



## Example Uses of GIS

### *Real Estate*

- **Aerial Photos** of houses and the surrounding area for prospective buyers
- **Locations** of schools, shopping, or cultural attractions within a certain distance of a potential home sale
- **Area Wall Maps** for a quick check on locations and approximate distances

### *Government*

- **Geo-Database Design** for water and sewer systems, power lines and gas lines
- **Custom Mapping** for in-house presentations, public meetings, and conferences
- **Editing and Maintenance** of existing data files

### *Business*

- **Analysis of Data** to help in marketing or locating new offices or stores
- **Custom Mapping** for presentations, displays, and use within other applications
- **Location or Subject-Specific Maps** to help staff or customers visualize relationships between locations

### *Chamber of Commerce*

- **Subject-specific Maps** to help new businesses and citizens understand the area better
- **Aerial Photo Maps** to show an overview of the area
- **Locations** of area attractions and tourism sites

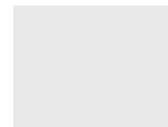
### *Developers*

- **Location or Subject-specific Maps** to help with marketing to the public or presentations to government bodies
- **Subject-specific Maps** of the existing transportation network and future road systems
- **Locations** of existing and proposed residential, commercial, and industrial parcels

*Please call for more information regarding pricing.*

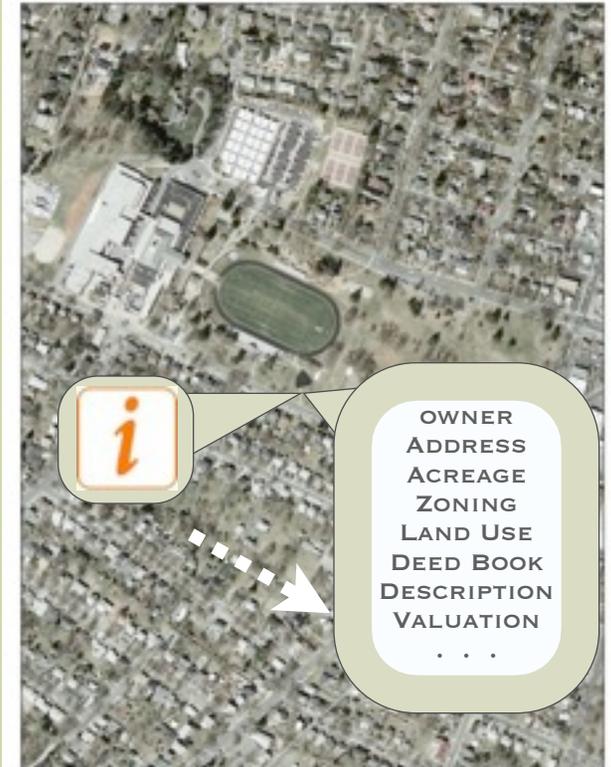


GREENWAY ENGINEERING  
151 WINDY HILL LANE  
WINCHESTER, VIRGINIA 22602



# GIS

## Geographic Information Systems



Greenway  
Engineering

151 WINDY HILL LANE  
WINCHESTER, VIRGINIA 22602  
(540)-662-4185



[www.greenwayeng.com](http://www.greenwayeng.com)

## What is GIS?

Very simply, Geographic Information Systems is the combination of software, computers, and data that allow one to analyze and display information (spatial data) that has been located on the face of the earth.

The power of GIS is in the information associated with a given location. Some say that “**location, location, location**” is what’s important, while others say that “**information is knowledge, and knowledge is power.**” GIS combines these two trains of thought to show where desired features are located, while symbolically or descriptively conveying information about the feature.

Greenway Engineering provides a range of GIS Services, including Mapping, Data Attribute Analysis, and Geo-Database Design.

## Mapping

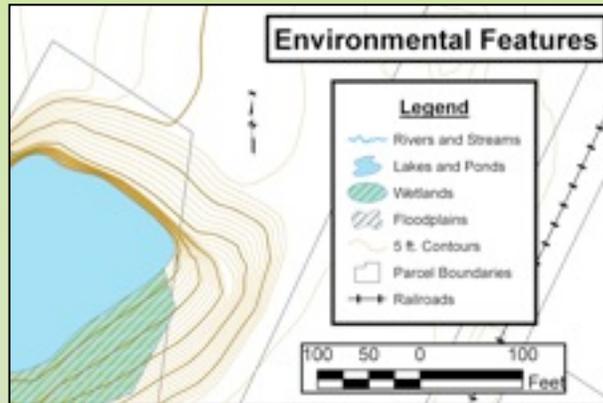
Through use of County and City GIS data, as well as data from other sources, Greenway Engineering is able to produce various types of maps, including:

- ✓ Subject-specific Maps
- ✓ General Location Maps
- ✓ Custom-sized Maps
- ✓ Aerial Photography Maps



LOCATION MAPS show where one feature is located in relation to another.

THEMATIC MAPS are maps in which the focus is on a particular subject, with appropriate background and supporting information. For example, creating a new map showing the Environmental Features on a parcel of land could indicate whether a proposed use is suitable for that piece of land.



OVERSIZE MAPS can be used for presentations and displays; UNDERSIZE MAPS can be saved in a variety of file formats and inserted in other applications to give a more professional look.



AERIAL PHOTOGRAPHY, when located correctly, can be used as a background with other map data superimposed over the photos, or as a stand-alone map, to see ground conditions at that point in time.

## Data Attribute Analysis

Each record, or feature, in a GIS has some data associated with it, in addition to its location data. These additional pieces of information are known as attributes.

Analysis of attribute data associated with a feature, or a set of similar features, can enhance the decision-making process for businesses, governments, and individuals.

Attribute data can be:

- Searched for specific values
- Sorted in order to rank the data
- Segmented to create desired subsets
- Used to symbolically show similarities or differences in the data

Some common attributes are road names and route numbers for road data; and owner names, addresses, acreage, zoning, and deed book & page numbers for land parcel data, among many others.

The high-tech methods used by GIS allow for intuitive analyses and searches by using the latest software innovations.

## Geo-Database Design

Databases are frequently used by Government departments and others to track inventory or to help maintain various systems, such as water and sewer systems. Adding location data for each feature makes the database a Geo-Database.

Designing an effective Geo-Database is simplified when the process is broken down into component steps (each component step is easier to understand and easier to implement), and those that will use the database stay involved in its design. This not only ensures that the information needed will be contained in the database, but it also removes much of the mystery that frequently accompanies design and use of databases.

For additional information on how GIS Mapping and Data Analysis can assist you or your company, please contact **Greenway Engineering** at 540-662-4185, or on the web at [www.greenwayeng.com](http://www.greenwayeng.com).