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FORM CD-450 (REV. 10/18) U.S. DEPARTMENT OF COMMERCE	X GRANT COOPERATIVE AGREEMENT
FINANCIAL ASSISTANCE AWARD	**FEDERAL AWARD ID NUMBER** 37-40-MM177
RECIPIENT NAME MCNC	**PERIOD OF PERFORMANCE** 07/01/2023 - 06/30/2025
STREET ADDRESS 3021 E. Cornwallis Road	**FEDERAL SHARE OF COST** $11,186,162.82
CITY, STATE ZIP Research Triangle Park, NC 27709-2889	**RECIPIENT SHARE OF COST** $7,773,435.18
AUTHORITY 47 U.S.C. Sec. 1741	**TOTAL ESTIMATED COST** $18,959,598.00
CFDA NO. AND NAME 11.033 Middle Mile (Broadband) Grant Program	
PROJECT TITLE: High-speed Economies for Rural Opportunity(HERO): NC Broadband Project	

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.

X DEPARTMENT OF COMMERCE FINANCIAL ASSISTANCE STANDARD TERMS AND CONDITIONS

R & D AWARD

FEDERAL-WIDE RESEARCH TERMS AND CONDITIONS, AS ADOPTED BY THE DEPT. OF COMMERCE

X SPECIFIC AWARD CONDITIONS

X LINE ITEM BUDGET

X 2 CFR PART 200, UNIFORM ADMINISTRATIVE REQUIREMENTS, COST PRINCIPLES, AND AUDIT REQUIREMENTS, AS ADOPTED PURSUANT TO 2 CFR § 1327.101

48 CFR PART 31, CONTRACT COST PRINCIPLES AND PROCEDURES

MULTI-YEAR AWARD. PLEASE SEE THE MULTI-YEAR SPECIFIC AWARD CONDITION.

X OTHER(S): GENERAL TERMS AND CONDITIONS for the NTIA MIDDLE MILE GRANT PROGRAM, April 2023.

SIGNATURE OF DEPARTMENT OF COMMERCE GRANTS OFFICER	DATE
DARREN OLSON Digitally signed by DARREN OLSON Date: 2023.06.15 08:09:48 -06'00' Darren Olson	
PRINTED NAME, PRINTED TITLE, AND SIGNATURE OF AUTHORIZED RECIPIENT OFFICIAL	DATE
Tommy Jacobson Tommy Jacobson Chief Operating Officer, Vice President	7/5/2023

Award Number: 37-40-MM177, Amendment Number 0
Federal Program Officer: Elaine Sloan
Requisition Number: MM177
Employer Identification Number: 581406628
UEI Number: W85LR2HMVMF5
Recipient ID: 3726394
Requestor ID: 3726394

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	$11,186,162.82

Award Contact Information

Contact Type	Contact Name	Email	Phone
Administrative	Mr. Tommy Jacobson	tjacobson@mcnc.org	9192481178

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

NIST Grants Specialist:
Damion Hart
100 Bureau Drive, MS 1650
Gaithersburg, MD 20899-1650
(301) 975-3766

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NIST Financial Assistance Award Number: 37-40-MM177
Amendment: NEW
Recipient: MCNC

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 37-40-MM177 with MCNC to support the work described in the proposal entitled "High-speed Economies for Rural Opportunity(HERO): NC Broadband Project" dated 9/27/2022, and any revisions received during the application review, which is 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:

Technical/Administrative:
Tommy Jacobson
Vice President / COO
MCNC
3021 E. Cornwallis Road
Research Triangle Park, NC 27709-2889
Telephone: 919-248-1178
Email: tjacobson@mcnc.org

3. NTIA Contact Information:

Federal Program Officer
Elaine Sloan
National Telecommunications and Information Administration
US Department of Commerce
1401 Constitution Ave., NW, Ste. 4078
Washington, DC 20230
Telephone: 202-482-8231
Email: esloan@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

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Grants Specialist:
Damion Hart
National Institute of Standards and Technology
100 Bureau Drive, Mail Stop 1650
Gaithersburg, MD 20899-1650
Telephone: 301-975-3766
Email: damion.hart@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)
__X__ Maximum Draw Amount controls (see explanation below)
$_____ each month
$_____ each quarter
$0.00_____ Max drawdown amount

Explanation:

1) **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.

2) Also, Federal funding in the amount of $352,937.00 is hereby withheld until approval of SAC #21 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

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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 depositary 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 2-year period of performance and provide for a maximum total amount of $11,186,162.82 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 $7,773,435.18 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 59% Federal share and 41% 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. Letter of Credit and Opinion Letter

Pursuant to the NOFO, the recipient must submit an irrevocable standby letter of credit in a value of no less than 25% of the award amount. The recipient also must 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

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as property of the winning bidder's bankruptcy estate under Section 541 of the Bankruptcy Code.

The recipient may obtain a new letter of credit or renew its existing letter of credit to reduce its value in accordance with the following limitations:

- Upon demonstrating to the satisfaction of the Assistant Secretary that it has completed the buildout of 40 percent of project miles, an eligible entity may obtain a new letter of credit or renew its existing letter of credit so that it is valued at no less than 20 percent of the award amount.
- Upon demonstrating to the satisfaction of the Assistant Secretary that it has completed the buildout of 60 percent of project miles, an eligible entity may obtain a new letter of credit or renew its existing letter of credit so that it is valued at no less than 15 percent of the award amount.
- Upon demonstrating to the satisfaction of the Assistant Secretary that it has completed the buildout of 80 percent of project miles, an eligible entity may obtain a new letter of credit or renew its existing letter of credit so that it is valued at no less than 10 percent of the award amount.

10. 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.

11. 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.

12. 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

13. 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.

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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.

14. 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 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

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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 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.

15. 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, 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 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.

16. 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

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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.

17. 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.

18. 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 Bipartisan Infrastructure 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.

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19. Pre-Award Costs:

Pre-award costs in the amount of $50,000.00 are acceptable only to the extent of reimbursing reasonable pre-application expenses, which include expenses related to preparing an application that are incurred after the publication date of the subject NOFO and prior to the date of issuance of this grant award, except the lobbying costs and contingency fees are not reimbursable. The approved pre-award costs are a portion of, **not in addition to**, the approved total budget.

Pre-award costs are approved for the period 05/13/2022 through 6/30/2023.

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, within 30 calendar days of 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). 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 37-40-MM177) 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:

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NIST Award Number: 37-40-MM177

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.

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21. Contingency Costs:

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

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.

End of Specific Award Conditions