The City of Lorain, Ohio

DEPARTMENT OF ENGINEERING

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Dale Vandersommen, PE
City Engineer

July 24, 2019

Mr. David Kirschner
U.S. Department of Transportation Federal Highway
Administration Office of Operations (HOP)
Mail Stop: E86-205
1200 New Jersey Avenue, SE
Washington, DC 20590

Subject: Request for Permission to Experiment
Washington Avenue Advisory Bicycle Lanes

Dear Mr. Kirschner:

The City of Lorain applied for Congestion Mitigation and Air Quality (CMAQ) funds via our Metropolitan Planning Organization (MPO), the Northeast Ohio Areawide Coordinating Agency (NOACA), in May of 2017. This letter concerns that award for the Washington Avenue Bikeway. Also, in 2017 the City of Lorain worked in concert with Lorain County Public Health, the Ohio Department of Transportation, and Lorain City Schools to create an Active Transportation Plan for the City of Lorain. This plan was finalized in March of 2018.

The Washington Avenue Bikeway was conceived by a groundswell of similar projects in the City of Lorain. The Lorain County Metroparks is currently designing their connection from the North Coast Inland Trail (NCIT) to Lake Erie. This trail will be 105 miles when complete stretching from Toledo, Ohio to Lorain, Ohio. Also, Lorain Connected, a collaborative that developed from the creation of the Active Transportation Plan, meets monthly to discuss active transportation and upcoming projects, from Walk to School Days to Infrastructure Applications for Safe Routes to School. Lastly, there is Transportation for Livable Communities Initiative (TLCI) planning project through NOACA, currently underway for the City of Lorain and surrounding Lakeside communities of Avon Lake, Sheffield Lake, and Vermillion to increase connectivity to the Lakefront, which was undertaken by the Lorain County Commissioners.

NATURE OF THE PROBLEM AND JUSTIFICATION

The City is requesting permission to experiment with advisory bike lanes along the Washington Avenue corridor. Currently, there are no bike lanes along Washington Avenue. This route provides an essential north-south connection to our city that enhances mobility and safety. Washington Avenue runs north-south through Lorain, and is primarily a residential

street with three schools, two city parks, and a commercial plaza near the north end. The south end of Washington Avenue terminates at Washington Elementary and General Johnnie Wilson Middle Schools, with the nearby Lorain High School and the north end terminates at Veterans Memorial Park and nearby Admiral King Elementary School. Improving safety for children riding bikes to school is a key goal of the project. Washington Avenue is also used by diverse bike riders as a means to connect with other destinations in town and other routes in Lorain and Lorain County's bicycle network. The Washington Avenue street width (26' to 36'-with parking) will not support traditional bike lanes.

PROPOSED CHANGE, DEVELOPMENT AND MUTCD DEVIATION

Originally the Washington Avenue Bikeway was planned to have sharrows only in the areas that did not support bike lanes. Since we anticipate students K-8 utilizing this bikeway there were some concerns of not providing separate bike lanes. We evaluated options for Washington Avenue, including traditional bike lanes, utilizing sharrows, and advisory bike lanes. Therefore, in discussion with our MPO and ODOT it was decided to explore Advisory Bike Lanes. The white paper: *Advisory Bike Lanes in North America* was utilized to design the Advisory Bike Lanes. These plans were taken to the Administration and City Council and approved. Utilizing a mixed approach to our bikeway allows for a seamless connection throughout the City of Lorain. Below is a list of the application of the various bike lanes to be utilized as part of this project. It has been customized to work with the existing conditions of our city.

- West 26th Street (Ashland to Oberlin) – Advisory Bike Lanes, 5' width; 1 block
- Oberlin Avenue and School Trail – Multiuse Trail, 8'-10' width
- Washington Avenue (Highland Park to West 21st Street) – Advisory Bike Lanes, 5' width; 7 blocks
- Washington Avenue (West 21st Street to West 12th Street) – Traditional Bike Lanes, 6' width; 10 blocks
- Washington Avenue (West 12th Street to West Erie Avenue) – Advisory Bike Lanes, 4.5'; 10 blocks

Traditional Bike Lanes – The pavement width of Washington Avenue varies along its length from 26 to 36 (with parking) feet. Washington Avenue is in an urban core area. A lot of the homes do not have driveways in the northern section. Therefore, it is not feasible to remove on street parking. In order to install traditional 5' bike lanes on both sides of Washington Avenue in the northern section– and maintain two vehicle travel lanes – the City would have to remove sidewalks on this street. The sidewalks in this area are adjacent to the roadway. There is no available right of way for widening.

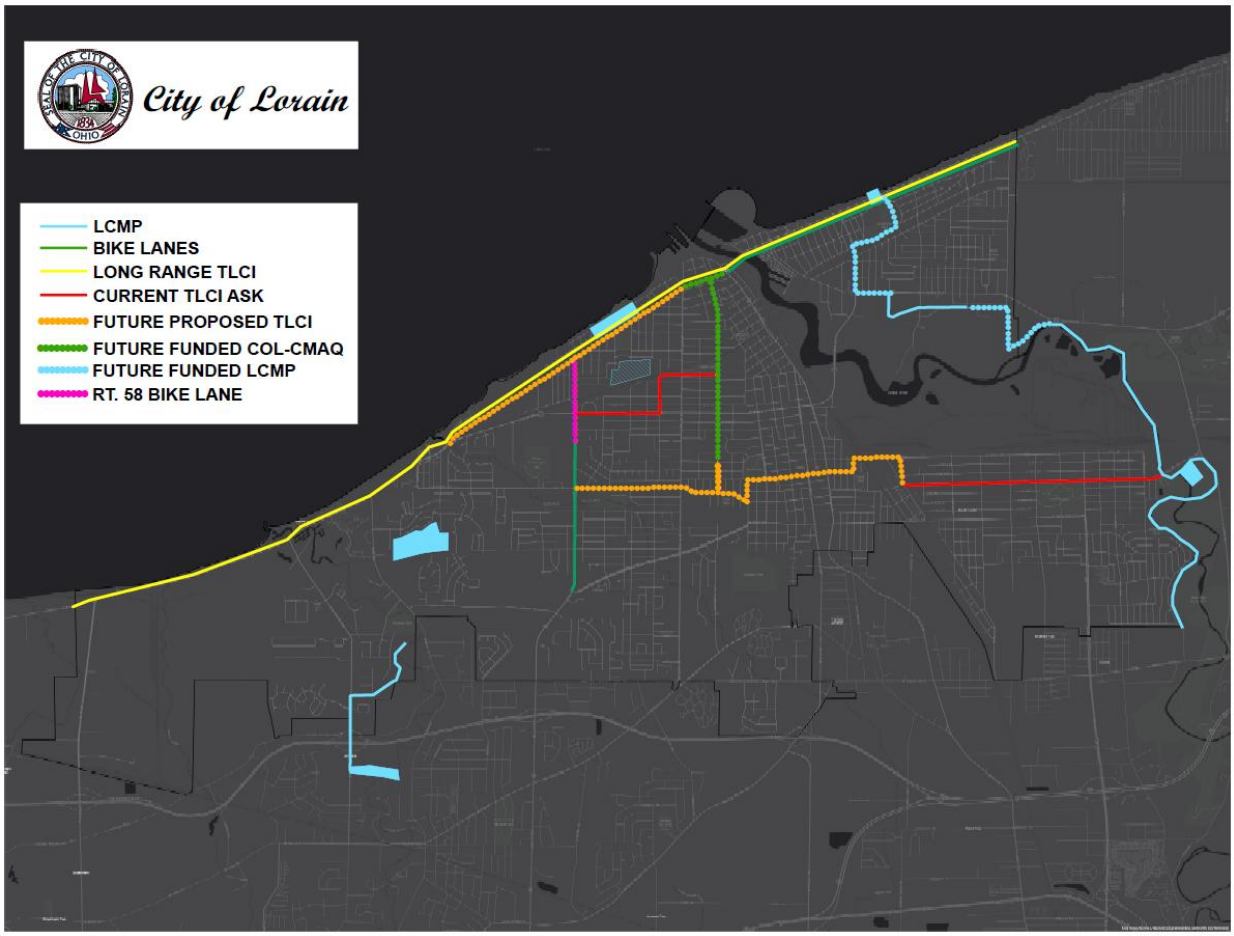
Bicycle Boulevard using Sharrows and Advisory Bike Lanes – With traditional bike lanes ruled out due to equitable use for pedestrians and motorists, the City further evaluated the pros and cons of a bicycle boulevard using sharrows and advisory bike lanes. Either of these options can be implemented within the City's budget constraints. Because of the frequency of children on the route, the City determined it would be safer and more effective to provide the

separation and prominence of advisory bike lanes versus a bicycle boulevard with sharrows, where vehicles and bicycles equally share the same space.

How Proposed Change Deviates from the current MUTCD – Advisory bike lanes differ from traditional bike lanes by using a dashed line rather than a solid line to delineate a dedicated space for bicyclists. There is only one shared vehicle travel lane. When an oncoming car is encountered, vehicles may cross over the dashed markings for passing purposes, but only when bicyclists are not present. This is the configuration contemplated in our project design. We anticipate our roadway cross section will look similar to what is shown below on the left. The project will also include the custom sign created by Burlington, VT for their advisory bike lanes shown below on the right and the recommended Two- Way Traffic warning sign. If the custom sign cannot be utilized for the project we would utilize a No Centerline and Two-Way Traffic Warning sign.

ILLUSTRATIONS

The following illustration is a map of the project area, showing Washington Avenue (green dots) and how it connects to existing and planned bicycle network facilities. We have received funding from NOACA, our MPO, to construct connections (shown in red) between our existing and planned infrastructure. This 2019 funded TLCI grant will allow for a connection from the planned advisory bike lanes, thus creating a bicycle network.



SUPPORTING DATA

We understand there are now a number of existing official experiments for advisory bike lanes. The FHWA website lists Minneapolis, MN, Edina, MN, Richfield, MN, Columbia, MO and Alexandria, VA as places that are currently using advisory bike lanes. The *Advisory Bike Lanes in North America* whitepaper published by Alta Planning and Design in 2017 also includes case studies for Burlington, VT and Ottawa, ON. The whitepaper provides experience-based evidence that Advisory Bike Lanes function safely. The whitepaper offers the following criteria for application and design of advisory bike lanes:

- Low-to-Moderate traffic volume (less than or equal to 5,000 ADT)
- Low-to-Moderate motor vehicle speed (lees than or equal to 30 mph)
- A roadway width too narrow to support dedicated bicycle lanes without roadway widening or removal of other high-demand street elements

The Washington Avenue advisory bike lanes meet these criteria. Lorain is a legacy city in Ohio. The City of Lorain has suffered population loss and economic shifts. This has led to 20% of the people in the project area that do not own cars, per the last census. They utilize other modes of transportation than automobiles, such as walking, biking, and public transit. The

population of the City of Lorain is approximately 64,097. NOACA conducted traffic counts on Washington Avenue between West 9th Street and West 11th Street, and the traffic volume is 2,852 ADT; the posted speed limit is 25 mph; our advisory lanes are currently contemplated at a varying width from 4.5' to 5'; and the two-way center travel lane varies from 14.8' – 19'.

PATENT OR COPYRIGHT

The City of Lorain is not aware of any patent or copyright protecting the concept of advisory bike lanes.

TIME PERIOD AND LOCATION

Time Period: 3 seasons (April to mid-October of 2021, 2022 and 2023)
Location: Washington Avenue corridor within the City of Lorain, Ohio

EVALUATION PLAN

There are currently no bike lanes or any kind of bike facility on Washington Avenue. The City will primarily focus its evaluation on the performance of the advisory bike lanes after their installation. Bicyclist and motorist behavior will be observed by staff and/or volunteers along Washington Avenue. The evaluation plan includes collecting and recording the following data:

- Bicycle volume (before and after) – Bike/Ped counts are done in May and September of each year
- Vehicular volume and speed (before and after) – Miovision equipment on loan from NOACA
  - Baseline data was collected on May 2, 3, and 4 of 2019.
- Observations will be made once per year, and will include items such as the following:
  - Where do bicyclists tend to ride? Does this vary by the presence of parked or oncoming vehicles?
  - Where do motorists tend to drive? Does this vary by the presence of bicyclists or oncoming vehicles?
  - Are motorists yielding to bicyclists before merging into the advisory bike lane?
  - When motorists overtake bicyclists, are they leaving a safe passing distance? Especially important as Ohio is a 3 foot rule state.
  - Do the advisory bike lanes and lack of centerline appear to create conflicts among bicyclists and motorists?
  - Are bicyclists using the treatment as intended?
  - Are motorists using the treatment as intended?

AGREEMENT

If it is determined that this proposed experiment does not perform as intended, the City will restore the site of the experiment to a condition that complies with the provisions in the

MUTCD in the spring following the end of the time period of the experiment (due to winter weather, the season for roadwork is generally May through mid-October). If significant safety concerns arise that are directly or indirectly attributable to the experiment, the City of Lorain agrees to terminate the experiment and restore the site to its original condition.

PROGRESS REPORTS AND FINAL RESULTS

The City agrees to provide semi-annual progress reports throughout the experiment time period. We suggest that these reports be for the months of May and September to be in line with our Bike/Ped count schedule. The City agrees to provide a copy of the final results of the experiment to FHWA's Office of Transportation Operations within three months of the conclusion of the experiment.

Thank you for considering the City of Lorain's request to experiment with advisory bike lanes on Washington Avenue. If I can provide any further information, please email me at veronica_newsome@cityoflorain.org or call me at (440) 204-2003.

Respectfully,

Veronica A. Newsome, P.E.
Staff Engineer