FY18

PSAP GRANT PROGRAM APPLICATION

VIRGINIA INFORMATION

TECHNOLOGIES AGENCY

Integrated Services Division

FY18 PSAP GRANT PROGRAM APPLICATION

HOW TO APPLY/DEADLINE

The grant application is available and accessible from VITA ISP's website (http://www.vita.virginia.gov/isp/default.aspx?id=8578).   Upon completion of the application, it is to be submitted to the electronic mailbox for grant applications - psapgrants@vita.virginia.gov. Any supporting documentation must also be submitted along with the application when making your grant application submission.

After the close of the grant application cycle, a Grant ID and email receipt notification will be sent to the e-mail address listed on the application received.

All funding requests must be submitted using the grant application. Technical assistance is available from VITA's Public Safety Communications (PSC) staff throughout the grant process. The FY18 PSAP Grant Application Cycle starts July 1, 2016 and concludes on September 30, 2016 at 5:00 pm.

ALL APPLICABLE SECTIONS MUST BE COMPLETED IN ITS ENTIRETY OR THE APPLICATION WILL BE CONSIDERED INCOMPLETE AND NOT ACCEPTED FOR CONSIDERATION.

FY18 PSAP GRANT APPLICATION

PROJECT TITLE

Roanoke Valley NG-9-1-1 Shared Services Project

GRANT APPLICANT PROFILE/PROJECT CONTACT

PSAP/HOST PSAP NAME: County of Roanoke
CONTACT TITLE: GIS Manager
CONTACT FIRST NAME: David
CONTACT LAST NAME: Wray
ADDRESS 1: 5925 Cove Rd
ADDRESS 2: *Click here to enter text*
CITY: Roanoke
ZIP CODE: 24019
CONTACT EMAIL: dwray@roanokecountyva.gov
CONTACT PHONE NUMBER: 540-777-8564
CONTACT MOBILE NUMBER: 540-588-2861
CONTACT FAX NUMBER: 540-777-9772
REGIONAL COORDINATOR: Melissa Parsons

HOST PSAP AND PARTICIPATING PSAPS/LOCALITIES

County of Roanoke (Host)	
City of Roanoke	
City of Salem	

GRANT TYPE

☐ Individual PSAP   ☒ Shared Services

TIER

☐ Out of Service   ☐ Non-Vendor Supported*

☐ Technically Outdated*   ☐ Strengthen

☒ Not Applicable

If technically outdated or non-vendor supported, application MUST include age and/or version of hardware/software.

VERSION: # YEARS of HARDWARE/SOFTWARE:

PRIORITY/PROJECT FOCUS   NG 9-1-1 GIS

FINANCIAL DATA

Amount Requested: $ 485,490.59

Total Project Cost: $ 485,490.59

PROJECT DESCRIPTION

Provide a detailed description of the project for which funding is being sought, including the impact on operational services and consequences of not receiving funding; the relationship to local strategic and capital improvement plans; and sustainability:

Click here to enter text

Geographic Information Systems (GIS) is vital to the success of NG 9-1-1. A dynamic and spatially correct homogenous NG 9-1-1 dataset is necessary for the entire Roanoke Valley area. During an initial phase of the proposed effort, the same collaborative team is developing the technical, logistical, procedural, and initial data framework for the regional dataset. This framework establishes a foundational operability, but budget constraints limited the depths to which the resulting dataset is homogeneous. The proposed second phase will leverage the structures currently being implemented to expand both capability and quality.

Central to this request is the injection of business logic that will add intelligence to the consolidation and publication routines. The business logic will focus on detecting and mitigating deviations between the source data from each locality, with an emphasis on boundary areas that require data stitching. With more seamless integration, the data will be more operational and capable of supporting increased functionality. Among the increased functional support is the concept of cross-jurisdictional routing. Additionally, as the regional PSAP coordination program advances, additional demands will dictate increased logging, analytics, reporting and visibility that will be established under the proposed grant request.

Currently, we received partial funding for this shared project and it is not likely to be successfully completed without additional funding. Each partner will use their current IT infrastructure and personnel to support this project. GIS is vital to the success of NG 9-1-1, therefore we are requesting the Commonwealth of Virginia to fund this worthwhile endeavor.

PROJECT GOAL

Describe how this project addresses locally identified need(s) and supports the Virginia 9-1-1 Comprehensive Plan:

The goal of this project is to advance the implementation of a Real-Time NG-9-1-1 valid seamless dataset for City of Roanoke, County of Roanoke and City of Salem PSAP. The data encompasses Road Centerlines, Address Building Points and/or Polygons, Emergency Service Zones, PSAP Boundaries, Authoritative Boundaries and County / Municipal Boundaries. This project will increase situational awareness and mutual aid capability through enhanced information consolidation and sharing, leverage GIS technology and data to better locate callers and improve response capabilities, support PSAP readiness for future technology and enhance the current efficiency of each PSAP.

PROJECT OBJECTIVES

SHARED SERVICES (if applicable)

Describe the relationship of the project to the participating PSAPs:

The project will use each PSAPs authoritative data to create an enhanced Real-Time NG911 valid seamless dataset. Road Centerlines, Address Building Points and/or Polygons, Emergency Service Zones, PSAP Boundaries, Authoritative Boundaries and County / Municipal Boundaries. The enhanced seamless dataset will be available for each PSAP for potential integration or consumption in both CAD and GIS production environments.

Describe the intended collaborative efforts and resource sharing opportunities:

The project will collaborate with County of Roanoke, City of Roanoke and the City of Salem. The following tasks will need to be completed.

1) Each locality will create and maintain a near Real-time Rest data access point (Rest endpoint, FTP publication, etc.).
2) Each dataset will be merged together to create one enhanced dataset for the Roanoke Valley Area.
3) Collaboratively defined integration logic will be automated to construct a consolidated data representation that can support regional workflows
4) The resulting dataset will be shared via a Rest endpoint published for the Roanoke Valley that includes Road Centerlines, Address Building Points and/or Polygons, Emergency Service Zones, PSAP Boundaries, Authoritative Boundaries and County / Municipal Boundaries and a newly added (part of the proposed grant) parcel polygons.
5) The dataset, as well as other regional PSAP program information (status or publication, documentation, etc.) will be centrally accessible through a centralized web site, including the ability to interact with the dataset via a web-based map.
6) The consolidated data will be distributed back to the participating localities via Rest Endpoint or other data push to accommodate consumption by each locality's PSAP emergency Services mapping applications, as desired. The data will either be Real-Time or Scheduled/On-Demand.

Describe the objectives that will support the goals identified above:

Description:

Location data has always been central to 9-1-1 to help direct response teams to the appropriate destination. As the same technological evolutions that inspired NG 9-1-1 can also be adopted to foster increased quality, reliability, and consistency in the underlying location data, this is the case here. Through the PSAP integration project is underway for Roanoke County, the City of Roanoke and the City of Salem the initial building blocks have been put in place, the three participating localities have demonstrated the vison for a collaborative approach to a common PSAP dataset by taking advantage of advances in location technology continue to offer opportunities to streamline regional data and access to the data. The current grant request expands the reliability and capability/functionality with increased business intelligence, robust validation and integration of additional core data.

Through the initial phase, participants are leveraging GIS to compile, manage and host web based map services that represent the most up-to-date versions of the datasets. By Continuing this project, the communities will allow these communities to implement routable networks, which increases efficiencies and improved services for the citizens. Building off of the tools previously implemented, the collaborative team is establishing a process that is increasingly repeatable, thereby allowing for additional communities to integrate into the PSAP and expanding the value of the effort.

The PSAP collaborative is looking to move beyond base centralization by adding intelligence into the process that will help construct a functionally seamless data. The operational source data will remain locally managed by each municipality, which will always result in discrepancies owing to varied data models (schemas) and diverse maintenance processes. The discrepancies are revealed when datasets are merged (road centerlines that do not connect at municipal boundaries, conflicts in spatial coincidence, etc.), which can inhibit true functional adoption.

This proposal for grant funds would be leveraged to help accomplish the following:
- Add parcel boundaries into the consolidated dataset.
- Inject business logic and processing intelligence into the consolidation/publication process.
  - Collaborative topological evaluation
  - Automated data stitching and geometry adjustments driven by defined hierarchical logic and priority
- Expansion of collaborative data hosting to accommodate distribution (adds redundancy).
- Routable network data review & design
- Oversight and strategic guidance on routable dataset
- Establish a centralized (secured) access point for the PSAP collaborative
  - Status and history communications
  - Logging & Reporting
  - Interactive interface to the PSAP data
- Infrastructure review and design for fault tolerance and high availability.
- Knowledge transfer & training

Implementation Strategy:

The implementation strategy underlying the proposed concept is a multi-faceted, highly collaborative process that spans five key phases:
- *Planning & Analysis*: This phase includes both preparatory activities (project plan development, coordination, facilitation), project initiation (kick-off meetings, communications plans) and ongoing controls (working sessions, status meetings and progress reporting).
- *Design*: The Design phase is intended to identify and document the detailed analytical or developmental requirements of the project through a highly collaborative process. The design will span technical coordination, data reviews, functional requirements documentation, business logic/intelligence finalization, and more.
- *Development*: Development is where the core work will be undertaken and where design is translated into operational solutions. Within this phase, the team will encode the business intelligence, enhance the publication scripts, develop the tools/applications, acquire and transform new data (parcels), establish logging and reporting, publish & distribute the data, and craft system and administrative documentation.
- *Testing & Acceptance*: With any solution, testing is a requisite step, but a multi-agency solution requires additional effort to ensure that all aspects of the solution are reviewed both together and independently. Within this phase, stakeholders from all groups will have the opportunity to participate in a review and feedback process that will, in turn, drive iterative refinements.
- *Implementation*: The final phase of core activities is comprised of deploying all infrastructure, data, scripts, services, and applications to the production environment. During implementation, the team will provide onsite knowledge transfer and deliver final documentation to support ongoing maintenance of the system, while simultaneously coordinating system release for day-to-day access.

The following table outlines the work plan in a structure consistent with the phases described above:

Planning & Analysis
Kick-Off, Status and Working/Review Meetings, Progress Reporting, and Coordination

Design
Requirements Gathering & Documentation
Parcel Data Acquisition, Review & Crosswalks
Schema Revisions, Review Meetings & Process Documentation
System Infrastructure Requirements & Design

Development
Parcel Schema Implementation & ETL Development
Enhance Data Automation (Additional Parcel Layer, Business Intelligence, Analysis/Anomaly Detection, Logging/Reporting)
Develop Centralized Access Application (Web Based)
Facilitate Creation of Routing Capability
User & Administration Documentation

Testing & QA
Configure & Manage Feedback Tracking Solution (JIRA)
Onsite Coordination, Review, Training
Data/Process Review & Validation
Acceptance Testing Support
Data/Script/Application Revisions & Refinement
Testing Coordination & Reporting Meetings

Implementation
Knowledge Transfer & Documentation Delivery
Production Script/Service/App Deployment
Release Coordination
Post Implementation Support

IMPLEMENTATION PLAN
SHARED SERVICES & INDIVIDUAL PSAP APPLICATIONS:

For each applicable phase of the project, indicate the planned completion date.

PROJECT PHASE	PLANNED COMPLETION DATE
INITIATION – Project concept is documented, local board or governing authority approval or endorsement is received, PSAP grant application is filed, local budgets are obtained, appropriated grant funds are approved, and budgetary estimates are obtained.	**9 / 30 / 17**
DESIGN/PLANNING - Requirements are documented, components to be purchased are identified, and general design is documented.	**10/ 30 / 17**
ACQUISITION - RFP (or other bid related processes) are drafted, proposals are evaluated, contract is signed, purchase orders are issued, and quotes are obtained.	**10 / 30 / 17**
IMPLEMENTATION - Purchased components are delivered and installed and training is performed	**1 / 1 / 17**
TESTING/COMPLETION - Performance of system/solution is validated and system/solution goes "live"	**4 / 1 / 17**

BUDGET AND BUDGET NARRATIVE

List the planned expenditures to be made with grant funds. Briefly explain the reason for each requested budget item and provide the basis for its cost. In addition, if contingency cost has been added, please identify the amount.

Implementation
Knowledge Transfer & Documentation Delivery
Production Script/Service/App Deployment
Release Coordination
Post Implementation Support
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Please see attached quote from GIS Inc. vendor for professional services. Also, below is each requested budget item and the basis for its cost.

Item	Cost	Basis
Planning and Analysis (Prof. Services)	$54,089.00	Project Management, Initation, Controls, Coordination &Communication
Design	$64, 444.00	Requriements Gathering, Parcel Data acquisition, Crosswalk & Schema Design System Infrastructure Design, Business Intelligence & Logic
Development	$155,450.00	Business Intelligecne Implementation, Parcel Schema ETL Development, Enhance Data Automoation, Logging/Reporting, Centralized Access Application, Routing Capabililty and User/Admin Documentation, Data Publication
Application Server (Prod. & Dev.)	$13,485.08	Data Automation and Scripting
MS SQL Database Server	$22,387.00	Database Server and Storage
Contracted Labor	$26,600.00	Data validation and coordination
Technology Equipment	$2,500.00	Precision Workstation and monitor
Small Equipment & Supplies	$1,500.00	Phone and office equipment
Testing & QA	$49,668.00	Data/Proceses Review & Validation/Acceptance Testing, Data/Script/Applications Revisions & Refinements, Testing Coordination, Reporting Meeting, Onsite Review
Implementation	$51, 232.00	Knowledge Transfer (Onsite), Finalize Documentation, Production Script/Service/Application Deployment, Release Coordination, Post Implemenation Support
Contingency(10 percent)	$44,135.50	
Total	$485,490.58	

EVALUATION

How will the project as identified in the project description be evaluated and measured for achievement and success:

This project will use the following measurements:

- PSAPs have adopted the mutually agreed upon processes for data sharing.
- Establish a hosting environment that meets the service level needs of the participating PSAPs.
- Maintain a viable and consistent regional dataset that can support PSAP operations.
- Satisfy the collaboratively defined business and technical intelligence for the publication scripts.
- The publication process brings municipal data sources together into a functionally seamless dataset.
- Cross-jurisdictional routing is available to each community.
- Demonstrate a fully operational, regionalized dataset to support that participating PSAPs.
- PSAPs will have access to a centralized website that broadcasts status of the regional dataset that also facilitates interactive access to the data.
- Transfer knowledge from the execution team to the administration team and user base.

CONSOLIDATION (Primary or Secondary) - (complete only if applicable)

How would a consolidation take place and provide improved service:

Click here to enter text

How should it be organized and staffed:

Click here to enter text

What services should it perform:

Click here to enter text

How should policies be made and changed:

Click here to enter text

CONSOLIDATION (Primary or Secondary) - (complete only if applicable) – con't

How should it be funded:

Click here to enter text

What communication changes or improvements should be made in order to better support operations:

Click here to enter text

GRANT PROCESSING REQUEST FORM
Department of Finance

DATE : September 22, 2016	

DEPARTMENT:
Communications & Information Technology

GRANT PROGRAM:
Public Safety Answering Point (PSAP)

GRANTING AGENCY: Virginia Information Technologies Agency	**AGENCY CONTACT:** Melissa Parsons	**AGENCY PHONE NO:** 804-393-0203

IF FEDERAL GRANT... CFDA #	**EXAMPLE OF NUMBER** Dept: Department of Education (Agency No.) 84.XXX (Grant Program No.)

PROGRAM TITLE:
PSAP Grant Program

FUNDING REQUEST:

FEDERAL	STATE	LOCAL MATCH	OTHER	TOTAL REQUEST
$0	$463,422.83	$0	$0	$463,422.83

IF LOCAL MATCH IS REQUIRED, ARE FUNDS AVAILABLE IN DEPARTMENT BUDGET? Y/N

ACCOUNT TO WHICH THE MATCH WILL BE CODED:

INDIRECT COSTS? Y/N N	**AMOUNT**

REIMBURSEMENT GRANT? Y/N   Y

FINANCIAL & PROGRESS REPORTS PREPARED BY: Department Finance	**REQUEST FOR FUNDS SUBMITTED BY:** Department Finance

PROJECT DIRECTOR:

PHONE:	**FAX:**	**EMAIL:**

DEPT. DIRECTOR OR THEIR DESIGNEE APPROVING SUBMISSON: *William F. Hunter*	SIGNATURE: *William F Hunter*	DATE: *9/22/16*
REVIEWED & APPROVED BY FINANCE: *Rebecca Owens*	SIGNATURE: *Rebecca Owens*	DATE: *9/28/16*
REVIEWED & APPROVED BY COUNTY ADMINISTRATION: *Thomas C. Gates*	SIGNATURE:	DATE: *9/25/16*

Letter of Intent

The PSAPs listed below hereby wish to participate in the multi-jurisdictional PSAP Shared Services Grant. County of Roanoke will be the "host" for this grant and will be the fiscal agent.

A maximum funding amount of $175,000 per PSAP is allowed for all Shared Services Projects. Each PSAP below has agreed to participate in a multi-jurisdictional application for a Shared Services project – <u>Roanoke Valley NG-9-1-1 Shared Services Project</u>

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The undersigned authorize VITA to transfer the Shared Services Grant funds, if approved, to the identified fiscal agent upon draw down request for the FY17 Shared Services Program grant.

Jurisdiction	Printed Name	Signature	Date	Amount
City of Roanoke	Sonya Roman	*Sonya Roman*	9-26-16	$154,474.277 of $463,422,83
City of Salem	Todd Clayton	*Todd H Clayton*	9-27-16	$154,474.277 of $463,422,83
County of Roanoke	Aleta Coleman	*Aleta Coleman*	09-26-16	$154,474.277 of $463,422.83