QUARTERLY PERFORMANCE PROGRESS REPORT FOR BROADBAND INFRASTRUCTURE PROJECTS

General Information

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

4. Recipient Organization

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

5. Current Reporting Period End Date (MM/DD/YYYY)	6. Is this the last Report of the Award Period?
03-31-2012	◯ 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	7c. Telephone (area code, number and extension)
Patricia Moody	9192481820
	7d. Email Address
Chief Financial Officer	pmoody@mcnc.org

7b. Signature of Certifying Official	7e. Date Report Submitted (MM/DD/YYYY):
Submitted Electronically	05-21-2012

Project Indicators (This Quarter)

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

Construction efforts for BTOP Round 1 as originally funded are complete and all equipment related to the project has been deployed and placed in to operation. There is now a DWDM core infrastructure serving the North Carolina Research and Education Network in the southeastern part of North Carolina along the Rocky Mount/Morehead City/Wilmington corridor, and in the western part of North Carolina between Mocksville/Asheville/Cullowhee/Charlotte corridor. The first service deployed on the system is a 10Gbps ring interconnecting all points of presence in those regions to the NCREN IP backbone.

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	78	Relative to the project budget, we are at 78%. However, relative to what we were funded to do in the original project, we are at 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)	70	Relative to the construction portion of the original budget, we are at 70% completion. Variances to budget are due to savings in the construction process, as well as the timing of billings from our contractors. Relative to what were funded to do in the original project, we are at 100% complete.
2i.	Equipment Deployment	100	This task is 100% complete.
2j.	Network Testing	100	This task is 100% complete.
2k.	Other (please specify): NA	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).

The final 1000's of feet of the project proved to be challenging due to the terrain of the areas they were in. These challenges spanned many quarters and were focused specifically on difficult creek and river crossings in the western footprint of the route due to rock, in many cases blue granite. At this point in the project, all issues rested squarely with us in implementation because we were well beyond permitting, contracting, and other issues. It was just a matter of executing which we have now done.

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	414	The final mileage represents the final constructed miles in the project after final engineering was complete and construction performed.

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
New network miles leased	291	Our projections on network miles leased have been inaccurate due to misinterpretation of network miles leased versus network miles upgraded in our baseline projections. As it relates to leasing (or in our case acquisition under Indefeasible Right to Use-IRU), we have now fully executed all that were planned or approved by NTIA once our project started. The total of 291 miles is made up of 197 from ERC and FRC routes communicated in application, 61 from Morris Broadband acquisition, and 33 from the Balsam and Plateau IRU's approved during the project. This number will always be less than the final projection of 420. The higher number reported in baseline are miles that now reside in the upgraded section below.
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 funded the equipment. Baseline always showed 0 throughout the project and were moved from the "network miles leased" area here in a previous quarter
Existing network miles leased	0	N/A
Number of miles of new fiber (aerial or underground)	414	The final mileage represents the final constructed miles in the project after final engineering was complete and construction performed.
Number of new wireless links	0	N/A
Number of new towers	0	N/A
Number of new and/or upgraded interconnection points	1,062	We are ahead of baseline as this number is representative of all splice enclosures and hand holds on the route, which enable interconnect points.

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	2
Number of agreements currently being negotiated with broadband wholesalers or last mile providers	5
Average term of signed agreements (in quarters)	80

5b. Please list the names of the wholesale and last mile providers with whom you have signed agreements (100 words or less). Providers:
MCNC has signed agreements for an approved swap with ERC and FRC as part of the project that was defined at application. We also signed an agreement with Haywood County Government on a 5 year lease of fibers in the western portion of the project over a short 2 mile segment of the route. Because this is not a wholesaler we do not include in the numbers above.

FRC, our subrecipient, has been discussing agreements with Zayo Bandwidth and Dukenet Communications for fibers in the route but contracts are not signed. They are now also talking to Pangea Internet about a possible IRU acquisition. Of these three possible agreements, the Dukenet agreement is forecasted for close in the June 2012 quarter. The Zayo efforts did not materialize. The Pangea opportunity may close the last half of 2012.

MCNC is exploring additional agreements with ERC for more fibers they would IRU along the BTOP route than originally planned that may officially close in June of 2012.

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 noted above are part of the IRU swaps that were negotiated and submitted to the NTIA for approval and those sites are expected to supply those services.

FRC is planning response to a number of RFP's related to wireless service but pricing plans are not yet available as the overall proposal contains BTOP and non-BTOP related fibers.

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.

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**	2	Discussions continue between FRC, Dukenet, and Pangea, but nothing formally signed between these. We are lower to baseline by one but expect when one of these signs later this year we will recover.
	Providers with signed agreements receiving improved access	0	We have discovered that most providers we've talked to are interested in dark services and not lit wholesale services so our projection here has been inaccurate.
	Providers with signed agreements receiving access to dark fiber	2	Discussions continue between FRC, Dukenet, and Pangea, but nothing formally signed between these. We are lower to baseline by one but expect when one of these signs later this year we will recover. We have discovered that some interest is there, but didn't start becoming more apparent until route was close to completion. Some interest has also been tied to the round 2 footprint as a complimentary route to help entice to the round 1 routes.
	Please identify the speed tiers that are available and the number of subscribers for each	0	Speeds and tiers available are anywhere from 100Mbps to 10Gbps. To date, no wholesalers have signed on for lit services.
Community Anchor Institutions (including Government institutions)	**Total subscribers served**	1,870	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 NCREN today.

Based on the clarifications from last quarter, what we report here are CAI's that were already connected to the North Carolina Research and Education Network (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.

This clarification means that some site names in lists previously uploaded on prior quarterly reports may need to be removed and replaced to correlate with the final 1870 site names reported here and within the annual report which is accurate. The total number of CAI's reported of 1870 matches the final count of on-net CAI's directly benefitting from the new infrastructure. |
| | **Subscribers receiving new access** | 0 | N/A |
| | **Subscribers receiving improved access** | 1,870 | 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 NCREN today.

Based on the clarifications from last quarter, what we report here are CAI's that were already connected to the North Carolina Research and Education Network (NCREN) backbone in some capacity that have received improved access due to the |

Subscriber Type	Access Type	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
			deployment of fiber and higher grades of service (i.e. 10Gbps internet service) out of NCREN maintained facilities. This clarification means that some site names in lists previously uploaded on prior quarterly reports may need to be removed and replaced to correlate with the final 1870 site names reported here and within the annual report which is accurate. The total number of CAI's reported of 1870 matches the final count of on-net CAI's directly benefitting from the new infrastructure.
	Please identify the speed tiers that are available and the number or subscribers for each	0	None of the improved access is due to directly connected CAI's but rather an improved middle mile infrastructure. That infrastructure 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.
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.

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
See Addendum	**See Addendum**	**See Addendum**	**See Addendum**	**See Addendum**

Project Indicators (Next Quarter)

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

The project as funded is complete. During this quarter, Q12012, we have submitted to the NTIA opportunities on how to leverage savings that have been realized during execution of the project. If approved, an additional 20 CAI's will be added to the project along with 23 new leased miles and 31 newly constructed miles. If approved during Q22012 we would anticipate starting the engineering and contract negotiations of these miles, but would not anticipate deployment during the quarter of any of the miles or CAI's.

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**	86	100% of the original project plan has been completed. We expect that efforts on the additional proposed infrastructure and expenditures realized during Q22012 will increase the overall spend of the project to 86%.
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.)**	80	100% of the original network build has been completed. We expect that efforts on the additional proposed infrastructure and expenditures related to that will increase the overall spend of the network build to 80%.
2i.	**Equipment Deployment**	100	This task is 100% complete.
2j.	**Network Testing**	100	This task is 100% complete.
2k.	**Other (please specify):** NA	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).

We will need quick turnaround from our engineering firm on the design of the new routes if NTIA gives clearance to proceed with the additional builds related to the project.

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	$379,500	$83,808	$295,692	$451,918	$99,801	$352,117	$451,918	$99,801	$352,117
b. Land, structures, right-of-ways, appraisals, etc.	$350,000	$77,294	$272,706	$429,734	$94,902	$334,832	$434,734	$96,006	$338,728
c. Relocation expenses and payments	$0	$0	$0	$0	$0	$0	$0	$0	$0
d. Architectural and engineering fees	$1,397,142	$308,543	$1,088,599	$1,784,937	$394,183	$1,390,754	$1,834,937	$405,225	$1,429,712
e. Other architectural and engineering fees	$0	$0	$0	$0	$0	$0	$0	$0	$0
f. Project inspection fees	$3,470	$766	$2,704	$3,717	$821	$2,896	$3,717	$821	$2,896
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	$31,439,915	$6,943,153	$24,496,762	$22,120,396	$4,885,042	$17,235,354	$25,120,396	$5,547,558	$19,572,838
j. Equipment	$4,942,064	$2,873,009	$2,069,055	$5,108,820	$2,909,835	$2,198,985	$5,108,820	$2,909,835	$2,198,985
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	$29,899,522	$8,384,584	$21,514,938	$32,954,522	$9,059,246	$23,895,276
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	$29,899,522	$8,384,584	$21,514,938	$32,954,522	$9,059,246	$23,895,276

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