

RECIPIENT NAME: Los Angeles Regional Interoperable Communications System Authority

AWARD NUMBER: NT10BIX5570158

DATE: 11/07/2016

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)

09-30-2016

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)

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7d. Email Address

Lam.tran@la.rics.org

7b. Signature of Certifying Official



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

10/27/2016

Project Indicators (This Quarter)

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

The Broadband Technology Opportunities Programs (BTOP) grant deadline extension from June 30, to September 30, 2016 has expired. The Los Angeles Regional Interoperable Communications System (LA-RICS) was tasked with developing a Project Information Plan (PIP) for the LA-RICS Public Safety Broadband Network (PSBN) for LTE 2. This new Plan will outline the benefits and additional coverage to enhance network performance provided through the implementation of approximately 26 primary candidates chosen by the project management team.

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

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

During the previous 90 days the Authority has concluded the initial research on these activities revealing the impacts of schedule, environmental compliance, and finance providing the architecture on how the Authority will execute the program to meet specific objectives. These different avenues have been chosen by the Authority to align itself with the additional sites development as well as operations for the new Network.

At this time, the Authority along with MSI is now entering the final phase/close out of LTE 1. All (63) static sites including the initial (4) Cell-On-Wheels COW's have been integrated into the network and is now being monitored (24/7) by the LA-RICS local and MSI Schaumburg NOCC's. Final operational testing, Passive Inter Modulation (PIM), alarm and circuit end to end testing on individual sites is to be completed by end of 2016. The Core Software upgrades from the existing Revision ver.7 (R7) to Revision ver.9 (R9) is under plan review. The Authority and Motorola Solution, Inc. (MSI) engineers from Schaumburg had a meeting in mid-September to discuss the Operating Support Platform (OSP) as well as other aspects of the System Management & Monitoring Subsystem (SMMS) to better understand the true capabilities of the current version and what this new upgrade to the Core would provide.

Once Revision ver.9 (R9) is installed, MSI/Ericson plans to install Revision ver.11 (R11) completing the latest upgrade to the Core which is scheduled to be finish by the end of November.

Ericson has provided a Scope of Work (SOW) for the Core R9 upgrades which has been circulated to all. Ongoing efforts continue with the final configurations for the Sheriff Command Center (SCC) NOCC for the (4) work stations including the upgrade to the facilities power and server.

The (15) SCE (COWs) Cell-On-Wheels are 90% completed awaiting final power and fiber connectivity. The break out for the services awaiting final configuration or installation are:

1. Fiber connection from the COW's to the Core
2. DC Power from the COW to the Southern California Edison (SCE) point of connection (POC)
3. Commissioning of EnodeB (Radio cabinet) and Transition Microwave Radio (TMR) cabinet
4. Integration and cluster tuning
5. Operational acceptance

In addition to the close out activities, the LA-RICS team members are spreading their time between training for different operating features and providing support for all Special events demonstrating the PSBN capabilities.

Training Update:

- Wave 1 training completed
- Closeout
- Wave 2 training in process, all dates committed. Authority requested additional training for March 2017 in the following areas: Kohler Generator Element manager, B-Tech Battery Monitor Element manager, and RET control
- OSP R9/R11 TBD
- Professional Services not covered by training
- Cluster Tuning
- APN set-up
- End-to-End circuit testing & Transport training for leased and microwave circuits

Outreach Activity

Interim Executive Director John Radeleff and representatives from the LA-RICS Team met with Deputy Assistant Attorney General Joseph Klimavicz, CIO for the U.S. Department of Justice, and his staff to discuss shared issues and potential cooperation regarding the LMR and Long Term Evolution (LTE) system on July 20, 2016.

The LA-RICS Team attended the 81st National Association of Counties Annual Conference and Exhibition at the Long Beach Convention Center on July 22, 2016, where staff provided a static display and demonstrations to attendees. The Interim Executive Director participated in a FirstNet panel discussion attended by elected officials from throughout the nation.

In late July and August, Interim Executive Director John Radeleff and representatives from the LA-RICS Team continued their ongoing outreach by meeting with City Officials from El Segundo, Agoura Hills and Signal Hill to discuss shared issues and potential cooperation regarding the LMR and Long Term Evolution (LTE) systems.

The Department of Health Services, Emergency Management Services Division (EMS) attended a demonstration at LA-RICS Headquarters where positive feedback was received from staff, including the benefits of PSBN applications that will enhance their paramedic communication, hospital disaster preparedness evacuation plan and their medical alert center teams on August 31, 2016.

The LA-RICS Team hosted the FirstNet Quality of Service, Priority and Preemption with Los Angeles Area Police and Fire Agencies to allow their input on the development of the conceptual framework for network policies and practices.

Lastly, ongoing meetings with the LA-RICS Communication Team to discuss recommended changes to our current Outreach Plan are well underway. A plan to develop a new strategy that is focused on establishing a more prominent social media presence, revamping the website and updating all handouts and newsletter materials are the main goal of the team.

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	89	Awaiting final close out binders and ATP of all PSBN sites.
2b.	Environmental Assessment	100	No construction activities occurred that required monitoring.
2c.	Network Design	100	Network design is complete. No change in the site configuration. All sites have both power and backhaul delivered (including all microwave paths) and have visibility to the core.
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	95	Cluster tuning has been completed. Wide Area Testing is under review.
2k.	Other (please specify): N/A	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).

Of the (15) Cell-on-Wheels (COW's) two of the units have not found their way to a final destination. The plan is to find a suitable location providing additional coverage enhancing both mobile and portable coverage. The Authority is currently working with the city of Pasadena in hopes to place one of the Cell-On-Wheels (COW) at the Rose Bowl in time for the Rose Parade and football game. The other Cell-On-Wheels (COW) does not have a proposed or chosen location at this time.

In-Vehicle Routers Installation

As of October 26, 2016, Los Angeles County Sheriff's Department (LASD) has installed routers in 480 vehicles, at a rate of approximately 100 vehicles per month. LASD is currently field testing solutions to previously identified network mapping and integration issues.

As the final end to end testing is completed, Motorola Solutions, Inc. (MSI) has been continuing to work with the commercial carriers to bring the final backhaul configuration for each of the sites that were on high speed data (HSD) circuits. MSI has completed 60 of the 63 static sites and moved those sites into operations preparing for the final ATP for alarms and the core.

All 63 sites for Backhaul (BH) including sites requiring high speed data to be converted over to carrier fiber were completed in the 3rd quarter. End to end testing for all new circuits received is wrapping up and is scheduled to finish in the 4th quarter.

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.
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	There is currently no new and/or upgraded interconnection 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	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 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 of 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? 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
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 1

The authority will focus on processing assets updates including all construction, technical and budgetary documentation essential to the project to closure. The operations team will be focused on technical upgrades to the Core from R9 to R11, including other areas such as Operations Support Platform (OSP) System Management & Monitoring Subsystem (SMMS) and other key functionalities throughout the Network. Demonstrations of the PSBN system and applicable devices will be made available for agencies to assess the capabilities and provide feedback in areas most important to the user.

LTE 2

In hopes of receiving a favorable decision from the department of Commerce National Telecommunications and Information Administration (NTIA) of the review of the Project Information Plan (PIP) the Authority – LA-RICS is fully prepared to initiate the plan upon receipt of formal approval from (NTIA)

Once approved LA-RICS will begin the project plan first by implementing the each of the five objectives. Knowing the initial Radio Frequency (RF) design has been completed another pass to refine any areas within the county previously determined to have weak and unreliable coverage will be the first properties to be addressed in the Site Access Agreements (SAA) for the top 26 sites reaching out to all landlords, agencies, Government entities and independent cities in preparation for both outreach and final contracts.

The plan for all site constructability's will be updated assuring the Agency and the Authority the design for backhaul as well as power will be satisfactory and within budget. Identifying The colocation sites mainly county owned properties will be the bulk of the first group of sites. Working with the county properties we have previously visited for Land Mobile Radio (LMR) provides insight and knowledge primarily focused through the environmental process providing the team advantages not previously recognized in LTE1. These first steps are measures needed to avoid the risk and delays during the planning phase.

In-Vehicle Routers Installation

LASD will continue to installation of routers at a rate of approximately 100 vehicles per month. The network mapping and integration issues will be resolved and the 480 vehicles equipped with a PSBN router will be connected and working on the LA-RICS LTE network.

- Load test to meet Key Learning Condition (KLC) #2 and #3 is schedule for the 4th quarter of 2016.
- Currently working with Greg Ford to add a 4 KLC with regards to applications hosting and testing.

KPI Projections.

It is estimated that 606 Community Anchor Institutions (CAI) (schools, hospitals, public safety entities) could be directly connected to the completed network. The CAI estimated number will be updated with actual 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.

Outreach

Planned Outreach to potential users including ongoing contact and discussions with the Department of Veterans Affairs, Department of Defense (DOD) and Metropolitan Transportation Authority (MTA).

Continued meetings with member agencies who opted out are ongoing. Memorandum of Understanding (MOU) for test equipment was approved by the LA-RICS JPA Authority at its meeting of July 7th.

LA-RICS Events Calendar

- o10/19: IACP FirstNet presentation
- o10/21: FirstNet Sheriff/Police Chief briefing
- o10/20: LACO Police Chief's Association meeting
- o10/26: NTIA Demo (LARICSHQ)
- o10/27: CPRA Table Top Event
- o10/31: West Hollywood Halloween Parade (WHD)
- o11/01: Demo to LA County Police Chief Association
- o11/2-3: IWCE Critical LTE Communications Forum, Chicago
- o11/03: Demo to Sheriff Dept. - Central Patrol Division

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	90	Operations classes will be ongoing through the end of the year of 2016.
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): N/A	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).

LTE1

The final close out documentation for all sites is scheduled for delivery to the by December 2016. This will provide final closure for all development of PSBN 1. Operational training/classes for all county engineers and county technicians will continue throughout 2017 along with special events.

LTE2

The Authority is awaiting the approval from NTIA to proceed forward with the proposed plan provided to NTIA on September 29th. The LARICS team will begin the planning phase by reaching out to agencies to further our SAA discussions and begin working through the project development scope of work (SOW) as well as the baseline schedule.

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	\$21,638,208	\$9,051,435	\$12,586,773	\$23,396,166	\$10,016,610	\$13,379,556	\$23,497,201	\$10,026,043	\$13,471,159
b. Land, structures, right-of-ways, appraisals, etc.	\$13,924,063	\$6,503,266	\$7,420,797	\$6,955,852	\$6,955,852	\$0	\$6,955,852	\$6,955,852	\$0
c. Relocation expenses and payments	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
d. Architectural and engineering fees	\$31,932,812	\$1,405,994	\$30,526,818	\$30,383,445	\$1,569,511	\$28,813,934	\$31,082,223	\$1,569,511	\$29,512,712
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	\$22,375,009	\$0	\$22,375,009	\$20,517,550	\$0	\$20,517,550	\$21,467,762	\$0	\$21,467,762
j. Equipment	\$41,713,113	\$1,927,892	\$39,785,221	\$37,353,128	\$3,243,660	\$34,109,468	\$38,195,518	\$3,464,399	\$34,731,119
k. Miscellaneous	\$6,318,019	\$1,870,500	\$4,447,519	\$3,550,613	\$131,735	\$3,418,878	\$3,596,711	\$146,372	\$3,450,338
I. SUBTOTAL (add a through k)	\$137,901,224	\$20,759,087	\$117,142,137	\$122,156,754	\$21,917,368	\$100,239,386	\$124,795,267	\$22,162,177	\$102,633,090
m. Contingencies	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
n. TOTALS (sum of I and m)	\$137,901,224	\$20,759,087	\$117,142,137	\$122,156,754	\$21,917,368	\$100,239,386	\$124,795,267	\$22,162,177	\$102,633,090

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