# Raised Crosswalks on Cross Street – Belmont, MA

### Site and Treatment Description

Cross Street in Belmont, MA serves as a collector road that connects Route 60 near Belmont Center with Route 2 SB. Cross Street has an average annual daily traffic (ADT)of 6000, with a significant residential traffic accessing a nearby elementary school, located on Cross Street. The Town has enacted a 25mph townwide speed limit, there are several advisory speed limit signs along this corridor reducing the speed to 20mph.

A petition was signed to introduce additional raised elements on Cross Street, particularly in



proximity to Winn Brook Elementary School in 2017. While there has been a raised crosswalk at the intersection of Middlecot Street and Cross Street - on Cross Street - since 2010, the town voted to install additional speed management treatments along this corridor in response to citizens' requests. As a result, an additional raised crossing was installed on Broad Street (circa 2018). At the same time, the resurfacing of Cross Street east of Winn Brook Elementary led to the installation of granite curbing and new pavement markings along that portion of the corridor.



# **Design Specifications and Cost**

The raised crosswalks were installed initially at the intersection of Cross St and Middlecot St; however, additional measures were installed along the corridor leading upstream and downstream of the Winn Brook Elementary School. As stated by some local personnel, these treatments are considered inexpensive and effective at reducing speeds and crashes, as compared to police enforcement intermittently along this corridor. That said, the typical cost per raised crosswalk ranged from \$7,000-\$20,000 depending on the proximity to drainage.

The raised crosswalk design referenced the FHWA specification (see <u>FHWA Traffic Calming</u> <u>ePrimer</u>), which highlights roughly 6ft rises on each side and table of about 10ft in depth. As a result the raised crosswalk itself sits roughly 3 to 3.5 inches above the roadway, with adequate ADA compliant ramps connecting to the sidewalk on each side. This design specification can be found in the Appendix of this case study.

#### Support Story

In 2017, several residents of Cross Street in Belmont <u>raised concerns of vehicle speeds on their</u> roadway citing that Cross Street was being used as a "cut-through" and that there were concerns with speeding and safety. As a result, the following petition summary was raised:

Speeding is a problem on Cross Street as more cars use Belmont as a 'cut-through' when traveling to and from work. Cars speed through this residential neighborhood, including in the Winn Brook school zone, which hundreds of children traverse each day to get to and from school. Within the last decade, Cross Street has been the scene of numerous car accidents including a fatal accident involving a vehicle striking a pedestrian near the intersection of Cross and Alexander. Given the well documented links between car speed and the risk of severe injury or death in pedestrian accidents and the increase in car accidents and 'distracted' driving, the Town of Belmont needs to introduce additional features that force vehicles to slow down as they travel on Cross Street. Currently, a raised crosswalk in front of Winn Brook School forces cars to slow down at that location. However, the rest of Cross Street represents more than a half mile stretch of wide, flat roadway that encourages cars to speed up, not slow down. More, raised walks and tables will enforce slow and safe driving on Cross Street. While it will not eliminate accidents, it will reduce their likelihood and, when they occur, their seriousness.

This petition summary stated that the residential group were looking for action regarding safety improvements on Cross Streets, particularly introducing additional raised crosswalks and/or raised tables that would encourage vehicles to travel more slowly and safely in the densely populated neighborhood. Residents proclaimed that the "Waze" effect, or otherwise known as GPS detouring, was leading to more vehicles being directed onto Cross Street as a cut-through corridor. With over 50 signatures of support from residents, the town was able to push forward a plan to install the additional treatments along this corridor, specifically the raised crossing at Broad Street.

#### Maintenance Tips

Local officials continued to implore that communication with both DPW and EMS were critical in prolonging the lifespan of these measures. As long as these groups were aware of their locations, they would be able to maintain them properly. Additionally, the location of raised crossings at an intersection has led to some pooling of water inside the intersection, which could be addressed.

#### **Other Lessons**

The redesign of Cross Street included both the installation of raised elements near Winn Brook Elementary, as well as the additional granite curbing and new pavement markings north of Brighton Street. After talking with town representatives, it was clear that testing these strategies out near school zones has been a success. These school zone locations become a showcase for the rest of the community to see, which helps promote them in other areas around town. Additionally, it remains important to note that before data helps "sell" these designs. Once there is a clear need, the town can test out these strategies, and conduct 6–12-month follow-up check-ins to make sure they are performing.

# **Speed Impacts**

While there have not been any speed studies conducted on this corridor, a speed feedback sign was installed in early 2018 to help deter speeding motorists. It is important to note that a speed feedback sign still remains today near the intersection of Munroe Street in the Northbound direction.



# Appendix A - Raised Crosswalk Specification

Source: Delaware DOT