation Authority program, began in 2020 and was completed in 2021.

In addition to construction projects, Pima County has experience in receiving and managing federal grants. As an example, the CARES Act funding awarded to the Pima County is shown below:

□ CARES Act funding: In 2020, Pima County was awarded \$87 million in federal funding from the Coronavirus Aid, Relief, and Economic Security (CARES) Act program to stem the economic and health impacts of the COVID-19 pandemic. The County fully expended its grant funds on time and in compliance with CARES Act requirements. The Auditor General in its review of the County on this grant had no findings, which means that there were no errors or non-compliance found in the County's use of these funds.

The key personnel assigned to carry out the project have extensive experience in Pima County and are considered experts in their field. Below are brief bios for each of the key personnel. Resumes are also attached in the portal.

Michelle Simon – Project Lead – Pima County - Michelle Simon is responsible for the development, administration, and oversight of a \$57 million budget for Pima County Public Library (PCPL). Her responsibilities include assessment, development, and implementation of plans to meet community needs for library services through public interaction, including citizen advisory groups, community forums, and input from community leaders. Michelle coordinates with other Pima County departments and community stakeholders to facilitate and implement digital access, inclusion, and equity initiatives. She directs and aligns strategic priorities for PCPL to the Pima County Economic Development Plan for workforce development and collaborates with Arizona @Work and community partners to provide expanded workforce and economic development services.

Mark Hayes – IT Lead – Pima County - Mark Hayes has been employed with Pima County since 2014 and has overseen major system projects, including Enterprise Resource Planning (ERP) system, permitting system, database hardware replacement and telephone system technical refresh during his tenure. He is responsible for a \$50 million annual budget for the county.

Katherine Hahn – Grants Lead - Pima County – Katherine Hahn is the lead for project teams to write multiple state and Federal competitive applications, with awards exceeding \$10 million. She is responsible for creating strategic partnerships with appropriate supporting documentation for successful implementation of grant programs. She also provides oversight to assure implementation, compliance monitoring and reporting for grants.

Terri Spencer – Procurement – Pima County – Terri Spencer is the Director of the Procurement Department for the county. She is responsible for the design, construction and related services contracts for all county departments. She will be responsible for the oversight of the RFP process to select the construction vendor and the network operational management vendor.

John Lucas – Project Consultant – Community Broadband Advocates (CBA) – John Lucas is the CEO of a broadband consulting firm that provides expert consultation to state and local government on middle mile and last mile projects. CBA facilitates community organization, planning, network design and project management for a wide range of broadband projects in Arizona. John is a retired Chief Information Officer (CIO) from an Arizona county and has managed several successful statewide communication projects.

— — —  
**Form CD-511 (Certification Regarding Lobbying)**

**The applicant must upload a completed form that certifies that Federal funds have not and will not be used for lobbying in connection with this request for Federal financial assistance. A fillable Form CD-511 can be found in the MMG ZIP folder.**

CD-511-09-15-2022 05-34-Pima County-GRN-000588.pdf, Signed CD511-11-14-2022 06-35-Pima County-GRN-000588.pdf

— — —  
**Standard Form-LLL (Disclosure of Lobbying Activities)**

**Standard Form-LLL must be completed and submitted for those applicants that need to disclose lobbying activities that have been secured to influence the outcome of a Federal action. A fillable Form SF-LLL can be found in the MMG ZIP folder.**

SFLLL-V1-09-15-2022 05-34-Pima County-GRN-000588.1.pdf, Signed SFLLL-11-14-2022 06-36-Pima County-GRN-000588.pdf

— — —  
**SAM.gov Registration**

**Applicants are asked to upload a screenshot of their SAM.gov registration.**

SAM screenshot-09-28-2022 06-23-Pima County-GRN-000588.pdf, Pima County\_Current SAM-04-04-2023 02-56-Pima County-GRN-000588.gov registration\_032023.docx

— — —

## **Additional Waiver Upload**

**Please upload, as applicable.**

Pima County MMG Letter of Credit Waiver Reque-09-29-2022 04-02-Pima County-GRN-000588.pdf,  
Letter of alternate proposal\_Response\_GRN-000-04-04-2023 07-16-Pima County-GRN-000588.pdf,  
Treasurer Letter\_Mar 2023-04-04-2023 07-15-Pima County-GRN-000588.pdf

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### **Executive Summary**

**Please describe how the applicant's proposal will advance the objectives of the MMG Program, as well as the specific objectives of outlined in the Notice of Funding Opportunity (NOFO);**

**An overview of the proposed route or service area(s), including information regarding rurality and socio-economic indicators in the area to be served by the proposed project.**

**This response is limited to 12000 characters as an open field narrative.**

The Pima County Middle Mile project will advance NTIA's objectives of "encouraging the expansion and extension of middle mile infrastructure to reduce the cost of connecting unserved and underserved areas to the backbone of the internet" and/or "promote broadband connection resiliency through the creation of alternative network connection paths that can be designed to prevent single points of failure on a broadband network;"

The proposed project creates a 134 mile contiguous open access fiber network ring containing two micro-ducts with 7 channel conduit. One 432 strand micro-fiber will be run in each micro-duct allowing the remaining conduit to be available for lease, share or swap from providers and other government entities. This future proof design has the capacity to accommodate expansive growth in the region. The network is designed in a ring surrounding the outer area of greater Tucson and surrounding rural communities. The proposed open-access fiber optic ring path runs around the unincorporated portions of the county, spanning from Oro Valley to Marana on the north side, south to Drexel Heights; east covering the entire Drexel Heights area; south to Sahuarita; east from Sahuarita through Corona de Tucson; and north through Vail along the County's eastern portion to the Catalina Foothills; culminating back at Oro Valley. An experienced and reputable engineering firm was commissioned to complete a preliminary engineering design and budget to identify the most advantageous path that maximizes the service area to the region and avoids geographic and environmental risk factors as much as possible. The ring design promotes resiliency and diversity that prevents single points of failure that can occur in the current spur design. This middle mile infrastructure lays the foundation for future development including use of backhaul for cellular service and 5G as well as multiple carrier last mile connections.

The proposed middle mile network path connects to 4 Central Office (CO) facilities. These four Tier 1 connections provide a link to the backbone of the public internet with physical interconnections for the exchange of traffic. The proposed middle mile infrastructure will reduce the cost for last mile providers



to connect unserved and underserved communities by providing a neutral network that last mile providers can access in a non-discriminatory open access model. Pima County also commits to offer wholesale broadband services at a reasonable rate on a carrier neutral basis. Under the management model, Pima County will invest the revenues received from providers and government users to support the maintenance and operations of the network and ensure interconnection in perpetuity to negotiated parties and include the ability to connect to the public internet and physical interconnection for the exchange of traffic.

There is limited existing middle mile infrastructure in the region and where infrastructure exists, it is proprietary and fragmented. The Pima County Middle Mile project, where fiber/conduit is available and viable, will negotiate agreements to further the project and limit duplication of resources to the extent possible. For example, the Arizona Commerce Authority (ACA) recently awarded \$100 million in Arizona Rural Broadband Development (ADBG) grants in the state to fund last mile projects. Cox Communications, in partnership with Pima County, received an award to provide Fiber to the Home (FTTH) in the southern part of the county. To complete this project, Cox Communications plans to build a short middle mile run along a similar route proposed on the southern route of the middle mile ring. Pima County will discuss with Cox the ability to share resources to leverage this build to reduce costs and duplication to ensure both the Pima County Middle Mile project and the last mile project are both successful.

The government owned infrastructure will ensure that affordable, reliable and accessible high-speed broadband services can be provided to as many communities, county and local facilities, anchor institutions and recreational areas as possible. The infrastructure will be made available to all viable internet service providers (ISPs) and other government entities to lease, share or swap resources in one of the 14 planned conduits.

Communities that will benefit from this project are the city of Tucson, South Tucson, Oro Valley, Tortolita, Catalina Foothills, Tanque Verde, Vail, Corona De Tucson, Sahuarita, Three Points, Picture Rocks, Avra Valley, and Marana. The existing infrastructure in this region is a single path following I-10 through the middle of city of Tucson and travels through the middle of a heavily congested area of the downtown area. All feed lines spur out from this single primary artery to the outskirts of the city of Tucson. Not only does this create massive and expensive construction and expansion issues, but the design also has little to no redundancy for the region. This greatly hinders the economic growth of the city of Tucson and surrounding communities because the design has single failure points along the network discouraging any investment by major technology broadband users. In addition to creating critical survivability issues in the city of Tucson, the surrounding communities are forced to survive on the leftover bandwidth as broadband resources go from the center out. This has discouraged most last mile providers from building out to more of the rural communities in this region due to the cost to get an affordable and dependable feed to the area. The return on investment models used by carriers prohibit carrier expansion in these areas without subsidies to support their expansion. Without this middle mile infrastructure, last mile carriers are unable to provide service to these communities.

The current broadband offerings do not provide reliable and affordable service to the most unserved and underserved residents of the community. The NTIA Indicators of Broadband Need Map shows over 118,000 households in 24 census tracts in the proposed service areas are without internet. Ten of

these census tracts show over 30% of the households with no internet and one census tract in particular shows over 40% of households with no internet. Twenty three of the twenty four census tracts show speeds of less than 100/10 Mbps. In addition, more than 75% of these Census areas are 20% or more below the federal poverty level.

Solution provided by the Pima County Middle Mile Ring:

The objective of the project is to create an open access fiber middle mile ring around the Pima County region. The proposed middle mile ring will create a fully diverse redundant fiber infrastructure path that all carriers can utilize. A dependable, redundant Broadband feed in the rural areas not only will provide the infrastructure needed to bring Fiber to the Home (FTTH) to all communities within a 25 mile radius but provide resources to large corporations, small businesses and data centers and encourage job creation and economic development in the region. The middle mile network will bring resources to smaller communities and expand resources available to the city of Tucson alike.

The proposed project has three objectives:

1. Provide a carrier neutral open access network that can be made available to any viable carrier at a reasonable price to build rural communities last mile FTTH networks.
2. Provide an opportunity for existing carriers to swap excess dark fiber in one region for dark fiber in another that would allow them to expand their customer base and build new communities with FTTH significantly reducing cost and build time.
3. Provide public expansion of resources such as public Wi-Fi, Smart Cities, Government services, public safety, traffic control, and shared resources between communities to reduce administrative cost.

Project Primary components:

- ☐ Two diverse redundant 432 F (36F/Tube), SMF-28 Ultra Fiber, Single Mode
- ☐ Two separate Future Path Micro-Duct 7-way redundant pathways
- ☐ One of the 432 Fiber bundles will be used for Public resources as mentioned above
- ☐ The second 432 Fiber bundle will be provided to carriers as an Open Access network managed by a contracted Manager/Maintenance Team providing security to all carriers and accessibility as needed
- ☐ Management/Maintenance Team maintaining all fiber, micro-duct pathways, vaults, carrier access and maintenance
- ☐ Splice vaults every 25,000 ft (6'x4'x7')
- ☐ Distribution vault every 3,000 ft (2'x6'x4')
- ☐ Internet CO distribution points interconnect around the ring at four locations, initially. This will be expanded over time through the fiber resource swaps to enhance service and redundancy for the network

One 432 Fiber bundle will be loaded into each of the two micro-duct pathways to ensure redundancy and separation of services. The excess micro-duct will provide for future expansion and reduced cost.

The design allows for 2 separate micro-ducts that can separate government and private use.

Anchor Institutions – As shown in the design, the Pima County Middle Mile project path identified anchors institutions that were within 1,000 feet of the middle mile infrastructure. In accordance with the NTIA requirement, Pima County certifies that, upon completion, the proposed project will provide

direct interconnection facilities that will facilitate the provision of broadband service, at speeds not less than 1 Gigabit per second for downloads and 1 Gigabit per second for uploads to those anchor institutions. A list of anchor institutions within the 1,000 feet requirement is included as an attachment along with all identified anchor institutions that will benefit from this project.

Sustainability and Operational Maintenance Plan – The county will utilize a 3rd party with expertise in managing a network of this size and complexity. The county will utilize industry standard Service Level Agreements (SLAs). The sustainability model is based on two factors, cost recovery/avoidance for the county and outside revenue from carrier lease agreements.

The county currently pays monthly fees for commercial internet service for all county facilities including libraries and public safety. As anchor tenants, the county owned middle mile network will have a dedicated 432 fiber strand for use by all county facilities in the service area generating a savings from current fees paid to carriers. Second, the revenue model projects income from leased conduit by carriers and other municipalities over the life of the network to sustain the operational maintenance of the network.

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#### **Level of Need**

**A description of the level of need in the proposed service area(s), including but not limited to communities considered unserved and/or underserved in the proposed service area(s), discussion of the competitive landscape in the area, variations among service areas if there are any, or the general economic conditions in the proposed funded service area.**

**This response is limited to 12000 characters as an open field narrative.**

Pima County is the second largest county in Arizona with a geographic area of over 9,200 square miles of diverse terrain, including a dense urban area, smaller exurban areas and rural areas. The county's geographic area is larger than seven U.S. states. According to the 2020 US Census, the population of Pima County is 1,043,433 which is the second most populous county in the state of Arizona.

Metropolitan Tucson is the county seat and an academic and commercial hub that is home to the University of Arizona, a globally recognized university for outstanding academics and medical research. The majority of county residents live in the Tucson metropolitan area with a population of 545,340. However, nearly half of the county population lives in areas outside of Tucson and is considered very rural. These areas of the county include a national forest, several national and state parks, a major international airport, major interstate highways, highly regarded institutions of higher education and training, and significant outdoor recreation areas.

As of the 2020 Census, 5% of the county population is under 5 years old and 20.83% is under the age of 18. This means over 217,000 residents are of school age and require internet access to be successful in school. In addition, almost 21% of residents are aged 65 and older. The elderly population is particularly vulnerable and in need of medical resources that can be provided and enhanced with the availability of high-speed internet. The median household income in Pima County in 2020 was \$55,023; per capita income was \$30,747. Nearly sixteen percent (15.9%) of the County's total population are



living in poverty. In comparison, the national median household income for the same period was \$67,521; per capita income was \$53,967 and the official poverty rate was 11.4%.

The FCC data indicates that nearly 10% of Pima County households have no broadband access and no internet. However, the data on individual communities that will be served by the Pima County Middle Mile Infrastructure Project shows that in some communities nearly 18% of the households have no broadband access or internet access at all. Nearly one-third of the county population resides in the areas identified to be served by this project.

Demographics vary considerably throughout this area, with some communities among the most socially vulnerable in the nation, including census tracts within the City of Tucson, bordering on the City and the town of Marana and into the town of Oro Valley, east of the city, and southwest of the city (which includes extensive reservation lands).

Demographic data for the project was derived from FCC data retrieved in September 2022, NTIA's Indicators of Broadband Need and Pima County statistical information on disadvantaged areas based on 27 library service areas. The Pima County data is grouped by Area of Dominant Influence (ADI). This data was compared to Census data as well as the FCC broadband maps that identify unserved and underserved areas. Six communities that are beneficiaries of the project have areas that are unserved and underserved as defined by the FCC as not having reliable and available internet service meeting the minimum standard of 100/10 Mbps according to the FCC map. Five of the six communities have areas that are considered unserved by the FCC definition of not having access to internet above 25/3 Mbps.

Flowing Wells – The Flowing Wells area has a population of 28,252. According to the 2020 US Census Bureau data, the poverty rate in this community is 24.7%. This is more than double the national average. In addition, half of the community population is minority status. The FCC data shows that 17.90% of the households or 2,075 homes do not have internet access.

Woods – The Woods area has a population of 48,394. According to the 2020 US Census Bureau data, the poverty rate in this community is 30.10%. Again, this is more than double the national average. More than one-third of the population in this community is minority status. The FCC data shows that 14.20% of the community households or 3,248 homes do not have internet access.

Richard Elias - Mission – The Richard Elias-Mission area has a population of 71,244. According to the 2020 US Census Bureau data, the poverty rate in this community is 17.70%. In addition, more than 60% of the community population is Hispanic. The FCC data shows that 13.2% of households or 3,455 homes do not have internet access.

Southwest – The Southwest area has a population of 12,505. According to the 2020 US Census Bureau data, the poverty rate in this community is 22.80%, more than double the national average. Over half (57.5%) of the population in this community is minority status. The FCC data shows that 10.10% of the households or 407 homes do not have internet access. This Southwest area was highlighted because although the population is not as large as the other communities, they experienced an 88.95% growth between 2010 -2020. This is a rapidly growing area but still shows economic challenges.

Valencia – The Valencia area has a population of 82,353. According to the 2020 US Census Bureau data, the poverty rate in this community is 22.50%. Over two-thirds (77.68%) of the population in this community is Hispanic. The FCC data shows that 10.10 % of the households or 2,694 homes do not

have internet access.

**El Rio** – The El Rio area has a population of 13,136. According to the 2020 US Census Bureau data, the poverty rate in this community is 17.20%. Over half (52.12%) of the population in this community is Hispanic. The FCC data shows that 8.30 % of the households or 462 homes do not have internet access.

**South Tucson** – South Tucson has a population of 4,613. South Tucson has experienced an 18.38% decline in population from 2010-2020. While other communities in Pima County and in Arizona have seen double digit increases in population, South Tucson is losing residents along with its rich culture. According to the 2020 US Census Bureau data, the poverty rate in this community is 38.6%. This is more than triple the federal poverty rate and the highest poverty rate in the proposed project area in Pima County. Over two-thirds (76.40%) of the population in this community is Hispanic. The FCC data shows that 39.40 % of the households do not have internet access.

**Tanque Verde** - The Tanque Verde area has a population of 16,250. The US Census data shows a population decline of nearly 4%. The FCC data shows that 9.30 % of the households or 588 homes do not have internet access.

In addition to the disadvantaged areas identified above, several rural towns are experiencing explosive growth with little broadband infrastructure in place to serve their growing communities.

**Marana** – The town of Marana has evolved from a small farming community to a rapidly growing residential suburb outside the metropolitan Tucson area. The population of Marana is 51,908 according to the 2020 US Census. This community has grown an incredible 48.47% from 2010-2020. Over 22% of the population is age 18 or under. This equates to nearly 11,000 school age children. According to the FCC maps, parts of Marana are unserved and underserved.

**Oro Valley** – The town of Oro Valley is another suburban community that has experienced tremendous growth. The population of Oro Valley is 47,070 as of the 2020 US Census and has grown 14.77% since the 2010 US Census. Like Marana, this town is growing with families seeking a community to raise their families; however, the lack of internet stifles the development of these areas.

**Corona de Tucson and Sahuarita** – The communities of Corona de Tucson and Sahuarita are located on the southern part of the county and along the lower part of the proposed middle mile network. The town of Sahuarita has a population of 34,134 according to the 2020 US Census data. Like Marana, this area has experienced tremendous growth of 35.13% since 2010. Twenty-eight percent of the population is under the age of 18, which equates to nearly 9,000 students in the area that depend on high-speed internet for their education.

The recent pandemic brought attention to the many disparities that face rural and low income residents of this country including Pima County, but none was as clear as the disparities between the “haves” and “have nots” when it comes to high-speed broadband access and affordability. Those who had affordable and reliable broadband could work from home, have multiple children taking classes online at the same time, access telehealth appointments and stay connected to family members and friends through video conferencing. Families who live in communities with low-speed Internet, dial-up access, or no access at all were forced to find public Wi-Fi, try to complete homework using a cell phone, or not complete it at all. Overall, 41% of Arizona students passed the English language section of the test and 33% passed the math portion. In Pima County, only 38% of the students passed the English language section and 31% of students passed the math section. This means that well over half

of the students in Pima County failed these sections of the statewide test. The lower scores may be attributed to the "homework gap" facing students who lack connectivity to complete their homework at home. According to the Pew Research Center the "homework gap" was more pronounced in Black, Hispanic and lower income homes. Pima County's largest city, Tucson, has a poverty rate of 25% and 44% of the population is Hispanic. Many of the communities identified in this application as unserved and underserved have similar statistics. Educational attainment drives social welfare outcomes, class structures, children's success, medical outcomes. Education is the key driver to lift people out of poverty and those without access to broadband will continue to be a disadvantaged population. U.S. Commerce Secretary Gina M. Raimondo stated that people can't participate in the current economy without access to reliable, affordable broadband.

Lack of broadband disproportionately effects low income and minority populations. Access to fast, reliable and affordable Internet will create economic opportunity by enabling new business expansion; support the creation of workforce development programs with remote learning options; support current industries and attract new ones to the region and provide greater remote work opportunities that provide flexibility to people who have mobility issues or have family or childcare needs. Fast reliable and affordable internet also will expand medical care options by offering telehealth opportunities, assist first responders with needed technology to save lives, and support smart city and transportation initiatives to manage the complex systems of these critical infrastructure today.

The proposed middle mile infrastructure project intends to lay the foundation to bring high-speed, reliable and affordable internet to unserved and underserved populations throughout the county. This project is essential in leveraging the Broadband Equity, Access and Development (BEAD) Program funding that will soon be available to communities in Arizona. The BEAD program is focused on last mile efforts; however, without this proposed middle mile project, any last mile effort will be fragmented and ineffective in solving the digital equity issues facing the county today. Leveraging the NTIA Middle Mile Infrastructure Grant Program funding and the BEAD Program funding will essentially close the digital divide as well as provide economic development opportunities, telehealth services, public safety, transportation and education services to a large geographic area of the county.

Revision: Specifically, Alluvion and Sun Corridor Network have expressed written interest in connecting to the middle mile infrastructure. Other providers have expressed verbal interest. Written letters are attached in the portal under Letters of Support.

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#### **State Collaboration Acknowledgement**

**NTIA strongly encourages prospective non-state applicants to coordinate and consult with the State Broadband Office or other coordinating body located in the jurisdiction in which the eligible entity proposes to deploy middle mile infrastructure to ensure that the proposal is consistent with the state's broadband plan and priorities. Please confirm collaboration and consultation.**

**Do you confirm collaboration and consultation with the appropriate organization?**

Yes



— — —  
**State and Local Collaboration Narrative**

**Please provide information on the applicant's coordination with applicable State, Territory, Tribal, and local governments, including their awareness of the proposed project and any potential impact to respective service areas; and**

**Information regarding the applicant's involvement and coordination with community organizations or other relevant partners in the proposed service area.**

**This response is limited to 6000 characters as an open field narrative.**

Arizona State Broadband Office – The Arizona State Broadband Office is housed in the Arizona Commerce Authority (ACA) - Pima County met with the State Broadband Director and ADOT officials to present the Pima County Middle Mile design and ensure the proposed project was consistent with state efforts. The proposed design aligns with the Arizona Broadband Statewide Middle Mile Strategic Plan and supports the following goals outlined in the plan.

- ☐ Expand long-haul and middle mile connectivity to unserved and underserved rural Arizonans
- ☐ Help local communities identify the middle mile fiber that they can leverage to complete last mile projects

Arizona Department of Transportation (ADOT) – ADOT's Broadband Office manages the agency's broadband initiatives that include a fiber project along all state highways in Arizona. Pima County staff met with ADOT and discussed the proposed project as well as ADOT's interest in utilizing the middle mile infrastructure to further ADOT's efforts of providing fiber along all the interstates and state highways in Arizona to support smart highway initiatives, weather and public safety announcements. Interstate 10 (I-10) and Interstate 19 (I-19) pass through Pima County and scored 2nd and 3rd in the overall evaluation criteria for unserved and underserved households within a 5 mile radius of the interstate. These areas are a priority in the Arizona Broadband Statewide Middle Mile Strategic Plan and directly impact Pima County. The coordination and partnership between Pima County and state government will save taxpayer resources by sharing conduit and not digging twice in the same area and avoid duplication of efforts. A letter of support from ADOT is attached.

Pima County Board of Supervisors (BOS) Resolution – On August 15, 2022, the Pima County Board of Supervisors unanimously approved a resolution for the county to submit an application to NTIA Enabling Middle Mile Infrastructure Grant Program to construct an open access fiber ring to provide middle mile infrastructure to large portions of the county including unincorporated and local incorporated areas in the county. Included in the resolution was a commitment to meet the 30% matching requirement through cash, in-kind and partner contributions. The Board Resolution is attached.

Connect Pima - The county's public library and information technology department partnered to assemble the "Strategic Planning Taskforce for Digital Access in Pima County," which created a long-term plan to increase access to affordable and reliable broadband internet. The goals of the plan are:

- ☐ Short Term - Increase the number of publicly accessible wireless hotspots by a minimum of 10 sites in each Pima County Board of Supervisors District by the first quarter of FY22/23
  - ☐ Increase the number of households served by affordable broadband by 10% in each Pima County Board of Supervisors District by the first quarter of FY24/25.
  - ☐ Implement joint trench policies for all critical infrastructure construction projects managed by DOTs, DOE, utilities, and Public Safety agencies by the fourth quarter of FY25/26.
- Connect Pima is comprised of community stakeholders interested in creating inclusive access to all Pima County residents. Committees include Broadband Infrastructure and Policy; Digital Inclusion and Equity; Digital Access; and Grants, Funding and Procurement.

Municipal Support – Stakeholder meetings have been held since the inception of the project to coordinate with municipal governments in the county on this project. Input on the overall design was solicited and the feedback resulted in a modification of the design that is more cost effective and aligns with the municipality goals in the region. Many of these municipalities will benefit from the middle mile network for their own municipal network expansion. For example, the proposed middle mile route passes by the Oro Valley town hall which is the hub of the town's infrastructure and also will facilitate a link to the Oro Valley Police Department and multiple signalized intersections that will benefit from smart technologies. The availability of a neutral middle mile network will provide the infrastructure for multiple ISP providers to provide competitive services for these growing communities. Letters of support from the communities that will benefit from the middle mile ring are attached.

Pima Association of Governments (PAG) - PAG is a regional council responsible for planning, sustainability and livability. PAG conducts business as a designated metropolitan planning organization (MPO). PAG efforts include the Smart Regions initiative to develop public and private support and funding for collaborative efforts to build the region's economic competitiveness and quality of life for residents. PAG recognizes that the availability of high-speed broadband is an economic development and quality of life benefit and works collaboratively with partners to advance communications infrastructure in the region.

Cox Communications Partnership - Pima County Public Library, in collaboration with Cox Communications, has launched "Hotspots Around Town." This project makes available 120 external wireless access points in urban and rural areas of Pima County, including libraries, parks, Boys & Girls Clubs, and community centers. The Pima County Library system is providing \$720,448, to be reimbursed through federal subsidies, for the spots to be made available to the public for free. This three-year project will provide internet access, free of charge, to community members in locations where they already meet and congregate.

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**Will the project connect middle mile infrastructure to last mile networks that provide or plan to provide broadband service to households in unserved areas?**

Yes
   
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**Is the project connecting non-contiguous trust lands?**

No

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**Do you commit to offering wholesale broadband service at reasonable rates on a carrier-neutral basis?**

Yes

— — —

**The eligible entity adopts fiscally sustainable middle mile strategies. This strategy should be described in the Budget Narrative.**

**Do you attest to this?**

Yes

— — —

**The eligible entity commits to offering non-discriminatory interconnect to terrestrial and wireless last mile broadband providers and any other party making a bona fide request. This policy will be described in the Interconnect Policy.**

**Do you attest to this?**

Yes

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**The eligible entity identifies specific terrestrial and wireless last mile broadband providers that have(i) expressed written interest in interconnecting with middle mile infrastructure planned to be deployed by the eligible entity; and ii) demonstrated sustainable business plans or adequate funding sources with respect to such interconnection. This may be demonstrated in the Level of Need narrative of the Exec Summary.**

**Do you attest to this?**

Yes

— — —

**The eligible entity has identified supplemental investments or in-kind support (such as waived franchise or permitting fees) that will accelerate the completion of the planned project. Such acceleration may be described in the Project Timeline narrative.**

**Do you attest to this?**

Yes

— — —

The eligible entity has demonstrated that the middle mile infrastructure will benefit national security interests of the United States and the Department of Defense. The benefits may be explained in the Benefitting National Security Interests Narrative.

Do you attest to this?

Yes

— — —

Please describe:

The proposed Middle Mile Infrastructure implementation at Pima County will provide multiple benefits in regard to national security interests. Redundant pathways around the Tucson valley will reduce the threat of an outage in any segment of the ring. Transmission of border security data, commercial telecommunications data, public safety and state and local government data will all be maintained in the event of an outage (e.g., fiber cut) in any single ring location due to the ability to reroute traffic around the other side of the ring. Local providers already have broadband presence which transmits crucial information such as rail traffic monitoring, power grid monitoring, traffic control data and other information in the public interest. This Middle Mile infrastructure will provide redundant pathways, and in some cases replace primary pathways, to increase resiliency of the broadband infrastructure for the entire community. It will also provide avenues for the final mile into unserved and underserved areas of the community, thus enabling public and private data communications that are not available today.

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Project

Duration

Number of Years

5

— — —

Project Timeline Narrative

The narrative requires the Applicant to describe a project with critical path, including key milestones for implementation of the project, preparations, and risk factors; and a capital investment schedule evidencing that the applicant will complete build-out and the initiation of service within five years of the date on which the entity receives the grant and will meet interim buildout requirements set forth herein and in any other binding document.

If the project is able to be accelerated with supplemental investments or in-kind support to meet a statutory purpose, this should be explained.

This response is limited to 6000 characters as an open field narrative.



The Pima County Regional Middle Mile Network Ring project consists of three phases working in sequence over a five-year period:

**Phase 1: Pre-Construction and Policy adoption:**

County Project Management: The personnel assigned to the project will oversee the overall construction of the project and facilitate the following items:

- i. Permits, Easements, and Rights-of-Way (ROW): Process and facilitate between communities and construction crews Permits, Easements and Rights-of-Way agreements
- ii. RFP requests and awards: Prepare and administer Construction RFP bids and awards and ensure the proper execution of these agreements
- iii. Select a 3rd party firm through RFP or competitively selected state contract to oversee the multi-year operations and maintenance of the network
- iv. Interconnect policy: Format, define and implement an Interconnect Policy agreement between the County, Management/Maintenance team and leasing carriers enforced by a contracted plant management team

Material/Resource Management: Due to resource availability and supply chain issues, the acquisition of resources and materials must be closely monitored, managed and executed well ahead of the needed timeline. RFP's for materials and services will be issued as soon as county project resources are available to begin the process

Engineering and Design: Due to the complexity of the project, an advanced engineering and design process must be performed immediately upon the project award. All subsequent tasks in the timeline will follow the successful completion of the engineering design

**Phase 2: Construction:**

To complete the project as quickly as possible and to facilitate services to the recently awarded ACA's Arizona Rural Broadband Development (ADBG) grant projects in the region, the construction phase of the project has been broken up into (3) concurrent segments. Each segment was determined based on the difficulty of the path and has an equivalent amount of difficulty and estimated revenue so that all three segments will attract the same interest of bidding from contractors. It is anticipated that if each segment had the same amount of difficulty and profitability, multiple contractors would be more inclined to bid on the RFPs and on one or more of the three segments. This approach encourages competition and allows smaller specialty companies to bid parts of the construction that fit their expertise and capacity.

Construction Team and Permitting Verification: Each of the (3) segments' construction teams will initially verify all permits, easements and rights-of-way prior to starting construction

Fiber Plant Construction: Each of the (3) segments will have milestone benchmarks based on the percentage of footage completed

**Project Segment Footage to follow:**

Segment 1: 305,683 ft. (Plow)

Segment 2: 180,800 ft. (Bore/Trench)

Segment 3: 222,658 ft. (Bore/Trench)

Construction is broken up into three underground dig methods for placing micro-duct in the ground.

Plowing – Requires specialized equipment that slices the ground to the desired depth. While the

ground is separated, the micro duct/fiber is inserted as the equipment is moved forward

Trenching - Requires standard backhoe equipment to open a trench that the required micro duct/fiber will be placed

Boring - Requires specialized equipment to bore a horizontal hole to the required depth and length.

This method is used when topsoil/roadways and environments cannot be disturbed. It is also an effective way to penetrate rocky areas or even solid rock shelves. Boring is also one of the most effective ways to cross washes, rivers, and canals.

Construction buildout milestones will be established at 40% (283,656 feet) by end of second year, 60% (425,485 feet) by end of third year and 100% (709,141 feet) by end of fourth year of the total project.

The project timeline is accelerated because of the design and partnerships with surrounding municipalities. The project will utilize the fifth year only if there is a resource shortage, supply chain issue or another segment is required to go into the Construction Contingency Allowance timeline  
Management/Maintenance Team involvement: Once a Management/Maintenance team has been selected and Interconnect policy approved by the Pima County Board of Supervisor, the Management/Maintenance team will engage with the construction company to ensure all construction meets the required standard

Phase 3: Carrier on-Boarding and Internet CO tie-in:

Carrier On-Boarding: During the Carrier On-Boarding the Management/Maintenance team will begin working with the carriers that either request to lease dark fiber or empty micro-duct. This agreement will be a shared revenue model based on the RFP for Operational Maintenance services

Internet CO Tie-in: The (4) Internet CO Tie-ins will connect at four locations throughout the middle mile project ring. Depending on the progress of each of the Segments and availability of a contractor, this connection will be completed under the direction of the Management/Maintenance team and in coordination with on-boarded carriers to ensure they receive the desired service so they can light up their facilities at each end of the middle mile project.

Several municipalities have committed to waiving permitting fees and streamlining the right of way approvals for the middle mile project. The municipalities have been involved in planning for the project and are supportive of expediting the permitting and right of way approvals. With the partnership from these municipalities, it is anticipated to reduce the Phase 1 - Pre-Construction and Policy adoption stage of the project by 4 -6 months.

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#### **Project Timeline File**

**Applicants are asked to upload a timeline which will denote key milestones for implementation of the project, including but not limited to field survey, network design, equipment/material procurement, environmental assessment, permitting, construction, network testing, network activation and completion.**

Pima County MM Project Timeline\_Final-09-28-2022 09-17-Pima County-GRN-000588.pdf, Pima County MM Project Timeline\_Final\_Capex S-04-04-2023 03-04-Pima County-GRN-000588.xlsx

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Is an extension being requested?

No

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#### Special Rules for Tribal Governments and Native Entities

The Infrastructure Investment and Jobs Act permits the Assistant Secretary, in consultation with Tribal governments and Native entities, to waive, or specify alternative requirements, in connection with most directives governing the MMG Program if the Assistant Secretary finds that waiver or modification of the requirement is necessary for (a) the effective delivery and administration of middle mile grants to Tribal governments or (b) the construction, improvement, or acquisition of middle mile infrastructure on trust land.

Is a waiver or alternative requirements requested?

No

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#### Fair Labor Practices

Applicants must have a demonstrated record of and plans to be in compliance with federal labor and employment laws as described in III.H in the NOFO. This will help ensure that projects are carried out in accordance with the law, assist NTIA in ensuring that a prospective awardee is capable of carrying out activities funded by an award in a competent manner in compliance with all applicable federal, state, and local laws; and promote the effective and efficient completion of high-quality middle mile broadband infrastructure projects by ensuring a reliable supply of skilled workers and minimizing disruptive and costly delays.

This response is limited to 6000 characters as an open field narrative.

Pima County has a demonstrated record of compliance with federal labor and employment laws. Every RFP includes language that specifies when federal funding is to be used then the County and Contractor agrees to be bound by all federal requirements. Specifically stated in the contract are federal Labor standards; Supplemental Provisions for Federal-Aid Construction Contracts; Davis Bacon and AZ Wage Decision requirements for minimum wage, withholding, payroll, apprentice subcontracting, termination provisions and the Work Hour and Safety Standards Act. In addition, all contractors and subcontractors must not be on the active exclusion list for the Federal government's System for Award Management (SAM) system.

The Pima County Small Business Enterprise (SBE) Program is race and gender neutral and actively encourages participation from small businesses for contracts and subcontracts in accordance with Pima County Code, Title 20, Chapter 20.04. In addition, Pima County Code Title 20 establishes a Disadvantaged Business Enterprise (DBE) for all federally funded projects. A sample contract

agreement is included as an attachment.

Pima County has not deployed public broadband projects previously. Pima County takes compliance with federal labor/employment law seriously, adopting and enforcing many policies and procedures to ensure compliance. Pima County Human Resources is the repository for these procedures, policies and plans, including:

1. E-Verify® ,
2. Employment Rights,
3. ADA Administration,
4. FMLA Administration,
5. HIPAA / Privacy Practices; and
6. Federal, State and local labor reporting

The public facing Pima County website ([https://webcms.pima.gov/government/human\\_resources/](https://webcms.pima.gov/government/human_resources/)) is the home of the 2021 versions of the Pima County Equal Employment Opportunity plan; The Pima County Attorney's Office Equal Employment Opportunity Plan; and the Pima County Sheriff's Department Equal Employment Opportunity Plan.

Pima County is governed by Administrative Procedures, Board of Supervisors Policies and Personnel Policies. Relevant procedures include Administrative Procedures relating to ADA accommodation, FMLA and FLSA. The Board of Supervisors, which is the governing body for Pima County, also has adopted specific policies. Relevant policies include Workplace Ethics, Conduct and Compliance; Regulatory Bill of Rights—Complaints and Appeals; Equal Employment Opportunity and Affirmative Action Policy; Prevention of Sexual Harassment, Prevention of Workplace Harassment, Native American Employment Policy, Fair Labor Standards Act and Americans With Disabilities Policy. Pima County complies with Equal Employment Opportunity Plan – State and Local Government Information Report (EEO4 certifications every two years); Department of Justice (July every two years); Federal Contractor Veterans' Employment Report (VETS 4212 due every August); and Job Openings and Labor Turnover Survey (JOLTS) every month.

All new employees receive training that reviews these policies and procedures. Employees are required to review the labor and employment training and policies on a regular basis. All new supervisors are also required to take specific training on labor and employment laws, including ADA, EEO, FLSA and FMLA.

Pima County includes labor and employment compliance requirements in procurement contracts, requiring contractors to include similar provisions in subcontracts. It also checks potential contractors for active registration in SAM.gov, reviewing whether the contractor has any exclusions that would prevent the County from working with it. These exclusions can be based on repeated violations of labor and employment laws. These registrations are periodically re-checked to ensure the contractor remains active with no exclusions.

Pima County has not had any written disclosures in which it has been found to have violated federal employment or labor laws in the last three years.

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## **Officer Certification**

In order for NTIA to evaluate an applicant's demonstrated record of and plans to be in compliance with federal labor and employment laws, each applicant must provide examples of items described in III.H in the NOFO. Applicants are asked to upload a Certification from an Officer/Director-level employee (or equivalent) of the applicant evidencing consistent past compliance with federal labor and employment laws by the applicant, as well as contractors and subcontractors.

labor certification-09-28-2022 01-44-Pima County-GRN-000588.pdf, Sample Executed County Contract-09-29-2022 07-53-Pima County-GRN-000588.pdf, Labor certification (002) - signed HR\_PD-11-15-2022 06-14-Pima County-GRN-000588.pdf

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## **Highly Skilled Workforce**

To ensure that applicants have the technical and operational capacity to carry out the project, applicants must submit a plan for ensuring that the project workforce will be an appropriately skilled and credentialed workforce (including by the applicant and each of its contractors and subcontractors). The plan for a highly skilled workforce should include the information described in III.I in the NOFO.

This response is limited to 6  
000 characters as an open field narrative.

Pima County will utilize the successful programs and practices in the Community and Workforce Development (CWD) department to support the development and use of a highly skilled workforce to carry out the Pima County Middle Mile Project through direct hires and require contractors and subcontractors to use a skilled workforce when working on this project to ensure the project is a success. Appropriate language will be included in the RFP for construction and operational management of the network to ensure contractors and subcontractors meet these requirements.

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## **Advancing Workforce Development**

A skilled workforce is critical to meeting infrastructure buildout timelines under the Infrastructure Act and connecting households across the country to reliable, affordable, high-speed broadband. A well-trained workforce will also allow for the safe deployment of sustainable networks. To meet the workforce needs of the MMG Program, applicants must make appropriate investments to develop a skilled, diverse workforce. Each applicant must provide as part of its application examples of items described in III.J in the NOFO.

**This response is limited to 6000 characters as an open field narrative.**

Pima County's Economic Development mission is to create a vibrant, diverse, and resilient economy that allows for upward economic mobility for all community members. The pandemic served to highlight the integral role of the Internet in economic sustainment, development and well-being, with those lacking such access appreciably harmed by the disconnect. Access to high-speed broadband is critical to support our daily needs, but also to expand and diversify Pima County's business community and employment opportunities.

Pima County's Community and Workforce Development (CWD) department connects local individuals, families, neighborhoods and community-based organizations to a network of resources, supports and services essential for learning, working, living and thriving in Pima County. Educational Resources is just one component of the services CWD provides. CWD programs support the whole human, ranging from homeless services, rental assistance, and eviction prevention to capital public facility projects in rural communities, to sectoral workforce initiatives in advanced manufacturing and cyber security. This breadth ensures that CWD is reaching most vulnerable, disadvantaged, underserved communities with critically needed support and programmatic on-ramps.

For workers, CWD offers different tiers of services. Its employment resources include labor-market information, job banks, on-line job matching, job leads, workshops, resumes and career counseling. Intensive career counseling includes vocational assessments, individualized career planning, pre-vocational adult education, job search and placement. These services are provided based on eligibility for a variety of grants targeting out-of-school youth and low income adults, dislocated workers, veterans, and homeless job seekers. CWD also offers an array of training to obtain employment, for those who meet eligibility and other requirements. These programs are provided by a menu of more than 300 qualified occupational training providers and through on-the-job training contracts (including apprenticeships). These trainers include both traditional public and private colleges partners plus grassroots non-profits. Assessments are used to determine appropriate training, and assistance is provided in developing training plans to reach career and employment objectives. One example is Pima County's H-1B One Workforce program, which provides unserved and underserved residents with testing, on-the-job training, apprenticeships, and supportive services to prepare citizens for occupations in aerospace, advanced manufacturing, and information technology fields. Outreach for H-1B is made through traditional partners and community-based resources to ensure that all communities, including populations historically unrepresented in these fields, have access to this training opportunity, which is an on-ramp into broadband-based fields.

CWD partners with employers and other groups, such as the Southern Arizona Manufacturers Partners, to understand skills requirements, job openings, and to create work-based skills development opportunities. These insights from these partnerships will ensure that our workforce is highly and appropriately skilled for evolving workplace needs.

Community-based partnerships are key to CWD's ability to include persons from all corners of the

County and of diverse economic and socio-economic backgrounds. These collaborations include partnerships with faith-based groups, literacy tutors and other non-profit agencies, specifically intended to help the County reach economically disadvantaged and other at-risk populations. These partnerships inform the design of CWD's programs, including its workforce development opportunities. Pima County has extensive experience (20+) years managing its metropolitan-area-network including extant fiber rings and all related network services. Furthermore, Pima County has extensive expertise and experience (20+) years in managing the sale and leasing of services utilizing existing assets, e.g., agreements for usage of County-owned rooftop radio towers and shelters. We currently have over 40 established agreements with both private and governmental agencies (FBI, DOHS, USAF, GovNET, etc.) for said services.

Pima County will contract with an experienced construction companies to build the infrastructure. The selection of construction vendors will be done through a competitive RFP process.

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### **Climate Resiliency**

**Please demonstrate that the applicant has sufficiently accounted for current and future weather- and climate-related risks to new MMG Program infrastructure projects. In particular, each applicant should clearly demonstrate how it is conducting the items listed in III.K in the NOFO.**

**This response is limited to 6000 characters as an open field narrative.**

Pima County's Middle Mile Infrastructure (MMI) project will be located in the greater statistical Tucson metropolitan area. This area includes the densely populated city of Tucson, several incorporated suburban areas, and more rural but developing regions to the southwest and south. The proposed fiber optic ring is surrounded on three sides by mountain ranges, parkland and forests, and includes important river resources. The region has been experiencing a megadrought, one lasting 27 years, giving wild fluctuations in experienced precipitation over the years. Although located in the heart of the hot Sonoran Desert, the region has been experiencing climbing heat indices during the hot summer months. The dry conditions, coupled with intermittent rainy periods has given rise to the growth and development of invasive plant species, which serve as serious wildfire fuels, which can be triggered by anything, including well-placed lightning strikes. Also, the wildfires that the region has experienced have left major burn scars, which contribute to other hazards such as flooding.

The impact of major climate hazards were taken into consideration in the design of the middle mile network. Constructing nearly 100% of the Middle Mile Project underground will mitigate the risk of damage to the infrastructure and provide future resilience for the life of the network. In assessing the current and future risk, a review and analysis of the data provided by FEMA's National Risk Index as



well as the other tools listed in the application guidance were reviewed. Pima County will perform a review of the risk assessment.

**Drought** – Although Pima County, as well as a significant portion of the southwest, have greater than average occurrences of drought, drought has little to no impact on an underground fiber network.

**Wildfire** – Pima County has an average greater risk of more than 50% of other counties in Arizona.

Wildfires have little impact on an underground fiber network.

**Excessive Heat** – Excessive heat is a serious problem in Pima County and Arizona in general. Although this is a serious health issue for the public, it has little effect on an underground network. All materials used in the construction of the network will meet or exceed heat tolerance specifications.

**Flood/Flash Floods**– On the Risk and Vulnerability Index, Pima County's Risk Index Score is 31.7 for flood risk. Although this is slightly higher than Arizona which scores 22.21, Pima County does not register on the Coastal Flood Exposure Map for having any hazard zones. Also, there is some risk of flash floods from the surrounding mountains in Tucson. Flooding is a serious problem; however, has little impact on an underground network. The construction specifications call for the conduit to be buried 3 feet underground and 6 feet when crossing washes, rivers and canals further limiting the risk of flood damage to the network.

**Freeze** – There is little to no risk of freezing in Pima County that will impact the infrastructure project. The Risk Index Score of 1.94 shows minimal risk to an underground fiber network.

**Hurricane** – There is little to no risk of hurricanes in the region.

**Winter Storms** – There is very little risk of severe winter storms in Pima County that will impact the underground infrastructure.

Per FEMA's National Risk Index, the entire Pima County region is judged to be a relatively high hazard risk—irrespective of where one is in the County. The County's composite risk score is 28.95, higher than Arizona's average of 23.68 and higher than the national average of 10.60. The score represents the natural hazards creating relatively moderate expected annual loss, but also relatively high social vulnerability and relatively moderate community resilience.

Pima County is experienced in assessing current and evolving risks to County residents, property and County-owned assets, using current tools and information resources such as FEMA's National Risk Index, the NOAA current and projected climate summaries, USDA Drought Monitors, among others. As new tools and information resources are developed, the County will integrate such resources into the assessment, characterization, and risk mitigation protocols. The County will evaluate current and evolving risks to the fiber optic middle mile ring constructed through this grant application on an annual basis.

A number of Pima County departments will share this responsibility, including Natural Resources, Parks and Recreation (NRPR), Flood Control (RFCD), Health, Office of Sustainability and Conservation, and Environmental Quality. Departments develop programs and strategies to address specific risks that might threaten the new middle mile infrastructure. Both NRPR and RFCD regularly assess invasive plant species conditions, which is a major influence in the likelihood and severity of regional wildfires and develop programs to mitigate these growths. Pima County, through its Office of Emergency Management, maintains the County's FEMA-Approved Multi-Jurisdictional Hazard Mitigation Plan, which must be updated every five years. As part of this review, the County convenes a multi-



stakeholder group representing all stakeholders throughout the County. As part of this process, the planning group undertakes risk assessment, hazard identification, and hazard risk profiling for the broad community, using up-to-date data, tools, and methodologies that acknowledge the tools and resources listed in Section K.5.

The County undertakes other periodic planning activities to address specific types of risks. For example, the County is in the process of updating its flood maps to understand current flood risks (which threaten the entire community and can change in the face of wildfire burn scars), as well as its Community Wildfire Prevention Plan, which is an assessment of wildfire risk (which changes over time) and a recommendation of strategies to combat.

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**Civil Rights and Nondiscrimination Law Compliance**

**Prior to distributing any MMG Program funding to a prospective awardee, NTIA will require the prospective awardee to agree, by contract or other binding commitment, to abide by the non-discrimination requirements set forth in III.J in the NOFO.**

**Do you agree to abide by the non-discrimination requirements?**

Yes

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**Certification of Technical Capability**

**Each applicant must supply a certification attesting that it is technically qualified to complete and operate the proposed project.**

Technical Capacity Certification-09-28-2022 01-43-Pima County-GRN-000588.pdf

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**Interconnect Policy**

**The Applicant must describe in detail the nondiscrimination, interconnection, and network management practices that would be adopted for the project facilities. The Applicant should describe how it will comply with nondiscrimination and interconnection obligations, particularly with connectivity to the public Internet and physical interconnection for the exchange of traffic. In addition to describing network management practices, the Applicant should disclose any practices in place to block access to illegal or harmful content.**

**This response is limited to 6000 characters as an open field narrative.**

Pima County's proposed middle mile fiber project commits to comply with the NTIA requirement to meet the FCC non-discrimination and network interconnection policies.

Non-discrimination – Pima County will meet or exceed the requirements set forth by the FCC's Internet Policy Statement, FCC 05-151, adopted August 5, 2005 regarding non-discrimination and actively

encourages broadband deployment and the preservation and promotion of the open and interconnected nature of the public Internet.

Interconnection – Pima County's middle mile service offering will be high-capacity, point-to-point private line transport services. Pima County will not manage or limit the content of communications traffic transiting on the Pima County network, except to the extent necessary to maintain reliable service. Pima County's network management practices will not involve preferential routing of traffic on the basis of content or provider. Pima County will utilize neutral traffic routing and will enable connections to all carriers and to the public Internet. Pima County will make its network management policies publicly available and will provide notice to customers of changes to these policies.

Pima County commits to offering non-discriminatory interconnect to terrestrial and wireless last mile broadband providers and any other parties making a bona fide request and will negotiate reasonable terms and conditions for all requests.

Revision:

Pima County will offer the network in perpetuity as stated in the attached Interconnect Policy.

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#### **Technical Overview**

**Please describe targeted last mile service objectives, including last mile service provider letters of commitment, agreements, or contracts; and a description of the proposed service offerings, including the pricing of the services to be offered over the proposed facility.**

**This response is limited to 6000 characters as an open field narrative.**

The last mile service objective is to facilitate carriers' ability to bring affordable high-speed Fiber to the Home (FTTH) for all residents in Pima County as well as provide last mile network access to large commercial enterprises, municipalities and higher education institutions. Currently, the surrounding communities outside the Tucson metropolitan area do not have middle mile infrastructure from point A to point B. These communities are suffering because they are at the end of the last mile run and experience high latency because there is not enough bandwidth to support the service needs in these communities. Without a middle mile network, latency increases causing unreliable and slow internet for these communities. This middle mile project will offer dark fiber or conduit for lease, share or swap to carriers so that they can provide affordable and reliable last mile service.

Pricing will be based on commercial offerings in the region with the goal of providing a more cost effective option for last mile carriers. As a government entity, high return on investment or profit models are not required. Pima County intends to contract with an operations and maintenance company. The maintenance and operational plan is designed to support the overall cost of network maintenance and technology improvements at the lowest cost to the customer. With support from the NTIA Middle Mile Infrastructure Grant Program, the initial construction costs are covered, further reducing the need to recoup those costs in the carrier's revenue model.

Pima County is in discussion with several carriers and the Arizona Department of Transportation (ADOT) on the use of the proposed middle mile network. The Sun Corridor Network is an Arizona

research and education network currently serving three state universities and other educational institutions across the state of Arizona. Sun Corridor has expressed interest in leasing conduit and is particularly interested in the University of Arizona Experiment Station that is currently being served by a microwave link. Last mile service providers like Alluvion, a tribal owned broadband provider, have expressed interest in the middle mile network.

The Pima County Middle Mile project will provide carrier neutral open access resources throughout the Pima County/Tucson metro area. The intent is to fully optimize and utilize 100% of the capacity provided by this infrastructure project. The project's objective is to dig once and populate many, utilizing one conduit for the Public (Government) use and one conduit for the private sector or commercial use. The proposed first group of 432 strands of fiber and open conduit will be utilized by Federal, State, County, City, Town, Libraries and Education. Pima County is a border county, and many state and federal resources must pass through the congested metro Tucson area to get to Phoenix. This design provides a safer and more efficient route around the heavily congested metro area. State agencies such as Arizona Department of Transportation has indicated their participation in the project to facilitate the current Interstate I-10/I-19 project. The public use will be a mixture of dark fiber and open conduit facilitating emergency services, Homeland Security, education and library services, internal Broadband, combined law enforcement systems, like NCIC (National Crime Information Center) and ACJIS (Arizona Criminal Justice Information System). The public conduit will be utilized for smart city applications like traffic control, license plate readers, and security/monitoring services in all the cities and towns in the region that is serviced by the project. The architecture is designed as a redundant ring and will be used for regional redundancy throughout multiple Data and Tier I Data centers as well as for services identified above.

The second 432 group of fiber and conduit will be utilized by the private sector delivering Broadband and Telecommunication services to all the surrounding communities in the region that is serviced by the Pima County Middle Mile project. This middle mile infrastructure project will set the foundation for the last mile grant opportunities provided through the upcoming BEAD program. The dark fiber will be utilized by smaller carriers wanting to enter the market to service outlying communities that currently is cost prohibitive. The high cost to service the last mile creates a "barrier to entry" making a last mile Fiber to the Home (FTTH) build not feasible without this project. This project will level that playing field in the outlying rural communities for all carriers and provide more options to carriers and the communities.

The project will create competitive options in all Pima County communities and encourages both small and large providers to participate. By providing open conduit to the larger providers, the project encourages them to also service the smaller outside communities by pulling their own fiber in the project's open conduit and maintaining the control and security that they require. The providers can also take advantage of the ring redundancy and multiple Tier 1 distribution failover points.

Pima County is duly authorized to provide broadband services as envisioned in the Enabling Middle Mile Broadband Infrastructure Grant program and as described in the County's Middle Mile grant application. Arizona Revised Statutes sets forth the powers of the County, which shall be exercised by the Board of Supervisors and agents and officers acting under its authority pursuant to a resolution executed by the Board on August 18, 2022 (Resolution 2022-48). The County is authorized to use its



land in the interests of the inhabitants of the County, improve real property for public purposes and to lease or sublease its lands and buildings. The County has the authority to contract with vendors to install physical fiber optic cable and contract with broadband companies to provide telecommunications services.

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**Applicants are encouraged to upload supplemental documentation.**

ACA-Broadband-Strategic-Plan-final-2-2-22-09-29-2022 04-17-Pima County-GRN-000588.pdf, Pima County MMG Letters of Support\_All-09-29-2022 07-06-Pima County-GRN-000588.pdf, Pima County MMG Network - Fiber-04-04-2023 03-24-Pima County-GRN-000588.Splice Calcs 3.21.23.xlsx, NTIA Middle Mile Grant Program\_Pima County\_Co-04-04-2023 03-24-Pima County-GRN-000588.docx, NTIA Middle Mile Programmatic Review Question-04-04-2023 07-34-Pima County-GRN-000588.docx, National Environmental Policy Act Compliance\_-04-04-2023 07-19-Pima County-GRN-000588.docx, NTIA Middle Mile Programmatic Review Question-04-04-2023 07-57-Pima County-GRN-000588.docx, Pima County MMG Budget Narrative\_Final\_revise-04-04-2023 07-56-Pima County-GRN-000588.docx

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### **Competitive Landscape**

**The Applicant should describe existing middle mile offerings in the area, if any, including competitor data if applicable. This should include a description of the proposed service offerings, including the pricing and technology of the services to be offered over the proposed facility. Where possible, Applicant's project should be able to demonstrate a decline in middle mile costs that are likely to flow through to consumer broadband prices.**

**This response is limited to 6000 characters as an open field narrative.**

There is no viable existing middle mile infrastructure outside of the metro Tucson area and the middle mile network in the metro area is congested with little bandwidth to reach outside rural communities. Although some carriers have limited infrastructure in place, it is proprietary and is not an open access network. The Pima County middle mile project will eliminate the need for last mile carriers to build independent and duplicative infrastructure to provide their services to households and businesses in the region. Last mile carriers will lease dark fiber or conduit for a lower cost than they would pay for the construction and maintenance of their own middle mile project. Pima County will also have fiber for county use creating cost savings to the county. Monthly recurring costs paid to carriers for Tier 1 connections will be reduced because the county will have their own dedicated fiber.

This model distributes the middle mile cost over several service providers including the cost of maintenance and management of the network thus reducing the cost to the end user, the residents of the communities. This model also allows smaller carriers the ability to enter the market and provide competitive pricing to consumers. These smaller carriers would not have an opportunity to expand their services if they had to fund and maintain a middle mile infrastructure on their own. Multiple carriers in a market provides competition; therefore, reducing end costs to the consumer.

The projections show that the county will have annual net operating revenue once the network is fully operational. Estimates for dark fiber and conduit leases to carriers and other government entities are shown in the Pro Forma template. Operational expenses are estimated bases on an experienced management firm contracted to provide network monitoring and maintenance for the network. In addition, an estimated 12% of revenues will be set aside for network reinvestment to cover expenses associated with adds, cuts, moves other major network expenses.

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**Type of technology to be used in proposal:**

Fiber Optic Technology

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**Each applicant of an award to build middle mile infrastructure using fiber optic technology shall certify that the proposed project, upon completion, will include direct interconnection facilities that will facilitate the provision of lit broadband service, at speeds not less than 1 Gigabit per second for downloads and 1 Gigabit per second for uploads to anchor institutions located within 1,000 feet of the middle mile infrastructure, as detailed in the Template CAI below.**

**Do you agree to certify to the above?**

Yes

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**Upload Template CAI. Required for Fiber Optic Technology, optional for Wireless or Other.**

Pima County MMG Community Anchor Institution\_-09-28-2022 09-08-Pima County-GRN-000588.xlsx

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**An eligible entity applying for a middle mile grant may seek, and the Assistant Secretary may grant, a waiver of the requirements set out in the previous paragraph, in full or in part, to the extent the eligible entity demonstrates that the requirement is not technically or economically feasible.**

**Do you plan to apply for a waiver? If yes, please attach the waiver application in the Application Workspace, the Application Information section, Required Documents under Required Document Question 4 "Additional Waiver Upload".**

No

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**Network Route Maps**

**Applicants should provide a physical network map that includes the following (if applicable):**

**The Project Area and those unserved and underserved areas which it will enable.**

**Applicant's pre-existing service area that demonstrates current service levels.**

**The physical path of the network's transmission medium (e.g., backbone and lateral cable routes,**

microwave links), transmission type, technology, operating bandwidth, capacity (e.g., dark vs. lit strand count), and cable placement (e.g., aerial, burial) should be displayed.

Points of interconnection (purely passive and non-environmentally controlled nodes, e.g., splice points are optional):

Provider Facilities

Collocation Facilities

Private Interconnection Points with partnering service provider/private network

Wireless towers and associated coverage areas.

Anchor institutions within 1,000 feet, if desired.

Additionally, the maps should delineate between network and facilities that are:

- Part of the Applicant's/key partners' existing network;

- Proposed as part of this project;

- Leased from a third party;

- Utilized under some alternative arrangement; or

- Relevant to interconnection with either Last Mile or Middle Mile service providers.

**PLEASE NOTE: Only ESRI Shapefiles will be accepted and uploaded.**

Fishel - Pima County Project Path SHP-09-28-2022 09-06-Pima County-GRN-000588.zip

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#### **Data Submission Specification**

There is a template "Upload Template Data Submission Specification" which shall be uploaded.

Applicants must complete the table with information for all interconnection points proposed for the network. This table has three required fields: Point Name, Latitude and Longitude. This should accommodate all of the points of interconnection (passive, non-environmentally controlled points of interconnection, e.g., splice points, may be excluded), collocation facilities, central offices, head ends, and other centralized facilities, network access points to Last Mile service providers, Internet peering points, and towers.

Pima County MMG Data Submission\_All-09-28-2022 09-07-Pima County-GRN-000588.xlsx

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#### **Network Diagram**

The Applicant must provide a high-level network diagram to be uploaded for the project that is a representation of the network, capacities, and facilities. The diagram must clearly denote which of the network elements already exist. The diagram should show:

**The links between the network nodes. The types of facilities used in connecting the network elements (fiber, wireless microwave, etc.).**

**The points of interconnection and collocation facilities, including Internet peering points, access to local exchange carriers, central offices, or cable head ends.**

**The proposed aggregation node facilities that will provide the egress point(s) from the broadband backbone to the networks of the selected service provider(s), named Last Mile service providers, and the selected named Internet Service Provider(s) in the new infrastructure.**

**The Applicant should show which technologies are used and include bandwidth capacity constraints.**

Pima County MMG Fiber Ring Network Design-09-28-2022 09-07-Pima County-GRN-000588.pdf, Pima County FCC Unserved and Underserved Over-09-29-2022 04-13-Pima County-GRN-000588.pdf, Pima County MM Network 25 Mile Last Mile Serv-09-29-2022 04-13-Pima County-GRN-000588.pdf, Pima County MMG NTIA Broadband USA Indicators-09-29-2022 04-13-Pima County-GRN-000588.pdf, Pima County Project Path-09-29-2022 07-12-Pima County-GRN-000588.kmz

#### **Environmental Narrative**

**Any project-related activity that may adversely affect the environment must not be undertaken prior to the completion of the environmental review process prescribed by NTIA. Doing so may jeopardize consideration of the application.**

**All Applicants for MMG projects must comply with the National Environmental Policy Act, the National Historic Preservation Act, and the Endangered Species Act, and other applicable environmental regulations.**

**Please provide a service-area environmental description that describes the physical project area and its surroundings (e.g., disturbed or developed land vs. open space; adjacent natural resources, such as rivers, wetlands, or forestlands; and any protected lands or resources in or near the project area), including site photographs and aerial photographs (e.g., Google Earth or Google Maps images), if the project includes construction and/or ground disturbing activities.**

**This response is limited to 12000 characters as an open field narrative with image files to be uploaded.**

#### **Service Area Environmental Description**

Pima County, located in Southern Arizona, is the heart of the Sonoran Desert. Covering large parts of the southwestern United States (US), the Sonoran Desert encompasses portions of Arizona and



California, extending into the Mexican provinces of Sonora, Baja California and Baja California Sur. It is the hottest desert in North America.

The service area for Pima County's project is the Tucson Basin. The Basin has a wide environmental range with a developed core (metro-Tucson area) that is surrounded by four mountain ranges (known as the Sky Islands), three rivers (Santa Cruz, Rillito and Canada del Oro), forests, parklands, desert scrub, and numerous watersheds. It includes diverse habitats, species, natural resources and a historical ~12,000 year old cultural landscape. To govern the competing demands of conservation and protection against development needs, the County developed the award-winning Sonoran Desert Conservation Plan (SDCP) to guide development and conservation throughout the region.

Pima County's Middle Mile Infrastructure project will construct new fiber optic utility in existing transportation/utility corridors along the periphery of the Basin in order to minimize adverse effects to sensitive biological and cultural resources. This project will avoid conservation areas that are protected from development activities.

Aerial photographs of the project area and specific photographs of bridges, washes and rivers, and railroad crossings are included as an attachment.

Natural resources, protected lands, etc.

Although the project was designed to avoid protected lands, the county will comply with the National Environmental Policy Act, the National Historic Preservation Act, and the Endangered Species Act, and other applicable environmental regulations. All relevant requirements will be included in the RFP issued for construction and management of the middle mile project.

Compliance with environmental and historical preservation requirements:

Although the project was designed to avoid historical preservation areas, the county will comply with the National Environmental Policy Act, the National Historic Preservation Act, and the Endangered Species Act, and other applicable environmental regulations. All relevant requirements will be included in the RFP issued for construction and management of the middle mile project.

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#### **Upload Map Images:**

Pima County MM Aerial Photos-09-28-2022 09-08-Pima County-GRN-000588.pdf

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#### **Negotiated Indirect Cost Rate Agreement**

**This is a document published to reflect an estimate of indirect cost rate negotiated between the Federal Government and a Grantee's organization which reflects the indirect costs (facilities and administrative costs) and fringe benefit expenses incurred by the organization. This must be completed, if applicable.**

De Minimis Indirect Cost Rate Waived-09-29-2022 07-58-Pima County-GRN-000588.docx

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#### **Template Table of Funded Partners and Unfunded Collaborators**



List all funded and unfunded project collaborators, including partners, subrecipients, match providers, major contractors/supplies, details on role/scope of work for project. A fillable Template of Funded Partners and Unfunded Collaborators can be found in found in the MMG ZIP folder.

Table of Funded Partners and Unfunded Collabo-09-28-2022 09-10-Pima County-GRN-000588.xlsx, Pima County\_MMG Table of Funded Part-11-18-2022 03-08-Pima County-GRN-000588. and Unfunded Collaborators\_Revised.xlsx

#### **Certificate of Operational Capability**

Each applicant must supply a certification from an officer-level employee (or individual of comparable rank) attesting to the applicant's operational capability to complete and operate the proposed project.

If the applicant has provided a voice and/or broadband internet access service, it must supply a certification from an officer-level employee (or individual of comparable rank) attesting that it has filed FCC Form 477s and the Broadband DATA Act submission, if applicable, to the extent required during this time period and otherwise complied with the Commission's rules and regulations. Alternatively, the applicant must explain any pending or completed enforcement action, civil litigation, or other matter in which it was alleged to have failed to comply with Commission rules or regulations.

If the applicant has operated only an electric transmission or distribution service, it must submit qualified operating or financial reports that it has filed with the relevant financial institution for the relevant time period along with a certification that the submission is a true and accurate copy of the reports that were provided to the relevant financial institution.

If applicable, the applicant must submit a certification from an officer-level employee (or individual of comparable rank) that is has operated a middle mile broadband network for at least two years or that it is a wholly owned subsidiary of such an entity and must specify the number of years the applicant or its parent company has been operating.

Operational Certification Middle Mile Grant-09-20-2022 09-17-Pima County-GRN-000588.pdf

#### **Certification of Financial Capability**

Each applicant must supply a certification from an officer-level employee (or individual of comparable rank) attesting that it is financially qualified to meet the obligations associated with a project, that they will have available funds for all project costs that exceed the amount of the grant, and that they will comply with all MMG Program requirements, including service milestones.

Pima County MMG Financial Certification and L-09-29-2022 07-13-Pima County-GRN-000588.pdf

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## Letter of Credit

During the application process, each applicant must submit a letter from a bank meeting eligibility requirements consistent with those set forth in 47 C.F.R. § 54.804(c)(2) committing to issue an irrevocable stand-by letter of credit, in the required form, to the applicant. The letter shall at a minimum provide the dollar amount of credit offered and the issuing bank's agreement to follow the terms and conditions of NTIA's model letter of credit. NTIA shall publish on its website a model letter of credit substantially similar to the model letter of credit established by the Federal Communications Commission in connection with the Rural Digital Opportunity Fund (RDOF - Rural Digital Opportunity Fund Order, 35 FCC Rcd at 773-77, Appx. C.).

NTIA will ensure, prior to issuing a middle mile grant award, that each eligible entity obtains an acceptable, irrevocable standby letter of credit in a value of no less than 25 percent of the award amount.

Each eligible entity shall provide with its letter of credit an opinion letter from its legal counsel clearly stating, subject only to customary assumptions, limitations, and qualifications, that in a proceeding under Title 11 of the United States Code, 11 U.S.C. § 101 et seq. (the "Bankruptcy Code"), the bankruptcy court would not treat the letter of credit or proceeds of the letter of credit as property of the winning bidder's bankruptcy estate under Section 541 of the Bankruptcy Code.

Pima County MMG Letter of Credit Waiver Reque-09-29-2022 06-17-Pima County-GRN-000588.pdf, MMG PC credit with AP22-70-11-15-2022 06-16-Pima County-GRN-000588.pdf, Letter of alternate proposal\_Response\_GRN-000-03-13-2023 09-05-Pima County-GRN-000588.pdf, Treasurer Letter\_Mar 2023-04-04-2023 07-16-Pima County-GRN-000588.pdf

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## Audited Financial Statement (Previous 3 Years)

Each applicant shall submit financial statements from the most recent fiscal year that are audited by an independent certified public accountant. If the applicant is not audited in the ordinary course of business, in lieu of submitting audited financial statements it must submit unaudited financial statements from the three prior fiscal years and certify that it will provide financial statements from the three prior fiscal years that are audited by an independent certified public accountant by an NTIA specified deadline.

**\*You must provide 3 years of audited financial statements.**

FY 21 Annual Financial Report-09-18-2022 07-39-Pima County-GRN-000588.pdf, FY 19 Annual Financial Report-09-18-2022 07-40-Pima County-GRN-000588.pdf, FY 20 Annual Financial Report-09-18-2022 07-40-Pima County-GRN-000588.pdf

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**Historical Financial Statements (Previous 3 Years)**

Each applicant shall submit financial statements from the three prior fiscal years that are audited by an independent certified public accountant. If the applicant is not audited in the ordinary course of business, in lieu of submitting audited financial statements it must submit unaudited financial statements from the three prior fiscal years and certify that it will provide financial statements from the three prior fiscal years that are audited by an independent certified public accountant by an NTIA specified deadline.

**\*You must provide 3 years of historical financial statements.**

FY 21 Annual Financial Report-09-18-2022 07-42-Pima County-GRN-000588.pdf, FY 19 Annual Financial Report-09-18-2022 07-41-Pima County-GRN-000588.pdf, FY 20 Annual Financial Report-09-18-2022 07-42-Pima County-GRN-000588.pdf

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**Budget Narrative**

Applicants will create and submit a budget narrative that adequately describes all proposed activities and costs for their grant-funded project. Applicants must complete the file template, fill in all required information, and upload the file

. The file must be uploaded as a Word file, and not converted to a PDF. You can find additional guidance in the MMG Application Guidance.

Pima County MMG Budget Narrative\_Final-09-29-2022 07-34-Pima County-GRN-000588.docx, Pima County MMG Budget Narrative\_Final\_revise-11-18-2022 01-27-Pima County-GRN-000588.docx, Pima County MMG Budget Narrative\_Final\_revise-04-04-2023 07-32-Pima County-GRN-000588.docx

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**Template Detailed Budget Justification**

The Detailed Budget Justification spreadsheet must reflect the cost categories that appear on the SF-424 and SF-424C and include itemized calculations for each cost placed under those categories. A fillable Template Detailed Budget Justification can be found in found in the MMG ZIP folder.

Pima County MMG Detailed Budget Justification-09-29-2022 07-35-Pima County-GRN-000588.xlsx, Pima County MMG Detailed Budget Justification-04-04-2023 07-29-Pima County-GRN-000588.xlsx, Pima County MMG Network - Fiber-04-04-2023 07-30-Pima County-GRN-000588.Splice Calcs 3.21.23.xlsx

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**Any other funding provided for this project?**

No

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## Template Pro Forma

**Pro forma financial projection and analysis related to the project's sustainability, inclusive of subscriber (e.g., last mile network connections, other wholesale services), across an eight-year forecast period. A fillable Template Pro Forms can be found in the MMG ZIP folder.**

Pima County MMG Pro Forma Final-09-29-2022 06-36-Pima County-GRN-000588.xlsx, Pima County MMG Pro Forma Final\_with Assumpti-04-04-2023 07-33-Pima County-GRN-000588.xlsx

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