Harvey Green Elementary School
Fremont School Traffic Safety Assessment
Technical Memo

November 2017

Prepared by Alta Planning + Design

Harvey Green Elementary School

A Traffic Safety Assessment was conducted at Harvey Green Elementary School during the morning arrival on Tuesday, November 7, 2017. The assessment was attended by representatives from the City of Fremont, Fremont Police Department, Alta Planning + Design, and Harvey Green Elementary staff and the parent Safe Routes to School liaison.

School Information

Address	42875 Gatewood Street Fremont, CA 94538	
Morning Bell(s)	8:45 AM (K), 11:45 AM (TK-K), 8:30 AM (1-6) Wednesday: 8:20 AM (TK -K), 8:30 AM (1-6)	
Afternoon Bell(s)	12:25 PM (K), 3:05 PM (TK-K), 2:50 PM (1-6) Wednesday: 11:40 AM (TK-K), 1:00 PM (1-6)	
Grade Levels	TK-6	
Enrollment	485	
School Type (neighborhood or magnet)	Primarily from attendance boundary	
Students' Proximity to School (Percentage of students)	Less than ¼ mile (5-minute walk): 32% Between ¼ and ½ mile (5- to 10-minute walk): 32% Between ½ and 1 mile (10- to 20-minute walk): 32% Greater than 1 mile (more than 20-minute walk): 6%	
Participating School in Alameda County Safe Routes to Schools?	Yes	
Student Travel Mode Info (Percentage of students)	**School Estimate:** Walking: 20% Biking: 10% School bus: 3% Transit: 0% Carpool: 5% Family Vehicle: 62%	**Spring 2016 SR2S Hand Tally:** Walking: 36% Biking: 2% School bus: 1% Transit: 0% Carpool: 9% Family Vehicle: 49% Other: 3%
Does the school have bike racks? What is the capacity? Is it secure bike parking? On a typical day, what percentage of racks are used?	Yes, Green Elementary has bicycle parking. The parking is not located in a secure location. Capacity: 200. On a typical day, 6% of racks were used.	
How do school and transit buses interact with the school?	Bus zone is on the street. Parent pick-up and drop-off is in the parking lot with the staff parking.	

Harvey Green Elementary is located on Gatewood Street in a neighborhood characterized by low-density residential uses. Most of the enrollment area is bounded by the arterials of Blacow Road, Grimmer Boulevard, Fremont Boulevard and Auto Mall Parkway. A small segment, with few residential uses, lies south of Auto Mall Parkway. Most of the bicycle and pedestrian injuries that have occurred within a half mile of the school between 2011 and 2014 occurred outside of the enrollment area, with the exception of one pedestrian collision on Fairwood Street.

Existing Conditions

The following existing conditions were observed or reported by participants during the walk audit.

1. Michael Avenue/Gatewood Street

- The team observed that vehicles would speed on Gatewood Street, specifically through the intersection of Michael Avenue, which is uncontrolled. The intersection currently has transverse crosswalks on two approaches (across Gatewood Street).

The intersection of Michael Avenue currently has crosswalks on two approaches.

2. Gatewood Street/Delaware Drive

- The intersection of Gatewood Street and Delaware Drive had high volumes of pedestrian traffic. Between 8:10 AM and 8:30 AM the project team observed about 70 students, 40 adults, and 8 bikes using this intersection. The intersection currently has a crossing guard facilitating safer crossings.
- The intersection has transverse crosswalks on three approaches, but not on the southern approach of Gatewood Street.

3. Delaware Drive

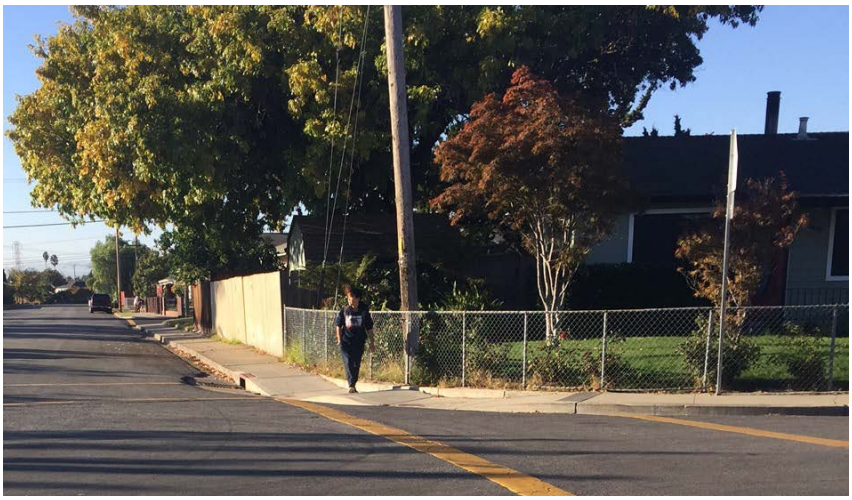
- The markings on the two speed humps along Delaware Drive between Gatewood Street and Cedarwood Drive are non-compliant with the CA MUTCD.

4. Gatewood Street/Doane Street

- School staff and the parent liaison noted that Doane Street at Gatewood Street is difficult to cross as a pedestrian. The intersection serves as a crossing point for students who live in the Southlake neighborhood. The intersection is currently a one-way stop.

5. Wixon Drive School Entrance

- The project team observed that parents often dropped their kids off on Wixon Drive and let students enter school premises through gates on either side of the baseball fields. The back entrance paths are both dirt, and school staff noted that the paths can get muddy and more difficult to use in winter weather.
- Vehicles parked on either side of Wixon Drive in close proximity to the two gate openings. The team observed vehicles doing U-turns and driving on the wrong side of the road to park on the curb adjacent to the school property.
- Some students and families were observed walking from Cherrywood Avenue or Cedarwood Drive and entering the school from the Wixon Drive entrance.



Student walking down Cedarwood Avenue to access Wixon Drive entrance.

6. Cedarwood Drive/Wixon Drive

- Many vehicles turning onto Wixon Drive from Cedarwood Drive failed to yield to pedestrians or fully stop at stop sign.

7. Cherrywood Avenue/Wixon Drive

- Vehicles turning onto Wixon Drive from Cherrywood Avenue failed to yield to pedestrians in crosswalk. This intersection is currently an uncontrolled intersection.

8. Drop-Off Loop

- During the morning drop-off, the loop was used with minimal congestion or backup for vehicles. Vehicles did back up occasionally on the loop when a car would try to take a left out of the loop onto Gatewood Street.

9. Bike Parking

- Green Elementary has a large area for bike parking with bike racks and capacity for up to 200 bikes. Currently the bike parking area is unsecured with a gate around most of the enclosure, except for an opening towards the school property.
- School staff remarked that they have had problems with other people stealing bikes from the unsecured bike parking area.

Recommendations

Recommendations to improve infrastructure or operations surrounding Green Elementary can be seen on the conceptual improvement plan found on the following page. Engineering cost estimates for the infrastructure recommendations are also provided.

The following improvements are recommendations for policy and program implementation at Green Elementary School to increase safety and active commutes to school.

Policy & Program Recommendations

- Distribute Recommended Walk/Bike Maps to students and their families in an effort to promote walking and biking to school on suggested routes. Safety tips are also included on these maps to promote good behavior among bicyclists, pedestrians, and drivers. SR2S resources would be very useful in creating these documents.
- Work with parents to connect them with others who live nearby to increase the number of students carpooling, which may reduce the number of vehicles coming to campus. Similarly, Walking School Buses and Bike Trains can be established with the same type of coordination.
- Continue to participate in SR2S events, including Bike Rodeos, Pedestrian Safety Rodeos, and the Rock the Block Assembly.
- Continue to participate in SR2S evaluations each fall and spring to monitor progress on mode shift goals.
- Send regular reminders to parents regarding the drop-off and pick-up location options and encourage parents to use the relatively underutilized drop-off space along Wixon Drive.

Sign-In Sheet

PROJECT Fremont School Traffic Safety Assessments

SUBJECT Green Elementary

DATE November 7, 2017

Name	Organization/Affiliation	Email Address
Beth Martin	Alta Planning	bethmartin@altaplanning.com
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Fremont School Traffic Safety Assessment
Green Elementary School
Preliminary Cost Estimate

Alta Planning + Design *6/4/2018*

Traffic Safety Improvements - *City of Fremont Recommendations*

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT COST	COST
1	Mobilization	1	LS	$23,300	$23,300
2	Traffic Control	1	LS	$23,300	$23,300
3	High Visibility Crosswalk	22	EA	$2,000	$44,000
4	Curb Extension & Ramp	4	EA	$40,000	$160,000
5	STOP Bar and Pavement Marking	10	EA	$400	$4,000
6	Speed Hump Pavement Markings (Renew)	2	EA	$500	$1,000
7	Speed Humps	1	EA	$6,000	$6,000
8	All Way Stop Intersection and Study	3	EA	$6,000	$18,000
			SubTotal Items		**$279,600**
			CONSTRUCTION CONTINGENCY	20%	$55,900
			Total		**$335,500**

Traffic Safety Improvements - *Fremont Unified School District Recommendations*

ITEM NO.	DESCRIPTION	ESTIMATED QUANTITY	UNIT	UNIT COST	COST
1	Mobilization	1	LS	$9,500	$9,500
2	Traffic Control	1	LS	$9,500	$9,500
3	Sign and Post Assembly	10	EA	$500	$5,000
4	Painted Curb Marking	1	LS	$3,000	$3,000
5	Bike SPA (Secured Parking Area)	1	LS	$15,000	$15,000
6	DG Path [Optional]	7,200	SF	$10	$72,000
ALTERNATIVE 1			**SubTotal Items (Optional Items Not Included)**		**$42,000**
			CONSTRUCTION CONTINGENCY	20%	$8,400
			Total		**$50,400**
ALTERNATIVE 2			**SubTotal Items (Optional Items Included)**		**$114,000**
			CONSTRUCTION CONTINGENCY	20%	$22,800
			Total		**$136,800**

Traffic Safety Improvements - All Recommendations		
City of Fremont Recommendations	*Total*	$335,500
Fremont Unified School District Recommendations (Without Optional Items)	*Total*	$50,400
All Recommendations	**Total**	**$385,900**
City of Fremont Recommendations	*Total*	$335,500
Fremont Unified School District Recommendations (With Optional Items)	*Total*	$136,800
All Recommendations	**Total**	**$472,300**

Green Elementary
Fremont DRAFT
Safe Routes to Schools Improvement Plan

Site Assessment held November 2017

1 Gatewood Street
- Install speed hump in advance of intersection of Gatewood Street with Michael Avenue

2 Gatewood Street/Michael Avenue
- Install high visibility crosswalks on all approaches. Install advance stop bars on eastern approach of Michael Avenue
- Conduct an all-way stop warrant study to determine stop sign feasibility
- Install curb extensions at the two eastern corners

3 Homewood Street
- Enhance the existing transverse crossings of Homewood Street at Michael Avenue and Delaware Drive to high visibility crosswalks

4 Gatewood Street/Delaware Drive
- Install high visibility crosswalks at all approaches and advance stop pavement markings approaches on Delaware Drive

5 Delaware Drive
- Update two crosswalks along Delaware Drive with high visibility crosswalks

6 Gatewood Street/Doane Street
- Create 4-way stop at Doane Street and Gatewood Street, and provide high visibility crosswalks and advance stop bars for all approaches

7 Cedarwood Drive/Wixon Drive
- Upgrade existing crossing to a high visibility crosswalk and advance stop pavement marking across Cedarwood Drive.
- Upgrade existing crosswalk to a high visibility crosswalk across Wixon Drive
- Conduct an all-way stop warrant study to determine stop sigh feasibility

8 Cherrywood Avenue
- Install high visibility crosswalk on Cherrywood Avenue at Wixon Drive
- Install high visibility crosswalk across Fairwood Street at Cherrywood Avenue

9 Fairwood Street
- Install high visibility crosswalks across Fairwood Street at both Gatewood Street approaches and both Cedarwood Drive approaches

10 Drop-Off Loop
- Install "No Left Turn" Sign at the Drop-off loop exit to prevent further vehicle congestion at the Gatewood Street/Michael Avenue intersection

11 Bike Parking
- Install secure bike parking at existing bike parking location

12 Wixon Drive School Entrance
- Consider adding crushed gravel or other weather resistant surface for two unpaved paths on campus
- Along Wixon Drive, install white curb and loading zone signage to formalize the curb as a drop-off location

Green Elementary

Michael Avenue

Gatewood Street

Homewood Street

Cherrywood Avenue

Wixon Drive

Delaware Drive

Cedarwood Drive

Fairwood Street

- # City of Fremont Recommendation
- # Fremont Unified School District Recommendation
- Existing Crossing Guard Location
- Existing School Access Point
- Existing Bike Parking
- Existing Speed Hump
- Recommended High-Visibility Crosswalk
- Recommended Curb Extension
- Recommended Advanced Stop Pavement Marking
- Recommended Speed Hump
- Recommended Pedestrian Path
- Recommended Stop Sign Warrant Study

0 200 ft

N

Improvements not to scale

The above items are recommendations only and based on Safe Routes to Schools site assessment best practices. Feasibility determination, final design, accessibility, funding, and implementation of any recommended improvements is the responsibility of the appropriate governing agency.