



Wheaton
Bicycle Plan



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Wheaton Bicycle Plan

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Executive Summary

Executive Summary

Wheaton partnered with consultants from Active Transportation Alliance to produce this active transportation plan for the community. The plan is composed of improvements to the physical infrastructure, policies, and programs that make it safer and more convenient for people to walk, bike, and use transit in Wheaton. To develop these recommendations, the consultants turned to the experts—the users of the network. Guided by their insight, this plan will position Wheaton for a brighter, healthier, and more active future.

Bicycle Network—Key Places and Routes

The active transportation network recommended in this plan provides door-to-door safe access to the key places in Wheaton. This plan focuses on connecting people to places and the bicycle facilities that will help make those connections. Highlights of the bicycle network include:

- Wayfinding signage to designate bicycle friendly routes
- On street bicycle lanes and shared lanes to indicate space on the road for cycling
- Additional bicycle parking at Metra stations and throughout the community
- Improvements along West Street to connect the off street segments of the Illinois Prairie Path

Policies and Ordinances

Increasing use of the active transportation network requires adoption and implementation of municipal and school policies that facilitate safe use of these facilities. This plan includes the following recommended policies:

- Update development codes and design standards to connectivity and access for cyclists
- Adopt a Complete Streets policy, committing to the accommodation of all road users in all future roadway projects whenever appropriate.
- Update Wheaton’s municipal code to include minimum parking for bicycles.
- Bicycle facility maintenance and clearance policy
- Continue collaborations with District 200 to promote Safe Routes to School

Programs

The plan provides guidance on the development of nationally recognized programs for education, encouragement, enforcement, and evaluation. These programs include:

Education Programs

- Wheaton bicycling ambassadors to teach bicycle safety at community events
- Bike safety education at the park district and schools
- A mobility education campaign to distribute bicycling information throughout the community

Encouragement Programs

- Wheaton Bicycle Route Map
- Shop by Bike Campaign
- Celebrate Car Free Day and other national bicycling related events

Enforcement Programs

- Train police officers on bicycle issues and receive regular updates on bicycle related laws

Implementation

The planning process does not end with the adoption of this plan. It will require the dedication of key stakeholders. The plan includes a timeline for implementation. The appendix includes resources for funding and implementing the plan’s recommendations. Model policies and data used in developing this plan are also included to facilitate effective implementation.

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Introduction

Introduction

The City of Wheaton is a great place to live, work and play. It is recognized as a contender for one of the best small cities in America by Money Magazine in 2010, and as one of the healthiest in the Chicago region. The community's low crime rate, generous parks and open spaces, and thriving business district contribute to an excellent quality of life for its residents and an attractive environment for its businesses. Access to three branches of the Illinois Prairie Path and pedestrian and bicycle trails in nearby forest preserves contribute to the high quality of life that Wheaton residents enjoy.

The City of Wheaton is now working to take its bicycle facilities, policies and programs to a new level. The Wheaton Bicycle Plan, funded by the federal Energy Efficiency Conservation Block Grant Program (EECBG), lays out a systematic way to support bicycling in the community. A dedicated group of appointed officials, public employees and interested stakeholders shaped this plan.

Putting in place infrastructure improvements and implementing policies and programs to encourage Wheaton residents to bicycle more often, especially for utilitarian trips, will improve the health and livability of the community. The Wheaton Bicycle Plan is comprised of four main implementation areas that, when employed in concert, will establish a physical and cultural environment that supports and encourages safe and comfortable travel throughout the city and into surrounding communities. By prioritizing these changes, the City of Wheaton will be taking important steps toward encouraging healthier lifestyles, improving air and water quality, and creating a more energy-efficient transportation system for all Wheaton residents.

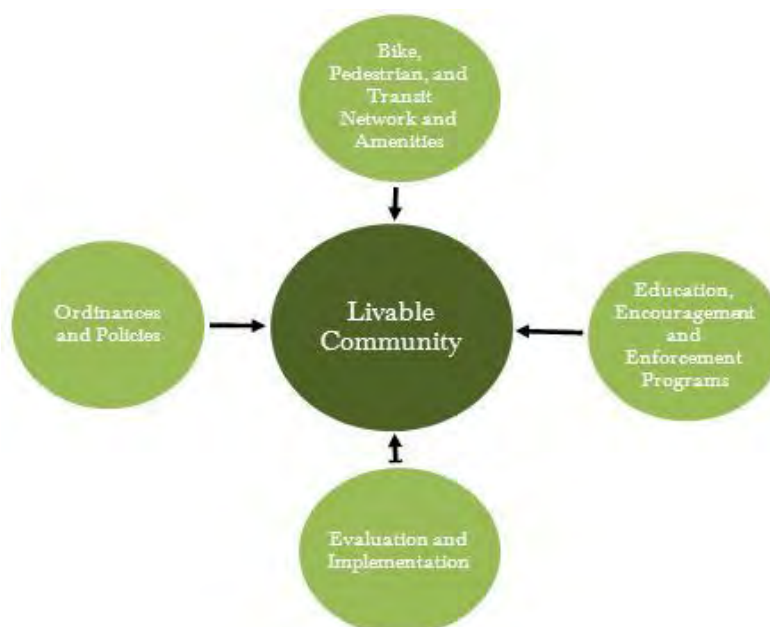
The following chart illustrates the four implementation tracts

in the plan. Each sub-element describing facility improvements, policy direction or programs may move forward independently as resources allow.

Wheaton, like many other communities, is looking for ways to be more environmentally, socially and economically sustainable. While the quality of schools, suburban values and cost of living still attract individuals and families to Wheaton, people's life choices are increasingly influenced by wellness, sustainability and mobility considerations. Many Wheaton residents already choose to use a bicycle to travel to work or school, to run errands and for recreation purposes. With assets including multiple access points to DuPage County trails, Wheaton College, two Metra commuter rail stations and a growing cycling base, Wheaton is poised to benefit from an improved bicycling network.

This plan charts a course for developing a safe and relevant non-motorized network for Wheaton that will allow residents from ages 8 through 80 to feel comfortable getting around by bike throughout the community. The purposes of the Wheaton Bicycle Plan are to:

- Increase bicycle use as an alternative mode of transportation
- Make bicycling a comfortable and enjoyable transportation choice
- Expand the network of bikeways throughout the community
- Create a safe and inviting biking environment for residents and visitors
- Contribute to the "quality of life" for current and future residents and visitors



The Benefits of Bicycling

The Benefits of Bicycling

Using the bicycle to move about Wheaton is an increasingly popular mode of transportation, due in part because of the many benefits cycling offers. These benefits include the following:

Mobility

Costs related to transportation are a household's highest expense after housing costs. Improving accommodations in Wheaton for bicyclists will make it easier for people to get around without a car, particularly for shorter distance trips. This may allow some families to reduce their transportation expenses.

Economy

Bicyclists are also consumers. Making Wheaton more bicycle-friendly will encourage cyclists to frequent local businesses, whether they are downtown or at large shopping centers. Bicycle friendly accommodations increase cyclists' access to businesses. Providing bicycle friendly infrastructure improvements will encourage more residents to travel by bike to purchase goods and services at local shops, rather than travelling by car to spend money in another town.

Health

Sedentary lifestyles are contributing to record levels of obesity and health issues, including heart disease, stroke, diabetes and other weight-related problems. Active living is a solution. Traveling by bike, whether for commuting or recreational purposes, is an inexpensive and convenient way to integrate healthy, physical activity into everyday life.

Environment

Improving bicycle infrastructure and encouraging more bicycling activity has the potential to reduce the number of vehicle trips and vehicle miles travelled in Wheaton. Fewer cars on the road means less traffic congestion, reduced vehicle exhaust emissions, cleaner air and a reduced reliance on finite energy resources.

Plan Methodology and Community Outreach

Plan Methodology and Community Outreach

The Wheaton Bicycle Plan study was initiated in the spring of 2010. Active Transportation Alliance was retained by the City of Wheaton as the lead consultant to assist the community in the development of a bicycle master plan. A Bicycle Plan Task Force was assembled to guide the development of the plan. The Task Force was comprised of city staff and other community stakeholders (see Appendix I for a full listing of members).

Study Approach

The study approach that led to the development of the Wheaton Bicycle Plan was undertaken in four general phases, as follows:

1. Assessing Existing Conditions involved listening to stakeholders opinions regarding existing and desired accommodations for biking, undertaking an inventory of existing bikeway facilities and preferred routes in Wheaton and in the surrounding area, mapping the existing and planned bikeways, paths and destinations, and then identifying real and perceived barriers to cycling those routes.
2. Developing a Bicycle Network Plan involved establishing a vision for the network, then identifying, evaluating, and selecting bikeway routes, and confirming facility type by route. The facility options include bikes lanes, shared lanes, signed routes and off-road paths.
3. Reviewing and Assessing Bicycling Policies and Programs involved a review of existing and available programs, policies and funding sources. This led to the development of the objectives and recommendations for each component of the Plan: Engineering, Encouragement, Education, Enforcement and Evaluation and Planning.
4. Documenting the Plan and Developing an Implementation Strategy involved synthesizing all of the work that had been done as a part of the study into a concise, informative and prescriptive "plan of action" that will serve to guide the City in its efforts to improve the state of bicycling in Wheaton.

The project team has worked closely with the Bicycle Plan Task Force, residents and stakeholders to learn about the community and to get a local perspective on biking in Wheaton. The following is a summary of the outreach activities that have occurred. These activities and the feedback received are the key drivers behind the recommendations contained in this plan.

Plan Methodology and Community Outreach

Kickoff Meeting with Task Force

The work to create the Wheaton Bike Plan officially kicked off at a meeting with the Bicycle Plan Task Force. The Wheaton team, which included staff from various City departments, the park district, the school district, the forest preserve district and other local and area stakeholders met with representatives from Active Transportation Alliance to discuss the process and expectations for the bike plan.

Community Open House

On June 9th 2010, nearly 60 Wheaton residents attended a community open house. The open house was a key activity in the process to develop the bike plan. Participants were able to express their opinions regarding the opportunities and challenges to developing an improved bike network in Wheaton. They were the “local experts” who knew their own streets quite well, knew which intersections are challenging to cross, which streets are most difficult to bike on now, and which destinations they most want to get to by bike.

Participants of the open house were asked to comment on programmatic and infrastructure improvements that would enhance their biking experience in Wheaton. The following summarizes the programming and bike amenities they would like to see in their community. These general suggestions were used to recommend a series of education, encouragement and enforcement programs, and infrastructure improvements to promote biking in Wheaton.

Education, Encouragement and Enforcement

- Bike safety education through the schools, park district and City
- Special events such as community bike rides
- Parent support for kids walking and biking to school
- More available and accessible information about biking in the community
- Additional bike racks at all key destinations and Metra stops
- Education programs and enforcement of traffic laws for both cyclists and drivers

Infrastructure

- Bike route signs
- Improved connections to downtown, the Illinois Prairie Path and other destinations

- Bike racks – increase supply and distribution
- Signed and marked bike lanes and shared lanes
- Re-stripe crosswalks
- Improve accommodations for bicyclists and pedestrians crossing busy streets

Field Work

The project team completed a field survey of the Wheaton street network. Data collected included roadway widths, speed limits, condition of pavement and the bikeability of each roadway.

The data was used to evaluate the comfort level for biking (Bicycle Level of Service or BLOS) on the streets surveyed and to recommend bicycle accommodations to improve the comfort level for biking on some streets.

See Appendix G for a full description of the Bicycle Level of Service and evaluation.



Projected Energy Savings

Funding to develop the Wheaton Bicycle Plan was obtained through the federal Energy Efficiency Conservation Block Grant Program (EECBG). One of the requirements of this funding source involves documenting energy savings and environmental benefits that might be achieved with the implementation of this plan.

One of the many positive benefits of commuting by bicycle is the energy savings and environmental impact of shifting trips from car to bicycle. Over the last two decades mode share for bicycling has increased. A combination of additional infrastructure, educational, encouragement and safety factors have contributed to this increase. And as additional facilities for bicycling are built, bicycle usage is likely to continue along this trend.

One way to quantify the value of bicycling and its benefits for the

Biking in Wheaton Today

community is by looking at the projected reduction in Vehicle Miles Traveled (VMT) as residents substitute trips taken by car for trips taken by bicycle. For each vehicle mile not traveled, there is a resulting energy savings. In Wheaton, at the time of complete build-out of this bicycle plan, more than 25,400 vehicle miles traveled per day will be saved, resulting in 13 fewer tons of CO₂ emitted due to this reduction in VMT.

See Appendix A for a full description of the energy efficiency calculations and evaluation.

Biking in Wheaton Today

Wheaton has a history of encouraging bicycling in the community. Biking is an increasingly popular form of transportation and recreation in Wheaton today. On a typical day, bikes can be found parked at the Metra stations, public library, schools and businesses throughout the community. Children are often seen riding to their friends' houses while adults bike to work, run an errand or meet up with friends. There are organizations, businesses and programs that support and encourage both adults and children to bike in Wheaton. These include:

A Tree Bicycle Tour of Wheaton

The Environmental Improvement Commission created an approximately 12 mile self-guided tour of trees of interest in Wheaton in 1997.

Wheaton Park District Bikeway Plan

The Wheaton Park District and the City of Wheaton created a Bikeway Plan in 2007. This effort coincided with DuPage County's work to update its Regional Bikeway Plan. The bikeway plan recognized the excellent foundation to create a bicycle network in Wheaton, building on the approximately 30 miles of paths and signed routes in the community.

Bike Shops

Wheaton is currently home to two full-service bike shops. Bicycles can be purchased from other retailers in the community. There are also full-service bike shops in many of the surrounding communities.

Safe Routes to School

Safe Routes to School (SRTS) is a federal funding program administered by the Illinois Department of Transportation to encourage children in grades K-8 to walk or bike to school. The

Existing Facilities

funds can be used to educate parents and students regarding the many benefits of biking or walking to school, to encourage such activities, to build infrastructure to accommodate safe biking and walking routes to schools, and to enforce rules of the road in school zones. The grants are available every other year, and do not require a local match. School District 200 has successfully applied for funding from the SRTS Program.

Existing Facilities

Existing Routes

There are approximately 30 miles of bike routes and paths within the City of Wheaton. Many of the paths are located within park facilities under the jurisdiction and control of the Wheaton Park District. Wheaton also benefits from its location along the Illinois Prairie Path and its proximity to DuPage County forest preserves and their trail systems.

Bike Parking

Both downtown Wheaton and the College Avenue Metra stations have bicycle parking. During warmer months of the year, bike parking is often full at the Metra stations and commuters lock their bikes to fences, light poles and signs. None of the Metra bike parking is covered and there is no secure long term parking.

Downtown Wheaton has a limited number of bike racks. Most racks are located near street intersections, at certain destination businesses, at community buildings, and inside the downtown parking garage. Few, if any, of the retail centers outside the downtown area offer bike parking.



Bikes on Metra

Metra only allows bicycles on its trains during off-peak hours and on weekends. A maximum of 20 bikes are allowed on the train at any time and bikes must be secured in designated areas. Metra commuters affected by these rules sometimes maintain bikes on both ends of their journey. However, for many people the "first and last miles" of a journey to work prevent them from choosing the bike-train alternative for their commute.

Regional Context

Regional Context

While Wheaton's bicycle network is a major undertaking, it can also be viewed as only a part of a bicycle network that connects to neighboring communities and the region. This view is closer to how the average cyclist would experience a trip. Municipal boundaries are usually invisible and do not function as trip destinations for many cyclists. However, a municipal boundary can become the 'end of the road' simply because a proper bike network connection has not been made to the neighboring community.

DuPage County and the communities neighboring Wheaton are in various stages of implementing their bike networks. The following information from DuPage County, the Forest Preserve District of DuPage County, and nearby communities was reviewed to identify opportunities to connect with the existing and planned Wheaton bicycle network: Connections to regional trails and adjacent communities are identified on the City of Wheaton Bicycle Network Map.

DuPage County

DuPage County adopted an updated Regional Bikeway Plan in 2008. The Illinois Prairie Path traverses through Wheaton and provides connections west to the Fox River Trail via the Aurora and Elgin Branches, and Geneva and Batavia Spurs. The Prairie Path extends east to Maywood. Other existing or planned regional trails in DuPage County include the Great Western Trail, West Branch DuPage River Trail, East Branch DuPage River Greenway Trail, the Salt Creek Trail, and the Arboretum-Forest Preserves Trail Connector.

Forest Preserve District of DuPage County

The Forest Preserve District of DuPage County owns a number of properties in the surrounding area and region that have been improved with bicycle trails. The Forest Preserve District properties are important destinations for bicyclists looking for a recreational ride and to enjoy nature.

Carol Stream

The Village of Carol Stream adopted a Bicycle Paths and Trails Plan in 2008. Developing bicycle accommodations along both Gary Avenue and President Street can connect Carol Stream and Wheaton. These bicycle accommodations would also provide residents and visitors of Wheaton with a connection to the Great Western Trail and the West Branch Forest Preserve Trail.

Glen Ellyn

The Village of Glen Ellyn does not have an adopted bike plan. However, the Village has identified some streets designated as bike routes with signage and/or striping. Wheaton and Glen Ellyn are linked via the Illinois Prairie Path, and there are a number of opportunities to further connect the two communities via their interconnected street networks.

Lisle

The Village of Lisle adopted a Bicycle and Pedestrian Plan in 2009. Bikeway connections between Lisle and Wheaton are possible along Naperville Road and along Leask Lane, as well as through the Danada Forest Preserve.

Naperville

The Village of Naperville adopted a Bicycle Implementation Plan in 2006. The League of American Bicyclists recognized Naperville as a Bronze level Bicycle Friendly Community in 2009. It serves as an excellent example of a suburban community working to improve conditions for bicycling and walking. Wheaton and Naperville are connected via trails in the Danada and Herrick Lake Forest Preserves.

Warrenville

The City of Warrenville adopted a Bikeway Implementation Plan in 2008. The Plan calls for a sidepath bicycle facility along the Butterfield Road corridor. This connection is identified on the City of Wheaton Bicycle Network map. The Illinois Department of Transportation is in the process of completing a road widening project along the Butterfield Road corridor, which includes bicycle and pedestrian accommodations. Trail connections in Warrenville include the Warrenville Grove and Blackwell Forest Preserves.

Winfield

Wheaton and Winfield are connected via the Geneva Spur of the Illinois Prairie Path network. The Illinois Prairie Path connection between Winfield and Wheaton is identified on the City of Wheaton Bicycle Network map. Trail connections in Wheaton include Winfield Mounds and the Winfield Riverwalk.

West Chicago

Wheaton and West Chicago are connected via the Geneva Spur of the Illinois Prairie Path network. The Illinois Prairie Path connection between West Chicago and Wheaton is identified on the City of Wheaton Bicycle Network map. Trail connections in West Chicago include the West Branch Regional Trail under North Avenue.

Timeframe for Implementation

Timeframe for Implementation

The recommendations contained in this plan are divided into three time categories: near-term, mid-term and long-term. These timeframes should help the City coordinate efforts with staffing, work plans and budgets.

Near-term priorities

Network: Near-term network recommendations are generally corridors and intersections that are currently bikeable but can be aided by some low-cost improvements, such as network signage or low cost crossing improvements.

Policy and Programming: These projects involve little to no start-up costs and planning prior to implementation. Many education and encouragement initiatives are proposed for near-term implementation to build support for later projects. These projects could be implemented within 2 years

Mid-term priorities

Network: Mid-term network recommendations are corridors and intersections where current conditions could be improved to become more bikeable, with a moderate construction budget. Examples are corridors with low average daily traffic (ADT) and ample width to add bike lanes or shared lane markings, and intersections that are currently signaled but could be improved by curb-extensions, transit shelters, local sidewalk completion, and other network amenities like benches and identity features.

Policy and Programming: Mid-term projects generally involve more planning and research. These projects may have initial start-up costs and require coordination with community organizations, but could be implemented within 5 years.

Long-term priorities

Network: Jurisdictional issues and the balancing of regional network priorities often complicate long-term network recommendations. These recommendations may have other feasibility issues like high ADT or a constrained road width or right-of-way.

Policy and Programming: These projects, expected to begin implementation after five years, frequently depend on the completion of earlier projects and local support.

Opportunistic Implementation

While this plan offers a guide to prioritizing these recommendations as near-, mid- or long-term priorities, the City should actively seek out opportunities to coordinate implementation with private development and public projects. Private development can often trigger the need to improve the corridor frontage areas, and state and county construction and maintenance priorities can overlap with this plan's recommendations. Implementing agencies should remain aware of these kinds of opportunities and seek to coordinate the implementation of this plan with parallel county and regional efforts.

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2

Bicycle Network

The Wheaton bicycle network starts at the front door of each home and business. The primary purpose of the network is similar to any other transportation system; to connect people to destinations, such as transit, schools, parks, retail and employment. However, unlike a roadway network, a bicycle network can't simply be laid out based on the most direct path or designed for a single user type. It must be designed to provide safe routes that encourage as much bicycle activity as possible for riders. This section of the study details the development of the Wheaton Bicycle Network and related amenities.

The first part of this chapter is a glossary of potential bicycle facility treatments. These treatments could be used to implement Wheaton's bicycle network. The second part of this chapter, Bicycle Network Recommendations, describes where these facilities could be applied.

Wheaton Bicycle Network Design Guide

The existing bicycling infrastructure in Wheaton includes a combination of signed routes and off-street trails. In order to create a complete bicycle network in the City, it will need to implement additional infrastructure and to consider new concepts.

One of the purposes of this plan is to provide Wheaton with a toolbox of state-of-the-practice solutions that can create complete streets that are safe and enjoyable for all bicyclists. Many of the elements found in the following state-of-the-practice solutions are referenced in the AASHTO Guide to Bikeway Facilities and in the Manual on Uniform Traffic Control Devices (MUTCD). Other solutions are described in the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide.

See Appendix C for a more complete listing of sources for bicycle facility design guidance.

Bikeway Facility Treatments

Multi-Use Trails

Multi-use trails (also referred to as shared-use paths) are an important component of Wheaton's and DuPage County's bicycle network. These facilities are separated from motor vehicle traffic and often provide access to natural areas. Multi-use trails are usually paved or have crushed gravel surfaces and should be a minimum of ten feet wide. Minimum width may be reduced to eight feet where physical or right-of-way constraints

are severe. The Illinois Prairie Path is an example of a multi-use trail in Wheaton.

Sidepaths

Side paths are an option for corridors that have higher traffic counts, higher vehicle speeds, and few driveway entrances and curb cuts. Side paths parallel a street, and are shared by pedestrians and bicyclists. They can provide a pleasant riding experience for a wide range of cyclists, including those with a low tolerance for sharing the road with motorized traffic, and they tie in well with regional trail networks. Driveway entrances and street intersections are particularly dangerous conflict points for cyclists; side path applications should minimize both.



Example of a sidepath

Signed Bicycle Routes

All elements of the Wheaton Bicycle Network should be signed upon full build-out of the system. Initially, all elements of the network that are connected and do not require additional facility treatments could be signed. These will typically be local or residential streets. Elements of the network requiring the design, permitting and construction of other facility treatments described in this section can be implemented at the time of construction.

Bicycle Lanes

A bicycle lane is a portion of the roadway that has been designated by striping, signing or pavement markings for the preferential use of bicyclists. The minimum width for a bicycle lane next to parked cars is five feet (four feet if next to a curb). Bicycle lanes include a bicycle pavement marking with an arrow to indicate that bicyclists should ride in the same direction as adjacent motor vehicle traffic. Bicycle lanes can provide the following benefits:

Glossary of Potential Treatments



Example of a bike lane

- Increase the comfort of bicyclists on roadways
- Increase the amount of lateral separation between motor vehicles and bicycles
- Indicate the appropriate location where to ride on the roadway with respect to moving traffic and parked cars, both at mid-block locations and approaching intersections
- Increase the capacity of roadways that carry mixed bicycle and motor vehicle traffic
- Increase drivers' awareness of bicyclists while driving and when opening doors from on-street parking space

Combined Bike/Parking Lanes

Combined bike/parking lanes provide space on the outside of a roadway in what is typically the parking zone. This is a good treatment along roads with low parking occupancy. Roads with sufficient width to allow two travel lanes and minimum seven foot wide parking zones along both sides are candidates for this treatment. The parking zone functions as an unofficial bike lane, similar to a paved shoulder.



Example of a combined bike/parking lane

Paved Shoulders

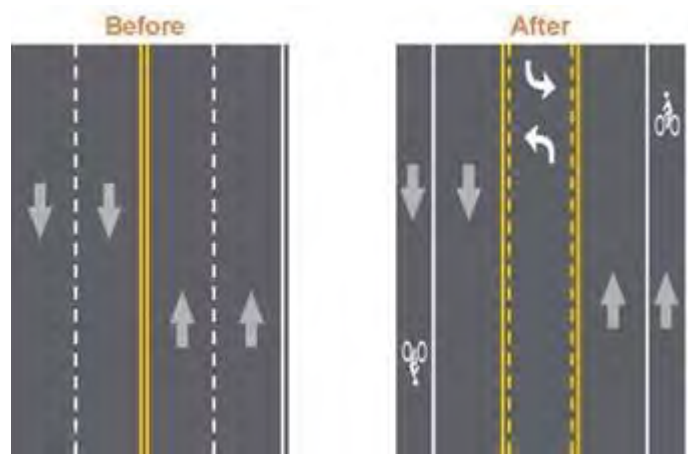
Paved shoulders provide space on the outside of a roadway for bicycle and pedestrian use. There is no minimum width for paved shoulders, however a width of at least four feet is desirable so that bicyclists or a pedestrian can use them and be safely passed by a vehicle driving in the adjacent travel lane.



Example of a paved shoulder

Road Diet

A road diet is a technique in transportation planning whereby a road is reduced in number of travel lanes and/or effective width in order to achieve systemic improvements. The space gained by removing unneeded travel lanes or by narrowing existing travel lanes can be used for other needs, such as sidewalks, bicycle lanes, transit facilities and parkway landscaping.



Example of a road diet

Marked Shared Lanes

Marked shared lanes are identified with bicycle symbols that are placed within a vehicular travel lane of the roadway. Unlike bicycle lanes, they do not designate a particular part of the roadway for the exclusive use of bicyclists. The bicycle symbols used in shared lane markings include chevrons pointing in the direction of motor vehicle traffic to indicate that bicyclists

Glossary of Potential Treatments

should also ride in this direction. Marked shared lanes have the following benefits:

- Provide a visible cue to bicyclists and motorists that bicycles are expected and welcomed on the roadway
- Indicate the most appropriate location to ride on the roadway with respect to moving traffic and parked cars
- Can be used on roadways where there is not enough space for standard width bicycle lanes
- Connect gaps between other bicycle facilities, such as a narrow section of roadway between road segments with bicycle lanes



Example of a marked shared lane

Bicycle Boulevards

Bicycle boulevards are streets that are low-volume and low-speed but feature outstanding connectivity to the network and important destinations that, with design changes that prioritize bicycle traffic above the movement of automobiles, allow them to become primary and preferred bicycle routes. A bike boulevard can be created simply and inexpensively, using asphalt, paint, planters, and bikeway signs to narrow the roadway, create bump-outs and chicanes, and employ other strategies that slow automobile traffic and increase operating space for bicycles.



Example of a bicycle boulevard

Intersection Treatments

Intersections are junctions at which different modes of transportation meet and facilities overlap. An intersection facilitates the interchange between bicyclists, motorists, pedestrians and other modes in order to advance traffic flow in a safe and efficient manner. Designs for intersections with bicycle facilities have shown to reduce conflict between bicyclists (and other vulnerable road users) and vehicles by heightening the level of visibility, denoting a clear right-of-way, and facilitating eye contact and awareness with competing modes. The configuration of a safe intersection for bicyclists may also include elements such as color, signage, medians, signal detection and pavement markings.

Properly calibrated bicycle detection at signalized intersections and warning beacons at unsignalized intersections or mid-block crossings can facilitate bicyclist crossings of roadways.

Bike Boxes

A bike box is a designated area at the head of a traffic lane at a signalized intersection that provides bicyclists with a safe and visible way to get ahead of queuing traffic during the red signal phase.



Example of a bike box

Marked Crosswalks

Some bicyclists prefer to dismount from their bikes and walk them through intersections. This is especially true of young cyclists and others who do not have the experience or comfort level to ride their bikes through intersections. “Ladder” style and “zebra” style pavement markings are the most visible to approaching motorists.

Glossary of Potential Treatments



Example of a ladder style crosswalk

Signal Detection and Actuation

Bicycle detection at traffic signals is used at actuated signals to alert the signal controller of bicycle crossing demand on a particular approach. Bicycle detection occurs either through the use of push-buttons or by automated means (in-pavement loops, video, microwave, etc.). Inductive loop vehicle detection at many signalized intersections is calibrated to the size or metallic mass of a vehicle, meaning that bicycles may often go undetected. The result is that bicyclists must either wait for a vehicle to arrive or dismount and push the pedestrian button, if available.

Proper bicycle detection meets two primary criteria: 1) accurate detection of bicyclists; and 2) provision of clear guidance to bicyclists on how to actuate detection (what button to push, where to stand).

Countdown Signals

Some bicyclists prefer to dismount from their bikes and walk them through intersections. This is especially true of young cyclists and others who do not have the experience or comfort level to ride their bikes through intersections. Crosswalk countdown signals notify bicyclists and pedestrians of the amount of time left to cross street. While it is preferred that the signal displays the time remaining at the beginning of the phase, many countdown timers display the time remaining in the clearance phase (the flashing “Don’t Walk” or hand signal). Countdown timers are particularly helpful for discouraging bicyclists and pedestrians to enter the crosswalk during the clearance phase when insufficient time is available to cross the street. Countdown signals are required at all new traffic signals.



Example of countdown clock



Example of a must stop for pedestrians sign

Must Stop for Pedestrians Signs

Some bicyclists prefer to dismount from their bikes and walk them through intersections. This is especially true of young cyclists and others who do not have the experience or comfort level to ride through intersections.

Illinois law now requires motorists to stop for pedestrians in crosswalks. Placing “must stop for pedestrians” signs in advance of crosswalks at unsignalized intersections reminds motorists to stop for pedestrians and bicyclists crossing the street.

Mid-block Crossings

Islands or medians of sufficient width that are placed in the center area of a street or highway can serve as a place of refuge for pedestrians who are attempting to cross at a midblock or intersection location. Center islands or medians allow pedestrians to find an adequate gap in one direction of traffic at a time, as the pedestrians are able to stop, if necessary, in the center island or median area and wait for an adequate gap in the other direction of traffic before crossing the second half of the street or highway.



Example of a mid-block crossing.

Glossary of Potential Treatments

Bikeway Signing and Marking

Bikeway signing and marking encompasses any treatment or piece of infrastructure whose primary purpose is either to indicate the presence of a bicycle facility or to distinguish that facility for bicyclists, motorists, and pedestrians. Bicycle signage includes way-finding and route signage, regulatory signage and warning signage. Bikeway markings include any device applied onto the pavement surface and intended to designate a specific right-of-way, direction, potential conflict area or route option.

Colored Pavement Bicycle Facilities

Colored pavement within a bicycle lane increases the visibility of the facility, identifies potential areas of conflict, and reinforces priority to bicyclists in conflict areas and in areas with pressure for illegal parking. Colored pavement is commonly applied at intersections, driveways and conflict areas.



Example of a colored bike lane

Shared Lane Markings

Shared Lane Markings or “sharrows,” are road markings used to indicate a shared lane environment for bicycles and automobiles. Among other benefits shared lane markings reinforce the legitimacy of bicycle traffic on the street and recommend proper bicyclist positioning. The shared lane marking is not a facility type, it is a pavement marking with a variety of uses to support a complete bikeway network. The MUTCD outlines guidance for shared lane markings in section 9C.07.

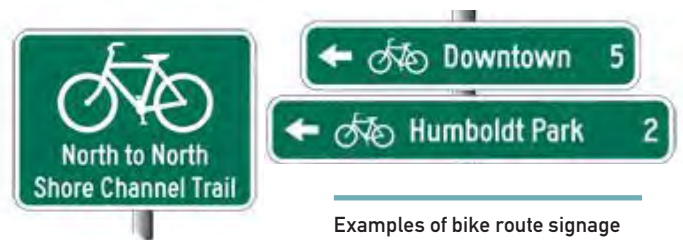
Bicycle Route Wayfinding Signage and Markings System

A bicycle wayfinding system consists of comprehensive signing and pavement markings to guide bicyclists to their destinations along preferred bicycle routes. Signs are typically placed at decision points along bicycle routes – typically at the intersection of two or more bikeways and at other key locations leading to and along bicycle routes. Wayfinding signs generally indicate direction, distance and destination.

There are generally three types of wayfinding signs:

- Confirmation signs indicate to bicyclists that they are on a designated bikeway and they make motorists aware of the bicycle route.
- Turn signs indicate where a bikeway turns from one street onto another street. They can be used in combination with pavement markings.
- Decision signs mark the junction of two or more bikeways. They inform bicyclists of the designated bike route to access key destinations.

Wayfinding signs can direct users to a number of different types of destinations. These may include on-street bikeways, downtown districts and commercial centers, transit stations, schools, civic and community facilities, local and regional parks and trails, and hospitals.



Examples of bike route signage

Glossary of Potential Treatments

Bicycle Parking

Like automobile parking, bicyclists require facilities to store their vehicles once they have arrived at their destination. Bicycle parking should be located convenient to final destinations and in highly visible areas. This will encourage use and discourage theft.

Planning for bicycle parking is increasingly being incorporated to shopping and employment areas to encourage bicycle commuting to shopping and work. It is also space efficient – one automobile parking space can accommodate up to 12 bicycles.

There are many styles of bicycle parking racks available, but best practices state that a rack should be securely anchored to the ground and allow both the frame and at least one wheel to be locked to the rack. Bike parking should be located approximately 50 feet from the entrance of buildings. If multiple racks are clustered in a visible and signed location they can be sited up to 100 feet from entrances to the destinations being served. Placing racks further away discourages their use. Cyclists requiring longer-term parking appreciate the ability to park their bicycles in a protected area. Covered bike parking facilities protect bikes from rain, snow and other elements. Covered parking areas should have at least seven feet of clearance, but not be so high as to allow rain and snow to easily blow under the roof.



Example of on street bike parking

Bicycle Network Recommendations

Bicycle Network Recommendations

Wheaton's street system displays a number of characteristics that are conducive to a good bicycle network. The residential streets have low traffic volumes and slow speeds, which encourage people to ride on the street. The grid system of streets crossing much of the community provides direct connectivity. Many of the City's parks and schools are located on these residential streets making it easy for people living in the neighborhood to bike to these popular destinations. All of these aspects provide a strong foundation to build a bike network.

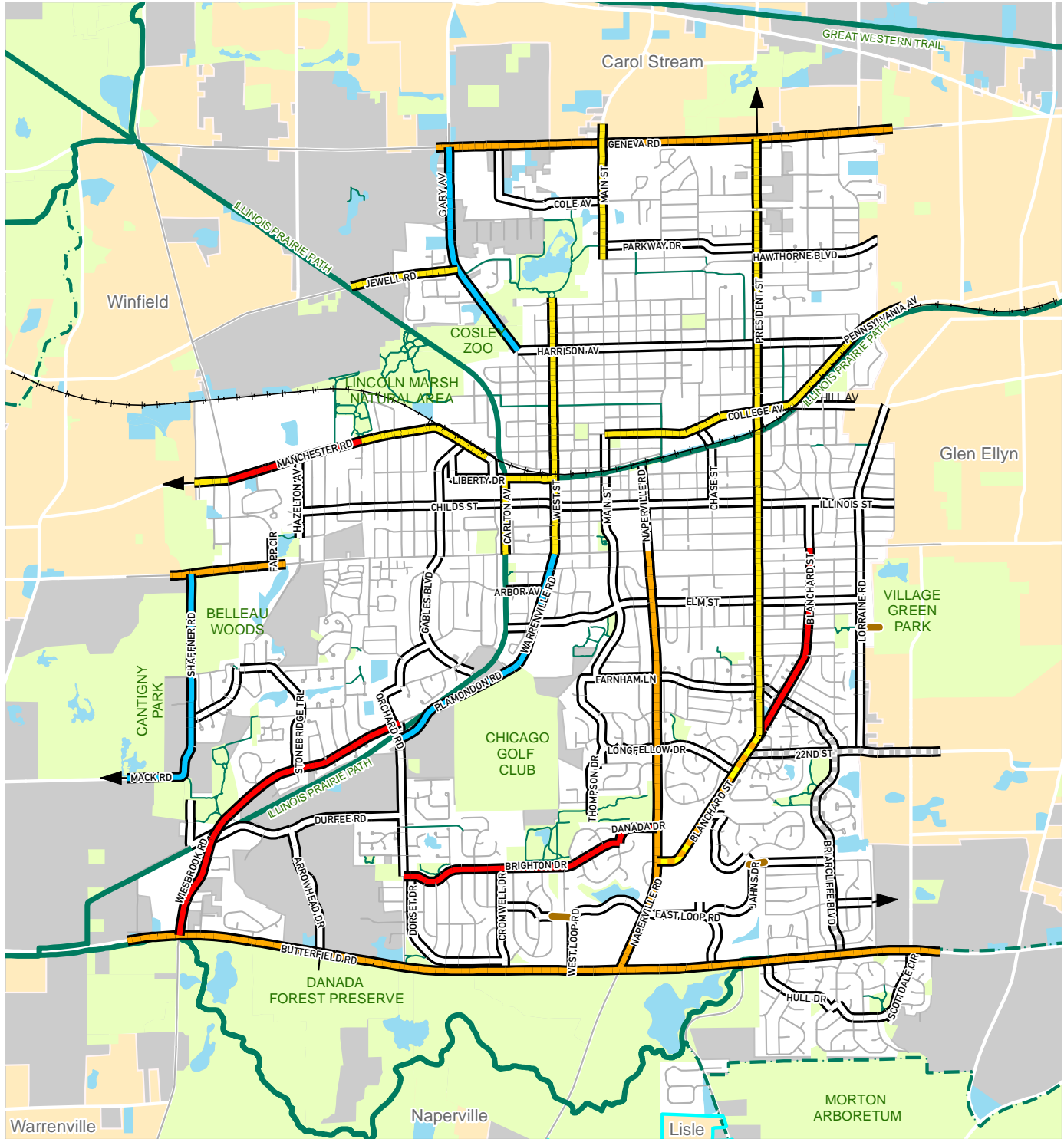
However, there are also a number of challenges to building a complete bike network in Wheaton. The arterial and collector roadways that run through the city are more difficult to ride on, which was made apparent by the plan consultants' observations and the Bicycle Level of Service analysis (*see appendix G for BLOS analysis*). These streets can also be difficult for bicyclists to cross without a controlled intersection. Some of the collector and arterial streets do not have the necessary width to construct off-street paths without property acquisition to add to the width of the right-of-way. And although most of the residential streets have operating characteristics that are friendly to bicyclists, they are typically not wide enough to provide dedicated on- or off-street facilities. Before adding bicycle facilities on these streets, additional study is recommended.

The planning for Wheaton's bicycle network was guided by a number of principles. These include:

- Use of existing bike routes whenever possible.
- Make connections to schools, parks and other important destinations a priority.
- Cross collector and arterial streets at controlled intersections.
- Incorporate input from local and area stakeholders.
- Use the results from the BLOS analysis.
- Provide local and regional connections.

The project team also recognized that implementing the bike network is not going to occur overnight. A number of the recommendations will take longer to receive approval and funding. However, the success of this plan cannot hinge solely on these longer-term recommendations. There also must be recommendations to implement in the next few years. A listing of the proposed near, mid and long term recommendations can be found in the implementation section.

Proposed Bicycle Network Map



0 0.25 0.5 1
Mile

Prepared By:
Active Transportation Alliance August 2011
Data Source:
Active Transportation Alliance, City of Wheaton,
DuPage County Forest Preserve District



Recommended Bicycle Facility Type

- ➔ Adjacent Community Connections
- New Path
- Bike Lane
- Shared Lane
- Sidepath
- Shared Lane and Sidepath
- Paved Shoulder
- Signed Route with Striped Parking
- Signed Bicycle Route

- Existing Regional Trail
- Proposed Regional Trail
- Existing Local Bike Routes and Trails
- Roadways
- Railroad
- Park or Open Space
- Water
- City of Wheaton
- Incorporated Municipalities

Bicycle Network Recommendations

Signed Routes

The entire Wheaton Bicycle Network could be marked with signage that gives riders information on distance, destination and direction. Signing the network provides immediate value and encouragement to cyclists while raising awareness to all road users of the acceptance of cycling within the city. Drivers and pedestrians, who are looking for specific destinations within Wheaton, also appreciate the wayfinding signs.

The following streets could be designated as signed bike routes:

- Cole Avenue
- Parkway Drive
- Hawthorne Boulevard
- Harrison Avenue
- Hill Avenue
- Chase Street
- Illinois Street
- Childs Street
- Liberty Drive
- Gables Boulevard
- Hazelton Avenue
- Main Street
- Elm Street
- Arbor Avenue
- Longfellow Drive
- Wadsworth Road
- Thompson Drive
- Brentwood Lane
- Jahns Drive
- West Loop Road
- East Loop Road
- Cromwell Drive
- Orchard Road
- Durfee Road
- Arrowhead Drive

In addition to the roads listed above, all roads recommended for a bike lane, shared lane, parking/bike lane or a paved shoulder, with the exception of Gary Avenue could be signed as a bike route. Roads recommended for a sidepath; Naperville, Geneva, Roosevelt and Butterfield are not currently considered safe for biking and should not be considered part of the bike network until improvements have been made.

Striping Parking

There is an opportunity to use the existing roadway space on some streets creatively to make bicyclists feel safer. While parking is provided on most of these streets, it was rarely used. Because of the lack of on-street parking demand, most bicycling activity was observed in the area allocated for parking. For residential streets where on street parking is allowed, it is recommended that the on-street parking be striped. This will provide a dedicated travel lane for cars and allow bicyclists to use the protected parking lane when they can.

Shared lane markings (sharrows) could also be striped on the travel lanes to alert drivers to the presence of bicyclists and to share the road, as well as serve as a wayfinding system for the bike network.

This treatment could be provided at the following locations:

- Briarcliff Boulevard-near term
- 22nd Street-near term

Paved Shoulder

Where insufficient roadway width is available for a bike lane, and the roadway does not have curbs or gutters, a paved shoulder allows a motorist to safely pass a cyclist while remaining in the same lane. Cyclists will be able to ride on the shoulder. This can be a significant benefit and improvement for cyclists, especially for less experienced riders.

The following streets could be studied for the addition of paved shoulders:

- Shaffner Road-mid term
- Palamondon Road-mid term
- Gary Avenue-long term

Shared Lane Markings

A number of the residential streets provide on-street parking on both sides, but have a width under 32 feet. If the on-street parking were striped on these streets, the travel lanes would be less than 9 feet which is not sufficient for a two-way, shared use roadway. These streets are still very comfortable for bicyclists and could be included as part of the bike network. Sharrows could be striped on these streets to alert drivers of the presence of bicyclists as well as make bicyclists aware that these streets are suggested for riding.

Objective: Install shared lane markings on bike network routes without sufficient width for 5 feet bicycle lanes (30 feet without curb side parking, 44 feet with curb side parking) and posted speed limits of 35 mph or less .

Bicycle Network Recommendations

Description: Shared lane markings remind motorists that the street is a shared public space where bicycling is expected and accommodated. Shared lane markings also help bicyclists to position themselves where they will be most visible to drivers and out of reach from opening car doors, and directional chevrons encourage cycling with traffic. For drivers, shared lane markings raise awareness and acceptance of cyclists on the street, and help identify safe passing distances.

The following streets could have shared lane markings :

- West Street-near term
- Carlton Avenue-near term
- President Street-near term
- Manchester Road-mid term
- Jewell Road-mid-term
- Main Street –mid term
- Seminary Avenue/College Avenue-mid term
- Blanchard Street-mid term

Striped Bicycle Lanes

Separated bicycle lanes exclusive to bicyclists use could be striped on collector and arterial streets with sufficient width and speeds less than 40 mph. Motorized vehicle travel lanes may be narrowed to 10 feet minimum where traffic volume and vehicle speeds are appropriate to allow bicycle lanes. It is not recommended that the curbside or right most travel lane be reduced to 10 feet on streets with high truck traffic volumes.

Striped bicycle lanes define a dedicated space for cyclists separate from the motor vehicle lane. A minimum street width of 30 feet without parking or 46 feet with curbside parking is required for bike lanes. The MUTCD defines a minimum width of 5 feet for a bicycle lane, however 6 feet width is preferred in Wheaton due to the extensive curbside parking and the adequate space for the bicycle lanes.

Streets where bicycle lanes are recommended include:

- Brighton Drive-near term
- Danada Drive-near term
- Blanchard Street-mid term
- Manchester Road-mid term
- President Street-mid term
- Wiesbrook Road-mid term

Striped bicycle lanes offer a higher level of comfort than shared lane markings for drivers and most cyclists on streets with heavier traffic. They reinforce proper roadway etiquette, raise

the visibility of cyclists and help bicyclists and drivers behave predictably when sharing road space. They also have proven to lower motor vehicle speeds, lessening crash severity. Bicycle lanes require regular sweeping to keep lanes acceptably free of road debris.

Because many of the essential segments of the Wheaton street network fall under DuPage County's jurisdiction, the near-term recommendation is for the city to immediately begin working with the DuPage County Division of Transportation to ensure the timely implementation of the County's Healthy Streets Initiative to improve cycling conditions. The City could monitor DuPage County road improvement and maintenance plans, scanning for opportunities to coordinate the implementation of these recommendations with larger projects.

Sidepaths

Sidepaths are shared use trails located alongside a road. They are good choices for roads with faster traffic speeds and heavier traffic volumes. They may have fewer side street and driveway connections. Many believe sidepaths are always safer than on-street bike accommodations. However, this is not the case. Statistics show that sidepaths can be more dangerous than on-street bike routes when there are frequent intersection conflicts with side streets, residential driveways, and commercial entrances. Some of these intersection conflicts can be reduced with good design. Accordingly, sidepaths could remain an option along thoroughfares, which have no room for on-street bike accommodations. Under most conditions, a recommended paved width for a two-directional shared use path is 10 feet. A minimum 5 feet buffer between the roadway and the sidepath is recommended.

Streets where a sidepath is recommended in the mid- to long-term timeframes are:

- Naperville Road
- Butterfield Road
- Geneva Road
- Blanchard Street

Bicycle Network Recommendations

Corridor Specific Recommendations

The following streets require additional changes to their geometry or additional facilities to better accommodate bicycling.

Manchester Road

Destinations: Connects DuPage County offices and downtown Wheaton, continues into residential area of Winfield

Time Frame: near-term

Recommendation: Add shared lane markings to Manchester east of White Oak Drive.

Time Frame: mid-term

Recommendation: Add bike lanes between County Farm Road and White Oak Drive. There is currently on-street parking on Manchester between Hazelton Avenue and White Oak Drive and other roads between County Farm Road and Hazelton Avenue. The use of these parking spaces and roadway alignment should be studied for the addition of bicycle lanes.

President Street

Destinations: North-South connector through Wheaton. Within a few blocks of Wheaton College, College of DuPage, and Lowell Elementary School

Time Frame: near-term

Recommendation: Add shared lane marking President is already a frequently used bicycle route. Adding shared lane markings on this street in the near term will create awareness for cyclists already using the road, and encourage new cyclists to take a route that

Time Frame: mid-term

Recommendation: Add bike lanes

To create sufficient width on this street for bike lanes, on-street parking will need to be removed. A study should be conducted to review the need for parking along this corridor. To prevent any negative feedback from residents, neighbors should be involved in the planning process and educated about the benefits of bike lanes on their street.

Because of its length and width, President Street is also a good candidate for an Open Streets event, when a segment of the street is closed to car traffic for a few hours and open only for non-motorized recreation and enjoyment. The Open Streets event should be held prior to any discussion of removing

parking. These events show residents how different their street will feel without cars on it.

College Avenue/Seminary Avenue

Destination: Wheaton College

Time frame: mid-term

Recommendation: Add shared lane markings on College Avenue/ Seminary Avenue from Main Street through the Wheaton College campus.

Time frame: mid-term

Recommendation: Reconfigure parking

Parking in front of retail on College Avenue should be reconfigured for parallel parking or back-in angle spaces to increase cyclist safety. This should only be done if the resultant reduced number of on-street parking spaces is determined to be adequate to meet area merchants' needs.

Blanchard Street

Destinations: Connects Wheaton Park District Community Center and swimming pool, Town Square Shopping Center to neighborhoods

Time frame: mid to long-term

Recommendation: Between Naperville Road and President Street place shared lane markings on either side of the street and a 10 foot wide sidepath on one side of the street for families to access the community center and pool.

Intersection Recommendation: Facilitate safer bicycle crossings at the intersection of 22nd and Blanchard by creating a tighter turning radius at the northeast corner, to increase bicycle and pedestrian visibility at the corner, and encourage slower, more cautious right turns onto Blanchard. The city should also consider moving the stop bar on 22nd Street farther away from the intersection, and restriping it so it is perpendicular to 22nd Street.

Major Arterial Streets: Roosevelt Road, Butterfield Road, Geneva Road and Naperville Road

Time Frame: long-term

Recommendation: These IDOT or DuPage County owned streets should be considered for complete streets implementation with an on or off street bicycle facility. An eight foot wide sidepath, should be considered on these streets when there are few driveways along the street.

Bicycle Network Recommendations

Butterfield Road: Illinois Department of Transportation is currently widening Butterfield Road to four lanes from Naperville Road to Route 59. A sidewalk is being constructed along the north side of Butterfield Road in Wheaton as a part of this improvement. Wheaton should consider extending the sidewalk east of Naperville Road as well.

Gary Avenue

Destinations: Cosley Zoo, trails in Carol Stream

Time Frame: long term

Recommendation: Replace the current gravel shoulder with a three foot paved shoulder. To calm traffic and address environmental constraints, the travel lanes could be narrowed to ten feet in each direction.

22nd Street

Time frame: near term

Recommendation: Stripe a shared parking/bike lane on 22nd Street

Time frame: mid term

Recommendation: See Blanchard Street for intersection improvement recommendation

Illinois Prairie Path Improvements

Regional path connections have proven to be a powerful economic stimulus, a desirable amenity for businesses as well as residents, and an effective tool for improving personal wellness. Wheaton should maximize these benefits by targeting improvements to the Illinois Prairie Path that provide a safer, and more comfortable and convenient user experience.

Signage

Time Frame: near or mid-term

Recommendation: Adopt consistent, conspicuous wayfinding and identification standards for signage within the corridor.

Wheaton should work with DuPage County and other communities along the trail to develop, adopt and implement a consistent and recognizable design standard for identifying the trail to users as well as passersby and directing users to nearby sites of interest and amenities. A consistent brand articulated through design standards will raise the profile of the trail, provide useful information and peace of mind to

users unfamiliar with the area, and provide a framework for collaborating with other communities on marketing campaigns to boost visitation and tourism.

Street Crossings

Time Frame: near-term

Recommendation: Prioritize Illinois Prairie Path (IPP) street crossings for annual crosswalk re-striping and install “Yield to Trail Users” signs on the cross street. Where the trail crosses immediately adjacent to the Metra right of way, stripe the stop line for northbound motor vehicles before the trail to discourage blocking the trail crossing.

Liberty Drive from West Street to Carlton Avenue

Recommendation: Re-align the Illinois Prairie Path for more logical connections and fewer conflicts

The IPP’s routing as a wide sidewalk along the north side of Liberty Drive is inconsistent in character with the rest of the trail, confusing to the trail user and unsafe, particularly for cyclists. As a commuter route and drop off point for the Wheaton Metra station, as well as serving a large multi-level parking structure, Liberty Avenue is a flurry of sudden turning movements, hurried commuters, and unpredictable driver and pedestrian behavior.

Routing cycling trail users in the near term into the street will improve sidewalk safety for pedestrians and improve cyclists’ safety by allowing them to behave predictably as a vehicle, by positioning them within driver’s field of vision, and by expanding the options for drivers and cyclists to safely negotiate sharing the street.

Time Frame: near-term

Recommendation: In the near term, mark Liberty Drive between Carlton Avenue and West Street as shared lanes, and sign as Illinois Prairie Path. Add an additional marking in the left turn lane at West Street directing path users to the east bound trail.

Time Frame: mid-term

Recommendation: At West Street and Liberty Drive, re-align the trail to approach the corner of West Street and Liberty Drive. The offset alignment creates a confusing crossing for the trail user and encourages west bound trail cyclists to ride against southbound traffic.

Bicycle Network Recommendations

Roosevelt Road/ Carlton Avenue Intersection

Recommendation: Improve convenience, clarity and safety for trail users.

Time Frame: near term

Recommendation: Extend southbound colored bike lanes on Carlton Avenue to the intersection and establish a forward green “bike box” ahead of the motor vehicle stop bar to aid street cyclists crossing Roosevelt Road to the IPP’s Aurora Branch. Install bicycle friendly detector loops within the bike box that initiate the “all red” with a green walk cycle for bicycles and pedestrians.

Time Frame: mid term

Recommendation: On the south side of Roosevelt Road, split the trail head to serve crosswalks on both the east and west side of the intersection. An additional crosswalk on the east side of the intersection provides improved access to local businesses and would better serve cyclists accessing northbound Carlton Avenue green bike lanes.

Additional Trail Connections

Recommendation: Seek additional locations for trails and connections to existing trails

Northside Park and Lincoln Marsh

Connect the Northside Park and Lincoln Marsh Natural Area paths to create a larger network of off street trails for families. Sign and improve the crossings across Gary Avenue with a pedestrian refuge. Creating this connection will allow people to travel by bike from either of these regionally significant parks to the Illinois Prairie Path.

Metra Stations and Commercial Districts

The Metra stations should be considered as gateways in and out of Wheaton. The stations and surrounding commercial districts are already pedestrian friendly. Further improvements should aim for maximizing residents’ willingness to bicycle or walk to the station, and for leveraging the stations’ proximity to the Illinois Prairie Path, shopping and dining to increase economic activity.

Additional Bicycle Amenities

In addition to on street bicycle infrastructure, there are many improvements that can be made to increase awareness of the bicycling network and provide a safe, comfortable and convenient bike trip.

Bike Parking

Install additional bike racks at major destinations such as Downtown, Wheaton College, and at schools and parks. The City should include a section on their website to allow residents and businesses to request bicycle parking.

Bicycle Network Maps

Network wayfinding maps can be made available as a large laminated poster, suitable for station or kiosk display, or as small brochures for visitors to take with them. Maps should include major recreation, shopping and business destinations and bike friendly routes to access the destinations.

Metra Stations

Covered Bike Parking: Monitor the use of bike parking at the Metra stations. Some bike parking facilities should be covered to protect the bikes from rain, snow and other elements. Covered parking areas should have at least seven feet of clearance, but not so high as to allow rain and snow to easily blow under the roof.

Abandoned Bicycle Checks: The City should monitor the Metra bike parking locations for abandoned bikes. Bikes that appear to be abandoned should be tagged and then removed after a week. Removing abandoned bikes will make room for others.

Bike Rental Station: Install unattended, automated bicycle rental kiosks at each Metra station. Bikes can be rented from these stations for a short period of time for an hourly rate. BCycle currently has eight bike sharing stations in the City of Chicago. Bikes can be rented at any station kiosk and returned to any other kiosk. Wheaton should consider partnering with other communities along the Union Pacific-West Metra line to bring bike sharing/rentals to the commuter rail corridor and DuPage County.

Bike rental is an affordable way for residents and visitors to access the Illinois Prairie Path or travel between Metra stations when train trains are not running frequently.

Bicycle Friendly Ordinances and Policies

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Bicycle Friendly Policies	26

Bicycle Friendly Ordinances

In addition to a robust bicycle network, Wheaton needs ordinances and policies in place to promote safe, convenient and comfortable biking for a wide range of talents amongst cyclists. The adoption and administration of local bicycle friendly ordinances and policies will help encourage community members to bike more often and feel safer while biking, as well as improve driver awareness of bicyclists.

It is recommended that the following bicycle friendly ordinances and policies be adopted by the City of Wheaton to support the building of bicycle infrastructure and to enhance the safety, convenience and comfort of cyclists.

Bicycle Friendly Ordinances

Street Design Standards and Guidelines

Time Frame: mid-term

Wheaton sets standards for roadway construction through its adopted design guidelines and street design regulations. The City could update its Street Design Standards to incorporate bicycle facilities as well as the principles of Complete Streets. This will provide a consistent standard for street construction or improvement projects completed in the community.

See appendix F for a list of resources.

Bicycle Parking Ordinance

Time Frame: near-term

Bicycle parking is an essential amenity for any bicycle transportation network. Residents are less likely use their bike to reach businesses unless they can safely lock it at their destination. To promote the use of the network and to boost local commerce, Wheaton could adopt a zoning ordinance to require bike parking at retail, commercial, multi-family residential and industrial sites .

See appendix E for sample ordinance language and formulas for calculating minimum bike parking requirements.

Update Development Codes

Time Frame: long-term

Wheaton could review its municipal zoning and subdivision codes and incorporate standards for bicycle-friendly accommodations and on-site amenities. The design of facilities within developments plays a significant role in how they are accessed by active modes of transportation. Wheaton could consider updating its municipal code to ensure connectivity and access for cyclists in all new developments.

Examples include:

- Reduce the required number of car parking spaces when bicycle parking is provided.
- Provide for a greater mix and integration of land use types, thereby decreasing distance barriers for walking and bicycling.
- Require public sidewalks adjacent to all developments and continuous sidewalk connectivity from the public sidewalk to building entrances.
- Require a maximum setback distance for building entrances, ensuring shorter trips through parking lots and yards for cyclists and pedestrians.
- Require street connectivity in order to improve the directness of routes, again decreasing distance barriers for walking and bicycling.

Update the Bicycle Traffic Ordinances

Time Frame: near-term

The Wheaton Municipal Code, Chapter 70, Traffic and Vehicles governs operating requirements for bicycles and other vehicles in Wheaton. These ordinances may be reviewed and updated to encourage safe cycling practices and align with Illinois Vehicle Code (625 ILCS 5/) Examples of municipal ordinances that may be considered for changes include:

- Deleting the requirement for a bell or horn, as it is not a state statute
- Requiring both front and rear lights on bicycles ridden between sunset and sunup. Current Wheaton code does not require a rear light.
- Adding a provision in the municipal code allowing for the removal of abandoned or inoperable bicycles
- Adding a provision in the municipal code prohibiting vehicles from parking in bike lanes

See appendix E for sample ordinance language.

Bicycle Friendly Policies

Bicycle Friendly Policies

Complete Streets Policy

Time Frame: near-term

Complete Streets are designed to enable safe access for all users of the transportation network regardless of age, ability or travel mode. A complete street has no predefined facilities requirements, but is optimized within its surrounding context to promote safe, convenient active transportation options for the community.

To ensure that Complete Streets principles play a lasting role in the development of the Wheaton bicycle network, the City could adopt a Complete Streets policy. Adopting this policy commits the jurisdiction to the consideration of bicyclists, pedestrians and transit users as well as motor vehicles in all new transportation construction, and maintenance projects.

Both the State of Illinois and Cook County have adopted Complete Streets policies. It is recommended that the City develop the policy based on national best practices.

See appendix F for a sample policy.

Bicycle Facility Maintenance and Clearing Policy

Time Frame: mid-term

As Wheaton continues to implement bicycle facilities, the City will also need to consider maintenance and clearing of these facilities. Cyclists ride year-round and need a clean, clear place to ride. The City may include bike lanes in their regular street sweeping schedule, ensure the lanes are plowed after a snowfall, and modify municipal code to allow for citation of vehicles stopped or parked in a bike lane.

Joint Use Agreements

Time Frame: opportunistic

Joint Use Agreements are formal agreements that encourage shared use of facilities. This type of agreement allows the schools, park districts and the City to hold events and activities in each neighborhood, closer to where participants live. Examples of joint use of facilities include community use of school facilities during non-school hours and school use of park facilities during the school day. By adopting joint use agreements Wheaton and the school districts and park districts can maximize use of community facilities, use land more efficiently, preserve community-centered institutions, increase opportunities for physical activity and encourage more active transportation while participating in community activities.

The City could establish a committee to identify opportunities for sharing space in the community and determine whether or not a joint use agreement would be appropriate.

Safe Routes to School

Time Frame: near-term

Recommendation: Meet with School District 200 on an annual basis

Schools are a focus of this plan because thousands of students live in Wheaton yet only a fraction of these students walk or bike to school. The schools policy recommendations in this plan hinge on the creation a school and municipal partnership that works to develop institutional changes that support increased opportunities for walking and bicycling to school.

Wheaton may continue its work with School District 200 to organize Safe Routes to School committees and regularly update Safe Routes to School Travel Plans, a pre-requisite for federal Safe Routes to School funding.

Programming: Education, Encouragement, Enforcement

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Education

Education, encouragement and enforcement programs are designed to motivate ‘interested but concerned’ residents to ride a bicycle confidently and securely. These programs help residents view bicycling as a reasonable transportation option and give them the opportunity to try bicycling in a setting in which they are comfortable. By participating in these programs residents gain more bicycling experience. With experience comes confidence, and with confidence bicyclists will ride in more varied settings. Eventually, they become regular cyclists and will maximize the number of trips they make by bicycle rather than driving. The primary purposes of education and encouragement programs are to:

- Increase ridership of Wheaton's current and proposed bicycling facilities
- Teach cyclists how to use the bicycle network in a safe way by following the rules of the road
- Reach out to Wheaton’s ‘interested but concerned’ residents to help make bicycling their first choice for transportation.
- Attend to the service and information needs of current bicycle riders to help them ride safely and comfortably while making biking even more convenient.

Enforcement programs and actions are a key component of bicycle and traffic safety and education.

A listing of funding and other resources for implementing education, encouragement and enforcement programs can be found in Appendices B and D.

Education

Education is a powerful tool for promoting healthy and safe behaviors. Users of a bike network need to be aware of how to protect themselves and others. As more people walk and bike for transportation and health, education should come in a variety of forms to reach all network users. Youth, teens and adults benefit from education programs focusing on pedestrian and bicycle safety and the rules of the road. The following recommendations are designed to reach all community members and include messages tailored to each specific audience:

Wheaton Bicycling Ambassadors

Target for Implementation: near-term

Objective: Ambassadors train children and adults in basic bike traffic safety, develop awareness of all road and trail users,

and work with the Wheaton Environmental Improvement Commission to raise the profile of cycling as a healthy, smart and valid choice of transportation within the community.

Description: The Wheaton Bicycle Ambassadors will deliver bicycle safety demonstrations to kids, teens and adults; educate motorists and non-motorists; and assist with the development of local cycling activities and events. The Ambassadors can be volunteers, existing municipal staff or contractors.

Benefits: Through appearances at community events, schools, and summer camps, bicycle education becomes extremely accessible for Wheaton residents. Training local residents as bicycle ambassadors is a long-term investment in bicycle education.

How it Works: The Wheaton Police Department, Active Transportation Alliance or League of Illinois Bicyclists trainers educate youth and adults interested in working over the summer months and possibly during select school year activities as a Bicycle Ambassador.

Once trained, the Ambassadors can:

- Be deployed as instructors to Wheaton Park District bicycle safety classes and local Safe Routes to School programs where they can provide helmet fitting, basic bicycle safety checks, and basic bicycle and crosswalk skills instruction.
- At motorized/non-motorized conflict points, distribute “Share the Road” and awareness literature to drivers as well as bicyclists and pedestrians.
- Capitalize on local bicycling events such as community bike rides by providing safety demonstrations for participants and spectators.
- Be a safety/support resource for events as ride marshals or course marshals.

The Ambassadors might also:

- Design their own literature for cyclists, walkers and driver tips & awareness
- Write a guest column for local news, update the Wheaton website, and produce biking and driving awareness videos
- Organize family and competitive bike rides in conjunction with other Wheaton community-wide events

Education

Bicycle & Pedestrian Safety Education at Park District and Schools

Time Frame: near-term

Description: Wheaton should partner with regional bicycle education instructors to train and encourage the public to bike and walk more and to do so safely. Instructors provide face-to-face demonstrations to youth, teens and adults at community events and special programs. Instructors can work with partners in the community to identify and address local transportation safety concerns.

Objective: Partner with regional bicycle education instructors for 2012 programming, including bicycle safety/education demonstrations at community events and/or recreation programs. Current programs such as Safety City and the DuPage Forest Preserve Bike Patrol Unit are examples of existing bicycle education opportunities and should be used as models for additional programming.

Safe Routes to School (SRTS)

Time Frame: near-term

Objective: Establish SRTS teams at each elementary and middle school.

Description: The Illinois SRTS program offers grants to fund school initiated education, encouragement and infrastructure programs that encourage children to walk or bike to school. Wheaton and School District 200 developed a School Travel Plan in 2007.

The Wheaton Environmental Improvement Commission should work with School District 200 to organize SRTS teams at local schools that involve stakeholders such as parents, police and public works officials. These teams, once established, should identify improvements needed to the physical walking and biking environment and determine the encouragement, education and enforcement solutions that will increase the number of children walking and biking to school.

Bicycle safety programs should be considered at all schools. The Wheaton Environmental Improvement Commission should develop the capacity to partner with schools to develop a regular and sustainable bicycling education program.

Resources for curriculum materials can be found in Appendix D.

Mobility Education Campaign

Time Frame: near-term

Description: Many bicyclists and motorists do not know or understand the rules of the road for cyclists. Educating these groups on the rules will create a safer environment for everyone.

Wheaton should distribute bicycling information:

- Integrate rules of the road for bicycles into the drivers education curriculum at all public schools.
- Arrange for bicycle information to be reprinted and/or distributed by partner agencies, utility companies and the private sector.
- Include information with utility bills and Wheaton parking sticker renewals.
- Partner with Spokes Bike Shop and Midwest Cyclery to distribute publications.
- Partner with local doctors and Central DuPage Hospital and DuPage County Public Health Department to distribute information on the health benefits of cycling.
- Partner with Wheaton North and Wheaton-Warrenville South high schools to develop materials and distribute information to the student body.

Information for distribution can be found through Active Transportation Alliance, League of Illinois Bicyclists, the State of Illinois and many other bicycle advocacy organizations.

Encouragement

Encouragement

Knowledge about when and where to bike and walk safely supports increased use of active transportation. Giving Wheaton residents access to information, social events and other incentives will encourage people to start riding or ride more often.

Wheaton Open Streets

Time Frame: near-term

Description: Wheaton Open Streets closes street segments within the city to cars and opens the streets for recreation for residents to walk, bike, rollerblade, jog and play.

Objective: Wheaton adopts Open Streets as an annual event to complement 4th of July parade, Memorial Day parade, Cosley Zoo 5K/10K Fundraiser, Taste of Wheaton, classic car nights or other road closing events.

Wheaton Bike Network Map or Bike to Metra Map

Timeframe: near-term

Description: A Wheaton Bicycle Map encourages bicycle use by promoting on-street and off-street bicycle routes, and by identifying bicycle-friendly routes connecting to destinations like parks, schools, libraries, forest preserves and business districts of Wheaton. Copies can be mailed to residents and can be included in “new resident” packets. Consider private sector sponsorship for printing the map.

Objective: The Planning Department may design and publish a free bicycle map that includes the recommended bikeway network routes and popular destinations. Local businesses may be interested in sponsoring the map.

City Bicycle Fleet

Time Frame: near-term

Description: Encouraging City staff to use bicycles for work travel around Wheaton can be considerably cheaper and often more effective than using automobiles. Employees will have better contact with residents in the neighborhoods. Using bicycles for work also improves employee health and fitness and shows residents that the City supports biking in the community through leadership by example.

Objective: The City of Wheaton increases the use of bicycles on the job. They prioritize adding bicycles to the City’s fleet whenever replacing or upgrading motor vehicles.

Bike Wheaton Webpage

Time Frame: near-term

Description: Create a single place where all Wheaton bicycle events can be publicized. Community groups, scouts, civic groups, the police and Wheaton Schools, Illinois Prairie Path, DuPage County Trails page, local advocacy organizations, and bike clubs all host their own bike rides and events. Having a single web page where residents can go to find information on biking in Wheaton will increase awareness and attendance to many of these events.

Objective: The Wheaton Communications manager and a member of the Wheaton Environmental Commission, work together to produce and maintain a webpage and calendar of bike events such as group rides and trail clean-ups in Wheaton. The webpage should also contain resources for bike safety information and a bike route map for Wheaton.

Larger group rides and bicycle maintenance classes should also be listed in the Wheaton Park District catalogue.

Shop by Bike

Time Frame: near-term

Description: Shop by Bike programs encourage residents to take their bikes on short errands to local shops, which help add physical activity to residents’ daily routines, relieve parking pressures, and support local businesses. With Shop by Bike, retailers offer discounts and/or promotions for shoppers on bike. The Bicycle Advisory Committee should pursue partnerships with the retailers and restaurants to encourage shopping by bike in Wheaton.

Bicycle education instructors should offer Shop by Bike classes twice yearly for residents on how to get the most out of shopping on their bike and educate merchants on the advantages of attracting and accommodating bicycle-riding customers and staff and shoppers on how to make small modifications to their bikes to accommodate their purchases.

Adequate bicycle parking is an important prerequisite for a successful Shop by Bike program; bicycle parking needs should be assessed before the program begins. For a short term program, temporary bicycle parking, provided through portable bicycle racks or by roping off monitored bicycle corrals, can be sufficient. This program should take place after additional bike racks have been installed in Wheaton’s downtown and other shopping areas.

Objective: Develop a summer-long Shop by Bike program for Summer 2012.

Encouragement

Bike to Work Week and Car-Free Day Wheaton

Time Frame: near-term

Description: National events such as Bike to Work Week and Car-Free Days are fun events that promote the use of bicycles for transportation to work, local errands and all other trips.

Programming can include:

- Greeting and rewarding non-motorized commuters at the downtown Wheaton and College Avenue Metra stations
- Offering bicycling classes leading up to the event through the Wheaton Park District or Bicycling Ambassador program
- Inviting merchants to offer special discounts to participants who walk, bike or use transit to shop
- Closing three to four streets to car traffic, creating a rectangular network providing access to all parts of Wheaton
- Offering group rides such as a progressive dinner on bicycle, stopping at a different restaurant in Wheaton for each course of the meal

Objective: The Wheaton Environmental Improvement Commission, works with several partner agencies, including the Planning Department in partnership with the Park District, Police Department, and Public Works Department to build on their existing efforts during Bike To Work Week, in the spring, and designates one day each year in the fall as Car Free Day for special programming that encourages residents to bike or for transportation.

Enforcement

Enforcement

Successful implementation of this plan will result in an increase in active transportation users and create new challenges for enforcement of laws. At the same time, traffic safety laws are only as good as the enforcement of those laws. Wheaton should prioritize enforcement of laws that deter reckless behavior by road users and reward those who observe the law.

Train Police Officers on Bicycle-Relevant Rules of the Road, Education and Enforcement Techniques

Time Frame: mid-term

Background: The Wheaton Police Department Bicycle Patrol began in 1982 using auxiliary officer bike patrols primarily for public relations as the officers patrolled the DuPage County Prairie Path during the summer months. The bicycle patrol is currently made up of officers who have volunteered to attend a bike patrol training, and officers now patrol all areas of Wheaton 24 hours a day. However, not all officers are trained on bike-relevant laws and enforcement.

Objectives:

- Train all officers, not just on-bike officers on laws and enforcement techniques for bicyclists and pedestrians.
- The Wheaton Police Department designates a liaison to communicate with the bicycling community.
- Work with local cycling clubs to build relationships between the law enforcement and cycling community, and educate cyclists on rules of the road for cyclists.

Benefits: Police officers are best equipped to respond to bicycle safety issues when appropriate training has been provided. By learning bicycle laws and enforcement techniques, officers are more likely to enforce the laws, and cyclists are more likely to observe them. Thus, making Wheaton's streets safer for cyclists and drivers. Police can utilize warning stops as an opportunity to educate cyclists and motorists on how to appropriately share the road.

How it Works: Officers receive additional training on the following topics. Holding a full or half training day, screening videos at roll call, distributing action alerts, memorandums to

police officers, or requiring officers to watch training videos are all ways to get the information out to officers.

The curriculum should include:

- Rules of the road for bicyclists
- Types of motorist behaviors that endanger bicyclists
- Most dangerous types of bicycling behaviors
- Most common causes of bicycle crashes
- Importance of reporting bicycle crashes
- Importance of investigating serious bicycle crash sites
- Best ways to prevent bicycle theft
- Advantages to policing by bicycle
- Transportation, health, and environmental benefits of bicycling

The Wheaton Police Department liaison to the bicycling community should work with local bike clubs and schools to educate residents on safe cycling and bike relevant rules of the road. This officer could work with the Forest Preserve District of DuPage County to hold bike rodeos and offer bike education for children.

Evaluation and Implementation

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Environmental Improvement Commission

The Wheaton Bicycle Plan is an ambitious program that requires an appropriate organizational structure for implementation. Parallel to implementing the bikeway network is a need to develop and implement education, encouragement and safety programming.

Environmental Improvement Commission

Time Frame: near-term

It is recommended that a Bicycle and Pedestrian Advisory Committee be established to coordinate the implementation of the Bicycle Plan. The committee would operate as a subcommittee of the existing Environmental Improvement Commission.

The sub-committee would monitor implementation of the plan, promote events celebrating active transportation in the City and encourage residents and visitors to use the improved active transportation network. The sub-committee would also serve as a hearing body to gather early public input regarding the design and construction of bicycle and pedestrian infrastructure.

Bicycle Coordinator

Time Frame: near-term

Users of the active bicycle network and the new Bicycle Advisory Committee would benefit from having access to a single municipal staff contact. The Bicycle Coordinator would serve as a liaison to the Committee, monitor implementation of the plan, and serve as a point of contact for residents and visitors. This person could also be charged with seeking funding for implementation of the plan and creating partnerships with like-minded governments in the region.



This is the placard awarded by the League of American Bicyclists to communities that receive Bicycle Friendly Community designation.

Bicycle Friendly Community Program

Time Frame: near-term

The Bicycle Friendly Community Program led by League of American Bicyclists provides incentives, hands-on assistance and award recognition for communities that actively support bicycling. A Bicycle Friendly Community welcomes cyclists by providing safe accommodations for cycling and encouraging people to bike for transportation and recreation. To apply for recognition, a step-by-step guide is available through the League of American Bicyclists website.

Annual Progress Report

Time Frame: on going

Monitoring and evaluating the annual progress of the Wheaton Bicycle Plan is the cornerstone of the implementation strategy. Although the Implementation Map and Matrix provide strategies to implement the recommendations of the plan over ten years, a more detailed annual work plan is needed to guide those who will implement the Plan.

Therefore it is recommended that the Bicycle Coordinator, in consultation with the Bicycle and Pedestrian Advisory Committee, prepare an Annual Progress Report to the City. This report would outline the progress made towards achieving the primary goals of the plan. The report would measure the success in implementing the recommendations set out in the Plan, identify changes in direction and priorities for the upcoming year, and confirm budget requirements. The implementation program for each year, including the specific routes and recommended programs, would be presented to the City for consideration during the preparation and review of the annual departmental budgets.

Commitment to Funding

Time Frame: on-going

Full implementation of the Wheaton Bicycle Plan will require a commitment to funding over an extended period of years. It will be important for Wheaton to anticipate and plan for projects in advance of grant funding cycles, and to have committed matching funds through its annual budget process. The City should include recommended bicycle accommodations in the design and budgeting for any scheduled street maintenance and rehabilitation projects.

A listing of funding resources is included in Appendix B.

Become a Bicycle Friendly Community

Collect and Analyze Cycling Data

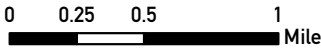
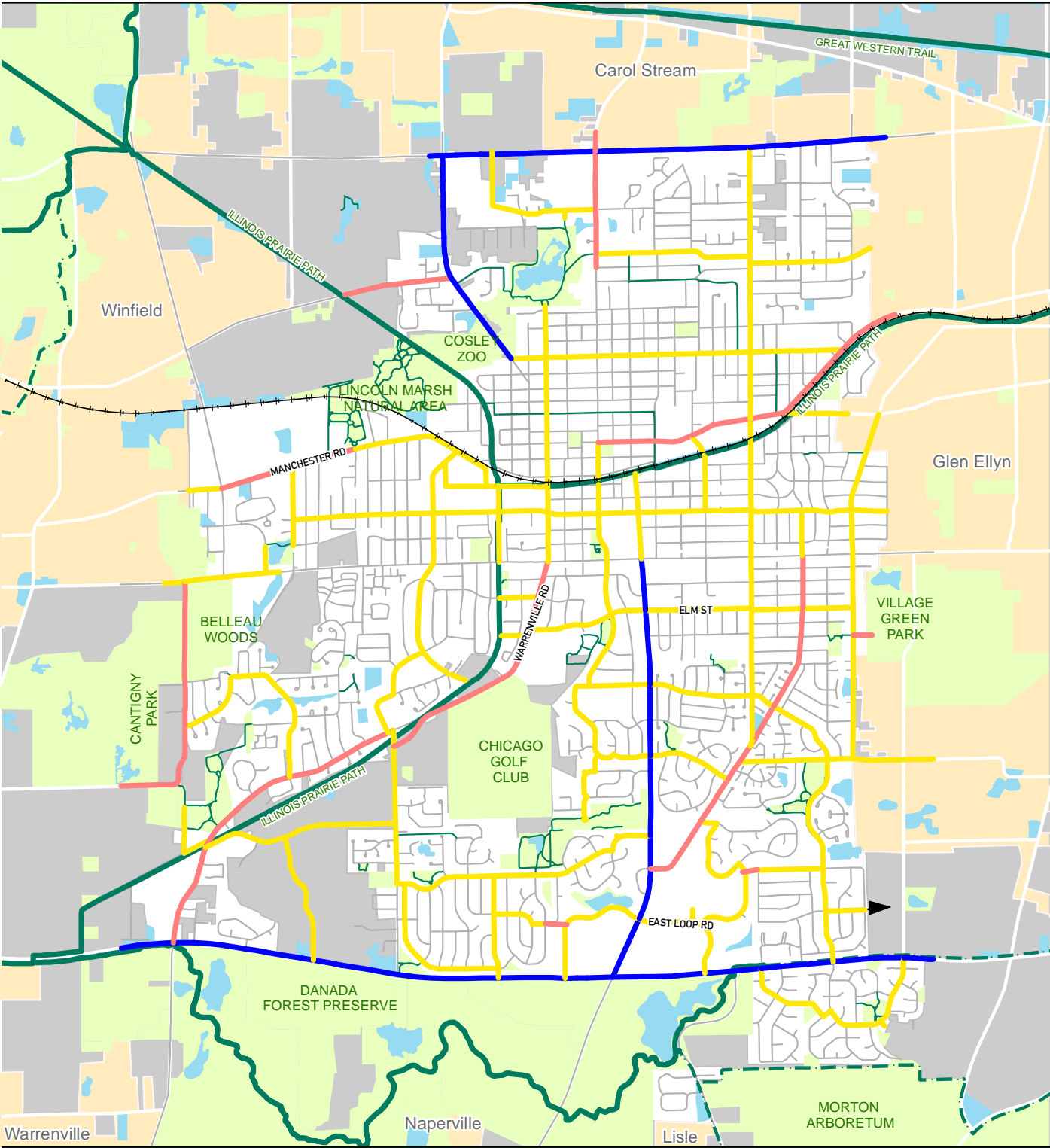
Time Frame: on-going

Assessing the impact of the Wheaton Bicycle Plan is easiest when reliable data is available. Many free and low cost data sets are available to assist with evaluation. The Bicycle Coordinator should be charged with collecting baseline data and evaluating data on an annual basis. Data sets might include information gathered from:

- Bicycle traffic counts to monitor cycling trends
- User surveys focused on specific cycling issues and opportunities
- Public attitude surveys
- Annual bicycle collision data

The application for the League of American Bicyclists Bicycle Friendly Community recognition program offers excellent guidance to establish baseline data. Other resources include traffic crash reports from Illinois Department of Transportation, and the data compiled by the consultants for this plan. Wheaton should conduct bicycle and pedestrian traffic counts on an annual basis. The National Center for Safe Routes to School offers a free student traffic count tool and a free analysis.

Implementation Map



Prepared By:
Active Transportation Alliance August 2011
Data Source:
Active Transportation Alliance, City of Wheaton,
DuPage County Forest Preserve District



- Near-Term

Mid-Term

Long-Term

Existing Regional Trail

Proposed Regional Trail

Existing Local Bike Routes and Trails

Roadways

Railroad

Park or Open Space

Water

City of Wheaton

Incorporated Municipalities
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Implementation Matrix-Bicycle Facilities

Timeframe	Street	Facility Recommendation
Near Term	Arbor Avenue	Signed Route
	Arrowhead Drive	Signed Route
	Brentwood Lane	Signed Route
	Chase Street	Signed Route
	Childs Street	Signed Route
	Cole Avenue	Signed Route
	Cromwell Drive	Signed Route
	Durfee Road	Signed Route
	East Loop Road	Signed Route
	Elm Street	Signed Route
	Gables Boulevard	Signed Route
	Harrison Avenue	Signed Route
	Hawthorne Boulevard	Signed Route
	Hazeltown Avenue	Signed Route
	Hill Avenue	Signed Route
	Illinois Street	Signed Route
	Jahns Drive	Signed Route
	Liberty Drive	Signed Route
	Longfellow Drive	Signed Route
	Main Street	Signed Route
	Orchard Road	Signed Route
	Parkway Drive	Signed Route
	Thompson Drive	Signed Route
	Wadsworth Road	Signed Route
	West Loop Road	Signed Route
	22nd Street	Striping Parking/Shared Lane Markings
	Briarcliff Boulevard	Striping Parking/Shared Lane Markings
	Carlton Avenue	Shared Lane Markings
	President Street	Shared Lane Markings
	West Street	Shared Lane Markings
	Manchester Road	Shared Lane Markings
	Brighton Drive	Bike Lanes
	Danada Drive	Bike Lanes
Mid Term	Blanchard Street	Shared Lane Markings
	Jewell Road	Shared Lane Markings
	Main Street	Shared Lane Markings
	Manchester Road	Shared Lane Markings
	Seminary Avenue/College Avenue	Shared Lane Markings
	Plamondon Road	Pave Shoulder or study for alternative bicycle facility
	Shaffner Road	Pave Shoulder or study for alternative bicycle facility
	Blanchard Street	Bike Lanes
	President Street	Bike Lanes
	Manchester Road	Bike Lanes
	Wiesbrook Road	Bike Lanes
	Blanchard Street and 22nd Street	Intersection Improvement
	Liberty Street and West Street	Intersection Improvement
	Roosevelt Road and Carlton Avenue	Intersection Improvement
	Seminary Avenue/College Avenue	Reconfigure parking
Long Term	Gary Avenue	Pave Shoulder or study for alternative bicycle facility
	Blanchard Street	Sidepath/Greenway
	Butterfield Road	Sidepath/Greenway
	Geneva Road	Sidepath/Greenway
	Naperville Road	Sidepath/Greenway

Implementation Matrix-Programs and Policies

Recommendation	Timeframe		
Bicycle Friendly Ordinances and Policies (p. 25)	Near-Term	Mid-Term	Long-Term
Review and Update Street Design Standards and Guidelines			X
Adopt Bicycle Parking Ordinance	X		
Review and Update Development Codes			X
Update the Bicycle Traffic Ordinances	X		
Adopt Complete Streets Policy	X		
Adopt Bicycle Facility Maintenance/Clearing Policy		X	
Joint Use Agreements	As opportunities arise		
Safe Routes to School		on-going	
Education Programming Recommendations (p.30)	Near-Term	Mid-Term	Long-Term
Wheaton Bicycle Ambassador Program	X		
Bicycle and Pedestrian Safety Education	X		
Safe Routes to School		on-going	
Mobility Education	X		
Encouragement Programming Recommendations (p.32)	Near-Term	Mid-Term	Long-Term
Wheaton Open Streets		on-going	
Wheaton Bicycle Map	X		
City Bike Fleet		X	
Bike Wheaton Webpage	X		
Shop by Bike	X		
Car Free Day	X		
Enforcement Programming Recommendations (p.34)	Near-Term	Mid-Term	Long-Term
Train Police on Bicycle and Pedestrian Safety Laws		X	
Implementation Programming Recommendations	Near-Term	Mid-Term	Long-Term
Bicycle Advisory Committee	X		
Bicycle Coordinator	X		
Bicycle Friendly Community Application	X		
Annual Progress Report		on-going	
Commitment to Funding		on-going	
Collect and Analyze Cycling Data	X		

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Projected Energy Savings

Funding to develop the Wheaton Bike Plan was obtained through the Federal Energy Efficiency Conservation Block Grant Program (EECBG). One of the requirements of this funding source involves documenting energy savings and environmental benefits that might be achieved with the implementation of this plan.

One of the many positive benefits of commuting by bicycle is the energy savings and environmental impact of shifting trips from car to bicycle. In the last two decades mode share for bicycling has increased.¹ A combination of additional infrastructure, educational, encouragement and safety factors have contributed to this increase. And as additional facilities for bicycling are built, bicycle usage is likely to continue increasing.

One way to quantify the value of bicycling and its benefits for the community is by looking at the projected reduction in Vehicle Miles Traveled (VMT) as residents substitute trips taken by car for trips taken by bicycle. For each vehicle mile not traveled, there is a resulting energy savings. In Wheaton, at the time of complete build-out of this bicycle plan, more than 25,400 vehicle miles traveled per day will be saved, resulting in 13 fewer tons of CO₂ emitted due to this reduction in VMT.

Existing Commuter Mode-split

In order to understand the impact of additional bicycling facilities, it is helpful to begin by reviewing current levels of bicycling. Reviewing current levels of bicycling will inform projections of additional bike ridership.

There are two methods of comparison for bicycling rates. One method is to compare communities with similar population. Another method is to compare neighboring communities. Making both comparisons helps to understand factors such as differentiation in land uses, density residential and job density, road patterns, and access to trails and transit. Neighboring communities are likely to have similar demographics and development patterns, but dissimilar population counts.

Using either method of comparison, Wheaton is one of the leading bicycling communities, with 0.73% mode share for bicycling. Compared to other Chicagoland municipalities with 50,000 to 60,000 residents (Census 2000) this is the highest mode share for bicycling. And compared to neighboring municipalities, Wheaton has the second highest portion of bicyclists, with only Glen Ellyn having a slightly higher mode share (0.78%).

¹ US Census

Commute to Work Comparisons

Appendix A: Energy Efficiency Calculations

Chicago area municipalities with 50,000 to 60,000 residents

Commuter Mode Share						
Rank	Place	Population	Bike (%)	Walk (%)	Use Public Transit (%)	Don't Drive To Work (%) Households without a car (%)
1	Wheaton city, Illinois	55,439	0.73	4.41	8.93	14.07 3.33
2	Mount Prospect village, Illinois	56,706	0.53	2.16	6.12	8.81 6.1
3	Oak Park village, Illinois	52,524	0.53	4.22	22.94	27.69 12.5
4	Hoffman Estates village, Illinois	50,352	0.37	1.3	3.36	5.03 4.21
5	Berwyn city, Illinois	54,016	0.3	3.27	11.02	14.59 13.96
6	Des Plaines city, Illinois	58,695	0.16	1.5	6.88	8.54 9.31
7	Bolingbrook village, Illinois	56,454	0.15	0.99	4.19	5.33 3.22
8	Oak Lawn village, Illinois	55,391	0.03	1.8	8.42	10.25 8.08
9	Orland Park village, Illinois	51,103	0.03	1.1	6.64	7.77 4.18

Wheaton and neighboring municipalities

Commuter Mode Share						
Rank	Place	Population	Bike (%)	Walk (%)	Use Public Transit (%)	Don't Drive To Work (%) Households without a car (%)
1	Glen Ellyn village, Illinois	27,040	0.78	2.96	12.36	16.10 4.94
2	Wheaton city, Illinois	55,439	0.73	4.41	8.93	14.07 3.33
3	Warrenville city, Illinois	13,194	0.15	1.20	4.35	5.70 1.46
4	Carol Stream village, Illinois	39,790	0.03	0.90	3.82	4.75 5.72

Probable Mode Shift Due to Environmental Change

Several studies, including the California Department of Transportation (Caltrans) Air Resources Board suggest that a reasonable mode share target for bicycles in suburban communities with complete bicycle networks is 2%. University towns have an even higher suggested mode share target of 6.8%. This figure is determined by the ratio of bicycle routes and lanes to arterial and highway lane miles.

In its current state, there are about .68 miles of bike route or trail for every mile of arterial roadway in Wheaton. When it is built out, there will be 2.8 miles of bicycle route, lane or trail for every mile of arterial roadway. That is a total network growth of 414%.

In a 2008 survey conducted the Chicago Metropolitan Agency for Planning (CMAP), DuPage County was cited as having a 1.5% mode share for bicyclists for all trips taken by people of all ages. This is one of the highest mode shares for the Chicagoland region, second only to north (1.5%) and central (2%) Chicago.

Considering the recommended mode share target from Caltrans, the expected growth in Wheaton's bicycle network and the most recent mode share statistics from CMAP, 2% is a reasonable baseline target for bicycling mode share at build out for Wheaton's bicycling network. Additionally, since there are two colleges (Wheaton College and College of DuPage) in or near Wheaton, and since the plan includes programmatic and policy recommendations that target work, school and recreational trips, it can be assumed that these trip types will see an additional increase in bicycling mode share.

Existing to Proposed Condition Comparison

Existing Conditions	Wheaton
Primary Motorized Routes	
Highway	0
Principal Arterial	16
Major Local	19
Total	36 miles
Primary Bicycle Route	
Bike Lanes	0
Bike Routes	4
Off-Road Trails	20
Total	24 miles

Proposed Conditions	
Primary Bicycle Route	
Bike Lanes	49
Bike Routes	28
Off-Road Trails	0
Total	76 miles

Comparisons	
Existing Miles of Bike Routes	68% of existing miles of primary motorized routes
Existing + Proposed Miles of Bike Routes	281% of existing miles of motorized routes
Existing + Proposed Miles of Bike Routes	414% of existing miles of bike routes

Reduction in Vehicle Miles Traveled

Using the current population count and data from the CMAP Travel Tracker survey, an estimate of the daily total miles traveled by Wheaton residents was made. Assuming a baseline mode share of 2% for bicycles and some trip types with a 3% mode share it can be estimated that there will be more than 5,000 bicycle trips per day in Wheaton,

The purpose of each trip, length of trip and willingness to travel a longer distance vary greatly depending on the traveler and trip purpose. For example, a person will probably only want to travel for a few minutes to buy a gallon of milk, but that same person is willing to spend more time traveling to work. Depending on the mode of travel, trip distance can vary significantly as well. In order to account for this variation, average trip length for all modes from the CMAP Travel Tracker study was used.

The end result of a complete bicycle network in Wheaton will show a reduction of more than 25,000 miles traveled by motor vehicle each day, or about ½ mile per person per day. Wheaton residents will reduce their greenhouse gas emissions by nearly 13 Tons per day, or more than 4,600 Tons per year.

**Estimated Trip and Greenhouse Gas Reduction
Miles Traveled**

Population	55,439
Daily Trips Per Person	4.04
Daily Total Number of Trips	224,028
Average Trip Length (miles)	4.88
Daily Total Miles Traveled	1,093,257

Reduction in Vehicle Miles Traveled by Biking Trips

Trip Type	Total Daily Trips	Percent of Total Trips	Bicycle Mode Share	Trip by Bicycle	Trip Length	VMT Reduction
To or From Work	18,594	8%	3%	558	4.88	2,722
Work Related business	5,825	3%	2%	116	4.88	568
Shopping	34,276	15%	2%	686	4.88	3,345
All other Family and Personal Business	105,517	47%	2%	2,110	4.88	10,298
School/church	13,442	6%	3%	403	4.88	1,968
Social and Recreational	41,445	19%	3%	1,243	4.88	6,068
Other	4,929	2%	2%	99	4.88	481
Total	224,028	100%		5,215		25,451

Reduction in Vehicle Miles Traveled

25,451	Miles Per Day
2.3%	Total Reduction in VMT
0.5	Miles Per Person/Day
168	Total Reduction in VMT per year per person

Projected CO2 Reductions

CO2 Emission Factor	454	Grams Per Mile
Daily CO2 Reduction	11,554,765	Grams
Daily CO2 Reduction	12.74	Tons
Yearly CO2 Reduction	4,648.99	Tons

Sources: Census 2000 and Chicago Metropolitan Agency for Planning (CMAP) Travel Tracker survey

Appendix B: Funding Resources

Primary Funding Sources for Local Transportation Projects									
	Transportation Enhancements	High-Priority Projects	Congestion Mitigation and Air Quality Improvement	Surface Transportation Program	Safe Routes to School	Recreational Trails Program	Highway Safety Improvement Program	Section 402-- State and Community Highway Safety Grant Program	Motor Fuel Tax (state)
Program Purpose	To foster cultural, historic, aesthetic and environmental aspects of our transportation infrastructure.	To fund key transportation projects deemed important by elected officials (earmarks).	To improve air quality and reduce traffic congestion in areas that do not meet air quality standards.	To fund state and local road and transit projects.	To enable and encourage children to walk and bicycle to school through education, encouragement, enforcement, engineering and evaluation strategies.	To develop and maintain recreational trails and trail-related facilities for both nonmotorized and motorized recreational trail uses.	To fund highway infrastructure safety projects aimed at reducing highway fatalities and serious injuries.	To create safety programs aimed at reducing traffic crashes.	To fund state and local road and transit projects.
Eligible Infrastructure	All bike/ped infrastructure that has a relationship to surface transportation (as opposed to recreation alone)	All bike/ped infrastructure or as dictated in the authorizing legislation	Most bike/ped infrastructure including bike paths, lanes, racks, lockers, bike sharing programs	All bike/ped infrastructure	All bike/ped infrastructure within a two mile radius of a K-8 school.	Bike trails, trailside and trailhead facilities, both development and maintenance	Bike lanes, bike parking, crosswalks and signage	None	Most bike/ped infrastructure
Eligible Non-Infrastructure	Safety and educational programs for pedestrians and cyclists are also eligible	As dictated in the authorizing legislation.	Most bike/ped safety and education programs.	None	Encouragement, Enforcement and Education activities, for children in grades K-8	Safety and environmental education; assessment of trail conditions; state program administration	States can spend 10 percent of their HSIP funds on public awareness campaigns, education programs and enforcement activities	Safety programs such as bike or pedestrian safety education, helmet education, or distribution of safety information	None
Key Project Requirements	Must relate to surface transportation.	No official requirements	1) Must be spent in non-attainment and maintenance areas. 2) Will be evaluated on air quality emissions	N/A	Requires a state-approved school travel plan	30% of state's funding must be used for nonmotorized trail projects; 30% for motorized; 40% for projects that encourage diversity of use of trail corridor, trailhead, etc.; projects encouraged to have environmental benefit and use youth conservation and service corps	Project must address goals written in State Highway Safety Plan	Project must address goals written in State Highway Safety Plan	Statute has minor distinctions between allowable uses for counties, townships and municipalities.
Application Process	Irregular schedule at call of IL Dept. of Transportation.	Specified in federal surface transportation bill (may be change in annual appropriations).	Timing under review. Generally, an annual call for proposals by Chicago Metropolitan Agency for Planning.	Varies at call of local council of governments.	Irregular schedule at call of IL Dept. of Transportation.	Irregular schedule at call of Illinois Department of Natural Resources.	Generally every year there is update to plan and call for proposals by IDOT Division of Traffic Safety.	Generally each spring at call of IL Dept of Transportation Division of Traffic Safety.	Funds distributed by IDOT on monthly basis to counties and certain local governments on a formula basis.
Local Match Required	Typically 20%.	No match requirement.	Typically 20%	20%	No match requirement.	Typically 20%; some 50%	10%	Typically 20%	No match required but local government is required to have certain minimum tax rate.
Who Can Apply?	Local government	Anyone	Local or state government agency	Local government (some funds retained by IDOT)	Any government entity or non-profit	Any state or local government entity or non-profit	Any state or local government entity or non-profit	Any state of local government entity or non-profit	N/A

Appendix C: Bicycle Facilities Guidance

Bicycle Facilities

Guide for the Development of Bicycle Facilities, 3rd Edition
American Association of State Highway and Transportation
Officials (AASHTO), 1999
<http://www.transportation.org>

Urban Bikeway Design Guide
National Association of City Transportation Officials (NACTO)
<http://nacto.org/cities-for-cycling/design-guide/>

Bike Lane Design Guide
City of Chicago and the Active Transportation Alliance, 2002
http://www.chicagobikes.org/pdf/bike_lane_design_guide.pdf

Bicycle Parking

Association of Pedestrian and Bicycling Professionals
Bicycle Parking Design Guidelines
<http://www.apbp.org/?page=Publications>

Bike Parking for Your Business
Active Transportation Alliance, 2003
http://www.chicagobikes.org/pdf/bike_parking_business.pdf

Other Resources

Complete Streets
National Complete Streets Coalition
<http://www.completestreets.org>

Manual on Uniform Traffic Control Devices
Federal Highway Administration, 2009
<http://mutcd.fhwa.dot.gov/>

Pedestrian and Bicycle Information Center
U.S. Department of Transportation
<http://www.pedbikeinfo.org>

Bicycle and Pedestrian Accommodations
Bureau of Design & Environment Manual – 2010 Edition
Illinois Department of Transportation
<http://www.dot.state.il.us/desenv/BDE%20Manual/BDE/pdf/Chapter%2017%20Bicycle%20and%20Pedestrian.pdf>

Appendix D: Programming Resources

Safe Routes to School

National Center for Safe Routes to School:
www.saferoutesinfo.org

The National Center for Safe Routes to School (SRTS) assists communities in enabling and encouraging children in grades K–8 to walk and bike safely to school. The National Center has an informative website about the five E's of SRTS (education, encouragement, enforcement, engineering, and evaluation), including case studies, resources, data collection, and trainings.

SRTS Guide: <http://guide.saferoutesinfo.org/index.cfm>

The Safe Routes to School Online Guide is a comprehensive manual designed to support the development of an SRTS program.

Illinois SRTS: <http://www.dot.il.gov/saferoutes/SafeRoutesHome.aspx>

The Illinois SRTS program is run by the Illinois Department of Transportation. Illinois has awarded \$11 million in federal funding for the program.

Walk to School Day

International Walk to School Day in the USA:

<http://www.walktoschool.org/>

The first Wednesday of October is International Walk to School Day. Children in over 40 countries participate. The website provides ideas and resources for planning an event.

International Walk to School:

<http://www.iwalktoschool.org/photos/index.htm>

The Official Website of International Walk to School features pictures, stories, best practices, downloads, resources, and who is walking around the world.

Walk and Bike Friendly Recognition

Bike friendly communities have shown a commitment to improving walkability, bikeability, and pedestrian and cyclist safety through comprehensive programs, plans, and policies.

Bicycle Friendly Community:

http://www.bikeleague.org/programs/bicyclefriendlyamerica/communities/getting_started.php

This site provides a step-by-step guide to turning your town into a Bicycle Friendly Community. The League of American Bicyclists provides resources, a bike friendly blueprint, and an explanation of how to apply for national Bicycle Friendly Community recognition.

Targeted Enforcement

Police inform motorist of Illinois laws with warnings and educational materials, ensuring drivers uphold their duties as motorists. Targeted enforcement improves awareness of traffic laws, increasing compliance, safety, and awareness of pedestrians and bicyclists on the road.

Educators and Educational Materials

League of Illinois Bicyclists
www.bikelib.org/

Teacher Resources from Active Transportation Alliance
<http://www.activetrans.org/education/teachers>

Workshops, Trainings and Presentations on Bicycle Safety and Maintenance from Active Transportation Alliance
<http://www.activetrans.org/education/workshops>

Appendix E: Sample Bicycle Ordinances

Bicycle Parking Ordinance

Base the number of bicycle parking spaces on 5 percent of required motor vehicle spaces (minimum 4 bicycle parking spaces/maximum 40 bicycle parking spaces, depending on proximity to bike path system). Exemptions: Single and two-family dwellings; warehousing and distribution; mortuaries; auto service; day care centers; car washes; drive-up establishments and airports.

Location and Design Elements

- Inverted-U structure preferred
- Should accommodate U-locks/chains and shall support a bicycle at two locations
- Thermoplastic powder coating on racks and must be anchored securely to ground per manufacturers specifications
- Bicycle parking should be separated from vehicle parking grade differences, landscaping, poles, etc.)
- Spaces shall be 30" x 6' per bicycle with a 5'-wide access aisle from behind. Sidewalk adjacent may serve as access site.
- Spaces should be within 50' of entrance and clearly safe and convenient (lit if necessary)
- Parking areas may be shared by two venues within 50' of one another
- Parking areas should be easily accessible from trails,
-

Abandoned bicycles -

Source: City of Chicago Municipal Code 9-52-071

(a) It shall be unlawful for any person to abandon any bicycle on any public way within the city. A bicycle shall be deemed abandoned if it:

(1) is in such a state of disrepair as to be incapable of being operated in its present condition, or

(2) has not been moved or used in more than seven days and bears physical indicia of having been deserted.

(b) Any bicycle deemed abandoned pursuant to subsection (a) of this section may have a notice affixed to it which informs the bicycle's owner that the bicycle appears to be abandoned. The commissioner of transportation or his designee is authorized to affix such notices upon bicycles. This notice shall indicate:

(1) a telephone number for the owner to call to inform the department of transportation that the bicycle is not abandoned; and

(2) the date after which the bicycle may be removed if it is not claimed by its owner. A bicycle shall not be deemed to be abandoned if the owner of the bicycle, within seven days of the affixing of a notice of abandonment, notifies the department of transportation that the bicycle is not abandoned.

(c) If a bicycle is not relocated or claimed by its owner within seven days of the affixing of a notice of abandonment, that bicycle may be removed and disposed of by the commissioner of transportation or his designee.

Driving, standing or parking on bicycle paths or lanes prohibited -

Source: City of Chicago Municipal Code 9-40-060

The driver of a vehicle shall not drive, unless entering or exiting a legal parking space, or stand, or park the vehicle upon any on street path or lane designated by official signs or markings for the use of bicycles, or otherwise drive or place the vehicle in such a manner as to impede bicycle traffic on such path or lane. The driver of a vehicle shall not stand or park the vehicle upon any lane designated by pavement markings for the shared use of motor vehicles and bicycles, or place the vehicle in such a manner as to impede bicycle traffic on such lane. In addition to the fine provided in Section 9-4-025 of this Code, any vehicle parked in violation of this section shall be subject to an immediate tow and removal to a city vehicle pound or authorized garage.

Appendix F: Sample Complete Streets Policy

Source: City of Chicago, 2006

The safety and convenience of all users of the transportation system including pedestrians, bicyclists, transit users, freight, and motor vehicle drivers shall be accommodated and balanced in all types of transportation and development projects and through all phases of a project so that even the most vulnerable—children, elderly, and persons with disabilities—can travel safely within the public right of way.

Examples of how the policy may be implemented:

- Design and construct right-of-way improvements in compliance with ADA accessibility guidelines.
- Incorporate features that create a pedestrian friendly environment, such as
 - Narrower traffic lanes
 - Median refuges
 - Curb extensions (“bulb-outs”)
 - Countdown pedestrian signals
- Improve pedestrian accommodation and safety at signalized intersections by:
 - Using good geometric design to minimize crossing distances and increase visibility between pedestrians and motorists
 - Timing signals to minimize pedestrian delay and conflicts, and balancing competing needs of vehicular level of service and pedestrian safety (e.g., 2009 version of MUTCD to reduce design walking speed from 4ft./sec. to 3.5 ft./sec.)
- Reclaim street space for other uses through “road diets”
 - E.g., convert 4-lane roadway to 3-lane roadway with marked bike lanes

Appendix G: Bicycle Level of Service

Bicycle Level of Service

The most common way to quantify the suitability of any roadway for biking is to utilize Bicycle Level of Service (BLOS). BLOS is a methodology developed by the Transportation Research Board to measure how comfortable a roadway is for bicyclists. BLOS considers the following variables to assess the bicycle friendliness of a roadway, including:

- Through-lanes per direction
- The width of the curb traffic lane
- Presence of paved shoulder, bike lane, or marked parking area
- Bi-directional traffic volume
- Posted speed limit (mph)
- Percentage of heavy vehicles
- Pavement condition rating
- Percentage of road segment with occupied on-street parking
- On-street parking time limit

The evaluation for each roadway provides a numerical result, which is, then assigned a letter grade, either A, B, C, D, E or F. A brief discussion of what each letter grade means is provided below.

LOS A – Roadways with a BLOS A are typically considered very bikeable because they have slow speed limits, low volume of traffic and provide space for bicyclists. These are typically neighborhood streets.

LOS B – Roadways with a BLOS B are still very appealing to all bicyclists but there is more vehicular traffic on these roadways. These are typically residential roadways and local collectors.

LOS C – Roadways with a BLOS C may not be suitable for all bicyclists. There may be more vehicular traffic on these roadways and there may be issues with the surface conditions of the roadway. These are typically collector roadways.

LOS D – Roadways with a BLOS D are typically only used by experienced riders. They have higher speeds and higher vehicular volumes which discourages bicycling activity. These roadways occasionally have small shoulders to provide bicyclists some buffer from vehicles. These are typically minor arterial roadways.

LOS E – Roadways with a BLOS E typically have minimal bicycling activity. They have high speeds, high vehicular volumes and a lack of space for bicyclists. These are typically arterial roadways.

LOS F – Roadways with a BLOS F are typically major arterial roadways that are dangerous for bicyclists. They have high speeds, very high vehicular volumes and do not provide any space for bicyclists. These are typically regional arterial roadways.

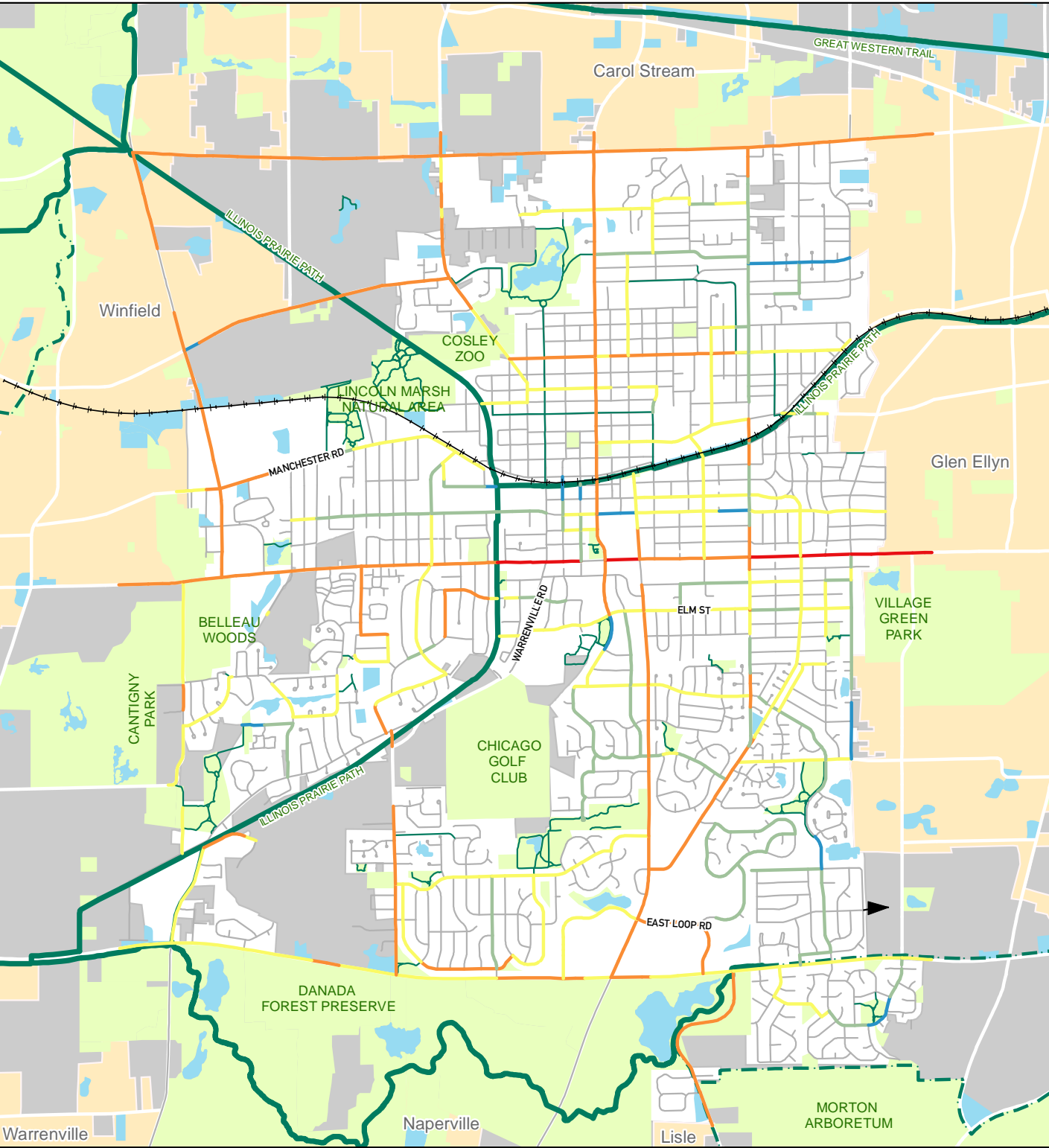
A LOS (D,E or F) does not mean that bicycling should be prohibited on the roadway. It just means that most bicyclists will choose not to ride on that route and improvements would be needed to make the roadway friendlier to bicyclists.

The Wheaton Bicycle Level of Service Map displays the results of the BLOS analysis for the streets that are recommended to be included in the bicycle network. In general, the residential streets have higher levels of service (A, B or C) and the collector and arterial streets have lower levels of service (D, E or F). The BLOS analysis was used to inform recommended treatments to improve the bicycle friendliness of the Wheaton Bicycle Network. Tools to improve bicycle level of service include:

- Signed Routes
- Striped Parking Lanes with Shared Lane Markings
- Paved Shoulders
- Shared Lane Markings
- Striped Bike Lanes
- Sidepaths
- Road Diets

These tools are described in the following section, Wheaton Bicycle Network Design Guide.

Appendix G: Bicycle Level of Service



0 0.25 0.5 1 Mile

Prepared By:
Active Transportation Alliance August 2011
Data Source:
Active Transportation Alliance, City of Wheaton,
DuPage County Forest Preserve District



- Bicycle Level of Service

A

B

C

D

E

Existing Regional Trail

Proposed Regional Trail

Existing Local Bike Routes and Trails

Roadways

Railroad

Park or Open Space

Water

City of Wheaton

Incorporated Municipalities



Crash Data Source: Illinois DOT

Appendix I: Bicycle Plan Task Force

Task Force Members

City of Wheaton Staff

Susan Wallace	Administration Department
Paul Redman	Engineering Department
Kevin Malone	Forestry
Tracy Jones	Planning Department
Brittany Graham	Planning Intern
Joe Dimas	Police Department

Wheaton Residents

Nancy Allured	Environmental Improvement Commission
Ted Witte	Environmental Improvement Commission
Joe Tyna	Environmental Improvement Commission

Other Organizations

Bill Farley	Community Unit School District 200
Andrea Hoyt	Forest Preserve District of DuPage County
Sydney Westrate	Wheaton College
Pat Callahan	Wheaton Park District
Steve Hinchee	Wheaton Park District
Rob Sperl	Wheaton Park District

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