



**DATE:** June 22, 2017

**TO:** Transportation Authority of Marin Board of Commissioners

**FROM:** Dianne Steinhauser, Executive Director  
Dan Cherrier, Principal Project Delivery Manager  
James O'Brien, Crossing Guard Coordinator

**SUBJECT:** Changes to Crossing Guard Program Location Scoring Methodology (Action), Agenda Item 6h

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## RECOMMENDATION

Approve the recommendation of the TAM Programming and Projects Executive Committee to change the Location Scoring Criteria and Methodology as described below.

## BACKGROUND

The TAM Crossing Guard program provides trained crossing guards for critical intersections throughout Marin County. As committed in the Transportation Sales Tax (Measure A) Expenditure Plan, the program uses trained crossing guards under contract to a professional company that specializes in crossing guard programs. Under contract to TAM, All City Management Services currently provides guards under the close supervision of TAM staff. The current 2016/2017 school year is the eleventh year during which crossing guards have been funded by the TAM Crossing Guard Program. TAM also has an agreement with several school districts to provide guards on a reimbursement basis.

### History of Original Program

The TAM Measure A Transportation Sales Tax Expenditure Plan envisioned providing guards at up to 70 locations around Marin's schools. The implementation policies and the original list of locations for the TAM Crossing Guard Program were developed during the 2005/2006 school year. The process began with a questionnaire distributed to all public and private schools in Marin County and to members of the Marin Public Works Association (MPWA). While the questionnaire was being distributed and the responses collected, the MPWA together with the Technical Advisory Committee (TAC) established a set of "qualifying" criteria for prioritizing potential crossing guard locations. The evaluation criteria were based on the California Manual of Uniform Traffic Control Devices (MUTCD) and the Criteria for Adult Crossing Guards published by Caltrans. These resources are generally used by communities in California to determine if crossing guards are warranted and cost effective at specific locations. In order to apply the criteria to the 70 locations identified at that time, traffic data was collected for each of the locations. The traffic data included vehicle and pedestrian counts during a morning period for trips to school and an afternoon period for trips leaving school. In addition to the traffic data, information about the roadway characteristics, such as the number of lanes and the type of intersection control (e.g. stop sign, signal, etc.), was also collected. About 85 sites were reviewed for the potential to have a guard.

This process resulted in 54 locations receiving a crossing guard from the program during the 2006/2007 school year. The locations consisted of 44 qualifying locations and ten pilot locations. Pilot locations were

considered by MPWA and the TAC and took into account other facts besides MUTCD criteria. A funding commitment was made for three years for the qualifying locations and annually for the pilot locations. For the 2008/2009 school year, five qualifying locations and four additional pilot locations were added, which increased the program to 63 locations.

#### Current Program based on 2008-09 Revised Criteria

The discussions at the MPWA and TAC meetings in early 2008 brought to light the need to address the consideration of other factors in the process for evaluating potential future crossing guard locations. The evaluation based on the vehicular and pedestrian volumes is numerical and lends itself straightforwardly to developing a ranked list. The evaluation of other factors such as roadway geometry, sight distance, the speed of traffic and other site-specific conditions is based in large part on engineering judgment and presents a greater challenge when developing a ranked list. The MPWA and TAC both recommended developing a new set of scoring criteria for the next round of location evaluations.

The TAC, MPWA, and TAM staff spent several months between Fall 2008 to Summer 2009 developing a revised scoring criteria that incorporated the general intent of MUTCD along with the inclusion of these other factors. An Ad-Hoc committee was formed to apply the new criteria to several locations throughout the County. The Ad-Hoc committee recommended several changes to the scoring criteria that were incorporated before acceptance by the TAC and MPWA membership in July of 2009.

In Fall 2009, the number of locations evaluated in the process increased to 125. Note this was due to the successful reception of the program by schools, parents and communities, as well as cash-strapped schools being unable to fund guards and turning their sites over to TAM.

Counts were conducted in March and April of 2010 and again in May 2014. Care was taken to communicate with each school near each location to determine special days that might affect the number of children walking. The exact day that counts were to take place was not provided to the school; however, no counts were conducted on Fridays or within two days of Spring Break. Counts were performed for two hours in the morning and two hours in the afternoon. Data was collected in 15 minute intervals to determine peak hours of use.

Counting staff were provided the following parameters:

- School age bicyclists and pedestrians were to be separated from all other bicyclists and pedestrians;
- A school age pedestrian was defined as age 5 to 13;
- School age bicyclists using the crosswalk were counted as school age pedestrians;
- Vehicle counts included all turning movements;
- Volume for a crosswalk was determined by all vehicles that actually crossed the crosswalk.

After sorting for the initial criteria, each crosswalk was scored in accordance with the new adopted criteria. The scoring includes points applied for vehicle volumes, school age pedestrian volumes, intersection skew angle, stopping sight distance, location on a horizontal curve, speed limit, and other factors provided by public works staff. Other factors included accident history involving pedestrians or bicyclists, nearby intersections, bus stops limiting visibility, and multiple lanes to cross. The list also assumed that pedestrians who cross on opposite sides of a location will utilize the services of a crossing guard. School age pedestrian volumes were combined across an intersection where applicable. Public Work Directors were provided the list and asked to state any objections.

The ranked list was approved by the full TAM Board at the June 2010 meeting (revised in 2012), and again in July 2014. The most recent list has been in place since the 2014/2015 School Year.

Counts normally occur on a four year cycle and are not scheduled to occur again until the 2017/2018 School Year. During that time period conditions may change at schools including new travel patterns, changed attendance boundaries, grade level reconfiguration, school openings and closing, and several other factors.

At the December 2011 Board meeting, the TAM Board adopted a policy allowing for mid-cycle modifications to the ranked list based on requests for new locations from Public Works Directors and new counts of existing locations based on changed conditions.

Two additional locations were added to the Program during the 2016/2017 School Year. A guard was added at McAllister Avenue and Stadium Way near Kent Middle School. An additional guard was placed in front of San Ramon elementary School in Novato.

Currently the program provides 82 crossing guards with eight additional guards entirely paid for by Novato Unified School District, Kentfield School District, and Mark Day School, Dixie School District, and Larkspur-Corte Madera School District. San Rafael City Schools, Ross School District, Reed Union School District, and Larkspur-Corte Madera School District also provide guards at locations on the approved list; however, these guards are paid through direct payment to All City Management Services or utilize District forces.

## **DISCUSSION/ANALYSIS**

### Proposed Changes in Scoring Methodology

The Transportation Authority of Marin Technical Advisory Committee (TAC) formed the TAM Crossing Guard Program Recertification Ad Hoc Subcommittee to review the recertification process and provide recommendations and findings related to the following elements of the TAM Crossing Guard Program recertification process:

- 1) The timing of the pedestrian and vehicle counts during the school year to allow for thorough coordination with local agencies, schools, school districts, and other interested parties during the recertification process, and for the reevaluation to be complete in time to notify schools and school districts, along with local jurisdictions of changes to the Program in the Winter prior to budget development, well in advance of the school year during which changes to the Program will take effect;
- 2) The method used for collecting the pedestrian, bicycle and vehicle count data, e.g. video, manual, or other method(s);
- 3) A method to eliminate some of the locations from the master list that are evaluated during the recertification process to minimize the cost of collecting, compiling and analyzing the pedestrian, bicycle and vehicle count data for the recertification process; and
- 4) The “*TAM Crossing Guard Program Location Scoring Criteria*” adopted in 2009 for use in developing a relative ranking of the locations for determining which locations will receive funding through the Crossing Guard Program.

There are currently 147 locations on the master list. Locations on the master list are evaluated and scored during “recertification” cycles to comply with the Measure A Transportation Expenditure Plan (TEP) requirements. The recertification process uses the “*TAM Crossing Guard Program Location Scoring Criteria*” adopted in 2009 to develop a relative ranking of the locations.

The number of locations to be scored has a direct impact on the cost of the recertification process (funding which could otherwise fund additional locations), and as the number of locations on the master list has increased, so has the cost of the recertification process. The number of locations scored for the 2010 recertification was 125. In 2012, four (4) locations were added to the list for a total of 129 locations, and in 2014, 132 locations were scored as part of the recertification cycle with five (5) locations added after the recertification for a total of 137 currently ranked locations. There are currently 147 locations on the master list for the next recertification, including ten (10) locations which do not have scores adopted by the TAM

Board. Attachment A shows the current list of 147 locations and their rankings from 2012 and 2014. Note, the 2012 ranking was an update of the 2010 ranking with a few new locations added. Most scores used in the 2012 List were generated as part of the 2010 list.

The Subcommittee met with TAM staff in May, June and September of 2016 to review the TAM Crossing Guard Program recertification process. This item was discussed at the January 19, 2017, and February 16, 2017 TAC meetings, and adopted at the March 16, 2017 TAC meeting.

Currently, all of the locations on the master list are evaluated and scored during “recertification” cycles to comply with the Measure A Transportation Expenditure Plan (TEP) requirements. The location scoring criteria, adopted in 2009, are based primarily on pedestrian, bicycle and vehicle count data gathered at each location during the recertification process. Data is collected for all the locations on the master list and each location is given a score for ranking relative to all other locations on the list. The ranked list is then used to determine which locations will be funded through the TAM Crossing Guard Program.

The Authority Board has adopted policies to address the need for adding locations to the list between recertification cycles, and for updating the scoring data for locations which experience changes in conditions affecting school travel patterns between recertification cycles. TAM staff maintains a current set of scoring data for each location on the master list.

### **Recommendations**

The Executive Committee and the TAC approved the following recommendations related to the TAM Crossing Guard Program recertification process:

- 1) Pedestrian, bicycle and vehicle count data should be collected during the early part of the school year, i.e. before mid-November to allow for thorough coordination with local agencies, schools, school districts, and other interested parties during the recertification process;
- 2) Pedestrian, bicycle and vehicle count data should be collected using the most cost-effective method, or methods, available to provide the data required for scoring. Data should be collected for two days, unless circumstances warrant additional collection to ensure sufficient data for scoring;
- 3) New data should only be collected for locations that were not ranked in the top 30 or that ranked 110 or below in the 2012 and 2014 rankings as shown in Attachment A;
- 4) The “*TAM Crossing Guard Program Location Scoring Criteria*” adopted in 2009 should continue to be used in developing a relative ranking of the locations for determining which locations will receive funding through the Crossing Guard Program;
- 5) The limit of only one guard per location, even where opposite crosswalks qualify, should be continued; and
- 6) Locations at which TAM is providing a crossing guard funded by others should remain on the master list of locations, and scoring data for such locations should be collected during recertification cycles.

### **Recommendation Detail:**

The Subcommittee developed the following in depth recommendations (summary of which is presented above). Further detail of each recommendation is presented below:

- 1) Pedestrian, bicycle and vehicle count data should be collected during the early part of the school year, i.e. before mid-November, so the scoring can take place to allow for a draft ranked list to be developed and coordinated with local agencies, schools, school districts and other interested parties during the December-January timeframe, with a final draft being developed during February. Coordination with interested parties should include discussions about options for local entities to reimburse TAM for crossing guards at locations which do not rank high enough for funding from the TAM Crossing

- Guard Program, especially locations which are currently funded by the TAM Crossing Guard Program and are subject to falling below the cutoff line during the recertification process. A final ranking in March would allow time to notify the schools and school districts about any pending changes to the Crossing Guard Program before the end of the school year. TAM has historically notified individual schools and school districts about upcoming changes to the Crossing Guard Program before the changes are implemented so the schools and districts can notify students and families about the pending changes. Changes have typically been implemented at the beginning of the school year, so the schools and districts must be notified before the end of the preceding school year.
- 2) Pedestrian, bicycle and vehicle count data should be collected using the most cost-effective method, or combination of methods, available to provide the data required for scoring. In the most recent data collection cycle, video data capture methods were used and complemented by manual counts. Previous data collection cycles used only manual counts. The numbers of days on which data is collected should be reduced to two days (the video data was typically collected over three days). Additional data can be collected for certain locations on a case-by-case basis to ensure sufficient data for scoring.
  - 3) Identify any locations that have ranked in the top 30 in both the 2012 and 2014 rankings as shown in Attachment A, and any locations that have ranked 110 or below, in both the 2012 and 2014 rankings. Only perform data collection for locations that are not included in either the “Top 30,” or the “110 or Below,” groups to reduce the number of locations for which count data must be collected and analyzed. Some concerns were expressed at the TAC meeting related to locations getting “stuck” in the bottom group and not being considered for future eligibility based on lack of updated count data. A similar concern was expressed for locations being “grandfathered” into the top 30 group. It was noted that concerns about locations being excluded from future funding eligibility due to the lack of updated count data are addressed by the current policy which allows for an evaluation of any location at any time upon request by the local public works department. A public works department can request an evaluation in the future based on an observed increase, or decrease, in pedestrian and bicycle volumes at any location, including locations which are not counted in the upcoming recertification cycle based on this recommendation. This recommendation will eliminate the need to collect data for 28 locations (11 locations in the 110 or below group plus 17 locations in the top 30 group as shown in Attachment A).
  - 4) Continue to use the “*TAM Crossing Guard Program Location Scoring Criteria*” adopted in 2009 for use in developing a relative ranking of the locations for determining which locations will receive funding through the Crossing Guard Program with minor revisions to provide clarification. The Ad Hoc Subcommittee made a clarification regarding pedestrian count data for uncontrolled intersections to be used for scoring. The current scoring criteria states that the scoring for school-aged pedestrian volumes at uncontrolled intersections is based on the daily pedestrian volume, but daily volumes are not counted. The clarification is that the scoring for school-aged pedestrian volume is based on the combined a.m. and p.m. peak hour volume rather than the daily volume. The Subcommittee also made recommendations for incorporating accident data gathered by others into the scoring process. The location scoring criteria includes extra points for documented accident histories. Attachment B shows the scoring criteria with the change from “daily” to “combined a.m. and p.m.” reflected.
  - 5) An overall goal of the Program has been to maximize the number of locations with a crossing guard. At one site, two opposite crosswalks score high enough to qualify for separate guards. Efforts have been made to consolidate users to one side of the intersection without success. Requests have been made by the crossing guard vendor and the School District to add a second guard. The Ad-Hoc felt that the Program would be better served limit the guards to one per location.
  - 6) The TAM Crossing Guard Program currently allows for a crossing guard to be deployed through the TAM contract with the company providing crossing guards at locations requested and funded by others, i.e. the sponsoring entity reimburses TAM for cost of crossing guard. It is recommended that

locations at which a crossing guard is deployed through the TAM contract and funded by others should remain on the TAM Crossing Guard Program master list of locations.

- 7) A location exists where the students experience no conflict with vehicles due to traffic signal phasing that has eliminated all other movements during crossing. The Ad-Hoc felt this crossing guard should be maintained.

### **FISCAL CONSIDERATION**

Staff recently received proposals for performing the counting. Costs ranged from approximately \$1,000 per location to almost \$3,000. Depending on the selected counting vendor, the reduction of 28 sites will allow an additional \$30,000 or more to be used towards guards in the field rather than counting.

### **NEXT STEPS**

Staff will be bringing a recommendation for the vendor to perform the counts at the July meeting. Counts are expected to be completed in the September and October timeframe. Completion of the ranked list is expected around the end of the 2017 calendar year.

### **ATTACHMENTS**

Attachment A – List showing Rankings in 2012 and 2014 Lists

Attachment B – Proposed Changes to Crossing Guard Scoring Criteria

**Transportation Authority of Marin  
TAM Crossing Guard Program Recertification Process**

**TAM Crossing Guard Program 2012 and 2014 Location Rankings**

TAM Site No.	Location	City/Community	2012 Rank	2014 Rank	Notes	Count in 2017
1	Mt Shasta & Idylberry	Lucas Valley	43	68		Y
2	Las Gallinas & Miller Creek Rd	Marinwood	12	62		Y
3	Nova Albion Way at Vallecito School	San Rafael	4	3	Note 1	N
4	Nova Albion Way & Arias Street	San Rafael	90	64		Y
5	Sir Francis Drake Blvd & Laurel Grove Ave	Kentfield	58	49		Y
6	College Ave & Woodland Ave (East Side)	Kentfield	47	58		Y
7	College Ave & Stadium Way	Kentfield	34	50		Y
8	Sir Francis Drake Blvd & Wolfe Grade	Kentfield	105	123		Y
9	Sir Francis Drake Blvd & College Ave	Kentfield	65	71		Y
10	Tam Racket Club & Doherty Rd	Larkspur	3	42		Y
11	Corte Madera & Tamalpais Dr (& Redwood)	Corte Madera	92	128		Y
12	Doherty Dr at Piper Park Crosswalk	Larkspur	36	4		Y
13	Magnolia Ave & King St	Larkspur	51	45		Y
14	E Blithedale & Lomita Ave	Mill Valley	19	9	Note 1	N
15	Throckmorton Ave & Old Mill St	Mill Valley	22	74		Y
16	E Strawberry Dr at Strawberry School	Marin County	9	14	Note 1	N
17	Bell Lane & Enterprise Concourse	Mill Valley	20	37		Y
18	Tiburon Blvd & Blackfield Dr	Tiburon	80	27		Y
19	Camino Alto & Sycamore Ave	Mill Valley	18	18	Note 1	N
20	Tiburon Blvd & Avenida Mireflores	Tiburon	66	53		Y
21	Tiburon Blvd & Lyford Dr	Tiburon	13	20	Note 1	N
22	Tiburon Blvd & Trestle Glen	Tiburon	72	80		Y
23	Lagunitas & Allen Avenue	Ross	39	35		Y
24	Lagunitas & Ross Common	Ross	59	15		Y
25	Sir Francis Drake Blvd & Lagunitas	Ross	106	91		Y
26	Sir Francis Drake Blvd & Oak Manor	Fairfax	108	120		Y
27	Butterfield Rd & Green Valley Court	Sleepy Hollow	25	26	Note 1	N



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TAM Site No.	Location	City/Community	2012 Rank	2014 Rank	Notes	Count in 2017
28	Sir Francis Drake Blvd & Broadmoor Ave	San Anselmo	97	121		Y
29	Sir Francis Drake Blvd & Bolinas Ave	San Anselmo	103	133		Y
30	Sir Francis Drake Blvd & Tamal Ave	San Anselmo	48	69		Y
31	Sir Francis Drake Blvd & Barber Ave/Ross Ave	San Anselmo	113	124	Note 2	N
32	Bahia Way & Kerner Blvd	San Rafael	7	1	Note 1	N
33	N San Pedro & Roosevelt	Santa Venitia	63	72		Y
34	Bahia Way at School Entrance	San Rafael	28	32		Y
35	Kerner Blvd & Canal St	San Rafael	35	33		Y
36	177 N San Pedro Road	Santa Venitia	5	30	Note 1	N
37	Knight Dr & Ashwood Ct	San Rafael	49	13		Y
38	Woodland Ave & Siebel	San Rafael	94	118		Y
39	5th Ave & River Oaks Dr	San Rafael	23	38		Y
40	Happy Lane & 5th Ave	San Rafael	50	40		Y
41	Oak Manor (mid-block at school)	Fairfax	60	17		Y
42	Sir Francis Drake Blvd & Oak Tree Lane	Fairfax	8	5	Note 1	N
43	Center Rd & Wilson Ave	Novato	64	31		Y
44	Center Rd & Leland Dr	Novato	6	8	Note 1	N
45	S Novato Blvd & Sunset Pkwy	Novato	53	83		Y
46	Sutro Ave & Dominic Dr	Novato	24	10	Note 1	N
47	Arthur & Cambridge St	Novato	14	110		Y
48	S Novato Blvd & Yukon Way	Novato	56	77		Y
49	San Marin Dr & San Ramon Way	Novato	79	85		Y
50	San Ramon Way & San Benito Way	Novato	21	28	Note 1	N
51	Diablo Ave & Hotchkin Dr	Novato	102	111		Y
52	Alameda De La Loma & Calle De La Mesa	Ignacio	17	56		Y
53	Paladini & Vineyard	Novato	10	11	Note 1	N
54	Wilson & Vineyard	Novato	76	25		Y



**Transportation Authority of Marin  
TAM Crossing Guard Program Recertification Process**

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55	W Castlewood Dr & Knight Dr	San Rafael	54	99		Y
56	Avenida Mireflores at School	Tiburon	29	46		Y
57	Mohawk (in front of Neil Cummins School)	Corte Madera	26	39		Y
58	Tamalpais Dr & Eastman Ave	Corte Madera	84	103		Y
59	Butterfield Rd (in front of School)	San Anselmo	46	61		Y
60	Sunset Pkwy & Lynwood Dr	Novato	73	34		Y
61	Karen Way (in front of school)	Tiburon	30	43		Y
62	Blackstone & Las Gallinas	Marinwood	74	86		Y
63	Las Gallinas & Elvia Ct	Marinwood	75	54		Y
64	Lomita Dr (in front of Edna Maguire School)	Mill Valley	40	75		Y
65	Sir Francis Drake Blvd & Marinda Dr	Fairfax	44	7		Y
66	Ross & Kensington	San Anselmo	95	108		Y
67	Sir Francis Drake Blvd & Butterfield Rd	San Anselmo	93	95		Y
68	Sunset Pkwy & Ignacio Blvd	Novato	86	12		Y
69	Olema-Bolinas Rd & Mesa	Bolinas	127	126	Note 2	N
70	Olema-Bolinas Road (in front of school)	Bolinas	96	59		Y
71	Marinwood Ave & Miller Creek Rd	Marinwood	99	105		Y
72	Nova Albion Way & Las Gallinas Ave	San Rafael	52	89		Y
73	Sir Francis Drake Blvd & Meadow Way	San Geronimo	110	114	Note 2	N
74	Hickory Ave (near Mohawk)	Corte Madera	27	44		Y
75	Magnolia Ave & Wiltshire Ave	Larkspur	62	66		Y
76	Harvard Ave & Wellesley	Tamalpais Valley	117	132	Note 2	N
77	E Blithedale & Elm Ave	Mill Valley	70	70		Y
78	Ricardo Ln & E Strawberry Dr	Marin County	101	78		Y
79	Gibson & Shoreline	Tamalpais Valley	120	87		Y
80	Montford Ave & Melrose Ave	Tamalpais Valley	109	127		Y
81	Melrose Ave & Evergreen Ave	Tamalpais Valley	91	81		Y

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<b>TAM Site No.</b>	<b>Location</b>	<b>City/Community</b>	<b>2012 Rank</b>	<b>2014 Rank</b>	<b>Notes</b>	<b>Count in 2017</b>
82	Tiburon Blvd & E Strawberry Dr	Marin County	118	92		Y
83	Evergreen Ave & Ethel Ave	Tamalpais Valley	114	113	Note 2	N
84	Richmond & Belle	San Anselmo	38	100		Y
85	Richmond & Mariposa	San Anselmo	115	119	Note 2	N
86	Tiburon Blvd & Kleinert Way	Tiburon	61	57		Y
87	Tiburon Blvd & Stewart Dr	Tiburon	87	67		Y
88	Blackfield Dr & Karen Way	Tiburon	107	134		Y
89	Woodland (at back entrance of school)	San Anselmo	77	117		Y
90	Sir Francis Drake Blvd & Aspen Court	San Anselmo	128	130	Note 2	N
91	Sir Francis Drake Blvd & Saunders Ave	San Anselmo	122	102		Y
92	Sequoia & Miracle Mile	San Anselmo	112	129	Note 2	N
93	Woodland Ave & Eva	San Rafael	68	96		Y
94	Woodland Ave & Lovell Ave	San Rafael	98	94		Y
95	Racquet Club Dr & 5th Ave	San Rafael	88	101		Y
96	Bellam Blvd & Francisco Blvd East	San Rafael	126	135	Note 2	N
97	Bellam Blvd & I-580 on ramp	San Rafael	124	106		Y
98	Bellam Blvd & I-580 off ramp	San Rafael	125	104		Y
99	Bellam Blvd & Anderson Dr	San Rafael	121	97		Y
100	Olive Ave & Summers Ave	Novato	119	107		Y
101	One Main Gate Road at School	Novato	41	19		Y
102	Wilson Ave at X-walk to field	Novato	83	55		Y
103	Tinker Way & Bowling Circle	Novato	116	76		Y
104	Center Rd & Tamalpais Ave	Novato	37	73		Y
105	Center Rd & Diablo Ave	Novato	45	79		Y
106	Adams St & Johnson St	Novato	33	47		Y
107	Sunset Parkway & Merritt Dr	Novato	69	2		Y
108	Lovell Ave & Old Mill St	Mill Valley	42	29		Y

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109	Nova Albion & Monticello	San Rafael	15	109		Y
110	Belle Ave (in front of school)	San Rafael	89	51		Y
111	Lincoln Ave & Paloma (east side of Lincoln)	San Rafael	111	131	Note 2	N
112	Grand Ave & Jewell St	San Rafael	85	122		Y
113	Sir Francis Drake Blvd & Manor Rd	Kentfield	100	88		Y
114	Sir Francis Drake Blvd & Bon Air Rd	Kentfield	82	90		Y
115	Sir Francis Drake Blvd & S Eliseo Dr	Kentfield	129	116	Note 2	N
116	Golden Hind Passage (in front of school)	Corte Madera	71	112		Y
117	E Blithedale & Buena Vista Ave	Mill Valley	67	84		Y
118	Woodland Ave & Lindaro St	San Rafael	16	23	Note 1	N
119	Miller Ave & Evergreen Ave	Mill Valley	2	21	Note 1	N
120	San Marin Dr & San Carlos Way	Novato	123	93		Y
121	Sir Francis Drake & Glen Dr	Fairfax	1	16	Note 1	N
122	Miller Ave & Almonte Blvd	Mill Valley	55	36		Y
123	Sutro Ave (in front of Pleasant Vly Elementary)	Novato	11	24	Note 1	N
124	Olive Avenue (in back of school)	Novato	31	48		Y
125	Wilson Ave & Hansen Road	Novato	104	136		Y
126	Shoreline Hwy & Almonte Blvd	Tamalpais Valley	32	65		Y
127	Redwood Hwy & S.B. Seminary Dr Ramp	Mill Valley	57	63		Y
128	Redwood Hwy & DeSilva Dr (at POC)	Marin County	81	137		Y
129	Marin St & Bayview St	San Rafael	78	125		Y
130	Shoreline Highway & Pine Hill Road	Tamalpais Valley	NA	41	Note 3	Y
131	Kleinert Way & Neds Ave	Tiburon	NA	82	Note 3	Y
132	San Benito Way & San Ramon Way (south)	Novato	NA	52	Note 3	Y
133	Arthur Street & Taft Court/Tyler Street	Novato	NA	115	Note 3	Y
134	Ross Common (at Post Office)	Ross	NA	22	Note 3	Y
135	Paradise Drive at Seawolf Passage	Corte Madera	NA	98	Note 3	Y

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<b>TAM Site No.</b>	<b>Location</b>	<b>City/Community</b>	<b>2012 Rank</b>	<b>2014 Rank</b>	<b>Notes</b>	<b>Count in 2017</b>
136	Tiburon Blvd & Mar West St	Tiburon	NA	6	Note 3	Y
137	Spindrift Passage & Prince Royal Passage	Corte Madera	NA	60	Note 3	Y
138	Arthur Street (in front of HS)	Novato	NA	NA	Note 4	Y
139	Sutro Avenue & Center Road	Novato	NA	NA	Note 4	Y
140	Shoreline Highway (in front of West Marin School)	Point Reyes Station	NA	NA	Note 4	Y
141	Arias Street & Trellis Drive	San Rafael	NA	NA	Note 4	Y
142	Tiburon Boulevard and San Rafael Avenue	Tiburon	NA	NA	Note 4	Y
143	South Novato Boulevard and Lark Court	Novato	NA	NA	Note 4	Y
144	Main Gate Road and C Street	Novato	NA	NA	Note 4	Y
145	San Ramon Way and San Juan Court	Novato	NA	NA	Note 4	Y
146	Almonte Boulevard and Rosemont Avenue	Tamalpais Valley	NA	NA	Note 4	Y
147	McAllister Avenue and Stadium Way	Kentfield	NA	NA	Note 4	Y

**Notes:**

- 1) Location ranked in top 30 in 2012 and 2014 lists
- 2) Location ranked below 110 in 2012 and 2014 lists
- 3) New location and count data added in 2014
- 4) New location added since 2014 Ranked List was approved
- 5) 17 Locations ranked in top 30 for both 2012 and 2014 Rankings
- 6) 11 Locations below Rank 110 for both 2012 and 2014 Rankings

## TAM Crossing Guard Program Location Scoring Criteria

Index	Criterion	Scoring	Score	Weight	Weighted Score
1	Actual vehicular volume crossing crosswalk as percent of qualifying volume (use highest hourly volume a.m. or p.m.)	One point, rounded to the nearest whole number, for each ten percentage points of maximum actual volume counted (a.m. or p.m. - hourly <del>or daily</del> ) to applicable "qualifying volume." (Maximum of 20 points)		2	
2	Actual school-aged pedestrian volume as percent of qualifying volume (use highest hourly volume a.m. or p.m., or <del>daily</del> combined a.m./p.m. volume depending on the type of intersection control)	One point, rounded to the nearest whole number, for each ten percentage points of maximum actual volume counted (a.m. or p.m. - hourly or <del>daily</del> -combined a.m./p.m.) to applicable "qualifying volume." (Maximum of 20 points)		5	
3	Intersection Skew Angle	Maximum skew from 0 to 5 degrees = 0 Maximum skew from 6 to 15 degrees = 1 point Maximum skew from 16 to 25 degrees = 2 points Maximum skew from 26 to 35 degrees = 3 points Maximum skew from 36 to 45 degrees = 4 points Maximum skew greater than 45 degrees = 5 points		1	
4	Stopping Sight Distance at Intersection	Stopping sight distance not impaired = 0 Stopping sight distance slightly impaired = 1 point Stopping sight distance significantly impaired = 2 points		10	
5	Location of intersection on a horizontal curve with posted warning or speed reduction sign(s)	No = 0 Yes = 1 point		5	
6	Posted speed limit (highest on any approach to pedestrian crossing)	Posted Speed Limit 25 mph or less = 0 Posted Speed Limit 30 mph = 1 point Posted Speed Limit 35 mph = 2 points Posted Speed Limit 40 mph = 3 points Posted Speed Limit 45 mph = 4 points Posted Speed Limit 50 mph or greater = 5 points		2	
7	Other factors	Use total score (i.e. total for all factors) (Maximum of 4 points total) Ped-Vehicular accident history documented = 1 point Multiple ingress-egress within 50 feet of crosswalk = 1 point Crossing more than 4 lanes total (i.e. both directions) = 1 point Other factor documented/concurred by Public Works = 1 point ea.		5	
				<b>Total</b>	

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