LAWRENCEBURG WATER SYSTEM MAPPING/ANALYSIS

Location: Lawrenceburg, KY

Client: City of Lawrenceburg
Mr. Larry Hazlett, Public Works Director
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Date: 2002

CDP Engineers, Inc. recently completed a water distribution system mapping project for the City of Lawrenceburg, Kentucky. The project involved development of a geographic information system (GIS), computer-based map of the entire water distribution system including over 150 miles of water lines, 462 valves, 359 fire hydrants, 67 blow-off valves, seven water storage tanks, and four booster pump stations. GIS is the computer-based information management tool that allows the water distribution system mapping to be linked to any other geo-referenced scaled image. Therefore, the water distribution system maps can be layered with USGS quadrangle maps, digital-ortho photographs, state highway maps, property valuation maps, and many other computer based maps to produce a wide variety of useful formats.

The various components of the water distribution system were located using differential global positioning system (GPS) equipment that provided horizontal accuracy within 3 feet. Field personnel obtained over 200 data points per day by using a golf cart for transporting equipment and personnel. This method of transportation reduced time required between points, avoided disruption of traffic, and minimized damage to landscape.

GeoSync (an ArcInfo-compatible GIS package) was the software selected for gathering, viewing, and analyzing the GIS data collected on the water distribution system. The software is also being used to manage the various map layers and provide update capability. Two copies of GeoSync software and software training were provided to the City of Lawrenceburg as part of this project.

Upon completion of the mapping project, the water distribution system mapping data will be downloaded into a PIPE2000 (KYPIPE) hydraulic model. The hydraulic computer model will be used to simulate actual pressure and flow conditions within the existing water distribution system and provide for the evaluation of future system requirements. The City will be provided a copy of the hydraulic model and associated software.

Water Distribution System Mapping and Hydraulic Analysis (short version)

- Lawrenceburg Distribution System Mapping and Hydraulic Analysis, Lawrenceburg, KY - This project includes field location of water system components using global positioning system (GPS) equipment, preparation of a water system geographic information system (GIS), downloaded into a PIPE2000 hydraulic model, and evaluation of system requirements to improve the performance of the City's water distribution system.