



# CITY OF EAST GRAND RAPIDS

750 LAKESIDE DRIVE SE-EAST GRAND RAPIDS, MICHIGAN 49506

## **Policy and Guidelines for the Use of Speed Cushions**

### A. Purpose & Objectives:

Speed cushions are vertical speed control elements, which are installed on local streets, with low volumes and low posted speeds at locations where speeding has been verified. Vertical speed control elements are typically used at locations where driving the appropriate speed for conditions is particularly critical, such as around school zones, and to manage traffic speeds and reinforce safe, pedestrian-friendly speeds. The Michigan Manual on Uniform Traffic Control Devices (MMUTCD), states that signs (W17-1 Modified) should be used to give warning of a vertical deflection in the roadway that is designed to limit the speed of traffic, guidance given in Section 2C.28 of the MMUTCD.

Objectives of speed cushion installations are to:

- Slow down vehicular traffic in residential neighborhoods
- Promote safety for pedestrians and bicyclists

Because law enforcement cannot always monitor speeds at all locations throughout the City consistently, speed cushions serve to supplement regular enforcement of speed limits by slowing motorists. An FHWA study of 98 speed table installations concluded that the 85<sup>th</sup> percentile speeds were reduced 4-11 mph.

Speed cushions have a similar impact to impacting speeds as speed humps but are designed to allow wider wheel-based vehicles (emergency vehicles, fire trucks, ambulances, etc.) to straddle and pass with minimal delay. The cross-section design noted in Attachment A also allows for snowplowing maintenance operations.

### B. Conditions for Use/Placement:

Speed cushions may be considered for use if the traffic calming guidelines policy criteria are met and where the following conditions exist:

1. Located on Public Act 51 designated local streets with a 25 MPH speed limit.
2. The roadway segment is at least 1,000 feet long between traffic controls (stop sign or signal).
3. Must not be within 300 feet of a controlled approach or within 75 feet of a cross street.
4. Must not be placed in front of driveways.
5. Must not be placed on curves.
6. Must not block roadway drainage.
7. The 85<sup>th</sup> percentile speed, as determined by four speed studies over at least a one-year period, exceeds the posted speed limit by at least 5 MPH.

8. Spacing of speed cushions should generally be 300-500 feet apart. On single blocks of 1,000 feet, two sets of cushions are usually adequate.
9. Subject to available budget.

C. Technical Requirements:

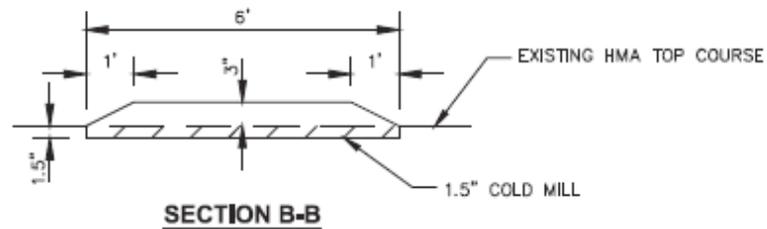
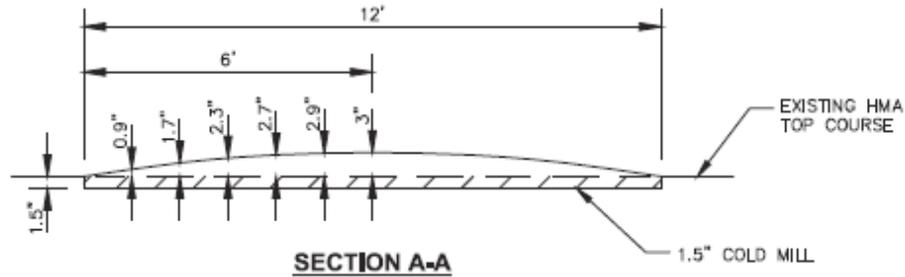
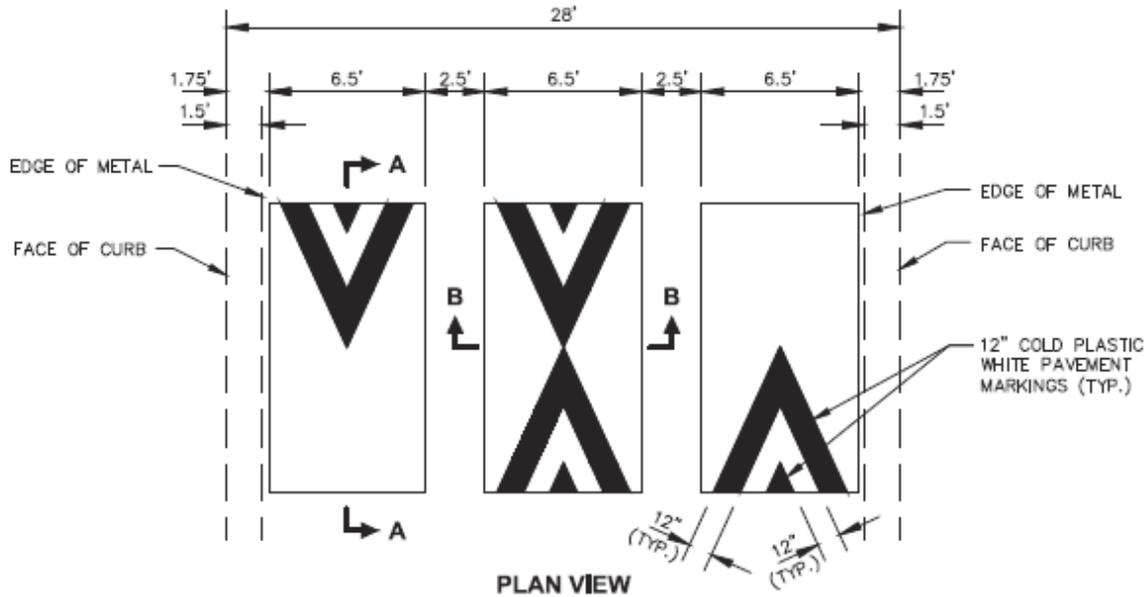
1. See speed cushion detail in Attachment A. Subject to modifications by licensed civil /traffic engineer.

D. Permanent Removal of Speed Cushions:

1. Subject to resident-initiated petition subject to the East Grand Rapids Traffic Calming Policy.
2. Subject to ongoing approval and design by the MMUTCD.

Effective Date Approved by the City Commission: 12/7/2020

Attachment A



NOTES:

1. HMA MIXTURE PLACED FOR SPEED CUSHION SHALL BE LVSP OR AS APPROVED BY THE ENGINEER. THE PAVEMENT FOR THE HMA AND THE COLD MILLING SHALL BE INCLUDED IN THE "SPEED CUSHION" PAY ITEM AND SHALL NOT BE PAID FOR SEPARATELY.
2. ALL LABOR AND MATERIAL REQUIRED TO PLACE THE PAVEMENT MARKINGS SHALL BE INCLUDED IN THE "SPEED CUSHION" PAY ITEM AND SHALL NOT BE PAID FOR SEPARATELY.
3. THE SPEED CUSHIONS SHALL NOT BE INSTALLED LESS THAN 12 HOURS AFTER PLACEMENT TOP COURSE.

**HMA SPEED CUSHION DETAIL**

N.T.S.