

SCHOOL OF ARCHITECTURE AND PLANNING

[] Graduate Program in Architecture

[X] Graduate Program in Planning

THESIS ABSTRACT

Title: Development of an Interactive Web Based Geographic Information System of a Comprehensive Bike Path and Trail Way Network for the City of Buffalo

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Statement of the Issue:

This project will design a comprehensive Bike path, Trail path and Pedestrian walkway system for the City of Buffalo and develop an Interactive Web based Geographic Information System of this network.

The researcher will identify potential bike trip generators and bicycle demand corridors and design and evaluate the potential routes in conjunction with existing paths as well as major new development and transportation projects. The proposed master plan will have a network, which will connect the parks, parkways, architectural, historic and industrial heritage sites, waterfront areas, and also other regional assets. The goal of the Master Plan is to provide pedestrians, bicyclists, joggers, skaters, strollers, and skiers access to both the local and regional facilities from their neighborhoods or communities. The purpose of this project will be to provide a guideline for developing a circulation system, which will enhance the quality of life of the local people as well as attract tourists or people from elsewhere to come and stay in this region.

Statement of Significance of Issue:

Walking and bicycling are indicators of a livable community. Bicycling offers not only the most inexpensive means of travel next to walking but also promotes physical and recreational activities. But the fact is that the citizens of Buffalo very often cannot use walking or biking as alternative modes of transportation because of the lack of infrastructure, presence of threats such as fatalities and injuries, an inefficient network, and lack of support services (i.e., bike racks). Given the increased attention at the national level to bicycling/walking, it is the time to develop an understanding and appreciation of the connection between physical activity and the shape and design of the communities.

In addition, a comprehensive bike and trail path plan can provide significant impact on local and regional tourism. A detailed virtual Master Plan will familiarize the visitor with a virtual picture of bicycling and walking in the Niagara Frontier, as well as the local and regional assets, the history of the City of Buffalo, and its interesting spaces.

Method of Inquiry:

The project will follow some specific methods of inquiries, such as:

- Literature review and site visit
- Analyzing existing bike path, trail path and pedestrian facilities of Buffalo
- Evaluating potential attractions, routes, destinations and facilities
- Performing Spatial Analysis based on the ranking of the indicators or variables
- Creating an Interactive Virtual GIS model of the proposed system

Expected Outcome:

The project will provide a potential Bicycle and Trail Master Plan for the City of Buffalo based on a coordinated system that will link the existing and proposed routes and also link the local and regional assets. In addition, policy recommendations will be provided regarding establishment of ancillary facilities, access to public transit, future expansion, funding sources and safety issues.

The final task for this project will be to provide a model for a process that other locations can follow in preparing a bike and trail path network. This model will include the development of an Interactive GIS Web site of the network to provide the local communities and visitors with detail information and images of routes, places, facilities and downloadable maps and data.

THESIS ABSTRACT FORM

Students Signature: _____ Date:

I have read and approved this thesis abstract:

Major Professor: Signature

Printed Name

Date

Committee Member: Signature

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