

**SUBMITTAL TO THE BOARD OF SUPERVISORS
COUNTY OF RIVERSIDE, STATE OF CALIFORNIA**

364



FROM: Stanley L. Sniff Jr., Sheriff-Coroner-PA

SUBMITTAL DATE:
09/16/09

SUBJECT: Approval of Lithos Robotics Corp., as the Sole Provider of a Radio Control System for the Sheriff's Department Hazardous Device Team's Remotec Andros F6A Robot.

RECOMMENDED MOTION: Move that the Board of Supervisors authorize the Purchasing Agent to purchase a radio control and repeater assembly from Lithos Robotics Corporation, at a cost not to exceed \$35,400, without securing competitive bids, in accordance with Ordinance 459.4.

BACKGROUND: The Sheriff's Department's Hazardous Device Team (HDT) has three robots; two wirelessly controlled Allied Vanguard MkII small robots with line-of-sight range of 350 feet, and the main robot, a Remotec Andros F6A. The Andros F6A is the primary robot utilized in law enforcement and military explosive ordnance disposal communities today. Most Andros F6A robots are controlled wirelessly; however, the Sheriff's Department's robot is controlled via a 1,000 foot fiber-optic cable tether. The presence of this tether greatly limits robotic capabilities; for example, it is impossible to enter a multi-story building with a tethered robot and access upper floors via an elevator. It is also impossible to address a potential Vehicle Borne Improvised Explosive Device (VBIED) from a relatively safe distance with a 1,000 foot tether.

Departmental Concurrence

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Will Taylor
Stan L. Sniff Jr., Sheriff-Coroner-PA
Will Taylor, Director of Administration

FINANCIAL DATA	Current F.Y. Total Cost:	\$35,400	In Current Year Budget:	Yes
	Current F.Y. Net County Cost:	\$2,514	Budget Adjustment:	No
	Annual Net County Cost:	\$0	For Fiscal Year:	FY 2009-10

SOURCE OF FUNDS: Federal – Homeland Security Funds and General Fund	Positions To Be Deleted Per A-30	<input type="checkbox"/>
	Requires 4/5 Vote	<input type="checkbox"/>

C.E.O. RECOMMENDATION:

APPROVE

BY: *Robert Tremaine*
Robert Tremaine

County Executive Office Signature

Purchasing: *Mark Seiler*
Mark Seiler, Assistant Director

Dept't Recomm.: Consent Policy

Per Exec. Ofc.: Consent Policy

Sole Source Purchase of Radio Control Assembly from Lithos Robotics Corporation

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Sheriff's HDT personnel conducted a search for remote radio control systems that are compatible with Remotec's Andros F6A robot and found only two systems: The Remotec "Talisman Gold," and Lithos Robotics "Monolith Digital Controller." HDT conducted two side-by-side tests of both systems in an environment similar to that in which it often operates, a residential area with usual obstructions such as buildings, vehicles, vegetation, etc. Sheriff's HDT personnel determined that the performance of the Lithos Robotics Monolith Digital Controller meets all the Team's requirements. Additionally, based on these tests and the representations of Lithos, the Controller meets the requirements for accreditation by the FBI Bomb Center and the U.S. Department of Homeland Security.

Price Reasonableness

Lithos is offering their system for \$35,382.38 (including sales tax and shipping). The Remotec system was recently quoted at \$61,501. Although the capabilities of the Remotec system exceed those of the Lithos system, the price difference is too significant to recommend a Remotec purchase over a Lithos.

Lithos has stated that it sells its systems at a standard price to all bomb squads and does not offer special discounts or one-time promotions.

JUSTIFICATION TO ACQUIRE LITHOS RADIO CONTROL ASSEMBLY

One of the basic items of equipment for a bomb squad is a remotely operated vehicle, or "robot". Not only is it a fundamental necessity when working with suspicious items that may be or contain improvised explosive devices (IED), but the FBI Bomb Data Center requires that a robot be possessed and used in order to maintain bomb squad accreditation.

The Riverside County Sheriff Hazardous Device Team possesses and uses three robots: Two wirelessly controlled Allied Vanguard MkII small robots (with line-of-sight range of 350 feet), and the main robot, which is a Remotec Andros F6A. The Andros F6A is the most ubiquitous robot in the law enforcement and military explosive ordnance disposal communities today; most are wirelessly controlled. In addition to using its robots to conduct bomb-related operations, HDT deploys its robots in support of the Special Enforcement Bureau's Emergency Services Team (EST). For example, HDT robots have been used to reconnoiter denied areas prior to the insertion of an entry team consisting of EST operators whose mission is to resolve situations involving barricaded subjects. HDT robots have also been used to deploy less-lethal munitions in support of EST operations.

The RSO HDT Andros F6A, however, is controlled via a fiber-optic cable tether which is 1,000 feet in length. While the quality of the communications (audio, video and data) link between the command post and the operating robot is crystal-clear, the presence of a tether greatly limits our remote capability. For example, it is impossible to enter a multi-story building with a tethered robot and access an upper floor via elevator. It is also impossible to address a potential Vehicle Borne Improvised Explosive Device (VBIED) from a relatively safe distance with a 1,000 foot tether. A copy of the Department of Defense Evacuation Chart is attached to illustrate this.

Accordingly, HDT conducted a search for remote radio control systems that are compatible with Remotec's Andros F6A, and found only two systems: The Remotec "**Talisman Gold**", and the Lithos Robotics "**Monolith Digital Controller**". HDT obtained a demonstration model of the Lithos system and conducted operational tests using its Andros F6A in an environment similar to that in which it often operates – a residential area with obstructions usual to such an area (buildings, vehicles, vegetation, etc.). We learned that the Lithos system operated well in most of the environments in which HDT operates.

The cost (including sales tax and shipping) of the Lithos system is \$35,382.38. The cost (including sales tax and shipping) of the Remotec system is \$61,501.31. With such a great difference in price, we needed to find out which system meets the HDT requirements, so we again obtained a demonstration system from Lithos and approached a local bomb squad that currently uses the Remotec system and requested that we be able to conduct a side-by-side test of each system in exactly the same environment operating the same robot. The Ontario Fire Department Bomb Squad consented to conducting this test using their robot and radio control system (both manufactured by Remotec). The test took place using a Remotec F6A robot identical to the one owned by HDT. The test took place in an environment like that in which HDT operates: i.e. a residential area with obstructions usual to such an area (buildings, vehicles, vegetation, etc.).

The results of the testing were unequivocal. The Lithos system maintained control of the robot for most of the time during the testing. **The Lithos system meets the requirements of HDT.** The Remotec system maintained control of the robot for over half a mile in an area full of typical obstructions. The Lithos system compares favorably with the Remotec "**Talisman Gold**", its only known competitor, at a price that is more than \$25,000 less! It is capable of operating in a bomb mitigation role as well as in support of EST operations deep inside of buildings of various configurations.

Date: September 09, 2009
From: Cpl. Frank Anderson Department/Agency: Riverside County Sheriff
To: Board of Supervisors
Via: Purchasing Agent
Subject: Sole Source Procurement; Request for

The below information is provided in support of my Department requesting approval for a sole source. Outside of a duly declared emergency, the time to develop a statement of work or specifications is not in itself justification for sole source.

Supply/Service being requested: **Radio control system for HDT Andros F6A Robot**

Supplier being requested: **Lithos Robotics Corporation, Amherst, NY**

Alternative suppliers that can or might be able to provide supply/service: **Remotec, Inc., a division of Northrup Grumman; Vendor # 10096**

Extent of market search conducted: **International Association of Bomb Technicians and Investigators, as well as suppliers to the U. S. Military**

Unique features of the supply/service being requested from this supplier, which no alternative supplier can provide: **See the attached narrative.**

Reasons why my department requires these unique features and what benefit will accrue to the county: **HDT will acquire the capability of successfully remotely defeating a Vehicle Borne Improvised Destructive Device (VBIED); HDT will improve its ability to operate remotely within denied areas.**

Price Reasonableness: **Refer to the attached narrative.**

Does moving forward on this product or service further obligate the county to future similar contractual arrangements? **No**


Department Head Signature

9/16/09
Date

Purchasing Department Comments:

Approve

Approve with Condition/s

Disapprove


Purchasing Agent

9-17-09
Date