



Legislation Details (With Text)

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TRANSPORTATION ADVISORY BOARD AGENDA ITEM

ACTION REQUESTED:

Recommend approval to implement an on-street bike route on Lisson Road, Wehrli Road, and Ranchview Drive

DEPARTMENT: Transportation, Engineering and Development

SUBMITTED BY: Kelly Dunne, Project Engineer

BACKGROUND:

The City's Bicycle Implementation Plan guides the establishment of new bicycle facilities throughout Naperville. Adopted by City Council in 2006, the plan identifies a bicycle network of proposed routes and has served as an ongoing framework for the implementation of new bicycle routes. The proposed routes are prioritized to provide staff with guidance on the relative importance of each route to the overall bicycle system.

City Staff collaborated with the Bicycle and Pedestrian Advisory Committee to conduct a public process for developing the Bicycle Implementation Plan. This involved identifying possible routes, establishing criteria for route evaluation, and utilizing the criteria to score possible routes. The outcome was the Bicycle Implementation Map (attached).

The top criteria for ranking potential routes are usability by the target basic rider, logical termini, cost, staff time required, and connections to popular destinations. The City defines the target basic rider as an adult non-expert rider. This type of rider is comfortable riding on on-street bike routes that have a low to moderate stress level. The stress level is based off of the Bicycle Compatibility Index (BCI). The BCI is a value between 1 and 5 that is calculated using traffic volumes, traffic speeds, roadway width, percentage of truck traffic, density of driveways, and frequency of parking. A lower BCI indicates a lower stress level for on-street bicyclists. A BCI worksheet template is attached.

DISCUSSION:

Recent initiatives by the Will County Forest Preserve District and the Forest Preserve District of DuPage County have resulted in new bicycle facilities near the southeastern limits of Naperville. In 2015, the Will County Forest Preserve District constructed a trail segment that allowed connectivity between Royce Road and Whalon Lake. In 2017, a joint project by both Forest Preserve Districts created an extension of the DuPage River Trail connecting Whalon Lake in Will County and Greene Valley Forest Preserve in DuPage County. The City is reevaluating potential bike routes in this area to ensure that facilities are accommodating to an increase in bicycle activity, and both County Forest Preserves have reached out to the City regarding the status of new routes.

Three route alternatives are being considered in this area, see the attached Alternative Routes Map. The Bicycle Improvement Plan calls for an off-street bike path along Wehrli Road between 87th Street and Bailey Road (Alternative 1). The County Forest Preserves have proposed that a new on-street bike route be implemented on Wehrli Road between 87th Street and Ranchview Drive, continuing along Ranchview Drive to connect with the existing on-street bike route on Auburn Avenue (Alternative 2). The City is considering a third alternative: an on-street bike route on Lisson Road between 87th Street and Wehrli Road, continuing along Wehrli Road until Ranchview Drive, and along Ranchview Drive until Auburn Avenue (Alternative 3).

Although the route depicted in the Bicycle Implementation Plan is designated as an off-street path, given the substantial costs and viable alternatives, city staff does not consider it a high-priority to provide off-street bicycle facilities in this location at this time. Therefore, the City has evaluated the three alternative as on-street bike routes. The BCI was applied to the four potential link segments and the results are summarized below.

Link	Alt.	BCI	High Stress Factor	Low Stress Factor
Wehrli - 87 th to Lisson	1	2.5	Speed	Driveways
Wehrli - Lisson to Bailey	1 & 2	2.5	Lane Width	No Parking
Ranchview	2 & 3	2.0	Driveways	Volume, Lane Width
Lisson - 87 th to Wehrli	3	2.5	Driveways	Volume, Lane Width

Note that while three of the segments scored equal BCIs of 2.5, different stress factors attributed to those scores. For example, the vehicle speeds on Wehrli Road between 87th Street and Lisson Road are a high stress factor, but the BCI is offset by the lack of driveways in this segment (and therefore less conflicting movements between vehicles and bicycles). Conversely, many driveways along the Lisson Road link are an added stressor, but this is mitigated by low vehicle volumes and wide lanes.

Arguably, high-speed traffic and narrow lanes are a greater stress factor to bicyclists than a large number of residential driveways. In this case, the numerical value of the BCI does not help distinguish which route is better, but looking closer at the stress factors reveals that the Ranchview Drive and Lisson Road links are the preferred alternative for an on-street bike route.

The Lisson Road link is also preferable to the Wehrli Road link when the intersections along both alternatives are considered. In Alternative 2, bicyclists traveling southbound will need to make a left turn from Ranchview Drive onto Wehrli Road. Since Wehrli Road does not stop at this intersection, bicyclists will have to wait for an adequate gap from both northbound and southbound vehicular

traffic. In Alternative 3, southbound bicyclists would be making a right turn at this intersection, a less stressful maneuver to execute. Another merit of Alternative 3 is the route's intersection with 87th Street. Lisson Road and 87th Street is an all-way stop controlled intersection, allowing bicyclists to more easily travel onto 87th Street than in Alternative 2, where 87th Street does not stop for Wehrli Road and bicyclists are again forced to wait for a gap in vehicular traffic.

The new on-street bike route will be signed in accordance with the Manual on Uniform Traffic Control Devices (MUTCD) and the National Association of City Transportation Officials (NACTO) Urban Bikeway Design Guide. The attached Wayfinding Signage Plan shows the recommended placement for signage along the route.