

**Office of the Clerk/Treasurer**

W240N3065 Pewaukee Road  
Pewaukee, WI 53072  
(262) 691-0770 Fax 691-1798

**REVISED**

**BIKE AND PEDESTRIAN PATH PLANNING COMMITTEE  
MEETING NOTICE AND AGENDA**

**Wednesday, July 24, 2019**

**4:30 PM**

Common Council Chambers ~ Pewaukee City Hall  
W240 N3065 Pewaukee Road, Pewaukee, WI 53072

- 
1. Call to Order and Pledge of Allegiance
  2. Public Comment - Please limit your comments to 2 minutes, if further time for discussion is needed please contact the municipal Clerk prior to the meeting.
  3. Discussion and Action to Approve the Bike & Pedestrian Path Planning Committee Meeting Minutes Dated April 17, 2019 and June 19, 2019
  4. Review and Possible Action Regarding the Bicycle and Pedestrian Facility Design Handbook [J. Blackwood]
  5. Discussion to Select the Next Meeting Date and Possible Items To Go On the Upcoming Agenda [J. Blackwood]
  6. Public Comment - Please limit your comments to 2 minutes, if further time for discussion is needed please contact your local Alderperson prior to the meeting.
  7. Adjournment

Kelly Tarczewski  
Clerk/Treasurer

7/23/2019

**NOTICE**

It is possible that members of other governmental bodies of the municipality may be in attendance to gather information that may form a quorum. At the above stated meeting, no action will be taken by any governmental body other than the governmental body specifically referred to above in this notice.

Any person who has a qualifying disability under the Americans with Disabilities Act that requires the meeting or materials at the meeting to be in an accessible format must contact the Clerk/Treasurer, Kelly Tarczewski, at (262) 691-0770 three business days prior to the meeting so that arrangements may be made to accommodate your request.

**CITY OF PEWAUKEE**  
**BIKE AND PEDESTRIAN PATH PLANNING COMMITTEE AGENDA ITEM 3.**

**DATE:** July 24, 2019

**DEPARTMENT:** Clerk/Treasurer

**PROVIDED BY:**

***SUBJECT:***

Discussion and Action to Approve the Bike & Pedestrian Path Planning Committee Meeting Minutes Dated April 17, 2019 and June 19, 2019

***BACKGROUND:***

***FINANCIAL IMPACT:***

***RECOMMENDED MOTION:***

**ATTACHMENTS:**

Description

6.19.19 Minutes

**In attendance:**

J. Blackwood, Alderman R. Grosch, J. Vitale, and G. Pascucci.

**Also Present:**

Deputy Clerk A. Hurd and Administrative Assistant T. Grandinetti.

1. Call to Order and Pledge of Allegiance

Mr. Blackwood called the meeting to order at 4:30 and requested everyone stand for the Pledge of Allegiance

2. Public Comment

No public comment was made

3. Discussion and Action to Approve the Bike & Pedestrian Path Planning Committee Meeting Minutes Dated February 20, 2019, March 20, 2019 and April 17, 2019

**A motion was made and seconded (R. Grosch, J. Vitale) to approve the February 20, 2019 and March 20, 2019 meeting minutes.** Motion Passed 4 –For, 0-Against.

Deputy Clerk Hurd stated the minutes from April 17, 2019 were not available

4. Discussion and Possible Action Regarding the Draft Version of the Bicycle and Pedestrian Facility Design Handbook

Mr. Blackwood stated the handbook was summarizing what was discussed during meetings over the year, which could be used as a reference point for Public Works staff or consultants doing trail or sidewalk design so we have consistency between projects as a starting point and not starting from scratch. Mr. Grosch mentioned that the handbook doesn't reference speed limits or provisions. Mr. Blackwood stated it's not about speed but has to do with traffic volume threshold.

Mr. Blackwood suggested making sure all paths meander around mature trees, utility and landscaping. Most people aren't concerned about the path, they just don't want to lose their trees and moving utility poles is a cost stand point which would make the project much more expensive, they also need to make sure everything is compliant and meets ADA requirements.

Discussion took place regarding half gate fences that are moveable for emergency vehicles and prevent people from driving cars down them. This would be an option.

Mr. Blackwood recommended that concrete be used for sidewalk and asphalt be used for shared use paths. They will strive for a minimum 10- foot wide grass terrace between the curb and the sidewalk, but they can go narrower than that. Five is a good minimum point. The focus of the sidewalk would be to make sure it meets ADA requirements.

Mr. Blackwood referred to the crosswalk section and suggested that anytime there is a crosswalk that is not at a four way stop or signal we should consider putting in a raised island. Places where these would be recommended include the crossing by the 5 O'clock Club entrance, along Highway G or any crossing on Highway SS. Anywhere there is a two lane road there would be the cost of the island and widening the road.

Mr. Blackwood mentioned he wasn't sure what the status was of the impact fee study, Mr. Grosch stated he received an email from Jeff Weigel stating he received a draft copy. It is being looked over and then going back to the consultant for final revisions and should be ready next month.

The committee felt that, as a guidance the handbook looked good, they will give Ross a chance to look it over and then they can finalize and vote on it at the next meeting.

5. Discussion to Select the Next Meeting Date and Possible Items To Go On The Upcoming Agenda

The next meeting was scheduled for Wednesday, July 24<sup>th</sup> at 4:30pm.

6. Public Comment

No public comment was made.

7. Adjournment

**A motion was made and seconded (R. Grosch, G. Pascucci) to adjourn the meeting at 4:49pm.** Motion Passed 4-For, 0-Against.

Respectfully Submitted,

Amy Hurd  
Deputy Clerk

**CITY OF PEWAUKEE**  
**BIKE AND PEDESTRIAN PATH PLANNING COMMITTEE AGENDA ITEM 4.**

**DATE:** July 24, 2019

**DEPARTMENT:** Clerk/Treasurer

**PROVIDED BY:**

***SUBJECT:***

Review and Possible Action Regarding the Bicycle and Pedestrian Facility Design Handbook [J. Blackwood]

***BACKGROUND:***

***FINANCIAL IMPACT:***

***RECOMMENDED MOTION:***

**ATTACHMENTS:**

Description

Facility Design Handbook



# City of Pewaukee Bicycle and Pedestrian Facility Design Handbook

June 2019

## Foreword

This document presents the City of Pewaukee Bicycle and Pedestrian Planning Committee's preferences for the design of new bicycle and pedestrian facilities.

All new facilities should be designed in accordance with the *Wisconsin Bicycle Facility Design Handbook* published by the Wisconsin Department of Transportation, the Americans With Disabilities Act, the *Public Right of Way Accessibility Guidelines (PROWAG)* published by the United States Access Board, and other nationally accepted design guides and manuals. These publications are typically written to cover a wide variety of roadway types and community densities. These publications present a range of acceptable values to cover as many situations as possible.

This document will present what the committee feels are the preferred design standards to be used in the City of Pewaukee where the density of development is less than an urban city. The intent is to provide a guide for designers so that there is consistency between bicycle and pedestrian facilities constructed within the City.

The City Engineer shall have final approval of which design standards are used on a specific project.

If design guides are updated and the standards presented in this manual are no longer within the ranges provided in those manuals the most applicable values from those manuals shall be used.

## On Road Bicycle Facilities

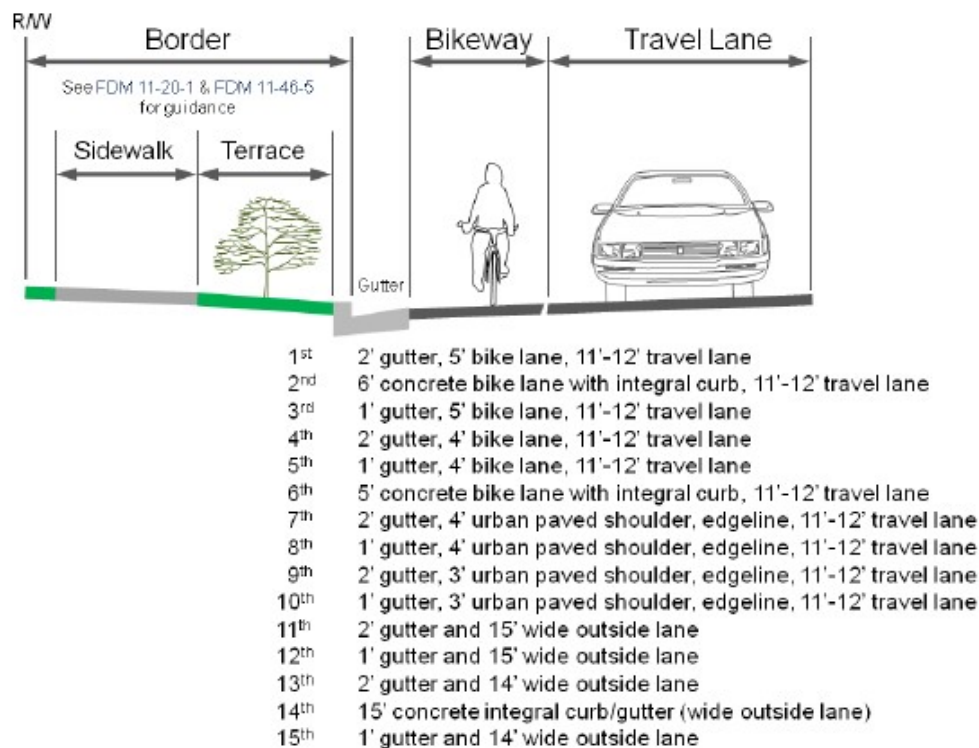
On rural roadways on road bicycle accommodations will be achieved using a paved shoulder. On urban roadways on road bicycle accommodations will be achieved with either a paved shoulder or a wide curb pan.

### Rural Roadways

- Paved shoulders should be placed on both sides of all roadways with an average daily traffic (ADT) of 700 vehicles per day or more. Roadways with a volume less than 700 vehicles per day and roadways within subdivisions do not need on road bike accommodations.
- The width of the paved shoulder should be 5' wide. If room is restricted a 4' wide paved shoulder can be used.
- The cross slope of the paved shoulder should be 2%.
- On asphalt roadways the paved should be paved integral with the driving lanes to avoid a longitudinal joint between the driving lanes and the paved shoulder.
- A white edgeline should be marked between the driving lane and paved shoulder. Bike lane symbols are not needed.
- Where guardrail is present a minimum of a 6 foot wide paved shoulder should be used.

### Urban Roadways

- The width of the on road accommodations should meet one of the 15 options shown in WisDOT Facilities Development Manual Chapter 11-46 Figure 15.1.



WisDOT FDM 11-46 Figure 15.1



- When a concrete bike lane is paved integrally with the curb the transverse joints should be sawed rather than tooled joints for a smoother ride.
- The slope of the bike lane should be 2%.
- Inlet castings should be safe for bicyclists. Castings should not have only longitudinal bars that allow narrow bike tires to get caught.
- A white edgeline should be paved between the driving lane and bike lane. Bike lane symbols are not required.

**Other Items**

- Manhole covers for public and private utilities should not be placed in bike lanes for both urban and rural roadways.
- For both rural and urban roadways signs and other fixed objects should be kept a minimum of three feet from the edge of the bike lane.
- At railroad crossings provide extra width to allow bikes sufficient room to cross tracks perpendicular to the tracks.

## Shared Use Paths

This section refers to separated paths that are either parallel to a roadway or multi-use trails that are on their own alignment. Paths can be used by pedestrians, cyclists, and skaters.

- Pavement material:
  - Shared use paths should be paved with asphalt. Concrete may be allowed with the approval of the City Engineer. If concrete is used transverse joints should be sawed and not tooled.
  - Gravel, woodchips, or other unpaved surfaces should not be used for shared use paths.
  - The thickness of the pavement and base course should be able to support maintenance vehicles.
- Roadway and Shoulder Widths:
  - The path width should be 10 feet wide. In constrained areas an 8 foot wide path can be used with the approval of the City Engineer.
  - A 2' wide shoulder with a slope of 6:1 or flatter should be constructed along paths. The shoulder may be gravel or grass.
  - The cross slope of the path should be 1.5% - 2%. When the path crosses driveways the slope of the path should remain at 2% and the driveway slope adjusted to match the path.
- Path location:
  - For paths parallel to a roadway the edge of the shoulder should be placed 1 foot inside the right of way line.
  - Meander the path to minimize impacts to mature trees, landscaping, utilities, and drainage structures.
  - Adjacent to a rural roadway the path must remain outside the roadway clear zone. The path may get as close as 5 feet to the edge of the roadway shoulder for short distances to avoid trees, utilities, or drainage structures.
  - Adjacent to an urban roadway the path shall remain at least 5 feet from the back of the curb and gutter.
- Vertical Alignment:
  - The running slope of the path shall be 5% or flatter unless the path is parallel to a roadway with a running slope steeper than 5%.
  - A slope up to 8.33% may be used for short stretches.
- Sideslopes:
  - A 4:1 or flatter sideslope is preferred. Slopes up to 3:1 are acceptable when required to limit impacts.
  - If a slope steeper than 3:1 is necessary a barrier is required on the top of the slopes to prevent users from falling down the slope. A 42" tall wood fence is preferred. Other barrier types can be used when approved by the City Engineer. When a barrier is used the shoulder width should be increased to 5' wide.
- Intersections:
  - ADA compliant curb ramps paved with concrete are required whenever the path crosses a roadway. Curb ramps shall meet all requirements of *PROWAG*.
  - Stop signs shall be placed on the path whenever the path crosses a public roadway.

- Consider stop signs on commercial driveways so vehicles stop before crossing the path.
- Design Speed:
  - Follow *Wisconsin Bicycle Facility Design Handbook* guidance on 18 mph typical design speed with 30 mph design speed on steep downgrades.
- Horizontal Curves:
  - Use a minimum of a 60 foot radius on horizontal curves (18 mph design speed).
  - Use a minimum of a 166 foot radius on horizontal curves at the bottom of steep downgrades (30 mph design speed).
- Drainage:
  - On rural roadways provide a ditch between the roadway and path width. The ditch depth shall be deeper than the subgrade shoulder point of the roadway.
  - When a culvert cannot fit under a path a trench drain with a solid cover can be used to convey water across the path.
- Manhole covers and handholes should be kept out of the path whenever possible.
- All signs and fixed objects should be 3 feet or farther from the edge of the paved path.
- Pavement marking along the center of the path is not needed unless there is a crash problem on the path.
- Paths should cross railroad crossings at a 90 degree angle.
- Vegetation should be kept at least 3 feet from the edge of the path and sufficiently far enough from the path to provide adequate sight distance on horizontal curves and at intersections.
- Waterways and Wetland Crossings:
  - Consider the use of wooden boardwalks to limit fills into waterways, floodplains, and wetlands.
  - Boardwalk design should follow the guidelines in the *Wisconsin Bicycle Facility Design Handbook*.
  - Boardwalks should be designed to accommodate maintenance vehicles. For trails not parallel to roadways designers should consult with the Fire Department to determine if boardwalks need to accommodate the width and weight of an ambulance.
- Consider if barriers or bollards are needed to restrict the width of the path to prevent vehicles from driving on the path. Any barrier or bollard should be able to be temporarily removed so emergency and maintenance vehicles can access the path.

## Sidewalk

Sidewalks are intended to be used by pedestrians only and are typically parallel to a roadway.

- Concrete should be used for all sidewalks.
- The concrete should carry through driveways rather than stopping the concrete at each driveway. The cross slope of the sidewalk shall be 2% or less through driveways.
- Sidewalk should be 5' wide.
- Sidewalk should be placed 1' inside of the right of way line when possible.
- A 10' wide grass terrace should be provided between the face of curb and inside of sidewalk. The terrace may be narrowed to as little as 5' to avoid utilities, mature trees, and landscaping.
- All sidewalk and curb ramps should meet Americans with Disabilities Act and PROWAG standards.
  - 2% maximum cross slope (1.5% design slope)
  - 5% maximum running slope unless roadway profile is steeper than 5%.
  - 8.33% maximum running slope for short segments and curb ramps (7% design slope)
  - Curb ramps should follow WisDOT Standard Detail Drawings and WisDOT Type 1 ramps should only be constructed as a last resort.
  - Detectable warning fields should be installed at each curb ramp. Use yellow or natural patina warning fields.

## Crosswalks

- All crosswalks across state highways, county highways, and city arterial and collector roadways should have pavement markings. A ladder style or continental style crosswalk is preferred.
- Crosswalks at mid-block locations or at intersections where vehicles do not have to stop a pedestrian crossing warning sign (MUTCD sign code W11-2) with down arrow (MUTCD W16-7P) should be installed.
- The use of a Rapid Rectangular Flashing Beacon (RRFB) should be considered at all crosswalks that are not stop sign or traffic signal controlled.
- Crosswalks at traffic signals should have pedestrian push buttons for all crossing movements.
- Consider street lighting at all crosswalks that are at areas that do not currently have street lighting.
- Refuge islands should be considered at all crosswalks where cross traffic is not required to stop for a stop sign or traffic signal to break up the length of the crossing and to make the crossing more visible for drivers.
  - The island should have a minimum 8 foot width measured from face of curb to face of curb.
  - The crosswalk should cut through the island and detectable warning fields should be placed on either side of the island.
  - A keep right sign (R4-7) should be placed on both ends of the median.
  - Add R1-6 Yield to Pedestrians signs visible to drivers in both directions.
  - Consider adding landscaping to non-paved portions of the island. Any landscaping should be low enough that children can see over it and drivers can see pedestrians waiting to cross.



**CITY OF PEWAUKEE**  
**BIKE AND PEDESTRIAN PATH PLANNING COMMITTEE AGENDA ITEM 5.**

**DATE:** July 24, 2019

**DEPARTMENT:** Clerk/Treasurer

**PROVIDED BY:**

***SUBJECT:***

Discussion to Select the Next Meeting Date and Possible Items To Go On the Upcoming Agenda [J. Blackwood]

***BACKGROUND:***

***FINANCIAL IMPACT:***

***RECOMMENDED MOTION:***