

Mayor
William Siegel
Mayor Pro Tem
Lois Wynne
Council Members
Ray Madrigal
Eddie Neal
Willard Rodarmel



**Parks and Recreation
Department**

721 W. Cinnamon Dr.
Lemoore, CA 93245
Phone (559) 924-6767
FAX (559) 924-6772

Staff Report

ITEM 3-1

To: Lemoore City Council

From: Joe Simonson, Parks and Recreation Director 

Date: August 14, 2014

Subject: Proposed Crosswalk Removal at Bush and Follett and Bush and Hamlet

Discussion:

Attached is an abridged version of a 114 page report that studied the safety effects of marked versus unmarked crosswalks at uncontrolled locations. This report states that pedestrians have a right to cross roads safely, and planners and engineers have a professional responsibility to plan, design and install safe and convenient crossing facilities. It goes on to state that providing marked crosswalks traditionally has been one measure used in an attempt to facilitate crossing. Such crosswalks commonly are used at uncontrolled locations (i.e., sites not controlled by a traffic signal or stop sign) and sometimes at midblock locations. However, there have been conflicting studies and much controversy regarding the safety effects of marked crosswalks.

Staff has researched putting marked crosswalks at an uncontrolled location and has determined it is not advised. (Please refer again to the attached U.S. Department of Transportation Report). Staff has also discussed the situation with Lemoore Police Chief Darrell Smith who feels that allowing cars to park on both sides of Bush blocks the view of oncoming traffic and creates a hazard for pedestrians entering the crosswalk. Chief Smith also stated and staff agrees, that the narrowness of Bush Street does not allow for any median to be installed to make it safer for pedestrians to cross. The engineer's report from Quad Knopf (see attached) agrees with Chief Smith and goes on to state that there have been five reported collisions at the intersections since January of 2003. The report also thinks these crosswalks give pedestrians a false sense of security, which staff agrees with.

There is a crosswalk one block down at the corner of 18th Avenue and Bush in a controlled location with stop lights. There is also a crosswalk at Bush and Hill Street across from Lemoore Elementary School which is controlled by crossing guards in the mornings and afternoons in order for children to cross safely. Because these locations are controlled, they are a much safer alternative for pedestrians to cross.

The origin of these crosswalks were for parishioners of St. Peter's Church during service time. St. Peter's has since moved to a new location on 18th Avenue.

Budget Impact:

None.

Recommendation:

That Council, by motion, approve the recommendation of staff and the city engineer to eliminate the crosswalks at Bush and Follett and Bush and Hamlet.



Quad Knopf

MEMO

Date: August 14, 2014

Project No.: L140002.01

To: Joe Simonson

From: Rick Joyner

Subject: Removal of Crosswalks on Bush Street at Follet Street and Hamlet Street

cc:

Section 21950.5 of the California Vehicle Code states that an existing marked crosswalk may not be removed unless notice and opportunity to be heard is provided to the public not less than 30 days prior to the scheduled date of removal.

Quad Knopf has researched the collision history available from the Statewide Integrated Traffic Records System for the intersections of Bush Street at Follet Street and Bush Street at Hamlet Street. The two intersections are approximately 150 feet apart with the crosswalks approximately 100 feet apart. During the period between January 1, 2003 and December 31, 2012, there were five (5) reported collisions at the intersections. The primary collision factor for two of the collisions were unsafe speed, one for unsafe lane change, one for following too closely and one for a pedestrian right of way violation.

It is recommended that both crosswalks be removed. With parking allowed along Bush Street and the number of travel lanes, the reaction time for vehicles may not be sufficient to stop for pedestrians in the crosswalks. Crosswalks may give pedestrians a false sense of security. Pedestrian often expect vehicles to give them the right of way. It is recommended that pedestrians utilize the signalized intersections at Bush Street and Lemoore Avenue and the lighted crosswalk at Bush Street and Hill Street.


[FHWA Home](#) | [Feedback](#)
[Research Home](#)


This report is an archived publication and may contain dated technical, contact, and link information

[Federal Highway Administration](#) > [Publications](#) > [Research Publications](#) > [Safety](#) > [04100](#) > Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations Final Report and Recommended Guidelines

Publication Number: FHWA-HRT-04-100

Date: September 2005

Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations Final Report and Recommended Guidelines

PDF Version (3.21 MB)

PDF files can be viewed with the [Acrobat® Reader®](#)

CHAPTER 4. CONCLUSIONS AND RECOMMENDATIONS

Pedestrians are legitimate users of the transportation system, and their needs should be identified routinely -and appropriate solutions selected-to improve pedestrian safety and access. Deciding where to mark crosswalks is only one consideration in meeting that objective.

The study results revealed that under no condition was the presence of a marked crosswalk alone at an uncontrolled location associated with a significantly lower pedestrian crash rate compared to an unmarked crosswalk. Furthermore, on multilane roads with traffic volumes greater than 12,000 vehicles per day, having a marked crosswalk was associated with a higher pedestrian crash rate (after controlling for other site factors) compared to an unmarked crosswalk. Therefore, adding marked crosswalks alone (i.e., with no engineering, enforcement, or education enhancement) is not expected to reduce pedestrian crashes for any of the conditions included in the study. On many roadways, particularly multilane and high-speed crossing locations, more substantial improvements often are needed for safer pedestrian crossings, such as providing raised medians, installing traffic signals (with pedestrian signals) when warranted, implementing speed-reducing measures, and/or other practices. In addition, development patterns that reduce the speed and number of multilane roads should be encouraged.

Street crossing locations should be routinely reviewed to consider the three following available options:

1. No special provisions needed.
2. Provide a marked crosswalk alone.
3. Install other crossing improvements (with or without a marked crosswalk) to reduce vehicle speeds, shorten the crossing distance, or increase the likelihood of motorists stopping and yielding.

GUIDELINES FOR CROSSWALK INSTALLATION

Marked pedestrian crosswalks may be used to delineate preferred pedestrian paths across roadways under the following conditions:

- At locations with stop signs or traffic signals to direct pedestrians to those crossing locations and to prevent vehicular traffic from blocking the pedestrian path when stopping for a stop sign or red light.
- At nonsignalized street crossing locations in designated school zones. Use of adult crossing guards, school signs and markings, and/or traffic signals with pedestrian signals (when warranted) should be considered in conjunction with the marked crosswalk, as needed.
- At nonsignalized locations where engineering judgment dictates that the number of motor vehicle lanes, pedestrian exposure, average daily traffic (ADT), posted speed limit, and geometry of the location would make the use of specially designated crosswalks desirable for traffic/pedestrian safety and mobility.

Marked crosswalks alone (i.e., without traffic-calming treatments, traffic signals and pedestrian signals when warranted, or other substantial crossing improvement) are insufficient and should not be used under the following conditions:

- Where the speed limit exceeds 64.4 km/h (40 mi/h).
- On a roadway with four or more lanes without a raised median or crossing island that has (or will soon have) an ADT of 12,000 or greater.
- On a roadway with four or more lanes with a raised median or crossing island that has (or soon will have) an ADT of 15,000 or greater.

GENERAL SAFETY CONSIDERATIONS

Since sites in this study were confined to those having no traffic signal or stop sign on the main street approaches to the crosswalk, it follows that these results do not apply to crossings controlled by traffic signals, stop or yield signs, traffic-calming treatments, or other devices. These results also do not apply to school crossings, since such sites were purposely excluded from the site selection process.

The results of this study have some clear implications on the placement of marked crosswalks and the design of safer pedestrian crossings at uncontrolled locations.

Pedestrian crashes are relatively rare at uncontrolled pedestrian crossings (1 crash every 43.7 years per site in this study); however, the certainty of injury to the pedestrian and the high likelihood of a severe or fatal injury in a high-speed crash make it critical to provide a pedestrian-friendly transportation network.

Marked crosswalks alone (i.e., without traffic-calming treatments, traffic signals with pedestrian signals when warranted, or other substantial improvement) are not recommended at uncontrolled crossing locations on multilane roads (i.e., four or more lanes) where traffic volume exceeds approximately 12,000 vehicles per day (with no raised medians) or approximately 15,000 ADT (with raised medians that serve as refuge areas). This recommendation is based on the analysis of pedestrian crash experience, as well as exposure data and site conditions described earlier. To add a margin of safety and/or to account for future increases in traffic volume, the authors recommend against installing marked crosswalks alone on two-lane roads with ADTs greater than 12,000 or on multilane roads with ADTs greater than 9,000 (with no raised median). This study also recommends against installing marked crosswalks alone on roadways with speed limits higher than 64.4 km/h (40 mi/h) based on the expected increase in driver stopping distance at higher speeds. (Few sites were found for this study having marked crosswalks where speed limits exceeded 64.4 km/h (40 mi/h).) Instead, enhanced crossing treatments (e.g., traffic-calming treatments, traffic and pedestrian signals when warranted, or other substantial improvement) are recommended. Specific recommendations are given in table 11 regarding installation of marked crosswalks and other crossing measures. It is important for motorists to understand their legal responsibility to yield to pedestrians at marked and unmarked crosswalks, which may vary from State to State. Also, pedestrians should use caution when crossing streets, regardless of who has the legal right-of-way, since it is the pedestrian who suffers the most physical injury in a collision with a motor vehicle.

On two-lane roads and lower volume multilane roads (ADTs less than 12,000), marked crosswalks were not found to have any positive or negative effect on pedestrian crash rates at the study sites. Marked crosswalks may encourage pedestrians to cross the street at such sites. However, it is recommended that crosswalks alone (without other crossing enhancements) not be installed at locations that may pose unusual safety risks to pedestrians. Pedestrians should not be encouraged to cross the street at sites with limited sight distance, complex or confusing designs, or at sites with certain vehicle mixes (many

heavy trucks) or other dangers unless adequate design features and/or traffic control devices are in place.

At uncontrolled pedestrian crossing locations, installing marked crosswalks should not be regarded as a magic cure for pedestrian safety problems. However, marked crosswalks also should not be considered as a negative measure that will necessarily increase pedestrian crashes. Marked crosswalks are appropriate at some locations (e.g., at selected low-speed, two-lane streets at downtown crossing locations) to help channel pedestrians to preferred crossing locations, but other roadway improvements are also necessary (e.g., raised medians, traffic-calming treatments, traffic and pedestrian signals when warranted, or other substantial crossing improvement) when used at other locations. The guidelines presented in table 11 are intended to provide guidance for installing marked crosswalks and other pedestrian crossing facilities.

Note that speed limit was used in table 11 in addition to ADT, number of lanes, and presence of a median. In developing the table, roads with higher speed limits (higher than 64.4 km/h (40 mi/h)) were considered to be inappropriate for adding marked crosswalks alone. This is because virtually no uncontrolled, marked crosswalk sites where speed limits exceed 64.4 km/h (40 mi/h) were found in the 30 U.S. cities used in this study. Thus, these types of high-speed, uncontrolled marked crosswalks could not be included in the analysis. Also, high-speed roadways present added problems for pedestrians and thus require more substantial treatments in many cases. That may be why Germany, Finland, and Norway do not allow uncontrolled crosswalks on roads with high speed limits. ⁽³⁰⁾

For three-lane roads, adding marked crosswalks alone (without other substantial treatments) is generally not recommended for ADTs greater than 12,000, although exceptions may be allowed under certain conditions (e.g., lower speed limits).

If nothing else is done beyond marking crosswalks at an uncontrolled location, pedestrians will not experience increased safety (under any situations included in the analysis). This finding is in some ways consistent with the companion study by Knoblauch et al. that found that marking a crosswalk would not necessarily increase the number of motorists that will stop or yield to pedestrians. ⁽¹³⁾ Research from Europe shows the need for pedestrian improvements beyond uncontrolled crosswalks. ^(17,21)

Table 11. Recommendations for installing marked crosswalks and other needed pedestrian improvements at uncontrolled locations.*

Roadway Type (Number of Travel Lanes and Median Type)	Vehicle ADT ≤ 9,000			Vehicle ADT >9,000 to 12,000			Vehicle ADT >12,000-15,000			Vehicle ADT > 15,000		
	Speed Limit**											
	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)	≤ 48.3 km/h (30 mi/h)	56.4 km/h (35 mi/h)	64.4 km/h (40 mi/h)
Two lanes	C	C	P	C	C	P	C	C	N	C	P	N
Three lanes	C	C	P	C	P	P	P	P	N	P	N	N

Multilane (four or more lanes) with raised median***	C	C	P	C	P	N	P	P	N	N	N	N
Multilane (four or more lanes) without raised median	C	P	N	P	P	N	N	N	N	N	N	N

* These guidelines include intersection and midblock locations with no traffic signals or stop signs on the approach to the crossing. They do not apply to school crossings. A two-way center turn lane is not considered a median. Crosswalks should not be installed at locations that could present an increased safety risk to pedestrians, such as where there is poor sight distance, complex or confusing designs, a substantial volume of heavy trucks, or other dangers, without first providing adequate design features and/or traffic control devices. Adding crosswalks alone will not make crossings safer, nor will they necessarily result in more vehicles stopping for pedestrians. Whether or not marked crosswalks are installed, it is important to consider other pedestrian facility enhancements (e.g., raised median, traffic signal, roadway narrowing, enhanced overhead lighting, traffic-calming measures, curb extensions), as needed, to improve the safety of the crossing. These are general recommendations; good engineering judgment should be used in individual cases for deciding where to install crosswalks.

** Where the speed limit exceeds 64.4 km/h (40 mi/h), marked crosswalks alone should not be used at unsignalized locations.

*** The raised median or crossing island must be at least 1.2 m (4 ft) wide and 1.8 m (6 ft) long to serve adequately as a refuge area for pedestrians, in accordance with MUTCD and American Association of State Highway and Transportation Officials (AASHTO) guidelines.

C = Candidate sites for marked crosswalks. Marked crosswalks must be installed carefully and selectively. Before installing new marked crosswalks, an engineering study is needed to determine whether the location is suitable for a marked crosswalk. For an engineering study, a site review may be sufficient at some locations, while a more indepth study of pedestrian volume, vehicle speed, sight distance, vehicle mix, and other factors may be needed at other sites. It is recommended that a minimum utilization of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians) be confirmed at a location before placing a high priority on the installation of a marked crosswalk alone.

P = Possible increase in pedestrian crash risk may occur if crosswalks are added without other pedestrian facility enhancements. These locations should be closely monitored and enhanced with other pedestrian crossing improvements, if necessary, before adding a marked crosswalk.

N = Marked crosswalks alone are insufficient, since pedestrian crash risk may be increased by providing marked crosswalks alone. Consider using other treatments, such as traffic-calming treatments, traffic signals with pedestrian signals where warranted, or other substantial crossing improvement to improve crossing safety for pedestrians.

In some situations (e.g., low-speed, two-lane streets in downtown areas), installing a marked crosswalk may help consolidate multiple crossing points. Engineering judgment should be used to install crosswalks at preferred crossing locations (e.g., at a crossing location at a streetlight as opposed to an unlit crossing point nearby). While overuse of marked crossings at uncontrolled locations should be avoided, higher priority should be placed on providing crosswalk markings where pedestrian volume exceeds about 20 per peak hour (or 15 or more elderly pedestrians and/or children per peak hour).

Marked crosswalks and other pedestrian facilities (or lack of facilities) should be routinely monitored to determine what improvements are needed.

POSSIBLE MEASURES TO HELP PEDESTRIANS

Although simply installing marked crosswalks by themselves cannot solve pedestrian crossing problems, the safety needs of pedestrians must not be ignored. More substantial engineering and roadway treatments need to be considered, as well as enforcement and education programs and possibly new legislation to provide safer and easier crossings for pedestrians at problem locations. Transportation and safety engineers have a responsibility to consider all types of road users in roadway planning, design, and maintenance. Pedestrians must be provided with safe facilities for travel.

A variety of pedestrian facilities have been found to improve pedestrian safety and/or ability to cross the street under various conditions. (See references 16, 31, 32, 33, and 34.) Examples of pedestrian improvements include:

- Providing raised medians (figure 31) or intersection crossing islands on multilane roads, which can significantly reduce the pedestrian crash rate and also facilitate street crossing. Also, raised medians may provide aesthetic improvement and may control access to prevent unsafe turns out of driveways. Refuge islands should be at least 1.2 m (4 ft) wide (and preferably 1.8 to 2.4 m (6 to 8 ft) wide) and of adequate length to allow pedestrians to stand and wait for gaps in traffic before crossing the second half of the street. When built, the landscaping should be designed and maintained to provide good visibility between pedestrians and approaching motorists.

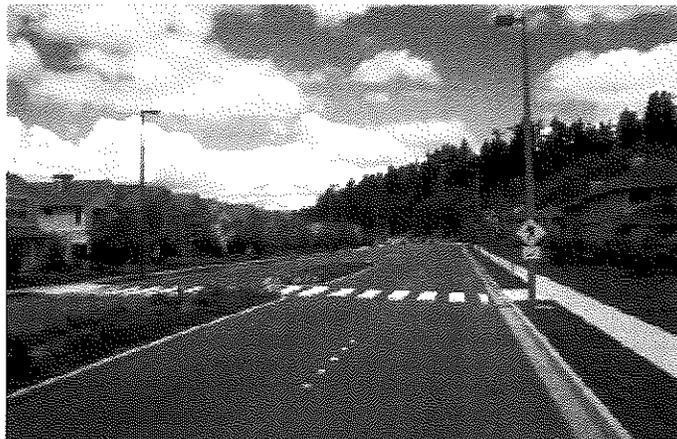


Figure 31. Raised medians and crossing islands can improve pedestrian safety on multilane roads.

- Installing traffic signals (with pedestrian signals), where warranted (see figures 32 and 33).



Figure 32. Pedestrian signals help



Figure 33. Traffic signals are needed to

accommodate pedestrian crossings on some high-volume or multilane roads.

improve pedestrian crossings on some high-volume or multilane roads.

- Reducing the effective street crossing distance for pedestrians by narrowing the roads or by providing curb extensions (figures 34 and 35) and/or raised pedestrian islands at intersections.



Figure 34. Curb extensions at midblock locations reduce crossing distance for pedestrians.



Figure 35. Curb extensions at intersections reduce crossing distance for pedestrians.

Another option is to reduce four-lane undivided road sections to two through-lanes with dual left-turn lanes or left-turn bays. Reducing the width of the lanes may result in slower speeds in some situations, which can benefit pedestrians who are attempting to cross the street. This creates enough space to provide median islands. The removal of a travel lane may also allow enough space for sidewalks and/or bike lanes.

- Installing traffic-calming measures may be appropriate on certain streets to slow vehicle speeds and/or reduce cut-through traffic, as described in a 1999 report titled *Traffic Calming: State of the Practice*.⁽²⁴⁾

Traffic-calming measures include raised crossings (raised crosswalks, raised intersections) (see figure 36), street narrowing measures (chicanes, slow points, "skinny street" designs), and intersection designs (traffic minicircles, diagonal diverters). Note that some of these traffic-calming measures may not be appropriate on major collector or arterial streets.



Figure 36. Raised crosswalks can control vehicle speeds on local streets at pedestrian crossings.

- Providing adequate nighttime lighting for pedestrians (figure 37). Adequate nighttime lighting should be provided at marked crosswalks and areas near churches, schools, and community centers with nighttime pedestrian activity.



Figure 37. Adequate lighting can improve pedestrian safety at night.

- Designing safer intersections for pedestrians (e.g., crossing islands, tighter turn radii).
- Providing narrower widths and/or access management (e.g., consolidation of driveways).
- Constructing grade-separated crossings or pedestrian-only streets (see figure 38). Grade-separated crossings are very expensive and should only be considered in extreme situations, such as where pedestrian crossings are essential (e.g., school children need to cross a six-lane arterial street), street-crossing at-grade is not feasible for pedestrians, and no other measures are considered to be appropriate. Grade-separated crossings must also conform to Americans with Disabilities Act (ADA) requirements.



Figure 38. Grade-separated crossings sometimes are used when other measures are not feasible to provide safe pedestrian crossings.

- Using various pedestrian warning signs, flashers, and other traffic control devices to supplement marked crosswalks (figure 39). However, the effects of supplemental signs and other devices at marked crosswalks are not well known under various roadway conditions. According to the MUTCD, pedestrian crossing signs should only be used at locations that are unusually hazardous, where crossing activity is unexpected, or at locations where pedestrian crossing activity is not readily apparent. ⁽²⁾

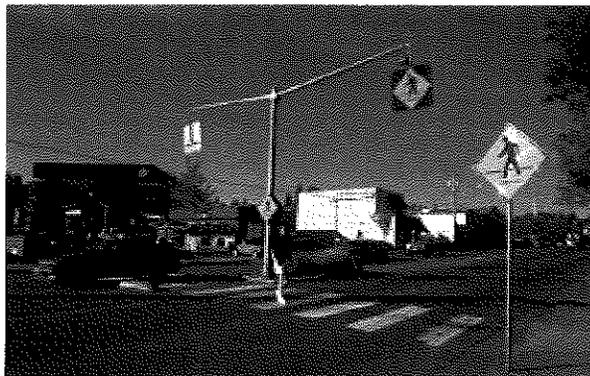


Figure 39. Pedestrian warning signs sometimes are used to supplement crosswalks.

- Building narrower streets in new communities to achieve desired vehicle speeds.
- Increasing the frequency of two-lane or three-lane arterials when designing new street networks so that fewer multilane arterials are required.

It is recommended that parking be eliminated on the approach to uncontrolled crosswalks to improve vision between pedestrians and motorists. The 2000 Uniform Vehicle Code specifies that parking should be prohibited within an intersection on a crosswalk, and within 6.1 m (20 ft) of a crosswalk at an intersection (which could be increased to 9.1 to 15.25 m (30 to 50 ft) in advance of a crosswalk on a high-speed road. ⁽¹⁾

Some agencies provide fences or railings in the raised medians of multilane roads that direct pedestrians to the right; this results in a two-stage crossing and increases the likelihood of pedestrians looking for vehicles coming from their right in the second half of the street (figures 40 and 41).



Figure 40. Fences or railings in the median direct pedestrians to the right and may reduce pedestrian crashes on the second half of the street.

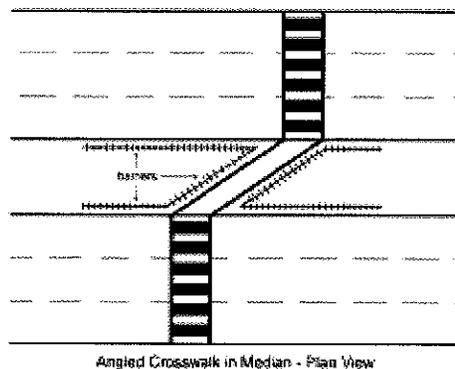


Figure 41. Angled crosswalks with barriers can direct pedestrians to face upstream and increase the pedestrian's awareness of traffic.

Proper planning and land use practices should be applied to benefit pedestrians. For example, busy arterial streets should be used as a boundary for school attendance or school busing. Major pedestrian destinations should not be separated from each other or from their parking facilities by a wide, busy street.

The MUTCD pedestrian signal warrant should be reviewed to determine whether the warrant should be modified to more easily allow for installing a traffic signal at locations where pedestrians cannot safely cross the street (and where no alternative safe crossings exist nearby).

Consideration must always include pedestrians with disabilities and proper accommodations must be provided to meet ADA requirements.

There should be continued research, development, and testing/explanation of innovative traffic control and roadway design alternatives that could provide improved access and safety for pedestrians

attempting to cross streets. For example, in-pavement warning lights, variations in pedestrian warning and regulatory signs (including signs placed in the centerline to reinforce motorists yielding to pedestrians), roadway narrowing, traffic-calming measures, and automated speed-monitoring techniques deserve further research and development to determine their feasibility under various traffic and roadway conditions.

More details about these and other pedestrian facilities are contained in the *Pedestrian Facilities User's Guide: Providing Safety and Mobility*,⁽²²⁾ and in the Institute for Transportation Engineers (ITE) publications *Design and Safety of Pedestrian Facilities*⁽³⁵⁾ and *The Traffic Safety Toolbox* (chapter 19, "Designing for Pedestrians").⁽³⁶⁾

Table 11 provides initial guidance on whether an uncontrolled location might be a candidate for a marked crosswalk alone and/or whether additional geometric and/or traffic control improvements are needed. As a part of the review process for pedestrian crossings, an engineering study should be used to analyze other factors, including (but not limited to), gaps in traffic, approach speed, sight distances, illumination, the needs of special populations, and the distance to the nearest traffic signal.

The spacing of marked crosswalks should also be considered so that they are not placed too close together. Overuse of marked crosswalks may breed driver disrespect for them, and a more conservative use of crosswalks generally is preferred. Thus, it is recommended that in situations where marked crosswalks alone are acceptable (see table 11) a higher priority be placed on their use at locations having a minimum of 20 pedestrian crossings per peak hour (or 15 or more elderly and/or child pedestrians per peak hour). In all cases, good engineering judgment must be applied.

OTHER CONSIDERATIONS

Distance of Marked Crosswalks from Signalized Intersections

Marked crosswalks should not be installed in close proximity to signalized intersections (which may or may not have marked crosswalks); instead, pedestrians should be encouraged to cross at the signal in most situations. The minimum distance from a signal for installing a marked crosswalk should be determined by local traffic engineers based on pedestrian crossing demand, type of roadway, traffic volume, and other factors. The objective of adding a marked crosswalk is to channel pedestrians to safer crossing points. It should be understood, however, that pedestrian crossing behavior may be difficult to control merely by adding marked crosswalks. The new marked crosswalk should not unduly restrict platooned traffic, and also should be consistent with marked crosswalks at other unsignalized locations in the area.

Alternative Treatments

In addition to installing marked crosswalks—or in some cases, instead of installing marked crosswalks—there are other treatments that should be considered to provide safer and easier crossings for pedestrians. Examples of these pedestrian improvements:

- Provide raised medians (or raised crossing islands) on multilane roads.
- Install traffic signals and pedestrian signals where warranted and where serious pedestrian crossing problems exist.
- Reduce the exposure crossing distance for pedestrians by:
 - Providing curb extensions.
 - Providing pedestrian median refuge islands.
 - Reducing four-lane undivided road sections to two through lanes with a left-turn bay (or a two-way left-turn lane), sidewalks, and bicycle lanes.
- Locate bus stops on the far side of uncontrolled marked crosswalks.
- Install traffic-calming measures to slow vehicle speeds and/or reduce cut-through traffic. Such measures may include:
 - Raised crossings (raised crosswalks, raised intersections).
 - Street-narrowing measures (chicanes, slow points, "skinny street" designs).
 - Intersection designs (traffic minicircles, diagonal diverters).
 - Other treatments are available; see *Traffic Calming: State of the Practice* for further details.⁽²⁴⁾

Some of these traffic-calming measures are better suited to local or neighborhood streets than to arterial streets.

- Provide adequate nighttime street lighting for pedestrians in areas with nighttime pedestrian activity where illumination is inadequate.
- Design safer intersections and driveways for pedestrians (e.g., crossing islands, tighter turn radii), which take into consideration the needs of pedestrians.

In developing the proposed U.S. guidelines for marked crosswalks and other pedestrian measures, consideration was given not only to the research results in this study, but also to crosswalk guidelines and related pedestrian safety research in Sweden, England, Canada, Australia, the Netherlands, Germany, Norway, and Hungary. (See references [17](#), [18](#), [19](#), [20](#), [21](#), [33](#), and [37](#).) More details on pedestrian facilities are given in the 2001 *Pedestrian Facilities User's Guide: Providing Safety and Mobility*,⁽²²⁾ *Design and Safety of Pedestrian Facilities*,⁽³⁵⁾ *The Traffic Safety Toolbox*,⁽³⁶⁾ and *Making Streets That Work-Neighborhood Planning Tool*,⁽³⁸⁾ among others.

[Previous](#) | [Table of Contents](#) | [Next](#)

Page Owner: Office of Research, Development, and Technology, Office of Safety, RDT
Scheduled Update: Archive - No Update
Technical Issues: TFHRC.WebMaster@dot.gov

Keywords: Marked crosswalk, Safety, Pedestrian crashes

Updated: 04/12/2012

[Research Home](#) | [FHWA Home](#) | [Feedback](#)



United States Department of Transportation - Federal Highway Administration

The City of Lemoore has recently proposed to permanently remove two crosswalks on Bush Street near the intersections of Hamlet Street and Follett Street.

We demand that the City of Lemoore keep at least one of the current crosswalks that allow citizens and school children safe passage across Bush Street.

These crosswalks are used by many citizens and school children on a daily basis. These crosswalks are currently the only easy access to downtown businesses, Lemoore City Park and bus stops.

Removing these crosswalks will either force citizens and school children to illegally and unsafely cross Bush Street or force them to alternate crosswalks at Lemoore High School or Lemoore Elementary. These alternate crosswalks are not convenient. We should encourage walking in our community and removing crosswalks is the opposite of that.

This petition will be presented at the City Council meeting on Tuesday August 19th 2014.

**CROSSWALK IS
PROPOSED TO BE
PERMANENTLY REMOVED**

**PUBLIC HEARING IS SCHEDULED FOR
TUESDAY, AUGUST 5, 2014 - 7:00 pm**

City Council Chambers - 429 "C" St - Lemoore

Resident Name	Resident Address	Resident Signature
JAMES RICE	242 HAMLET ST	James Rice
Kimberly Chavarria	277 Hamlet St.	R Chavarria
Jesse Chavarria	277 Hamlet St.	Jesse Ch
Emmett Anymada	206 Hamlet St.	Emmett Anymada
Hewart Boney	136 Hamlet St	Hewart Boney
Gwynn S Boney	136 HAMLET St	Gwynn S. Boney
Daniel Rice	242 Hamlet St.	Daniel Rice
Joshua Ulaschin	268 Hamlet St	Joshua Ulaschin
Shelby Robbins	214 Hemlockemoore ca	Shelby Robbins
Michael M. Divil	232 N Lemore Ave #	Michael M. Divil
Chris Williams	177 W. Hazelwood Dr.	Chris Williams
Jessie Bumpus	1236 Summerwind dr	Jessie Bumpus
Karen Halgerson	14 South Byron Dr	Karen Halgerson
Bryan Rice	113 Oleander Ave	Bryan Rice
Alex Moser	161 W D St Lemore ca	Alex Moser
Myra Sawyer	499 W. St.	Myra Sawyer
Charles Stevens	219 Magnolia Ave	Charles Stevens
Mary Hayes	149 W. Bush St.	Mary Hayes
LARRY HAYES	149 W Bush St	Larry Hayes
DAVE Joyce Smith	125 W. Bush St	Joyce Smith
Virginia Bremers	125 W. Bush St	Virginia Bremers
Virginia Brener	254 HAMLET	Virginia Brener
Bruce Aced	227 Hamlet	Bruce Aced

