LOCATING AREAS SUITABLE FOR BICYCLE TRANSPORTATION
Case Study North Little Rock, Arkansas

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Little Rock, Arkansas
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Introduction

• North Little Rock is recognized as a Bronze Bicycle Friendly City since 2009
• What makes a City Bicycle Friendly?
• Is North Little Rock really Bicycle Friendly?
• This projects attempts to quantify what makes a community Bicycle Friendly.
Location of North Little Rock, Arkansas

53 Square Miles
588 Non-Freeway Miles
Bicycle Planning

• Initial planning of the 70’s and 80’s focused on off road paths.
• Bicycles and Autos were treated differently as means of transportation.
• Using existing infrastructure is cheaper than building new facilities for bicycles.
• Since bicycles account for less than 1 percent of all transportation trips, it was viewed as marginal.
Previous Studies

• Does bicycle transportation bring value to a community?
• What creates demand for bicycle use?
• What is the cost/benefit of promoting bicycle use?
• What is the optimum road network for cyclists?
• How does North Little Rock measure up?
Types of Cyclists

Commuter Cyclist

Child Cyclist

Average Adult Cyclist
Issue / Problem

• Using bicycles as a means for transportation in North Little Rock could be a frightening thought to many due to perceived safety issues with traffic and road conditions.

• Showing areas of the city that are safe for bike based trips would be a help in getting the average adult cyclist to replace some trips by auto using a bicycle instead.
Specific Aims / Objectives

- Indicate areas of the city that are connected for cycling
- Show the gaps in the network
- Show what amenities are within biking distance
Variables Used

• Slope 0-3% Most Desirable, 3-5% Acceptable, over 5% Not Acceptable
• Average Daily Traffic under 1,200 Most Desirable, 1,200 to 10,000 Acceptable, over 10,000 Not Acceptable
• Vehicle/Bicycle Crash Locations
Layers for Analysis

Traffic and Road Network

Contours (Slope)

Bike Crash Locations
Crashes and Population 1995-2015

Jacksonville
Benton
Conway
Little Rock
North Little Rock
Pulaski, Saline, Lonoke, Faulkner

% of Population
% or Crashes

Legend
Amenities

- Variety Store
- Grocery Store
- Park
- Restaurant
- Pharmacy
- Bank
# Bike Zone Amenities

<table>
<thead>
<tr>
<th>Bike Zones</th>
<th>Parks</th>
<th>Grocery Stores</th>
<th>Banks</th>
<th>Variety Stores</th>
<th>Pharmacies</th>
<th>Restaurants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amenity</td>
<td>33 of 44</td>
<td>7 of 9</td>
<td>21 of 35</td>
<td>12 of 18</td>
<td>8 of 14</td>
<td>114 of 188</td>
</tr>
<tr>
<td>Population</td>
<td>22,140</td>
<td>9,011</td>
<td>19,183</td>
<td>10,973</td>
<td>8,568</td>
<td>29,937</td>
</tr>
<tr>
<td>% of Total Pop</td>
<td>35.54%</td>
<td>14.46%</td>
<td>30.79%</td>
<td>17.61%</td>
<td>13.75%</td>
<td>48.05%</td>
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</tbody>
</table>
Levy Spur Trail
Bike Zone Gaps
Selected Examples
## Bus Route Analysis

<table>
<thead>
<tr>
<th>Bus Routes</th>
<th>Parks</th>
<th>Grocery Stores</th>
<th>Banks</th>
<th>Variety Stores</th>
<th>Pharmacies</th>
<th>Restaurants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amenities</td>
<td>28</td>
<td>5</td>
<td>17</td>
<td>10</td>
<td>6</td>
<td>101</td>
</tr>
<tr>
<td>% of Total</td>
<td>63.63%</td>
<td>55.56%</td>
<td>48.57%</td>
<td>55.56%</td>
<td>42.86%</td>
<td>53.72%</td>
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</tbody>
</table>
Conclusions - Recommendations

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