

Hazel Park ADA Sidewalk Improvement Project



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Project Purpose

The purpose of this project was to meet the needs of a selected client using geographic information system software (GIS), with the final product being published on the World Wide Web.

We contacted several municipalities in Southeastern Michigan with the preliminary thought being that older suburban communities, for a variety of reasons, often do not have the resources necessary to implement a GIS system for the management of public infrastructure. Additionally, we expected that many inner-ring suburbs such as Hazel Park would be experiencing utilities and public works at the end of their useful lifespan. We felt that we could be of service and assist the other planning efforts by developing an integrated web-based GIS information system.

We were able to establish contact with Leonard Solecki of the City of Hazel Park Water Department. Our meeting with Leonard revealed that the city was in need of some GIS assistance, particularly with their public works department. The projects discussed and considered were:

- Geocoding the locations and inventory of where sidewalks intersect the street by whether they are compliant with the Americans with Disabilities Act (ADA). The city had historically kept track of this information using a

paper map and pen and wanted to increase efficiency. The reason why the city was keeping an inventory is that they were interested in applying for Federal Community Block Development Grants (CBDG) to make all street and sidewalks intersections ADA compliant.

- Geocoding the locations of the city's water mains and the locations of water main breaks over the past ten years. This analysis would be useful in determining whether pressure reducing valves are needed and where these valves should be placed to remedy and prevent future water main breaks. This was a need we had predicted due to the aging infrastructure in cities similar to Hazel Park.

Due to a variety of reasons, which included the availability of information, we focused on providing a web-based GIS information system for the first issue.

Mission Statement

To develop an integrated web-based GIS information system that provides utility for both the citizens and government of Hazel Park alike.

Architecture of the Web Site

The web site was designed with both the city and its citizens in mind. Currently there is no easy way for the citizens of Hazel Park to be updated on the condition of the city's ramps. Furthermore, the feedback and information request forms will facilitate increased communication and efficiency.

Utility of GIS

ESRI ArcView 3.2, a popular GIS program, was used to geocode the location of ramps that are ADA compliant and the street and sidewalk intersections that currently do not meet ADA standards. The layers, which were created over an aerial image of the City of Hazel Park, could be easily updated to reflect the change in compliance status. These updates images and maps are then automatically uploaded to the website for citizen use.

Site Utility For Citizens

The site will be useful for citizens because it will provide a means for them to keep up to date on the inventory of the ADA compliant sidewalk ramps and a way for them to contact the city to report ramp damage or where a ramp is needed due to hazardous conditions caused by high curbs. Citizens can also

request other information, such as zoning maps and other publications, via the web site.

This section and its contents are entirely up to the city to decide. Hazel Park can include any files, reports or maps that they wish to share with their citizens.

Site Utility For Government

As previously mentioned, prior the development of the web-based GIS system the city had historically kept track of this information using a paper map and push pins. Although this method was accurate and easy to update it did not convey this information to the public and also lacked the ability to keep an inventory of the condition of the ramps that have been constructed per ADA standards. Our web-based information system addresses these issues.

Future Applications

The web-based information system that we have created should continue to provide utility indefinitely. In the short-term the system will be valuable in inventorying which sidewalks have been reconstructed to meet ADA standards and which are in need of reconstruction. In the long run the system will be an easy and cost effective way to keep track of the condition of the ramps and will provide citizens a means of contacting the city if a ramp is in need of repair. Citizens can become aware of what the city does and how they can contribute to their community.

Conclusions/Unresolved Issues

The integrated web-based GIS information system that we have developed will provide utility for both the citizens and government of Hazel Park alike. The system will be relatively easy and cost effective to manage and will open the lines of communication between the citizens and the city.

A web-based information system would also be useful in the analysis of the water main break problem because it would provide a spatial analysis that would identify problematic patterns and where the remedies are needed most. We would encourage the city to perform this type of analysis.