

**CITY OF LOS ANGELES
INTER-DEPARTMENTAL CORRESPONDENCE**

Date: November 13, 2015

To: Honorable Members of the City Council

From: Sharon M. Tso, Chief Legislative Analyst

Sharon M. Tso
Miguel A. Santana

Miguel A. Santana, City Administrative Officer

Subject: **REPORT ON THE LOS ANGELES REGIONAL INTEROPERABLE
COMMUNICATIONS SYSTEM (LA-RICS)**

SUMMARY

In October 2008 (CF 08-0969), the City became a member of Los Angeles Regional Interoperable Communications System (LA-RICS) Authority. The LA-RICS Authority (Authority) is tasked with establishing a region-wide interoperable public safety communications network, and as such is in the process of implementing two Countywide independent communication systems; one for voice communications (land mobile radio, or LMR), and the other for broadband data communications (long-term evolution, or LTE). The intent is to have all Authority members jointly use and share operation/maintenance costs of each system upon their completion. The LMR system is currently in the design phase. Construction is substantially complete on the LTE system and is now in the testing phase. The LTE starter system will “go-live” in January 2016.

The Authority plans on primarily receiving federal funding for the implementation of both systems; Urban Areas Security Initiative (UASI) grant funds for the LMR system and Broadband Technology Opportunity Program (BTOP) grant funds for the LTE system. Any grant matching funds and non-grant funded costs related to the implementation, operation and/or maintenance of either system will be allocated to Authority members using a Funding Plan formula approved by the Authority in May 2014. There is a no cost “opt-out” period for members to exit the Authority. It is currently set to expire on November 24, 2015. If all Authority members were to opt-out except the City and County, the City would be allocated approximately one-third and the County two-thirds of non-grant funded costs experienced by the Authority.

After much discussion with the Office of the Mayor, Police Department (LAPD) and Fire Department (LAFD), our Offices recommend that it is in the City’s best interest to opt-out of Authority membership on or before November 24, 2015, but continue participation in the Authority as an Affiliate. Affiliates are entities that desire to utilize LA-RICS for mutual or automatic aid, or any other purpose approved by the Authority. Our Offices recognize the need for the City to remain as a regional partner with LA-RICS and further recommend that the City work towards establishing a Regional Interoperability Communications Working Group to facilitate securing funding from and reporting to the UASI Approval Authority for the implementation of multiple stand-alone LMR systems that would have the ability to be linked to each other to achieve interoperability through a memorandum of understanding

between regional public safety agencies. In addition, as an Affiliate member of the Authority, the City would be eligible to subscribe to the LTE system after the subscription model and rates are established in early 2016.

The primary reasons to opt-out at this time include:

- **Need to Upgrade City's Existing Systems** – LAPD and LAFD's existing radio systems respectively operate primarily and partially on the UHF T-Band frequency. LAPD and LAFD will need to migrate off this frequency by 2021 in accordance with the provisions of H.R. 3630¹ that allows the federal government to "claw back" these frequencies from public safety agencies.
- **Achieving Interoperability** – Upgrading LAPD's LMR system will allow for regional interoperability between LAPD, LAFD, and other public safety agencies, including the County and LA-RICS. The City will be able to retain control over its system and will be responsible for operation and maintenance of the system, but the proposed Regional Interoperability Communications Working Group will ensure that the various systems are able to seamlessly "talk" with each other.
- **Costs** – It will cost approximately \$18 million to build a City stand-alone LMR system for LAPD, only. The cost to build the LA-RICS LMR system is currently estimated to be \$149 million. The construction costs of the LA-RICS LMR system will be potentially funded by grant funding and the ongoing costs will be the responsibility of Member agencies. It is also anticipated that the City stand-alone system can be built by 2017, while the completion date of the LA-RICS system is unknown at this time.

RECOMMENDATIONS

That the Council, subject to the approval of the Mayor:

1. Authorize City representatives on the LA-RICS Board of Directors to opt-out of LA-RICS by the November 24, 2015 deadline pursuant to Article V, Section 5.01 of the Joint Powers Authority Agreement;
2. Authorize City representatives to convert the City's status from LA-RICS Member to LA-RICS Affiliate;
3. Authorize City representatives to collaborate with other public safety agencies in the region to develop the Regional Interoperability Communications Working Group; and
4. Instruct the LAPD, LAFD and the Information Technology Agency to report back with a comprehensive plan to implement the City stand-alone LMR system including required staffing, costs, project timeline and available funding sources.

¹The UHF T-Band is the 470 - 512 MHz frequency band that is shared between television broadcasters and public safety agencies. The Federal Government enacted H.R. 3630 in 2012. It allows the federal government to "claw back" the UHF T-Band frequencies by 2021 and requires public safety agencies to completely migrate off the T-Band by 2023. The Federal Government will then implement a competitive bidding process that would grant new initial licenses for the UHF T-Band. Currently, LAPD's voice radio system and LAFD's mobile data radio system primarily operate on T-Band frequencies. The LA-RICS LMR system is currently being designed to operate on UHF T-Band and the 700 MHz frequency.

BACKGROUND

LA-RICS includes separate wireless radio and broadband data communication systems designed to serve law enforcement, fire service, and health service professionals throughout Los Angeles County. LA-RICS intends to provide radio and broadband communication for public safety providers in the greater Los Angeles region. The purpose of LA-RICS is to enhance emergency incident coordination, and make it safer for those living in the City and County of Los Angeles through communications interoperability.

There are various grants that are funding the LA-RICS LTE and LMR projects. The LTE project is primarily funded by the Broadband Technology Opportunities Program (BTOP) from the U.S. Department of Commerce, which is administered by the National Telecommunications and Information Administration (NTIA). The BTOP grant is funding design, equipment and construction of the LTE system. These grant funds originally were set to expire on September 30, 2015. However, the NTIA granted LA-RICS a five-year extension until 2020. It is anticipated that the federal Urban Areas Security Initiative (UASI) grant program will continue to fund the LMR Project until its completion subject to the approval by the UASI Approval Authority.

In May 2007, Council adopted a report from the City Administrative Officer (CAO) recommending conceptual approval of the City's participation in a Joint Powers Authority (JPA) to establish LA-RICS (C.F. 07-1150). The Authority is administered by a Board of Directors (Board). The Board currently consists of 14 Directors, with the City holding four Director positions that includes representatives from the CAO, the Chief Legislative Analyst (CLA), LAPD and LAFD.

The Council subsequently approved the final Joint Powers Agreement (JPA Agreement) in October 2008 (C.F. 08-0969). When the JPA Agreement was approved, the CAO and CLA were directed to report to the Council regarding a proposed System Funding Plan developed by the Board. The Board adopted the Funding Plan in May 2014 and approved a 180-day no cost "opt-out" period, with the last day for Members to opt-out and withdraw from the Authority being November 24, 2014. In August 2014, the Board extended the no cost opt-out period for another year until November 24, 2015. The City of Los Angeles now has until November 24, 2015 to opt-out of LA-RICS or remain a Member. As of November 5, 2015, a total of 21 Member Agencies have opted out of the LA-RICS JPA.² These agencies represent 11.87 percent of LA-RICS' membership. As agencies opt-out, their costs are reallocated among the remaining members. Under the current Funding Plan, and assuming no other agencies opt-out, the City is responsible for approximately 30 percent of the costs for LA-RICS.

If the City opts out by November 24, 2015, the City will incur no additional costs or liabilities. However, if the City withdraws after the November 24th deadline, then it would remain responsible for all financial liabilities incurred during its membership until official written notice of its intent to withdraw is received by the Authority. In addition, the JPA Agreement requires a 12-month notice period, during which the City would continue to pay its share of operating costs. The City may also be liable for repaying the County of Los Angeles for funds it advanced to the JPA in 2014-15 and 2015-16 should we not withdraw by the deadline.

² The agencies that have opted out include: Alhambra, Bell Gardens, Beverly Hills, Burbank, Calabasas, El Segundo, Gardena, Glendale, Hermosa Beach, Lancaster, Long Beach, Manhattan Beach, Monrovia, Monterey Park, Palos Verdes Estates, Pomona, San Marino, Santa Clarita, Santa Monica, South Pasadena, and Torrance.

Our Offices recommend that the City remain an Affiliate of LA-RICS, since the City is providing some infrastructure for the LTE system. On November 12, 2014, the City Council approved a master site access agreement (SAA) between the City and the Authority (C.F. 12-0590-S3). The SAA allows LA-RICS to access, construct, integrate and maintain a Public Safety Broadband Network (PSBN) at City sites for a term not to exceed 15 years. The SAA does not contemplate the Authority providing compensation to the City for access and use of the property; however, the SAA does allow the City to renegotiate the terms and conditions of the SAA after five years in the event the City chooses not to participate in the LTE system. The SAA also includes a provision wherein if the Authority offers more favorable terms to another jurisdiction, the Authority will notify the City and provide the City with the option to amend the SAA to include more favorable terms.

Reasons for Opting-Out of LA-RICS

Our Offices recommend that it is in the City's best interest to opt-out of LA-RICS because the City will be able to upgrade its existing system and use existing infrastructure at a lower cost, while still achieving interoperability within the region.

Need to Upgrade the City's Existing Public Safety Communications System

Currently, LAPD and LAFD do not have their own broadband data network for mobile devices. They obtain broadband data coverage through commercial carriers (i.e., Sprint and Verizon). LAPD previously had a Mobile Data Terminal (MDT) radio system that operated in the 800 MHz frequency band. They have since abandoned this system for data and are using those frequency channels for their voice radio system. LAFD also has a MDT system that operates in the 450-512 MHz UHF T-Band. However, H.R. 3630 allows the Federal Government to "claw back" these frequencies in 2021.

LAPD's current voice radio system also primarily operates in the UHF T-Band spectrum. It supports 10,000 portable/hand radios.. LAFD's voice radio system consists of 18 analog channels in the 800 MHz frequency band. The LAPD and LAFD voice radio systems will reach their "end of life" by 2016 after which Motorola will stop its support of these systems. LAFD will continue to use its existing analog system for fire ground operations, but will use the City stand-alone LMR system for its administrative traffic.

Achieving Interoperability

Upgrading LAPD's LMR system will allow for regional interoperability between LAPD, LAFD, and other public safety agencies, including the County and LA-RICS. Currently, LAPD's and LAFD's MDT and voice radio systems operate in different frequency bands and use different configurations, resulting in different coverage and capacities. This makes it difficult for the systems to be interoperable. However, LAPD and LAFD have implemented some procedures and hardware connections to allow for limited communication capabilities with one another. Upon build out of the LAPD voice radio system on 700/800 MHz band, the two departments will have the capability to be interoperable with each other when using the new radios. Attachment 1 provides an overview of the City's existing communications systems.

In addition, LAPD and LAFD recognize the importance of interoperability within the region, and the ability to communicate instantly with other public safety agencies in the event of a natural disaster or terrorist event. While a regional shared system, like LA-RICS would achieve this goal, the City,

LA-RICS and other public safety agencies could also engage in a “system of systems” approach. The City stand-alone LMR system (City System) would be designed and constructed to be interoperable with other systems in the region, including LA-RICS.

In 2008, a shared system, like LA-RICS was the only way to achieve interoperable LMR communications between public safety agencies in the Los Angeles region. However, the recent and on-going development of Project 25 (P25) technology has resolved the major technology issue that once prevented interoperability between separate communication systems. Therefore, the City now has an alternative to achieving LMR interoperability by using much of its current communication system infrastructure, including antennas. This “system of systems” design approach is supported by the Los Angeles/Long Beach UASI Approval Authority.

The Interagency Communications Interoperability System (ICIS), which includes the neighboring cities of Glendale, Burbank, and Beverly Hills, currently utilizes a “system of systems” approach where each agency owns, controls, and maintains their systems, but has the technology that allows them to be interoperable with each other. The “system of systems” approach for a voice radio system/LMR system will provide significant cost savings and will allow the City to own, operate, control, and maintain its own system, while still being interoperable with other systems like LA-RICS.

Costs

The Board has adopted a Funding Plan that allocates all costs for the LTE and LMR systems that are not grant-funded and the operations of the Authority to the JPA Members based on a 50 percent population and 50 percent geography cost-sharing formula. Under the Funding Plan, and assuming no other jurisdictions opt out, the City is liable for 29.9 percent of the total costs associated with the LTE and LMR systems. If all other jurisdictions opted out and only the City and County remained in LA-RICS, then the City would be responsible for approximately 33 percent of the costs and the County’s share would be approximately 67 percent based on the share of population and geography.

The cost for design, equipment and construction of the LTE system when it included 232 sites was \$154 million plus an in-kind and cash match. However, the number of sites was reduced to 82 after the approval of a Corrective Action Plan, which then reduced the cost of design, construction, and equipment to approximately \$117 million plus the in-kind and cash match. The LTE construction cost is primarily funded by the Broadband Technology Opportunity Program (BTOP) grant. In addition, there is a 17.35 percent BTOP grant cash match requirement. The LTE Project was expected to meet the BTOP grant deadline of September 30, 2015. However, the NTIA granted LA-RICS a 90-day extension to December 31, 2015 to ensure that the LTE sites are operational. In addition, LA-RICS was granted a five-year extension on the BTOP funds to build additional LTE sites.

The cost to construct the LMR system, which is currently in design, is estimated to be \$149 million. These costs may increase after the environmental review is completed. The LMR construction costs may be funded by Urban Areas Security Initiative (UASI) grant funds, but these grant funds are subject to the approval of the UASI Approval Authority. If the LMR project receives no grant funding, the City would be liable for approximately one-third of the costs to construct the system (approximately \$45 million plus the costs to purchase new radios).

Current Status of LA-RICS

On March 24, 2015, the Los Angeles County Board of Supervisors took action to halt construction at 75 Los Angeles County Fire stations that were previously contemplated in the LA-RICS LTE project, based upon community concerns associated with environmental, health and safety issues, and a lack of public input afforded the community. Subsequently, on April 1, 2015, Motion (Englander-Wesson-LaBonge) (C.F. 15-0379) halted construction of the LTE project at all LAFD and LAPD stations based upon similar concerns, project delays and cost uncertainties.

The NTIA then suspended the use of the BTOP grant funds on April 3, 2015. The Notice of Suspension required LA-RICS to provide a revised deployment plan by April 13, 2015. As a result of these actions, the Authority submitted a Corrective Action Plan (CAP) to NTIA on April 13, 2015. The CAP was approved by the County on April 14, 2015. On April 17, 2015, the City Council approved Motion (Englander-Wesson-LaBonge) (C.F. 15-0379-S1) to rescind the previous action to halt construction, approved the CAP, and authorized the inclusion of 19 LAPD station sites into the CAP.

Corrective Action Plan

The CAP included the following 84 sites:

- 30 sites owned by the County of Los Angeles;
- 18 sites owned by independent cities;
- 19 sites owned by LAPD;
- Two City of Los Angeles proprietary department sites (Port Police and Department of Water & Power); and
- 15 Cell-on-Wheels mobile sites (COWs) that can be deployed throughout the County.

Since the approval of the CAP, seven sites have been dropped from the LTE system for a total of 77 sites. This system is now referred to as the "LTE Starter System." Attachment 2 is a map showing the coverage provided by the 77 sites. The areas most impacted by the loss of these sites are the Crescenta Valley area.

Long-Term Evolution (LTE) Project Status

The LA-RICS Joint Powers Authority announced this month that construction of 63 permanent tower sites and 14 deployable Cell on Wheels (COW) sites was completed for the public safety Long-Term Evolution (LTE) broadband network by the September 30, 2015 federal deadline. The system is on track to be implemented by the end of the calendar year. One additional deployable COW is available for use during emergencies as needed. The 63 permanent LTE tower sites and 14 deployable COW sites will provide starter coverage for 95% of Los Angeles County. Over the next few years, additional tower sites will need to be identified and constructed to achieve desired performance on the system. Construction is substantially complete at all LAPD and proprietary department sites.

Land Mobile Radio (LMR) Project Status

The LA-RICS LMR system is currently in the design phase. LAPD has been working closely with Motorola and LA-RICS on the design. The LA-RICS LMR system will operate on the T-Band and 700 MHz Band spectrum. However, the design of the LA-RICS voice radio network is delayed

pending the completion of an Environmental Impact Report as required by State CEQA requirements and a Programmatic Environmental Assessment as required by the federal National Environmental Policy Act (NEPA) process. LA-RICS is working with the City's consultant, AECOM, to complete the environmental review, which is expected to be completed by mid-2016.

In summation, it is our collective opinion that although the City may decide to opt-out of the LA-RICS JPA, that it remain a strategic regional partner with LA-RICS and its member agencies and that the City recognizes the importance of this alliance in achieving an interoperable communications system that will effectively link region-wide public safety agencies through voice radio and broadband data communications networks.

FISCAL IMPACT STATEMENT

Adoption of the recommendations in this report will enable the City to 'opt-out' from its membership in the LA-RICS Joint Powers Authority (JPA). By withdrawing from the JPA prior to the November 24, 2015 withdrawal deadline, the City will bear no responsibility for any financial liabilities incurred during its membership in the JPA, per Article V, Section 5.01 of the JPA Agreement. As an alternative, should the City decide to proceed with a stand-alone Land Mobile Radio (LMR) system, the estimated cost to build this system would be approximately \$18 million. Additionally, LAPD will need to purchase new radios that are estimated to cost a total of \$65 million that can be purchased in phases. LAFD has also indicated a need to replace radios however, they have not yet identified the estimated cost (it should be noted that replacement radio purchases would be a City obligation regardless of membership in LA-RICS). If the City were to subscribe to the LA-RICS Long-Term Evolution (LTE) system, the City would incur future costs. Estimated costs for subscriber participation in the LTE system are unknown at this time, as system activation is scheduled for early 2016.

SMT:MAS:MF:PJH

Attachments

- 1 – City's Existing Public Safety Communications Systems
- 2 – Coverage Map
- 3 – Opt-Out Process
- 4 – Overview of LA-RICS Funding Plan and Project Funding
- 5 – Description of the City's Stand-Alone LMR System