City of Bloomington
Common Council

Legislative Packet

Committee of the Whole

23 January 2008

Office of the Common Council
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City of Bloomington Indiana

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To: Council Members
From: Council Office
Re: Weekly Packet Memo
Date: January 18, 2008

Packet Related Material

Memo
Agenda
Calendar

Notices and Agendas:

- **State of the City Address** in the Council Chambers on Thursday, January 24, 2008 at 5:30 p.m.

Legislation for Dicussion:

- **Res 08-02** To Amend the City's Comprehensive Plan to include an Update to the Alternative Transportation and Greenways System Plan
  - Certification; Memo to Council from Scott Robinson, Long Range/Transportation Manager; Alternative Transportation and Greenways System Plan
  Contact: Scott Robinson at 349-3566 or robinsos@blooomington.in.gov

Memo

Reminder: State of the City on Thursday at 5:30 p.m. in the Council Chambers

One Resolution Ready for Discussion at the Committee of the Whole on Wednesday, January 23rd

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Item One -- Res 08-02 To Amend the City's Comprehensive Plan to include an Update to the Alternative Transportation and Greenways System Plan

There is one resolution ready for discussion next week which is summarized and included herein.

Resolution 08-02 amends the City's *Growth Policies Plan* (GPP) by updating the GPP's *Alternative Transportation and Greenways System Plan* (ATGSP). State statute refers to the GPP as the City's "comprehensive plan" and directs that any amendments to the comprehensive plan be prepared by the Plan Commission and forwarded to the Common Council (IC §36-7-4-501). The ATGSP was first amended into the GPP in October 2001 (Res 01-24); the GPP was subsequently amended in November 2002 (Res 02-19).

The ATGSP is a commitment by the City to "design, construct, and maintain a network of safe, convenient, and attractive bicycle and pedestrian facilities for community and recreational use throughout the City." (p. iv). The ATGSP aims to:

- alleviate traffic congestion
- improve the health, fitness, and quality of life for its residents
- reduce community costs;
- expand tourism opportunities;
- build the City's assessed value;
- increase and stabilize property values;
- enhance the local economy;
- aid business recruitment efforts;
- provide opportunity to those without cars or otherwise unable to drive; and
- improve and preserve the natural environment. *Id*.

As spelled out in the original 2001 ATGSP, the policies outlined in the document are not intended to be static; instead the ATGSP is intended to be a living document that evolves and adapts to changing circumstances. From the 2001 ATGSP, "[F]or the Plan to be effective it must be reviewed, evaluated, and when necessary, updated to reflect changing trends and attitudes of the community." (p. iv). The proposed ATGSP update is not a new plan; indeed, much of the policy guidance provided in the original 2001 document remains the same. As made clear in the *Memorandum* submitted by Scott Robinson, Long Range/Transportation Manager, the update is a response to changing community trends and a need to maintain consistency with the development regulations for alternative transportation facilities contained in the Unified Development Ordinance (UDO).

Update Process

In updating the document, staff conducted field evaluations, thoroughly reviewed the 2001 ATGSP, assembled a local advisory committee, conducted public outreach and coordinated efforts with other governmental and business stakeholders. The update process is detailed both in the draft update and in the accompanying *Memorandum* submitted by Scott Robinson. The following is a brief summary:

- **Field Evaluations –** Planning staff closely evaluated the entire alternative transportation and greenways network as captured in the *Bicycle and Pedestrain Facitilities Network Map*.
- **Strategic Advisory Committee (SAC) –** Comprised of local residents, board and commission representatives, and City and County staff, the SAC was created to review staff recommendations and guide staff through the process. Among the SAC's recommendations were: more funding is needed; high priority should be placed on connector paths, education programs, bike lanes and multi-use paths; bicycle boulevards should be included in the ATGSP; public outreach should extend beyond City Hall; the update process should afford the community the opportunity to explore new ideas. Please consult the ATGSP for a complete list of SAC participants.
- **Public Outreach** – Planning Staff conducted outreach at the Monroe County Public Library and a public workshop at City Hall.

  MCPL -- The event at the library was a two-day event intended to capture feedback from those who typically do not attend City meetings. Staff talked to approximately 130 patrons and received questionnaires from 70. This feedback revealed that completion of the B-Line Trail, a greater abundance and convenience of bike lanes and multi-use trails are high priorities. Most respondents thought the City should be "aggressive' in implementing the ATGSP and generally thought the City does an average job in implementing an alternative transportation network.

  City Hall Workshop – This event was designed to focus feedback around the *Bicycle and Pedestrian Map*, rank projects for strategic plan development, address Bicycle Boulevards and address any other concerns. The Workshop resulted in: a draft *Bicycle and Pedestrian Map*, focusing primarily on small connector paths and bike routes (p.9 of ATGSP); implementing strategies (pp. 14-27 of ATGSP); Bicycle Boulevard design (pp. 74-75) and corridor identification (p. 11).
- **Inter-governmental coordination –** Staff coordinated its update efforts with the Bloomington Bicycle and Pedestrian Commission, the Bloomington/Monroe County MPO, Downtown Bloomington, Inc., the Environmental Commission and the Plan Commission.

Changes Proposed in the 2007 Update

The ATGSP is composed of three primary sections: 1) Strategic Plan; 2) Plan Development; and 3) Design Guidelines. The following summarizes the changes made in the proposed 2007 ATGSP.

Preface

The 2007 ATGSP added and deleted language to reflect the current state of the ATGSP. The *Preface* points out that as of 2007, "approximately 11 miles of bike lanes, 34 miles of signed bike routes, 11 miles of sidepaths/connector paths, and 20 miles of unimproved trails and multi use trails have been provided to encourage increased bicycle and pedestrian activities. However, more work is needed." (p. v)

Strategic Plan

The most substantive changes to the 2007 ATGSP occur in the *Strategic Plan* section of the document. This section outlines the conceptual framework for a bicycle and pedestrian network and translates this framework into a plan for implementing the network based on priorities. The conceptual plan is based on three distinct character areas of the City: 1) Central City (downtown, historic neighborhoods, and adjacent, densely urbanized areas); 2) Urbanizing Ring (subdivisions, commercial nodes, and industrial areas outside of the Central City) and 3) Fringe (undeveloped areas, farmland, natural, and transitional areas). The new plan identifies what sort of facilities are suitable to each character area, e.g., bike lanes, signed bikes routes, connector paths and sidewalks for built-up segments of the Central City (*See* p. 5). The new plan also adds Bike Boulevards, sharrows ("share-the-road arrows") and connector paths to its list of primary facilities -- previously, the list only included signed bike rotes, bike lanes, sidepaths, sidewalks, and multi-use trails.

Unlike the previous plan which offered a year-by-year schedule of facility installments, the 2007 ATGSP provides a broad vision for future bicycle and pedestrian facilities and establishes ranked priorities for these facilities. The *Bicycle and Pedestrian Map* (p.9) outlines 23 miles of future bike lanes and 72 miles of future side/connector paths and multi-use trails. Compare this to the extant 11 miles of bike lanes and 17 miles of side/connector paths and multiuse trails. The new plan also contains a map of future Bicycle Boulevards, which will likely be a hybrid consisting of improvements such as bike lanes, signage, traffic calming and pavement marking. (p.11)

The 2007 ATGSP prioritizes the implementation of these facilities by ranking projects High, Medium and Low priority. This section of the plan makes it clear that the ranking of projects is intended to guide public investment and "should not

be construed as conveying community support, or lack thereof, for a particular project. Rather all initiatives. . . are equally important." (p. 13). The document states that the priorities are not intended to prioritize private investment as part of development approvals. The 2007 ATGSP ranks each project by priority and tracks the phase of each project (feasibility, design or construction). Higher ranking projects should be initiated prior to lower-ranking projects. Conceptual priority maps are provided for High and Medium-Priority projects (High Priority, p. 17; Medium Priority, p. 23). Major High-priority projects include completion of the B-Line, Clear Creek and Jackson Creek Trails; extension of the Polly Grimshaw trail, Bicycle Boulevards and neighborhood connector paths. Notably, the new plan also suggests possible funding partnerships, such as MPO, IU, INDOT and Monroe County.

The document states that the strategies sketched out in the 2007 ATGSP are ambitious, but flexible by design. The strategies should be continuously evaluated for progress in implementation. Just as funding sources, user needs and community priorities shift over time, the ATGSP should be updated when evaluation reveals significant deviation from the plan's priorities.

Plan Development

This section remains largely the same; only a few references and factual information were revised in 2007. This section spells out the benefits of alternative transportation and greenways and outlines the goals and vision of the ATGSP. Again, the stated benefits include: reduced congestion; non-driver accessibility; quality of life; health and wellness; economy and tourism; and environmental integrity. The vision is stated in terms of bicycle and pedestrian users, connectivity, funding, maintenance, environment, economic development and tourism.

Design Guidelines
This section establishes general design principles for bicycle and pedestrian facilities. As explained in the ATGSP, these design guidelines are intended to assist City staff with the development of bicycle and pedestrian facilities that are safe, convenient, and attractive as well as ensure uniformity of design, layout, and construction of facilities. These guidelines are to be used in conjunction with the standards provided by the Public Works department, the Indiana Department of Transportation (INDOT) and the American Association of State Highway and Transportation Officials (AASHTO).

This section too, remains largely unchanged with the exception of two significant modifications: surface materials and guidelines for sharrows and Bicycle Boulevards. The 2007 ATGSP updates and expands the discussion of environmentally-friendly alternatives to asphalt and concrete to reflect advances in technology (namely, pervious concrete, pervious asphalt, block pavers, and boardwalks) (p. 64). The new plan points out that such surface materials substantially reduce stormwater runoff and improves water quality. *Id*.

The 2007 ATGSP also includes design guidelines for sharrows and bicycle boulevards since these two facilities were not included in the 2001 TGSP. As explained in Robinson's *Memorandum*, sharrows are recommended where a bike lane would be desirable, but is not feasible due to road width. (p.73) Bicycle Boulevards are more general and consist of a combination of facilities. The 2007 ATGSP points to the Berkeley, California Bicycle Boulevard program and recommends that Bloomington loosely model its own program after that of Berkeley. The plan points out that Berkeley is a suitable model for our community because: it is the site of a large State university; it has an extensive history of planning and implementing Bicycle Boulevards; the goals and objectives of Berkeley's program are compatible with, and transferable to, Bloomington; Berkeley has developed extensive design guidelines that can serve as a starting point for implementation of Bicycle Boulevards (p. 74).

Appendix
The previous ATGSP located appendices after every two chapters. The 2007 ATGSP consolidated all this information into a single appendix.

Role of the Plan Commission

After two hearings, the Plan Commission adopted the 2007 ATGSP by unanimous vote in December. Robinson states that most of the changes focused on clarifying language and were not substantive in nature. The following is a brief review of the Plan Commission's comments and any subsequent changes made to the draft as recounted in Robinson's *Memorandum*.

- **Name Change**

  The Plan Commission discussed changing the title of the ATGSP to reflect its predominantly bicycle and pedestrian nature. Staff cautioned that since the UDO references the ATGSP, any title change would require an amendment to the UDO. Staff also pointed out that the community has come to recognize the current title over the last six years and that any change might suggest that this is a completely new plan, which it is not. The Commission agreed with staff and did not change the title.

- **Congested Areas, Potential Safety Islands &Pedestrian-Activated Crossings**

  The Commission also suggested that the document identify congested areas, potential pedestrian safety islands, and pedestrian-activated crossings. Staff responded that the locations and design issues related to pedestrian safety are best resolved on a case by case basis.

- **Measuring the Success of the Plan**

  A suggestion was also made that language on page 58 be changed so that measurements other than "completed projects" be used to measure the success of the plan. Staff responded that since the primary focus of the update was not on the Plan Development chapter, this may not be a current concern of the community. Indeed, public feedback suggests that the City should be more aggressive in implementing projects. Staff did acknowledge that other measures will ultimately be necessary as the current network is fragmented, which may make some measures difficult to obtain. Staff suggests that it may be appropriate to re-visit measurements in 5-10 years when the plan is next updated. The Commission agreed and did not recommend any changes at this time.

- **Traffic Diverters on Collector Streets**

  The Public Works Department raised the concern that traffic diverters could be used on Collector Streets with the implementation of Bicycle Boulevards. Since Collector Streets are not the intended location the Boulevards, clarifying language was added to the Bicycle Boulevard Design Standard section which states: "Traffic diverters shall not be used on collector streets and are only intended for key intersections accessing neighborhood connecting streets." (p.75)

- **Clarifying Facilities on High and Medium-Priority Maps**

  The Commission requested staff distinguish between existing and priority-rated facilities. Staff did so by using solid lines fro existing facilities and dashed lines for priorities.

Please consult Robinson's *Memorandum* for a detailed review of the Plan Commission's suggestions.

Role of the Council

The Indiana Code requires that a comprehensive plan (including amendments) are not effective until it has been approved by resolution of the legislative body (IC §36-7-4-509(b)). The Code further directs amendments to the City's comprehensive plan be certified to the Council. (IC §36-7-4-508). The Council then has one of three options: it may adopt a resolution approving, rejecting, or amending the plan. Such a resolution requires only a majority vote and is not subject to approval or veto by the Mayor. (IC §36-7-4-509(a)).

If the Council rejects or amends the proposed ATGSP, it must do so by resolution and must return the ATGSP to the Plan Commission with a written statement of its reason(s) for rejection or amendment. The Plan Commission then has 60 days to consider the rejection or amendment and file its report with the Council (however, Council may grant the Commission an extension). If the Plan Commission approves the amendment, the ATGSP stands, as amended by the Council as of the date of the filing of the Plan Commission's report with the Council. If the Plan Commission disapproves the rejection or amendment, the action of the Council on the original rejection or amendments stands only if confirmed by another resolution of the Council. (IC §26-7-4-510 (b)). However, if the Plan Commission does not file a report with the Council within 60 days (or any agreed-upon extension), then the action of the Council in rejecting or amending the ATGSP becomes final. (IC §36-7-4-510(c)).

NOTICE AND AGENDA
BLOOMINGTON COMMON COUNCIL COMMITTEE OF THE WHOLE
7:30 P.M., WEDNESDAY, JANUARY 23, 2008
COUNCIL CHAMBERS
SHOWERS CENTER, 401 N. MORTON ST.

Chair: Timothy Mayer

1. Resolution 08-02 To Amend the City's Comprehensive Plan to Include an Update to the Alternative Transportation and Greenways System Plan

Asked to Attend: Scott Robinson, Long Range/Transportation Manager

Posted and Distributed: Friday, January 18, 2008

City of Bloomington Indiana

City Hall
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To: Council Members
From: Council Office
Re: Calendar for the Week of January 21-25, 2008

Monday, January 21, 2008

"A Day On! Not a Day Off!"

City Holiday: Dr. Martin Luther King Jr. Day – Offices Closed

7:00 pm Dr. Martin Luther King, Jr. Birthday Celebration, Buskirk-Chumley Theater, 114 E. Kirkwood *(Reception at 5:00 p.m.* featuring winners of the "Dr. Martin Luther King, Jr. Web Design Contest" for students, *the Great Room of the First United Methodist Church , 219. E. Fourth Street)*

Tuesday, January 22, 2008

4:00 pm Board of Park Commissioners, Council Chambers
5:00 pm Utilities Service Board, Board Room, 600 E. Miller Dr.
5:30 pm Bloomington Public Transportation Corporation, Transportation Center, 130 W. Grimes Lane
5:30 pm Board of Public Works, Council Chambers

Wednesday, January 23, 2008

4:15 pm Commission on the Status of Black Males, Hooker Room
5:30 pm Traffic Commission, Council Chambers
6:30 pm Metropolitan Planning Organization Citizens' Advisory Committee, McCloskey
7:30 pm Common Council Committee of the Whole, Council Chambers

Thursday, January 24, 2008

3:00 pm Historic Preservation Commission Special Meeting, Hooker Room
3:30 pm Housing Trust Fund Board, McCloskey
5:30 pm *State of the City* Address from Bloomington Mayor Mark Kruzan, Council Chambers
5:30 pm Board of Zoning Appeals, McCloskey

Friday, January 25, 2008

12:00 pm Economic Development Commission, Hooker Room
1:30 pm Metropolitan Planning Organization Technical Advisory Committee, McCloskey

Posted and Distributed: Friday, January 18, 2008

City of Bloomington
Office of the Common Council

MEETING NOTICE

State of the City Address

Members of the Bloomington Common Council have been invited to attend the *State of the City* address by the Mayor of the City of Bloomington. This address is scheduled for Thursday, January 24, 2008 at 5:30 pm in the Council Chambers of City Hall, Showers Building, 401 North Morton.

Because a quorum of the Council may be present, this meeting may constitute a meeting of the Common Council under the Indiana Open Door Law. For that reason, this statement provides notice that this meeting will occur and is open for the public to attend, observe and record what transpires.

Dated & Posted: Friday, January 11, 2008

RESOLUTION 08-02

TO AMEND THE CITY'S COMPREHENSIVE PLAN TO INCLUDE AN UPDATE TO THE ALTERNATIVE TRANSPORTATION AND GREENWAYS SYSTEM PLAN

WHEREAS, pursuant to I.C. 36-7-4-501, the Plan Commission is responsible for preparing comprehensive plans and amendments thereto and forwarding them to the Common Council; and

WHEREAS, with the passage of Resolution 01-24 on October 31, 2001, an Alternative Transportation and Greenways System Plan was amended into the City's comprehensive plan; and

WHEREAS, with the passage of Resolution 02-19 on November 6, 2002, the Common Council updated the comprehensive plan, also known as the Growth Policies Plan; and

WHEREAS, the Alternative Transportation and Greenways System Plan requires periodic revisions to reflect existing conditions and City priorities; and

WHEREAS, the Alternative Transportation and Greenways System Plan sets forth a plan for improving the efficiency of the City's transportation system, while enhancing quality of life and promoting economic development; and

WHEREAS, a public participatory process has been completed for the Alternative Transportation and Greenways System Plan, and the Plan Commission has made a positive recommendation and forwarded the Plan to the Common Council for adoption;

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE COMMON COUNCIL OF THE CITY OF BLOOMINGTON, MONROE COUNTY, INDIANA, THAT:

SECTION 1. The City's Comprehensive Plan shall be amended by the replacement of the 2001 Alternative Transportation and Greenways System Plan with the 2007 Alternative Transportation and Greenways System Plan, which is attached to and made a part of this resolution.

PASSED AND ADOPTED by the Common Council of the City of Bloomington, Monroe County, Indiana, upon this _____ day of _____, 2008.

_____
SUSAN SANDBERG, President
Bloomington Common Council

SIGNED and APPROVED by me upon this _____ day of _____, 2008.

_____
MARK KRUZAN, Mayor
City of Bloomington

ATTEST:

_____
REGINA MOORE, Clerk
City of Bloomington

SYNOPSIS

This resolution amends the City's Growth Policies Plan (GPP) by updating the Alternative Transportation and Greenways System Plan. This plan provides policy recommendations and strategies for transportation facilities, quality of life standards, and economic development and environmental goals to attain for the City of Bloomington as they pertain to bicycle, pedestrian, and other non-automobile oriented modes of transportation.

****RESOLUTION CERTIFICATION****

RESOLUTION 08-02

In accordance with IC 36-7-4-508 I hereby certify that the attached Resolution Number 08-02 is a true and complete action of Plan Commission Case Number MP-33-07 which was given a recommendation of approval by a vote of **9 Ayes, 0 Nays, and 0 Abstentions** by the Bloomington City Plan Commission at a public hearing held on December 10, 2007.

Date: January 10, 2008

Thomas B. Micuda, Secretary
Plan Commission

Received by the Common Council Office this _____ day of _____, 2008.

Memo to the Common Council

To: Members of the Common Council

From: Scott Robinson, Long Range/Transportation Manager

Subject: Resolution 08-02: Update to the Alternative Transportation and Greenways System Plan

Date: January 14, 2008

BACKGROUND: The purpose of this resolution is to amend the Growth Policies Plan (GPP) by replacing the 2001 Alternative Transportation and Greenways System Plan (ATGSP) with an updated ATGSP as adopted by the Plan Commission (MP-33-07). The ATGSP establishes the city's long-term vision for bicycle and pedestrian facilities in Bloomington. The Plan recommends periodic updates to "reflect changing trends, outlooks, and thinking of the community". Staff determined that the ATGSP should be updated because of the age of the Plan, the need to reflect changing trends in the community, and to maintain consistency with the development regulations for alternative transportation facilities contained in the Unified Development Ordinance.

In preparation for the update of the ATGSP, staff first conducted field evaluations of the entire network, as detailed by the Bicycle and Pedestrian Facilities Network Map (Map), and thoroughly reviewed the 2001 Plan. Preliminary staff recommendations for the update process focused on revising the Map, developing a new strategic plan, and incorporating new or emergent themes. At each step of the process, these recommendations and revisions were reviewed, modified, and built upon for continued development throughout the update process.

A Strategic Advisory Committee (SAC) was created to review staff recommendations and guide staff through the update process. The SAC was comprised of local residents, board and commission representatives, and City and County staff (a complete listing of the SAC members is contained in the Plan). Key conclusions that resulted from SAC input included:

- Strategic Plan development should reflect that more funding is needed, that community expectations are higher now than in 2001, and that the provision of new facilities should be robust compared to the implementation of existing facilities
- High priorities included: connector paths, enforcement/education programs, bike lanes, and multiuse trails
- Bike Boulevards should be incorporated into the updated ATGSP
- Staff should conduct public outreach outside of City Hall to better reach citizens who typically do not participate at standard City Hall style meetings
- The update process should allow for the opportunity to explore new ideas or emergent themes

Next, staff facilitated a public outreach activity at Monroe County Public Library and a

public workshop at City Hall. The purpose of the public outreach activity was to solicit comments on the Bicycle and Pedestrian Facilities Network Map, to gain a better understanding of community concerns and priorities, to answer any questions about the ATGSP or related issues, and to publicize the upcoming public workshop. This two day activity was very successful and staff received approximately 70 completed questionnaires and talked to approximately 130 people. The survey is not based on a scientific sampling of respondents and only measures the attitudes of people who were onsite and chose to participate. Some highlights of the input received from the questionnaire and this outreach activity are:

- Completion of the B-line Trail is a high priority
- Bike lanes and multiuse trails are the facilities that would result in the greatest improvements to the network
- Areas of the most need/concern include the S.R. 45/46 Bypass between 10th St. and 3rd St. and Whitehall Crossing/S.R. 37
- If bicycle and pedestrian facilities were more convenient and abundant, most respondents would walk and bike more, drive less, and would not change their transit usage
- Most respondents (50 of 67) think that the City should take an "aggressive" approach to implementing the ATGSP (several medium to large projects a year) and that the City is currently doing an "average" job when it comes to implementing an alternative transportation network
- Safety and convenience are the main barriers to promoting alternative modes of transportation
- Most respondents would support policies that encourage public projects to address all transportation needs

The pubic workshop had several exercises that were designed to focus public input on making revisions to the draft Map, rank projects for strategic plan development, define and propose bike boulevards, and identify any other interests or concerns. This step in the process provided essential feedback so that a draft plan could be developed and presented to the Plan Commission. Key conclusions that resulted from the public workshop are as follows:

- The Map review exercise resulted in a draft Map (see p. 9)
- The majority of map-related suggestions were focused on small connector paths and new bike routes – many of these have been incorporated into the Appendix section for future consideration (see Appendix p. 89-91)
- The project ranking exercise provided input that resulted in the implementation strategies detailed on p.14-27 of the draft Plan
- The Bicycle Boulevard exercise contributed to the Bicycle Boulevard design guidelines (p.74-75) and to the identification of several Bicycle Boulevard corridors (p.11)
- Most of the general comments during the Emergent Themes exercise pertained to education and enforcement

In addition to these efforts, staff also coordinated with the Bloomington Bicycle and Pedestrian Commission, the Bloomington/Monroe County Metropolitan Planning Organization, Downtown Bloomington, Inc., the Environmental Commission, and the Plan Commission to seek additional feedback on the ATGSP. Information collected from these outreach efforts was evaluated and the draft plan was modified accordingly. The Bloomington Bicycle and Pedestrian Safety Commission reviewed the ATGSP most

recently at their regular meeting on November 19, 2007 and supports adoption of the Plan.

A final draft 2007 ATGSP is attached to this packet for review. It is important to emphasize, that in many ways, the final draft Plan is not significantly different than the 2001 ATGSP. The core policy guidance contained in the draft Plan remains the same as in the original 2001 ATGSP.

This memo is organized into three sections. First the **Plan Summary** provides an outline of the contents within the Alternative Transportation and Greenways System Plan. Second, **Plan Commission Discussion** provides an overview of the comments received during Plan Commission hearings. Last, the **Recommendation** section provides a synopsis of the final Plan Commission recommendation.

PLAN SUMMARY: The final draft of the Alternative Transportation and Greenways System Plan is organized into four sections: Strategic Plan; Plan Development; Design Guidelines; and Appendix. In order to aid the Council, a summary of the final draft 2007 Alternative Transportation and Greenways System Plan is provided below. This summary provides a brief overview of each section, identifies key elements of the ATGSP, and acknowledges significant changes from the 2001 ATGSP.

STRATEGIC PLAN**:** This chapter establishes a conceptual framework for implementing a bicycle and pedestrian facilities network in Bloomington. The conceptual plan identifies on-street facilities such as bike lanes and bike routes as being the most important type of facility in the central city, whereas sidepaths, multi-use trails, and unimproved trails are most appropriate for the urbanizing ring and fringe areas. The conceptual plan envisions a grid-like network of bicycle facilities in the downtown area and a ring of multi-use trails and sidepaths around the edges of the city. The conceptual plan is unchanged (except that sharrows and Bike Boulevards were added to the types of facilities) from the original plan and is illustrated on page 4 of the draft ATGSP.

While the conceptual plan is somewhat abstract, the Strategic Plan provides more precise guidance for implementing the bicycle and pedestrian facilities network. Along with a snapshot of current conditions, the Strategic Plan establishes a vision for future bicycle and pedestrian facilities, which can be seen on the Bicycle and Pedestrian Facilities Network map (p.9). Most notable on this map are the 23 miles of future bike lanes and 72 miles of future sidepaths/connector paths and multi-use trails, compared to 11 miles and 17 miles of existing facilities, respectively. Implementation of proposed future facilities would amount to a realization of the conceptual plan. Future facilities were designated after careful consideration of significance to the network, feasibility of implementation, property ownership, and other factors; however, in many cases further study will be required prior to implementation.

The Strategic Plan section also contains a map of future bicycle boulevards (p.11). This map demonstrates that in Bloomington, bicycle boulevards will likely be a hybrid facility consisting of on-street improvements, such as bike lanes, signage, traffic calming, and pavement markings, as well as motor vehicle restrictions provided by connector paths or other treatments. The bicycle boulevard map has undergone significant changes based on community input. This update process has illustrated that the community is very interested in the concept of bicycle boulevards and that there are several potential

bicycle boulevard corridors that are worthy of consideration. Those shown on the Proposed Bicycle Boulevards map are believed by staff to be the most feasible and significant to implement.

The final component of the Strategic Plan is a prioritization of facility implementation and public initiatives. Projects are divided into high, medium, and low priorities by facility type, and include feasibility studies, engineering/design, as well as construction and phasing considerations. Public initiatives include funding sources, partnership opportunities, education programs, and other activities necessary to implement a successful bicycle and pedestrian facilities network.

Major high priority projects include construction of the B-Line Trail and the Clear Creek Trail, study and implementation of key bicycle boulevards, implementation of bike lanes on major arterials, construction of small neighborhood connector paths, and study and implementation of the Polly Grimshaw Trail extensions. High priority public initiatives include increased funding, increased collaboration among local agencies, and increased education relating to bicycle and pedestrian safety. A more thorough breakdown of all project priorities is given in the draft document, beginning on p. 14. Maps illustrating the future bicycle and pedestrian facilities network under high and medium priority build-out scenarios can be seen on p.17 and p.23, respectively.

PLAN DEVELOPMENT: This chapter outlines the importance of alternative transportation and defines key terms. Topics are broken into two main sections: “Benefits of Alternative Transportation & Greenways,” (p.32) and “Vision, Goals, & Objectives” (p. 38). The benefits discussed include reduced traffic congestion; improved accessibility, quality of life, and health & wellness; increased tourism; and improved environmental quality. The vision of the plan is broadly outlined, and the goals and objectives relate this vision to Bloomington in terms of users, connectivity, funding, maintenance, environment, economic development, and tourism. No significant changes were made to the Plan Development section. Only a few relatively minor changes were made to acknowledge the update process.

DESIGN GUIDELINES: The purpose of this chapter is to describe bicycle and pedestrian facilities in terms of their physical requirements, how they relate to the surrounding environment, and how these factors influence facility selection. General design principles are established, followed by technical implementation details. Broader issues discussed include on-street parking, surface material, intersections, railroad crossings, maintenance, and drainage. The last section provides more detailed design guidelines for the following facility types: signed bike routes, bike lanes, sharrows, bicycle boulevards, sidepaths, sidewalks, connector paths, greenways, multi-use trails, and unimproved trails.

Of these topics, the only significant modifications in this chapter were related to surface material (p.64) and to design guidelines for sharrows and bicycle boulevards (p. 73-75). For surface materials, the discussion of environmentally friendly alternatives to asphalt and concrete was updated and expanded to acknowledge technology advances in these materials. Design guidelines for sharrows and bike boulevards are new additions to the document, since these facility types were not included in the 2001 version. The design considerations relating to sharrows (p.73) are fairly straightforward; in general, sharrows are recommended where a bike lane would be desirable but is infeasible due to road width constraints. Guidelines for bicycle boulevards (p.74 and p.75) are more general,

as these corridors typically will consist of a combination of facilities. The design guidelines also recognize the Berkeley, CA bicycle boulevard program as a model program for Bloomington and recommends that its "Bicycle Boulevard Design Tools and Guidelines" be used as a reference for design issues relating to Bloomington. Nonetheless, the ATGSP outlines many important considerations relating to the definition and implementation of bicycle boulevards in Bloomington.

APPENDIX: This chapter of the ATGSP is different than the appendices contained in the 2001 ATGSP. Whereas the 2001 document had appendices within two chapters, the final draft 2007 ATGSP consolidated this information into a single appendix. The Appendix contains various materials from the 2001 ATGSP, such as the Bicycle and Pedestrian Facilities map and a summary of the public process, to provide a historical record for the 2001 Plan. This chapter also contains new reference material, such as a map that identifies small neighborhood connector paths (p.89) and future bicycle routes suggested by the public for the consideration of the Bloomington Bicycle and Pedestrian Commission (p.91). The sidewalk inventory section was moved to this chapter because it serves as an annual evaluation tool rather than a policy guidance component of the plan. The Sidewalk Inventory Map (p.87) is updated annually and is a helpful tool to evaluate community needs for sidewalk implementation through the Council Sidewalk Committee, Safe Routes to School, and other resources.

PLAN COMMISSION DISCUSSION: Prevailing issues discussed during the Plan Commission hearings focused mostly on the need to clarify language used within the final draft and were not substantive in nature. The following section provides a detailed summary of feedback received by staff and describes revisions incorporated into the final draft ATGSP.

- A request to change the title of the ATGSP to reflect the predominant bicycle and pedestrian nature of the plan.

  Status: Staff cautioned the Plan Commission on changing the title of the ATGSP, because the Unified Development Ordinance (UDO) specifically references the Plan in several sections of the UDO. If the title is changed then this would require amending the UDO. Additionally the title of the Plan has gained community recognition over the last six years and a new title may suggest a completely different plan, which this is not. A title change may create unintended consequences and therefore the title was not changed in response to this request. The Plan Commission agreed with this position and did not change the title.

- A request to identify congested areas, potential pedestrian safety islands, and pedestrian activated crossings.

  Status: Staff believes that the locations and design issues related to pedestrian safety are best resolved on a case by case basis. Similarly, the Planning Department is working with the Bloomington Bicycle and Pedestrian Safety Commission to conduct a pedestrian accessibility study for the College Mall shopping area (as noted by a revision on page 16 in the Strategic Plan chapter as a High Priority Public Initiative), as well as the SR 45/46 Bypass area to address pedestrian safety issues. The Plan Commission agreed with this position and did not make any changes in response to this request.

- A request to consider changing the language on page 58 so that other types of measurements than “completed projects” could be used to measure the success of the plan.

  Status: Staff believes that since the primary focus of the update was not on the Plan Development chapter, this may not be a main concern for the community at this point in time. In fact, community input suggests the City be more aggressive in the implementation of facilities. However, staff does agree that other measures will have to be used to measure the success of implementing the Plan. The current network is incomplete and fragmented which may make some measurements difficult to obtain. As facilities are implemented and as the time to update the plan again approaches (5-10 years), appropriate benchmarking or “other” measurements can be developed. Currently, staff does conduct trial pedestrian and bicycle counts. However, the techniques and results of these measurements are not reliable at this time and need further development. Therefore, staff did not include any revisions based on this request. The Plan Commission agreed with this position and did not make any recommendations to change the language.

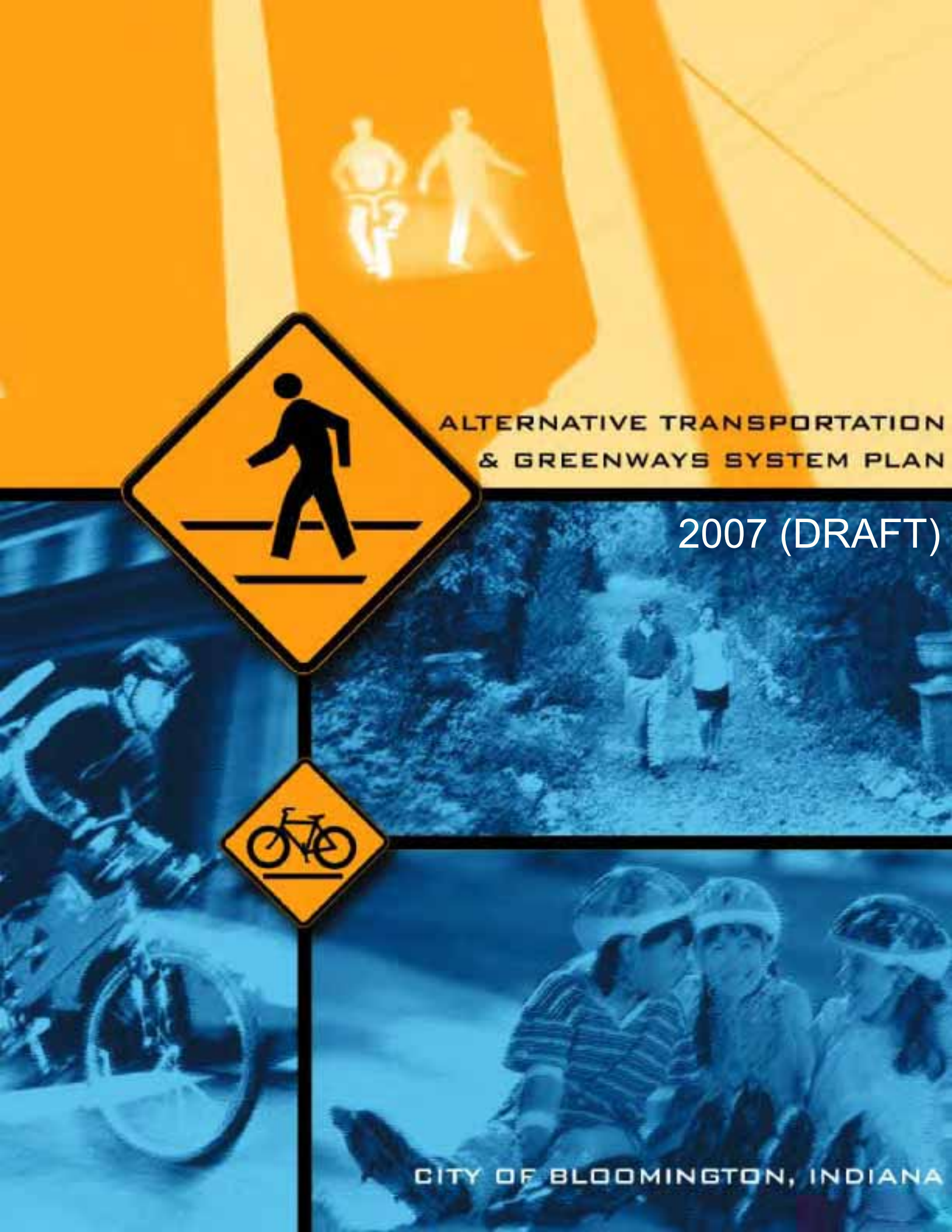
- A concern that Traffic Diverters could be used on Collector Streets (as identified by the Master Thoroughfare Plan) in the implementation of Bike Boulevards was raised by the Public Works Department.

  Status: Staff agrees that traffic diverters are not appropriate on Collector Streets and that Collector Streets are not the intended location for this type of improvement as part of a Bicycle Boulevard network. New language is included on page 75 (last sentence) of the Bicycle Boulevard Design Standard section which states: “Traffic diverters shall not be used on collector streets and are only intended for key intersections accessing neighborhood connecting streets.”

- A request to clarify the facilities mapped on the High and Medium Priority Bicycle and Pedestrian Facilities Network Maps (pages 17 and 23 respectively).

  Status: Staff revised these maps so the existing facilities and the priority rated facilities are illustrated with solid and dashed lines respectively. Additionally, the Medium Priority Bicycle and Pedestrian Facilities Network Map assumes that all of the high priority facilities have been constructed, illustrating them with solid lines (existing) for this map.

RECOMMENDATION: After two hearings (November 5th and December 10th, 2007) the Plan Commission adopted the 2007 ATGSP by a unanimous vote. Staff recommends that the Common Council adopt the 2007 ATGSP as well.


ALTERNATIVE TRANSPORTATION
& GREENWAYS SYSTEM PLAN
2007 (DRAFT)
CITY OF BLOOMINGTON, INDIANA

Preface

Alternative Transportation & Greenways System Plan

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Preface

Executive Summary

The City of Bloomington is undertaking an important step toward mitigating traffic congestion and improving the health, fitness, and quality of life of its residents. The Alternative Transportation and Greenways System Plan represents a commitment by the City to design, construct, and maintain a network of safe, convenient, and attractive bicycle and pedestrian facilities for commuting and recreational use throughout the City.

One key benefit of an alternative transportation and greenways system is to minimize the use of cars, especially for short, frequent trips. Some City of Bloomington streets have more vehicles on them than they originally intended to carry. This has resulted in increasing road maintenance costs, building new and wider roads, traffic congestion, driver frustration, longer commute times, and increased use of nonrenewable energy resources.

In addition to mitigating traffic, a network of bicycle and pedestrian routes will result in many other benefits the City is striving to accomplish. These include:

- Further enhancing the community image,
- Further enhancing local quality of life,
- Promoting healthier lifestyles,
- Reducing commuting costs,
- Expanding tourism opportunities,
- Building the City's assessed value,
- Increasing and stabilizing property values,
- Enhancing the local economy,
- Aiding business recruitment efforts,
- Providing opportunity for people unable to drive or people without cars,
- Improving the natural environment, and
- Preserving natural areas.

The Alternative Transportation and Greenways System Plan is composed of three sections. These include:

1. Strategic Plan,
2. Plan Development, and
3. Design Guidelines.

The Strategic Plan section contains the overall network of bicycle and pedestrian facilities as well as identifies the community's priorities (e.g. high, medium, and low) for key projects. The Plan Development section outlines the benefits of alternative transportation and greenways development as well as the vision, goals, and objectives for the Plan. The Design Guidelines section sets standards to ensure uniformity of bicycle and pedestrian facilities throughout the City.

Implementing the Alternative Transportation and Greenways System Plan will require a cooperative effort among public agencies as well as private and nonprofit organizations within the City of Bloomington and Monroe County. To facilitate such coordination, the Planning Department has created a Transportation Planner position that is responsible for coordinating projects and obtaining funding for design, construction, and maintenance of bicycle and pedestrian facilities throughout the City.

The Alternative Transportation and Greenways System Plan should not be viewed as a static, set-in-stone series of ideas or projects. For the Plan to be effective it must be reviewed, evaluated, and when necessary, updated to reflect changing trends and attitudes of the community. In doing so, the City of Bloomington can collectively reduce resistance to alternative transportation and develop a network of bicycle and pedestrian facilities that take advantage of opportunities and avoid potential pitfalls.

Executive Summary Cont.

Reflection upon past accomplishments reveals that the City of Bloomington has taken steps to mitigate traffic congestion and improve the health, fitness, and quality of life of its residents. As of 2007, approximately 11 miles of bike lanes, 34 miles of signed bike routes, 11 miles of sidepaths/connector paths, and 20 miles of unimproved trails and multiuse trials have been provided to encourage increased bicycle and pedestrian activities. However, more work is needed.

With this in mind, the Planning Department initiated an update process for the Alternative Transportation and Greenways System Plan. This update process focused on developing a new Strategic Plan, incorporating Bicycle Boulevards into the Design Guidelines section, and bringing other pertinent information up to date – all without changing the vision, intent, or goals of the original Plan. Rather, the revisions to the plan refocus the resources available for alternative transportation in order to maximize opportunities for implementation. In addition, the revisions to the plan reflect the changing trends and attitudes of the community towards alternative transportation.

The City continues to take steps and has identified many new priorities to implement in this ongoing quest. In the forthcoming pages, new strategies are outlined that prioritize the most important efforts in which the community should engage.

Outreach at the Monroe County Public Library

Preface

Plan Directive

The directives of the plan established at the inception of the process are as follows:

- Establish a community vision for alternative transportation and greenways,
- Identify key destinations and potential linkages within Bloomington,
- Develop a conceptual design for alternative transportation and greenways routes,
- Identify goals and objectives to guide future decision making, and
- Coordinate this plan with Bloomington's Growth Policies Plan, Parks Master Plan, and Thoroughfare Plan.

Why Update this Plan?

The pursuit and implementation of an alternative transportation and greenway system plan has resulted from increases in traffic congestion in the City of Bloomington. More importantly, this pursuit and implementation will lead to benefits related to: reduced traffic congestion; non-driver accessibility; quality of life; health and wellness; economic and tourism; and the environment.

Streets and parking areas in Bloomington are increasingly more crowded than in the past. In fact, in recent years the City has noticed an increase in vehicular traffic in comparison to population growth. These trends must change to fulfill the vision set forth by this plan.

The City of Bloomington is a progressive community that recognizes bicycling, walking, and public transit as a necessity for future vitality, stability, and especially quality of life. However, construction of bicycle and pedestrian facilities has lagged behind this recognition. Ongoing efforts must continue to accomplish the many benefits contained within this plan. Therefore an effective implementation strategy is fundamental to these ongoing efforts.

Preface

Overview of the Planning Process

In the fall of 2000, the planning effort was initiated to develop an Alternative Transportation and Greenways System Plan for the City of Bloomington. Since this plan addresses alternative choices for commuting and mobility in their community, it was essential that citizens have a voice in shaping the plan. In fact, the City leadership emphasized that this effort be a grass-roots planning effort.

Staff and a steering committee developed a draft plan after two public workshops and numerous interviews with key interest groups were held. The Alternative Transportation Greenways System Plan was adopted as part of the City of Bloomington's Growth Policies Plan in October 2001.

After several years, it became apparent that the Alternative Transportation and Greenways System Plan needed to be updated. In 2007, a strategic advisory committee was formed to assist with the update process. Recommendations were formulated on how to improve the Alternative Transportation and Greenways System Plan, especially the Strategic Plan and Network Facilities Map.

The public was once again engaged in this update process. City staff solicited input at the Monroe County Public Library, held a public workshop, and conducted outreach with several City boards and commissions. After these recommendations were considered for incorporation, the Alternative Transportation and Greenways System Plan went before both the City of Bloomington Plan Commission and the City of Bloomington Common Council as part of the formal approval process.

How To Use this Document

This Alternative Transportation and Greenways System Plan replaces the 2001 Alternative Transportation and Greenways System Plan.

The Alternative Transportation and Greenways System Plan should be used in short and long-term decision making by elected and appointed officials and City staff. These individuals, as well as the general public, should become familiar with the goals and objectives of the plan and implement them to the greatest extent possible.

The concepts, goals, and objectives discussed in this Plan should complement the Growth Policies Plan, Thoroughfare Plan, and Parks Master Plan.

Preface

Acknowledgments

The following people are recognized by the Planning Department for their participation and assistance in the development of the Alternative Transportation and Greenways System Plan.

City of Bloomington Mayor

Mark Kruzan

City of Bloomington City Council

Michael Diekhoff
Dave Rollo
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Chris Sturbaum
Brad Wisler
Timothy Mayer
Andy Ruff
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City of Bloomington Plan Commission

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Kate Cruikshank
Jason Eakin
Tim Miller
Bill Stuebe
Dave Williams
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Strategic Plan

Alternative Transportation & Greenways System Plan

Strategic Plan

Introduction

The intent of the Alternative Transportation and Greenways System Plan is to create a network of bicycle and pedestrian facilities for residents of all ages and mobility to walk or bike to their destinations rather than taking their car. Choosing to walk or bike will ultimately reduce traffic congestion in the City and improve the health, fitness, and quality of life of Bloomington's residents. However, motivating individuals to walk or bike will require developing safe, convenient, and attractive facilities.

The information contained in this Strategic Plan moves the City of Bloomington that much closer to developing a network of safe, convenient, and attractive bicycle and pedestrian facilities. This Strategic Plan establishes the conceptual plan for the Alternative Transportation and Greenways System, identifies specific bicycle and pedestrian facilities throughout the City, and sets priorities for implementation.

Cyclists leaving the Showers Plaza for the Community Cruiser Bike Ride

Conceptual Plan

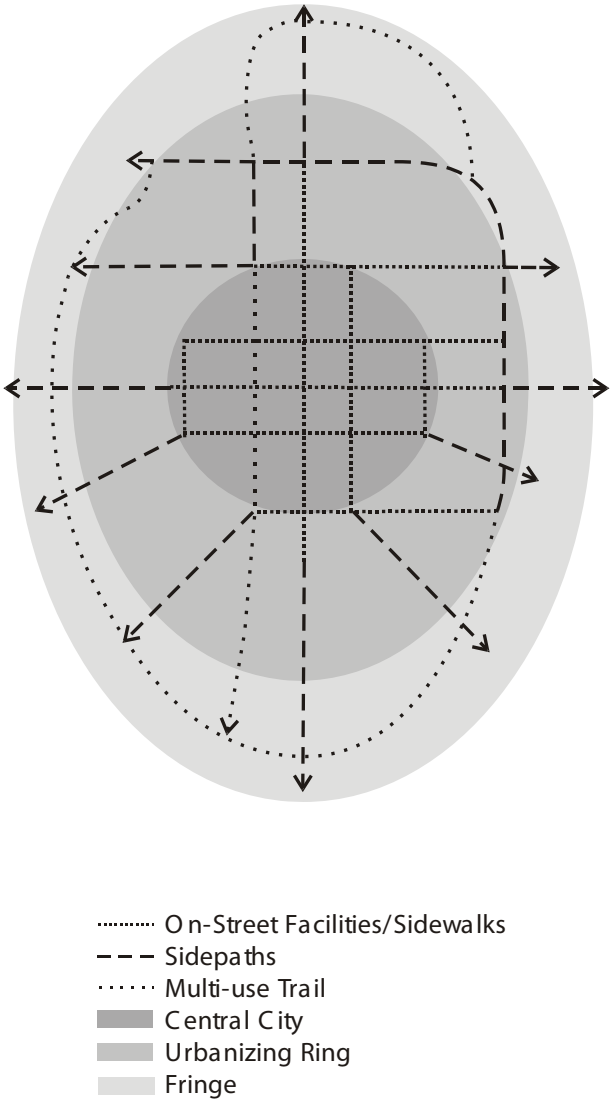
The conceptual plan is based on the three distinct character areas in the City of Bloomington. These include:

1. Central City - downtown, historic neighborhoods, and adjacent, densely urbanized areas,
2. Urbanizing Ring - subdivisions, commercial nodes, and industrial areas outside of the Central City, and
3. Fringe - undeveloped areas, farmland, natural, and transitional areas.

There are several different types of bicycle and pedestrian facilities that have been successfully implemented throughout the nation. The primary types of bicycle and pedestrian facilities discussed in this Plan include:

1. Signed Bike Route - A street that is safe for use by both vehicles and bicycles without a designated bike facility. These routes are identified with appropriate signage,
2. Bike Lanes – A portion of the road that has been designated and designed for the exclusive use of bicycles with distinct signage and pavement markings. “Share-the-road arrows” (or “sharrows”) can be painted in a vehicular travel lane to connect bike lanes when there is insufficient right-of-way for bike lanes,
3. Bike Boulevards – A roadway where all types of vehicles are allowed, but is modified as needed to enhance bicycle safety and convenience,
4. Sidepath – A hard-surface path physically separated from the road with a grass or tree plot within the road right-of-way for use of two-way bicyclists, pedestrians and other non-motorized users,
5. Connector Path - A hard-surface linkage or shortcut between key destinations that is not accessible by automobiles,
6. Sidewalk - A hard-surface path within the street right-of-way that is designated for the exclusive use of pedestrian traffic, and
7. Multi-use Trail - A hard-surface, off-road path for use by bike, foot, and other non-motorized traffic typically not within the road right-of-way.

This conceptual plan and graphic illustration is intended to be the foundation for the Strategic Plan.



Conceptual Plan Cont.

The conceptual plan acknowledges that a successful city-wide alternative transportation and greenways system does not rely on any one type of facility, but is a system of different types of facilities with seamless transitions. This Plan conceptually transcends all areas in the City with the most appropriate and feasible types of bicycle and pedestrian facilities.

Central City

On-street facilities such as bike lanes, signed bike routes, connector paths and sidewalks are most appropriate in the built up areas of the Central City. In general, on-street bike lanes and signed bike routes should be accommodated on existing streets with minimal disturbances to the function of the street and neighboring land uses. In extreme cases it may be necessary to restrict on-street parking to one side or all together to successfully accommodate bike lanes.

Urbanizing Ring

The area outside of the central City, the urbanizing ring, has opportunities for sidepaths, sidewalks, and multi-use trails where space exists. Sidepaths should be considered on busy streets with large rights-of-way so there is sufficient space to separate vehicular, bicycle, and pedestrian traffic.

Fringe

The fringe or less developed/low density areas are better suited for multi-use and unimproved trails. Multi-use trails will most likely follow utility easements, waterways, or other public non-vehicular rights-of-way.

Two alternative types of bicycle and pedestrian facilities, although not shown on the conceptual plan, will be considered for future use, where appropriate. These include:

1. Unimproved Trail - A less intrusive path utilizing pervious materials such as crushed limestone, bark mulch, or exposed soil surface. Unimproved trails may restrict all types of users but may be the best solution for areas considered environmentally sensitive, and
2. Alley Conversions - An improved alley easement utilized for bicycle and pedestrian traffic.

Existing Bicycle & Pedestrian Facilities

Since the adoption of the first Alternative Transportation and Greenways System Plan by the City of Bloomington in October 2001, the City has made strides in development of a network of facilities that serves the needs of pedestrians and cyclists (please refer to the map on page 9 and the sidewalk inventory map in the appendix). The City, either through efforts of its own or in partnership with private developers, has installed numerous bike lanes, sidepaths, connector paths, sidewalks, and multi-use trails. As of the end of calendar year 2007, it is estimated that the City will have developed an alternative transportation network consisting of:

- 11 miles of bike lanes
- 35 miles of designated signed bike routes
- 17 miles of sidepaths and multi-use trails
- 20 miles of unimproved trails and greenways
- 241 miles of sidewalk

Bloomington has a long history of placing emphasis on alternative transportation. Recent local initiatives indicate that Bloomington's commitment to alternative transportation is stronger than ever. The Unified Development Ordinance strengthened requirements for bicycle parking facilities and bicycle and pedestrian infrastructure in new developments. Additionally, the City has made significant investments in the downtown B-Line Trail with recent land aquisition, and is awaiting final design approval for construction. The provision and maintenance of new and existing bicycle and pedestrian facilities has become a significant element of all construction projects. Efforts such as these contributed to Bloomington's designation as Indiana's first Bicycle Friendly Community by the League of American Bicyclists in 2003, as a Bronze level community. The City has maintained a Bronze level status since 2003, renewed most recently in 2007.

Pedestrian and bicycle lane markings along Sheridan Drive

Future Bicycle & Pedestrian Facilities

As a progressive community, Bloomington will continue to be a leader in the provision of safe, comfortable, and practical opportunities for bicyclists and pedestrians. The City will continue development of a network that will connect residential, recreational, commercial, academic, and institutional destinations. The Alternative Transportation and Greenways System Plan provides a blueprint for how the City will accomplish this.

When possible, future bicycle and pedestrian routes are identified within the City's road rights-of-way and utility easements. The Plan attempts to avoid the busier, more congested streets and intersections. However, this is not always possible, and careful consideration should be made to establish designated well-marked and continuous bike lanes and sidewalks to safely facilitate bicycle and pedestrian traffic.

Prioritizing and determining the type of facility (bike lane, signed route, sidepath, multi-use trail, or sidewalk) for each route will depend on space availability, funding, user needs, and coordination with private and public projects. This Strategic Plan will assist staff and decision-makers with these issues.

Priorities for implementing the Alternative Transportation and Greenways System Plan shall focus on connecting key destinations and mitigating traffic congestion. As much as possible, such bicycle and pedestrian facilities should be built on existing City-owned land to minimize conflicts with adjacent land owners.

Future routes identified on the following map (page 9) are somewhat flexible in nature. The City should take advantage of opportunities to develop bicycle and pedestrian facilities through infrastructure improvements, private and public projects, and land acquistion providing they follow the basic principles outlined in the Alternative Transportation and Greenways System Plan.

Bicycle Boulevards are a new facility type identified within this plan. They present an innovative strategy to implement various improvements that will provide benefits consistent with this plan. They were first identified back in 2001 as a facility option to consider; however little guidance was provided.

As part of the 2007 update process, the Bicycle Boulevard concept was developed to provide the basic guidance needed for future implementation. The map on page 11 illustrates the corridors most desirable to implement these innovative facilities as a phase one initiative. Other corridors may be identified as part of future updates, but the Bicycle Boulevards identified on this map should be given the highest priority for implementation. Additionally, design guidelines are also provided (pages 74 - 75) to detail the necessary components fundamental to these facilities.

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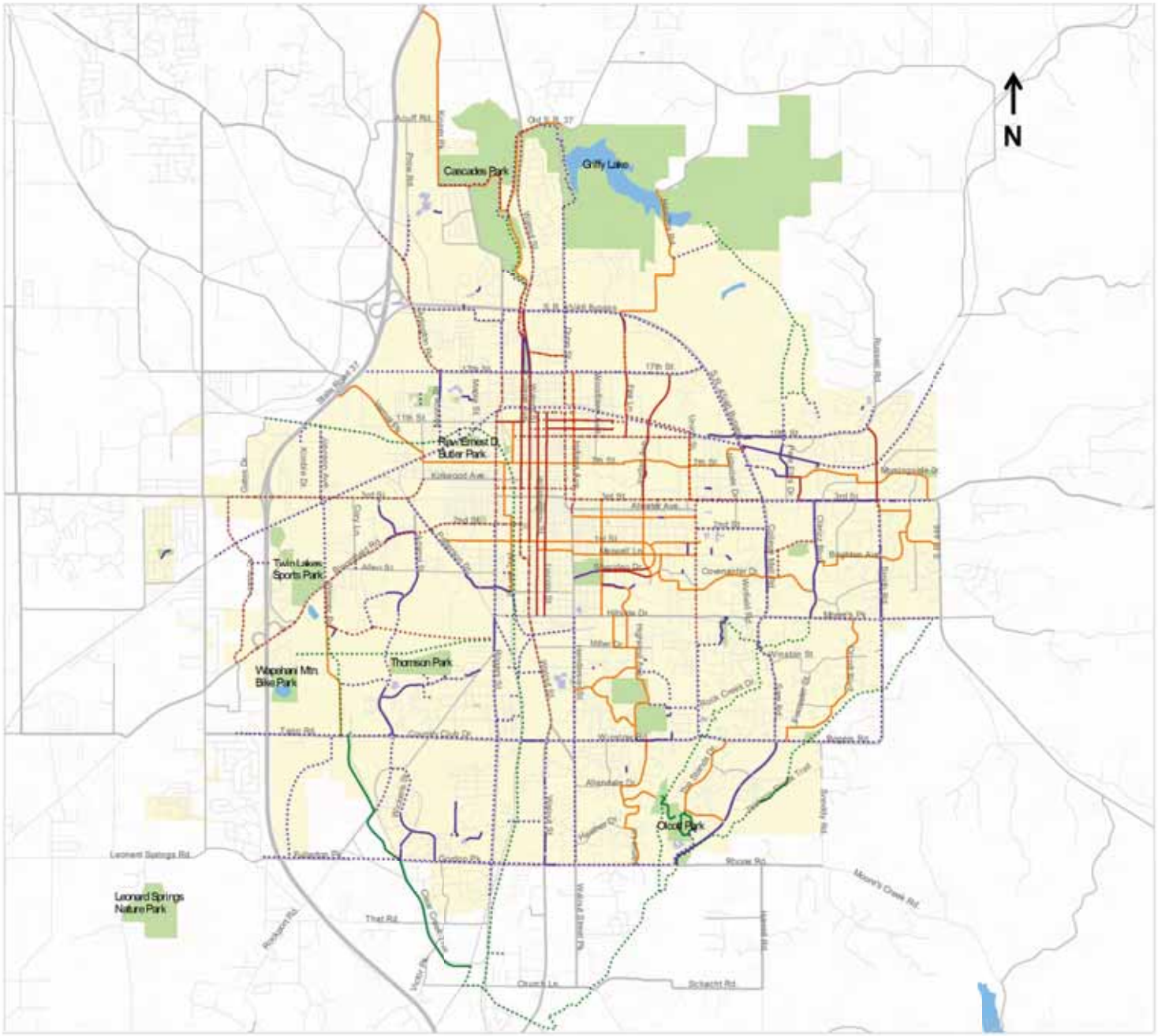


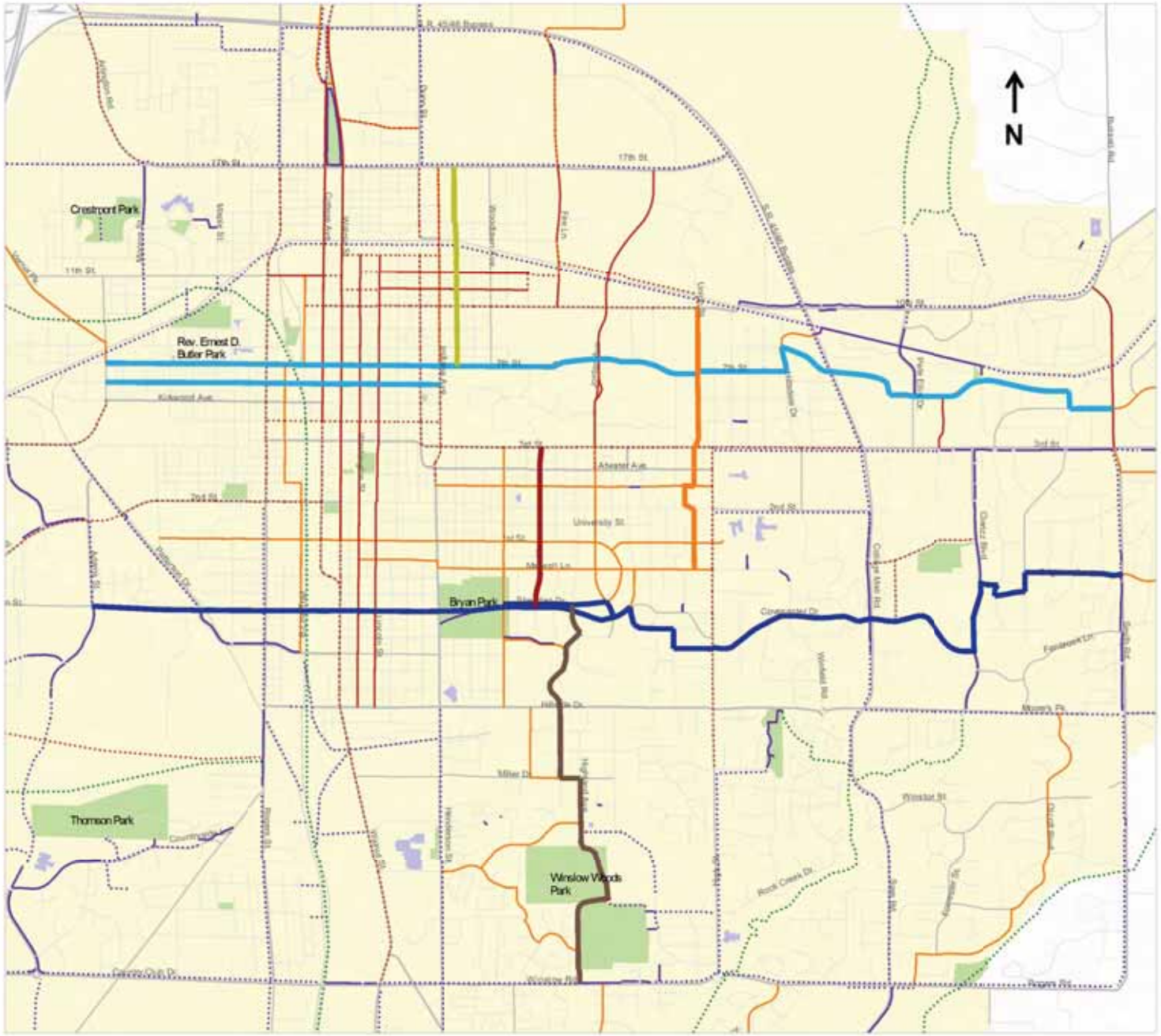
City of Bloomington

Alternative Transportation & Greenways System Plan

Bicycle and Pedestrian Facilities Network

- Planning Jurisdiction
- City of Bloomington Parks
- Lakes
- Schools

- Signed bike route
- Existing bike lane
- Future bike lane
- Existing sidepath/connector path
- Future sidepath/connector path
- Existing multi-use trail
- Future multi-use trail



City of Bloomington

Alternative Transportation & Greenways System Plan

Proposed Bicycle Boulevards

- Planning Jurisdiction
- City of Bloomington Parks
- Lakes
- Schools

- Signed bike route
- Existing bike lane
- Future bike lane
- Existing sidepath/connector path
- Future sidepath/connector path
- Existing multi-use trail
- Future multi-use trail

- 6th St./7th St./Longview Ave. Bicycle Boulevard
- Allen St./Covenanter Dr. Bicycle Boulevard
- Fess Ave. Bicycle Boulevard
- Hawthorne Dr. Bicycle Boulevard
- Highland Ave. Bicycle Boulevard
- Clifton Ave./Union St. Bicycle Boulevard

Strategic Plan Priorities

The purpose of the Strategic Plan section is to direct public investments toward implementation and should not be construed as conveying community support, or lack thereof, for a particular project. Rather, all initiatives, projects, objectives, and goals are equally important. This section provides a tool that indicates the strategic progression, from high to low priorities, of various projects as to generally when they should be initiated.

It is important to note that this section is not intended to prioritize private investment as part of development approvals. All relevant development site improvement requirements should be considered high priority projects because these site improvements are directly associated with the facilites identified within the Plan. Implementation of these improvements should occur in a timely fashion and be in direct relationship to the progress of other site improvements. In fact, it is best to complete required site improvements before tenants, residents, and/or other land use activities commence as part of the land development process.

Facility implementation involves several sequential phases, including feasibility studies, design, rights-of-way acquisition, and construction. For the purposes of the Strategic Plan, the project implementation process is generalized into three phases to allow for flexibility in the implementation process. These phases are:

- **Feasibility Studies** are processes that determine the degree of complexity for engineering design, rights-of-way acquisition, and construction for a proposed project;
- **Design** is the process of creating detailed engineering plans for projects that have been determined to be feasible; and
- **Construction** is the final phase when rights-of-way acquisition occurs and all associated capital improvements are constructed.

Projects that are not associated with physical capital improvements, and may be complex in nature and/or require various means to implement, are listed in the Public Initiatives section.

The following strategies provide a level of commitment and expectation for the City, and for Bloomington's residents and visitors. It also details a strategic framework for the City to work within such that many of these expectations and commitments are fulfilled. With implementation, it is the hope that the following strategies will continue to build upon past successes, generate momentum, and create unforeseen synergies with various agencies and private entities to one day achieve this grand vision.

These strategies are very ambitious, as they should be. However, at the same time they are general and flexible by design. This is important to allow for continuous evaluation by the City on the progress of implementation. Funding sources, user needs, and City priorities will change over time. When evaluation reveals significant deviation from the Plan's priorities, the City should engage the community on a comprehensive update of the Alternative Transportation and Greenways System Plan to ensure the vision of the Plan remains consistent with both public and private interests.

List of Strategic Plan Acronyms Used

BBC: Bloomington Bicycle Club
BBPSC: Bloomington Bicycle and Pedestrian Safety Commission
CVB: Convention and Visitors Bureau
INDOT: Indiana Department of Transportation
IU: Indiana University
MPO: Metropolitan Planning Organization
SRTS: Safe Routes to School (grant)
TE: Transportation Enhancement (grant)

High Priority Projects

This ranking indicates that the following projects should be initiated prior to lower ranked projects. A conceptual high priority build-out map is on page 17 and provides a useful visual tool to illustrate the eventual completion of all construction phased projects identified in the following section.

Multiuse Trail Facilities				
Project Name	**Location/Notes**	**Phase**		
		F	**D**	**C**
B-line Trail: Central City	2nd Street to Country Club Drive and Rogers Street to Adams Street ⇨High public interest in rapid completion of B-line Trail		●	
	South Phases: 2nd Street to Country Club Drive			●
	North Phases: Rogers Street to Adams Street			●
Clear Creek Trail	Weimer Road Phase: Tapp Road to Sudbury Drive ⇨Public/Private partnership opportunity		●	●
Jackson Creek Trail: Urbanizing Ring and Fringe	West Spur Phases: Rhorer Road to Moores Pike ⇨2002 TE Grant Award for construction of Phase I Goat Farm; phase includes High Street sidepath		●	●
	East Spur Phases: Rhorer Road to Moores Pike	●	●	
	South Mainline Phases: Rhorer Road to Clear Creek Trailhead	●	●	

F = Feasibility / D = Design / C = Construction

High Priority Projects Cont.

Bike Lane and Bike Boulevard Facilities				
Project Name	Location/Notes	Phase		
		F	D	C
6th/7th/Longview Bike Boulevard	Adams Street to Smith Road ⇨Neighborhood association partnership opportunity	●	●	●
Allen/Covenanter Bike Boulevard	Adams Street to Smith Road ⇨Neighborhood association partnership opportunity	●	●	●
Highland Bike Boulevard	Winslow Road to Sheridan Drive ⇨Neighborhood association partnership opportunity	●	●	●
Hawthorne Bike Boulevard	Sheridan Drive to 3rd Street ⇨Neighborhood association partnership opportunity	●	●	●
Fess Bike Boulevard	7th Street to 17th Street ⇨Neighborhood association partnership opportunity	●	●	●
Clifton/Union Bike Boulevard	Maxwell Lane to 10th Street ⇨Neighborhood association partnership opportunity	●	●	●
Bike Lane/Sharrows Initiative	College Avenue, Walnut Street, Indiana Avenue, Dunn Street, North Rogers/Madison Street, 3rd Street, 4th Street, 2nd Street, and Liberty Drive	●	●	
Walnut Street Bike Lanes	1st Street to Winslow Road			●
College Avenue Bike Lanes	4th Street to Walnut Street			●
Liberty Drive Bike Lanes	SR 45 to SR 48 ⇨Monroe County partnership opportunity			●
3rd Street Bike Lanes	Liberty Drive to Kirkwood Avenue ⇨MPO Partnership opportunity (2009 construction SR 37 to Landmark)			●
	Indiana Avenue to SR 45/46			●
2nd Street/Bloomfield Road Bike Lanes	College Avenue to Liberty Drive ⇨MPO Partnership opportunity			●

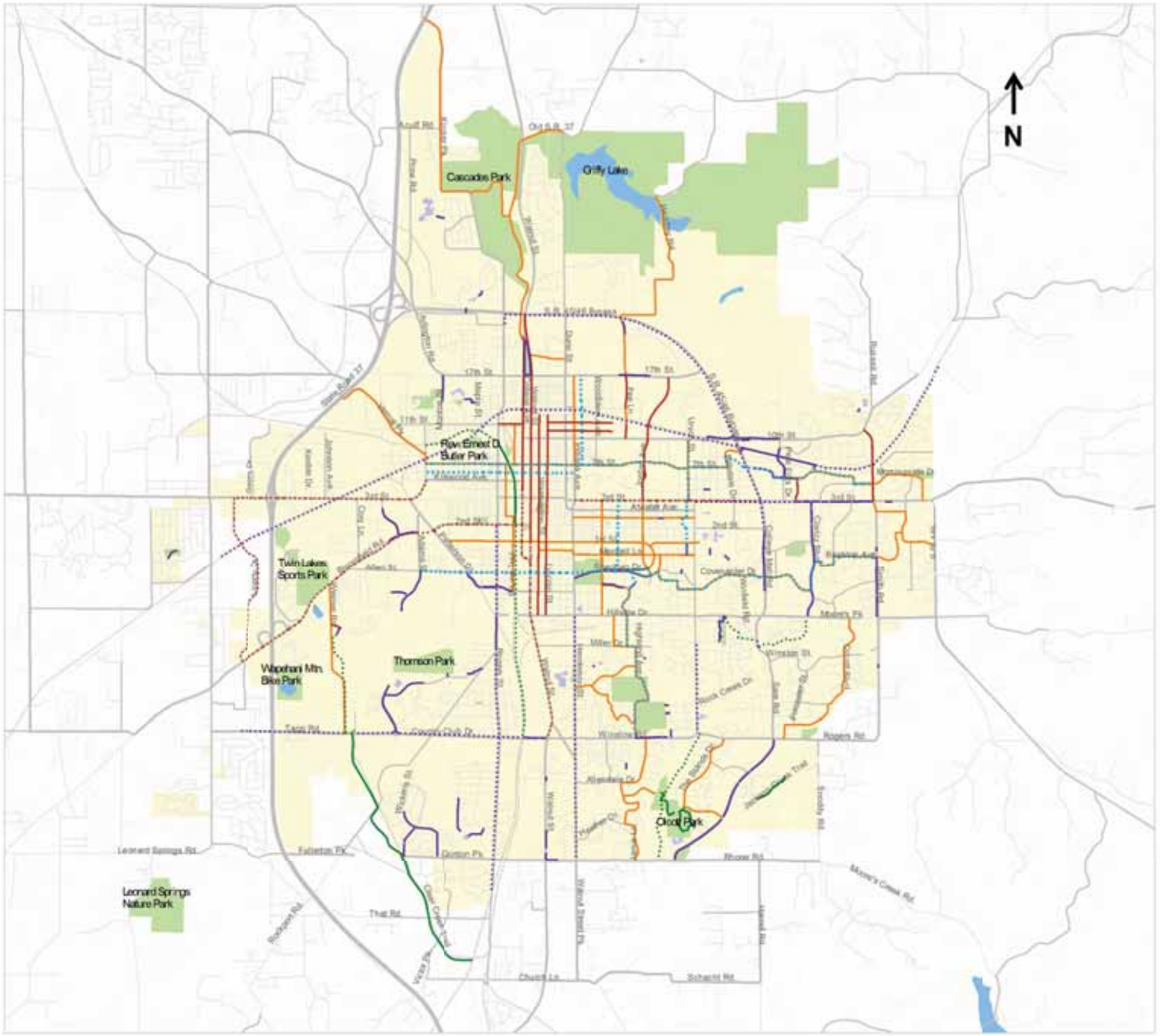
F = Feasibility / D = Design / C = Construction

High Priority Projects Cont.

Sidepath/Connector Path Facilities				
Project Name	**Location/Notes**	**Phase**		
		F	**D**	**C**
Neighborhood Small Connector Paths	See Appendix page 89 ⇨Public/Private, neighborhood and MPO SRTS partnership opportunities		●	●
Rogers Street Sidepath	Rockport Road to Bloomington Rail Trail ⇨West side of the street preference: MPO partnership opportunity (Rockport Road to Country Club Drive)		●	●
Tapp Road Sidepath	SR 37 to B-line Trail ⇨North side of the street preference: MPO partnership opportunity		●	●
3rd Street Sidepath	High Street to Kingston Drive ⇨South side of the street preference	●	●	●
Polly Grimshaw Path	SR 37 to Eastside Jurisdiction ⇨IN RailRoad, IU, MPO TE partnership opportunities	●	●	
	Central City Phases: SR 45/46 to Dunn Street			●
	Central City to West Urbanizing Ring Phases: Dunn Street to SR 37			●
	East Urbanizing Ring to Fringe Phases: Glenwood Avenue to Eastside Jurisdiction			●
Henderson Street Sidepath	Hillside Drive to Rhorer Road ⇨Side of the street preference varies: MPO, SRTS partnership opportunities		●	●
SR 45/46 Sidepath	Kinser Pike to 2nd Street ⇨MPO,INDOT, IU partnership opportunities			●

F = Feasibility / D = Design / C = Construction

Public Initiatives	
Project Name	**Description/Notes**
Community Promotion and Education Program	Develop a comprehensive public relations program for bicyclists and pedestrians ⇨BBC, BBPSC, CVB, IU partnership opportunities
Interlocal Agreements	Form partnerships with Monroe County and/or the Town of Ellettsville for joint venture Plan related projects
College Mall Area Pedestrian Study	Pedestrian accessibility analysis ⇨BBPSC partnership opportunity



City of Bloomington

Alternative Transportation & Greenways System Plan

High Priority Bicycle and Pedestrian Facilities Network

- Planning Jurisdiction
- City of Bloomington Parks
- Lakes
- Schools

- Signed bike route
- Existing bike lane
- High priority bike lane
- Existing sidepath/connector path
- High priority sidepath/connector path
- Existing multi-use trail
- High priority multi-use trail
- High priority bicycle boulevard

Note: Portions of the B-Line Trail and 17th St. sidepath shown as existing are anticipated to be constructed in 2008.

Medium Priority Projects

This ranking indicates that the following projects should be initiated prior to lower ranked projects, but not before most of the higher ranked projects have reached various degrees of successful implementation. A conceptual medium priority build-out map is on page 23 and provides a useful visual tool to illustrate the eventual completion of all construction phased projects identified in the following section.

Multiuse Trail Facilities				
Project Name	**Location/Notes**	**Phase**		
		F	**D**	**C**
B-line Trail: Urbanizing Ring	Country Club Drive to Church Lane (not to be confused with the Bloomington Rail Trail) and Adams Street to Gate Drive ⇨IN Rail Road, Monroe County partnership opportunities	●	●	
	North Phases: Adams Street to Gates Drive			●
	South Phases: Country Club Drive to Church Lane			●
Jackson Creek Trail: Urbanizing Ring and Fringe	South Mainline Phases: Rhorer Road to Clear Creek Trailhead ⇨Monroe County partnership opportunity			●
	East Spur Phases: Rhorer Road to Moores Pike ⇨Monroe County partnership opportunity			●
Cascades Park Trail	Lower Cascades Park ⇨2007 Feasibility Study Completed		●	●

Bike Lane and Bike Boulevard Facilities				
Project Name	**Location/Notes**	**Phase**		
		F	**D**	**C**
College Avenue Bike Lanes	Miller Showers Park to SR 45/46			●
Arlington Road Bike Lanes	Monroe Street to SR 37 ⇨Monroe County, Town of Ellettsville partnership opportunities			●
Indiana Avenue Bike Lanes	Hunter Avenue to 17th Street			●
Rogers Street Bike Lanes	2nd Street to 17th Street			●
Dunn Street Bike Lanes	3rd Street to 17th Street			●
4th Street Bike Lanes	Indiana Avenue to Rogers Street			●
Sudbury Drive Bike Lanes	Rogers Street to Weimer Road ⇨Public/Private partnership opportunity			●

F = Feasibility / D = Design / C = Construction

Medium Priority Projects Cont.

Sidepath/Connector Path Facilities				
Project Name	Location/Notes	Phase		
		F	D	C
Sare Road Sidepath	College Mall Road to Rogers Road ⇨Side of the street preference varies: MPO partnership opportunity		●	●
2nd Street Sidepath	High Street to College Mall Road ⇨South side of the street preference		●	●
17th Street Sidepath	College Avenue to Crescent Road ⇨North side of the street preference		●	●
	Walnut Street to SR 45/46 ⇨North side of the street preference: MPO and IU partnership opportunities			●
Old SR 37 Sidepath	College Avenue to Lower Cascades Park and Club House Drive to Dunn Street ⇨Side of the street preference varies		●	●
10th Steet/SR 45 Sidepath	Pete Ellis Drive to Russell Road ⇨North side of the street preference: MPO, INDOT partnership opportunities		●	●
Black Lumber Path	B-line Trail to Henderson Street ⇨MPO TE, SRTS partnerhip opportunities		●	●
Smith Road Sidepath	Brighton Avenue to 3rd Street ⇨West side of the street preference		●	●
	Moore's Pike to Rogers Road ⇨West side of the street preference: Monroe County partnership opportunity		●	●
Arden Drive Sidepath	High Street to Southeast Park ⇨North side of the street preference		●	●
3rd Street Sidepath	Smith Road to SR 446 ⇨South side of the street preference		●	●
Patterson Drive Sidepath	Allen Street to 3rd Street ⇨Northeast side of the street preference		●	●
Kinser Pike Sidepath	17th Street to SR 45/46 ⇨Side of the street preference varies		●	●

F = Feasibility / D = Design / C = Construction

Medium Priority Projects Cont.

Public Initiatives	
Project Name	**Description/Notes**
Community Promotion and Education Program	Continued support and expansion of program
Capital Trust Program	Seek alternative sources of public and private revenue to support facilities development and continued maintenance needs ⇨Bonding, Improvement Districts, Adopt a Path, and other initiatives
Bicycle and Pedestrian Wayfinding	Develop a Wayfinding signage program to better direct/inform users to key destinations ⇨CVB, Private partnership opportunities
Bike Support Facilities	Develop a strategy to provide public bike racks, European style bike sharing programs, and Bike Station (storage, repair, and shower) ⇨Public/Private, IU partnership opportunities
Plan Update	Update the Strategic Plan section, the facility system network map, and other pertinent material ⇨5-10 year timeframe after 2007 update

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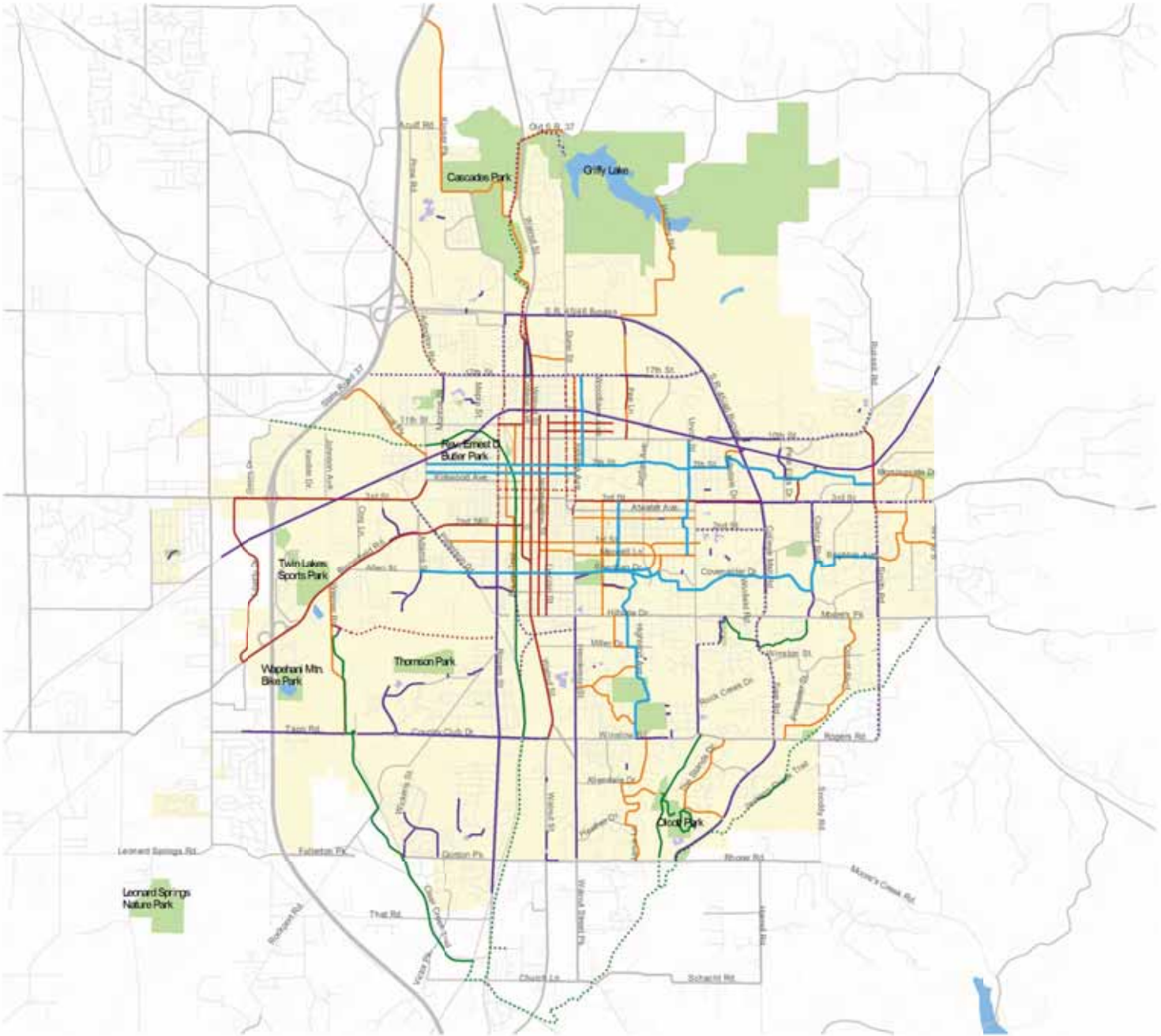

City of Bloomington

Alternative Transportation & Greenways System Plan

Medium Priority Bicycle and Pedestrian Facilities Network

- Planning Jurisdiction
- City of Bloomington Parks
- Lakes
- Schools

- Signed bike route
- Existing bike lane
- Medium priority bike lane
- Existing sidepath/connector path
- Medium priority sidepath/connector path
- Existing multi-use trail
- Medium priority multi-use trail
- Existing bicycle boulevard

Note: High priority facilities are assumed to have been built prior to medium priority facilities, and thus are shown as existing facilities ("existing bike lane," "existing multi-use trail," etc.).

Low Priority Projects

This ranking indicates that the following projects should be initiated after most of the higher ranked projects have reached various degrees of successful implementation. Not all of the facilities identified on the maps within this Plan are included in the Strategic Plan chapter.

Multiuse Trail Facilities				
Project Name	Location/Notes	Phase		
		F	D	C
Griffy Lake/IU Trail	East IU Campus to Headley Road ⇨IU partnership opportunities		●	●
Thomson Park/Sudbury Trail	SR 37 to Rogers Street (aka Powerline Trail) ⇨Duke Energy, Public/Private, MPO TE partnership opportunities		●	●
Jackson Creek Trail: Urbanizing Ring	Rogers Road to Sare Road along Jackson Creek	●		

F = Feasibility / D = Design / C = Construction

Bike Lane and Bike Boulevard Facilities				
Project Name	Location/Notes	Phase		
		F	D	C
Fee Lane Bike Lanes	17th Street to SR 45/46 ⇨IU partnership opportunity		●	●
19th Street Bike Lanes	Walnut Street to Dunn Street		●	●
12th Street Bike Lanes	Walnut Street to Indiana Avenue		●	●
10th Street Bike Lanes	Morton Street to Union Street ⇨IU partnership opportunity		●	●
Law Lane Bike Lanes	Fee Lane to Union Street ⇨IU partnership opportunity		●	●
Union Street Bike Lanes	3rd Street to Law Lane ⇨IU partnershipopportunity		●	●
High Street Bike Lanes	Arden Drive to 3rd Street ⇨Sharrows are the preferred treatment		●	●
Walnut Street Bike Lanes	SR 45/46 to Old SR 37			●

F = Feasibility / D = Design / C = Construction

Low Priority Projects Cont.

Sidepath/Connector Path Facilities				
Project Name	Location/Notes	Phase		
		F	D	C
Club House Drive Sidepath	Old SR 37 to Kinser Pike ⇨Side of the street preference varies		●	●
Dunn Street Sidepath	17th Street to Old SR 37 ⇨East side of the street preference			●
Monroe Street Sidepath	10th Street to 14th Street ⇨East side of the street preference		●	●
Weimer Road Sidepath	Sudbury Drive to 3rd Street ⇨Side of the street preference varies		●	●
Adams Street Sidepath	Allen Street to 2nd Street ⇨East side of the street preference		●	●
Rogers Street Sidepath	Hillside Drive to 2nd Street ⇨West side of the street preference		●	●
Countryside Lane Sidepath	Adams Hill Circle to Thomson Park ⇨North side of the street preference		●	●
Winslow/Rogers Road Sidepath	Walnut Street to Smith Road ⇨North side of the street preference: Monroe County partnership opportunity		●	●
High Street Sidepath	Winslow Road to Arden Drive: West Spur of Jackson Creek Trail ⇨East side of the street preference		●	●
Walnut Street Sidepath	Winslow Road to Rhorer Road ⇨East side of the street preference		●	●
Gordon Pike/Rhorer Sidepath	Country Club Trail to Sare Road ⇨North side of the street preference: Monroe County partnership opportunity		●	●
Winston-Thomas Path	Walnut Street to B-line Trail ⇨Side of the street preference varies		●	●
Moores Pike Sidepath	College Mall Road to SR 446 ⇨North side of the street preference		●	●
Prow Road Sidepath	Arlington Road to Bloomington North High School ⇨East side of the street preference		●	●

F = Feasibility / D = Design / C = Construction

Low Priority Projects Cont.

Public Initiatives	
Project Name	**Description/Notes**
Alternative Transportation and Greenways System Plan Update	Seek additional policy guidance to incorporate transit and other policies to foster a multimodal facility network ⇨ 10 years after 2007 update

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Plan Development

Alternative Transportation & Greenways System Plan

Introduction

What is Alternative Transportation?

Alternative transportation emphasizes forms of transportation that are not dependent on the personal automobile. For the purpose of this plan, alternative transportation will focus on the needs of the cyclist, walker, rollerblader, and other non-motorized means of travel. This plan acknowledges buses as a form of alternative transportation, but recognizes bus systems independently.

An alternative transportation system can be implemented in many forms. For the purpose of this plan the routes identified on the maps within it are for specific alternative transportation facilities including:

- Signed Bike Routes
- Bike Lanes
- Bicycle Boulevards
- Sidepaths
- Connector Paths
- Sidewalks
- Multi-use Trails

What is a Greenway?

The focus of this plan is primarily to implement an alternative transportation system that connects key destinations in the City. Greenways can link such destinations through and along natural or "green" corridors. Trail development in greenways can serve multiple purposes. It can buffer and protect the greenway in its natural state and also provide a great setting for both recreational-based and alternative transportation activities.

Greenway - The linear wooded or open space along waterways, utility lines, non-vehicular public right-of-way, and natural corridors.

Unimproved Trail - A less intrusive path utilizing pervious materials such as crushed limestone, bark mulch, or exposed soil surface. Unimproved trails may restrict all types of users but may be the best solution for greenway areas considered environmentally sensitive.

Throughout the plan the alternative transportation and greenways system will be referred to as routes or bicycle and pedestrian facilities unless a specific reference is warranted.

Joggers and walkers enjoying Clear Creak Trail

Benefits of Alternative Transportation & Greenways

Introduction

A convenient, safe, and well-designed alternative transportation and greenways system will directly benefit numerous individual users, and indirectly benefit the entire community. Although there are many benefits, the primary benefit targeted by this Alternative Transportation and Greenways System Plan is to reduce the dependency and use of motor vehicles. This requires providing efficient and well-planned routes for bicycle and pedestrian commuters, and tying into the public transit system.

Beyond mitigating traffic, a network of bicycle and pedestrian routes will result in many benefits which the City of Bloomington is striving to accomplish. These include:

- Reduce traffic congestion,
- Non-driver accessibility,
- Quality of life,
- Health and wellness,
- Economic and tourism, and
- Environment.

On this and the following pages, the benefits of alternative transportation and greenways systems are identified and discussed.

Reduce Traffic Congestion

One of the most important benefits of an alternative transportation and greenways system is to minimize the use of cars. Many of our city streets have more vehicles using them than they were designed or originally intended to carry. This has resulted in increasing road maintenance costs, building new and wider roads, traffic congestion, driver frustration, longer commute times, and increased use of nonrenewable energy resources.

A 1995 National Personal Transportation Survey found that 40% of all vehicular trips in the United States are less than two miles in length. Such short trips could be achieved with a 10 minute bike ride or a 30 minute walk. According to a similar survey, 40% of American adults said they would commute by bike if safe routes were available. These studies, along with many others, portray a society dependant on vehicles, but willing to utilize an alternative transportation and greenways system if safe, convenient, and attractive facilities are available.

Developing alternative transportation and greenways systems use less land and resources than similar systems for vehicular traffic. The maintenance cost per square foot is much less for alternative transportation and greenways systems than roadways. Therefore, even a small shift from automobile to alternative transportation can reduce the overall cost to the City for transportation related projects and maintenance.

Reducing the use of motor vehicles can aid in solving parking issues and consumption of land for parking spaces. Facilities for parking and storing bicycles require much less space and expense than an equal number of spaces for vehicles.

Reductions of automobile traffic results in a greater degree of safety for motorists, bicyclists, and pedestrians. The National Personal Transportation Survey found that adding paved bike lanes on two lane roads significantly reduced the number of traffic conflicts.

Benefits of Alternative Transportation & Greenways

Non-Driver Accessibility

An alternative transportation and greenways system is a necessity for non-drivers within a community. The most common classifications of people without drivers licenses or cars are the young, elderly, disabled, college students, persons with poor driving records, or persons with low incomes. In fact, a large percentage of our population, approximately 30%, is unable to drive due to age, disability or income. Additionally, a small percentage of people choose to not own a vehicle.

Many of these individuals depend on buses, bicycles, or walking to get to work, stores, school, and other necessary destinations. A safe and efficient alternative transportation and greenways system such as bike lanes, multi-use trails, and public transit will better accommodate this segment of the population.

Quality of Life

Quality of life makes a community a more desirable place to live for young and old, rich and poor, families, and individuals. Quality of life is the most influential factor in attracting and retaining new residents, businesses, industry and tourists.

Alternative transportation and greenways systems have a positive effect on the quality of life within communities. Many communities recognized as having exceedingly high quality of life have well developed alternative transportation and greenways systems. In fact, it is well documented that residents, businesses and industry are attracted to communities that have bicycle and pedestrian facilities.

Local quality of life is influenced by many factors. Some of these factors include economic vitality, consumer opportunity, transportation, natural environment quality, quality of education, ease of accessibility, recreation opportunity, health and safety, arts and culture, and community character.

Bicycle and pedestrian facilities invite people to experience their surroundings which in-turn leads to human interaction, healthier populations, and a heightened sensitivity to community aesthetics; especially pedestrian-scale design features. Bicycle and pedestrian facilities allow people to enjoy their community in a way that motorists cannot.

Bicycle and pedestrian facilities also increase opportunities for recreation, and promote environmental protection resulting in more attractive and more livable communities.

Benefits of Alternative Transportation & Greenways

Health & Wellness

Exercise is essential to maintaining good health throughout our lives. Regular exercise builds one's self-esteem and energy level, as well as reduces numerous illnesses including heart disease, high blood pressure, and obesity. Bike lanes and multi-use trails provide safe and inexpensive opportunities for residents of all ages to improve their overall health.

According to the U.S. Surgeon General and the American Medical Association, 60% of Americans do not exercise on a regular basis and 40% are overweight. Heart disease, the number one killer of Americans, has been directly linked to obesity. Children and teenagers are less physically active than previous generations resulting in greater medical problems.

People who are healthy and exercise regularly have fewer claims against their medical insurance and spend fewer days in the hospital. The Texas Department of Health's Chronic Disease Community and Worksite Wellness Program actively promotes building bicycle and pedestrian facilities as part of a strategy to encourage healthy living.

Former President Clinton's Council on Physical Fitness recommends that one of the best things local communities can do to promote healthy lifestyles is to provide more greenspace and bicycle and pedestrian facilities.

Economic & Tourism

Investing dollars in alternative transportation and greenways will yield a substantial return on the community-wide investment. This return will be in the form of increased personal savings for users, increased property values, increased tourism revenue, and an increase in business recruitment, among other factors. The amount of return cannot be accurately calculated because of the complexity of benefits, unquantifiable nature of some benefits, and the lack of statistical research over time. However, some examples of how other communities have realized economic and tourism benefits from alternative transportation and greenways systems are provided below.

Personal Savings

A bicycle and pedestrian system that is designed for daily commuting can result in significant personal savings for the users. Owning and operating a bicycle for commuting is significantly less expensive than owning and operating a vehicle.

The League of American Bicyclists estimates that the cost of maintaining a bicycle for commuting is approximately $120/year. Whereas the average cost of operating a car is approximately $5,000/year. According to the 1998 U.S. Census, 13% of a typical household income is dedicated to owning and operating a car.

Residents across the country who are able to commute using bike lanes and multi-use trails save thousands of dollars each year in commuting costs.

Economic & Tourism Cont.

Increased Property Values

The existence of bicycle and pedestrian facilities and greenspace amenities also factors into the decisions of potential home buyers. People are searching for and demanding residential areas that include parks, bicycle and pedestrian amenities, and natural areas.

Bicycle and pedestrian facilities and greenways in or near neighborhoods have been proven to increase residential property values. In relation, developers are able to get equivalent premium on lot sales along greenways as they do for lot sales on golf courses.

A 1998 study in Brown County, Wisconsin found that homes along the Mountain Bay Trail sold faster and for an average of 9% more than comparable property off the bicycle and pedestrian facilities. Homes in proximity of the very popular Monon Trail in Indianapolis, Indiana have experienced a similar boost to their property value. Home buyers actively seek out property with bicycle and pedestrian access and are willing to pay premium fees.

The developer of Shepherd's Vineyard in Apex, North Carolina, incorporated greenways into the design of the development and advertised the greenways as a selling point in marketing brochures. As a result, the lots adjacent to the greenways sold the fastest and sold for an average of $5,000 more than similar lots in the subdivision that were not located along the greenway.

Increased property values can produce increased property tax revenues. A study of the impacts of greenways on neighborhood property values in Boulder, Colorado revealed that aggregate property value for one neighborhood was approximately $5.4 million greater than if there had been no greenway. This resulted in approximately $500,000 in additional property tax revenue annually.

Increased Business Revenue

Bicycle and pedestrian facilities have a positive effect on adjacent retail, restaurant and entertainment businesses. Businesses along routes, especially those that are commuter or recreation-related, have been known to flourish with the increased use of the bicycle and pedestrian commuters. Bike and in-line skate repair/rental shops, clothing shops, restaurants, and coffee shops are examples of businesses that can benefit from increased bicycle and pedestrian traffic.

Prior to the development of the Pinellas Trail through the small town of Dunedin, Florida, businesses were suffering and the downtown storefront occupancy rate was at 30%. Today, revenue from bicycle and pedestrian facility users has spurred economic activity. Business is booming and there is now a waiting list for businesses who wish to relocate to the downtown.

Marketability of Community

Bicycle and multi-use trails that link key destinations can make a community more appealing to businesses, industry and people in search of a better quality of life. Communities with alternative transportation and greenways systems successfully attract technology related, professional, and cutting-edge businesses and industry. Further, they are able to keep executives and managers in the community as residents.

Livability is an important factor for businesses looking to relocate. The Rails-to-Trail Conservancy reports that businesses look at schools, housing, and proximity and abundance of outdoor recreational spaces. In Pueblo, Colorado trail and park development along the Arkansas River and Fountain Creek became a major component of the City's economic revitalization strategy.

Economic & Tourism Cont.

Throughout the country, alternative transportation and greenways systems have been successfully marketed to enhance tourism and the local economy through lodging, retail, entertainment, and dining. The RiverWalk in San Antonio, Texas has become a main tourist attraction for the City and is the second most important tourist attraction in the state.

Visitors and Tourism

Tourism is the third largest industry in the country. More and more travellers are interested in visiting locations that offer recreational opportunities. Local communities not only benefit when tourists spend money on food, lodging, and souvenirs, but also recreational supplies for boating, fishing, bird watching, and bicycling.

A 1999 trail users study on the Little Miami Scenic Trail in Ohio found that visitors spent an average $13.50 per visit just on food, beverages and transportation to the bicycle and pedestrian facility. An additional $275 per visit is spent locally by visitors each year on clothing, equipment and accessories to use during these trips.

Contact with nature is important to many visitors of bicycle and pedestrian systems. The US Fish and Wildlife Service has determined that Americans spend more money each year to watch wildlife than is spent on movies or sporting events.

Clear Creak Trail Amenities

Environment

Alternative transportation and greenway systems can significantly benefit the quality of our land, water, and air resources. Short, frequent trips made by automobiles create a substantial amount of pollution. Much of these harmful pollutants can be filtered or trapped by the trees, shrubs, and grasses in greenways before mixing with the air we breath and water we drink. Natural corridors also provide valuable linkages and habitat for urban wildlife.

Air Pollution

Air pollution is becoming increasingly problematic. Many communities throughout the United States do not currently meet the clean air standards established by the U.S. Environmental Protection Agency.

Automobiles cause a significant amount of air pollution. In fact, 31% of total carbon dioxide, 81% of carbon monoxide, and 49% of nitrogen oxide emissions in the United States are the result of increased vehicular traffic and the frequency of short trips. In contrast, non-motorized alternative transportation such as biking and walking releases no air pollution into the environment.

Greenways and other natural areas are able to improve the air quality by filtering and absorbing pollutants such as ozone, sulfur dioxide, and carbon monoxide and releasing oxygen. Therefore the more greenways preserved and maintained in healthy conditions, the more air filtration can be accomplished.

Water Quality & Flood Mitigation

Greenways are able to improve water quality and minimize flooding. Streamside forests act as a filter, trapping nonpoint source pollutants. These pollutants, including sediment, pesticides, fertilizers, oil, gas, and other chemicals, are transported into streams, rivers, and lakes by stormwater when it rains or snows. Without protected greenways, rivers and streams would be more polluted, which increases human health concerns, increases the costs of drinking water pretreatment, destroys aquatic species, and decreases the overall quality of the area.

Flooding causes more damage to communities across the country than all other types of natural disasters combined. Flooding is costly not only in terms of the value of property lost but also lives lost. One reason for this loss is the fact that many flood-prone areas have been inappropriately developed. Setting aside land along rivers and streams in the natural floodplain helps lessen the impacts of flooding.

The Federal Emergency Management Agency estimates that approximately 10 million homes are located in floodplains across the nation and that flood damage alone costs $1 billion in property damage each year. This is money that could be allocated elsewhere if these natural floodplains were protected and managed as greenways.

Wildlife Linkages & Habitat

Greenways preserve natural systems and processes. Protecting greenways is one of the few ways to preserve wildlife habitat and migration routes in urban areas.

Much of the habitat wildlife depends upon has become fragmented by changes in land use and development along rivers and in upland wooded areas. Wooded greenway corridors can effectively link fragmented islands of habitat for wildlife.

Greenways provide good habitat to sustain wildlife. The vegetated land-water edge of a healthy river system is ecologically important for providing food, cover, and water for a variety of animal and plant species.

Vision, Goals & Objectives

Introduction

The Alternative Transportation and Greenways System Plan described in this chapter reflects substantial public and interest group input. This Plan also incorporates analysis of many alternatives put forth by City staff, and the consulting planners and engineers. Public and key interest group input was used to formulate the big-picture goals and objectives, while the detailed analysis of the Plan's components was developed by the professional consultants.

The Alternative Transportation and Greenways System Plan is an aggressive approach aimed primarily at establishing a core network of commuting and recreation routes for pedestrians and bicyclists. It intentionally has some degree of vagueness to ensure flexibility and adaptability as needed.

Plan Vision

The vision of this Plan is to transform the City of Bloomington into a community with a network of safe, convenient and attractive bicycle and pedestrian facilities necessary to efficiently connect people to local destinations. Through city-wide policies, partnerships, ordinances and promotion, the alternative transportation and greenways system will significantly challenge the need to use motor vehicles by providing an equally convenient and lower cost means of reaching destinations in the City.

With the installation and proliferation of bicycle and pedestrian facilities for commuting, the City shall realize an evolution of linear recreation and fitness opportunities, especially when seamlessly integrated with the park system's multipurpose paths, nature trails, and diverse park facilities.

The city-wide system of bicycle and pedestrian facilities shall complement the City's policies for the environment, land use, and transportation while enhancing quality of life, sustaining vitality and defining community character. Thus, Bloomington's alternative transportation and greenways system will further its ability to stay on the forefront of community needs and expectations.

City Profile

The City of Bloomington represents a unique opportunity for implementation of an alternative transportation and greenways system. The following factors better assure the successful design, implementation, and most importantly use of a system in Bloomington.

- A college town with a high percentage of students,
- A highly educated population,
- Compact urban form development pattern,
- A high level of environmental awareness, and
- A strong desire to reduce vehicular traffic and congestion.

College Town

Bloomington is a vibrant and exciting college town. The young, culturally diverse, and well educated population in Bloomington is most likely to embrace an alternative transportation and greenways system and make it successful.

The majority of residents in Bloomington are in some way affiliated with Indiana University. Many of whom do not live on-campus or in a neighborhood adjacent to the campus, and therefore must commute to campus.

As a college town, parking on campus and around downtown is limited and expensive. Both the Indiana University and Bloomington Transit systems serve the City very well; however, a network of safe, convenient, and well-designed bicycle and pedestrian routes could provide additional transportation options for residents moving in and around the City.

Highly Educated Population

Highly educated people are attracted to Bloomington because of its progressive thinking, cultural amenities, and high quality of life. Typically, this same demographic group appreciates and utilizes an alternative transportation and greenways system.

Compact Urban Form

Bloomington's downtown and older neighborhoods benefit from having a compact urban form. Typically, these are areas that have mixed land uses and higher density development. Compact urban form allows for more efficient transportation, public services, and preservation of open space.

Bloomington's existing and continued pursuit of compact urban form development will benefit from the successful implementation of the Alternative Transportation and Greenways System Plan. Communities without compact urban form are at a disadvantage regarding alternative transportation and greenways because key destinations are spread out as a result of sprawl and low density development.

Moving people from their cars onto bicycle and pedestrian routes requires destinations that are in proximity to one another. National averages indicate that bicyclists will commute approximately 3 miles (15 minute ride) and pedestrians up to a 1 mile (10-15 minute walk) to reach their destination. Major employment, and commercial areas in Bloomington are clustered in key locations throughout the City which should make them easily reached by foot or bike from surrounding residential areas.

City Profile

Environmental Awareness

Bloomington has several environmental, bicycle, pedestrian, and parks groups that are cognizant of the environmental implications of an automobile-dominated society. Furthermore, the City recognizes the importance of maintaining the integrity of the natural environment. This is reflected in the fact that the City employs an environmental planner and stormwater engineer. This deep respect for the environment serves as a strong foundation for a successful Alternative Transportation and Greenways System Plan.

This Alternative Transportation and Greenways System Plan is intended to complement the efforts of City staff and environmental, bicycle, pedestrian, and parks groups alike.

Traffic Congestion

Bloomington is similar to communities all over the nation that are experiencing traffic congestion. Several factors contributing to the increase in vehicular use include:

- Multiple workers in each household,
- Development on the City fringe versus redevelopment and infill,
- Lack of alternative transportation and greenways options,
- Increase in out-of-house activities,
- Decentralization of schools and employment centers, and
- Increase vehicular trips from surrounding counties for recreation, employment, and shopping opportunities in Bloomington.

The alternative transportation and greenways system will create a network of safe, convenient, and attractive facilities throughout Bloomington that will entice motorists to leave their cars behind and bike, walk, or take the bus to work and to run errands.

Cyclist using bike lane on Washington Street.

Goals & Objectives

The Alternative Transportation and Greenways System Plan identifies long-range, goals and objectives for the City of Bloomington. With this in mind, the goals and objectives listed on the following pages are intentionally vague in nature to allow for flexibility and adaptability as needed over the next ten years.

The goals and objectives for this Plan have been divided into the following seven topics areas. These include:

1. Bicycle and Pedestrian Users,
2. Connectivity,
3. Funding,
4. Maintenance,
5. Environment,
6. Economic Development, and
7. Tourism.

It is important to note that the following pages include the key issues raised by the public as well as the goals and objectives for the Plan during the 2001 plan development and adoption process. Only a few references and factual information was revised as part of the 2007 update process. Otherwise this section remains largely the same and was not included as part of the 2007 update process; however many of the public comments received did resonate with many of the sentiments detailed in this section.

1. Bicycle & Pedestrian Users

The intent of this Plan is to create a network of bicycle and pedestrian routes for residents of all ages and mobility to bike or walk to their destination rather than taking their car. Choosing to walk or bike to work and run errands will ultimately reduce traffic congestion in the City and improve the health, fitness, and quality of life of Bloomington's residents. However, motivating individuals to walk or bike will require developing safe, convenient, and attractive facilities.

Safety is a primary concern of bicyclists and pedestrians. This includes the safety of the physical design of the alternative transportation and greenways system; safety from other users; and safety from becoming a victim of criminal activity.

The American Association of State Highway and Transportation Officials has published an excellent manual for on-street and off-street bicycle and pedestrian facility design, entitled *Guide for the Development of Bicycle Facilities*. Following these guidelines during the design of the alternative transportation and greenways system should alleviate many of the safety issues.

Conflicts among bicyclists, pedestrians, and motorists can be effectively addressed through educational and awareness efforts including: signage, brochures, special safety days, presentations to school groups, organizations, and businesses, as well as support from the local media. Good signage and clearly marked routes, especially at intersection and mid-block crossings, will minimize conflicts between motorists, pedestrians, and bicyclists.

The Indiana Code recognizes bicycling as a valid form of transportation and as a result bicyclists traveling on the road must adhere to the same rules as motorists and that motorist must share the road with bicyclists. This means stopping at red lights and stop signs, yielding to pedestrians, and using appropriate turn signals.

Bicycle and pedestrian facilities that support a variety of ages, speed, and mobility such as multi-use trails have the greatest user conflicts. Basic etiquette for multi-use trails users may include:

- Stay to the right except to pass,
- Travel at a reasonable speed that is consistent and predictable,
- Look behind and ahead before passing,
- Give a clear warning sign before passing, or stopping, and
- Keep pets on a short leash.

Regular patrol either by law enforcement or trained volunteers may be necessary to promote safety. Busy routes for commuters, park-and-rides, and trailheads may benefit from non-intrusive security or street lighting. Any landscaping adjacent to the bicycle and pedestrian facilities, park-and-rides, and trailheads should be kept pruned to minimize hiding places for criminals.

A well-designed alternative transportation and greenways system will provide pedestrians and bicyclists with a network of bicycle and pedestrian facilities for commuting and recreation that are safe, convenient and attractive.

The following pages include key issues raised by the public as well as the goals and objectives for the Plan.

1. Bicycle & Pedestrian Users Cont.

Key Issues:

Participants in the key interest group interviews, public workshops, and the steering committee identified traffic congestion, connectivity, and personal safety as key issues for pedestrians and bicyclists.

The following is a list of issues identified.

- People want to be out of their cars but conflicts with vehicular traffic and the lack of linked destinations prevents them from doing so.
- Sprawling development patterns and increased volume and speed of cars decrease desire and ability to safely walk and bike.
- Parents drive children to school because there is a lack of safe sidewalks and bicycle and pedestrian facilities in many neighborhoods.
- Currently, people have to drive to locations that are safe for recreational bicycling.
- Bicycle and pedestrian facilities established for commuting need to be easy to navigate and efficient.
- Separate pedestrian, bicycles and cars where possible.
- Education and enforcement of rules of the road is needed for both motorists and bicyclists.
- Volume and speed of vehicular traffic is a major barrier for cyclists and pedestrians.
- Clearly marked routes, especially at intersections, are needed to lessen conflict for pedestrians, bicyclists, and motorists.

Goal :

Increase opportunities for pedestrians and bicyclists to safely and efficiently commute and recreate throughout the City of Bloomington.

Objectives:

1. Create bicycle and pedestrian facilities that are safe:
   A. Where possible, use sidewalks, sidepaths and multi-use trails to physically separate pedestrians and bicyclists from traffic.
   B. Designated bicycle lanes, signed bike routes, and sidepaths should be designed to safely accommodate bicyclists.
   C. Incorporate signage at key points, especially intersections and mid-street crossings to remind users and motorists of the rules of the road.

2. Create routes that are as direct as possible:
   A. Routes that are more accessible and direct for pedestrians and bicyclists will encourage more people to leave their car at home for short and frequent trips.

3. Clearly mark individual routes and the overall system:
   A. Each route and intersection in the system must be clearly marked with signs and striping. Pedestrians and bicyclists should be able to easily distinguish if they are on a designated bicycle and pedestrian facility.
   B. Develop themes for key thoroughfares such that users can refer to a segment of bicycle and pedestrian facility by name or unique features and clearly identify it from other routes.

1. Bicycle & Pedestrian Users Cont.

4. Conduct regular educational and awareness programs for users:
   A. Provide educational programs and events which lead to greater awareness of the system.
   B. Provide incentives for individuals who commute using alternative transportation and disincentives for motorists.

5. Prepare bicycle and pedestrian facility maps and make them available to the public:
   A. Clearly identify city-wide bicycle and pedestrian routes in addition to trailheads. Trailheads should be coded as to what amenities are available (i.e. public restroom, storage, etc.).
   B. Clearly mark park-and-ride locations and public transit stops.

6. Collect and analyze accident and crime data:
   A. Track accident reports relating to bicyclists or pedestrians versus cars, and bicyclists versus pedestrians. Areas that have repeated accidents will need to be reviewed for redesign or installation of additional safety measures.
   B. Track criminal activity on bicycle and pedestrian facilities. Such statistics should indicate criminal activity along routes will be significantly less than elsewhere in the community. This information will prove valuable if the City is being challenged publicly on safety and security issues.

2. Connectivity

Determining where routes for the alternative transportation and greenways system should be located and which type of facility to implement is dependent on several factors. These factors include:

- Identifying key destinations,
- Determining type of bicycle and pedestrian facility and user needs, and
- Developing creative solutions to overcome existing obstacles such as street width, traffic volume and speed, comfort of user, intersections, turn lanes, and bus stop blisters.

Key destinations are places people want or need to get to. These may include: school, work, shopping, parks, entertainment, and transit stops. The intent of this Plan is to better connect such key destinations with bicycle and pedestrian routes in an effort to lessen the number and frequency of vehicular trips.

The major destinations identified in Bloomington include student housing, Indiana University campus, schools, parks, major employment areas, commercial districts, and transit stops.

The type of bicycle and pedestrian facility implemented will be determined by proximity to key destinations, land ownership, and the needs of the proposed users. Bicyclists and pedestrians have varying levels of confidence and reasons for using the alternative transportation and greenways system. Experienced bicyclists who are comfortable riding with traffic will benefit from on-street bike lanes or signed routes. Whereas users interested in recreational benefits or are less confident interacting with vehicular traffic will enjoy sidepaths and multi-use routes.

End of route facilities, such as showers and lockers, for daily commuters and ample secure parking at key destinations will encourage more individuals to ride and walk instead of taking their car.

Each proposed route of the alternative transportation and greenways system will require careful consideration of the most efficient route to connect key destinations as well as the needs of pedestrians and bicyclists.

The collaboration between the Indiana University Campus bus service and Bloomington Transit, which allows students to ride both systems with their student identification, has significantly increased ridership throughout the City. Bloomington Transit ridership was 2.15 million riders in 2005.

Each Bloomington Transit bus is equipped with a bike rack. This system works well for individuals who don't want to fight traffic during their commute but want some flexibility and mobility close to their destination.

The park-and ride site at Indiana University Assembly Hall is very popular and more park-and-ride locations will likely be needed as parking becomes more expensive and limited in and around the campus area. Secure and safe bicycle parking should be provided at key transit stops and park-and-ride locations.

The following pages identify issues raised by the public as well as the goals and objectives developed for this section.

2. Connectivity Cont.

Key Issues:

Much of the discussion on implementing an alternative transportation and greenways system focused on the importance of connecting key destinations as well as the types and locations of bicycle and pedestrian facilities.

The following list includes the most important facility issues identified.

- Locate a hierarchy of routes based on speed and volume of users as well as vehicular traffic.
- Locate routes within City-owned parcels, street rights-of-way and utility easements to the greatest extent possible.
- Provide safe connections to schools, parks, residential, and commercial areas including: Lake Griffy, Cascades Park, downtown, Indiana University Campus, and College Mall.
- Connect hotels, the convention center, and attractions with routes for visitors.
- Promote opportunities to connect arts, culture, and recreation.
- Link City routes with good routes in the county to access Lake Monroe, Hoosier National Forest, and similar destinations.
- Destinations west of SR 37 including retail, residential, schools, recreation, and businesses need to be interconnected and connected to downtown.
- Use alleys, less congested roads, and duplicate roads at Southdowns and College Mall.
- Develop routes in the City for transportation and routes outside Bloomington for recreation.
- Enhance the bicycle and pedestrian facilities with public art.

Goal:

Establish a network of convenient, safe, and well-designed alternative transportation and greenways systems that connect key destinations throughout the City.

Objectives:

1. Continue to support an Alternative Transportation and Greenways System Coordinator:
   A. Continue to fund at least one City staff person within Planning or Public Works to coordinate and facilitate public, private, and nonprofit bicycle and pedestrian projects. Such coordination ensures successful implementation of the Alternative Transportation and Greenways System Plan.

2. Link key destinations:
   A. Determine and prioritize key destinations for bike, pedestrian, and transit commuters. Good connectivity is essential to the success of this Plan. Land use patterns will dictate how successful linking these destinations will be. Dispersed low-density development is much harder to connect than compact, mixed-use developments.
   B. Determine and prioritize key destinations for recreational paths. Residents are more likely to travel longer distances for recreational purposes. Design such routes for a variety of experiences and accessibility for all ages and mobility levels. Part of the recreational experience should be the route itself, not the end destination.

2. Connectivity Cont.

3. Establish a hierarchy of bicyclist and pedestrian routes:
   A. Design pathways to accommodate the volume and speed of users. For on-road facilities, take into consideration the speed and volume of adjacent vehicular traffic.
   B. Establish a hierarchy of pathways that include local, collector, and arterial routes. This hierarchy should complement the system identified for the roadway network. An example of an arterial route would be an on-road facility such as a bike lane. These routes carry the fastest and most experienced users who are comfortable riding with vehicular traffic. Local and collector routes may be bike lanes on less travelled roads or off-road pathways such as sidepaths and multi-use trails. These routes still provide good connectivity but the speed of the user can be much slower.

4. Establish a land aquisition program for alternative transportation that is equivalent in importance to roadway construction projects.
   A. Desired routes for multi-use trails may fall outside of the City's utility and drainage easements thus restricting important linkages between key destinations. Where possible, the City should purchase desired parcels of land to develop bicycle and pedestrian facilities.
   B. All railroad property and right-of-way shall be a high priority for land acquisition and trail construction.
   C. The City shall adopt policy that will attempt to develop trail systems in cooperation with willing land sellers. In the event that an agreement cannot be reached, the City will exercise its authority of eminent domain, which shall be used as a last resort for the purpose of completing the goals of this Plan.
   D. Land acquisition and trail construction issues will be considered and addressed as a matter of course in connection with all proposals for land development. Relevant City ordinances and regulations will be amended to reflect this policy.

5. Provide secure bike parking:
   A. Establish secure parking areas at key destinations, such as employment centers, schools, transit stops, and park-and-rides.
   B. Provide options for secure, short-term or long-term parking. Ideal parking facilities for bike commuters should be covered, safe, and well-illuminated.
   C. Provide incentives to developers and land owners to incorporate secure bicycle parking facilities into their parking lots and developments.

6. Promote bike racks on public transit vehicles:
   A. Encourage bicyclists to use the racks on the front of City buses. This is an ideal system for commuters who don't want to bike with the street traffic but want the freedom and mobility close to their destination.
   B. Provide educational and public service programs for bicyclists to make them more comfortable using transit bike racks.

7. Encourage businesses to participate and assist with plan implementation
   A. Provide incentives for employers to encourage their staff to bike, walk, or take public transit to work. This may include recognitions like "Commuter of the Month" or cash in lieu of a prepaid parking pass.
   B. Encourage employers to invest in end-of-trip facilities such as a shower, changing or locker room, and a secure place to lock their bikes.

3. Funding

Funding an alternative transportation and greenways system can be an expensive and time consuming endeavor. Land acquisition, design, construction and maintenance of the bicycle and pedestrian routes are some of the most significant costs associated with bicycle and pedestrian facilities. This Plan has identified numerous routes throughout the City. Once the routes are built, these routes will successfully connect key destinations and allow for the safe and efficient movement of bicycle and pedestrians throughout the City.

The City Council has allocated $500,000 annually to fund the development of the Alternative Transportation and Greenways System Plan. However, in order to get people out of their cars and using bicycle and pedestrian routes for commuting and recreation, additional funds may be needed to build as many connections as possible in the shortest amount of time.

Creative solutions to funding can be found with collaboration and cooperation of public funds as well as private donations.

Some potential funding sources include:

- Federal programs for transportation, community development and conservation,
- State programs for recreation, transportation, conservation and water quality,
- Local taxes, impact fees, bond referendums, capital improvement programs, and
- Private participation through land trusts, foundations, local businesses, generous individuals, and volunteers.

Some more creative ways to fund development of segments of the alternative transportation and greenways system may include:

- Money from equipment rental for bicycle and pedestrian facility users (roller blades, bicycles, strollers, etc.),
- Sell sponsorship for popular, well-travelled stretches of the bicycle and pedestrian facility, and
- Use the network of routes for a competitive recreational event and charge an entrance fee.

Creative thinking and cooperation among private and public interests will help to successfully build the alternative transportation and greenways system in a shorter time period.

The following pages identify issues raised by the public as well as the goals and objectives developed for this section.

Key Issues:

Discussion within the key interest groups, public workshops, and the steering committee regarding funding for alternative transportation and greenways focused on grant opportunities as well as cooperative efforts among City departments and organizations.

The following list summarizes the issues identified:

- Explore all available federal, state, local, public, private, and nonprofit funding options.
- Combine smaller grants and funds from various City departments and local organizations for bicycle and pedestrian projects.
- Seek donations from private individuals and organizations.
- Incorporate bicycle and pedestrian projects in all applicable INDOT road project proposals.
- Consider a 1/2% property tax increase to be used for land acquisition, construction, and maintenance of bike lanes and multi-use trails.

3. Funding Cont.

- Research available environmental funds especially for routes along waterways or through vacant or underutilized properties.
- Incorporate funds to pay for public art along routes or at trailheads in funding requests.

Goal:

Fiscally plan for the development and maintenance of an alternative transportation and greenways system and place its funding priority equal to that of roadways.

Objectives:

1. Identify and track funding opportunities:
   A. Maintain a database of local, state and federal funding opportunities. This would include public, private, and nonprofit donors. It may be advisable to dedicate a portion of the Alternative Transportation and Greenways Coordinator's time to conduct research or hire a professional grant writer to conduct this research, due to the time and effort involved.
   B. Consider a user fee either in the form of a donation drop box at a trailhead or more formally through a modest property, sales, or hotel tax increase.
   C. Explore funding opportunities that are indirectly related. For example, land purchased or placed in an easement to control flooding could provide linkage opportunities for the alternative transportation and greenways system.
2. Maintain a constant funding source to aid with implementation:
   A. Ensure the City Council and department budgets include annual contributions to develop bicycle and pedestrian routes throughout the community.
3. Coordinate local projects:
   A. Coordinate funds from smaller projects to develop a larger, and better, portion of the system. This may require consolidating funds from multiple City departments and possibly the county.
   B. Coordinate various City departments Capital Improvement Projects (CIP) to include alternative transportation and greenways as a priority.
   C. Explore partnerships with local nonprofits or private corporations. These groups may have projects that directly relate to the City's plans. Such groups may have access to funds not available to public organizations.
4. Incorporate bicycle and pedestrian facilities in all applicable roadway projects:
   A. Coordinate future roadway construction and improvement projects with priorities of the alternative transportation and greenways system.
   B. Establish a system to measure the volume of bicyclist and pedestrian use on a regular basis. Incorporate these numbers into the calculations used to determine funds needed for road improvement and construction projects.
5. Concentrate funds to maximize results:
   A. Identify segments of the community that could benefit the most from an alternative transportation and greenways system. This could include a residential area with school-aged children with no means to safely walk to the neighborhood school.
   B. Coordinate funds and participants to develop a focused number of key linkages of the alternative transportation and greenways system as opposed to creating several small, insignificant and unconnected routes.

4. Maintenance

A well maintained alternative transportation and greenways system will provide commuters and recreational users the confidence they need to leave their cars at home and safely use the bicycle and pedestrian routes on a regular basis. Long-term maintenance issues such as drainage and sight distances should be addressed during the design of the alternative transportation and greenways system.

Regular maintenance may include:

- Inspecting and replacing bicycle and pedestrian facility and roadway signs,
- Repairing cracks and holes in bicycle and pedestrian facility surface,
- Sweeping routes to remove loose gravel, sand, garbage, leaves, etc.
- Removing dead or dangerous tree limbs and regular pruning of vegetation along the bicycle and pedestrian facility,
- Removing snow and ice, and
- Documenting regular inspections to limit risk and liability.

Ownership and maintenance of the alternative transportation and greenways system will be the responsibility of the City of Bloomington. Maintenance of bicycle and pedestrian facilities within the road right-of-way including bike lanes, sidepaths, connector paths, and sidewalks will be the responsibility of the Public Works Department whereas the off-road multi-use paths will be the responsibility of the Parks Department.

The City may wish to explore a cooperative maintenance plan with land owners adjacent to the bicycle and pedestrian facility to monitor and report maintenance problems. Planning and development of the alternative transportation and greenways system will be a joint effort of Planning, Parks and Public Works.

The following pages identify issues raised by the public as well as the goals and objectives developed for this section.

Key Issues:

Participants in the key interest group interviews, public workshops, and the steering committee agreed that regular maintenance of bicycle and pedestrian facilities is critical for daily commuting and recreational use.

The following list highlights these issues.

- Manage bicycle and pedestrian facilities as “dawn to dusk” operations similar to parks except in urban areas where lighting may be appropriate for the safety of daily commuters.
- Police patrol on bikes only in downtown area and at Indiana University.
- Remove snow, sand, and other debris on heavily travelled sidepaths and bike lanes.
- Develop better paint/stripping on bicycle and pedestrian facilities and crosswalks.
- Encouraging neighborhoods, businesses, service organizations, etc., to “adopt-a-trail” and maintain sections of the bicycle and pedestrian facility.

4. Maintenance Cont.

Goal:

Maintain and upgrade the alternative transportation and greenways system on a regular basis so it is safe and accessible for bicycle and pedestrians users throughout the year.

Objectives:

1. Maintain condition of pathways:
   A. Ensure that pathways are regularly cleared of debris and obstacles that may restrict mobility of users. This may include snow, sand, garbage, leaves, and standing water. Regular maintenance of the alternative transportation and greenways system encourages commuters to use the system on a daily basis.
   B. Maintain the surfaces of pathways for ease of the handicapped, elderly, baby strollers, and children.
   C. Inspect surfaces, curbs, ramps, barriers, signage, and warning lights regularly to ensure the safety of users.
   D. Consider a joint maintenance program with adjacent landowners similar to that of the existing sidewalk program.
2. Maintain visibility of routes:
   A. Ensure that routes are clearly marked with durable paint and good signage. Routes should be visible to bicyclists, pedestrians, and motorists. Good visibility and increased awareness reduces conflicts between the various users and motorists particularly at intersections and crosswalks.
   B. Maintain good site clearance along routes. Bicyclists, pedestrians, and motorists need to be visible at critical points of the system such as intersections, grade changes, and blind corners.
3. Upgrade segments of bicycle and pedestrian routes:
   A. Improve segments of routes that have significantly increased in demand. Overcrowded bicycle and pedestrian facilities, especially multi-use trails, can become dangerous and less enjoyable for users.
4. Maintain records for tracking and budgeting maintenance needs:
   A. Track maintenance costs per mile for each type of bicycle and pedestrian facility to determine differing annual maintenance expenditures between sidepaths versus on-street bike lanes.
   B. Track the maintenance cost of amenities or special features, such as trailhead parking lots and restrooms. Special features may also include bridges or vegetation along the bicycle and pedestrian facility.

5. Environment

Multi-use trails can successfully be incorporated into greenways without destroying the environmental integrity of a natural corridor. In many cases, increased visibility of greenways by bicyclists and pedestrians can promote preservation, management, and a greater appreciation for these environments.

However, in urban areas, with limited green space, trail development can have a significant impact on wildlife habitat. A typical multi-use trail may have only ten feet of hard surface but an additional ten feet on either side may be groomed or cleared for the safety and visibility of users. Construction of the bicycle and pedestrian facility can influence existing drainage, soil composition, and plant material. Individuals who wander off the trail with their pets have even a greater impact on natural areas.

With this in mind, natural areas and waterways should be buffered from the trail and trail users. Providing controlled access vistas or look out points should discourage additional traffic through natural areas. Interpretive signage will promote education, awareness, and stewardship among trail users.

The following pages identify issues raised by the public and the goals and objectives developed for this section.

Key Issues:

The participants in the key interest group interviews, public workshops, and the steering committee identified several environmental issues that should be addressed in the Alternative Transportation and Greenways System Plan.

They include:

- Reduce traffic congestion, air, and noise pollution.
- Reduce parking lot requirements to allow smaller parking lots and less impervious surface.
- Use greenways to protect open space, wildlife habitat, and mitigating flood problems along rivers and streams.
- Restore riparian corridors along Clear Creek and proposed Jackson Creek trails.

5. Environment Cont.

Goal:

Promote and enhance the integrity of the natural environment through the sensitive development of trails and greenway corridors.

Objectives:

1. Establish greenways along major streams and tributaries:
   A. Maintain the natural filtration and storage capacity of riverine environments. Streamside forests and natural wetlands act as filters, trapping harmful, nonpoint source pollutants before they reach the waterway.
   B. Remove invasive and noxious plants and replace with native trees, shrubs, and herbaceous species. Native species can tolerate local conditions and, as a result, have a better survival rate.
   C. Maintain and enhance riparian corridors. Streamside forests provide a critical interface between upland development and the sensitive riverine environment. Wildlife depends on these green corridors for food, water, shelter, and breeding.
2. Require environmentally sensitive design techniques and materials for trail construction and placement:
   A. Reduce compaction of soils in natural areas with small machines or hand operated equipment.
   B. Require pervious paving materials to be used on trails in natural areas. Finely crushed gravel or pervious pavement will establish a hard surface for mobility while allowing some filtration into the soil.
   C. Reduce the standard size of trails in natural areas to minimize the area disturbed for trail development.
   D. Design the trail system to complement the existing terrain and vegetation.
3. Provide opportunities for users to explore natural areas off the trail:
   A. Establish designated areas where users can venture off the hard-surfaced trail and enjoy the natural setting of hills, rocks, trees, and water.
4. Design informational signage on trails:
   A. Take advantage of opportunities to educate users with attractive signage and theme trails. This should emphasize the importance of streamside forests for wildlife habitat, water and air quality enhancement and protection.
5. Protect greenways from overuse, misuse, and abuse:
   A. Maintain data on the condition and number of users on multi-use trails. Overuse, misuse, and abuse of the bicycle and pedestrian facility and surrounding areas will degrade the quality of the natural resource.
6. Encourage neighboring landowners to participate in restoration practices.
   A. The Community Wildlife Habitat Program/Wild City Initiative is a program sponsored by the National Wildlife Federation. The purpose of the program is to encourage landowners to allow their property to return to a more natural state. Ultimately resulting in less use of herbicides, pesticides, powered lawnmowers while creating better habitats for wildlife in urban settings. Participating landowners could significantly enhance the greenways efforts of the city with their participation.

6. Economic Development

Alternative transportation and greenways systems provide economic development opportunities for local businesses. Businesses that cater specifically to the needs of pedestrians and bicyclists such as sales, repair, specialty clothing and outfitting will certainly benefit from a well-designed alternative transportation and greenways system. Other non-related businesses like restaurants, coffee shops, shopping, entertainment, and convenience stores will also benefit from the increased bicycle and pedestrian traffic.

As with the success of any business, location is the key. Businesses should take advantage of their proximity to the bicycle and pedestrian facilities. If they are not located directly on a route, attractive signage should be used to draw pedestrians and bicyclists off the designated facility toward their business.

Employers and business owners in proximity to the alternative transportation and greenways system could also make themselves more attractive to prospective employees by extending bicycle and pedestrian facilities to their building. Large corporations looking to relocate often factor in proximity and abundance of open space and recreational opportunities into their decision-making process.

An alternative transportation and greenways system can enhance the City's overall quality of life and its ability to attract and retain residents, businesses, and industry.

The following pages identify issues raised by the public and the goals and objectives developed for this section.

Key Issues:

Participants of the key interest group interviews, public workshops, and the steering committee agreed that businesses linked by the alternative transportation and greenways system, especially those catering specifically to bicycle and pedestrian facility users, could significantly benefit from an alternative transportation and greenways system.

The following key issues were identified by participants.

- Promote commuter and recreational-related businesses in proximity to bicycle and pedestrian facilities.
- Provide safe access for bicyclists and pedestrians to businesses along designated routes.
- Use appropriate signage to advertise businesses in proximity to the bicycle and pedestrian facilities.
- Encourage commercial and employment centers to extend bicycle and pedestrian routes to their facility.

6. Economic Development Cont.

Goal:

Promote the alternative transportation and greenways system as a distinguishing feature of Bloomington to attract and retain quality residents, businesses, and industry.

Objectives:

1. Enhance the local economy by reducing commuter costs and increasing property values:
   A. Strengthen the development of commuter and recreational related businesses in proximity to bicycle and pedestrian routes.
2. Market the system to retain and attract businesses:
   A. Ensure connections are made to existing commercial and business centers. Routes for commuting and recreation have a positive effect on the local quality of life and liveability of the community.
   B. Consider linkages to proposed commercial and business areas. Alternative transportation and greenways routes are an effective marketing tool to attract new businesses and employees.

Downtown bike parking: Over 50 hoops, or more than 100 spaces, have been recently added around the downtown.

7. Tourism

A convenient, safe, and well-designed network of bicycle and pedestrian facilities can boost the local tourism industry.

Bloomington has a rich bicycling history. However, bicycle tourists sometimes have difficulty finding their way around the City safely. An alternative transportation and greenways system will greatly benefit visitors interested in exploring Bloomington by foot, roller blade, or on a bike. Events such as the Hilly Hundred and Little 500 will also benefit from improved routes in Bloomington and better access to county roads.

Safe and convenient connections to key tourist attractions such as hotels, convention center, Indiana University, restaurants and shopping as well as rental and safe storage facilities will boost bicycle and pedestrian tourism opportunities in Bloomington.

The following pages identify issues raised by the public and the goals and objectives developed for this section.

Key Issues:

Discussions among participants of the key interest group interviews, public workshops, and the steering committee highlighted the reality that Bloomington has a reputation as a bicycle friendly community but there are few designated routes that safely link attractions throughout the community, especially for tourists.

The following list identifies tourism issues.

- Market the proposed loop around the City as a potential tourism attraction.
- Develop themes for each route which tie into Bloomington's unique history, geology, and notable landmarks. For example, Monroe County is famous for the abundance of limestone and quarries.
- Bicycle and pedestrian facilities are excellent for targeting the eco-tourism market.
- The image of Bloomington as a bicycle-friendly community and the reality of that perception are not the same.
- Key destinations to link for tourism include: hotels, restaurants, Indiana University, shopping, entertainment, and the convention center.

7. Tourism

Goal:

Add paths to the commuter system to cater to distance cyclists, family vacations, adventurists, naturalists, and other tourism-focused groups.

Objectives:

1. Continue to market Bloomington as a bike friendly community to attract visitors:
   A. Build on the rich bicycle history already established in Bloomington. Major cycling events such as the Hilly Hundred and Little 500 are major income generators for the City.
   B. Provide connections to safe county roads in Monroe County for distance cyclists.
   C. Identify well-marked routes specifically for tourists.
2. Establish themes along each route:
   A. Market the unique local history, geology, and notable landmarks. Themes are an effective way to create interest and opportunity to educate visitor and residents using the alternative transportation and greenways system.
3. Use bicycle and pedestrian facilities to link and support tourist destinations:
   A. Connect key tourist destinations including hotels, the convention center, restaurants, entertainment, and shopping areas.

Summary

The Alternative Transportation and Greenways System Plan provides the City of Bloomington with direction for developing a network of bicycle and pedestrian facilities throughout the City. The intent is for this Plan to be used for both long-term and daily decision-making. This Plan is complemented by a Strategic Plan and Design Guidelines.

The Plan identifies several benefits of developing an alternative transportation and greenways system including:

- Reduce traffic congestion,
- Provide accessibility for non-drivers,
- Enhance the community's overall quality of life,
- Improve the community's health and wellness,
- Provide opportunities for economic development and tourism, and
- Protect the natural environment.

Vehicular traffic has been increasing at a much higher percentage than the population growth rate causing significant congestion and parking problems throughout the City. To it's benefit, Bloomington is a vibrant, highly educated college town with a strong environmental awareness and for the most part, a compact urban development pattern.

The Alternative Transportation and Greenways System Plan identifies long-range goals and objectives that are intentionally vague in nature to allow for flexibility and adaptability as needed over the next ten years.

These goals and objectives are:

- Increase opportunities for bicyclists and pedestrians to safely and efficiently commute and recreate throughout the City.
- Establish convenient, safe, and well-designed alternative transportation and greenways system that connect key destinations throughout the City.
- Develop a fiscal plan to construct and maintain bicycle and pedestrian facilities.
- Maintain and upgrade the alternative transportation and greenways system on a regular basis so it is safe and accessible for bicyclists and pedestrians throughout the year.
- Promote and enhance the integrity of the natural environment throughout the City and fringe area.
- Promote the alternative transportation and greenways system as a distinguishing feature of Bloomington to attract and retain quality businesses and residential development.
- Add bicycle and pedestrian routes to the commuter system which cater to distance bicyclists, family vacationers, adventurists, naturalists, and other tourism-focused groups.

The success of this Plan will be measured annually based on the completion of projects identified in the Strategic Plan.

The Alternative Transportation and Greenways System Plan cannot be viewed as a static, set in stone series of ideas or projects. For this Plan to be effective it must be reviewed, evaluated, and when necessary updated to reflect changing trends, outlooks, and thinking in the community. In doing so, Bloomington can collectively reduce resistance to alternative transportation and develop a network of bicycle and pedestrian facilities that take advantage of opportunities and avoid potential pitfalls.

Design Guidelines

Alternative Transportation & Greenways System Plan

Design Guidelines

Introduction

The intent of the Alternative Transportation and Greenways System Plan is to create a network of bicycle and pedestrian facilities for residents of all ages and mobility to walk or bike to their destination rather than taking their car. Choosing to walk or bike to work will ultimately reduce traffic congestion in the City and improve the health, fitness, and quality of life of Bloomington's residents. However, motivating individuals to walk or bike will require developing safe, convenient, and attractive facilities.

The following design guidelines are essential to the successful implementation of the vision, goals, and objectives of the Alternative Transportation and Greenways System Plan. These guidelines will assist City staff with the development of bicycle and pedestrian facilities that are safe, convenient, and attractive as well as ensure uniformity of the design, layout, and construction of these facilities throughout the City.

These guidelines should be used in conjunction with the standards developed by the City of Bloomington Public Works Department, Indiana Department of Transportation (INDOT), and American Association of State Highway and Transportation Officials (AASHTO).

The City shall develop specific pathway standards as a future update to this document that addresses the types of facilities that can be constructed in smaller pedestrian easements, as differentiated from larger rights-of-way owned by the City. However, as a policy, the City shall seek ownership of its facilities in order to address issues of liability.

Types of Users

Bicycle and pedestrian users vary in experience, mobility, as well as confidence in travelling with, or crossing, vehicular traffic. Experienced users will bike or walk with vehicular traffic even if designated facilities do not exist. However, less experienced or average users prefer to bike or walk on less busy neighborhood streets and on designated bicycle and pedestrian facilities.

Providing accessibility for users of varying experience, mobility and confidence requires careful attention to the visibility of users, width and surface condition of routes, and design speed of bicycle and pedestrian facilities.

The Alternative Transportation and Greenways System Plan attempts to improve the routes and connectivity for experienced users as well as create safe, convenient and attractive facilities to attract average users.

Design Guidelines

Facility Selection

Bicycle and pedestrians desire the same accessibility, convenience and directness of routes as do motorists.

The following list identifies key factors to consider for developing bicycle and pedestrian facilities:

- Identify key destinations that generate a large volume of vehicular traffic with limited parking including the Downtown area, Indiana University campus, and Bloomington Hospital.
- Identify key destinations that typically attract volumes of bicyclists and pedestrians such as parks, natural areas, libraries, schools.
- Determine skill level of users.
- Determine user travel patterns including desired route, time of day, and frequency of travel.
- Identify potential conflict locations between motorists, bicyclists, and pedestrians such as intersections, driveways, and midstreet crossings.
- Determine vehicular speed (not necessarily posted speed limit), volume, and type of vehicular traffic including bus, truck, and car.
- Determine frequency of traffic lights, 2-way and 4-way stops.
- Identify irregularities in pavement as well as location of utility covers and drainage structures.
- Identify on-street parking orientation, frequency and duration of use.
- Identify physical barriers including rivers, railroads, freeways, and steep slopes.
- Identify natural corridors for wildlife habitat enhancement and human enjoyment.

Types of Facilities

The Alternative Transportation and Greenways System Plan identifies several types of bicycle and pedestrian facilities.

The type of facility implemented will depend on physical opportunities and constraints as well as the needs of the user. Ideally, bicycle and pedestrian facilities will connect key destinations throughout the City. However, it will neither be feasible nor practical to implement just one type of facility. Merging, or transitions from one system to another will require careful attention to detail, sound engineering, and good signage.

These guidelines are divided into two sections. The first discusses general information that may pertain to more than one type of facility such as surface material, maintenance and bicycle parking. The second section gives an overview for each of the bicycle and pedestrian facilities identified in the Alternative Transportation and Greenways System Plan including:

- Signed Bike Route,
- Bike Lane,
- Sidepath,
- Connector Path,
- Sidewalk,
- Greenway,
- Multi-Use Trail,
- Unimproved Trail, and
- Bicycle Boulevard.

Design Issues

The following general design issues are not specific to any one type of bicycle and pedestrian facility. These include:

- Surface material,
- On-street parking,
- Intersections,
- Railroad crossings,
- Maintenance,
- Cost, and
- Drainage.

Specific information regarding design and size, intersection treatment, and signage and pavement markings is discussed in detail under each bicycle and pedestrian facility in the following section.

On-Street Parking

On-street parking can become a hazard to both bicyclists and pedestrians. Bicyclists on bike lanes and signed bike routes could be overlooked by vehicular traffic weaving in and out of parking stalls. On-street parking that is too close to intersections and driveways may obstruct motorists view of bicyclists and pedestrians on intersecting sidewalks, sidepaths, and multi-use trails.

- In general, the following concerns should be considered for on-street parking.
- Although parallel parking is safer for visibility, an unexpected open door or side mirror could become dangerous for a passing bicyclist.
- Angled and perpendicular parking creates the greatest conflict since visibility of the motorist and bicyclist is significantly reduced.
- Parking stalls that are used by numerous vehicles and for short durations throughout the day may create conflict for passing bicyclists.
- On-street parking may need to be restricted especially in areas with limited street width.
- Good signage, curb markings, and appropriate setbacks from intersections should reduce conflicts with bicyclists, pedestrians, and motorists.

Surface Material

The condition of the surface material directly affects the speed, comfort, and safety of the user. Bicycle and pedestrian facilities should be machine laid hard-surface material. Concrete and asphalt are the most popular materials used. Although more durable than asphalt, concrete is more expensive initially, more expensive to repair, and takes a longer time to cure.

Environmentally friendly alternatives to asphalt and concrete include pervious concrete, pervious asphalt, block pavers, and boardwalks. These surface materials significantly reduce stormwater runoff and improve water quality compared to traditional materials. Pervious concrete and asphalt are similar to their traditional counterparts in terms of application, and are especially appropriate for low-impact uses such as off-street paths and trails in environmentally-sensitive areas. Block pavers and boardwalks are most suitable for pedestrian-only environments, bridges, and other transition areas where using concrete or asphalt would be infeasible or undesirable. The use of alternative materials should not significantly reduce the utility of the facility or cause it to be noncompliant with ADA provisions. Facilities constructed with alternative materials may require additional maintenance.

Many hard surfaces become slippery when wet and as a result, can be hazardous to users. Concrete should be broomed finished to reduce slippery qualities. Pavement markings also have a tendency to become slippery and should include Silica Beads. These colorless beads are made from recycled glass and are highly resistant to wear and weathering.

Surface irregularities can affect the stability of bicyclists and pedestrians, cause a tire or foot to become trapped and result in the loss of control. Rough surfaces may include:

- Utility structures that are not flush with pavement surface. Utility structures should not be constructed in the travel lane of bicycle and pedestrian facilities. Existing structures should be retrofitted by decreasing openings, elevation, and location if possible.
- Potholes, cracks, and edge of pavement treatment should be addressed in the facility design. The edge of pavement is susceptible to breaking and should be stabilized.
- Rumble strips, reflectors, textured pavement, and raised lane markers should be considered where appropriate.
- Bridge and surface expansion joints should be saw-cut to create a smoother travel surface for bicycles and pedestrians. Smooth asphalt joints can be created using a feathering technique.
- Persistent vegetation may cause bicycle and pedestrian routes to heave. Before construction, a nonselective herbicide should be applied. In environmentally sensitive areas, geotextiles and landscape fabric work well. The installation of a root barrier at the edge of the bicycle and pedestrian facility will prevent roots from growing underneath the trail.

Intersections

More conflicts among vehicles, bicyclists, and pedestrians occur at intersections than anywhere else. Reducing conflicts at intersections requires good visibility, direction, and understanding of who has the right-of-way.

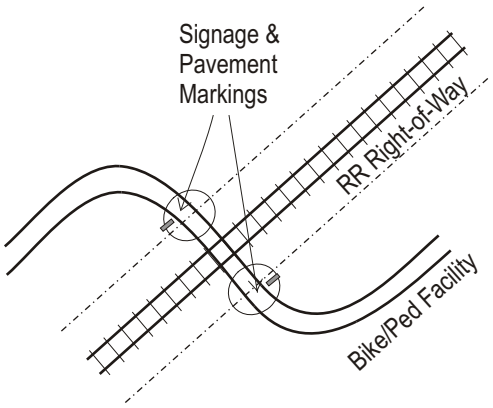
The following are general guidelines to assist with the design of safe intersections for bicyclists and pedestrians.

1. Intersections should be simple in their configuration with good visibility, slow vehicular speeds, and plenty of space for maneuverability.
2. Intersection wait time for bicyclists and pedestrians should be minimized especially at intersections with heavy bicycle and pedestrian traffic.
3. Intersection crossings should be comfortable and accommodating to bicycle and pedestrian users including safe turn lanes and sufficient time to cross street.
4. Each type of bicycle and pedestrian facility will require a unique approach to intersections. This specific information can be found in the previous section listed by facility type.

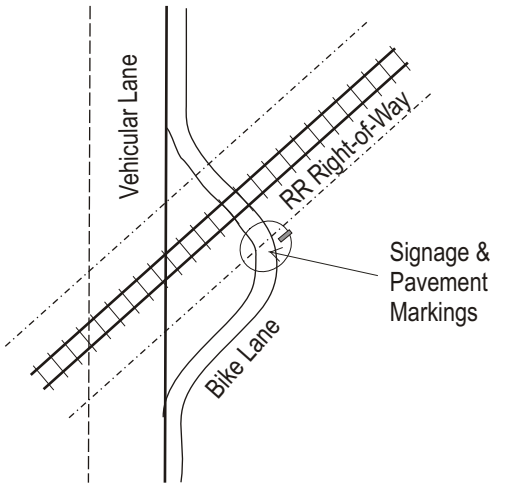
Railroad Crossings

Railroad crossings can be a major obstacle for connecting key destinations for bicyclists and pedestrians. Inactive railroad tracks should be removed for the safety of vehicular, bicycle, and pedestrian traffic. Crossing an active railroad requires careful attention to design and orientation of the bicycle and pedestrian facility including:

- Additional signage, crossing arms, and flashing lights to warn bicyclists and pedestrians of an approaching train.
- Realign street crossing or widen street shoulder so that bicyclists can cross railroad intersections at a 90 degree angle. A smaller angle may trap the tire in railroad tracks and cause the user to lose control.
- Create a smooth travelling surface by filling the track flangeway with a compressed filler such as rubber or concrete. A wood filler is not recommended because it becomes too slippery.



90 Degree RR Crossing



Widened Shoulder RR Crossing

Maintenance

Regular maintenance of bicycle and pedestrian facilities is necessary. Deteriorating facilities can become hazardous for the user and create a liability for the City.

Routine maintenance should include:

- Removal of accumulated sand, gravel, leaves, garbage, and debris with regular sweeping.
- Inspection of surface conditions and timely repair of potholes, cracks, and irregularities along facility edges.
- Inspection of route and roadway signs and pavement markings for readability and effectiveness. Replace deteriorating or confusing signs. Repaint pavement markings on heavily travelled routes on an annual basis.
- Inspection of drainage grates for function and smooth integration into the bicycle and pedestrian facilities.
- Mowing along the edge of routes and pruning branches from nearby trees and shrubs.
- Clearing of snow and ice to ensure safe use during winter months.

Drainage

Poor drainage and placement of drainage structures can create unsafe conditions for bicycle and pedestrian users.

Ponding water can be alleviated with careful attention to the slope and layout of the facility.

- Use a 2% cross slope that drains in one direction. A cross slope will also simplify the design and construction of the facility.
- Install more efficient drainage grates or provide wider travel lanes.
- Construct a ditch to intercept water, or pipe water underneath rather than over the top of the bicycle and pedestrian facility.

The style and location of drainage structures can significantly improve the condition of the bicycle and pedestrian facility.

- If possible, keep bicycle and pedestrian facilities free of all drainage structures.
- Use curb inlets as opposed to surface inlets.
- Where drainage structures must be located within bicycle and pedestrian facilities, adjust the edge of the structure to be flush with pavement surface.
- Surface drainage grates with wide openings parallel to the direction of travel can trap tires causing the user to lose control. Short and narrow grate openings will reduce the likelihood of trapping a tire regardless of the direction of travel.

1. Signed Bike Routes

Signed bike routes are defined as a street that is safe for use by both vehicles and bicycles without a designated bike facility. These routes are identified with appropriate signage.

Signed bike routes work best if they are incorporated into the design and layout of the road. These bicycle facilities can also be successfully integrated into an existing road system providing the travel lane is large enough to safely accommodate both a motorist and bicycle.

Signed bike routes are low maintenance and low cost since no striping or special construction of bike facilities is required. These facilities are preferred by experienced bicyclists who are comfortable riding with traffic. However, they are less preferred by inexperienced or average bicyclists who are intimidated by vehicular traffic.

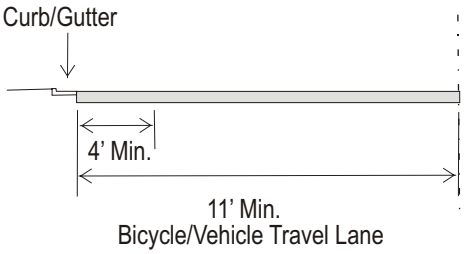
Signed bike routes also work well as short transition facilities for bicyclists to connect discontinuous segments of bike lanes, sidepaths, and multi-use trails.

Facility Design & Size

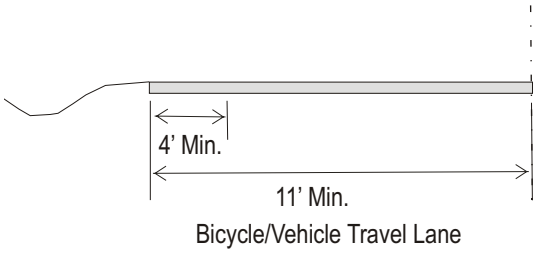
Signed bike routes are suitable for streets with lower traffic volumes and lower vehicle speeds.

The following design and size guidelines should be followed:

- 11’ minimum shared travel lane (measured from edge of pavement not including curb and gutter).
- 4’ of smooth pavement is ideal for bicycle traffic if wide shoulder or curb lane is available.



Wide Curb Lane Cross Section



Wide Shoulder Cross Section

Intersection Considerations

Intersections can be extremely dangerous for motorists and bicyclists. Signed bike routes require bicyclists to ride in traffic. There are two key points to remember when designing a signed bike route:

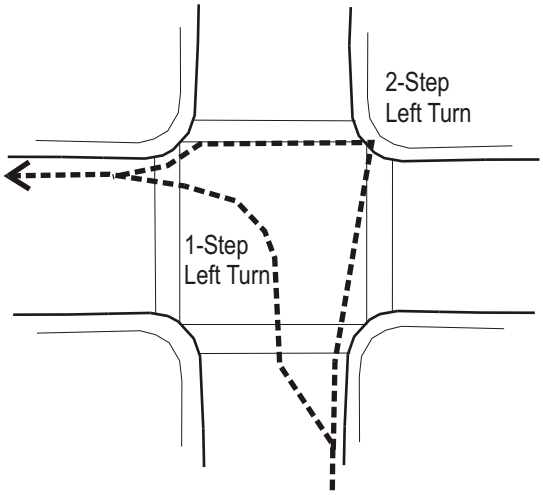
- On-street bicyclists should proceed and follow the same rules as motorists.
- On-street bicycle facilities should be direct and as close to vehicular route as possible.

Simple modifications to intersections should reduce some of the conflict and confusion between motorists and bicycles. These include:

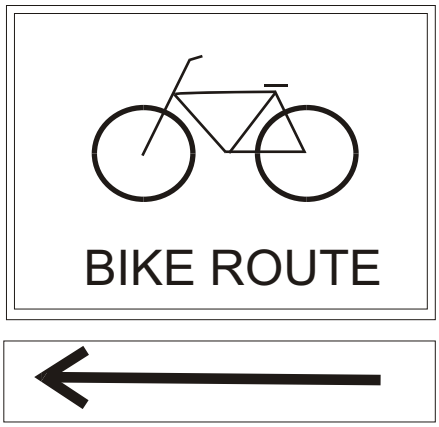
- Provide adequate sight distances for both motorists and bicyclists.
- Assign priority of 2-way stop intersections to streets with signed bike routes. This will allow bicyclists to keep their momentum as well as stop intersecting vehicular traffic.

1. Signed Bike Routes Cont.

- Add signage at intersections to alert motorists of bicycles. Unless the bicyclist is turning left, they will be riding furthest to the right.
- Use "No Turn on Red" and "Right Turn; Yield to Bikes" signage.
- Note: Experienced bicyclists will weave through traffic to make left turns as a motorist would. Less experienced bicyclists may opt for a 2-step left turn



Bicycle Left Turns



Signed Bike Route Sign

Signage & Pavement Markings

Good signage is essential on signed bike routes. Bike route signs should be located every 1/4 mile as well at major intersections. Other reasons for signs include:

- Identifying streets as safe for shared use by vehicles and bicycles.
- Alerting motorists that bicyclists will be sharing the road.
- Providing continuity with other bicycle facilities.
- Identifying key destination information.
- Marking pavement for a signed bike route at the beginning of the route and at intersections.

2. Bike Lanes

Bike lanes are defined as a portion of the road that has been designated and designed for the exclusive use of bicycles with distinct signage and pavement markings.

Bike lanes have a channelizing effect on traffic and allow for more predictable movements of cars and bicycles. Less experienced bicyclists are much more confident in a bike lane versus a signed bike route.

Bike lanes should:

- Travel in one direction only.
- Travel in the same direction as vehicular traffic.
- Be located on the right side of the street (unless bike lane is to the left of a vehicular right turn).

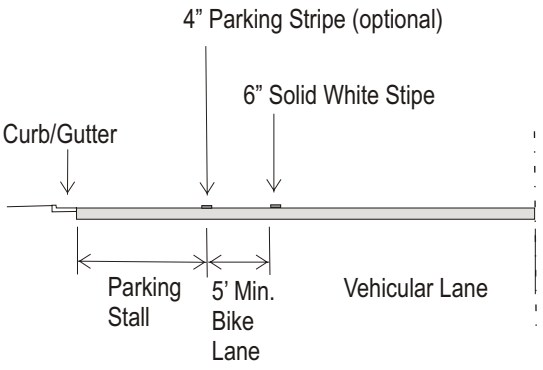
Facility Design & Size

Bike lanes can be integrated onto most city streets providing that the following space requirements are met:

- 4' bike lanes are suitable for streets with 30-40 mph traffic; 5' for streets with vehicular speeds greater than 40 mph.
- 5' bike lane on streets with curb and gutters; 4' bike lane without curb and gutters.

Bike lanes should always be located between on-street parking and vehicular travel lanes. The dimension of bike lanes may vary depending on the type of on-street parking.

- 5' bike lanes should be located on streets with marked parking stalls.
- Bike lanes should be an additional 1-2' wide in areas with short-term, high demand on-street parking.



Bike Lane Cross Section

Intersection Considerations

Conflicts between motorists and bicyclists are greatest at intersections. Good signage and pavement markings with clear directional information will reduce potential conflicts.

Typically bike lane pavement markings will stop before the intersection and pedestrian crossing markings. It is advisable to continue a dotted line through the intersection to:

- Alert motorists at busy intersections of bike traffic.
- Provide safe access for bicyclists progressing through T-intersections.

Motorists making right turns do not always see bicyclists approaching the intersection especially if they are attempting to position themselves in a right turn only lane. The following are options that will allow for improved bicycle safety in right turn lane situations:

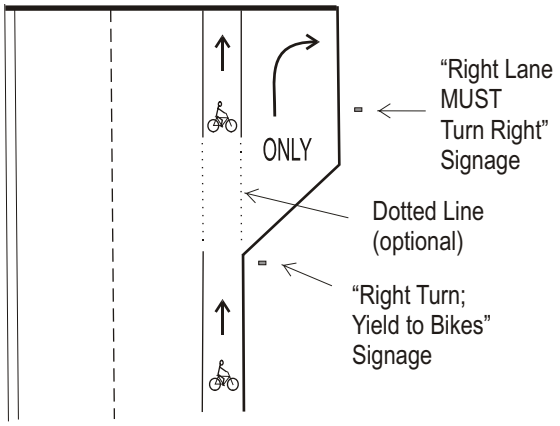
- Continue the solid stripe of the bike lane to the intersection.
- Use a dotted line or end the bike lane stripe to allow traffic to merge to the right.
- Use "Share the Road" signage or "Right Turn; Yield to Bikes".

2. Bike Lanes Cont.

Left turns are more complicated for bicyclists because they may require weaving through multiple lanes of traffic. Left turns by bicyclists are often unanticipated by motorists. Bicyclists will typically use one of the following two options when making a left turn:

- Experienced bicyclists may wish to merge with left turning traffic and turn as a vehicle would.
- Less experienced bicyclists may decide to undertake a 2-step left turn which requires travelling straight through the intersection, stopping at the far corner and then proceeding straight again when permitted.

Sensors or loop detectors, push buttons activators, and a separate green light for bicycle/pedestrian crossings are all options to promote safer crossings at busy intersections.



Bike Lanes & Vehicular Right Turns

Signage & Pavement Markings

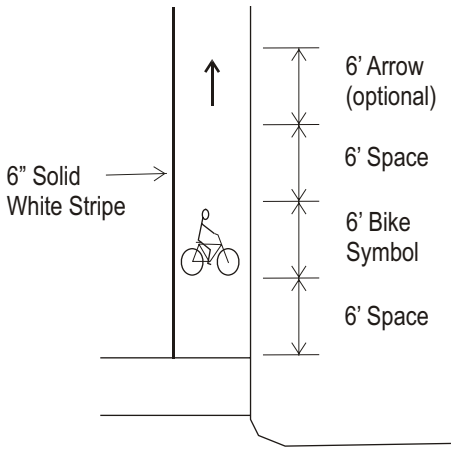
Signage and pavement markings are essential to on-street bicycle facilities. Repetition of information on signs and pavement will reinforce messages for bicyclists and motorists alike.

Signs and pavement markings should be used to:

- Indicate direction of travel.
- Identify bus stops, pedestrian crossings, destinations, steep grades, sharp turns, etc.

Bike lane pavement markings should include:

- A 6" wide solid white line to separate bike lanes from vehicular traffic.
- A 4" wide solid white line to separate bike lanes from on-street parking spaces.
- Striping on entry and exit of intersections.
- Bicycle stencils, directional arrows, and diamonds at every major intersection. Additional stencils may be needed along longer stretches of bike lane.

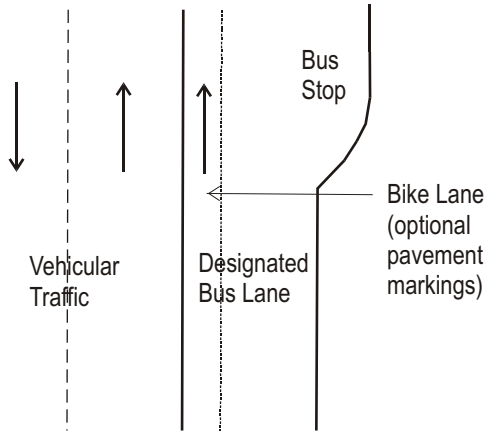


Bike Lane Pavement Markings

2. Bike Lanes Cont.

Bicycle/Bus Lane Combination

It is possible for buses and bicycles to share a designated lane. Buses travel at lower speeds and make frequent stops, making it safe for bicycles to pass on the left side (except for school buses).

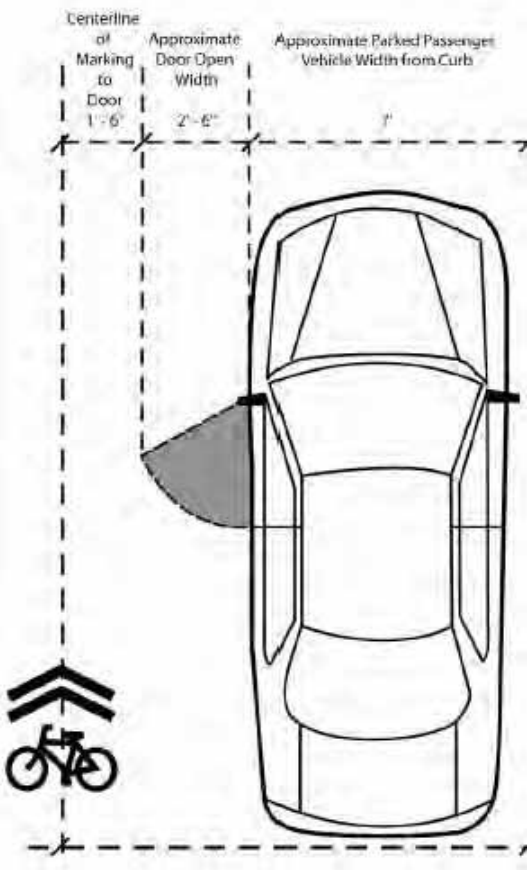


Bike/Bus Lane Combination

3. Sharrows

Share-the-Road Arrows, or Sharrows, are defined as pavement markings painted in vehicular travel lanes which send a visual cue to both motorists and cyclists that cyclists are encouraged to ride in the center of the travel lane.

This positioning is intended to promote safe predictable riding practices and reduce the likelihood of a cyclist colliding with an open door from a parked car or riding off the pavement. By emphasizing the cyclist's right to travel in the middle of the lane, sharrows also help dispel the misconception that cyclists should always travel at the extreme right edge of the road.



Legally, sharrows do not change the rights or responsibilities of motorists or cyclists. They do not restrict motorists from using the sharrow lane, nor do they prevent cyclists from using other lanes.

Sharrows should:

- Direct bicycle travel in same direction as vehicular traffic
- Be located in center of the travel lane
- Be used to connect bike lanes only when there are road width limitations

Facility Design & Size

The markings consist of a bicycle symbol with two arrows pointing in the direction of travel and should be designed to be consistent with the Manual of Uniform Traffic Control Devices (MUTCD), the national standard for lane marking and signage.

Sharrow markings on Walnut Street.

4. Bicycle Boulevards

Bicycle Boulevards are intended to provide a safe and efficient means of travel for bicyclists of all ages. By designating Bicycle Boulevards, the City can target innovative improvements along these key corridors such that a high degree of free-flow bicycle travel, access to major destinations, comfortable bicycling conditions, and minimal conflicts with motorists and pedestrians result.

Bicycle Boulevards are defined as a combination of both on-street (e.g. bike route, bike lane, sharrow) and off-street (e.g. multiuse paths and trails) facilities where modifications are made to improve bicycle safety, convenience, and connectivity. Bicycle transportation is enhanced through the use of various engineering and regulatory tools, such as pavement markings, traffic calming, motor vehicle diversion, signage, and other methods of improving the safety, comfort, and efficiency of bicycling. Bicycle boulevards do not prohibit motor vehicle travel, but may limit access in some manner. Furthermore, bicycle boulevards do not restrict emergency vehicle access.

Bloomington's Bicycle Boulevard program will be loosely modeled after that of Berkeley, CA. Berkeley's program has a number of qualities that make it a suitable model:

- Like Bloomington, Berkeley has a large state university.
- Berkeley has an extensive history of planning and implementing Bicycle Boulevards.
- The goals and objectives of Berkeley's program are largely compatible with and transferable to Bloomington.
- Berkeley has developed excellent reference materials in its "Bicycle Boulevard Design Tools and Guidelines" that can serve as a starting point for implementation of Bicycle Boulevards in Bloomington.

Facility Design & Size

Unlike other bicycle and pedestrian facilities that have specific design criteria, bicycle boulevards may take on many different forms and use various methods to accomplish the goal of providing a safe and convenient bicycle facility. A bicycle boulevard can be thought of as a hybrid bicycle facility which may use bike lanes, multiuse paths, traffic calming, and/or other tools to make bicycling a preferred option. The bicycle boulevard designation is reserved for lower-volume streets and off-street multiuse path facilities that offer the potential for the following:

Significant east-west and/or north-south connectivity – A bicycle boulevard should be provided along a lengthy corridor so that cyclists can traverse the City comfortably and safely.

Free-flow bicycle travel – A bicycle boulevard should have few impediments and barriers to cyclists so that an expeditious route is provided for cyclists.

Access to major destinations – A bicycle boulevard must connect people to where they work, live, shop, study and play in order to be practical.

Comfortable bicycling conditions – A bicycle boulevard is most appropriate on roads which have slower speeds and less vehicular traffic. To this end, bicycle boulevards may work best on neighborhood connector streets or streets that incorporate traffic calming such as chicanes, speed bumps/tables, etc.

Minimal conflict with motorists and pedestrians – A bicycle boulevard mitigates dangerous interactions by providing the appropriate facility for the appropriate user at the appropriate place.

4. Bicycle Boulevards Cont.

Low volume streets may be able to accommodate motorists, cyclists, and pedestrians while higher volume streets may warrant bike lanes and sidewalks in addition to vehicular travel lanes.

Intersection Considerations

As has previously been mentioned, conflicts between motorists and bicyclists are greatest at intersections. In addition to good signage and pavement markings, bicycle boulevards may incorporate other elements to acknowledge and give preference to bicycles:

Bicycle actuated signals – A bicycle boulevard should provide a mechanism to cyclists so that they are recognized at signalized intersections. An effective example of this is a traffic signal loop detector that can detect a bicycle and "trip" the sensor to change the light. This is best accompanied with pavement markings or signage that instructs cyclists how to be detected by the device.

Traffic Diverters – A bicycle boulevard may restrict non-emergency vehicular traffic while maintaining access for cyclists. An effective example of this is when motorists are forced to turn (because of physical barriers or signage) but cyclists may continue straight. Traffic diverters reduce "cut-through" vehicular traffic on neighborhood streets and give preference to cyclists. Traffic diverters shall not be used on collector streets and are only intended for key intersections accessing neighborhood connecting streets.

Bicycle Boulevard street markings in Berkeley, CA

Bicycle Boulevard traffic diverters in Berkeley, CA

5. Sidepaths

Sidepaths are defined as hard-surface paths physically separated from the road with a grass or tree plot within the road right-of-way for use of two-way bicyclists, pedestrians, and other non-motorized users.

Sidepaths are good for less experienced or recreational bicyclists since they are physically separated from vehicular traffic.

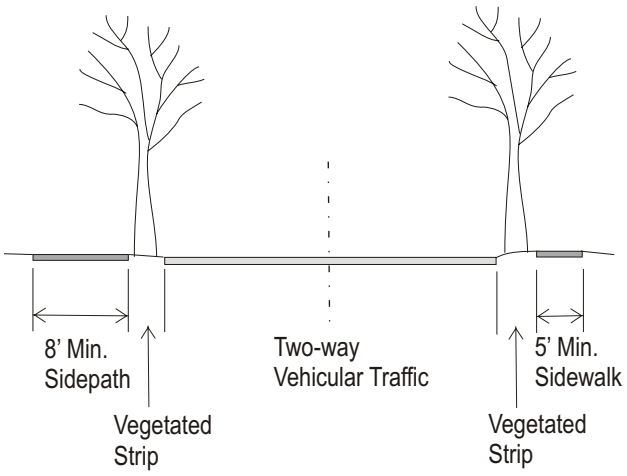
Sidepaths require a large road right-of-way and can be difficult to retrofit along existing streets. Ideally, one side of the street would be used for a two-way bicycle sidepath and the other side of the street for pedestrian use. Mixed uses on the sidepath may result in user conflicts.

Sidewalks may be converted to sidepaths if narrow stretches of road, bridges, or ramps do not provide enough space for bicyclists. Converting sidewalks to sidepaths should be done with caution for the following reasons:

- Bicyclists travel at a faster speed and have slower reaction times than pedestrians.
- Standard sidewalk furnishing such as light poles, bus shelters, benches, garbage cans, parking meters, etc. will have to be relocated to accommodate bicyclists.
- Motorists are not expecting bicycles on sidewalks at intersections.

Facility Design & Size

Sidepaths are meant for both bicycle and pedestrian traffic and should be at least 8’ wide. The vegetated buffer between the sidepath and street should be at least 4’ wide. If sufficient right-of-way exists two-way bicycle traffic should be separated from pedestrian traffic with the sidewalk located on other side of the street.



Sidepath Cross Section

Intersection Considerations

(see Multi-Use Trail Intersection Considerations)

Signage & Pavement Markings

If the sidepath is heavily used by two-way traffic then a 4” wide solid line should be painted down the center to delineate travel lanes. Directional arrows should not be necessary. Signage should be used to remind users of shared trail etiquette or to direct pedestrians to a separate sidewalk facility.

Sidewalks converted to sidepaths will require good signage to warn pedestrians to anticipate bicycle traffic.

6. Sidewalks

Sidewalks are defined as a hard-surface path within the street right-of-way that is designated for the exclusive use of pedestrian traffic.

Facility Design & Size

Sidewalks should be at least 5' wide, formed of concrete with a textured, nonslip surface. Saw-cut joints create a smoother, more comfortable surface for strollers, wheelchairs, etc. Ideally, sidewalks should be buffered from the street with a grass or vegetated strip. Sidewalks should be wider than 5' in urban settings with high pedestrian traffic.

Signage

Signage may be used to identify destinations, bus stops, and intersections. Signage should be set back off of the sidewalk or high enough to prevent obstructing views or interfering with pedestrian.

Intersection Considerations

Pedestrian crossings at street intersections should:

- Be unobstructed by cars, buildings, vegetation.
- Intersect with street at 90 degrees.
- Have crosswalk striping the same width as the sidewalk.
- Include refuge islands on busy streets, especially if there are a lot of elderly, disabled, or children crossing the street.
- Include motion detectors, pressure mats, push button activators for pedestrians.
- Be ADA compliant.

On-Street Parking

On-street parking provides a good buffer between the sidewalk and street traffic.

7. Connector Paths

A connector path is defined as a hard-surface linkage or shortcut between key destinations that is not accessible by automobiles.

Connector paths provide great opportunities to link neighborhoods, entertainment, commercial areas, and schools with nearby bicycle and pedestrian routes. Drainage and utility easements make great connectors between neighborhoods and other destinations.

Bollards, or some other type of physical deterrent may be necessary at the end of the connector to restrict access to vehicular traffic access and suggest a private entrance to other trail users.

Facility Design & Size

Connectors typically link neighborhoods to a nearby trail or destination. Traffic on this type of connector is usually light. However, to safely accommodate multiple users an 8' wide hard-surface trail is recommended.

Intersection Considerations

Intersections should have good visibility, signage, and ideally meet at a 90 degree angle. (see Multi-Use Trail Intersection Considerations)

Signage & Pavement Markings

Signage should be used to identify destinations, intersections, and any trail hazards.

No pavement markings are necessary.

A connector path in Green Acres Neighborhood on 4th Street

8. Greenways

A greenway is defined as a linear wooded or open space along waterways, utility lines, non-vehicular public right-of-way, and natural corridors.

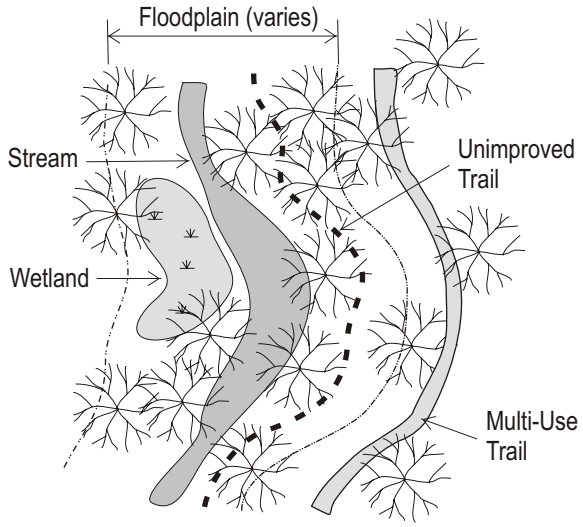
Greenways provide a great opportunity to protect natural corridors and connect natural islands fragmented by development. With careful consideration for maintaining the natural integrity of the site, greenways provide an opportunity for trail development.

Facility Design & Size

Greenways vary in size. Corridors along waterways should include contiguous riparian, floodway, and wetland areas. Trails in greenways should be between 25' to 200' from environmentally sensitive areas.

Trails in greenways may be constructed in either of the following ways:

- Unimproved 6-8' trail composed of pervious material such as mulch, loose gravel, or soil. (See Unimproved Trail Facility Design & Size.)
- Multi-use 6-8' hard-surfaced trail constructed with some sensitivity to the surrounding environment. (See Multi-use Trail Facility Design & Size.)



Greenway Delineation

Signage

Interpretive signage along the trail will be useful in promoting environmental awareness and stewardship among trail users.

Maintenance

Regular removal of invasive and non-native plant material will be necessary on a regular basis.

9. Multi-Use Trails

Multi-use trails are defined as a hard-surface, off-road path for use by bike, foot, and other nonmotorized traffic typically located within or along a greenway.

Multi-use trails are ideal for recreational use since these trails can support a variety of two-way users. Multi-use trails are a valuable asset to a bicycle and pedestrian network and should be used to supplement on-road facilities.

Multi-use trails may focus on a particular theme or celebrate local history, surrounding natural features, or notable landmarks. Trailheads and rest areas along multi-use trails may have benches, water fountains, trash cans and displays of public art.

Facility Design & Size

Multi-use trails are typically 10-12' wide with at least a 2' crushed gravel shoulder. In environmentally sensitive areas, or where volume of users is expected to be low or infrequent, 6-8' trails may be appropriate. In areas where the volume of use is high and type of user diverse, pedestrian and bicyclists/roller bladers should be physically separated to reduce conflicts.

Bicyclists and pedestrians should be separated if:

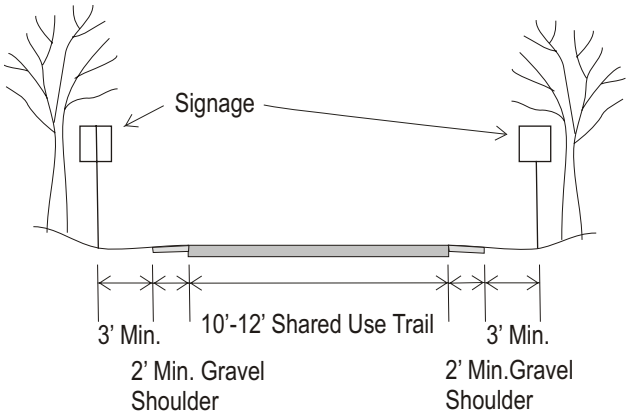
- The trail is used for long distance commutes and therefore experiences faster speeds
- There is a high volume of diverse users (2000 or more users/day).

Controlling speed on multi-use trails is important to the safety and enjoyment of all trail users. The minimum design speed for multi-use trails is 20 mph. Speeds any faster than this are inappropriate for mixed use.

Speed of users is determined by:

- Type and condition of bicycle and user.
- Purpose of trip.
- Condition, location, and grade of trail.
- Speed and direction of wind.
- Number of users on trail.

Vehicular access can be controlled with bollards, low landscaping, or two smaller one-way trails.



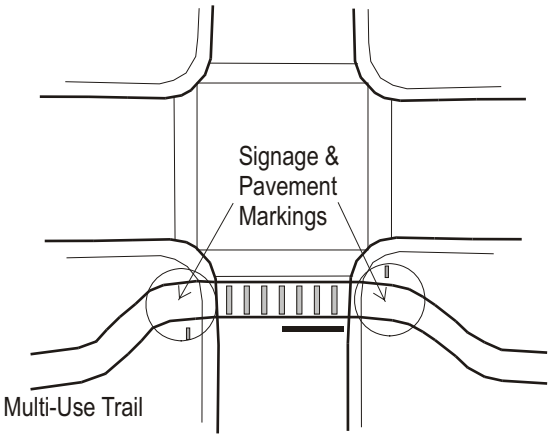
Multi-Use Trail Cross Section

Intersection Considerations

Multi-use trails typically have a limited number of street crossings. However, conflicts with motorists still exist. Intersection features at multi-use trails may include:

- Flashing lights at trail crossings.
- Crosswalks that are the same width as the trail.
- Designated green lights for trail users.
- Infrared motion detectors, pressure mats, button activated crossings, etc.
- Refuge islands for trail users especially those with reduced or limited mobility.

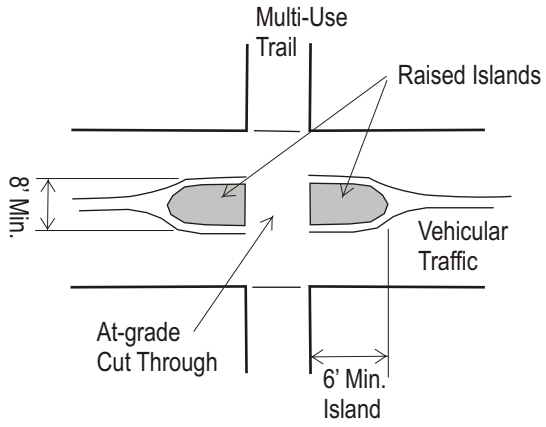
9. Multi-Use Trails Cont.



Multi-Use Trail Intersection

Mid-block crossings for multi-use trails are fairly common and require good signage, pavement markings and sometimes overhead flashing lights to alert motorists to crossing bicyclists and pedestrians. Some key considerations of mid-block crossings include:

- Ensure adequate separation from existing intersections. Motorists are often distracted when approaching an existing intersection with merging, accelerating, deceleration, turning, etc.
- Use refuge islands for trail users to wait until they can safely cross busy streets.



Multi-Use Trail Refuge Island

Signage & Pavement Markings

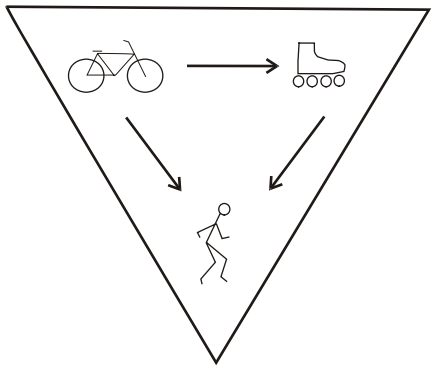
Good signage and pavement markings are needed on multi-use trails to ensure that trail users do not conflict with one other as well as with motorists at intersections.

The use of signage is important to:

- Alert users of potential conflict points - steep slopes, sharp curves, intersections.
- Post trail direction and destinations.
- Ensure that trail names, theme, mile markers, etc. are adequately identified.
- Identify cross street names.
- Remind users to share path and to give notice when passing.

Pavement markings may include:

- A 4" wide yellow centerline. Use broken line if good sight distance is available for passing.
- A 4" wide white line to mark edge of trail. This is especially important for early morning and evening users.



Multi-Use Trail Signage

10. Unimproved Trails

An unimproved trail is defined as a less intrusive path utilizing pervious materials such as crushed limestone, bark mulch, or exposed soil surface. Unimproved trails may restrict all types of users but may be the best solution for greenway areas considered environmentally sensitive.

Facility Design & Size

Unimproved trails are designed for lower speeds and grades. Speeds less than 15 mph and grades of 3% or less are suitable for unimproved trails.

Trail width may vary depending on the conditions of the surrounding area. An unimproved trail of 6-8' will allow for multiple users.

Surface Material

Pervious materials such as bark mulch, loose gravel, or exposed soil are suitable surface materials.

Appendix

Alternative Transportation & Greenways System Plan

Appendix

Public Participation Overview

Public participation is essential to the continued development and implementation of the Alternative Transportation and Greenways System Plan. The community's priorities need to be reflected in the Plan if it is to be successful. This can only be accomplished if the public is actively engaged in the Plan's development.

Both the development of the original Plan and its Update in 2007 relied heavily upon public input. In both instances steering committees from diverse backgrounds helped formulate recommendations. These groups were asked to serve as a sounding board on behalf of the community throughout the planning process. The recommendations were then presented at public workshops in order to gauge public support and generate ideas for any other needed changes. The result is a living document that the City and its residents can uphold as a testimony to the community's priorities.

Initial Plan Development

The public participation process for the alternative transportation and greenways system planning process began in 2001 with the creation of a steering committee of sixteen people from diverse backgrounds. Interviews were then conducted of ten different key interest groups so that the City could begin to identify the community's priorities.

A public workshop was held on February 20, 2001 which gave residents an opportunity to voice some of the initial needs and concerns regarding a network of pedestrian and bicycle trails throughout the City. A second public workshop was held on May 31, 2001 in which the conceptual plan and suggested alternative transportation and greenways system routes were unveiled to the community.

The feedback received through these public input forums resulted in the development of the draft Alternative Transportation and Greenways System Plan. The Plan went through the formal public approval process in order to have it incorporated into the City's Growth Policies Plan. It was first brought before the City of Bloomington's Plan Commission which ultimately recommended adoption of the Plan to the Common Council. On October 31, 2001, the City of Bloomington Common Council adopted Resolution 01-24 officially amending the Growth Policies Plan to include the Alternative Transportation and Greenways System Plan.

Appendix

2007 Plan Update Development

The 2007 update of the Alternative Transportation and Greenways System Plan was developed in keeping with the reliance on the public to identify bicycle and pedestrian facility priorities for the City. Similar to the development of the initial Plan, the City formed a Strategic Advisory Committee to help guide the update process. It was made up of fourteen stakeholders representing diverse interests in the community. The Strategic Advisory Committee and City staff developed a series of recommended updates to the Alternative Transportation and Greenways System Plan, especially to the Strategic Plan section of the document.

An updated proposed facilities network map was unveiled at the Monroe County Public Library on August 24 & 25, 2007 at a two day public information gathering display. The public was able to provide input on the proposed facilities map as well as complete a survey which helped identify other key policy changes within the Plan. Results of the survey are included on pages 93 to 96.

The public was then invited to a workshop on September 11, 2007. Attendees were able to comment on the proposed changes to the proposed facility network map as well as the priorities set forth in the Strategic Plan. Additionally, specific guidance was sought and received on bicycle boulevards and emergent themes within the Alternative Transportation and Greenways System Plan.

The guidance received from the Strategic Advisory Committee, the public information gathering display at the Monroe County Public Library, and the public workshop have all influenced the development of this document. This input has resulted in a new Strategic Plan, a new Bicycle and Pedestrian Facilities Network map, a new Proposed Bicycle Boulevard map, a new Neighborhood Small Connector Path map, a Future Bike Routes map, as well as other minor revisions to the Plan.

Sidewalk Inventory

Several neighborhoods are currently without sidewalks, have missing segments, or the sidewalks are unsafe and in need of repair.

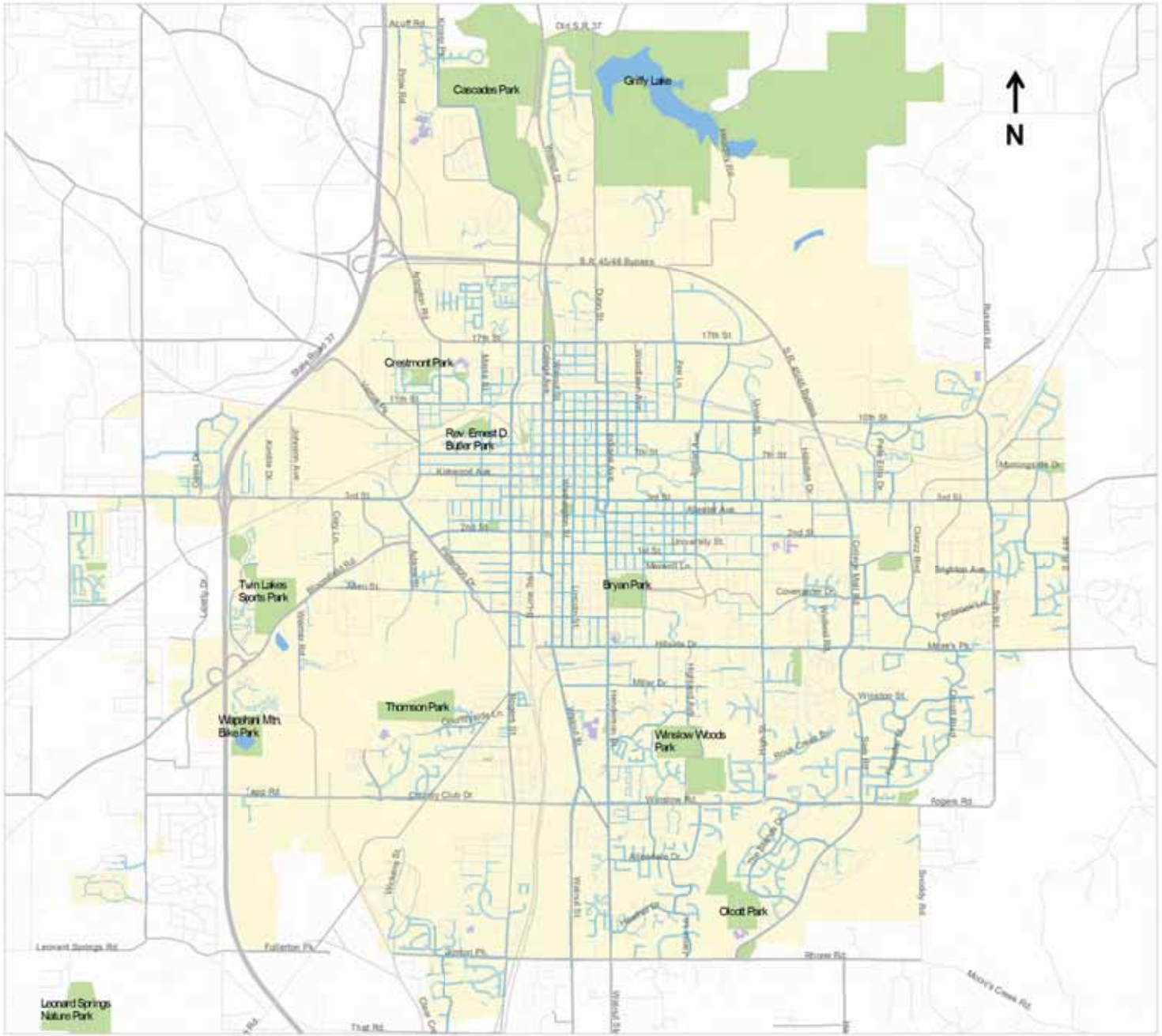
The City of Bloomington will conduct a thorough sidewalk inventory. The location and condition of each stretch of sidewalk will be recorded in the City's geographic information system and a prioritizing methodology will be established to determine key areas of the City in need of sidewalk repair, replacement, and new construction.

As the City considers additions to the existing sidewalk system the following methodology will be used to ensure the wisest possible investment of City funds. Elements of this methodology include:

- Identifying dangerous roads and intersections,
- Determining the number and frequency of trips generated from key destinations,
- Collecting and analyzing census data to determine areas that have high densities,
- Identifying location of transit routes and transit stops, and
- Allocating the City's resources evenly throughout the residential, commercial, and institutional land uses.

The City of Bloomington has a 50/50 program to share the cost of installation and repair of sidewalks with property owners. While this program has been successful, sidewalk construction is very expensive for both the City and landowner. This Plan recognizes sidewalks as an essential component of the alternative transportation and greenways system.

A map of the 2007 Sidewalk Inventory is included on the following page. The map is updated annually and is a useful visual tool to identify locations with and without sidewalks throughout the City.



City of Bloomington

Alternative Transportation & Greenways System Plan

2007 Sidewalk Inventory

- Planning Jurisdiction
- City of Bloomington Parks
- Lakes
- Schools
- Existing sidewalk

City of Bloomington

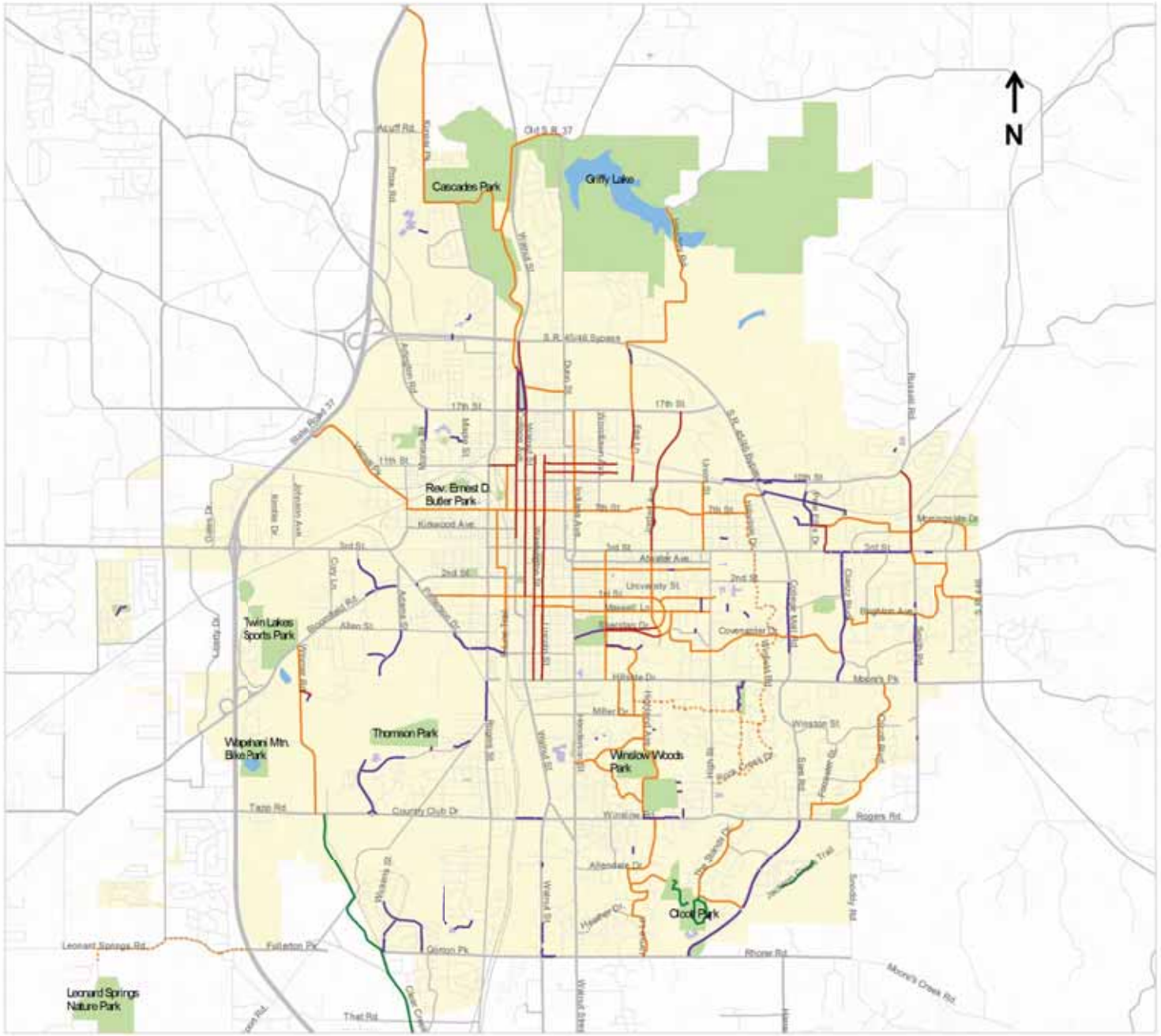
Alternative Transportation & Greenways System Plan

Small Neighborhood Connector Paths

Planning Jurisdiction
City of Bloomington Parks
Lakes
Schools

..... Future connector path

Key	Description
1	Canterbury Park to Showplace Cinema
2	Basswood Dr. to Twin Lakes Sports Park
3	Rev. Ernest D. Butler Park to B-Line Trail
4	Walker St. to Patterson Dr.
5	Madison St. to Patterson Dr.
6	Wilson St. to Henderson St.
7	Fess Ave. to Bryan Park
8	Olive St. to Azalea Ln.
9	Dorchester Dr. to Thornton Rd.
10	Renwick Trail to Jackson Creek
11	Showplace East to apartment complex
12	Homestead Dr. to Clarizz Blvd.
13	Regents Cir. to Cobble Creek Dr.
14	Canada Dr. to Jackson Creek Trail
15	Winslow Sports Park to Olde Mill Ct.
16	Winslow Woods Park to Olde Mill Dr.
17	Winslow Woods Park to Bent Tree Dr.
18	Batchelor Heights to Batchelor M.S.
19	The Highlands to Clear Creek Trail
20	Summit Elementary School to Thomson Park
21	Thomson Park to Power Line Trail



City of Bloomington

Alternative Transportation & Greenways System Plan

Proposed Bike Routes

- Planning Jurisdiction
- City of Bloomington Parks
- Lakes
- Schools

- Future bike route
- Signed bike route
- Existing bike lane
- Existing sidepath/connector path
- Existing multi-use trail

Note: Future bike routes shown here were recommended during the public input process. These routes, along with any other potential bike routes, will be evaluated by the Bloomington Bicycle and Pedestrian Safety Commission prior to implementation.

Appendix

Survey Results

Below are the questions from the survey and the results of the respondents.

1. Please draw on the attached map any changes you would make to Bloomington's bicycle and pedestrian network.

2. Please mark an "X" on the map where you live (general location). If you don't live in Bloomington, please note the town, county or city in which you live at the bottom of the map.

   Note: A map is provided on page 95 that illustrates the results for this question. The colors represent the concentration of responses from none (blue/purple) to the most (red).

3. Please place two stickers on the map where bicycle and pedestrian improvements are needed most.

   Note: A map is provided on page 96 that illustrates the results for this question. The colors represent the concentration of responses from none (blue/purple) to the most (red).

4. What facility would improve Bloomington's bicycle and pedestrian network the most? (Please pick only one).
   a. Bike Lanes/Sharrows ("share-the-road arrows"): (**22)**
   b. Connector Paths: (**4)**
   c. Multiuse Trails: (**21)**
   d. Sidepaths: (**10)**
   e. Sidewalks: (**4)**
   f. Bike boulevard: (**1)**
   g. All the above: (**1)**

5. For transportation purposes such as getting to work or school, or running errands, please indicate how many times a week you:

   a. Walk:
      None: (**7**)
      1-3X: (**22**)
      4-7X: (**9**)
      >7X: (**13**)

   b. Ride the Bus:
      None: (**30**)
      1-3X: (**12**)
      4-7X: (**5**)
      >7X: (**3**)

   c. Bike:
      None: (**6**)
      1-3X: (**12**)
      4-7X: (**16**)
      >7X: (**22**)

   d. Drive an automobile:
      None: (**12**)
      1-3X: (**17**)
      4-7X: (**14**)
      >7X: (**12**)

   e. Other (please list):
      None: (**3**)
      1-3X: (**1:carpool**)
      4-7X: (**2: moped/motorcycle**)
      >7X: (**0**)

6. If bicycle and pedestrian facilities were conveniently located and/or more abundant would you:
   a. Walk:
      Less (**11**), More (**28**), No Change (**17**)
   b. Bike:
      Less (**0**), More (**57**), No Change (**5**)
   c. Ride the Bus:
      Less (**3**), More (**14**), No Change (**29**)
   d. Drive an automobile:
      Less (**39**), More (**0**), No Change (**10**)
   e. Other (please list):
      Less(**1:**carpool), More(**0**), No Change(**0**)

7. How would you rate Bloomington's performance in providing appropriate bicycle and pedestrian facilities (Please pick only one)?
   a. Poor: (**11**)
   b. Average: (**35**)
   c. Excellent: (**15**)
   d. Not Sure: (**4**)
   (Note: Some confusion on this question – some remarked: "compared to what?")

Appendix

Survey Results Cont.

8. How should Bloomington implement new and proposed facilities for bicyclists and pedestrians (Please pick only one):
   a. Stop (do not implement new/proposed facilities): (**0**)
   b. Slow (about one small to midsized project a year): (**1**)
   c. Moderate (about two to three midsized projects a year or one big project a year): (**11**)
   d. Aggressive (multiple projects of all sizes a year): (**50**)
   e. Not Sure: (**5**)

9. What do you think is the main reason why people don't walk, bike, or ride the bus more frequently (Please pick only one)?
   a. Safety: (**17**)
   b. access to facilities: (**6**)
   c. lack of facilities; (**8**)
   d. education/awareness: (**13**)
   e. less convenient compared to alternatives: (**24**)
   f. other: (**8**) (**4** *stated: laziness*)

   (Note: Lots of people did not want to just pick one)

10. Should Bloomington's Alternative Transportation and Greenways System Plan focus more on bus riders?
    a. Yes: (**20**)
    b. No: (**16**)
    c. Not sure: (**32**)

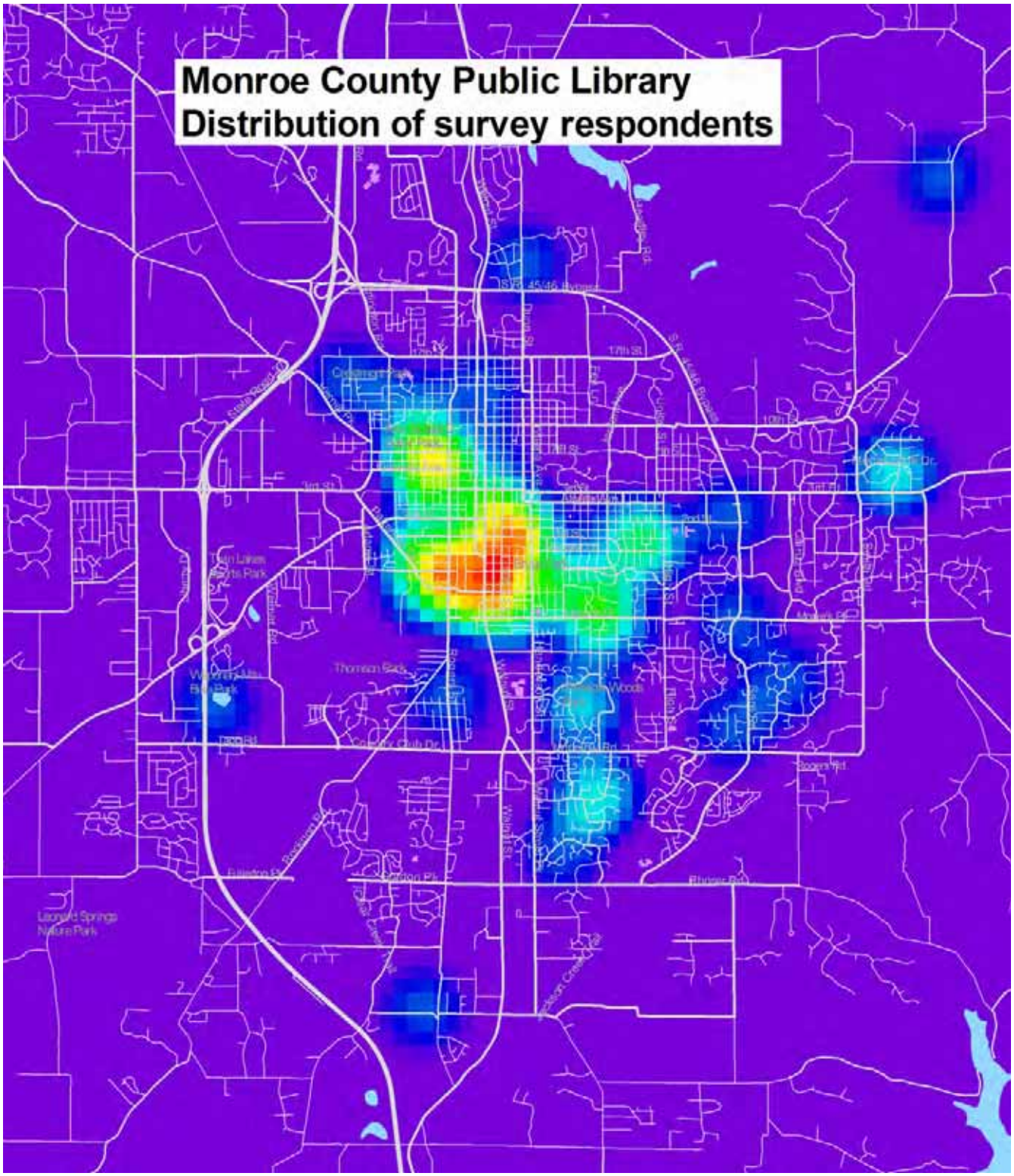
11. Should Bloomington adopt policies that encourage projects to address all transportation needs (bus riders, bicyclists, pedestrians, and people who drive)?
    a. Yes: (**54**)
    b. No: (**5**)
    c. Not sure: (**7**)

    (Note: Lots of confusion on this question. Several people marked out "and people who drive.")

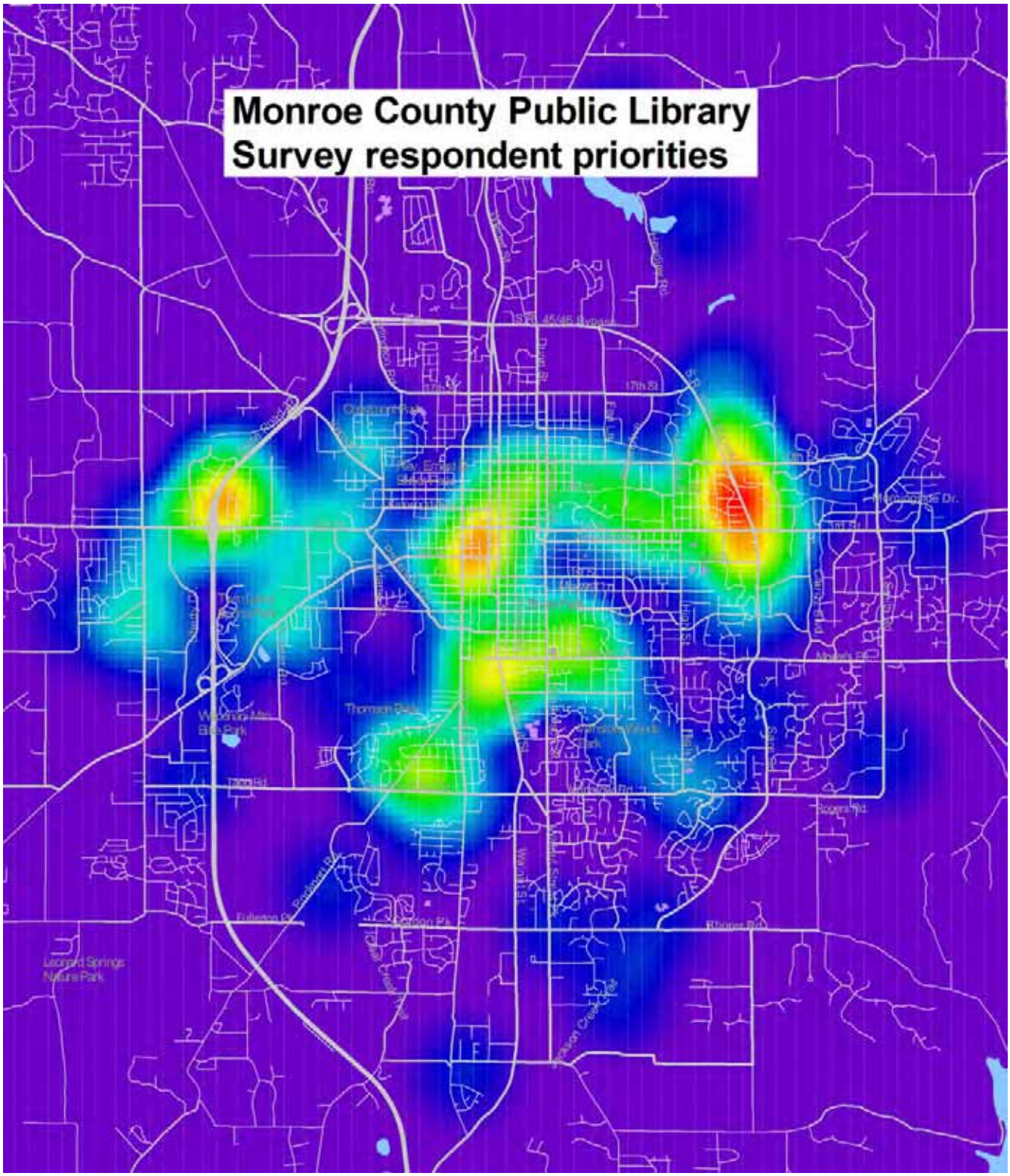
12. Please provide any additional comments below. Thank you for your time and input!

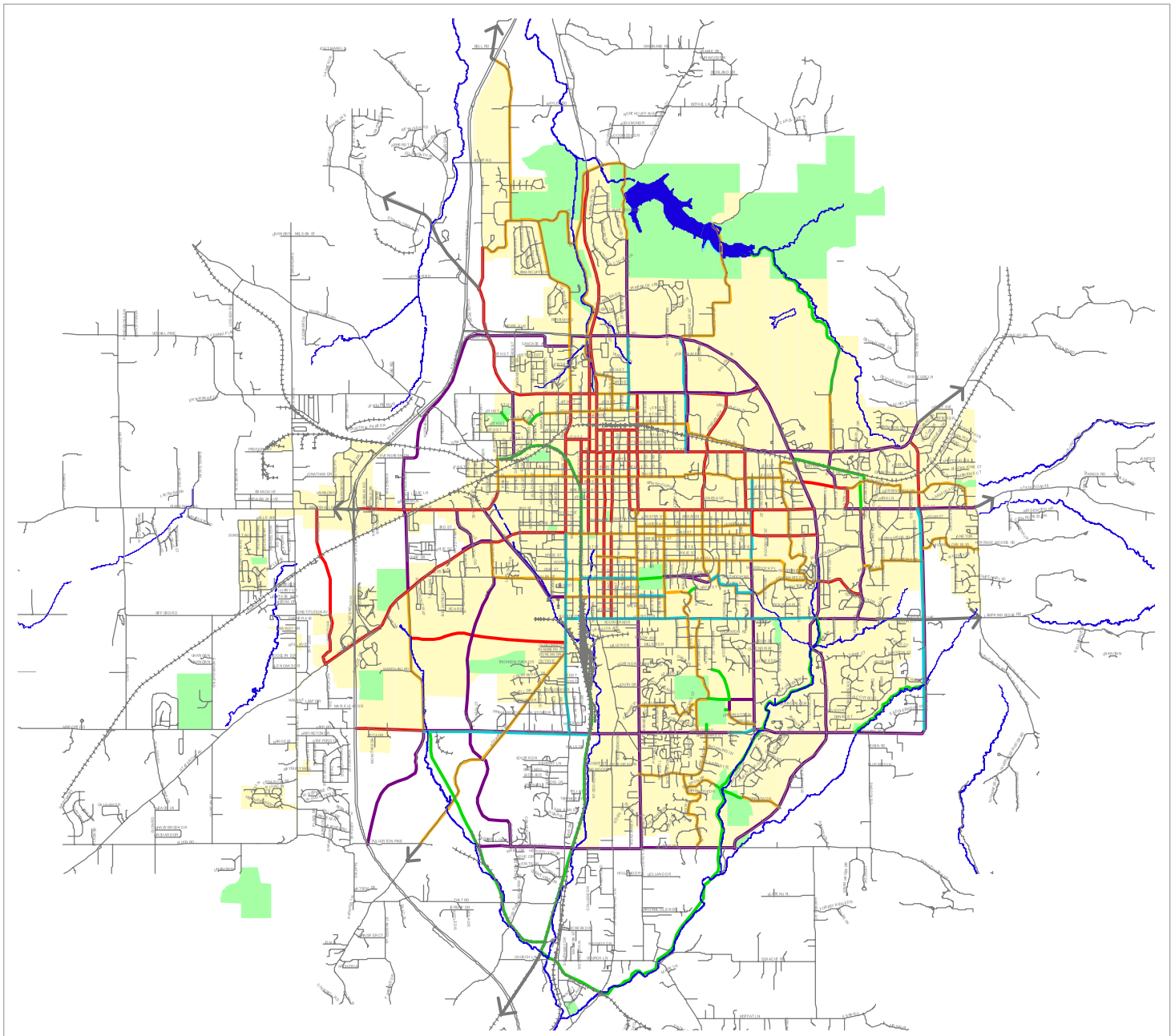
    (Note: All other written public comments are transcribed and contained within the case file for the Plan Commission/Common Council Adoption process.)

Survey Results Cont.



Survey Results Cont.





City of Bloomington

Alternative Transportation & Greenways System Plan

- Bike Lane
- Signed Route
- Sidepath
- Multi-Use Trail
- Sidewalk
- Access to County

- Parks
- City Limits

0.5 0 0.5 1 Miles

N

This map was created using the City of Bloomington GIS, for use by the City and general public as map information. Information on this map is based on aerial photography from March 1991, March 1992 and updated April 1998. The accuracy of this map is not warranted.

RATIO ARCHITECTS
Ratio Architects
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Suite 100
Indianapolis, IN 46204
(ph) 317-633-4040
(fx) 317-633-4153
www.ratioarchitects.com

2001 Bicycle & Pedestrian Facilities Network

Funding Resources

The following is a partial list of possible funding opportunities for the City of Bloomington to further explore.

Local Funding

1. Mayor & City Council. Provide political support. Direct funding and local matching funds for state and federal grants. Adopt regulatory measures for setbacks, open space requirements, and trail easements.
2. City Departments - Parks & Recreation, Public Works, Traffic, Utilities, Planning, Engineering, and Transit. Coordination of planning, land acquisition, implementation, and maintenance efforts among individual departments will lessen the financial burden of trail development on one department. Include alternative transportation efforts in each department Capital Improvement Program.
3. Tourism Agency. Provide funds or services for promotion and publishing information.
4. School District. Funding for land for use as outdoor classroom and greenway.
5. Special Interest Groups. Collaborate funding with organizations with compatible interests.

State Funding

1. Indiana Department of Natural Resources. Funding available from Division of Outdoor Recreation, Recreational Trails Program. This is a matching grant program that supports trail related acquisition, development, maintenance, restoration, and education projects.
2. Indiana Department of Transportation. Funds for bicycle and pedestrian trails are available through the Transportation Equity Act (TEA-21) including "Recreational Trails Program", "Bicycle Transportation and Pedestrian Walkways", and "Scenic Byways Program". Revenue generated from the sale of environmental license plates fund trail development.
3. Indiana Lottery. Proceeds from ticket sales may provide funding for parks, recreation, and conservation.

Federal Funding

1. Department of the Interior
   A. National Park Service - funds available for land acquisition and trail development through the "Land & Water Conservation Fund" and "Rivers, Trails and Conservation Assistance Program";
   B. U.S. Fish & Wildlife - funds available for wildlife habitat conservation along greenways.
   C. Bureau of Land Management - funds available for forest restoration, wildlife habitat studies, riparian habit restoration and other programs benefitting public land.
2. Department of Transportation. Funds for bicycle and pedestrian trails are available through the Transportation Equity Act (TEA-21) including "Recreational Trails Program", "Bicycle Transportation and Pedestrian Walkways", and "Scenic Byways Program".
3. Environmental Protection Agency. Funding available for planning, public information, and wetland projects related to greenways.

4. Department of Defense.
   A. U.S. Army Corps of Engineers - funds available for recreation and conservation projects in conjunction with flood control improvements
5. Department of Housing and Urban Development.
   A. Community Development Block Grants - funds available to projects that benefit low and moderate-income people.
6. Department of Commerce.
   A. Economic Development Administration - funds available to projects that promote long-term economic development and private sector job creation especially in areas in severe economic distress.
   B. Small Business Administration - funds available for tree planting programs.
7. Federal Emergency Management Agency. Funds available through local flood insurance programs.
8. Department of Energy. Funds available to assist communities cleanup contaminated sites.
9. National Endowment for the Arts and Humanities. Funds available for including art along trails and greenways.

Grant Programs

1. American Greenways Kodak Awards Program. Grants of $500 to $2500 available through The Conservation Fund to local greenways projects including planning, design, or development. Contact American Greenways Program at The Conservation Fund, 1800 North Kent Street, Suite 1120, Arlington, VA 22209
2. Recreational Equipment Incorporated (REI). Seed grants of $200 to $2000 available to state and local conservation groups for river protection projects. Contact National Rivers Coalition, American Rivers, Inc., 801 Pennsylvania Ave,. SE, Washington, DC 2003.
3. Fish America Foundation. Grants approximately $10,000 to projects that conserve and enhance fish habitats. Contact Fish America Foundation, 1033 N. Fairfax St., Suite 200, Alexandria, VA 22314
4. The Global Relief Heritage Forest Program, American Forestry Association. Grants available (unspecified amount) for tree planting on public lands. Contact American Forestry Association, P.O. Box 2000, Washington, DC 20013
5. The Design Arts Program of the National Endowment for the Arts. Grants available (unspecified amount) to promote excellence in urban design, historic preservation, planning, architecture, and landscape architecture. Contact National Endowment for the Arts, Room 625, Nancy Hanks Center, 1100 Pennsylvania Ave., NW, Washington, DC 20506

Foundations

National, regional and local foundations may be able to fund trail development. The national Foundation Center (www.fdncenter.org) maintains a database of foundations.

Corporate Sponsorship

Corporate donations have been used to build boardwalks, interpretive signage, trail furniture, and provide funds for annual awards programs.

Appendix

Organizations

The following is a partial listing of alternative transportation and greenways organizations that may provide valuable policy, planning, design, and technical information to the City of Bloomington.

Alternative Transportation

1. American Association of State Highway and Transportation Officials (AASHTO). A national organization representing highway transportation departments. Published "Guide for the Development of Bicycle Facilities" in 1999. Contact at AASHTO, 444 North Capital St., NW, Washington, DC 20001 or www.aashto.org
2. National Bicycle Greenway. A national organization dedicated to creating and maintaining a coast-to-coast network of multi-use transportation and recreational bicycle trails. Public education information available. Contact www.bikeroute.com
3. Association of Pedestrian and Bicycle Professionals. A national organization dedicated to promoting better conditions for bicycling and walking. Contact www.apbp.org
4. National Center for Bicycling & Walking. A national organization promoting the increased safe use of bicycles and walking in transportation planning. Contact National Center for Bicycling & Walking, 1506 21st St., NW, Suite 200, Washington, DC 20036 or www.bikewalk.org
5. League of American Bicyclists. A national organization devoted to increased bicycle use for commuting and recreation. Contact League of American Bicyclists, 1612 K St., NW, Suite 401, Washington, DC 20006 or www.bikeleague.org
6. Surface Transportation Policy Project. A national organization lobbying for alternative transportation and instrumental in passage of ISTEA. Contact Surface Transportation Policy Project, 1100 17th St., NW, 10th Floor, Washington, DC 20036 or www.transact.org
7. Transportation Access Project. A national organization dedicated to integrating alternative transportation into communities. Contact Transportation Access Project, 503 W. 4th Ave., Olympia, WA 98501.
8. Pedestrian & Bicycle Information Center. A national organization dedicated to providing sound policy, design, and research information regarding alternative transportation. Contact www.bicyclinginfo.org

Appendix

Greenways

1. The American Greenways Program. A national organization dedicated to establishing a network of public and private open space corridors. Information and technical assistance is available on all aspects of greenways planning and development. Contract The Conservation Fund, 1800 N. Kent St., Suite 1120, Arlington, VA 22209 or www.conservationfund.org
2. American Farmland Trust. A national organization charged with protecting agricultural land. Technical information is available regarding land preservation strategies. Contact American Farmland Trust, 1920 N. St., NW, Suite 400, Washington DC 20036 or www.farmland.org
3. American Hiking Society. A national organization dedicated to protecting the interests of hikers and preserving footpaths and the natural environment. Information about volunteer recruitment, trail building and maintenance is available. Contact The American Hiking Society, 1422 Fenwich Lane, Silver Spring, MD, 20910 or www.americanhiking.org
4. American Rivers. A national organization leading the charge of preserving the nation's outstanding rivers and their landscape. Contact American Rivers, 1025 Vermont Avenue, Suite #720, Washington, DC 20005 or www.amrivers.org
5. Land Trust Alliance. A national organization of land trusts. Expertise in establishing land trusts is available. Contact Land Trust Alliance, 1319 F St., NW, Suite 501, Washington DC 20004 or www.lta.org
6. National Wildlife Federation. A national organization dedicated to the protection of wildlife, wild places, and the environment. Sponsors a program call The Community Wildlife Habitat Program/Wild City Initiative. www.nwf.org
7. Rails-to-Trails Conservancy. A national organization dedicated to assist local governments and nonprofits convert abandoned railroad right-of-ways into public recreational trails. Contact Rails-to-Trails Conservancy, 1100 17th St., NW, 10th Floor, Washington, DC 20036 or www.railstotrails.org
8. Scenic America. A national organization devoted to preserving American's scenic beauty. Information and technical assistance is available to assist identifying, designating, and protecting scenic roads in urban and rural settings. Contact Scenic America, 801 Pennsylvania Ave., SE, Suite 300, Washington, DC 20003 or www.scenic.org
9. Trust for Public Land. A national organization formed to help public agencies acquire land of significant recreation, cultural, and ecological value. Contact Trust for Public Land, 116 New Montgomery St., 3rd Floor, San Francisco, CA 94105 or www.tpl.org
10. Trails and Greenways Clearinghouse. A national organization dedicated to promoting greenway development. Technical assistance and information available. Contact Trails and Greenways Clearinghouse, 1100 17th St., NW, 10th Floor, Washington, DC 20036 or www.trailsandgreenways.org

Appendix

Sources

Benefits

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"Policy and Planning: Benefits of Bicycling". Pedestrian and Bicycle Information Center website. (www.bicyclinginfo.org)

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"Health and Wellness Benefits". Rails-to-Trails Conservancy website. (www.trailsandgreenways.org)

"Preserving Historic and Cultural Resources". Rails-to-Trails Conservancy website. (www.trailsandgreenways.org)

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Comprehensive Park and Recreation Plan. City of Bloomington (IN) Parks and Recreation Department. The Eppley Institute. November, 1996.

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Transportation Improvement Plan-Fiscal Years 2001 through 2003. Bloomington Metropolitan Planning Organization. City of Bloomington Planning Department. December, 2000.

Appendix

Design Standards

Bicycle Boulevard Design Tools and Guidelines Public Review Draft Report - http://www.ci.berkeley.ca.us/transportation/Bicycling/BB/Guidelines/linkpag.htm

Bicycle Boulevards in Berkeley - http://www.ci.berkeley.ca.us/transportation/Bicycling/BB/BicycleBoulevard.html

Design and Engineering Guidelines: City of Portland Bicycle Master Plan. City of Portland website. (www.trans.ci.portland.or.us/Traffic_Management/Bicycle_Program/BikeMasterPlan)

Guide for the Development of Bicycle Facilities. American Association of State Highway and Transportation Officials. 1999.

Highways Design Manual: Chapter 1000 Bikeway planning and Design. California Department of Transportation website. www.dot.ca.gov/hq/oppd/hdm/chapters/t1003)

Indiana Department of Transportation Guidelines and Standards. Division of Transportation. November, 1994.

Minnesota Bicycle Transportation Planning and Design Guidelines. Minnesota Department of Transportation. June, 1996.

Parks, Recreation, Open Space, and Greenway Guidelines. 1996.

Pervious Concrete - http://www.perviouspavement.org/

Trails for the Twenty-First Century: Planning, Design and Management Manual for Multi-Use Trails. 2nd Edition. Rails-to-Trails Conservancy. Charles A. Flink, Kristing Olka, Robert M. Searns. 2001.

Toolbase Services - http://www.toolbase.org/Technology-Inventory/Sitework/permeable-pavement

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"Getting Trails on Track", Landscape Architecture. J. William Thompson. June, 2000.

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