

PSAP Grant Program Grant Ranker

View Application--12--Richmond County - Mapping Maintenance Enhancement

Grant Period: 2009

Tier: Strengthen current equipment and service delivery capability by upgrading existing wireless E-911 related equipment or services (**STRENGTHEN**)

Grant Program: Continuity and Consolidation **Grant Type:** Individual PSAP

Priority: RCL maintenance (**RCL**)

Primary PSAP Applicants: Richmond County

Jurisdictions Served: Town of Warsaw
Richmond

Project Director:

Christopher H. Jett
Director of Planning and Information
101 Court Circle P. O. Box 1000 Warsaw, VA 22572
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cjett@co.richmond.va.us

Project Description:

Richmond County desires to purchase software and hardware to better maintain the GIS data used in the Sheriff's Office mapping system. Currently, the maintenance of this data is outsourced to MSAG Data Consultants. The County wishes to maintain the GIS data using inhouse staff, resulting in increased accuracy of the data and more frequent updates to the Sheriff's Office. The County wishes to purchase 1 concurrent license of MSAG's OfficeGIS, 1 license of TabletGIS, 1 concurrent license of ArcEditor, activation of 2 ArcView single use licenses, data conversion services, and 3 PCs (1 of which will be a tablet PC).

Total Project Cost \$42,000.00

Amount Requested: \$33,600.00

Matching Funds: \$8,400.00

Additional Local Funds: \$10,456.00

Statement of Need:

Richmond County is currently outsourcing the maintenance of its mapping data to MSAG Data Consultants in Orange, VA. The method for the assignment of addresses for structures is sound and the means of tracking the requests for new addresses is acceptable. However, staff has noticed that the greater the setback of a structure from a named road, the greater the level of error in the address placement by MSAG, since County staff is providing MSAG with only a setback and distance along the road for a new address. The use of in-the-field data collection tools such as TabletGIS and GPS technology will allow for much greater accuracy in the collection of these structure addresses. In addition, the process of adding new roads, fire hydrant locations, and other planimetric data is currently cumbersome and allows for high levels

of inaccuracy. Many times, this high degree of error is not realized until new orthophotography is released by the state. Staff feels that inhouse and in-the-field aquisition and maintenance of the mapping data will greatly increase the level of accuracy and currency, due to local knowlege and the use of GPS technology. There are limited local funds available for the software and hardware upgrades necessary to allow for the inhouse maintenance of the mapping data. The E-911 Wireless Services Board currently provides Richmond County with approximately \$45,000 annually. However, this funding is already being used to offset the maintenance costs of the County's E-911 CPE, voice logging recorder, and Eagle Mapped ALI system, as well as personnel costs for dispatchers and IT support staff. Without the requested grant funding, Richmond County will be unable to move forward with the desired enhancements to its mapping maintenance system.

Project Impact:

The implementation of this mapping maintenance enhancement will provide the dispatchers in the Sheriff's Office with more accurate and current mapping data, since updates will be able to be provided to them more frequently than the quarterly updates currently provided. The additional positional accuracy of the mapping data will also provide the dispatchers with a higher level of confidence in the mapping data that they use when responding to a high percentage of their emergency calls. The updating of the locations of available fire hydrants within the Town of Warsaw (which is currently several years out of date) will also provide the dispatchers with necessary information for use when responding to fire calls within the Town.

Consequence of Not Receiving:

If the requested grant funding is not received, the proposed mapping maintenance enhancements will not be able to be accomplished and the County will continue with the outsourcing of its mapping maintenance. This will result in a continuation of the lower level of accuracy and currency of the mapping data used within the Richmond County Sheriff's Office.

Part of Long Term or Strategic Plan?: Yes

Likelihood of Completion Unfunded?: 5%

Other Available Funding Sources?: No

Percent of Grant Funding Requested To Total Funding Cost?: 80%

Is Project Locally Sustainable?: Yes

Comprehensive Project Description:

Richmond County desires to purchase software and hardware in order to allow Staff to better maintain the GIS data used in the Sheriff's Office mapping system. Currently, the maintenace of this data (which includes road center line (RCL) data that must be maintained to VGIN standards, structure addresses and footprints, water features, fire hydrant locations, and various other planimetric layers) is outsourced to MSAG Data Consultants in Orange, VA. The County wishes to maintain the GIS data using inhouse staff, resulting in increased accuracy of the data and more frequent updates to the Sheriff's Office. In order to accomplish this, the County wishes to purchase 1 concurrent license of MSAG's OfficeGIS software, 1 license of MSAG's TabletGIS software, data services to convert the existing GIS data to a geodatabase format, 1 concurrent license of ArcEditor from ESRI, maintenance activation of 2 ArcView single use licenses from ESRI, and 3 PCs (1 of which will be a tablet PC). The concurrent licenses of ArcEditor and MSAG's OfficeGIS will provide 2 staff members with the capability of editing the GIS data, even though not simultaneously. The license of MSAG's Tablet GIS will allow Staff to collect and/or modify GIS data in the field while utilizing GPS technology and the state orthophotography (funded through the Wireless E-911 Fund) as reference.

What type of interface or compatibility solution will be used between existing equipment and/or software and that which you intend to purchase?:

Richmond County has contracted with MSAG Data Consultants for various E-911 and GIS products and services since 1992. As a result, the County is heavily invested with MSAG and already uses its Eagle Mapped ALI product as the mapping system in the Sheriff's Office. MSAG has developed the OfficeGIS and TabletGIS software solutions, which the County wishes to receive funding to purchase through this grant program, so that they will work seamlessly with MSAG's other software offerings, such as the Mapped ALI software and OnlineGIS.

What is the overall relationship of your project to your PSAP or locality's established long-

range future plans?:

Richmond County has long anticipated a time when maintenance of its GIS data would need to be done inhouse in order to provide for increased accuracy and quicker turnaround times for maintenance updates. With an increase in the number and complexity of data layers being maintained as well an increase in the rate of development that the County is experiencing, staff feels that the time has arrived to begin the transition to inhouse maintenance of the data as opposed to outsourcing.

How will the equipment purchased will support future technologies for PSAP readiness?:

The OfficeGIS and TabletGIS software will allow inhouse staff to more accurately and quickly maintain and update the GIS data that will be available for use by multiple technologies within the PSAP in the future.

Budget and Budget Narrative:

Richmond County is requesting grant funds to cover 80% of the initial software license costs, training, data conversion services, and PC hardware in order to allow the inhouse maintenance of its mapping data by County staff. The County proposes to cover the additional 20% of these costs as well as all of the support and maintenance costs that will recur annually after the first year. MSAG's OfficeGIS works as an add-on to ESRI's ArcEditor in order to provide County staff with a user-friendly means of editing and maintaing mapping data. In order for the County's current mapping data to be able to be used by the OfficeGIS software, it will need to be converted to a geodatabase format. The concurrent license of ArcEditor and the hardware for 2 PCs will allow 2 staff members the ability to edit and maintain the County's mapping data, while not simultaneously. The 2 ArcView single user licenses will allow those same 2 staff members the ability to view and use the mapping data, even if the other staff member is in the process of editing the data. The hardware and software associated with MSAG's TabletGIS will allow 1 staff member the ability to collect and edit mapping data (such as structure addresses, new or modified roads, fire hydrant locations, and other planimetric layers) in the field while using GPS technology and the state funded orthophotography as reference. Proposed Budget: OfficeGIS software license and training - \$10,085 Annual support after year 1 - \$6,995 TabletGIS software and training - \$4,115 Annual support after year 1 - \$1,195 Data conversion services (transferring current data to geodatabase format - \$12,580 ArcEditor concurrent use license - \$5,885 Annual maintenance after year 1 - \$1,545 2 ArcView single use maintenance activation fees - \$1,030 Annual maintenance after year 1 - \$721 Tablet PC hardware - \$4,851 2 Other PCs (hardware) - \$3,454 Totals: Initial software licenses - \$21,115 Annual maint. on software after year 1 - \$10,456 Data conversion services - \$12,580 PC Hardware - \$8,305 Requested grant funds - \$33,600 (80% of the initial software licenses, data conversion services, and PC hardware) Local Match - \$8,400 (20% of the initial software licenses, data conversion services, and PC hardware) Additional local funds needed annually for maintenance - \$10,456

Ongoing Expenses:

This project will result in annually recurring software support and maintenance costs, currently estimated at \$10,456 each year. The County proposes to cover these operating costs out of its general fund as an annually budgeted item. The E-911 Wireless Services Board currently provides Richmond County with approximately \$45,000 annually to assist with wireless E-911 related costs.

Evaluation:

Evaluation of the success of Richmond County's E-911 Mapping Maintenance Enhancement grant award will include demonstration that the proposed MSAG and ESRI software and the PC hardware has been purchased, installed, and is functioning as designed. In addition, the County will demonstrate that the necessary data conversion has been completed and that training has been provided for 2 staff members on use of the mapping maintenance system.

What are the short term, intermediate, and/or long-term outcomes desired for this project?:

The short term goal of this mapping maintenance enhancement is the ability for staff to be able to edit and maintain the data inhouse, resulting in increased accuracy of the data due to local knowledge and in-the-field data aquisition tools. A longer-term goal of the program enhancement is the ability to provide more frequent updates of the data to the Sheriff's Office for use in the Eagle Mapped ALI mapping system, resulting in better emergency response.

What measures will be used to determine outcomes?:

The newly released 2007 orthophotography base will be used to evaluate whether or not inhouse maintenance of the mapping data will result in an increase in the accuracy of the mapping data, as compared to the current outsourcing of the maintenance. The ability to provide data updates to the Sheriff's Office more frequently than once each quarter will determine if the mapping maintenance enhancement will provide more data currency for the dispatchers and first responders.

How will data be collected and how will evaluations be conducted?:

Data will be collected by the inhouse staff involved with the day-to-day mapping maintenance. The accuracy of new data acquired using the TabletGIS will be visually compared (using local knowledge), as it is overlaid on the state orthophotography, to data that has been collected through outsourcing of the maintenance since the 2002 orthophotography was flown.

How will data be presented?:

Evaluation data will be presented in a written report describing the effectiveness of the mapping maintenance enhancement as well as through screen shots of the data overlaid on the 2007 orthophotography, comparing that acquired through outsourcing and that acquired through inhouse maintenance.

Attachments

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| VITA ISP Grant1.jpg |
| VITA ISP Grant2.jpg |
| VITA ISP Grant3.jpg |

3. Tablet PC Hardware.

The hardware we recommend to run TabletGIS™ is the Xplore X104 C²V (AllVue Screen, 80 GB HD, 1 GB RAM) with integrated GPS and Bluetooth Radio from Xplore Technologies. It includes an external GPS and is ruggedly designed to better handle use in the field. We also recommend purchasing two (2) replacement breakaway plates which protect the GPS attachment in the field (the additional cost is \$19 and is included in pricing listed below).

COSTS:

1. OfficeGIS™ (Qty: 1)	
• Software license and training	\$10,085
• Support Options (choose ONE – see attached doc for descriptions):	
○ Standard	\$4,455
○ Premium	\$6,995
TabletGIS™ (Qty: 1)	
• Software license	\$3,320
• Training (2 individuals)	\$795
• Standard support	\$1,195
2. Data Conversion Services	\$12,580
3. Tablet PC Hardware + 2 replacement breakaway plates	\$4,851

Option 1: TOTAL w/ Standard Support = \$37,281

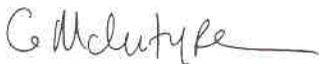
Option 2: TOTAL w/ Premium Support = \$39,821

Costs include all software and system training for two individuals at MSAG's training facility in Orange, VA. County-supplied ESRI ArcGIS 9.x software (ArcEditor or higher) will need to be used in conjunction with the OfficeGIS™ application. The annual total recurring support costs for one (1) license of OfficeGIS™ and one (1) license of TabletGIS™ (starting year 2) are \$5,650 for standard support and \$8,190 for premium support.

The two options for OfficeGIS™ support – Standard and Premium – are described in a separate attached document. All support options include bug fixes and technical problems with OfficeGIS™ and TabletGIS™ and is available via phone from 8:00 am to 5:00 pm, Monday through Friday. Hardware support issues must be taken up with the original equipment manufacturer.

Please feel free to contact me with any questions or if you require further details. I can be reached by phone at (540) 829-5669.

Sincerely,



Carrie McIntyre
Account Representative
carrie.mcintyre@msag.com



January 9, 2007

Chris Jett
Planning Director
Richmond County, Virginia
PO Box 1000
Warsaw, VA 22572

RE: Pricing for OfficeGIS™ / TabletGIS™ and Data Conversion Services

Dear Chris:

The following is a quote for the OfficeGIS™ and TabletGIS™ address maintenance and field collection solutions, as well as data conversion services and Tablet PC hardware.

1. OfficeGIS™ address maintenance & TabletGIS™ field collection tools.

OfficeGIS™ features include:

- Easy data import from ArcGIS™
- Assign new address points
- Integration of new road features
- Create clean topology for GIS
- Assign address ranges to new roads
- Maintain MSAG database
- Text manipulation tools
- Cartographic quality map labeling
- Data validation and integrity checking
- ALI / GIS data validation
- Simple to use interface
- Wizards for common, repeated steps
- Maintain E-911 data in ESRI format
- ESRI personal geodatabase format

TabletGIS™ features include:

- Seamlessly integrates digital map data and imagery with real-time GPS
- Layer Manager controls the behavior and appearance of map layers
- Technology automatically adjusts the map display to show your current location based on the GPS receiver
- Ability to link pictures from a digital camera
- Support of orthophotos and GIS vector data (ESRI Shapefile format)
- Field verification settings allow you to track address attributes associated with a layer
- Redlining functionality that enables you to make annotations and markups on the tablet to facilitate updates in the office

2. Data Conversion Services.

Data conversion includes services related to creating a Geodatabase for the Richmond County E911 data for use in OfficeGIS™. This includes a data migration plan to comply with VITA specifications for review and approval by Richmond County officials before implementation. A map series with the current 11" x 17" E911 map books will be created as part of this project so they can be reproduced in the future, as well as template maps of the E911 Roster Wall Map and the E911 Folded Map. Finally, MSAG will perform QA/QC checks on the dataset to make sure it will function properly within OfficeGIS™, TabletGIS™, and EAGLE Mapped ALI™.

**ESRI**

ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE, INC.
 ESRI, Inc.
 8615 Westwood Center Dr
 Vienna, VA 22182-2214
 Phone: 703-506-9515
 Fax: 703-506-9514

*To expedite your order, please attach a copy of
 this quotation to your purchase order.
 Quote is valid from: 12/12/2007 To: 03/11/2008*

Quotation # 20308609

Date: December 12, 2007
 Customer # 218209
 Contract # 2003MPA2064

COUNTY OF RICHMOND
 GIS DEPT
 101 COURT CIR
 WARSAW, VA 22572

ATTENTION: CHRIS JETT
 PHONE: 804-333-1100
 FAX:

Material	Qty	Description	Unit Price	Total
86353	1	ArcEditor Concurrent Use License	5,885.00	5,885.00
105598	1	ArcGIS 9.2 with USB Key Installation Package	0.00	0.00
97619	1	ArcView Single Use from 3.x Primary Maintenance Activation Fee	618.00	618.00
97620	1	ArcView Single Use from 3.x Secondary Maintenance Activation Fee	412.00	412.00
			Item Total:	6,915.00
			Subtotal:	6,915.00
			Estimated Shipping & Handling (2 Day Delivery) :	30.42
			Contract Pricing Adjust:	0.00
			Total (excludes applicable sales tax):	\$6,945.42

The prices quoted herein (Contract # VA030700-ESRI) are applicable if the purchase is made through the eVA system (<http://www.eva.state.va.us/>).

The following items are optional items listed for your convenience.
 These items are not included in the totals of this quotation.

Material	Qty	Description	Unit Price	Total
86497	1	ArcEditor Concurrent Use Primary Maintenance	1,545.00	1,545.00
87192	1	ArcView Single Use Primary Maintenance	412.00	412.00
87193	1	ArcView Single Use Secondary Maintenance	309.00	309.00

Quoted By: Aaron Armstrong, x8072
 Email: aarmstrong@esri.com

Account Manager: Robert Rike
 Email: rrike@esri.com

Acceptance of this quotation is limited to the ESRI License Agreement and the Quotation Terms and Conditions
 This Quotation is made in confidence for your review. It may not be disclosed to third parties, except as required by law.

If sending remittance, please address to: ESRI, File No. 54630, Los Angeles, Ca 90074-4630