



DATE: April 17, 2023

TO: Transportation Authority of Marin Citizens' Oversight Committee

FROM: Anne Richman, Executive Director
Dan Cherrier, Director of Project Delivery
Molly Graham, Public Outreach Coordinator

SUBJECT: Review of the Recommended Crossing Guard Location Selection (Discussion),
Agenda Item No. 5

RECOMMENDATION

The COC reviews the recommended crossing guard location selection, which was reviewed and supported by the Marin Public Works Association (MPWA), and provides any input.

The TAM Board is expected to act on the recommended list at its April 27 meeting and any input provided by the COC will be shared with the Board.

BACKGROUND

TAM has been funding the Marin County Crossing Guard Program since 2006. Funding for the program comes from the transportation sales tax, Measure AA, and from the vehicle registration fee, Measure B. In the current fiscal year, the program is expected to cost approximately \$2.19 million.

A key decision in managing the program is to determine the locations for guards. In summary, the decision process involves assessing locations near schools throughout the County, developing a ranked list based on certain criteria, and assigning guards to the top locations, with the number of guards provided based on fiscal concerns. The Measure AA Expenditure Plan specifies a base level of 96 guards. Typically, this evaluation process can take a year, due to the intensive data collection and analysis. Ranked lists were developed in 2010, 2014, and 2018, with one expected in 2022. However, because of school operation disruptions early in the pandemic, staff felt it was prudent to delay the development of the 2022 ranked list to 2023 in order to obtain more consistent data.

Early in the program's history, locations were based on recommendations from local public works officials and on criteria from the California Manual of Uniform Traffic Control Devices (CMUTCD). MPWA and the former TAM Technical Advisory Committee developed a scoring system in 2009 that was based in part on the CMUTCD criteria and other factors. The TAM Board-approved scoring system utilizes vehicle volumes, pedestrian volumes, skew angle of the intersecting streets, stopping sight distance if impaired, designation if on the crest of a vertical curve, speed limit of any approaching roadway, accident history, and other relevant factors. Committees were formed in 2017 and 2021 to see if any changes should be made to the scoring system.

MPWA and the TAM Board approved the latest changes to the scoring methodology in April 2022. Recent changes include using posted speed limits rather than school speed limit zones when

determining the crosswalk speed limit; dropping the lower age of school age pedestrian to four years old to account for new transitional kindergarten (T-K) programs; and increasing the scoring weight of recent accidents at or near the crosswalk involving bicycles or pedestrians. The new scoring criteria is shown in Attachment B. It is important to have a standard process for evaluating the sites to reduce potential liability associated with location selection.

DISCUSSION/ANALYSIS

In order to obtain some of the needed data for this cycle, a contract was signed with a video counting firm this past summer. The video firm supplied the vehicle counts for the 161 intersections evaluated. The work was supplemented by the TAM on-call contractor TYLin, which supplied the pedestrian counts from the video. TYLin also gathered the accident and speed limit data. TAM staff performed quality control on the vehicle and pedestrian counts and performed all the site scoring.

The scores for the sites were then placed in a ranked list. Scores ranged from 2 to 154, out of a possible 210 points. Several sites had the same score and when necessary, additional sorting was performed using Peak Hour pedestrian values. The Ranked List is shown in Attachment A.

Based on the Measure AA Expenditure Plan base level of 96 guard locations, (plus one additional site explained in the next section) there are some changes in the new list compared to the current guard locations:

- Some current locations have fallen below the funding cutoff. These locations are shown in red on Attachment A.
- Some locations (previously below the cutoff line), shown in green, are now above the cutoff line and are being proposed for crossing guard services.
- In one instance, a local jurisdiction is proposing to exchange locations, shown in gold. Crossing guards are defined as a traffic control device and the Public Works Director for each jurisdiction has final approval for guard placement. The Public Works Director for Corte Madera opted to move a guard that scored above the funding cutoff at Pixley/Redwood to Tamalpais/Eastman, which was scored under the funding cutoff.

Status of sites that have no coloring remain the same as now, either guarded or unguarded, depending on if they are above or below the funding cutoff.

There are numerous reasons for the changes, including: capital projects that have been completed in the last several years that are designed to improve safety conditions (some projects were funded by TAM), such as reconfigured intersections and crosswalks, removal of uncontrolled crosswalks (several along Sir Francis Drake Blvd.), and realigned bicycle lanes; changes to signal timing; significant and in most cases declining school enrollment (see Attachment C); better video quality for this cycle to discriminate right turns on red versus right turns on green; grade level reconfiguration; and school closing or combining (Greenwood School closed, and Willow Creek/MLK Academy combined).

The Ranked List was reviewed and approved by MPWA at its March meeting. The Measure AA Expenditure Plan states that MPWA should recommend the list to the TAM Board for final approval.

FISCAL CONSIDERATION

During the preparation of the Measure AA Expenditure Plan, staff determined that a base level of 96 guards was sustainable until the end of the Sales Tax Measure in 2048. This calculation utilized

expected revenues from multiple sources as well as all costs associated with the Program operation and evaluation.

The number of crossing guard locations traditionally has grown by two each year due to the "New and Changed Condition Policy". Since the current base crossing guard list was approved in 2018, the number of locations paid for by the Program has grown from 96 to 103 (the change included one location that was discontinued due to a school closure). This growth was expected in the cash flow analysis and is acceptable as long as the Program resets to 96 guards upon the introduction of each new evaluation and list. Staff recalculated the estimated base now that five years of the 30-year measure have actual costs and determined that a base of 96 guards is still sustainable going forward. However, it is important to note that the projections made certain assumptions, including about the cost of the Program. With the upcoming end and re-bidding of the current guard contract, it remains to be seen whether cost/wage pressures will be in line with the projections. More information about the next contract is expected to be available later this summer.

There is a tie-breaking system in place when creating the list. Since there is a tie (even with the tie-breaking process) between Rank 96 and 97 during this evaluation, staff is recommending that TAM funds a total of 97 locations during this round. This level is sustainable based on current revenue projection and cash flow analysis.

NEXT STEPS

TAM staff has reached out to superintendents at affected school districts about the changes and is in the process of meeting with the districts. Staff will also be attending Safe Routes to Schools Task Forces and working with the principal's office at affected schools to notify students/parents of the proposed changes. Leaflets will be distributed before the end of school at crosswalks where crossing guard service will be discontinued.

ATTACHMENTS

- Attachment A – Proposed 2023 Crossing Guard List
- Attachment B – Current Crossing Guard Scoring Criteria
- Attachment C – School Enrollment Changes 2017 to 2022
- Attachment D – Crossing Guard Presentation

List of Proposed TAM Crossing Guard Program Locations

Location	City/Community	Type of Control Primary Crossing	Crit. No. 1	Crit. No. 2	Crit. No. 3	Crit. No. 4	Crit. No. 5	Crit. No. 6	Crit. No. 7	Crit. No. 8	Weighted Score	Rank
			Veh. Volume	Ped. Volume	Skew Angle	Stopping Sight	Horiz. Curve	Speed Limit	Accidents	Other Factors		
			2	5	1	Scoring Weight 10	5	2	10	5		
Sir Francis Drake & Glen Drive	Fairfax	Uncontrolled	20	20	0	0	0	2	1	0	154	1
Doherty Drive & Rose Lane (East) (at Piper Park)	Larkspur	Uncontrolled	20	20	0	0	0	0	1	0	150	2
Nova Albion Way at Vallecito School	San Rafael	Uncontrolled	20	19	0	0	0	0	1	0	145	3
Miller Avenue & Almonte Boulevard	Mill Valley	Uncontrolled	20	20	0	0	0	2	0	0	144	4
Center Road & Wilson Avenue	Novato	Stop Sign	11	20	1	0	0	2	1	1	142	5
East Strawberry Drive at Strawberry School	Marin County	Uncontrolled	12	20	0	0	0	0	1	1	139	6
Center Road & Leland Drive	Novato	Uncontrolled	17	20	0	0	0	1	0	0	136	7
Sunset Parkway & Merritt Drive	Novato	Uncontrolled	20	18	1	0	0	0	0	0	131	8
Olive Avenue (in back of school)	Novato	Uncontrolled	15	20	0	0	0	0	0	0	130	9
Sir Francis Drake Boulevard & Oak Tree Lane	Fairfax	Uncontrolled	20	17	0	0	0	0	0	1	130	10
Lagunitas Road & Ross Common	Ross	Uncontrolled	13	20	1	0	0	0	0	0	127	11
Ross Common (at Post Office)	Ross	Uncontrolled	13	20	0	0	0	0	0	0	126	12
Sir Francis Drake Boulevard & Marinda Dr	Fairfax	Uncontrolled	20	17	0	0	0	0	0	0	125	13
East Blithedale Avenue & Lomita Avenue	Mill Valley	Signal	2	20	2	0	0	2	1	1	125	14
Sir Francis Drake Boulevard & Manor Road	Kentfield	Uncontrolled	4	20	0	0	0	3	1	0	124	15
Sir Francis Drake Boulevard & Wolfe Grade	Kentfield	Signal	5	20	1	0	0	3	0	1	122	16
Larkspur Plaza Drive (Tam Racket Club) & Doherty Drive	Larkspur	Signal	2	20	0	0	0	0	1	1	119	17
Sutro Avenue (in front of Pleasant Vly Elementary)	Novato	Uncontrolled	9	20	0	0	0	0	0	0	118	18
College Avenue & Stadium Way	Kentfield	Signal	0	20	2	0	0	0	1	1	117	19
Camino Alto & Sycamore Avenue	Mill Valley	Signal	2	20	1	0	0	1	1	0	117	20
Happy Lane & 5th Avenue	San Rafael	Uncontrolled	8	20	1	0	0	0	0	0	117	21
Paladini Road & Vineyard Road	Novato	Stop Sign	8	20	0	0	0	0	0	0	116	22
Las Gallinas Avenue & Elvia Court	San Rafael	Stop Sign	20	15	1	0	0	0	0	0	116	23
Mohawk Avenue (in front of Neil Cummins School)	Corte Madera	Uncontrolled	5	20	0	0	0	0	0	1	115	24
Woodland Avenue & Lindaro Street	San Rafael	Stop Sign	7	20	0	0	0	0	0	0	114	25
San Ramon Way & San Juan Court	Novato	Uncontrolled	7	20	0	0	0	0	0	0	114	26
Woodland Avenue & Eva Street	San Rafael	Stop Sign	9	18	0	0	0	0	0	1	113	27
Magnolia Avenue & Wiltshire Avenue	Larkspur	Uncontrolled	20	11	1	0	0	0	1	1	111	28
Bahia Way at School Entrance	San Rafael	Uncontrolled	5	20	0	0	0	0	0	0	110	29
Wilson Avenue & Vineyard Road	Novato	Stop Sign	11	17	3	0	0	0	0	0	110	30
Sutro Avenue & Dominic Drive	Novato	Uncontrolled	16	15	1	0	0	1	0	0	110	31
Bell Lane & Enterprise Concourse	Mill Valley	Stop Sign	4	20	0	0	0	0	0	0	108	32
Belle Avenue (in front of school)	San Rafael	Uncontrolled	4	20	0	0	0	0	0	0	108	33
Donahue Street & Drake Avenue (NW)	Marin County	Uncontrolled	6	19	0	0	0	0	0	0	107	34
Karen Way (in front of school)	Tiburon	Uncontrolled	3	20	0	0	0	0	0	0	106	35
Hickory Avenue (near Mohawk Avenue)	Corte Madera	Uncontrolled	3	20	0	0	0	0	0	0	106	36
Miller Avenue & Evergreen Avenue	Mill Valley	Uncontrolled	20	13	0	0	0	0	0	0	105	37
Redwood Avenue & Pixley Avenue	Corte Madera	Uncontrolled	1	20	2	0	0	0	0	0	104	38
Calle Empinada & Calle Paseo	Novato	Uncontrolled	2	19	1	0	0	0	0	0	100	39
Shoreline Highway & Pine Hill Road	Mill Valley	Uncontrolled	20	7	0	1	0	0	0	3	100	40
Kerner Boulevard & Canal Street	San Rafael	Stop Sign	3	14	4	0	0	0	1	1	95	41
McAllister Avenue & Stadium Way	Kentfield	Uncontrolled	4	16	0	0	0	0	0	1	93	42
Butterfield Road & Green Valley Court	San Anselmo	Uncontrolled	18	11	0	0	0	1	0	0	93	43
Alameda De La Loma & Calle De La Mesa (East)	Novato	Stop Sign	3	17	1	0	0	0	0	0	92	44
Oak Manor Drive (mid-block at school)	Fairfax	Uncontrolled	11	14	0	0	0	0	0	0	92	45
Bahia Way & Kerner Boulevard	San Rafael	Stop Sign	9	12	1	0	0	0	1	0	89	46
Almonte Boulevard & Rosemont Avenue	Mill Valley	Uncontrolled	20	9	0	0	0	2	0	0	89	47
Lagunitas Road & Allen Avenue	Ross	Stop Sign	13	12	2	0	0	0	0	0	88	48
Tiburon Boulevard & Avenida Miraflores	Tiburon	Signal	3	15	1	0	0	3	0	0	88	49
San Ramon Way & San Benito Way (North)	Novato	Stop Sign	6	15	0	0	0	0	0	0	87	50
Lovell Avenue & Old Mill Street	Mill Valley	Uncontrolled	6	15	0	0	0	0	0	0	87	51
South Novato Boulevard & Yukon Way	Novato	Uncontrolled	20	7	0	0	0	3	0	1	86	52
North San Pedro Road & Roosevelt Avenue	San Rafael	Uncontrolled	20	7	0	0	0	0	1	0	85	53
177 North San Pedro Road	San Rafael	Uncontrolled	20	7	0	0	0	0	1	0	85	54
Sir Francis Drake Boulevard & Tamal Avenue	San Anselmo	Signal	1	13	0	0	0	1	1	1	84	55
Tiburon Boulevard & Lyford Drive	Tiburon	Signal	2	14	2	0	0	2	0	0	80	56
5th Avenue & River Oaks Drive	San Rafael	Uncontrolled	4	14	2	0	0	0	0	0	80	57
Tiburon Boulevard & Mar West Street	Tiburon	Uncontrolled	20	6	0	0	0	2	0	1	80	58
Shoreline Highway & Almonte Boulevard	Mill Valley	Signal	8	10	0	0	0	2	0	2	80	59
Throckmorton Ave & Old Mill Street	Mill Valley	Stop Sign	6	13	0	0	0	0	0	0	77	60

List of Proposed TAM Crossing Guard Program Locations

Location	City/Community	Type of Control Primary Crossing	Crit. No. 1	Crit. No. 2	Crit. No. 3	Crit. No. 4	Crit. No. 5	Crit. No. 6	Crit. No. 7	Crit. No. 8	Weighted Score	Rank
			Veh. Volume	Ped. Volume	Skew Angle	Stopping Sight	Horiz. Curve	Speed Limit	Accidents	Other Factors		
			Scoring Weight									
			2	5	1	10	5	2	10	5		
Blackstone Drive & Las Gallinas Avenue	San Rafael	Stop Sign	3	14	0	0	0	0	0	0	76	61
Magnolia Avenue & King Street	Larkspur	Stop Sign	13	8	0	0	0	0	1	0	76	62
South Novato Boulevard & Lark Court	Novato	Uncontrolled	20	5	0	0	0	3	0	1	76	63
Tiburon Boulevard & Stewart Drive	Tiburon	Uncontrolled	20	4	0	0	0	3	1	0	76	64
Sunset Parkway & Ignacio Boulevard	Novato	Stop Sign	8	10	0	0	0	2	0	1	75	65
College Avenue & Woodland Avenue/Kent Avenue	Kentfield	Stop Sign	20	4	0	0	0	0	1	1	75	66
Lomita Drive (in front of Edna Maguire School)	Mill Valley	Stop Sign	9	11	0	0	0	0	0	0	73	67
Gibson Avenue & Shoreline Highway	Tamalpais Valley	Signal	1	11	1	0	0	2	1	0	72	68
Trumbull Avenue & Vineyard Road	Novato	Stop Sign	2	13	2	0	0	0	0	0	71	69
Woodland Avenue & Siebel Street	San Rafael	Uncontrolled	2	13	1	0	0	0	0	0	70	70
Butterfield Road & Rosemont Avenue (in front of School)	San Anselmo	Stop Sign	20	6	0	0	0	0	0	0	70	71
West Castlewood Drive & Knight Drive	San Rafael	Stop Sign	11	9	2	0	0	0	0	0	69	72
Tiburon Boulevard & Kleinert Way/Ned's Way	Tiburon	Uncontrolled	20	5	0	0	0	2	0	0	69	73
Sir Francis Drake Boulevard & Meadow Way	San Geronimo	Uncontrolled	15	7	0	0	0	2	0	0	69	74
Sunset Parkway & Lynwood Drive	Novato	Uncontrolled	4	12	0	0	0	0	0	0	68	75
One Main Gate Road at School	Novato	Uncontrolled	20	5	0	0	0	1	0	0	67	76
Redwood Highway & NB Off-Ramp/DeSilva Drive (at POC)	Marin County	Signal	2	7	2	1	1	2	0	1	65	77
Tiburon Boulevard & East Strawberry Drive	Marin County	Uncontrolled	6	3	0	1	0	4	1	2	65	78
Redwood Highway & Southbound Seminary Drive On-Ramp	Mill Valley	Stop Sign	12	6	1	0	0	2	0	1	64	79
Tiburon Boulevard & San Rafael Avenue	Tiburon	Signal	1	10	1	0	0	3	0	1	64	80
San Benito Way & San Ramon Way (south)	Novato	Uncontrolled	6	10	0	0	0	0	0	0	62	81
Ross Avenue & Kensington Road	San Anselmo	Stop Sign	3	11	0	0	0	0	0	0	61	82
Sir Francis Drake Boulevard & College Avenue	Kentfield	Signal	4	7	2	0	0	2	1	0	59	83
Wilson Avenue at X-walk to field	Novato	Uncontrolled	10	6	0	0	0	2	0	1	59	84
San Marin Drive & San Ramon Way	Novato	Stop Sign	15	5	0	0	0	2	0	0	59	85
Tiburon Boulevard & Trestle Glen Boulevard	Tiburon	Signal	3	8	2	0	1	3	0	0	59	86
Adams Street & Johnson Street	Novato	Stop Sign	1	11	1	0	0	0	0	0	58	87
Sir Francis Drake Boulevard & Butterfield Road	San Anselmo	Signal	0	11	0	0	0	1	0	0	57	88
Avenida Miraflores & Hilary Drive	Tiburon	Uncontrolled	8	6	0	0	0	0	0	2	56	89
Las Gallinas Avenue & Miller Creek Road	San Rafael	Stop Sign	4	7	0	0	0	0	1	0	53	90
Avenida Miraflores at School	Tiburon	Uncontrolled	9	6	0	0	0	0	0	1	53	91
Nova Albion Way & Arias Street	San Rafael	Signal	1	10	0	0	0	0	0	0	52	92
Sutro Avenue & Center Road	Novato	Stop Sign	5	6	0	0	0	1	1	0	52	93
Mt Shasta Drive & Idylberry Road	Lucas Valley	Stop Sign	3	9	0	0	0	0	0	0	51	94
Knight Drive & Ashwood Court	San Rafael	Uncontrolled	13	5	0	0	0	0	0	0	51	95
Marinwood Avenue & Miller Creek Road	San Rafael	Stop Sign	13	2	0	0	0	0	1	1	51	96
Center Road & Diablo Avenue	Novato	Stop Sign	12	3	0	0	0	1	1	0	51	97
Sir Francis Drake Boulevard & Lagunitas Road	Ross	Signal	1	8	1	0	0	1	0	1	50	98
Nova Albion Way & Montecillo Road	San Rafael	Stop Sign	10	6	0	0	0	0	0	0	50	99
Sir Francis Drake Boulevard & Saunders Avenue	San Anselmo	Uncontrolled	20	0	0	0	0	0	1	0	50	100
Sir Francis Drake Boulevard & Laurel Grove Avenue (East)	Kentfield	Signal	0	8	0	0	0	2	0	1	49	101
Woodland Avenue & Lovell Avenue	San Rafael	Uncontrolled	3	8	3	0	0	0	0	0	49	102
Corte Madera Avenue & Tamalpais Drive (& Redwood)	Corte Madera	Signal	4	6	1	0	0	0	1	0	49	103
Sir Francis Drake Boulevard & Barber Avenue/Ross Avenue	San Anselmo	Signal	2	6	0	0	0	2	1	0	48	104
Sir Francis Drake Boulevard & Bolinas Avenue	San Anselmo	Signal	2	5	0	0	0	2	1	1	48	105
Bolinas Avenue & Shady Lane	Ross	Uncontrolled	11	5	1	0	0	0	0	0	48	106
East Blithedale Avenue & Elm Avenue	Mill Valley	Signal	0	7	2	0	0	0	0	2	47	107
Melrose Avenue & Evergreen Avenue	Tamalpais Valley	Stop Sign	4	6	1	0	0	0	0	1	44	108
Racquet Club Drive & 5th Avenue	San Rafael	Stop Sign	13	3	3	0	0	0	0	0	44	109
Shoreline Highway (in front of West Marin School)	Point Reyes Station	Uncontrolled	17	2	0	0	0	0	0	0	44	110
Sir Francis Drake Boulevard & Broadmoor Avenue	San Anselmo	Signal	5	4	1	1	0	1	0	0	43	111
Tamalpais Drive & Eastman Avenue	Corte Madera	Signal	0	5	0	0	0	1	1	1	42	112
Sir Francis Drake Boulevard & South Eliseo Drive	Kentfield	Signal	2	6	2	0	0	3	0	0	42	113
Olema-Bolinas Road (in Front of School)	Bolinas	Uncontrolled	8	5	0	0	0	0	0	0	41	114
Center Road & Tamalpais Avenue	Novato	Stop Sign	11	3	0	0	0	1	0	0	39	115

List of Proposed TAM Crossing Guard Program Locations

Location	City/Community	Type of Control Primary Crossing	Crit. No. 1	Crit. No. 2	Crit. No. 3	Crit. No. 4	Crit. No. 5	Crit. No. 6	Crit. No. 7	Crit. No. 8	Weighted Score	Rank
			Veh. Volume	Ped. Volume	Skew Angle	Stopping Sight	Horiz. Curve	Speed Limit	Accidents	Other Factors		
			Scoring Weight									
			2	5	1	10	5	2	10	5		
Richmond Road & Belle Avenue	San Anselmo	Uncontrolled	4	6	0	0	0	0	0	0	38	116
Bellam Boulevard & I-580 on ramp	San Rafael	Signal	13	1	1	0	0	3	0	0	38	117
Arthur Street & Cambridge Street	Novato	Stop Sign	11	3	0	0	0	0	0	0	37	118
Evergreen Avenue & Ethel Avenue	Tamalpais Valley	Stop Sign	3	6	0	0	0	0	0	0	36	119
Ricardo Lane & East Strawberry Drive	Marin County	Uncontrolled	5	4	1	0	0	0	0	1	36	120
Blackfield Drive & Karen Way	Tiburon	Uncontrolled	5	5	0	0	0	0	0	0	35	121
Diablo Avenue & Hotchkin Drive	Novato	Uncontrolled	14	1	0	0	0	1	0	0	35	122
Nova Albion Way & Las Gallinas Avenue	San Rafael	Signal	10	1	0	0	0	0	1	0	35	123
Bellam Boulevard & I-580 off ramp	San Rafael	Signal	7	1	0	0	0	3	1	0	35	124
Marin Street & Bayview Street	San Rafael	Stop Sign	2	6	0	0	0	0	0	0	34	125
Arthur Street & Taft Court/Tyler Street	Novato	Uncontrolled	12	2	0	0	0	0	0	0	34	126
Blackfield Drive & Cecilia Way	Tiburon	Uncontrolled	4	4	1	0	0	0	0	1	34	127
Wilson Avenue & Hansen Road	Novato	Uncontrolled	10	1	0	0	0	2	0	1	34	128
East Blithedale Avenue & Buena Vista Avenue	Mill Valley	Uncontrolled	3	3	2	0	0	0	0	2	37	129
Golden Hind Passage (in front of school)	Corte Madera	Uncontrolled	5	4	2	0	0	0	0	0	32	130
Bellam Boulevard & Anderson Drive	San Rafael	Signal	5	1	1	0	0	3	1	0	32	131
Bon Air Road & South Eliseo Drive	Marin County	Signal	3	3	0	0	0	0	1	0	31	132
Sir Francis Drake Boulevard & Bon Air Road	Kentfield	Signal	0	3	0	1	0	3	0	0	31	133
Sir Francis Drake Boulevard & Oak Manor Drive	Fairfax	Signal	0	5	1	0	0	2	0	0	30	134
Tiburon Boulevard & Blackfield Drive	Tiburon	Signal	6	2	0	0	0	4	0	0	30	135
Paradise Drive & Seawolf Passage	Corte Madera	Signal	0	5	1	0	0	1	0	0	28	136
San Marin Drive & San Carlos Way	Novato	Stop Sign	4	1	0	0	0	0	1	1	28	137
Spindrift Passage & Prince Royal Passage	Corte Madera	Uncontrolled	2	4	0	0	0	1	0	0	26	138
Drake Avenue & Phillips Drive (N)	Marin County	Uncontrolled	5	3	1	0	0	0	0	0	31	139
South Novato Boulevard & Sunset Pkwy	Novato	Signal	1	1	0	0	0	2	1	1	26	140
Grand Avenue & Jewell Street	San Rafael	Stop Sign	1	4	3	0	0	0	0	0	25	141
Woodland Avenue (at back of Wade Thomas school)	San Anselmo	Uncontrolled	2	4	0	0	0	0	0	0	24	142
Kleinert Way & Neds Avenue	Tiburon	Uncontrolled	6	1	0	0	0	0	0	1	22	143
Harvard Avenue & Wellesley Avenue	Tamalpais Valley	Uncontrolled	7	1	1	0	0	0	0	0	20	144
Montford Avenue & Melrose Avenue	Tamalpais Valley	Stop Sign	5	2	0	0	0	0	0	0	20	145
Tiburon Boulevard & Rock Hill Drive	Tiburon	Signal	2	2	0	0	0	3	0	0	20	146
Richmond Road & Mariposa Avenue	San Anselmo	Uncontrolled	2	3	0	0	0	0	0	0	19	147
Buchanan Drive (at school driveway)	Sausalito	Uncontrolled	3	2	3	0	0	0	0	0	19	148
Buchanan Drive & Wateree Street	Sausalito	Uncontrolled	1	3	0	0	0	0	0	0	17	149
Arias Street & Trellis Drive	San Rafael	Uncontrolled	3	2	0	0	0	0	0	0	16	150
Lincoln Avenue & Paloma Avenue	San Rafael	Signal	0	3	0	0	0	0	0	0	15	151
Olive Avenue & Summers Avenue	Novato	Uncontrolled	2	2	1	0	0	0	0	0	15	152
Sir Francis Drake Boulevard & Aspen Court	San Anselmo	Signal	1	2	0	0	0	1	0	0	14	153
Olema-Bolinas Road & Mesa Road	Bolinas	Stop Sign	5	0	0	0	0	2	0	0	14	154
Main Gate Road & C Street	Novato	Uncontrolled	3	1	0	0	0	1	0	0	13	155
Bridgeway & Nevada Street	Sausalito	Signal	2	1	0	0	0	2	0	0	13	156
Bellam Boulevard & Francisco Boulevard East	San Rafael	Signal	0	1	1	0	0	1	0	1	13	157
Sequoia Drive & Red Hill Avenue (Miracle Mile)	San Anselmo	Signal	1	1	0	0	0	2	0	0	11	158
End of Tinker Way	Novato	Uncontrolled	2	1	0	0	0	0	0	0	9	159
Arthur Street & Hayes Street	Novato	Uncontrolled	1	1	0	0	0	0	0	0	7	160
Nevada Street & Tomales Street	Sausalito	Uncontrolled	1	0	0	0	0	0	0	0	2	161

Notes:

Gold indicates a swapped location

Green indicates a site that is not currently guarded but is expected to have a guard beginning August 2023

Red indicates a site that currently has a guard but is now under the funding line, not all are TAM funded

TAM Crossing Guard Program Scoring Process Guide

- **8 Criteria used for scoring crosswalks at locations on Master List**
- **Criteria related to vehicular and school-aged pedestrian volumes dependent on actual volumes counted (school-aged = transitional kindergarten through 8th grade)**
- **“Qualifying” vehicular and school-aged pedestrian volumes for scoring based on MUTCD 2012 Update**
- **Individual weighting factors for each criterion used to establish “Weighted Score”**
- **Locations ranked by the highest Weighted Score of all crosswalks at the location**
- **Scoring instructions for each criterion on following pages**
- **TAM Crossing Guard Program Location Scoring Criteria Summary (attached)**

Criteria No. 1: Vehicular Volume

1. Stop Sign

$$\frac{\text{Peak Hour Volume from Counts}}{350} (\%) \quad \text{Multiplied by} \quad \frac{1 \text{ Point}}{10\%} = \text{SCORE (Rounded)}$$

2. Traffic Signal

$$\frac{\text{Turning Movement Peak Hour Volume from Counts}}{300} (\%) \quad \text{Multiplied by} \quad \frac{1 \text{ Point}}{10\%} = \text{SCORE (Rounded)}$$

3. Uncontrolled Rural

$$\frac{\text{Peak Hour Volume from Counts}}{300} (\%) \quad \text{Multiplied by} \quad \frac{1 \text{ Point}}{10\%} = \text{SCORE (Rounded)}$$

4. Uncontrolled Urban

$$\frac{\text{Peak Hour Volume from Counts}}{350} (\%) \quad \text{Multiplied by} \quad \frac{1 \text{ Point}}{10\%} = \text{SCORE (Rounded)}$$

Criteria No. 2: School-Aged Pedestrian Volume

1. Stop Sign

$$\frac{\text{Peak Hour Pedestrian Volume from Counts}}{40} (\%) \quad \text{Multiplied by} \quad \frac{1 \text{ Point}}{10\%} = \text{SCORE (Rounded)}$$

2. Traffic Signal

$$\frac{\text{Peak Hour Pedestrian Volume from Counts}}{40} (\%) \quad \text{Multiplied by} \quad \frac{1 \text{ Point}}{10\%} = \text{SCORE (Rounded)}$$

3. Uncontrolled Rural

$$\frac{\text{Combined a.m. \& p.m. Pedestrian Volume from Counts}}{30} (\%) \quad \text{Multiplied by} \quad \frac{1 \text{ Point}}{10\%} = \text{SCORE (Rounded)}$$

4. Uncontrolled Urban

$$\frac{\text{Combined a.m. \& p.m. Pedestrian Volume from Counts}}{40} (\%) \quad \text{Multiplied by} \quad \frac{1 \text{ Point}}{10\%} = \text{SCORE (Rounded)}$$

Criteria No. 3: Intersection Skew Angle

All Intersection Control Types

Maximum skew from 0 to 5 degrees	0 Points
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

Criteria No. 4: Stopping Sight Distance

All Intersection Control Types

Stopping sight distance not impaired	0 Points
Stopping sight distance slightly impaired	1 point
Stopping sight distance significantly impaired	2 points

Criteria No. 5: Horizontal Curve

All Intersection Control Types

- Intersection not located on a curve with posted warning or speed reduction sign 0 Points
- Intersection located on a curve with posted warning or speed reduction sign 1 point

Criteria No. 6: Speed Limit

All Intersection Control Types

Posted speed limit (highest on any approach to crossing) 25 mph or less	0 Points
Posted speed limit (highest on any approach to crossing) 26 mph to 30 mph	1 point
Posted speed limit (highest on any approach to crossing) 31 mph to 35 mph	2 points
Posted speed limit (highest on any approach to crossing) 36 mph to 40 mph	3 points
Posted speed limit (highest on any approach to crossing) 41 mph to 45 mph	4 points
Posted speed limit (highest on any approach to crossing) 50 mph or more	5 points

(Note: Use posted speed limit for regular hours, i.e. not school-zone time-restricted limit.)

Criteria No. 7: Pedestrian-Vehicular Accident History

All Intersection Control Types

No documented pedestrian-vehicular accident history	0 Points
Documented pedestrian-vehicular accident history	1 point

Criteria No. 8: Other Factors

All Intersection Control Types

Use cumulative score (i.e. total for all factors with maximum total score of 4)

Multiple ingress-egress within 50 feet of crosswalk	1 point
Crossing more than 4 lanes total (i.e. both directions)	1 point
Other factor(s) documented/concurred by Public Works	<u>1 point ea.</u>

Total Score
(Max. = 4)

TAM Crossing Guard Program Location Scoring Criteria Summary - Approved April 2022

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 hourly volume counted (a.m. or p.m.) to applicable "qualifying volume." (Maximum of 20 points)		2	0
2	Actual school-aged pedestrian (TK - 8th Grade) volume as percent of qualifying volume (use highest hourly volume a.m. or p.m., or 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 combined a.m./p.m.) to applicable "qualifying volume." (Maximum of 20 points)		5	0
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	0
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	0
5	Location of intersection on a horizontal curve with posted warning or speed reduction sign(s)	No = 0 Yes = 1 point		5	0
6	Posted speed limit (highest on any approach to pedestrian crossing). Note: this does not include school zone speed limits.	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	0
7	Pedestrian-Vehicular Accident History	Pedestrian-Vehicular accident history documented? No = 0 Yes = 1 point		10	0
8	Other factors	Use total score (i.e. total for all factors) (Maximum of 4 points total) 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	0
				Total	0

Enrollment Change 2017 to 2022

Source: Ed Data for public schools

School Name	2017	2022	Change	Percent Change
Mill Valley Middle	1,050	816	(234)	-22.3%
Bel Aire Elementary	503	327	(176)	-35.0%
San Jose Middle	726	555	(171)	-23.6%
Edna Maguire Elementary	588	430	(158)	-26.9%
Del Mar Middle	568	410	(158)	-27.8%
White Hill Middle	808	664	(144)	-17.8%
Greenwood - Closed	127	0	(127)	-100.0%
Davidson Middle	1,203	1,079	(124)	-10.3%
Bacich Elementary	645	523	(122)	-18.9%
Vallecito Elementary	510	397	(113)	-22.2%
Glenwood Elementary	417	304	(113)	-27.1%
Strawberry Point Elementary	355	255	(100)	-28.2%
Hamilton K-8	613	518	(95)	-15.5%
Reed Elementary	371	283	(88)	-23.7%
Cove Elementary	445	365	(80)	-18.0%
Hidden Valley Elementary	320	241	(79)	-24.7%
Kent Middle	588	511	(77)	-13.1%
Neil Cummins Elementary	580	504	(76)	-13.1%
Pleasant Valley Elementary	463	389	(74)	-16.0%
Lucas Valley Elementary	406	336	(70)	-17.2%
San Ramon Elementary	476	412	(64)	-13.4%

Enrollment Change 2017 to 2022

Source: Ed Data for public schools

School Name	2017	2022	Change	Percent Change
Tamalpais Valley Elementary	482	419	(63)	-13.1%
Mary Silveira Elementary	433	376	(57)	-13.2%
Wade Thomas Elementary	378	321	(57)	-15.1%
Sinaloa Middle	826	775	(51)	-6.2%
Park Elementary	310	259	(51)	-16.5%
Sun Valley Elementary	501	461	(40)	-8.0%
Hall Middle	516	481	(35)	-6.8%
Brookside Elementary	320	288	(32)	-10.0%
Coleman Elementary	401	370	(31)	-7.7%
Lu Sutton Elementary	365	335	(30)	-8.2%
Ventia Valley K-8	711	683	(28)	-3.9%
Lagunitas K-8	164	136	(28)	-17.1%
Loma Verde Elementary	415	394	(21)	-5.1%
Old Mill Elementary	298	278	(20)	-6.7%
Ross K-8	387	369	(18)	-4.7%
Rancho Elementary	369	352	(17)	-4.6%
West Marin K-8	145	128	(17)	-11.7%
Marin Primary K-8	356	343	(13)	-3.7%
Novato Charter	268	261	(7)	-2.6%
Bolinas K-8	91	94	3	3.3%
St. Anselm K-8	258	262	4	1.6%

Enrollment Change 2017 to 2022

Source: Ed Data for public schools

School Name	2017	2022	Change	Percent Change
Mark Day K-8	382	390	8	2.1%
Miller Creek Middle	632	645	13	2.1%
Olive Elementary	312	327	15	4.8%
Bahia Vista	561	580	19	3.4%
Marin Horizon K-8	248	298	50	20.2%
Laurel Dell Elementary	179	240	61	34.1%
MLK - Willow Creek	127	391	264	207.9%
Mount Tam K-8	?	240	N/A	N/A

THIS PAGE LEFT BLANK INTENTIONALLY

Citizens' Oversight Committee Crossing Guard Location Recertification

Transportation Authority of Marin
April 17, 2023



Crossing Guard – 2023 Evaluation & Revised Location List

- 5th list of Crossing Guard locations
- Previous lists 2006, 2010, 2014, 2018
- Evaluation postponed to 2023 due to COVID-19
- Prior lists were recommended by MPWA and the TAM TAC
- This newly evaluated list was recommended by MPWA at its March meeting
- The TAM FPL Executive Committee reviewed the list at its April 10 meeting
- Approval to be considered by the TAM Board in April



Basis of Program

- Included in Measure AA and Measure B
- Measure AA Renewal in 2018 increased local funding for Crossing Guards from 4.2% to 7%
- Created a base of 96 Guards
- Current cash flow analysis indicates that a base of 96 Guards can be maintained



Number of Guards/Locations

- Start with Base of 96
- “Changed condition policy” allows sites to be evaluated upon request (outside of regular evaluation cycle)
- If the changed condition site scores above the existing approved sites, the new site can be added
 - Average of 2 guards added each year due to changed condition
- Current list includes 105 Guards due to changed condition policy
 - 103 Guards are paid for by TAM
 - Larkspur-Corte Madera and Kentfield School Districts pay for one additional guard each
- New evaluation resets the list at 96 guards (97 guards this year due to a tie)



List Methodology

- The Crossing Guard list is based on a scoring system that has been refined over time
 - Crossing Guards are considered a traffic control device
 - The California Manual on Uniform Traffic Control Devices is the basis for the scoring system
 - Current scoring system began in 2010 with modification in 2017 and 2022
 - MPWA has participated in changes to the scoring system
 - Current List created using criteria approved by TAM Board in April 2022



List Methodology – Weighted Scoring Criteria

- Vehicular volume crossing crosswalk
- School-aged pedestrian volume
- Intersection skew angle
- Stopping sight distance at intersection
- Location of intersection (on a horizontal curve with posted warning or speed reduction sign(s))
- Posted speed limit (highest on any approach to pedestrian crossing)
- Pedestrian-Vehicular Accident History
- Other Factors (ingress/egress, lanes, DPW considerations)
- Recent refinements include
 - Using posted speed for roadway rather than limit for school zone
 - Separate category for safety
 - School age lowered to 4-y.o. due to T-K



List Methodology – Process

- Crosswalks are scored individually
- Crosswalks are put into one of 4 categories:
 - Uncontrolled Rural
 - Uncontrolled Urban
 - Stop Sign
 - Signal
- The site score is the highest crosswalk score
- Vehicle volumes are paired with school age pedestrian volumes
- Highest scoring crosswalk used even if not the one that has the highest pedestrian count
- School age pedestrians from opposite crosswalk included if no crossing guard

New Evaluation & Crossing Guard List

Some changes affecting sites, examples include:

- Declining school enrollment
- Completed capital projects such as:
 - Removal of uncontrolled crosswalks
 - Realigned bike lanes
 - Realigned crosswalks
- Signal timing
- No Right on Red
- School closure/consolidation

Funding Level

- Staff recommends keeping the base at 96 but fund 97 locations this round due to a tied scoring condition
- Sufficient carryover exists to fund the guards at a base of 96 for this certification cycle with 2% annual revenue growth projected
- Projections assume similar costs/wages with inflation adjustment, new contract to be bid this year

List – Recommendations and Next Steps

- Communication including:
 - TAM staff will meet with each jurisdiction that is affected
 - TAM to place informational signs at each site that will not have a guard in the coming school year
 - TAM staff to attend SR2S Task Force meetings
- TAM Board to consider approval on April 27
- Staff recommends that the next evaluation be for the 2026-2027 school year
 - Travel patterns may be different than pre-Covid
 - Enrollment reductions may stabilize

Questions?



THIS PAGE LEFT BLANK INTENTIONALLY