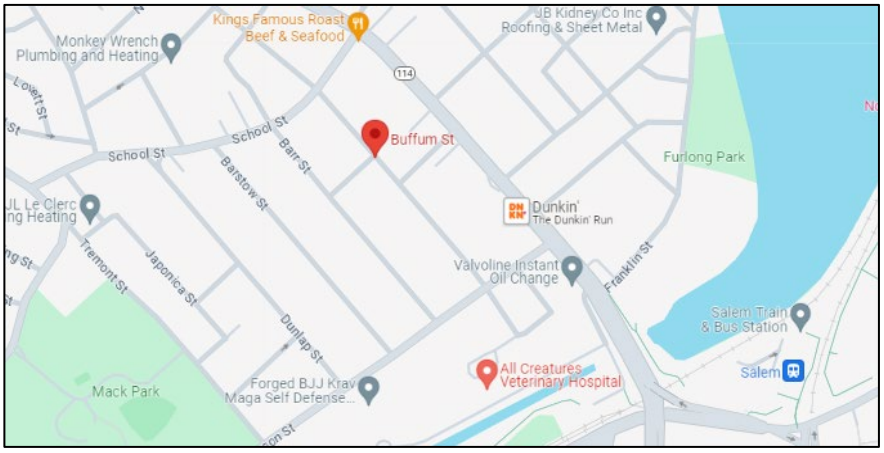
Speed Humps: North Salem Neighborhood - Salem, MA

Site and Treatment Description

Buffum, Barr, Barstow, and Dunlap Streets are parallel residential streets in the North Salem neighborhood of Salem, MA. Their average daily traffic ranges from 300 (Barr, Barstow) to 800 (Dunlap) vehicles/day. Because they are straight and have long blocks, they are prone to high-speed driving, and are often used as cut-throughs. The speed limit is 25 mph.



In 2020, temporary speed humps were installed on Buffum Street. When citizens reported traffic was diverting to parallel local streets, the project quickly expanded to cover the four streets with 16 speed humps in all, for an average spacing of 275 ft. In 2022, permanent speed humps were installed at the same locations as the temporary humps.

Before-After Speed Results

For the four streets as a whole, the percentage of vehicles going faster than 25 mph fell from 36% to 7% with temporary humps, and to 3.5% with the permanent humps. The City of Salem publishes a data portal showing all of its speed data.

Design Specs and Cost

Salem used temporary speed humps for the first two years, and then installed permanent speed humps after the trial period showed effectiveness and community acceptance.

Temporary speed humps from Treetop (see description of their "standard" speed hump), which are roughly 3 ft deep (in the direction of vehicle travel) and 2 inches high. Price for a similar project in 2023 was $1,650 per hump plus $800 apiece for installation. When a pilot project is made permanent, temporary humps are then applied to a different street without having to purchase new material, though they have to purchase new bolts, anchors, and warning signs.

Permanent humps follow a commonly used spec published long ago by ITE (see appendix). They are 12 ft deep and 3 inches high, with a parabolic profile. A contractor installed 16 of them for a cost of $2,630 each.

Support Story

The City's Traffic & Parking Commission adopted Vision Zero and made it a policy to support traffic calming in 2019, and invited applications from citizens. Staff evaluated the request for Buffum Street, determined it was worthy, and engaged a consultant, Neighborways Design, to help with design, public engagement, and evaluation. Staff reached out to fire and public works officials, and there was no objection. (On streets used as fire response routes, Salem has chosen speed cushions instead of speed humps to better accommodate fire trucks.) The design was approved by the city's Traffic & Parking Commission.

As the number of citizen requests for traffic calming has grown, the City found a need to objectively evaluate and prioritize them, and so they developed a system that rates streets' need for traffic calming based on speed data. Those ratings and the request form can be found on the City's public engagement website, built on a platform provided by PublicInput.com.

By policy, the City prefers to first do pilot installations with temporary materials, evaluate performance with speed and volume measurements, and survey abutters regarding their satisfaction. After two years, with data showing a large reduction in speeding and local satisfaction high, permanent humps were installed. (Elsewhere in the city, a pilot speed hump project was not continued due to objections and a lack of strong support from abutters.) Evaluation data is published in a data portal and in annual presentations made by the traffic calming consultant to the Traffic & Parking Commission, published here.

Maintenance Tips

Temporary speed humps have to be removed for the winter and re-installed in spring. The labor involved is often done by public works staff, but sometimes has to be contracted out. Reinstallation in the spring requires purchasing new anchors and bolts. Salem has so many temporary speed humps that they had to buy a storage shed to hold them off-site during the winter. The temporary humps are modular, breaking down into pieces roughly 3' x 2' and weighing 60 lbs.

Having an on-call contractor to help with the temporary speed humps has been helpful.

Other Lessons

When speed humps were first installed on Buffum Street only, and similarly on Fairfield Street in South Salem, some traffic was diverted to parallel local streets. This led to the concept of traffic calming *zones* in North Salem and South Salem, in which traffic calming is applied to a set of parallel streets bounded by collector streets. That way, any diverted traffic goes to collector streets, which are intended for through traffic. In the North Salem zone, average daily traffic fell on all four streets by 25% on average.

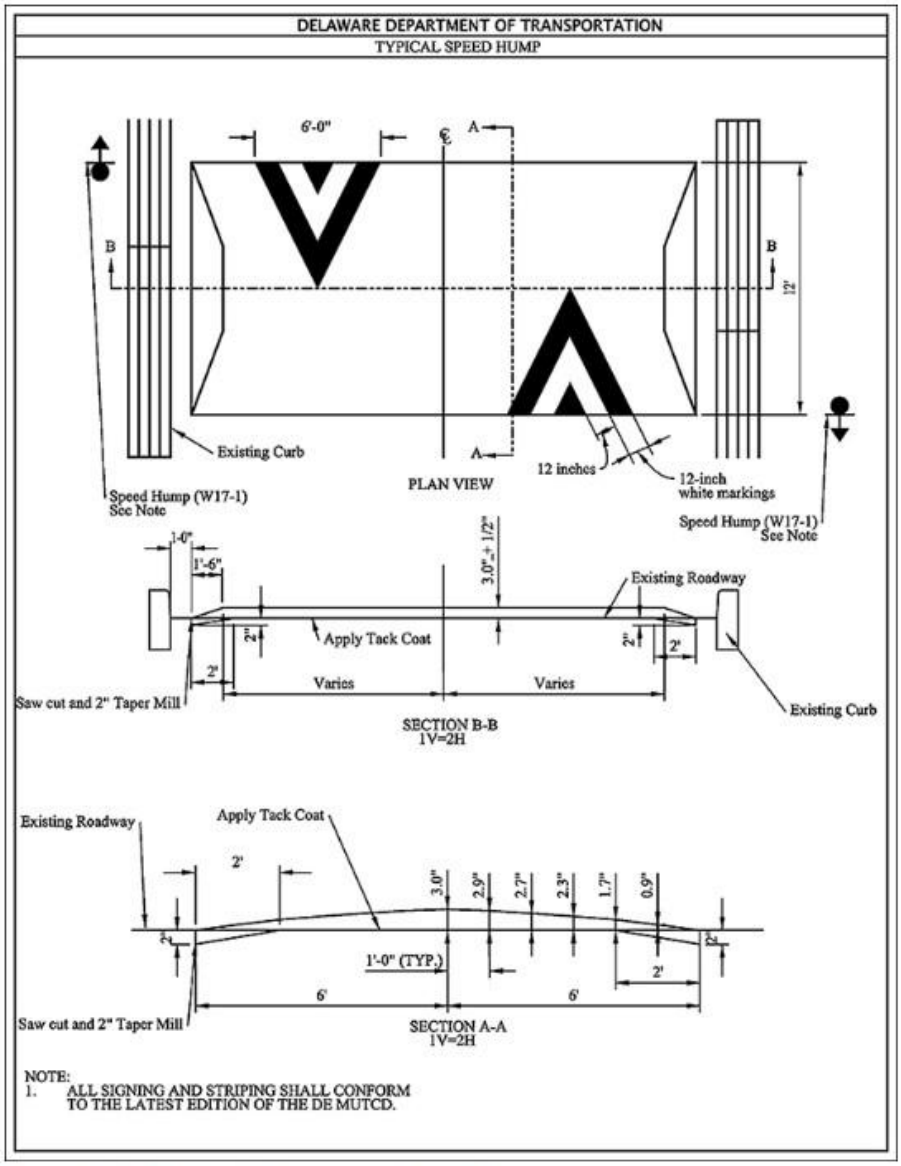
As demand for traffic calming outstripped the City's capacity to deliver projects, the City has been working to expand its capacity, including by engaging a consultant. According to Assistant

Transportation Director Christina Hodge, “the biggest lesson learned is that these temporary devices are effective in slowing speeds in neighborhoods, and now everyone wants to be part of the program.”

Further Plans

The City continues to install speed humps and other traffic calming devices at an increasing pace.

Appendix - Permanent Speed Hump Specification



Source: Delaware DOT