

# SCHOOL CROSSING GUARD STUDY

## CITY OF POMONA

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Prepared for:  
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# Table of Contents

- 1.0 INTRODUCTION..... 3
- 2.0 MUTCD GUIDANCE ..... 7
- 3.0 WARRANT ANALYSIS ..... 8
  - 3.1 Traffic Counts ..... 8
  - 3.2 Pedestrian Volumes ..... 8
- 4.0 PRIORITIZATION..... 10
  - 4.1 Alternative 1 – Pedestrian Crossing ..... 10
  - 4.2 Alternative 2 – All Pedestrian Volumes ..... 12
  - 4.3 Alternative 3 – Control Type ..... 14
  
- APPENDICES
  - Appendix A – Existing Traffic Counts
  - Appendix B – Adult Crossing Guard Warrant Spreadsheet

# 1.0 INTRODUCTION

The City of Pomona is working on identifying designated locations for crossing guards within proximity of the elementary and middle schools. In an effort to enhance pedestrian safety near schools, 54 intersections are identified as potential crossing guard locations. Those locations are analyzed and prioritized based on the Crossing Guard warrant from the California Manual on Uniform Traffic Control Devices (MUTCD). This study aims to evaluate whether the guideline is met to have a crossing guard at the identified locations.

Figure 1 illustrates all the schools identified in Pomona Unified School District (PUSD), The 54 intersections were identified based on a ½ mile buffer at each elementary school and middle school in the PUSD. High schools were excluded from this analysis. The location includes:

- 16 Uncontrolled Intersections
- 19 Stop-Controlled Intersections
- 19 Signalized Intersections

Table 1 lists the locations of the 54 potential crossing guard locations. All pedestrian crossings at the 54 intersections are analyzed to determine whether the MUTCD warrant is met and discussed in Section 2. Figure 2 illustrates a map of all potential crossing guard locations listed in Table 1.

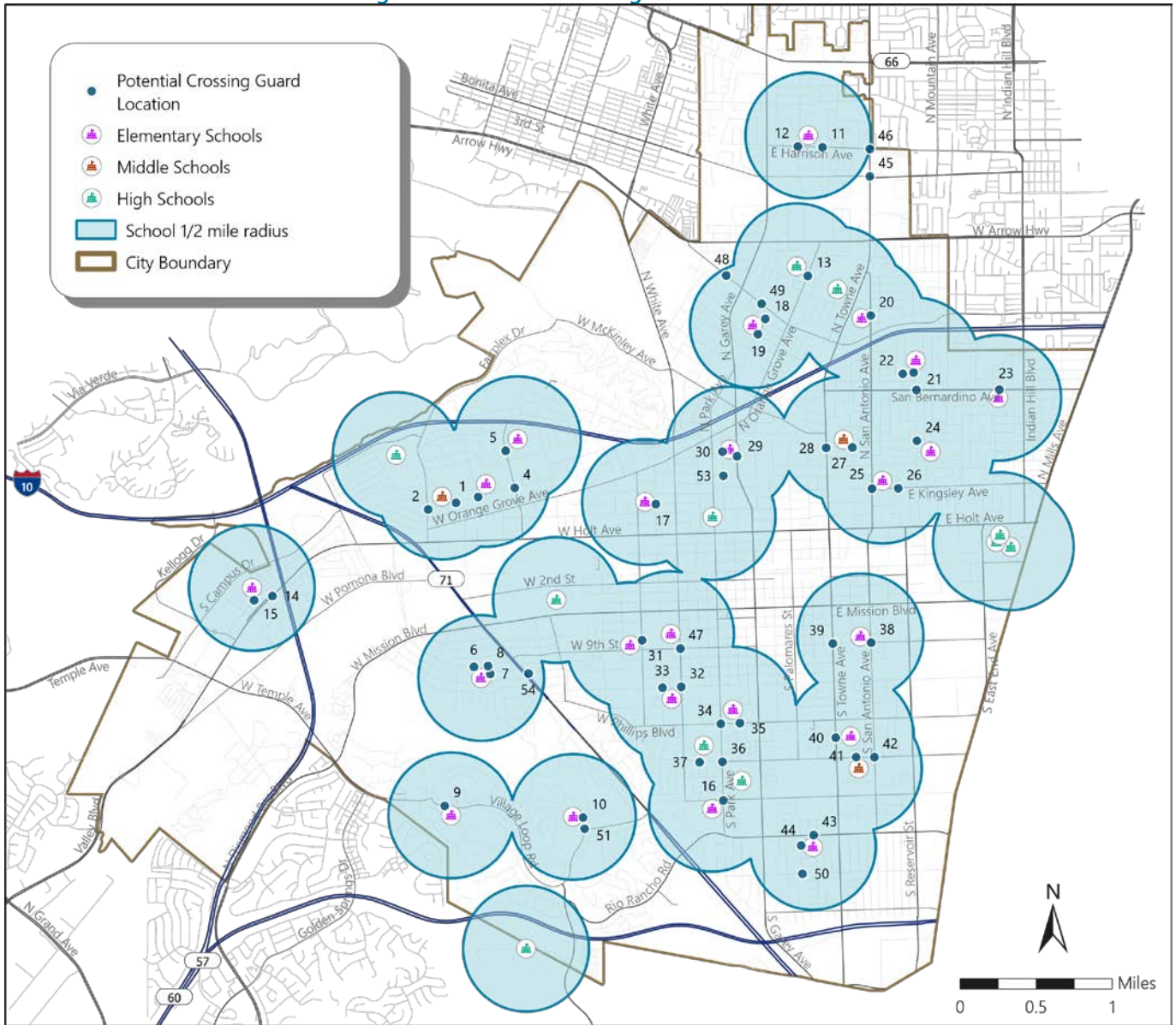
**Table 1: List of Potential Crossing Guard Locations**

ID	Crossing Guard Location	School
1	Arroyo Ave & Saed St	Marshall MS
2	Arroyo Ave & Fairplex Dr	Marshall MS
3	Arroyo Ave & Glen Ave	Arroyo ES
4	Arroyo Ave & Dudley St	Arroyo ES
5	Dudley St & Elwood St	Cortez ES
6	9th St & Goldenrod Pl	Westmont ES
7	Storrs Pl & Grier St	Westmont ES
8	9th St & Storrs Pl	Westmont ES
9	Santa Clara Dr & Trabuco Rd	Ranch Hills ES
10	Village Loop Rd & Viewpoint Cir	Decker ES
11	Harrison Ave & Sumner Ave	Harrison ES
12	Harrison Ave & Vamana St	Harrison ES
13	Orange Grove Ave & Deborah Dr	Palomares Academy of Health Science
14	Omar St & Valley Blvd	Kellogg Polytechnic ES
15	Medina St & Santez Dr	Kellogg Polytechnic ES
16	Lexington Ave & Park Ave	Lexington ES
17	Huntington St & Texas St	Roosevelt ES
18	Cadillac Dr & San Felipe St	San Jose ES
19	Cadillac Dr & San Rafael St	San Jose ES
20	San Antonio Ave	Barfield ES
21	San Bernardino Ave & Washington Ave	Allison ES
22	Russell Pl & Palmgrove Ave	Allison ES
23	San Bernardino Ave	Montvue ES
24	Lincoln Ave & Washington Ave	Kingsley ES

ID	Crossing Guard Location	School
25	San Antonio Ave & Kingsley Ave	San Antonio ES
26	Kingsley Ave & Madeleine Way	San Antonio ES
27	Caswell Ave & Lincoln Ave	Emerson MS
28	Lincoln Ave & Towne Ave	Emerson MS
29	Garey Ave & Jefferson Ave	Lincoln ES
30	Gordon St	Lincoln ES
31	8th St & Hamilton Blvd	Lopez ES
32	Grand Ave & White Ave	Vejar ES
33	Grand Ave & Hungtington St	Vejar ES
34	Park Ave & Phillips Blvd	Madison ES
35	Main St & Phillips Blvd	Madison ES
36	Franklin Ave & Park Ave	Fremont Academy of Engineering and Design
37	Bolivar St & Franklin Ave	Fremont Academy of Engineering and Design
38	9th St & San Antonio Ave	Washington ES
39	9th St & Towne Ave	Washington ES
40	Alcott Ave & Towne Ave	Alcott ES
41	Franklin Ave & Mango Wy	Simons MS
42	Franklin Ave & San Antonio Ave	Simons MS
43	Philadelphia St	Philadelphia ES
44	Cynthia St & Palomares St	Philadelphia ES
45	Towne Ave & Bonita Ave	(Location not within 1/2-mile radius of school)
46	Harrison Ave & Towne Ave	Harrison ES
47	9th St & White Ave	Lopez ES
48	La Verne Ave & Sharon Dr	Yorba ES
49	La Luna Wy & La Verne Ave	San Jose ES
50	Olive St & Palomares St	Philadelphia ES
51	Old Pomona Rd & Village Loop Rd	Decker ES
52	Leslie Ct & Russell Pl	Allison ES
53	Alvarado St & Gordon St	Lincoln ES
54	Butterfield Rd & Smith St	Westmont ES



Figure 2: Potential Crossing Guard Locations



## 2.0 MUTCD GUIDANCE

The Federal Highway Administration has defined the standards by following the guidelines in the local agency to install and maintain traffic control devices on all streets and highways, including the use of school crossing guards. These standards are provided in the California MUTCD. The MUTCD guidelines were used for this warrant study to determine whether an adult crossing guard is warranted at the analyzed locations. Chapter 7D, Section 7D.02 of the MUTCD states the following criteria for adult crossing guards:

*Adult Crossing Guards normally are assigned where official supervision of school pedestrians is desirable while they cross a public highway, and at least 40 school pedestrians for each of any two hours (not necessarily consecutive) daily use the crossing while going to or from school.*

### *Option:*

*Adult crossing guards may be used under the following conditions:*

1. *At uncontrolled crossings where there is no alternate controlled crossing within 600 feet; and*
  - a. *In urban areas where the vehicular traffic volume exceeds 350 during each of any two hours (not necessarily consecutive) in which 40 or more school pedestrians cross daily while going to or from school; or*
  - b. *In rural areas where the vehicular traffic volume exceeds 300 during each of any two hours (not necessarily consecutive) in which 30 or more school pedestrians cross daily while going to or from school.*

*Whenever the critical (85th percentile) approach speed exceeds 40 mph, the guidelines for rural areas should be applied.*

2. *At stop sign-controlled crossing:  
Where the vehicular traffic volumes on undivided highways of four or more lanes exceeds 500 per hour during any period when the school pedestrians are going to or from school.*
3. *At traffic signal-controlled crossings:*
  - a. *Where the number of vehicular turning movements through the school crosswalk exceeds 300 per hour while school pedestrians are going to or from school; or*
  - b. *Where justified through analysis of the operations of the intersection.*

Based on the California MUTCD, it is interpreted that either one of the following conditions is satisfied, and an adult crossing guard may be assigned to the designated school crossing to assist pedestrians crossing the specified hours when going to or from school.

**Condition 1:** If more than 40 school-age pedestrians crossing the analyzed intersection daily for any two hours

**Conditions 2:** If one of the conditions is satisfied under the **Option** guidelines

However, the California MUTCD does not prohibit having an adult crossing guard in any case, nor does it suggest that the conditions must be satisfied.

## 3.0 WARRANT ANALYSIS

### 3.1 Traffic Counts

Per the MUTCD guidance, pedestrian and vehicle volumes were collected at the 54 locations. Based on school bell schedules posted on the PUSD website, counts were collected during student pick-up and drop-off periods. AM and PM school peak hour bicyclist, pedestrian, and vehicular turning movement traffic counts were collected in early January 2022 at the following times to capture the maximum walking students before and after school.

- 7:25 AM – 8:25 AM
- 1:10 PM – 2:10 PM

[Appendix A](#) includes all the turning movement volumes, pedestrians, and bicyclists data.

### 3.2 Pedestrian Volumes

Crossing guards are typically assigned where there is a need to supervise school-age pedestrians when crossing the roadway. The MUTCD requires a crossing to have at least 40 school-age pedestrians, for any two hours, crossing to and from school.

Based on the Ault Crossing Guard guidelines stated in the MUTCD Chapter 7D, Section 7D.02, a minimum of 40 school-age pedestrians per crossing satisfies for a crossing guard at that location. The following listed the locations that satisfy a school crossing guard:

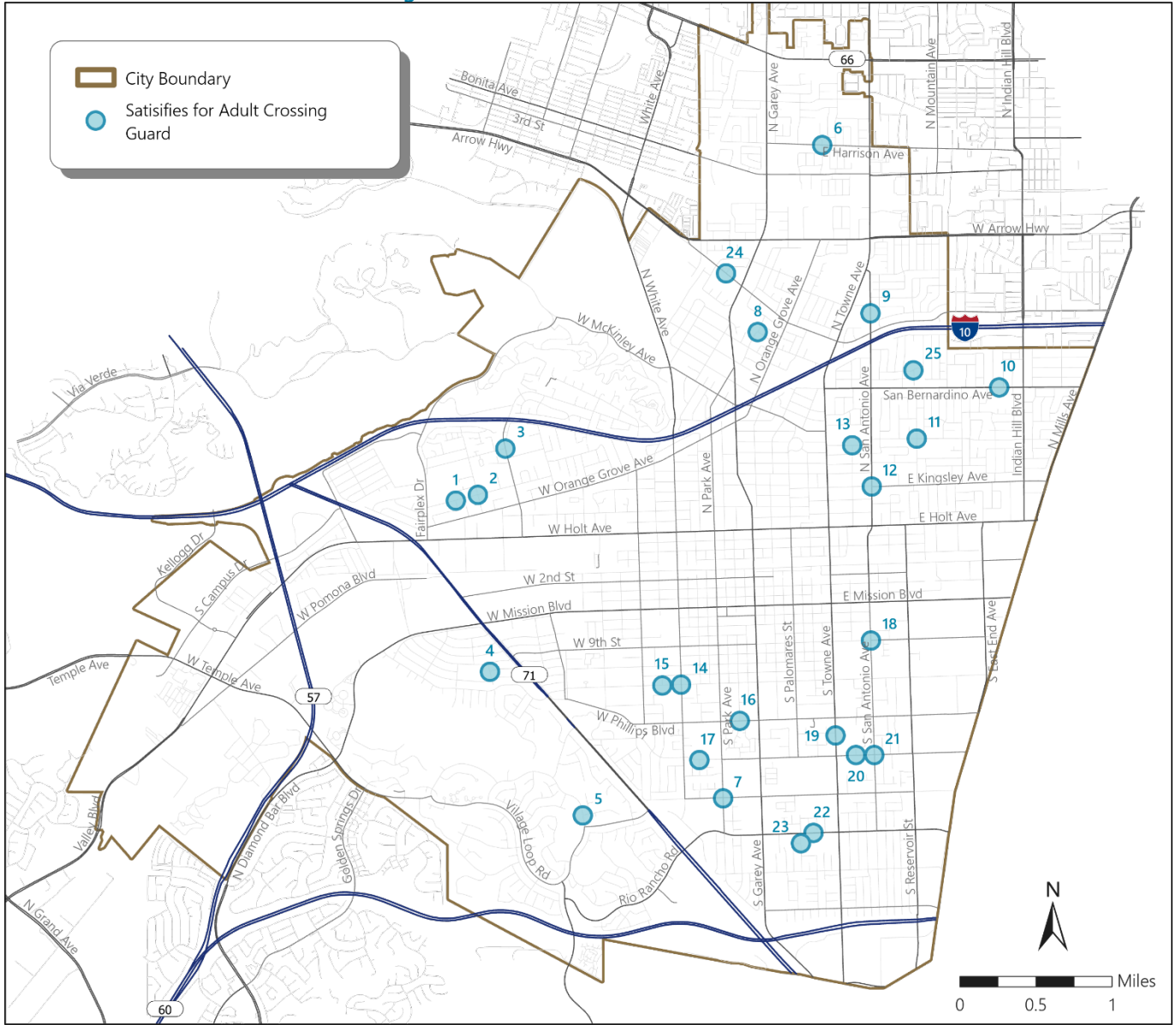
Based on the pedestrian volume analysis, 25 intersections satisfies for an adult crossing guard, which meets the minimum pedestrian volume, 40 or more. [Figure 3](#) illustrates the 25 intersections, and the list is provided below:

- |  |   |
|--|---|
| 1) Saed Street & Arroyo Avenue                       | 14) White Avenue & Grand Avenue                         |
| 2) Glen Avenue & Arroyo Avenue                       | 15) Huntington Street & Grand Avenue                    |
| 3) Dudley Street & Elwood Street                     | 16) Main Street & Phillips Boulevard                    |
| 4) Storrs Place & Grier Street                       | 17) Bolivar Street & Franklin Avenue                    |
| 5) Village Loop & Viewpoint                          | 18) San Antonio Avenue & 9 <sup>th</sup> Street         |
| 6) Sumner Avenue & Harrison Avenue                   | 19) Towne Avenue & Alcott Avenue                        |
| 7) Park Avenue & Lexington Avenue                    | 20) Mango Way & Franklin Avenue                         |
| 8) Cadillac Drive & San Rafael Street                | 21) San Antonio Avenue & Franklin Avenue                |
| 9) San Antonio Avenue & Barfield ES (midblock)       | 22) Philadelphia Street & Philadelphia ES<br>(midblock) |
| 10) San Bernardino Avenue & Montvue ES<br>(midblock) | 23) Palomares Street & Cynthia Street                   |
| 11) Washington Avenue & Lincoln Avenue               | 24) Sharon Drive & La Verne Avenue                      |
| 12) San Antonio Avenue & Kingsley Avenue             | 25) Leslie Court & Russell Place                        |
| 13) Caswell Avenue & Lincoln Avenue                  |   |

The adult crossing guard options for (1) uncontrolled intersections, (2) stop-controlled intersections, and (3) signalized intersections are not considered as part of the analysis. In addition, the option guidelines require analyzing the existing traffic volumes. Those guidelines are optional and, therefore, not included in the analysis as it may eliminate more crossing guard locations.

The analysis spreadsheet for the adult crossing guard warrant is provided in [Appendix B](#).

Figure 3: Location Satisfies the Warrant



## 4.0 PRIORITIZATION

Three alternative scenarios are analyzed for comprehensive analysis in identifying the adult crossing guard locations. **Alternative 1** focuses on pedestrians only with criteria prioritizing the locations. **Alternative 2** focuses on pedestrians at all locations and ranks by total pedestrians. **Alternative 3** focuses on prioritizing the location by control type.

The following section contains three alternatives for analyzing and prioritizing the crossing guard locations.

### 4.1 Alternative 1 – Pedestrian Crossing

**Alternative 1** includes intersections with at least 40 school-age pedestrians crossing for two hours. Of the 54 intersections, 25 had a pedestrian crossing that met the pedestrian volume. A scoring methodology was developed to prioritize the 25 intersections. **Table 4.1** summarizes the scoring criteria for ranking the intersection. These criteria include traffic volumes, school-age pedestrians, and control type (1 is the lowest, and 5 is the highest). Based on the scoring total, the intersections will then be prioritized using the point breakdown shown in **Table 4.2**. This is a two-step process for prioritizing the Alternative 1 Pedestrian Crossing. Based on the ranking, each location is listed from highest to lowest score and is prioritized based on the point breakdown of **Table 4.2**. A summary of the pedestrian prioritization results is shown in **Table 4.3**.

**Table 4.1: Alternative 1 Scoring Criteria**

Scoring Criteria	Alternative 1: Scoring Breakdown	
Traffic Volumes	5	≥1001
	4	751-1000
	3	501-750
	2	251-500
	1	≤250
School Age Pedestrians	5	≥101
	4	76-100
	3	51-75
	2	26-50
	1	≤25
Control Type	3	Uncontrolled Intersection
	2	Stop Controlled Intersection
	1	Signalized

**Table 4.2 Alternative 1 Priority Ranking**

Point Breakdown	Alternative 1: Priority Ranking
11-13	Priority 1
8-10	Priority 2
≥7	Priority 3

Table 4.3: Alternative 1 Pedestrian Prioritization

ID	Intersection	Intersection Control Type	Peak Hour Intersection Volumes	Highest School Age Pedestrians per Crossing	Scoring (max = 13)				Priority Ranking
					Control Type (1-3)	Peak Hour Volumes (1-5)	School Age Pedestrians (1-5)	Final Score	
40	Towne & Alcott	Signalized	1407	135	1	5	5	11	Priority 1
42	San Antonio & Franklin	Stop-controlled	770	135	2	4	5	11	Priority 1
3	Glen & Arroyo	Stop-controlled	532	131	2	3	5	10	Priority 2
32	White & Grand	Signalized	1677	87	1	5	4	10	Priority 2
10	Village Loop & Viewpoint	Stop-controlled	492	159	2	2	5	9	Priority 2
41	Mango & Franklin	Uncontrolled	435	98	3	2	4	9	Priority 2
43	Philadelphia ES & Philadelphia	Signalized	831	83	1	4	4	9	Priority 2
24	Washington & Lincoln	Stop-controlled	534	82	2	3	4	9	Priority 2
25	San Antonio & Kingsley	Signalized	1447	69	1	5	3	9	Priority 2
48	Sharon & La Verne	Uncontrolled	640	65	3	3	3	9	Priority 2
16	Park & Lexington <sup>1</sup>	Signalized	1253	61	1	5	3	9	Priority 2
35	Main & Phillips	Uncontrolled	561	56	3	3	3	9	Priority 2
5	Dudley & Elwood	Signalized	1120	56	1	5	3	9	Priority 2
37	Bolivar & Franklin	Stop-controlled	334	94	2	2	4	8	Priority 2
23	Montvue ES & San Bernardino	Signalized	791	70	1	4	3	8	Priority 2
38	San Antonio & 9th	Stop-controlled	717	68	2	3	3	8	Priority 2
20	San Antonio & Barfield ES	Uncontrolled	711	50	3	3	2	8	Priority 2
7	Storrs & Grier	Uncontrolled	161	69	3	1	3	7	Priority 3
52	Leslie & Russell	Uncontrolled	179	57	3	1	3	7	Priority 3
44	Palomares & Cynthia	Uncontrolled	201	54	3	1	3	7	Priority 3
11	Sumner & Harrison	Stop-controlled	282	51	2	2	3	7	Priority 3
19	Cadillac & San Rafael	Stop-controlled	248	74	2	1	3	6	Priority 3
1	Saed & Arroyo	Uncontrolled	414	49	3	2	2	7	Priority 3
33	Huntington & Grand	Stop-controlled	309	48	2	2	2	6	Priority 3
27	Caswell & Lincoln	Stop-controlled	442	46	2	2	2	6	Priority 3

Note: The ID numbers match with the ID in Appendix B.

## 4.2 Alternative 2 – All Pedestrian Volumes

**Alternative 2** includes all 54 intersections, regardless of the number of pedestrians per crossing. This alternative provides a comprehensive analysis and ranks the total morning and afternoon school-age pedestrian volumes. Priority 1 is the highest-ranking, with at least 121 school-age pedestrians, whereas Priority 4 has less than 40 pedestrians. **Table 4.4** shows the breakdown of the priority ranking. A summary of the results is in **Table 4.5**.

**Table 4.4: Alternative 2 Priority Ranking**

Pedestrians	Alternative 2: Ranking by Pedestrian Volumes
≥121	Priority 1
81-120	Priority 2
41-80	Priority 3
≤40	Priority 4

**Table 4.5 Prioritization by Pedestrian Volume**

ID	Intersection	Intersection Control Type	Total School Age Pedestrians	Priority Ranking
3	Glen & Arroyo	Stop-controlled	326	Priority 1
32	White & Grand	Signalized	229	Priority 1
25	San Antonio & Kingsley	Signalized	181	Priority 1
10	Village Loop & Viewpoint	Stop-controlled	178	Priority 1
24	Washington & Lincoln	Stop-controlled	160	Priority 1
42	San Antonio & Franklin	Stop-controlled	148	Priority 1
40	Towne & Alcott	Signalized	135	Priority 1
38	San Antonio & 9th	Stop-controlled	123	Priority 1
37	Bolivar & Franklin	Stop-controlled	121	Priority 1
16	Park & Lexington <sup>1</sup>	Signalized	117	Priority 2
7	Storrs & Grier	Uncontrolled	109	Priority 2
35	Main & Phillips	Uncontrolled	109	Priority 2
5	Dudley & Elwood	Signalized	102	Priority 2
19	Cadillac & San Rafael	Stop-controlled	101	Priority 2
41	Mango & Franklin	Uncontrolled	98	Priority 2
34	Park & Phillips	Signalized	88	Priority 2
43	Philadelphia ES & Philadelphia	Signalized	83	Priority 2
4	Dudley & Arroyo	Uncontrolled	83	Priority 2
48	Sharon & La Verne	Uncontrolled	75	Priority 3
11	Sumner & Harrison	Stop-controlled	71	Priority 3
27	Caswell & Lincoln	Stop-controlled	71	Priority 3
23	Montvue ES & San Bernardino	Signalized	70	Priority 3
1	Saed & Arroyo	Uncontrolled	66	Priority 3

ID	Intersection	Intersection Control Type	Total School Age Pedestrians	Priority Ranking
44	Palomares & Cynthia	Uncontrolled	65	Priority 3
52	Leslie & Russell	Uncontrolled	57	Priority 3
20	San Antonio & Barfield ES	Uncontrolled	50	Priority 3
33	Huntington & Grand	Stop-controlled	48	Priority 3
36	Park & Franklin	Signalized	45	Priority 3
51	Village Loop & Old Pomona	Stop-controlled	43	Priority 3
12	Vamana & Harrison	Stop-controlled	42	Priority 3
17	Huntington & Texas	Stop-controlled	37	Priority 4
18	Cadillac & San Felipe	Uncontrolled	33	Priority 4
26	Madeleine & Kingsley	Uncontrolled	32	Priority 4
39	Towne & 9th	Signalized	31	Priority 4
50	Palomares & Olive	Stop-controlled	28	Priority 4
22	Palmgrove & Russell	Stop-controlled	27	Priority 4
2	Fairplex & Arroyo	Signalized	26	Priority 4
6	Goldenrod & 9th	Stop-controlled	25	Priority 4
30	Gordon & Lincoln ES	Signalized	21	Priority 4
13	Orange Grove & Deborah	Uncontrolled	21	Priority 4
53	Gordon & Alvarado	Stop-controlled	18	Priority 4
54	Butterfield & Smith	Stop-controlled	17	Priority 4
47	White & 9th	Signalized	17	Priority 4
31	Hamilton & 8th	Uncontrolled	15	Priority 4
28	Towne & Lincoln	Signalized	14	Priority 4
45	Towne & Bonita	Signalized	12	Priority 4
9	Trabuco & Santa Clara <sup>1</sup>	Signalized	9	Priority 4
15	Medina & Santez	Uncontrolled	7	Priority 4
46	Towne & Harrison	Signalized	6	Priority 4
8	Storrs & 9th	Stop-controlled	4	Priority 4
49	La Luna & La Verne	Uncontrolled	4	Priority 4
29	Garey & Jefferson	Signalized	2	Priority 4
21	Washington & San Bernardino	Uncontrolled	1	Priority 4
14	Omar & Valley	Signalized	0	Priority 4

Note: The ID numbers match with the ID in Appendix B.

### 4.3 Alternative 3 – Control Type

**Alternative 3** includes all 54 intersections and the priority ranks by control type. The highest ranking, as shown in **Table 4.5**, are uncontrolled intersections. Uncontrolled intersections are listed as Priority 1 to consider for adult crossing guards. It could be most dangerous as those intersections may not provide enhanced safety needs for pedestrians. Stop-controlled intersections have some form of control and, therefore, are listed as Priority 2. There are stop signs; however, no designated time or sign for pedestrians to cross. Signalized intersections are the lowest priority ranking, Priority 3, because the traffic signal provides pedestrians the right of way with the pedestrian signal designating “walk” time for pedestrians. **Table 4.6** summarizes the prioritization of all locations by control type.

**Table 4.5: Alternative 3 Priority Ranking**

Control Type	<u>Alternative 3:</u> Ranking by Control Type
Uncontrolled Intersection	Priority 1
Stop Controlled Intersection	Priority 2
Signalized Intersection	Priority 3

**Table 4.6: Prioritization by Control Type**

ID	Intersection	Intersection Control Type	Control Type Ranking
41	Mango & Franklin	Uncontrolled	Priority 1
7	Storrs & Grier	Uncontrolled	Priority 1
48	Sharon & La Verne	Uncontrolled	Priority 1
52	Leslie & Russell	Uncontrolled	Priority 1
35	Main & Phillips	Uncontrolled	Priority 1
44	Palomares & Cynthia	Uncontrolled	Priority 1
20	San Antonio & Barfield ES	Uncontrolled	Priority 1
1	Saed & Arroyo	Uncontrolled	Priority 1
26	Madeleine & Kingsley	Uncontrolled	Priority 1
4	Dudley & Arroyo	Uncontrolled	Priority 1
13	Orange Grove & Deborah	Uncontrolled	Priority 1
18	Cadillac & San Felipe	Uncontrolled	Priority 1
31	Hamilton & 8th	Uncontrolled	Priority 1
15	Medina & Santez	Uncontrolled	Priority 1
49	La Luna & La Verne	Uncontrolled	Priority 1
21	Washington & San Bernardino	Uncontrolled	Priority 1
10	Village Loop & Viewpoint	Stop-controlled	Priority 2
42	San Antonio & Franklin	Stop-controlled	Priority 2
3	Glen & Arroyo	Stop-controlled	Priority 2
37	Bolivar & Franklin	Stop-controlled	Priority 2
24	Washington & Lincoln	Stop-controlled	Priority 2
19	Cadillac & San Rafael	Stop-controlled	Priority 2

ID	Intersection	Intersection Control Type	Control Type Ranking
38	San Antonio & 9th	Stop-controlled	Priority 2
11	Sumner & Harrison	Stop-controlled	Priority 2
33	Huntington & Grand	Stop-controlled	Priority 2
27	Caswell & Lincoln	Stop-controlled	Priority 2
17	Huntington & Texas	Stop-controlled	Priority 2
12	Vamana & Harrison	Stop-controlled	Priority 2
50	Palomares & Olive	Stop-controlled	Priority 2
6	Goldenrod & 9th	Stop-controlled	Priority 2
51	Village Loop & Old Pomona	Stop-controlled	Priority 2
22	Palmgrove & Russell	Stop-controlled	Priority 2
53	Gordon & Alvarado	Stop-controlled	Priority 2
54	Butterfield & Smith	Stop-controlled	Priority 2
8	Storrs & 9th	Stop-controlled	Priority 2
40	Towne & Alcott	Signalized	Priority 3
32	White & Grand	Signalized	Priority 3
43	Philadelphia ES & Philadelphia	Signalized	Priority 3
23	Montvue ES & San Bernardino	Signalized	Priority 3
25	San Antonio & Kingsley	Signalized	Priority 3
16	Park & Lexington <sup>1</sup>	Signalized	Priority 3
5	Dudley & Elwood	Signalized	Priority 3
34	Park & Phillips	Signalized	Priority 3
30	Gordon & Lincoln ES	Signalized	Priority 3
39	Towne & 9th	Signalized	Priority 3
36	Park & Franklin	Signalized	Priority 3
2	Fairplex & Arroyo	Signalized	Priority 3
28	Towne & Lincoln	Signalized	Priority 3
47	White & 9th	Signalized	Priority 3
45	Towne & Bonita	Signalized	Priority 3
9	Trabuco & Santa Clara <sup>1</sup>	Signalized	Priority 3
46	Towne & Harrison	Signalized	Priority 3
29	Garey & Jefferson	Signalized	Priority 3
14	Omar & Valley	Signalized	Priority 3

Note: The ID numbers match with the ID in Appendix B.