

TRAFFIC CALMING IN RESIDENTIAL NEIGHBORHOODS A COMMUNITY DEVELOPED PROGRAM JOE A. GARCIA

INTRODUCTION

The City of San Jose, popularly identified as the Capital of Silicon Valley, is the 11th largest city in the United States and 3rd largest in California with a population of approximately 925,000. There are an estimated 911,000 private and commercial vehicles registered to residents and businesses in the City. The City covers an area of approximately 183 square miles with all public and private streets totaling more than 2,300 miles of which 75% are classified residential.

The City's Traffic Calming Program was developed in the mid-1980's. In the early 1990's budget cuts eliminated staffing for the Traffic Calming Program. Since then, Silicon Valley development has resulted in increased speeds and volumes on residential streets, thus San Jose decided to reinstate the Traffic Calming Program. The Program that was developed in the mid-80's was developed without community involvement. The new Program needed to be developed with community involvement to ensure that the traffic engineers understood what the community wanted. In April 2000 the City adopted a new Traffic Calming Policy (refer to Exhibit II) and in July 2000 funding was allocated towards traffic calming staffing and implementation.

BACKGROUND

Community Input

In order to gain broad-based community input, a series of three public evening meetings were held. The purpose of the meetings was to serve as a forum for citizens to express their desired outcomes regarding neighborhood traffic intrusion and traffic safety, and to describe what constitutes successful solutions. Each meeting began with a presentation by City staff that described past City efforts and illustrated typical traffic calming measures, their outcomes and costs.

Nearly 250 citizens attended the series of meetings. The first meeting emphasized desired outcomes and discussed specific concerns and possible solutions. The second and third meetings focused primarily on concerns and solutions. After initial presentations attendees broke up into the following six facilitated focus groups:

- 1. School Safety and Pedestrian Issues**
- 2. Speeding Issues**
- 3. Planning Issues**
- 4. Traffic and Parking Intrusion Issues**
- 5. Bicycle Issues**
- 6. Approvals Process Issues**

Staff from the Department of Transportation (DOT) and Planning Department facilitated the six groups. Additionally, staff from the Police Department, Public Works Department and Fire

Department observed, answered questions, and helped facilitate. Meeting summaries for all three meetings were sent to each attendee of every meeting. The following is a summary of responses received from all meetings:

1. School Safety and Pedestrian Issues

Desired Outcomes: Safer conditions for young pedestrians walking to and from schools, and improved circulation and parking conditions around schools.

Major Concerns:

- chaotic traffic and pedestrian conditions near schools
- driving/parking behavior and speeds near schools
- wide streets; lack of sidewalks, crosswalks, wheelchair ramps and crossing guards
- drivers violating pedestrians' rights-of-way
- blocked visibility for pedestrians and drivers

Possible Solutions:

- increased police and parking enforcement
- more traffic controls, improved visibility, new sidewalks and road bumps
- crossing guards
- more education (parents and students)
- better school facilities for drop-offs/pick-ups

2. Speeding Issues

Desired Outcomes: Drivers obeying speed laws in neighborhoods and near schools.

Major Concerns:

- speeding near schools by parents and high school students
- inability to back out from driveways
- child pedestrian safety

Possible Solutions:

- enforcement by the Police Department and NASCOP
- increased use of radar trailers
- increasing the size of the Police Department's Traffic Enforcement Unit
- more road bumps, warning signs and pavement markings
- greater neighborhood involvement
- improved public outreach on the danger of speeding

3. Planning Issues

Desired Outcomes: Improve neighborhood coordination in the planning process and ensure adequate roadway and pedestrian facilities are included in all planning efforts.

Major Concerns:

- lack of adequate roadway construction to keep pace with development
- insufficient neighborhood notification procedures for new development
- lack of pedestrian and bicycle facilities

Possible Solutions:

- more closed-in neighborhood designs
- narrower streets to discourage through traffic
- compliance with City's Level of Service Policy

- increased importance of pedestrians in the General Plan
- improvement of intersection capacity
- increased transit availability
- better coordination to revitalization efforts

4. Traffic and Parking Intrusion Issues

Desired Outcomes: Neighborhoods where truck traffic, cut-through traffic and parking intrusion are minimal.

Major Concerns:

- speeding and cut-through automobile traffic
- after-hours school/church activities and littering
- park and school safety
- parking congestion
- cut-through truck traffic

Possible Solutions:

- speed enforcement by police
- more on-site parking for apartments/condos
- enforcing limits on the number of residents/cars per unit
- restricting high school driving/parking privileges
- more crosswalks
- lower speed limits
- reduced residential densities
- traffic calming measures, and better City services
- eliminate truck traffic

5. Bicycle Issues

Desired Outcomes: Recognize the importance of bicycles and a safe bicycling environment.

Major Concerns:

- lack of bike facilities
- poor maintenance
- poor bike lane connectivity
- poor behavior of bicyclists and motorists
- a general feeling that San Jose is not “bike friendly”

Possible Solutions:

- increased maintenance
- more bike lanes/parking
- removal of impediments to bicyclists
- slowing the speeds of right-turning vehicles
- better street sweeping
- police enforcement against drivers and cyclists alike
- traffic signals that sense bicyclists

6. Approvals Process Issues

Desired Outcomes: Residents having greater input in approvals process and more knowledgeable on all possible solutions.

Major Concerns:

- insufficient mitigations to deal with development impacts
- insufficient appeals process for obtaining traffic control devices (where prior requests had been denied)
- the City's procedures are far too lengthy – too much red tape
- the City makes poor decisions and is not proactive enough

Possible Solutions:

- focus on improved communication with citizens using various City web sites for tracking development application data, previous development approvals, traffic complaints and traffic study results
- broader (direct) notification of citizens regarding development submittals
- increased educational outreach by the City on traffic issues
- initiate a master-planning effort for all neighborhoods

Traffic Appeals Commission (TAC) Coordination

The TAC is an official City Council commission comprised of seven San Jose residents. The TAC is authorized to hear appeals on citizen stop sign request denials. Additionally, they are responsible for assigning priority (order of execution) to traffic calming studies, when more than one study is pending within DOT. The TAC has not exercised this responsibility since the early 1990's when DOT's Traffic Calming Program was eliminated due to budget reductions. Representation from the TAC was present at the citizen focus group meetings. In March 2000, a special TAC meeting was held to discuss the findings from the focus meetings and identify potential changes to the TAC's responsibilities under the Traffic Calming Policy.

At the March meeting, TAC members expressed concern primarily over their inability to offer alternatives to deal with the safety concerns brought up by citizens after the TAC had denied their stop sign appeal requests. Staff from DOT suggested a number of mitigations that could be recommended by the TAC as alternatives. TAC members showed the most interest in the following:

- Ability to recommend to City staff that radar trailers be used on streets where stop sign appeals were denied by the TAC
- Ability to refer neighborhoods to request photo radar enforcement or police enforcement on streets where stop sign appeals were denied by the TAC
- Ability to refer neighborhoods to consider requesting traffic safety improvements on and/or around streets where stop sign appeals have been denied by the TAC

The TAC already has the ability to recommend implementation of a variety of traffic control measures but have not done so due to their uncertainty as to which measures are most appropriate. Staff from DOT and the Police Department will continue to work with the TAC and provide formal training on appropriate traffic control measures and the sequence with which they are normally applied. Therefore, no changes to the official responsibilities of the TAC are needed.

The City's Photo Radar Program i.e. The City's Neighborhood Automated Speed Compliance Program (NASCOP)

Reductions in speeds and crashes on streets receiving regular NASCOP enforcement average over 40%. This highly successful and sought-after program would be a cornerstone of any traffic-calming program. Citizens at the focus group meetings repeatedly requested NASCOP as a speeding solution. The program was initially approved as a trial by the City Council in May 1995, and procedures for receiving enforcement involve considerable neighborhood involvement. Neighborhood associations desiring enforcement must first submit an application form after neighborhood notification (by association newsletter) and approval at a subsequent association meeting. Neighborhoods without associations must go through a petition process where petitioners must canvass most of a neighborhood prior to submitting an application form. Neither State law nor the local court system requires such advance notification to occur in order to issue and adjudicate NASCOP citations. The primary reason for these lengthy procedures was the unique nature of photographic enforcement in San Jose and the attendant concerns over its potential for rejection by citizens. The program is in its third year (trial program plus full-time program) and has been fully accepted by citizens, police and the court system.

Currently, many good NASCOP-candidate streets are not enforced due to the lack of organized citizen representation in the form of associations and/or people willing to circulate petitions. The City addressed this concern by reducing the number of streets where petitions must be circulated to only those streets that are candidates for enforcement. This has resulted in considerable reduction in time and labor efforts required of citizens and has allowed more neighborhoods to be served by NASCOP.

The use of NASCOP is an important part of our Traffic-Calming Program, and combined with improved petitioning procedures, has resulted in a near doubling of the demand upon existing resources. In order to provide increased service levels for up to 80 new neighborhood streets, an additional camera-van and associated staff was approved in July 2000.

Formation of a Joint Bicycle and Pedestrian Advisory Committee

Four of the six focus groups raised pedestrian-related issues. Primary among them were lack of facilities (safety) and disjointed planning efforts. Requests were made to have the City institute a pedestrian advisory committee, with a specific suggestion of enlarging the City's existing Bicycle Advisory Committee to accommodate pedestrian issues. At a regularly scheduled Bicycle Advisory Committee meeting, which was held subsequent to the focus meetings, the Bicycle Advisory Committee was informed of this suggestion and responded positively. The purpose of such a joint committee would be an expansion of the Bicycle Advisory Committee's existing charge, which would be to act in an advisory capacity to DOT on bicycle and pedestrian issues. The committee's name was changed to the Bicycle and Pedestrian Advisory Committee and the membership expanded by two new members, for a total of 11 members.

Review of Stop Sign Policy and Crosswalk Installation Guidelines

Stop signs and crosswalks can be prominent traffic calming tools, therefore, City Council Policy, Policy 8-1 "Criteria for the Installation of Stop Signs" was reviewed and modified. Additionally, DOT internal guidelines for the installation of crosswalks were modified.

Legislative Changes to Current Speed Laws

The issue of speeding on local streets far outweighed any other concern expressed by citizens at the focus meetings. It is also the number one concern expressed by citizens that contact DOT regarding neighborhood traffic issues. Although local streets comprise 75% of the City's entire street system, speed-related crashes occur with less frequency on local streets than on collector and arterial roadways. The Citywide average (mean) speed on the busiest used local streets is approximately 29 miles per hour, with the 85th percentile speed being approximately 34 miles per hour. Most complaints from citizens occur when speeds significantly exceed the 85th percentile. Increased use of NASCOP and police enforcement will lead to greatly increased numbers of citations. In order to reinforce the point that speeding on residential streets is unacceptable, while at the same time not unduly jeopardizing a person's driving privilege, it may be advantageous to have the option of eliminating the criminal consequences of a neighborhood speeding ticket on 25 mile-per-hour roadways. Such an option would allow increased levels of enforcement at lower speeds. For example, those caught speeding below ten miles per hour over the limit on residential streets, at the option of the officer, could receive a regular speeding ticket or receive a speeding fine that is similar to a parking ticket. Speeding fines would be sent to the registered owner of the vehicle and if not paid could result in a delay in vehicle registration. The local agency could set the fine level and collect the fines. Speeding of ten or more miles per hour over the limit would remain a criminal offense. These changes would require extensive evaluation and ultimately legislative action at the State level.

ANALYSIS

Research on Similar Programs and Traffic Calming Standards

In order to obtain a thorough understanding of the state of the art (and issues) regarding traffic calming, the following agencies, organizations, firms and individuals were contacted for information regarding their policies, programs, device utilization and concerns:

Santa Clara, CA.	Austin, Texas	UK News
Ventura, CA.	Tempe, AZ.	London Daily Express
Berkeley, CA.	Toronto, ONT.	Potomac Gazette
Portland, OR.	Montgomery County, MD.	Portland Press Herald
Tampa, FL.	Howard County, MD	Ronald R. Bowman
Fairfax, VA	New York City, N.Y	
Albuquerque, N.M.		
Houston, Texas		
Seattle, WA.		

Institute of Transportation Engineers, Traffic Calming -- State of the Practice
Americans for Traffic Calming Reform

Toolbox Matrix of Traffic Calming Measures and Related Issues

Based upon the analysis of information received from the foregoing sources and from past City experience in traffic calming efforts, a toolbox matrix has been created. It reflects conditions and concerns expressed by San Jose residents at the focus group meetings, and by affected City

departments. It contains those traffic-calming measures, including police enforcement, that have been shown to work in San Jose and other jurisdictions, with the maximum effectiveness and the minimum amount of negative impact upon citizens, emergency services and the environment. The toolbox matrix is shown as Exhibit I.

Traffic Calming Policy for Residential Neighborhoods

A proposed new City Council Policy, shown as Exhibit II, has been developed. It is based upon the citizen focus group input, technical research, review of existing City policies and procedures, past experience with neighborhood traffic calming efforts, and review by affected City departments. This new policy is designed to replace existing City Council Policy 5-5 “Neighborhood Traffic Management Program” and Council Policy 8-4 “Installation of Traffic Restraint Devices.” It combines elements of a large area study (Policy 5-5) with those of a small area study (Policy 8-4) into a single, three-level policy. In order to implement such a policy, appropriate staffing and implementation resources are required. As identified in the toolbox matrix (Exhibit I), Base Level measures utilize traditional education, traffic engineering tools and enforcement in increasing order of restrictive usage, e.g., warning signs, NASCOP, radar trailers, striping, roadway markings, stop signs, curb markings, police enforcement and posted turn restrictions. The Traffic Appeals Commission would be utilized if necessary, to help identify, and expedite usage of Base Level measures. Level I studies and Level II studies utilize increasing orders of physical barriers, e.g., chokers, traffic circles, road humps chicanes, medians, diverters and partial/full street closures.

In order to expedite Department response times to citizens, the process and procedures used to initiate and carry out Base Level studies only require simple requests by citizens. Level I studies and Level II studies require a process and procedure where specific citizen involvement, requirement of minimum thresholds, trial plan testing and Council approval take place.

A Nine-Month Case Study on the City’s Traffic Calming Program

As of July 1, 2000 the City has been utilizing the new Traffic Calming Program to address speeding, safety, and volume intrusion concerns in residential neighborhoods. The City has ten (10) council districts with each district having over 90,000 residents. Since the implementation of the Traffic Calming Program the City has studied and installed the following Base Level studies, Level I studies, and Level II studies:

Status of Base Level Traffic Calming Studies
(July 1, 2000 to March 31, 2001)

Council District	Completed	Active	Total
One	46	8	54
Two	38	6	44
Three	164	12	176
Four	50	15	65
Five	50	12	62
Six	90	15	105
Seven	55	8	63
Eight	49	12	61
Nine	29	19	48
Ten	63	21	84
Total	*634	128	762

* 54% of all base traffic calming studies completed within 14 days

Status of Level I/II Traffic Calming Studies
(July 1, 2000 to March 31, 2001)

Council District	Level 1			Level 2		
	Completed	In progress	In Queue	Completed	In progress	In Queue
One	0	3	1	0	0	0
Two	1	1	0	0	0	0
Three	0	7	0	0	2	0
Four	0	3	1	0	0	0
Five	0	3	2	0	0	0
Six	1	7	2	0	2	0
Seven	0	1	2	0	0	0
Eight	0	0	0	0	0	0
Nine	0	0	0	0	0	0
Ten	0	2	0	0	0	0
Total	2	27	8	0	4	0

Summary of City-Wide Traffic Calming Studies
(July 1, 2000 to March 31, 2001)

	BASE	LEVEL I	LEVEL II
Completed	634	2	0
In progress	128	27	4
In queue	0	8	0
Total	762	37	4

Since the implementation of the Traffic Calming Program the residential community has been very active in requesting the City for relief from speeders, cut-through volume, and safety concerns for pedestrians, bicyclists and motorists in residential neighborhoods, as evident by the total numbers of projects completed in the Base Level and projects in progress in Level I studies and Level II studies. The City has created a very positive program that requires a tremendous amount of staff resources and time. To address this workload the City has authorized (during the mid-year budget cycle) DOT to hire three additional Associate Civil or Traffic Engineers to increase the number of unit managers doing traffic calming from five to eight unit managers.

DOT is also in the process of modifying the Traffic Calming Program so that all Level I traffic calming tools do not have to go to City Council for approval. This will decrease the time it takes to study and implement Level I studies and thus address the backlog that is forming during the past 9-months.

SUMMARY

The City has adopted, through a comprehensive outreach program, a community based Traffic Calming Program that has proven to be a highly sought after by San Jose residents. In the past 9-months, DOT has determined that additional staffing and slight policy changes were needed to effectively administer the Traffic Calming Program. Staff continues to work at implementing Base Level studies and attending community and traffic committee meetings. The desired outcome is to develop the best traffic calming plans for San Jose residents. Using education, enforcement, and three levels of traffic calming tools the City believes it can proactively address all types of traffic concerns and enhance the overall livability in residential communities.

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EXHIBIT I
Traffic Calming Matrix: Measures and Outcomes

(Level)* and Measure	Speed Reduction	Volume Reduction	Noise Increase	Pollution Increase	Loss of Parking	Access Restricted	Emerg'cy Impacts	Increased Maint.
(B) Safety Education	Possible - Minor	None	No	No	No	No	No	No
(B) High Visibility X-walks	Possible - Minor	None	No	No	Possible	No	No	Minor
(B) Corner bulbs (minor)	Possible - minor	Possible - minor	No	No	Possible - minor	Possible	No	Minor
(B) NASCOP enforcement	Moderate to major	Possible - Minor	No	No	No	No	No	No
(B) Radar trailer	Minor	None	No	No	No	No	No	No
(B) Striping	Possible - Minor	None	No	No	No	No	No	Minor
(B) Warning signs	Possible - Minor	None	No	No	No	No	No	Minor
(B) Curb markings	No	None	No	No	Possible	No	No	Minor
(B) Stop signs	Minor	None	Possible - Minor	Minor	No	No	No	Minor
(B) Police enforcement	Moderate to major	None	No	No	No	No	No	None
(B) Gateway signs	Possible - Minor	None	No	No	No	No	No	Minor
(B) Truck restriction	No	Minor	No	No	No	No	No	No
(B) Larger (ex) signs	Possible - Minor	None	No	No	No	No	No	None
(B) Signed turn restrictions	Possible - Minor to moderate	Possible - Minor to moderate	No	Possible - minor	No	Minor to moderate	No	Minor
(I) Traffic circles	Minor to moderate	Possible - Minor	No	No	Minor	No	Minor	Minor to moderate
(I) Road bumps	Minor to moderate	Possible - Minor	Minor	Minor	Minor	No	Minor to moderate	Minor to moderate
(I) Medians and chokers	Minor to moderate	Possible - Minor	No	No	Minor to moderate	No	Minor	Minor to moderate
(II) Chicanes	Minor to moderate	Possible - Minor	No	No	Minor to moderate	No	Minor	Minor to moderate
(II) Corner bulbs-major	Minor	Possible - Minor	No	No	Minor	No	Possible - minor	Minor to moderate
(II) Diverters	Minor to major	Minor to Major	Minor	Possible - minor	Minor	Minor to major	Minor	Minor to moderate
(II) Partial closure	Minor to major	Minor to Major	Minor	Possible - minor	Minor	Moderate to major	Minor	Minor to moderate
(II) full closure	Minor to major	Minor to Major	Minor	Possible - minor	Minor	Moderate to major	Moderate to major	Moderate

***B = Base Level measure**

I = Level I measure

II = level II measure

EXHIBIT II
COUNCIL POLICY
TRAFFIC CALMING FOR RESIDENTIAL NEIGHBORHOODS

BACKGROUND

Increasingly, San Jose residents have expressed concerns over vehicular traffic on local residential streets and the resultant reduction in the quality of living within their neighborhoods. Effective neighborhood traffic management and enforcement programs are needed to minimize the negative impacts of cut-through traffic, truck traffic, speeding, parking intrusion and other undesirable behavior while considering potential impacts on surrounding neighborhoods, emergency vehicle access and surrounding collector and arterial roadways. The preceding effort is referred to as traffic calming for residential neighborhoods.

PURPOSE

To state Council policy relative to traffic calming for residential neighborhoods.

POLICY

It is the policy of San Jose to minimize the negative impacts associated with traffic within its residential neighborhoods, through its normal engineering, education and enforcement services. Traffic impacts that cannot be mitigated through normal services may qualify for a comprehensive traffic calming study. The Level I traffic calming study is intended to primarily address speeding and other inappropriate driver behaviors. The Level II traffic calming study is intended to primarily address excessive traffic volumes.

PROCESS

If normal traffic engineering investigations, selective enforcement and educational efforts are not successful in reducing the negative impacts associated with traffic within residential neighborhoods, the following process to calm traffic will apply:

1. A Level I traffic calming study requires that one of the following criteria be satisfied: The street(s) under consideration have an 85th percentile speed that exceeds the citywide average of 85th percentile speeds for similar roadways, the crash rates exceed the citywide average for similar roadways, or a finding by the Director of Streets and Traffic (Director) that an unusual condition exists resulting in the need for a traffic calming study.
2. A Level II traffic calming study requires that the criteria for a Level I study is met and the peak hour or average daily traffic volumes on the street(s) under consideration be at least 50% higher than citywide averages for similar roadways and land use patterns.

Both Level I and II traffic calming studies require the active involvement of a neighborhood traffic committee and the support of the affected residents and property owners. The Director shall approve membership on the committee. Study boundaries will be determined jointly by the traffic committee and the Director. A petition will be prepared by City staff and distributed by the traffic committee to all households and absentee property owners within the study area. A majority of those petitioned must approve the initiation of a study.

City staff, the traffic committee and affected residents and property owners will jointly determine the proposed traffic calming plan based upon the analysis of conditions and neighborhood input. Neighborhood meetings will be held before a test plan is chosen for a trial period. The City Council shall approve the test plan. Requirements set forth by emergency and utility service providers (i.e. Police, Fire and PG&E) must be satisfactorily accommodated during the trial period.

Depending upon neighborhood input and an analysis of the test plan, City staff will notify residents and property owners of any subsequent meetings and present a final traffic calming plan. The final plan will be approved by City Council.

COORDINATION

Traffic calming efforts shall be coordinated with all affected City Departments and local agencies for Level I and Level II studies. Potentially affected City Commissions, Committees and Collaboratives shall be notified and given the opportunity to participate in all Level I and II studies. Potentially affected regular service providers and major utilities, including but not limited to transit, school bus, mail, garbage, PG&E, cable, and water, will be involved.