

# UC Berkeley

## Earlier Faculty Research

### Title

Evaluation of the California Safe Routes to School Construction Program

### Permalink

<https://escholarship.org/uc/item/7fq6w31h>

### Authors

Boarnet, Marlon G.  
Day, Kristen  
Anderson, Craig

### Publication Date

2003

## **Evaluation of the California Safe Routes to School Construction Program**

**University of California, Irvine**

**Principal Investigator: Marlon G. Boarnet**

**Co-Investigators: Kristen Day, Craig Anderson**

**January 31, 2003**

Portions of this report were written by Marlon Boarnet, Craig Anderson, Kristen Day, Tracy McMillan, Mariela Alfonso, Irene Tang, and Layal Nawfal. Research assistance was provided by several UC-Irvine students, including Tracy McMillan, Mariela Alfonso, Irene Tang, Layal Nawfal, Jun Kim, C. Scott Smith, Meghan Sherburn, Luis Escobedo, and Eric Gage. This research was also supported by a contract from the California Department of Transportation. Continuation funding for this project was provided by UCTC Year 15, so this final report for UCTC Year 14 describes the initial part of a longer research project. For that reason, the phrase “interim report” is used in some places in the document, although this report is the final report for the research conducted with UCTC Year 14 funding.

This report describes the progress made from April, 2002 through January, 2003 in the UC-Irvine evaluation of the California Safe Routes to School construction program. The UC-Irvine research is a pre- and post-evaluation of selected California SR2S sites to determine the effectiveness of physical changes to the local environment in (1) improving the perceived and actual safety of the walk and bicycle trip to school, and (2) enhancing the viability of the walking and bicycling environment. The goal of the research is to assess the impact of the SR2S construction program on pedestrian, bicyclist, and motorist behavior tied to safety, perceived safety, and the amount of non-motorized travel to and from school sites participating in the SR2S program.

This report describes the selection of sixteen school sites, the methods use to collect data at those school sites, and an initial description of the data at the first twelve schools included in this research.

### **Site Selection**

The site selection criteria, as outlined in a report from May, 2002, are threefold:

1. School type (elementary/middle/high school): Cycle 1 SR2S projects were overwhelmingly (70 percent) targeted toward elementary schools. Given that, the UCI research team suggested that a focus on elementary schools was appropriate. Recruiting schools proved to be exceptionally time-consuming, and including students of different age ranges, such as middle or high-school children, would have required changes to the research design for schools that serve different ages. For those reasons, the UCI team chose to focus on elementary schools only.
2. School setting: Most of the schools funded in the first two cycles of the SR2S program were in suburban settings. Even urban schools, such as those in South Central Los Angeles, are classified by the U.S. Census as “urban fringe of a large city.” We believe that we have variation across a broad range of settings, including urban settings and more rural settings, but that variation is constrained by the fact that SR2S grantee sites were predominantly in suburban settings.
3. Work type: The SR2S projects included in this study represent all six work types highlighted in the site selection report.

The schools included in this study are listed below:

## SR2S Study Sites

	City/County	School Name	Improvement
1	City of Bell Gardens	Cesar Chavez ES	traffic signal installation at Loveland & Jaboneria
2	City of Chino	Newman ES	signal
3	City of Contra Costa	Sheldon ES	Sidewalk gap closures
4	City of Encinitas	Ocean Knoll ES	sidewalks
5	City of Glendale	Glenoaks Elementary	Install "sequential" pavement lighting systems (in-pavement crosswalk lighting systems) designed to alert approaching vehicular traffic of the presence of children in the crosswalks.
6	City of Gonzales	La Gloria ES	sidewalks and bikeways, traffic signal, signs and pavement markings, traffic calming and traffic diversion
7	City of Malibu	Juan Cabrillo ES	Construct pathway of decomposed granite, bordered by 8"x8" wood curb, with appropriate signage
8	City of Murrieta	Murrieta ES	bike lanes, sidewalk, curb and gutter
9	City of Oakland	Hawthorne Elementary School	Sidewalk bulbout Ped head
10	City of Rancho Cucamonga	Jasper ES	ped-activated flashing warning light system
11	City of San Bernadino	Mt. Vernon ES	traffic signal system
12	City of Santa Clarita	Sulphur Springs Elementary	Construct a pedestrian bridge over Sand Canyon Creek and construct a sidewalk on the south side of Lost Canyon Road
13	City of South Gate	Montara Elementary School	Install new flashing safety lighting for pedestrian crossings, replace deteriorated sidewalk, install new street safety lighting at crosswalks and installation of traffic calming features (speed humps)
14	City of Whittier	Evergreen Elementary School	Construct sidewalk and disabled access ramps around Evergreen Elementary School
15	City of Yucaipa	Valley ES	Sidewalk gap closures
16	San Bernardino County	West Randall ES	Sidewalk gap closures

Notes: Final permission for data collection at Hawthorne Elementary has not yet been granted by school officials. Data collection will begin at Hawthorne when permission is obtained. Data for Juan Cabrillo, Ocean Knoll, and Sulphur Springs have been collected but are not summarized in this report.

The work types associated with these school sites are shown below.

Work Type	Schools
Sidewalk improvements	Sheldon, West Randall (primarily sidewalks) Murrietta, Valley, La Gloria (includes other work types) Juan Cabrillo, Ocean Knoll
Traffic calming & speed reduction	La Gloria, Hawthorne
Pedestrian/bicycle crossing	Mt. Vernon, Jasper, Valley, Glenoaks
Bicycle facilities	La Gloria, Murrietta
On-street	6
Off-street	7
Traffic control devices	Cesar Chavez, Newman
Traffic diversion improvements	La Gloria, Sulphur Springs

Note: Most projects with multiple work types are shown in multiple categories. Data collected at Juan Cabrillo, Ocean Knoll, and Sulphur Springs are not included in the summary of the first twelve data collection sites in this report. Awaiting confirmation from Hawthorne Elementary to begin data collection.

Selecting the sixteen schools for this study involved contacting all schools in Cycles 1 and 2 that could feasibly fit within the observation window for the study, given that all observations should be complete in time to deliver a final report before the end of 2003. The process of selecting schools is shown below.

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
1	City of Bell Gardens	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Cesar Chavez ES 6139 Loveland St. Bell Gardens, CA 90201 323/773-1804 (general line) 323/887-7900, x5696 (VP direct line) Nicholas D'Amico Assistant Principal	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	traffic signal installation at Loveland & Jaboneria
2	City of Chino	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Newman ES 4150 Walnut Avenue Chino, CA 91710 Phone: (909) 627-9758 Fax: (909) 465-0481 Principal: Mark Goldband	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	signal
3	City of Contra Costa	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Sheldon ES 2601 May Rd. Richmond, CA 94803 510/223-0500 Cynthia Swainbank Principal	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Sidewalk gap closures
4	City of Encinitas	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Ocean Knoll ES Leslie Harden, Principal 910 Melba Rd. Encinitas 92024 760/944-4351	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	sidewalks
5	City of Glendale	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Glenoaks Elementary 2015 E. Glenoaks Blvd. Glendale, CA 91206-2911 818/242-3747 AP-Angela Schultz	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Install "sequential" pavement lighting systems (in-pavement crosswalk lighting systems) designed to alert approaching vehicular traffic of the presence of children in the crosswalks.

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
6	City of Gonzales	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	La Gloria ES 220 Elko St. Gonzales, CA 93926 831/675-3663 Chad Carvey Assistant Principal	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	sidewalks and bikeways, traffic signal, signs and pavement markings, traffic calming and traffic diversion
7	City of Malibu	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Juan Cabrillo ES 30237 Morning View Drive Malibu, California 90265 (310) 457-0360 FAX (310) 457-0367 Pat Cairns	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Construct pathway of decomposed granite, bordered by 8"x8" wood curb, with appropriate signage
8	City of Murrieta	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Murrieta ES 24725 Adams Avenue • Murrieta, CA 92562 • (909) 696-1401 Prin: Mike Lorimer Fax 909- 696-1445	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	bike lanes, sidewalk, curb and gutter
9	City of Oakland	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Hawthorne Elementary School	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Sidewalk bulbout Ped head
10	City of Rancho Cucamonga	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Jasper ES 6881 Jasper St. Alta Loma, CA 91701 909/484-5050 Mary Ann Burke Principal	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	ped-activated flashing warning light system

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
11	City of San Bernadino	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Mt. Vernon ES Principal: Kristin Kolling Phone Number: (909) 388-6400 Fax Number: (909) 889-9797 1271 West 10th Street, San Bernardino, CA 92411	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	traffic signal system
12	City of Santa Clarita	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Sulphur Springs Elementary 16628 W. Lost Canyon Road Canyon Country, CA 91351 (661) 252-2725 661-252-5403 Principal: Vicky Myers	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Construct a pedestrian bridge over Sand Canyon Creek and construct a sidewalk on the south side of Lost Canyon Road
13	City of South Gate	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Montara Elementary School Principal Juliana Dawson Address 10018 Montara Ave, South Gate, Ca 90280 Phone 323-567-1451 Fax 323-249-7394	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Installation of new flashing safety lighting for pedestrian crossings, replacement of deteriorated sidewalk, installation of new street safety lighting at crosswalks and installation of traffic calming features (speed humps)
14	City of Whittier	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Evergreen Elementary School 12915 E. Helmer Dr. Whittier, CA 90602 (562)698-9841 (562) 698-6951 Principal: DORKA DURON	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Construct sidewalk and disabled access ramps around Evergreen Elementary School



	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
15	City of Yucaipa	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Valley ES 12333 Eighth St. Yucaipa, CA 92399 909/797-1125 Pam Whitehurst Principal	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Sidewalk gap closures
16	San Bernardino County	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	West Randall ES 15620 Randall Ave. Fontana, CA 92334-5090 909/357-5780 Rebecca Wilson Assistant Principal	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Sidewalk gap closures
17	City of Glendale	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Dunsmore ES	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	N	
18	City of Glendale	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Columbus Elementary 425 W. Milford St. Glendale, CA 91203-1708 818/242-7722 Principal Kelly King AP-Vicki Atikian (contact)	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	N	
19	City of Glendale	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Cerritos Elementary 120 E. Cerritos Ave. Glendale, CA 91205-3107818/244-7207 Principal Janice Hanada	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	N	
20	City of Hawthorne	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Kornblum ES 3620 El Segundo Blvd. Hawthorne, CA 90250 (310) 970-4294 310-	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	N	

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
				970-4298 Principal Victoria Warner				
21	City of Hawthorne	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Cimarron ES (323) 757-1226 11559 Cimarron Ave Hawthorne, CA fax 323-756-1686 Ms. Bradford	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	N	
22	City of Lancaster	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Desert View ES 1555 West Avenue H- 10 Lancaster, CA 93535 (661) 942-9521 (661) 942-4321 fax Christa Chapman, Principal	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	N	
23	City of Lancaster	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Linda Verde ES 44924 5th Street East Lancaster, CA 93535 (661) 942-0431 (661) 942-7621 fax Tara Brown, Principal	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	N	
24	City of South Gate	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	State Street Elementary School Prin Duane Barrett 3211 Santa Ana St, South Gate, Ca 90280 Phone 323-582-7358 Fax 323-582-5981 AP Kwok	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	N	

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
25	Ontario	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Vineyard ES 1500 E. Sixth Street Ontario, CA 91764 Phone (909) 984-2306 Fax (909) 459-2965 Bob Lastoskie, Principal	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	N	
26	City of Glendale	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Muir Elementary	✓ <input type="checkbox"/>	N		
27	City of Glendale	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Fremont Elementary	✓ <input type="checkbox"/>	N		
28	City of Glendale	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Lincoln Elementary	✓ <input type="checkbox"/>	N		
29	City of Hawthorne	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Zela Davis ES 13435 S Yukon Avenue Hawthorne, CA 90250 (310) 679-1771 310-675-4962 Principal Stacey Bobo	✓ <input type="checkbox"/>		N	
30	City of Hawthorne	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Williams ES 13434 S. Yukon Avenue Hawthorne, CA 90250(310) 679-3444 310-676-8550 Principal Ken Young	✓ <input type="checkbox"/>		N	
31	City of Hawthorne	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Yukon ES 17815 Yukon Avenue, Torrance, CA 90504 • (310) 533-4477	✓ <input type="checkbox"/>		N	
32	City of Hawthorne	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Bodger ES	✓ <input type="checkbox"/>		N	
33	City of Hawthorne	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	York ES 11838 S. York Avenue Hawthorne, CA 90250 (310) 675-1189 310-675-4892 Principal	✓ <input type="checkbox"/>		N	

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
				Jennifer Beekman				
34	City of Hawthorne	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Lloyd ES	✓ <input type="checkbox"/>		N	
35	City of Hawthorne	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Billy Mitchell ES	✓ <input type="checkbox"/>		N	
36	City of Lancaster	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Monte Vista ES 1235 West Kettering Lancaster, CA 93534 (661) 942-1477 (661) 949-1328 fax Elaine Darby, Principal	✓ <input type="checkbox"/>		N	
37	City of Lancaster	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Tierra Bonita ES (661) 946-3038 44820 27th St E Lancaster, CA	✓ <input type="checkbox"/>		N	
38	City of Long Beach	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Colin Powell Academy 150 Victoria St., Long Beach, CA 90805 (310) 631-8794 - voice (310) 631-8983 fax Principal: Sparkle Peterson	✓ <input type="checkbox"/>		N	
39	City of Norwalk	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Chavez ES 12110 E. Walnut St. Norwalk, CA 562-868-3565 Ramon Miramontes, Principal x 7043	✓ <input type="checkbox"/>		N	

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
40	City of Norwalk	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Dolland ES 15021 S. Bloomfield Ave. Norwalk, CA 562-921-9934 FAX 404-4302 Bart MacNeil, Principal x7110	✓ <input type="checkbox"/>		N	
41	City of Norwalk	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Edmundson ES 15121 S. Grayland Ave. Norwalk, CA 562-864-9501 FAX 864-9501 Rosa Carreon, Principal x7216	✓ <input type="checkbox"/>		N	
42	City of Norwalk	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Glazier ES 10932 E. Excelsior Dr. Norwalk, CA 562 863-8796 FAX 863-8797 Lindsey Ma, Principal x7056	✓ <input type="checkbox"/>		N	
43	City of Norwalk	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Johnston ES 13421 S. Fairford Ave. Norwalk, CA 562-864-2508 FAX 864-2509 Herman Mendez, Principal x7045	✓ <input type="checkbox"/>		N	
44	City of Norwalk	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Lampton ES 14716 Elmcroft Ave. Norwalk, CA 562-462-9273 FAX 484-0223 Cindy Rayburn, Principal x7061	✓ <input type="checkbox"/>		N	

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
45	City of Norwalk	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Moffitt ES 13323 S. Goller Ave. Norwalk, CA 562-864-3071 FAX 864-3071 Arlene López, Principal x7021	✓ <input type="checkbox"/>		N	
46	City of Norwalk	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Morrison ES 13510 S. Maidstone Ave. Norwalk, CA 562-868-9878 FAX 868-9879 Marsha Guerrero, Principal x7033	✓ <input type="checkbox"/>		N	
47	City of Norwalk	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	New River ES 13432 S. Halcourt Ave. Norwalk, CA 562 868-9848 FAX 868-0726 Elizabeth Parisi, Principal x7041	✓ <input type="checkbox"/>		N	
48	City of Norwalk	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Nuffer ES 14821 S. Jersey Ave. Norwalk, CA 562 868-3788 FAX 868-5167 Sherry Herrera, Principal x7052	✓ <input type="checkbox"/>		N	

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
49	City of Norwalk	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Sanchez ES 11960 E. 162nd St. Norwalk, CA 562-926-2365 FAX 926-2366 Dianne Genisauski, Principal x7100	✓ <input type="checkbox"/>		N	
50	City of Pomona	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Alcott Elementary School 1600 S. Towne Ave. Pomona, CA 91766 (909) 397-4552 prin Dolores Reyes	✓ <input type="checkbox"/>		N	
51	City of Pomona	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Decker Elementary School 20 Village Loop Road Pomona, CA 91766 prin Robert Rodman (909) 397-4581; fax 909-397-4585	✓ <input type="checkbox"/>		N	
52	City of Pomona	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Montvue Elementary School 1440 San Bernardino Ave. Pomona, CA 91767 prin Cassandra George (909) 397-4655	✓ <input type="checkbox"/>		N	
53	City of Pomona	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Philadelphia Elementary School 600 E. Philadelphia St. Pomona, CA 91766 Sylvia Manning (909) 397-4660	✓ <input type="checkbox"/>		N	

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
54	City of Pomona	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Roosevelt Elementary School 701 N. Huntington Blvd. Pomona, CA 91768 Fernando Esparza Telephone Number: (909) 397-4666	✓ <input type="checkbox"/>		N	
55	City of South Gate	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	South Gate Elementary School	✓ <input type="checkbox"/>		N	
56	City of South Gate	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Bryson Elementary School Principal Jose Hernandez Address 4470 Missouri Ave, South Gate, Ca 90280 Phone 323-569-7141 Fax 323-567-5386	✓ <input type="checkbox"/>		N	
57	City of South Gate	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Liberty Elementary School Principal Grace Fuller Address 2728 Liberty Blvd, South Gate, Ca 90280 Phone 323-583-4196 Fax 323-589-5680	✓ <input type="checkbox"/>		N	



	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
58	City of South Gate	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	San Gabriel Elementary School Principal Cartney, Mc Cartney 8628 San Gabriel Ave, South Gate, Ca 90280 Phone 323-567-1488 Fax 323-563-3762	✓ <input type="checkbox"/>		N	
59	City of South Gate	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Stanford Avenue Elementary School Principal Michael Repp 2833 Illinois Ave, South Gate, Ca 90280 Phone 323-569-8117 Fax 323-569-1786	✓ <input type="checkbox"/>		N	
60	City of South Gate	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	San Miguel Elementary School Principal Moses Jorge 9801 San Miguel Ave, South Gate, Ca 90280 Phone 323-567-0511 Fax 323-249-0997	✓ <input type="checkbox"/>		N	
61	Huntington Beach	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Agnes Smith ES 770 Seventeenth Street • Huntington Beach, CA 92648 • (714) 536-1469 Mike Andrzejewski, Principal	✓ <input type="checkbox"/>		N	
62	Ontario	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Arroyo ES 1700 E. 7 th street, Ontario, CA 91762 (909) 985 1012 Susan Allred, Principal	✓ <input type="checkbox"/>		N	
63	Blythe	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Ruth Brown ES	N			

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
64	City of Downey	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Warren HS	N			
65	City of Glendale	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Toll Middle, Wilson Middle & Clark High School	N			
66	City of Hawthorne	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Dana, Cabrillo, Burnett, Hawthorne High, Eucalyptus, Ramona, Washington Intermediate Schools; Hawthorne, Jefferson, Leuzinger, Prairie Vista Middle Schools; and Hawthorne High School	N			
67	City of Lancaster	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Cole, Park View and Piute Middle Schools	N			
68	City of Monrovia	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Canyon Early Learning Center Preschool (626) 471-2001	N			
69	City of South Gate	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Tweedy Boulevard Elementary School Principal Cora Watkins 9515 Pinehurst Ave, South Gate, Ca 90280 Phone 323-569-7111 Fax 323-569-7315	N			

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
70	Grand Terrace	✓ <input type="checkbox"/>	✓ <input type="checkbox"/>	Terrace Hills MS	N			
71	City of San Buenaventura	✓ <input type="checkbox"/>	Spring	Balboa Middle School	Updated; send fax later on	Spring 03		(Priority 1) Construct sidewalk and Class II bike lane on north side of Telegraph Road and combined pedestrian/bicycle Class I path on south side of Telegraph Road
72	City of Thousand Oaks	✓ <input type="checkbox"/>	Spring	Banyan Elementary School	Updated; call back in Oct/Nov to get more definitive timeline	Approx. April-May03		(Priority 4) "Banyan Elementary School Lighted Cross Walk Pedestrian System" - Provide a lighted student pedestrian crosswalk with automatic actuation, advanced flashing yellow beacons and flashing yellow strobe light embedded in the roadway pavement; and "Banyan Elementary School Traffic Calming Improvements" - Provide residential traffic circles along Knollwood Drive
73	City of Thousand Oaks	✓ <input type="checkbox"/>	Spring	Colina Intermediate School	Updated; call back in Oct/Nov to get more definitive timeline	Approx. April-May03		(Priority 2) "Colina Intermediate School Lighted Cross Walk Pedestrian System" - Provide a lighted student pedestrian crosswalk with automatic actuation, advanced flashing yellow beacons and flashing yellow strobe light embedded in the roadway pavement

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
74	La Mesa	✓ <input type="checkbox"/>	Spring	Maryland Ave ES Dr. Jack Reed, Principal 5400 Maryland Ave. La Mesa, CA 91942 (619)668-5744 Fax: (619) 668-5746	send fax later on	Winter/Spring unless school asks them to wait till summer	?? School district has both traditional and YR	curb, gutter, sidewalks
75	Riverside County	✓ <input type="checkbox"/>	Spring	Lyndon B. Johnson ES 44-640 Clinton Street Indio, CA 92201 Phone 760-863-3680 Fax 760-863-3684 Principal: Derrick Lawson	Sent fax 7/18; no answer at school 7/22; send fax again later on	Mar-03	traditional starts 9/4	traffic signal system
76	San Diego	✓ <input type="checkbox"/>	Spring	John Adams ES Judy Brings, Principal 4672 35th Street, San Diego, CA 92116 Telephone: (619) 284-1158, Fax: (619) 563-7532	send fax later on	Spring 03	Traditional	curb extensions, crosswalks, signs, striping
77	San Diego	✓ <input type="checkbox"/>	Spring	Euclid ES Mitzi Merino, Principal 4166 Euclid Avenue, San Diego, CA 92105 Telephone: (619) 282-2192, Fax: (619) 283-7351	send fax later on	Spring 03	Single track year-round	curb ext, pavement markings, traffic signal
78	Santee	✓ <input type="checkbox"/>	Spring	Rio Seco ES 9545 Cuyamaca Street, Santee, CA 92071 Principal Cheryl Bowen 619-956-5500 Fax Number 619-956-5514	send fax later on	next spring/summer	traditional starts Sept 4th	sidewalk and curb ramps

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
79	Santee	✓ <input type="checkbox"/>	Spring	Carlton Hill ES 9353 Pike Road, Santee, CA 92071 Principal Margaret Steinrichter 619-258-3400 Fax Number 619-258-3414	send fax later on	next spring/summer	traditional starts Sept 4th	sidewalk and curb ramps
80	Santee	✓ <input type="checkbox"/>	Spring	Christian ES (619) 448-8653 9735 Halberns Blvd Santee, CA	send fax later on	next spring/summer		sidewalk and curb ramps
81	Chino Hills	✓ <input type="checkbox"/>	N					
82	Chino Hills	✓ <input type="checkbox"/>	N					
83	City of Commerce	✓ <input type="checkbox"/>	N					
84	City of Los Angeles	✓ <input type="checkbox"/>	N					
85	City of Los Angeles	✓ <input type="checkbox"/>	N					
86	City of Los Angeles	✓ <input type="checkbox"/>	N					
87	City of Los Angeles	✓ <input type="checkbox"/>	N					
88	City of Lynwood	✓ <input type="checkbox"/>	N					
89	City of Santa Clarita	✓ <input type="checkbox"/>	N					
90	City of Santa Paula	✓ <input type="checkbox"/>	N					
91	Escondido	✓ <input type="checkbox"/>	N					
92	Escondido	✓ <input type="checkbox"/>	N					
93	Escondido	✓ <input type="checkbox"/>	N					

	City/County Contacted	Contact Made	Construction Timeline Compatible	Project Name	Favorable Project /School Type	School Contact Made	School Agreed	Improvement
94	Fontana	✓ <input type="checkbox"/>	N					
95	Fullerton	✓ <input type="checkbox"/>	N					
96	Fullerton	✓ <input type="checkbox"/>	N					
97	Fullerton	✓ <input type="checkbox"/>	N					
98	Imperial Beach/Imperial Beach ES	✓ <input type="checkbox"/>	N					
99	La Vista	✓ <input type="checkbox"/>	N					
100	Moreno Valley	✓ <input type="checkbox"/>	N					
101	Rancho Cucamonga	✓ <input type="checkbox"/>	N					
102	Rancho Cucamonga	✓ <input type="checkbox"/>	N					
103	Rancho Cucamonga	✓ <input type="checkbox"/>	N					
104	San Diego County	✓ <input type="checkbox"/>	N					
105	City of Artesia	NC						
106	City of Calabasas	NC						
107	City of Covina	NC						
108	City of Los Angeles	NC						
109	City of Los Angeles	NC						
110	San Bernadino County	NC						



The sixteen schools selected at the top of the above table are the sites included in this study. The site selection process can be understood by following the table from the bottom to the top. All schools were contacted, and schools fell out of consideration for various reasons, shown by schools that do not have checks in columns move from left to right. Beginning at the bottom of the table, some city public works directors did not return repeated contacts requested construction information, some schools had construction timelines that were either too early or too late for inclusion in this study, some schools were not suitable (either because they were middle schools, high schools, or pre-schools or because the SR2S project covered multiple sites), and some schools either did not return repeated calls or refused to participate. The site selection was a process of whittling down, and the driving factor was often which schools were willing to participate among the schools that fit the research timeline. The sixteen schools included in the study are the only schools among Cycle 1 and 2 grantees that fit the project timeline, agreed to participate, and were not middle schools, high schools, or pre-schools.

Once schools were selected, the research methods included observing traffic, observing urban design, and survey the parents of school children, as described below.

## **Methods**

### **Traffic Observation Methods**

Traffic data were collected at each school location by a team of three or four observers. The observations reported here are pre-construction measurements made at intersections expected to demonstrate the effect of funded SR2S projects. One observer recorded child and adult pedestrians and bicyclists. Groups traveling together were noted, as well as the streets crossed by each individual or group. Pedestrians and bicyclists were counted if they crossed at the intersection, passed adjacent to the intersection, or crossed midblock on a single pre-selected segment. A second observer recorded yielding behavior of drivers, pedestrians, and bicyclists, as required by the California Vehicle Code. Beginning with the tenth school, one observer obtained the number of pedestrians and bicyclists and yielding behaviors.

A third observer counted vehicles entering the intersection from one direction, or if volume was low, from two directions. The number of vehicles turning right and left from each direction was also recorded.

Vehicle traffic speeds were calculated by timing vehicles driving along a street segment. that began and ended at least 50 feet from any intersection, with a total length of at least 200 feet. Distances were measured with a measuring wheel. The fourth observer used a stopwatch to measure the time to travel the measured segment, and recorded the times by hand. As soon as travel time was recorded, another vehicle was identified, timed and recorded. The results of this method are not comparable to conventional spot speed data, but, unlike radar speed measures, this method allowed the measurement of average travel times over the segment even when traffic was heavily congested.

Traffic was observed from 30 minutes before to 15 minutes after the beginning of the school day, and from 15 minutes before to 45 minutes after the end of the school data. All observers recorded two-minute intervals in the raw data. Two ten-minute periods were used to summarize



the data. The baseline 10 minutes the final 10-minute of morning observations and the first 10 minutes of afternoon observations. The busy 10 minutes was the 10-minute period during the observations with the highest volume and lowest speed. These 10-minute mean speed and counts were averaged over the two days of observation, so that fractional counts are possible.

### **Urban Design Observation Methods**

Information was collected on the physical character (or urban design) of the neighborhood surrounding each school in the sample. We defined “neighborhood” as the sum of all blocks contained in part or whole within 1/4 mile of the primary school impacted by SR2S construction project being observed. Blocks included both facing sides of the street. Each neighborhood includes a different total number of blocks, depending on its street pattern.

To observe urban design, data collection teams of 2–3 individuals walked each block within the neighborhood. Observers recorded elements of the urban design hypothesized in the literature to be related to walking activity, including features linked to perceived and actual traffic safety, perceived safety from crime, and walkability. Using a two page urban design survey instrument, observers recorded elements as present or absent. Elements such as sidewalk and bike lane presence, block length, and street width were measured to address traffic safety. Perceived safety was assessed by noting features such as the percent of houses with windows facing the street and absence of vacant lots or abandoned buildings. The presence of street trees, mixed use, public space and traffic calming measures were recorded as hypothesized livability characteristics suggested to affect walking activity. Information on each block was coded on a separate survey sheet.

<b>Defining Urban Design Elements</b>	
<b>Perceived Traffic Safety</b>	
Blocks with a complete sidewalk	Sidewalks present for entire block
Blocks with a complete buffered, sidewalk	Sidewalks separated from street by “buffer” (e.g., strip of lawn or landscaping)
Blocks with bike lanes	Bike lane is “marked” for entire block (e.g., by painted lines)
Blocks with bike lanes separated from the street	bike lane is “off street” or is otherwise physically separated from car traffic for entire block
<b>Perceived Crime Safety</b>	
Blocks with first floor windows visible from the street	More than half of the buildings have first floor windows that are visible from the street
Blocks with street lighting	One or more public street lighting standards present on block
Blocks where abandoned buildings were absent	No obviously abandoned buildings on block (e.g., boarded up buildings)
Blocks where rundown buildings were absent	No buildings and/or lots with serious maintenance problems (i.e., bottom 20% of buildings—broken windows, missing porch steps, etc.)
Blocks where vacant lots were absent	No undeveloped lots that appear uncared for (e.g., accumulated trash)
Blocks where graffiti was absent	No graffiti visible. Any past graffiti painted over.
Blocks where undesirable land uses were absent	No liquor stores, check cashing store, pawn shop, adult movie or book stores, or bars.
<b>Actual Traffic Safety</b>	
Average number of traffic lanes within a block	Number of lanes of car traffic the road accommodates, excluding turning or parking lane.
Average street width of a block (in ft.)	Mean of street width for all blocks.
Average block length of a block (in ft.)	Mean of block length for all blocks.
Average sidewalk width of a block (in ft.)	Mean of sidewalk width for all blocks.
Blocks with traffic circles	One or more intersections have a round-about or traffic circle that diverts traffic in a circular pattern
Blocks with bulbout	One or more intersections have a “bulb-out” or extra extension into the street to shorten travel distance for pedestrians and limit lane width for cars.
Blocks with speed bumps	Street has 1 or more “bumps” or other intentional elevations in the road, that are explicitly intended to slow car traffic.
Blocks with cul-de-sacs	At least one end of street is closed to car traffic

	by a cul-de-sac or other physical closure of street.
Blocks with medians	Street has one or more “islands” in the middle. Islands may or may not be landscaped, and may or may not be intended for pedestrian use
Blocks with paving treatments	One or more crosswalks is marked with a special paving (e.g., change in color or materials).
<b>Walkability</b>	
Blocks with street trees	2 or more trees are planted in a regular pattern in the public portion of the roadway
Blocks with mixed uses	Contains <u>residential</u> as well as one of the following land uses: retail//commercial, office, public, and/or industrial
Blocks with public space	Contains 1 or more open spaces that are not part of a private dwelling (e.g., park).
Blocks with street furniture	Contains benches, chairs, or tables for use by the public.

## Survey Methods

The study sample for the parent survey consisted of all parents with children in the 3<sup>rd</sup>-5<sup>th</sup> grade attending the participating school. Sample sizes varied across the 12 schools based on the number of classrooms (average: 367, min. 222, max. 571). In total, 4,405 surveys were distributed across the twelve school sites.

The parent survey was designed to capture information on:

- 1) parent’s self-report of their child’s travel to/from school and their own walking and bicycling activity in the neighborhood;
- 2) parent’s perception of safety (crime and traffic) for their children while walking/bicycling to school;
- 3) parent’s perception of the degree to which neighborhood design features influence their and their children’s walking/bicycling behavior (e.g., traffic calming treatments, traffic speed);
- 4) parent’s perceptions of driving behavior in the neighborhood around the school (both their own behavior and the behavior of others);
- 5) parent’s attitudes towards walking, bicycling and the trip to school;
- 6) parent’s feelings about the social and/or cultural norms about walking, bicycling and the trip to school; and
- 7) demographic questions about the household.

In addition, the survey asked parents to describe the distance they live from the school and length of residence within neighborhood. Such questions will allow some controls for unique characteristics of the neighborhood, such as resident longevity, which may be correlated with travel behaviors. The survey was in English and Spanish and designed for completion in

approximately 15 minutes. It was distributed in the classroom to be sent home and returned through the student. There was no follow-up to capture non-respondents.

The overall survey response rate was 48%, within the anticipated range. Response rates by school varied from a low of 23% to a high of 72%. The same procedures were used at each school; however, some principals felt more confident about the potential response from their parent population than others did, based on past communications with parents. We feel this probably accounts for the variations in response rates across schools.

### **Preliminary Data**

In the next sections, we give preliminary descriptive from each of the first twelve schools. This provides a baseline from which future analyses of the effectiveness of the SR2S intervention at the school sites will be evaluated.

## Sheldon Elementary School

### Contact Information:

2601 May Rd.  
El Sobrante, CA 94803-3130  
Cynthia Swainbank, Principal  
510-223-0500 (Phone)  
510-243-2093 (Fax)

Grades: K-6

School Population: 531

Average class size: 22.2

### Ethnic Makeup:

Asian: 11.4%

Hispanic: 22.1%

African American: 26.3%

White: 32.3%

City population: (Richmond, 2001): 101,700<sup>1</sup>

U.S. Census Classification: "Urban fringe of a large city"

**Date Observed:** 4/18/02 & 4/19/02

### Description of the Neighborhood:

This neighborhood can be considered fairly traditional suburban. It is an established bedroom community of the San Francisco Bay area, located in an unincorporated area of Contra Costa County. San Pablo Dam Rd is a major arterial, one block from the school, that breaks the neighborhood into two separate areas. One side of the neighborhood is comprised of many small curvilinear roads, many with quite a steep grade. The other side had a less steep grade and longer more rectilinear roads.

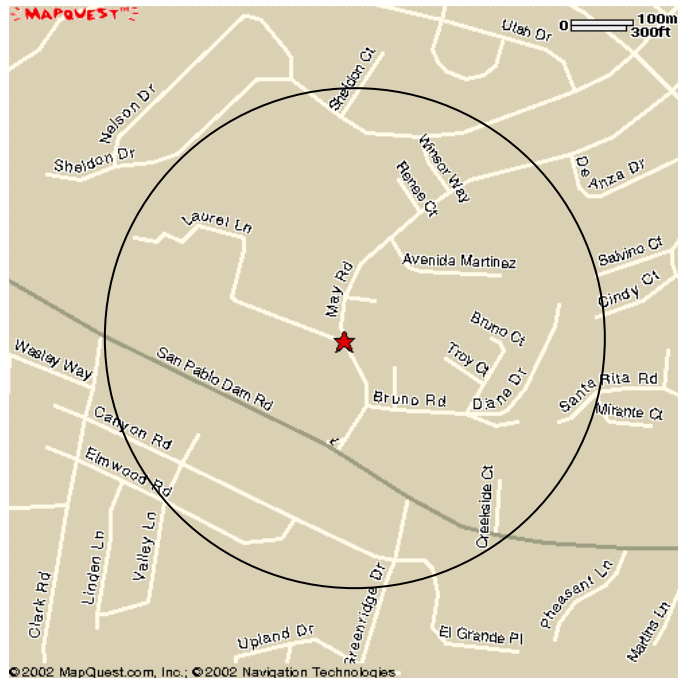
### SR2S Project Type: Sidewalk improvements

The project proposed will take place on San Pablo Dam Road between the intersections of Clark Road and Greenridge Drive. Only 100 of these 500 feet currently have sidewalks and curbs. The frequent gaps in the sidewalk force the pedestrian into the shoulder of the road; if there are parked cars in the shoulder, the pedestrian must walk in the street itself. The project proposed is to fill in the missing segments of sidewalk and curbs along both the north and south sides of San Pablo Dam Road at an approximated cost of \$225,153.

---

<sup>1</sup> Sheldon Elementary is located within an unincorporated area of Contra Costa. Richmond's population is listed due to its close proximity.

**Map:**



Star indicates location of elementary school; Circle represents portion of neighborhood included in the study (approx. 1/4 mile radius from the elementary school)

Urban Design Observations

**School: SHELDON**

<b>Perceived Traffic Safety</b>	
Blocks with a complete sidewalk	53%
Blocks with a complete buffered, sidewalk	10%
Blocks with bike lanes	2%
Blocks with bike lanes separated from the street	0%

<b>Perceived Crime Safety</b>	
Blocks with first floor windows visible from the street	81%
Blocks with street lighting	88%
Blocks where abandoned buildings were absent	98%
Blocks where rundown buildings were absent	75%
Blocks where vacant lots were absent	80%
Blocks where graffiti was absent	95%
Blocks where undesirable land uses were absent	98%

<b>Actual Traffic Safety</b>	
Average number of traffic lanes within a block	2
Average street width of a block (in ft.)	39
Average block length of a block (in ft.)	477
Average sidewalk width of a block (in ft.)	4
Blocks with traffic circles	0%
Blocks with bulbouts	0%
Blocks with speed bumps	3%
Blocks with cul-de-sacs	20%
Blocks with medians	12%
Blocks with paving treatments	0%

<b>Walkability</b>	
Blocks with street trees	7%
Blocks with mixed uses	10%
Blocks with public space	0%
Blocks with street furniture	0%

## Traffic Observations

Sheldon Elementary is located on May Road, a two-lane collector, one block north of San Pablo Dam Road, a 4-lane arterial road without sidewalks, in an unincorporated area of Contra Costa County. Measurements were made at the signalized intersection where May Road ends at San Pablo Dam Road. No other streets proceed north from San Pablo Dam Road in the vicinity of May Road, and all students who walk to Sheldon Elementary from the San Pablo Dam Road or further south pass this intersection.

The vehicle counts and speeds are for the four-lane arterial. Child pedestrian and bicyclist counts were lower and vehicle counts and speeds were higher than at most of the other locations. Pedestrian crossing of San Pablo Dam Road is facilitated by the traffic signal with a pedestrian signal. Changes in vehicle speed and volume on San Pablo Dam Road appear to be related to through commuter traffic rather than to school traffic or the small number of child pedestrians.

Twenty-four of twenty-five vehicles (96%) yielded to pedestrians or bicyclists with the right of way. At this fully-signalized T-intersection, most of the drivers required to yield were turning right on red signals.

Observation period:	Variable	Baseline 10 minutes	Busy 10 minutes	Change
am	Speed (mi/hr)	43	32	-25%
am	Vehicles (10 min count)	338	470	39%
am	Child pedestrians & bicyclists (10 min count)	1.5	6	300%
pm	Speed (mi/hr)	39	36	-8%
pm	Vehicles (10 min count)	273	306	12%
pm	Child pedestrians & bicyclists (10 min count)	2.0	26	1175%



## Survey Results

# classrooms grades 3-5:

# surveys distributed: 315

# surveys returned: 71

Response rate: 23%

	Mean	SD	Median	IQR
Average years of education of parent completing survey	13.06	3.30	13	3
Average age of child who brought survey home	9.5	0.97	9	1

	3rd	4th	5th	other	missing
Grade of child who brought survey home	39.44	23.94	28.17	1.41	7.04

Frequency household income:

< \$15,000	\$15,001-35,000	\$35,001-55,000	\$55,001-75,000	> \$75,001	missing
9.86	19.72	21.13	19.72	14.08	15.49

How long in U.S.:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
0.00	7.04	2.82	36.62	50.70	2.82

How long in neighborhood:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
2.82	43.66	32.39	16.90	1.41	2.82

	YES	NO	missing
Born in United States	46.48	43.66	9.86
% living w/in 1 mile of school	56.34	32.39	11.27
% living w/in 1/2 mile of school	39.44	49.30	11.27
% living w/in 1/4 mile of school	18.31	70.42	11.27

Mode split (%)

	Walk/bike	Private vehicle	Bus/transit	missing
Trip to school	11.27	84.51	0.00	4.23
Trip from school	18.31	73.24	0.00	8.45

Frequency of mode of travel to school by distance from home to school

	<1/4 mile	1/4-1/2 mi.	½- 1mi.	> 1 mi.	Not sure	missing
Walk/bike	25.00	25.00	25.00	0.00	0.00	0.00
Private vehicle	16.67	20.00	16.67	30.00	4.35	6.52
Bus/transit	No bus data reported for Sheldon					
missing	0.00	0.00	20.00	60.00	20.00	0.00

Frequency of mode of travel to school by time from home to school

	< 5 min.	5-10 min.	11-20 min.	> 20 min.	Not sure	missing
Walk/bike	0.00	50.00	50.00	0.00	0.00	0.00
Private vehicle	33.33	48.33	15.00	3.33	0.00	
Bus/transit	No bus data reported for Sheldon					
missing	0.00	66.67	0.00	0.00	0.00	33.33

Who brings the child to school?

	% of total
Mother	47.89
Father	18.31
Other adult from household	5.63
Other adult not from household	8.45
Other	0.00
None; child travels without adults	8.45
missing	11.27

Where does adult go after dropping off child at school?

	% of total
Returns home	42.25
Work/school (not at home)	33.80
Shopping or other errands	8.45
No adult; child traveled alone	8.45
missing	7.04

Frequency of how often parent walks in neighborhood by mode of travel to school

	At least 1/day	Few times/week	1/week	Few times/month	Hardly ever	missing
Walk/bike	12.50	12.50	12.50	12.50	12.50	0.00
Private vehicle	8.33	20.00	3.33	26.67	35.00	6.67
Bus/transit	No bus data for Sheldon					
missing	0.00	0.00	0.00	100.00	0.00	0.00

If the child were to walk/bike to and from school (or already walks/bikes to and from school), would they have to do any of the following on their way to/from school? (reporting % of total)

	YES	NO	missing
<b>a.</b> Cross a road with more than 4 lanes of traffic?	35.21	46.48	18.31
<b>b.</b> Cross a road at an intersection that doesn't have a street signal or a stop sign to stop traffic?	25.35	59.15	15.49
<b>c.</b> Cross a road at an intersection without a painted crosswalk?	28.17	53.52	18.31
<b>d.</b> Walk in the road or on the edge of the road because there is no sidewalk?	67.61	18.31	14.08
<b>e.</b> Walk or bicycle along a road or sidewalk that has traffic going more than 30 miles an hour?	66.20	18.31	15.49

## **Cesar Chavez Elementary School**

### **Contact Information:**

6139 Loveland St.  
Bell Gardens, CA 90201  
Dr. Nicholas D'Amico, Vice Principal  
323-773-1804 (general line)  
323-887-7900, x5696 (VP direct line)  
323-826-5164 (fax)

Grades K-4

School Population: 1,185

Average class size: 20.7

### **Ethnic Makeup:**

Asian: 0.2%

Hispanic: 99%

African American: 0.2%

White: 0.4%

City population (Bell Gardens): 45,650

U.S. Census classification: "Urban fringe of a large city"

**Date Observed:** 4/24/02 and 5/1/02

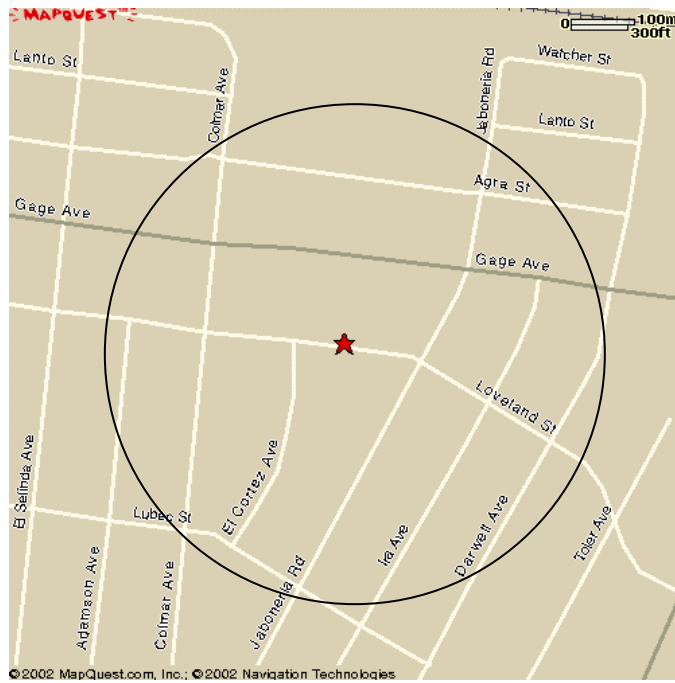
### **Description of the Neighborhood:**

This neighborhood is urban in character, located within the south central area of Los Angeles. It is built on a traditional grid system and land uses are mixed. While residential density is greater than "suburban" neighborhoods, this neighborhood is still predominantly made up of single-family detached homes. School is located near major arterial, Gage Ave.

### **SR2S Project Type: Traffic Control**

The project proposed will take place on the corner of Loveland Avenue and Jaboneria Road, at which there is currently a four-way stop. Because of school traffic, Cesar Chavez Elementary wishes to upgrade the intersection by installing a traffic light. The cost of this plus another traffic light proposed for a second elementary school in the city is \$285,000.

## Map:



Star indicates location of elementary school; Circle represents portion of neighborhood included in the study (approx. 1/4 mile radius from the elementary school)

Urban Design Observations

**School: CESAR CHAVEZ**

<b>Perceived Traffic Safety</b>	
Blocks with a complete sidewalk	94%
Blocks with a complete buffered, sidewalk	77%
Blocks with bike lanes	0%
Blocks with bike lanes separated from the street	0%

<b>Perceived Crime Safety</b>	
Blocks with first floor windows visible from the street	94%
Blocks with street lighting	100%
Blocks where (for all, below) abandoned buildings were absent	100%
Blocks where rundown buildings were absent	89%
Blocks where vacant lots were absent	94%
Blocks where graffiti was absent	46%
Blocks where undesirable land uses were absent	86%

<b>Actual Traffic Safety</b>	
Average number of traffic lanes within a block (and for all)	2
Average street width of a block (in ft.)	48
Average block length of a block (in ft.)	684
Average sidewalk width of a block (in ft.)	4
Blocks with traffic circles	0%
Blocks with bulbouts	0%
Blocks with speed bumps	0%
Blocks with cul-de-sacs	0%
Blocks with medians	0%
Blocks with paving treatments	2%

<b>Walkability</b>	
Blocks with street trees	96%
Blocks with mixed uses	65%
Blocks with public space	2%
Blocks with street furniture	8%

## Traffic Observations

Cesar Chavez Elementary is located on Loveland Street at the corner of Jaboneria Road in the city of Bell Gardens. Measurements were made at the intersection of these two two-lane collectors, which is controlled by a four-way stop sign. During most of the observation period, a crossing guard also controlled traffic. In addition to pedestrians traveling to and from the elementary school, many pedestrians travel to and from a high school three blocks north of this intersection.

Vehicle counts and speeds were lower than at most of the other locations. Pedestrian volumes were so high that it was difficult to assure that all pedestrians were counted. Although the decrease in average speed was modest, traffic was congested immediately after school, and some parents stopped in traffic lanes to pick up students.

Five hundred eighty-four of 612 vehicles (95%) yielded to pedestrians or bicyclists with the right of way.

Observation period:	Variable	Baseline 10 minutes	Busy 10 minutes	Change
am	Speed (mi/hr)	21	17	-19%
am	Vehicles (10 min count)	128	138	17%
am	Child pedestrians & bicyclists (10 min count)	33	172	429%
pm	Speed (mi/hr)	24	22	-11
pm	Vehicles (10 min count)	20	173	765%
pm	Child pedestrians & bicyclists (10 min count)	35	239	593%

## Survey Results

# classrooms grades 3-4: 19

# surveys distributed: 448

Response rate: 56%

# surveys returned: 251

	Mean	SD	Median	IQR
Average years of education of parent completing survey	9.05	3.41	9	6
Average age of child who brought survey home	8.95	0.74	9	1

	3rd	4th	5th	other	missing
Grade of child who brought survey home	52.19	42.23	0.40	0.40	4.78

(school is K-4)

Frequency household income:

< \$15,000	\$15,001-35,000	\$35,001-55,000	\$55,001-75,000	> \$75,001	missing
31.87	38.65	14.74	2.39	1.50	10.76

How long in U.S.:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
1.59	6.77	7.97	65.74	14.74	3.19

How long in neighborhood:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
9.16	37.45	23.11	20.72	4.78	4.78

	YES	NO	missing
Born in United States	14.34	82.07	3.59
% living w/in 1 mile of school	55.78	20.32	23.90
% living w/in 1/2 mile of school	45.42	30.68	23.90
% living w/in 1/4 mile of school	26.29	49.80	23.90

Mode split

	Walk/bike	Private vehicle	Bus/transit	missing
Trip to school	51.00	44.22	0.4	4.38
Trip from school	55.78	33.07	1.59	9.56



% traveling by given mode by distance from home to school

	<1/4 mile	1/4-1/2 mi.	1/2- 1mi.	> 1 mi.	Not sure	missing
Walk/bike	27.34	17.97	10.16	3.13	14.84	26.56
Private vehicle	24.32	22.52	9.91	8.11	14.41	20.72
Bus/transit	100.00	0.00	0.00	0.00	0.00	0.00
missing	27.27	0.00	18.18	9.09	18.18	27.27

Frequency of mode of travel to school by time from home to school

	< 5 min.	5-10 min.	11-20 min.	> 20 min.	Not sure	missing
Walk/bike	17.97	53.13	24.22	3.91	0.78	0.00
Private vehicle	36.94	52.25	9.01	0.90	0.90	0.00
Bus/transit	100.00	0.00	0.00	0.00	0.00	0.00
missing	27.27	27.27	9.09	9.09	0.00	27.27

Who brings the child to school?

	% of total
Mother	59.76
Father	6.77
Other adult from household	11.16
Other adult not from household	2.79
Other	1.20
None; child travels without adults	7.17
missing	11.16

Where does adult go after dropping off child at school?

	% of total
Returns home	66.53
Work/school (not at home)	10.76
Shopping or other errands	8.76
No adult; child traveled alone	6.77
missing	7.17

Frequency of how often parent walks in neighborhood by mode of travel to school

	At least 1/day	Few times/week	1/week	Few times/month	Hardly ever	missing
Walk/bike	50.00	23.44	4.69	4.69	7.81	9.38
Private vehicle	12.61	16.22	7.21	12.61	34.23	17.12
Bus/transit	0.00	0.00	0.00	100.00	0.00	0.00
missing	36.36	27.27	0.00	9.09	18.18	9.09

*If the child were to walk/bike to and from school (or already walks/bikes to and from school), would they have to do any of the following on their way to/from school? (reporting % of total)*

	YES	NO	missing
<b>a.</b> Cross a road with more than 4 lanes of traffic?	15.94	70.52	13.55
<b>b.</b> Cross a road at an intersection that doesn't have a street signal or a stop sign to stop traffic?	14.74	68.92	16.33
<b>c.</b> Cross a road at an intersection without a painted crosswalk?	13.94	72.91	13.15
<b>d.</b> Walk in the road or on the edge of the road because there is no sidewalk?	3.59	79.28	17.13
<b>e.</b> Walk or bicycle along a road or sidewalk that has traffic going more than 30 miles an hour?	13.15	69.72	17.13

## Jasper Elementary School

### Contact Information:

6881 Jasper St.  
Alta Loma, CA 91701  
Mary Ann Burke, Principal  
909-484-5050 (phone)  
909-484-5055 (fax)

Grades: K-6  
School Population: 614  
Average class size: 24

### Ethnic Makeup:

Asian: 1.8%  
Hispanic: 22.6%  
African American: 7.3%  
White: 62.1%  
City population (Alta Loma): 51, 341  
U.S. Census Classification: "Urban fringe of a large city"

**Date Observed:** Week of May 13<sup>th</sup>, 2002

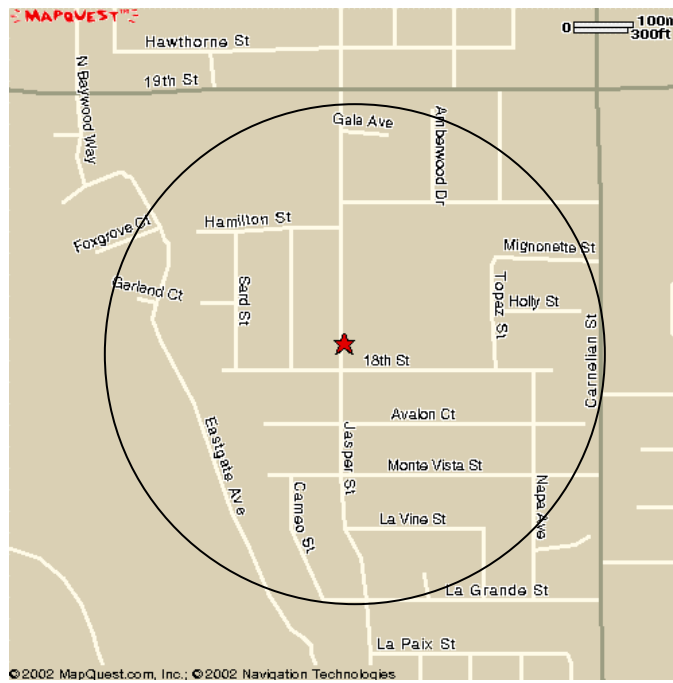
### Description of the Neighborhood:

This neighborhood is located in the City of Rancho Cucamonga. It is a suburban, bedroom community of Los Angeles County, Orange County and San Bernardino County. It consists of solely residential land uses. The neighborhood follows a primarily suburban land use pattern with longer blocks and curvilinear streets, and has only 3-4 entry/exit points from the major arterials bordering the neighborhood. A major 4-lane arterial with traffic speeds posted at 50mph lies within ¼ mile radius of school.

### SR2S Project Type: Pedestrian Crossing Improvements

The proposed project will take place at the intersection of 19<sup>th</sup> Street and Jasper Street. There are currently pedestrian crossing warning signs augmented by a flashing beacon at this intersection. Although 19<sup>th</sup> Street is a major arterial, Jasper is a quiet, residential street, and does not generate enough traffic to warrant a traffic light or a four-way stop. Instead, the project proposed is to install an in-pavement crosswalk lighting system, in which a pedestrian activates a set of flashing lights embedded in the roadway around the pedestrian crossing, alerting drivers of their presence. The installation is proposed at a cost of \$30,000.

**Map:**



Star indicates location of elementary school; Circle represents portion of neighborhood included in the study (approx. ¼ mile radius from the elementary school)

Urban Design Observations

**School: JASPER**

<b>Perceived Traffic Safety</b>	
Blocks with a complete sidewalk	57%
Blocks with a complete buffered, sidewalk	57%
Blocks with bike lanes	0%
Blocks with bike lanes separated from the street	0%

<b>Perceived Crime Safety</b>	
Blocks with first floor windows visible from the street	91%
Blocks with street lighting	100%
Blocks where abandoned buildings were absent	93%
Blocks where rundown buildings were absent	93%
Blocks where vacant lots were absent	93%
Blocks where graffiti was absent	93%
Blocks where undesirable land uses were absent	94%

<b>Actual Traffic Safety</b>	
Average number of traffic lanes within a block	2
Average street width of a block (in ft.)	38
Average block length of a block (in ft.)	636
Average sidewalk width of a block (in ft.)	5
Blocks with traffic circles	2%
Blocks with bulbouts	3%
Blocks with speed bumps	2%
Blocks with cul-de-sacs	32%
Blocks with medians	2%
Blocks with paving treatments	2%

<b>Walkability</b>	
Blocks with street trees	59%
Blocks with mixed uses	6%
Blocks with public space	0%
Blocks with street furniture	0%

## Traffic Observations

Jasper Elementary is located on Jasper Avenue two and one-half blocks south of 19th street in Rancho Cucamonga. Measurements were made at the intersection of Jasper Avenue and 19th Street. Jasper Avenue is a two-lane collector, and 19th Street is a four-lane arterial. At this intersection, Jasper has a two-way stop sign. There is no permanent traffic control on 19th Street, but before and after school a crossing guard assists pedestrians crossing in the marked crosswalk on the east side of the intersection.

The vehicle counts and speeds are for the four-lane arterial. In the morning, vehicle counts were substantially higher during the busy 10 minutes. Variations in vehicle volume seem to be primarily related to commuting patterns. Speeds decreased during the busiest 10 minutes of the morning observation period, but changed very little during the afternoon. Pedestrian counts were quite low both before and after school. Twenty-seven of 28 vehicles (96%) yielded to pedestrians or bicyclists with the right of way.

At the time of pre-construction data collection, 19th Street was designated as State Route 30. The extension of Interstate 210, which passes approximately 800 feet north of the intersection of 19th Street and Jasper Avenue, was opened in November 2002. It is intended to decrease traffic on 19th Street.

Observation period:	Variable	Baseline 10 minutes	Busy 10 minutes	Change
am	Speed (mi/hr)	42	32	-25%
am	Vehicles (10 min count)	180	310	72%
am	Child pedestrians & bicyclists (10 min count)	0.0	9.0	
pm	Speed (mi/hr)	41	40	-3%
pm	Vehicles (10 min count)	199	219	10%
pm	Child pedestrians & bicyclists (10 min count)	1.0	16	1450%

## Survey Results

# classrooms grades 3-5: 10

# surveys distributed: 222

Response rate: 64%

# surveys returned: 143

	Mean	SD	Median	IQR
Average years of education of parent completing survey	14.15	2.33	14	2
Average age of child who brought survey home	9.43	1.06	10	1

	3rd	4th	5th	other	missing
Grade of child who brought survey home	32.17	30.77	31.47	4.20	1.40

	Male	Female	missing
Sex of child who brought survey home	42.66	54.55	2.80

Frequency household income:

< \$15,000	\$15,001-35,000	\$35,001-55,000	\$55,001-75,000	> \$75,001	missing
3.50	10.49	9.79	24.48	39.16	12.59

How long in U.S.:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
0.00	0.00	0.00	12.59	83.92	3.50

How long in neighborhood:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
6.29	40.56	25.17	21.68	2.80	3.50

	YES	NO	missing
Born in United States	83.22	9.79	6.99
% living w/in 1 mile of school	58.04	26.57	15.38
% living w/in ½ mile of school	35.66	48.95	15.38
% living w/in ¼ mile of school	20.28	64.34	15.38

Mode split

	Walk/bike	Private vehicle	Bus/transit	missing
Trip to school	18.18	60.14	18.88	2.8
Trip from school	20.28	47.55	25.87	6.29

	<1/4 mile	1/4-1/2 mi.	½- 1mi.	> 1 mi.	Not sure	missing
Walk/bike	50.00	30.77	11.54	0.00	0.00	7.69
Private vehicle	16.28	13.95	23.26	30.23	2.33	13.95
Bus/transit	7.41	7.41	33.33	22.22	7.41	22.22
missing	0.00	0.00	0.00	25.00	25.00	50.00

Frequency of mode of travel to school by time from home to school

	< 5 min.	5-10 min.	11-20 min.	> 20 min.	Not sure	missing
Walk/bike	30.77	46.15	23.08	0.00	0.00	0.00
Private vehicle	48.84	39.53	10.47	0.00	0.00	1.16
Bus/transit	18.52	40.74	18.52	18.52	3.70	0.00
missing	75.00	25.00	0.00	0.00	0.00	0.00

Who brings the child to school?

	% of total
Mother	50.35
Father	7.69
Other adult from household	4.90
Other adult not from household	8.39
Other	0.70
None; child travels without adults	20.28
missing	7.69

Where does adult go after dropping off child at school?

	% of total
Returns home	39.16
Work/school (not at home)	22.38
Shopping or other errands	9.09
No adult; child traveled alone	20.28
missing	9.09

Frequency of how often parent walks in neighborhood by mode of travel to school

	At least 1/day	Few times/week	1/week	Few times/month	Hardly ever	missing
Walk/bike	26.92	19.23	7.69	15.38	26.92	3.85
Private vehicle	16.28	27.91	6.98	24.42	18.60	5.81
Bus/transit	7.41	37.04	7.41	25.93	18.52	3.70
missing	0.00	25.00	0.00	25.00	25.00	25.00



If the child were to walk/bike to and from school (or already walks/bikes to and from school), would they have to do any of the following on their way to/from school? (reporting % of total)

	YES	NO	missing
<b>a.</b> Cross a road with more than 4 lanes of traffic?	34.97	60.14	4.90
<b>b.</b> Cross a road at an intersection that doesn't have a street signal or a stop sign to stop traffic?	51.05	44.06	4.90
<b>c.</b> Cross a road at an intersection without a painted crosswalk?	28.67	65.03	6.29
<b>d.</b> Walk in the road or on the edge of the road because there is no sidewalk?	30.77	62.94	6.29
<b>e.</b> Walk or bicycle along a road or sidewalk that has traffic going more than 30 miles an hour?	59.44	36.36	4.20

## West Randall Elementary School

### Contact Information:

15620 Randall Ave.  
Fontana, CA 92334-5090  
Rebecca Wilson, Assistant Principal (primary)  
Vicki Lamborn, Principal  
909-357-5780 (Phone)  
909-357-5789 (Fax)

Grades: K-5

School Population: 1,109

Average class size: 21.7

### Ethnic Makeup:

Asian: 0.1%

Hispanic: 92.1%

African American: 1.7%

White: 5.1%

City population (Fontana): 135,100

U.S. Census Classification: "Urban fringe of a large city"

**Date Observed:** Week of May 20<sup>th</sup>, 2002

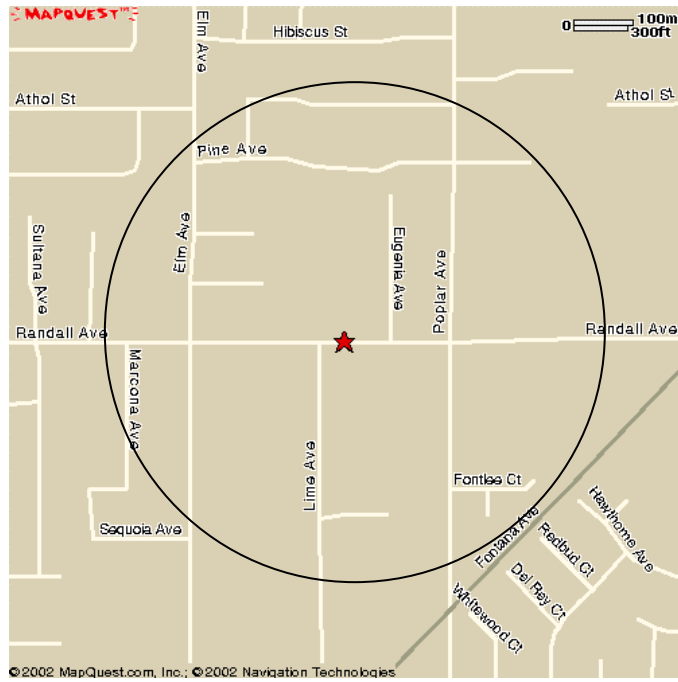
### **Description of the Neighborhood:**

This neighborhood is located within an unincorporated area of San Bernardino County. The neighborhood follows a typical suburban pattern. It is an older neighborhood, composed of low-density residential land-uses. There was no commercial development present.

### **SR2S Project Type: Sidewalk Improvements**

The project proposed will take place on Randall Avenue between Marcona Avenue and Poplar Avenue. Currently, much of the shoulder of Randall Avenue around the elementary school is dirt, prone to dust and mud. The proposed project will install 2234 ft. of sidewalk, curbs and gutters to replace this dirt, separating pedestrian traffic from automobiles, and thereby increasing pedestrian safety. The proposed project cost is \$97,975.

**Map:**



Star indicates location of elementary school; Circle represents portion of neighborhood included in the study (approx. ¼ mile radius from the elementary school)

## Urban Design Observations

### School: WEST RANDALL

Perceived Traffic Safety	
Blocks with a complete sidewalk	36%
Blocks with a complete buffered, sidewalk	34%
Blocks with bike lanes	0%
Blocks with bike lanes separated from the street	0%

Perceived Crime Safety	
Blocks with first floor windows visible from the street	96%
Blocks with street lighting	94%
Blocks where abandoned buildings were absent	91%
Blocks where rundown buildings were absent	91%
Blocks where vacant lots were absent	71%
Blocks where graffiti was absent	35%
Blocks where undesirable land uses were absent	87%

Actual Traffic Safety	
Average number of traffic lanes within a block	2
Average street width of a block (in ft.)	39
Average block length of a block (in ft.)	528
Average sidewalk width of a block (in ft.)	5
Blocks with traffic circles	2%
Blocks with bulbouts	2%
Blocks with speed bumps	2%
Blocks with cul-de-sacs	25%
Blocks with medians	2%
Blocks with paving treatments	2%

Walkability	
Blocks with street trees	22%
Blocks with mixed uses	13%
Blocks with public space	2%
Blocks with street furniture	0%

## Traffic Observations

West Randall Elementary is located on Randall Avenue in an unincorporated portion of San Bernardino County. Measurements were made at the intersection where Lime Avenue ends at Randall Avenue, opposite the school. Both of these streets are two-lane collectors. At this intersection, Lime Avenue has a stop sign and Randall Avenue has no traffic control. During most of the observation period, a crossing guard also controlled traffic.

Vehicle counts during the baseline period were low, but more than doubled during the busy period. Speed dropped by one-half or more. Observers noted cars double-parked and stopping in traffic immediately after school. Pedestrian volumes were also high before and after school.

One hundred fifty-four of 156 vehicles (99%) yielded to pedestrians or bicyclists with the right of way.

Observation period:	Variable	Baseline 10 minutes	Busy 10 minutes	Change
am	Speed (mi/hr)	24	13	-46%
am	Vehicles (10 min count)	34	126	271%
am	Child pedestrians & bicyclists (10 min count)	2.5	59	2270%
pm	Speed (mi/hr)	21	6	-70%
pm	Vehicles (10 min count)	81	163	101%
pm	Child pedestrians & bicyclists (10 min count)	21	128	517%

## Survey Results

# classrooms grades 3-5: 24

# surveys distributed: 571

Response rate: 48%

# surveys returned: 272

	Mean	SD	Median	IQR
Average years of education of parent completing survey	9.99	3.47	10	5
Average age of child who brought survey home	9.69	1.06	10	2

	3rd	4 <sup>th</sup>	5th	other	missing
Grade of child who brought survey home	34.19	17.65	40.07	1.10	6.99

	Male	Female	missing
Sex of child who brought survey home	40.81	48.90	10.29

Frequency household income:

< \$15,000	\$15,001-35,000	\$35,001-55,000	\$55,001-75,000	> \$75,001	missing
22.06	42.65	16.91	3.31	2.94	12.13

How long in U.S.:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
1.10	4.41	9.19	56.62	23.90	4.78

How long in neighborhood:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
16.18	45.96	18.75	12.50	1.10	5.51

	YES	NO	missing
Born in United States	19.85	72.79	7.35
% living w/in 1 mile of school	51.10	27.21	21.69
% living w/in ½ mile of school	32.72	45.59	21.69
% living w/in ¼ mile of school	16.54	61.76	21.69

Mode split

	Walk/bike	Private vehicle	Bus/transit	missing
Trip to school	31.99	54.78	8.46	4.78
Trip from school	39.71	42.28	8.82	9.19

	<1/4 mile	1/4-1/2 mi.	½- 1mi.	> 1 mi.	Not sure	missing
Walk/bike	29.89	25.29	11.49	2.30	11.49	19.54
Private vehicle	10.07	14.77	22.82	14.77	14.77	22.82
Bus/transit	4.35	0.00	21.74	39.13	21.74	13.04
missing	23.08	0.00	7.69	15.38	15.38	38.46

Frequency of mode of travel to school by time from home to school

	< 5 min.	5-10 min.	11-20 min.	> 20 min.	Not sure	missing
Walk/bike	20.69	45.98	26.44	2.30	1.15	3.45
Private vehicle	42.95	44.97	9.40	2.01	0.67	0.00
Bus/transit	4.35	17.39	30.43	34.78	13.04	0.00
missing	7.69	38.46	15.38	0.00	0.00	38.46

Who brings the child to school?

	% of total
Mother	47.79
Father	9.19
Other adult from household	11.76
Other adult not from household	7.35
Other	0.37
None; child travels without adults	13.24
missing	10.29

Where does adult go after dropping off child at school?

	% of total
Returns home	63.24
Work/school (not at home)	11.76
Shopping or other errands	5.51
No adult; child traveled alone	11.76
missing	7.72

Frequency of how often parent walks in neighborhood by mode of travel to school

	At least 1/day	Few times/week	1/week	Few times/month	Hardly ever	missing
Walk/bike	28.74	29.89	3.45	5.75	20.69	11.49
Private vehicle	9.40	21.48	4.03	16.78	42.28	6.04
Bus/transit	8.70	26.09	0.00	30.43	34.78	0.00
missing	7.69	30.77	15.38	7.69	30.77	7.69

If the child were to walk/bike to and from school (or already walks/bikes to and from school), would they have to do any of the following on their way to/from school? (reporting % of total)

	YES	NO	missing
<b>a.</b> Cross a road with more than 4 lanes of traffic?	14.34	69.85	15.81
<b>b.</b> Cross a road at an intersection that doesn't have a street signal or a stop sign to stop traffic?	31.99	51.84	16.18
<b>c.</b> Cross a road at an intersection without a painted crosswalk?	35.29	47.06	17.65
<b>d.</b> Walk in the road or on the edge of the road because there is no sidewalk?	54.78	31.62	13.60
<b>e.</b> Walk or bicycle along a road or sidewalk that has traffic going more than 30 miles an hour?	40.07	44.12	15.81



## La Gloria Elementary School

### Contact Information:

220 Elko St  
Gonzales, CA 93926  
Chad Carvey, Assistant Principal/Al Velasquez, Principal  
831/675-3663 (general phone)  
831/675-3260 (fax)  
831/212-9954 (Carvey cell phone)  
ccarvey@monterey.k12.ca.us

Grades: K-4

School Population: 895

Average class size: 19.3

### Ethnic Makeup:

Asian: 0.2%

Hispanic: 92.7%

African American: 0.3%

White: 5.3%

City population (Gonzales): 7,950

U.S. Census Classification: "Urban fringe of a mid sized city"

**Date Observed:** 5/30/02 & 5/31/02

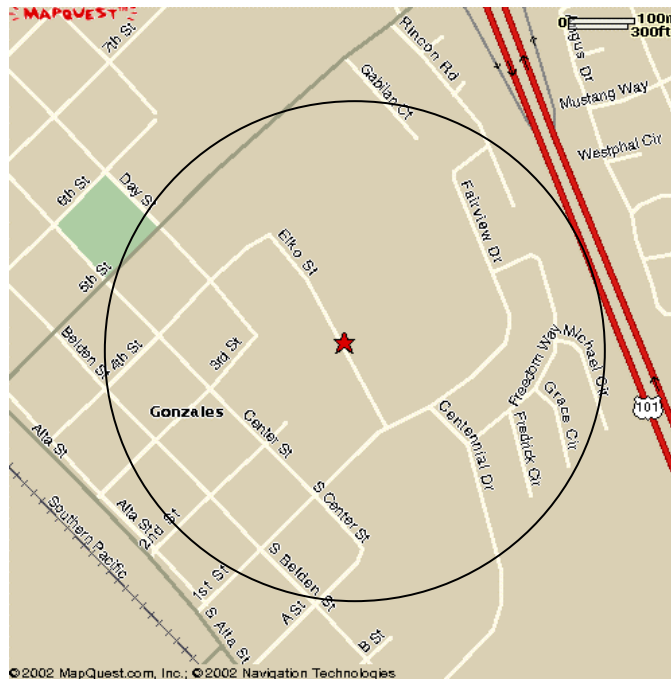
### **Description of the Neighborhood:**

This agricultural neighborhood, located in the City of Gonzales, is a rural one currently evolving into to a more suburban area. There is a mix of residential, commercial, and civic land uses. The neighborhood on one side of the school is mixed use, containing residences, public open space, and the community's downtown containing commercial establishments and civic buildings. This neighborhood is predominantly built on a grid system. The neighborhood on the other side of the school is primarily residential, built in a traditional suburban land use pattern with longer, curvilinear streets. The middle school and high school are adjacent to the elementary school as are community recreation fields.

### **SR2S Project Type: Sidewalk Improvements, Bicycle Facilities, Traffic Calming/Speed Reduction, Traffic diversion improvements**

The project proposed will take place on Elko Street directly in front of La Gloria Elementary. Currently, the street is too narrow and congested to accommodate pedestrians, bikers and automobiles safely. The proposed project will widen the street to accommodate new bike lanes and sidewalks. In addition, extending Elko Street through to Fifth Street will provide better access to the elementary school, divert traffic, and connect the existing bike lanes on Fifth Street with the planned bike lanes on Elko Street. This extension will be accompanied by speed humps, stop signs, safety signage and a three-way stop at the intersection of Fourth Street and Elko Street. The proposed project cost is \$447,836.

**Map:**



Star indicates location of elementary school; Circle represents portion of neighborhood included in the study (approx. 1/4 mile radius from the elementary school)

## Urban Design Observations

### School: LA GLORIA

Perceived Traffic Safety	
Blocks with a complete sidewalk	91%
Blocks with a complete buffered, sidewalk	87%
Blocks with bike lanes	0%
Blocks with bike lanes separated from the street	0%

Perceived Crime Safety	
Blocks with first floor windows visible from the street	94%
Blocks with street lighting	84%
Blocks where abandoned buildings were absent	94%
Blocks where rundown buildings were absent	97%
Blocks where vacant lots were absent	94%
Blocks where graffiti was absent	97%
Blocks where undesirable land uses were absent	99%

Actual Traffic Safety	
Average number of traffic lanes within a block	2
Average street width of a block (in ft.)	45
Average block length of a block (in ft.)	434
Average sidewalk width of a block (in ft.)	4
Blocks with traffic circles	0%
Blocks with bulbouts	1%
Blocks with speed bumps	19%
Blocks with cul-de-sacs	10%
Blocks with medians	0%
Blocks with paving treatments	9%

Walkability	
Blocks with street trees	94%
Blocks with mixed uses	39%
Blocks with public space	15%
Blocks with street furniture	10%

## Traffic Observations

La Gloria School is located on Elko Street near Fourth Street in the city of Gonzales. Both Elko and Fourth streets are two-lane local streets. Both streets end in their intersection, which has a stop sign. The driveway into Fairview Middle School is aligned with Fourth Street.

The speed measurements were made on Elko Street. Vehicular and pedestrian counts indicate that most of the traffic at this location is related to the schools. Pedestrians counts in the afternoon were very high compared to other locations.

One hundred six of 117 vehicles (91%) yielded to pedestrians or bicyclists with the right of way.

Observation period:	Variable	Baseline 10 minutes	Busy 10 minutes	Change
am	Speed (mi/hr)	19	14	-27%
am	Vehicles (10 min count)	41	215	424%
am	Child pedestrians & bicyclists (10 min count)	7.5	59	690%
pm	Speed (mi/hr)	16	13	-23%
pm	Vehicles (10 min count)	44	102	132%
pm	Child pedestrians & bicyclists (10 min count)	2.0	273	13550%

# classrooms grades 3-4: 17  
 # surveys distributed: 373  
 # surveys returned: 164

Response rate: 44%

	Mean	SD	Median	IQR
Average years of education of parent completing survey	10.23	3.83	11	6
Average age of child who brought survey home	9.17	0.72	9	1

	3rd	4th	5th	other	missing
Grade of child who brought survey home	47.56	42.68	0.61	2.44	6.71

(school is K-4)

	Male	Female	missing
Sex of child who brought survey home	39.63	50.61	9.76

Frequency household income:

< \$15,000	\$15,001-35,000	\$35,001-55,000	\$55,001-75,000	> \$75,001	missing
11.59	38.41	20.12	12.20	9.76	7.93

How long in U.S.:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
1.22	7.32	3.66	46.95	37.20	3.66

How long in neighborhood:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
11.59	39.02	21.34	14.63	6.71	6.71

	YES	NO	missing
Born in United States	35.98	57.93	6.10
% living w/in 1 mile of school	41.46	42.68	15.85
% living w/in ½ mile of school	26.22	57.93	15.85
% living w/in ¼ mile of school	16.46	67.68	15.85

Mode split

	Walk/bike	Private vehicle	Bus/transit	missing
Trip to school	23.78	37.20	36.59	2.44
Trip from school	28.05	25.00	40.85	6.10

	<1/4 mile	1/4-1/2 mi.	1/2- 1mi.	> 1 mi.	Not sure	missing
Walk/bike	28.21	17.95	12.82	7.69	15.38	17.95
Private vehicle	19.67	11.48	14.75	26.23	9.84	18.03
Bus/transit	5.00	3.33	18.33	41.67	20.00	11.67
missing	25.00	0.0	0.00	0.00	50.00	25.00

Frequency of mode of travel to school by time from home to school

	< 5 min.	5-10 min.	11-20 min.	> 20 min.	Not sure	missing
Walk/bike	7.69	48.72	41.03	2.56	0.00	0.00
Private vehicle	24.59	42.62	21.31	8.20	0.00	3.28
Bus/transit	3.33	23.33	40.00	18.33	11.67	3.33
missing	25.00	25.00	0.00	25.00	0.00	25.00

Who brings the child to school?

	% of total
Mother	27.44
Father	4.88
Other adult from household	10.98
Other adult not from household	14.63
Other	1.83
None; child travels without adults	35.37
missing	4.88

Where does adult go after dropping off child at school?

	% of total
Returns home	31.71
Work/school (not at home)	20.12
Shopping or other errands	7.93
No adult; child traveled alone	32.32
missing	7.93

Frequency of how often parent walks in neighborhood by mode of travel to school

	At least 1/day	Few times/week	1/week	Few times/month	Hardly ever	missing
Walk/bike	33.33	38.46	2.56	17.95	7.69	0.00
Private vehicle	18.03	31.15	1.64	27.87	21.31	0.00
Bus/transit	10.00	35.00	15.00	8.33	26.67	5.00
missing	25.00	0.00	0.00	25.00	50.00	0.00

If the child were to walk/bike to and from school (or already walks/bikes to and from school), would they have to do any of the following on their way to/from school? (reporting % of total)

	YES	NO	missing
<b>a.</b> Cross a road with more than 4 lanes of traffic?	16.46	71.95	11.59
<b>b.</b> Cross a road at an intersection that doesn't have a street signal or a stop sign to stop traffic?	29.27	57.32	13.41
<b>c.</b> Cross a road at an intersection without a painted crosswalk?	26.83	59.76	13.41
<b>d.</b> Walk in the road or on the edge of the road because there is no sidewalk?	14.63	71.34	14.02
<b>e.</b> Walk or bicycle along a road or sidewalk that has traffic going more than 30 miles an hour?	20.12	64.63	15.24

## Valley Elementary School

### **Contact Information:**

12333 Eighth St.  
Yucaipa, CA 92399  
Pam Whitehurst, Principal  
909-797-1125

Grades: K-5

School Population: 764

Average class size: 18.4

### Ethnic Makeup:

Asian: 0.1%

Hispanic: 24.1%

African American: 1.8%

White: 71.6%

City population (Yucaipa): 42,250

U.S. Census Classification: "Urban fringe of a large city"

**Date Observed:** 7/24/02 & 7/25/02

### **Description of the Neighborhood:**

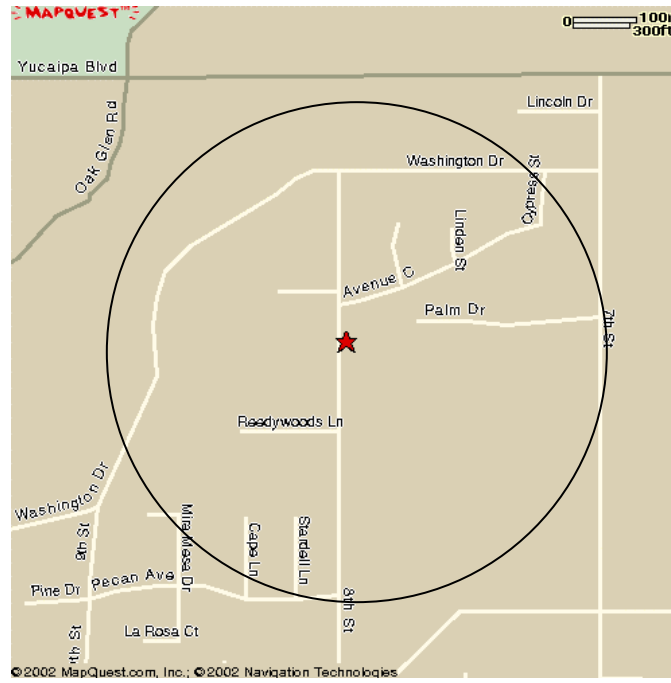
This neighborhood is located in Yucaipa, a bedroom community of the City of San Bernardino. The neighborhood, especially the surrounding area, seems to be experiencing growth that is changing the once rural nature of this neighborhood to a more traditionally suburban one. The neighborhood is composed of residential land uses and fairly large lots.

### **SR2S Project Type: Sidewalk Improvements, Pedestrian Crossing Improvements**

The project proposed will link existing sidewalk at five separate points along both Avenue "E" and 8<sup>th</sup> Street. A total of 3260 feet of sidewalk, curb, gutter and drainage will be installed, as well a curb ramp, a crosswalk and four crosswalk signs. The project is proposed at a cost of \$312,140.



**Map:**



Star indicates location of elementary school; Circle represents portion of neighborhood included in the study (approx. ¼ mile radius from the elementary school)

## Urban Design Observations

### School: VALLEY

Perceived Traffic Safety	
Blocks with a complete sidewalk	22%
Blocks with a complete buffered, sidewalk	0%
Blocks with bike lanes	2%
Blocks with bike lanes separated from the street	0%

Perceived Crime Safety	
Blocks with first floor windows visible from the street	94%
Blocks with street lighting	50%
Blocks where abandoned buildings were absent	100%
Blocks where rundown buildings were absent	100%
Blocks where vacant lots were absent	83%
Blocks where graffiti was absent	100%
Blocks where undesirable land uses were absent	94%

Actual Traffic Safety	
Average number of traffic lanes within a block	2
Average street width of a block (in ft.)	37
Average block length of a block (in ft.)	526
Average sidewalk width of a block (in ft.)	6
Blocks with traffic circles	0%
Blocks with bulbouts	0%
Blocks with speed bumps	0%
Blocks with cul-de-sacs	39%
Blocks with medians	3%
Blocks with paving treatments	0%

Walkability	
Blocks with street trees	0%
Blocks with mixed uses	0%
Blocks with public space	0%
Blocks with street furniture	0%

## Traffic Observations

Valley Elementary is located on Eighth Street opposite Reedywoods Lane in the city of Yucaipa. Eighth Street is a two-lane collector and Reedywoods Lane is a very lightly-traveled local street. Speeds were measured south of the school on Eighth Street. Much of the traffic at this location enters the school parking lot just south of Reedywoods Lane. Vehicular traffic was light during the baseline period and increased substantially during the busiest period. Traffic slowed considerably at the location chosen for measurement, and stopped in both directions at the parking lot entrance due to the number of vehicles waiting to enter the parking lot. Fewer children walked to or from school than at most of the other locations. Eighteen of 19 vehicles (95%) yielded to pedestrians or bicyclists with the right of way.

Observation period:	Variable	Baseline 10 minutes	Busy 10 minutes	Change
Am	Speed (mi/hr)	31	24	-22%
Am	Vehicles (10 min count)	14	95	603%
Am	Child pedestrians & bicyclists (10 min count)	0.5	8.0	1500%
Pm	Speed (mi/hr)	27	14	-48%
Pm	Vehicles (10 min count)	50	106	112%
Pm	Child pedestrians & bicyclists (10 min count)	3.0	34	1033%

## Survey Results

# classrooms grades 3-5: 16

# surveys distributed: 366

Response rate: 43%

# surveys returned: 157

	Mean	SD	Median	IQR
Average years of education of parent completing survey	12.55	3.03	12	2
Average age of child who brought survey home	9.03	0.98	9	2

	3rd	4 <sup>th</sup>	5th	other	missing
Grade of child who brought survey home	29.30	28.66	40.76	0.00	1.27

	Male	Female	missing
Sex of child who brought survey home	49.04	48.41	2.55

Frequency household income:

< \$15,000	\$15,001-35,000	\$35,001-55,000	\$55,001-75,000	> \$75,001	missing
12.10	26.75	17.83	20.38	13.38	9.55

How long in U.S.:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
0.00	0.64	2.55	15.92	77.71	3.18

How long in neighborhood:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
6.37	52.23	19.11	19.11	1.27	1.91

	YES	NO	missing
Born in United States	78.34	18.47	3.18
% living w/in 1 mile of school	45.86	49.04	5.10
% living w/in ½ mile of school	24.84	70.06	5.10
% living w/in ¼ mile of school	10.83	84.08	5.10

Mode split

	Walk/bike	Private vehicle	Bus/transit	missing
Trip to school	8.28	58.60	29.94	3.18
Trip from school	10.19	54.14	30.57	5.10

	<1/4 mile	1/4-1/2 mi.	½- 1mi.	> 1 mi.	Not sure	missing
Walk/bike	61.54	7.69	15.38	15.38	0.00	0.00
Private vehicle	9.78	21.74	25.00	32.61	4.35	6.52
Bus/transit	0.00	2.13	14.89	68.09	10.64	4.26
missing	0.00	0.00	20.00	60.00	20.00	0.00

Frequency of mode of travel to school by time from home to school

	< 5 min.	5-10 min.	11-20 min.	> 20 min.	Not sure	missing
Walk/bike	30.77	38.46	30.77	0.00	0.00	0.00
Private vehicle	51.09	40.22	7.61	0.00	1.09	0.00
Bus/transit	6.38	29.79	29.79	17.02	12.77	4.26
missing	0.00	100.00	0.00	0.00	0.00	0.00

Who brings the child to school?

	% of total
Mother	46.50
Father	4.46
Other adult from household	5.10
Other adult not from household	10.19
Other	2.55
None; child travels without adults	16.56
missing	14.65

Where does adult go after dropping off child at school?

	% of total
Returns home	47.77
Work/school (not at home)	19.75
Shopping or other errands	7.01
No adult; child traveled alone	14.65
missing	10.83

Frequency of how often parent walks in neighborhood by mode of travel to school

	At least 1/day	Few times/week	1/week	Few times/month	Hardly ever	missing
Walk/bike	23.08	30.77	0.00	15.38	30.77	0.00
Private vehicle	5.43	31.52	10.87	20.65	28.26	3.26
Bus/transit	25.53	21.28	2.13	19.15	27.66	4.26
missing	0.00	40.00	0.00	0.00	60.00	0.00

If the child were to walk/bike to and from school (or already walks/bikes to and from school), would they have to do any of the following on their way to/from school? (reporting % of total)

	YES	NO	missing
<b>a.</b> Cross a road with more than 4 lanes of traffic?	15.29	78.98	5.73
<b>b.</b> Cross a road at an intersection that doesn't have a street signal or a stop sign to stop traffic?	36.31	55.41	8.28
<b>c.</b> Cross a road at an intersection without a painted crosswalk?	59.87	30.57	9.55
<b>d.</b> Walk in the road or on the edge of the road because there is no sidewalk?	84.08	9.55	6.37
<b>e.</b> Walk or bicycle along a road or sidewalk that has traffic going more than 30 miles an hour?	70.70	22.29	7.01

## **Glenoaks Elementary School**

### **Contact Information:**

2015 E. Glenoaks Blvd.  
Glendale, CA 91206  
Robert Modrzejewski, Principal  
818-242-3747 (Phone)  
818-247-4423 (Fax)

Grades: K-6

School Population: 654

Average class size: 22.3

### **Ethnic Makeup:**

Asian: 18.3%

Hispanic: 18.5%

African American: 1.7%

White: 48.3%

City population (Glendale): 199,000

U.S. Census Classification: "Urban fringe of a large city"

**Date Observed:** 9/9/02 & 9/10/02

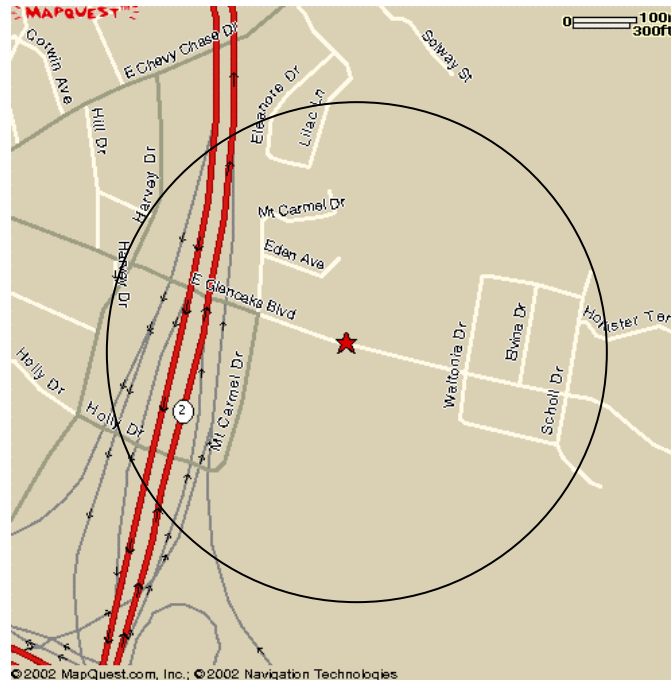
### **Description of the Neighborhood:**

This neighborhood within the City of Glendale can be considered to be a suburban to urban community of the Los Angeles area.. The neighborhood is composed of primarily residential land uses. It follows a largely suburban land use pattern with curvilinear streets. The neighborhood is divided by highway overpass, clearly separating it into two types (single-family, higher income vs. multi-family, middle to lower income).

### **SR2S Project Type: Pedestrian Crossing Improvements**

The project proposed will take place on Glenoaks Boulevard between Mt. Carmel Road and Waltonia Drive. The project will install a pedestrian-activated in-pavement crosswalk lighting system. The installation is proposed at a cost of \$396,000.

**Map:**



Star indicates location of elementary school; Circle represents portion of neighborhood included in the study (approx. ¼ mile radius from the elementary school)



Urban Design Observations

**School: GLENOAKS**

<b>Perceived Traffic Safety</b>	
Blocks with a complete sidewalk	36%
Blocks with a complete buffered, sidewalk	15%
Blocks with bike lanes	0%
Blocks with bike lanes separated from the street	0%

<b>Perceived Crime Safety</b>	
Blocks with first floor windows visible from the street	73%
Blocks with street lighting	93%
Blocks where abandoned buildings were absent	96%
Blocks where rundown buildings were absent	96%
Blocks where vacant lots were absent	95%
Blocks where graffiti was absent	93%
Blocks where undesirable land uses were absent	91%

<b>Actual Traffic Safety</b>	
Average number of traffic lanes within a block	2
Average street width of a block (in ft.)	40
Average block length of a block (in ft.)	467
Average sidewalk width of a block (in ft.)	5
Blocks with traffic circles	0%
Blocks with bulbouts	0%
Blocks with speed bumps	4%
Blocks with cul-de-sacs	13%
Blocks with medians	0%
Blocks with paving treatments	0%

<b>Walkability</b>	
Blocks with street trees	54%
Blocks with mixed uses	5%
Blocks with public space	4%
Blocks with street furniture	9%

## Traffic Observations

Glenoaks Elementary is located on Glenoaks Boulevard between Waltonia Drive and Mt. Carmel Drive in Glendale. The vehicle counts and speeds are for Glenoaks Boulevard, a two-lane collector. There is a marked midblock crosswalk in front of the school, with a crossing guard before and after school. Both pedestrian and vehicle counts were marked increased during the busy period, and speeds decreased substantially.

Two hundred twenty-five of 239 vehicles (94%) yielded to pedestrians or bicyclists with the right of way.

Observation period:	Variable	Baseline 10 minutes	Busy 10 minutes	Change
am	Speed (mi/hr)	25	11	-55%
am	Vehicles (10 min count)	83	223	169%
am	Child pedestrians & bicyclists (10 min count)	13	71	442%
pm	Speed (mi/hr)	25	14	-44%
pm	Vehicles (10 min count)	79	142	81%
pm	Child pedestrians & bicyclists (10 min count)	4	81	1925%

## Survey Results

# classrooms grades 3-5: 10

# surveys distributed: 290

Response rate: 72%

# surveys returned: 209

	Mean	SD	Median	IQR
Average years of education of parent completing survey	14.34	3.93	15	4
Average age of child who brought survey home	9.29	1.05	9	2

	3rd	4th	5th	other	missing
Grade of child who brought survey home	22.49	25.84	41.63	9.09	0.96

	Male	Female	missing
Sex of child who brought survey home	46.41	51.20	2.39

Frequency household income:

< \$15,000	\$15,001-35,000	\$35,001-55,000	\$55,001-75,000	> \$75,001	missing
8.61	17.70	20.57	14.83	30.62	7.66

How long in U.S.:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
1.44	7.18	4.78	48.80	37.32	0.48

How long in neighborhood:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
9.09	33.01	26.79	28.71	2.39	0.00

	YES	NO	missing
Born in United States	40.67	52.63	6.70
% living w/in 1 mile of school	57.89	35.89	6.22
% living w/in ½ mile of school	33.97	59.81	6.22
% living w/in ¼ mile of school	14.83	78.95	6.22

Mode split

	Walk/bike	Private vehicle	Bus/transit	missing
Trip to school	14.83	78.95	0.48	5.74
Trip from school	14.83	78.47	1.44	5.26

	<1/4 mile	1/4-1/2 mi.	½- 1mi.	> 1 mi.	Not sure	missing
Walk/bike	51.61	12.90	16.13	3.23	12.90	3.23
Private vehicle	7.88	20.61	24.24	34.55	6.67	6.06
Bus/transit	0.00	0.00	100.00	0.00	0.00	0.00
missing	16.67	16.67	33.33	16.67	0.00	16.67

Frequency of mode of travel to school by time from home to school

	< 5 min.	5-10 min.	11-20 min.	> 20 min.	Not sure	missing
Walk/bike	12.90	54.84	29.03	3.23	0.00	0.00
Private vehicle	46.67	43.64	7.88	1.21	0.61	0.00
Bus/transit	0.00	0.00	100.00	0.00	0.00	0.00
missing	8.33	41.67	25.00	0.00	0.00	25.00

Who brings the child to school?

	% of total
Mother	53.59
Father	15.79
Other adult from household	2.87
Other adult not from household	1.91
Other	0.00
None; child travels without adults	6.22
missing	19.62

Where does adult go after dropping off child at school?

	% of total
Returns home	42.11
Work/school (not at home)	38.76
Shopping or other errands	6.70
No adult; child traveled alone	5.74
missing	6.70

Frequency of how often parent walks in neighborhood by mode of travel to school

	At least 1/day	Few times/week	1/week	Few times/month	Hardly ever	missing
Walk/bike	25.81	35.48	9.68	9.68	19.35	0.00
Private vehicle	11.52	29.70	10.91	25.45	21.82	0.61
Bus/transit	0.00	0.00	0.00	0.00	100.00	0.00
missing	16.67	33.33	16.67	16.67	16.67	0.00

If the child were to walk/bike to and from school (or already walks/bikes to and from school), would they have to do any of the following on their way to/from school? (reporting % of total)

	YES	NO	missing
<b>a.</b> Cross a road with more than 4 lanes of traffic?	28.23	57.42	14.35
<b>b.</b> Cross a road at an intersection that doesn't have a street signal or a stop sign to stop traffic?	42.11	44.50	13.40
<b>c.</b> Cross a road at an intersection without a painted crosswalk?	39.71	46.89	13.40
<b>d.</b> Walk in the road or on the edge of the road because there is no sidewalk?	20.10	66.03	13.88
<b>e.</b> Walk or bicycle along a road or sidewalk that has traffic going more than 30 miles an hour?	43.06	43.06	13.88

## Montara Elementary School

### Contact Information:

10018 Montara Ave.  
South Gate, CA 90280  
Juliana Dawson, Principal  
323-567-1451 (Phone)  
323-249-7394 (Fax)

Grades: K-5

School Population: 1,015

Average class size: 19.9

### Ethnic Makeup:

Asian: 0.5%

Hispanic: 98.4%

African American: 0.3%

White: 0.5%

City population (South Gate): 99,800

U.S. Census Classification: "Urban fringe of a large city"

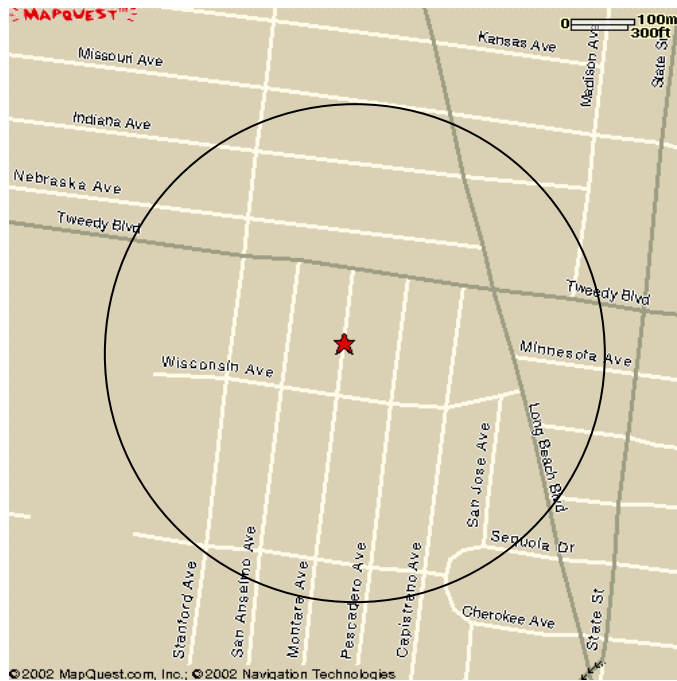
**Date Observed:** 9/17/02 & 9/18/02

### **Description of the Neighborhood:**

This neighborhood within the City of South Gate can be considered to be a suburban to urban community of the Los Angeles area. There is a mix of residential and commercial land uses. The commercial uses are concentrated on major arterials that are within a ¼ mile of Montara Elementary School. Uses range from gas stations, food markets and clothing stores to bars, hotels and pawnshops. The neighborhood is built on a traditional grid system.

**SR2S Project Type: Pedestrian Crossing Improvements**

**Map:**



Star indicates location of elementary school; Circle represents portion of neighborhood included in the study (approx. ¼ mile radius from the elementary school)

Urban Design Observations

**School: MONTARA**

<b>Perceived Traffic Safety</b>	
Blocks with a complete sidewalk	100%
Blocks with a complete buffered, sidewalk	84%
Blocks with bike lanes	0%
Blocks with bike lanes separated from the street	0%

<b>Perceived Crime Safety</b>	
Blocks with first floor windows visible from the street	82%
Blocks with street lighting	92%
Blocks where abandoned buildings were absent	96%
Blocks where rundown buildings were absent	98%
Blocks where vacant lots were absent	93%
Blocks where graffiti was absent	9%
Blocks where undesirable land uses were absent	91%

<b>Actual Traffic Safety</b>	
Average number of traffic lanes within a block	3
Average street width of a block (in ft.)	39
Average block length of a block (in ft.)	492
Average sidewalk width of a block (in ft.)	6
Blocks with traffic circles	0%
Blocks with bulbouts	0%
Blocks with speed bumps	4%
Blocks with cul-de-sacs	0%
Blocks with medians	0%
Blocks with paving treatments	0%

<b>Walkability</b>	
Blocks with street trees	81%
Blocks with mixed uses	45%
Blocks with public space	1%
Blocks with street furniture	9%



## Traffic Observations

Montara Avenue Elementary is located on Montara Avenue just south of Tweedy Boulevard. Measurements were made at the intersection of Montara Avenue and Tweedy Boulevard. Montara Avenue is a two-lane collector, and Tweedy Boulevard is a four-lane arterial. At this intersection, Montara Avenue has a two-way stop sign. There is no permanent traffic control on Tweedy Boulevard, but before and after school a crossing guard assists pedestrians crossing in the marked crosswalk on the east side of the intersection.

The vehicle counts and speeds are for the four-lane arterial.

Two hundred two of 250 vehicles (81%) yielded to pedestrians or bicyclists with the right of way, one of the lowest proportions observed. Less than half of vehicles yield to pedestrians when the crossing guard was not present.

Observation period:	Variable	Baseline 10 minutes	Busy 10 minutes	Change
am	Speed (mi/hr)	25	11	-55%
am	Vehicles (10 min count)	166	446	169%
am	Child pedestrians & bicyclists (10 min count)	13	71	442%
pm	Speed (mi/hr)	25	14	-44%
pm	Vehicles (10 min count)	157	284	81%
pm	Child pedestrians & bicyclists (10 min count)	4	81	1925%

## Survey Results

# classrooms grades 3-5: 12

# surveys distributed: 313

Response rate: 47%

# surveys returned: 148

	Mean	SD	Median	IQR
Average years of education of parent completing survey	9.68	3.53	10	4.5
Average age of child who brought survey home	8.95	0.93	9	2

	3rd	4 <sup>th</sup>	5th	other	missing
Grade of child who brought survey home	36.49	27.70	31.76	0.68	3.38

	Male	Female	missing
Sex of child who brought survey home	40.54	54.05	5.41

Frequency household income:

< \$15,000	\$15,001-35,000	\$35,001-55,000	\$55,001-75,000	> \$75,001	missing
28.38	38.51	15.54	2.70	0.68	14.19

How long in U.S.:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
2.03	2.03	10.14	64.86	18.24	2.70

How long in neighborhood:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
5.41	33.11	22.30	31.08	2.70	5.41

	YES	NO	missing
Born in United States	14.86	80.41	4.73
% living w/in 1 mile of school	61.49	22.30	16.22
% living w/in 1/2 mile of school	56.76	27.03	16.22
% living w/in 1/4 mile of school	38.51	45.27	16.22

Mode split

	Walk/bike	Private vehicle	Bus/transit	missing
Trip to school	38.51	56.08	2.03	3.38
Trip from school	47.30	39.19	2.70	10.81

	<1/4 mile	1/4-1/2 mi.	1/2- 1mi.	> 1 mi.	Not sure	missing
Walk/bike	40.35	15.79	3.51	3.51	17.54	19.30
Private vehicle	37.35	20.48	6.02	7.23	15.66	13.25
Bus/transit	66.67	0.00	0.00	33.33	0.00	0.00
missing	20.00	20.00	0.00	0.00	20.00	40.00

Frequency of mode of travel to school by time from home to school

	< 5 min.	5-10 min.	11-20 min.	> 20 min.	Not sure	missing
Walk/bike	28.07	43.86	28.07	0.00	0.00	0.00
Private vehicle	55.42	39.76	3.61	1.20	0.00	0.00
Bus/transit	33.33	33.33	0.00	33.33	0.00	0.00
missing	0.00	40.00	20.00	0.00	0.00	40.00

Who brings the child to school?

	% of total
Mother	58.78
Father	10.14
Other adult from household	12.16
Other adult not from household	6.08
Other	0.00
None; child travels without adults	10.06
missing	14.53

Where does adult go after dropping off child at school?

	% of total
Returns home	64.86
Work/school (not at home)	20.95
Shopping or other errands	8.78
No adult; child traveled alone	0.68
missing	4.73

Frequency of how often parent walks in neighborhood by mode of travel to school

	At least 1/day	Few times/week	1/week	Few times/month	Hardly ever	missing
Walk/bike	52.63	22.81	1.75	5.26	8.77	8.77
Private vehicle	20.48	30.12	8.43	19.28	18.07	3.61
Bus/transit	66.67	33.33	0.00	0.00	0.00	0.00
missing	40.00	40.00	0.00	0.00	0.00	20.00

*If the child were to walk/bike to and from school (or already walks/bikes to and from school), would they have to do any of the following on their way to/from school? (reporting % of total)*

	YES	NO	missing
<b>a.</b> Cross a road with more than 4 lanes of traffic?	22.97	66.89	10.14
<b>b.</b> Cross a road at an intersection that doesn't have a street signal or a stop sign to stop traffic?	26.35	60.14	13.51
<b>c.</b> Cross a road at an intersection without a painted crosswalk?	20.95	64.19	14.86
<b>d.</b> Walk in the road or on the edge of the road because there is no sidewalk?	5.41	79.05	15.54
<b>e.</b> Walk or bicycle along a road or sidewalk that has traffic going more than 30 miles an hour?	18.92	67.57	13.51

## Murrieta Elementary School

### Contact Information:

24725 Adams Ave.  
Murrieta, CA 92562  
Mike Lorimer, Principal  
909-696-1401 (Phone)  
909-696-1445 (Fax)

Grades: K-5

School Population: 651

Average class size: 21.6

### Ethnic Makeup:

Asian: 1.5%

Hispanic: 22.9%

African American: 3.8%

White: 69.9%

City population (Murrieta): 46,850

U.S. Census Classification: "Rural area (metropolitan)"

**Date Observed:** 9/24/02 & 9/27/02

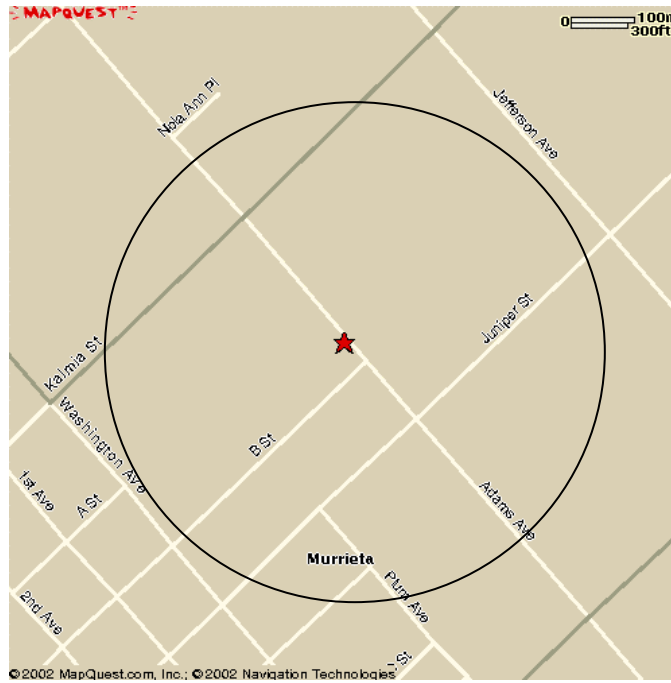
### Description of the Neighborhood:

This neighborhood is in the City of Murrieta. It is a suburban neighborhood on a rural edge. The neighborhood has a mix of residential, commercial and civic land uses. Large lots and long blocks characterize this neighborhood, which is changing from a rural agricultural/ranch area to a bedroom community of Orange/Riverside/San Diego Counties. City is in the process of constructing civic building and public space in large lot across from school. Recreation fields and community center are near to the school, as are some small businesses and churches. A busy arterial is about ½ block away from the school.

### SR2S Project Type: Sidewalk Improvements, Bicycle Facilities

The project proposed will take place on Adams Avenue, "B" Street, 2<sup>nd</sup> Street, and Kalmia Street. There is a general lack of concrete sidewalk and gutters separating pedestrians from automobile traffic in this growing area. Construction of sidewalk and bicycle facilities is proposed at a cost of \$453,938.

**Map:**



Star indicates location of elementary school; Circle represents portion of neighborhood included in the study (approx. 1/4 mile radius from the elementary school)

Urban Design Observations

**School: MURRIETA**

<b>Perceived Traffic Safety</b>	
Blocks with a complete sidewalk	8%
Blocks with a complete buffered, sidewalk	8%
Blocks with bike lanes	0%
Blocks with bike lanes separated from the street	0%

<b>Perceived Crime Safety</b>	
Blocks with first floor windows visible from the street	46%
Blocks with street lighting	0%
Blocks where abandoned buildings were absent	100%
Blocks where rundown buildings were absent	100%
Blocks where vacant lots were absent	42%
Blocks where graffiti was absent	100%
Blocks where undesirable land uses were absent	100%

<b>Actual Traffic Safety</b>	
Average number of traffic lanes within a block	2
Average street width of a block (in ft.)	33
Average block length of a block (in ft.)	879
Average sidewalk width of a block (in ft.)	6
Blocks with traffic circles	0%
Blocks with bulbouts	0%
Blocks with speed bumps	0%
Blocks with cul-de-sacs	0%
Blocks with medians	0%
Blocks with paving treatments	0%

<b>Walkability</b>	
Blocks with street trees	0%
Blocks with mixed uses	72%
Blocks with public space	23%
Blocks with street furniture	0%

## Traffic Observations

Murrietta Elementary is located on Adams Avenue at the corner of Calmia Street. Both of these streets are two lane collector, and their intersections is controlled by a four-way stop sign. The vehicle counts and speeds are for Adams Avenue. The only marked crosswalk at the intersection crosses Adams on the side of the intersection nearest the school. No crossing guard was present.

There was very little pedestrian activity at this site. (Observations were made on very hot days in September). Vehicular traffic increased substantially and speeds decreased somewhat during the busy periods.

Five of six vehicles (83%) yielded to pedestrians or bicyclists with the right of way.

Observation period:	Variable	Baseline 10 minutes	Busy 10 minutes	Change
am	Speed (mi/hr)	30	23	-25%
am	Vehicles (10 min count)	21	164	698%
am	Child pedestrians & bicyclists (10 min count)	0.0	0.5	
pm	Speed (mi/hr)	30	28	-8%
pm	Vehicles (10 min count)	41	74	83%
pm	Child pedestrians & bicyclists (10 min count)	0.5	2.0	300%



## Survey Results

# classrooms grades 3-5: 17

# surveys distributed: 416

Response rate: 54%

# surveys returned: 223

	Mean	SD	Median	IQR
Average years of education of parent completing survey	13.81	2.99	14	4
Average age of child who brought survey home	9.0	0.98	9	2

	3rd	4 <sup>th</sup>	5th	other	missing
Grade of child who brought survey home	36.77	35.87	25.11	0.45	1.79

	Male	Female	missing
Sex of child who brought survey home	41.70	56.05	2.24

Frequency household income:

< \$15,000	\$15,001-35,000	\$35,001-55,000	\$55,001-75,000	> \$75,001	missing
3.59	9.87	11.66	22.42	43.50	8.97

How long in U.S.:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
0.00	1.79	0.90	13.90	81.17	2.24

How long in neighborhood:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
23.77	39.91	15.25	18.39	0.90	1.79

	YES	NO	missing
Born in United States	81.17	14.35	4.48
% living w/in 1 mile of school	42.60	54.26	3.14
% living w/in 1/2 mile of school	16.59	80.27	3.14
% living w/in 1/4 mile of school	6.73	90.13	3.14

Mode split

	Walk/bike	Private vehicle	Bus/transit	missing
Trip to school	5.38	81.61	11.21	1.79
Trip from school	7.62	72.20	17.49	2.69

	<1/4 mile	1/4-1/2 mi.	½- 1mi.	> 1 mi.	Not sure	missing
Walk/bike	33.33	16.67	41.67	0.00	8.33	0.00
Private vehicle	6.04	10.44	26.37	53.85	0.55	2.75
Bus/transit	0.00	4.00	16.00	68.00	4.00	8.00
missing	0.00	0.00	25.00	75.00	0.00	0.00

Frequency of mode of travel to school by time from home to school

	< 5 min.	5-10 min.	11-20 min.	> 20 min.	Not sure	missing
Walk/bike	16.67	50.00	33.33	0.00	0.00	0.00
Private vehicle	36.81	51.10	8.24	2.75	0.00	1.10
Bus/transit	0.00	8.00	36.00	56.00	0.00	0.00
missing	25.00	25.00	25.00	0.00	0.00	25.00

Who brings the child to school?

	% of total
Mother	59.19
Father	7.17
Other adult from household	4.48
Other adult not from household	11.21
Other	0.00
None; child travels without adults	5.83
missing	12.11

Where does adult go after dropping off child at school?

	% of total
Returns home	47.98
Work/school (not at home)	26.46
Shopping or other errands	8.52
No adult; child traveled alone	5.38
missing	11.66

Frequency of how often parent walks in neighborhood by mode of travel to school

	At least 1/day	Few times/week	1/week	Few times/month	Hardly ever	missing
Walk/bike	16.67	16.67	0.00	41.67	8.33	16.67
Private vehicle	12.09	33.52	8.24	22.53	22.53	1.10
Bus/transit	20.00	12.00	0.00	24.00	40.00	4.00
missing	0.00	50.00	0.00	25.00	25.00	0.00

*If the child were to walk/bike to and from school (or already walks/bikes to and from school), would they have to do any of the following on their way to/from school? (reporting % of total)*

	YES	NO	missing
<b>a.</b> Cross a road with more than 4 lanes of traffic?	28.70	63.68	7.62
<b>b.</b> Cross a road at an intersection that doesn't have a street signal or a stop sign to stop traffic?	37.67	54.26	8.07
<b>c.</b> Cross a road at an intersection without a painted crosswalk?	62.78	30.04	7.17
<b>d.</b> Walk in the road or on the edge of the road because there is no sidewalk?	86.10	8.52	5.38
<b>e.</b> Walk or bicycle along a road or sidewalk that has traffic going more than 30 miles an hour?	76.23	17.04	6.73

## **Mt. Vernon Elementary School**

### **Contact Information:**

1271 West 10th St.  
San Bernardino, CA 92411  
Kristin Kolling, Principal  
909-388-6400

Grades: K-5

School Population: 741

Average class size: 21.3

### Ethnic Makeup:

Asian: 0.5%

Hispanic: 84.9%

African American: 9.3%

White: 3.6%

City population (San Bernardino):

190, 200

U.S. Census Classification: "Mid sized city"

**Date Observed:** 9/30/02 & 10/02/02

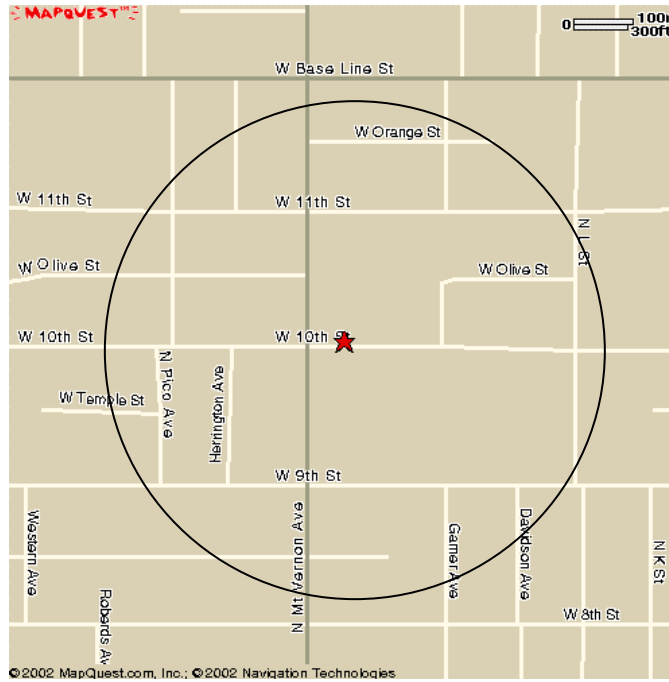
### **Description of the Neighborhood:**

This neighborhood is located in San Bernardino. Although the neighborhood is mainly residential, there are commercial uses along a main arterial. Most of the neighborhood follows a grid-like street pattern. The northern section of the neighborhood had a different urban form and land-use pattern than the rest of the neighborhood, with longer streets, more cul-de-sacs, vacant lots, abandoned and run-down buildings. There was a mix of uses throughout the entire neighborhood, including churches, small food stores, small businesses, and parks.

### **SR2S: Pedestrian Crossing Improvements**

The project proposed will take place at the intersection of Mt. Vernon Avenue and 9<sup>th</sup> Street as well as 9<sup>th</sup> Street and "L" Street. There are currently traffic lights at these crossings; however, there are no pedestrian activated signals. As a result, students can step into the street on a green light, but face a red light before they reach the other side. In addition, the intersection of 9<sup>th</sup> Street and "L" Street lacks pedestrian access ramps. The project proposed will install the signals and construct the ramps at a cost of \$142,000.

**Map:**



Star indicates location of elementary school; Circle represents portion of neighborhood included in the study (approx. ¼ mile radius from the elementary school)

## Findings, Urban Design Observations

### School: MT. VERNON

Perceived Traffic Safety	
Blocks with a complete sidewalk	63%
Blocks with a complete buffered, sidewalk	72%
Blocks with bike lanes	0%
Blocks with bike lanes separated from the street	0%

Perceived Crime Safety	
Blocks with first floor windows visible from the street	82%
Blocks with street lighting	90%
Blocks where abandoned buildings were absent	83%
Blocks where rundown buildings were absent	82%
Blocks where vacant lots were absent	48%
Blocks where graffiti was absent	14%
Blocks where undesirable land uses were absent	97%

Actual Traffic Safety	
Average number of traffic lanes within a block	3
Average street width of a block (in ft.)	44
Average block length of a block (in ft.)	547
Average sidewalk width of a block (in ft.)	5
Blocks with traffic circles	0%
Blocks with bulbouts	0%
Blocks with speed bumps	0%
Blocks with cul-de-sacs	7%
Blocks with medians	0%
Blocks with paving treatments	0%

Walkability	
Blocks with street trees	56%
Blocks with mixed uses	51%
Blocks with public space	14%
Blocks with street furniture	6%

## Traffic Observations

Mount Vernon Elementary is located on Mount Vernon Avenue between 9th and 10th street in the city of San Bernardino. Observations were made of the intersection of Mount Vernon Avenue and 9th Street, which is controlled by a traffic signal. Speed measurements were made on Mount Vernon Avenue, a four-lane arterial and vehicles were counted on Mount Vernon Avenue and 9th Street. Ninth Street also has four lanes, but carries much less traffic than Mount Vernon Avenue.

School-related traffic did not seem to have a major effect on Mt. Vernon Avenue. The number of pedestrians increased before and after school, but they were not as numerous as at many schools.

One hundred forty of 144 vehicles (97%) yielded to pedestrians or bicyclists with the right of way.

Observation period:	Variable	Baseline 10 minutes	Busy 10 minutes	Change
Am	Speed (mi/hr)	33	29	-13%
Am	Vehicles (10 min count)	180	238	32%
Am	Child pedestrians & bicyclists (10 min count)	1.5	12	700%
Pm	Speed (mi/hr)	30	25	-16%
Pm	Vehicles (10 min count)	274	363	32%
Pm	Child pedestrians & bicyclists (10 min count)	8.5	44	418%

# classrooms grades 3-5: 15  
 # surveys distributed: 360  
 # surveys returned: 179

Response rate: 49%

	Mean	SD	Median	IQR
Average years of education of parent completing survey	9.58	3.42	10	5
Average age of child who brought survey home	9.01	1.26	9	2

	3rd	4 <sup>th</sup>	5th	other	missing
Grade of child who brought survey home	37.43	34.64	22.91	3.35	1.68

	Male	Female	missing
Sex of child who brought survey home	51.40	41.90	6.70

Frequency household income:

< \$15,000	\$15,001-35,000	\$35,001-55,000	\$55,001-75,000	> \$75,001	missing
40.78	31.84	11.73	2.23	0.56	12.85

How long in U.S.:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
1.68	3.91	12.85	41.90	37.43	2.23

How long in neighborhood:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
11.73	39.66	15.64	16.20	11.17	5.59

	YES	NO	missing
Born in United States	33.52	62.57	3.91
% living w/in 1 mile of school	59.78	16.76	23.46
% living w/in 1/2 mile of school	45.25	31.28	23.46
% living w/in 1/4 mile of school	28.49	48.04	23.46

Mode split

	Walk/bike	Private vehicle	Bus/transit	missing
Trip to school	41.90	51.96	0.56	5.59
Trip from school	44.13	46.37	0.56	8.94



	<1/4 mile	1/4-1/2 mi.	1/2- 1mi.	> 1 mi.	Not sure	missing
Walk/bike	32.00	20.00	10.67	2.67	12.00	22.67
Private vehicle	27.96	16.13	16.13	7.53	9.68	22.58
Bus/transit	0.00	0.00	100.00	0.00	0.00	0.00
missing	10.00	0.00	20.00	10.00	20.00	40.00

Frequency of mode of travel to school by time from home to school

	< 5 min.	5-10 min.	11-20 min.	> 20 min.	Not sure	missing
Walk/bike	9.33	36.00	38.67	13.33	1.33	1.33
Private vehicle	55.91	30.11	8.60	4.30	1.08	0.00
Bus/transit	0.00	0.00	0.00	100.00	0.00	0.00
missing	40.00	30.00	10.00	20.00	0.00	0.00

Who brings the child to school?

	% of total
Mother	58.10
Father	7.82
Other adult from household	6.70
Other adult not from household	2.23
Other	0.56
None; child travels without adults	10.06
missing	14.53

Where does adult go after dropping off child at school?

	% of total
Returns home	67.60
Work/school (not at home)	14.53
Shopping or other errands	2.79
No adult; child traveled alone	8.38
missing	6.70

Frequency of how often parent walks in neighborhood by mode of travel to school

	At least 1/day	Few times/week	1/week	Few times/month	Hardly ever	missing
Walk/bike	40.00	26.67	4.00	9.33	13.33	6.67
Private vehicle	13.98	18.28	5.38	12.90	44.09	5.38
Bus/transit	0.00	100.00	0.00	0.00	0.00	0.00
missing	30.00	20.00	0.00	10.00	20.00	20.00

If the child were to walk/bike to and from school (or already walks/bikes to and from school), would they have to do any of the following on their way to/from school? (reporting % of total)

	YES	NO	missing
<b>a.</b> Cross a road with more than 4 lanes of traffic?	25.70	64.25	10.06
<b>b.</b> Cross a road at an intersection that doesn't have a street signal or a stop sign to stop traffic?	27.93	56.98	15.08
<b>c.</b> Cross a road at an intersection without a painted crosswalk?	30.73	54.19	15.08
<b>d.</b> Walk in the road or on the edge of the road because there is no sidewalk?	16.20	67.60	16.20
<b>e.</b> Walk or bicycle along a road or sidewalk that has traffic going more than 30 miles an hour?	18.92	53.63	13.97

## Newman Elementary School

### Contact Information:

4150 Walnut Ave  
Chino, CA 91710  
Mark Goldband, Principal  
909-627-9758 (Phone)  
909-465-0481 (Fax)

Grades: preK-6  
School Population: 889  
Average class size: 23.1

### Ethnic Makeup:

Asian: 3%  
Hispanic: 49.8%  
African American: 2.7%  
White: 42.5%  
City population (Chino): 68,800  
U.S. Census Classification: "Urban fringe of a large city"

### Description of the Neighborhood:

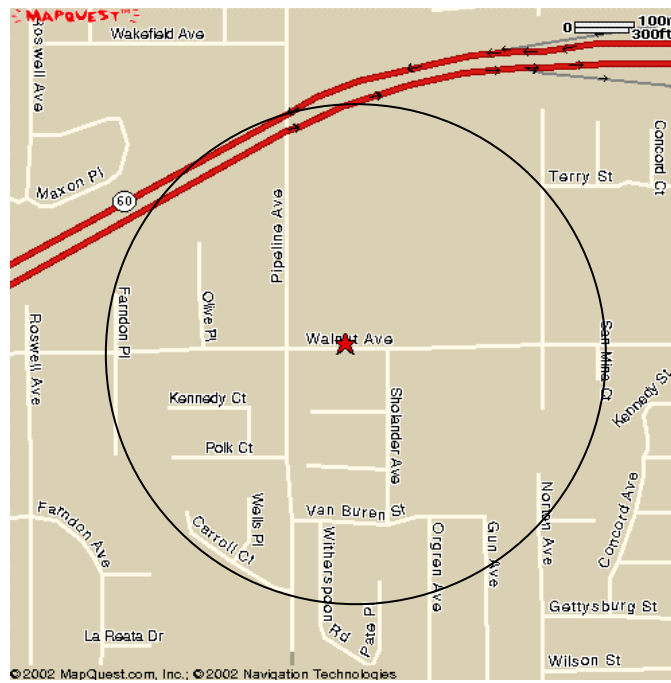
This neighborhood is located in Chino, a city near Los Angeles, San Bernardino, and Riverside. The neighborhood can be characterized as an older suburban area with a modified grid-pattern with cul-de-sac streets. The cul-de-sacs in this neighborhood had a pedestrian pathway that linked the street to the major arterial. The area is comprised of residential land uses.

### SR2S Project Type: Traffic Control Devices

The project proposed will take place at the intersection of Walnut Avenue and Pipeline Avenue, at which there is currently a four-way stop. The project will install a traffic signal at a cost of \$129,500.

**Date Observed:** 10/07/02 & 10/09/02

**Map:**



Star indicates location of elementary school; Circle represents portion of neighborhood included in the study (approx. ¼ mile radius from the elementary school)

Urban Design Observations

**School: NEWMAN**

<b>Perceived Traffic Safety</b>	
Blocks with a complete sidewalk	86%
Blocks with a complete buffered, sidewalk	80%
Blocks with bike lanes	0%
Blocks with bike lanes separated from the street	0%

<b>Perceived Crime Safety</b>	
Blocks with first floor windows visible from the street	83%
Blocks with street lighting	91%
Blocks where abandoned buildings were absent	100%
Blocks where rundown buildings were absent	94%
Blocks where vacant lots were absent	94%
Blocks where graffiti was absent	83%
Blocks where undesirable land uses were absent	100%

<b>Actual Traffic Safety</b>	
Average number of traffic lanes within a block	2
Average street width of a block (in ft.)	41
Average block length of a block (in ft.)	439
Average sidewalk width of a block (in ft.)	5
Blocks with traffic circles	0%
Blocks with bulbouts	0%
Blocks with speed bumps	0%
Blocks with cul-de-sacs	37%
Blocks with medians	0%
Blocks with paving treatments	0%

<b>Walkability</b>	
Blocks with street trees	17%
Blocks with mixed uses	14%
Blocks with public space	0%
Blocks with street furniture	0%

## Traffic Observations

Newman Elementary is located on Walnut Avenue at the corner of Pipeline Avenue in the city of Chino. The intersection of these two streets is controlled by a four-way stop sign. Speed measurements and vehicle counts were made on both streets.

Vehicle volume increased during the morning observations and vehicle speed decreased during the afternoon observation. The number of pedestrians was less than at several other schools.

Two hundred seventy-seven of 292 vehicles (95 %) yielded to pedestrians or bicyclists with the right of way.

Observation period:	Variable	Baseline 10 minutes	Busy 10 minutes	Change
am	Speed (mi/hr)	29	24	-17%
am	Vehicles (10 min count)	111	230	107%
am	Child pedestrians & bicyclists (10 min count)	0.0	37	
pm	Speed (mi/hr)	28	19	-29%
pm	Vehicles (10 min count)	265	278	5%
pm	Child pedestrians & bicyclists (10 min count)	11	43	305%

## Survey Observations

# classrooms grades 3-5: 16

# surveys distributed: 421

Response rate: 51%

# surveys returned: 215

	Mean	SD	Median	IQR
Average years of education of parent completing survey	12.92	3.15	13	2
Average age of child who brought survey home	8.95	0.96	9	2

	3rd	4 <sup>th</sup>	5th	other	missing
Grade of child who brought survey home	33.95	33.02	25.58	5.12	2.33

	Male	Female	missing
Sex of child who brought survey home	45.58	51.16	3.26

Frequency household income:

< \$15,000	\$15,001-35,000	\$35,001-55,000	\$55,001-75,000	> \$75,001	missing
6.98	18.14	18.60	20.00	21.86	14.42

How long in U.S.:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
0.47	0.93	1.86	25.12	67.91	3.72

How long in neighborhood:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
8.37	40.93	19.07	22.79	5.58	3.26

	YES	NO	missing
Born in United States	64.65	29.77	5.58
% living w/in 1 mile of school	70.23	22.79	6.98
% living w/in ½ mile of school	51.63	41.40	6.98
% living w/in 1/4 mile of school	25.12	67.91	6.98

Mode split

	Walk/bike	Private vehicle	Bus/transit	missing
Trip to school	15.81	77.67	4.19	2.33
Trip from school	17.67	72.09	6.98	3.26

	<1/4 mile	1/4-1/2 mi.	½- 1mi.	> 1 mi.	Not sure	missing
Walk/bike	58.82	14.71	8.82	0.00	8.82	8.82
Private vehicle	17.96	31.14	21.56	19.16	2.99	7.19
Bus/transit	0.00	0.00	11.11	88.89	0.00	0.00
missing	80.00	0.00	0.00	20.00	0.00	0.00

Frequency of mode of travel to school by time from home to school

	< 5 min.	5-10 min.	11-20 min.	> 20 min.	Not sure	missing
Walk/bike	29.41	47.06	20.59	2.94	0.00	0.00
Private vehicle	62.87	31.14	3.59	0.60	0.00	1.80
Bus/transit	22.22	22.22	11.11	33.33	11.11	0.00
missing	0.00	80.00	0.00	0.00	0.00	20.00

Who brings the child to school?

	% of total
Mother	57.67
Father	10.23
Other adult from household	6.51
Other adult not from household	8.84
Other	0.47
None; child travels without adults	5.12
Missing	11.16

Where does adult go after dropping off child at school?

	% of total
Returns home	47.91
Work/school (not at home)	35.81
Shopping or other errands	6.51
No adult; child traveled alone	4.19
missing	5.58

Frequency of how often parent walks in neighborhood by mode of travel to school

	At least 1/day	Few times/week	1/week	Few times/month	Hardly ever	missing
Walk/bike	26.47	35.29	5.88	17.65	8.82	5.88
Private vehicle	7.78	25.15	9.58	19.16	35.33	2.99
Bus/transit	22.22	11.11	0.00	33.33	22.22	11.11
missing	20.00	20.00	20.00	0.00	20.00	20.00



If the child were to walk/bike to and from school (or already walks/bikes to and from school), would they have to do any of the following on their way to/from school? (reporting % of total)

	YES	NO	missing
<b>a.</b> Cross a road with more than 4 lanes of traffic?	15.35	71.16	13.49
<b>b.</b> Cross a road at an intersection that doesn't have a street signal or a stop sign to stop traffic?	33.02	56.28	10.70
<b>c.</b> Cross a road at an intersection without a painted crosswalk?	38.14	48.37	13.49
<b>d.</b> Walk in the road or on the edge of the road because there is no sidewalk?	55.81	33.95	10.23
<b>e.</b> Walk or bicycle along a road or sidewalk that has traffic going more than 30 miles an hour?	58.14	32.09	9.77

## Evergreen Elementary School

### **Contact Information:**

12915 Helmer Dr.  
Whittier, CA 90602  
Dorka Duron, Principal  
562-698-9841 (Phone)  
562-698-6951 (Fax)

School Population: 601  
Average class size: 20.2

### Ethnic Makeup:

Asian: 0.7%  
Hispanic: 96.3%  
African American: 0.2%  
White: 2.2%  
City population (Whittier): 85,900  
U.S. Census Classification: "Urban fringe of a large city"

**Date Observed:** 10/21/02 & 10/23/02

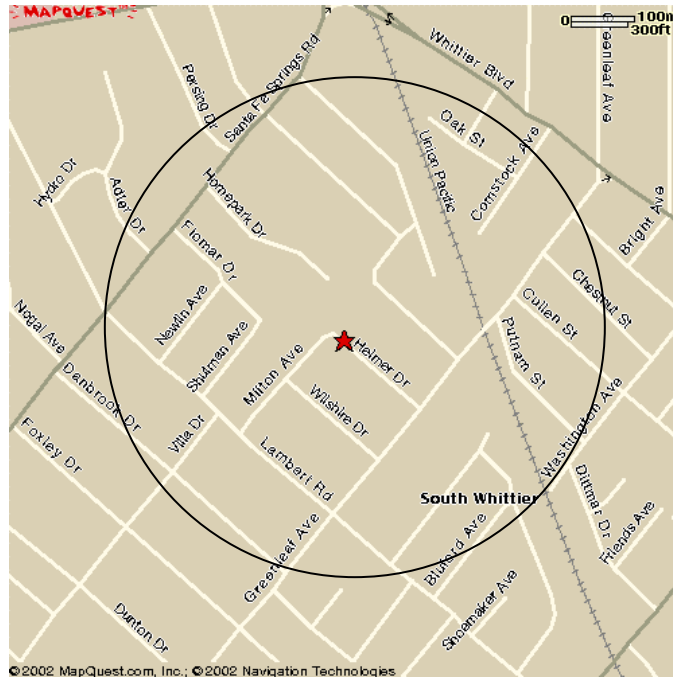
### **Description of the Neighborhood:**

This neighborhood is within the City of Whittier and follows a typical suburban pattern. There is a mix of residential and commercial land uses. Commercial land uses are concentrated on major arterials that are within ¼ mile of Evergreen Elementary School. Uses range from gas stations, food markets, and fast food, to small businesses and churches. The neighborhood is built on a modified grid system.

### **Evergreen Elementary, Whittier: Sidewalk Improvements**

The project proposed will take place on almost 20 of the streets surrounding Evergreen Elementary. Pedestrians currently share these streets with vehicles, as there are only curbs and unlevelled paths on these streets. The proposed project will construct sidewalks as well as pedestrian access ramps at a cost of \$500,000.

**Map:**



Star indicates location of elementary school; Circle represents portion of neighborhood included in the study (approx. 1/4 mile radius from the elementary school)

## Urban Design Observations

### School: EVERGREEN

Perceived Traffic Safety	
Blocks with a complete sidewalk	49%
Blocks with a complete buffered, sidewalk	42%
Blocks with bike lanes	0%
Blocks with bike lanes separated from the street	0%

Perceived Crime Safety	
Blocks with first floor windows visible from the street	79%
Blocks with street lighting	53%
Blocks where abandoned buildings were absent	98%
Blocks where rundown buildings were absent	94%
Blocks where vacant lots were absent	94%
Blocks where graffiti was absent	55%
Blocks where undesirable land uses were absent	98%

Actual Traffic Safety	
Average number of traffic lanes within a block	3
Average street width of a block (in ft.)	44
Average block length of a block (in ft.)	426
Average sidewalk width of a block (in ft.)	5
Blocks with traffic circles	0%
Blocks with bulbouts	0%
Blocks with speed bumps	2%
Blocks with cul-de-sacs	9%
Blocks with medians	11%
Blocks with paving treatments	0%

Walkability	
Blocks with street trees	67%
Blocks with mixed uses	44%
Blocks with public space	0%
Blocks with street furniture	2%

## Traffic Observations

Evergreen Elementary is located on Helmer Drive near Greenleaf Avenue in the city of Whittier. Helmer is a two-lane local street and Greenleaf has four lanes. There is a stop sign for Helmer where it ends at Greenleaf. Speed measurements and vehicle counts were made on both streets

Vehicle volume increased and vehicle speed decreased during both the observation periods. There were few pedestrians.

All of the 36 vehicles yielded to pedestrians or bicyclists with the right of way.

Observation period:	Variable	Baseline 10 minutes	Busy 10 minutes	Change
am	Speed (mi/hr)	32	26	-19%
am	Vehicles (10 min count)	52	136	164%
am	Child pedestrians & bicyclists (10 min count)	1.5	12	667%
pm	Speed (mi/hr)	29	24	-19%
pm	Vehicles (10 min count)	77	112	46%
pm	Child pedestrians & bicyclists (10 min count)	1.5	17	1033%

## Survey Results

# classrooms grades 3-5: 12

# surveys distributed: 310

Response rate: 31%

# surveys returned: 96

	Mean	SD	Median	IQR
Average years of education of parent completing survey	8.96	3.35	9	6
Average age of child who brought survey home	8.99	0.92	9	2

	3rd	4th	5th	other	missing
Grade of child who brought survey home	38.54	32.29	27.08	1.04	1.04

	Male	Female	missing
Sex of child who brought survey home	53.13	42.71	4.17

Frequency household income:

< \$15,000	\$15,001-35,000	\$35,001-55,000	\$55,001-75,000	> \$75,001	missing
19.79	39.58	17.71	4.17	1.04	17.71

How long in U.S.:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
1.04	7.29	9.38	57.29	22.92	2.08

How long in neighborhood:

< 1 year	1-5 years	6-10 years	> 10 years	All my life	missing
7.29	34.38	30.21	25.00	0.00	3.13

	YES	NO	missing
Born in United States	17.71	78.13	4.17
% living w/in 1 mile of school	68.75	18.75	12.50
% living w/in 1/2 mile of school	55.21	32.29	12.50
% living w/in 1/4 mile of school	42.71	44.79	12.50

Mode split

	Walk/bike	Private vehicle	Bus/transit	missing
Trip to school	42.71	50.00	0.00	7.29
Trip from school	44.79	39.58	0.00	15.63

	<1/4 mile	1/4-1/2 mi.	½- 1mi.	> 1 mi.	Not sure	missing
Walk/bike	48.78	7.32	17.07	0.00	12.20	14.63
Private vehicle	37.50	16.67	10.42	14.58	12.50	8.33
Bus/transit	0.00	0.00	0.00	0.00	0.00	0.00
missing	42.86	14.29	14.29	0.00	11.46	12.50

Frequency of mode of travel to school by time from home to school

	< 5 min.	5-10 min.	11-20 min.	> 20 min.	Not sure	missing
Walk/bike	31.71	48.78	12.20	2.44	0.00	4.88
Private vehicle	43.75	41.67	8.33	4.17	0.00	2.08
Bus/transit	0.00	0.00	0.00	0.00	0.00	0.00
missing	28.57	28.57	28.57	0.00	0.00	14.29

Who brings the child to school?

	% of total
Mother	45.83
Father	10.42
Other adult from household	13.54
Other adult not from household	4.17
Other	0.00
None; child travels without adults	7.29
missing	18.75

Where does adult go after dropping off child at school?

	% of total
Returns home	63.54
Work/school (not at home)	22.92
Shopping or other errands	1.04
No adult; child traveled alone	4.17
missing	8.33

Frequency of how often parent walks in neighborhood by mode of travel to school

	At least 1/day	Few times/week	1/week	Few times/month	Hardly ever	missing
Walk/bike	41.46	24.39	2.44	7.32	17.07	7.32
Private vehicle	14.58	25.00	8.33	4.17	43.75	4.17
Bus/transit	0.00	0.00	0.00	0.00	0.00	0.00
missing	28.57	42.86	0.00	0.00	28.57	0.00

*If the child were to walk/bike to and from school (or already walks/bikes to and from school), would they have to do any of the following on their way to/from school? (reporting % of total)*

	YES	NO	missing
<b>a.</b> Cross a road with more than 4 lanes of traffic?	30.21	63.54	6.25
<b>b.</b> Cross a road at an intersection that doesn't have a street signal or a stop sign to stop traffic?	18.75	70.83	10.42
<b>c.</b> Cross a road at an intersection without a painted crosswalk?	18.75	73.96	7.29
<b>d.</b> Walk in the road or on the edge of the road because there is no sidewalk?	33.33	58.33	8.33
<b>e.</b> Walk or bicycle along a road or sidewalk that has traffic going more than 30 miles an hour?	30.21	62.50	7.29



