

CITY'S EXISTING PUBLIC SAFETY COMMUNICATIONS SYSTEMS

Mobile Data Terminal Radio Systems

There are two (2) separate and distinct Mobile Data Terminal (MDT) Radio systems that provide LAFD and LAPD with narrowband data service. These two radio systems operate in different frequency bands using different configurations.

LAFD Mobile Data Terminal (MDT)

The LAFD radio system consists of four channels operating in the 450-512 MHz UHF T-Band. This radio system currently supports approximately 700 mobile data radios used by the LAFD firefighters. LAFD will need to replace this system because the frequencies will be clawed back as a result of H.R. 3630. LAFD may also supplement its MDT system with commercial carriers such as Verizon.

LAPD Mobile Data Terminal

LAPD previously used a MDT System consisting of ten channels operating in the 800 MHz frequency band. LAPD has abandoned this MDT System and is now using the channels for its voice radio system operation. LAPD uses the Sprint Broadband Network for broadband data. This system currently supports approximately 1500 mobile data radios used by the LAPD officers.

Voice Radio Systems (VRS)

Similar to the mobile data terminal systems, there are two (2) separate and distinct voice radio systems that currently serve LAFD and LAPD.

LAFD Voice Radio System

The LAFD VRS consists of 18 analog channels configured in the conventional mode operating in the 800 MHz frequency band. This radio system currently supports over 2,000 portable/mobile radios used by the LAFD firefighters. This system will reach its "end of life"³ by 2016 after which Motorola will stop its support. The Federal Communications Commission is exploring a future Report and Order to mandate that radio system operators on the 800 MHz radio band "narrow-band" their existing channels. Narrow-banding splits the existing radio channel into two pieces, essentially doubling the number of channels available use. If LAFD narrow-bands its channels, then their 18 channels could potentially be doubled to 36 channels, which provides more growth potential.

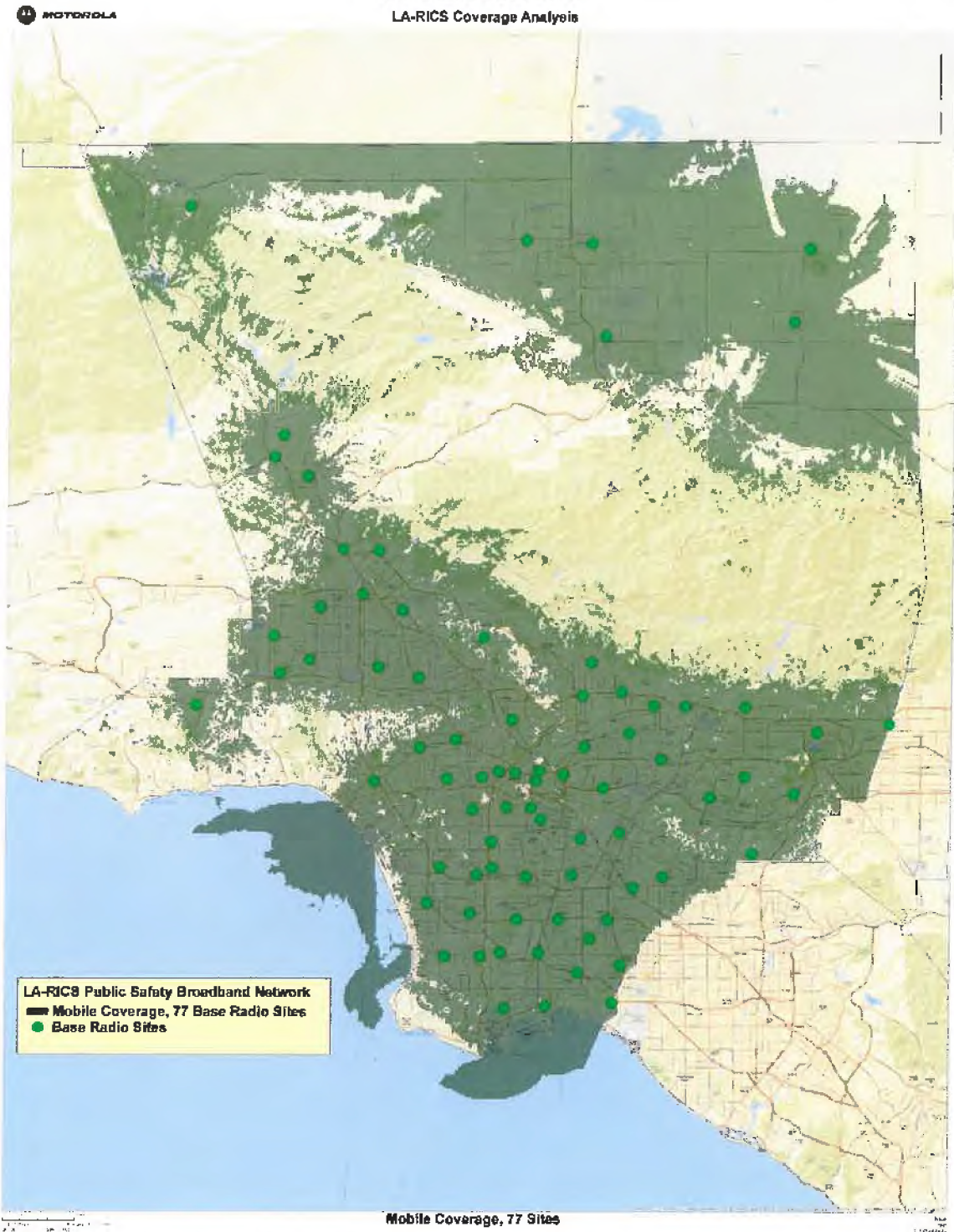
LAPD Voice Radio System

The LAPD VRS consists of 59 digital channels and one analog channel. This system is configured in the conventional mode operating in the T-Band. This system currently supports 10,000 portable/mobile radios for LAPD officers. The frequencies for this system will be clawed back as a result of H.R.3630. The system will also reach its end of life by 2016. LAPD is exploring the option of building a new voice radio network on 700/800 MHz frequencies.

³ "End of life" means that the manufacturer will no longer support the radios and ITA can only maintain the radios with spare parts that may have been purchased in advance of them not being available through the manufacturer. The system would continue to function, so long as ITA could continue to repair it. This is aside from the fact that the technology will also eventually become obsolete.

COVERAGE MAP

LA-RICS Coverage Analysis



The areas with the lighter shade of green are areas where LA-RICS coverage and capacity are minimal.

OPT-OUT PROCESS

As of November 5, 2015, 21 Member agencies have opted-out of LA-RICS. 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 one-third of the costs for LA-RICS.

Impact to City if it Opt-Out by November 24, 2015

As previously indicated, Article V, Section 5.01 of the JPA Agreement only requires a 35-day opt-out period; however, the Board may approve to extend the deadline. The Board first extended the opt-out deadline in May 2014 to November 24, 2014. It was extended again in August 2014 to the current deadline of November 24, 2015. Per the JPA Agreement, "[there] will be no costs for any Member that withdraws from the Authority within this time period."

Impact of Withdrawal and Termination of JPA Membership after November 24, 2015

Article VI, Section 6.01(b) of the JPA Agreement establishes the process for membership opt-out after the November 24, 2015 deadline. It states that members who provide infrastructure, frequencies, or physical plant to the System are required to provide twelve months advanced written notice of its intent to withdraw from the Authority.⁴ The City is providing infrastructure and physical plant for the LTE system (e.g., towers at LAPD stations), so it would be subject to the 12-month notice requirement.

Article VI, Section 6.02(a) of the JPA Agreement also states that the withdrawing member would remain liable for all financial liabilities incurred during its membership until written notice is received of the intent to withdraw from the JPA. In addition, the withdrawing member must continue to pay its share of operating costs during the twelve-month "notice period" after submitting its written notice of its intent to withdraw. The City, therefore, may be liable for any operating expenses incurred 12-months *after* it provides written notice to opt-out. For example, if the City provided written notice on November 25, 2015, it would be liable for operating expenses through November 25, 2016. Section 6.02(c) does allow for the withdrawing member to negotiate a buy-out agreement for early termination to retire any ongoing financial obligations. Moreover, if the City opts-out or withdraws it would cease to be a member of the JPA and would no longer have representation on the Board.

In addition to the costs related to withdrawal and termination, 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 for the BTOP cash match, JPA member operations cost, and administrative costs in FY 2014-15 and 2015-16.

⁴ The City is providing infrastructure at nineteen LAPD stations. If the Member agency did not provide infrastructure, frequencies or physical plant to system then only ninety days advanced written notice of its intent to withdraw would be required.

OVERVIEW OF LA-RICS FUNDING PLAN AND PROJECT FUNDING

The Board adopted the LA-RICS Funding Plan on May 28, 2014, and allocates costs to Members⁵ as follows:

- **Authority's Administration Costs:** Distribution of 40 percent of Authority staff and operating costs based on Members' proportional share of Countywide population and geography are equally split (50 percent each) effective FY 2014-15.
- **LMR System Operating Costs:** No costs will be allocated or collected for the LMR System from Members until the system is operational, which is projected to be FY 2017-18, unless the Authority Board adopts a revised Funding Plan, to account for any loss or shortage of grant funds.
- **LTE System Operating Costs:**
 - The cost of operation during the first year of operation (FY 2015-16), is based on:
 - Distribution of 30 percent of Authority staffing and LTE System operational costs and fiber connectivity operational costs, if applicable, based on Authority Members' proportional share of Countywide population and geography equally split (50 percent each).
 - Hard match contributions based on Authority Members' proportional share of Countywide population and geography equally split (50 percent each).
 - The LA-RICS Operating Budget for FY 2015-16 shows that the Member Funded JPA Operations totals \$1,033,000 and \$2,638,000 for the BTOP cash match.
 - The cost of operation during the second and subsequent years of operation, effective FY 2016-17, is based on:
 - Distribution of 30 percent of Authority staffing and LTE System operational costs and full cost of LTE System maintenance, including leased fiber connectivity, if applicable, based on Authority Members' proportional share of Countywide population and geography equally split (50 percent each).
 - Hard match contribution based on Authority Members' proportional share of Countywide population and geography equally split (50 percent each).
 - Cost of operation during years following the extinguishment of commercial financing will continue as reflected above, with the exception of hard match contributions.

The Funding Plan relies on grant monies for the initial construction of the LMR and LTE Systems. Member fees are to be the revenue source for the ongoing operations and maintenance as well as all other capital costs.

⁵ The Funding Plan is predicated on the number of Member jurisdictions participating. For every Member that opts-out before November 24, 2015, their annual share of the cost must be absorbed by the remaining JPA Members.

There are various grants that comprise the bulk of the funding for the LA-RICS project (both LTE and LMR). These grants have provided funding for system design, equipment and construction. The following is an overview of the grants funding the LA-RICS LTE and LMR Projects.

Funding Source	Description	Award Amount
Broadband Technology Opportunities Program (BTOP) for LTE Project	<p>The American Recovery and Reinvestment Act (ARRA) provided a total of \$7.2 billion to the NTIA and the Department of Agriculture's Rural Utilities Service (RUS) to fund projects that would expand access to, and adoption of, broadband services across the United States. NTIA utilized \$4.7 billion of that funding for grants to deploy broadband infrastructure in the U.S., expand public computer center capacity, and encourage the sustainable adoption of broadband service.</p> <p>The grant amount has been reduced to \$117 million as a result of a reduction in the number of sites included in the LA-RICS project. The BTOP grant has a match requirement. The match is 17.35 percent (\$18,910,674) which is being met by administrative and legal staff and architecture and engineering (A&E) costs in a cash match, and by administrative and legal, A&E, office leases, land cost of sites and equipment as an in-kind match.</p>	\$117 million (original allocation \$154.64 million)
Urban Areas Security Initiative (UASI) for LMR Project	<p>The U.S. Department of Homeland Security has also awarded funding to the LA-RICS project through its UASI Grant Program and State Homeland Security Grant Program (SHSGP). The Federal Emergency Management Agency (FEMA) and the California Governor's Office of Emergency Services oversee these grant funds. The grant administrator for the UASI funds is the City and the grant administrator for the SHSGP funds is the County.</p> <p>The UASI program funds address the unique risk-driven and capabilities-based planning, organization, equipment, training, and exercise needs of high-threat, high-density Urban Areas based on the capability targets identified and associated assessment efforts; and assists them in building an enhanced and sustainable capacity to prevent, protect against, mitigate, respond to, and recover from acts of terrorism.</p>	FY 2009: \$16,929,838 FY 2010: \$19,406,079 FY 2011: \$18,227,238 FY 2012: \$18,263,579 FY 2013: \$13,744,067 FY 2014: \$4,943,257*
State Homeland Security Grant Program (SHSGP) for LTE and LMR projects	<p>The SHSGP assists state, tribal and local preparedness activities that address high-priority preparedness gaps across all core capabilities and mission areas where a nexus to terrorism exists. SHSGP supports the implementation of risk driven, capabilities-based approaches to address capability targets set in urban area, state, and regional Threat and Hazard Identification and Risk Assessments (THIRAs). The capability targets are established during the THIRA process, and assessed in the State Preparedness Report (SPR) and inform planning, organization, equipment, training, and exercise needs to prevent, protect against, mitigate, respond to, and recover from acts of terrorism and other catastrophic events.</p>	FY 2009: \$5,769,201 FY 2010: \$5,315,000 FY 2011: \$2,826,218 FY 2012: \$250,000 FY 2013: \$509,000 FY 2014: \$200,000

*As of August 31, 2015, LA-RICS has spent \$36,335,917 in UASI funds.. The UASI Approval Authority froze the FY 2014 and FY 2015 funds pending the execution of a Memorandum of Understanding between LA-RICS and the Interagency Communications Interoperability System (ICIS).

CITY STAND-ALONE LMR SYSTEM

The upgrade of the City's existing system will allow the City to connect to LA-RICS and other regional/agency systems such as the Glendale-based Interagency Communications Interoperability System (ICIS). This design will also provide for capacity and coverage for all LAFD administrative radio traffic. LAFD will remain on its existing analog system for fire ground operations.

It would cost approximately \$18 - \$20 million, including contingency, to upgrade the City System. LAPD will also need to purchase new radios, which totals approximately \$65 million. The radios will be purchased in phases over a five or seven year period, with estimated costs in the first year being \$15 million. ITA estimates that it would take approximately 18 months to complete construction of the City System. The ongoing maintenance and operations costs are projected to be \$8.8 million for a five-year system upgrade agreement. The City would need to identify funding source(s), including potential grant funds, to pay for the cost of the City System.

The following is a chart that compares the alternative designs above to the LA-RICS LMR System:

	City System	LA-RICS LMR System
Coverage	<ul style="list-style-type: none"> • Coverage is customized, using five simulcast cells, to the specific areas of coverage the LAPD and LAFD would need. • Utilizes 700/800 MHz spectrum, which is not subject to the claw-back provisions of H.R. 3630, and is superior for in-building penetration/coverage. 	<ul style="list-style-type: none"> • Coverage is customized, using 11 simulcast cells, to the specific areas of coverage within the entire Region (i.e., County). • Utilizes T-Band and 700 MHz coverage, which could cause a risk to the cross-band communications. • T-Band is subject to the claw-back provision of H.R. 3630.
Capacity	<ul style="list-style-type: none"> • Capacity is customized to the specific traffic pattern the LAPD and LAFD would have, which will minimize roaming. • Will initially be optimized by T-Band in the conventional mode, but will later utilize 42 city channels in the 700/800MHz spectrum in the trunked mode, in compliance with H.R. 3630. 	<ul style="list-style-type: none"> • Capacity is customized to the area, using 85 County channels based on the Region's operation throughout the County. • Utilizes T-Band and 700 MHz, in a hybrid configuration; once migrate off T-band, then will add to traffic on 700 MHz.
Control	<ul style="list-style-type: none"> • City will control. • City will be able to modify the system to suit the needs of LAPD and LAFD without having to first obtain approval through LA-RICS JPA. 	<ul style="list-style-type: none"> • LA-RICS JPA will control system; any change would need to be approved by the Board.
Cost	<ul style="list-style-type: none"> • Cost to build will be \$18 – 20 million plus costs of radios. • Uses existing City sites with no new buildings and towers, and therefore no Environmental Study or community outreach will be required – saves time off project schedule. • Utilizes the newly build Aviat IP-TDM microwave network and upgraded Fujitsu fiber optic network DWDM equipment. 	<ul style="list-style-type: none"> • Cost of LA-RICS LMR is \$250 million (construction \$149 million plus 15-year maintenance) plus costs of radios. • May increase significantly depending on the completion of the environmental study and community outreach. • Environmental study to be completed mid-2016.