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TO: Richmond Selectboard

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SUBJECT: Overview of Traffic Calming Measures

### Background

The [Richmond Bike, Walk, and Trails Plan](#) suggest the installation pedestrian crossings and either speed humps, speed tables, or chicanes in the short term. Chicanes would involve installations to narrow the roadway, forcing drivers to drive slower through the road or take turns driving through the roadway.

Typically, the installation of permanent fixtures in the roadway is considered high impact—mainly because once a speed hump is installed or a curb is relocated, it cannot be easily removed—and warrants further investigation. Further investigation would involve a speed study, a traffic count, and an analysis of the type of traffic calming measures that can be installed and exact locations for installing such measures. I've enclosed an example traffic calming study CCRPC and Stantec did for Town of Williston for Blair Park Road.

To give you a sense of the range of possibilities for traffic calming measures, I have listed a variety of low-impact and high-impact measures below.

### Types of Traffic Calming

Unlike high-impact traffic calming measures, low- and medium-impact traffic calming measures are less intrusive or would not modifying the physical road. Such measures include:

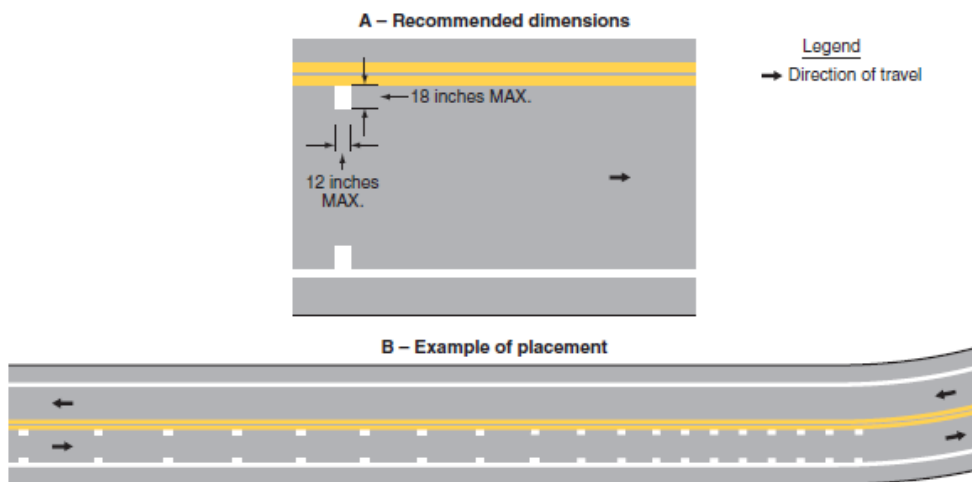
- Pavement markings – Examples include:
  - Converging chevron marking patterns



- Transverse markings



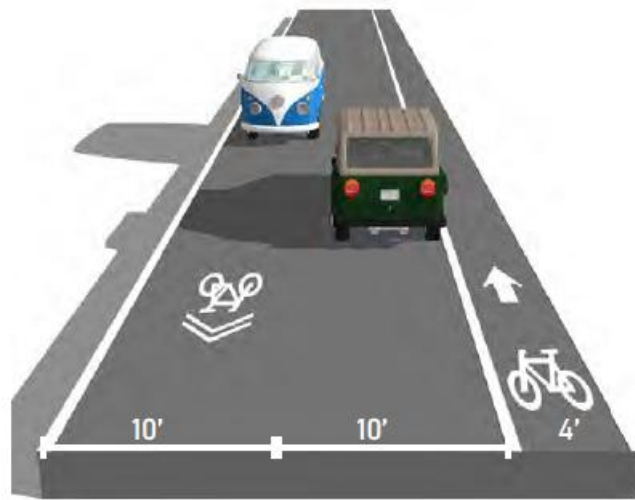
- Optical speed bars



- Zigzag pavement markings.

Most of these types of pavement markings within the travel lane give drivers the impression that they are traveling at a high speed, persuading them to slow down. [Studies](#) show that these types of pavement markings reduce speeds.

Contrastingly, the removal of signage and striping can also lead to slower streets. The Richmond Bike, Walk and Trails Plan suggest removing center lines on some roads to lower vehicle speeds:



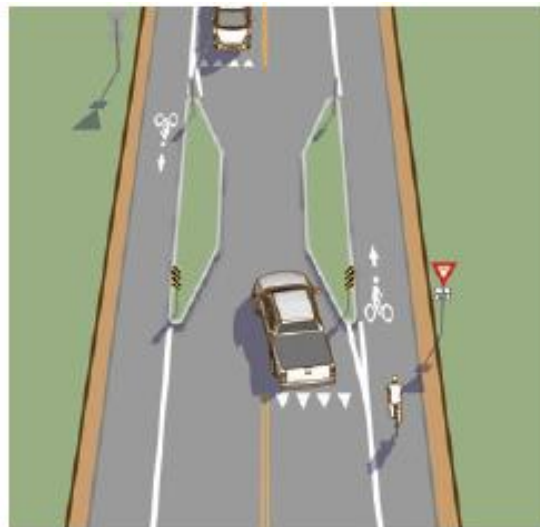
The removal of signage entirely is a relatively newer concept but has shown to be effective: [Why don't we do it in the road? | Salon.com](#); [Roads Gone Wild | WIRED](#).

- Signage – Speed feedback signs, and red borders around speed limit signs have led to reductions in speeds, studies show.

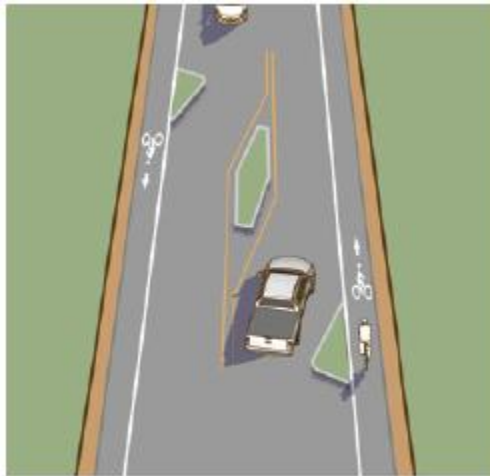
To note, Rectangular Rapid Flashing Beacon (RRFB) signs are installed primarily for the benefit of pedestrians. VTrans recommends that RRFBs work best in locations where special emphasis is required, and that they should only be used at uncontrolled crosswalks.

High-impact traffic calming measures include:

- Speed humps
- Speed tables
- Speed cushions
- Roundabouts, mini roundabouts and traffic circles
- Chokers – Also known as pinch points, this traffic calming measure narrows the roadway through curb extensions and forces vehicles to merge into a single lane:



- Lateral shifts – This realigns an otherwise straight travel path and creates chicanes in effect. By forcing drivers to turn, this measure lowers vehicle speeds:



- Median Island – Similar to lateral shifts, median islands narrow travel lanes and force drivers to drive around an obstruction. The island itself serves as a pedestrian refuge:



Striping, bollards and planters can be used to temporarily or seasonally implement high-impact traffic calming measures:

- A lateral shift using bollards and high-impact installations:



- A median island using bollards:



- A curb extension using paint and bollards:





### Sources

The above photos and renderings were pulled from a variety of sources:

- [The Federal Highway Administration \(FHWA\) Small Town and Rural Multimodal Networks](#)
- [FHWA Report: Factors Influencing Operating Speeds and Safety on Rural and Suburban Roads](#)
- The Richmond Bike, Walk, and Trails Plan
- [Intersection Treatments :: Seattle Streets Illustrated](#) – This site from the City of Seattle Department of Public Works has a number of ideas on installing low- to medium-impact traffic calming measures

The Manual on Uniform Traffic Control Devices (MUTCD) from FHWA—which the town uses for placing striping and signage—also has guidance on installing traffic calming measures.