NDOT

CASE STUDY | BELMONT PILOT PROJECT

LOCATION

Street(s): Portland Ave/Belmont Blvd from 18th Ave S to Ashwood Ave
Neighborhood: Belmont-Hillsboro
District: 18

PARTNERS

NDOT Division(s): Planning
Metro Agencies:
Community Organizations: Belmont-Hillsboro Neighbors, 12 South Neighborhood Association, and 12 South Farmer's Market
Community Leaders: Belmont University, Council Member Tom Cash

SUMMARY

The Belmont Bikeway Pilot Project successfully demonstrated that the bikeway is improved by converting the existing buffered bike lanes on Belmont Boulevard between Portland Avenue/18th Avenue S and Blair Boulevard/Ashwood Avenue to parking-protected bike lanes. Despite a limited amount of negative feedback, based on the positive results from evaluating the pilot bikeway, NDOT recommends that the parking-protected bikeway should be maintained and extended throughout the Belmont Blvd. corridor in future. Additional traffic calming treatments can further reduce driver speeds.

OBJECTIVE

The Belmont Bikeway Pilot Project focused on three primary goals:

- Slow down people driving
- Make it easier for people to cross the street
- Create more space for people biking and walking

These goals and other information about the Belmont Bikeway Pilot Project are available on the project website at https://www.nashville.gov/departments/transportation/projects/bikeways/belmont-boulevard.

OVERVIEW

The Belmont Bikeway Pilot Project explores the following existing challenges in the Belmont-Hillsboro community:

- **Immediate challenges**
  - Drivers are speeding
  - Parked vehicles near intersections make it hard to see pedestrians, especially children, crossing the street
- **Personal challenges**
  - The impact of right-of-way challenges – commercial vs. residential property

OUR APPROACH

In addressing the neighborhood's goals, NDOT completed a bikeway pilot project on Belmont Blvd. between the Portland/18th intersection and the Blair/Ashwood intersection, relocating the existing buffered bike lanes to be adjacent to the curbs, with on-street parking between the biking and driving lanes to serve as a form of protection for the bike lanes. To evaluate the pilot, NDOT conducted a before/after analysis to better understand safety and mobility performance, traffic and operational impacts, changes in ridership, and community perspectives.

What do we do? What strategies and tools did we employ? What innovations did we use?

- The bike lane was relocated to the curb, protected from the driving lane by the parking area with vertical delineation in the bike lane buffer
- Parking was relocated from the curb to between the bike lane and the driving lane
- Pedestrian improvements: new/wider crosswalks, intersection daylighting (pavement markings and vertical delineation to prevent parking too close to intersections)
- Additional/improved signage related to people walking and biking

What were the barriers throughout the project? How did we solve them?

- Belmont University construction, road closures, and multimodal detours
- During Belmont construction, the bike lane was rerouted into mixed traffic with sharrow pavement markings; this detour did not contribute to any reported crashes, and the community responded positively to this particular detour in contrast to many detours in Nashville

How did we engage with the community? How did community engagement shape the project?

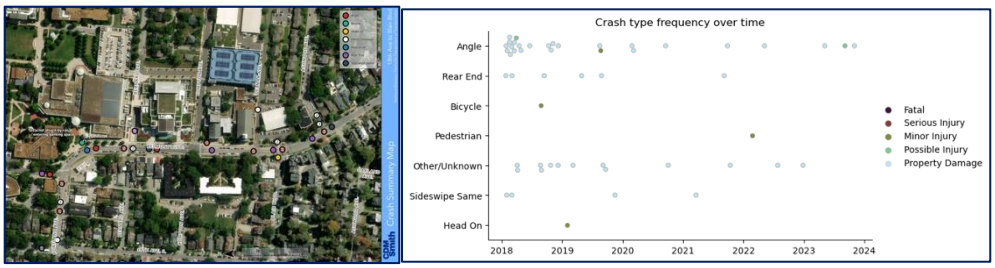
The purpose of community engagement in this project was to evaluate how the pilot bikeway was working, identify any challenges the pilot bikeway presented, and help inform any future adjustments to the bikeway. NDOT engaged the community through the following activities:

- Online surveys
- On-site intercept surveys and interviews
- Business site visits and interviews
- Councilmember interviews and coordination
- Pop-up events
- Stakeholder interviews with neighbors, including Belmont University
- Communications via the project website, social media, and newsletters
- View the complete engagement report on the project website at https://www.nashville.gov/departments/transportation/projects/bikeways/belmont-boulevard.

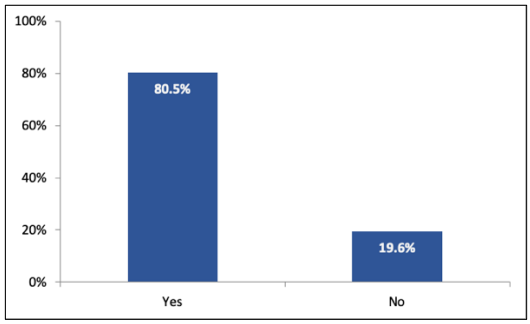
WHAT WE OBSERVED

The following quantitative data validates that the pilot bikeway is successful, with opportunity to further reduce driver speeds for overall transportation safety on the Belmont corridor. Multimodal traffic speed and volume counts were collected at the intersections of Belmont with Paris and Wildwood and at the gas station and Fisher Center locations.

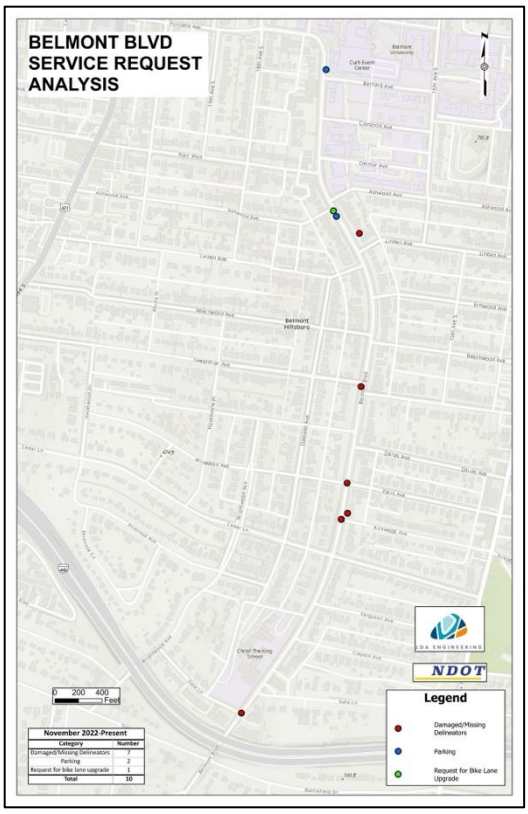
- **Crash Analysis**
  - The team analyzed crashes on Belmont between 2018 and 2024.
  - One crash involving a person biking occurred in August 2018 before the pilot was installed. The crash resulted from a conflict with a parking vehicle. No other crashes involving people biking have been reported along the study corridor; however, there may be crashes or near misses that were not reported.
  - One crash involving a person walking occurred in February 2022 at night in the rain before the pilot was installed. The crash occurred as the pedestrian was crossing Belmont near the gas station driveway. The driver was turning left out of the driveway and struck the pedestrian.



- **Survey Responses**
  - Out of almost 180 survey respondents, 81% think the pilot bikeway is working well.



  - The following quote is representative of the limited number of negative perspectives on the pilot: "It is very confusing. Drivers don't understand they can park and most of the time, if they do, they block the bike lane." The conflicts described in this quote could be addressed by clarifying signage and/or pavement markings, adding delineation, and increasing enforcement as appropriate.
- **Vehicle Volumes & Driver Speeds**
  - The average number of vehicles present on the corridor each day, referred to as the average daily trips (ADT), increased 4% between 2022 and 2024
  - 2022 ADT: 10,273 vehicles per day (VPD)
  - 2024 ADT: 10,693 VPD
  - Despite the transportation improvements, driver speeds still exceed the posted speed limit of 25 mph. Additional traffic calming elements, including vertical deflection such as speed cushions and/or horizontal deflection such as curb extensions, will be needed to further reduce driver speeds.
  - 2024 average speed: 29 mph
  - 2024 85th percentile speed (the speed at which 85% of drivers are traveling at or below): 34 mph
- **Ridership**
  - Counts were not collected for people biking before the pilot was installed. Since the pilot was installed, average daily trips for people biking are estimated at approximately 81 with a peak of 118 people biking per day during the count period in September 2022.
- **HubNashville Data**
  - The team evaluated relevant service requests received through hubNashville. Bikeway-related service requests, such as complaints regarding drivers parking in the bike lane, are addressed through the pilot design and minor adjustments to delineators after the pilot was initially installed. The following map shows the locations referred to in service requests.



WHAT WE LEARNED

In addition to the results of the quantitative analysis, the following quotes help illustrate community members' perspectives from the qualitative analysis:

- **Testimonials**
  - "In general, I feel much safer with parking protected bike lanes than the plastic barriers elsewhere on Belmont."
  - "I am a regular cyclist, and I appreciate the enhancements to Belmont Blvd. Parking-protected cycling lanes are wonderful to separate cyclists from moving vehicles."
  - "Excellent work slowing traffic. Belmont is less dangerous for drivers with fewer illegal driving instances. Belmont is also safer for pedestrians, cyclists, and walkers."