

City of Hayward Neighborhood Traffic Calming Program Summary



September 2016



This summary provides key information you need to get a full understanding of the City's **Neighborhood Traffic Calming Program (NTCP)**

Angled parking and corner bulbouts at B Street and Mission Boulevard



WHAT IS NTCP?1
DECISION MAKING FLOW CHARTS5
LIST OF MEASURES & DETAILS8
PETITION & APPLICATION25

Traffic circle at Orchard Avenue and Joyce Street





High visibility crosswalk on B Street

WHAT IS NTCP?

The City of Hayward has developed its first comprehensive Neighborhood Traffic Calming Program that will eliminate current inconsistency in the application of traffic calming strategies and provide a well-defined toolkit to utilize the most proper and effective solutions with community outreach and collaboration. This document is developed as a guide for the City Staff, elected officials and residents to become acclimated to the policies and procedures for successful implementation of traffic calming solutions that will benefit Hayward residents and businesses with a variety of traffic safety related concerns.

Traffic calming involves strategies and solutions that may reduce vehicular speeds and cut through traffic; improve safety for all users, and enhance quality of life for residents in the neighborhoods. The Program will benefit the City in various perspectives, including:

- Improve driver attention and awareness, and change driving behavior that brings long term benefits
- Enhance safety for all users – auto, transit, bicyclists, and pedestrians
- Encourage non-auto modes of transportation such as walking and bicycling
- Encourage citizen involvement with neighborhood traffic management in the City
- Provide a fair and consistent process to address public concerns about traffic
- Enhance livability of residential neighborhoods

THE FOUR E'S

The Program explores traffic calming strategies and solutions in the four categories – Education, Empowerment, Enforcement, and Engineering.

- **Education** – Strategies and solutions through a variety of educational events and materials to convey the importance of neighborhood traffic safety, such as the Street Smart Program.
- **Empowerment** – Strategies involve community members to take initiative in solving traffic related problems.
- **Enforcement** – Solutions involve compliance of traffic regulation and enforcing violated traffic activities.
- **Engineering** – Physical improvements on street configurations, signage improvements, and other special treatments.



Speed lumps on Belmont Avenue.

THE THREE TIERS

The traffic calming solutions are presented in three Tiers:

- **Tier I** – Low-cost improvements that require little or no engineering design and construction.
- **Tier II** – Improvements that require some engineering analysis, design, and construction.
- **Tier III** – Requires extensive analysis, design, community outreach and funding.

Detailed traffic calming measures and their evaluation thresholds are provided in this document starting from **Page 5**.

ROLES AND RESPONSIBILITIES

The City

The City is responsible for maintaining a transportation system that provides safe access for various travel modes. The City's Public Works - Engineering and Transportation Department will continue to accept traffic related concerns from the community and utilize the most appropriate approaches identified in this document.

The Community

The Community acts as the informant to the City, sharing any traffic related issues and concerns that negatively affect their safety, comfort, and livability. To make this program successful, it is important that the community becomes more engaged in understanding the traffic calming issues and identifying solutions that are beneficial to the community, without negatively impacting other neighborhoods within the City.

IDENTIFICATION OF SOLUTIONS

City Staff (Public Works) identifies all potential solutions upon receipt of a complaint. Using the process outlined in Chapter III of this document, the problem is filtered by severity into one of the three available tiers of solutions (Tier I, Tier II or Tier III). The screening process is the first step for any traffic safety concern, as it will determine what types of strategies are available to remedy the problem and the level of community engagement.

The easily recognizable and simple problems are addressed in Tier I, where solutions are low-cost and do not require extensive data collection, analysis, design or community engagement. Tier II and III strategies are implemented where Tier I solutions are not likely to be effective. Such strategies require additional data collection, engineering analysis, design, community engagement, petitions, etc. Typically, Tier II and III solutions require much higher staffing resources and funding, and take longer from project inception to completion. Such solutions may also provide benefits that last for longer duration than most Tier I improvements.



Corner bulbouts on Dixon Street and Valle Vista Avenue.



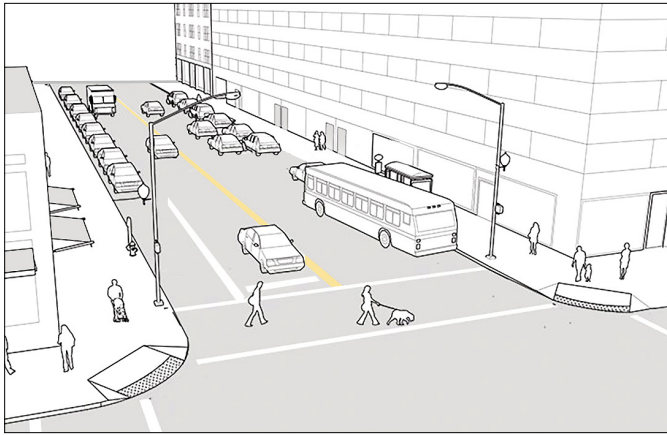
LIST OF MEASURES & DETAILS

This section summarizes with a list of feasible traffic calming solution for the Hayward neighborhoods, as well as illustrations that provide conceptual idea of each measure.

Regular Flashing Beacon on Second Street.

EDGE/CENTERLINE STRIPING

Edgeline/Centerline striping creates narrowed roadways to slow vehicle speeds.



Suitable for:

- Residential streets
- Collector streets

Not Suitable for:

- Arterial streets

TARGETED SPEED ENFORCEMENT

A portable speed feedback sign setup on-street to alert drivers to vehicle speeds.



Suitable for:

- School zones
- Residential streets
- Collector streets
- Locations with speeding concerns
- High pedestrian activity areas

Not Suitable for:

- Intersections
- Significant roadway curvature

SPEED LEGENDS

Speed legends are used to inform drivers of the current speed limit.



Suitable for:

- Residential streets
- Collector streets

Not Suitable for:

- Arterial streets

SIGNAGE

Signage improves awareness to speed limits, pedestrian crossings, and other potential hazards.



Suitable for:

- School zones
- Residential streets
- Collector streets
- Locations with speeding concerns
- High pedestrian activity areas
- Significant roadway curvature

Not Suitable for:

- Intersections

BOTTS DOTS/RAISED REFLECTORS

Botts dots provide tactile feedback to drivers moving across travel lanes or approaching intersections.



Suitable for:

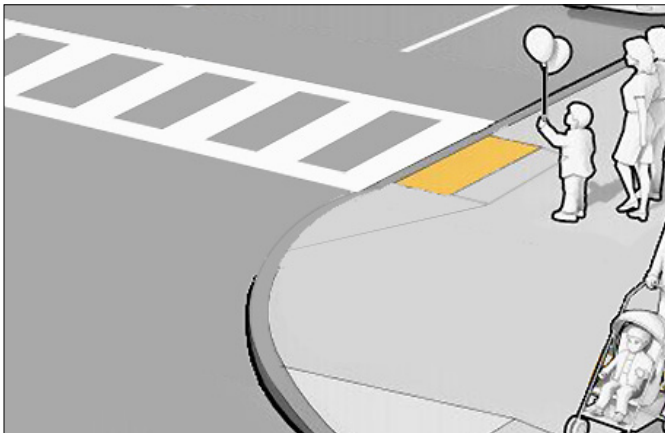
- School zones
- Residential streets
- Collector streets
- T-intersections

Not Suitable for:

- Arterial streets

HIGH VISIBILITY CROSSWALKS

Ladder markings and defined crosswalk widths heighten awareness of pedestrian crossings.



Suitable for:

- School zones
- Residential streets
- Collector streets
- Arterial streets
- Mid-block crossings
- Intersection crosswalks
- High pedestrian activity areas

Not Suitable for:

- Low pedestrian volume locations

INCREASED PATROL AND WARNING/CITATIONS

Increased patrol and warning/citations can effectively reduce speeding and inappropriate driving.



Suitable for:

- Residential streets
- Collector streets
- Locations with speeding concerns

Not Suitable for:

- N/A

SPEED FEEDBACK SIGNS

Speed feedback signs are permanently installed to alert drivers of their speeds versus posted limits.



Suitable for:

- School zones
- Residential streets
- Collector streets
- Arterial streets
- Locations with speeding concerns
- High pedestrian activity areas

Not Suitable for:

- Intersections
- Significant roadway curvature

FLASHING BEACONS

Flashing beacons warn drivers of pedestrians at an uncontrolled crossing.



Suitable for:

- School Zones
- Mixed-use areas
- Residential streets
- Collector streets

Not Suitable for:

- N/A

ROAD DIET

A road diet reduces the number of travel lanes to accommodate other modes and slow vehicle speeds.



Suitable for:

- Wide residential streets
- Collector streets
- Downtown areas
- High pedestrian activity area
- High bicycle traffic
- Locations with speeding concerns

Not Suitable for:

- Narrow roadways

ANGLED PARKING

Angled parking narrows travel lanes to slow vehicle speed and increases parking supply.



Suitable for:

- Downtown areas
- Commercial areas
- Mixed-Use areas
- Residential streets
- Collector streets

Not Suitable for:

- Arterial streets

PACE CAR PROGRAM

A community-driven program focusing on raising awareness to speed reduction in the neighborhoods.



Suitable for:

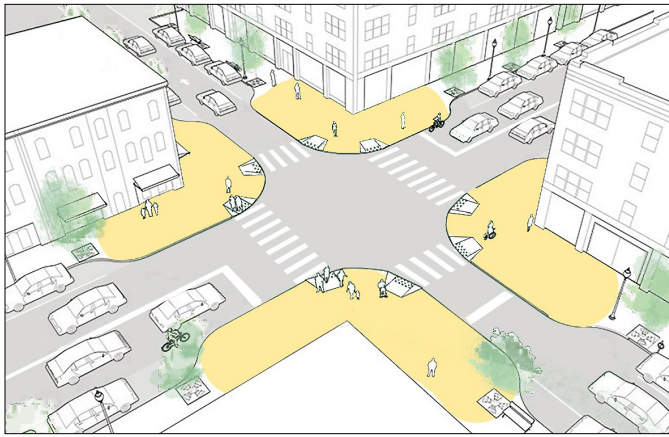
- Downtown streets
- Residential streets
- Collector streets
- High pedestrian activity areas

Not Suitable for:

- Low pedestrian activity areas

BULBOUTS

Bulbouts are curb-extensions that slow vehicle speeds with the impression of a narrowed roadway.



Suitable for:

- Downtown streets
- Residential streets
- Collector streets
- Arterial streets
- High pedestrian activity areas
- Long pedestrian crossing distances

Not Suitable for:

- Low pedestrian activity areas
- Narrow streets
- High truck volumes

TWO LANE CHOKERS

Two lane chokers function similarly to bulbouts but at mid-block locations.



Suitable for:

- Wide streets
- High cut-through volumes

Not Suitable for:

- Emergency access routes
- High on-street parking demand
- High bicycle volumes

CENTER ISLAND NARROWING/PEDESTRIAN REFUGE

Concrete medians that define travel lanes and secure pedestrian right-of-way.



Suitable for:

- Wide residential streets
- Collector streets
- Mid-block crossings
- Long crossing distances
- High pedestrian activity areas
- Locations with speeding concerns

Not Suitable for:

- Narrow roadways

TRAFFIC CIRCLES

Traffic Circles require drivers to slowly maneuver through an intersection.



Suitable for:

- Residential streets
- Collector streets
- Locations with speeding concerns
- High accident rate

Not Suitable for:

- Horizontal curvature
- Vertical curvature

ROUNDBABOUTS (SINGLE LANE)

Roundabouts require drivers to slowly maneuver through an intersection operating with yield control.



Suitable for:

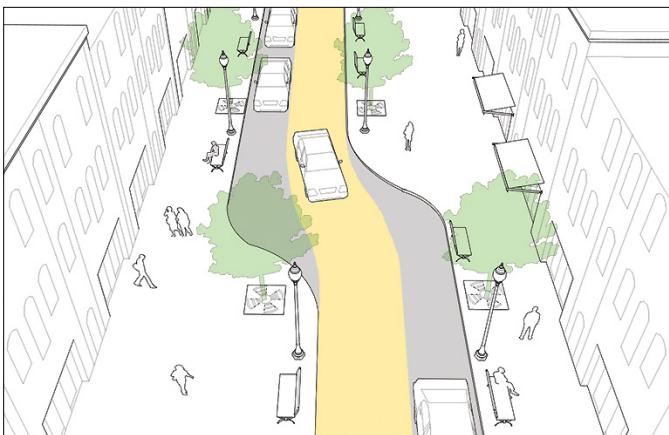
- Collector streets
- Arterial streets
- Locations with speeding concerns
- High accident rate

Not Suitable for:

- Horizontal curvature
- Vertical curvature

LATERAL SHIFTS

Lateral shifts force drivers to make slight maneuvers, resulting in slower vehicle speeds.



Suitable for:

- Residential streets
- Collector streets
- Arterial Streets
- Locations with speeding concerns

Not Suitable for:

- High vehicle volumes

CHICANES

Chicanes function similarly to lateral shifts and require less roadway reconfigurations.



Suitable for:

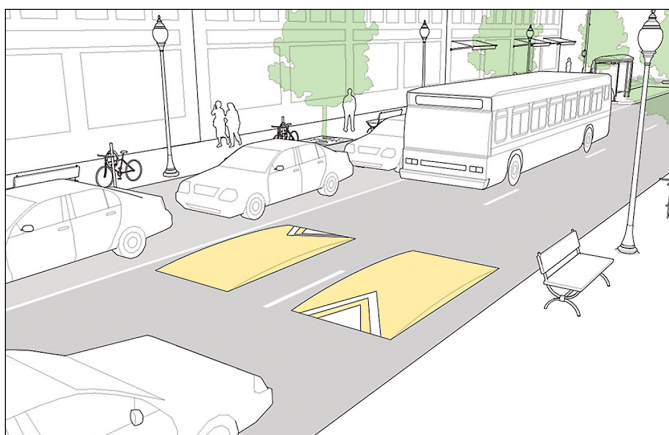
- Wide residential streets
- Wide Collector streets

Not Suitable for:

- Arterial streets
- Emergency access routes
- High on-street parking demand
- High bicycle traffic

SPEED LUMPS

Speed lumps slow driver speeds with vertical roadway deflections.



Suitable for:

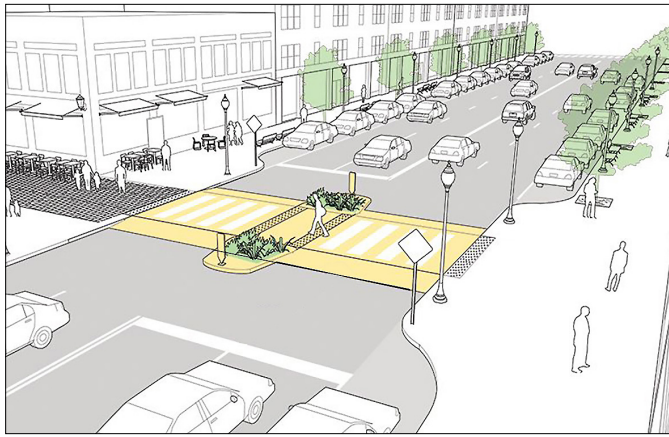
- Residential streets
- Persistent speeding
- High cut-through volumes

Not Suitable for:

- Collector streets
- Arterial streets

RAISED CROSSWALKS

Raised crosswalks slow driver speeds with vertical deflections and emphasis of pedestrian right-of-way.



Suitable for:

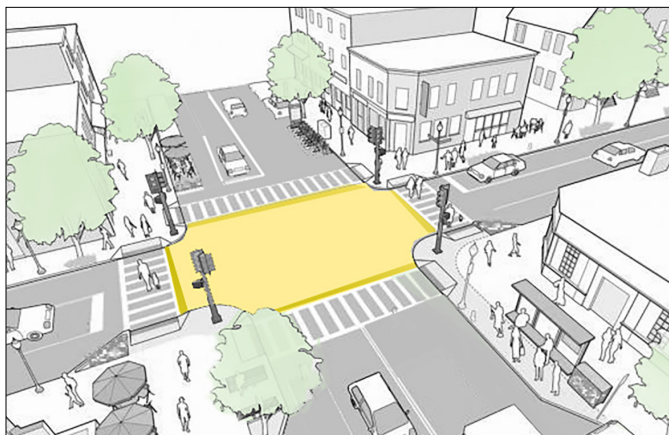
- School zones
- Residential streets
- Mid-block crossings
- High pedestrian activity areas

Not Suitable for:

- Arterial streets
- Intersections

RAISED INTERSECTIONS

Raised intersections slow drivers speed by emphasizing a “shared zone” with pedestrians and bicyclists.



Suitable for:

- Downtown areas
- High pedestrian activity areas
- High vehicle speeds

Not Suitable for:

- Residential streets
- Collector streets
- Arterial streets

DIAGONAL DIVERTERS

Diagonal diverters reduce traffic entering neighborhoods by permanently detouring certain routes.



Suitable for:

- Residential streets
- Locations with speeding concerns
- Limited access desired

Not Suitable for:

- Arterial streets
- Collector streets if significant traffic diversion anticipated

PARTIAL CLOSURES

Partial closures reduce traffic entering neighborhoods by permanently restricting one direction of traffic.



Suitable for:

- Residential streets
- Locations with speeding concerns
- Limited access desired

Not Suitable for:

- Arterial streets
- Collector streets if significant traffic diversion anticipated

FULL CLOSURES

Full closures reduce traffic entering neighborhoods by permanently restricting vehicular access.



Suitable for:

- Residential streets
- Locations with speeding concerns
- Limited access desired

Not Suitable for:

- Arterial streets
- Collector streets if significant traffic diversion anticipated

FORCED TURN ISLANDS

Raised concrete islands separate turning traffic from through traffic when approaching an intersection.



Suitable for:

- Residential streets
- Collector streets
- Locations with speeding concerns
- Limited access desired

Not Suitable for:

- N/A

PRIORITIZATION

Limited funds available to address the number of requests received by the City staff, far exceeds what can realistically be funded in a given year. Establishing a project priority list is essential to allocating resources more effectively. To develop a prioritization list, the NTCP proposes to incorporate an established process that places emphasis on speeds, accidents, volumes, schools, and pedestrian generators pertinent to traffic calming. With this process in place, the City will look to first fund those projects which are most critical to public safety. The proposed process and scoring criteria can be found below in the table.

Criteria		Point Definitions	Points Available
Primary	85th percentile speed	2 points for every 1 MPH above the posted speed limit (85th percentile speed must be at least 5 MPH over the posted speed limit to be considered for traffic calming)	30
	Crash History	3 points for each preventable crash within the last three years	30
Secondary	Vicinity to Schools	7.5 points per school if street fronts or provides access to a school, or if street is a designated Safe Route to School	15
	Pedestrian Generators	10 points if location is within 1,000 feet of a major transit access point or a civic facility; or peak hour pedestrian volume at any adjacent intersections exceeds 100	10
	Traffic Volumes	1 point for 0 – 500 average daily traffic 2 points for 501 – 1,000 average daily traffic 3 points for 1,001 – 1,500 average daily traffic 4 points for 1,501 – 2,000 average daily traffic 5 points for > 2,000 average daily traffic	5
	Cut-through Traffic	2 points if at least 25% of traffic volume is cut-through; 1 points for each additional 5% (Up to 40% max)	5
	Additional Concerns	1 point if visibility restrictions result from roadway geometry; 1 point if segment is a designated Bike Route or pedestrian corridor; 1 point if street has no sidewalks; 1 point if segment is > 1,000 feet in length; 1 point if segment is > 40 feet in width	5
Total			100