Village of Mount Pleasant
Master Bicycle Plan 2030

Bicycle Federation of Wisconsin

www.bfw.org

Prepared by Bicycle Federation of Wisconsin
For Village of Mount Pleasant, Racine County, Wisconsin

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Foreword and Acknowledgements

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We would like to thank the Village of Mount Pleasant for taking the initiative to incorporate bicycle transportation into its planning process. This demonstrates that the Village identifies bicycling as an important form of transportation and recreation of the future.

The Bicycle Master Plan was authored by Jack E. Hirt and Charles W. Strawser of The Bicycle Federation of Wisconsin. This plan was funded by the Village of Mount Pleasant.

The Bicycle Federation of Wisconsin is a statewide nonprofit bicycle education and advocacy organization with over 2,500 members. The Bicycle Federation of Wisconsin's mission is to make Wisconsin a better place to bicycle. Bicycling is a viable, healthy, and environmentally sustainable means of transportation, recreation, and sport. The Bicycle Federation of Wisconsin provides bicyclists of all ages with information on recreational rides, safety tips, and commuting skills while educating decision makers about the importance of bicycling to our communities. Learn more at www.bfw.org.

Jack E. Hirt
Bicycle Federation of Wisconsin
1845 N Farwell Ave, Suite 100
Milwaukee, WI 53202
Office: 414-271-9685
jack@bfw.org

Charles W. Strawser
Bicycle Federation of Wisconsin
106 E Doty St, Suite 400
Madison, WI 53703
Office: 608-251-4456
chuck@bfw.org

Brennan Kane
Deputy Director of Planning and Development
Village of Mount Pleasant
6126 Durand Ave
Mount Pleasant, WI 53406
Office 262-554-8750
bkane@mtpleasantwi.gov

Executive Summary

The *Village of Mount Pleasant Bicycle Master Plan 2030* serves as a supplement to the *Village of Mount Pleasant Year 2030 Master Plan for Land Use and Transportation*, and should be part of any update to that plan.

Bicycling is an effective mode of transportation that is quiet, non-polluting, versatile, healthy, and fun. Bicycling is also a transportation mode available to all ages and income levels. In addition to the social, environmental, health, and transportation benefits, bicycling has a positive economic impact. Federal, state, and regional policies and plans have firmly established that the safe accommodation of bicycling and walking is the responsibility of state and local transportation agencies. The *Village of Mount Pleasant Bicycle Master Plan 2030* serves as the local framework for implementing those policies and plans.

The *Village of Mount Pleasant Bicycle Master Plan 2030* serves as a blueprint for continuous improvement of bicycling conditions and safety by addressing the "four E's" – Engineering (bicycle facility creation and improvement), education, encouragement, and enforcement (of the rules of the road for all road users – both motorists and bicyclists). When combined with facility improvements, enforcement, education and encouragement can dramatically increase both the levels of bicycling and bicyclists' safety, since studies have shown a correlation between higher numbers of bicycles in the traffic stream and lower crash rates for bicyclists.[1]

The *Village of Mount Pleasant Bicycle Master Plan 2030* identifies existing and desirable bicycle routes within the village of Mount Pleasant, including connections to neighboring municipalities. The *Village of Mount Pleasant Bicycle Master Plan 2030* identifies and prioritizes bicycle facility project needs, and provides references for best practices in planning, designing, and maintaining those facilities.

Goals and Performance Measures:

Goal: Improve the levels, safety, and convenience of bicycling through the accommodation of bicyclists in every Village, County, and State road construction, resurfacing, streetscape, and traffic calming project

Performance Measures:

- Bicyclists' needs are accommodated in every local, county, or state roadway project undertaken in or adjacent to the Village by 2011.
- 10% of bike lane, bike route, and path mile goals for 2016 achieved annually, beginning in 2007.
- 70% of residential parcels within 0.5 mile of a bicycle facility by 2016

[1] *Bicycle Transportation Plan for the Madison Urban Area and Dane County*, WI, Madison Area Metropolitan Planning Organization, September 2000.

Specific recommendations for on- and off-street bicycle facilities, and their priority, are summarized in Chapter 6. Construction and maintenance cost estimates, design guidelines, and potential funding sources follow the specific facility recommendations, which are illustrated by the map.

Safe and convenient accommodations for bicyclists can provide transportation bicyclists with access to goods and services, just as the surface transportation network has provided that for motorists. Increasing levels of bicycling can decrease the need for roadway expansion, travel times for all road users, the community's health care costs resulting from sedentary lifestyles, and the negative environmental consequences of motor vehicle use. Supporting an expanded bicycling network can have myriad positive effects, including social, environmental, health, and economic benefits in addition to the obvious transportation benefits.

Photo by Arthur Ross

Chapter 1 – Introduction

Bicycling is an important mode of transportation that is available to all ages and socioeconomic groups. Bicycling is a convenient and efficient form of transportation. For some people, bicycling is the main mode of transportation. Bicycling is also a popular mode of transportation because, like the automobile (but unlike public transit), a bicycle provides its user with autonomy and flexibility regarding travel schedules and destinations, including multiple destinations (or "trip-chaining"). Door to door bicycle travel times for distances of up to five miles can be faster than, or at least comparable to, driving or transit. Bicycling levels are much higher during the warmer months, but the development of inexpensive, more versatile bicycles and clothing have increased both the appeal and the practice of bicycling in wetter and colder weather.

Bicycling for recreation is also popular, and its popularity (and economic impact) continues to grow, as evidenced by the number of bicyclists participating in groups such as the Kenosha-Racine Bicycle Club. Nationally, bicycling ranks as the second most popular recreational activity.[2]

1.1 Purposes of Plan

The *Village of Mount Pleasant Bicycle Master Plan 2030* (PLAN) serves as a supplement to the *Village of Mount Pleasant Year 2030 Master Plan for Land Use and Transportation*, and especially as a way to implement some of the objectives in that plan, particularly the encouragement of compact, mixed land uses that increase mobility and access for bicyclists. Any future update of the *Village of Mount Pleasant Year 2030 Master Plan for Land Use and Transportation* should incorporate the *Village of Mount Pleasant Bicycle Master Plan 2030* and any updates to it. The PLAN should also serve as a blueprint for continuous improvement of bicycling conditions and safety, and serve to increase levels of bicycling through guidelines for planning, designing, and maintaining bicycle facilities.

The PLAN shall identify existing and desirable bicycle routes within the village of Mount Pleasant, including connections to neighboring municipalities. The PLAN identifies and prioritizes bicycle facility project needs, and recommends specific policies and educational, promotional, and enforcement activities to improve the practicality and safety of bicycling for transportation on a daily basis.

The *Village of Mount Pleasant Bicycle Master Plan 2030* shall serve as a framework for cooperation between state agencies, the county, the SE Wisconsin Regional Planning Commission, and local governments in planning for and developing bicycle facilities.

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[2] *Bicycle Transportation Plan for the Madison Urban Area and Dane County*, WI, Madison Area Metropolitan Planning Organization, September 2000.

1.2 PLAN Scope

The *Village of Mount Pleasant Bicycle Master Plan 2030* focuses on bicycling for transportation as opposed to recreational purposes. For bicycle transportation, trip origins, destinations, and trip purpose are of utmost importance (e.g. commuting to work or school, shopping, attending a social event, etc.), and the bicycle is simply the means to the end. Conversely, recreational bicycling trips are made expressly for the enjoyment of bicycling, and the destination, if there is one at all, is of minor importance. The reality is that most trips (and many facilities) serve both functions, but the bicycle facility (including roadways suitable for bicycling) must be complete in order to serve the needs of transportation bicyclists.

In order to be eligible for funding under most Federal aid programs, bicycle projects must be primarily for transportation purposes (the Recreational Trails Program is a notable exception). In general, federal guidelines consider any bicycle path or trail other than a closed loop trail as being principally for transportation and eligible for federal funding.

The PLAN is a comprehensive approach to bicycle transportation planning in that it encompasses the "four E's" – Engineering (bicycle facility creation and improvement), education, encouragement, and enforcement (of the rules of the road for all road users – both motorists and bicyclists). Education and encouragement are used to increase bicycling while also improving safety by increasing the skills and confidence of bicyclists to ride safely with traffic. This is crucial for increasing bicyclists' mobility. When combined with facility improvements, education and encouragement can dramatically increase both the levels of bicycling and bicyclists' visibility. Additionally, studies have shown that the more bicycles in the traffic stream, the lower the crash rate for bicyclists.[3] Educating motorists on how to share the road safely with bicyclists is also important. And education of elected officials, planners, engineers, and others involved in land use development will help insure that bicyclists' needs are considered and accommodated when planning and designing new neighborhoods and roadways, especially proposed development along Hwy 20 and I-94. Lastly, for enforcement to be effective, law enforcement officers need to know which illegal behaviors are the most common factors in crashes, and enforce them. Wisconsin's Pedestrian and Bicycle Law Enforcement training course, available through Larry Corsi through the Wisconsin Department of Transportation (WisDOT) Bureau of Transportation Safety, teaches just that. It also qualifies towards the training hours required of most law enforcement agencies.

The PLAN identifies existing facilities and deficiencies, and recommends new programs, policies, and bicycle facilities projects (off-street paths, on-street facilities, and signed routes, as well as supporting facilities, such as bicycle parking) for the planning period. Implementation of the plan will encourage the use of this practical, non-polluting, and affordable mode of transportation. Existing roadways in the village were analyzed for

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[3] *Bicycle Transportation Plan for the Madison Urban Area and Dane County*, WI, Madison Area Metropolitan Planning Organization, September 2000.

their suitability for bicycling, to identify corridors that serve as bicycle transportation routes or barriers to cycling. The bicycle facility recommendations are those necessary for bicyclist safety, mobility, and access to important destinations such as schools, employment centers, commercial areas, public institutional land uses, and recreational areas. Recommendations are prioritized to fill in gaps first in order to maximize the existing network, and then augment the existing bicycle transportation network in the Village and its connections to other municipalities.

1.3 Public Input

For any planning effort to be effective, it requires the participation of the public. Public input was solicited via a survey administered online by the Bicycle Federation of Wisconsin, and also provided to every household in the Village with a copy of the Village newsletter. Input was also sought directly from the largest bicycle user group in the area, the Kenosha-Racine (KR) Bike Club. A public information meeting was held at the Village Hall November 6, 2006, to give everyone a chance to view a map of the proposed bicycle network and make comments on it and the plan in general. Input was sought through interviews with staff of Villages of Mt Pleasant and Sturtevant, City and County of Racine, and WisDOT, interested citizens and stakeholder groups in addition to the members of the Kenosha Racine Bike Club, including the City of Racine's Bicycle & Pedestrian Task force. BFW also publicized the process via our website, www.bfw.org, and made notice to our entire membership of nearly 4000.

1.3.1 *Village of Mount Pleasant Bicycle Master Plan 2030* Public Input Survey Results

Public input was solicited via a survey administered online by the Bicycle Federation of Wisconsin, and also provided with a copy of the Village newsletter to every household in the Village. The responses to the survey are summarized here; open ended comments are included in the appendix.

Photo by Della Haugen

	%Response	Response Total
How often do you bicycle in Mt Pleasant?		
never	20.2%	52
once/month	16.7%	43
once/week	15.6%	40
multiple	38.1%	98
daily	10.1%	26
	Total Respondents	257
	skipped this question	2
How important is it to you to improve conditions for bicycling in your community?		
very unimportant	20.6%	52
somewhat unimportant	5.1%	13
no opinion	1.6%	4
somewhat important	18.2%	46
very important	54.5%	138
	Total Respondents	253
	skipped this question	6
How often do you use your bicycle for transportation?		
never	49.8%	127
0-3 times/week	31.8%	81
3-6 times/week	15.3%	39
7+ times/week	3.5%	9
	Total Respondents	255
	skipped this question	4
How often do you use your bicycle for recreation/exercise?		
never	16.7%	43
0-3 times/week	46.7%	120
3-6 times/week	30.0%	77
7+ times/week	6.6%	17
	Total Respondents	257
	skipped this question	2
Do you agree with Wisconsin State Law that Bicycles are considered vehicles of the road and have the right to be driven on the street?		
strongly disagree	10.2%	26
somewhat	5.9%	15
no opinion	3.5%	9
somewhat agree	16.5%	42
strongly agree	63.9%	163
	Total Respondents	255
	skipped this question	4
What's the longest distance you would consider riding a bicycle?		
0-1 mile	6.4%	16
1-5 miles	12.7%	32
5-10 miles	23.1%	58
10 or more miles	57.8%	145
	Total Respondents	251
	skipped this question	8

How would the factors below affect your decision to bicycle more?

	not affect		moderately affect		greatly affect	
	%	responses	%	responses	%	responses
more on-street facilities (bike lanes, paved shoulders, wide travel lanes, etc.)	9%	23	17%	42	74%	183
more greenway trails	12%	30	23%	58	64%	159
more bicycle parking	41%	101	36%	88	23%	55
increased enforcement of laws applying to motorists & bicyclists	20%	49	42%	104	38%	93
education programs for bicycle safety	53%	127	30%	71	17%	40
a map of bicycle facilities for planning routes	14%	34	45%	109	41%	99
					Total Respondents	252
					skipped this question	7

What factors discourage you from bicycling in your community?

	slightly discourages		moderately discourages		greatly discourages	
	%	response	%	response	%	response
motorists not following the laws of the road	22%	51	31%	72	48%	113
bicycle unfriendly roadways	9%	23	18%	45	72%	177
No bicycle parking at destinations	52%	117	26%	59	22%	51
Lack of greenway trails	26%	62	31%	73	43%	100
Lack of interest	69%	113	17%	27	14%	23
					Total Respondents	251
					skipped this question	8

What types of destinations would or do you bicycle to?

	Yes		No	
	%	responses	%	responses
place of employment	46%	104	54%	124
school	16%	33	84%	173
restaurant	52%	119	48%	108
shopping/retail	62%	144	38%	88
entertainment	52%	114	48%	106
park	88%	213	12%	29
trails and greenways	91%	221	9%	23
transit	35%	72	65%	134
		Total Respondents		248
		skipped this question		11

1.3.2 Kenosha Racine Bike Club

Jack Hirt attended the September 15 meeting of the Kenosha Racine (KR) Bike Club, a group of 160 experienced cyclists. The fifteen members of the KR Bike Club present were very interested and approving of the draft bike network PLAN. Input was provided by club members present at that meeting, and incorporated into the PLAN and proposed bikeway network. The full notes on the comments made at the KR Bike Club meeting are in the appendix.

1.3.3 Public Information Meeting

A public meeting was held November 6, 2006, at the Village Hall in which the draft PLAN and a map of the proposed bicycle network were presented. Several changes were made to the PLAN and the map as a result of comments made by the 16 people in attendance. The changes made as a result of those comments are summarized in the appendix.

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Chapter 2 –The Importance and Relevance of Bicycling

2.1 Social, Environmental, Health, and Transportation Benefits

The bicycle is an effective means of transportation that is quiet, non-polluting, versatile, healthy, and fun. Bicycling is the most energy efficient form of transportation, and is often faster than driving for shorter trips (up to five miles). Bicycling offers low cost mobility; for those who do not use or have access to an automobile, such as school-age children, bicycling is particularly important. While bicycling may not replace all trips by motor vehicle, it can be a practical mode for many trips, and part of multi-modal trips as well (such as a trip to a park-and-ride carpool facility, or transit stop). Internal travel within Southeastern Wisconsin is predominantly by personal motor vehicle. Walking and bicycle travel represent the next largest percentage of internal weekday travel by resident households of the region, and that percentage has doubled since 1991.[4]

Although the Belle Urban public transit system serves parts of the main commercial corridors in the Village, most of the residential areas in Mount Pleasant are not served by transit. There are currently no bike racks on the Belle Urban System's buses, although there are plans to add them.

Increasing bicycle opportunities and levels improves the efficiency of the transportation system. It improves neighborhood livability by reducing motor vehicle traffic and its associated pollution and congestion, reducing the need for motor vehicle parking, and reducing motor vehicle crashes, injuries, and property damage.

Bicyclists take up little roadway space. In most urban traffic conditions, bicyclists do not significantly limit traffic flow. Therefore, converting motorists to bicyclists will increase roadway capacity, reduce congestion, and decrease trip times for everyone.[5] According to a 1998 UW Extension survey of residents cited in the *Village of Mount Pleasant Year 2030 Master Plan for Land Use and Transportation*, 84% of respondents said solving traffic congestions was "important," or "very important."

Increasing bicycling levels along with increased quality and quantity of bicycle facilities can benefit the community by providing those unable to drive or without access to a car with more independence; reducing the need for parents to chauffeur their children to school, social, and recreational activities; allowing households to meet their transportation needs with fewer cars, and increasing recreational opportunities and, by extension, improving public health.

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[4] A Regional Transportation System Plan for Southeastern Wisconsin: 2035 (SEWRPC Planning Report No. 49) www.sewrpc.org/regionalplans/regionaltransysplan.shtm Chapter IV Travel Habits and Patterns, pp.6

[5] John Forestor, *Bicycle Transportation*, 2nd edition (1994), pp.87-95.

Improving bicycle facilities for transportation purposes benefits those who bicycle for recreation and fitness as well. Recreational bicycle rides can begin at home and be combined with other, often utilitarian, trip purposes. When linked with a larger bikeway system, off-street paths can provide important transportation linkages, and a complete bikeway network benefits everyone, regardless of how they use the road.

2.2 Economic Impact of Bicycling

Improving the bicycling environment can provide non-transportation related benefits as well. The community benefits from bicycle riders who purchase food and other needs locally. The tourism industry benefits as more bicyclists are attracted from outside the community. Most importantly, the quality of life of the community is enhanced by the presence of bicyclists and pedestrians, for example, when social interactions occur spontaneously, or when people feel safer being outdoors.

Photo provided by WI Dept of Tourism

Bicycle facilities have been shown to have a positive effect on both nearby property values,[6] and an increase in business reported by owners of businesses near bicycle facilities.[7] A study by North Carolina's Department of Transportation of bicycle facilities in the Outer Banks reveals an annual economic impact of the facilities of 600% of the (one-time) capital costs.[8] A study in Wisconsin showed 39% of responding businesses indicated increased business as a result of users of the Fox River Trail. The same study showed that a bicycle facility had positive effects on real estate values (and therefore property tax revenues). Lots adjacent to the Mountain Bay Trail in Brown County, WI, sold faster and for an average of 9% more than similar property not located next to the trail. The study also suggests that, by providing workers an alternative to driving to work, the trail became an inexpensive alternative to increasing road capacity. [9] The conclusion that trail facilities generate increased revenue through higher property values is corroborated by the Consumer's Survey on Smart Choices for Home Buyers. In that survey, trails ranked the second most important amenity out of a list of 18 choices.[10]

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[6] National Association of Realtors and National Association of Builders, *Consumer's Survey on Smart Choices for Home Buyers*, April 2002.
[7] Runge, Cole. Fox River Trail Study, Prepared for the Brown County Planning Commission, December 2002.
[8] Lawrie, Judson, John Guenther, Thomas Cook, and Mary Paul Meletiou. *The Economic Impact of Investments in Bicycle Facilities: A Case Study of the North Carolina Outer Banks*, summary report, April 2004.
[9] Runge, Cole. *Fox River Trail Study*, Prepared for the Brown County (WI) Planning Commission, December 2001.
[10] National Association of Realtors and National Association of Home Builders, *Consumer's Survey on Smart Choices for Home Buyers*, April 2002

Chapter 3 – Existing Federal, State, Regional, Local Policies and Plans Related to Bicycling

3.1 Federal – AASHTO, USDOT - FHWA, SAFETEA-LU

The *Guide for the Development of Bicycle Facilities* by the American Association of State Highway and Transportation Officials (AASHTO) is commonly accepted as the "best practices" for building bicycle facilities. The *Wisconsin Bicycle Facility Design Handbook*, by WisDOT, however, meets or exceeds all AASHTO guidelines.

The *Manual on Uniform Traffic Control Devices* by the US Department of Transportation (USDOT) Federal Highway Administration (FHWA) contains currently acceptable signage for use on bicycle facilities, as well as experimental signs. mutcd.fhwa.dot.gov/

Congress firmly established the principle that the safe accommodation of bicycling and walking is the responsibility of state and local transportation agencies, and that this responsibility extends to the planning, design, operation, maintenance, and management of the transportation system in federal transportation law, including the *Intermodal Surface Transportation Efficiency Act (ISTEA)*, its reauthorization, the *Transportation Equity Act for the 21st Century (TEA-21)*, and its reauthorization, the *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)*, www.americabikes.org/resources_policy_bicyclefriendly.asp

The Federal Highway Administration Program guidance on the federal transportation bills states that "In the planning, design, and operation of transportation facilities bicyclists and pedestrians should be included as a matter of routine and the decision not to accommodate them should be the exception rather than the rule. There must be exceptional circumstances for denying bicycle and pedestrian access either by prohibition or by designing highways that are incompatible with safe, convenient walking and bicycling."

3.2 State - Wisconsin Department of Transportation (WisDOT)

The *Wisconsin Bicycle Transportation Plan 2020* (WisDOT September 1998) is intended "to establish bicycling as a viable, convenient, and safe transportation choice throughout Wisconsin." The role of the state plan is "ensuring an interconnected transportation system across government boundaries and highway jurisdictions that can work safely for bicyclists…" The recommendations in the *Mount Pleasant Bicycle Master Plan 2030* should contribute to achieving the two primary goals of the state plan: doubling the number of bicycle trips by 2010, and reducing crashes involving bicyclists and motor vehicles by 10% or more by 2010. www.dot.state.wi.us/projects/state/bike2020.htm

The *Wisconsin Bicycle Facility Design Handbook* meets or exceeds federal (AASHTO) guidelines (referenced in SEWRPC Plans), and should be used preferentially over the AASHTO *Guide for the Development of Bicycle Facilities*. It is available from the state bicycle and pedestrian coordinator, Tom Huber, (thomas.huber@dot.state.wi.us), and also online at www.dot.wisconsin.gov/projects/state/docs/bike-facility.pdf.

Although intended for larger communities, the *Wisconsin Bicycle Planning Guidance: Guidelines for MPOs & Communities in Planning Bicycle Facilities* still contains useful information about the importance of planning a complete bikeway network.
www.dot.state.wi.us/projects/bikes.htm

3.3 Regional - Southeastern Wisconsin Regional Planning Commission (SEWRPC)

The *KRM: A Plan for the Kenosha-Racine-Milwaukee Commuter Link* (SEWRPC) includes a possible commuter rail station in Racine. Combined with safe and convenient bicycle routes throughout Mount Pleasant and Racine, this could make it possible for residents to use multimodal alternatives to get to Kenosha and Milwaukee and beyond.
www.sewrpc.org/KRMonline/

The *Regional [I-94] Freeway System Reconstruction Plan for SE WI* (SEWRPC) includes plans to reconstruct I-94 interchanges in and around Mount Pleasant, such as HWY 20, from their current "scissor" configuration to a cloverleaf design whose off-ramps end in T-stops, similar to the current interchange with HWY 11. This would be much safer for bicycles and still accommodate motor vehicle traffic. Some frontage roads in Racine County would be reconstructed with 5' shoulders (including 2' rumble strips) for improved crossroad intersection spacing and ramp design, as per WisDOT's 1996 Environmental Assessment.
www.sewrpc.org/freewaystudy

The *Regional Transportation System Plan for Southeastern Wisconsin: 2035* (SEWRPC Planning Report No. 49) includes SEWRPC's vision for transportation in the region: "A multimodal system with high quality public transit, bicycle and pedestrian, and arterial street and highway elements which add to the quality of life of Region residents and support and promote expansion of the Region's economy, by providing for convenient, efficient, and safe travel by each mode…" Also useful is chapter IV: Regional Travel Habits and Patterns, which can serve as a baseline (e.g. for measuring local progress in goals such as WisDOT's to double the number of trips by bicycle).
www.sewrpc.org/regionalplans/regionaltransysplan.shtm

The *Amendment to the Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wisconsin: 2020* (SEWRPC) "seeks to remove existing impediments to bicycle travel related to the lack of bicycle paths, the lack of safe accommodation on streets and highways, and the lack of support facilities such as bicycle parking and storage lockers. The plan recommends that improvements such as extra-wide outside travel lanes or paved shoulders be considered to be provided whenever an arterial street or highway is constructed or reconstructed to better accommodate shared roadway use by bicycles and motor vehicles." pp 2. www.sewrpc.org/transportation/amendmentbikeped.asp

A Park and Open Space Plan for the Town of Mt. Pleasant (SEWRPC Planning Report No. 199, 2nd edition, April 2003) includes recommendations for paths/trails in Mount Pleasant, which are covered in 6.1 Recommended Bicycle Facilities. www.sewrpc.org/parkplanning/

SEWRPC has identified several roads in and around the Village of Mount Pleasant for expansion and/or extension. These road expansions and extensions will have significant impacts of bicyclists to move safely and conveniently around the region. Whether those impacts are positive or negative will depend on whether accommodations for bicycles are incorporated concurrently into these construction projects. If the goals of the state and SEWRPC's own plans regarding bicyclists are to be realized, it is imperative that the bicyclists be accommodated as an integral part of every project.

The following roads in and around Mount Pleasant are among those identified by SEWRPC for expansion/extension which will have an impact on the safety and convenience of bicycling:

- 90th St north from Hwy 20 to County HWY C;
- County HWY C widened to 4 lanes west from Sunnyslope Dr;
- Airline Rd south to Oakes Rd;
- Oakes Rd south to Braun Rd;
- Hwy 20 widened to 6 lanes from I-94 to Oakes Rd (although the Hwy 20 bridge over the UP Railroad tracks will not currently accommodate 6 lanes)

3.4 Local Policies and Plans

3.4.1 Village of Mount Pleasant

The *Village of Mt. Pleasant Year 2030 Master Plan for Land Use and Transportation*, by Russell Knetzger, AICP, should be amended by the Village during its next update to include this Village of Mount Pleasant Bicycle Master Plan 2030. The *Village of Mt. Pleasant Year 2030 Master Plan for Land Use and Transportation* also cites a useful survey undertaken in the fall of 1998 of all registered voters in Mount Pleasant. The following are some of the responses:

- "Planning community growth" was "very important" (56%) or "important" (32%) to an overwhelming 88% of survey respondents

- "Solving traffic congestion" was similarly "important" or "very important" to 84% of respondents, which is not surprising since over 70% experience traffic problems "a lot" (30.8%) or "some" (40%).

- If transit were made more convenient, 7.3% might use it for work, 9.8% for shopping, 3.2% for church, and 5.8% for recreation. 3 blocks from their home was the maximum distance that gained a "convenient" rating for respondents. At that distance, 27% of households reported that at least one member of the household might use transit for at least one purpose. This suggests that safe and convenient bicycle facilities might encourage even higher numbers of residents to bicycle for transportation, given that bicycling provides the autonomy of route and schedule that is absent in transit use.

The *Mt Pleasant I-94 Area Study*, by Lakota, Metro Transportation, and SB Friedman, includes a wealth of data on the demographics and transportation (both regionally and locally) of the study area. The land use changes projected by the *Mt Pleasant I-94 Area Study* illustrate the need for planning for the accommodation of bicycles in the developing areas of the Village. www.thelakotagroup.com/mtpleasant.htm

3.4.2 Racine County

Although Racine County has no bicycle plan of their own, Racine County is using SEWRPC's *Amendment to the Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wisconsin: 2020* as a guide for planned and proposed bike projects. Those projects that affect or abut Mount Pleasant are included in 6.1 Recommended Bicycle Facilities.

3.4.3 City of Racine

The City of Racine has no bicycle plan, but they do have a bicycle pathway map, and have expressed a willingness to connect the proposed path along Lake Michigan in the city to the proposed path in the Village if and when the Village builds the path in their jurisdiction. This is most likely to happen when the brownfield that exists in that corridor is redeveloped.

3.4.4 Other Villages

The Village of Sturtevant currently has no bicycle plan or projects, except Racine County's projects within that Village, but they have expressed a willingness to make connections to Mount Pleasant, which could include critical connections to the new Amtrak Station in the Renaissance Center Business Park on Hwy 20.

The Village of Caledonia currently has no bicycle plan.

It will be important for the Village of Mount Pleasant to work with the city, county, and other villages to ensure that connections between the various jurisdictions are created concurrently with any new development or redevelopment. Memoranda of understanding between the municipalities are desirable. Additionally, Mount Pleasant should encourage the other municipalities to begin creating bicycle plans of their own to incorporate into their long range transportation and land use plans.

Photo by Arthur Ross

There is a common perception that bicycling on streets is dangerous. This concern keeps people from bicycling more, or at all. In addition to *engineering* (facilities), discussed in Chapter 6, *enforcement*, *education*, and *encouragement* can all be used to effectively counter the perception that bicycling for transportation is unsafe. The "four Es" are all key components to achieving the PLAN's goals of increasing the number of trips by bicycle and improving the safety and convenience of the bicycling environment.

4.1 Enforcement

For enforcement to be effective, law enforcement officers need to know which illegal behaviors are the most common factors in crashes. Wisconsin's Pedestrian and Bicycle Law Enforcement training course, available through Larry Corsi through the Wisconsin Department of Transportation (WisDOT) Bureau of Transportation Safety, teaches just that. The course also qualifies towards the training hours required of most law enforcement agencies. Contact Larry.Corsi@dot.state.wi.us, or 608-267-3154.

The rules for riding bicycles on the road (and rules for motorists sharing the road safely with bicycles) are online at www.dot.state.wi.us/safety/vehicle/bicycle/rules.htm. WisDOT also distributes, for free, printed safety materials such as a Summary of Wisconsin Bicycle Laws (HS226), and a Bicycle Law Card (HS221) that fits in a wallet. Request these materials using form DT1265 at www.dot.wisconsin.gov/forms/docs/dt1265.doc.

WisDOT's Division of Motor Vehicles *Motorist Handbook* includes nearly ten pages of information on bicycling safely and on motorists sharing the road safely with bicyclists.

In addition to training police in law enforcement for bicycle safety, training drivers of commercial vehicles to model behavior can bolster enforcement by police officers. The City of Madison, for example, educates all drivers of city vehicles about the state statutes that require drivers to yield to pedestrians in crosswalks and to give all vehicles (including cyclists) 3 feet of clearance when passing.

4.2 Education

Educating motorists and bicyclists to share the road will establish safer, more inviting streets for bicycling. Bike Rodeos, Bike Ed and Safe Routes to School initiatives are three examples of established bicycle education programs.

The purpose of the Federal Safe Routes to School (SRTS) Program is to address the decline in children walking and bicycling to school. In 1969, about half of all students walked or bicycled to school.[11] Today, however, fewer than 15 percent of all school trips are made by walking or bicycling, one-quarter are made on a school bus, and over half of all children arrive at school in private automobiles.[12] This decline in walking and bicycling has had an adverse effect on traffic congestion and air quality around schools, as well as pedestrian and bicycle safety. In addition, a growing body of evidence has shown that children who lead sedentary lifestyles are at risk for a variety of health problems such as obesity, diabetes, and cardiovascular disease.[13] Safety issues are a big concern for parents, who consistently cite traffic danger as a reason why their children are unable to bicycle or walk to school.[14] The SRTS Program empowers communities to make walking and bicycling to school a safe and routine activity once again. The Program makes funding available for a wide variety of programs and projects, from building safer street crossings to establishing programs that encourage children and their parents to walk and bicycle safely to school. A Safe Routes to School toolkit is available from WisDOT at: www.dot.wisconsin.gov/localgov/aid/saferoutes-toolkit.htm.

Bike Rodeos can be effective tools for teaching kids safe bicycling basics, but only when those running the rodeos know what the most common kinds of child bicyclist crashes are, and what skills kids need to avoid them. Teaching Safe Bicycling is a course that does just that. Like Wisconsin's Pedestrian and Bicycle Law Enforcement Training, Teaching Safe Bicycling is a course coordinated by Larry Corsi, the Bicycle & Pedestrian Safety Program Manager for WisDOT's Bureau of Transportation Safety. Contact Larry.Corsi@dot.state.wi.us, or 608-267-3154.

Photo by Jessica Weinberg

[11] "Transportation Characteristics of School Children," Report No. 4, Nationwide Personal Transportation Study, Federal Highway Administration, Washington, DC, July 1972.
[12] Data from the 2001 National Household Travel Survey conducted by Federal Highway Administration were used as the source, cited on FHWA website: safety.fhwa.dot.gov/saferoutes/.
[13] "Physical activity and the health of young people," U.S. Centers for Disease Control & Prevention, Fact Sheet, 2004.
[14] Barriers to Children Walking and Biking to School," CDC, 2005.

Bike Ed is a group of courses developed by the League of American Bicyclists (LAB) to suit the needs of any cyclist. LAB certifies, insures and equips League Cycling Instructors (LCI)s to teach anything from basic skills to college level courses. LCIs are the experts in bicycle education and safety. Courses offered include: Road I, Road II, Commuting, Motorist Ed, Kids I and Kids II. LCI's can also offer modified versions of these courses and design bike rodeos and provide general safety consulting.

Road I

Gives cyclists the confidence they need to ride safely and legally in traffic or on the trail. The course covers bicycle safety checks, fixing a flat, on-bike skills and crash avoidance techniques and includes a student manual. Recommended for adults and children above age fourteen, this fast-paced, nine-hour course prepares cyclists for a full understanding of vehicular cycling.

Road II

For more advanced students with an understanding of vehicular cycling principles, this twelve-hour course includes fitness and physiology, training for longer rides, advanced mechanics, paceline skills, advanced traffic negotiation, foul weather riding and night riding. Student manuals are included with each class.

Commuting

For adult cyclists who wish to explore the possibility of commuting to work or school by bike. This three hour follow-up to Road I covers route selection, bicycle choice, dealing with cargo and clothing, bike parking, lighting, reflection, and foul weather riding. Included with the class are handouts and student materials.

Motorist Education

A 3-hour classroom session, this course can be easily added to a driver's education curriculum, such as diversion training for reckless drivers or a course designed local bus drivers. Directed towards motorists in general, topics covered include roadway positioning of cyclists, traffic and hand signals, principles of right-of-way and left and right turn problems. Materials include Share the Road literature for bicyclists and motorists as well as other fact sheets.

Kids I

Designed for parents, instructors explain how to teach a child to ride a bike. Topics covered include how to perform a bicycle safety check, helmet fitting and bike sizing. The course includes the 10-minute 'Kids Eye View' video and a brochure for parents.

Kids II

This 7-hour class for 5th and 6th graders covers the same topics as Road I, including on-bike skills as well as choosing safe routes for riding.

The Bicycle Federation of Wisconsin has trained dozens of people in Wisconsin to teach the League of American Bicyclist courses, and BFW can connect those interested in taking Bike Ed with the closest LCI. Contact the League of American Bicyclists, www.bikeleague.org/programs/education/courses.php, or the Bicycle Federation of Wisconsin, www.bfw.org or 608-251-4456, for more information about Bike Ed in Wisconsin.

4.3 Publicity: Education *and* Encouragement

Publicizing bicycling is both education and encouragement. By producing and distributing bicycle education material, the Village can provide bicyclists, and potential bicyclists, with the information they need to bicycle safely and comfortably. WisDOT provides a range of safety materials for free to anyone requesting them by their publication number.

Of the safety materials WisDOT provides related to bicycling, the best materials include: Wisconsin Bicycle Laws card (HS 221), Bicycle Safety-What Every Parent Should Know (HS 239), From A to Z by Bike (HS 214, for ages 11-adult), Bicycle Safety: A 'Wheely' Good Idea (HS 213, handbook for ages 8-11), Bicycles & Traffic-Get Over Your Fear (brochure HS 238), Two-Wheeled Survival (brochure HS 227), Sharing The Road: Survival of the Smallest (brochure HS 228), Street Smarts (updated brochure HS 207), and Share the Road with Bicycles (bumper sticker HS 237).
Request materials from WisDOT by publication number using the form found at www.dot.wisconsin.gov/forms/docs/dt1265.doc.

Partnering with other agencies and organizations will help deliver bicycle information more effectively. For example, bicycle education should be integrated into school curricula and park programs so that many more children learn to bicycle more safely and frequently. Partnering with media outlets and the private sector will further increase the reach of education campaigns. The Village could also make use of the website www.Streetshare.org to promote bicycling and walking, and to educate citizens about bicycling and walking in the community. Contact Dave Schlabowske, the City of Milwaukee's Bicycle & Pedestrian coordinator, to set up a link from www.StreetShare.org.

Often adults are unwilling to bicycle simply because they are unaware of the safest routes to get to their destinations by bicycle. A map for bicyclists can address that, and tips for safe bicycling can be provided on the back of the map.

4.3.1 Bike to Work Week

Photo by Arthur Ross

Bike to Work Week (BTWW) is a promotional campaign that has succeeded in increasing the numbers and safety of individuals who bike to work, shop, school, or wherever they need to go in the communities where it has taken place. The Bicycle Federation of Wisconsin produces a toolkit for concerned citizens to start encouraging bicycling in their community through Bike to Work promotions, online at www.bfw.org/btww/howtoBTWW_single_pdf.pdf.

4.3.2 Bicycle Map

Producing and distributing a Village map for bicyclists can go a long way towards encouraging and educating citizens. The Bicycle Federation of Wisconsin has produced a bicycle map for Milwaukee, and has the capability of producing a bicycle map for Mt Pleasant. Such a map could not only educate citizens about the best routes for bicycling, but could also help teach them to safety share the road with motor vehicle traffic by using safety tips and illustrations on the reverse of the map itself. An overwhelming 86% of respondents to the survey indicated that a bicycle map of the area would positively (41% “greatly,” 45% “moderately”) affect their decision to bicycle more.

In creating a bicycle map, it will be extremely important to gather more information from the public regarding the map content. From previous bicycle mapping projects completed by the Bicycle Federation of Wisconsin, map users have expressed that it is very important to include the following characteristics:

- All bicycle facilities, including signed routes, bike lanes, and bike trails, depicted
- Public amenities, such as restrooms, parks, emergency services, and private amenities, such as bike shops, should all be displayed.
- Map scale should be appropriate for users to easily determine travel distance, and the map should have as many roads as feasible labeled.
- A digital version of the map should be available on-line

Geographical Information Systems (GIS) technology would be the best method to create the bicycle map. One of the purposes of the PLAN is to provide a facilities network map, and using GIS is the most expedient means for updating the map (and the plan) in the future.

The cost of creating a bicycle route map can be divided into two parts: the cartography work and the printing and distribution. An itemized list of specific tasks and related costs can be found in the appendix, but a summary cost for cartography work is estimated at about 150 hours. Consulting rates range from $40 to $120 and higher per hour. An itemized list of estimated costs for producing and map can be found in the appendix.

Printing can be difficult to estimate since choice of color, paper stock, and number of copies printed all have a significant affect on price. In 2005 Milwaukee County updated their bicycle map, and printed 100,000 copies, or enough maps for about 10% of their population, which is projected to be enough to last for about 3 years before a reprint is needed. The cost for a standard paper stock and a four color double sided 26”x36” map was about $25,000. Enough maps for 10% of residents of Mount Pleasant would be about 2500 copies, and could cost less than $1000, although printing smaller quantities sometimes costs more per unit than printing larger quantities

Often at least some of the funds for a bicycle map can be procured from advertising fees from local businesses wanting representation on the map. It might also be possible to partner with the city or county of Racine on a more regional map. The Village could also charge for each copy of the map, but the administrative costs of charging for each copy may exceed the revenue gained. A bicycle map is also more likely to be an effective educational strategy if it is available for free.

4.3.3 Other Avenues for Bicycle Publicity

In addition to a bicycle map, and education programs described above, there are other ways to get the word out that bicycling is a viable means of transportation and recreation. The Village could work with the area chamber of commerce, and also with Wisconsin’s Department of Tourism to publicize bicycling. Television and/or radio Public Service Announcements about safe bicycling and motorists safely sharing the road with bicycles could be produced and aired. Advertising in newspapers, on billboards, and on buses can gain bicycling exposure. If and when bike racks are installed on the Belle Urban buses, brochures about how to use the racks could be distributed with bus schedules and route maps. “Earned media,” e.g. a press release in conjunction with a ribbon cutting ceremony, is always a great way to get publicity, and also to generate more interest in expanding the bikeway network.

Chapter 5 – Existing Conditions, Goals, and Performance Measures

5.1 Existing Conditions

The Village currently includes a total of 3.25 miles of off-street bicycle facilities (trails), consisting of two unconnected sections: a 2 mile crushed limestone surfaced trail that Racine County owns and maintains, and another 1.25 mile asphalt section of trail owned by the Village. In addition to existing facilities, Racine County has approved funding and is in the engineering phase of a 3.4 mile extension to their off-street trail that would run through the Village. The Village also has a 1.5 mile extension planned for their off-street trail but is currently not funded. The Village also includes segments of streets signed as bike routes totaling 8.6 miles.

5.2 Goal

The goal of the *Village of Mount Pleasant Bicycle Master Plan 2030* is improving the levels, safety, and convenience of bicycling in the Village by accommodating bicycling in every Village, County, and State road construction, resurfacing, streetscape, and traffic calming project in and connecting to the Village. More specific goals regarding bicycle facilities and policies, and measures of performance, follow:

5.2.1 Existing and Proposed Bikeway Network:

	2006 Existing (Miles):	2016 Proposed (Miles):
Bike Lane	0	7
Off-Street Trail	3.25	25
Signed Bike route	8	19

In 2006, 15% of residential parcels are within 0.5 mile of a bicycle facility.
One measure of performance: 70% of residential parcels within 0.5 mile of a bicycle facility by 2016.

5.3 Recommended Actions

There are many things the Village can do to encourage bicycling, and make bicycling safer and more convenient that are not specific to any particular street or trail. The following actions are all recommended:

- Enact an ordinance requiring an adequate amount of bike parking in an appropriate location for all new development and redevelopment.

- Enact an ordinance requiring all new subdivisions to reserve greenspace where off-street paved (asphalt or concrete) bicycle trails could be developed with connections to the existing or future bicycle facility network. Further, it is recommended that developers construct, or pay all cost of initial construction of such bicycle facilities, and then turn over ownership and maintenance of facilities to the Village.

- Create a Village policy for "complete streets," i.e., that plans for construction of new roads, or reconstruction of existing roads, shall include appropriate accommodations for bicyclists and pedestrians. (This will be especially important for the development of new subdivisions along Hwy 20 and I-94 and the feasibility of creating a connection to the Hoods Creek Pathway (see below), as well as the construction/expansion of County Road V) Examples of language include: "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 …"[15] "Provide bicycle and pedestrian accommodations along and across all streets and roadways in conjunction with construction and reconstruction where feasible and appropriate in accordance with the U.S. Department of Transportation Design Guidance on Integrating Bicycling and Walking into Transportation Infrastructure."[16] Federal Highways Administration language can be found online at www.fhwa.dot.gov/environment/bikeped/design.htm.

- Encourage intergovernmental cooperation, through memoranda of understanding, to create connections for bicycles from the Village to adjacent municipalities.

- Create a Bicycle Task Force for the Village. A Bicycle Task Force is an effective way for local citizens to convey knowledge and guide policy makers on bicycle issues in the village. The members of the task force should be educated on bicycling in the local community. An official designation of the Task Force should be adopted by the Village Trustees with a set of operating by-laws and members should be elected to serve terms. An example of by-laws used in the Milwaukee Bicycle and Pedestrian Task are attached in the appendix. Examples of the duties of a task force are include: Evaluation of existing bicycle facilities and making recommendations on the future development of bicycle infrastructure; gathering input of bicyclists and conveying that input back to the Village government; assisting in programs to encourage the bicycling activity in the community; and in general advocating for bicyclists rights and needs.

- Encourage the Belle Urban transit system to install bike racks on buses. The ability to bring a bike on a bus extends the effective range of alternative transportation options and increase transit rider levels.

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[15] City of Chicago "Complete Streets" www.biketraffic.org/content.php?id=1024_0_16_0_C

[16] *City of Madison Long Range Transportation Plan*

5.4 Measures of Performance

Measures of performance determine measure progress made towards the goal of the *Village of Mount Pleasant Bicycle Master Plan 2030* to increase the levels, safety, and convenience of bicycling in the Village.

- Bicyclists' needs are accommodated in every local, county, or state roadway project undertaken in or adjacent to the Village by 2011.
- 10% of bike lane, bike route, and path mile goals for 2016 achieved annually, beginning in 2007.
- 70% of residential parcels within 0.5 mile of a bicycle facility by 2016.

Photo by Arthur Ross

Chapter 6 – Recommended Facility Plan

6.1 Recommended Bicycle Facilities

6.1.1 Bicycle Parking

Just as ordinances and development codes require off-street parking for motor vehicles, bicycle parking should be required of all new or expanded development. More than half (59%) of respondents to the public input survey responded that "more bicycle parking" would "greatly affect" (23%), or at least "moderately affect" (36%) their decision to bicycle more. Nearly half of respondents (48%) said that "no bicycle parking at destinations" discouraged them from bicycling.

Photo by Arthur Ross

The amount of bicycle parking provided can be determined as a percentage (e.g. 10%) of the amount of motor vehicle parking required, or other methods can be used. It is important that in all cases where any bicycle parking is required, no fewer than two bicycle parking spaces should be required. Bicycle parking requirements can be fulfilled by lockers, racks, or equivalent structures in or upon which a bicycle may be locked by the user. The design and location of bicycle parking racks can make them safe, secure, and convenient, or dangerous and useless for the purpose of parking bicycles.

The city of Madison has an excellent set of parking requirements, along with great information about the design and location of facilities to meet their requirements, all available online at www.ci.madison.wi.us/transp/z2811bik.pdf. Another good reference is the Association of Pedestrian and Bicycle Professionals *Bicycle Parking Guidelines*, available online at www.bfbc.org/issues/parking/apbp-bikeparking.pdf.

6.1.2 **On-Street Facilities**

An overwhelming 90% of respondents to the survey stated that "bicycle unfriendly roadways" "greatly discouraged" (72%) or "moderately discouraged" (18%) them from bicycling in the community. Similarly, 91% of respondents reported that "more on-street facilities (bike lanes, paved shoulders, wide travel lanes, etc.)" would "greatly affect" (74%) or "moderately affect" (17%) their decision to bicycle more. A table of recommended on-street facilities follows. Although the priority of construction is not precisely ranked, facilities that should have a higher priority of construction are grouped nearer the top, and facilities with lower priority are grouped nearer the bottom.

Photo by Arthur Ross

Recommended on-street bicycle facilities (bike lanes and signed bike routes):

Location	Length	Type	Purpose/Connection	Notes
Lathrop Rd - County KR to Taylor Dr	1.53 mi	Bike Lane	Connects residential areas to existing bike routes, existing bike trails, and retail.	Facility would be constructed along new road construction being done in the next two years
Old Sheridan Rd - Chickory Rd to Larson St	0.8 mi	Bike Route	Connects lake front residents to the village bike network and southeast village residents to Racine's lakefront pathway. Also directly connects to a park.	Critical connection through the case foundry property would be needed to connect to Racine.
County X / Taylor Dr - Wood Rd to Lathrop Rd	1.1 mi	Bike Route	Connects to retail and existing bike routes. Also link into the City of Racine.	Recommended in the SEWRPC 2015 Bike Ped plan.
Chickory Rd - Lathrop Rd - Sheridan Rd	1.18 mi	Bike Route	East-west connection to lake front and servicing a school.	Facility shared between the village and City of Racine.
Southwood Dr	0.77 mi	Bike Route	Connection to retail and park/recreation located in the City of Racine.	Facility shared between the village and City of Racine.
Village Center Dr - Kinzie Ave to Hwy 20	0.27 mi	Bike Lane	In-line connection for northern residential to the Hwy 20 retail.	Road width adequate, only needs striping.
Kinzie Ave - Emmertsen Rd to Village Center Dr	0.27 mi	Bike Lane	In-line connection for northern residential to the Hwy 20 retail.	Road width adequate, only needs striping.
Emmertsen Rd - Hwy 20 to Village boundary.	2.51 mi	Bike Lane	Connects northern residential areas to Hwy 20 retail.	Road width adequate, only needs striping.
Sunnyslope Dr - Mariner Dr to Hwy 20	0.23 mi	Bike Lane	In-line connection from Pike River Trail to Hwy 20 retail.	Road width adequate, only needs striping.
Mariner Dr - Pike River Trail to Sunnyslope Dr	0.37 mi	Bike Lane	In-line connection from Pike River Trail to Hwy 20 retail.	Road width adequate, only needs striping.
Stuart Rd - Old Spring St to Hwy 20	1.2 mi	Bike Lane	Connects northern residential areas to Hwy 20 retail, Smolenski Park, and future village hall.	Bike lane should go in with planned construction in 2006.
Willow Rd - Hwy 20 to 16th St	0.31 mi	Bike Lane	Extension of the Stuart Rd bike lane south to 16th street and intersecting with the Racine County Bike trail planned for construction.	Road width adequate, only needs striping.
County H - County C to Hwy 20	1.14 mi	Bike Route	Connects residential areas to Renaissance business park & Amtrak.	Already heavily used by cyclists.
County C - County V to Meadowbrook Blvd	5.46 mi	Bike Route	East-west connection across the northern part of the Village.	Recommended in the SEWRPC 2015 Bike Ped plan.

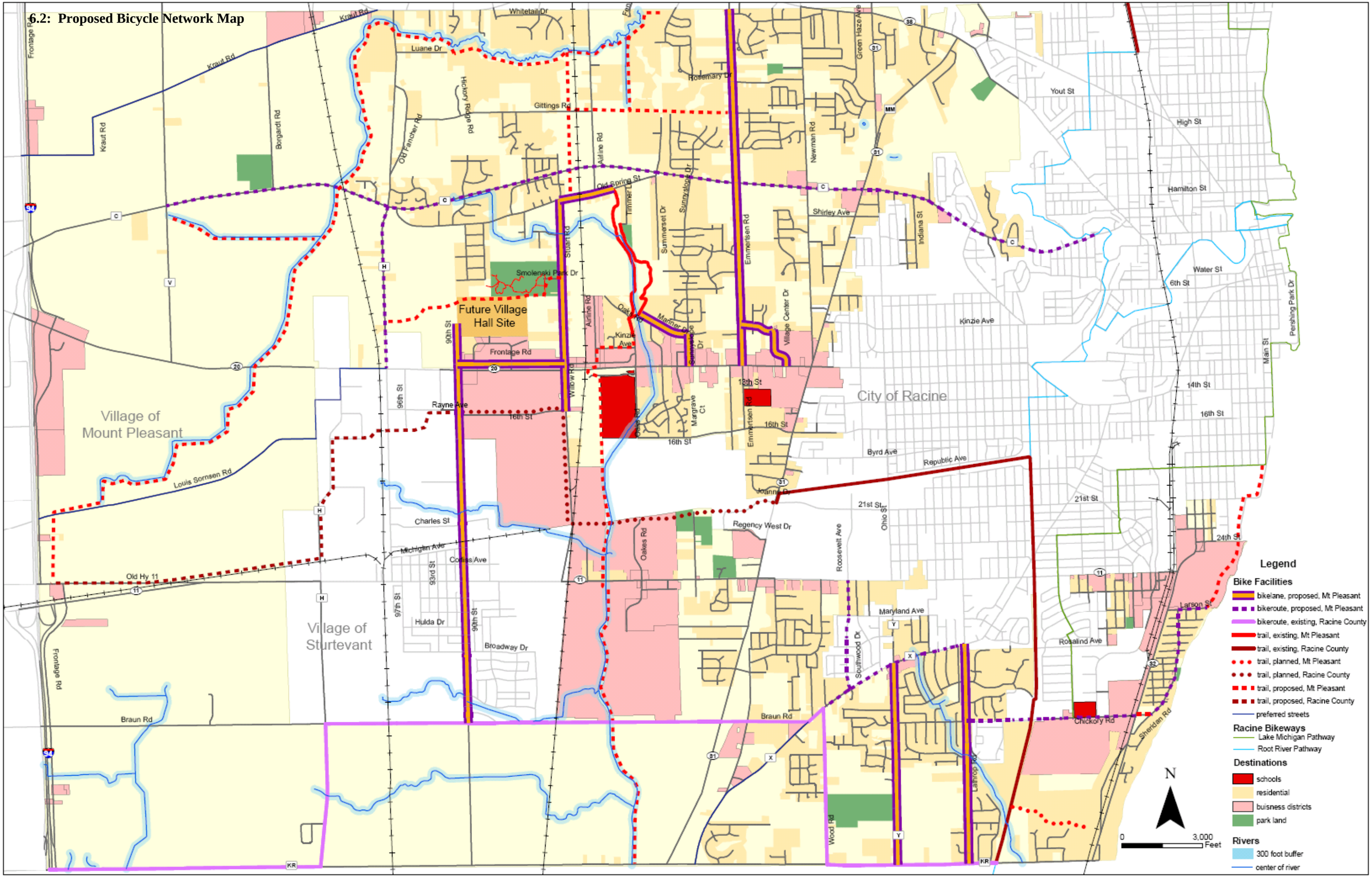
6.1.3 **Off-Street Facilities**

74% of respondents to the survey stated that "lack of greenway trails" "greatly discouraged" (43%) or "moderately discouraged" (31%) them from bicycling in the community. An overwhelming 87% of respondents reported that "more greenway trails" would "greatly affect" (64%) or "moderately affect" (23%) their decision to bicycle more. A table of recommended off-street facilities follows. Although the priority of construction is not precisely ranked, facilities that should have a higher priority of construction are grouped nearer the top, and facilities with lower priority are grouped nearer the bottom.

Recommended off-street facilities (paths or trails):

Location	Length	Type	Purpose/Connection	Notes
lake front Case property	1.87 mi	off street trail	connect to the City of Racine's Lake Front Pathway.	City of Racine will consider extending an off street trail to the CASE property
east terminus of Chickory Rd to Old Sheridan Rd	0.12 mi	off street trail	connect Chickory Rd bike route to Old Sheridan Rd bike route without having to travel on Hwy 32	Open space is available which currently has recreational use
Providence Point sub division	0.55 mi	off street trail	connect Providence Point neighborhood to Racine County's bike trail	Developer would build trail and then turn over ownership to the Village
Intersection of Hwy 31 & 21st street west to County Hwy H	4.8 mi	trail - on and off street	Extension of Racine County's bike trail to the west	east end of this trail section is currently being constructed by Racine County
County Hwy H west to I-94	1.93 mi	off street trail	Extension of Racine County's bike trail to the west	Racine County has no planned construction for this section
Intersection of Kinzie Ave & Oaks Rd south to County Hwy KR running along the Pike River	4.0 mi	off street trail	Extension of the Pike River Trail to the south	This trail should get constructed along with the restoration of the Pike River
Entire length of the Hoods Creek	8.1 mi	off street trail	Connection of I-94 development north east to residential areas of the Village	This trail should get constructed along with the restoration of the Hoods Creek
Hoods Creek south to Old Spring St running in the power line corridor	1.03 mi	off street trail	Connection of northern residential areas south the bike network.	American Transmission Company & various land developers own parcels in this corridor
Intersection of power line corridor and Gittings Rd east to Emmertsen Rd	1.15 mi	off street trail	East west connection for northern residential areas to Emmertsen Rd and the bike network	Trail should be constructed along with development of new sub divisions
Stuart Rd at Smolenski Park west to County Hwy H	1.33 mi	off street trail	Connection for northern residential areas to the west including the Amtrak station	Trail would run through Smolenski Park, the proposed Village Hall site, and proposed development adjacent to the County Hwy H.

6.2: Proposed Bicycle Network Map



6.3 Construction and Maintenance Costs

Wisconsin uses the "marginal cost" approach. In the marginal cost approach, the per-unit costs of bicycle improvements are those costs over and above the costs of the project without bicycle accommodation. Typically, right-of-way costs and the costs of relocating utilities are not included in these cost estimates for bicycle facilities. Following are some examples of costs to construct various bicycle facilities from various sources.

From WisDOT's Bicycle Transportation Plan:

Paved shoulder, 3 feet both sides; over gravel shoulder:	$20,000/mile
Paved shoulder, 5 feet both sides; over gravel shoulder:	$33,000/mile
Wide curb lane (one or two feet added, both sides):	$15-50,000/mile
Bike lane, five/six feet, both sides:	$25-90,000/mile
Bike path (final limestone surface):	$10,000/mile
Bike path (asphalt, 12 feet, landscaped etc):	$200,000/mile (minimum)

Where bicycle accommodations can be made simply by changing the pavement markings, the costs are obviously much lower. The following is a cost estimate, including labor costs for the area, for a bike lane striping project completed in Milwaukee, WI, in the summer of 2005. The entire project was completed with water borne paint that has a life expectancy of 1 year. From observation, however, much of the paint will last more than 1 year. In areas where Milwaukee's city buses constantly crossed the stripes, the paint did actually wear away in 1 year:

Pavement marking removal:	$0.95/linear foot, or $5016.00/mile
4" wide stripe:	$0.11/linear foot, or $580.08/mile
6" wide stripe:	$0.17/linear foot, or $897.60/mile
Bike symbol pavement marking:	$33.00/symbol
Arrow pavement marking:	$25.00/symbol

From another recent WisDOT project in Milwaukee:

4" stripe paint:	$0.20/linear foot
4" stripe Epoxy:	$0.37/linear foot
4" stripe preformed plastic:	$1.82/linear foot
6" stripe epoxy:	$1.30/linear foot
Bike lane arrows epoxy:	$54.99/symbol
Bike lane symbols epoxy:	$63.99/symbol
Bike lane words epoxy:	$54.53/symbol

Thermoplastic striping installed in the city of Chicago had the following costs:

4" stripe thermoplastic:	$.52/linear foot, or $2745.60/mile
6" stripe thermoplastic:	$.78/linear foot, or $4118.40/mile
8" stripe thermoplastic:	$1.04/linear foot, or $5491.20/mile
12" stripe thermoplastic:	$3.40/linear foot, or $17952.00/mile
Bike symbol:	$207/symbol
Arrow:	$109/symbol

For Signed Bike Routes, the AASHTO Guide recommends signing a shared roadway as a bike route every 1/4 mile (500m) and before and after every turn (both to mark the turn and to confirm that the rider has made the correct turn). Costs per sign found online vary from $100-200/sign, installed.

From the Virginia Department of Transportation, the (year 2000) costs for constructing the following bicycle facilities:

Bike path, 10 foot wide:	$92,000/mile
Bike lanes, 4 foot each side w/curb and gutter:	$270,300/mile
Bike lanes, 5 foot each side w/mountable curb:	$281,100/mile
4” stripe:	$0.60/linear foot, or $3168/mile

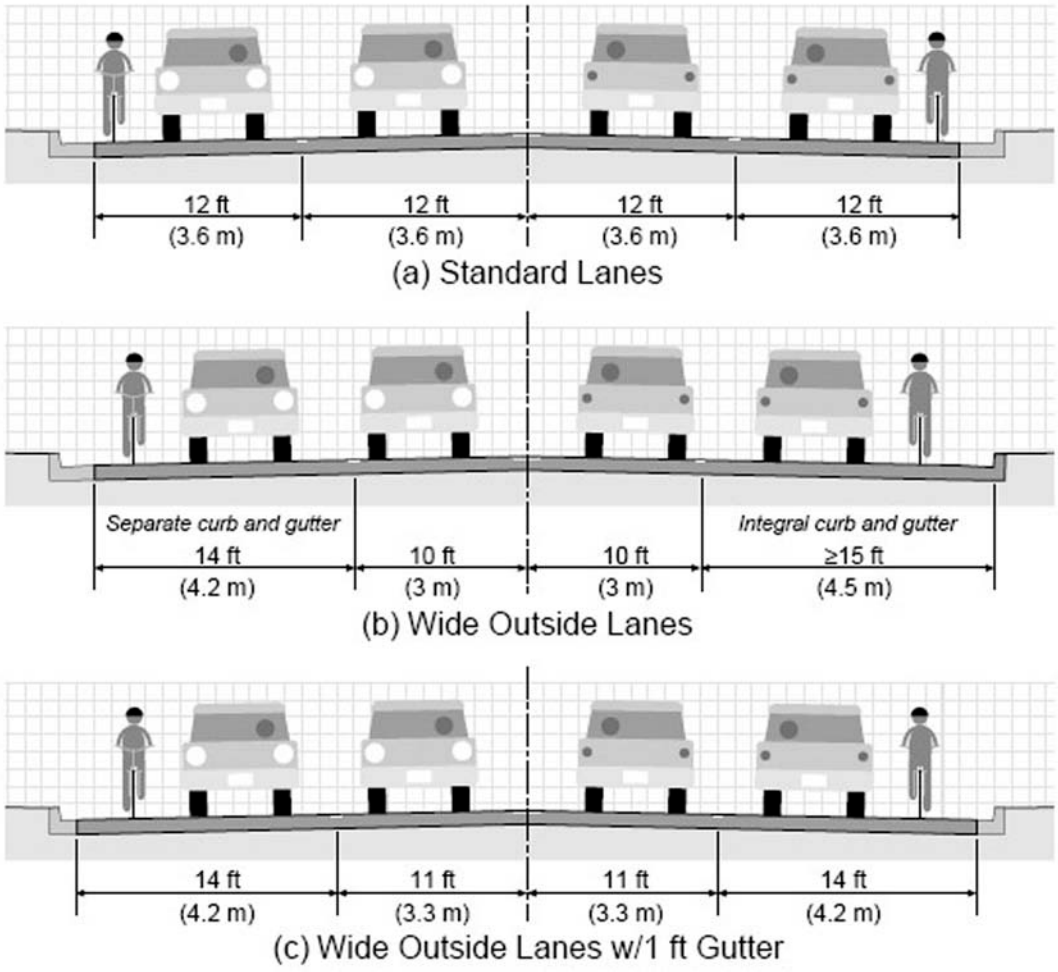
The Village should budget for engineering costs, including a contingency for cost overruns. Often the federal and state funding is awarded for a fixed amount, and will not cover cost overruns, so budgets should be made carefully. For example, an MPO elsewhere in the Midwest has, in the past, budgeted 20% of every project for engineering plus contingencies.

6.4 Design Guidelines and Signage

Photo by Arthur Ross

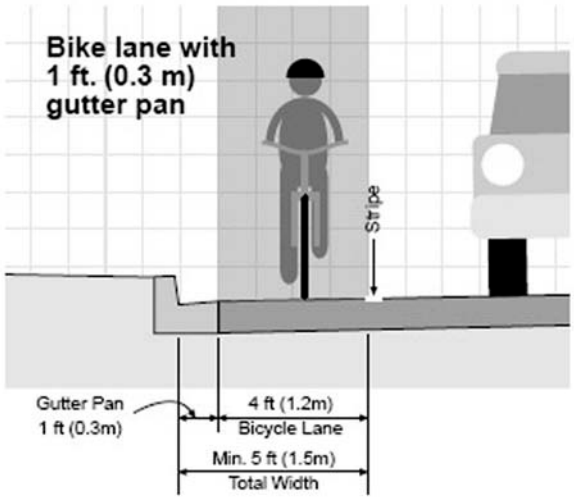
Although the *Guide for the Development of Bicycle Facilities* by the American Association of State Highway and Transportation Officials (AASHTO) is commonly accepted as the “best practices” for building bicycle facilities, the *Wisconsin Bicycle Facility Design Handbook*, by WisDOT, meets or exceeds all AASHTO guidelines, and, being specific to Wisconsin, tends not include alternative treatments that are less appropriate for cold climates. WisDOT’s *Wisconsin Bicycle Facility Design Handbook* should therefore be the standard used by the Village for the design and construction of bicycle facilities or bicycle accommodations on roadways. The *Wisconsin Bicycle Facility Design Handbook* can be found on the WisDOT website at: www.dot.wisconsin.gov/projects/state/docs/bike-facility.pdf

Several examples of appropriate designs for various bicycle facilities are shown here, but there are many more examples in the *Wisconsin Bicycle Facility Design Handbook*, and it should be the basis for any design. (Because off-street facilities are often used by pedestrians, skaters, and other users in addition to bicyclists, they are typically called "shared-use paths" in the *Wisconsin Bicycle Facility Design Handbook*, and sometimes called "multi-use paths elsewhere).

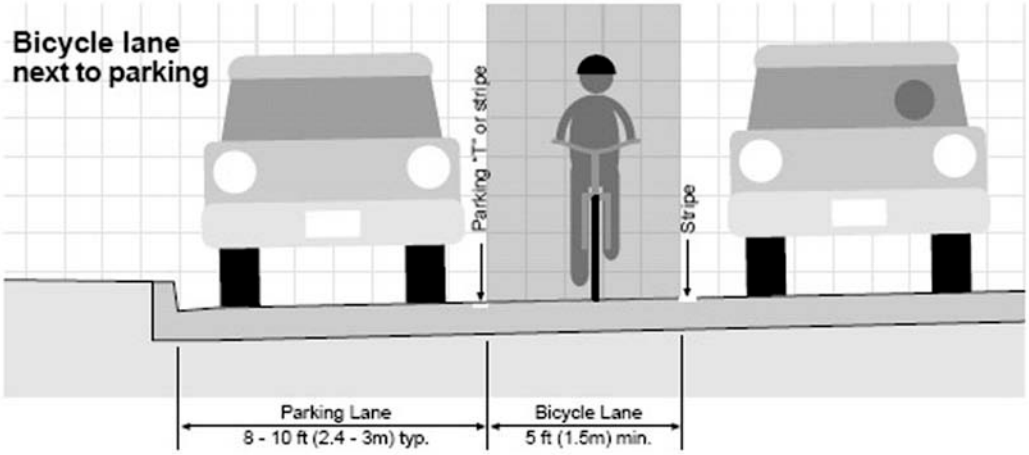


Shifting lane striping is one way to create a wider outside lane. With a concrete street with integral curb and gutter, there is no joint line that can possibly endanger bicyclists. If the curb and gutter are being replaced, extra space may be gained by reducing the gutter pan width to 1 ft. [17]

[17] Figure 2-30 from Page 2-16 of WisDOT's *Wisconsin Bicycle Facility Design Handbook*



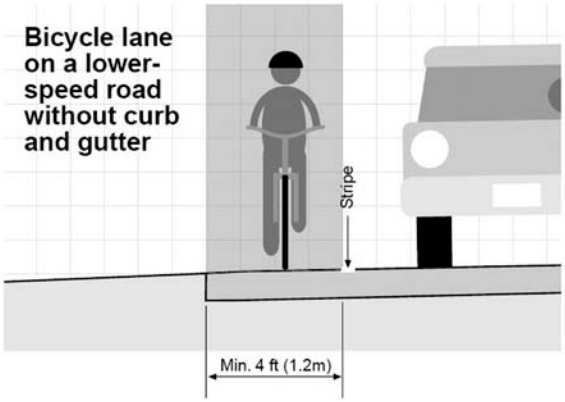
A Bicycle lane next to the curb on an asphalt roadway may be 4 ft. wide. However, this should not include the gutter pan.[18]



Typical dimensions for a bicycle lane next to a parking lane.[19]

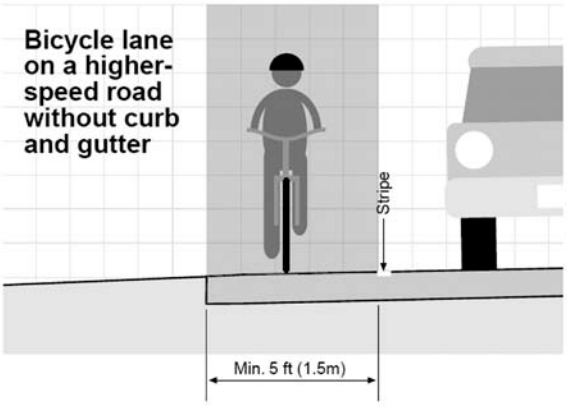
[18] Figure 3-12 from Page 3-9 of WisDOT's *Wisconsin Bicycle Facility Design Handbook*

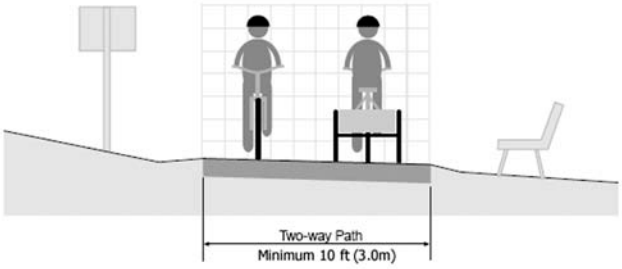
[19] Figure 3-16 from Page 3-11 of WisDOT's *Wisconsin Bicycle Facility Design Handbook*



A Bicycle lane adjacent to a stable gravel shoulder on a roadway without curb or gutter.[20]

On higher speed roadways, the marked bicycle lane should be at least 1.5m (5 ft) wide. [21]





The standard width of a shared-use path. In areas with greater potential uses, adding extra width may be appropriate. [22]

[20] Figure 3-21 from Page 3-13 of WisDOT's *Wisconsin Bicycle Facility Design Handbook*
[21] Figure 3-22 from Page 3-13 of WisDOT's *Wisconsin Bicycle Facility Design Handbook*
[22] Figure 4-8 from Page 4-7 of WisDOT's *Wisconsin Bicycle Facility Design Handbook*

6.5 Potential Funding Sources

Many different funding sources are available for accommodating bicycles through on-street or off-street facilities. In order to be eligible for funding under most federal aid programs, bicycle projects must be primarily for transportation purposes (the Recreational Trails Program is a notable exception). In general, federal guidelines consider any bicycle path or trail other than a closed loop trail as being principally for transportation and eligible for federal funding. State funding for the construction of on-street and off-street bicycle facilities is available through programs administered by the Wisconsin Department of Transportation (WisDOT), and includes funds provided directly by the state and "pass-through" funds provided by the Federal government as part of the Federal-aid Highway, Transit, and Highway Safety Programs.

6.5.1 Transportation-Based Funding Sources

The following is a summary of potential transportation-based funding sources for accommodating bicycles, from WisDOT:

Transportation Enhancement (TE) Program

Transportation enhancements (TE) are transportation-related activities that are designed to strengthen the cultural, aesthetic and environmental aspects of transportation systems. The transportation enhancements program provides for the implementation of a variety of non-traditional projects, with examples ranging from the restoration of historic transportation facilities, to bike and pedestrian facilities, to landscaping and scenic beautification, and to the mitigation of water pollution from highway runoff. Transportation enhancements are part of the Statewide Multi-modal Improvement Program (SMIP). Approved projects are reimbursable at 80% of the cost, and a local match of 20% is required. A majority of the requests and projects awarded in Wisconsin have been for bicycle facilities. Examples of bicycle projects include multiuse trails (in greenways, former rail trails, road rights-of-way, etc.), paved shoulders, bike lanes, bicycle route signage, bicycle parking, overpasses/underpasses/bridges, and sidewalks. Transportation enhancement activities must relate to surface transportation. Federal regulations restrict the use of funds on trails that allow motorized users, except snowmobiles. The federal Transportation Equity Act for the 21st Century (TEA 21) expanded the definition of transportation enhancements eligibility to specifically include the provision of safety and educational activities for pedestrians and bicyclists, which had not been clearly eligible under the Intermodal Surface Transportation Efficiency Act (ISTEA), the original federal legislation.
Contact: WisDOT SE Region Bicycle & Pedestrian Coordinator Jill Mrotek, 262-548-8794, jill.mrotek@dot.state.wi.us, or TE Program Manager John Duffe, 608-264-8723, john.duffe@dot.state.wi.us.

Surface Transportation Program – Discretionary

The Surface Transportation Program – Discretionary provides grants primarily to local governments, transit or transportation commissions, etc. in areas with a population of greater than 5,000 for projects that promote non-highway use or supplement existing transportation activities. Approved projects are reimbursable at 80% of the cost, and a local match of 20% is required. Priority is given to projects that promote alternatives to single-occupancy vehicle trips. Like TE, these funds are also part of the SMIP. Funding has gone evenly to transit and bicycle/pedestrian projects in past years. However, in the last two state budgets, no money has been appropriated for this program. Nearly every bicycle project eligible under the Transportation Enhancement program is also eligible for this program, unless the project will clearly not reduce single-occupant vehicle trips. Unlike the Transportation Enhancement program, bicycle and pedestrian planning is eligible.
Contact: WisDOT SE Region Bike & Ped Coordinator Jill Mrotek, 262-548-8794, jill.mrotek@dot.state.wi.us, or John Duffe, 608-264-8723 john.duffe@dot.state.wi.us.

Congestion Mitigation and Air Quality Program (CMAQ)

The primary purpose of the Congestion Mitigation and Air Quality (CMAQ) Improvement Program is to fund projects and programs that reduce travel and/or emissions in areas that have failed to meet air quality standards for ozone, carbon monoxide (CO), and small particulate matter. Bicycle and pedestrian projects are eligible for CMAQ if they reduce the number of vehicle trips and miles traveled. Approved projects are reimbursable at 80% of the cost, and a local match of 20% is required. Almost all bicycle projects eligible for Transportation Enhancements and STP-D are likely to be eligible (see examples above), but a higher burden of proof that the project will reduce air pollution will be required for CMAQ funding. CMAQ is not a statewide program; only bicycle projects in Milwaukee, Kenosha, Racine, Ozaukee, Waukesha, Washington, Sheboygan, Kewaunee, Manitowoc, and Door Counties are eligible.
Contact: WisDOT District 2: Anita Pusch (262-548-8789), or WisDOT Program Mgr John Duffe, 608-264-8723, john.duffe@dot.state.wi.us.

Hazard Elimination Program

Bicycle and pedestrian projects are now eligible for this program. This program focuses on projects intended for locations that should have a documented history of previous crashes.
Contact WisDOT SE Region Bike & Ped Coordinator Jill Mrotek, 262-548-8794, jill.mrotek@dot.state.wi.us, for more details before contacting the statewide coordinator, Chuck Thiede, 608-266-3341.

Surface Transportation Program - Urban

Metropolitan areas receive an allocation of funds annually. These funds can be used on a variety improvement projects including bicycle and pedestrian projects. Most of the Metropolitan Planning Organizations (MPOs) that administer this program have been using these funds to integrate bicycle and pedestrian projects as larger street reconstruction projects are taken on. SEWRPC is the MPO for Southeast Wisconsin. Contact Chris Hiebert of SEWRPC, 262-547-6722 x281, chiebert@sewrpc.org.

Safe Routes to School Program

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), the revised federal transportation act signed into law on August 10, 2005, provides funding to state departments of transportation to create and administer Safe Routes to School (SRTS) Programs. SRTS programs encourage children ages K-8 to walk and bike to school by creating safer walking and biking routes. SRTS Programs improve walking and biking travel options, promote healthier lifestyles in children at an early age and decrease auto-related emissions near schools. Contact WisDOT's SRTS Coordinator, Renee Callaway, 608-266-3973, or renee.callaway@dot.state.wi.us

Photo by Arthur Ross

Incidental Improvements

Bicycle and pedestrian projects are broadly eligible for funding from most of the major federal-aid programs. One of the most cost-effective ways of accommodating bicycle and pedestrian accommodations is to incorporate them as part of larger reconstruction, new construction and some repaving projects. Generally, the same source of funding can be used for the bicycle and pedestrian accommodation as is used for the larger highway improvement, if the bike or pedestrian accommodation is "incidental" in scope and cost to the overall project. Overall, most bicycle and pedestrian accommodations within the state are made as incidental improvements.

6.5.2 Recreation-Based Funding Sources

The following information for potential recreation-based funding sources was culled from the Wisconsin Department of Transportation website.

Funding for the Recreational Trails Program (RTP) is provided through federal gas excise taxes paid on fuel used by off-highway vehicles. Towns, villages, cities, counties, tribal governing bodies, school districts, state agencies, federal agencies and incorporated organizations are eligible to receive reimbursement for development and maintenance of recreational trails and trail-related facilities for both motorized and non-motorized recreational trail uses. Eligible sponsors may be reimbursed for up to 50 percent of the total project costs.
Eligible projects include:

- Maintenance and restoration of existing trails
- Development and rehabilitation of trailside and trailhead facilities and trail linkages
- Construction of new trails (with certain restrictions on Federal lands)
- Acquisition of easement or property for trails
- Projects are ranked in order of funding priority
- Rehabilitation of existing trails
- Trail maintenance
- Trail development
- Trail acquisition

Wisconsin Department of Natural Resources (DNR) regional staff review and rank eligible projects. Projects are then ranked in a statewide priority listing. The highest ranking projects will be funded to the extent that funds are available.

Following you will find general program information for programs that provide up to 50% funding assistance to acquire land or conservation easements and develop facilities for outdoor recreation purposes – the Stewardship Local Assistance Grant Programs, the Federal Land & Water Conservation Fund Program, and the Federal Recreation Trails Program. Any project application submitted will be considered for each of the following programs that it is eligible for.

Under the Knowles-Nelson Stewardship Local Assistance Grant Program, the following programs provide 50% funding assistance to acquire land and easements and develop trails, facilities, etc. for nature-based outdoor recreation purposes.

Aids for the Acquisition and Development of Local Parks (ADLP)

ADLP helps to buy land or easements and develop or renovate local park and recreation area facilities (e.g. trails, fishing access, and park support facilities). Applicants compete for funds on a regional basis.

Urban Green Space Grants (UGS)

UGS helps to buy land or easements in urban or urbanizing areas to preserve the scenic and ecological values of natural open spaces for outdoor recreation, including non-commercial gardening. Applicants compete for funds on a statewide basis.

Urban Rivers Grants (UR)

UR helps to buy land or easements on or adjacent to rivers flowing through urban or urbanizing areas to preserve or restore the scenic and environmental values of river ways for outdoor recreation. This includes shoreline enhancements such as development of public recreation facilities or habitat restoration that serve public recreation or resource conservation purposes. The Urban Rivers Program has a cap per applicant based on 20% of the total funds allocated to the program each fiscal year. Applicants compete for funds on a statewide basis.

Acquisition of Development Rights Grants (ADR)

ADR helps to buy development rights (easements) for the protection of natural, agricultural, or forestry values, that would enhance outdoor recreation. Applicants compete for funds on a statewide basis.

Land and Water Conservation Fund (LWCF)

LWCF provides 50% funding assistance for the acquisition and development of public outdoor recreation areas and facilities. Similar to the Stewardship ADLP program above except that active outdoor recreation facilities are eligible for grant assistance and school districts may be eligible project sponsors. Applicants compete for funds on a statewide basis.

Recreational Trails Act (RTA)

RTA provides 50% funding assistance for the development and maintenance of recreational trails and trail related facilities for both motorized and non-motorized recreational trail uses. Applicants compete for funds on a statewide basis.

These programs are administered by the Wisconsin Department of Natural Resources. The Stewardship Advisory Council, with representatives from local units of government and nonprofit conservation organizations (NCOs), advises the department on matters relating to the Stewardship program. Similarly the State Trails Council advises the department on matters relating to the Recreational Trails Program. The National Park Service plays the major role in working with the Department on the Land & Water Conservation Fund Program and the Department of Transportation plays a role with the Recreational Trails Program. Key components of the programs are cooperation and partnership between the Wisconsin Department of Natural Resources, the federal government, local units of government, and NCOs. The programs recognize the important role each partner plays in meeting the conservation and recreation needs of Wisconsin residents and is designed to assist groups working to meet those needs. The application deadline for all of the programs is May 1 each year. Complete applications should be submitted to the regional Community Services Specialist (CSS) on, or be postmarked by, May 1.

6.5.3 Other potential funding sources

In addition to the funds administered by the state, funding for public bicycle and pedestrian projects can come from federal highway traffic safety programs, federal traffic safety (section 402) funds, the County (Racine County Department of Public Works), impact fees required of new development or redevelopment, public/private partnerships, or wholly from the private sector.

Chapter 7 – Conclusion

7.1 Priority of Construction

Priority of construction is implicit in the ranking of on-street and off-street facilities, but it should be noted that bicycle facilities are always less costly to build in conjunction (and concurrently) with road or other construction projects. So it is always advisable to include segments of planned or even proposed bicycle facilities whenever plans for bicycle facilities coincide with construction or reconstruction projects for roads.

7.2 Concluding Vision

Safe and convenient accommodations for bicyclists can provide transportation bicyclists with access to goods and services, just as the surface transportation network has provided that for motorists. Increasing levels of bicycling can decrease the need for roadway expansion, travel times for all road users, the community's health care costs resulting from sedentary lifestyles, and the negative environmental consequences of motor vehicle use.

Supporting an expanded bicycling network can have myriad positive effects, including social, environmental, health, and economic benefits in addition to the obvious transportation benefits

Photo by Arthur Ross

.

Appendices

A: Resources

B: Public Comments

C: Estimated Cost of Bicycle Map

D: Pavement Marking Cost Estimates

E: Bicycle Task Force By-Laws Example

F: Summary of Wisconsin Bicycle Laws

Photo provided by WI Department of Tourism

Appendix A: Resources

American Association of State Highway and Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities*, 1999.

Bicycle Federation of Wisconsin, including the BTWW toolbox: www.bfw.org.

Bicycle Parking Guidelines, Association of Pedestrian and Bicycle Professionals, www.bfbc.org/issues/parking/apbp-bikeparking.pdf

Bicycle Parking In Madison, www.ci.madison.wi.us/transp/z2811bik.pdf

Bicycle Transportation, John Forestor, 2nd edition, 1994.

Bicycle Transportation Plan for the Madison Urban Area and Dane County, WI, Madison Area Metropolitan Planning Organization, September 2000.

City of Chicago, *Bike 2015 Plan*, Mayor's Bicycle Advisory Council, January 2006. www.bike2015plan.org

Economic Impact of Bicycling in Wisconsin, Prepared for the Governor's Bicycle Coordinating Council by the Bicycle Federation of Wisconsin with the Wisconsin Department of Transportation, spring 2006.

Effective Cycling, John Forestor, 6th edition, 1993.

Institute of Transportation Engineers (ITE) Traffic Calming Library www.ite.org/traffic.

Kenosha Racine Bike Club, www.krbikeclub.com, krbikeclub@hotmail.com

Manual on Uniform Traffic Control Devices (FHWA) mutcd.fhwa.dot.gov/.

Milwaukee by Bike: Bicycle Publicity Plan, Bicycle Federation of Wisconsin, 2003.

Milwaukee Off-Street Bikeway Study: Milwaukee's Best Opportunities for Trail Expansion, Bicycle Federation of Wisconsin.

Mount Pleasant I-94 Area Study by Lakota, Metro Transportation, and SB Friedman. www.thelakotagroup.com/mtpleasant.htm

Mount Pleasant Year 2030 Master Plan for Land Use and Transportation

National Complete Streets Coalition, www.completestreets.org.

Pathways to Prosperity - The Economic Impact of Investment in Bicycle Facilities: A Case Study (NCDOT)
www.ncdot.org/transit/bicycle/safety/safety_economicimpact.html

Predicting Demand for Non-motorized Travel (Pedestrian and Bicycle Information Center) www.bicyclinginfo.org/pp/predicting/index.htm

Safe Routes to School (National Center for Safe Routes to School clearinghouse)
www.saferoutesinfo.org/index.cfm

Safe Routes to School (USDOT FHWA) http://safety.fhwa.dot.gov/saferoutes/

Safe Routes to School (WisDOT), including the SRTW toolbox:
www.dot.wisconsin.gov/localgov/aid/saferoutes.htm

SEWRPC *KRM: A Plan for the Kenosha-Racine-Milwaukee Commuter Link*,
www.sewrpc.org/KRMonline/background.shtm.

SEWRPC *Regional Bicycle and Pedestrian System 2020 Plan for SE WI*
www.sewrpc.org/transportation/amendmentbikeped.asp

SEWRPC *Regional [I-94] Freeway System Reconstruction Plan for SE WI*
www.sewrpc.org/freewaystudy

SEWRPC *Regional Transportation System Plan for Southeastern Wisconsin: 2035* (SEWRPC Planning Report No. 49)
www.sewrpc.org/regionalplans/regionaltransysplan.shtm

StreetShare (Motorist, Bicyclist, and Pedestrian Education website for Wisconsin)
www.streetshare.org

"Transportation Characteristics of School Children," Report No. 4, Nationwide Personal Transportation Study, Federal Highway Administration, Washington, DC, July 1972.

Wisconsin Bicycle Facility Design Handbook (WisDOT) January 2004
www.dot.state.wi.us/projects/bikes.htm

Wisconsin Bicycle Laws (in plain language, not the State Statutes verbatim)
www.dot.state.wi.us/safety/vehicle/bicycle/rules.htm

Wisconsin Department of Transportation - Bureau of Transportation Safety, Bicycle & Pedestrian Safety Program Manager, Larry.Corsi@dot.state.wi.us, 608-267-3154.

Wisconsin Department of Transportation Bicycle & Pedestrian Statewide Coordinator, Thomas.Huber@dot.state.wi.us, 608-267-7757.

Wisconsin Department of Transportation Bicycle & Pedestrian Southeast Region Coordinator, Jill Mrotek, 262-548-8794, jill.mrotek@dot.state.wi.us.

Wisconsin Department of Transportation, Transportation Enhancements Program Manager John Duffe, 608-264-8723, john.duffe@dot.state.wi.us.

Wisconsin Bicycle Planning Guidance: Guidelines for MPOs & Communities in Planning Bicycle Facilities www.dot.state.wi.us/projects/bikes.htm

Wisconsin Bicycle Transportation Plan 2020
www.dot.state.wi.us/projects/state/bike2020.htm

Wisconsin Bicycle Travel Information (including the 1999 bicycle transportation survey)
www.dot.state.wi.us/travel/bike-foot/bike-index.htm

Wisconsin DOT Major Sources of Funding for Bicycle & Pedestrian Projects
dot.wi.gov/localgov/docs/potential-funding.pdf

Wisconsin State Bicycle Maps (by County)
www.dot.state.wi.us/travel/bike-foot/countymaps.htm

Appendix B: Public Comment

Public Comment was solicited from the KR Bike Club at their September 2006 meeting, as well as from attendees of the Public Information meeting November 6, 2006. Those comments are summarized below.

Notes on comments made verbally at the **KR Bike Club** meeting September 15, 2006:

- A suggestion was made to make a signed bike route connection from Taylor Ave north to Hwy 11 running along Lakeview Dr, Greenbrook Rd, and Wood Rd because the intersection of Wood Rd and Hwy 11 is controlled by a stoplight, making it easier for cyclists to cross Hwy 11. This route would be in conflict with the route identified by SEWRPC running along Southwood Dr located about 3 blocks to the east, although the intersection of Southwood Dr and Hwy 11 is not controlled by a stop light.
- Even though Braun Rd is an existing signed bike route, club members hesitate to use it because of the pavement condition is currently very poor.
- SEWRPC has identified making portions of Taylor Dr a signed bike route. Club members pointed out that for some portions there are no shoulders and other portions with a 2 foot paved shoulder have parking allowed which poses conflict.
- Some concern has been brought up about making County Hwy C a signed bike route because of high traffic volume and speed limits. Club members stated that they use this road quite often and have no issues at all when riding on it.
- Club members would also like to see conditions improved on County Hwy V. As road is built and extended to the south into the new interstate development it should contain some kind of bike facility especially if it's leading to a retail district. Also if the county ever re-paves the portion running north a paved shoulder should be encouraged by the village.

Notes on comments made verbally at **Public Information Meeting** November 6, 2006:

- Louis Sorensen Rd, Kraut Rd, and County Hwy X (south of Braun Rd) were added as "preferred streets" (or "urban escape routes) because local cyclists explained that, despite lacking specific facilities for bicyclists, these roads were safe routes to ride out to the more rural areas of the county.
- The Meachem Rd bike lane was added after confirmation from local cyclists that the road currently serves as a route to the UW-Parkside campus. Because of the excessively wide travel lanes on Meachem Rd, bike lanes there could serve as traffic calming, as well as providing a designated spot on the road for cyclists.
- The alignment of Racine County's bike trail, behind Cozy Acres parks was corrected.
- The signed bike route on County Hwy C was extended east to connect the Root River Pathway.

Additionally, a survey was available online at surveymonkey.com. A written version of the same survey was also distributed with the October issue of the Mt Pleasant newsletter, insuring that every household in Mount Pleasant received a survey. There were no open ended questions in either the online or the written survey, however, many paper surveys were returned with comments made in the margins. They are included below in their entirety, followed by BFW staff notes on comments made verbally at the September 2006 KR Bike Club meeting, and the November 6 Public Information Meeting at the Village Hall.

Comments made in the margins of paper survey responses:

- I can't believe the village improved Chicory Rd without a bike or pedestrian lane. Please consider a bike/pedestrian lane on both sides of Lathrop Ave from Taylor Ave. to KR when it is improved.
- I would but what do you do with your bike once you get there?
- The bike path from old spring to Dairy Queen is very nice but it isn't easy to get on from our house.
- It is important for people to be able to walk around and bike in their neighborhood. Lathrop, KR, and Chicory needs bike/walk lanes. I am glad to see the village paying attention to the safety of its citizens.
- Person in charge of road maintenance should ride their bike to see what the conditions are for where bikes ride.
- I would bike more if the village was more bike friendly
- While a bike plan is a good idea, I think there are far more important places to spend money. Realistically, I think most people would only ride bikes about 5-6 months out of the year.
- SCRAP THIS PLAN. NO MORE TAXES. PASS PERSONAL PROTECTION ACT FOR SELF DEFENSE.
- Don't wreck parks like Racine did by putting paved bike trails thru middle of park. Use city right of ways of edges of parks instead. I bike a lot up north but have no desire to ride designated bike baths around here, not enough scenery/nature/solitude to interest me.
- I found it remarkable that when roads are re-surfaced no bike lane/walking lane is added. Example: Chicory Rd which you need to use to access the bike path & Jones school. What poor planning.
- Lathrop does not need a bicycle lane.
- I think it is so wonderful that you are working on this. A lot of people I know would love to commute but are afraid.
- So many children do not know which side of the road to ride on.
- Thank you for this survey. As a family of cyclists we would love to see more paved shoulders. Much safer for all.

- The police dept needs to enforce the basic traffic laws. Currently biking is dangerous.
- We need bike/pedestrian lanes on Lathrop between Taylor and KR
- The bike trail by Pike creek is great.
- Hwy 20 is suicidal – I use the sidewalk. The cars use all 3 lanes and you are close to being hit when on the road. There is no room for a bike on it. No one ever walks on the sidewalk. Convert it to bike/pedestrian path.
- Southwood Dr – Bad traffic.
- Not comfortable with gravel shoulders.
- For those who want to bike, it should be an option. Right now it is not a safe option.
- Wish there were paths along the busier streets – Hwys C, H
- It would be a great improvement to have bicycle/walking lanes on the main roads. Gravel is not safe to ride in.
- Hard to reach the C bike lanes without risking you life on spring street.
- Safety has to be considered on greenway trails.
- Extend off road trail to Hwy 30 from old spring st. Biking is our family's #1 sport.
- Dangerous for cars & bike riders without an adequate shoulder or bike lane.
- I usually pack up the bikes in my van and go to Kenosha to ride on their bike trails. A major inconvenience but at least I don't have to ride on Hwy 31.
- On the road license fees should be similar to autos.
- We need street lights on Prairie Drive.
- In our neighborhood we need to plan for pedestrians and bikers. In the past we've been more concerned about cars and traffic flow. We need to balance the needs for all 3.
- Thanks for the great bike trail along Pike's creek.
- No place to lock bike up
- I feel I must respond in writing. We have 3 people in our household who would ride several times per week if we felt roadways were safe (there are no compatible trails)
- Biking is too dangerous on city streets the way they are now. I used to ride everywhere on my bike. Now I don't own one. We need community events taking place on our trails. Also more bike give aways, bike rentals, tours.
- I ride only during the spring/summer/fall seasons, we need safer riding conditions.
- A bike lane and speed bumps in all paths would be greatly appreciated, as well as bike lanes on roads like Taylor Ave, Wood Rd, Braun Rd.
- I think the bike issues are a quality of life issue. We are impressed with things we've seen around Rochester and Minneapolis, MN areas. Also the bike paths around Dousman are terrific. This survey represents that we all agree it would be important to improve our quality of life.

- Not paying for bike trails
- My husband and I are both Senior Citizens enjoying riding our bikes on Newmon Rd because of the wide travel lane, also Emmertson Rd.
- The lack of bike lanes/shoulders on KR, Wood Road, Braun Road, and Lathrop Ave make riding on these roads dangerous.
- The current bike trail map shows a bike trail from 21st to Hwy 31 to Sturtevant but the trail doesn't exist. Stuart Rd between Hwy 20 and Spring St. too narrow no shoulder.
- We have adequate trails and roads for bicycles.
- Money spent for bike roadways could be used for Parks-street repair. We see very few bikers out.
- Extremely important , Mount Pleasant needs to better enforce traffic laws – red lights, yellow lights, speed limits especially hwy 31. Drivers using cell phones should be ticketed.
- Aside from biking, sidewalks would have been nice – too late now.
- Wal-Mart has done a good job every year with bike clinic, needs more advertising. Rail road bridge East of Stuart over Hwy 11, very dangerous for bikes. Should never require bike license, only registration if you want for theft purposes.
- Biking has become a form of family entertainment. Good bike paths & signs would draw visitors to our community. A bridge or path joining the two paths at the pike river walk would be great.
- Why send this out? 98% of the people don't even have a bike. One would need to be insane to ever ride one, I quit my motorcycle at 75 – no respect
- Sidewalks are desperately needed on Spring St east of Hwy 31 and Hwy 31 by the mall – there are worn dir paths which show how highly used that area is.
- When city, state, or county roads are built or repaved, a bike lane should be provided, even a paved shoulder would be nice.
- I do not feel that the tax payers should have to pay for all this, it's bad enough you people keep taking more money from us the tax payers. I know you people don't care and you think it's funny, but we're not rich and I don't get a pay raise every year like you do when you raise taxes.

Appendix C: Estimated Cost of Bicycle Map

	hours	low rate estimate	high rate estimate	low cost
Creation of different layouts and symbology to be presented to the Village for choice and approval	20	$40/hr	$120/hr	$800
Collect public input to define map needs and content	20	$40/hr	$120/hr	$800
Paper map design and cartography	100	$40/hr	$120/hr	$4,000
Digital Map Creation	8	$40/hr	$120/hr	$320
Coordinate Printing and Delivery	8	$40/hr	$120/hr	$320
Total	156			**$6,240**

Appendix D: Pavement Marking Cost Estimates

Material	Est. Life	$/linear ft 6" line	Cost/ft/yr	WisDOT Approved	Notes
Waterborne Paint	.5	0.17	0.34	Yes	• Outside line wears quickly • Our estimate from Crowley was $0.17/ft, but this included field marking. The cost of just paint could be less.
Epoxy	3	0.27	0.9*	Yes	• Often flakes off concrete with poor prep • Can't be used on asphalt
Methyl Methacrylate	3	1.35	0.45*	No	• Not widely used in US • Fumes cause complaints in area for the day and day after installation
Polyester	5	0.13	0.03*	No	• Not widely used in US • Requires HAZMAT license to apply
Polyurea	3	0.9	0.3	No	• Material used in Chicago school safety program • Material deteriorated quickly according to Chicago report • Requires special equipment to apply • 3M only known manufacturer
Preformed Thermoplastic	6	1.59	0.27	Yes	• Currently used for bike symbols in Chicago • Does not work well for lines • Premark best product • Manufacturer recommends pre-sealer for older asphalt • Can be applied in all temperature ranges
Thermoplastic	10	0.68	0.07	Yes	• Not practical for detailed symbol marking • Ideal for lines • Chicago does not use pressure washing or pre-sealer, just sweeping. • Manufacturer estimated life is 5-6 years, but Chicago typically gets 10-11 years on high traffic streets.
Preformed Plastic Tape	3.75	2.34	0.62	Yes	• Formerly used for bike symbols in Chicago. • 3M is only known vendor. • Installation is time consuming and weather dependent. • If not installed properly, the product is very likely to fail.

Estimate is national figure from studies some years old. Costs have likely doubled.

Source: Compiled by City of Milwaukee Bicycle & Pedestrian Coordinator:
Dave Schlabowske, dschla@mpw.net

Appendix E: Example of Bicycle Task Force By-Laws

BY-LAWS OF THE
CITY OF MILWAUKEE BICYCLE AND PEDESTRIAN TASK FORCE

Whereas, this committee, having been officially established in May 1993 by the Mayor and Common Council of the City of Milwaukee, and having been officially designated as the City of Milwaukee Bicycle and Pedestrian Task Force, is desirous of operating in an organized manner; now, therefore, be it

Resolved, that the following By-Laws be adopted and by the passage of this resolution by majority vote are declared to constitute the official By-Laws of the City of Milwaukee Bicycle and Pedestrian Task Force.

Article I. Purpose

The Task Force is charged with recommending to policy makers ways to make Milwaukee a more bicycle and pedestrian-friendly community. This is accomplished by serving as the formal means through which active citizen participation is provided to advise policy makers on such issues as:

1. The development of an integrated bicycle route system for commuter and recreational use.

2. Connections with existing and proposed off-road bicycle and pedestrian trails.

3. Provisions for bicycle amenities such as bike lanes and bike racks in the public rights of way.

4. Promoting pedestrian and bicyclist rights.

5. Provisions for pedestrian facilities such as sidewalks, crosswalks, traffic signals, benches, and other sidewalk amenities.

6. Other bicycle or pedestrian issues that the Task Force deems appropriate.

This is to be accomplished by the Task Force in cooperation with appropriate municipal, county and state agencies and planning organizations.

The functions of the Task Force will include the use of the skills, knowledge and experience of its members and the organizations and groups they represent to assist and advise the local government with respect to the purposes of this Task Force.

Article II. Membership

The membership of this Task Force shall be in accord with Resolution File Number 930071 and Resolution File Number 010472 and shall consist of eleven members appointed by the Mayor of the City of Milwaukee and confirmed by the Common Council for three-year terms. One member shall be a safety professional involved with City concerns, such as a member of the Police Department, Fire Department, Health Department or Safety Commission, one shall represent the Department of Public Works, and one shall represent the Department of City Development.

Article III. Voting

Each member of the Task Force shall be entitled to one vote on all matters brought to a vote during a regular or called meeting in which said member is present, providing a quorum is present at the time as specified in Article IV.

Article IV. Quorum

A majority of the membership of the Task Force officially holding appointments from the appointing authority shall constitute a quorum, and a quorum shall be necessary for the transaction of any official business by the Task Force.

Article V. Election of Officers

Section 1. The officers of the Task Force shall be a Chair and Vice-Chair, and shall be selected in accordance with Section 2. of this Article.

Section 2. Officers shall be nominated from the floor and elected at the Annual Meeting, pursuant to Article IV, and as specified in Article VIII.

Section 3. All elected officers shall serve for a term of one year or until their successors have been elected. Officers are eligible to succeed themselves.

Article VI. Duties of Officers

Section 1. The Chair shall preside at all meetings of the Task Force and is eligible to vote on all matters coming before the Task Force. The Chair shall appoint all subcommittees. Meetings can be scheduled by the Chair or by the agreement of three members of the Task Force with proper and due notice pursuant to Article VII to the other members of the Task Force.

The Chair shall have the responsibility for the meeting agendas and for conducting all meetings as provided by these by-laws.

Section 2. The Vice-Chair shall perform all duties and assume all the responsibilities of the Chair in his or her absence.

Section 3. City of Milwaukee staff shall keep accurate records on all proceedings of the Task Force and shall be responsible for issuing all necessary meeting notices, copies of agendas, and special informational materials.

Article VII. Meeting Dates

The Bicycle and Pedestrian Task Force shall by motion establish a regular meeting schedule. Sufficient notice as agreed upon by the members shall be given of all meetings. Agenda, minutes and special informational materials shall accompany meeting notices.

Article VIII. Annual Meeting

An annual meeting of the Task Force shall be held at the last regularly scheduled meeting in each calendar year. During this annual meeting the following activities shall take place:

A. A summation of progress made and activities accomplished as required by Chapter 320-1 of the City of Milwaukee Ordinances.

B. Goals formulated for the coming year.

C. Officers for the coming year shall be elected.

Article IX. Amendments to By-Laws

Section 1. The By-Laws of the Task Force, as officially adopted, shall be amended only in accordance with the following procedure:

A. All members holding official appointments to the Task Force shall be furnished a copy of the proposed changes and/or amendments to the By-Laws at least thirty (30) days prior to any official vote on said proposed changes and/or amendments.

B. Any changes and/or amendments to the By-Laws of the Task Force shall be read at the meeting prior to presenting the change to the Task Force for a vote, said meeting to be a regular meeting held in accordance with the provisions of the By-Laws presently in effect.

C. A simple majority of the total membership of the Task Force shall be deemed sufficient to adopt any changes and/or amendments to the By-Laws, providing that other provisions of this Article have been complied with.

The By-Laws, as set forth herein, are hereby adopted by the City of Milwaukee Bicycle and Pedestrian Task Force to be the official By-Laws of the City of Milwaukee Bicycle and Pedestrian Task Force pursuant to a unanimous vote of the members present.

Done this _____ (month & date), _____ (year).

By: _____
Chair

_____
Member

_____
Member

_____
Member

_____
Member

_____
Member

_____
Member

_____
Member

_____
Member

_____
Member

_____
Member

Appendix F: Summary of Wisconsin Bicycle Laws,

from http://www.dot.state.wi.us/safety/vehicle/bicycle/rules.htm.

Rules for riding bicycles on the road

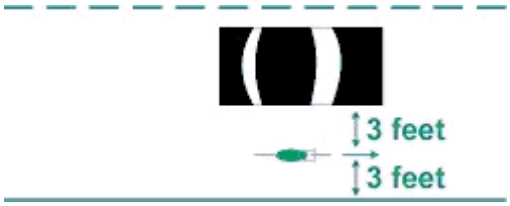
General rules

- **Bicycles are vehicles. They belong on the road.** [emphasis added]
- Ride at least three feet from the curb or parked vehicles or debris in curb area and in a straight line. Don't swerve in and out around parked vehicles.
- Always ride in the same direction as traffic.
- Sidewalk riding for bicyclists past the learning stage and being closely supervised by adults can be more dangerous than on the road, obeying traffic laws. It is also illegal unless the community has passed an ordinance specifically permitting sidewalk riding. This can be age-restricted, location-restricted or based on the type of property abutting the sidewalk.
- Obey all traffic laws.
- Be predictable! Let other users know where you intend to go and maintain an understood course.

Narrow lanes

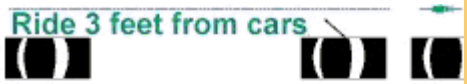
- Ride in the center of the lane.
- Keep at least three feet between yourself and passing or parked traffic.

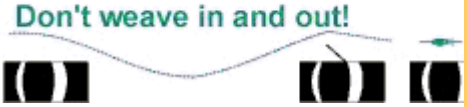
Wide lanes



- Ride just to the right of the actual traffic line, not alongside the curb.
- Keep at least three feet between yourself and the curb or from parked vehicles. Motorists should be passing you with at least 3 feet of clearance.

Don't get the door prize!





- Ride in a straight line three feet out from parked cars. You'll avoid car doors that open in front of you and you'll be more visible to other drivers.
- Don't pull into the space between parked cars. Ride just to the right of the actual traffic line, not alongside the curb.
- Ride straight, three feet from parked cars - don't get "doored"

Take the lane

You will fare better with other road users if you function like a legal vehicle operator, which you are.

- **Right turning motorists** can be a problem, but taking the lane or more of the right portion of the wide curb lane can prevent this. Take an adult bicycling course to learn skills and develop confidence in traffic.
- **Left turning motorists** are the cause of most adult bicyclists' crashes. Motorists claim not to see the cyclist who is traveling in a straight path in the opposite direction.

Bicyclists, when making your own left turn look over your left shoulder for traffic, signal your left turn and change lanes smoothly, so you are to the left side or center of the through lane by the time you reach the intersection. If a left turn lane is present, make a lane change to center of that lane. Do not move to left of that lane as left-turning motorists may cut you off.

- Do not wait until you reach the crosswalk, then stop and try to ride from a stop across other traffic. If you need to cross as a pedestrian, leave the travel lanes, then get into the crosswalk, walking or riding your bicycle like a pedestrian travels, not fast, and with pedestrian signals.

Lane positioning can be especially important in approaching a downhill intersection. Moving to the center makes you more visible to intersecting and left turning motorists in opposing lanes.

- Going downhill, your speed is likely to be closer to traffic speeds or posted speed limits. Hugging the curb when there are visual barriers increases your chance to be struck by a bigger vehicle, or of hitting a pedestrian or sidewalk riding bicyclist.
- Take the lane, be seen and see other traffic better if you are close to traffic speeds

How to ride

Wear bright colors during the day and retro-reflective items at night along with headlight and taillight to increase your visibility to other road users.

- Wear a bicycle helmet on every ride to reduce your chance of head injury in event of a fall or crash. Most serious injuries from a fall or crash are to the head and most frequently, the forehead, so wear helmet level with the ground, just above the eyebrows.

Be aware of changing road surfaces, new construction or unusual barriers on the roadway, distracters for both you and other vehicle operators.

- Leaves can be slippery in the early morning and are a hazard even when slightly damp. Distractions such as dogs, wild animals and even humans can draw attention from the roadway and lead to a crash. Expect them.

Motorist reminders

- **Bicycles are vehicles. They belong on the road.** [emphasis added]
- Cyclists need room to get around potholes, sewer grates and other obstructions.
- Leave at least three feet when passing bicycles, more room at higher speeds.
- Change lanes to pass any bicycle traveling in a narrow lane.
- Train yourself to scan for fast moving (it's hard to tell speed) bicycles and motorcycles in the opposing lane to you when turning left, and scan sidewalks and crosswalks for pedestrians and bicyclists using the sidewalk and crosswalk as a pedestrian. Always scan to your right side sidewalk before you leave a stop light or stop sign. And to the left and right side sidewalks when on a one-way street.

From: http://www.bfw.org/projects/bicycle_laws.php

Wisconsin State Bicycle Laws

[numbers in brackets refer to State Statutes]

A. Vehicular Status
· The bicycle is defined as a vehicle. [340.01(5)]
· The operator of a vehicle is granted the same rights and subject to the same duties as the driver of any other vehicle. [346.02(4)(a)]

B. Lane Positioning
· Always ride on the right, in the same direction as other traffic. [346.80(2)(a)]
· Ride as far to the right as is practicable (not as far right as possible). [346.80(2)(a)]
· Practicable generally means safe and reasonable. 346.80(2)(a) lists a few situations when it is not practicable to ride far to the right:
· When overtaking and passing another vehicle traveling in the same direction;
· When preparing for a left turn at an inter-section or driveway;
· When reasonably necessary to avoid unsafe conditions, including fixed or moving objects, parked or moving vehicles, pedestrians, animals, surface hazards or substandard width lanes [defined as a lane that is too narrow for a bicycle and a motor vehicle to travel safely side by side within the lane].

C. One Way Streets
Bicycles on a one-way street with 2 or more lanes of traffic may ride as near the left or right-hand edge or curb of the roadway as practicable (in the same direction as other traffic). [346.80(2)(b)]

D. Use of Shoulders
Bicycles may be riden on the shoulder of a highway unless prohibited by local authorities. [386.04(1m)]

E. Riding 2-Abreast
Riding 2 abreast is permitted on any street as long as other traffic is not impeded. When riding 2 abreast on a 2 or more lane roadway, you both have to ride within a single lane. [346.80(3)(a)]

F. Hand Signals
· Bicyclists are required to use the same hand signals as motorists [346.35].
· Hand signals are required within 50 feet of your turn. It is not required continuously if you need both hands to control the bicycle [346.34(1)(b)]

G. Passing
· A motorist passing a bicyclist in the same lane is required to give the bicyclist at least 3 feet of clearance, and to maintain that clearance until safely past. [346.075]
· A bicyclist passing a stopped or moving vehicle is also required to give at least 3 feet of clearance when passing. [346.80(2)(c)]

H. Use of Sidewalks
· State Statutes allow local units of government to permit vehicles on sidewalks through local ordinances. [346.94(1)]
· When bicycles are allowed to be operated on sidewalks, bicyclists must yield to pedestrians and give an audible warning when passing pedestrians traveling in the same direction. [346.804]
· At intersections and other sidewalk crossings (alleys, driveways), a bicyclist on the sidewalk has the same rights and duties as pedestrians. [346.23, 24, 25, 37, 38]

I. Bicycling at Night
· Bicycling at night requires at least a white front headlight and a red rear reflector. The white front light must be visible to others 500 feet away. The red rear reflector must be visible to others between 50 and 500 feet away. A red or amber steady or flashing rear light may be used in addition to the required reflector. These are required no matter where you ride--street, path or sidewalk. [347.489(1)]

J. Duty to report accident. [346.70]
· The operator of a vehicle involved in an accident resulting in injury to or death of any person, or total damage to property owned by any one person of $1,000 or more shall immediately give notice of such accident to the police.
· "injury" means injury to a person of a physical nature resulting in death or the need of first aid or attention by a physician or surgeon, whether or not first aid or medical or surgical treatment was actually received;
· "total damage to property owned by one person" means the sum total cost of putting the property damaged in the condition it was before the accident, or the sum total cost of replacing such property.
· This section does not apply to accidents involving only vehicles propelled by human power.

For more information contact:
Bicycle Federation of Wisconsin, 608-251-4456, info@bfw.org, www.bfw.org