



TO THE HONORABLE MAYOR AND COUNCIL

DATE: May 13, 1997

SUBJECT: School Traffic Safety Study - Study Session

Report in Brief

At its Study Issues Workshop for calendar year 1996, the City Council approved undertaking a School Traffic Safety Study. The study focused upon traffic, bicycle and pedestrian safety issues in the immediate vicinity of elementary and middle school sites within Sunnyvale. The study resulted from concerns raised by parents of school children to the City's Bicycle Advisory Committee (BAC).

With consultant assistance, City staff received input from individual school principals and administrators from each of the school districts in an attempt to identify the problems of most concern. In addition to the discussions with school officials, the study included extensive field observations at school sites where representative problems were reported. Additionally, research was performed to identify the school safety actions and programs which were being undertaken in other cities throughout the Country.

This report includes a description of numerous actions and programs which could be implemented by the City, the school districts, individual schools or parent groups. While the actions and programs seem likely to result in safety improvements at school sites, they would each require a commitment of additional resources from whichever agency or group undertook the effort. Almost all of the efforts would require a commitment of resources from the school districts. Many of the potential actions would only be successful if undertaken by several of the involved parties.

This report attempts to identify the level of effort and relative responsibility among the involved parties (City, school districts, principals offices and parents). Staff is asking that the City Council provide direction regarding the appropriate role for the City and level of City resources which should be committed to the potential school safety actions identified.

Background

During 1995, the Bicycle Advisory Committee was approached by several school parents concerned about bicycle and pedestrian safety in the vicinity of school sites within Sunnyvale. After a discussion with staff, the BAC concluded that this might be a fairly widespread concern deserving of study by the City. The BAC asked that a Study Issue Paper (Attachment 1) be prepared for City Council consideration at its Issues Workshop.

In fall of 1995, the Bicycle Advisory Committee ranked the proposed School Safety Study as its highest priority issue for the City Council's Study Issues Workshop in December of 1995. At the workshop, the City Council ranked the School Safety Study issue high

enough for inclusion in the Public Works Department's work program for 1996. This Report to Council describes the findings of that study.

Discussion

Because of concerns raised by school parents to Sunnyvale's staff and the City's Bicycle Advisory Committee, the City Council approved an investigation of traffic, pedestrian and bicycle safety issues in and around the elementary and middle schools within Sunnyvale. This study was performed by the City's Traffic Engineering Division with assistance from the consulting firm of TJKM Transportation Consultants. The scope of the study included not only the identification of safety problems related to school arrivals and departures but also consideration of the appropriate roles for the City, individual schools, the School District and parents in working toward improvements and solutions.

In Sunnyvale, like many cities within California, it is becoming generally recognized that the severity of school traffic congestion and congestion related safety problems are worsening over time and generally exceed the ability of the City or schools to solve within currently limited resources. This has occurred due to a combination of circumstances. School districts are legislatively exempt from city review and control of site plans. Additionally, almost all of the schools were originally planned and constructed in an era when most school children arrived via school bussing programs. They were also built during a time when parents were much more prone to allow children to walk or ride bicycles to school. Routine school bussing (except for special needs children) has been terminated due to a lack of funds for these programs. Many or most parents are now unwilling to allow children to walk or ride bikes to school for reasons of perceived security concerns. School populations have recently seen a considerable increase in enrollment and the schools' site layout patterns intended for a very different arrival and departure situation, have mostly remained unchanged.

The combination of factors just described has created a situation where many parents drive their children to and from school. This occurs despite the fact that the facilities in and surrounding school sites are inadequate for the amount of traffic, stopping and parking which takes place. The neighborhood street systems surrounding schools were generally not planned to accommodate significant amounts of traffic wishing to reach and leave school areas and circulate in the immediate vicinity of the school sites. In addition to the traffic congestion which is being caused, the heavy traffic demand and the often-required maneuvering also results in a situation where the traffic poses increased hazards for the children that do walk or bike to school.

The School Traffic Safety Study was intended to accomplish five major objectives:

- Discuss the state of comprehensive school traffic safety planning efforts in Sunnyvale.
- Identify measures that might be implemented to address school traffic safety concerns and describe sources of costs associated with the proposed measures.
- Determine which jurisdictions should logically take responsibility for implementation.
- Discuss cases of traffic safety program implementation in other cities.
- Describe recommended actions in terms of level of City commitment.

The study of this issue involved coordination with the City's Traffic Engineering Division and Public Safety Department and also included cooperation from the Sunnyvale Elementary School District, the Santa Clara Unified School District and the Cupertino Union School District. Discussions were held with principals and administrators from each of the three school districts in an attempt to identify the problems of most concern.

In addition to the discussions with City staff and school officials, extensive field observations at school sites where representative problems were reported. The consultant and City staff as well as School District representatives identified six schools which were selected as target study sites for data collection and analysis. These included Lakewood Elementary School, Bishop Elementary School, Stockmeir Elementary School, Peterson Middle School, Ellis Elementary School and Manuel Vargas Elementary School. Data on traffic conditions, traffic controls and the incidence of traffic and parking violations were recorded at these sites. An overview of Citywide school traffic safety concerns was developed and specific concerns at these individual school sites were identified. Several general findings emerged from these observations and studies.

It appears as though the demand for parents to drive their children to school, set against the limited time and space available, as well as currently inadequate school site layout, effects schools in different ways. Schools with good access to heavily used arterials present hazards to bikes and pedestrians as well as vehicles that are improperly parked or maneuvered in and out of high speed traffic. Conversely, at schools located within neighborhoods, poor access to arterials often requires parents to make unconventional or illegal maneuvers and to sometimes disregard pedestrians and other drivers around them. It was also found that within neighborhoods parents were more likely to block circulation completely by parking or leaving their cars because they may perceive this as a lesser impact within a residential neighborhood. Included in the field observations was identification of the various unsafe actions which occurred at the study schools. Table 1 summarizes those actions and allows a comparison between the six school study sites.

Table 1

School Site	Approx. No. of Students	Total Double Parking	Total Mid-Block Pedestrian Crossing	Parking in Restricted Zone*	Total Violations
Lakewood Elementary School	800	38	120	29	187
Bishop Elementary School	775	104	147	127	378
Stockmeir Elementary School	800	7	115	304	426
Peterson Middle School	1,000	73	38	95	206
Ellis Elementary School	530	35	131	84	250
Manuel Vargas Elementary School	600	28	54	18	100

*Includes parents parking in loading zones, staff spaces and blocking driveways.

Parental Input

The study included the distribution of "open ended" comment forms which were circulated to parents at 12 schools. There were 182 responses to this survey. Parents expressed a variety of concerns relating to both general and specific issues. Many parents also offered recommendations to solve the problems they had experienced or observed. Complaints about parking violations and careless driving as well as requests for changes to the layout or use of loading and unloading areas were predominant. Tables 2 and 3 summarize the complaints and suggestions.

Table 2

Complaints/Concerns	
Frequency	Category
43	Careless Driving (inattentiveness, U-turns, running Stops and signals)
42	Parking Violations (double parking, parking in loading zone, etc.)
31	Heavy Traffic (high volumes, high speeds, congestion)
18	Jaywalking (and mid-block loading)
11	Stranger Danger (real or perceived threats from unrecognized persons)

Table 3

Requests/Suggestions	
Frequency	Category
51	Improved Loading Areas (requests for more or designated loading areas)
22	More Crossing Guards
21	Minor Improvements (requests for signs, striping, humps, bike racks, etc.)
20	More Traffic Enforcement (and stiffer penalties)
19	Encourage Alternatives (requests for bussing, carpools, walking, biking)
6	Major Improvements (requests for signals, new roadways, overcrossings)

In addition to the open ended comments, parents were specifically asked to provide information on the mode of transportation used by their children. Table 4 shows the results. The results substantiated the observations and opinions of City staff as well as school officials. Being driven alone to school is the prevailing mode of transportation overall for elementary school and middle school students. The next highest mode was parent carpooling of children. Combining the "driven alone" and "parent carpooling" categories reveals that 70% of students from kindergarten through middle school are arriving and departing by private car.

Table 4

Grade Level	Number of Students	Walk	Bike	Bus	Parent Carpool	Driven Alone
Kindergarten	39	21.9%	4.1%	0.0%	44.4%	29.7%
1 st Grade	45	36.3%	0.9%	0.0%	21.4%	41.4%
2 nd Grade	35	14.2%	4.4%	2.9%	22.9%	55.7%
3 rd Grade	17	17.6%	3.5%	0.0%	23.4%	55.4%
4 th Grade	24	13.9%	11.1%	0.0%	17.5%	57.5%
5 th Grade	32	37.9%	15.8%	0.0%	10.0%	36.3%
Middle School	30	14.4%	0.0%	11.7%	27.2%	46.7%
Overall	219	23.2%	5.0%	2.2%	25.4%	44.2%

The City's Current Safe Way To School Program

The City's Public Safety Department and Traffic Engineering Division currently jointly undertake a "Safe Way To School Program" which is offered to all elementary schools within the City. This program is intended to ensure the safety of children on their way to/from school.

The "Safe Way to School Program" is a general safety education program for children in kindergarten through third grade. The emphasis is on pedestrian, skate board and bicycle safety as well as stranger identification (personal security). For older children the City offers a "Bicycle Safety Program". The Bicycle Safety Program reaches every fourth, fifth and sixth grade child in the City with an emphasis on proper procedures at intersections, hand signaling, safe riding in traffic and the importance of wearing a helmet.

Between the "Safe Way to School Program" and the "Bicycle Safety Program" City staff (primarily from Public Safety) made 113 presentations at elementary schools in 1996. These presentations reached a total of 6,280 elementary school students.

The City resources committed to these school safety programs is significant. The Traffic Engineering Division's budget includes approximately 200 hours annually to support these programs as well as to perform specific school traffic safety studies and adult crossing guard warrant studies. In addition to the hours identified exclusively for school activities, the Division also expends additional hours related to stop sign warrant studies, speed studies, etc. which are related to school area concerns.

The Public Safety Department commits extensive resources to school safety programs. The Public Safety Department budget includes approximately 1,300 officer hours related to school safety education programs, selective enforcement at the schools, bicycle rodeos, etc. In addition, the City annually provides 24,000 hours of adult school crossing guard supervision.

School District Efforts

The City's consultant held meetings with school administrators' offices. Several messages seemed common. While the School District as well as school principals and individual teachers are concerned about traffic, pedestrian and bicycle safety, there are serious constraints to addressing the problems. The school districts realize that they have no responsibility for the transportation of non-special education school children to and from school. They are very conscious of the fact that their jurisdiction and, therefore, their legal responsibility ends at the boundary of the school site. At the district level, resource and financial constraints result in the situation where there is not a proactive program to deal with traffic safety issues in the vicinity of school sites.

Although the principals at problem sites have been very vocal in identifying concerns, there are limits to resources and authority available at this level. Most principals make an effort to represent parents' interests, but parents themselves have not formed into a constituency and therefore are not effective in dealing with the school districts

Another problem has been the unpredictability and inconsistency of parental, school and volunteer commitments. With changes in school site administrations and PTA leaders, it is optimistic to assume that programs based upon volunteer efforts and school support can be maintained. Schools by their nature have a consistent "turnover" of parents who are concerned and involved with the school's issues. Consequently, even actions and programs successful in some years could fail or be abandoned in other years. This unpredictability at the individual school level would require strong support at the school district level in order to insure that commitments and efforts are maintained year after year.

Identification of Possible Traffic Safety Improvements

The City's consultant researched school safety programs and actions throughout the Country. It was found that most cities (especially of Sunnyvale's size) generally have a program equivalent or lesser to Sunnyvale's current program. However, some cities (especially those with some legal responsibility for schools) have established more aggressive programs for dealing with school issues. All of these programs were reviewed in an attempt to identify specific actions which might be applicable to the situation at Sunnyvale schools. The measures which are reviewed in this report are general rather than specific in nature. This would allow each to be tailored to the specific need and applicability for each school site.

Optional Actions and Programs

Despite the constraints which are faced by both school districts and the City, the study identified actions which might be taken in an effort to improve the traffic safety situation in the vicinity of school sites. Some of the possible actions were discovered during research into other school safety programs around the Country and other were simply developed by staff and the City's consultant. No attempt was made to eliminate possible actions on the basis of limited resources. Staff believed it was appropriate to have the City Council, school district officials and the public made aware of potential actions which might be taken if resources were available.

It is important to differentiate between the different basic nature of some options. Some options require physical changes and are essentially funding actions. If a commitment of one-time capital funds or ongoing operating funds is made, the resultant improvements in safety are likely to be realized every year. The resultant benefits are less assured from the "softer," volunteer-based programs and actions. As just alluded, many of the options rely on strong, ongoing commitments from parents' groups, school administrations and residents to programs and actions which are voluntary in nature. These options can be much more unpredictable and inconsistent over time.

Option 1:

Alter school site design to create safer student drop-off/pick-up zones.

Most Sunnyvale schools would experience dramatically improved circulation if adequate off-street pick-up and drop-off areas were installed. As stated earlier, almost all schools in Sunnyvale were designed for a radically different school arrival and departure situation. Although potentially costly, the school administrators and school districts should look for every opportunity to accommodate the current demand for parent drop-off and pick-up of children. Without adequate space for this activity, it will be impossible to eliminate the traffic safety problems which are caused by inappropriate stopping and parking of vehicles and children walking or bicycling between vehicles to reach their destination. It will be important for the City's Traffic Engineering Division to work closely with the schools and school district in any attempt to create improved drop-off and pick-up loading areas. It is also critical that the City make any required changes in off-site circulation patterns which might be necessitated by on-site modifications. Close coordination would be required between the schools, the City and the immediate neighborhood in order to make the improvements successful. Additionally, schools would need to assume the responsibility of informing parents about the change and reinforcing the appropriate driver behavior.

- The cost of this action could vary widely by school site and the changes which would be desired. Small changes could cost on the order of \$10,000 to \$50,000 and extensive changes could require several hundred thousand dollars for each site.

Option 2:

Redirect traffic flow on local streets surrounding schools to encourage straight-forward uni-directional flow with loading and unloading of students on the right side of the street. This would be an attempt to establish full or partial clockwise one-way traffic flow adjacent to school sites.

This change would be particularly important in the vicinity of areas where student drop-off and pick-up occurs. Currently, many students are forced to cross the street through traffic in order to reach or leave a parents' car on the far side of the street. A one-way clockwise traffic flow would eliminate or minimize that problem. It would also allow pedestrians and bicyclists needing to cross the streets to focus on approaching traffic from only one direction. A version of this proposed one-way drop-off/pick-up circulation pattern has been successfully used on the north end of the Peterson School site. A section of Rosalia Avenue and Poplar Avenue functions as a one-way road adjacent to the school site.

A traffic flow change of this type would be almost exclusively the City's responsibility. With cooperation from the school district, administrators and parents, the City would need to work with the neighbors in the immediate area as well as the general neighborhood to explore the ramifications and acceptability of a one-way street pattern. The City would assume the responsibility for all roadway striping and signing changes as well as enforcement. The school or school district would need to assume responsibility for working with parents to assure that they drop-off and pick-up their children in the appropriate fashion given the changed traffic flow pattern.

- Implementing this action could cost between \$5,000 and \$20,000 per school site, depending upon the extent of neighborhood involvement which is required and the extent of roadway striping, signing and other modifications.

Option 3:

Consider enhanced crosswalks or temporary crosswalks in the vicinity of school sites.

Despite the best efforts to mark and sign crosswalks, they are oftentimes not very visible or noticeable to drivers. During peak school arrival and departure hours the City could elect to augment the crosswalk pavement markings with "in street" vertical panels at traffic centerline or lane line locations. Essentially, thin three or four foot long reflectorized rubber panels would be inserted in holes adjacent to the crosswalks. These would only be present during the arrival and departure times at school sites. Their installation and removal would need to be made the responsibility of school crossing guards or school administrators.

Because of serious safety concerns related to crosswalks at mid-block locations, the City's Traffic Engineering Division has historically resisted their use and actually removed many existing ones over the years. Attachment 2 (a memo by the City Traffic Engineer) explains City staff's rationale for this position. However, at school sites, there may be particular circumstances where some mid-block crosswalks might be appropriate during school arrival and departure hours if augmented by vertical panels or other devices to assure driver awareness of the crosswalk. Rubber, tape-like materials are currently being developed which might be used for the temporary marking of crosswalk lines. In special instances, crosswalk locations could be implemented where the crosswalk would only exist during school arrival and departure hours with adult supervision from a crossing guard, school official or a volunteer parent. At these locations the adult would not only be responsible for the installation of the vertical panels, but also the "rolling out" and retrieval of the rubberized tape crosswalk lines at the beginning and end of school arrival and departure times. City staff would need to research the practicality and suitability of the products now under development in order to assure that they are appropriate for this possible application. This type of temporary crosswalk installation should only be considered after studies have concluded its appropriateness and a strong commitment is made regarding the presence of adult supervision.

- It is likely that the proposed action would cost approximately \$2,000 to \$5,000 per crosswalk location. There would be some increase maintenance costs related to future roadway resurfacing and replacement of the signing and marking materials.

Option 4:

Implement school valet program.

Some of the stopping and parking problems at school sites are exacerbated by parents who are concerned about their children's ability to get safely between the family vehicle and the classroom. Many parents currently accompany their children on this walk or remain parked to visually observe their children walking between the classroom and the car. The duration of this parking results in worsening the problem related to vehicles adjacent to school sites.

Some schools have established programs where teachers or older students accompany younger students between vehicles and classrooms. This program can be especially beneficial during the morning drop-off period. If parents know that their students are being escorted by a teacher or older student, they can drive away more quickly after dropping off their child.

The schools have the most logical role in implementing valet programs. The schools would need to identify teachers, students or volunteer parents to serve this valet function.

- Although there would be very little capital cost involved with this action, an ongoing level of resources would be required to organize, operate and monitor the program.

Option 5:

Improve pedestrian safety facilities.

In some areas the City could consider the elimination of permitted or free right turns at signalized intersections near school sites. This could conceivably be regulated only during those times when most school arrivals and departures occur. This could make the crossing of roadways simpler and safer for young pedestrians and bicyclists. However, it would also result in increased delay for right-turning motorists especially when pedestrian and bicycle crossings might not warrant the prohibition.

- It is estimated that this option could be undertaken for less than \$5,000 annually.

Option 6:

Implement a bicycle/pedestrian safety encouragement program.

While the City currently commits significant resources to its "Safe Way to School" program, this is primarily a once-a-year activity. During the beginning of each school year, the Traffic Engineering Division and Public Safety Department prepare materials and make safety presentations at Sunnyvale schools. In general, each student receives the materials and the presentation once each year.

As a supplement to the City's "Safe Way to School" program, the schools could consider installing a curriculum-based bicycle and pedestrian safety program in elementary schools. This course would not only include the typical traffic, pedestrian and bicycle safety training,

but also emphasize training regarding personal security and safety. Some parents currently driving their children to/from school might allow their children to walk or bike if their fears about traffic safety and the security of their child were reduced. While the schools would need to play the major role in this effort, the City's Public Safety Department and Traffic Engineering Division could potentially help by providing materials, developing instruction plans, and with portions of the training. Additionally, the City's Parks and Recreation Department might provide opportunities for this training during summer vacation for students.

- City staff is not familiar enough with school funding and curriculum issues to establish a likely cost to the school districts. The City's cost would primarily be in the form of salaries and would be dependent upon the extent of City involvement.

Option 7:

Implement a "walking school bus" program for elementary schools.

In a "walking school bus" program members of the community such as senior citizens or volunteer parents are asked to be walking bus "drivers" who walk a set route and pick-up children along the way and walk with them safely to/from school. This can be especially effective where schools sites are located within residential neighborhoods. The program can be made more attractive by encouraging children's imagination: for instance by including a pulled "trolley" or wagon that carries children's coats or backpacks to/from school. By providing a safe supervised walking trip between home and school, the walking school bus saves parents the need to drive their children to/from school individually. The schools would need to take the lead in establishing this type of program because they have the addresses of the students and the contacts with the adults through their school newsletters and PTAs. However, the City should certainly play a role in determining the safest routes for walking school buses to utilize.

- The cost of this action would be fairly minimal. It would consist of finding and organizing volunteers, planning the "walking school bus" routes and monitoring the program.

Option 8:

Consider changing the colors of traffic signs in school zones.

Several U.S. cities have received Federal approval and funding to change road signs in school zones from the standard (and required) yellow and white to a distinctive lime green. Changing the color of road signs could draw increased attention to school zones by motorists on neighborhood streets and nearby arterials and could result in improving general traffic safety in those areas. However, this change is still experimental and as of two months ago, has not been approved by the Federal or State governments for use other than in the ongoing experiments. If the use of lime green signs becomes approved, the City could consider this change to our signing if it is done uniformly at school sites in order to ensure the intended effect.

- The cost of this action would vary depending upon the configuration of roadways and location of school zones around individual sites. It is estimated that changing the signs (if eventually approved) would cost between \$5,000 and \$25,000 per school site.

Option 9:

Facilitate subscription bussing.

Service providers ranging from personalized taxi-style service to conventional bus operators have occasionally expressed interest in this type of program. These providers each are regulated by the State and required to carry their own liability insurance which covers children at all times while they are aboard the vehicles. The service has the potential to decisively reduce the congestion associated with peak school traffic.

The schools or PTAs would need to take the lead in organizing interested parents so that the costs could be kept as reasonable as possible.

- At this time staff has no specific information on the possible costs of subscription school bussing.

Option 10:

Establish standing school traffic/pedestrian/bike committees between the City, school officials and parents at the district or individual school level.

Although City staff and school administrators meet or talk near the beginning of each school year to identify potential problems and solutions, much still occurs on a reactive ad hoc basis. Establishing standing committees might allow for better planning of school and City actions as well as better coordination between the involved agencies. However, this action would exceed the resources currently available within the Public Safety Department, the Traffic Engineering Division and school administration offices.

- It is likely that this action could require approximately \$20,000 to \$30,000 for additional staff time from the Public Works and Public Safety Departments. Studies and projects undertaken as a result of committee activities could also result in a requirement for additional resources.

Likely Effectiveness of Options

It is clear that the identified options would only improve the safety situation around school sites, and not solve all of the problems. Even implementing all options would be unlikely to result in a situation as safe as that which was found when schools had aggressive student bussing programs and parents had little reason to fear allowing their children to walk or bicycle to school. However, some of the options which have been presented appear to have a greater potential effectiveness than other options.

At most school sites, the majority of problems result from school site layouts which are inappropriately designed for pick-up/drop-off patterns and which have insufficient parking

areas for school staff and parents. The problems caused by insufficient school site layout are often further compounded by street system and traffic flow configurations which result in parents making unsafe and unwise traffic and parking maneuvers.

Consequently, redesigning and modifying school sites to provide adequate parking and drop-off/pick-up opportunities has the greatest potential benefit for improving safety. In those instances where traffic circulation can also be modified (to include one-way clockwise traffic flow) this combination of actions could result in significant improvement. These are options 1 and 2 presented in this report. However, it is important to note that these options might not be practical at all school sites. In some instances, space is too constrained on a particular site to allow significant modifications, and in other instances, modifying the roadway circulation pattern would result in a severe problem for the neighbors and neighborhood.

While the potential for safety improvement is not nearly as great, staff believes the next category of options could also result in noticeable safety improvements. This includes the option of enhancing crosswalks through the use of rubberized vertical panels placed within the roadway (option 3) and establishing a school valet program (option 4) to accompany young students between parents' vehicles and classrooms.

One other option falls into a somewhat unique category. The establishment of subscription bussing (option 9) has the potential to provide significant relief and safety improvement at school sites. However, a significant benefit would only be realized if the subscription bussing program were widespread throughout the student enrollment at a particular school. Staff suspects that the cost of this program would make it unlikely that more than a small percentage of students could be expected to participate.

While the remaining options might provide some improvements, staff believes that the improvement would be "at the margin." This is not to say they should not be undertaken. But options 5, 6, 7, 8 and 10 would be unlikely to result in significant improvement without some of the other more aggressive options being successfully undertaken.

Summary

While it is easy to find numerous actions likely to improve the safety situation surrounding school sites, it is entirely more difficult to determine the appropriate responsibility for those actions. Clearly the City has an interest in the traffic, pedestrian and bicycle safety in the vicinity of school sites and throughout the City. However, the City, much like the schools, is operating within limited resources

The problem primarily stems from actions and decisions made by school districts and parents. The City played virtually no role in the planning and design of school sites and the decision to eliminate the bussing of students for which those sites were designed. The school district's decisions (mostly unavoidable) to eliminate bussing, coupled with their financial inability to modify site designs, has resulted in the situation where many parents feel compelled to drive their children to/from school.

Most of the proposed actions to improve the situation around schools require considerable commitment by the school districts, school administrators and parents in order to be

achievable. Actions by the City can only be effective if accompanied by strong commitments from the other responsible parties. Although City staff will undertake the minor striping and signing types of improvements which were identified in the field observations, the actions which might lead to significant improvement can mostly not be done by the City alone.

Fiscal Impact

As described earlier in this report, the City currently undertakes a fairly significant effort (which is not legally required) related to our existing Safe Way to School Program and related studies and improvements. The existing level of effort is comparable or exceeds what is generally found in other cities of Sunnyvale's size and character

Ultimately the fiscal impact would depend on the action taken by school districts and supplemented by the City.

Public Contact

This report represents a survey of conditions and alternatives. As a result it is primarily an information document at this time. If the Council is interested in further consideration of the options, considerable discussion is needed with school officials at the district level. While the focus of this study is the safety of children, the neighborhoods surrounding schools are also effected by the present conditions and would be affected by implementation of the alternatives. In some cases, solutions which improve school safety may not be viewed favorably by their neighborhoods. Neighborhood involvement becomes crucial at the time options are being considered for a specific school site.

Notice of the study session was advertised as a part of public action of the agenda. Copies of the report were sent to school district officials and members of the Bicycle Advisory Committee.

Alternative Courses of Action

1. Direct staff to investigate the interest and potential commitment from the school districts by arranging meetings between senior management of the City and school districts and return to Council with the results of those meetings.
2. Determine that the City has no direct responsibility for the problems now occurring at school sites and decide that no additional resources above those currently committed by the City should be applied to this problem.
3. Other Council direction.

Recommendation

Alternative 1.



Ray C. Williamson
City Traffic Engineer



Regan Williams
Chief of Public Safety



Marvin A. Rose
Director of Public Works



Thomas F. Lewcock
City Manager

Appendix: Attachment 1: School Traffic, Bike and Pedestrian Safety Study Issue
Attachment 2: Memo entitled: "Considerations Regarding Mid-Block Crosswalks"

PROPOSED STUDY ISSUE

Attachment 1
Page 1 of 2

Continuing X
Mandatory
New
(check one)

Item: School Traffic, Bike and Pedestrian Safety Study

General Plan Element or Sub-Element: Transportation Element, Bicycle Plan, Law Enforcement Sub-Element

Department Responsible: Public Works

1. What are the key elements of the issue?

The City currently undertakes numerous activities intended to provide for the safe movement of cars, buses, cyclists and pedestrians in and around schools. The City annually performs its "Safe Way to School" Program and both the Traffic Engineering Division and Public Safety Department routinely become involved in school access and safety issues. Despite this past level of effort, problems still exist at some of the school sites in the City. These are generally problems whose nature exceeds the resources currently being committed by the City to school-related traffic problems.

In light of traffic congestion and conflicts between buses, vehicle drop-offs, pedestrians and bicycles in the vicinity of schools, the City could evaluate whether it is appropriate to play a greater role in analyzing and addressing these problems and a range of possible solutions. Although it is obvious that the City desires the safest possible situation around schools, many of the problems/solutions may belong within the jurisdiction of individual schools or the school district and might be more effectively controlled by those entities in combination with PTA's, parents, students, etc. The goal of this study is to look at the scope of these problems, jurisdictional responsibilities and liability issues. The study would evaluate whether or not it is appropriate for the City to be involved in the resolution of these problems beyond those actions the City currently takes. This study is currently underway.

2. Is study of the issue called for in the General Plan?

Not specifically. However, there are several related General Plan policies.

Bicycle Plan Policy BP.A: Cycling for recreation, commuting and travel to school and shopping shall be encouraged.

Bicycle Plan Policy BP.C2: Study the expansion of bicycle education and safety programs to include other segments of the public.

Law Enforcement Sub-Element Policy 4.1A.5: Facilitate the safe movement of pedestrians, bicyclists and vehicles.

3. Why should the issue be considered by Council? What precipitated it?

A member of the Bicycle Advisory Committee informed staff that she was receiving

inquiries regarding traffic congestion and safety problems at one of the City schools. Upon further discussion, staff recognized that citizen complaints have been received about a number of schools and that problems might need to be examined at schools across the City. There is a perception that these problems are increasing over time as people choose to drive their children to school rather than letting them ride a bike or walk. The study results will be used to identify the scope and magnitude of transportation-related problems, determine jurisdictional responsibility and serve as the basis for possible additional City actions.

4. Origin of issue: Council: __ (Councilmember __) Staff: __ General Plan: __ Board or Commission: __ Outside Request: __
Arts __ Bicycle Adv. Bldg Code Appeals __
CCAB __ Heritage Pres. __ Library __
H&HS __ Parks & Rec. __ Personnel __
Planning __

5. Multiple Year Project? Yes __ No Expected Completion Date: __

6. Estimated work hours and/or cost for consultant to prepare full report to Council:

<u>Work Hours</u>		<u>Cost</u>
<input type="checkbox"/> Less than 50	<input type="checkbox"/> 200-300	
<input type="checkbox"/> 50-100	<input type="checkbox"/> 300-400	\$2000*
<input checked="" type="checkbox"/> 100-150	<input type="checkbox"/> 400-500	
<input type="checkbox"/> 150-200	<input type="checkbox"/> Over 500	*Consultant assistance.

7. Due Date (for continuing and mandatory issues if known): ____

8. Estimated work hours from City Attorney's Office to prepare full Reports to Council:

20 hours

9. Preliminary Staff Recommendations: Recommended Priority For Study
 Recommended Against Study No Recommendation At This Time

If recommendation is "priority" or "against", explain below:

This study is currently underway.

City Manager

Date

CITY OF SUNNYVALE
CALIFORNIA

November 7, 1994

Considerations Regarding Mid-Block Crosswalks
by
Ray Williamson, City Traffic Engineer

It is important to note that the issues described in this paper apply only to **Mid-Block** and other crosswalks where motor vehicles conflicting with pedestrians are not controlled by a traffic signal or stop sign. If conflicting traffic is controlled by a traffic signal or stop sign, City staff believes that crosswalks are appropriate and safe.

Providing the safest possible situation for pedestrians is the overriding issue regarding the Traffic Engineering Division's position concerning crosswalks. Numerous studies and findings both here in California and around the Country have consistently indicated that pedestrian crosswalks at locations not controlled by traffic signals or stop signs almost always increase pedestrian accident frequency and severity. This is very counter-intuitive to most people's belief that crosswalks are generally of benefit to pedestrians. But repeated observations and studies clearly indicate that crosswalks where conflicting traffic is not positively controlled are actually likely to result in a more unsafe situation for pedestrians.

As much as we all believe that pedestrians should be treated as equals to the automobile, and in many cases given the preference indicated in California's right-of-way laws, the fact of the matter is that from a physical size, speed and durability viewpoint pedestrians are not equal with automobiles. It must also be remembered that painted crosswalks are much more visible to pedestrians than to drivers approaching the crosswalk. What often occurs is that pedestrians feel unjustifiably secure when in a painted crosswalk. This results in situations where pedestrians are clearly not as safe as if they had entered the roadway in full realization that it was their responsibility to behave defensively in order to assure their own safety.

Unfortunately, the City of Sunnyvale experiences more than 2,000 reported automobile accidents every year. The largest majority of these accidents is caused simply by driver inattention. The fact of the matter is that most drivers don't pay attention to "details" concerning the road and surrounding environment when they are driving. Many drivers are focused on the basics of driving such as staying in the appropriate lane and watching other traffic to the point that they oftentimes do not even notice signs and crosswalks. I suspect that very few of your company's employees could tell you the location of the speed limit signs, crosswalks, etc. that they pass on their journey to and from work each day. Any inattention on the part of drivers that is coupled with inattention on the part of the pedestrian has the potential to result in a tragic situation.

As the issue of marked crosswalks is considered, I encourage the observation of pedestrians in both marked and unmarked situations. It does not take traffic engineering knowledge or much time to observe that the two groups of pedestrians tend to behave differently. Pedestrians in marked crosswalks oftentimes ignore conflicting traffic once they have determined that it appears safe to cross the street. Once they identify a gap in traffic and begin crossing in a crosswalk, many pedestrians assume that approaching drivers will see them, the crosswalk and stop. Unfortunately, this is not always the case. As difficult as it seems to believe, virtually all pedestrian accidents occur because drivers did not see and respond to the pedestrian.

Very different pedestrian behavior tends to occur when pedestrians are crossing the street not within a painted crosswalk. In these instances, pedestrians do not rely on the false sense of security provided by the painted lines. Pedestrians very actively remain attentive to approaching traffic and take the necessary steps to stay out of harm's way.

While painted crosswalks can identify a pedestrian's right and right-of-way to cross a roadway, the two painted lines are oftentimes not very effective in keeping a pedestrian safe from an approaching vehicle. To use a somewhat morbid cliché within the Traffic Engineering and Public Safety fields, a pedestrian struck while in a marked crosswalk may not have only been right, but occasionally may be dead right.

The City of Sunnyvale has taken steps over the years to eliminate many of the mid-block crosswalks which were in existence 10 or 15 years ago. To repeat, the only reason for this position is the belief that it will result in greater safety for pedestrians. It would almost always be much easier, less costly, and more popular for the City to install crosswalks than to undertake the effort to convince citizens and businesses that some crosswalks oftentimes result in greater safety problems. It is unfortunate that pedestrians must endure a situation where they are forced to behave defensively when crossing a roadway. But it is exactly that situation which assures that the pedestrian is likely to be much safer than if there were a marked crosswalk.