



City Council Report

Item: 18.
Category: New Business
Meeting Date: June 21, 2016

TITLE: Conceptual Approval of Harriet Avenue/McCoy Avenue/San Tomas Aquino Road Signalization Project (Resolution/Roll Call Vote)

RECOMMENDATION

That the City Council conceptually approve the signalization of the Harriet Avenue/McCoy Avenue/San Tomas Aquino Road intersection.

BACKGROUND

In January, 2001, Caltrans awarded a federal Hazard Elimination Safety (HES) grant to the City of Campbell for the Harriet Avenue/McCoy Avenue Signalization Project. On May 13, 2002, staff held a neighborhood meeting where the vast majority of those in attendance rejected the concept of a Harriet/McCoy traffic signal.

On September 2, 2002, the City Council adopted Resolution No. 10059 approving a revised project scope for the Harriet/McCoy intersection. The revised project scope was 1) to include the installation of median improvements; 2) install other roadway enhancements such as bike lanes on Harriet Avenue; and, 3) eliminate the installation of a traffic signal from consideration at that time.

In the ensuing years, staff designed and constructed the Harriet Avenue Bike Lane Project and installed at the Harriet/McCoy intersection various enhancements such as fluorescent yellow-green school warning signs, a ladder-type crosswalk, and a six-foot-wide striped median. Staff had also considered installing a spot median island on Harriet Avenue at McCoy Avenue as part of the Westmont Avenue Improvement Project and the San Tomas Aquino Creek Trail Project, but those plans were dropped due to a shortage of funds.

On April 7, 2009, the City Council adopted Resolution No. 11017 authorizing staff to submit a State Safe Routes to School (SR2S) grant application for the Harriet Avenue/McCoy Avenue Bicycle and Pedestrian Safety Project that would have installed radar speed feedback signs and in-pavement lights at Harriet/McCoy. In August, 2009, staff learned that Caltrans had not awarded an SR2S grant to Campbell.

On October 27, 2009, two pedestrians were struck by a vehicle in the Harriet/McCoy school crosswalk. At the City Council meeting on November 3, 2009, Mayor Kennedy stated that the City Manager had directed staff to bring a report back to the City Council

Conceptual Approval of Harriet/McCoy/San Tomas Aquino Signalization Page 2
June 21, 2016

in early 2010 for possible safety enhancements to the intersection. Several members of the public appeared before the City Council during oral requests to express their safety concerns for the Harriet/McCoy intersection. Several residents referred to an online petition, and one member of the public submitted a signed petition (Attachment 2) asking for stop signs or a traffic signal at this intersection.

On November 9, 2009, the Public Works Director and Police Chief met with the school principal of nearby Forest Hill Elementary School to discuss options for addressing issues and community concerns at the Harriet/McCoy intersection. The principal at that time had explored establishing a program where parent volunteers would serve as adult crossing guards. The Police Chief at that time would have assigned an officer to conduct training. The City would have provided vests, rain gear, and stop sign paddles as needed for the volunteers. At that time, the school had little success in getting parents to volunteer.

The Chief also contacted San Jose Police Department staff regarding potential re-deployment of one of the two San Jose crossing guards currently working the all-way stop-controlled McCoy Avenue/Meta Drive intersection to the Harriet/McCoy intersection. However, San Jose Police indicated that their policy is not to deploy crossing guards in other jurisdictions.

Based on staff research, the meeting with the school principal, and San Jose Police's response, staff's recommendations in 2009 included the following.

1. Parent Volunteer Crossing Assistants. Staff was to monitor the school's adult volunteer crossing guard program to determine whether there was a need for crossing guards and whether more children are using the Harriet/McCoy crosswalk. If the need for a city-furnished school crossing guard is demonstrated, Campbell Police would consider placing a crossing guard at this location.
2. Near-term: Enhanced Pedestrian Crossing. Campbell Public Works Department investigated options for installing an enhanced pedestrian crossing at this location. Table 1 summarizes various crossing treatments, the approximate level at which motorists yield to pedestrians, estimated capital cost, and advantages and disadvantages. Based on this investigation, staff recommended for the near term a combination of pedestrian-activated flashing beacons and LED street signs. In addition, a spot median island on the south leg of Harriet Avenue was recommended to provide additional refuge for pedestrians and protection for future median-mounted beacons. The flashing beacon system and spot median island were installed with Transportation Development Act (TDA) grant funds and continue to exist at Harriet/McCoy.

Table 1
Comparison of Crossing Treatments at Uncontrolled Crossings

Crossing Treatment	Approximate Compliance Level*	Estimated Capital Cost	Advantages	Disadvantages
Red signals or beacons (e.g., half-signal**, High-intensity Activated Crosswalks (HAWK) signal beacon**)	97-99%	\$75,000 to \$140,000	<ul style="list-style-type: none"> • High compliance 	<ul style="list-style-type: none"> • High cost • Not as much protection as a traffic signal • Some are experimental devices** • May confuse motorists
Rectangular rapid-flashing beacons	88-93%	\$10,000 to \$20,000	<ul style="list-style-type: none"> • High compliance • Low cost 	<ul style="list-style-type: none"> • Experimental device** • May confuse motorists
In-street signs (paddles)	87-90%	< \$500	<ul style="list-style-type: none"> • High compliance • Very low cost 	<ul style="list-style-type: none"> • May be high-maintenance
Pedestrian crossing flags	65-74%	< \$500	<ul style="list-style-type: none"> • Medium compliance • Low cost 	<ul style="list-style-type: none"> • Significant flag theft • Not useful for sight-impaired
In-roadway lights	66%	\$50,000 to \$75,000	<ul style="list-style-type: none"> • Medium compliance 	<ul style="list-style-type: none"> • High cost • May be high-maintenance • Low daytime visibility
Active overhead flashing beacons	47-49%	\$10,000 to \$20,000	<ul style="list-style-type: none"> • Low cost 	<ul style="list-style-type: none"> • Low compliance
Median refuge islands	29-34%	\$10,000 to \$20,000	<ul style="list-style-type: none"> • Provides physical refuge • Pedestrian can focus on one direction of traffic at a time 	<ul style="list-style-type: none"> • Low compliance • Low cost
High-visibility signs and markings	17-20%	< \$2,000 to \$3,000	<ul style="list-style-type: none"> • Very low cost 	<ul style="list-style-type: none"> • Low compliance

*Source: *Transportation Research Record: Journal of the Transportation Research Board, No. 1982*, Transportation Research Board of the National Academies, Washington, D.C., 2006, pp. 1-12.

**In 2009 these devices were considered experimental devices that required authorization from California Traffic Control Devices Committee (CTCDC) to install such devices and commit to preparing before/after studies on the experiment. These devices are no longer experimental.

**Conceptual Approval of Harriet/McCoy/San Tomas Aquino Signalization Page 4
June 21, 2016**

3. Long Term: Continued Traffic Monitoring. Staff investigated two long-term traffic control solutions: Option #1 (All-Way Stop Control) and Option #2 (Traffic Signal).

Option #1 (All-Way Stop Control)

Staff determined that the Harriet/McCoy intersection would operate well as an all-way stop-controlled intersection in terms of intersection level of service (LOS) for the AM, after school, and PM peak hours. The intersection was evaluated to determine whether installing stop signs on Harriet Avenue was warranted. The analysis showed that stop signs facing Harriet Avenue were not warranted based on the *California Manual on Uniform Traffic Control Devices (MUTCD)*. Traffic volumes entering the intersection were not high enough throughout an average weekday to warrant stopping traffic on Harriet Avenue.

Option #2, Traffic Signal

Staff determined that the Harriet/McCoy intersection would operate well as a signalized intersection in terms of intersection level of service (LOS) and queuing for the AM, after school, and PM peak hours. The traffic signal warrant analysis based on the *California Manual on Uniform Traffic Control Devices (MUTCD)* indicated that a traffic signal was not warranted based on traffic volumes collected in November, 2009.

Long-Term Recommendations

The preferred long-term solution was the installation of a traffic signal to address pedestrian, bicycle and vehicular issues at this location. Installing stop signs on Harriet Avenue was not recommended since traffic volumes were not high enough throughout the day to warrant stopping traffic on Harriet Avenue. Also, if motorists do not obey the stop signs on Harriet Avenue, the intersection would be less safe for pedestrians to cross. Although all-way stop control may reduce existing eastbound queues on McCoy Avenue, queuing on Harriet Avenue would lead to more neighborhood cut-through traffic from southbound Harriet Avenue. In 2009 staff recommended that traffic volumes be monitored at Harriet/McCoy and that grant funding opportunities for a traffic signal at this location be pursued.

In 2013 a traffic signal warrant analysis was performed again and determined that a traffic signal would be warranted for the Harriet Avenue/McCoy Avenue intersection. At the same time a traffic signal would be warranted if San Tomas Aquino Road were included in the signalization (i.e., signalization of Harriet Avenue/McCoy Avenue/San Tomas Aquino Road intersection).

Conceptual Approval of Harriet/McCoy/San Tomas Aquino Signalization Page 5 June 21, 2016

On July 16, 2013, the City Council adopted Resolution No. 11566 authorizing the submittal of a Highway Safety Improvement Program (HSIP) grant application to Caltrans for the Harriet Avenue/McCoy Avenue/San Tomas Aquino Road Signalization Project. In December 2013, based on the merits of the project concept and its proposed use of a traffic signal as an effective countermeasure to the traffic collision history at these two intersections, Caltrans awarded an HSIP grant of \$516,900 to the City.

The Harriet Avenue/McCoy Avenue/San Tomas Aquino Road Signalization Project would remove and replace the Harriet/McCoy flashing beacon system with a traffic signal that would operate Harriet/McCoy and Harriet/San Tomas Aquino Road as one signalized intersection. The aim is to have the two intersections work in tandem to keep the area between McCoy Avenue and San Tomas Aquino Road clear of traffic queues, as much as possible, by allowing side-street traffic (e.g., from McCoy Avenue) to clear the downstream intersection (e.g., Harriet/San Tomas Aquino). The project would provide ADA accessibility ramps at both intersections and widen the sidewalk on the east side of Harriet Avenue over San Tomas Aquino Creek where the current width is only two feet.

DISCUSSION

Public Feedback

Forest Hill Parent Teacher Association (PTA) Meeting

On April 13, 2016, staff met with the Forest Hill Elementary School Parent Teacher Association (PTA) to present the Harriet/McCoy/San Tomas Aquino Signalization Project and to solicit public feedback. Approximately 27 school parents (including eight PTA board members) were in attendance with current Principal Denise Khalid. Public response was enthusiastically supportive of the traffic signal. In addition, there was support for other project components including the widening of the sidewalk on the east side of Harriet Avenue over San Tomas Aquino Creek and the installation of curb ramps at the two project intersections.

Following the PTA meeting, the school circulated a flyer soliciting public feedback from school parents. Staff continued to receive support for the project although some members of the public were also opposed to signalizing the two intersections.

Meeting at Residents' Homes

On the evening of April 28, 2016, staff met with about a half dozen residents at the corner of Harriet/McCoy to discuss how the traffic signal would operate and to answer questions. Some residents expressed concerns regarding driveway access and asked

**Conceptual Approval of Harriet/McCoy/San Tomas Aquino Signalization Page 6
June 21, 2016**

about different options that could be considered including signaling only one of the two project intersections, installing stop signs at one or both intersections, and relocating the school crosswalk from Harriet/McCoy to Harriet/Silacci Drive.

Oral Requests

On May 3, 2016, two residents appeared before the City Council during Oral Requests. The first resident (who lives at the northwest corner of Harriet/McCoy) objected to the concept of a traffic signal. He cited the past neighborhood objection to a Harriet/McCoy traffic signal and believes that traffic is only an issue during school admission and dismissal hours. The second resident lives on Hacienda Avenue. While he acknowledged that the failure of motorists to yield to pedestrians is an issue, he echoed the sentiment that the traffic issue lasts only two hours per day. He pointed to the width of Harriet Avenue as contributing to speeding and proposed raised crosswalks or speed humps as used on Cox Avenue in Saratoga, in-pavement lights as used in Los Gatos, or bulb-outs and narrowed streets like Hacienda Avenue in Campbell.

On May 17, 2016, a resident whose address was not disclosed appeared before the City Council during Oral Requests. This resident also acknowledged pedestrian safety as an issue and implied that the traffic safety issues at Harriet/McCoy could be attributed to the past relocation of the school crosswalk that had once been located at Harriet/Silacci Drive. The resident cited speeds on Harriet Avenue as a major concern and pointed to the street width as a contributing factor. He suggested Cox Avenue speed humps as a solution and cited a Department of Transportation website that stated that traffic signals may promote speeding.

Neighborhood Public Meeting

On May 16, 2016, staff held a public meeting at Forest Hill Elementary School. The meeting was announced through flyers to over 600 addresses in the neighborhood, the City's website, and through social media (e.g., Nextdoor and Facebook). About 25 members of the public attended the meeting. The residents asked questions on how the traffic signal would operate and expressed concerns about driveway access or potential traffic diversion. Two of the five people who expressed opposition to the traffic signal concept appeared before the City Council during Oral Requests.

Phone Calls and E-mails

In April and May staff received approximately 25 correspondences from the public regarding the traffic signal concept. Overall, approximately two-thirds of public comments expressed support for the project. A sampling of the comments and concerns is provided below.

Conceptual Approval of Harriet/McCoy/San Tomas Aquino Signalization Page 7
June 21, 2016

- Appreciate the City's taking initiative to address safety issue
- Concern about potential diversion of traffic to other streets like Keith Drive
- Cars do not stop for the flashing beacons
- Traffic signal is a fabulous idea
- Traffic signal will destroy the community and is a terrible idea
- Do not install signal; force people to walk to Westmont Avenue
- Signal is long overdue; there is no reasonable opposition particularly when funding is available
- Totally support a traffic signal and looking forward to seeing this proposal becoming a reality that will improve safety
- Speed humps are a bad idea on Harriet or McCoy; residents' solutions are too simple for such a complicated problem
- Strongly support this project in the interest of public safety
- From a parent whose children attend school near the intersection, it is imperative that a traffic signal be installed due to the amount of traffic
- A traffic signal and widened sidewalk is a great idea
- Why not change the flashing beacons from yellow to red?

Traffic Collision History and Traffic Safety

The following summarizes the key traffic collision history at Harriet/McCoy and Harriet/San Tomas Aquino between 2009 and 2014. **It is worth noting that at least three of the four crashes do not appear to have occurred during school admission or dismissal hours.**

Harriet/McCoy

- 10/27/2009 at 1:55 p.m.: Two pedestrians (69-year-old grandfather and seven-year-old grandson) were struck in the marked crosswalk by vehicle. Both legs of the grandson were broken.
- 12/12/2012 at 5:10 p.m.: A 13-year-old bicyclist was struck in the marked crosswalk by vehicle; flashing beacon was activated. The bicyclist's leg was believed to be fractured.
- This intersection experienced a total of one pedestrian- and four bicycle-related collisions between 2009 and 2014.

Harriet/San Tomas Aquino

- 9/21/2010 at 11:47 a.m.: A 22-year-old pedestrian crossing San Tomas Aquino Road was struck in the unmarked crosswalk by a vehicle making a southbound left-turn.

Conceptual Approval of Harriet/McCoy/San Tomas Aquino Signalization Page 8 June 21, 2016

- 11/12/2012 at 11:45 a.m.: A 54-year-old pedestrian crossing San Tomas Aquino Road was struck in the unmarked crosswalk by hit-and-run vehicle making a southbound left-turn.
- This intersection experienced a total of two pedestrian- and five bicycle-related collisions between 2009 and 2014.

It is worth noting that these pedestrian- and bicyclist-related collisions would have been correctable with a traffic signal. **Also, speed was not a contributing factor in any of these incidents.** Motorists were not traveling above the speed limit or had actually stopped to yield for oncoming traffic. Between 2009 and 2014 the City experienced 104 pedestrian- and 153 bicycle-related collisions. **The Harriet/McCoy and Harriet/San Tomas Aquino intersections experienced 6.6 percent of the City's pedestrian- and bicycle-related collisions during this time period.**

Options That Were Considered

At the May 16 public meeting staff provided feedback to the public regarding options that were considered.

1. Do Nothing (i.e., keep the flashing beacon system). The recent crash history and public feedback have demonstrated that motorists fail to yield to pedestrians.
2. Stop Signs Facing Harriet Avenue Traffic. This option would require all vehicles on Harriet Avenue to stop even in the absence of conflicting traffic. Traffic operations would be inefficient and would contribute to noise and air pollution. Not all motorists come to a complete stop.
3. Traffic calming measures (e.g., islands, bulb-outs, raised crosswalks).
 - a. These measures may be effective in slowing speeds but do not necessarily stop motorists or assign right-of-way clearly to all parties.
 - b. These measures do not improve side-street access as much as a traffic signal.
 - c. More substantial measures like roundabouts may require additional right-of-way and could create a problem for motorists who wish to exit from residential driveways currently located at Harriet/McCoy.
 - d. Speed humps may compromise emergency response times for County Fire and Police. "Speed lumps" or "speed cushions" that provide openings for fire truck tires (see Figure 1 below) may still slow down fire trucks as not all fire trucks have the same tire spacing. County Fire is concerned about damage to truck axles.
 - e. Staff observed the raised crosswalk on Cox Avenue in Saratoga and noticed that motorists still do not necessarily yield to pedestrians.



Figure 1: "Speed Lump" or "Speed Cushion".

Based on public feedback following the May 16 public meeting, the following options were evaluated.

1. Signalize only Harriet/San Tomas Aquino. This option would not address pedestrian safety at Harriet/McCoy.
2. Change the color of the flashing beacons from yellow to red. The State law requires motorists only to yield to pedestrians. Red beacons would send the wrong message. Again, not all motorists would stop for pedestrians.
3. Narrow the street like Hacienda Avenue. Traffic calming options like narrowing Harriet Avenue would not address the failure of motorists to yield to pedestrians and would not provide positive guidance regarding who has the right-of-way.
4. Install a landscaped median island like on Westmont Avenue. A landscaped median island on Harriet Avenue would deprive Harriet Avenue residents of direct left-turn access into their driveways. It is unclear whether those who are

Conceptual Approval of Harriet/McCoy/San Tomas Aquino Signalization Page 10
June 21, 2016

requesting the landscaped median island actually live on Harriet Avenue near McCoy and San Tomas Aquino.

Other Questions or Concerns

The following provides answers to other questions or concerns raised by the public.

1. "Traffic is bad for only two hours of the day." Traffic volumes are highest at these two intersections during the school admission (8:00-9:00 a.m.) and school dismissal (2:00-3:00 p.m.) hours. However, while traffic volumes are highest during these two hours, the hours between 3:00-7:00 p.m. carry comparable traffic volumes. Therefore, there are six hours that have comparable traffic volumes at these two intersections.
2. "The problem is speeding." While traffic speeds are high on Harriet Avenue, traffic calming measures do not necessarily address the failure of motorists to yield to pedestrians in the crosswalk. Also, speed was not a contributing factor in the four traffic collisions cited earlier.
3. "Traffic signals will increase speeds." At the May 17 Council meeting, during Oral Requests, a member of the public cited a Department of Transportation website that said traffic signals promote speeding. Staff found a federal web page at http://mutcd.fhwa.dot.gov/knowledge/faqs/faq_part4.htm#tcsfq6 that included similar language, but **the context was specific to an experimental warning device that would flash prior to the signal's turning yellow.** The federal web page response reads, "Each time displays such as these have been tried, it was found that they lengthened the "dilemma zone" in which drivers are unsure whether to stop or proceed, they encouraged more drivers to unreasonably speed up to 'beat the light,' and the increased aggressive driving behavior caused more crashes to occur than was the case without the advance indication of the change to yellow." Staff has not found a study that shows conclusively that traffic signals increase traffic speeds. In contrast, Police have reported that after the traffic signal on Campbell Avenue at Victor Avenue was installed, traffic speeds on Campbell Avenue actually decreased.
4. "Why was the school crosswalk relocated to Harriet/McCoy? The safety issues have occurred because the crosswalk was moved to McCoy Avenue." The school crosswalk had been located on the north leg of Harriet at Silacci Drive. Moving the school crosswalk to Harriet/McCoy made sense since the crosswalk would serve students of Forest Hill Elementary School where the school is located on McCoy Avenue. Also, the crosswalk at Silacci conflicted with westbound left-turns coming out of Silacci Drive. It is safer to have crosswalks to the right of motorists than to the left since a car's windshield pillar can block a motorist's view of pedestrians to one's left. Additionally, the pedestrian and bicycle crashes at Harriet/McCoy involved southbound through vehicles. Having the school crosswalk at Silacci Drive instead of McCoy Avenue would not have

eliminated the conditions that led to these crashes (i.e., southbound through traffic failing to yield to pedestrians or bicyclists in a marked crosswalk).

5. "Prove to me that people are more likely to stop at a traffic signal than at a stop sign." Traffic signals provide an illuminated display that is visible from hundreds of feet in advance. Traffic signal heads can be positioned directly over travel lanes. Multiple signal heads are provided per intersection turning movement. Stop signs are subject to fading, rely on street lights and vehicle headlights for visibility at night, are placed laterally to the side of the intended audience, and must be supplemented with STOP legends painted on the roadway. Clearly, traffic signals command better attention than stop signs.

Project Design Components

To address some concerns raised by the public, staff is incorporating the following items into the project.

1. Spot Island bulb-out. A bulb-out in the form of a spot island would be installed on the southwest corner of Harriet/McCoy (west end of the marked crosswalk). This bulb-out would also address residents' request for a bulb-out to narrow the street and shorten the crossing distance on Harriet Avenue.
2. Buffered bike lane. In an effort to address concerns about traffic speeds on Harriet Avenue, staff is considering the narrowing of travel lanes on Harriet Avenue. At the same time, the extra roadway width would allow for a striped three-foot buffer in both directions of Harriet Avenue between the vehicular travel lane and bike lane, thereby creating a buffered bike lane. In the absence of bike traffic, the buffered bike lanes would allow more room for residents who are backing out of their driveways and onto Harriet Avenue. The result would be better driveway visibility and a shifting of street traffic further away from the face of curb. Buffered bike lanes are becoming more popular and are currently being used on South Fourth Street near San Jose State University in San Jose. The bike lanes on Harriet Avenue would be buffered between Inskip Drive and San Tomas Aquino Road in the northbound direction and between McCoy Avenue and Silacci Drive in the southbound direction.
3. Southbound right-turn lane. The resident at the northwest corner of Harriet/McCoy noted that southbound right-turns cut the corner at high speeds, thereby making it difficult for pedestrians to walk across McCoy Avenue. Staff will incorporate a right-turn lane in the design to force southbound motorists to use the southbound right-turn lane rather than "cut the corner." Motorists' speeds around the corner should decrease.
4. Green bike lane next to southbound right-turn lane. Along with the proposed southbound right-turn lane at Harriet/McCoy, staff would incorporate in the design a green bike lane on the southbound approach of Harriet/McCoy to

emphasize the presence of bicyclists as motorists cross the existing bike lane to enter the proposed southbound right-turn lane.

5. Pedestrian barricade on northwest corner of Harriet/McCoy. The sidewalk on the west side of Harriet Avenue terminates at the north side of McCoy and does not continue west onto McCoy Avenue until west of San Tomas Aquino Creek. The resident on the northwest corner of Harriet/McCoy requested that the City address the pedestrian traffic that walks across her lawn. Staff will include a pedestrian barricade and sign to guide pedestrians on Harriet Avenue to cross to the south side of McCoy Avenue.

It should be noted that the traffic signal concept and widening the sidewalk on the east side of Harriet Avenue over San Tomas Aquino Creek are also the result of public feedback.

Recommendation

Staff recommends signalizing the Harriet/McCoy/San Tomas Aquino intersection for the following reasons. Based on traffic signal warrant analysis, this intersection satisfies Caltrans Signal Warrant 2 (Four Hour Volume) and Warrant 3 (Peak Hour Volume). Satisfaction of these warrants indicates that a traffic signal would be beneficial in assigning right-of-way and reducing excessive delay or hazard to McCoy Avenue and San Tomas Aquino Road traffic.

Entering onto Harriet Avenue from both side-streets is difficult. The posted speed limit is 30 miles per hour (mph) and the 85th percentile speed is 37-38 mph on Harriet Avenue. A traffic signal would improve access from side-streets.

Unlike stop signs and traffic calming measures, a traffic signal is more likely to stop motorists completely and stop them only when necessary (i.e., when conflicting traffic is present).

A traffic signal addresses the contributing factors to past pedestrian- and bicycle-related crashes cited in this report. Speed was not a contributing factor in these crashes. The issue is the failure of motorists to yield to pedestrians and bicyclists in crosswalks. A traffic signal would clearly assign right-of-way (i.e., who has the green signal).

A traffic signal provides margin for error for motorists and pedestrians. Traffic signals include safeguards like all-red time following the transition from green to yellow to red; yellow time based on travel speeds; clearance green time to allow side-street traffic to clear the downstream intersection; countdown pedestrian timers; and, leading pedestrian intervals that may be used to allow pedestrians to establish themselves in the crosswalk ahead of motorists.

Conceptual Approval of Harriet/McCoy/San Tomas Aquino Signalization Page 13 June 21, 2016

A traffic signal would make use of existing infrastructure. Unlike traffic calming measures like roundabouts, traffic signals can make use of existing infrastructure like curb, gutter, and sidewalk; intersection and driveway layouts; and, median, bike lane, and travel lane striping. Traffic signals typically do not require the acquisition of additional right-of-way.

In summary, the Harriet/McCoy/San Tomas Aquino Signalization would clearly assign right-of-way, protect pedestrians and bicyclists, and relieve motorists of decision-making in driving through these two intersections. The potential project benefits include making it easier to walk to neighborhood destinations (e.g., Forest Hill Elementary School, Westmont High School, San Tomas Park), improving McCoy and San Tomas Aquino side-street access onto Harriet Avenue, and clearly assigning right-of-way for all roadway users.

Schedule

Should the Council approve the project concept, the tentative project schedule would be as follows:

Prepare PS&E	June-August, 2016
Neighborhood Meeting #2	August 15, 2016
Council Approval of PS&E	September 20, 2016
Caltrans Review of PS&E	October, 2016
Caltrans Authorizes Construction	November, 2016
Bid Advertisement	November, 2016
Bid Opening	December, 2016
Award of Contract	January, 2017
Begin Construction	February, 2017
End of Construction	August, 2017

Staff will coordinate with City of San Jose staff since a short portion of the striping work on Harriet Avenue lies within San Jose city limits. Staff anticipates Neighborhood Meeting #2 will focus on the design components of the project.

FISCAL IMPACT

The preliminary project cost estimate is \$574,400. The federal Highway Safety Improvement Program (HSIP) grant is for 90% of the project cost or \$516,900. The City is responsible for a 10% local match or \$57,500. The Metropolitan Transportation Commission (MTC) has made a regional funding source called toll credits available for local agencies to use for local match funds if projects receive Caltrans approval by September, 2016.

ALTERNATIVES

1. Do not approve the conceptual project.

Prepared by: Matthew Jue
Matthew Jue, Traffic Engineer

Reviewed by: Todd Capurso
Todd Capurso, Public Works Director

Reviewed by: David Carmichael
David Carmichael, Police Chief

Approved by: Mark Linder
Mark Linder, City Manager

Attachments:

1. Resolution
2. 2009 Petition from Concerned Citizens
3. Letters received from the Community

RESOLUTION NO. _____**A RESOLUTION OF THE CITY COUNCIL OF THE CITY OF CAMPBELL
AUTHORIZING THE CONCEPTUAL APPROVAL OF THE HARRIET
AVENUE/McCOY AVENUE/SAN TOMAS AQUINO ROAD
SIGNALIZATION PROJECT**

WHEREAS, the City of Campbell was awarded a \$516,900 grant from the Federal Highway Safety Improvement Program (HSIP) Cycle 6 in Fiscal Year (FY) 2013/14 for the Harriet Avenue/McCoy Avenue/San Tomas Aquino Road Signalization Project; and

WHEREAS, Caltrans has approved the use of the HSIP funds for the Harriet/McCoy/San Tomas Aquino Signalization Project; and

WHEREAS, the Public Works Department met with the Forest Hill Elementary School Parent Teacher Association (PTA) on April 13, 2016, and held a public meeting with neighborhood residents on May 16, 2016; and

WHEREAS, those parents who were present at the PTA meeting were overwhelmingly supportive of the project concept; and

WHEREAS, neighborhood residents are concerned with how the traffic signal would operate, driveway access, and potential cut-through traffic; and

WHEREAS, some residents have expressed opposition to the traffic signal and have suggested that speeding is the issue on Harriet Avenue and recommended that the City consider other measures like raised crosswalks, narrowing Harriet Avenue, speed humps, landscaped median islands; and

WHEREAS, approximately two-thirds of public feedback support the Harriet/McCoy/San Tomas Aquino Signalization Project concept; and

WHEREAS, the Harriet/McCoy/San Tomas Aquino signal would improve traffic safety and address the contributing factors to pedestrian- and bicycle-related crashes at the two project intersections; and

WHEREAS, speed was not a contributing factor in any of the pedestrian- and bicycle-related crashes at the two project intersections between 2009 and 2014; and

WHEREAS, staff believes that the main safety issue with the pedestrian- and bicycle-related crashes is the failure of motorists to yield the right-of-way; and

WHEREAS, the Harriet/McCoy/San Tomas Aquino Signalization Project would remove the flashing beacon system and replace it with traffic signals at both intersections;

widen the sidewalk on the east side of Harriet Avenue over San Tomas Creek; and, install a bulb-out on the southwest corner of Harriet/McCoy; and

WHEREAS, the Harriet/McCoy/San Tomas Aquino Signalization Project would address the issue of motorists' failing to yield the right-of-way, protect pedestrians and bicyclists, and relieve motorists of decision-making in driving through these two intersections; and

WHEREAS, the potential project benefits include making it easier to walk to neighborhood destinations (e.g., Forest Hill Elementary School, Westmont High School, San Tomas Park), improving McCoy and San Tomas Aquino side-street access onto Harriet Avenue, and clearly assigning right-of-way for all roadway users.

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Campbell hereby approves the concept of the Harriet/McCoy/San Tomas Aquino Signalization Project.

PASSED AND ADOPTED this 21st day of June, 2016, by the following roll call vote:

AYES: COUNCILMEMBERS:
NOES: COUNCILMEMBERS
ABSENT: COUNCILMEMBERS:

APPROVED:

Attest:

Jason T. Baker, Mayor

Wendy Wood, City Clerk

Petition to Make Harriet/McCoy Intersection Safe

Petition summary and background	We would like the city of Campbell to look at the intersection and help keep our neighbor safe. We don't want any more innocent people getting hurt!
Action petitioned for	We, the undersigned, are concerned citizens who urge our leaders to act now to put stop signs or traffic lights at the intersection of Harriet and McCoy Avenues.

Printed Name	Signature	Address	Comment	Date	
Kris Anderson	<i>Kris Anderson</i>	[REDACTED]	Don't let anyone else get hurt!!	10/30/09	
John Richardson	<i>John Richardson</i>		Help!	10/30/09	
Kim Hoffmann	<i>Kim Hoffmann</i>		already fix this!	10/30/09	
Katrin Anderson	<i>Katrin Anderson</i>			10/30/09	
Jennifer	<i>Jennifer</i>			Fix this	10/30/09
LORI DIEZ	<i>Lori Diez</i>			It's past time!!	10/30/09
STERRILLEN	<i>Sterrillen</i>				10/30/09
Kelly Dickson	<i>Kelly Dickson</i>			FIX NOW!	10/26/09
Anna Via	<i>Anna Via</i>			Please before anyone else gets hurt	10/30/09
Lisa Wallace	<i>Lisa Wallace</i>				10/30/09
Robert Ortiz	<i>Robert Ortiz</i>			fix this	10/30/09
Rechel Schmeier	<i>Rechel Schmeier</i>			Help	10/30/09
mitch morris	<i>Mitch Morris</i>		FIX NOW!	10/30/09	

Light @ McCoy + San Tomas Aquino

Printed Name	Signature	Address	Comment	Date
Jude Anderson	<i>[Signature]</i>	[REDACTED]	Its Broken, Fix it	10/30/09
STEVE SALTUS	<i>[Signature]</i>	[REDACTED]	NEED SIGNAL LIGHT	10/30/09
Monica Tilney	<i>[Signature]</i>	[REDACTED]	need stop light	10/30/09
Rocky Tilney	<i>[Signature]</i>	[REDACTED]	NEED STOP SIGN OR LIGHT	10/30/09
Mary McAllister	<i>[Signature]</i>	[REDACTED]	Need stop light	10/30/09
Shelly Anita	<i>[Signature]</i>	[REDACTED]	!! stop light	10/30/09
Shawn Ortiz	<i>[Signature]</i>	[REDACTED]	stop light	10/30/09
Sara Cillon	<i>[Signature]</i>	[REDACTED]	Stop light	10/30/09
Bong Cha	<i>[Signature]</i>	[REDACTED]	stop light	10/30/09
SHILPA TORVI	<i>[Signature]</i>	[REDACTED]	Need signal or stop sign	10/30/09
Jennifer Concha	<i>[Signature]</i>	[REDACTED]	stop light	10/30/09
Caterina Kuleva	<i>[Signature]</i>	[REDACTED]	stop light !!	10/30/09
Helga Kames	<i>[Signature]</i>	[REDACTED]	NOT SAFE AS IS	10/30/09
BRECK HEWDER	<i>[Signature]</i>	[REDACTED]	HEAVY TRAFFIC AREA LOTS OF BIKES, NEED LIGHT	10/30/09
LEXIA DASGYPH	<i>[Signature]</i>	[REDACTED]	need stop light	10/30/09
SALATA	<i>[Signature]</i>	[REDACTED]	stop light	10/30/09

Printed Name	Signature	Address	Comment	Date
LISA MASON	<i>Lisa Mason</i>			10-30-09
Tracy Heck	<i>Tracy Heck</i>	4730 LONDON ST CLINTON		10-30-09
Kelly Clegg	<i>Kelly Clegg</i>			10-30-09
Travis Hummer	<i>Travis Hummer</i>			10/30/09
Charles McKelishan	<i>Charles McKelishan</i>			10/30/09
S. Saram	<i>S. Saram</i>			10/30/09
David Hamilton	<i>David Hamilton</i>		lt.	10/30/09
Diane L. Young	<i>Diane L. Young</i>			10/30/09
Cindy Hankton	<i>Cindy Hankton</i>			10/30/09
STARIE BEARDS	<i>Starie Beards</i>			10/30/09
Andrea Terry	<i>Andrea Terry</i>		Light, please	10-30-09
Tim Brown	<i>Tim Brown</i>		"	10-30-09
Debbie Lane	<i>Debbie Lane</i>			10-30-09
David Peil	<i>David Peil</i>		Police aware of problem but ignore it. Told me off the record not to walk to school."	10/30/09
Monica Lafuze	<i>Monica Lafuze</i>			10/30

Printed Name	Signature	Address	Comment	Date
Ketrick Arensburg	[Signature]	[Redacted]	It is needed!	10/30
Sammali Mirales	[Signature]	[Redacted]	Need it!	10/30
Angelica Jimenez	[Signature]	[Redacted]	WE NEED this for our kids and community!!!	10/30
MARISOL VARGAS	[Signature]	[Redacted]	needed very soon	10/30
Diana Valdez	[Signature]	[Redacted]	" " "	10/30
Josefina Valdez	[Signature]	[Redacted]	" " "	10/30
Karen Hedman	[Signature]	[Redacted]	Please we need it	10/20
Jeimy Lee	[Signature]	[Redacted]		10/30
Kathy Schliet	[Signature]	[Redacted]	ASAP!	10/30
David May	[Signature]	[Redacted]	No more tragedies!	10/30
Michelle Barber	[Signature]	[Redacted]	Yes ASAP	10/30
Celine Brochu	[Signature]	[Redacted]	Stop waiting!	10/30
ANN PHAM	[Signature]	[Redacted]	It a must: Too dangerous!!!	10/30
Vince Frorillo	[Signature]	[Redacted]	don't wait until someone really gets hurt or worse	10/30
PHILIP M. ALLISTER	[Signature]	[Redacted]	NEED STOP LIGHT!	10/30
Cheryl Johnson	[Signature]	[Redacted]	Please!!!	10/30

Printed Name	Signature	Address	Comment	Date
Sharon Morris	Sharon Morris		1	10/30
Carolyn Moore	Carolyn Moore		It's about time!	10/30
Elizabeth Desoberts	Elizabeth Desoberts		It's about time	10/30
Erica Crome	Erica Crome		So it takes to injured people to finally make it	10/30
Berto yee	Berto yee		big need for water? Flasher lights!	10/30
Gravito	Gravito			10/30
Masaiki Nishimura	Masaiki Nishimura		1	10/30
Tessa Kirhey	Tessa Kirhey			10/30
Colleen Zimser	Colleen Zimser			10/30
Faye Robert	Faye Robert			10/30
Natalie Call	Natalie Call			10/30
Andie Tran	Andie Tran			10/30
Corina Minor	Corina Minor			10/30
Julie Cittadino	Julie Cittadino			10/30
Shana Corle	Shana Corle			10/30
Iela Mikroyan	Iela Mikroyan			10/30

Printed Name	Signature	Address	Comment	Date
PETER ROSS	Peter Ross		We need safer streets Let's slow down & pay attention	10/30/09
Cathy Holley	Cathy Holley			10/30/09
Kim Paras	Kim Paras			10/30/09
Rebecca Martin	Rebecca Martin		Please keep our kids SAFE!!	10/30/09
CAROL STODDARD	Carol Stoddard		UNATTENDED DANGEROUS CROSSWALK	10/30/09
Megan Noriega	Megan Noriega			10/30/09
JENNIFER J. ATWOOD	Jennifer Atwood			10/30/09
Oy Kinder Vics	Oy Kinder Vics		T30 Dangerous	10/30/09
Laura Johnson	Laura Johnson		not safe! bad intersection	10/30/09
Wende Buck	Wende Buck		Please keep us safe	10-30-09
Doranne Hardt	Doranne Hardt		Something is needed to slow the traffic down	10/30/09
LISA SIMPSON	Lisa Simpson		poor visibility dangerous crosswalk	10/30/09
Rebecca Diskin	Rebecca Diskin			10/30/09
Margaret Crawford	Margaret Crawford			10/30/09
Judith Black	Judith Black		traffic too fast. Cars don't stop at cross	9/2/09
Edward Black	Edward Black		officer not unsafe	9/2/09

Printed Name	Signature	Address	Comment	Date
Carol Isuchiya				10/30/09
Debbie Margulis			people drive faster blind thru them should/corves	10/30/09
Donna Campbell			there needs to be a stop light!!!	10/30/09
Pia Lusk			Very scary!	10/30/09
Sheri Mays			I have been saying this preventable accident could have been	10/30/09
Heather Gudanski			Too long of a crosswalk & busy street without signs!!	10/30/09
Linda Roberts			Very Dangerous	10/30/09
Elaine Saghafian			I was shaken	10/30/09
Michelle Ardith			9500	10/30/09
Lisa Krause			Please ^{drive} not ^{slowly} why	10/30/09
Tina Haupt			please for the safety of the children	10/30/09
Jeanne Spencer				10/30/09
Laura Coates			Mandatory	10/30/09
Ed St. Louis			Mandatory	10/30/09
Laurie Croxall			SAFETY!!!!	
Suzanne Tolhurst		Safety	10/30/09	



June 10th, 2016

City of Campbell
70 N. First Street
Campbell CA 95008

Attn: Mark Linder, City Manager
Todd Capurso, Public Works
City Council Members

Subj: Proposed Traffic Lights at Harriet/McCoy/San Tomas Aquino

Dear City Council Members and Staff:

I write to you today with the safety of pedestrians, cyclists, and drivers in mind, and with great concerns about the speeding problems at Harriet Ave. My wife and I have three children enrolled at Forest Hill Elementary and we walk them to school every morning during school days. Living next to it, I am very familiar with the intersection and the heavy traffic (pedestrians, cyclists, and motorists) that must navigate it. I offer the following observations for your consideration:

1. The heavy traffic involving pedestrians takes place roughly between 7:40AM and 8:10AM, and for another 30 minutes total in the early afternoon and evening time, Monday through Friday, during school days. That's about 1 hour per day, 5 days of the week, for a portion of the year. The rest of the time the intersection flows nicely and efficiently.
2. There is a speeding problem on Harriet Ave. and Public Works survey data show it.
3. There is a very poorly designed and implemented crosswalk for pedestrians that confuses drivers (there are lights but no clear instructions about what they are for, and what are drivers supposed to do, or where they are supposed to stop and yield), and puts pedestrians at risk (the crosswalk lands right at my neighbor's driveway.)

The Public Works staff has a plan to install several traffic lights on two different intersections: Harriet and McCoy, and Harriet and San Tomas Aquino. I have seen the plans and I have attended a public meeting held at Forest Hill Elementary. I was not impressed by the plans because this seems to be a 24/7/365 traffic control monster imposed to us for a 1 hour/day (on school days only) situation.

Furthermore, Public Works staff stated that there is no speeding problem on Harriet despite their own survey indicating the opposite. Traffic lights in residential areas are likely to increase speeding as drivers race to make the green, or speed up after being stopped by a red light. I believe that the traffic lights are the wrong solution because Public Works is looking at an incomplete picture of the situation.

For the sake of our children in the neighborhood, cyclists, and drivers too, I implore you to reject the traffic lights project and direct Public Works staff to go back to the drawing board with a broader view of the situation that includes speeding on Harriet. Please ask them to give thorough consideration to traffic calming alternatives that physically modify the geometry of the roads to slow down motorists.

Specifically, I call out their attention to the following ideas:

1. Add a traffic circle on Harriet at San Tomas Aquino. Make the necessary adjustments to sidewalks and curbs to take advantage of the narrowing of the road due to the creek's bridge, and to make the necessary room for the traffic circle. This slows down traffic and allows cars on San Tomas Aquino to enter Harriet in an orderly fashion. My driveway on Harriet Ave also has a fair chance to be entered and exited.
2. Add bulb-outs on Harriet and McCoy to narrow the roads and give pedestrians a shorter distance to cross while slowing down traffic.
3. Move the crosswalk and crosswalk light further south, closer to Silacci, and make sure it does not end/start on people's driveways.
4. Clearly mark the bicycle lanes on Harriet Ave with bright green paint.

I wholeheartedly oppose the installation of traffic lights on Harriet, McCoy, and San Tomas Aquino. I join the many other neighbors who oppose them because we consider safety our top concern and the current project fails to address the root causes: speeding on Harriet and a poorly designed crosswalk.

Please reject the traffic lights project and give our community a better alternative.

Best regards,

Jaime Batiz

Wendy Wood

Subject: FW: Agenda item for June 21 Council Meeting

From: F S **Sent:** Sunday, June 12, 2016 10:06 PM

To: Wendy Wood

Cc: F. S.

Subject: Agenda item for June 21 Council Meeting

Faisal Mohamed
Campbell, Ca 95008

June 11, 2016

City of Campbell
70 N. First Street
Campbell, CA 95008

Attn: Mark Linder, City Manager
Todd Capurso, Public Works
City Council Members

Subj: Proposed traffic signal at Harriet, McCoy, and San Tomas Aquino

Dear City Council Members and Staff:

Pedestrian safety and speeding are the two concerns that has to be addressed. Installing traffic signals does not address the concerns. Accidents have taken place after the public works department had moved the cross-walk to the intersection of McCoy Ave. and Harriett Ave. At the meeting at Forest Hill Elementary school, when asked why the cross-walk was moved from the safer location which was between McCoy Ave. and Silacci Dr, the traffic engineer's answer was that some residents requested for it to be moved. No further clarification or details were provided. According to Campbell police report from 2001 to present, there were no incidents occurring at the previous location of the cross-walk when it was closer to Silacci Dr.

Harriett Avenue has a posted speed limit of 30 MPH, but since it is a wide street not too many motorists adhere to the speed limit. Motorist are speeding and tailgating citizens who are driving at the speed limit. The public works dept. is well aware of this situation, and they have added a warning sign which says "speed enforcement area" and they have added 2 radar based speed alerts on both sides of Harriett Avenue but this does not seem to attract the motorists' attention.

After 7 PM, when residents are out walking, it is still difficult to cross Harriett Avenue due to speeding cars. A Traffic light at McCoy Ave. and Harriett Ave. is not going to solve the problem of residents who need to cross Harriett Ave. further away from the traffic light. More importantly students walking up Elam Ave and heading towards Westmont High School have no easy way of crossing Harriett Ave. to get to other side. One side of Harriett has no sidewalk, and therefore to get to the cross-walk at Westmont Ave, and Harriett Ave, students need to walk pass this stretch of roadway right next to on-coming traffic. None of these concerns are being acknowledged or addressed by the public works dept.

For the safety of the children, adults and motorists, we need to implement traffic calming measures for the whole length of Harriett ave and change the culture of unsafe driving in the area. Encouragingly, these traffic calming measures have been adopted by other cities, such as the New York Department of Transportation. Here is the perspective from the FAQ page, in regards to traffic signals in residential areas.

Does a traffic signal control speed?

No. In some areas where speeding is a problem, residents believe that a traffic signal is needed to address the speeding problem. In fact, traffic signals sometimes result in greater speeds as drivers accelerate to try to get through the signal before it turns red. Other traffic control measures, such as speed humps, speed limit signs, and traffic enforcement, are more effective in controlling speed.

<http://www.nyc.gov/html/dot/html/infrastructure/signals.shtml>

I request the Council to send this proposal back to staff with instructions to present alternatives for pedestrian safety.

Sincerely,

Faisal Mohamed.



Tuesday, June 14th, 2016.

City of Campbell
70 N. First Street
Campbell CA 95008

Attn: Mark Linder, City Manager
Todd Capurso, Public Works
Paul Kermoyan, Community Development Director
Corinne Shinn, Executive Assistant
City Council Members

Subj: Public Works Project 14-GG, McCoy/Harriet Traffic Signal installation.

Dear City Council Members and Staff:

We are a group of Campbell residents and members of STACC that live near the intersection where city staff is planning to install two traffic signals (Harriet Ave, McCoy Ave, San Tomas Aquino Rd). The document we are bringing to you is the fruit of our research and concern. We are, after all, the users of these roads; it is our children that walk, bike, skateboard and even drive on those roads on their way to school and around the neighborhood and we are willing to go to great lengths to ensure their safety.

The problems that affect our intersection are, to say the least, very complex. Furthermore, they are greatly influenced by the time of day and the school calendar. If you come by at 7:50 am, you will find a very different intersection as you would at any other hour during the morning both on school week days and the rest of the year. We have come to the conclusion that only by addressing all the factors that contribute to the problems at our intersection the problem can be effectively solved.

Sadly, in their single minded pursuit of a traffic light for these intersections, City staff has overlooked important data that point to the diverse factors that contribute to the problems at the intersection and they are about to impose on us a project that will be in fact detrimental to our community's safety and quality of life.

The goal of this document is:

- 1) Analyze the factors that contribute to the problems at both intersections: speed, street layout, and proper signalization.**
- 2) Use data analysis to weight the impact, usefulness, and unintended bad consequences of two synchronized traffic lights in a residential neighborhood.**
- 3) Provide research about alternate solutions that have proven to be effective at solving traffic problems in residential areas, and specifically address pedestrian safety.**
- 4) And, finally, to respectfully ask you, as our representatives, to pause the traffic lights project and direct city staff to come up with a fully researched traffic calming strategy so that we can weight the advantages and disadvantages of each alternative and make an informed decision regarding the well being of our community.**

Note: The "traffic calming" term is taken from the Institute of Traffic Engineers and will be defined and fully supported on section 3 of this document.

Note 2: In an effort to make the reading of this document as efficient as possible data and documentation will be snapshot and included in the document with links whenever possible so you can see its source as you are reading instead of having to go back and forth to check the creditability of our facts.

Note 3: Since the San Tomas Aquino intersection was just recently included as part of the signalization project, we may not have as much data as we have on the McCoy intersection.

Best regards,

Isabel Batiz.

Analysis of factors that contribute to the problems at the intersections

SPEED

Speed seems to be the major point of contention between city staff and residents. Every time residents have confronted the staff regarding a speeding problem on Harriet Ave they have been told that there is no speeding problem in Harriet and that, if they insist, they may petition the city to look at the problem once the traffic lights are installed. Given that the link between speeding and pedestrian risk has long been established it seemed paramount to look at the data and determine if we have a speeding problem or not at the intersection.

Only by evaluating all of the factors that contribute to the problem are we in a position to determine which solutions would best serve the needs of the residents.

The speed limit on Harriet and McCoy is 30mph, and 25mph for San Tomas Aquino road. This limit was established considering the safety for all users, the purpose of the road (collector) and its location in the city (residential). Furthermore, California is ruled by a "Basic speed law"

California Driver Handbook - Laws and Rules of the Road

Speed Limits

California has a "Basic Speed Law." This law means that you may never drive faster than is safe for current conditions. For example, if you are driving 45 mph in a 55 mph speed zone during a dense fog, you may be cited for driving "too fast for conditions."

Regardless of the posted speed limit, your speed should depend on:

- The number and speed of other vehicles on the road.
- Whether the road surface is smooth, rough, graveled, wet, dry, wide, or narrow.
- Bicyclists or pedestrians walking on the road's edge or crossing the street.
- Whether it is raining, foggy, snowing, windy, or dusty.

In the driver's handbook it is also established that around children it is never safe to drive faster than 25 mph.

Now let's see how drivers on our intersections are doing and how it may affect the use of the road:

We have 9,322 vehicles per day (VPD) on Harriet.

1,982 VPD on EB McCoy

1,562 VPD on STA

HARRIET. 50% of vehicles are speeding: 4,661 vehicles are driving above 33.7mph
35% driving between 34 and 38mph and,
1,389 cars (15%) driving closer to 40mph or more. We have a recording from a neighbor that puts speeds as high as 55mph.

McCoy 50% vehicles speeding above 30mph
STA has a posted speed limit of 20mph near the Harriet intersection.
Again, we see more than 50% of drivers speeding.

Public Works
 To: María Isabel Bätz
 RE: Traffic data at Harriet and McCoy ave.

Isabel,

Here is the information you requested.

Harriet Avenue between Westmont Avenue and north city limits					
		2010	2015		
NB	Median	29.32	32.6	33	33.8
	Mode	33			
	85 th %	38		38	
SB	Median	30	33.4	31	33.7
	Mode	30		31	
	85 th %	37		37	
McCoy Avenue between Harriet Avenue and west city limits					
		2010	2015		
EB	Median	32	29.0	32	30.9
	Mode	34		34	
	85 th %	34		34	
WB	Median	30	29.9	33	31.3
	Mode	30		33	
	85 th %	35		35	
San Tomas Aquino Road between Harriet Avenue and Hazel Avenue					
		2010	2015		
WB/NB	Median	28	27.3	25	24.4
	Mode	31		27	
	85 th %	31		27	
EB/SB	Median	26	27.8	26	26.3
	Mode	26		26	
	85 th %	32		31	

- Data received from City Staff on May 31st, 2016.

By looking at the data provided, we found conclusive evidence that there is a speeding problem on Harriet and McCoy. With about 1,389 vehicles driving at 38mph or more every day. Why then, every time we have brought our concerns to city officials we have been dismissed? Is it surprising that even within walking distance most parents prefer to drive their kids to school thus adding to the congestion problem?

The World Health Organization published data stating that an increase of 1km/h (.62mph) in speeds typically results in a 3% higher risk of a crash involving injury.

http://www.who.int/violence_injury_prevention/publications/road_traffic/world_report/speed_en.pdf

From the World Health Organization:

Excessive and inappropriate speed is the most important factor contributing to the road injury problem faced by many countries. The higher the speed the greater the stopping distance required, and hence the increased risk of a crash. As more kinetic energy must be absorbed during a high-speed impact, there is a higher risk of injury should a crash occur.

Speed management is a very important tool for improving road safety. However, improving compliance with speed limits and reducing unsafe driving speeds are not easy tasks. Many drivers do not recognize the risks involved and often the perceived benefits of speeding outweigh the perceived problems that can result.

The management of speed remains one of the biggest challenges facing road safety practitioners around the world and calls for a concerted, long-term, multidisciplinary response. This manual advocates a strong and strategic approach to creating a safe road system, with speed management at its heart. Reducing motor vehicle speeds in areas where the road user mix includes a high volume of vulnerable road users such as pedestrians and cyclists is especially important.

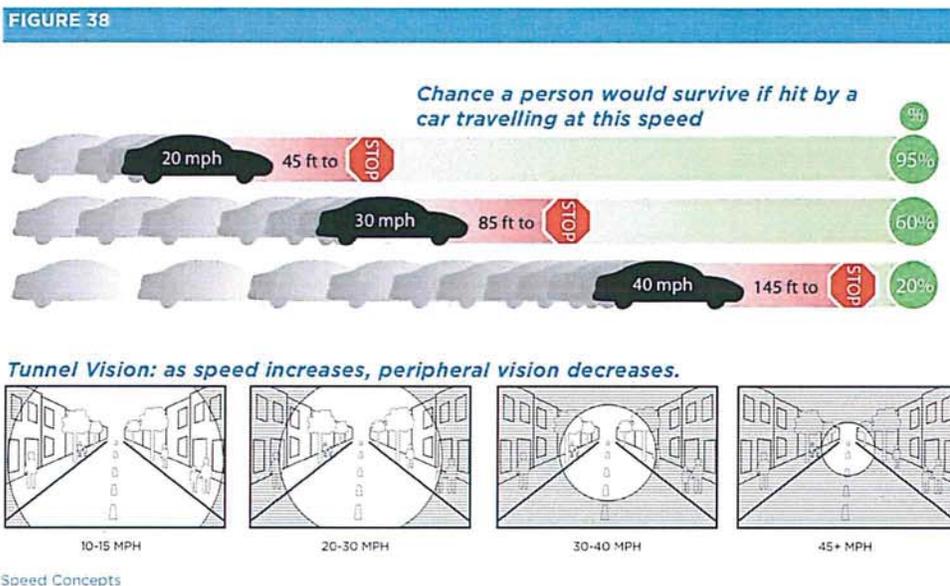
http://www.who.int/roadsafety/projects/manuals/speed_manual/speedmanual.pdf

The relationship between speeding and the seriousness of crashes has long been established. For illustration purposes we've included this chart from Chicago streets blog, but more information in the subject can be found at the National Association of Automotive Professional's website.

<http://nacto.org/publication/urban-street-design-guide/design-controls/design-speed/>

It is important to highlight that **children are the most vulnerable pedestrian group:**

- * They weigh considerably less than the average adult.
- * Their height makes them harder to spot both at a distance and when a car is turning or backing up.
- * They tend to make more mistakes in judging the distance and speed of an approaching vehicle.
- * They tend to move swiftly and unpredictably.



<http://chi.streetsblog.org/wp-content/uploads/sites/4/2014/08/Screenshot-2014-08-18-15.16.47.png>

Although 8 miles or more above the speed limit or 13 miles above the safe speed limit may not sound much to some people, the risks for pedestrians grow exponentially. Because of the actual layout of our streets, in most cases, there's no good visibility at 145 ft, there have been too many run ins.

Walking and biking to and from school is one of the easiest, cost effective, environmentally responsible ways of keeping our children active and healthy but given the statistics on the speeding behavior at our intersection it will come as no surprise that city staff reported only 15 pedestrians crossing Harriet on their way to and from school.

If you were to read only one link from this document, we would encourage you to read: "Increasing Physical Activity through community design" a report published by Washington: National Center for Biking and walking. http://www.bikewalk.org/pdfs/IPA_full.pdf

Effectively addressing the speed problem on Harriet and McCoy should be a priority if pedestrian safety is a concern. A study published by the University of Davis regarding Community design and Physical activity determines that **changes in the community design that lower traffic speeds and promote safe walking and biking routes to potential destinations resulted in 65% increase in pedestrians walking to school and**

114% increase in kids biking to school. It also states that, obviously, parents will not let their kids walk and bike around streets that they do not perceive to be safe.

https://www.niehs.nih.gov/about/events/pastmtg/assets/docs_n_z/supplementary_informationoverviewhandy_508.pdf

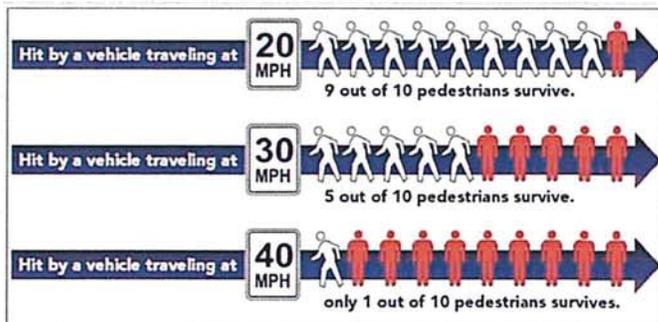
Here's yet another example on how Cities worldwide are stressing the importance of low speeds when children are present.

Tuesday, July 1, 2014

7 Comments

Supervisor Mar Wants to Study How Lower Speed Limits Could Improve SF

by Aaron Bialick



Reducing speed limits could have a big impact on saving lives. Image: [PEDS Atlanta](#)

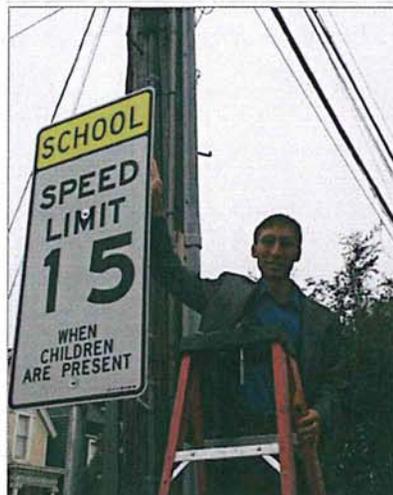
Supervisor Eric Mar [requested a city study](#) last week about [how lower speed limits](#) could benefit San Francisco. Although lowering speed limits without implementing physical traffic calming measures isn't a panacea for safer streets, the measure does hold promise as a first step toward saving lives and implementing [Vision Zero](#). San Francisco would follow in the footsteps of New York City, Paris, and the United Kingdom in looking at major speed limit reductions.

"We must do all that we can do to make sure that our streets are safer for our residents, and a speed limit reduction may have a significant impact on achieving this," said Mar.

The study requested by Mar would add to a growing body of research showing how lower speed limits would reduce fatal crashes and save money. The UK Department of Transportation, which [instituted a "20's Plenty" campaign](#) that set 20 mph speed limits as the default for residential streets, found that the chances of survival for a person hit by a car at 40 mph are half that of being hit at 30. Fatalities increase six-fold from 20 to 30 mph.

"Getting hit at 20 mph is like falling off a one-story building, but getting hit by a car at 40 mph is like falling off the fifth-floor," said Walk SF Executive Director Nicole Schneider, who called major speed limit reductions "one of the most important next steps we can take in achieving Vision Zero."

"We need to look towards our partner cities that have done this successfully, and model our efforts on the best practices," she said.



Supervisor Mar with one of SF's 15 mph school zone signs.

Photo: Eric Mar

STREET LAYOUT

Factors like how wide is the street, how straight, how smooth is the surface and how much visibility there is have a direct effect on how motorists use the road.

- Harriet Ave is a wide, straight road.
- We have bike lanes that were designed so wide that vehicles are using them as a second unofficial right turn lane.
- We have wide angled curbs that facilitate speeding turns and diminish visibility.
- During school day mornings pedestrians, bikes, and vehicles converge at the intersection and compete for the use of the road. In other words, everybody wants to go to school/work at the same time and they all must pass through the same intersection.

Speed and wide roads: In reference to speed, Chapter two of the Traffic calming manual supports the idea that streets that are both wide and have long straight stretches are the most inviting to speeders. 1,389 daily drivers on Harriet agree.

<http://library.ite.org/pub/e2778ce6-2354-d714-5179-ee031f27d167>

As part of their findings on pedestrian safety, New York department of transportation states that their results confirm nation wide research showing that **wider roads and wider lanes lead to increased speeding and diminished driver awareness.**

http://www.nyc.gov/html/dot/downloads/pdf/nyc_ped_safety_study_action_plan.pdf

There are numerous examples of cities and towns dealing with safety and traffic congestion by narrowing the roads and redesigning the architecture of the road so that vehicles, bikers, and pedestrians are aware of each other. Paradoxically, one of the unintended side effects is that despite traffic going slower vehicles move more efficiently. By slowing traffic down, Traffic engineers also noted an increase in pedestrian and bicycle activity as people felt more safe to be along those roads.

<http://www.wired.com/2004/12/traffic/>

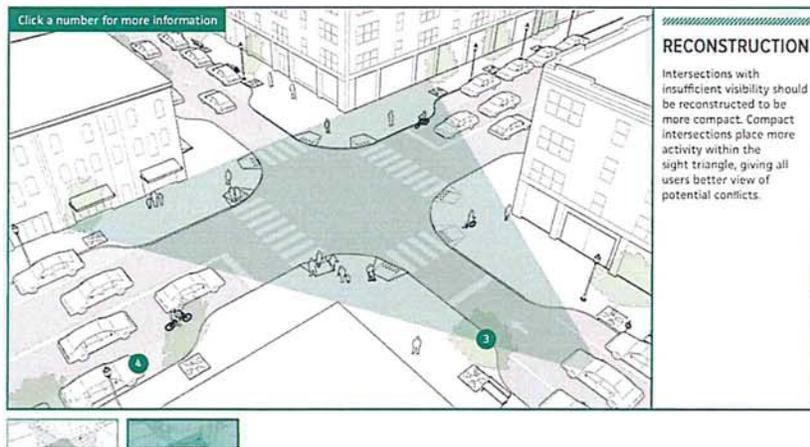
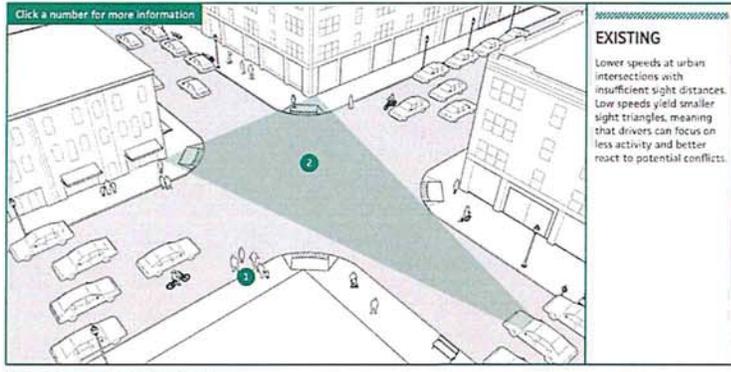
Our bike lane is so wide and poorly marked that is being used as a second lane to turn right on McCoy without slowing down, and pedestrians have to cross a very wide road on their way to school and the local park.



PEDESTRIAN VISIBILITY. The first tenant on intersection design and pedestrians is the importance to create a layout that fosters pedestrian visibility while at the same time shortening as much as possible the time pedestrians have to be on the path of traffic.

Pictures below, from the national association of city Transport officials illustrate the importance of this point.

Visibility and sight distance are parameters central to the inherent safety of intersections, driveways, and other potential conflict points.



<http://nacto.org/publication/urban-street-design-guide/intersection-design-elements/visibility-sight-distance/>

One of the problems created by Harriet's speeding vehicles is that the gap to merge safely into Harriet is very limited. But merging to Harriet is also made difficult by the lack of visibility.



Visibility from a minivan stopped right before the pedestrian crosswalk.

California driver's handbook considers it a "blind intersection" if a driver is unable to see within 100 feet on each direction and states that the merging speed should be 15mph.

At our intersection most drivers adapt by inching forward as much as they can in order to swiftly merge on Harriet. But they do so by blocking the pedestrian path on McCoy and since the driver's attention is focused on the upcoming traffic many times they don't even see approaching pedestrians. When they finally see the pedestrians, the crosswalk is already blocked.



Usually the matter is solved rather quickly as the vehicle is able to merge on Harriet and the crosswalk is liberated, but during the school day mornings, around 8am at the McCoy intersection most drivers are frustrated by the inability to turn on Harriet, and for those 30 minutes or so, there are queues of other cars waiting. What happens then is that drivers ignore pedestrians or they apologetically wave pedestrians to pass in front of them, that is, walk on Harriet on the path of upcoming traffic.

Although McCoy is a one lane each way street, it's wide enough to unofficially, at peak times, accommodate two squeezed-together lines, one for drivers turning left and the other for drivers turning right. The view of pedestrians is often blocked by the second lane of cars and if pedestrians dare start crossing they have to watch out no to be on the path of the second row as it suddenly seizes an opportunity to turn.



Having a traffic light to designate right of way sounds great, but the reality is, that due to the lack of visibility and excessive driving speed on Harriet, most vehicles turning right will continue to inch forward and, vehicles on Harriet will continue to make fast right turns into McCoy.

One of the biggest dangers with a traffic light is that it lures the driver into a false sense of security. It shifts the awareness from what's happening around to what color the light is. There's a widespread misconception that green means go. When the light turns green the driver has the right of way. However, if

pedestrians are also given the “walk” light conflict is sure to happen. By the way, green means: it’s ok to proceed with caution.

In the morning everybody at that intersection is rushed, frustrated and distracted. Few wise parents manage to walk or drive to school a few minutes early and thus avoid the madness. But, for the majority of us, something always happens, we arrive at the intersection with few minutes to spare and balk at any delay. When that is happening we need drivers at the slowest possible speed and with the clearest field of vision.

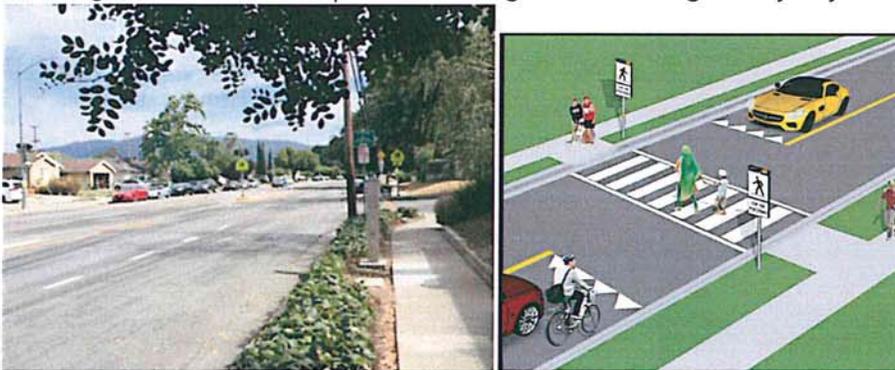
One last consideration regarding speeders: the traffic light by design, will be green on Harriet unless the sequence is triggered by an approaching vehicle on San Thomas Aquino or McCoy ave. The layout of the street will remain exactly as it is right now, there’s nothing to deter vehicles and motorcycles from racing on Harriet in the middle of the night.

PROPER SIGNALIZATION

Or the lack of it, is an interesting point. As we demonstrated previously, more than 50% of vehicles are speeding on Harriet and therefore are less aware of their environment and have less time to react. As residents we often see cars stop just shy of crossing pedestrians which creates a host of problems:

First of all, it’s pretty scary to have a car come at you when you are in the middle of the road. If you were crossing the street with little kids you would know the very definition of terror. We’ve seen terrified pedestrians run back to the curb, others stop midway and some even react angrily and confront the driver. And, second of all, stopping in the middle of the intersection increases the risk of rear end crashes as the vehicle behind has even less visibility as to the conditions of the road, it’s very likely to be speeding, and is not expecting a vehicle to suddenly stop there. Although that would be addressed by the traffic light for the people crossing Harriet, vehicles turning right will continue to corner dive when merging on McCoy.

It turns out that there’s absolutely no sign, paint strip or any information that indicates to the drivers where do they need to stop to yield to pedestrians at any of the three spots where upcoming vehicles would encounter a pedestrian crossing Harriet. Every driver chooses what they think it’s best, with some drivers assuming that it’s ok to drive past the flashing beacon as long as they stay a few feet clear of pedestrians.



After reviewing the data on vehicles per day and statistics on speed that city staff provided and research documents regarding pedestrian safety, we can say confidently that speeding, poor visibility and lack of proper signalization are major factors contributing to the dangers along Harriet Ave.

More than 80% of the residents we talked with regarding the installation of the two synchronized traffic lights on Harriet Ave want safe routes for kids to walk, skateboard and bike to our local school and high school. What we don't want is something that may look good on paper but will not work in real life.

THE IMPACT OF TWO SYNCHRONIZED TRAFFIC LIGHTS INSTALLED ON HARRIET.

Again, in the interest of expediency we will summarize the conclusion of our research and data analysis and we will elaborate on each point further on the document.

1. It's going to make the road more dangerous for non motorist users.
2. It's going to create a hot spot of pollution for pedestrians and residents.
3. It's going to create long car queues.
4. It's going to produce unnecessary delays 80% of the time when the intersections are empty and fluid.
5. It will foster dangerous neighborhood cut through as motorists try to avoid the delays both at the rush hour because of the long queues and the rest of the time because vehicles will be stopped on an empty intersection.
6. It will not address the problem of "hot rodders" speeding up on Harriet in the middle of the night.
7. Two traffic lights within 20 feet of each other this deep in a residential area will create an over urbanized unappealing landscape.
8. It will prevent residents to access their homes in a timely manner.
9. It will create excessive noise for residents that live close to the traffic light.

It's going to make the road more dangerous for non motorist users.

Safety is the number one concern of residents. It shows. City staff counted only 15 pedestrians crossing Harriet on their way to and from school. No matter how many times city staff reassures us that there's no speeding on Harriet, even before we had the data to prove it, people instinctively know that it's not safe. Compared to the hazard of walking and biking our little ones to school on Harriet, driving provides a safer, more efficient alternative.

It is widely known, however, that physical activity before school has a direct positive effect on our children's mental and physical's well being. Many cities now are changing their roads' architecture and speed laws to foster this activity. Community designers know that the road has to be safe and to feel safe in order to invite non motorist use.

Please look at the following snapshot from the safe routes to school website.

SafeRoutes
National Center for Safe Routes to School

Home Submit data Go to Guide Find state contacts

Program Tools Events & Activities Training Data Central About Us

Focusing on a safer way to get to school...

Improving children's safety while walking and bicycling is a central mission of Safe Routes to School. And program benefits stretch beyond the school day.

SRTS resources & activities help communities:

- Build sidewalks, bicycle paths & pedestrian-friendly infrastructure
- Reduce speeds in school zones & neighborhoods
- Address distracted driving among drivers of all ages
- Educate generations on pedestrian & bicycle safety

Explore resources →

None of the above include put traffic lights every 20 feet. With reason, traffic light will not achieve any of those goals. They are a tool for vehicles.

According to a verbal response from city staff, a traffic light, or two, in our case, is not an instrument to control speeding. Of course, according to their verbal accounts, there's no speeding problem on Harriet Ave so we have to look at research.

There's growing evidence that **speeding increases around the traffic light intersection as drivers accelerate to make the green or try to compensate for time lost during a red light.**

<http://www.ncbi.nlm.nih.gov/pubmed/26545011>

A study of speeding in school zones found that on average motorists accelerate 8.27km/h (5.1mph) over the speed limit after being stopped at a red light.

<http://www.ncbi.nlm.nih.gov/pubmed/24884545>

From the AAA foundation.org "one way to reduce the number of pedestrians injured or killed in crashes is to restrict traffic speeds, in areas where vehicles and pedestrians may encounter one another, to speeds at which a pedestrian is unlikely to be seriously injured or killed if struck by a vehicle."

"Results show that the average risk of severe injury for a pedestrian struck by a vehicle reaches 10% at an impact speed of 16 mph, 25% at 23 mph, 50% at 31 mph, 75% at 39 mph*, and 90% at 46 mph. The average risk of death for a pedestrian reaches 10% at an impact speed of 23 mph, 25% at 32 mph, 50% at 42 mph, 75% at 50 mph, and 90% at 58 mph. Risks vary significantly by age. For example, the average risk of severe injury or death for a 70-year-old pedestrian struck by a car travelling at 25 mph is similar to the risk for a 30-year-old pedestrian struck at 35 mph."

<https://www.aaafoundation.org/sites/default/files/2011PedestrianRiskVsSpeed.pdf>

Harriet has about 1,392 vehicles driving daily above 38 mph. The risk to pedestrians is unacceptable.

Let's not forget that older elementary kids and teenagers use Harriet Ave as a bike route to school. Ideally we would want to create an environment that encourages more kids that live a little farther than walking distance to schools to use their bikes as a way of transportation. Can we honestly ask them that knowing that we are putting them at a tremendous risk of serious injury?

Cars are driving dangerously fast on Harriet already, do we really want to give them another excuse to speed even more? The conclusion of every document and research published on pedestrians safety is always the same: *As long as we don't address the speeding problem to meet pedestrian safety standards Harriet Ave and its nearby intersections McCoy Ave and San Tomas Aquino Road will never be a safe route for kids to walk or bike to school.* Traffic lights have no positive effect on reducing speeding.

With regards to speeding, between installing those two traffic lights and doing nothing the safest choice is doing nothing. Although we will present to this board evidence based research that there are great alternatives to make these streets truly safe and foster the quality of life we all want for our kids in this City.

Now, let's pretend for a few seconds that we only care about those kids who will cross Harriet Ave. How will a traffic signal work to make them safer?

Traffic signals are designed to control the flow of traffic and assign right of way. It works by alternating the green light between conflicting sides of the road so that eventually everyone gets a turn. Both traffic lights

at our intersections will have a pedestrian led sequence. That is, regardless of where the green light is, once the pedestrian presses the button it will work at stopping traffic so pedestrian gets the right of way as soon as possible, or, in about two minutes depending on how much traffic there is. Once pedestrians get the "walk" light, they will have about 27 seconds to reach the other side, and, they will be given a 6 seconds head start before the alternate road gets the green light. City staff estimates that the wait period to get right of way will be between 6 second on an empty road to around 2 minutes on a busy time.

Please observe as you are driving this week how many seconds does it take a traffic light to turn for you, and about in how many seconds you begin to feel frustrated. This is a very real phenomena, psychologically, when we are driving, we tend not to look kindly at interruptions.

How will it work on school mornings? If pedestrians arrive at 7:45 am, there's sure to be lots of traffic. Two things are sure to happen here: First, unlike a crossing guard, the pedestrian signal has no way of knowing if there are more pedestrians right behind, so it will run its countdown. A second pedestrian who reaches the intersection seconds later has a decision to make, start crossing even when the light is flashing "don't walk" and run for it, or, wait until the pedestrian signal ends and click it again to wait for your turn. Second, cars have been waiting and, they have poor visibility, so they will be inching forward into the pedestrian path as they attempt to make the turn. 6 seconds after the pedestrians started walking cars at the other intersection will be given the green light. They are supposed to yield to pedestrians... Does this sound like a safe environment for your kids to cross the street?

According to New York's study on pedestrian safety, 27% of crashes were caused by a driver's failure to yield to a pedestrian crossing with the signal. That happens when drivers turning right at an intersection get the green light at the same time when pedestrians get the walk signal.

http://www.nyc.gov/html/dot/downloads/pdf/nyc_ped_safety_study_action_plan.pdf

Please also remember that, as pedestrians go, a great number of kids crossing Harriet are, well, tiny. If they choose to ride a trike or scooter not only will they be really hard to spot, but their movements are erratic, unpredictable and extremely fast. A kid who suddenly speeds to catch up to a friend, or a kid who stops midstride because they just saw a friend are very common behavior in elementary school or high school for that matter, but one hopes that size makes the older kids more visible.

Let's not forget that a pedestrian beacon assigns unequivocally the right of way to pedestrians, however, drivers in their rush are already not respecting it. What will happen when cars get the green light?

When cars invade the bike lane to turn right both on a green light and also on a red light if they feel it's safe, what will happen to cyclists? A simple observation on how motorists behave at the Campbell Ave intersection a few blocks down should be enough to show that Traffic lights make an intersection car territory, where pedestrians and bikes are tolerated only for a few seconds. These are our children we are putting in the path of traffic.

Talking about putting pedestrians in the path of traffic, let's talk about pollution.

In order to measure changes in the air quality at our intersection we need to determine what would change regarding traffic flow. City staff submitted and was granted a NEPA air quality certification stating that since the same number of cars would drive at both intersections there would be no change on pollution and designated the project as no air quality concern.

Not a Project of Air Quality Concern (40 CFR 93.123(b)(1))

(i) New or expanded highway projects with significant number/increase in diesel vehicles?

- Not a new or expanded highway project
- Signalization project—no additional lanes on Harriet Avenue, McCoy Avenue, and San Tomas Aquino Road
- No change in traffic volume or truck percentages on Harriet Avenue, McCoy Avenue, and San Tomas Aquino Road

It is a sad reality in most countries that the rules and requirements from government agencies lag behind the latest scientific research. How long did it take to ban tobacco after it was scientifically proven to be dangerous to our health?

We believe that in this day of global communication and information, it is irresponsible to make a decision without considering the results and knowledge of the latest scientific research. Particularly when it concerns the health and well being of our children.

We must inform our decisions by taking advantage of this wealth of information at our disposal or we risk making terrible mistakes. There have been a number of studies that link the way we drive our cars (accelerating, breaking, and, stopping) with the amount of pollution they generate. So let's study how will the installation of two traffic signals would change the way we drive on Harriet.

By default the traffic light will be on green for Harriet because it has more car volume. Every car exiting STA and McCoy will have the red light and will have to stop, and also vehicles on Harriet who would want to make a left turn. We are told that the traffic lights will have cameras sensing approaching traffic and therefore only a delay of about 6 seconds is to be expected on an empty road. If there's more than one car then the signal will have to assign turns so to speak.

How many cars is that and how much pollution will they cause?

Let's look at the data:

There are 9,322 daily vehicles on Harriet ave;
1,981 vehicles on McCoy and,
1,562 daily vehicles in STA.

Let's take out the vehicles on the top 4 hours of maximum congestion that staff is using as a warrant for the signal installation. We will, for the time being, accept their premise that there is congestion on those hours, although we reiterate our cordial invitation to the members of this board to visit the intersections at those times and confirm if it's truly a matter of traffic congestion or excessive speed what troubles our residents.

WARRANT 2 - Four Hour Vehicular Volume

SATISFIED* YES NO

Record hourly vehicular volumes for any four hours of an average day.

APPROACH LANES	One	2 or More	Hour			
			0800/1400	1400/1700	1700/1600	
Both Approaches - Major Street	X		937	922	840	776
Higher Approach - Minor Street	X		268	174	171	166
*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)						Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)						Yes <input type="checkbox"/> No <input type="checkbox"/>

That leaves

5,847 VPD Harriet

1,202 VPD McCoy

STA data was not used as a qualifier in the warrant, however we will take the same hours as they used on McCoy and Harriet leaving us with: 1,035 VPD

If you stop by the intersection, and we highly encourage you to do so, you will be able to observe that it remains fluid most of the time. Now that the summer is here, we would love to be able to ride our bikes with our kids around the neighborhood, sadly no matter what day of the year it is, there's always speeding on Harriet and it's not safe.

Both intersections would change with a traffic light. Since we don't have more accurate data regarding the destination of traffic merging on Harriet let's assume that half the cars on either McCoy or STA would want to turn left and the other half right. That is 1,719 vehicles stopped at the red light regardless of how many cars there may be on Harriet.

And, let's also divide the cars on Harriet equally thinking that about a third would want to turn left on either STA or McCoy and the rest would want to turn right or simply continue along the road. That number is 2,796 vehicles for Harriet for a total of 4,515 vehicles stopped at the traffic light.

How much pollution is that? One of the most recent studies regarding car pollution was published by the University of Surrey, UK. Scientists measured the nano particles generated by vehicles exhausts during a 6 km (3.7 mi) commute. They determined that when a car is stopped at a traffic light it produces 29 times the pollutants it produces when flowing. They determined that although commuters spent less than 2 percent of their time at traffic lights, this short time contributes to 25% of their total pollution exposure.

Here's a summary. <http://www.surrey.ac.uk/features/stopping-red-lights-exposes-drivers-high-levels-air-pollution-new-study-finds>

Based on their measurements, the amount of pollution generated by the installation of a traffic light at these two intersections would generate a change in our air quality equivalent to having 130,935 vehicles circulating on Harriet, McCoy ave, and STA every day.

As part of their conclusions they recommend that **pedestrians that pass regularly through an intersection regulated by a traffic light look for alternative routes.** Later during an interview, the lead scientist, Dr. Prashant Kumar concluded: "This has important implications for town planning and we should consider whether we really want schools, offices or hospitals to be built within these environments. Most people may not even consider what they or their children are breathing when they sit down at their desks each morning. A combination of policy and technology will help ensure that while we are hard at work our buildings are also working to protect us from harmful pollutants that affect both mind and body."

World Health Organization estimates that there are 7 million annual deaths attributable to air pollution.
<http://www.who.int/mediacentre/news/releases/2014/air-pollution/en/>

The American Lung Association stated that the number one cause for kids to miss school in California is asthma. A 2 decade study that looked at 2,000 kids in southern California found strong evidence that the quality of air kids breathe during their growing years determines the size and health of their lungs.
<http://articles.latimes.com/2004/sep/09/local/me-smog9>

Cleaner air = kids with bigger and stronger lungs for life, California study shows



CC BY 2.0 Wikimedia

Results from a two-decade study that looked at 2,000 kids in 5 cities in Southern California was recently published in the *New England Journal of Medicine*. Its findings remind us once again of the importance of clean air; remember, air pollution now kills more people than AIDS and malaria combined, and is now the world's biggest environmental health risk with 7 million deaths per year. In fact, the *World Health Organization* now puts air pollution in the same category as tobacco smoke, UV radiation and plutonium!

We all share a huge responsibility towards our children, in this case their very lives may depend on this. There are many families with young children who live less than 1,000 feet of these intersections, they have no choice to breathe a different air. If breathing at the traffic light intersections during 2% of their commute contributes to 25% of pollutants breathed by drivers, How much would resident's percentage be??

On a side note, we would also like to point out that vehicles stopped idle at a traffic light will also create excessive noise between the engines breaking and accelerating, the higher risk or rear end crashes and the pedestrian signal beeping. **Traffic noise is not only a nuisance, it has a direct impact on the quality of life and well being of residents.**

<http://www.ncbi.nlm.nih.gov/pubmed/15613943>

CONCLUSIONS: The results support the hypothesis that chronic exposure to high levels of traffic noise increases the risk for cardiovascular diseases.

Noise pollution increases the risk of hearing loss, stress, depression, sleep disturbances (thank you hot rodders!), and heart disease. There are even studies linking long term exposure to noise pollution to lower birth weight and impaired cognitive development in children.

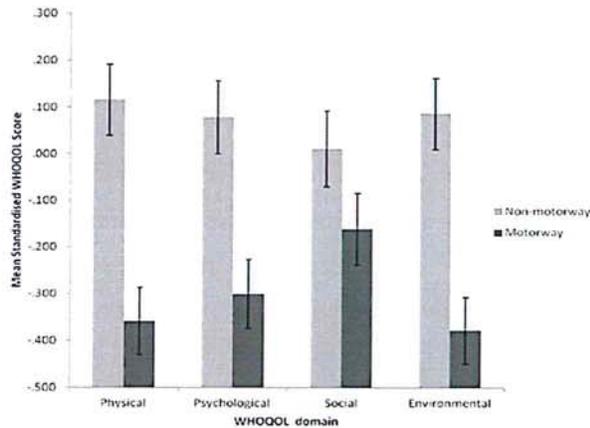
<http://articles.mercola.com/sites/articles/archive/2015/06/20/noise-pollution.aspx>

"A lot of municipalities just don't even think about noise," says Eric Zwerling, director of the Rutgers Noise Technical Assistance Center at the State University of New Jersey and president of the Noise Consultancy, LLC, "but the bottom line is that it's much, much cheaper to design for quiet than to remediate afterwards. Spending additional time upfront helps residents avoid disrupted lives and costly retrofits, and could help municipalities and State DOTs avoid the problem and expense of addressing incompatible adjacent land uses."

This is important because with the introduction of a traffic light, noise will increase both as cars break and as they accelerate. <http://waset.org/publications/13739/traffic-noise-under-stop-and-go-conditions-in-intersections-a-case-study>

Just look at the overall reduction in quality of life results from self assessment questionnaires in a study from the World health organization that compared those dwelling near or far motorways.

Source: Welch D, Shepherd D, Dirks KN, McBride D, Marsh S. Road traffic noise and health-related quality of life: A cross-sectional study. Noise Health [serial online] 2013 [cited 2016 Jun 12];15:224-30. Available from: <http://www.noiseandhealth.org/text.asp?2013/15/65/224/113513>



Although we have stated repeatedly that our top priority is to make our streets safer for our children and preserve the air quality of our city, installing two traffic lights within 20 feet of each other in an attempt to synchronize two intersections that do not connect will create other nuisance problems for residents and motorists alike.

Longer queues at peak times and delays the rest of the day.

We have already talked about how the two traffic lights will stop traffic regardless of the conditions of the road, now we would like to evaluate how long is there really a traffic congestion that delays motorists versus how long the two synchronized traffic lights will create traffic congestion and delays.

Although we have a speeding problem every single day and hour of the year, we only have right of way conflict and kids crossing Harriet to go to school, obviously on school days. This 2016/2017 school year we will have 183 school days. That is roughly half a year. Now, those school days, we have the highest concentrations of traffic for 6 hours. Or, 25% of the day, or, to put it in context, we will spend half a million dollars to solve a problem that happens only 12.53% of the time during a year.

The rest of the time, cars will be stopped regardless of the conditions of the road. On the 2010 City Council report with regards to Pedestrian safety recommendations, city staff estimated queues of 10 cars on Harriet and 7 cars on McCoy during the morning peak times. That is longer queues that we are experiencing right now (7 cars on Harriet and 5 cars on McCoy as counted by residents on their way to drop kids off to school). Residents that live at the intersection are already experiencing difficulty accessing their driveways at peak time, however, since the traffic light will continually stop traffic, residents will also find their driveways blocked many other times during the day.

hours. Future traffic queues are anticipated to be ten vehicles long on southbound Harriet Avenue and seven vehicles long on eastbound McCoy Avenue during the AM peak hour, less than with an all-way stop. However, some increase in cut through traffic would still be a concern.

It is interesting to note that city staff predicts an increase in cut through traffic as a result of the queues, thus given even more credibility to safety concerns that streets nearby a signalized intersection will see an increase both on traffic volumes and speeding as drivers will try to avoid delays caused by the traffic light.

At the time of that report, only the intersection at Harriet & McCoy was considered for a traffic light. It is safe to assume that adding an adjacent intersection and attempting to make them work as one, would only create more delays, more neighborhood cut through traffic, and more blocked driveways.

TRAFFIC CALMING; THE BETTER ALTERNATIVE.

Before we get into the full topic of altering the street to make it safer for pedestrians, many of the residents would like to know the pros and cons of returning the pedestrian crosswalk to the corner of Harriet and Silacci. There were no traffic incidents recorded at that intersection for the many years it was there. We were told by city staff that it was moved because some residents requested it and also in the interest of providing students from Forest Hill a more direct path to school. It doesn't seem to have been a very evaluated decision because in the name of direct route, pedestrians were put on the path of two busy streets where a lot happens whereas Silacci, being a residential street has very little traffic. Although it will do nothing to change the reckless driving on Harriet, which is what we would need to solve in order to increase non motorist activity in our community, it is none the less a reasonable question and we would like the City staff to analyze it and respond to us.

At this point in our research we would like to direct your attention to the Traffic calming alternatives that we would like City staff to bring to the table.

We have a wide residential road that has been causing problems to the neighborhood for the past 16 years or more. We can proceed with installation of two traffic lights and bear the consequences, because resident complaints are not going to stop. Or, we can use this as an opportunity to apply the latest advances in street architecture and create something innovative, environmentally responsible, that will extend the use of the road from the quickest way to get from point A to point B to a shared road what will promote healthier more active habits for residents, reduce pollution, increase traffic efficiency.

How many of the residents will say to their friends, come and take a peak at the glorious, humongous traffic light that city engineers installed at the heart of our community How about we invite them instead to bike on our safe green bike lanes? In other words:

would you want to live here?...

Or here?



"Instead of stop signs and traffic signals, street safety advocates suggest physically altering the street to slow down traffic. "Because traffic signals and stop signs are not self-enforcing — they don't come with a physical component that requires drivers to slow down — they can easily be ignored by drivers, especially if there isn't visible enforcement by the police," said Transportation Alternatives safety campaign director Lindsey Ganson." <http://www.streetsblog.org/2011/04/26/to-get-safer-streets-traffic-lights-and-stop-signs-arent-the-answer/>

Traffic Calming as defined by the Institute of transport Engineers is "the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users."¹

Traffic calming goals include:

- increasing the quality of life;
- incorporating the preferences and requirements of the people using the area (e.g., working, playing, residing) along the street(s), or at intersection(s);
- creating safe and attractive streets;
- helping to reduce the negative effects of motor vehicles on the environment (e.g., pollution, sprawl); and
- promoting pedestrian, cycle and transit use.¹

Traffic calming objectives include:

- achieving slow speeds for motor vehicles,
- reducing collision frequency and severity,
- increasing the safety and the perception of safety for non-motorized users of the street(s),
- reducing the need for police enforcement,
- enhancing the street environment (e.g., street scaping),
- encouraging water infiltration into the ground,
- increasing access for all modes of transportation, and
- reducing cut-through motor vehicle traffic."

<http://www.ite.org/traffic/index.asp>

GREEN BIKE LANES.

There are numerous ways to address the speeding problem on Harriet by altering its design and layout. Nearly a 100% of residents favor protected bike lanes on Harriet. A combination of green bike lanes, curb bulb outs, street narrowing, roundabouts and other traffic calming design alternatives will both change the motorist perception of the road and residents use of the road. Take a look at this:

Green bike lanes are popping everywhere, and with reason. Bright paint visually reduces the size of the road, it determines unequivocally that there are non motorist users that share the road, it predisposes both drivers and cyclists to be aware of each other and if foster healthy habits for the community. The neighbor city of Los Gatos is painting their bike lanes green as a part of their safe routes to school initiative.

Source: Nacto.org

<http://www.losgatosca.gov/2231/Green-Bike-Lanes>

Colored Bike Facility Benefits

- Promotes the multi-modal nature of a corridor.
- Increases the visibility of bicyclists.
- Discourages illegal parking in the bike lane. [Read More](#)
- When used in conflict areas, raises motorist and bicyclist awareness to potential areas of conflict. [Read More](#)
- Increases bicyclist comfort through clearly delineated space. [Read More](#)
- Increases motorist yielding behavior. [Read More](#)
- Helps reduce bicycle conflicts with turning motorists. [Read More](#)

Green Bike Lanes

The Parks & Public Works has installed three roadway surfaces for implementation of Green Bike Lanes in Town. The purpose of the painted lane is to bring attention to the bicycle lane and reduce the conflicts between bicycle and cars. The lanes will also create a connected system for bicycling around town. Protected bike lanes bring predictability and order to busy streets allowing drivers to know where to expect bicyclists.

SURVEY: Please let us know what you think about the Green Bike Lanes [HERE](#)

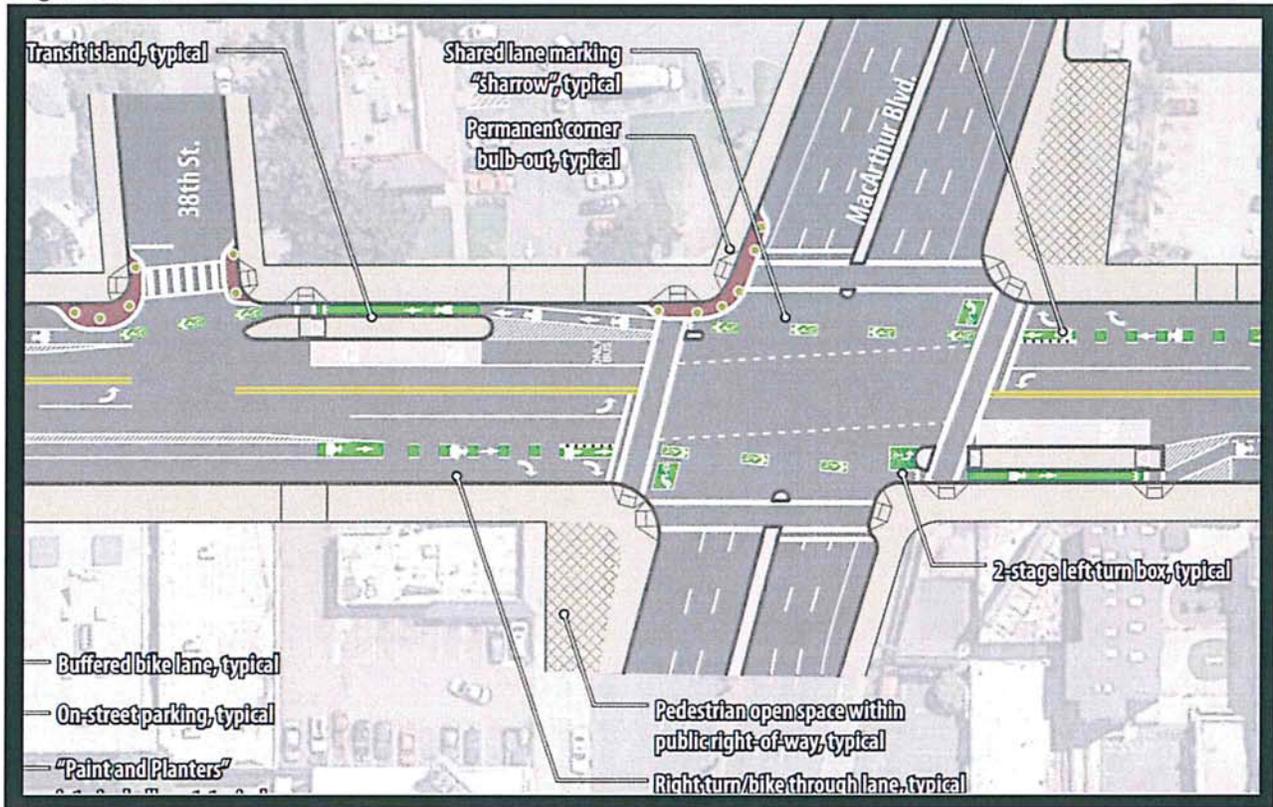
[Green Bike Lanes FAQs](#)



One of the reasons green bike lanes are working so well is that by design and color it marks that section of the road as bike territory, where cars may only drive after yielding to cyclist and only for the briefest possible time. We believe the cost of maintaining green bike lanes would not exceed the cost of maintaining the two traffic lights city staff is proposing, but unlike the lights, the environmental and health benefits for the community far outweigh the cost.



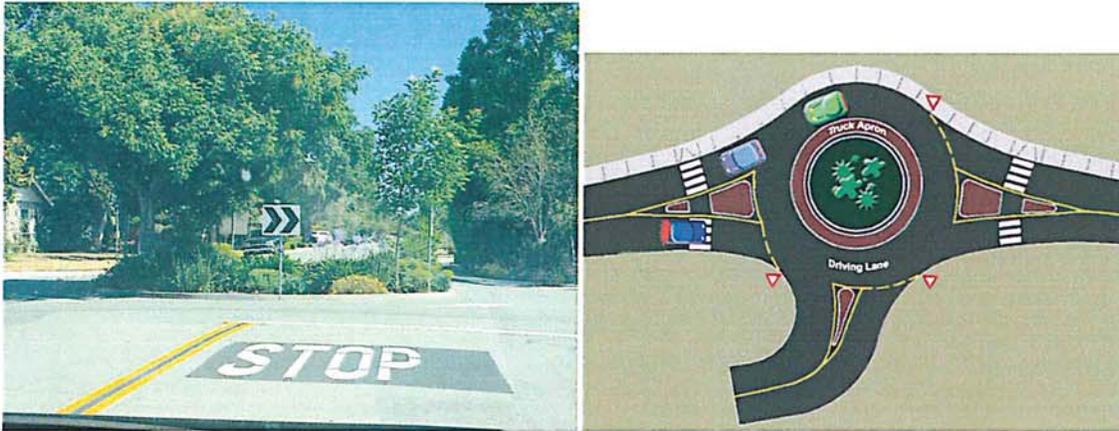
A great side effect of road modifications that include green bike lanes is that as residents bike more, not only their health improve but they will reduce traffic congestion. Our streets will be even safer and our air quality better. That in turn, will have a positive effect encouraging more residents to walk and bike around the neighborhood.



Studies from different cities across the US show that voters support the installation of green bike lanes in their communities and are willing to put public funding in them, real state values increased as people found the addition to green bike lanes made properties more attractive.

<http://atlanta.curbed.com/2013/8/8/10210634/bike-lanes-property-values-is-there-a-correlation>

ROUNDAOBOUTS.



Stanford University is the perfect example of Pedestrian, bike and vehicle conflict. They deal with it every day, so when they installed roundabouts on all of their intersections leading off the oval, we took notice. A few weeks later we read an article in their magazine informing alumni of their plans to remove a gas station to make room for a new roundabout on Campus drive, so we did some digging:
<https://transportation.stanford.edu/roundabout/stanford.php>

It turns out that roundabouts got a bad reputation when they were installed in the US a few decades ago as being unsafe but research shows that it was design, not the tool itself what was faulty. However after installation and use Washington's department of Transportation published the following statistics:

Roundabouts reduced injury crashes by 75 percent at intersections where stop signs or signals were previously used for traffic control, according to a study by the Insurance Institute for Highway Safety (IIHS). Studies by the IIHS and Federal Highway Administration have shown that roundabouts typically achieve:

- A 37 percent reduction in overall collisions
- A 75 percent reduction in injury collisions
- A 90 percent reduction in fatality collisions
- A 40 percent reduction in pedestrian collisions

They also found them to make the flow of traffic more efficient with a 89% reduction in delays and 56% reduction in vehicles stops. Since a well designed roundabout is designed to promote traffic to slow down to 15-20mph, there's no light to beat and all traffic moves in one direction traffic moves through the intersection in a quicker safer way.

Roundabouts are also found to alleviate car queues on the streets approaching the intersection and were found to handle greater volumes of traffic more efficiently than traffic signals.

Source: <http://www.wsdot.wa.gov/Safety/roundabouts/benefits.htm>

The Federal Highway Administration also studied roundabouts and found that they reduce accidents where people are seriously hurt by 78%. They included roundabouts as one of their "Proven safety countermeasures" <http://safety.fhwa.dot.gov/intersection/innovative/roundabouts/>

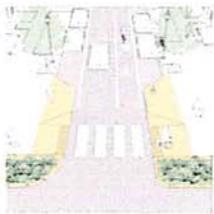
Here are a couple of links to videos

Roundabout the safer choice. <https://www.youtube.com/watch?v=Y05qGz5B1Wg>

Casa grande 3 prongs roundabout simulation. <http://casagrandeaz.gov/dept/publicworks/streets-division/roundabout-information/>

PINCHPOINT OR STREET NARROWING.

Source: Nacto.org



GATEWAY

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

[Read More](#)

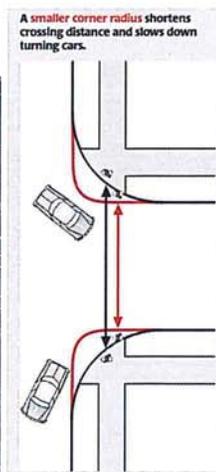


PINCHPOINT

Curb extensions may be applied at midblock to slow traffic speeds and add public space. When utilized as a traffic calming treatment, mid-block curb extensions are referred to as "pinchpoints" or "chokers".

[Read More](#)

Extending the curb to provide safer crossing paths for pedestrians, slowing speeds, better signaled bike lanes and, parking for residents is a great example of altering a street layout to make it safer and beautiful at the same time. Our own city Engineers have shown us with their latest work at Hacienda Ave. that it can be done.



We end this document by asking you to request City Engineers to come up with a safer alternative to the traffic light. You, as our representatives and decision makers, are in a unique position to shape our lives for the better and the worse. It is a huge responsibility.

We believe that we have fully supported our claims that there's a speeding problem in our streets, and we cannot encourage our residents to walk and bike more without first addressing the safety issues that affect these roads.

Some members of our group took to the streets to talk to our neighbors, we have begun collecting signatures to show that residents overwhelmingly favor the design of an alternative that will effectively bring down traffic speed to a level that would be safe for pedestrians and bikes, that will not create more pollution, we are hoping for better curb design that will increase pedestrian visibility, reduce motorist's turning speed and reduce the distance pedestrians have to travel on the road, we want eye catching better signalized bike lanes. We want, in two words, Quality of life.

The following pages have the first 128 signatures from residents that support our request, with more signatures arriving this week. Unfortunately due to the end of school many families are traveling. We will continue to gather signatures during the next months but based on residents responses it is our estimate that 73% of residents we were able to talk to, strongly favor our request to bring a traffic calming alternative to these intersections instead of the two traffic signals proposed by city staff.

We believe that given the history of the intersection and the importance of finding safe routes to school along those roads, the only way we will be able to effectively solve the issue is by enlisting a strong participation from the residents and users of the road. We will be directly affected by any project done at our intersection. The very air we breathe can change. We believe residents have a right to consider more than one alternative and weight the pros and cons. We understand that there's no perfect solution and that it would be impossible to get everything. But we feel very strongly that we have the right to make an informed decision.

Please support the well being of our community by making sure that the factors that contribute to the un-safety on our streets are fully considered and that the measures proposed in any project will have a direct impact in making our streets safer for pedestrians and cyclists along the full length of the route to school. Please direct City staff to go back to the drawing board and develop a plan for this intersection using traffic calming solutions and mitigation features deemed appropriate.

This summary was prepared by Isabel Batiz in support to the petition residents signed bellow.