ASSURANCES - CONSTRUCTION PROGRAMS

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0042), Washington, DC 20503.

PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET. SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

NOTE: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the Awarding Agency. Further, certain Federal assistance awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant, I certify that the applicant:

- Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project costs) to ensure proper planning, management and completion of the project described in this application.
- Will give the awarding agency, the Comptroller General of the United States and, if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the assistance; and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
- Will not dispose of, modify the use of, or change the terms of the real property title, or other interest in the site and facilities without permission and instructions from the awarding agency. Will record the Federal interest in the title of real property in accordance with awarding agency directives and will include a covenant in the title of real property acquired in whole or in part with Federal assistance funds to assure non-discrimination during the useful life of the project.
- Will comply with the requirements of the assistance awarding agency with regard to the drafting, review and approval of construction plans and specifications.
- Will provide and maintain competent and adequate engineering supervision at the construction site to ensure that the complete work conforms with the approved plans and specifications and will furnish progress reports and such other information as may be required by the assistance awarding agency or State.
- Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
- Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.

- 8. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. 4728-4763) relating to prescribed standards for merit systems for programs funded under one of the 19 statutes or regulations specified in Appendix A of OPM=s Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
- Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4801 et seq.) which prohibits the use of lead-based paint in construction or rehabilitation of residence structures.
- 10. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. 1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. 794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. 6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) the Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. 3601 et seq.), as amended relating to nondiscrimination in the sale, rental or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (i) the requirements of any other nondiscrimination statute(s) which may apply to the application.

- 11. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (P.L. 91-646) which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal and federally-assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
- 12. Will comply with the provisions of the Hatch Act (5 U.S.C. 1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
- 13. Will comply, as applicable, with the provision of the Davis-Bacon Act (40 U.S.C. 276a to 276a-7), the Copeland Act (40 U.S.C. 276c and 18 U.S.C.874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. 327-333) regarding labor standards of federally assisted construction subagreements.
- 14. Will comply with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
- 15. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the

- National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in flood plains in accordance with EO 11988; (e) assurance of project consistency with the approved State management program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. 1451 et seq.); (f) conformity of Federal actions to State (Clean Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. 7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended (P.L. 93-205).
- 16. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.
- Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469a-1 et seq.).
- 18. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act Amendments of 1996 and OMB Circular No. A-133, AAudits of States, Local Governments, and Non-Profit Organizations.@
- 19. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations, and policies governing this program.

SIGNATURE OF AUTHORIZED CERTIFYING OFFICIAL

TITLE

President and CEO

APPLICANT ORGANIZATION MCNC

DATE SUBMITTED

08/13/2009

U.S. Department of Commerce Broadband Technology Opportunities Program

I certify that I am the duly authorized representative of the applicant organization, and that I have been authorized to submit the attached application on its behalf. A copy of the applicant organization's authorization for me to submit this application as its official representative is on file in the applicant's office, and I am identified as the applicant organization's Authorized Organization Representative (AOR) in the Central Contractor Registration database. By signing this certification, I certify that the statements contained in the application are true, complete, and accurate to the best of my knowledge, and that if an award is made, the applicant organization will comply with all applicable award terms and conditions.

08/13/2009 (Date)	(Authorized Representative's Signature)
	Joseph A. Freddoso Name:
	President and CEO Title:

CERTIFICATION REGARDING LOBBYING

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 conncection 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:

If 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

MCNC

AWARD NUMBER AND/OR PROJECT NAME

Broadband Infrastructure Application Submission to RUS (BIP) and NTIA (BTOP) Building a Sustainable Middle-Mile Network for Underserved Rural NC MCNC Project Title:

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Joseph A. Freddoso, President and CEO

DATE 08/13/2009 FORM CD-512 (REV 12-04)

CERTIFICATION REGARDING LOBBYING LOWER TIER COVERED TRANSACTIONS

U.S. DEPARTMENT OF COMMERCE

Applicants should 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."

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.

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If 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.

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

NAME OF APPLICANT MCNC

AWARD NUMBER AND/OR PROJECT NAME

Broadband Infrastructure Application Submission to RUS (BIP) and NTIA (BTOP) MCNC Project Title: Building a Sustainable Middle-Mile Network for Underserved Rural NC

PRINTED NAME AND TITLE OF AUTHORIZED REPRESENTATIVE

Joseph A. Freddoso, President and CEO

SIGNATURE

DATE 8/13/2009

PLEASE COMPLETE THE TABLE BELOW FOR THE DIFFERENT CATEGORIES OF EQUIPMENT THAT WILL BE REQUIRED FOR COMPLETING THE PROJECT. EACH CATEGORY SHOULD BE BROKENDOWN TO THE APPROPRIATE LEVEL FOR IDENTIFYING UNIT COST

SERVICE A	AREA or COMMON NETWORK FACILITIES:	Eligibility (Yes/No)	Unit Cost	No. of Units	Total Cost	Support of Reasonableness
NETWORK & A	ACCESS EQUIPMENT					
Switching						
, witching	Cisco 7609 Chassis, Morehead City, southeastern network	Yes	\$57,250	1	\$57,250	Establishment of new layer-3 RPOP in rural southeastern North Carolina
	Cisco 7609 Chassis, Sylva, western network	Yes	\$57,250	1	\$57,250	Establishment of new layer-3 RPOP in rural western North Carolina
	Cisco 7609 10G Linecards, western network	Yes	\$17,500	8	\$140,000	Trunk Interface cards to establish new layer-3 RPOP in rural western North Carolina
	Cisco 7609 10G XENPAK's, western network	Yes	\$2000	8	\$16,000	Optics to establish new layer-3 RPOP in rural western North Carolina
	Cisco 7609 10G XENPAK's, southeastern network	Yes	\$2000	10	\$20,000	Optics to establish new layer-3 RPOP in rural southeastern North Carolina
Routing	Cisco 7609 10G Linecards, southeastern network	Yes	\$17,500	10	\$175,000	Trunk interface cards to establish new layer-3 RPOP in rural southeastern North Carolina
	Cisco 7609 1G Linecards, southeastern network	Yes	\$15,000	2	\$30,000	1G interfaces to establish layer-RPOP in rural southeastern network; client connection
	Cisco 7609 1G Linecards, southeastern network	Yes	\$15,000	2	\$30,000	1G interfaces to establish layer- RPOP in rural western network client connection
						Required equipment to build central NCREN core previously bought. Would have needed the to provided end to end connectivity with new project
	Cisco 7609 In Kind Match	Yes	\$67,084	9	\$603,753	the grant would award. Required equipment to build central NCREN core previously bought. Would have needed this to provided end to end
	Cisco CRS-1 In kind Match	Yes	\$422,448	3	\$1,267,346	connectivity with new project the grant would award.
Transport	Cisco 15454 DWDM Optical	Yes	\$108,057	7	\$756,400	Enables multiple services and

		DETAIL	OF PROJECT CO	818		
	Nodes, Common Elements, western North Carolina network					transport capabilities on the fiber infrastructure. Given distances involved, and capabilities of the system, provides the lowest cost service for aggregation of the services for rural western North Carolina.
	Cisco 15454 DWDM Optical Nodes, Common Elements, southeastern North Carolina network	Yes	\$98,799	8	\$790,395	Enables multiple services and transport capabilities on the fiber infrastructure. Given distances involved, and capabilities of the system, provides the lowest cost service for aggregation of the services for rural southeastern North Carolina.
	Cisco 10Gbps Optical Transponders, western North Carolina network	Yes	\$26,900	8	\$215,200	Transponders required to enable 10G IP transport network for NCREN rural western North Carolina network.
	Cisco 10Gbps Optical Transponders, southeastern North Carolina network	Yes	\$26,900	10	\$269,000	Transponders required to enable 10G IP transport network for NCREN rural eastern North Carolina network.
	Cisco 15454 DWDM Optical Nodes and Transponders, In Kind Match	Yes	\$149,399	8	\$1,195,188	Existing optical infrastructure procured in NCREN network expansion upgrade that would be needed to interconnect rural southeastern North Carolina and rural western North Carolina together.
Access	Staff installation labor of electronics	Yes	\$100/hr	540	\$54,000	Estimate based on installation interval we've seen for similar installations we've performed and what Cisco has confirmed is a general standard for a configuration of this magnitude. The estimate is for work at 15 locations at roughly 36 man hours per location. \$100/hr is the blended rate for our engineers including benefits.
OUTSIDE PLAN	T					
Cables	Corning, singlemode fiber, 48 ct.	Yes	\$0.50/ft	2,534,400	\$1,267,200	Current rate of fiber being bought today is in this price range.
		Vac		\$20.750	\$20.750	This fiber build ties in to a lease

Yes \$28,750 \$28,750

•	Ī	DETAIL C	OF PROJECT COS	515		
						of Qwest long haul fiber in
	W. G. L. W. L. E.					Winston-Salem Would have
	Winston-Salem/Wake Forest		1			needed to enable this new
	Access Fiber-In kind	_	1			network.
						This is previously acquired fiber
						from ITC Deltacom that is being
						leveraged to construct
						southeastern network path. This
						path would have been required
	Raleigh/Fayetteville/Wilmington	**		#2 C 7 000	Φ 2 ε 5 000	to purchase to produce this ring
	Long Haul Fiber	Yes	1	\$365,000	\$365,000	enabled by grant.
						This fiber build ties in to a lease
						of Qwest long haul fiber in
						Greensboro. Would have
		**		#200 000	Ф200 000	needed to enable this new
	Greensboro Metro Fiber	Yes	1	\$300,000	\$300,000	network.
	Blue Diamond SDR 9 1.25" hdep					Current rate of conduit being
	conduit, 2 in all fiber plant	37	ΦΩ 22/G	5.060.000	¢1 (72 704	bought today is in this price
Conduits	construction	Yes	\$0.33/ft	5,068,800	\$1,672,704	range.
	1.25" hdpe conduit couplings,		\$4.85/each			Current rate of conduit being
		Van		0.570	\$41,603	bought today is in this price
D 4		Yes		8,578	\$41,003	range.
Ducts						
Poles						
Towers						
						Required labor construction to
						get to underserved areas. Cost
						per foot is a blended rate over
						entire service area. Southeastern
						build will provide less
						impediments such as rock and
						will allow it to offset the overall
						costs in the west. Fiber
						contractor has provided this
Other 1						general rate as a starting point
	Fil C	**	Φ 7. 51./C	2.524.400	Φ10 04 2 0 57	for basis of providing a
	Fiber Construction	Yes	\$7.51/ft	2,534,400	\$19,043,957	budgetary quote.
	Rock Adder	Yes	\$28.25/ft	346,236	\$9,781,167	Potential for rock in the
						construction areas is high.
						We've added a reasonable
						amount of adder to allow for
						covering that, realizing that we
						could be high or low depending on what is discovered once
						on what is discovered once construction starts. If a
						significant amount is discovered,

Other 2 Fiber Route Markers Yes \$48 2672 \$128,256 Required location materials for new construction. Current rate of material bought today is in this price range. Fiber Closures Fiber Closures Fiber Closures Yes \$325 85 \$27,625 S27,625 Required splice enclosures along route to enable interconnect locations and splicing of lengths of cable. Current rate of fiber closures being bought today is in this price range. Fiber Handholds, 30x36x30 Yes \$325 85 \$27,625 S27,625 S2	1	Г		I ROJECI COSI	1	1	
Piber Route Markers Yes S48 2672 S128,256 Required location materials for new construction. Current rate of material bought today is in this price range. Required splice enclosures along route to enable interconnect locations and splicing of lengths of cable. Current rate of fiber closures being bought today is in this price range. Fiber Closures Yes S255 SERVICE AREA or COMMON NETWORK FACILITIES: REQUIRED TO							we will switch to aerial
Fiber Route Markers Yes \$48 2672 \$128,256 meter along mount and of miderial bought today is in this price range. Required to terminate combuit as it placed in the ground. Current rate of miderial bought today is in this price range. Yes \$325 \$85 \$27,625 His price range. Required to terminate conduit as it placed in the ground. Current rate of fiber closures being bought today is in this price range. Required to terminate conduit as it placed in the ground. Current rate of handholds being bought today is in this price range. SERVICE AREA or COMMON NETWORK FIber Handholds, 30x36x30 Yes \$255 \$480 \$122,400 Support of Reasonableness FACILITIES: Support of Reasonableness For all Cost BUILDINGS New Construction Pre-Fab Huts Regeneration but in Lincolnton Yes \$150,000 1 \$150,000 There will be power work required at nine new facilities. The power will be bought from the building owner, but we required 2 at nine new facilities. The power will be bought from the building owner, but we required by the bought from the building owner, but we required at nine new facilities. The power will be bought from the building owner, but we required by a nine new facilities. The power will be bought from the building owner, but we required by a nine new facilities. The power will be bought from the building owner, but we required the nine own in the building owner, but we required the nine own in the building owner, but we required the nine own in the building owner, but we required the nine own in the solutions we've seen this cost around \$5000 per site. BILLING SUPPORT AND OPERATIONS SUPPORT SHILLING SUPPORT AND OPERATIONS SUPPORT							
Other 2 Fiber Closures Yes \$325 \$527,025 Total Cost Required to terminate conduit as it it placed in the ground. Current rate of handholds being bought today is in this price range. \$255 \$480 \$122,400 \$122,	Other 2	Fiber Route Markers	Yes	\$48	2672	\$128,256	new construction. Current rate of material bought today is in this
Fiber Handholds, 30x36x30 Yes \$255		Fiber Closures	Yes	\$325	85	\$27,625	route to enable interconnect locations and splicing of lengths of cable. Current rate of fiber closures being bought today is in
FACILITIES:		Fiber Handholds, 30x36x30	Yes	\$255	480	\$122,400	it it placed in the ground. Current rate of handholds being bought today is in this price
BUILDINGS New Construction Pre-Fab Huts Regeneration hut in Lincolnton Other CUSTOMER PREMISE EQUIPMENT Modems Set Top Boxes Inside Wiring Racks, DC power plant termination blocks at 9 locations. Press BILLING SUPPORT AND OPERATIONS SUPPORT SYSTEMS Billing Support Systems Regeneration hut in Lincolnton Yes \$150,000 1 \$150,000 in regentation site needed due to rural nature of the route. Prefab hut presents cheapest option. S150,000 1 \$150,000 in rural nature of the route. Prefab hut presents cheapest option. There will be power work required at nine new facilities. The power will be bought from the building owner, but we require DC management systems, and breaker boxes to terminate the power. In past installations we've seen this cost around \$5000 per site. BILLING SUPPORT AND OPERATIONS SUPPORT SYSTEMS Billing Support Systems	SERVICE AREA of	r COMMON NETWORK	Eligibility	Unit Cost	No. of		Support of Reasonableness
New Construction			(Yes/No)		Units	Total Cost	
Regeneration site needed due to rural nature of the route. Prefab Huts Regeneration hut in Lincolnton Yes \$150,000 1 \$150,000 hut presents cheapest option.							
Pre-Fab Huts Regeneration hut in Lincolnton Yes \$150,000 1 \$150,000 hut presents cheapest option.	New Construction	on					
Other CUSTOMER PREMISE EQUIPMENT Modems Set Top Boxes Inside Wiring Racks, DC power plant termination blocks at 9 locations. Yes \$5000 9 \$45,000 Figure 4 nine new facilities. The power will be bought from the building owner, but we require DC management systems, and breaker boxes to terminate the power. In past installations we've seen this cost around \$5000 per site. BILLING SUPPORT AND OPERATIONS SUPPORT SYSTEMS Billing Support Systems		·	Yes	\$150,000	1	\$150,000	rural nature of the route. Prefab
CUSTOMER PREMISE EQUIPMENT Modems Set Top Boxes Inside Wiring Racks, DC power plant termination blocks at 9 locations. Yes \$5000 9 \$45,000 Facks, DC power plant termination the building owner, but we require DC management systems, and breaker boxes to terminate the power. In past installations we've seen this cost around \$5000 per site. BILLING SUPPORT AND OPERATIONS SUPPORT SYSTEMS Billing Support Systems	Improvements &	Renovation					
Modems	Other						
Set Top Boxes	CUSTOMER PREMISE EQUIPMENT						
Inside Wiring Racks, DC power plant termination blocks at 9 locations. Yes \$5000 9 \$45,000 Fine will be power work required at nine new facilities. The power will be bought from the building owner, but we require DC management systems, and breaker boxes to terminate the power. In past installations we've seen this cost around \$5000 per site. BILLING SUPPORT AND OPERATIONS SUPPORT SYSTEMS Billing Support Systems	Modems						
Other Racks, DC power plant termination blocks at 9 locations. Yes \$5000 9 \$45,000 There will be power work required at nine new facilities. The power will be bought from the building owner, but we require DC management systems, and breaker boxes to terminate the power. In past installations we've seen this cost around \$5000 per site. BILLING SUPPORT AND OPERATIONS SUPPORT SYSTEMS Billing Support Systems	Set Top Boxes	Set Top Boxes					
Other Racks, DC power plant termination blocks at 9 locations. Yes \$5000 9 \$45,000 There will be power work required at nine new facilities. The power will be bought from the building owner, but we require DC management systems, and breaker boxes to terminate the power. In past installations we've seen this cost around \$5000 per site. BILLING SUPPORT AND OPERATIONS SUPPORT SYSTEMS Billing Support Systems	Inside Wiring						
SYSTEMS Billing Support Systems	Other	blocks at 9 locations.	Yes	\$5000	9	\$45,000	required at nine new facilities. The power will be bought from the building owner, but we require DC management systems, and breaker boxes to terminate the power. In past installations we've seen this cost
Customer Care Systems	Billing Support Sys	tems					
	Customer Care Sys	tems					

		•				
Other						
SERVICE AREA	or COMMON NETWORK	Eligibility	Unit Cost	No. of		Support of Reasonableness
FACILITIES:		(Yes/No)		Units	Total Cost	
OPERATING EQ	UIPMENT					
Vehicles						
Office Equipment/	Furniture					
Other						
PROFESSIONAL S	SERVICES					
Engineering Design	Route Engineering	Yes	\$0.25/ft	2,534,400	\$633,600	
Project Management	Project Management Oversight by partner, with support from MCNC employees	Yes	\$328,685/one time	1	\$328,685	Project oversight of construction firm and crews.
Consulting						
Other						
TESTING						
Network Elements						
IT System Element	ts					
User Devices						
Test Generators						
Lab Furnishings						
Servers/ Computer	rs					
OTHER UPFRONT COSTS						
SITE PREPARAT						
Other	Pre-award consulting (legal, mapping, grant writing, fiber planning)	Yes	\$122,500	1	\$122,500	
	Pre-award labor, 1904.76 hours x \$4.10/hr	Yes	\$44.10/hr	1904.76	\$84,000	
	Benefits @ 44.6% of labor	Yes	\$37,464	1	\$37,464	
	Direct/Labor Overhead, 54.8327% of labor and benefits	Yes	\$66,602	1	\$66,602	
	G&A	Yes	\$58,791	1	\$58,791	
	Travel, workshop attendance, fiber route inspection	Yes	\$3470	1	\$3470	

K&L GATES

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www.klgates.com

August 12, 2009

Rural Utilities Services Attn: Administrator U.S. Department of Agriculture Washington, D.C. 20250-1500

National Telecommunications and Information Administration Attn: Assistant Secretary U.S. Department of Commerce Washington, D.C. 20230

Ladies and Gentlemen:

We are special counsel to MCNC, a North Carolina nonprofit corporation formerly named Microelectronics Center of North Carolina (the "Applicant"), in connection with its application (the "Application") to the Broadband Initiatives Program administered by the United States Department of Agriculture (the "USDA") and/or the Broadband Technology Opportunities Program administered by the United States Department of Commerce (the "USDOC") and one or more proposed Grant Agreements, Loan Agreements, or Loan/Grant Combination Agreements (the "Funding Agreement") between the USDA and/or the USDOC (the "Funder") and the Applicant, as referenced in Notices of Funds Availability published in the Federal Register by the USDA (FR Doc. 2009–16268) on July 9, 2009 and the USDOC (FR Doc. 2009-16103) on July 8, 2009. We are delivering this opinion letter to you at the Applicant's request as required by the Application.

This opinion letter has been prepared and should be understood in accordance with the Legal Opinion Principles, 53 Bus. Law. 831 (1998), and Guidelines for the Preparation of Closing Opinions, 57 Bus. Law. 875 (2002), of the Committee on Legal Opinions, ABA Section of Business Law (collectively the "ABA Reports"). Furthermore, the opinions set forth below are issued in connection with, and are subject and conditioned on: (i) the examination of the corporate documents of Applicant as deemed appropriate; (ii) reliance without independent verification on certificates of public officials and on the certificate of an officer of the Applicant (the "Fact Certificate"); (iii) certain assumptions and qualifications (the "Assumptions and Qualifications"); (iv) limitations as to applicable law on which we are opining; (v) stipulations as to the use of certain capitalized terms and reference to "our knowledge"; (vi) limitations regarding laws affecting the rights and remedies of creditors generally and general principles of equity; and (vii) the exclusions of opinions as to title to real or personal property as more fully stated in each of the foregoing instances in the supplemental information (the "Opinion Supplemental Material") accompanying the Application of the Applicant, the provisions of which are incorporated herein.

The following documents are referred to collectively in this opinion letter as the "Transaction Documents".

1. Application; and

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Rural Utilities Services National Telecommunications and Information Administration August 12, 2009 Page 2

2. Funding Agreement (as and to the extent posted at **www.broadbandusa.gov** on the date hereof).

We assume without verification that the Funding Agreement as entered, or to be entered, into by the Applicant will be in form and substance substantially the same as so posted as of our execution and delivery of this opinion letter and reserve the right to revise or withdraw this opinion letter if the form and substance substantially change or the applicable Funding Agreement is not so posted.

Based on and subject to the foregoing, it is our opinion that:

- a. The Applicant is a duly incorporated and existing nonprofit corporation under the laws of the State of North Carolina.
- b. The Applicant has the corporate power to own its property and carry out its business as described in the Fact Certificate.
- c. The Applicant has the corporate power (i) to execute and deliver the Transaction Documents, and (ii) to perform all acts required to be done by the Applicant under the Transaction Documents.
- d. To our knowledge, except as set forth on <u>Schedule 1</u> of the Opinion Supplemental Material incorporated herein, no legal proceedings have been instituted or are pending against the Applicant, the outcome of which would adversely affect the Applicant's ability to perform the duties under the Funding Agreement, or adversely affect the security to be pledged under the Funding Agreement (the "**Legal Proceedings**").
- e. To our knowledge, except as set forth on <u>Schedule 2</u> of the Opinion Supplemental Material incorporated herein, there are no judgments against the Applicant (the "**Judgments**"), and no liens against any of the real or personal property of the Applicant (the "**Liens**"), which would adversely affect the security to be pledged under the Funding Agreement.

We are furnishing this opinion letter to you solely in connection with the Application. You may not rely on this opinion letter in any other connection, and it may not be furnished to or relied upon by any other person for any purpose, without our specific prior written consent.

The foregoing opinions are rendered as of the date of this letter. We assume no obligation to update or supplement any of our opinions to reflect any changes of law or fact that may occur.

Yours truly,

KEL Gates LIP

K&L Gates LLP

Disclosure of Lobbying Activities

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352

(See reverse for public burden disclosure)

1. Type of Federal Action: a. contract b. grant c. cooperative agreement d. loan e. loan guarantee f. loan insurance	2. Status of Federal Action: a. a. bid/offer/application b. initial award c. post-award		3. Report Type:a. a. initial filing b. material change For material change only: Year quarter Date of last report	
4. Name and Address of Reporting Entity: X Prime Subawardee Tier, if Known: MCNC 3021 Cornwallis Road PO Box 12889 Research Triangle Park, NC 27709 Congressional District, if known: 4th		5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:		
Congressional District of North Carolina 6. Federal Department/Agency: United States Dept. of Agriculture, Rural Utilities Service (BIP) and U.S. Dept. of Commerce, National Telecommunications and Information Administration (BTOP)		Congressional District, if known: 7. Federal Program Name/Description: Broadband Initiatives Program (BIP) and Broadband Technology Opportunities Program (BTOP) CFDA Number, if applicable: 10.787 and 11.557		
8. Federal Action Number, if known: unknown		9. Award Amount, if known: \$ unknown		
10. a. Name and Address of Lobbying Registrant (if individual, last name, first name, MI): none		b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI): n/a		
11. Information requested through this form is authorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.		Signature: Alple All All All All All All All All All A		
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