Orange County Fire Authority

Community Risk Reduction

1 Fire Authority Road, Building A, Irvine, CA. 92602 www.ocfa.org 714-573-6100

Traffic Calming Devices

Guideline B-04

Serving the Cities of Aliso Viejo • Buena Park • Cypress • Dana Point • Garden Grove • Irvine • Laguna Hills • Laguna Niguel • Laguna Woods
Lake Forest • La Palma • Los Alamitos • Mission Viejo • Rancho Santa Margarita • San Clemente • San Juan Capistrano • Seal Beach
Santa Ana • Stanton • Tustin • Villa Park • Westminster • Yorba Linda and Unincorporated Areas of Orange County

Traffic Calming Devices

The time required for firefighters to reach an emergency is directly related to the proper installation and maintenance of fire department access roadways. It is important to understand the risk associated with traffic calming device installation. Most types of traffic calming devices slow the fire department's response to an emergency by approximately 10 seconds per device. In responding to both fire and medical emergencies, seconds count.

1. PURPOSE

The Orange County Fire Authority (OCFA) is dedicated to delivering prompt and effective emergency services. To support this mission, OCFA aims to maintain or improve its average response times. As part of this effort, a 5-minute response time is used as the evaluation benchmark when reviewing requests for speed bumps or other traffic calming measures that may impact emergency response.

This guideline outlines the evaluation process for traffic calming installation requests and the design of traffic calming devices.

2. SCOPE

Pursuant to the 2025 California Fire Code (CFC) Section 503.4.1, traffic calming devices are prohibited unless specifically approved by the fire code official. These guidelines apply to private streets within the jurisdiction of the OCFA that may require emergency response access.

This guideline includes:

- Plan submittal and review procedures
- Definitions and descriptions of traffic calming measures
- Alternatives to traditional speed bumps
- Design and dimensional standards for OCFA-approved speed cushions

3. DEFINITIONS

Fire Department Access Roads:

The means by which emergency apparatus can access a facility or structure for emergency operations. Access roads must extend to within 150 feet of all portions of the exterior of the first floor of any building and must meet OCFA criteria for width, surface, slope, turning radius, and other access requirements. Fire department access roads are also referred to as fire lanes.

Speed Bumps:

Raised asphalt traffic calming devices, parabolic in shape, designed to slow vehicles. OCFA defines speed bumps as being 3 inches high (±¼ inch) and 12 feet in length to create a gradual rise. These are not typically approved due to their impact on emergency response times. (Refer to Attachment A)

Speed Cushions:
Segmented raised devices designed to slow passenger vehicles while allowing fire apparatus to pass with minimal delay. OCFA-approved speed cushions are 6 feet wide and 12 feet long, installed in a staggered pattern with a minimum 2-foot gap between cushions to allow emergency vehicles (up to 94,000 lbs GVWR) to straddle them. Speed cushions may be constructed of asphalt or modular rubber systems capable of supporting OCFA fire apparatus. (Refer to Attachments B and C)

Gates and Barriers:
Any device or structure that restricts pedestrian or vehicular ingress or egress from a facility. These require OCFA review and approval to ensure emergency access is not compromised.

Radar Speed Signs:
Permanent roadside signs equipped with LED displays that show the speed of approaching vehicles. These are used to enhance driver awareness and reduce speed without physically impeding emergency vehicles.

4. SUBMITTAL REQUIREMENTS

4.1 Submittal Requirements

The scope of work shall be clearly outlined in a cover letter attached to the site plan. The letter must specify whether speed bumps or speed cushions are being proposed and shall be submitted on official Homeowners Association (HOA) letterhead. For public streets, requests must be initiated by the City Traffic Engineer.

4.2 Review and Evaluation Process

a. A plan review fee is required at the time of submittal. This fee includes plan review, and administrative processing.
b. Once the complete submittal package is received, OCFA reserves the right to have the nearest OCFA fire station conduct a response time evaluation, commonly referred to as a “time trial.”
c. Time trials are typically required for speed bump requests due to their impact on emergency response times.
d. Speed cushion installations generally do not require time trials, as they are designed to accommodate fire apparatus.
e. Applicants should allow up to 30 calendar days for a written response if a time trail is recommended or required. In jurisdictions where city approval is required, review by the City Traffic Engineer may extend this timeframe. If no time trial is required, a traffic

calming device plan review will fall within the normal plan review timeline for written response.

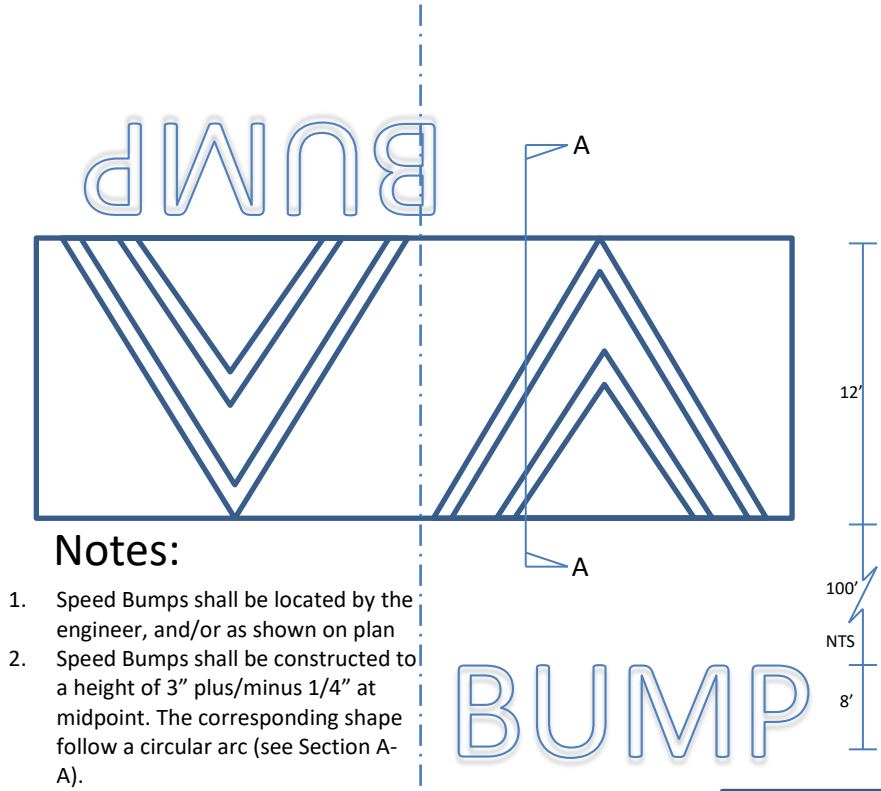
Note: Speed cushions or devices with similar design are the only approved traffic calming device when the emergency response time to the requested street exceeds 5 minutes from the nearest fire station.

4.3 Installation and Inspection

a. If approved, traffic calming devices shall be installed in accordance with the OCFA-approved plans and applicable specifications (see Attachments A and B).
b. Upon installation and if required, the applicant must contact the OCFA Inspection Scheduling Office (contact information provided in the approval letter) to request an inspection.
c. The purpose of the inspection is to confirm compliance with the approved design and ensure the installation does not obstruct emergency access, in accordance with CFC Section 503.4.1

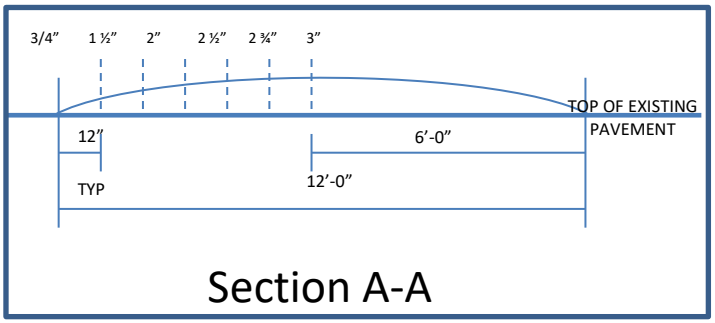
ATTACHMENT A

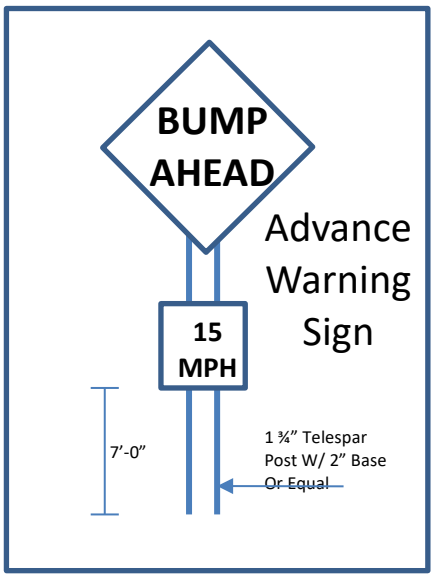
SPEED BUMP DETAILS



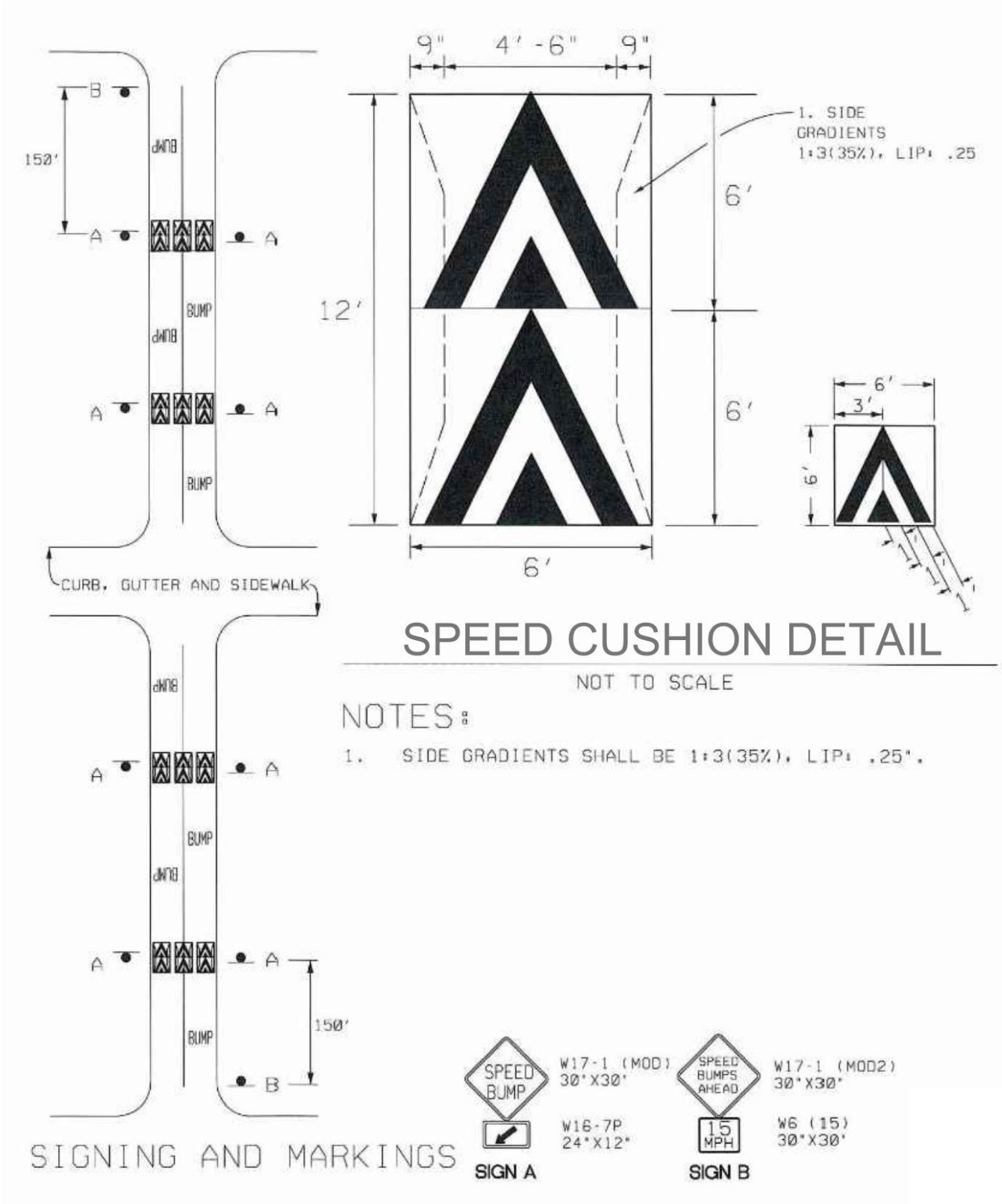
Notes:

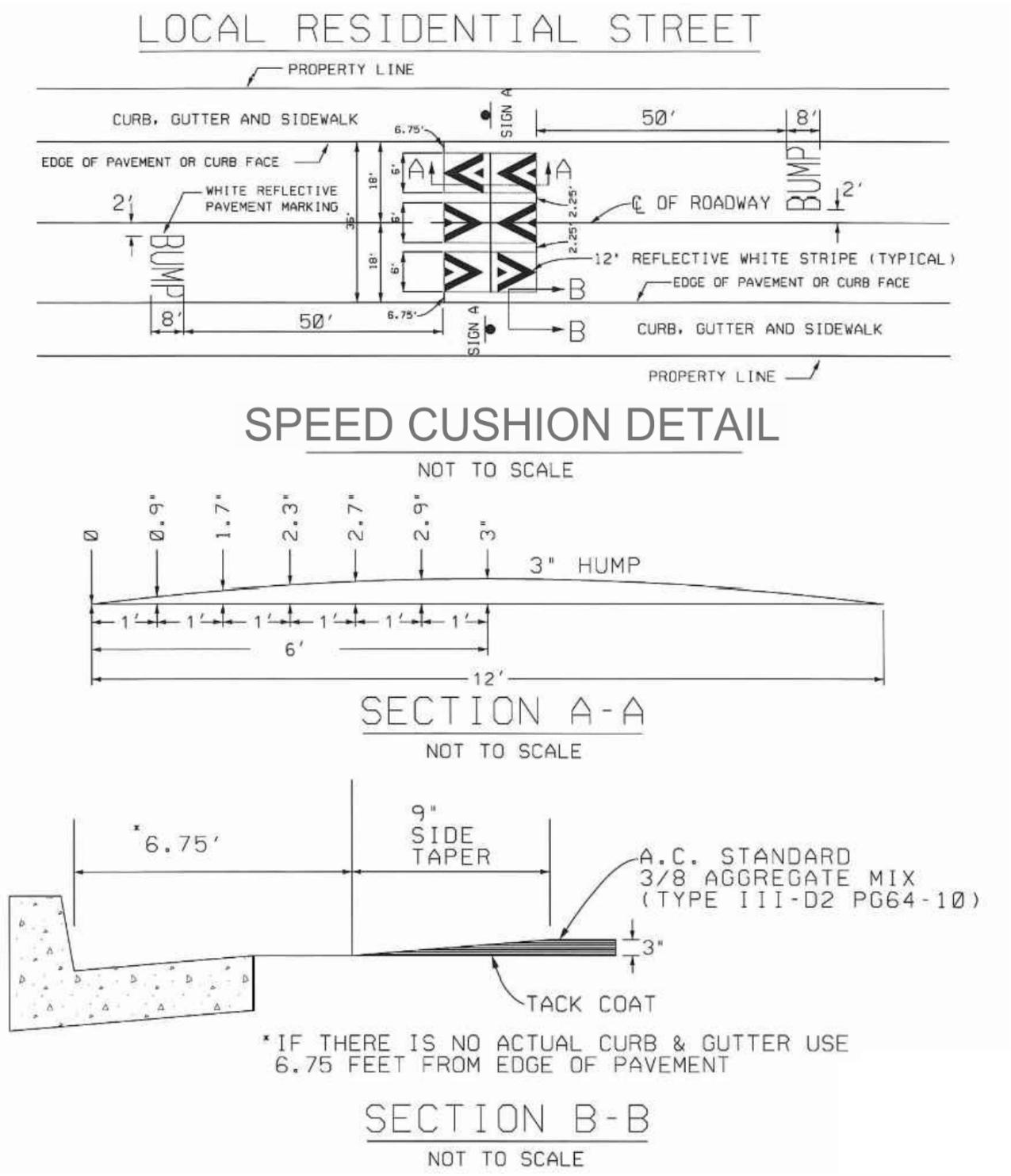
1. Speed Bumps shall be located by the engineer, and/or as shown on plan
2. Speed Bumps shall be constructed to a height of 3" plus/minus 1/4" at midpoint. The corresponding shape follow a circular arc (see Section A-A).
3. Asphalt shall be placed in 2 lifts. 1" minimum at highest point.
4. Asphalt shall be Type III-C3-AR4000 (1/2") with 6% asphalt binder or as directed by the engineer.

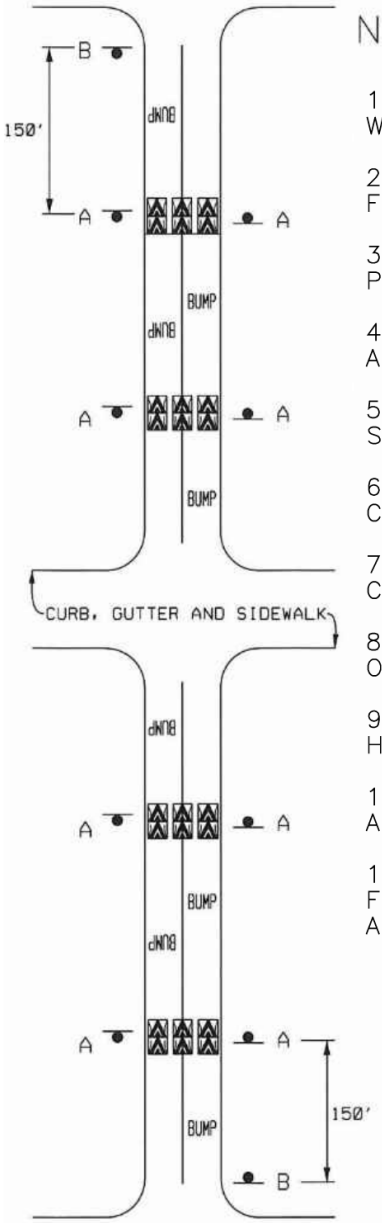




ATTACHMENT B




LOCAL RESIDENTIAL STREET
PROPERTY LINE
CURB, GUTTER AND SIDEWALK
EDGE OF PAVEMENT OR CURB FACE
WHITE REFLECTIVE PAVEMENT MARKING
2'
BUMP
8'
50'
6.75'
SIGN A
18'
6'
35'
A
B
℄ OF ROADWAY
2.25'
12' REFLECTIVE WHITE STRIPE (TYPICAL)
EDGE OF PAVEMENT OR CURB FACE
CURB, GUTTER AND SIDEWALK
PROPERTY LINE
SPEED CUSHION DETAIL
NOT TO SCALE
Ø
0.9"
1.7"
2.3"
2.7"
2.9"
3"
3" HUMP
1'
6'
12'
SECTION A-A
NOT TO SCALE
*6.75'
9" SIDE TAPER
A.C. STANDARD 3/8 AGGREGATE MIX (TYPE III-D2 PG64-10)
3"
TACK COAT
*IF THERE IS NO ACTUAL CURB & GUTTER USE 6.75 FEET FROM EDGE OF PAVEMENT
SECTION B-B
NOT TO SCALE



NOTES:

1. SPEED CUSHIONS SHALL NOT BE PLACED OVER MANHOLES, WATERVALVES, JUNCTION CHAMBERS, ETC.

2. WHERE POSSIBLE EDGE OF SPEED CUSHIONS SHOULD BE 10 FEET MINIMUM FROM THE EDGE OF DRIVEWAYS.

3. WHERE POSSIBLE SPEED CUSHIONS SHOULD BE PLACED AT PROPERTY LINES INSTEAD OF MID-BLOCK.

4. WHERE POSSIBLE SPEED CUSHIONS SHOULD BE PLACED ADJACENT TO STREET LIGHTS.

5. EXACT LOCATIONS OF SPEED CUSHIONS, SIGNS AND MARKINGS, SHALL BE DETERMINED BY THE CITY ENGINEER.

6. WHERE POSSIBLE SPEED CUSHIONS SHOULD BE 150 FEET CLEAR OF INTERSECTIONS OR TIGHT TURNS.

7. WHERE POSSIBLE SPEED CUSHIONS SHOULD BE 150 FEET CLEAR OF STOP SIGNS.

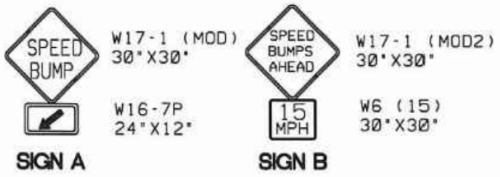
8. WHERE POSSIBLE SPEED CUSHIONS SHOULD BE DOWN STREAM OF STORM DRAIN INLETS.

9. SPEED CUSHIONS SHALL NOT BE PLACED ON SHARP HORIZONTAL CURVES.

10. SPEED CUSHIONS SHALL BE 25 FEET FROM FIRE HYDRANTS AND MANHOLES.

11. SPEED CUSHIONS SHALL NORMALLY BE SPACED 400 TO 600 FEET APART. SPEED CUSHIONS MAY BE SPACED CLOSER ONLY WITH APPROVAL OF THE CITY ENGINEER.

SIGNING AND MARKINGS



ATTACHMENT C

Figure 1: Example of rubber speed cushions installed across a fire lane. Locate the first speed cushion in the center of the street.

Figure 2: Fire truck straddling speed cushions. Locate the first speed cushion in the center of the street.