

# LUZERNE COUNTY AGENCIES WORK TOGETHER TO UPDATE AND DEVELOP ACCURATE, COUNTYWIDE GIS DATA SET FOR PUBLIC SAFETY

"Our countywide addressing and GIS project was a success due to the cross-agency collaboration in partnership with GeoComm. GeoComm met our demands for an intense, fast turnaround and continues to provide excellent service in partnership with Luzerne County for maintaining our GIS data going forward. The staff at GeoComm is highly knowledgeable and wonderful to work with."

~ Fred Rosencrans, Data Manager and Technical Support Supervisor, Luzerne County 9-1-1



Nestled in The Coal Region of northeastern Pennsylvania, Luzerne County is home to over 300,000 residents across many communities who know the value of working together. The county is a mix of urban and rural and is part of the Scranton-Wilkes-Barre metro area. From one 9-1-1 call center, over 240 public safety agencies are dispatched across a county that is 907 square miles. The 9-1-1 call center averages 1,200 calls per day or over 430,000 calls per year. Luzerne County, as part of the 9-1-1 Standardized Address Act, committed to improving the county's public safety response times by improving their countywide addressing. The updated addressing and more accurate GIS data will be used to display caller location in their tactical 9-1-1 caller mapping, identify closest available units in AVL, and generate routes and driving directions for their first responders. Further, it lays a foundation for beginning to meet Next Generation 9-1-1 (NG9-1-1) GIS standards.

This project had two specific goals. They were:

1. Field verify and collect GPS points at structures in 12 of Luzerne County's municipalities where addressing had not been completed and field verify the addresses in the remaining 67 municipalities over an intense six month time frame. The data collection involved identifying the GPS location of individual structures and gathering the current address information for each location.
2. Examine the current addressing system and work with Luzerne County and the municipalities to determine a possible addressing system that would best serve the public safety needs of the citizens.

To begin, GeoComm dedicated nine on-site personnel to conduct fieldwork in the 12 municipalities where addressing had not been completed. While some of these municipalities did have almost 98 percent of their locatable structures addressed, other municipalities had not assigned addresses. The varying degrees of completion of the address conversion projects only added to the complexity of the overall project and increased the need for cooperation from all participating agencies. GPS points were also collected for the addressed structures in the remaining 64 municipalities. Once the GPS data was processed, an Address Point Layer

was developed. The address point layer uses discrete coordinates to represent the geographic location of sites and structures within each jurisdiction. The points in an Address Point Layer typically contain detailed information about each location such as the physical address, resident or business name, phone number, parcel information, special notes, or hyperlinks to floor plans.

Once the field collection data was processed and the data from all of 76 municipalities was verified, examining the current addressing systems began. GeoComm and Luzerne County worked with 12 of the municipalities to develop an effective addressing scheme that was customized to the unique needs of each municipality. The addressing schemes aided in converting residents addresses from rural route addressing to locatable physical addresses, it also included adjusting addresses when required to fit the new addressing scheme. This newly developed addressing scheme serves as a solid foundation for assigning future addresses, for maintaining the data layers during future growth, and aid in improving public safety response.

In addition, updates were made to the Geodatabase Design and a Base Map was developed. The address ranges based on the field verified address points and municipal addressing schemes were applied to the Road Centerline layer. Any road name discrepancies between the field verification, address schemes, and Master Street Address Guide (MSAG) were sent to the municipalities for resolution. The final Road Centerline layer was used to create an updated MSAG file. The GIS data model was also adjusted to meet Luzerne County's new Computer Aided Dispatch (CAD) specifications. In addition, several GIS data layers were updated to conform to the current NENA GIS Data Format standards.

As a result of this project, Luzerne County achieved a high synchronization rate between the new GIS data, MSAG, and ALI database. The maintenance program is helping the county to retain those levels in the future. Lastly, GeoComm worked with Luzerne County staff to implement new GIS maintenance workflows. These new workflows consisted of a concise maintenance program outlining individual responsibilities, ensuring that new procedures and GIS data layers remained accurate moving forward. Luzerne County purchased GeoLynx DMS from GeoComm to help them maintain their newly updated GIS data. By installing GeoLynx DMS, a tool bar within Esri ArcGIS for Desktop, Luzerne County is able to efficiently update their existing GIS layers, enhance their data maintenance with a higher level of accuracy, and decrease the time required to maintain their GIS data through structured and automated QA/QC procedures. Moving forward, Luzerne County has requested GeoComm periodically review their GIS data and provide them with regular report cards. These GIS data report cards will record the synchronization between the map data, MSAG, and 9-1-1 ALI database; show how prepared the data is for a NG9-1-1 transition; and assist with evaluating the ongoing GIS maintenance.

Luzerne County, Pennsylvania now has a quality countywide addressing system in place to aid in improving their public safety communications and interoperability. The transformation of their data is an excellent example of how collaboration between all vested parties and working together for one common goal can result in success.