

# SUMNER COUNTY, TN UPDATES THEIR GIS MAP DATA TO PREPARE FOR A TRANSITION TO NEXT GENERATION 9-1-1

"Sumner County realized the critical role that GIS data plays in today's E9-1-1 system and the even more crucial role that accurate GIS data plays in Next Generation 9-1-1 (NG9-1-1). With NG9-1-1 implementation just around the corner and the Tennessee State Standards for NG9-1-1 GIS data already in place, Sumner County realized that significant improvements needed to be made to our existing E9-1-1 GIS data. With the completion of this extensive project Sumner County now has the basis for meeting both TIPS compliancy and for passing state GIS audits for NG9-1-1 compliancy. While some work still remains, the project completed by GeoComm Inc. put Sumner County far ahead of the game. This project allows us to easily proceed in meeting state standards. GeoComm's staff completed the work in a timely and professional manor even taking on several additional tasks which we had not identified before the project began. Our thanks to GeoComm for partnering with Sumner County in this effort and for delivering high quality GIS data."

~ Tonya Jetton, Assistant 911 Director, Sumner County Emergency Communications District

As agencies across the country begin their transition to Next Generation 9-1-1 (NG9-1-1), it has become apparent that accurate Geographic Information System (GIS) is a necessity. NG9-1-1 relies on accurate GIS map data to validate addresses and to route 9-1-1 calls to the proper Public Safety Answering Point (PSAP). In Tennessee, the entire state has begun taking the necessary steps to ensure the quality of their GIS map data will meet the needs of NG9-1-1. The Tennessee Information for Public Safety (TIPS) standard lays the foundation by requiring each Emergency Communication District (ECD) in Tennessee to submit their GIS data to the state by June 30, 2012. In addition, the State of Tennessee is requiring that all ECDs submit a plan by January 1, 2013 indicating they are working to improve their GIS data to meet National Emergency Number Association (NENA) Next Generation 9-1-1 GIS guidelines. This plan will outline the GIS layers each ECD needs in a NG9-1-1 system and the GIS map data table structure. Providing this plan demonstrates the ECD is working on improving their GIS data for a NG9-1-1 system. Sumner County decided to hire GeoComm to review the GIS map data and offer suggestions for improvement.

To start, the GIS map data must be accurate enough to be relied on for call routing, a function of the Master Street Address Guide (MSAG) in a current 9-1-1 system. GeoComm analyzed the synchronization between the GIS, Automatic Location Identification (ALI) database, and MSAG which determined that the GIS map data used by Sumner County's ECD was not ready to replace the MSAG. Therefore the county needed to develop processes for maintaining the data and synchronization once an updated data set was established.

Through the synchronization assessment, GeoComm determined there were issues with many different layers of the map data. To begin, there were several issues identified in the Road Centerline Layer and the Emergency Services Number (ESN) layer. The Road Centerline Layer had missing fields and attributes that are required by NENA for NG9-1-1. These missing fields and attributes were updated, missing road names were added using Sumner County resources, and uniform road naming was ensured throughout the Road Centerline Layer, the MSAG, and ALI database. The data in the ESN layer was referencing the Computer Aided Dispatch (CAD) databases and was not properly tied to the MSAG. This layer had to be completely redesigned so that it was valid with the MSAG. Sumner County also provided the resources for GeoComm to develop additional GIS map data layers required for NG9-1-1. Those layers included the PSAP Boundary Layer; Fire, Medical, and Law Service Boundary Layers; and a Postal Boundary Layer.

Now that the GIS map data layers are improved, Sumner County ECD is closer to meeting NENA NG9-1-1 standards. Plus, there are processes in place to ensure the data is updated and will continue to be updated to meet those standards as updates are needed or available. These GIS map data layer changes made Sumner County's ECD compliant with the Tennessee TIPS standard and also the January 1, 2013 NG9-1-1 submission plan deadline for GIS data. These GIS changes and Sumner County's recent installation of a new state of the art software/hardware system, make Sumner County ready to plug into the State of Tennessee NG9-1-1 system.