Newton, Iowa Sidewalk, Trail, and Bikeway Plan: A Path to Livability 2008 and Beyond

John Kerkula Foeday
University of Iowa

Darian Nagle-Gamm
University of Iowa

Nathan Soldat
University of Iowa

DOI: https://doi.org/10.17077/15gh-cwhi

Copyright © 2008 the authors

Hosted by Iowa Research Online. For more information please contact: lib-ir@uiowa.edu.
Newton, Iowa

Sidewalk, Trail, and Bikeway Plan:
A Path to Livability 2008 and Beyond

University of Iowa Urban & Regional Planning Master's Candidates
John Kerkula Foeday | Darian Nagle-Gamm | Nathan Soldat
327 Jessup Hall | Iowa City, IA 52242

Property of Urban and Regional Planning
University of Iowa
Newton, Iowa

Sidewalk, Trail, and Bikeway Plan:
A Path to Livability 2008 and Beyond

University of Iowa Urban & Regional Planning Master's Candidates
John Kerkula Foeday | Darian Nagle-Gamm | Nathan Soldat
327 Jessup Hall | Iowa City, IA 52242
Acknowledgements

We would like to thank Erin Chambers, City Planner at Newton’s Community Development Department for her direction and encouragement. We would also like to thank Bryan Friedman, Community Development Director, Bob Bringolf, Engineering Supervisor, and Denny Slings, Parks Director for their valuable input and technical assistance. Additionally, we would like to thank the members of our Technical Advisory Committee for their support and help in refining crucial elements of this plan. We are greatly appreciative for all of the input gathered by citizens of Newton at the two Community Involvement Forums. Finally, we would like to thank our faculty advisors, Professors Heather MacDonald and Jim Throgmorton.
Table of Contents

List of Figures .................................................................................................................. 6
List of Tables .................................................................................................................... 6
List of Maps ...................................................................................................................... 6
Executive Summary .......................................................................................................... 7
Section 1: Introduction ..................................................................................................... 8
  Existing Conditions ......................................................................................................... 9
    Sidewalks ..................................................................................................................... 9
    Hike and Bike Trails ..................................................................................................... 9
    Bikeways/Bike Routes ................................................................................................. 10
    Ridership .................................................................................................................... 10
Section 2: Goals ................................................................................................................ 11
  Goal 1: To provide a framework for the continuous development
  and maintenance of a safe, usable, and integrated sidewalk, trail, 
  and bikeway system for Newton. ................................................................................. 11
  Goal 2: To make Newton a more attractive community to live 
  and visit through quality of life improvements .......................................................... 11
  Goal 3: To create a document that can be used to systematically 
  address the future development and maintenance of sidewalk, 
  trail, and bikeway infrastructure in Newton ............................................................. 12
Section 3: Methodology .................................................................................................. 13
  Community Involvement Forums ................................................................................. 13
  Technical Advisory Committee .................................................................................... 14
Section 4: Recommendations .......................................................................................... 17
  Sidewalks ..................................................................................................................... 18
  Trails ............................................................................................................................ 19
  Bikeways ...................................................................................................................... 21
Section 5: Implementation .............................................................................................. 22
  Phasing ........................................................................................................................ 22
    Phase 1 ...................................................................................................................... 22
    Phase 2 ...................................................................................................................... 23
    Phase 3 ...................................................................................................................... 23
Appendices

Appendix I: Points of Interest (CIF I)
Appendix II: Survey Results (CIF I)
Appendix III: Visual Preference Survey and Results (CIF I)
Appendix IV: Route Preferences (CIF II)
Appendix V: Project Preferences (CIF II)
Appendix VI: Technical Advisory Committee Members
Appendix VII: Complete Streets
Appendix VIII: Funding Sources
List of Figures

Figure 1: Newton’s “Renew” campaign................................................................. 1
Figure 2: Gap in Sidewalk................................................................................. 1
Figure 3: Pedestrians on the Roadway............................................................... 1
Figure 4: Technical Advisory Committee......................................................... 1
Figure 5: ADA Compliant Curb Cuts................................................................. 1
Figure 6: Bike Route Sign................................................................................. 1
Figure 7: Steep Slope on Existing Trail.............................................................. 1
Figure 8: Bike Lane with Painted Stripe............................................................ 1
Figure 9: Telespar Posts................................................................................... 1
Figure 10: Trail Amenities................................................................................ 1
Figure 11: Safety Signs.................................................................................... 1

List of Tables

Table 1: Phase 1 Costs..................................................................................... 23
Table 2: Phase 2 Costs..................................................................................... 23
Table 3: Phase 3 Costs..................................................................................... 24

List of Maps

Map 1: City of Newton
Map 2: Sidewalk Inventory: Newton
Map 3: Missing Curbcuts in Priority Areas
Map 4: Existing or Funded Hike and Bike Trails
Map 5: Sidewalk Inventory: Priority Areas
Map 6: Existing and Proposed Hike and Bike Trail Routes
Map 7: Bikeways: On-Street Bike Routes
Map 8: Proposed Hike and Bike Trail and Bike Route System
Executive Summary

The Newton Sidewalk, Trail, and Bikeway Plan: A Path to Livability 2008 and Beyond was developed to provide Newton with the framework to help guide the development of its pedestrian and bicycle system. It was also created to provide the City with a tool for evaluating sidewalk and trail requirements for development or redevelopment of properties in Newton. This plan proposes sidewalk priority areas, bikeway routes, and trail connections that can be developed to create a safe, usable and integrated system. A phasing schedule, cost estimates, and potential funding sources are also provided to improve implementation.

The plan was developed with input and feedback received through Community Involvement Forums (CIF). A Technical Advisory Committee (TAC) comprised of Planning and Zoning Commissioners, several citizens, and City staff provided technical guidance and helped refine the goals and scope of the plan.

This plan recommends a three phased approach to implementation:

- Phase I includes projects that complete the existing hike and bike trail loop, focus on priority sidewalk areas, and establish bikeways.
- Phase II includes projects that focus on non-priority sidewalk areas.
- Phase III includes projects that are aimed at improving the existing hike and bike trail network, develop an additional hike and bike loop to connect the south east portion of Newton, and address the steep slope on the current hike and bike system.
Section 1: Introduction

Newton, the seat of Jasper County, is a thriving Central Iowa community located along Interstate-80 (Map 1). Newton has a beautiful and expansive park and greenway system with Maytag Park as its flagship, a school system that includes a branch of the Des Moines Area Community College and Buena Vista University, an impressive number of public art pieces, the world renowned Maytag Dairy Farms, and the Iowa Speedway.

Newton is experiencing marked change while maintaining remarkable resilience. Maytag Corporation, a long standing employer in the community, officially closed its doors on October 25th, 2007. The community is adjusting and is attracting new businesses like TPI and seeing expansion of existing ones such as Iowa Telecom. In September of 2006, Iowa Speedway opened and now attracts upwards of 400,000 visitors annually.\(^1\) Another change Newton is experiencing is the creation and expansion of its hike and bike trail system and a growing interest in a complete pedestrian and bicyclist system.

Newton’s comprehensive plan recognizes the need for a safe, efficient, and integrated network of sidewalks, trails, and bikeways for recreational use and personal transportation. The plan also calls for the development of strategies to address the current gaps in the sidewalk system, the creation of safe bike routes, and the continued development of the hike and bike trail network.

The Newton Sidewalk, Trail, and Bikeway Plan aims to assist the community in fulfilling the objectives of the comprehensive plan and to provide a framework for including and maintaining pedestrian and bicycle facilities in future commercial and residential

---

\(^1\) Phone Interview with Iowa Speedway Representative
maintaining pedestrian and bicycle facilities in future commercial and residential developments. The plan is based on community input, the comprehensive plan, an examination of current conditions, and best practices from other communities. This plan identifies proposed routes, types of facilities, priority areas, and a strategy for phased implementation.

**Existing Conditions**

**Sidewalks**

Sidewalks in downtown area are fairly complete. As you move away from the downtown, there are gaps in the sidewalk system found in both residential and commercial areas (Figure 2). A complete inventory of sidewalks is shown on Map 2. Only 26% of the roadways in Newton have sidewalks on both sides. Over 55% of the roads have no sidewalks at all and 18% have sidewalks on one side. There are also areas where the sidewalk abruptly ends mid-block. These gaps in the sidewalk system force pedestrians onto the roadway (Figure 3). In many areas where sidewalks do exist, they lack curb cuts and ramps (Map 3). This makes travel difficult for those in wheelchairs, parents with strollers, and people riding bicycles. Of the curb cuts that do exist, the majority are not equipped with early detection warning devices for the visually impaired.

**Hike and Bike Trails**

Several multi-use trails have been built in Newton, but the city-wide loop has not yet been completed. There is a 2.74 mile existing trail in the southwestern portion of the city that
Map 2
Newton Sidewalk Inventory

- **Sidewalk Both Sides**
- **No Sidewalks**
- **Sidewalk One Side**
- **Undetermined**

Created by Dain L. Nagle-Garren
Masters Candidate in Urban and Regional Planning
University of Iowa
April 1st, 2009

Data Sources: US Census Bureau, Jasper County 2005 Orthophoto
Map 3
Number of Missing Curbcuts: Priority Areas

<table>
<thead>
<tr>
<th>Schools</th>
<th>Point of Interest</th>
<th># Missing Curbcuts per Intersection</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Sidewalk</td>
<td>Sidewalk One Side</td>
<td>Sidewalk Both Sides</td>
</tr>
<tr>
<td>0</td>
<td>1-2</td>
<td>3-4</td>
</tr>
</tbody>
</table>

1. Newton Arboretum and Botanical Gardens
2. Agnes Patterson Park
3. Newton YMCA
4. Sunset Park
5. Woodland Park
6. Maytag Park and Pool
7. 30 Acres Park
8. Thomas Jefferson Elementary School
9. Newton High School
10. Beeg Midway Elementary School
11. Emerson Rough Elementary School
12. Newton Christian School & Teen Center
13. Woodrow Wilson Elementary
14. Aurora Heights Elementary
15. Willowbrook Adult Day Care Center
16. Jasper County Senior Citizens Center
17. Samuelville Senior Housing

Created by Darren L. Nagle-Caines
Masters Candidate in Urban and Regional Planning
University of Iowa
April 16, 2008
Data Sources: US Census Bureau, Jasper County 2000 Orthophoto
runs along Interstate-80 to Maytag Park and the Newton High School, and another 1.82 mile existing trail system built in Agnes Patterson Park in the northeastern section of Newton (Map 4). Two new hike and bike trail connector routes are planned, funded, or are in-construction at this time. A 1.2 mile westward route from Agnes Patterson Park along North 11th Ave East will be completed in 2008. Construction will begin in 2008-2009 on an additional 1.85 mile route that will connect the existing southeastern trail from South 13th Avenue East northeastward towards Agnes Patterson Park via a wide sidewalk system that passes through a residential area. The existing trail system is on the edge of town and does not provide access to the downtown area.

Bikeways/Bike Routes

There are currently no designated on-street bike routes in Newton. City streets lack bike lanes, road markings, or signage to indicate bicycle routes or the presence of cyclists. There are few thoroughfares that cyclists safely take to move from west to east across town. Experienced cyclists may use all roadways comfortably, including the busy 1st Avenue arterial. However, casual or inexperienced riders have fewer options due to the lack of east-west through streets.

Ridership

Approximately 3% of Newton residents walk to work and 0.5% percent commute by bicycle\(^2\). The low traffic congestion and abundant free parking makes the automobile the mode of choice. Residents use the pedestrian and bicycle system mostly for recreation at this time. However, rising fuel prices and concerns about health and fitness, air pollution, and global warming will likely increase interest in alternative forms of transportation in the future.

Section 2: Goals

The goals of this plan are derived from two sources: community input and the comprehensive plan. Three goals have been identified to provide guidance for the on-going development of a pedestrian and bicyclist friendly Newton.

Goal 1: To provide a framework for the continuous development and maintenance of a safe, usable, and integrated sidewalk, trail, and bikeway system for Newton.

The Newton comprehensive plan calls for the development of a safe, efficient, and integrated network of sidewalks, bike lanes, paths, and trails to serve pedestrians and cyclists. A safe, usable, and integrated sidewalk, trail, or bikeway network is complete with no gaps, connected to important community facilities and amenities, properly maintained, easily navigated by users, and reduces the potential for conflicts with other pedestrians, bicyclists, and traffic.

Goal 2: To make Newton a more attractive community to live and visit through quality of life improvements

Complete sidewalks, trails, and bikeways have become the standard for communities today. Pedestrian and bicyclist facilities contribute to a community’s quality of life through improved health and fitness, the creation of recreational and social opportunities with friends and family, a connection with nature and the outdoors, and a sense of community pride. As Newton continues to grow in the post-Maytag era, it is more important than ever that the community make appropriate public investments to improve the quality of life for its current and future residents.
Goal 3: To create a document that can be used to systematically address the future development and maintenance of sidewalk, trail, and bikeway infrastructure in Newton.

A strategy for developing future sidewalks, trails, and bikeways and maintaining the network will improve Newton’s walkability and bikability. This plan aims to provide additional guidance to be used in conjunction with other city documents, such as the subdivision ordinance, site plan code, and the comprehensive plan, in order to develop future pedestrian and bicycle route connections in new developments as well as re-development projects.
Section 3: Methodology

To ensure that the planning process was responsive to the community’s desires, two Community Involvement Forums were held. Each forum was followed by a Technical Advisory Committee session to help refine public input and direct the planning process.

Community Involvement Forums

The Community Involvement Forums (CIF) created an opportunity to gather the public’s perspective and help guide the planning process. The purpose of the CIFs was to:

1) Assist in articulating goals for the plan
2) Identify of priority areas and important community resources to be connected
3) Gain perspective on the current pedestrian and bike system’s assets and areas of concern
4) Articulate route preferences

Each CIF session was heavily advertised. Fliers were distributed at the Public Works building, City Hall, the Skiff Medical Center, the Public Library, and downtown businesses. Newton Community Planner Erin Chambers recorded a radio spot “Feature Scope” for the event that was played on local radio station KCOB. A press release was provided to the Newton Daily News from which an article was published. In addition, there was a formal notification in the legal advertisements section of the paper.

The first CIF sessions were held on January 22\textsuperscript{nd}, 2008 at Newton City Hall from 4:00 – 5:00 and 6:00 – 7:00 pm. An “open house” format was used where citizens had the opportunity to offer their feedback at three different stations. The first station asked the public to identify important points of interest that should be connected. A list of important community resources and amenities was generated from the public feedback gathered at the CIF. Each location was given a relative level of importance, ranging from zero to five, depending on the number of people who had identified it as being significant.\footnote{See Appendix I}
The second station asked the public to provide feedback in the form of a written survey. The survey asked participants to identify the current system’s assets and areas of concern. They were also asked to provide a vision for the future sidewalk, trail, and bikeway system in Newton. The results from the twenty-one respondents were compiled and categorized.⁴

The third station was a visual preference survey. The public was presented with thirty-nine images which they then ranked from 0 (not desirable) to 10 (highly desirable). Twenty-five surveys were taken.⁵

The second CIF was held on March 25th, 2008 at Newton City Hall. An “open house” format was again used with three stations. The first station provided an opportunity for the public to comment on the goals of the plan. The second station asked the public to comment on the location of potential trails, bikeways, and sidewalk priority areas that were generated from the first CIF and TAC sessions. The public was asked to rank each potential route and bikeway from 0 (not desirable) to 10 (highly desirable) or by providing qualitative feedback.⁶ At the third station, the public was asked to rank sidewalk, trail, and bikeway improvements in order of preference to help determine the prioritization of projects.⁷

**Technical Advisory Committee**

Creating a Technical Advisory Committee (TAC) was necessary to refine public input received through the Community Involvement Forums and provide assistance in understanding local conditions. The TAC was formed as a subcommittee of the Planning and Zoning (P&Z) Commission. Under the by-laws of the P&Z Commission, sub-committees can be formed consisting of two P&Z Commissioners plus additional members of the community who have expertise in the subject at hand. The TAC consisted of two P&Z

---

⁴ See Appendix II
⁵ See Appendix III
⁶ See Appendix IV
⁷ See Appendix V
Commissioners, several citizens with an interest in biking, and some City staff members (Figure 4).\textsuperscript{8} The objectives of the TAC sessions were to:

1) Refine goals of the plan  
2) Determine potential routes  
3) Determine types of facilities that are appropriate  
4) Prioritize projects and develop a phased implementation plan

The first TAC session was held on February 12\textsuperscript{th} at 5pm in Newton City Hall. The agenda for the work session included a review of the first Community Involvement Forum, the refinement of the goals for the plan, and the identification of potential connector routes.

After reviewing the results of the first CIF, an open discussion was held to help refine the goals of the plan. The group expressed a desire for the concepts of "safety", "usability", "integrated", "for everyone", and "system" to be reflected in the goals. The group also agreed that another goal of the plan should be to outline the responsibility of developers in relation to sidewalks and trail connections in Greenfields development and redeveloped properties. Finally, the group expressed a desire to make Newton a more attractive place to live and visit as well as improving the quality of life for both current and future residents.

The final task was to identify potential connector routes. This was accomplished as the TAC reviewed a map that contained all points of interest and their respective level of importance. The TAC worked together to identify potential routes between the points of interest and identifying potential problem areas. This information, coupled with the feedback from the first CIF session, was used to develop initial recommendations for trail and bikeway routes and priority sidewalk improvement areas.

\textsuperscript{8} See Appendix VI for list of TAC members
The second TAC session was held on March 31st at 5:00 pm at Newton City Hall. The agenda for the work session included reviewing the results of the second CIF, assessing estimated costs for sidewalk, trail, and bikeway improvements, and developing a phased strategy for implementation of the plan. There was clear agreement that a route through the downtown area that would connect the western side of Newton was desirable. Drawing on the CIF feedback and knowledge of local conditions, the TAC made route recommendations.

The TAC also discussed the types of facilities that could be utilized. Lastly, the TAC developed a phased implementation strategy.
Section 4: Recommendations

Pedestrian and bicycle facilities serve as important community infrastructure providing residents access to businesses, stores, schools, public offices, and recreational centers. In addition to providing accessibility, research shows that these facilities have safety, health, and recreational benefits and can improve quality of life for users.\(^9\) Neighborhoods that are pedestrian-friendly encourage people to interact and can result in a safer, close-knit community.

The presence of sidewalks, trails, and bike routes provides an opportunity for a more active lifestyle. The Iowa Department of Health reports that in 2004, over 23.9% of Iowans were obese and 37.7% were overweight, resulting in a combined total of 61.6% of Iowans.\(^10\) The percentage of Iowans that are obese has risen 60% since the early 1990s. Obesity is one of the most serious health problems in Iowa. It is linked to cardiovascular disease, cancer, and strokes, which are the top three leading causes of death in the state.\(^11\) The rise in obesity is also closely linked to the diabetes epidemic. While problems with weight and obesity are rooted in many cultural, environmental, and socioeconomic issues, public health officials increasingly view access to pedestrian and bicycle facilities as an important environmental factor in public health.\(^12\)\(^13\)

Sidewalks and trails not only have quality of life benefits, they also have positive impacts on property values. Pedestrian-friendly neighborhoods often have higher property values.

---


because homes located where residents can safely walk to schools and other nearby destinations are desirable.\textsuperscript{14} In addition, research has shown that properties situated along trails have higher values than homes located at a distance.\textsuperscript{15}

Because sidewalks and trails provide such important services and opportunities to the public, they should be developed and maintained to meet the needs of a greater number of people. Though the City of Newton recognizes the significance of these facilities as reflected in the comprehensive plan, site plan and subdivision ordinances, additional action is necessary to ensure the continuous development of pedestrian and bicyclist facilities\textsuperscript{16}. Based on the feedback from the community, existing conditions, and research, we propose the following sidewalk, trail, and bikeway recommendations.

**Sidewalks**

Over 73\% of the roadways in Newton have no sidewalks or sidewalks on one side only. Where sidewalks do exist, many do not have curb cuts with ADA compliant early warning detection devices (Figures 5). These result in safety, mobility, and access issues for residents. To create a more pedestrian friendly Newton, we recommend that the city develop and adopt a sidewalk improvement plan focusing on the construction of new four foot sidewalks and the repair of existing sidewalks, including the addition of curb cuts where necessary. Through community input, we have identified sixteen priority areas near schools, parks, and other important community facilities that should receive sidewalk

\begin{itemize}
\item See Newton Site Plan Ordinance Chapter 32.0301.2 and Subdivision Ordinance Chapter 35.0102.5, 35.0201.45, 35.0201.36, 35.0806, 35.0808, 35.0901, 35.0904.3, 35.0811
\end{itemize}
improvements first (Map 5). Seven of the priority areas are schools. These areas should receive attention first. We also recommend that the sidewalk improvement plan require future developers to satisfy their sidewalk obligations as prescribed by Newton’s existing site plan and subdivision ordinances. We also recommend that Newton strengthen its stance on pedestrian and bicycle facilities by adopting a “Complete Streets” policy, ensuring that new roads or major reconstruction projects will accommodate travel by pedestrians and bicyclists. Iowa communities such as Iowa City and Cascade have adopted such “Complete Streets” policies.17 18

**Trails**

Trails have become a standard for livable communities across the country. They contribute to a community’s quality of life through improved health and fitness, more recreational and social opportunities, a connection with nature and the outdoors, and a sense of community pride. Municipal trails also promote economic development if connected to commercial areas or if connected to a regional trail network that allows visitors access to the community.

To continue the development of Newton’s hike and bike trail network in accord with public preferences, we first recommend that the southwestern trail be connected to the northeastern trail via a downtown connector route. Based on route preferences expressed by the public through the CIF and knowledge of existing conditions, the TAC has recommended a connector route from the intersection of North 11th Avenue East and East 12th Street North to the existing trail head at the intersection of South 12th Avenue West and West 18th Street South (Map 6). Ideally, an 8 foot grade separated trail should be constructed; however, in areas where a separate

---


18 See Appendix XII to review Iowa City and Cascade’s “Complete Street” policies.
trail may not be possible, an on-street bike route should be designated with an accompanying 4 foot wide sidewalk for pedestrians. If an on-street facility is used, the route should be indicated with BIKE ROUTE (Figure 6) signs every quarter mile in compliance with AASHTO standards. A striped shoulder could be used to help further identify space for bicyclists; however, research has shown that both non-striped and striped designated bicycle routes improve riding conditions for bicyclists.19

We also recommend an eastern expansion of the hike and bike trail network that connects the existing southern section of the trail to the airport, Iowa Speedway, and other commercial activities south of Interstate 80 to the commercial center on the eastern beltway (Map 6). The public expressed an interest in connecting Newton to the regional trail network of the Greater Des Moines Area called the “Central Iowa Trail Network” which contains over 460 miles of trails.20 The community of Newton should foster such links by developing spurs from the municipal trail system to connect with regional trails. Newton must coordinate with the Central Iowa Regional Transportation Planning Agency (CIRTPA) and Jasper County to determine the location of future regional trails and to devise potential connector routes to Newton. Developing regional connections not only will provide access to the regional trails for Newton residents, but will also serve as another link by which visitors can take advantage of the community’s amenities.


The public expressed concern over the steep slopes on the existing hike and bike trail network to the southeast of Maytag Park and south of the High School (Figure 7). When this section of the trail was built, the topography in the area made it very difficult to avoid the creation of a steep trail. Costly efforts to reduce the steepness would have severely limited the ability to build additional trails in general, thus creating less linear length in the overall hike and bike network. Despite these difficulties, we recommend that sometime in the future an alternative connector route be developed to the south of the existing trail to provide an additional route with less steep slopes (Map 6). Either an easement or a purchase of property from the school district would be required to complete this alternate route.

**Bikeways**

Based on feedback received from the Community Involvement Forums, we recommend that six on-street bike routes be established in Newton to provide on-street facilities for bicyclists (Map 7). Bike routes are a type of bikeway that exist on designated roads and are distinguished by the use of a bike lane sign and/or painted stripe on the road’s surface (Figure 8). Bike routes provide additional on-road routes for cyclists that have less traffic, are wider, and have little to no on-street parking. The routes were selected based on public input, feedback from the TAC, traffic counts, street widths, and on-street parking availability.
Map 8
Proposed Hike & Bike Trail and Bike Route System

- Alternate Route
- Eastern Addition
- Western Connector
- Woodland Spur
- Existing Trail
- Planned Trail (2008-2009)
- Bike Routes

Created by Dianen L. Nagle-Gann
Masters Candidate in Urban and Regional Planning
University of Iowa
April 11th, 2008
Data Sources: US Census Bureau, Jasper County 2000 Orthophoto
Section 5: Implementation

Phasing
On March 31st, 2008, the Technical Advisory Committee devised a three phased approach to implementation based on the feedback from the community, cost estimates, and knowledge of local conditions.

<table>
<thead>
<tr>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Phase 3</th>
<th>Ongoing</th>
</tr>
</thead>
</table>
| • Short Term  
  • Western hike and bike connector  
  • Sidewalk improvements in priority areas  
  • Designating on-street bike routes | • Medium Term  
  • Sidewalk improvements in non-priority areas | • Long Term  
  • Eastern expansion of hike and bike trail  
  • Connections to regional trail system  
  • Address steep slopes south of High School | • Enforce existing subdivision code regarding sidewalks  
  • Acquire land or easements in new subdivisions for trail connectors  
  • Adopt "Complete Streets" policy |

Phase I
The TAC recommends that Phase 1 projects are completed in the short term. This phase includes a hike and bike trail connection through the downtown connecting the western side of Newton, infill sidewalk construction and repair in priority areas such as schools, senior centers, and frequently visited parks, and the establishment of on-street bike routes. There are multiple types of facilities that may be appropriate for the western connector route. In some areas, it may be possible to build an 8 foot separate trail and in others on-street bike route may be more appropriate. Table 1 includes six different options for completing the western connector and their estimated cost.
Table 1: Phase 1 Cost Estimates

<table>
<thead>
<tr>
<th>Phase 1 - Short Term</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Hike and Bike Trail Connector</td>
<td></td>
</tr>
<tr>
<td>Option 1: 100% 8 ft separated trail</td>
<td>$539,135</td>
</tr>
<tr>
<td>Option 2: 100% On-street bike route (striping &amp; signage)</td>
<td>$9,747</td>
</tr>
<tr>
<td>Option 3: 100% On-street bike route (signage only)</td>
<td>$1,837</td>
</tr>
<tr>
<td>Option 5: 50% 8 ft separate trail/50% bike route (striping &amp; signage)</td>
<td>$274,441</td>
</tr>
<tr>
<td>Option 6: 50% 8 ft separate trail/50% bike route (signage only)</td>
<td>$270,486</td>
</tr>
<tr>
<td>Woodland Spur (8 ft trail off Western connector)</td>
<td>$85,701</td>
</tr>
<tr>
<td>Priority-Area Sidewalk Improvements</td>
<td></td>
</tr>
<tr>
<td>Infill</td>
<td>$5,851,678</td>
</tr>
<tr>
<td>Curb cuts</td>
<td>$247,100</td>
</tr>
<tr>
<td>Bike Routes</td>
<td></td>
</tr>
<tr>
<td>Striped shoulder w/signage</td>
<td>$35,304</td>
</tr>
<tr>
<td>Signage only</td>
<td>$6,656</td>
</tr>
</tbody>
</table>

Phase 2

The TAC recommends that Phase II projects, completed in the medium term, include the expansion of infill sidewalk construction, repair, and curb cuts to non-priority areas. Cost estimates are shown in Table 2.

Table 2: Phase 2 Cost Estimates

<table>
<thead>
<tr>
<th>Phase 2 - Medium Term</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non Priority-Area Sidewalk Improvements</td>
<td></td>
</tr>
<tr>
<td>Infill</td>
<td>$8,108,979</td>
</tr>
<tr>
<td>Curb Cuts</td>
<td>TBD *</td>
</tr>
</tbody>
</table>

* Pending curb cut inventory in non-priority areas

Phase 3

The TAC recommends that Phase III projects be completed in the long term. In this phase, an additional eastern hike and bike trail loop is to be developed to connect the southeast
portion of Newton including the Iowa Speedway, and the eastern commercial area on Iowa Speedway Drive. This can be completed by the development of an 8 ft separated trail, on-street bike routes, or a combination of both. Table 3 contains estimated costs for each option. An additional route south of the High School would provide an alternative to the challenging slopes on the existing trail system. This will require an acquisition of land or an easement from the school district. An alternate route would also require significant investment due to the steep terrain and stream crossing required to complete the alternate route.

Table 3: Phase 2 Cost Estimates

<table>
<thead>
<tr>
<th>Phase 3 - Long Term</th>
<th>Estimated Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Expansion of Hike and Bike Trail</td>
<td></td>
</tr>
<tr>
<td>Option 1: 100% 8 ft separated trail</td>
<td>$701,031</td>
</tr>
<tr>
<td>Option 2: 50% 8 ft separated trail &amp; 50% bike route (striping/signage)</td>
<td>$328,410</td>
</tr>
<tr>
<td>Option 3: 50% 8 ft separated trail &amp; 50% bike route (signage only)</td>
<td>$321,924</td>
</tr>
<tr>
<td>Regional Trail Connections</td>
<td>TBD</td>
</tr>
<tr>
<td>Alternative Hike and Bike Route South of High School</td>
<td>TBD</td>
</tr>
</tbody>
</table>

*Regional trail connections depending on the future location of Central Iowa Trails extensions*

Central Iowa is currently developing an extensive regional trail network. Spurs should be developed to connect the municipal hike and bike trail network to regional trails.

Future Development

Future commercial and residential development and re-development of properties within Newton should include sidewalks, hike-and-bike trail connections, and bike routes where appropriate. The code also requires developers to provide pedestrian access or networks in all subdivisions via sidewalks. The City should ensure during the subdivision approval process that these provisions of the ordinance are satisfactorily met by every developer. Waivers of sidewalk requirements should be avoided. Newton should also seek the

21 Newton Subdivision Ordinance Chapter 35.0807.2, Chapter 35.0808.3
acquisition of land or easements for trail corridors in the subdivision approval process. Language regarding land dedication for trails should be introduced into the subdivision ordinance. Further, the adoption of a “Complete Streets” policy would ensure that future road projects have funding secured for the inclusion of pedestrian and bicyclist facilities prior to construction.

**Funding**

Newton should attempt to leverage local money with outside funding sources to increase resources available for building and managing its sidewalks, trails, and bike routes. Funding can be raised through government sources, the private sector, and community fundraising. State and federal funding sources include federal Transportation Enhancement funds and state grants such as the “Safe Routes to School” program. We have included a more detailed list of funding sources in Appendix VIII.

The private sector has traditionally been a significant financial contributor in Newton. In the last year of its endowment, The Maytag Foundation funded $1.5 million to a variety of community programs designed to improve the quality of life for Newton’s residents.\(^{22}\) We encourage the City to develop relationships with new businesses and local employers to help strengthen the sidewalk, trail, and bikeway system in Newton.

Additionally, the city can create local revenue streams for the continued development and maintenance of pedestrian and bicycle facilities. Common approaches employed by other communities include: dedication of a portion of local option sales tax, special bond issues, voter-approved sales tax increase, use of the capital improvement budgets of Public Works and/or Parks agencies, and special assessments on property tax.\(^{23}\)

According to city code, homeowners are responsible for constructing and maintaining sidewalks in front of their properties; however, this has not always been enforced very

---


\(^{23}\) See the Pedestrian and Bicycle Information Center website for ‘Government Funding Sources’ at [http://www.bicyclinginfo.org/funding/sources-government.cfm](http://www.bicyclinginfo.org/funding/sources-government.cfm)
well. Funding for sidewalk improvements could be a joint effort between the City of Newton and homeowners. For example, in FY07, Newton collected 1.2 million in local option sales tax revenues. These funds, typically designated for important community improvement projects, could be used to subsidize a portion of homeowner sidewalk improvements or fund the development of trails or bike routes.

For future development, the City should require that developers build sidewalks in accordance with the subdivision regulations. A “Complete Streets” policy would also ensure that new road project funding allow for the accommodation of bicyclists and pedestrians with adequate road width and an adjacent sidewalk.

**Maintenance**

All trail routes, bikeways, and sidewalks should be maintained regularly to ensure a safe, useable and integrated system for users. The Parks and Recreation and Public Works Departments should put in place a maintenance schedule for tasks in the short and long-term. Seasonal maintenance, such as removing litter and snow and patrolling trails are considered to be short-term tasks. Long-term tasks include following an inspection schedule to identify the condition of amenities, cracks in the pavement, and areas in need of new paint.

Although there are financial costs associated with implementing a maintenance schedule, failure to maintain the system can lead to safety and security issues, underutilization by users, increased repairs cost in the long run, and liability issues. Leveraging volunteer work from community groups to assist with maintenance can help deflect some of the associated costs.

In residential areas where eight foot wide sidewalks are used as part of the trail system, property owners should only be responsible for removing snow by clearing a four-foot

---

24 City of Newton Subdivision Ordinance Chapter 35.0906.7

wide path. On-street bike routes should receive frequent street sweepings to ensure that the lane near the curb is free of sand and debris such as broken glass or trash.

**Community Education**

One important strategy to help improve the safety of pedestrians and cyclists in Newton is community education. Newton’s schools are an excellent place to learn about safety. In elementary school, a bike education curriculum teaches children about pedestrian and bicycle safety, including “looking both ways” and the importance of wearing a helmet. Driver’s education classes are a venue for preparing new drivers to be aware of pedestrians and cyclists on the road. Educational flyers posted in public facilities and in schools can help remind pedestrians, cyclists, and drivers about how to interact safely with one another.

Signs are another important educational tool. For example, BIKE ROUTE signs indicate that a segment of road is designated for shared use with bicycles. The SHARE THE ROAD sign serves a similar purpose. These signs help improve driver’s awareness of cyclists by providing a reminder that under Iowa state law, bicycles are allowed on all roads except for limited access highways.

Bike to Work Week is an important annual educational and advocacy event for cyclists. During May, communities across the country promote bike commuting through activities such as educational seminars, bike commuter breakfasts, organized group rides, raffle drawings, or bike commuter discounts at local businesses.26

The city should continue to enforce traffic regulations that aim to improve safety for all road users. Drivers, pedestrians, or cyclists who break traffic laws that put themselves or others in danger should be appropriately penalized.

---

Signage and Amenities

The visual preference survey completed during the first Community Involvement Forum indicated a strong preference for sidewalk and trail amenities. Amenities make the pedestrian experience more pleasant. Benches provide an opportunity to rest and socialize (Figure 10). Lighting improves safety and increases the number of hours that the trail is usable. Motion-activated lighting may be used to reduce costs at night. Placing litter containers along the trail can reduce the need for daily clean up (Figure 10). Signage is important as it can be used to articulate rules, provide directional and locational information, and give advance warning.

Theft of trail signs was a concern raised by TAC. To help deter theft of trail signs:

- Rivets can be used to permanently attach signs to posts
- Star or square bolts rather than regular sized bolts can be used (theft would require a specialized tool to unbolt signs)
- Signs should be placed in visible locations (e.g. under a light)
- Steel Telespar posts should be used in place of wood posts (Figure 9)

Signs should adhere to the Manual on Uniform Traffic Control Devices (MUTCD) standards as developed by the Federal Highway Administration. Signs should communicate their messages clearly and quickly. Adequate space, as designated in the MUTCD, should be used between signs so that users are not overwhelmed with sign clutter.

---

Section 6: Conclusions

Findings

Newton is well positioned to create a safe, usable, and integrated sidewalk, trail, and bikeway system that will enhance the attractiveness of the community for residents and visitors alike. Newton’s Sidewalk, Trail, and Bikeway Plan: A Path to Livability 2008 and Beyond provides the framework within which the City can plan for and build such a system. The plan was developed with extensive citizen participation and further technical refinement by a well qualified Technical Advisory Committee (TAC). It also takes into consideration the financial requirements and limitations associated with creating this system. We have found that residents do desire a safe, usable, and integrated system that is attractive to residents and visitors.

Final Comments

Though there have been numerous recommendations made throughout this plan, the following is a summary of the most important recommendations necessary to implement this plan. It is recommended that the city follows two key steps:

(1) Adopt the recommended 3-Phase Strategy devised by the TAC.
   a. Phase I (Short Term)
      i. Completion of a hike and bike trail route through downtown connecting the western side of Newton
      ii. Sidewalk construction and repair in priority areas such as schools, senior centers, and frequently visited parks
      iii. Establishment of on-street bike routes
   b. Phase II (Medium Term)
      i. Expansion of infill sidewalk construction to all other areas of the community
      ii. Sidewalk repair projects and upgrades to ADA compliant curb cuts
   c. Phase III (Long Term)
i. Development of an additional eastern hike and bike trail loop to connect the south east portion of Newton including the Iowa Speedway racetrack, and the eastern commercial area on the beltway

ii. Development of an additional route south of the High School that would provide an alternative to the steep slopes on the existing trail

iii. Development of spurs to connect existing municipal hike and bike system with the regional trail network

(2) Vigorously explore and pursue potential funding sources as listed Section 5, Implementation-Funding.

This plan should be viewed as a tool to help guide future development, improvement, and maintenance of a sidewalk, trails, and bikeway system. It should also be considered an educational resource for the citizens and leaders of Newton.
Appendices

Appendix I: Points of Interest (CIF I)
Appendix II: Survey Results (CIF I)
Appendix III: Visual Preference Survey and Results (CIF I)
Appendix IV: Route Preferences (CIF II)
Appendix V: Project Preferences (CIF II)
Appendix VI: Technical Advisory Committee Members
Appendix VII: Complete Streets Policies
Appendix VIII: Funding Sources
## Appendix I: Points of Interest (CIF I)

<table>
<thead>
<tr>
<th>Location</th>
<th># Times Indicated as Point of Interest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Newton Arboretum &amp; Botanical Gardens/Agnes Patterson Park</td>
<td>5</td>
</tr>
<tr>
<td>Maytag Farms</td>
<td>1</td>
</tr>
<tr>
<td>Jasper County Historical Museum</td>
<td>1</td>
</tr>
<tr>
<td>Newton Speedway</td>
<td>1</td>
</tr>
<tr>
<td>Proposed Casino</td>
<td>1</td>
</tr>
<tr>
<td>Jasper Winery</td>
<td>0</td>
</tr>
<tr>
<td>Newton YMCA</td>
<td>5</td>
</tr>
<tr>
<td>Sunset Park</td>
<td>5</td>
</tr>
<tr>
<td>Woodland Park</td>
<td>5</td>
</tr>
<tr>
<td>Maytag Park &amp; Pool</td>
<td>4</td>
</tr>
<tr>
<td>30 Acres Park</td>
<td>3</td>
</tr>
<tr>
<td>Route to Chichaqua Trail</td>
<td>2</td>
</tr>
<tr>
<td>Skate Costal</td>
<td>2</td>
</tr>
<tr>
<td>Aurora Park</td>
<td>1</td>
</tr>
<tr>
<td>Hillcrest Park</td>
<td>1</td>
</tr>
<tr>
<td>Softball Complex</td>
<td>1</td>
</tr>
<tr>
<td>Grassy Knoll/Park</td>
<td>1</td>
</tr>
<tr>
<td>Sunset Park West</td>
<td>1</td>
</tr>
<tr>
<td>Planned Park</td>
<td>1</td>
</tr>
<tr>
<td>Prairie Fire Prairie</td>
<td>1</td>
</tr>
<tr>
<td>#23 Potential Park</td>
<td>1</td>
</tr>
<tr>
<td>Quail Ridge Park</td>
<td>0</td>
</tr>
<tr>
<td>Deniston Knolls Park</td>
<td>0</td>
</tr>
<tr>
<td>Lincoln Park</td>
<td>0</td>
</tr>
<tr>
<td>Callison Park</td>
<td>0</td>
</tr>
<tr>
<td>Thomas Jefferson</td>
<td>4</td>
</tr>
<tr>
<td>Newton High School</td>
<td>3</td>
</tr>
<tr>
<td>Berg Middle &amp; Elementary Schools</td>
<td>3</td>
</tr>
<tr>
<td>Emerson Hough</td>
<td>3</td>
</tr>
<tr>
<td>Newton Christian School and Teen Center</td>
<td>3</td>
</tr>
<tr>
<td>Woodrow Wilson</td>
<td>2</td>
</tr>
<tr>
<td>Aurora Heights</td>
<td>1</td>
</tr>
<tr>
<td>DMACC/Buena Vista</td>
<td>0</td>
</tr>
<tr>
<td>Basic and Beyond</td>
<td>0</td>
</tr>
<tr>
<td>Art Installations</td>
<td>Health</td>
</tr>
<tr>
<td>------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>War Memorial Sculpture</td>
<td>Skiff Medical Center</td>
</tr>
<tr>
<td>#14 Sculptures</td>
<td>Skilled Rehab</td>
</tr>
<tr>
<td>#15 Sculpture</td>
<td>#11 Mural</td>
</tr>
<tr>
<td>#16 Sculpture</td>
<td></td>
</tr>
<tr>
<td>#17 Sculpture</td>
<td></td>
</tr>
<tr>
<td>Sir Rust-a-lot Sculpture</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1</th>
<th>1</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>1</th>
<th>1</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

| 1 | 1 | 1 |
### Appendix II: Survey Results (CIF I)

<table>
<thead>
<tr>
<th>Issue/Problem</th>
<th>% of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entire infrastructure</strong></td>
<td></td>
</tr>
<tr>
<td>Inadequate</td>
<td>14.3</td>
</tr>
<tr>
<td>Costly</td>
<td>4.8</td>
</tr>
<tr>
<td><strong>Sidewalks</strong></td>
<td></td>
</tr>
<tr>
<td>Poor conditions/sidewalk maintenance</td>
<td>28.6</td>
</tr>
<tr>
<td>Lack of sidewalks</td>
<td>28.6</td>
</tr>
<tr>
<td>Incomplete sidewalks/gaps in sidewalks</td>
<td>28.6</td>
</tr>
<tr>
<td>No curb cuts</td>
<td>9.5</td>
</tr>
<tr>
<td>Sidewalks too close to city streets</td>
<td>4.8</td>
</tr>
<tr>
<td>Lack of enforcement of city sidewalk ordinance</td>
<td>4.8</td>
</tr>
<tr>
<td>Narrow sidewalks/sidewalks not too wide</td>
<td>4.8</td>
</tr>
<tr>
<td><strong>Bike Lanes</strong></td>
<td></td>
</tr>
<tr>
<td>Lack of bikeways/No bike lanes</td>
<td>14.28</td>
</tr>
<tr>
<td>Bikeways not well connected</td>
<td>4.76</td>
</tr>
<tr>
<td><strong>Trails</strong></td>
<td></td>
</tr>
<tr>
<td>Trails not connected to popular destinations (incomplete trails)</td>
<td>23.8</td>
</tr>
<tr>
<td>Steepness</td>
<td>19.0</td>
</tr>
<tr>
<td>Lack of signage on trails</td>
<td>9.5</td>
</tr>
<tr>
<td>Safety</td>
<td>9.5</td>
</tr>
<tr>
<td>Inaccessibility</td>
<td>4.8</td>
</tr>
<tr>
<td>Lack of amenities on trails</td>
<td>4.8</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
</tr>
<tr>
<td>Walking on streets (Pedestrian safety)</td>
<td>9.5</td>
</tr>
<tr>
<td>Wheelchair users’ safety</td>
<td>4.8</td>
</tr>
<tr>
<td>Tree maintenance</td>
<td>4.8</td>
</tr>
<tr>
<td>Traffic crossing</td>
<td>4.8</td>
</tr>
<tr>
<td>Safety of bicyclists</td>
<td>9.5</td>
</tr>
<tr>
<td>Individual property right</td>
<td>4.8</td>
</tr>
</tbody>
</table>
Appendix III: Visual Preference Survey & Results (CIF I)

<table>
<thead>
<tr>
<th>Rank</th>
<th>Avg Score</th>
<th>Pedestrian or Cyclist Accommodations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>8.5</td>
<td>Separated Multi-Use Trail</td>
</tr>
<tr>
<td>2</td>
<td>8.4</td>
<td>Curb Cut with Early Warning Detection Device</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>Sidewalk &amp; Trail Amenities</td>
</tr>
<tr>
<td>4</td>
<td>7.3</td>
<td>Trail Roadway Continental Crossing</td>
</tr>
<tr>
<td>5</td>
<td>7.1</td>
<td>On-Street Bikeways</td>
</tr>
<tr>
<td>6</td>
<td>6.6</td>
<td>Trail Adjacent to Roadway</td>
</tr>
<tr>
<td>7</td>
<td>6.3</td>
<td>Crosswalks (Parallel and Continental)</td>
</tr>
<tr>
<td>8</td>
<td>6.2</td>
<td>Sidewalks</td>
</tr>
<tr>
<td>9</td>
<td>3.1</td>
<td>Sidewalks Missing</td>
</tr>
</tbody>
</table>


### Appendix IV: Route Preferences from CIF II

<table>
<thead>
<tr>
<th>Rank</th>
<th>Western</th>
<th>Eastern</th>
<th>(North) Inbound</th>
<th>(South) Outbound</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Route 2</td>
<td>Route 4</td>
<td>Route 1</td>
<td>Route 1</td>
</tr>
<tr>
<td>2</td>
<td>Route 1</td>
<td>Route 1</td>
<td>Route 2</td>
<td>Route 2</td>
</tr>
<tr>
<td>3</td>
<td>n/a</td>
<td>Route 2</td>
<td>Route 3</td>
<td>Route 3</td>
</tr>
<tr>
<td>4</td>
<td>n/a</td>
<td>Route 3</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Route</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Bikeway 7</td>
</tr>
<tr>
<td>2</td>
<td>Bikeway 8</td>
</tr>
<tr>
<td>3</td>
<td>Bikeway 1</td>
</tr>
<tr>
<td>4</td>
<td>Bikeway 2</td>
</tr>
<tr>
<td>5</td>
<td>Bikeway 4</td>
</tr>
<tr>
<td>6</td>
<td>Bikeway 5</td>
</tr>
<tr>
<td>7</td>
<td>Bikeway 3</td>
</tr>
<tr>
<td>8</td>
<td>Bikeway 6</td>
</tr>
</tbody>
</table>

### Appendix V: Project Preferences from CIF II

<table>
<thead>
<tr>
<th>Rank</th>
<th>Project Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Trails</td>
</tr>
<tr>
<td>2</td>
<td>Sidewalks</td>
</tr>
<tr>
<td>3</td>
<td>Bikeways</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Sidewalk Improvement Areas</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Schools</td>
</tr>
<tr>
<td>2</td>
<td>Neighborhood Residential Areas</td>
</tr>
<tr>
<td>3</td>
<td>Parks</td>
</tr>
<tr>
<td>4</td>
<td>Public Facilities/Buildings</td>
</tr>
<tr>
<td>5</td>
<td>Commercial Areas</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Trail Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Western Newton Connector loop</td>
</tr>
<tr>
<td>2</td>
<td>Connecting trails to downtown</td>
</tr>
<tr>
<td>3</td>
<td>Reducing steep slopes on existing trails</td>
</tr>
<tr>
<td>4</td>
<td>Reducing steep slopes on existing trails</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Rank</th>
<th>Sidewalk Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Improving existing sidewalk condition and accessibility</td>
</tr>
<tr>
<td>2</td>
<td>Installing sidewalks in areas where they do not exist</td>
</tr>
<tr>
<td>3</td>
<td>Increasing number of curb ramps</td>
</tr>
<tr>
<td>4</td>
<td>Marking crosswalks</td>
</tr>
</tbody>
</table>
Appendix VI: TAC Members

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>David Gale</td>
<td>Interested Citizen</td>
</tr>
<tr>
<td>Tom Hollander</td>
<td>Member of the Spirited Spokes</td>
</tr>
<tr>
<td>Bob Bringolf</td>
<td>Engineering Supervisor</td>
</tr>
<tr>
<td>Denny Slings</td>
<td>Parks &amp; Recreation Director</td>
</tr>
<tr>
<td>Jeff Maki</td>
<td>Planning and Zoning Commissioner</td>
</tr>
<tr>
<td>Bernie Lammers</td>
<td>Planning and Zoning Commissioner</td>
</tr>
<tr>
<td>Bryan Friedman</td>
<td>Director of Community Development</td>
</tr>
<tr>
<td>Erin Chambers</td>
<td>City Planner</td>
</tr>
</tbody>
</table>

Appendix VII: Complete Streets Policies

CITY OF CASCADE

POLICY STATEMENT

COMPLETE STREETS: INTEGRATING BICYCLING AND WALKING INTO TRANSPORTATION INFRASTRUCTURE

POLICY STATEMENT:

1. Bicycle and pedestrian ways shall be established in new construction and reconstruction projects with in the city limits of Cascade unless one or more of the following conditions are met:

   *bicyclist and pedestrians are prohibited by law from using the roadway. In this instance a greater effort may be necessary to accommodate bicyclist and pedestrians elsewhere within the right of way or within a near by parallel corridor.

   *the cost of establishing bikeways or walkways would be excessively disproportionate to the need or probable use. Excessively disproportionate is defined as exceeding twenty percent of the cost of the overall transportation project.

   *where sparsity of population or other factors indicate an absence of need. This is defined as streets developed as a cul-de-sac with four or fewer dwellings or if the street has severe topographic or natural resource restraints. Also an indication of absence of need will be on streets where the speed limit is no more than twenty-five miles per hour and/or the average daily vehicle counts are less than 250 vehicles per day.

2. Sidewalks, shared use paths, street crossings (including over and under crossings), pedestrian signals, signs, street furniture and facilities, as well as all connecting
pathways shall be designed, constructed, operated, and maintained so that all pedestrians, including people with disabilities, can travel safely and independently.

3. The design and development of the transportation infrastructure shall improve conditions for bicycling and walking through the following steps.

*planning projects for the long-term. Transportation facilities are long-term investments that remain in place for many years. The design and construction of new facilities that meet the criteria in item 1. above should anticipate likely future demand for bicycling and walking facilities and not preclude the provision of future developments. For example a bridge that is likely to remain in place for 50 years, might be built with sufficient width for safe bicycle and pedestrian use in anticipation that facilities will be available at either end of the bridge even if that is not currently the case.

*addressing the need for bicyclist and pedestrians to cross corridors as well as travel along them. Even where bicyclist and pedestrians may not commonly use a particular corridor that is being improved or constructed, they will likely need to be able to cross that corridor safely and conveniently. Therefore the design of intersections shall accommodate bicyclist and pedestrians in a manner that is safe, accessible and convenient.

*getting exceptions approved by the city administrator. Exceptions for non-inclusion of bikeways and walkways shall be approved by the city administrator and be documented with supporting data that indicates the basis for the decision.

*facilities shall be designed to currently available standards and guidelines. The design of facilities for bicyclist and pedestrians that are commonly used, AASHTO Guide for the Development of Bicycle Facilities, AASHTO's A policy on Geometric Design of Highways and Streets, and the ITE Recommended Practice “Design and Safety of Pedestrian Facilities.”
CITY OF IOWA CITY
COMPLETE STREETS RESOLUTION

WHEREAS, the City of Iowa City is committed to creating street corridors that accommodate bicyclists, pedestrians and public transit as well as motorized vehicles; and

WHEREAS, pedestrian, bicycle, public transit and motorized vehicle facilities will be implemented through subdivision design standards and public street construction and reconstruction projects; and

WHEREAS, a sidewalk infill fund has been established to construct sidewalks within existing street rights-of-way where the streets are not being reconstructed; and

WHEREAS, bicycle and pedestrian facilities will not be required where their use is prohibited; and

WHEREAS, public transit facilities will not be required on streets that do not serve as a bus transit route and the desirability of public transit facilities will be determined on a project specific basis; and

WHEREAS, bicycle, pedestrian, and public transit facilities will not be required where their cost is excessive as defined by this resolution; and

WHEREAS, Council desires to amend the Complete Streets Policy adopted by Resolution No. 07-109 to clarify that the City Council will make the decision whether the cost of bicycle, pedestrian and/or other public transit facilities is disproportionate to the need or probable use.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF IOWA CITY, IOWA, THAT:

All public street projects or public street reconstruction projects (not including maintenance) in the City of Iowa City shall be designed to accommodate travel by pedestrians, bicyclists, public transit, and motorized vehicles and their passengers with the following exceptions:

1. Bicycle and pedestrian facilities are not required where they are prohibited by law such as within interstate highway corridors.

2. Public transit facilities are not required on streets not serving as transit routes; the desirability of bus turn-off bays and other transit facilities will be determined on a project specific basis.

3. If the cost of bicycle, pedestrian, and/or public transit facilities is excessively disproportionate to the need or probable use, defined as at least 20% of the overall project cost.
cost, the City Council may choose not to require bicycle, pedestrian and/or transit facilities. This action may occur during the budget and capital improvements program approval process, at a work session discussing the project, and/or when project plans and specifications are approved.
Funding Sources

The Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which was signed into law in 2005 and contains many provisions of the Transportation Efficiency Act of 1998 (TEA-21), is the principal source of federal funding for trails, sidewalks, and bikeways. There are many sections of TEA-21 and SAFETEA-LU that support the development of bicycle and pedestrian transportation corridors. Those sections that apply to the creation of trails, sidewalks, and bikeways include the following:

Surface Transportation Program (STP) Funds

These funds can be used by states and local governments for roads that are not purposely classified as local or rural collectors. Bicycle and pedestrian facility projects can be funded under this program. Transit capital improvements are equally eligible for funding under this program. The nine Metropolitan Planning Organizations (MPOs) and/or the 18 Regional Planning Affiliations (RPAs) in conjunction with the Iowa DOT manage these funds. The local contact is therefore the MPO or the RPA or the District Transportation Planner and/or the Surface Transportation Program Management Division in the Iowa DOT.

Contact information:

<table>
<thead>
<tr>
<th>Tom Kane, Executive Director</th>
<th>Lorne Wazny, District Transportation Planner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Des Moines MPO</td>
<td>1020 S 4th Street</td>
</tr>
<tr>
<td>6200 Aurora Ave Suite 300 W</td>
<td>Ames, Iowa 50010</td>
</tr>
<tr>
<td>Urbandale, Iowa 50322-2866</td>
<td>Ames, Iowa 50010</td>
</tr>
<tr>
<td>Email: <a href="mailto:tjkane@dmampo.org">tjkane@dmampo.org</a></td>
<td>Email: <a href="mailto:lorne.wazny@dot.iowa.gov">lorne.wazny@dot.iowa.gov</a></td>
</tr>
</tbody>
</table>

Federal Transportation Enhancement Program (TE)

The intent of the TE program is to fund enhancement or preservation activities of transportation-related projects. Projects that are funded fall into the following categories:

- Trails and bikeways;
- Historic and archaeological, or
- Scenic and environmental.

Public agencies as well as private non-profit organizations are qualified for funding. However, private sponsorship requires a public agency as a co-sponsor.

At least 30% local match is required for statewide enhancements and a minimum of 20% local match is required for regional enhancement projects as determined by the MPO or the
RPA policies. Enhancements must have a direct relationship to the existing or planned surface transportation facilities.

The application deadline is October 1st for statewide project applications. MPOs and RPAs may have different deadlines for regional or metropolitan applications. For more information on this program, contact the following persons:

<table>
<thead>
<tr>
<th>Contact Information:</th>
<th>Contact Information:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nancy B. Anania</td>
<td>Troy Siefert</td>
</tr>
<tr>
<td>Iowa Department of Transportation</td>
<td>Iowa Department of Transportation</td>
</tr>
<tr>
<td>Office of Systems Planning</td>
<td>Office of Systems Planning</td>
</tr>
<tr>
<td>800 Lincoln Way</td>
<td>800 Lincoln Way</td>
</tr>
<tr>
<td>Ames, Iowa 50010</td>
<td>Ames, Iowa 50010</td>
</tr>
<tr>
<td>Phone: 515 – 239 - 1621</td>
<td>Phone: 515 – 239 - 1369</td>
</tr>
<tr>
<td>Email: <a href="mailto:nancy.anania@dot.iowa.gov">nancy.anania@dot.iowa.gov</a></td>
<td>Email: <a href="mailto:troy.siefert@dot.iowa.gov">troy.siefert@dot.iowa.gov</a></td>
</tr>
</tbody>
</table>

**Congestion Mitigation and Air Quality Improvement Program**

The Congestion Mitigation and Air Quality Improvement (CMAQ) Program, which is administered in Iowa as ICAAP\(^{28}\), is an innovative program established by the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). The ISTEA created flexible guidelines that allow the CMAQ Program to cut across traditional boundaries and encompass projects and programs dealing with highways, transit, and non-traditional areas, such as vehicle emission inspections and maintenance to name just a few. The CMAQ program was created to reduce congestion on local streets and improve air quality. Funds are available to communities designated as “non-attainment” or “maintenance” areas for the National Ambient Air Quality Standards as determined by the EPA. Funds are distributed to states based on population by county and the severity of air quality problems. A 20-percent local match is required.

CMAQ Program funds (Section 1008) may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as brochures, public service announcements, bike racks on busses, and route maps) related to safe bicycle use. More information on this program can be accessed at [http://www.sysplan.dot.state.ia.us/icaap.htm](http://www.sysplan.dot.state.ia.us/icaap.htm).

**Safe Routes to School Program**

The purpose of the *Safe Route to School program* is to enable and encourage children, including those with disabilities, to walk and bicycle to school. The program also helps

\(^{28}\) ICAAP stands for Iowa Clean Air Attainment Program; it was established in 1995 by the Iowa DOT Commission to achieve the purpose of the CMAQ Program.
make walking and bicycling to school safe and appealing, and helps facilitate the planning and implementation of projects that improve safety, reduce traffic fuel consumption and air pollution in the vicinity of schools.

Funds are available for school boards or local government agencies to implement infrastructure and non-infrastructure related activities. Eligible activities include: sidewalk improvements; traffic calming and speed reduction improvements; pedestrian and bicycle crossing improvements; on-street bicycle facilities; off-street bicycle and pedestrian facilities; secure bicycle parking facilities; traffic diversion improvements within two miles of a school; public awareness campaigns and educational materials; traffic education and enforcement in the vicinity of a school; school sessions on bicycle and pedestrian safety; and training for volunteers and managers of SRTS programs. The deadline for application every year is usually the first of October.

Contact Information:
Kathy Ridnour, Iowa SRT Program Coordinator
Office of Systems Planning
Iowa Department of Transportation
800 Lincoln Way
Ames, Iowa 50010
Phone: 515 – 239 – 1713  Fax: 515 – 233 - 7857
Email: kathy.ridnour@dot.iowa.gov
Website: http://www.dot.state.ia.us/saferoutes

Federal Recreational Trails Program (RT)

This program helps provide and maintain motorized and non-motorized recreational trails and trail-related projects, such as trailheads, kiosks, lighting, etc. To qualify for this program, the City must provide a minimum 20% match. Also, funded trails must be maintained as a public facility for at least 20 years. Application deadline is usually October 1st and application forms can be obtained from the Iowa DOT. For further information, contact Steve Bowman. See contact information below.

Contact Information:
Steve Bowman
Iowa Department of Transportation
Office of Systems Planning
800 Lincoln Way
Ames, Iowa 50010
Phone: 515 – 239 – 1337
Email: steven.bowman@dot.iowa.gov
State Recreational Trails Program

The purpose of this program is to provide funds for public recreational trails. Cities, counties, and state agencies are eligible for sponsorship. To receive funding, an applicant must meet the following requirements:

- At least 25% local match is required. [Note that volunteer services and other state grants are not eligible as matching funds];
- Proposed projects must be a part of a local, area-wide, regional or statewide trail plan;
- Successful or funded projects must be maintained as a public facility for a minimum of 20 years.

For more information/applications, also contact Steve Bowman. See his contact information above.

Land and Water Conservation Fund (LWCF)

The LWCF, which began in 1965, provides federal grant funds to acquire land for outdoor recreation and to develop or renovate public outdoor recreation facilities. Cities and counties are eligible to apply. More information about this program can be accessed at http://www.nps.gov/lwcf/. In Iowa the contact information is:

Administrator
Conservation and Recreation Division
Department of Natural Resources
E 9th Street & Grand Avenue
Des Moines, Iowa 50319
Phone: 515 – 281 - 8657

Community Development Block Grant (CDBG)

This program makes federal funds available to cities and counties in the form of state grants for community development. Funds are designated for activities that must meet at least one of three national objectives: benefit low to moderate income persons; prevention or elimination of slums or blight; or meeting particularly urgent community development needs. Eligible applicants are all cities and counties except “entitlement jurisdiction” which may receive similar federal funds directly.

CDBG Small Cities: Community Projects

Funds are designated for projects that will generally enhance the community. Various activities are eligible. Typical examples of funded projects include construction of senior citizens centers, community centers and small infrastructure projects. Projects should primarily benefit low to moderate-income persons. Local match is recommended but not required.
Hazard Elimination Safety Program (HESP)

The Hazard Elimination Safety Program (HESP) is a federal safety program that provides funds for safety improvements on all public roads and highways. This program involves a process that identifies safety locations or sections of streets and highways which have high collision experience and, through analysis, identifies corrective actions which, when implemented, provide a greater degree of safety for the traveling public. In short, the HESP funds are used to either eliminate or reduce the number and/or risk of traffic accidents at locations selected for improvement. Typical project improvements include such items as intersection reconstruction with turning lanes, improving sight distance, changing horizontal and vertical alignment, signalization and intersection lighting. For more information, check: http://www.dot.ca.gov/hq/LocalPrograms/hesp/hesp.htm

Additional Funding Ideas

Although Federal monies provide the primary funding source for bikeways, state or local governments may also provide revenues from their general funds, special bond levies, transportation impact fees or system development charges. Cooperative projects with utility districts or companies can be funded to jointly build bridges across streams to carry both utility lines and bicycle traffic.

Local Capital Improvement Program Funds

Greenways can be funded through sales tax or local option sales tax (LOST) revenues. One example for a community that is using sales tax dollars to fund bicycle and pedestrian facilities is Cobb County, Georgia, where citizens voted to implement a one percent local sales tax to provide funding for transportation projects. Over four years, Cobb County Department of Transportation will receive $3.8 million of this sales tax revenue for bicycle improvements alone, to be used as a match for federal dollars. Another example is Oklahoma City, where voters approved a temporary $0.01 sales tax, which generated millions of dollars for greenway acquisition and development.

Impact Fees

Impact fees are monetary one-time charges levied by a local government on new development. Unlike required dedications, impact fees can be applied to finance greenway facilities located outside the boundary of development. These fees can be levied through the subdivision or building permit process to finance greenways.

Bond Referendums

Communities across the nation have successfully placed propositions on local ballots to support greenway development. The Charlotte-Mecklenburg County, North Carolina area passed four consecutive referendums that generated more than $3 million for greenways. Guilford County, North Carolina also passed a referendum that appropriated $1.6 million
for development of the Bicentennial Trail. Since bonds rely on the support of the voting population, an aggressive education and awareness program will need to be implemented prior to any referendum vote.

Local Businesses

Local industries and private businesses may agree to provide support for development of greenways through: donations of cash to a specific greenway segment; donations of services by corporations to reduce the cost of greenway implementation, including equipment and labor to construct and install elements of a trail, and reduction in the cost of materials purchased from local businesses that support greenway implementation and can supply essential products for facility development.

This method of raising funds requires a great deal of staff coordination. One example of a successful endeavor of this type is the Swift Creek Recycled Greenway in Cary, North Carolina. A total of $40,000 in donated construction materials and labor made this trail an award-winning demonstration project. (Some materials used in the “recycled trail” were considered waste materials by local industries!)

Trail Sponsors

A sponsorship program for trail amenities allows for smaller donations to be received both from individuals and businesses. The program must be well planned and organized, with design standards and associated costs established for each amenity. Project elements, which may be funded, can include wayside exhibits, benches, trash receptacles, entry signage, and picnic areas. Usually, plaques recognizing the individual contributors are placed on the constructed amenities or at a prominent entry point to the trail.

Volunteer Work

Community volunteers may help with trail construction, as well as fund-raising. Potential sources of volunteer labor could include local bicyclists, local historical groups, neighborhood associations, local churches, conservation groups, school groups, and local civic clubs such as the Chambers of Commerce and the Rotary and Lions Clubs. A good example of a volunteer greenway program is Cheyenne, Wyoming, which generated an impressive amount of community support and volunteer work. The program has the unusual problem of having to insist that volunteers wait to begin landscaping trails until construction is completed. A manual for greenway volunteers was developed in 1994 to guide and regulate volunteer work. The manual includes a description of appropriate volunteer efforts, request forms, waiver and release forms, and a completion form. [Volunteers are asked to summarize their accomplishments].

To better organize volunteer activity, Cheyenne developed an “Adopt-a-Spot” program. Participants who adopt a segment of the trail are responsible for periodic trash pick-up, but can also install landscaping, prune trail-side vegetation, develop wildlife enhancement projects, and install site amenities. All improvements must be consistent with the Greenway Development Plan and must be approved by the local Greenway Coordinator.
*Adopt-a-Spot* volunteers are allowed to display their names on a small sign along the adopted section of greenway.

**“Buy-a-Foot” Programs**

“*Buy-a-Foot*” Programs have been successful in raising funds and awareness for trail and greenway projects across the country. Under local initiatives, citizens are encouraged to purchase one linear foot of the greenway by donating the cost of construction. An excellent example of a successful endeavor is the High Point (North Carolina) Greenway “*Buy-a-Foot*” campaign, in which linear greenway “feet” were sold at a cost of $25 per foot. Those who donated were given a greenway T-shirt and a certificate. This project provided an estimated $5,000 in funds.

**Developer Dedications**

Cary, North Carolina, has used a dedication program to acquire land for its greenway program. Other communities have used such programs to build facilities, such as sidewalks, trails and other amenities, as part of new development. The developer typically fronts the cost of these improvements and passes the costs along to homebuyers.
Annotated Bibliography


- The final report of the Regulatory Negotiation Committee established in 1997 by the Architectural and Transportation Barriers Compliance Board to propose rules for outdoor developed areas, including trails, outdoor recreation access routes, beach access routes, as well as picnic and camping facilities.
- The report covers issues dealing with trail alterations and maintenance, relationship between use of ATVs and the Proposed Trail Accessibility Guidelines, shared-use paths (trails), etc.
- It compares the AASHTO Guidelines for Bicycle Facilities and the Proposed Guidelines for Trails.


- Highlights the cause and areas of pedestrian’s deaths and injuries on U. S. Roads;
- Identifies strategies to employ in addressing issues associated with pedestrian collisions, injuries, and deaths.
- Highlights bicyclist fatalities and injuries as well as outlines strategies that can be used to reduce, if not prevent, the number of bicyclists killed and injured annually.

America Bikes' Resources on Complete Streets. Available at http://www.americabikes.org/completestreets.asp. The resources on this site include but not limited to the following:

- Complete Street Power Point Presentation
- Complete the Street for Safer Bicycling and Walking
- The Benefits of Complete Streets
- Policy papers
- Description of Senator Tom Harkin’s Safe and Complete Streets Amendment to SAFETEA


- The paper highlights the Cedar Valley Trail System and rural Cedar Valley Nature Trail location project, originally known as the Trail Emergency Access System (TEAS) developed in 1999 to assist emergency responders in locating Trail users in need of help.
- The authors present and discuss a new project called Cedar Valley Trails 911 Signs Project (or 911 Signs in short).
• 911 Signs is a comprehensive approach to geo-referencing trail locations for emergency response and asset management purposes.
• It provides a practical solution to location communication in emergency situations and serves as an asset inventory of all features along this transportation corridor.


• A community-based program with the following goals: 1) to encourage children to walk and bicycle to and from school; 2) to increase awareness of the importance of regular physical activity for children, improved pedestrian safety, and healthy and walkable community environments, and 3) to mobilize communities to work together to create safe routes to school.

City of Newton, Iowa (2002). *Code of Ordinances, Title 4 (Land Use).*
• This is Chapter 35 of Newton Subdivision Ordinance.
• It outlines among other issues the following: 1) Plat or subdivision application process; 2) Street and sidewalk requirements 3) Capital improvements; 4) Easements, and 5) Developers’ requirement

• A multi-use trail plan designed for the City of Spencer by the RDG Planning and Design Company of Des Moines Iowa.
• The plan seeks to achieve the same purpose as the one being developed for the City of Newton.


• First developed in September 2000 and then updated in February 2005;
• Aims at making the City of Hickory a more livable community through the development of pedestrian and bikeway facilities, greenways and trails.


• Hard copies of this handbook can also be obtained from the Iowa Department of Transportation, Office of Systems Planning, 800 Lincoln Way, Ames, IA 50010, website: [www.dot.state.ia.us](http://www.dot.state.ia.us), Phone: 515 – 239 - 1669
• The handbook has two objectives: 1) to serve as a companion piece to Iowa Trails 2000 and 2) to serve as a resource guide for communities throughout the State of Iowa.
• It sets forth guiding principles for implementing trail-based community development approaches and provides a mix of case studies highlighting lessons,
including successes and failures, learned from other places, especially in the Midwest.


- Discusses what determines the price of real estate and why property values vary in different locations;
- Reports that location and public choices about capital investments in community assets, such as trails, can affect property values.


- Discusses trails and tourism;
- Gives examples of trails that attract tourists, provides a framework for analyzing trail tourism, and offers checklists for calibrating the tourism potential of a trail or trail system.


- Outlines the benefits or advantages of trails and provides links to six case studies in other states, highlighting the economic and community benefits of trails and greenway developments.


- The Rails-to-Trails Conservancy with the support of the National Park Service Rivers, Trails, and Conservation Assistance Program tried to investigate criticisms that trails can attract drug dealers, murderers, and rapists.
- The researchers sought to: 1) document the levels of crime on urban, suburban, and rural rail-trails with current and comprehensive data, 2) examine trail management strategies that can mitigate crime and improve trail safety, and 3) put crime on trails in perspective.

• The City of Anchorage, in response to community safety concerns prompted by several incidents on Anchorage trails systems, in 2003, developed the Trail Watch program.
• The program is community-based and focuses on the following: 1) volunteer patrols, 2) trail maintenance reporting system, 3) enhanced signage, and 4) better tracking system for reporting crime on the trails.


• This article reports finding of a study sponsored by the FHWA to better understand the physical dimensions and operational characteristics of an increasingly diverse group of non-motorized trail and roadway devices.


• Covers the major issues in rural tourism, including but not limited to steps in planning and developing tourism as well as economic impact of tourism.
• Provides web links to information guides, manuals, and handbooks that local officials, communities, and citizens involved in tourism planning and development could utilize.

http://www.nps.gov/pwro/rtca/econ_index.htm
A resource book covering a wide range of relevant subject areas, including relationships between trails and real property values and between trails and tourism.
• Gives examples of case studies that underscore the effects of the relationships between trails and real property values and between trails and tourism.

http://www.americantrails.org/resources/adjacent/sumadjacent.html

• Highlights findings of three studies conducted in Denver (Colorado), Santa Rosa (California), and Cary (North Carolina) respectively;
• All three studies show that trails have significant positive impact on the values of properties adjacent to them.