PSAP Grant Program Grant Ranker

View Application--33--Geometry Update and Verification

Grant Period: 2010

Tier: Replacement of technically outdated wireless E-911 equipment or service to enable primary PSAP to maintain current service levels to the general public (**TECHNICALLY OUTDATED**)
Grant Program: Continuity and Consolidation **Grant Type:** Individual PSAP
Priority: GIS: high priority (refer to GIS-related Grant Request Prioritization Matrix for a description of GIS projects that would have a high funding priority) (**GIS HIGH PRIORITY**)

Primary PSAP Applicants: Highland County

Jurisdictions Served: Highland, County of

Project Director:
Roberta Lambert
County Administrator
P.O. Box 130 165 W. Main St Monterey, VA 24465
540-468-2347 (phone)
(fax)
hcboard@htcnet.org

Project Description:

Total Project Cost $120,000.00
Amount Requested: $120,000.00

Statement of Need:
Relationship to the Current Funding Priorities This grant request is related to following GIS high priority needs as stated the Grant Guidelines for 2010. Data – Data manipulation of: Road centerlines and address building points Evidence of Financial Need Successful accomplishment of this project will improve our ability to provide current and reliable information to the PSAP from the GIS. We do not have the financial or technical resources to successfully develop and implement this project. We intend to hire a consultant to perform this work. Impact on Operational Services Road and structure point updates are done using the best available source information which is typically subdivision or road plans, and citizen information. As-built alignment changes can be most effectively determined through comparing GIS/E-911 road data with new imagery. Structure points are placed often without having the buildings available on imagery and therefore placement is unverified. These roads and structure points can then be adjusted to insure that location information can be accurately provided by dispatchers to emergency responders. Completion of this project would allow the County to accurately reflect the location of all roads, structures, and addressing to enable the PSAP to maintain their service levels to all citizens and businesses. Consequences of not receiving funding The County has some available funding for road and structure point maintenance, but lacks the in-house time and expertise to perform this project. If this funding is not received, the County will not have a GIS or E-911 with accurate road locations. Inclusion of Project in PSAP Planning This project is

part of our long-term commitment to improve local response capability through establishment of a common base data set using the VBMP imagery and roads.

Comprehensive Project Description:

Project Description The County plans to update its GIS and E-911 data to the 2007 orthoimagery in its continuing effort to provide the highest quality emergency services to County citizens. The GIS geometry adjustment and verification project will be completed in six(6) phases: Verifying and Loading Data, Pilot Area Creation, Delivery and Acceptance, Aligning Centerline Data to the Orthoimagery, a Quality Control phase to review centerline adjustments and correct topology, a Verification Phase, and Final Delivery and Data Prep. The anticipated duration of the parcel project will be approximately six months from kick off to completion. Implementation Strategy and Work plan Phase 1: Receiving, Verifying and Loading Data This phase of the project will include receiving and verifying the centerline data and 2006/2007 orthoimagery. Orthoimagery and centerline data will be loaded into an Enterprise geodatabase platform for viewing and editing environment. The anticipated duration of Phase 1 is one week. Phase 2: Pilot Area Creation, Delivery and Acceptance The phase will involve establishing a pilot area of within the County for the initial centerline adjustment. Once this pilot delivery is complete, the County will have the opportunity to review and comment on the data. Once pilot area data is agreed upon, work will continue on Phase 3. The anticipated duration of this phase is three weeks. Phase 3: Aligning Geometry to Orthoimagery Aligning centerline data to the orthoimagery will take place in the ArcSDE environment, allowing Specialists ease of use and continuity throughout the County. All centerline data will be visually inspected by Specialists with immediate focus on areas of development since 2002. Any discrepancies or adjustments that need County involvement will also be dealt with in this phase. The anticipated duration of this phase is eight weeks. Phase 4: Quality Control Phase 4 involves quality control of the adjusted centerlines. A QA/QC Specialist will inspect all centerline data for errors or improvements of the performed work. Topology checks of the centerline geometry will also be performed to rule out overlapping geometry, duplication, dangle errors, multi-part segments, and other geometric errors that hinder connectivity. These issues will be addressed to ensure a quality product. The anticipated duration of this phase is two weeks. Phase 5: Verification Phase 5 is initiated once data has been updated and QA/QC'd to 2007 imagery. This data will be made graphically available to the public to verify their addresses and structure/access point locations. Due to the County's difficult terrain and lack of staff availability to visit structures using GPS, it is often difficult to correctly place geometry in the best location even with imagery. Through public service announcements, citizens will be informed of a website where they will be able to view their own structures and driveways. In instances where their structures and driveways are not properly located, they will be given instructions to contact the County to inform them of their correct locations. The anticipated duration of this phase is eight weeks. Phase 6: Final Delivery and Data Prep Phase 6 involves the creation of a new centerline export file matching the requirements of the CAD mapping system in use by the County. The anticipated duration of this phase is one week. Goals and Objectives Goal The goal of this project is improve the spatial accuracy of roads and structures in the GIS and PSAP mapping and CAD systems. We will focus our efforts on identifying and updating road and address points added since 2000 when the original data set was created. Project Objectives 1. Determine the structures that need updating based on the new imagery. 2. Move the features to more closely overlay the features on the 2007 imagery 3. Load the updated features into the PSAP system. Project Timeline (days from grant award) • 15 - Phase 1: Receiving, Verifying and Loading Data • 30 - Phase 2: Pilot Area Creation, Delivery and Acceptance • 60 - Phase 3: Aligning Centerline Data to Orthoimagery • 120 - Phase 4: Quality control of the adjusted centerlines • 140 – Phase 5: Verification • 200 - Phase 6: Creation of a new centerline and structure/access point export files matching the requirements of the CAD mapping system in use by the County. Project Sustainability Once complete, the results of this project will be incorporated into the standard data work processes of the PSAP and GIS.

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

How will Equipment purchased support future technologies for PSAP readiness? The products of this project will provide a more accurate model of the roadways and associated addressing for use in the PSAP mapping, CAD, and field operations.

Budget and Budget Narrative:

Proposed Project Fee Phase Tasks Fee 1 Receiving, Verifying, and Loading Data $2,100.00 2 Pilot Area Creation, Delivery and Acceptance $7,900.00 3 Aligning Geometry to Imagery $42,400.00 4 Quality Control $19,300.00 5 Verification $46,000.00 6 Final Delivery $2,300.00 Total Fee $120,000.00

Evaluation:

Evaluation data will be collected throughout the project as specific milestones are achieved. The data sources will include regular project status reports, milestone testing and acceptance documents, and final project acceptance documents. Project milestones and status reports will follow our specific tasks and phases: 1. Receiving, Verifying, and Loading Data 2. Pilot Area Creation, Delivery and Acceptance 3. Aligning Geometry to Imagery 4. Quality Control 5. Verification 6. Final Delivery As part of the overall project, a Project Management Document shall be developed that incorporates each stage of the project, and provides an audit trail associated with final outcomes, final project metrics, and achievement of specific project deliverables.

Attachments