

CASE STUDY

City of Leominster Department of Public Works City-wide GIS Base Mapping

Leominster's Department of Public Works has a long-term goal of developing a city-wide Geographic Information System (GIS) to support department operations. Recognizing that Leominster will phase this effort over time, the DPW decided to initiate their efforts with a comprehensive base mapping project. The base mapping project consisted of a City flyover from which planimetrics were developed and integrated into the GIS.



Aerial photography of Leominster downtown area.

PROJECT GOALS ACCOMPLISHED

The GIS PROJECT was initiated by DEVELOPING COMPREHENSIVE and ACCURATE city-wide BASEMAPPING.

A variety of PLANIMETRIC FEATURES were DEVELOPED from the AERIAL PHOTOGRAPHY to be used for PROGRAM MANAGEMENT ACTIVITIES.

The GIS was DEVELOPED using the latest ESRI SOFTWARE and TECHNOLOGIES.

City-wide flyover provides accurate basemap

The city-wide flyover was completed in April 2004 using color photography. Survey points were established prior to the flight and were used for aerotriangulation. Two different scales were established for subsequent work products; the urban areas were mapped at a scale of 1" = 40", while the rural areas were mapped at a scale of 1" = 100'.

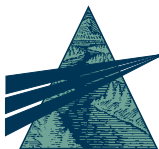
Planimetric mapping was completed to develop a variety of features

Planimetric features were obtained from the aerial photography to add as layers in the GIS. Comprehensive planimetric features were selected by the City and included such items

as building footprints, streets, storm and sewer infrastructure, hydrography, and two foot contours to name a few. The idea behind the extensive list included in planimetric development was to serve as a solid base which could be updated over time as necessary.

GIS development and integration used the latest technologies

Orthophotography that consisted of all the flight aerial photographs stitched together, served as the base layer in the GIS. The planimetric features were integrated into the GIS as separate layers. Each layer was symbolized appropriately for delivery to the client. All GIS work was completed using the latest software from Environmental Systems Research Institute (ESRI), ArcView 9x.



City of Leominster Department of Public Works

The basemapping effort will serve as the foundation for the DPW's GIS. By starting the project with the flyover and planimetric development, the DPW can be assured that their existing information is at a level of accuracy to be used for program management.

Ongoing training will allow for users to become familiar with the system

Training will be initiated for the core GIS users after the data development is complete. Training will take the form of an initial two day session and then on-going, on-call support. The training necessary is expected to be minimal given the DPW personnel's existing familiarity with similar products such as AutoCad.



Planimetrics overlaid on aerial photography of downtown area.

OFFICE LOCATIONS

Maine ■ 1-800-426-4262

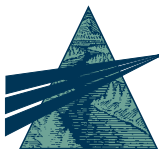
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