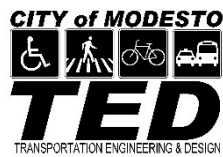


NEIGHBORHOOD TRAFFIC CALMING PROGRAM

DECEMBER 2021



The City of Modesto’s Traffic Calming Program is funded by Measure L Local Control Traffic Management funding.



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List of Acronyms and Abbreviations

ACE	Altamont Corridor Express
ADA	American with Disabilities Act
ADT	Average Daily Traffic
ATP	Active Transportation Program
BART	Bay Area Rapid Transit
BCR	Benefit Cost Ratio
CED	Community and Economic Development Department
CEQA	California Environmental Quality Act
CIP	Capital Improvement Projects
City	City of Modesto
FHWA	Federal Highway Administration
FY	Fiscal Year
GIS	Geographic Information System
HSIP	Highway Safety Improvement Program
MAX	Modesto Area Express
Measure L	Local Roads First Transportation Funding Measure
MFD	Modesto Fire Department
MOVE	Designated Consolidated Transportation Services Agency for Stanislaus Region
MPD	Modesto Police Department
NACTO	National Association of City Transportation Officials
NTC	Neighborhood Traffic Calming
SHP	Speed Hump Program
SOI	Sphere of Influence
StanCOG	Stanislaus Council of Governments
StanRTA	Stanislaus Regional Transit Authority
StaRT	Stanislaus Regional Transit
SWITRS	Statewide Integrated Traffic Records System
TED	Transportation Engineering Design
TIMS	Transportation Injury Mapping System

1 EXECUTIVE SUMMARY

City of Modesto has developed a Neighborhood Traffic Calming Program (NTCP) with the goal of improving safety and the quality of life for residents by reducing the impacts of speeding vehicles, cut-through traffic and careless drivers in residential neighborhoods, funded by Measure L Local Control Traffic Management funds.

To achieve the program goal, the City has established a framework for the selection, application, and design of appropriate traffic calming and pedestrian safety improvement measures in the City of Modesto. This program serves as a toolbox of traffic calming pedestrian safety improvement measures including guidelines for their selection and placement. The following table summarizes the various traffic calming measures considered.

Neighborhood Traffic Calming Measures

Non-Physical Measures	Vertical Design Elements	Horizontal Design Elements	Intersection Modifications
Speed Enforcement	Speed Hump	Chokers	Traffic Circle
Signage	Speed Cushion	Corner/Curb Extensions	Roundabout
Crosswalk Striping	Speed Table	Median Islands	Partial Closure
Edgeline Striping	Raised Intersection	Chicanes	Diagonal Diverter

The program includes opportunities for public engagement, where the City can develop greater understanding of the challenges experienced by residents first-hand, every day, the public can participate in the identification of potential traffic calming projects and facilitates a process where residents and property owners can request and receive relief from traffic-related concerns.

Potential projects can be submitted by residents to the City via website application or email. Projects will be evaluated based on established criteria and selected on an annual basis for implementation as funding allows. A priority ranking system has been developed, with emphasis on safety.

Priority Weighting

Category	Element	Weighting
Safety	Correctable Accident Records	50%
	Vehicle Speeds	
	Vehicle Counts	
	Pedestrian Use	
Location	Proximity to Pedestrian Generators	20%
	Proximity to Planned Projects	
	Distribution of Projects	
Policies	Consistent with City Policy Documents	15%
	Neighborhood Support	
Financial	Benefit Cost Analysis	15%

This NTCP was developed through interdepartmental coordination of various stakeholders, including Community and Economic Development, Public Works, Finance, Modesto Police, Modesto Fire, and the Stanislaus Regional Transit Authority. Program materials have been developed and will be posted on the City’s website along with public outreach efforts.

In anticipation of this program, the City has established a NTCP request log, which currently includes more than 50 requests received since February 2020, for traffic calming projects throughout the City. Measure L Local Control Traffic Management funding has been allocated to address proposed projects in the current fiscal year, and funding for future years is programmed in the *5-Year Measure L Plan (2019-2024)*.

A schedule of program milestones for the current fiscal year, and annual milestones has been developed, for implementation upon City Council approval.

Program Milestones

No.	Deliverable	<i>Target Completion Date</i>
1	Develop Draft Document	10/30/2021
2	Measure L Citizen’s Sales Tax Commission	9/2/2021
3	Internal Coordination (PW, Finance, MFD, MPD, SRTA)	9/30/2021
4	Internal Review of Draft Document	10/29/2021
5	Finalize Document	11/4/2021
6	City Council Acceptance	<i>12/14/2021</i>
7	Review of NTCP Request Log for Qualifying Requests	<i>12/31/2021</i>
8	Develop priority ranking for qualifying requests	<i>12/31/2021</i>
9	Neighborhood Support documentation due	<i>2/28/2022</i>
10	Selection of Pilot Year (FY2021/22) projects	<i>3/15/2022</i>
11	Notification of Pilot Year (FY2021/22) projects	<i>3/31/2022</i>
12	Initial Program Public Outreach	<i>1/31/2022</i>
13	Annual Outreach “Call for Projects”	<i>June 30</i>
14	Annual Cut Off for Project Submissions	<i>September 30</i>
15	Annual Review of Submitted Projects	<i>October 30</i>
16	Annual Development of Priority Ranking for Qualifying Projects	<i>November 30</i>
17	Annual Selection of Projects	<i>December 31</i>
18	Annual Notification of Selected Projects	<i>January 31</i>
19	Program Update	<i>December, 2023</i>

The NTCP is intended to replace the City’s existing speed hump program (Resolution 92-492), which places the financial burden on residents of the neighborhood and limits traffic calming to one solution. This program incorporates current state of practice methods used to calm traffic and puts the identification of potential projects into the hands of the residents/property owners with funding to support their desired project(s).

This program document includes the following:

- Section 1 An Executive Summary of the program.
- Section 2 An introduction to the program, including City of Modesto circulation, funding source, and program goals and objectives.
- Section 3 Outlines traffic calming principles and considerations.
- Section 4 Describes specific traffic calming measures.
- Section 5 Outlines program guidelines, including roles and responsibilities, applying to the program, qualifying criteria, selection and notification.
- Section 6 Outlines prioritization of projects, including discussion of the priority ranking system, and each individual ranking element.
- Section 7 Discusses environmental review as applicable to the program.
- Section 8 Outlines public outreach for the program.
- Section 9 Outlines program start up and future implementation.
- Section 10 Lists references used in developing this program document.

2 INTRODUCTION

The 2021 population of Modesto was estimated at 216,810 based on projections of the United States Census Bureau. The City currently maintains 634 miles of streets consisting of 121 million square feet of pavement surface area. The *FY2017/18 through FY2021/22 Capital Improvement Program* estimates the replacement cost for the City's streets is estimated at \$979 million in 2018 dollars. The City is responsible for 22 bridge structures, three pedestrian-bicycle crossings of waterways, and three pedestrian-bicycle crossings over streets. The City also maintains the bridge decks and pavement markings on 13 structures that cross over State Route 99.

The City is responsible for the design, construction, maintenance, and rehabilitation of traffic signals, roundabouts, sign and pavement markings. The City maintains 227 traffic signals, 11,575 streetlights, 16 flashing beacons, 26 crosswalks with in pavement lights, 32 school flashing beacons, 7 warning beacons, 6 crosswalk beacons, 6 communication hubs, 18 roundabouts and 29,173 traffic signs.

2.1 Circulation

The City of Modesto has 310 lane miles of arterial streets, which are the largest most heavily traveled corridors such as Briggsmore Ave, Sylvan Ave and Pelandale Ave. Modesto has 198 lane-miles of collector streets, such as Carver Rd, Rumble Rd, Sunrise Ave, and Encina Ave, which connect the arterials with the residential/local streets. Modesto has 846 lane-miles of residential streets, which are two-lane, low volume neighborhood streets that have the exclusive function of providing access to abutting properties and connecting to higher-order roadways.

The Neighborhood Traffic Calming Program will focus primarily on residential/local streets, and may include two-lane minor collector streets, which are primarily lined with residential development and serve a function similar to local streets, but with higher traffic volumes. Collector streets serve pedestrian and bicycle traffic, as well as automobiles. Refer to Appendix A for Street Designations throughout the City of Modesto.

2.2 Complete Streets

Streets are a vital part of livable, attractive communities. Everyone, regardless of age, ability or income ought to have safe, comfortable and convenient access to community destinations and public places. A complete street is a transportation facility that is planned, designed, operated, and maintained to provide safe mobility for all users, including children, elderly, pedestrians, bicyclists, transit vehicles and trucks appropriate to the function and context of the facility.

Every complete street looks different, according to its context, community preferences, the types of road users, and their needs.

2.3 Measure L

In November 2016, Stanislaus County voters passed the Local Roads First Transportation Funding Measure, known as Measure L, which is estimated to provide approximately \$960 million in funding for transportation needs over 25 years within the County, from 2017 to 2042. Approximately \$269 million (28%) of Measure L total estimated revenues has been allocated to 16 regional projects. Of the remaining 72% of total revenues, 65% will be passed through continuously to ten local agencies (Cities of Ceres, Hughson, Modesto, Newman, Oakdale, Patterson, Riverbank, Turlock and Waterford, and Stanislaus County) for road repairs, pedestrian and bicycle improvements, and traffic management improvements; and 7% will be passed through to Point-To-Point service providers (MOVE Program), local transit providers (Ceres Transit, Modesto Transit, Stanislaus County Transit, Turlock Transit), and regional rail service providers (ACE, BART, Amtrak).

Distributions to local agencies are described in the *Measure L 2018 Strategic Plan, Adopted 3/29/2018* by the Stanislaus Council of Governments. Measure L Local Control Traffic Management funds have been allocated to develop and implement the City's Neighborhood Traffic Calming Program.

2.4 What is Traffic Calming?

Definitions of traffic calming have varied with publications and with time. The following "definition" was developed by the U.S. Department of Transportation Federal Highway Administration (FHWA):

The primary purpose of traffic calming is to support the livability and vitality of residential and commercial areas through improvements in non-motorist safety, mobility, and comfort. These objectives are typically achieved by reducing vehicle speeds or volumes on a single street or a street network. Traffic calming measures consist of horizontal, vertical, lane narrowing, roadside, and other features that use self-enforcing physical or psycho-perception means to produce desired effects.

2.5 Existing Program

The City of Modesto has had a speed hump program since 1992 (Council Resolution 92-492, Appendix B). Over the years, several minor revisions have been made to the program but the current adopted program is limited, focused only on speed humps/bumps, has not accounted

for other types of traffic calming and puts the financial burden on residents of the neighborhood. This traffic calming program replaces the speed hump program.

2.6 Challenges

Effective traffic calming requires a balance between the need to provide an efficient transportation network and maintaining a livable and safe environment for bicyclists, pedestrians, and other street or street-adjacent users. The challenge of traffic calming is selecting the appropriate measures and locations to reach that balance.

Traffic calming issues have shifted over the decades as communities across the country have embraced the concept of installing traffic calming on their roadways. The rapid response needs of emergency service providers is a concern, as is funding of improvements.

Residents may want slower vehicle travel speeds through their neighborhoods, but mobility desires can be at odds with that goal. A traffic calming measure seen as necessary by some may be seen as a nuisance by others. For example, residents may object to a traffic calming measure being placed directly in front of their property. Neighborhood participation and consensus buy-in are important parts of a traffic calming plan.

Traffic calming can also affect users that rely on the transportation network for efficient movement, including police, fire, emergency responders, transit, school districts and waste collection.

2.7 Program Goals and Objectives

The goal of the Neighborhood Traffic Calming program is to **improve safety and the quality of life for residents by reducing the impacts of speeding vehicles, cut-through traffic and careless drivers**. This goal will be achieved through the following objectives:

- Reduce speed and/or amount of traffic on local streets through specific management techniques.
- Establish a framework for the selection, application, and design of appropriate traffic calming and pedestrian safety improvement measures in the City of Modesto.
- Create a toolbox of traffic calming pedestrian safety improvement measures with guidelines for their selection and placement to standardize traffic calming measures throughout the City.
- Increase public awareness of complete streets and traffic calming concepts.
- Provide opportunity for public engagement in the identification of potential traffic calming projects.

- Facilitate a process where residents and property owners can request and receive relief from traffic-related concerns.

3 TRAFFIC CALMING

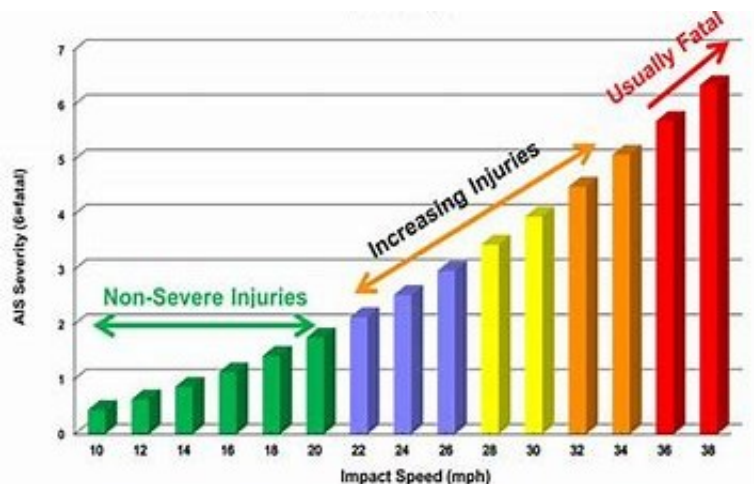
3.1 Importance of Traffic Calming

FHWA’s Traffic Calming ePrimer states:

The importance of reducing vehicle speeds cannot be overstated in an area where there is potential for conflict between a pedestrian and a motor vehicle. The slower the speed of the motor vehicle, the greater the chances are for survival for the pedestrian. If struck by a motor vehicle travelling at a speed of 20 miles per hour or less, a pedestrian is typically not permanently injured. If struck by a motor vehicle travelling at a speed of 36 miles per hour or more, a pedestrian is usually fatally injured.

Figure 1 illustrates the relationship between impact speed and severity of injury (source: USDOT FHWA *Traffic Calming ePrimer*).

Figure 1: Vehicle Impact Speed vs. Pedestrian Injury



3.2 Types of Traffic Calming

Five types of traffic calming measures can be utilized to change driver behavior:

- Non-physical measures
- Narrowing measures
- Horizontal measures
- Vertical measures
- Diversion devices

3.3 Integration with Pedestrian System

To be effective, traffic calming needs to work with and not conflict with the overall pedestrian system. As previously discussed, the City of Modesto's Neighborhood Traffic Calming Program will focus primarily on residential neighborhoods, implementing traffic control measures appropriate for residential and local streets. The City of Modesto's Standard Specifications contains typical and alternate residential and local street sections. Throughout the City there are County pockets, which may not have pedestrian improvements, or have improvements that do not meet with current City Standards. Deficient pedestrian improvements can present challenges when implementing traffic calming measures in developed areas, reinforcing the need for clear guidance and engineering review.

3.4 Americans with Disabilities Act

Any pedestrian improvements contemplated within the City's Neighborhood Traffic Calming Program will comply with current requirements of the Americans with Disabilities Act (ADA).

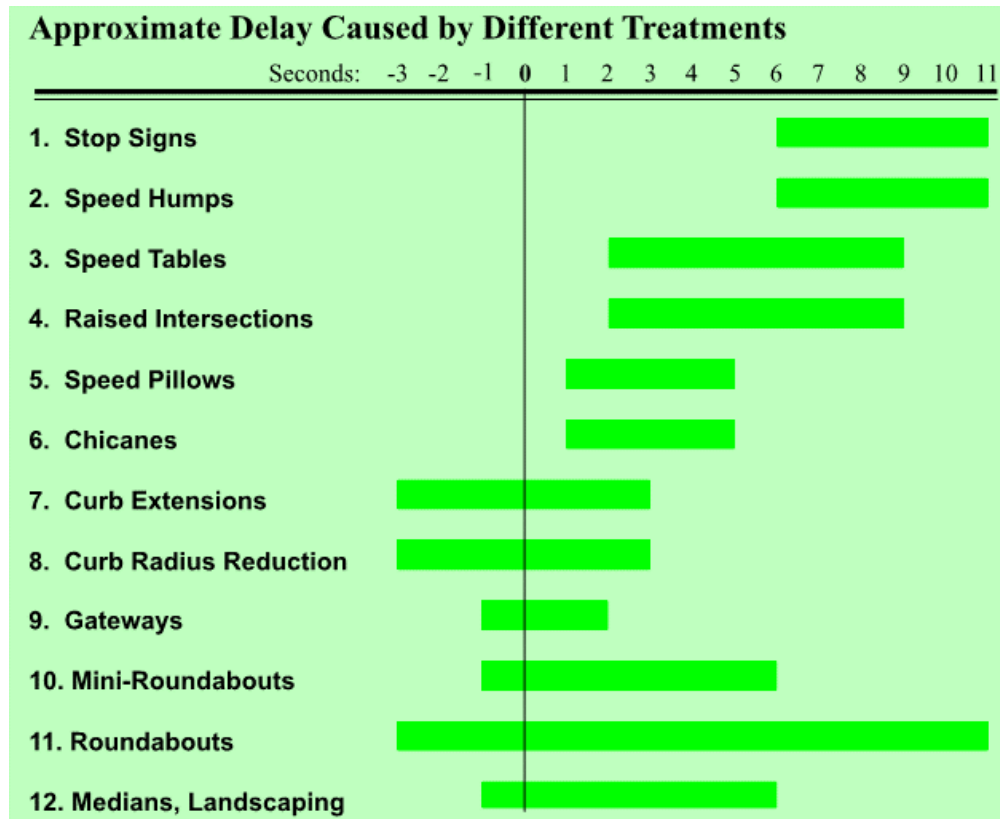
3.5 Emergency Vehicle Response Time

Poorly planned traffic calming can create delays for emergency responders. Speed humps and stop signs have the potential to increase response times, and humps can be especially hard on fire equipment.

One of the motivations for developing this Program was to clarify which traffic calming measures are appropriate for use and where they should be located. As this Program was developed, coordination with Modesto Police Department (MPD) and Modesto Fire Department (MFD) resulted in a clearer understanding of emergency vehicle response needs and priorities. Engagement with MPD and MFD will continue through implementation of the program, with MPD and MFD staff participating in the annual project selection process, and reviewing traffic calming measures that have the potential to impact emergency vehicle response times (such as some vertical measures and intersection modifications).

For example, this Neighborhood Traffic Calming Program, which replaces the City's existing Speed Hump Policy, recommends vertical traffic calming measures such as speed cushions, which allows the wider wheel base of fire equipment to pass around the vertical cushion. Another example of traffic calming measures designed for minimal impact to emergency response vehicles is an offset speed table, that specifically accommodates fire vehicles. In some cases, traffic calming improves response times. Figure 2 (source: Burden, D. and Zykofsky, P., *Emergency Response Traffic Calming and Traditional Neighborhood Streets*) includes impacts to emergency vehicle response times from various traffic calming measures.

Figure 2: Response Time Impacts of Traffic Calming Measures



Note: -3, -2, -1 means a 3, 2, 1, seconds decrease in delay, respectively.

3.6 Stanislaus Regional Transit Authority (StanRTA)

The Stanislaus Regional Transit Authority (StanRTA) was established on January 26th, 2021, when the Modesto City Council and the Stanislaus County Board of Supervisors both unanimously approved the formation of the new agency to improve transit efficiencies and operations in the Stanislaus region. The Stanislaus Regional Transit Authority merges the City of Modesto’s Modesto Area Express (MAX) and the Stanislaus County’s Stanislaus Regional Transit (StaRT) transit systems into one seamless system to better serve transit users. The MAX and StaRT brands will be discontinued in 2022, replaced with a new brand that will be determined in November 2021. In addition, the StanRTA started on Comprehensive Operational Analysis of all routes in the system. This analysis is anticipated to make recommendations to

streamline and create efficiencies in the operation of transit services in Modesto and Stanislaus County. Those changes are anticipated to be completed by summer 2022.

Traffic calming measures can have impacts on large vehicles, including buses. StanRTA staff participated in the development of this Neighborhood Traffic Calming Program, and will continue to be involved as the program is implemented.

3.6.1 StanRTA fixed and commuter routes

The StanRTA currently operate the Modesto Area Express (MAX), Modesto Dial-A-Ride (MADAR) and StaRT systems, which currently serve the City of Modesto, and portions of other areas outside the city limits including commuter services to areas outside Stanislaus County.

The StanRTA provides 24 bus routes on Monday through Fridays, beginning as early as 5:15 am, and ending generally at 11:00 pm. On Saturdays and Sundays there are 19 routes that operate. In addition to the routes in Modesto and Stanislaus County, the StanRTA provides weekday morning and evening commuter routes to and from the Dublin/Pleasanton Bay Area Rapid Transit (BART) Station, the Manteca/Lathrop Altamont Commuter Express (ACE) train station and the downtown transit centers in Manteca and Stockton.

The ADA paratransit system operates as a senior/disabled, paratransit service to satisfy the Americans with Disabilities Act (ADA) requirements for those that are unable to use a fixed route.

The majority of routes connect to the downtown Modesto Transportation Center. This Center provides a connection point to other regional and interregional transit services such as Greyhound, Taxi, and the commuter buses to BART, ACE, Manteca and Stockton. The Center is designed to accommodate future passenger ACE rail stop in Modesto.

All buses are accessible in accordance with ADA requirements, and are equipped with a bike rack to accommodate 2-3 bicycles each, providing a smooth system for securing bicycles

Some transit routes are located on some collector and residential streets. Refer to Appendix C for StanRTA System Routes.

3.7 Legal Issues Liability

The following discussion was presented in FHWA's *Traffic Calming ePrimer*:

While successful legal action related to traffic calming measures is not common, the successful lawsuits have generally been the result of improper or inadequate maintenance of

signs or pavement markings, not because a traffic calming measure was determined to be inherently unsafe.

In order to minimize the potential for any liability, a public agency should develop and maintain documentation of every step in the traffic calming program process.

- *Document the goals of the traffic calming program and individual measures*
- *Confirm that the overall traffic calming program is appropriate for the government entity, in particular its size, its responsibilities, and the problems it is charged to address*
- *Adhere to a formal process for problem identification, analysis, funding, and implementation*
- *Document guidelines for speed, volume, and safety conditions that factor into a decision*
- *Follow a rigorous, comprehensive, and consistent process for selecting a traffic calming measure*
- *Install traffic calming elements that are consistent with national, state, and local practice relative to geometric design, pavement markings, signs, and lighting*
- *Design the traffic calming measure so that a motorist acting reasonably and exercising ordinary care can understand the measure and safely negotiate it*
- *Document and justify exceptions in accordance with appropriate design exception procedures*

The City's Neighborhood Traffic Calming Program will provide documentation and guidance to address most if not all of the above concerns.

3.8 Temporary Versus Permanent Installation

Installing a temporary version of a traffic calming measure can be useful to verify the location, configuration, and geometry of a measure will produce the desired effect, or to gauge community reaction. Temporary installations can be applied when there are insufficient funds for permanent construction, or if a short-term initiative is needed.

Tactical urbanism is an approach to neighborhoods where short-term, low-cost, temporary changes to the built environment are implemented to improve local neighborhoods and city gathering places.

The following discussion was presented in FHWA's *Traffic Calming ePrimer*:

It may be appropriate to install a temporary version of a traffic calming measure under certain circumstances. Examples include:

- When there is a need to verify that the location, configuration, and geometry of a traffic calming measure will produce the desired effect (e.g., vehicle speed change, motorist compliance, vehicle maneuverability), before investment in a permanent feature*
- When there are insufficient funds available for permanent construction*
- When there is a desire to gauge community reaction to, or opinion of, the measure before investment in a permanent feature; or*
- A short-term initiative is needed to provide traffic calming on a local street during a major traffic generating event or nearby construction on the highway system.*

Typical materials used in a temporary traffic calming feature include delineators, precast concrete curbing, removable rubber speed humps, precast or wood planters, rolled asphalt, pavement markings and signage.

The potential effectiveness of a traffic calming measure can likely be affected by the quality of its design and implementation. Therefore, the limitations introduced in a temporary installation may likewise limit the effectiveness of the measure.

Temporary traffic calming measures may be implemented if appropriate, based on specific issues reported, and individual site characteristics.

3.9 City Standard Specifications

In the interest of standardizing traffic calming throughout the City, standard design criteria and details will be included in the next City Standard Specifications update. Design information from traffic calming measures implemented through this NTCP will become the basis of future standard details, with input from and consideration given to all users of City streets, including vehicles, pedestrians, bicycles, and emergency and transit vehicles.

4 TRAFFIC CALMING MEASURES

The City of Modesto has had a speed hump program (SHP) since 1992 (Council Resolution No. 92-492). Over time minor revisions have been made to this Program, however, the SHP has the following limitations:

- focused only on speed humps
- has not accounted for other types of traffic calming measures
- neighborhood residents pay for entire cost of implementation.

This Neighborhood Traffic Calming Program will build upon the current adopted program by expanding it to include moderate volume residential and collector streets with posted speeds at or below 35 mph and various traffic calming devices that are friendlier to emergency vehicles. The City will not continue to install the speed hump/bump due to its delay in emergency vehicle response times. Speed humps are included in the neighborhood traffic calming measures for discussion purposes, as there are many existing speed humps existing throughout the City.

In general, traffic calming measures consist of horizontal, vertical, lane narrowing, roadside, and other features that use self-enforcing physical or psycho-perception means to produce desired effects. The following sections discuss various traffic calming design elements, and includes information originally presented in the National Association of City Transportation Officials (NACTO) *Urban Street Design Guide*.

The City of Modesto’s Neighborhood Traffic Calming Program will include the traffic calming measures summarized in Table 1, and discussed in the following pages.

Table 1: Neighborhood Traffic Calming Measures

Non-Physical Measures	Vertical Design Elements	Horizontal Design Elements	Intersection Modifications
Speed Enforcement	Speed Hump	Chokers	Traffic Circle
Signage	Speed Cushion	Corner/Curb Extensions	Roundabout
Crosswalk Striping	Speed Table	Median Islands	Partial Closure
Edgeline Striping	Raised Intersection	Chicanes	Diagonal Diverter

4.1 Non-Physical Measures

Non-physical measures include traffic calming measures that do not require the construction of physical modifications to the roadway. This can include speed enforcement, signage, crosswalk striping and edgeline striping.

4.1.1 Speed Enforcement

In coordination with the Modesto Police Department (MPD), targeted speed enforcement may be an initial measure to help reduce speeding in a specific area. Based on survey results, a request is submitted to the Modesto Police Department for the desired enforcement in an area. MPD would then deploy an officer in the area in hopes to fix driver behavior by enforcement. Due to the limited resources, enforcement would not be continued indefinitely. Targeted enforcement may be used in conjunction with other measures to help drivers become more aware of the new restrictions on a roadway.



4.1.2 Signage

Traffic signs can be installed to make roadway users aware of a roadway condition, to fully utilize parking capacity or to restrict vehicular traffic. Although signage can sometimes be viewed as a short-term fix and often ignored by drivers, advancements have been made to make the signs more visible. LED lights can be added to the perimeter of signs to make motorists aware of certain road conditions or help enforce regulatory signage. See below for an example (Source: Solar Thingz).



Radar feedback signs can also be used to inform road users of their speed compared to the posted speed limit. Throughout Modesto, there are standard warning signs (from the Manual of Uniform Traffic Control Devices) that advise motorists to slow down for curves, pedestrians, stop signs, signals, and schools. For traffic calming purposes, signage may be more effective when combined with other traffic calming measures. Figure 3 includes examples of signage (source: Field photo, Google Street View).

Figure 3: Signage Examples



4.1.3 Crosswalk Striping

A marked crosswalk helps guide and channelize pedestrians to a preferred crossing location. Marked crosswalks are most appropriate near schools, recreational facilities and other pedestrian generators. Crosswalks provide a centralized location for pedestrians to cross, increase driver awareness of pedestrians, and are easy to install. However, pedestrians entering a crosswalk may have a “false sense of security”, as it is very visible to them, but not so much to approaching drivers. Figure 4 shows typical crosswalk striping located on Lucern Avenue (source: Google Street View).

Figure 4: Crosswalk Striping (Lucern Ave)



4.1.4 Edgeline Striping

Edgeline striping is used to create narrow travel lanes which give the impression of a narrow street, which may help reduce overall speeds. Striping can be placed near the curb, center of roadway, or midblock to create the appearance of a constricted roadway. Edgeline striping is effective on long, wide residential streets with speeding traffic, although it may result in loss of street parking.

Edgeline striping is relatively easy to install and lower cost to modify when compared to other types of installations. This kind of striping can be highly effective when used as a temporary measure to test effectiveness and neighborhood acceptance of traffic calming prior to committing to full construction. Figure 5 shows typical edgeline striping on Orangeburg Avenue (source: Google Street View).

Figure 5: Edgeline Striping (Orangeburg Ave)



4.2 Vertical Design Elements

Comprehensive traffic calming uses physical design features and warning systems to enhance safety, slow traffic or divert traffic from residential neighborhoods.

4.2.1 Speed Hump

Although the City will no longer continue to install speed humps, they are installed throughout the City, and are included here for completeness of discussion. Speed humps are typically a single asphalt hump, parabolic in shape, designed to slow traffic speeds on lower volume, lower speed residential roads. Speed humps are typically 3¼ - 3¾ inches high and 12 feet wide. Speed humps reduce speeds to 15–20 mph and are often referred to as “bumps” on signage and by

the general public. Figure 6 shows a typical speed hump located on Edgebrook Drive (source: Google Street View).

Figure 6: Speed Hump (Edgebrook Dr)



4.2.2 Speed cushions

Speed cushions are similar to speed humps or speed tables that include wheel cutouts to allow large vehicles to pass unaffected, while reducing passenger car speeds. They can be offset to allow unimpeded passage by emergency vehicles, and are typically used on key emergency response routes. Speed cushions extend across one direction of travel from the centerline, with a gap to allow wide wheelbase vehicles to avoid going over the hump.

Speed Cushion are asphalt mounds, parabolic in shape, covering 12 to 14 feet of street with a height between 3 and 3 ¾ inches. The center mound or cushions, has a width of approximately 6 feet to 7 feet to accommodate the wheelbase of fire trucks and buses. The cushion adjacent to the center cushions vary in width to accommodate the street width. Depending on the street width, additional cushions may be placed in each travel lane.

Figure 7 shows a typical speed cushion (source: A Block at a Time, abaat.org).

Figure 7: Speed Cushion



4.2.3 Speed Table

Speed Tables are midblock traffic calming devices that raise the entire wheelbase of a vehicle to reduce traffic speed. Speed tables are longer than speed humps and flat-topped (10 feet length) with a height of 3 - 3 ¾ inches and a total length of 22 feet. Vehicle operating speeds for streets with speed tables range from 25 – 40 mph. Speed tables have been installed on streets in Modesto. They can be used on residential and collector streets with park or school frontage and posted speeds of 35 mph, however the advisory speed is 20 mph.

Figure 8 shows a typical speed table (source: NACTO *Urban Street Design Guide*).

Figure 8: Speed Table



4.2.4 Raised Intersections

Raised intersections create a safe, slow-speed crossing and public space at minor intersections. Similar to speed humps and other vertical speed control elements, they reinforce slow speeds and encourage motorists to yield to pedestrians at the crosswalk.

Figure 9 shows a typical raised intersection (source: NACTO *Urban Street Design Guide*).

Figure 9: Raised Intersections



4.3 Horizontal Design Elements

4.3.1 Chokers

Chokers are raised islands in the parking zone that can be detached from the curb-line to allow for drainage. Mid-block chokers narrow the roadway and are most applicable on wide streets with long blocks having speeding and cut-through problems. Chokers can have the same narrowing effect as parked vehicles on streets where there is little or no on-street parking. Chokers may be installed with either landscaping or hardscape treatment. The resulting narrowed travel lanes can slow vehicle speeds, while increasing the visibility between pedestrians and motorists. Chokers may result in loss of parking, and force bicyclists to use more of the vehicular travel lane.

Figure 10 shows a typical choker (source: NACTO *Urban Street Design Guide*).

Figure 10: Choker



4.3.2 Corner/Curb Extensions - Bulb-outs

Curb extensions are often applied at the mouth of an intersection. When installed at the entrance to a residential or low speed street, a curb extension is referred to as a “gateway” treatment and is intended to mark the transition to a slower speed street.

Bulbouts narrow the street width at intersections, creating a shorter and safer pedestrian crossing while encouraging drivers to slow down. These may contain special paving or landscaping and are generally used at intersections where parking is already restricted. Detached bulbouts may be striped or raised islands containing special paving or landscaping while maintaining existing drainage patterns. Attached bulbouts require altering the curb, gutter and sidewalk. These installations also affect the existing drainage patterns, possibly requiring installation of additional storm drains. They may reduce parking, and may increase emergency vehicle response times.

Figure 11 shows curb extensions/bulb-outs (source: NACTO *Urban Street Design Guide*).

Figure 11: Corner/Curb Extensions



4.3.3 Medians and Islands

A median is the portion of the roadway separating opposing directions of the roadway, or local lanes from through travel lanes. An island is defined as an area between traffic lanes used for control of traffic movements. They can provide traffic calming and aesthetic benefit, but the addition of medians alone may also cause an increase in vehicle speeds by reducing friction between opposing directions of traffic.

Where no median is present, raised islands can be used as traffic calming features to briefly narrow the traveled way, either in mid-block locations, or to create gateways at entrances to residential streets and make it more difficult for drivers to “cut the corner”. Figure 12 below is an example of a gateway treatment on a median (source: *Google Street View*).

Figure 12: Gateway Treatment



4.3.4 Medians with Pedestrian Refuges

Medians can be used on wider streets to improve safety by allowing pedestrians to cross one direction of traffic at a time. The narrow travel lanes can slow vehicle speeds, and provide a shorter distance for pedestrians to cross travel lanes. They may interrupt driveway access, and reduce parking. Figure 13 shows a median with pedestrian refuge on College Avenue (source: *Google Street View*).

Figure 13: Median with Pedestrian Refuge (College Avenue)



4.3.5 Chicanes

Chicanes create a curved street that can be incorporated into new developments or retrofitted in existing rights-of-way. Figure 14 is an example of a lower cost chicane that was created with striping and raised pavement markers (source: *Google Street View*).

Figure 14: Striped Chicane



The curvilinear alignment requires additional maneuvering and shortens sightlines for drivers, resulting in lower speeds. Large, landscaped chicanes increase the amount of public space available on a corridor and can have enough room for benches, bicycle parking, and other amenities. They require extensive design and have higher implementation cost compared to some other traffic calming options, and may result in loss of street parking.

Figure 15 shows typical placement of chicanes (source: FHWA *Traffic Calming ePrimer*).

Figure 15: Chicanes



4.4 Intersection Modifications

There are multiple ways to improve the safety and flow of complex intersections: they can be broken up into multiple compact intersections; streets can be realigned or “bent” so that they meet as close as possible to a right angle; stop signs can be aligned at all legs of an intersection to be perpendicular to the travel lanes which enhances overall clarity and visibility for vehicles and pedestrians. As previously discussed, intersections can be re-sized through the addition of curb extensions and medians. Vehicle turning speeds can be reduced using medians, realignment, and tight curb radii.

4.4.1 Traffic Circles

Traffic Circles are raised circular medians that direct traffic counterclockwise within an intersection. Vehicles must change direction of travel to maneuver around the circle. Traffic circles are controlled by “Yield” signage on all approaches, and can help manage speeds, reduce volume and improve side street access. Traffic circles may include low growth landscaping and/or a tree for visual impact.

Benefits of traffic circles include reduced vehicle speeds, increased access to main street from a side street, breaking up sightlines on a straight street, and making it more aesthetically pleasing.

Figure 16 shows typical traffic circle located on Flushing Meadows Drive (source: Google Street View).

Figure 16: Traffic Circle (Flushing Meadows Dr)



4.4.2 Roundabout

Like traffic circles, roundabouts require traffic to circulate counterclockwise around a center island. Unlike circles, roundabouts are used on higher volume streets to allocate right-of-way among competing movements. They are found mainly on arterial and collector streets, often substituting for traffic signals or all-way STOP signs. They are larger than neighborhood traffic circles and typically have raised splitter islands to channel approaching traffic. By reducing the speed of approaching vehicles, roundabouts typically have fewer severe injury collisions than signalized intersections, and are less expensive to operate. They may require major reconstruction of existing intersections, and can result in loss of on-street parking.

Figure 17 shows typical single lane roundabout located at Lincoln Oak Drive (source: Google Street View).

Figure 17: Roundabout (Lincoln Oak Dr)



4.4.3 Partial closures

Where traffic volume data shows excess vehicle capacity, the number of vehicle lanes can be reduced to “Right Size” the corridor, consolidate excess turn lanes and eliminate slip lanes as appropriate. The space can be reallocated to medians, bicycle and/or pedestrian facilities.

A partial closure is a physical barrier that restricts vehicles from turning into a street, while still allowing for bicycle access. The adjacent lane is left open to allow vehicles to exit, while two-way traffic is maintained for the remainder of the block. Partial closures can be considered on local streets with cut-through traffic. Partial closure restricts movements into a street while maintaining full access and movement within the street block for residents while reducing cut-through traffic into street. They also provide shorter distance for pedestrians to cross travel lanes. Partial closures may increase trip length for local drivers, and may redirect traffic to other local streets.

Figure 16 shows a typical partial closure (source: FHWA *Traffic Calming ePrimer*).

Figure 18: Partial Closure

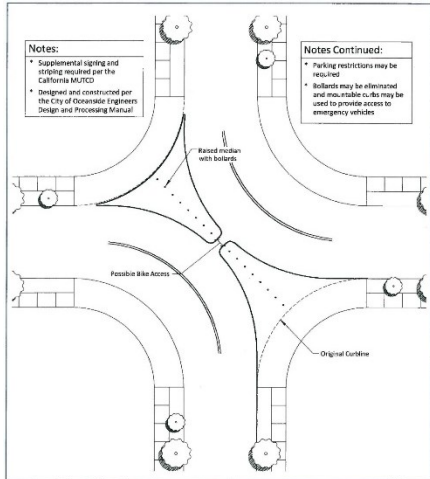


4.4.4 Diagonal Diverter/Bicycle Boulevard

Diverter are raised areas placed across a four-way intersection that prohibit through movements and force turns for approaches. Diverter can be considered on local streets where cut-through traffic is a major problem, and can be designed to accommodate emergency vehicles. A diagonal diverter is either a raised median, bollards, or another type of treatment placed diagonally across an intersection to restrict through traffic movements. Diagonal diverters split a four-way intersection into two L-shaped turns. Bicycle and pedestrian access may be maintained by providing breaks in the treatment. The use of diverters interrupt traffic flow on a street reducing or eliminating through traffic, but maintains traffic circulation. Diverter are barriers placed across four-legged intersections, interrupting through traffic flow. These barriers can be used to create a maze-like effect in the neighborhood.

Figure 17 shows typical diagonal diverters (source: City of Oceanside Neighborhood Traffic Calming Program, LA County Neighborhood Traffic Calming Program).

Figure 19: Diagonal Diverter



5 PROGRAM GUIDELINES

5.1 Roles and Responsibilities

5.1.1 The City of Modesto

The City is responsible for maintaining a transportation system that provides safe access for various travel modes and must make adjustment as facilities age and travel patterns change. The City frequently performs its own assessment and utilizes input from residents. Traffic related concerns from the community are submitted via several modes, including the GO MODESTO app, emails and phone inquiries. Upon receiving a traffic-related comment, Public Works Traffic Division records the request in an online work order program, performs a quick review of the area via GIS, and runs a collision report in the area to review historical data.

For speeding concerns, field crews can deploy mobile radar along the corridor to record multiple days of vehicular speeds. Based on the results of the data collection, the location may be referred to MPD for targeted enforcement or to the Transportation Engineering Design (TED) division of the Community and Economic Development Department for consideration in the Neighborhood Traffic Calming Program. TED will continue to accept traffic related concerns from the community, and will collaborate with Public Works and Finance Departments as appropriate to prioritize and apply the appropriate techniques as identified in this Program document.

5.1.2 The Community

The community informs the City, sharing 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 engaged in understanding traffic calming issues and solutions that are beneficial to the community, without negatively impacting other neighborhoods or services provided. An important factor is residential support, which will be needed to be demonstrated as qualifying criteria for this program (discussed further below).

5.2 Applying to the Program

A Neighborhood Traffic Calming Program application and supporting materials are included in Appendix E and will be available on the City's website (www.modestgov.com). It is recommended to have one point of contact for the neighborhood, a person who will communicate with the City regarding the application. Guidance is provided on how to describe the street segment, and how to determine if the street is a local or minor collector road as designated by the City's General Plan in Figure V-1 Circulation Diagram (Appendix A).

Applicants are required to obtain neighborhood support. To qualify for the program, signatures must be obtained from at least 60 percent of the households (minimum of four distinct property owners) within the block where traffic calming is being requested.

In the initial roll-out of the NTCP, potential projects that have been captured from Public Works Traffic Division traffic comments will be evaluated for eligibility and then prioritized. Moving forward, applications will be accepted year-round. Following annual public outreach “call for projects” in June of each year, there will be a cut-off for consideration at the end of September.

5.3 Preliminary Review of Applications

As applications are received, they will be cross-referenced with Public Works Traffic Division traffic comments. The investigation process will include a GIS survey, review of all reported collisions within the last four years, and the collection of vehicular speeds for at least a 24-hours period. Based on the results of data collection, the location may be referred to MPD for targeted enforcement.

A review of potential projects captured on the NTCP Request Log will be conducted with program start-up. Moving forward, annual review of submitted projects will occur before October 30th of each year.

5.4 Qualifying Criteria

A street segment qualifies for the installation of traffic calming measures when the results of a City-led investigation demonstrate that the criteria presented below are met. The following qualifying criteria has been established to determine eligibility for traffic calming measures on local roads and minor collectors:

1. The segment must be a minimum of 750 feet in length between traffic controls, four-way intersections, and/or curves with less than a 250-foot radius,

Or,

The street is comprised of contiguous segments with no stop controls between the segments and all side streets entering at four-way intersections are stop controlled. The total length of the contiguous segments must be at least 750' in length. The length is measured from the nearest flow line from the ends of the segment or continuous segments.

2. The street has only one travel lane in each direction (Two-Way Left-Turn Lanes are acceptable).

3. Posted speed limit must be 30 mph or less on local streets and posted 25 – 35 mph on moderate volume collectors.
4. Segment in question must have mostly residences fronting the street.
5. Street must be approved by Regional Transit and by the Fire Department.
6. A speed survey shall indicate that at least 10 percent of motorists are driving at 10 or more miles per hour over the speed limit.
7. The Average Daily Traffic volume must be between 500 and 4,500 vehicles on local streets and must be between 4,500 and 8,000 for collectors.
8. Resident Support: petition submitted with minimum sixty percent (60%) majority of residents in favor of the installation traffic calming, acknowledging that selection and location of potential traffic calming measures will be made by City staff. *

*One signature per household is allowed; petitioners must reside at the household (whether they are owners or tenants), as they are the primary users of the street being considered for traffic calming.

5.5 Selection of Traffic Calming Measures

Once street segments/projects have been determined eligible for traffic calming measures, the selection and placement of traffic control measures is an engineering decision made by staff. Public input is essential for identifying problems, and as discussed previously, the selection and placement of appropriate traffic calming measures is essential to the success of the improvement, to public safety, and for emergency and transportation services utilizing the street segment.

The following table (Table 2) summarizes traffic calming measures, when/where to use them appropriately, and approximate (conceptual level) construction costs.

5.6 Priority Ranking for Qualifying Projects

Once street segments/projects have been determined eligible for traffic calming measures, and appropriate traffic calming measures have been identified as described above, projects will be prioritized based on the methodology discussed in Section 6 Prioritization of Projects.

Prioritization of potential qualifying projects captured on the NTCP Request Log will be conducted with program start-up. Moving forward, annual development of priority ranking for qualifying projects will occur before November 30th of each year.

5.7 Selection and Notification

The annual selection of projects will be made before December 31st of each year, for incorporation into the next FY budget cycle. Notification of project selection will be made before January 31st of each year to applicants and will be posted on the City's website.

Table 2: Application of Neighborhood Traffic Calming Measures

6 PRIORITIZATION OF PROJECTS

Once potential projects have been identified and determined to meet the qualifying criteria outlined in Section 5, they will be prioritized based the criteria, methodology, and weighting system described below.

6.1 Priority Ranking System

The goal of the Neighborhood Traffic Calming program is to **improve safety and the quality of life** for residents by reducing the impacts of speeding vehicles, cut-through traffic and careless drivers. In keeping with this goal, a priority ranking system has been developed with a primary focus on safety as measured by vehicle collisions (especially those involving a pedestrian or bicyclist), vehicle speeds, and pedestrian use. Next in priority is location, as measured by proximity to pedestrian generators, distribution of project throughout the City, and proximity to planned projects. Third in priority will be City policies and goals and neighborhood support, followed by financial considerations based on benefit cost analysis. These priorities are summarized in Table 3.

Table 3: Priority Weighting

Category	Element	Weighting
Safety	Collisions	50%
	Vehicle Speeds	
	Vehicle Counts	
	Pedestrian Use	
Location	Proximity to Pedestrian Generators	20%
	Proximity to Planned Projects	
	Geographical Distribution of Projects	
Policies	Consistency with Strategic Plan, General Plan, other Policy Documents	15%
	Neighborhood Support	

Financial	Benefit Cost Analysis	15%
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6.2 Collisions

The collision history of potential traffic calming project locations will be reviewed, with priority assigned by the following descending severity (as defined by the California State Transportation Agency’s Statewide Integrated Traffic Records System (SWITRS)):

- Fatalities
- Severe Injury: an injury other than fatal which results in severe laceration, broken or distorted extremity, crush injuries, suspected skull, chest, or abdominal injury, unconsciousness, paralysis or spinal injury.
- Other Visible Injury: an injury evident at the scene of the crash other than fatal or severe injuries, including lump on the head, abrasions, bruises, and/or minor lacerations.
- Complaint of Pain: an injury reported or claimed which is not fatal, severe injury, or other visible injury, including momentary loss of consciousness, claim of injury, limping, complaint of pain or nausea.
- Property Damage Only

For the analysis of roadway segments, previous four years of correctable collisions will be accessed from existing databases, Police reports, and credible eyewitness accounts of unreported collisions (such as video footage and photo evidence).

Correctable Collisions:
Points assigned based on severity of outcome

6.3 Vehicle Speed Data

Upon receiving a speeding complaint along a corridor, Public Works Traffic Division records the request in an online work order program, performs a quick review of the area via GIS, and runs an accident report in the area to review correctable collisions. Field crews are assigned on a first come first serve basis to place a mobile radar along the corridor in question for one week at a time. The mobile radar unit is covert in nature and about the size of a lunchbox. The small size of the radar helps the radar be inconspicuous to drivers and allows us to record natural driver behavior. This Radar unit must be placed on segments of roadway away from congestion points such as stop signs, sharp curves, or signals. The Radar is used to record free flow speed, not speeds of merging or slowing vehicles. Figure 18 shows typical placement of a mobile radar unit.

Currently, the City of Modesto considers speeding on a roadway as 10% or more of the vehicles travelling at or above 10 mph of the posted speed limit, which is the qualifying criteria for this Neighborhood Traffic Calming Program.

Vehicle Speed:
Points assigned for each mph that 85 percent of vehicles are travelling above the posted speed limit.

Figure 20: Mobile Radar Unit



Installation on two lane undivided road

6.4 Average Daily Traffic

Since the Neighborhood Traffic Calming Program is primarily for local and collector streets, the ADT criterion is 500 to 8,000 vehicles per day.

Vehicle Counts:
Points assigned for each 1,000 vehicles of Average Daily Traffic

6.5 Pedestrian Use

After receiving a speeding comment, if deemed appropriate, Public Works Traffic Division may decide to collect pedestrian use data. These counts are typically collected manually, with duration and times based on specifics of the reported complaint and location.

Pedestrian Use:
Points assigned for each 10 pedestrians per day

6.6 Proximity to Pedestrian Generators

Adjacent land uses will be determined through a review of GIS data and/or aerial maps. Frontage on both sides of the street segment will be evaluated, as well as proximity to sites that generate foot traffic. Transit, schools, parks and other pedestrian generators within 500 feet of the street segment will be considered.

Pedestrian Generators:

Points assigned for proximity to each generator (transit, schools, parks, etc.)

6.7 Proximity to Planned CIP Projects

Proposed projects will be evaluated for proximity to planned Capital Improvement Program Projects. The City will incorporate Neighborhood Traffic Calming projects into larger projects whenever possible, to realize efficiencies and economies of scale.

Planned CIP Projects:

Points assigned for proximity to planned work

Typically, the bid prices are favorable when there is a larger scope of work. Project costs can be shared (such as site preparation, demobilization, traffic control), rather than borne entirely by one project.

6.8 Distribution of Projects

A key element of effective use of Measure L funds is to provide benefit to all citizens by considering distribution of projects throughout the City. Consideration will be given to location of proposed projects, by neighborhood and by Council Districts. The intent is not to select a project in each Council district each year. One year, it may be cost effective to select more than one project in an area or neighborhood (particularly when considering proximity to planned CIP projects). The following year, another area or neighborhood should be considered. The methodology for this element may evolve over time, through implementation.

Distribution of Projects:

Points assigned for proximity to planned work

6.9 City Policy and Goals

All Neighborhood Traffic Calming projects need to conform to the City's planning documents, including the General Plan, Downtown Master Plan, and Active Transportation Plan (Non-Motorized Transportation Plan). Projects are evaluated using complete streets principles to improve the multimodal network and maximize funding opportunities (match funding programs evaluation criteria). Project prioritization includes consideration of safety, comfort and convenience for all users, including drivers, bicyclists, transit riders, vehicles, and pedestrians of all ages and abilities.

City Policy & Goals:

Points assigned for conformance to planning documents

6.10 Neighborhood Support

As previously discussed, a level of resident support for a potential project is required to qualify for the Neighborhood Traffic Calming Program. Specifically, a petition to be submitted with minimum 60% of residents in favor of the installation traffic calming, acknowledging that selection and location of potential traffic calming measures will be made by City staff.

Neighborhood Support:

Points assigned for greater than 60% supporting the project

6.11 Cost Benefit Analysis

Following the methodology presented by FHWA for the California Local Highway Safety Improvement Program (HSIP) and the Benefit-Cost Analysis in 2018, the City will determine a Benefit Cost Ratio (BCR) for qualifying projects. The source, assumptions and methodology are presented in greater detail in Appendix D. The methodology can be summarized in five steps:

Cost Benefit Analysis:

Points assigned for higher Benefit Cost Ratios

1. Identify accident history of proposed location, occurrences within the last 4 years.
2. Estimate current associated accident costs based on 2018 FHWA California Local HSIP Program Presentation.
3. Identify Potential Traffic Calming Measures for the project and approximate costs.
4. Determine accident reduction factor for each traffic calming measure.
5. Calculate Benefit-Cost Ratio

A Benefit Cost Ratio is based on the estimated benefit of a reduction in accidents divided by the estimated project cost, as shown in Appendix D.

6.12 Priority Ranking Points Summary

The City has identified elements and assigned value to determine project priority ranking, as described in Table 4 below.

Table 4: Priority Ranking

Element	Assigned Points
Correctable Accident Records	50 points for each Fatality 40 points for each Severe Injury 30 points for each Other Visible Injury 20 points for each Complaint of Pain 10 point for each Property Damage Only
Vehicle Speeds	1 point for each mph that 85 percent of vehicles are travelling above the posted speed limit
Average Daily Traffic	1 point for each 1,000 vehicles of Average Daily Traffic Volume
Pedestrian Use	1 point for each 10 pedestrians per day (If data is collected)
Proximity to Pedestrian Generators	3 point for proximity to transit 3 point for proximity to schools 3 point for proximity to parks 3 point for other pedestrian generators
Proximity to Planned Projects	3 points for adjacent to planned project 2 points for within 1,000 feet of planned project 1 point for within 2,500 feet of planned project
Distribution of Projects	Up to 5 points for distribution of projects throughout the City
Consistent with City Policy Documents	Up to 5 points for consistency with various City Planning Documents
Neighborhood Support	1 point for each 10% neighborhood support above qualifying 60%
Benefit Cost Analysis	10 points for BCR greater than 20 5 points for BCR greater than 10 1 point for BCR greater than 1

Note: Assigned points and criteria may be refined as the Neighborhood Traffic Calming Program is implemented, and methodologies and values may be updated from time to time. Significant changes may be presented as an addendum to this document, or may be incorporated into future revisions.

7 ENVIRONMENTAL REVIEW

7.1 California Environmental Quality Act (CEQA)

Feasibility or planning studies are exempt from the requirements to prepare Environmental Analysis under CEQA, per Title 14 California Code of Regulations, Chapter 3 Guidelines for Implementation of the California Environmental Quality Act, Article 18. Statutory Exceptions, Section 15262. Studies must still include consideration of environmental factors.

Operations, repair, maintenance, or minor alterations of existing public facilities are exempt from CEQA requirements, with existing highways and streets, sidewalks, gutters, bicycle and pedestrian trails and similar facilities categorically exempt per Section 15301 (c).

Traffic calming projects eligible for the City's Neighborhood Traffic Calming Program (funded by Measure L) will be statutorily or categorically exempt from the CEQA process. CEQA requirements will be met by the preparation and filing of a Statement/Notice of Exemption with the Stanislaus County Clerk-Recorder Office and the State of California Office of Planning and Research.

Projects with other funding sources, such as state funded projects where Measure L funding may be utilized for local match, may have CEQA requirements and will be considered on an individual project basis.

7.2 National Environmental Policy Act (NEPA)

NEPA requirements will apply to federally funded projects. Similar to above, if Measure L funding is utilized for local match, NEPA requirements for federally funded projects will be evaluated on an individual project basis.

8 PUBLIC OUTREACH

Effective community engagement is critical when developing policies and projects that make a community's built-form more livable and more supportive of active transportation. There are many benefits of effective community engagement in projects influencing the built environment.

Effective community engagement improves the success rates of policies and projects because it helps the agencies leading a project understand and respond to local conditions. When people affected by a project are involved from the beginning of the planning process, the likelihood of unexpected or significant opposition when it comes time to implement the project is reduced. Community members also have unique knowledge of local contexts, including political, cultural, and geographic settings. By interacting with the public and gaining local insight, project leaders can shape and direct the project in keeping with the community's vision and needs.

Effective community engagement also has the power to build social capital—the “social networks and interactions that inspire trust and reciprocity among citizens” (Leyden, K., “Social Capital and the Built Environment: The Importance of Walkable Neighborhoods,” *American Journal of Public Health*, 2003, 93[9]:1546–1551). A community with a high level of social capital is characterized by a culture of neighbors knowing each other, interest and participation in local politics, high rates of volunteerism, and diversity in social connections. These characteristics foster a sense of community, engender trust, enhance innovative problem solving, and increase the likelihood that stakeholders will support financial investments in community projects.

8.1 About the NTC Program

Information about the Neighborhood Traffic Calming Program, including this program document, is available on the City of Modesto's website, on the Measure L page.

<https://www.modestogov.com/1990/Transportation-Sales-Tax-Information-Mea>

8.2 Stakeholder Engagement

Various stakeholder engagements have been incorporated into the development of this program, including coordination with various City departments, including Community and Economic Development Department, Public Works, Finance Department, Modesto Police Department, and Modesto Fire Department. External stakeholder involvement included Stanislaus Regional Transit Authority, the Measure L Citizen's Transportation Sales Tax Commission, and members of the public.

8.3 Ongoing Outreach

In addition to regular updates on the City's website, key outreach efforts are anticipated to be undertaken annually, including (but not limited to):

- call for projects
- announcement of selected projects
- annual summary of progress

Target dates for ongoing outreach are included in Section 8, Program Implementation.

8.4 Program Updates

As the NTC Program is implemented, updates and modifications to the program are anticipated to capture refinements, and respond to public outreach and project feedback. Any updates will be provided on the City's website, and incorporated into the ongoing outreach efforts. A formal program update is planned on or before December, 2023.

8.5 Report the Problem

If neighborhoods experience speeding and/or traffic problems on residential streets, the first step is to report the problem(s). As previously discussed, in addition to the GO MODESTO App, City staff accepts requests by phone and email, and have provided a Neighborhood Traffic Calming Request Form (see Appendix E) on the City's website.

9 PROGRAM IMPLEMENTATION

The goal of the Neighborhood Traffic Calming Program is to improve **safety and the quality of life for residents by reducing the impacts of speeding vehicles, cut-through traffic and careless drivers**. As previously discussed, this goal will be achieved through the several objectives, including the facilitating a process where residents and property owners can request and receive relief from traffic-related concerns.

9.1 Overview

Steps	How it Works	Resources
Step 1: Residents and property owners see a need for action	Document your concerns, and confirm that your street is appropriate for traffic calming (local streets or minor collectors, with a posted speed limit of 25 to 35 mph).	General Plan Figure V-1 Circulation Diagram (Appendix A)
Step 2: Residents/property owners complete and submit application	NTCP Application is available online and in Appendix E. The completed application must be accompanied by a petition showing resident support.	NTCP on-line Application, Appendix E
Step 3: Acceptance into the program or denial of application	City staff will review accident data, and may conduct a speed survey or other monitoring to assess/confirm the need for traffic calming. Once information is collected, City staff will determine if the proposed project qualifies for the NTC Program, and will provide written notification to the email and/or address provided on the application.	Qualifying Criteria, Appendix E
Step 4: Prioritization of Projects	City staff will assign points to each qualifying project. Each year, the call for projects will conclude in November. Projects will be prioritized and ranked for consideration for design and construction in the next Fiscal year. Results and project ranking will be posted on the City's website in January of each year.	Priority ranking, Appendix E
Step 5: Implementation of Projects	As funding allows, projects will be selected for implementation. Typically, higher priority ranking projects will be selected. You will be notified of if your project is selected. Projects will stay on	Annual Implementation Schedule

	the list for a period of 4 years, after which they will be retired. Participants can reapply for qualifying retired projects.	
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9.2 Implementation of Key Milestones

Key milestones have been identified for the Neighborhood Traffic Calming Program. Table 5 (below) identifies key milestones for preparation and implementation of the program:

Table 5: Key Milestones

No.	Deliverable	Completion Date <i>Target Date</i>
1	Develop Draft Document	10/30/2021
2	Measure L Citizen’s Sales Tax Commission recommends forward to Council	9/2/2021
3	Internal Coordination (PW, Finance, MFD, MPD, SRTA)	9/30/2021
4	Internal Review of Draft Document	10/29/2021
5	Finalize Document	11/4/2021
6	Economic Development Committee Discussion	12/6/2021
7	City Council Acceptance	12/14/2021
8	Review of NTCP Request Log for Qualifying Requests	12/31/2021
9	Develop priority ranking for qualifying requests	12/31/2021
10	Neighborhood Support documentation due	2/28/2022
11	Selection of Pilot Year (FY2021/22) projects	3/15/2022
12	Notification of Pilot Year (FY2021/22) projects	3/31/2022
13	Initial Program Public Outreach	1/31/2022
14	Annual Outreach “Call for Projects”	June 30
15	Annual Cut Off for Project Submissions	September 30
16	Annual Review of Submitted Projects	October 30
17	Annual Development of Priority Ranking for Qualifying Projects	November 30
18	Annual Selection of Projects	December 31
19	Annual Notification of Selected Projects	January 31

20	Program Update	December, 2023
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10 REFERENCES

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