

**CITY OF OAKLAND**  
**AGENDA REPORT**

FILED  
OFFICE OF THE CITY CLERK  
OAKLAND

2010 JAN 13 PM 6:11

**To:** Office of the City Administrator  
**Attn:** Dan Lindheim  
**From:** Department of Information Technology and Police Department  
**Date:** January 26, 2010

**Re: Report And Resolution Authorizing The City Administrator To: 1) Negotiate And Enter Into A Contract With Harris Stratex, Inc. In An Amount Not-To-Exceed One Million Four Hundred Thousand Dollars (\$1,400,000) To Upgrade, Expand, And Integrate The Phase I Of Public Safety Microwave Backbone System, 2) Negotiate And Enter Into A Contract With Harris Stratex, Inc. In An Amount Not-To-Exceed One Hundred Fifty Two Thousand Dollars (\$152,000) For Maintenance Over A Two -Year Period; And 3) Waive The City's Advertising, Competitive Bid And Request For Proposal (RFP) Process For Equipment, Products And Professional And Technical Services To Be Purchased From Harris Stratex, Inc., 4) Enter Into Multiple, Additional Competitively Bid Contract(s) To Purchase Networking And Security Equipment For A Total Expenditure Not-To-Exceed One Hundred And Seven Thousand And Eight Hundred And Thirty Seven Dollars (\$107,837), For All Such Contracts, Without Return To Council**

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**SUMMARY**

Staff has prepared a report and proposed resolution authorizing the City Administrator to 1) negotiate and enter into a contract with Harris Stratex, Inc. in an amount not to exceed \$1.4 million dollars to upgrade, expand and integrate phase I of the Public Safety Microwave Backbone System, 2) negotiate and enter into a contract with Harris Stratex, Inc. in an amount not to exceed \$152,000 for maintenance over a two-year period, 3) waive the City's advertising, competitive bid and Request for Proposals (RFP) process for equipment, products and professional and technical services to be purchased from Harris Stratex, Inc., and 4) enter into multiple, additional competitively bid contract(s) to purchase networking and security equipment for a total expenditure not to exceed \$107,837, for all such contracts, without return to Council.

The Department of Information Technology (DIT) and Oakland Police Department (OPD) seek to utilize the COPS Interoperability grant funding approved for acceptance by Resolution No. 80894 C.M.S. dated October 16, 2007, to design, install and upgrade the Microwave Backbone for Public Safety infrastructure.

**FISCAL IMPACT**

Approval of this resolution will authorize the City Administrator to execute a contract in an amount not to exceed \$1,400,000.00 between the City of Oakland and Harris Stratex, Inc. to upgrade, expand, and integrate the new Microwave IP Backbone system in Oakland. The work

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will include the RF (Radio Frequency) path analysis, assessment of the new City sites, design and modeling of the proposed RF network, installation, integration and testing of the Microwave equipment. The City is required to negotiate and execute separate additional vendor service agreements for additional purchases, installation services, maintenance and support of third party networking and security hardware and software.

The Public Safety Microwave IP Backbone upgrade project will be funded by the U.S. Department of Justice, Office of Community Oriented Policing (COPS) grant funds for the Police Department's FY 2007 Law Enforcement Technology (Interoperable Communications) grant program for the project term of September 1, 2007 through August 31, 2010, in the amount of \$988,966. Funding will be appropriated to the Federal Grant Fund (2112); Police Information Technology Division Org. (106410); Agency-Wide Administration Program (PSOI), in a Project Account to be determined. The funding agency requires a (minimum) 25% matching funds component which must be made from local, state, or other non-DOJ/COPS funds. Matching funds in the amount of \$332,988 are allocated in the Unclaimed Cash Fund (7440); Property and Evidence Division Org. (102120); Project to be determined; Miscellaneous Contract Services Account (54919), Criminal Investigations Division Program (PS03). The Police Department will account for the expenditure of matching funds in accordance with methods approved by the DOJ/COPS. Additional funds in the amount of \$200,000 shall be drawn from JPFA Capital Projects Fund (5200), Communication and information Services Organization (94461), Contract Contingencies Account (54011), Project (P70600), Technology Management Program (IP62), and funds in the amount of \$137,883 shall be drawn from U.S. Department of Homeland Security Fund (2123), Emergency Services Program Organization (20711), Computer Equipment Account (57711), Project (G385910), and Program (PS21). The total project cost, inclusive of the matching funds provision, is \$1,659,837. The program will be managed by the Department of Information Technology; no immediate need for additional resources is foreseen at this time.

The information listed in the table below shows the sources of funding and the associated totals for the Microwave IP Backbone System project.

Source of Funds	Amount of Funding
DOJ COPS FY'07 Interoperability Grant	\$988,966.00
OPD Unclaimed Cash Funds	\$332,988.00
PSIC Grant	\$137,883.00
JPFA Capital Projects Funds	\$200,000.00
<b>TOTAL Source Funding</b>	<b>\$1,659,837.00</b>

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The following table outlines the use of funds for one time amounts (itemized analysis of costs) associated with installation services, maintenance/support, contingency, and equipment needed to effectively implement, operate and maintain the Microwave IP Backbone System.

Use of Funds	One Time Costs (\$)	Item Description
Microwave Equipment and Professional Services for Phase I from Harris Stratex, Inc.	\$1,400,000.00	The total contract amount of the Microwave Backbone System from Harris Stratex, Inc. which includes total of 30 hops, radio equipment, redundant radio controllers, engineering design, path analysis, antenna system, structural work, and first year maintenance and support agreement.
Networking and Security Equipment	\$107,837.00	The total amount is required to purchase the networking and security gear for connecting the remote sites with annual maintenance and support.
Annual Maintenance Services needed to support the operations	\$152,000.00	The total amount is required for annual maintenance and support of the microwave backbone system.
<b>GRAND TOTAL</b>	<b>\$1,659,837.00</b>	

The annual ongoing cost for microwave maintenance and network support charges (\$152,000) shall be paid for from the Radio Maintenance Fund (Fund 4200) as a support system. This increase to the fund will also be reflected in the FY 2011-2013 internal service charge increase to the Police and Fire Departments.

**BACKGROUND**

The Internet Protocol (IP) has become the global standard networking protocol for interconnecting all types of computer systems and assuring the network interoperability for various platforms. The current public safety backbone system in Oakland relies on 15 year old Analog Microwave Equipment and dedicated leased line circuits with varying speeds from 1Mbps (Million/Mega Bits Per Second) to 45Mbps of speed. The next generation of public safety devices require significant amounts of bandwidth and backhaul capacity (up to 100Mbps) to offer the bandwidth needed for business applications such as voice, video, data, images, and mapping, etc.

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In recent years, two studies related to the broadband wireless communications needs, solutions and roadmap, have been performed in Oakland:

- Interoperability Study of 08/09 by CTA Communications, and
- Wireless Needs Assessment of 07/09 by Tellus Venture Associates

It is noticeable that both studies highly recommend upgrading the current Analog Microwave Equipment and migration to an Interoperable Microwave IP Backbone infrastructure, owned and maintained by the City, to support the future needs of the Public Safety Voice and Data communications infrastructure. Additionally, this upgrade will yield a significant savings once the new Microwave IP Backbone is operational, in replacing the redundant current leased dedicated circuits, and offer the better regional interoperability with the partners like East Bay Regional Communication System (EBRCS) and Bay Area Regional Interoperable Communication System (BayRICS).

On October 16, 2007, Council passed Resolution No. 80894, C.M.S., authorizing the Oakland Police Department to receive grant funds totaling up to \$988,966 from the Department of Justice Office of Community Oriented Policing Services COPS FY 2007 Law Enforcement Technology Interoperable Communications Grant Program. This allocation of said grant funds is aligned with a collaborative multi-agency, multi-jurisdictional, interoperable communications venture with the City and County of San Francisco, the County of Alameda, and the City of San Jose, and the County of Santa Clara.

## **KEY ISSUES AND IMPACT**

The new Microwave Backbone System is the critical infrastructure required to support the First Responders Project 25 radio system. The Microwave Backbone System will connect all the core infrastructures consisting of P25 Radio Sites, Main Data Center Buildings, and Fire Stations in the City of Oakland. The reference architecture consists of more than 30 links per system layout; however, only core links will be deployed based on the engineering design and study in Phase I. The conceptual system layout assumes the *Line of Sight* for all the links and the final system design will be developed and finalized after a path survey and detailed engineering analysis. A detailed Statement of Work (SOW) will be developed before deployment and implementation of the project to determine the appropriate tower structure, required structural analysis, and site readiness.

Public safety agencies require robust and redundant backhaul communication systems able to survive and perform under emergency conditions. The federal government has set aside both valuable spectrum and grant funding for this purpose. Initial reference architecture for a citywide public safety microwave backbone system was developed to meet the operational requirements,

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and the financial cost and benefits of each alternative was evaluated. Prime consideration was given to finding immediate offsets of existing costs, such as leased data lines, and the potential for grant funding. Several iterations of this design/financial analysis cycle were performed, resulting in a conceptual system design that meets these operational requirements to the greatest extent possible given the limits of current technology, regulations and funding. Department of Justice (DOJ) Interoperability 2007 grant funding of Community Oriented Policing Servicing (COPS) program, will be used for this public safety application. The reference architecture provides an extensible backbone that minimizes the cost of adding these capabilities, and demonstrates that voice and broadband data technology is deployable and effective.

### *Sole Source Justification*

Due to the extremely tight project schedule (8 months), the magnitude and complexity of the Microwave Backbone Phase I project, and the potential loss of significant grant funding that could occur with delays, it is recommended that Council provides an approval to the City Administrator to proceed with single source procurement of the goods and services as needed to complete this highly valued regional interoperability project. The limited timeline for completion (Aug. 31, 2010, no project extensions allowed), and the procurement of goods and services needed to successfully complete the project and ensure compatibility with existing local and regional microwave and dependant systems makes project completion challenging. The Phase I of the voice and data transport project (which will support the transport needs of the Oakland P25 Communications System) will be built upon the recently completed P25 Radio sites by expanding it to other sites and adding several system enhancements aimed at improving operational efficiencies, system performance, adding system redundant failsafe measures, and extending maintenance and technical support of the system.

City Staff contacted other local public safety organizations that selected Harris Stratex, Inc. through a competitive bidding process, and found the company very reliable, scalable, and cost effective. The reasons listed below provide additional justification:

1. In Oakland, the new digital system will be an upgrade from the current analog microwave communication system originally built by Harris Stratex Inc. Any work, systems enhancements or expansions made by any company other than Harris-Stratex would impact and might void the existing warranties and maintenance agreements leaving County and other network participants at risk. The continued use of standardized equipment in Oakland is critical to maintaining system compatibility and local access to resources in the event of equipment failure. If a jurisdiction experiences a failure, a replacement part can be borrowed from a nearby entity. In addition, local government technical support staffs are trained on the maintenance and repair of this equipment, and have a high level of knowledge and experience regarding equipment functions, reducing maintenance costs and system down-time for repairs.

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2. Harris Stratex Inc. Microwave equipment has been the vendor of choice by most local government agencies in the greater Bay Area. Several of these local and regional microwave radio communications network systems are built and maintained by Harris Stratex. The Alameda County and Contra Costa County East Bay Regional Communications System (EBRCS) utilizes the Microwave Backbone solution designed and built Harris Stratex, Inc. Santa Clara County is building the 38 Sites Microwave Backbone Communication System to support the Silicon Valley Regional Communication System (SVRCS) for critical voice and data services. The BayLoop, Microwave Backbone System, interconnecting all the Ten Counties in the Bay Area is being built by Harris Stratex, Inc. Eventually, all these microwave communication systems will be linked together to form a 12 County network for regional support of voice and data interoperability.
3. The project will be completed in 7 to 9 months, fulfilling the grant deadlines. Utilization of Harris Stratex Inc. will allow for a more efficient design and implementation schedule, which will be required to meet the limited time left to complete this complex project.

## **PROJECT DESCRIPTION**

The Analog Microwave Backbone in the City of Oakland, installed and designed by Harris Stratex Inc., is currently used to connect radio sites for redundancy and backup links. Many public safety agencies in the Bay Area, including Alameda County, Contra Costa County, City and County of San Francisco, Santa Clara County, City of San Jose, and the Bay Area Regional Interoperable Communication System (BayRICS) are using the Digital Microwave Backbone solution provided by Harris Stratex, Inc.

The project scope requires the overall network architecture to connect the following main sites:

- Seneca Radio Site
- Gwin Radio Site
- APL Radio Site
- 150 Frank H. Ogawa Plaza
- Emergency Operations Center (EOC)
- Police Administration building (PAB)
- Police Communications Center (911)

In addition, all the fire stations and other critical public safety locations will be connected using the Microwave Backbone technology for high-speed data access to critical information.

### **SUSTAINABLE OPPORTUNITIES**

***Economic:*** Once the new Microwave IP Backbone is operational, the greatest economic savings will be realized, in replacing the redundant current leased dedicated circuits which will provide better regional interoperability with the regional partners.

***Environmental:*** There are no environmental opportunities identified in this report.

***Social Equity:*** Enhancing interoperability promotes public safety by enhancing emergency response time, thereby making communities safer.

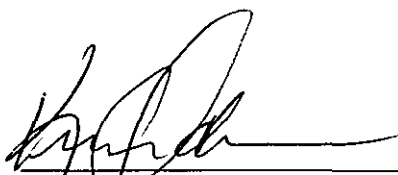
### **DISABILITY AND SENIOR CITIZEN ACCESS**

There are no disability or senior citizen access related issues with this report.

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**RECOMMENDATION**

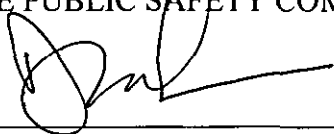
Staff recommends acceptance of this report and approval of the resolution authorizing the City Administrator to 1) negotiate and enter into a contract with Harris Stratex, Inc. in an amount not to exceed \$1.4 million dollars to upgrade, expand and integrate phase I of the Public Safety Microwave Backbone System, 2) negotiate and enter into a contract with Harris Stratex, Inc. in an amount not to exceed \$152,000 for maintenance over a two-year period, 3) waive the City's advertising, competitive bid and Request for Proposals (RFP) process for equipment, products and professional and technical services to be purchased from Harris Stratex, Inc., and 4) enter into multiple, additional competitively bid contract(s) to purchase networking and security equipment for a total expenditure not to exceed \$107,837, for all such contracts, without return to Council.



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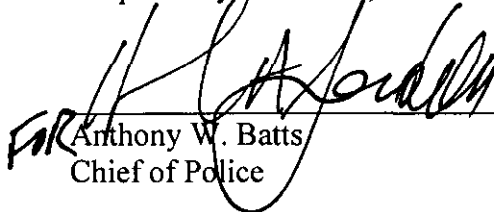
Ken Gordon, Acting Director  
Department of Information Technology

APPROVED AND FORWARDED TO  
THE PUBLIC SAFETY COMMITTEE:



Office of the City Administrator

Respectfully submitted,



Anthony W. Batts  
Chief of Police

Prepared by:  
Ahsan Baig, IS Manager, Public Safety  
Department of Information Technology

Reviewed by:  
Captain Eric Breshears,  
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Oakland Police Department

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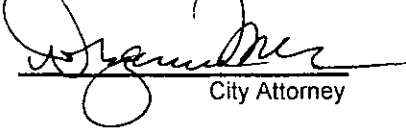
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# OAKLAND CITY COUNCIL

Approved as to Form and Legality

  
City Attorney

RESOLUTION No. \_\_\_\_\_ C.M.S.

## RESOLUTION AUTHORIZING THE CITY ADMINISTRATOR TO:

- 1) NEGOTIATE AND ENTER INTO A CONTRACT WITH HARRIS STRATEX , INC. IN AN AMOUNT NOT-TO-EXCEED ONE MILLION FOUR HUNDRED THOUSAND DOLLARS (\$1,400,000) TO UPGRADE, EXPAND, AND INTEGRATE THE PHASE I OF PUBLIC SAFETY MICROWAVE BACKBONE SYSTEM, AND
- 2) NEGOTIATE AND ENTER INTO A CONTRACT WITH HARRIS STRATEX , INC. IN AN AMOUNT NOT-TO-EXCEED ONE HUNDRED FIFTY TWO THOUSAND DOLLARS (\$152,000) FOR MAINTENANCE OVER A TWO -YEAR PERIOD; AND
- 3) WAIVE THE CITY'S ADVERTISING, COMPETITIVE BID AND REQUEST FOR PROPOSAL (RFP) PROCESS FOR EQUIPMENT, PRODUCTS AND PROFESSIONAL AND TECHNICAL SERVICES TO BE PURCHASED FROM HARRIS STRATEX, INC.; AND
- 4) ENTER INTO MULTIPLE, ADDITIONAL COMPETITIVELY BID CONTRACT(S) TO PURCHASE NETWORKING AND SECURITY EQUIPMENT FOR A TOTAL EXPENDITURE NOT-TO-EXCEED ONE HUNDRED SEVEN THOUSAND EIGHT HUNDRED THIRTY SEVEN DOLLARS (\$107,837), FOR ALL SUCH CONTRACTS, WITHOUT RETURN TO COUNCIL

**WHEREAS**, on October 16, 2007, the City Council approved Resolution No. 80894 C.M.S., authorizing the acceptance and appropriation of grant funds in the amount of \$988,966 from the U.S. Department of Justice, Office of Community Oriented Police Services, FY 2007 Law Enforcement Technology (Interoperable Communications) grant program, to the Oakland Police Department in support of the Interoperability; and

**WHEREAS**, the Department of Information Technology (DIT) and Oakland Police Department (OPD) seek to use the COPS Interoperability Communication grant, to design, install and upgrade the Microwave Backbone for Public Safety infrastructure; and

**WHEREAS**, the Microwave Backbone project shall assist in deploying the P25 radio upgrade for voice interoperability in the Bay Area region and Broadband Wireless Data for improved response time through more efficient and timely resource allocation, as well as overall public safety management during times of emergency; and

**WHEREAS**, Oakland Municipal Code Sections 2.04.051.A and 2.04.040.B require advertising and competitive solicitation processes to be determined by the City Administrator for the purchase of professional services; and

requests for proposal/qualification processes upon finding that it is in the best interests of the City to do so; and

**WHEREAS**, Oakland Municipal Code Section 2.04.050 requires advertising and competitive bids with award to the lowest bidder for the purchase of equipment and products; and

**WHEREAS**, Oakland Municipal Code Section 2.04.050.I authorizes the City Council to waive such advertising and bidding requirements upon a finding that it is in the best interests of the City to do so; and

**WHEREAS**, staff researched and contacted other public safety organizations in the Bay Area that have selected Harris Stratex, Inc. through competitive bidding processes and currently use their Microwave Radio equipment and services; and

**WHEREAS**, Harris Stratex, Inc. is the only vendor proven to have time tested technology that is compatible with the current Microwave equipment and is the only vendor that can maintain its system; and

**WHEREAS**, the project includes connecting the critical infrastructure Radio Sites (i.e., Gwin, Seneca, APL, Police Communications Center, Police Admin Building, Police Sub-Station at Eastmont, 150 Frank H. Ogawa Plaza, Emergency Operations Center, and Fire Stations); and

**WHEREAS**, the Microwave equipment deployment will utilize the existing proven technologies, compatible interfaces and best practices in the current City IT infrastructure to minimize additional integration costs; and

**WHEREAS**, for the reasons stated above and in the City Administrator's agenda report accompanying this item, the City Administrator recommends that the Council waive advertising, the competitive request for proposal/qualifications process and competitive bidding for the purchase of a Microwave Backbone system; and

**WHEREAS**, the City Administrator has determined that services provided pursuant to said agreement with Harris Stratex, Inc. are of a professional, scientific, or technical nature and are temporary in nature; and

**WHEREAS**, the City Administrator has determined that said agreement shall not result in a loss of employment or salary by any person having permanent status in the competitive service; now, therefore, be it

**RESOLVED:** That pursuant to Oakland Municipal Code sections 2.04.050.I.5 and 2.04.051.B, and based on the reasons set forth in the City Administrator's agenda report accompanying this resolution, the City Council hereby finds and determines that it is in the best interests of the City to waive advertising, competitive bidding and request for proposal/qualifications process for the purchase of professional and technical services for the implementation of a Public Safety Microwave Backbone System and so waives said requirements; and be it

**FURTHER RESOLVED:** That the City Council authorizes the City Administrator to negotiate

and enter into an agreement with Harris Stratex, Inc. in an amount not to exceed \$1,400,000 for the purchase of equipment, products and professional and technical services necessary for the implementation of a Public Safety Microwave Backbone System; and be it

**FURTHER RESOLVED:** That the City Council authorizes the City Administrator, or his designee, to enter into a maintenance agreement with Harris Stratex, Inc. in an amount not-to-exceed \$152,000 for provision of system maintenance over a two-year period to commence at the completion of the warranty period; and be it

**FURTHER RESOLVED:** That the City Council authorizes the City Administrator, or his designee, to select a vendor or vendors, following a competitive process, and enter into an agreement or agreements with other vendors for a total expenditure not-to-exceed \$107,837 for the purchase of network and security equipment; and be it

**FURTHER RESOLVED:** That grant funds from the U.S. Department of Justice, Office of Community Oriented Policing Services, in the amount of \$988,966 shall be drawn from the Federal Grant Fund (2112), Bureau of Services Division Org. (106410), Information Technology Division Program (PS01), in a Project Account to be established; and be it

**FURTHER RESOLVED:** The funding agency requires a (minimum) twenty-five percent (25%) matching funds component which must be made from local, state, or other non-DOJ/COPS funds, and said funds in the amount of \$332,988 shall be drawn from the Unclaimed Cash Fund (7440); Property and Evidence Division Org. (102120); Project to be determined; Miscellaneous Contract Service Account (54919), Criminal Investigations Division Program (PS03); and be it

**FURTHER RESOLVED:** Additional funds in the amount of \$200,000 shall be drawn from JPFA Capital Projects Fund (5200), Communication and information Services Organization (94461), Contract Contingencies Account (54011), Project (P70600), Technology Management Program (IP62), and funds in the amount of \$137,883 shall be drawn from U.S. Department of Homeland Security Fund (2123), Emergency Services Program Organization (20711), Computer Equipment Account (57711), Project (G385910), and Program (PS21); and be it

**FURTHER RESOLVED:** That pursuant to Oakland Municipal Code section 2.04.051.B and based on the reasons set forth in the City Administrator's agenda report accompanying this resolution, the City Council hereby finds and determines that it is in the best interests of the City to waive the competitive request for proposal/qualifications process for the purchase of goods and services from Harris Stratex, Inc. relative to the delivery of services associated with the FY 2007 COPS Interoperability Communications grant program; and be it

**FURTHER RESOLVED:** That the City Council finds and determines based on the above determinations of the City Administrator, that the goods and services provided pursuant to the agreements authorized hereunder are of a professional, scientific, or technical and temporary nature, and shall not result in a loss of employment or salary by any person having permanent status in the competitive service process; and be it

**FURTHER RESOLVED:** That the City Administrator or his designee is hereby authorized to

complete all required negotiations, certifications, assurances and documentation required to accept, modify, extend and/or amend the grant awards, and be it

**FURTHER RESOLVED:** That the City Attorney shall review and approve said agreements as to form and legality and copies of said agreements shall be filed with the Office of the City Clerk.

IN COUNCIL, OAKLAND, CALIFORNIA, \_\_\_\_\_, 20\_\_\_\_\_

**PASSED BY THE FOLLOWING VOTE:**

AYES- BROOKS, DE LA FUENTE, KAPLAN, KERNIGHAN, NADEL, QUAN, REID, and PRESIDENT BRUNNER

NOES-

ABSENT-

ABSTENTION-

ATTEST: \_\_\_\_\_  
LaTonda Simmons  
City Clerk and Clerk of the  
Council of the City of Oakland, California