QUARTERLY PERFORMANCE PROGRESS REPORT FOR BROADBAND INFRASTRUCTURE PROJECTS

General Information		
1. Federal Agency and Organizational Element to Which Report is Submitted Department of Commerce, National Telecommunications and Information Administration	**2. Award Identification Number** NT10BIX5570011	**3. DUNS Number** 018946590

4. Recipient Organization

MCNC 3021 Cornwallis Road, Research Triangle Park, NC 27709-2889

5. Current Reporting Period End Date (MM/DD/YYYY) 09-30-2013	**6. Is this the last Report of the Award Period?** ◯ Yes ◉ No

7. Certification: 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.

7a. Typed or Printed Name and Title of Certifying Official Patricia Moody Chief Financial Officer	**7c. Telephone (area code, number and extension)** 9192481820
	7d. Email Address pmoody@mcnc.org
7b. Signature of Certifying Official Submitted Electronically	**7e. Date Report Submitted (MM/DD/YYYY):** 10-29-2013

Project Indicators (This Quarter)

1. Please describe significant project accomplishments completed during this quarter (600 words or less).

MCNC previously reported that the original project, as well as the project modifications approved in spring of 2012, are complete. The associated miles in the project are 444 miles of new fiber; 314 miles of leased fibers and197 miles of existing network miles upgraded; and 1866 CAI's with improved or new connectivity. During this quarter all remaining 100G upgrade equipment for the Research universities was deployed as were the three huts that were approved in December of 2012. All aspects of the project have been completed.

2. Please provide the percent complete for the following key milestones in your project. Write "0" in the Percent Complete column and "N/A" in the Narrative column if your project does not include this activity. If you provided additional milestones in your baseline plan, please insert them at the bottom of the table. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the percent complete is different from the target provided in your baseline plan (300 words or less).

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
2a.	Overall Project	100	This task is 100% complete.
2b.	Environmental Assessment	100	This task is 100% complete.
2c.	Network Design	100	This task is 100% complete.
2d.	Rights of Way	100	This task is 100% complete.
2e.	Construction Permits and Other Approvals	100	This task is 100% complete.
2f.	Site Preparation	100	This task is 100% complete.
2g.	Equipment Procurement	100	This task is 100% complete.
2h.	Network Build (all components - owned, leased, IRU, etc)	100	This task is 100% complete.
2i.	Equipment Deployment	100	This task is 100% complete.
2j.	Network Testing	100	This task is 100% complete.
2k.	Other (please specify):	0	N/A

3. To the extent not covered above, please describe any challenges or issues faced during this past quarter in achieving planned progress against the project milestones listed above. In particular, please identify any areas or issues where technical assistance from the BTOP program may be useful (600 words or less).

No significant challenges in continuing on the execution of the project were experienced.

4. Please report the following information regarding network build progress. Write "0" in the Total column and "N/A" in the Narrative column if your project does not include this activity. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the total is different from the target provided in your baseline plan (600 words or less).

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
New network miles deployed	444	The 444 miles represented here matches the original approved build and additional miles added during the project. Initial baseline established would have projected 467.1 miles for this quarter, but the forecasted amount included miles that NTIA allowed to be acquired under IRU (indefeasible right to use) once the project began and means this number will always track below baseline.

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
New network miles leased	314	Our projections on network miles leased have been inaccurate due to misinterpretation of network miles leased versus network miles upgraded in our baseline projections. The total of 314 miles reported here is made up of 197 from ERC and FRC routes communicated in the original application, 61 from the Morris Broadband acquisition, and 33 from the Balsam and Plateau IRU's approved during the project. The additional 23 miles as approved in the savings request have now been added for a total of 314 miles. This number will always be less than the final projection of 420 due to misunderstanding of accounting of these miles at baseline completion.
Existing network miles upgraded	197	These miles represent fiber that MCNC already had the rights to via IRU and presented in the project and BTOP then funded the equipment. Baseline always showed 0 throughout the project and were moved from the "network miles leased" area here in a previous quarter which is creating the variance to baseline.
Existing network miles leased	0	N/A
Number of miles of new fiber (aerial or underground)	444	The 444 miles represented here matches the original approved build and additional miles approved during the project.
Number of new wireless links	0	N/A
Number of new towers	0	N/A
Number of new and/or upgraded interconnection points	1,125	This final number is higher to baseline due to the additional approved builds during the project and our estimate for number of required handholds designed during engineering being low initially.

For questions 5 and 6 please include information relating to agreements that you are negotiating or have entered into, or that your sub recipient, contractor or subcontractor is negotiating or entered into.

5a. If applicable, please provide the following information with regard to agreements with broadband wholesalers and/or last mile providers as a result of your project.

Indicators	
Number of signed agreements with broadband wholesalers or last mile providers	10
Number of agreements currently being negotiated with broadband wholesalers or last mile providers	3
Average term of signed agreements (in quarters)	70

5b. Please list the names of the wholesale and last mile providers with whom you have signed agreements (100 words or less). Providers:
Signed agreements completed to date are as follows:

1. ERC (dark fiber) through MCNC
2. FRC (dark fiber) through MCNC
3. FRC (lit service) through MCNC
4. Earthlink (dark fiber) through MCNC
5. RST Communications (dark fiber) through MCNC
6. Verizon Wireless (lit service) through FRC (subrecipient)
7. Morris Broadband (dark fiber) through FRC (subrecipient)
8. Pangea Internet (dark fiber) through FRC (subrecipient)
9. Broadplex (dark fiber) through MCNC
10. MOX Networks (dark fiber) through MCNC

Conversations with Dukenet have stalled. We contribute this primarily due to their recent announcement about being acquired by Time Warner Cable. Conversations with Balsamwest and TW Cable regarding fibers along a portion of the route are ongoing, as well as additional purchases from RST and Earthlink.

5c. What wholesale services are being provided by this project? Please describe below. As an attachment to this report, please provide pricing plans (in $ per month) associated with each wholesale service provided by your product (100 words or less). Wholesale services description:

MCNC is not providing wholesale services. The Agreements and providers noted above will be providing wholesales services as these agreements are formalized and these providers begin deploying equipment and services in those regions.

5d. If you have designated a third party to operate all or a portion of your network, please provide the name and contact information for this third party, indicate if this entity is a sub recipient, contractor, and/or subcontractor, and describe with specificity the portion of your network this this third party operates (600 words or less).

FRC has been contracted to provide fiber maintenance (locates and break/fix) on the fiber. Now that construction is complete, they have assumed this responsibility. They will provide route maintenance on 100% of the newly constructed fiber. On fiber assets that they retain in the new fiber footprint, they will be in a position to provide wholesale services to other wholesale carriers, last mile carriers, and private enterprise. MCNC will be focused on the education, government, and public health sectors.

FRC Contact Info:
Mike Baldwin
Senior Counsel, Business and Legal Affairs
1500 Hampton Street, Columbia SC 29201
(803)-726-4053

MCNC Contact Info:
Tommy Jacobson
COO
3021 E. Cornwallis Road
Research Triangle Park, NC 27709

6. Please provide the data according to the type of subscriber. Write "0" in the Total column and "N/A" in the Narrative column if your project does not pass or serve a particular subscriber type. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent reporting quarter. Please provide a narrative description if the total is different from the target provided in your baseline plan (300 words or less).

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
Broadband Wholesalers or Last Mile Providers	**Providers with signed agreements receiving new access**	1	FRC is providing lit service under a master contract with Verizon Wireless to 17 wireless towers over portions of the network.
	Providers with signed agreements receiving improved access	1	In advance of FRC lighting portions of the route on their own for the fibers they acquired in the route, they have contracted with MCNC for the next year to provide a 10Gbps lambda between New Bern and Wilmington on the MCNC network.
	Providers with signed agreements receiving access to dark fiber	8	Dark fiber agreements communicated in previous reports for the arrangements with FRC (as part of the subrecipient agreement), ERC, Pangea Internet, Morris Broadband, RST and Earthlink. During the quarter agreements with Broadplex and MOX Networks materialized. Discussions continue with Dukenet, Balsamwest, Time Warner Cable and Earthlink (additional purchase) for portions of the constructed network.
	Please identify the speed tiers that are available and the number of subscribers for each	2	Earthlink and RST are the first two providers that we believe will be providing wholesale and residential services in the areas of their purchases. However, we do not have direct visibility to what those offerings are or how they have provisioned the dark fibers they have received. Within the MCNC/FRC fibers, the service MCNC is providing is operating at 10G and the services that FRC is providing is operating at 100M. 100M: 17 subscribers 10G: 1 subscriber

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
Community Anchor Institutions (including Government institutions)	**Total subscribers served**	1,866	We are serving 1866 CAI's. This is 4 less than was communicated in prior quarters. MCNC was advised by NTIA to remove 17 CAIs that were previously reported as improved because now they are counted on the MCNC Round 2 project as receiving new fiber builds.

Additionally, we added 13 sites that were approved during this past year during project reroutes. 19 sites were approved as part of that process, but 6 were already included in the report as receiving improved access due to the initial project as funded. We do not include them again now to keep from double counting. Therefore, 1847 will be listed as receiving improved access and 19 will be listed as receiving new access, for a total of 1866.

As our understanding of the reporting requirements refined during the project, we now know that projections in our initial application and baseline are inaccurate due to misinterpretation of the guidance. Initial projections were based on community anchor institutions located in the counties in which our fiber route passes through, but not necessarily on-net with the North Carolina Research and Education Network (NCREN) today.

Based on the clarifications from a previous quarter, what we report here are CAI's that were already connected to the NCREN backbone in some capacity that have received improved access due to the deployment of fiber and higher grades of service (i.e. 10Gbps internet service) out of NCREN maintained facilities |
| | **Subscribers receiving new access** | 19 | These 19 sites reported represent locations approved for new builds during the project. |
| | **Subscribers receiving improved access** | 1,847 | We are now reporting 1847 CAI's. This is less than what was communicated in prior quarters. MCNC was advised by NTIA to remove 17 CAIs that were previously reported as improved because now they are counted on the MCNC Round 2 project as receiving new fiber builds.

Additionally, we added 13 sites that were approved during this past year during project reroutes. 19 sites were approved as part of that process, but 6 were already included in the report as receiving improved access due to the initial project as funded. We do not include them again now to keep from double counting. Therefore, 1847 will be listed as receiving improved access and 19 will be listed as receiving new access, for a total of 1866.

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Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
	Please identify the speed tiers that are available and the number or subscribers for each	1	Most of our CAI's that are noted have improved access due to being on the improved middle mile infrastructure. That infrastructure now has capability for 100G. On the system deployed, direct point to point services as shown below are possible: 100M, 250M, 500M, increments of 1G, 10G, 100G. For CAI's that have had new fiber constructed to their locations they have capability with the equipment deployed for services up to 10Gbps depending on what service level they choose. As their capabilities grow beyond the equipment deployed, we could upgrade that equipment through operational funds and improve their connectivity up to 100G. Currently these locations that had direct fiber built have had 100M services provisioned over 1G interfaces. 100M: 19 subscribers
Residential / Households	**Entities passed**	0	N/A
	Total subscribers served	0	N/A
	Subscribers receiving new access	0	N/A
	Subscribers receiving improved access	0	N/A
	Please identify the speed tiers that are available and the number of subscribers for each	0	N/A
Businesses	**Entities passed**	0	N/A
	Total subscribers served	0	N/A
	Subscribers receiving new access	0	N/A
	Subscribers receiving improved access	0	N/A
	Please identify the speed tiers that are available and the number of subscribers for each	0	N/A

7. Please describe any special offerings you may provide (600 words or less).

We are able to provide lambda based point to point based circuits between all NCREN POP's enabled by the new infrastructure and to portions of the central core (defined as the Charlotte to Raleigh corridor) of the NCREN network that existed prior to application. In addition, due to funding from the NTIA, the entire NCREN central core operates at 100Gbps.

8a. Have your network management practices changed over the last quarter?   ◯ **Yes**   ◉ **No**

8b. If so, please describe the changes (300 words or less).
N/A

9. Community Anchor Institutions:
Using the table below, please provide a list by service area of the community anchor institutions (including Government institutions) connected to your network as a result of BTOP funds. Figures should be reported for the most recent reporting quarter only (NOT cumulatively). Also indicate whether your organization is currently providing broadband service to the anchor institution. Finally, provide a short narrative description with examples of how institutions are using BTOP-funded infrastructure (300 words or less).

Institution Name	Service Area (town or county)	Type of Anchor Institution (as defined in your baseline)	Are you also the broadband service provider for this institution? (Yes / No)	Narrative description of how anchor institutions are using BTOP-funded infrastructure

Institution Name	Service Area (town or county)	Type of Anchor Institution (as defined in your baseline)	Are you also the broadband service provider for this institution? (Yes / No)	Narrative description of how anchor institutions are using BTOP-funded infrastructure
N/A	**N/A**	**N/A**	**N/A**	**N/A**

Project Indicators (Next Quarter)

1. Please describe significant project accomplishments planned for completion during the next quarter (600 words or less).

N/A as project is complete.

2. Please provide the percent complete for the following key milestones in your project. Write "0" in the Planned Percent Complete column and "N/A" in the Narrative column if your project does not include this activity. If you provided additional milestones in your baseline plan, please insert them at the bottom of the table. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the next reporting quarter. Please provide a narrative description if the percent complete is different from the target provided in your baseline plan (300 words or less).

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
2a.	Overall Project	100	This task is 100% complete
2b.	Environmental Assessment	100	This task is 100% complete
2c.	Network Design	100	This task is 100% complete
2d.	Rights of Way	100	This task is 100% complete
2e.	Construction Permits and Other Approvals	100	This task is 100% complete
2f.	Site Preparation	100	This task is 100% complete
2g.	Equipment Procurement	100	This task is 100% complete
2h.	Network Build (all components - owned, leased, IRU, etc.)	100	This task is 100% complete
2i.	Equipment Deployment	100	This task is 100% complete
2j.	Network Testing	100	This task is 100% complete
2k.	Other (please specify):	0	N/A

3. Please describe any challenges or issues anticipated during the next quarter that may impact planned progress against the project milestones listed above. In particular, please identify any areas or issues where technical assistance from the BTOP program may be useful (600 words or less).

N/A as project is complete.

Infrastructure Budget Execution Details

Activity Based Expenditures (Infrastructure)

1. Please provide details below on your total budget, cumulative actual expenditures (for the period ending the current quarter), and cumulative anticipated expenditures (for the period ending next quarter) for each line item, including detailed disbursements of both matching funds and federal funds from project inception through end of this quarter (actual) or next quarter (anticipated). Actual and anticipated figures should be reported cumulatively from award inception to the end of the applicable reporting quarter.

Cost Classification	Budget for Entire Project			Actuals from Project Inception through End of Current Reporting Period			Anticipated Actuals from Project Inception through End of Next Reporting Period		
	Total Cost (plan)	Matching Funds (plan)	Federal Funds (plan)	Total Cost	Matching Funds	Federal Funds	Total Costs	Matching Funds	Federal Funds
a. Administrative and legal expenses	$466,201	$169,207	$296,994	$473,791	$104,632	$369,159	$473,791	$104,632	$369,159
b. Land, structures, right-of-ways, appraisals, etc.	$740,417	$97,261	$643,156	$454,023	$100,266	$353,757	$454,023	$100,266	$353,757
c. Relocation expenses and payments	$0	$0	$0	$0	$0	$0	$0	$0	$0
d. Architectural and engineering fees	$1,904,780	$420,649	$1,484,131	$1,979,201	$437,084	$1,542,117	$1,979,201	$437,084	$1,542,117
e. Other architectural and engineering fees	$0	$0	$0	$0	$0	$0	$0	$0	$0
f. Project inspection fees	$0	$0	$0	$0	$0	$0	$0	$0	$0
g. Site work	$0	$0	$0	$0	$0	$0	$0	$0	$0
h. Demolition and removal	$0	$0	$0	$0	$0	$0	$0	$0	$0
i. Construction	$26,410,266	$6,370,055	$20,040,211	$26,650,831	$6,423,181	$20,227,650	$26,650,831	$6,423,181	$20,227,650
j. Equipment	$8,990,427	$3,229,401	$5,761,026	$8,954,245	$3,221,410	$5,732,835	$8,954,245	$3,221,410	$5,732,835
k. Miscellaneous	$0	$0	$0	$0	$0	$0	$0	$0	$0
l. SUBTOTAL (add a through k)	$38,512,091	$10,286,573	$28,225,518	$38,512,091	$10,286,573	$28,225,518	$38,512,091	$10,286,573	$28,225,518
m. Contingencies	$0	$0	$0	$0	$0	$0	$0	$0	$0
n. TOTALS (sum of l and m)	$38,512,091	$10,286,573	$28,225,518	$38,512,091	$10,286,573	$28,225,518	$38,512,091	$10,286,573	$28,225,518

2. Program Income: Please provide the program income you listed in your application budget and actuals to date through the end of the reporting period.

a. Application Budget Program Income: $0	b. Program Income to Date: $0