



WBW Statement Regarding Miller Avenue

The problem

Walk Bike Washtenaw (WBW) sees the following problems with Ann Arbor's proposal to extend the two-way cycle track on the south side of Miller Avenue from First Street to Maple Road:

- “Wrong-way” cycling -- Drivers from side streets or driveways turning right (east) onto Miller may not look right to see a westbound cyclist. Likewise, drivers westbound on Miller turning left (south) onto a side street or driveway may not see a westbound cyclist. At least one crash with the latter condition recently occurred at the Catherine / Fifth intersection. Two-way cycle tracks are most suitable when there are few or no intersections on the same side and when the use of that side is important for connectivity.
- Cycle-cycle crashes -- The potential for crashes between eastbound and westbound cyclists is increased by the speeds caused by the big hill on Miller. Downhill bikers can easily go over 25 mph, and uphill riders may wobble side-to-side due to the hill. If an uphill cyclist going say 10 mph wobbles in front of a downhill biker going say 30 mph, or the downhill rider needs to dodge an obstruction, there could be a dangerous 40 mph crash. Moreover, if at night one or both bikers (improperly) have no lights, the colliding cyclists may not even see each other.
- Headlight confusion -- At night, westbound cyclists and eastbound drivers may be confused or blinded by headlights passing just to their right.

Though these problems exist to some degree with the four current cycle tracks around the downtown area, the problems are worse on Miller because of higher car speeds, more conflict points on the south (9 street intersections and many driveways), less lighting, and the likelihood that people exercise less caution on Miller than downtown.

What we favor

WBW believes that a protected bike lane on each side of Miller would be safer than the current proposal, with at least bollards and preferably also curbs. See the Appendix below for supportive documentation. The transition for westbound cyclists from the south to the north side of Miller can happen at First Street.

Action requested

We ask that staff:

- Present this issue to the Transportation Commission.
- Review the literature on this issue. The material we have reviewed suggests that our proposal would conform to best practices (see Appendix below).
- Design and build a facility that conforms to best practices.



Appendix: Documentation supporting this statement

Federal Highway Administration (FHWA)

From an FHWA course on bicycle and pedestrian transportation, lesson 19 on bicycle lanes:

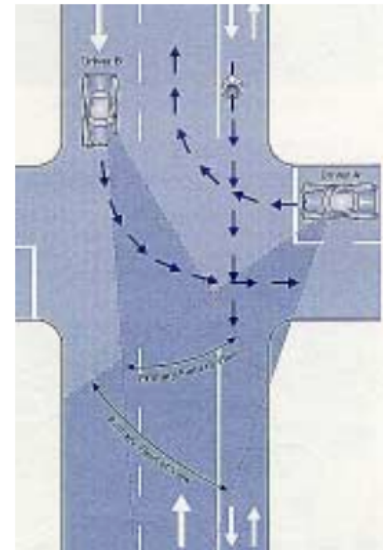
https://safety.fhwa.dot.gov/PED_BIKE/univcourse/pdf/swless19.pdf

19.5 Practices To Be Avoided

Two-Way Bike Lane

This creates a dangerous condition for bicyclists. It encourages illegal riding against traffic, causing several problems:

- At intersections and driveways, wrong-way riders approach from a direction where they are not visible to motorists.
- Bicyclists closest to the motor vehicle lane have opposing motor vehicle traffic on one side and opposing bicycle traffic on the other.



In both cases above, a wrong-way bicyclist is not in the driver's main field of vision.

New York State

From New York State Highway Design Manual, Chapter 17 on Bicycle Facility Design, revised 2015, page 17-9 on Bicycle Lanes; PDF file downloadable from:

<https://www.dot.ny.gov/divisions/engineering/design/dqab/hdm/chapter-17>

Two-way bicycle lanes on one side of a highway are not acceptable because they promote riding against the flow of motor vehicle traffic. This practice is specifically identified as an illegal operation of a bicycle in the "Vehicle and Traffic Law".

Netherlands

From a 2020 article from the Institute for Road Safety Research in the Netherlands (SWOV is the acronym in Dutch), under "Infrastructure for pedestrians and cyclists", "Are two-way bicycle tracks as safe as one-way bicycle tracks":

<https://swov.nl/en/fact-sheet/infrastructure-pedestrians-and-cyclists>



Two-way bicycle tracks are less safe than one-way bicycle tracks and, therefore, one-way bicycle tracks have been preferred in design recommendations and guidelines for some time now [4] [41] [42]. The heading of this section refers to bicycle tracks alongside carriageways and not to solitary bicycle tracks. ... On road sections, two-way bicycle tracks increase the risk of head-on crashes between cyclists, and between cyclists and (light) moped riders [14]. Drivers who turn right to a distributor road from an access road on priority intersections often only look to the left, the direction vehicles normally come from. Cyclists on two-way bicycle tracks that, from the driver's point of view, come from the right are therefore overlooked. ... On average, the risk that a cyclist on a priority road is hit by a motor vehicle at a priority intersection is 75% higher for two-way bicycle tracks than for one-way bicycle tracks [15].

Netherlands

From the conclusion of a 2017 study supported by the Dutch Ministry of Infrastructure and the Environment:

<https://www.sciencedirect.com/science/article/abs/pii/S0001457516301725?via=ihub>

Bicycle-motor vehicle crashes are more likely on bidirectional cycle paths than on unidirectional cycle paths. In this paper we discuss the hypothesis that opening *all* unidirectional cycle paths for cycle traffic in both directions would solve this problem because drivers get used to cyclists riding at the left side of the road. Based on an exploration of available research, data and theories, we reject the hypothesis. Bidirectional cycle paths are far more risky than unidirectional cycle...

France

From Copenhagenize Design Company, a bicycle infrastructure design firm located in Paris, France, in a 2014 article entitled "Explaining the Bi-directional Cycle Track Folly":

<https://copenhagenize.com/2014/06/explaining-bi-directional-cycle-track.html>

In Denmark, the on-street, bi-directional facility was removed from Best Practice for bicycle infrastructure over two decades ago [i.e., before 1994]. That in itself might be an alarm bell to anyone paying attention. These two way cycle tracks were found to be more dangerous than one-way cycle tracks on each side of the roadway. ... I asked Theo Zeegers at the Dutch national cycling organisation, Fietsersbond, about this issue and he said, "*Bi-directional cycle tracks have a much higher risk to the cyclists than two, one-directional ones. The difference on crossings is about a factor 2. So, especially in areas with lots of crossings (ie. builtup areas), one-directional lanes are preferred. Not all municipalities get this message, however.*" ... In the recently published OECD report about Cycling Health and Safety you can read much of the same. Bi-directional are not recommended for on-street placement. One way cycle tracks on either side are the Best Practice that should be chosen.