

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 NT10BIX5570140	3. DUNS Number 965088057
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4. Recipient Organization University of Hawaii Systems 2530 Dole Street, Honolulu, HI 96822-2309
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5. Current Reporting Period End Date (MM/DD/YYYY) 03-31-2014	6. Is this the last Report of the Award Period? <input checked="" type="radio"/> Yes <input type="radio"/> No
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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 Yaa-Yin Fong Director	7c. Telephone (area code, number and extension) (808) 956-7800
	7d. Email Address yaayin@hawaii.edu

7b. Signature of Certifying Official Submitted Electronically	7e. Date Report Submitted (MM/DD/YYYY): 05-21-2014
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Project Indicators (This Quarter)

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

During this quarter final payments to all vendors were made and the five final CAI sites were completed, as planned. The Ke Ala Ike Project accomplished its goal of building new fiber connections to 311 Community Anchor Institutions (CAI) including public K-12 schools, public libraries and public higher education sites and connecting those sites on all 6 major Hawaiian islands to the State's Institutional Fiber network (INET). The project has also upgraded access to 73 CAI's across the state. In total, 384 sites have new connectivity or upgraded connectivity at speeds ranging from 1Gbps to 10Gbps. The high speed connectivity that each site has back to its respective institutional networks provides the bandwidth necessary for applications and services that the users require in today's Internet connected world.

The project has also formed partnerships with the Department of Education and the University of Hawaii to fund additional builds after grant end so that every educational site in the state can eventually be connected at a minimum of 1Gbps to the State INET backbone. The infrastructure put in place by this project allows future growth of bandwidth as needs dictate.

The Department of Education K-12 schools greatly benefit from the increased bandwidth for enhanced learning opportunities including video streaming, video conferencing, digital multimedia, and interactive learning. Additionally, the increased bandwidth provides reliable and timely response for student online testing.

Specifically, programs for "one student/one laptop" have been deployed to pilot schools in the Keeau and Pahoa towns on the Big Island. The Ke Ala Ike network provides the high speed data connectivity for these devices to reach services and applications on the Department of Education network.

Additionally all schools on the islands of Molokai and Lanai now enjoy gigabit per second access rates which are significantly faster than their previous 10Mbps connectivity. The Ke Ala Ike project brought 10Gbps circuits to each of these islands to be shared by the DOE, Libraries, and UH sites.

Hawaii's Public Libraries benefit from the increased bandwidth to provide high speed internet access to library patrons across the state. Increased bandwidth, complemented by the Public Computing Center grant that provided hundreds of public computers for the libraries and high speed, free of charge wifi access, significantly increased the public use capacity of internet connected computers at each branch.

Prior to the Ke Ala Ike project, each library was limited to less than 1.5Mbps of access for both wired and wireless users. After the Ke Ala Ike project connected the Libraries to the State INET fiber network the Libraries are reporting significantly higher usage at all locations.

The University's sites have experienced a 10 fold increase in bandwidth among its major campuses and research sites. This increase of capacity greatly enhances the University's services to its students, staff, faculty, and researchers. The University's Big Island and Maui telescopes are now connected to the network via multiple 10Gbps circuits, thereby providing high speed access to key research facilities and data to users across the nation and world.

In all, the Ke Ala Ike project has provided modern day fiber connectivity to nearly every public learning institution across the entire State of Hawaii. The broad reach of the fiber network touches every community in the state, connecting schools and libraries everywhere to serve all of its citizens. By design, the network is future proof; with dark fiber to every location, as additional bandwidth requirements arise, changes to the optical gear at each site is all that is required to provide increased capacity. The network has been designed and built to last for years to come.

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	Overall project percentage reported is based on funds expended (total funds including match. Actual progress is based on the fiber construction, equipment installation and site activation, which is now 100% complete.

	Milestone	Percent Complete	Narrative (describe reasons for any variance from baseline plan or subsequent written updates provided to your program officer)
2b.	Environmental Assessment	100	completed
2c.	Network Design	100	completed
2d.	Rights of Way	0	n/a
2e.	Construction Permits and Other Approvals	0	n/a
2f.	Site Preparation	100	completed
2g.	Equipment Procurement	100	All equipment has been purchased and received for the project. Equipment procurement percentage reflects quantities of equipment, not dollar value.
2h.	Network Build (all components - owned, leased, IRU, etc)	100	All sites have been spliced into the INET ring.
2i.	Equipment Deployment	100	All equipment has been deployed and installed.
2j.	Network Testing	100	Network testing is tracking the network build, which is 100% completed.
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).

Over the course of the project, the team had to remove sites that lacked the infrastructure necessary to bring fiber to the premise as these infrastructure improvements required work that would not have been completed prior to the end of the grant, or required improvements that were not covered under the projects' environmental assessment requirements. The Department of Education and University of Hawaii will pay for the remaining costs to connect these sites once the infrastructure improvements are made after the grant has ended.

No technical assistance from the BTOP program is requested at this time.

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	409	4 lateral miles were built this quarter to bring the total miles built during the project to 409 miles.
New network miles leased	0	n/a
Existing network miles upgraded	770	5 miles of fiber were upgraded this quarter to bring the total miles upgraded to 770 miles.
Existing network miles leased	0	n/a
Number of miles of new fiber (aerial or underground)	409	A total of 409 new network miles of fiber have been built by the project. This number is lower than the baseline as the project was unable to build Hana and Haleakala runs.
Number of new wireless links	1	Wireless links connect Pearlridge Elementary to Waimalu Elementary
Number of new towers	0	n/a
Number of new and/or upgraded interconnection points	0	n/a

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	0

Indicators			
Number of agreements currently being negotiated with broadband wholesalers or last mile providers		0	
Average term of signed agreements (in quarters)		0	
5b. Please list the names of the wholesale and last mile providers with whom you have signed agreements (100 words or less). Providers: n/a			
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: n/a			
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). n/a			
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	0	n/a
	Providers with signed agreements receiving improved access	0	n/a
	Providers with signed agreements receiving access to dark fiber	0	n/a
	Please identify the speed tiers that are available and the number of subscribers for each	0	n/a
Community Anchor Institutions (including Government institutions)	Total subscribers served	384	5 CAIs were given new access this quarter bringing the total CAIs served over the course of the project to 384.
	Subscribers receiving new access	311	5 CAIs were given new access this quarter for a total of 311 CAIs with new access.
	Subscribers receiving improved access	73	All CAIs who were previously installed have received improved access.
	Please identify the speed tiers that are available and the number or subscribers for each	2	There are two speed tiers - 10Gbps and 1Gbps. 24 CAIs are in the 10Gbps tier and the remaining 360 CAIs are in the 1Gbps tier.
Residential / Households	Entities passed	0	n/a
	Total subscribers served	0	n/a
	Subscribers receiving new 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)
	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).

n/a

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
Ala Wai Elementary School	Honolulu	K-12 School	No	BTOP connectivity provides 1Gpbs bandwidth to the State of Hawaii Department of Education network for student and staff use.
Central Middle School	Honolulu	K-12 School	No	BTOP connectivity provides 1Gpbs bandwidth to the State of Hawaii Department of Education network for student and staff use.
Manoa Elementary School	Honolulu	K-12 School	No	BTOP connectivity provides 1Gpbs bandwidth to the State of Hawaii Department of Education network for student and staff use.
UH Hilo Waiakea Research Station	Hilo	Higher Ed	Yes	BTOP Connectivity provides 1 or 10Gbps to University of Hawaii Higher Education Sites to the UH Network for student and staff use.
o3b Earth Station	Sunset Beach	Higher Ed	Yes	BTOP Connectivity provides 1 or 10Gbps to University of Hawaii Higher Education Sites to the UH Network for student and staff use.

Project Indicators (Next Quarter)

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

The project has completed all sites on the updated CAI list for a total of 384 CAIs across the state. 100% of the construction was completed.

As the project was complete at the end of February 2014, no additional work will occur. Final construction expenditures after 3/31/14

are included in the Current Reporting Period of the budget.

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	Project Completed. 99% of the the funding has been expended. 100% of the sites have been completed.
2b.	Environmental Assessment	100	completed
2c.	Network Design	100	completed
2d.	Rights of Way	0	n/a
2e.	Construction Permits and Other Approvals	0	n/a
2f.	Site Preparation	100	completed
2g.	Equipment Procurement	100	completed
2h.	Network Build (all components - owned, leased, IRU, etc.)	100	completed
2i.	Equipment Deployment	100	completed
2j.	Network Testing	100	completed
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).

All project work was completed and planned progress against construction milestones was met. During this quarter we will complete the final reporting Closeout Milestones. No technical assistance from the BTOP program is requested at this time.

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.

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		
Cost Classification	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	\$75,000	\$0	\$75,000	\$111,258	\$0	\$111,258	\$0	\$0	\$0
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	\$2,200,000	\$608,554	\$1,591,446	\$2,200,000	\$608,554	\$1,591,446	\$0	\$0	\$0
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	\$25,528,000	\$7,061,446	\$18,466,554	\$25,287,997	\$6,942,843	\$18,345,154	\$0	\$0	\$0
j. Equipment	\$14,663,000	\$823,200	\$13,839,800	\$14,459,001	\$860,255	\$13,598,746	\$0	\$0	\$0
k. Miscellaneous	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
l. SUBTOTAL (add a through k)	\$42,466,000	\$8,493,200	\$33,972,800	\$42,058,256	\$8,411,652	\$33,646,604	\$0	\$0	\$0
m. Contingencies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
n. TOTALS (sum of l and m)	\$42,466,000	\$8,493,200	\$33,972,800	\$42,058,256	\$8,411,652	\$33,646,604	\$0	\$0	\$0

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