

RECIPIENT NAME: Los Angeles Regional Interoperable Communications System Authority

AWARD NUMBER: NT10BIX5570158

DATE: 05/15/2018

OMB CONTROL NUMBER: 0660-0037

EXPIRATION DATE: 6/30/2015

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

NT10BIX5570158

3. DUNS Number

962696089

4. Recipient Organization

Los Angeles Regional Interoperable Communications System Authority 2525 Corporate PL Ste 200, Monterey Park, CA 91754-7672

5. Current Reporting Period End Date (MM/DD/YYYY)

03-31-2018

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

Lam Tran
Grant Analyst

7c. Telephone (area code, number and extension)

(323) 881-8318

7d. Email Address

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7b. Signature of Certifying Official



7e. Date Report Submitted (MM/DD/YYYY):

05/15/2018

Project Indicators (This Quarter)

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

Long Term Evolution (LTE) Round 1

The Public Safety Broadband Network (PSBN) Round 1 program has been in operation for over one (1) year providing public safety support and services to the greater Los Angeles area. As noted in the 4th quarter (Q4) of 2017, the nine (9) COW's were to play a key role in filling gaps in coverage for those areas identified early on in the program where permanent solutions were not possible. Motorola (MSI) along with Ericson and the LA-RICS team have now completed the Acceptance Test Plan (ATP) on all nine (9) COWs and final integration for public safety use. The Final document delivery by MSI has been reviewed by the team awaiting a few outstanding items for each book as well as the final test results for the COW's. Updates to the close out book are ongoing through the maintenance and operation phase and will be submitted in the same method.

All documentation for the COW's is nearly completed awaiting the final data and review of this information by the Project Management team. As we moved into the new year our internal operations team alongside MSI and Ericson were able to complete the final configuration for Virtual Local Area network (VLAN) connections including the Long Term Evolution (LTE) system upgrades allowing the COW's to be integrate into the system.

The operations team have installed the data warehouse servers and completed the final configuration. Televate along with MSI operations have been monitoring and gathering data to analyze the PSBN system performance and to optimize sites when required. This performance data is being collected during day to day usage as well as all counters establishing detailed reports to be analyzed by the LA-RICS technical team.

LTE 2 Updates

The Authority submitted the LA-RICS PSBN Round 2 Project Implementation Plan (PIP) to the National Telecommunication and Information Administration (NTIA) on February 15, 2018. NTIA provided an initial set of comments and the Authority responded March 26th, 2018. The Authority has requested a final response from NTIA by April 27, 2018. The PIP contains three Objectives: 1) Coverage Augmentation, 2) COLTs, and 3) Interoperable Applications. A pool of 40 candidates (site locations) will be the focus of Objective 1 all of which will be subjected to the environmental process. Out of the 40 candidates, 26 plus sites will be selected for construction. The candidates are a mix of both new and existing, or to be constructed Land Mobile Radio (LMR) sites. These sites were elected for the PSBN Round 2 project by both AT&T engineers and LA-RICS in order to address the needs of public safety in both the mountains as well as in the urban areas based on the existing commercial AT&T footprint. AT&T provided a letter of support of the PIP to NTIA and the letter was submitted as part of the Authority's overall submission. Both LA-RICS and AT&T are committed to moving forward without delay to bring the resources needed to make Round 2 a successful program.

Network Operations Centers (NOCs) Implementation:

Three (3) locations have been designated for the NOCs to house equipment for monitoring of the Public Safety Broadband Network (PSBN):

1. Fire Command and Control Facility (FCCF),
2. Sheriffs Communication Center (SCC)
3. Los Angeles Regional Interoperable Communications System (LA-RICS) office

Construction is complete at all three locations (FCCF, SCC and LA-RICS office), with LA-RICS being the temporary primary NOC location. All efforts to complete the final configurations for the SCC Primary NOC have been completed including the facility's power and server room. All internal facility work, power, cabling, cabinets and furniture have been completed and are now functional. Prior to manning the facility, final configurations at the work stations are wrapping up in hopes to have individuals moved in by the end of Q2 2018.

Network Optimization

The LA-RICS team performed detailed LTE PSBN drive testing in support of onboarding and special event activities. Drive testing continue during Q1 of 2018 to support the on-boarding of the SCE COW's cover any specific areas needed for on-boarding in the San Fernando Valley after the LMR change at site LADWP243, CCT, USC and Palmdale areas.

Key Learning Conditions (KLC)

The PSBN team has a plan to manage the following KLCs:

1. KLC 1 - Secondary Responders: The KLC 1 report has been completed and provided to FirstNet for review to ensure it is meeting all KLC reporting requirements in October 2017.
2. KLC 2 - Quality of Service (QoS) Network alert mechanisms: The KLC 2 report was created and issued In November 2017. - Addendum report on the Rose Parade was completed in Q1 and will be delivered in May of 2018.
3. KLC 3 - Testing/Validation of NPSTC Priority and QoS Requirements and management alternatives: The Final KLC 3 Report was developed and delivered to FirstNet in December 2017. - Addendum report on the Rose Parade was completed in Q1 and will be delivered in May of 2018

Outreach Reporting

- Members of the LA-RICS Team participated in a webinar with Sonim Technology to review a demonstration of innovative Public

Safety Communications Technology.

- Executive Director Scott Edson and Members of the LA-RICS Team met with representatives from AT&T to continue discussions regarding the Asset Transfer Agreement.
 - Executive Director Edson went to Washington D.C., and met with several members of Congress to update them on LA-RICS and FirstNet, and made a presentation in the Rayburn Foyer for all to attend on The Future of First Responder Technology.

On-Boarding Update

- PSBN Onboarding will transition to LA-RICS' PSBN Team working with AT&T to migrate the PSBN Core, Routers and VMLs into FirstNet NPSBN.
 - Members of the LA-RICS Team met with Covina Police Chief, Fire Chief and City Manager to discuss early adopters' opportunities for LMR and PSBN.

There were no significant Board's decision regarding LTE to report in this quarter.

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	95	Awaiting final close out binders and test result for the COWs.
2b.	Environmental Assessment	100	No construction activities occurred that required monitoring.
2c.	Network Design	100	Network design is complete.
2d.	Rights of Way	100	Complete.
2e.	Construction Permits and Other Approvals	100	Complete.
2f.	Site Preparation	100	Complete.
2g.	Equipment Procurement	100	Complete.
2h.	Network Build (all components - owned, leased, IRU, etc)	100	Complete.
2i.	Equipment Deployment	100	Complete.
2j.	Network Testing	96	Network testing will continue into the 2nd quarter of 2018.
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).

In-Vehicle Routers (IVR) Installation Update

The proposed schedule provided to all for vehicle installations have outlined the number of on-boarding agencies consisting of Los Angeles County Fire Department (LACoFD) and Los Angeles County Sheriff Department (LASD) planned by quarter in 2018. The LASD's Information Technology (IT) Division as well as the LACoFD's IT have developed and implemented processes to streamline the installation and provisioning of the antennas as well as the IVR to achieve the aggressive schedule set forth in a previous narrative provided to National Telecommunications and Information Administration (NTIA) from LASD and LACoFD.

The cumulative Year-to-Date (YTD) In-Vehicle routers installation as of the end of Q1 2018 are as follows:

- o LASD – 1075 routers installed with 984 active on the network.
- o LACoFD – 565 routers installed with 469 active on the network.

Active engagement continued with interested agencies via demonstrations, providing test Demo Kits, and technical coordination meetings with the participation of the LASD and the LACoFD. Both LASD and LACoFD continued installing modems in vehicles at an accelerated pace and are collectively meeting or exceeding their quarterly goals.

Core and Radio Access Network (RAN)

The RAN and Core development has been completed for the SCE COWs site commissioning and integration process. The scheduled integration work was also completed and all nine (9) COW's are now up and running providing the added coverage and capacity per the design. Continued efforts by LA-RICS and MSI operations is ongoing to maintain all sites within the PSBN system providing critical

data through the data warehouse in support of the KPI's.

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	156	Includes all 15 point to point microwave links, including intermediate hops going to the non-LTE sites.
New network miles leased	0	No new network miles leased.
Existing network miles upgraded	100	Calculates distance between nodes used on Los Angeles County and City of LA fiber.
Existing network miles leased	494	Existing network miles leased from Time Warner Cable and AT&T to Los Angeles County Fire Command Control Facility.
Number of miles of new fiber (aerial or underground)	0	Essentially less than a mile for site communication.
Number of new wireless links	12	PSBN microwave links.
Number of new towers	30	There are currently 30 Towers installed.
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
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	0	It is estimated that 606 CAIs will be added to the completed Network.
	Subscribers receiving new access	0	Pending system acceptance.
	Subscribers receiving improved access	0	Pending system acceptance.
	Please identify the speed tiers that are available and the number or subscribers for each	0	Pending system acceptance.
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). N/A			
8a. Have your network management practices changed over the last quarter? <input type="radio"/> Yes <input checked="" type="radio"/> 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
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).

LTE Round 1- Initial 76 Sites Program

All close out documentation has been completed by MSI and reviewed by the Project Management (PM) team. Additional technical documents are updated throughout the life of the site as changes occur to both construction and technical equipment. Current discussions with AT&T surrounding the transition of devices, sites and the core are all part of the team goals to meet public safety requirements.

SCE COWs

The COW's have additional drive testing to work out some notable KPI's on 3 of the COW locations.

NOC Implementation

A few remaining items to be completed include network connections for the stations including turn-up and test to bring the NOC online by the end of Q2 2018.

Round 2 LTE Project Implementation Plan (PIP)

LA-RICS was tasked with developing a Project Information Plan (PIP) for the LA-RICS PSBN for LTE Round 2. This new Plan outlined the benefits and additional coverage to enhance network performance provided by the implementation of approximately 26 primary candidate sites. The Authority has received an initial response of questions from NTIA which were answered by the Authority and returned back to NTIA for review. At this time we are awaiting further details in hopes of getting the (PIP) on the calendar for vote at the April board meeting.

The Authority focused on five (5) objectives to enhance the overall performance and coverage for LTE Round 2:

1. Coverage objective
2. Rapid response vehicles
3. Applications and NOCC Infrastructure
4. Interconnection of the Public Safety Enterprise Network (PSEN)
5. Testing and Verification Center

IVR Installation

LASD is forecasting to have 1577 routers installed by the end of Q2 2018.

LACoFD is forecasting to have 900 routers installed by the end of Q2 2018.

KPI Projections

The CAI estimated that 606 Community Anchor Institutions (CAIs) (schools, hospitals, public safety entities) that could be directly connected to the completed network. The CAI estimated number will be updated with actuals once the network is fully operational. It is expected 156 New Miles to be deployed, Zero New Miles to be leased, 100-110 Existing Miles to be upgraded, 77 Wireless Transmission Sites, 527 Existing Network Miles to be leased and Zero Improved CAIs.

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)
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AWARD NUMBER: NT10BIX5570158

DATE: 05/15/2018

OMB CONTROL NUMBER: 0660-0037

EXPIRATION DATE: 6/30/2015

	Milestone	Planned Percent Complete	Narrative (describe reasons for any variance from baseline plan or any other relevant information)
2a.	Overall Project	95	Shake down and site commissioning for the 9 SCE COWs.
2b.	Environmental Assessment	100	No variance from baseline.
2c.	Network Design	100	Complete.
2d.	Rights of Way	100	Complete.
2e.	Construction Permits and Other Approvals	100	Complete.
2f.	Site Preparation	100	Complete.
2g.	Equipment Procurement	100	Complete.
2h.	Network Build (all components - owned, leased, IRU, etc.)	100	Complete.
2i.	Equipment Deployment	100	Complete.
2j.	Network Testing	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).

Engagement with agencies who currently have test Demo Kits and routers will continue as well as technical coordination meetings to support the transition to FirstNet. LA-RICS will continue to work with the Los Angeles County Sheriff's Department (LASD) and the County of Los Angeles Fire Department (LACoFD) on the transition of devices into LA-RICS FirstNet/AT&T.

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	\$25,412,767	\$11,150,040	\$14,262,727	\$28,229,800	\$11,404,168	\$16,825,632	\$28,440,787	\$11,463,473	\$16,977,314
b. Land, structures, right-of-ways, appraisals, etc.	\$21,310,254	\$10,160,688	\$11,149,566	\$8,509,113	\$7,949,852	\$559,261	\$8,573,833	\$7,991,269	\$582,564
c. Relocation expenses and payments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
d. Architectural and engineering fees	\$29,391,350	\$1,569,511	\$27,821,839	\$33,809,872	\$1,569,511	\$32,240,361	\$33,991,343	\$1,569,511	\$32,421,832
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	\$29,859,206	\$0	\$29,859,206	\$23,465,901	\$0	\$23,465,901	\$23,817,876	\$0	\$23,817,876
j. Equipment	\$36,520,364	\$3,954,604	\$32,565,760	\$41,853,608	\$4,717,056	\$37,136,552	\$42,314,099	\$4,846,118	\$37,467,981
k. Miscellaneous	\$7,643,839	\$3,185,800	\$4,458,039	\$6,075,856	\$1,289,774	\$4,786,082	\$6,194,538	\$1,343,515	\$4,851,023
l. SUBTOTAL (add a through k)	\$150,137,780	\$30,020,643	\$120,117,137	\$141,944,150	\$26,930,361	\$115,013,789	\$143,332,476	\$27,213,886	\$116,118,590
m. Contingencies									
n. TOTALS (sum of l and m)	\$150,137,780	\$30,020,643	\$120,117,137	\$141,944,150	\$26,930,361	\$115,013,789	\$143,332,476	\$27,213,886	\$116,118,590

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
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