

Greg Minikel

From: Greg Minikel
Sent: Friday, August 01, 2014 9:00 AM
To: Dan Koski
Cc: Randy Junk; Chad Scheinoha; Gary Kennedy; Dan Koski ; Jill Erickson; Liza Rezach (lrezach@manitowoc.org); Matt Smits; Mike Zimmer; Sonja Birr; Steve Herzog
Subject: FW: Dewey Street - S. 26th to S. 39th St. - LRIP Funding and Bike Lanes
Attachments: 20140729145918288.pdf; Shared Use Paths - FDM Guidance.pdf

Dan,

Are we going to take this issue to the next PI Comm. meeting??

I know that Randy suggested building wider sidewalks (shared use path – min. 10 feet wide) to accommodate the bikes. I think that we already looked at this option a few years ago when Kipping was starting the design of Dewey. I think that there are too many driveways and intersections to have this shared use path.

After doing a little reading, I do not believe that the DOT would accept this option. See attachment.

On-road bike facilities are the preferred method and since we could build the “road diet” (convert 4 lane to 3 lane road), the DOT will very likely say that the shared use path will not be acceptable.

Unless the Committee/Council wants to go down to the 3 lane option, it is looking like we will have to give back both of the LRIP funded projects that we have received.

Here is a summary of the LRIP Funded Projects:

Both of the LRIP project limits are from South 26th to S. 35th St.

2012-2013 LRIP - Project Number 12457 - \$77,561.05 with a sunset date of June 30, 2017. Effectively this means construction would need to be completed in 2016.

2014-2015 LRIP - Project Number 13759 - \$77,637.61 with a sunset date of June 30, 2019.

From: Weyer, Derek J - DOT [<mailto:Derek.Weyer@dot.wi.gov>]
Sent: Tuesday, July 29, 2014 2:58 PM
To: Greg Minikel
Subject: RE: Dewey Street - S. 26th to S. 39th St. - LRIP Funding and Bike Lanes

Good Afternoon Greg

Answers to your questions below:

There is an existing Railroad Bridge (Overpass) between S. 26th and S. 30th St. that would prevent us from widening the pavement for bike lanes. See the attached photos.

Is this constrained environment enough to exempt us from the bike accommodations??

No, the railroad bridge would not allow for a constrained environment throughout the entire corridor. WisDOT would look to at minimum providing a wide outside lane (1' gutter and 14' outside lane) from S. 26th and S. 30th Street.

Can we use a sharrow on Dewey St.?? Is this an approved accommodation for bikes??

No, sharrows are not seen as adequate bike accommodations according to the TRANS 75 guidance.

Another option:

the easiest way to accommodate bikes and peds as part of this reconstruct project would be to convert this roadway to a TWLTL.

WisDOT has seen this tool used effectively in numerous municipalities throughout the state with roads handling f up to 17,500vpd. By converting to a TWLTL the bike accommodations would be provided for in the existing cross section of 48ft. I have attached FDM guidance regarding a TWLTL.

Regards,

DEREK WEYER

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From: Greg Minikel [<mailto:gminikel@manitowoc.org>]

Sent: Tuesday, July 29, 2014 2:11 PM

To: Weyer, Derek J - DOT

Cc: Greg Minikel; Kennedy, Gary; Dan Koski; Mike Zimmer; Steve Herzog

Subject: Dewey Street - S. 26th to S. 39th St. - LRIP Funding and Bike Lanes

Hi Derek,

I wanted to discuss our proposed reconstruction of Dewey St. from S. 26th to S. 39th St. that is tentatively scheduled for construction in 2015 as it relates to the LRIP funding and bike lanes.

We have 2 cycles of LRIP Funding approved (Project # 12457 & #13759), but I need to make sure that we can either be exempt from the bike accommodations or make provisions to have bike accommodations be part of the reconstruction.

The ROW on Dewey St. is 80 feet wide. The existing pavement width between faces of curb is 48 feet. The speed limit on this segment is 35 MPH. The 2008 ADT on Dewey St. is approx. 10,000 vehicles per day. No parking is allowed on Dewey St. within the project limits. There are existing sidewalks on both sides of Dewey St., except for the south side of the street from S. 26th to S. 30th St.

There is an existing Railroad Bridge (Overpass) between S. 26th and S. 30th St. that would prevent us from widening the pavement for bike lanes. See the attached photos.

Is this constrained environment enough to exempt us from the bike accommodations??

If so, would this be for the entire length of the project or only between S. 26th and S. 30th St.

Can we use a sharrow on Dewey St.?? Is this an approved accommodation for bikes??

For your reference, I have also attached a copy of the original paving plans from 1978 and 1980.

Let me know your thoughts on this. Thanks.

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- Design year AADT:
 - 3-Lane TWLTL: between 8,000 and 17,500 vpd
 - 5-Lane TWLTL: 24,000 vpd maximum
 - 7-Lane TWLTL: **NOT ALLOWED**
- Length of TWLTL: The length of the TWLTL should have sufficient length to operate properly at the posted speed. Site conditions and the types of intersection treatments will also influence the length of the TWLTL. Use the following guidelines:
 - Posted speed of 30 mph or less: 500-foot minimum uninterrupted length
 - Posted speed of greater than 30 mph: 1000-foot minimum uninterrupted length
- Railroad Crossings: Do not extend a TWLTL across a highway/railroad grade crossing. Terminate the TWLTL 150 ft to 200 ft in advance of the crossing and provide a raised-curb median adjacent to the railroad. Coordinate with the Region railroad coordinator.
- Intersection Treatment:
 - At signalized intersections and at non-signalized intersections/driveways with left-turning turning volumes > 100vph, convert a TWLTL to an exclusive left-turn lane (see FDM 11-25-2.3 for guidance on turn bay length). Use a raised median at intersections and driveways with a high concentration of left turning vehicles and at other locations as needed for pedestrian and bicycle refuge.
 - If turning volumes to a non-signalized minor street/driveway are low, it is not necessary to convert the TWLTL to an exclusive left-turn lane. However, pedestrians and bicyclists may still need median refuge.
- Operational/Safety Factors: For traffic to move safely through intersections, drivers need to be able to see stop signs, traffic signals, and oncoming traffic in time to react accordingly. Do not locate a TWLTL where there is substandard stopping sight distance. Provide decision sight distance, where practical, in advance of stop signs, traffic signals, and roundabouts. Appropriate design speed intersection sight distance shall be provided for the drivers of vehicles that are stopped, waiting to cross or enter a through roadway.
- Marking and Signing: Mark and sign TWLTLs in accordance with the Manual on Uniform Traffic Control Devices to identify the lane and regulate its proper use. Additional delineation is possible by either using a different type of pavement material with contrasting color or texture, or a mountable raised median. See SDD 15C10, "Raised Pavement Markers" and MUTCD Figure 3-5 for typical details of marking for two-way left-turn channelization. Two-way left-turn lanes are also discussed in the GDHS⁶⁸ on pp 474-478

5.4.2.1 Conversion from 4-Lane Undivided to 3-lane TWLTL ("Road Diet")

Consider converting a four-lane facility to a 3-lane TWLTL - commonly referred to as a "Road Diet" - if the following conditions exist:

- High accident rates involving left turning movements, sideswipes, rear-ends, or crossing traffic
- The need for traffic calming (Lowering the average through traffic speeds and reducing weaving)
- Pedestrian and bicyclist safety issues
- The existing four-lane facility actually operates similar to a 3-lane facility. The inside lanes operate as the left turn lane and the outside lanes operate as the through lane.
- Projected traffic volumes do not show a drastic increase

Converting a four-lane undivided section to a three-lane cross section may result in less right of way impacts, less environmental impacts and less costs than converting to a wider TWLTL or raised median cross section. The conversion from four to three lanes may also allow the use of wider or designated bike lanes.

Roadways with stop and go traffic such as school buses and delivery trucks or where slow moving heavy vehicles such as long trucks and farm machinery will result in increased through traffic delays. An increased delay for access from side roads may also result with the conversion to three-lanes. A design year ADT of 15,000 - 17,500⁶⁹ is typically the maximum capacity for a three-lane TWLTL cross section, but check for

⁶⁸ (1) *A Policy on Geometric Design of Highways and Streets 2004*, 5th edition. AASHTO, 2004.

⁶⁹ (26) *Geometric Design of Lanes - Continuous Two-Way Left-Turn Lanes (TWLTLs)*. In *IADOT Design Manual ch. 6: Geometric Design* Iowa DOT, 2001, sect. 6C-6, pp.1-4. <http://www.iowadot.gov/design/dmanual/06c-06.pdf>. (27) *Facility Selection / Two - Way Left - Turn Lanes*. In *MODOT Engineering Policy Guide ch. 200: Geometrics* Missouri DOT, 2012, sect. 232.3. http://epg.modot.org/index.php?title=232.3_Two_-_Way_Left_-_Turn_Lanes.

and traffic volumes (design year <1,500 ADT) that bicyclists can use most of or the entire travel lane for bicycling. No special bicycle accommodations are necessary on these roadways. The low volume of traffic provides ample passing opportunities for motorists and increases the comfort level for bicyclists. Use the "Pavement Marking for Shared Lanes" shown in SDD 15c29 f to help increase motorists' awareness of bicyclists.

Another application of a shared roadway on an urban street is providing a shared parking / bicycle lane of less than 12 feet. This is not a bicycle accommodation and does not comply with Trans 75 criteria for a bikeway, but can be justified as an *exception* for short segments in highly constrained environments (e.g., through a two-block downtown segment or commercial zone where buildings are directly adjacent to the sidewalk).

Consider a shared parking / bicycle lane of less than 12 feet (next to 11-foot or wider travel lanes) if parking usage is 20% or less, even during peak parking periods, and the following thresholds are met for residential areas (these are based on the FHWA Bicycle Compatibility Index):

1. For street widths of 44 feet from curb face to curb face and posted speeds of 25 mph, design year AADTs of 5,000 or less.
2. For street widths of 44 feet from curb face to curb face and posted speeds of 30 mph, design year AADTs of 4,000 or less
3. For street widths of 42 feet from curb face to curb face and posted speeds of 25 mph, design year AADTs of 4,000 or less
4. For street widths of 42 feet from curb face to curb face and posted speeds of 30 mph, design year AADTs of 2,500 or less

Use the following thresholds for commercial and industrial areas with 20 percent parking use or less:

1. For street widths of 44 feet from curb face to curb face and posted speeds of 25 mph, design year AADTs of 3,000 or less.
2. For street widths of 44 feet from curb face to curb face and posted speeds of 30 mph, design year AADTs of 1500 or less.

15.5.2 Shared Roadway on Rural Highways

A Rural highway is a shared roadway if it has no paved shoulder or it has a paved shoulder whose width is less than the minimum required width for a bicycle accommodation shown in Table 15.2. A shared roadway on a rural highway is not a bike accommodation and does not comply with Trans 75 criteria for a bikeway. A shared roadway is not appropriate other than on very low volume roads - less than 750 ADT - and sometimes not on those (see FDM 11-46-1.3.1.4.2). However, with very low volumes, motorists will generally have ample passing opportunities and additional features are usually not necessary for compatibility with bicycling.

15.6 Shared-use Paths

See chapter 4 of the Wisconsin Bicycle Facility Design Handbook³⁶ for guidance on shared-use path design.

According to FHWA³⁷, "the term "shared-use path" means a multi-use trail or other path, physically separated from motorized vehicular traffic by an open space or barrier, either within a highway right-of-way or within an independent right-of-way, and usable for transportation purposes. Shared use paths may be used by pedestrians, bicyclists, skaters, equestrians³⁸, and other nonmotorized³⁹ users."

Shared-use paths meet Trans 75 criteria for a bikeway and may supplement on-road bicycle accommodations. However, Trans 75.02 (3) requires that the Bureau of Project Development Project Services Section Chief approve a shared-use path proposed as the sole form of bicycle accommodation (i.e., there is no on-road bicycle accommodation) (see FDM 11-46-1).

Because it is a facility intended for pedestrian use, American with Disabilities Act (ADA) regulations and guidance shall also be followed in the design of these projects. The standard width of a shared-use path is 10 feet (see Figure 15.6). Use standard width unless there is justification for using a different width. See section 4.4 of the WisDOT Bicycle Facilities Handbook for guidance when considering a non-standard width.

³⁶ (4) *Wisconsin Bicycle Facility Design Handbook*. Wisconsin DOT, 2004.

<http://www.dot.wisconsin.gov/projects/state/docs/bike-facility.pdf>.

³⁷ (18) Shared Use Paths Along or Near Freeways and Bicycles on Freeways. Federal Highway Administration, 2-24-2011. <http://www.fhwa.dot.gov/environment/bikeped/freeways.htm>.

³⁸ Equestrian use is not typical on shared-use paths.

³⁹ Although shared-use paths are usually non-motorized facilities, there are some state trails in Wisconsin that permit snowmobile use.

A minimum 5-foot separation of a shared-use path from the roadway shoulder or curb is required and the separation should be as wide as practical (and preferably outside the clear zone) to prevent operational and safety problems that may occur when two-way bike traffic operates adjacent to motor vehicle traffic.

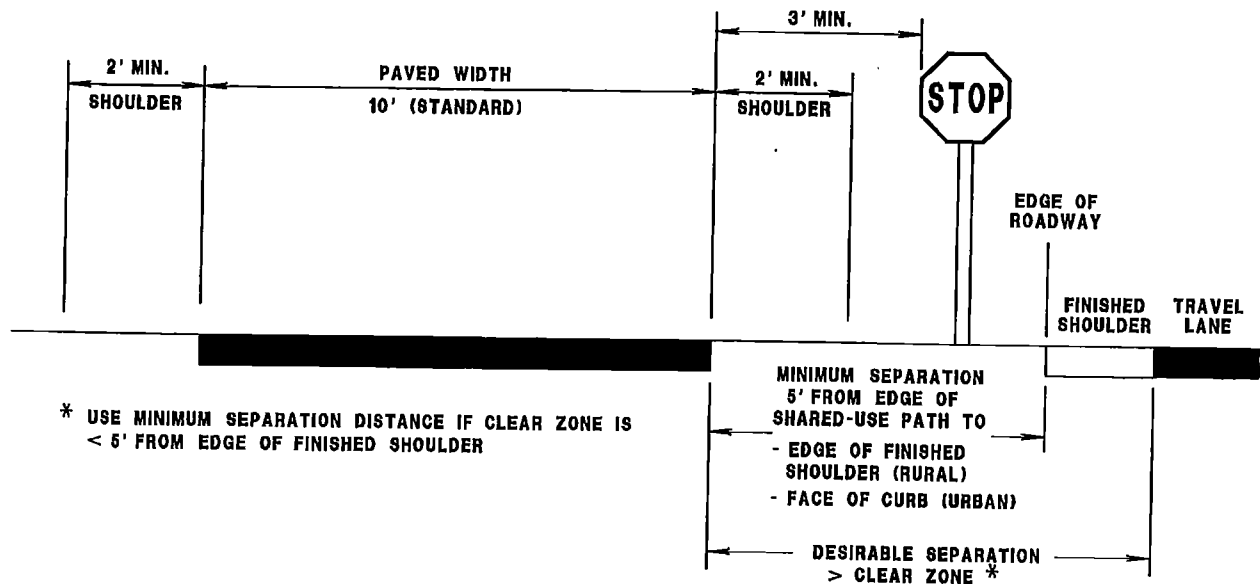


Figure 15.6 Shared-use Path Design

A shared-use path is generally more expensive to construct and maintain than bike lanes or paved shoulders. In addition, a shared-use path may be a less direct route for a bicyclist and safety is often a concern at street intersections or driveways when a shared-use path is located adjacent to a roadway. Nevertheless, under some circumstances, a shared-use path may be the best option, but does not substitute or preclude the need to provide on-street bicycle accommodations.

In a rural setting, there are fewer intersection and driveway crossings than in urban/suburban areas. This reduces potential hazards for bicyclists and helps make a shared-use path for bicyclists a viable option, particularly when 2-lane roadways are re-designed as expressways or freeways, typically with posted speed limits over 55 mph. The greatest opportunity to include a shared-use path presents itself when real estate is being purchased for the expansion of a roadway.

Consider a shared-use path on a rural highway if either of the following guidelines apply and right-of-way is either available or can be readily acquired through the real estate acquisition process associated with the larger highway project.

1. **Safety and Access.** When rural highways undergo changes that will cause restrictions for bicyclists and pedestrians and/or posted speeds increase to over 55 mph, a shared-use path is often a viable solution to provide a bike accommodation. This is especially relevant when there are no frontage roads or nearby parallel roadways (within one-half mile). When a new 4-lane roadway is built on the alignment of an existing 2-lane roadway, bicyclists and pedestrians still need to access the corridor. In other cases, bicyclists and pedestrians may be permitted, but high speeds (over 55 mph) on 4-lane highways make on-road bicycling difficult and undesirable. Though shared-use paths are generally more expensive to construct and maintain than paved shoulders, in certain situations they are the best way to provide connectivity for short to moderately long distances in this type of setting.
2. **Usage.** Usage is expected to be at least moderate (25 users per day). Good indicators of sufficient future path usage include connections between specific destinations (e.g., schools, major subdivisions, parks), or connections between two communities separated by 5 miles or less, or regional connections that may extend more than 5 miles. In urban or suburban areas, shared-use paths next to roadways can pose operational problems and often increase the hazards to bicyclists, particularly at intersections and driveways. For this reason, on-street bicycle accommodations are almost always the best choice.

Use the following guidelines to evaluate whether a shared-path is an appropriate choice in urban and suburban areas. Most of the conditions shall be met.

1. Considerable numbers of bicyclists and pedestrians are expected to use the facility on a daily basis.
2. The shared-use path is sited in a sound location for travel by bicyclists and pedestrians. This usually occurs where there are both high traffic volumes and vehicle speeds on the adjacent roadway and the shared-use path would not have to cross many roadways or driveways (especially commercial driveways). Only in rare cases would the path substitute for on-street bicycle accommodations.
3. There are no reasonable alternatives for bicycle accommodations on nearby parallel roadway routes.
4. The shared-use path connects to an existing or planned bicycle facility (shared-use path or other bikeway) or street/road where bicycle travel is accommodated. For instance, the shared-use path would be part of a larger bicycle transportation network that provides continuity for bicycle travel. As an alternative, a shorter shared-use path could provide direct access to a park, school, business district, etc. Where the shared-use path will be part of a planned bicycle facility that does not yet exist, the local government should provide a written commitment to complete the facility within a reasonable time frame.
5. The shared-use path is consistent with local, regional and state adopted land use / smart growth plans and current transportation plans for the area by an MPO, local or state government.
6. There is ample room for the shared-use path itself and for its separation from the roadway.
7. There is a reasonable expectation that the safety and service benefits derived from the shared-use path would be worth the total cost of the facility, including right of way, construction, marking and signing, and maintenance.

15.6.1 Roundabout Sidepaths

A roundabout sidepath is a variant of a shared-use path. "A "roundabout sidepath" is a sidepath around the perimeter of an isolated roundabout or a sidepath between two closely spaced roundabouts and around their perimeters. Bicyclists on the roadway enter and exit roundabout sidepaths via ramps upstream and downstream from the roundabout circular roadway. Bicycle traffic on roundabout sidepaths is assumed unidirectional. Roundabout sidepaths connect to sidewalks where there are sidewalks, and are standalone facilities where there are no sidewalks. Roundabout sidepaths do not connect to community/region shared-use paths. See FDM 11-26-30.5.13 for additional information.

15.7 Bicycle Accommodations on Highway Structures

See FDM 11-35-1.6, "Structures/ Sidewalks, Bicycle Accommodations, Shared Use Paths and Roundabout Sidepaths", and FDM 11-35 Attachments for width requirements for sidewalks, shared-use paths and roundabout sidepaths, as well as criteria and height requirements for parapets and fences adjacent to bikeways, sidewalks, shared-use paths or roundabout sidepaths

Also, See section 2.9, "Structures", and section 4.16.4 "Separation on Combined Structures" of the Wisconsin Bicycle Facility Design Handbook⁴⁰ for guidance.

Generally, continue the bicycle accommodations provided (or planned) on the approaches to a structure across the structure. New highway structures need to be wide enough to accommodate required bikeways and sidewalks, shared-use paths or roundabout sidepaths. Width requirements vary depending on whether the bikeway is a wide outside lane, a continuation of a paved shoulder, a bike lane, a shared-use path, or roundabout sidepath; and whether there is a sidewalk.

In urban and suburban areas, the preferred design is a 6-foot striped area (unmarked or marked as bike lanes). The 6 foot shoulder on the structure is typically comprised of the width needed off the structure to accommodate a 2 foot gutter and a 4 foot bike lane. The next preferred design is a 4 or 5-foot striped area (not marked as a bike lane). If the bike accommodation on the approach roadway is a wide outside lane, the minimum accommodations is at least 14-ft lane, not including curb and gutter, or if next to a parapet or concrete barrier, provide a 4' shy distance.

Current standards for clear roadway width of structures for most – but not all - rural highway design classes provide adequate width for bicycle accommodation (see FDM 11-15 Attachments 1.1 thru 1.4 and Attachments 1.16 thru 1.18). Also, see FDM 11-35-1 and FDM 11-26-30-5.13 for additional information on structure widths

At some locations, it may be appropriate to provide a shielded shared-use path in addition to bike lanes, wide outside lanes or shoulders across the structure. This situation arises when a structure (or the roadway under a structure) provides continuity for a shared-use path serving a different corridor than the highway.

⁴⁰ (4) *Wisconsin Bicycle Facility Design Handbook*. Wisconsin DOT, 2004.
<http://www.dot.wisconsin.gov/projects/state/docs/bike-facility.pdf>.