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** NT10BIX5570070	**3. DUNS Number** 147368641

4. Recipient Organization

Massachusetts Technology Park 75 North Drive
, Westborough, MA 01581-3335

5. Current Reporting Period End Date (MM/DD/YYYY) 12-31-2013	**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 Lisa Erlandson	**7c. Telephone (area code, number and extension)**
	7d. Email Address erlandson@masstech.org
7b. Signature of Certifying Official Submitted Electronically	**7e. Date Report Submitted (MM/DD/YYYY):** 02-26-2014

Project Indicators (This Quarter)

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

MassBroadband 123 accomplishments for the quarter ending December 31st, 2013:

Completion of 19 (of 958) new miles and 0 (of 229) new leased miles (for a total of 1187 miles); 239 (of 1080) new CAIs and 107 (of 157) improved CAIs (for a total of 1237 CAIs).

Make Ready and Licensing
-Received 125 Verizon pole licenses for a total of 32,638 (99% complete).
-Received 128 electric utility pole licenses for a total of 30,330 (99% complete).

Network Design and Construction
-Installed 3 miles of messenger strand for a total of 883 miles for the project (99% complete).
-Installed 23 miles of aerial fiber optic cable for a total of 998 cable miles (including slack and sag) for the project (99% complete).
-Installed 792 feet of conduit for a total of 48,365 feet for the project (98% complete).
-Completed 15 additional Community Anchor Institution site installations of a total of 789 locations for the project (99% complete).
-Completed 239 additional Community Anchor Institution fiber terminations/testing of a total of 1084 for the project (98% complete).
-Completed 12 Point of Interconnection and collocation site installations of a total of 39 for the project (100% complete).

Network Testing and Turnover
-Completed turnover of 12 new Points of Interconnection to Network Operator (70% complete).
-Completed turnover of 18 network segments to Network Operator (67% complete).
-Completed turnover of 200 Community Anchor Institution locations to Network Operator (16% complete).

Sustainability
- Executed 1 additional connecting agreements with broadband wholesalers or last mile providers for a total of 18.

Jobs Created or Retained
-The total number of jobs created or retained during the quarter was 45.22.

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	In this section, we are calculating Percentage Complete with reference to the approved NTIA budget. Actual Costs are now 122% of the approved budget. MassTech has secured additional non-federal funds from the Commonwealth of Massachusetts to cover those amounts that exceed the approved NTIA budget. In comparison to the new project budget, 97% of the budget has been expended.
2b.	Environmental Assessment	100	Compliance requirements with environmental mitigation included in Design-Build RFP and the Owner's Project Manager will oversee work. Complete and actual costs are 159% of baseline budget.
2c.	Network Design	100	Some costs included in Network Build are now categorized under Network Design. High costs offset by additional matching funds from the Commonwealth of Massachusetts; Actual costs are 259% of baseline budget.
2d.	Rights of Way	100	Pole survey work and make ready application costs are complete. Actual costs are 132% of baseline budget.
2e.	Construction Permits and Other Approvals	100	High costs offset by additional matching funds from the Commonwealth of Massachusetts; Actual costs are 140% of the baseline budget.
2f.	Site Preparation	100	Although some of these costs have been allocated to other categories, actual costs are higher than budgeted. Actual costs are 103% of the baseline budget. Site preparation is essentially complete.
2g.	Equipment Procurement	100	High costs offset by additional matching funds from the Commonwealth of Massachusetts; Actual costs are 139% of the baseline budget.

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
2h.	**Network Build (all components - owned, leased, IRU, etc)**	95	Behind on budgeted expenditures by 5%; some costs included in the baseline report under this category are being captured under Network Design.
2i.	**Equipment Deployment**	100	High costs offset by additional matching funds from the Commonwealth of Massachusetts; Actual costs are 334% of the baseline budget.
2j.	**Network Testing**	100	High costs offset by additional matching funds from the Commonwealth of Massachusetts; Actual costs are 161% of the baseline budget.
2k.	**Other (please specify):**	100	Costs included in this category are: -Federal Compliance Staff -BTOP Non-Construction Staffing -Application and Post Application Submission Costs included in approved budget -Staff, Consulting, and legal costs Costs will be offset by additional matching funds from the Commonwealth of Massachusetts; Actual costs are 132% of the baseline budget.

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).

Our challenges now are completing fiber and CAI testing and final review of test results and documentation.

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	950	Behind on baseline projection by 26 miles due to slower-than-expected make ready completion and previous construction holds. Note: Updated projections documented in an upcoming AAR shift the expected total miles deployed to 954.
New network miles leased	229	Behind on baseline projection by 78 miles. Lease miles reduced from 307 to 192.5 per approved AAR due to switch to all dark fiber IRUs. End of project new leased miles are expected to be 229.
Existing network miles upgraded	57	After consultation with NTIA, it was determined that all existing miles upgraded were removed from the project and replaced with cash-match. This will result in a 55 mile reduction from baseline and a 57 mile reduction in total project miles. End of project miles in this category will be 0.
Existing network miles leased	0	N/A
Number of miles of new fiber (aerial or underground)	1,179	Behind on baseline by 57 miles due to (a) 78 mile reduction in IRU miles, (b) 2 miles remaining to be constructed, and (c) 2 miles that are planned for removal from project scope in a future AAR. In addition, a future AAR will remove 55 miles of existing fiber for I-91. The end-of-project total new fiber miles are expected to be 1,181.
Number of new wireless links	0	N/A
Number of new towers	0	N/A

Indicator	Total	Narrative (describe your reasons for any variance from the baseline plan or any other relevant information)
Number of new and/or upgraded interconnection points	39	Ahead of project baseline by 17. The target number of POIs has been changed to 39 due to the addition of POIs for connections to municipal IRUs and reclassification of some locations from CAI to POI. MassTech has completed the new connection at all Point of Interconnection locations except for three tower locations that are going to be removed from scope.

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	18
Number of agreements currently being negotiated with broadband wholesalers or last mile providers	1
Average term of signed agreements (in quarters)	76

5b. Please list the names of the wholesale and last mile providers with whom you have signed agreements (100 words or less). Providers:
-Axia Networks, USA
-Massachusetts Executive Office of Public Safety and Security (EOPSS)
-Massachusetts Information Technology Division (ITD)
-Crocker Communications
-FTG Technologies
-Center for Education Leadership (CELT)
-Access Plus
-Community WISP, Inc.
-Streamline Networks
-Cornerstone Communications
-Holyoke Gas & Electric
-MECnet
-Ayacht Technology Solutions
-Warwick Broadband Service
-Berkshire Unified Phone
-WiredWest
-Lightower
-Windstream

NOTE: The average term of signed agreements in 5a reflects the average length of fixed-term contracts.

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:
Wholesale services currently being provided are:
-Ethernet-100 Service - Ethernet-based bandwidth services that provide up to 100% of the line rate speed of the physical connection. It services a single User Network Interface (UNI) and a single Virtual Private Network membership (VPN).
-NNI (Network-to-Network Interface Service) - Allows customers to access "off-net" services determined by the customer network.
-Gigabit Ethernet Boston Transport Service - Provides connectivity from either network Regional Gateway to the Boston Global Gateways at the following speeds: 20 Mbps increments, 1, 2.5, & 5Gbps.
-Broadband Service - Provides Ethernet-based bandwidth service at the following rates: 5, 10, 20 & 50Mbps.
-Wavelength Service - Provides connectivity from a chosen location to a Regional Gateway or from a Regional Gateway to a Global Gateway. This is a wavelength-based service and is available at the following rates: 2.5 & 10Gbps

The speed tiers available across the variety of service offerings are; 5, 10, 20, 50, & 100 Mbps and 1, 2.5, 5 & 10 Gbps. Note that the Boston Transport service includes an offering that is scalable in 20Mbps increments.

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).
MassTech has hired Axia NGNetworks USA as a contractor to run the entirety of the MassBroadband 123 network. They will also assist with equipment specifications and network and fiber design during the construction period. Tim Scott, Vice President, may be

contacted at Tim.Scott@axia.com

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**	18	Ahead on baseline by 5; interest of service providers has exceeded expectations held at the time of grant submission.
	Providers with signed agreements receiving improved access	0	MassTech interpreted the baseline differently and is now categorizing all signed agreements as "receiving new access" and does not expect to categorize any agreements as "receiving improved access".
	Providers with signed agreements receiving access to dark fiber	0	Per NTIA guidance, MassTech now lists service providers who receive access to both lit and dark services on the primary method they will use to obtain services. MassTech now anticipates that all service providers will primarily receive lit services, causing the value to remain at zero.
	Please identify the speed tiers that are available and the number of subscribers for each	9	5Mbps-(0), 10Mbps-(0), 20Mbps-(0), 50Mbps-(0), 100Mbps-(0), 1Gbps-(6), 2.5Gbps-(0), 5Gbps-(0), 10Gbps-(1) Note: The counts above represent active services being provided to paying wholesalers or service providers.
Community Anchor Institutions (including Government institutions)	**Total subscribers served**	1,187	Behind on baseline by 201, MassTech considered CAI connections as occurring upon installation of systems, but is now reporting based on when Community Anchor Institutions are spliced to its serving POI. MassTech anticipates 1239 CAIs receiving service at the end of the project.
	Subscribers receiving new access	1,079	Behind on baseline by 181, MassTech considered CAI connections as occurring upon installation of systems, but is now reporting based on when Community Anchor Institutions are spliced to its serving POI. MassTech anticipates 1082 CAIs receiving "new access" at the end of the project.
	Subscribers receiving improved access	108	Behind on baseline by 20, MassTech considered CAI connections as occurring upon installation of systems, but is now reporting based on when Community Anchor Institutions are spliced to its serving POI. MassTech anticipates 157 CAIs receiving "improved access" at the end of the project.
	Please identify the speed tiers that are available and the number or subscribers for each	9	5Mbps-(14), 10Mbps-(7), 20Mbps-(2*), 50Mbps-(2), 100Mbps-(3), 1Gbps-(3), 2.5Gbps-(0), 5Gbps-(0), 10Gbps-(1). Note: The counts above represent active services being provided to paying CAI customers *-Includes 1 incremental "to scale" Boston Transport service customer whose total provided bandwidth is 300Mbps.
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

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 of subscribers for each	0	N/A

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

MassTech offers a 15% discount off of wholesale rates to our state partners, Information Technology Division and Executive Office of Public Safety and Security. Our state partners contributed matching funds to the MassBroadband 123 grant application and they have committed to being an anchor tenant on the new network.

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 separate addendum	**See separate addendum**	**See separate addendum**	**See separate addendum**	**Addendum attached separately**

Project Indicators (Next Quarter)

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

Project Close-Out
-Complete final acceptance testing
-Complete all punchlist items

MBI plans for end of project counts to be;
Total Miles Deployed: 954 New, 229 Leased, and 0 Upgraded Miles
Total CAIs Deployed: 1,082 New and 157 Improved CAIs
Total Agreements Executed: 18 Broadband wholesaler/last mile provider agreements

A budget revision request will be submitted to address a decrease in the federal percentage of the project as well as any other modifications deemed necessary to account for final project changes through January 31, 2014, the federal award end date.

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	In this section, we are calculating Percent Complete with reference to the original NTIA budget. Costs are now projected to be 125% of the original budget, and MassTech has secured additional non-federal funds from the Commonwealth of Massachusetts to cover those amounts that exceed the original NTIA budget. Against new budget with extra funds, expected to be at 100% complete
2b. Environmental Assessment	100	Environmental Assessment completed. No further expenditures planned. Compliance requirements with environmental mitigation included in the Design Build Request For Proposal and the Owner's Project Manager will oversee work
2c. Network Design	100	Costs projected to be 260% of the baseline budget and are funded with additional funds from the Commonwealth of Massachusetts

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
2d.	Rights of Way	100	Costs projected to be 132% of the baseline budget and are funded with additional funds from the Commonwealth of Massachusetts
2e.	Construction Permits and Other Approvals	100	Costs projected to be 143% of the baseline budget and are funded with additional funds from the Commonwealth of Massachusetts
2f.	Site Preparation	100	Site Preparation expected to be completed. Actual projected costs will be 103% of the baseline budget.
2g.	Equipment Procurement	100	Costs projected to be 145% of the baseline budget and are funded with additional funds from the Commonwealth of Massachusetts
2h.	Network Build (all components - owned, leased, IRU, etc.)	100	Network Build will be 98% of the baseline budget as some projected costs accounted for under other categories
2i.	Equipment Deployment	100	Equipment Deployment expected to be completed. Actual costs projected to be 334% of the baseline budget and are funded with additional funds from the Commonwealth of Massachusetts
2j.	Network Testing	100	Costs projected to be 162% of the baseline budget and are funded with additional funds from the Commonwealth of Massachusetts
2k.	Other (please specify):	100	No significant expenditures planned next quarter which aligns with PPR projections and baseline. Costs include: • Federal Compliance Staff • BTOP Non-Construction Staffing • Application and Post Application Submission Costs • Staff, Consulting and Legal Costs with procurements Costs are projected to be 139% of the baseline budget

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).

The challenge going forward is to ensure thorough review and quality of the documentation for the network and clean-up of punch list items to ensure operational efficiency.

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	$1,871,196	$598,342	$1,272,854	$2,742,104	$1,121,492	$1,620,612	$2,917,042	$1,296,430	$1,620,612
b. Land, structures, right-of-ways, appraisals, etc.	$0	$0	$0	$0	$0	$0	$0	$0	$0
c. Relocation expenses and payments	$0	$0	$0	$0	$0	$0	$0	$0	$0
d. Architectural and engineering fees	$9,317,022	$2,979,253	$6,337,769	$17,283,720	$7,929,462	$9,354,258	$17,685,291	$8,331,033	$9,354,258
e. Other architectural and engineering fees	$0	$0	$0	$0	$0	$0	$0	$0	$0
f. Project inspection fees	$2,218,560	$709,417	$1,509,143	$1,175,221	$890,632	$284,589	$1,476,469	$1,191,880	$284,589
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	$51,193,858	$19,660,308	$31,533,549	$55,501,812	$27,163,698	$28,338,114	$56,445,180	$28,107,066	$28,338,114
j. Equipment	$7,044,808	$2,252,680	$4,792,129	$10,720,121	$4,872,250	$5,847,871	$11,161,203	$5,313,332	$5,847,871
k. Miscellaneous	$0	$0	$0	$0	$0	$0	$0	$0	$0
l. SUBTOTAL (add a through k)	$71,645,444	$26,200,000	$45,445,444	$87,422,978	$41,977,534	$45,445,444	$89,685,185	$44,239,741	$45,445,444
m. Contingencies	$0	$0	$0	$0	$0	$0	$0	$0	$0
n. TOTALS (sum of l and m)	$71,645,444	$26,200,000	$45,445,444	$87,422,978	$41,977,534	$45,445,444	$89,685,185	$44,239,741	$45,445,444

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: $612,896