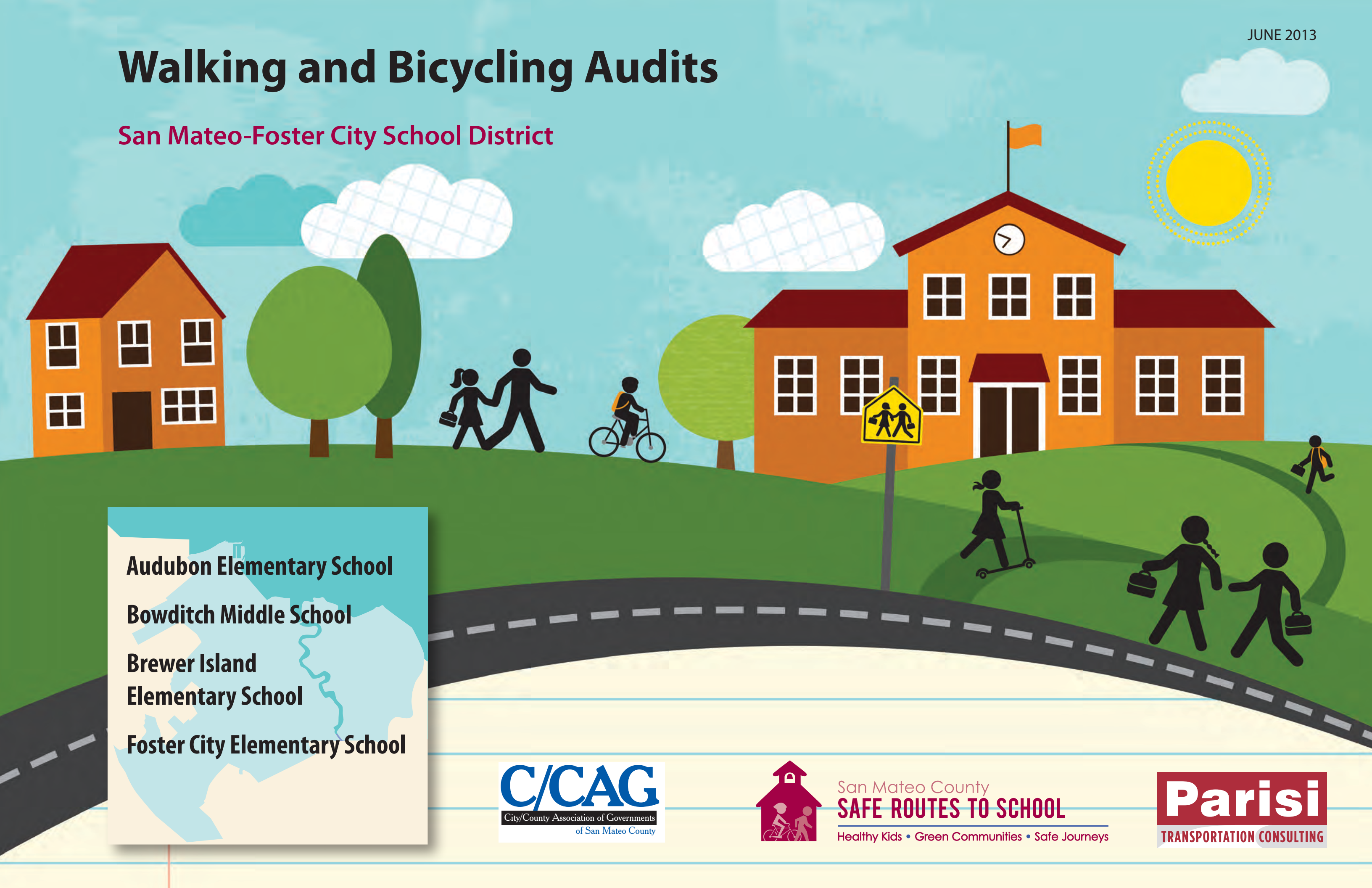


Walking and Bicycling Audits

San Mateo-Foster City School District



Audubon Elementary School

Bowditch Middle School

Brewer Island
Elementary School

Foster City Elementary School



San Mateo County
SAFE ROUTES TO SCHOOL

Healthy Kids • Green Communities • Safe Journeys



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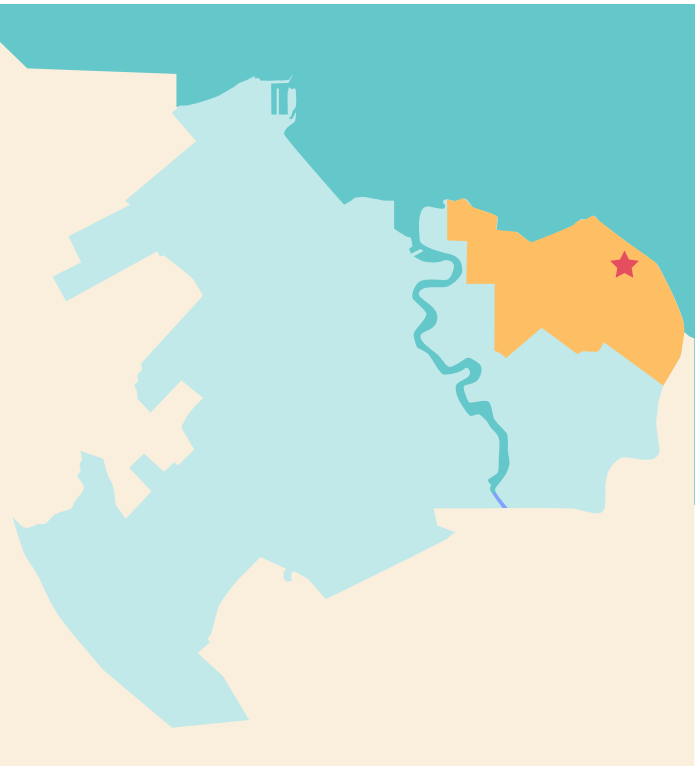
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Audubon Elementary School Walking and Biking Audit



School Information

Audubon Elementary School is located at 841 Gull Avenue in a residential neighborhood of Foster City. All streets immediately surrounding the school are two-lane roadways with on-street parking.

During the 2012–2013 school year, 629 students were enrolled in Kindergarten through 5th grade from all over Foster City.

Passenger pick-up and drop-off occurs in a formal loading loop accessed from Crane Avenue and on the street at Gull Avenue and Avocet Court.

Bell Schedule

Grade	Morning	Afternoon
Kindergarten	8:20	12:20
1 - 3	8:20	2:40 12:41
4 - 5	8:20	3:00 12:45

Safe Routes to School Survey

A parent survey was conducted at Audubon Elementary School during the Fall 2012 semester, with 136 responses were collected. Key findings are reported below:

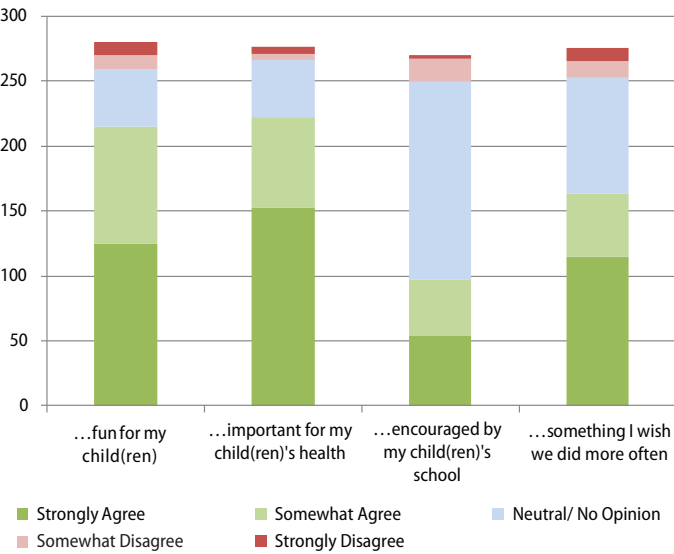
➔ **Riding in family vehicle and walking are the most common modes of travel:** Asked about their travel patterns, 19 percent of parents responded that their child walks to and from school. Sixty-nine percent are driven in a family vehicle. Carpooling accounts for approximately eight percent of trips.

➔ **Travel distances are further than for other Foster City elementary schools:** Although 31 percent of students live within a quarter mile of the school site, 44 percent live at least a mile away. Eight percent of students travel more than two miles to school.

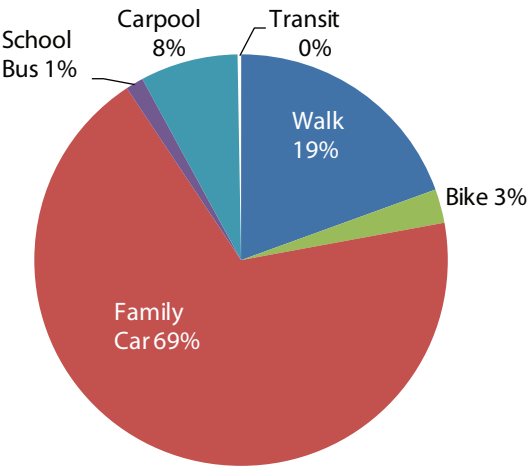
➔ **There is interest in walking and bicycling to school:** Most respondents cited that walking and bicycling is fun for their children and important for their children's health. However, a majority of respondents were neutral when asked whether walking and bicycling was encouraged by their child's school.

➔ **Traffic considerations are a high priority:** Parents cited "Unsafe Intersections" as a primary barrier preventing them from allowing their children to walk and bike to school more often. Unique to Audubon Elementary, distance from school is another significant challenge.

Walking or biking to school is... (n= 280)

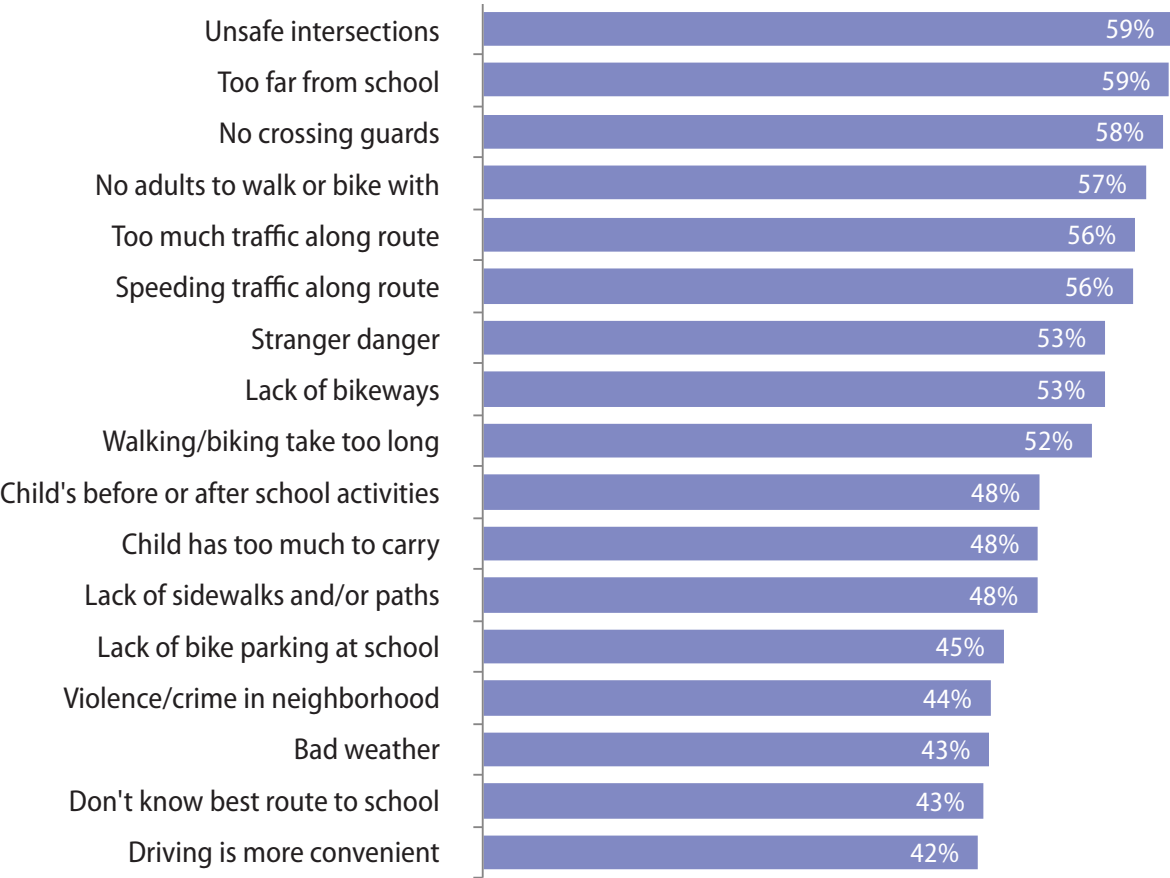


Mode split for all school trips (n= 1,355)



Source MTC Safe Routes to Schools Parent Survey, 2012

Would you allow your children to walk/bike more often if this concerned were addressed?



Walking and Bicycling Audit

A walking and bicycling audit was held on the morning of March 19, 2013. Staff representing the City of Foster City and the San Mateo - Foster City School District attended the audit, along with the school principal and several parents of school attendees.

Audit participants observed the morning arrival period, including travel behavior by pedestrians, bicyclists, and motorists, and transportation infrastructure issues at the school site and surrounding neighborhood. Photos are shown on the following page.

Infrastructure Observations

SCHOOL GROUNDS:

- ➔ School staff reported that approximately 12 bicyclists park daily at a bke rack on the east side of the school parking lot and loading zone:
- ➔ The proximity of the loading zone entrance to the intersection of Crane Avenue and Egret Street causes some delay as motorists were observed blocking the intersection and crosswalks.
- ➔ An open lane connects the loading zone entrance with the school grounds. No motorists were observed using the lane.
- ➔ A fence running the lgnth of the property line prevents pedestrian access at any location other than a narrow gate.
- ➔ Yellow curb paint denotes the passenger loading zone; the California Vehicle Code calls for white.

CRANE AVENUE AT EGRET STREET:

- ➔ All intersection legs are uncontrolled.
- ➔ There are no curb ramps for the crosswalks at this intersection.
- ➔ One parking space is reserved along the school side, generally used by residents of the nearest home.
- ➔ Stencils and signage appropriately indicate the uncontrolled pedestrian crossing.

GULL AVENUE:

- ➔ High parking occupancy on Gull Avenue was observed.
- ➔ A crossing guard is stationed at the uncontrolled pedestrian crossing of Gull Avenue.

CONNECTING PATHWAYS:

- ➔ The gate at Swan Street is permanently opened. It is slated to be replaced with a closing gate.
- ➔ Pathways on both sides of the school connect to extended off-street pathway networks.

Behavior Observations

PASSENGER LOADING ZONE:

- ➔ One school staff member assists at the passenger loading zone.
- ➔ Motorists were observed failing to pull forward to drop off their students, especially closer to bell time. In some instances, students disembarked in the driveway before entering the loop.
- ➔ Motorists were observed dropping students off on both sides of Crane Avenue
- ➔ Left turning vehicles into and out of the loading zone caused delay
- ➔ Parents were reported speeding into the passenger loading zone from Crane Avenue.

GULL AVENUE:

- ➔ School staff reported that some motorists do not obey the crossing guard on Gull Avenue. Motorists were reported to continue through the intersection before the crossing guard returned to the curb.

Improvement Plan

Recommendations for the school area appear in the following pages.

Observations



A motorist observed pausing in a crosswalk to drop off a student.



Many crossing locations for students lack curb ramps



Crane Avenue serves both walking and driving trips.



Drivers do not always yield to pedestrians in the crosswalk.



The presence of school staff managing the loading zone on Crane Avenue is important for the smooth operation of the facility.



Passenger loading zones should be demarcated with white curb paint.



Outdated signage exists at many locations around the school site.



Uncontrolled transverse crosswalks can be difficult for motorists to see without additional crossing treatments.



Adjacent vegetation can obstruct visibility of school area signage.



Pathways through parks and at midblock locations provide students with opportunities to shorten their walking distance.



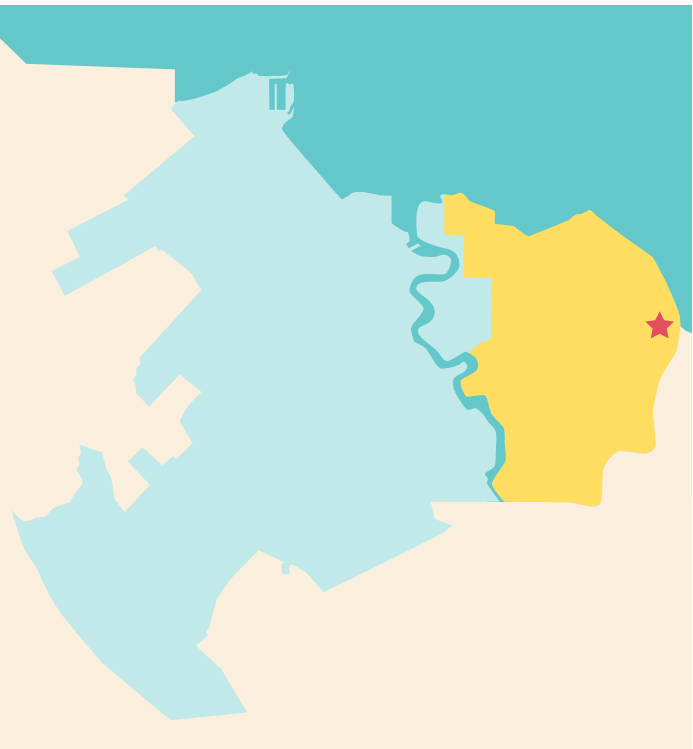
Congestion from the loading zone can present challenges to pedestrians as well as motorists.



Congestion on Crane Avenue resulting from school drop-off.



Bowditch Middle School Walking and Biking Audit



School Information

Bowditch Middle School is located at 1450 Tarpon Street in a residential neighborhood of Foster City.

In 2012–2013, 852 students are enrolled from all over Foster City. The school is situated along the Bay shoreline served by a multi-use path. Beach Park Boulevard, a four-lane road, separates the school from the path.

Passenger pick-up and drop-off occurs in a formal loading loop on Tarpon Street and an on-street passenger loading loop on Beach Park Boulevard.

Bell Schedule

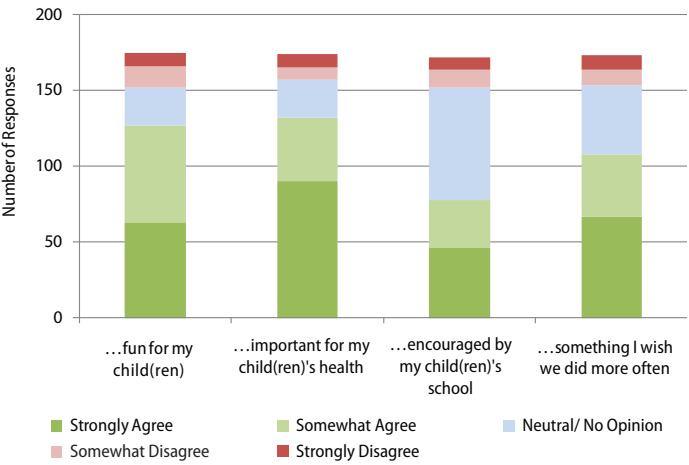
Grade	Morning	Afternoon
6–8	8:20	3:00
6–8 Wednesday	8:20	1:40

Safe Routes to School Survey

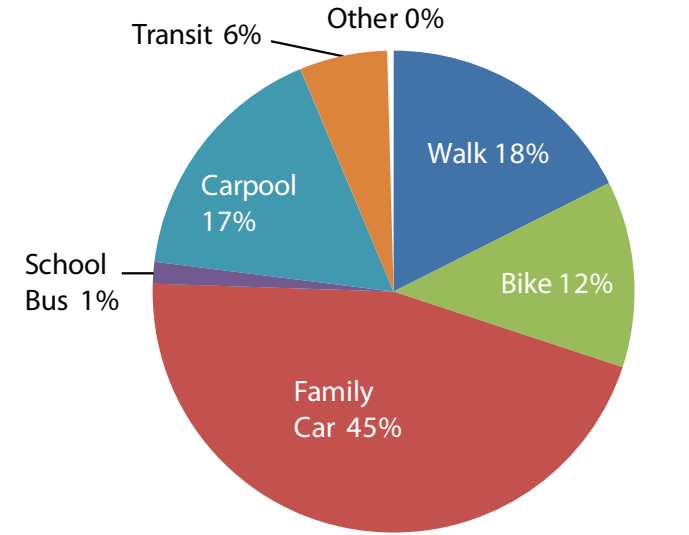
A parent survey was conducted at Bowditch Middle School during the Fall 2012 semester; 285 responses were collected. Key findings are reported below:

- ➔ **A minority of students are driven to school alone:** While 45 percent of students are driven to school in a family vehicle, 17 percent carpool, 18 percent walk, and 12 percent bike. The percentage of students using these modes of transportation is highest for schools in the city.
- ➔ **A majority of students live at least a mile from school:** Only 21 percent of students live within a half mile from school. Fifty-eight percent of students live more than a mile from school. The high use of non-motorized modes of transportation and carpooling suggests that distance need not prevent walking and bicycling.
- ➔ **There is interest in walking and bicycling to school:** A majority of parents indicated that walking and bicycling to school was something that they did more often, with large majorities citing that walking and bicycling is fun for their children and important for their children’s health.
- ➔ **Middle school students have unique considerations for walking and bicycling:** Parents most commonly cited the amount of things their child must carry (73 percent) as a concern that discouraged walking and bicycling. Traffic considerations, including traffic speed and volume, were cited by large majorities.

Walking or biking to school is... (n = 175)

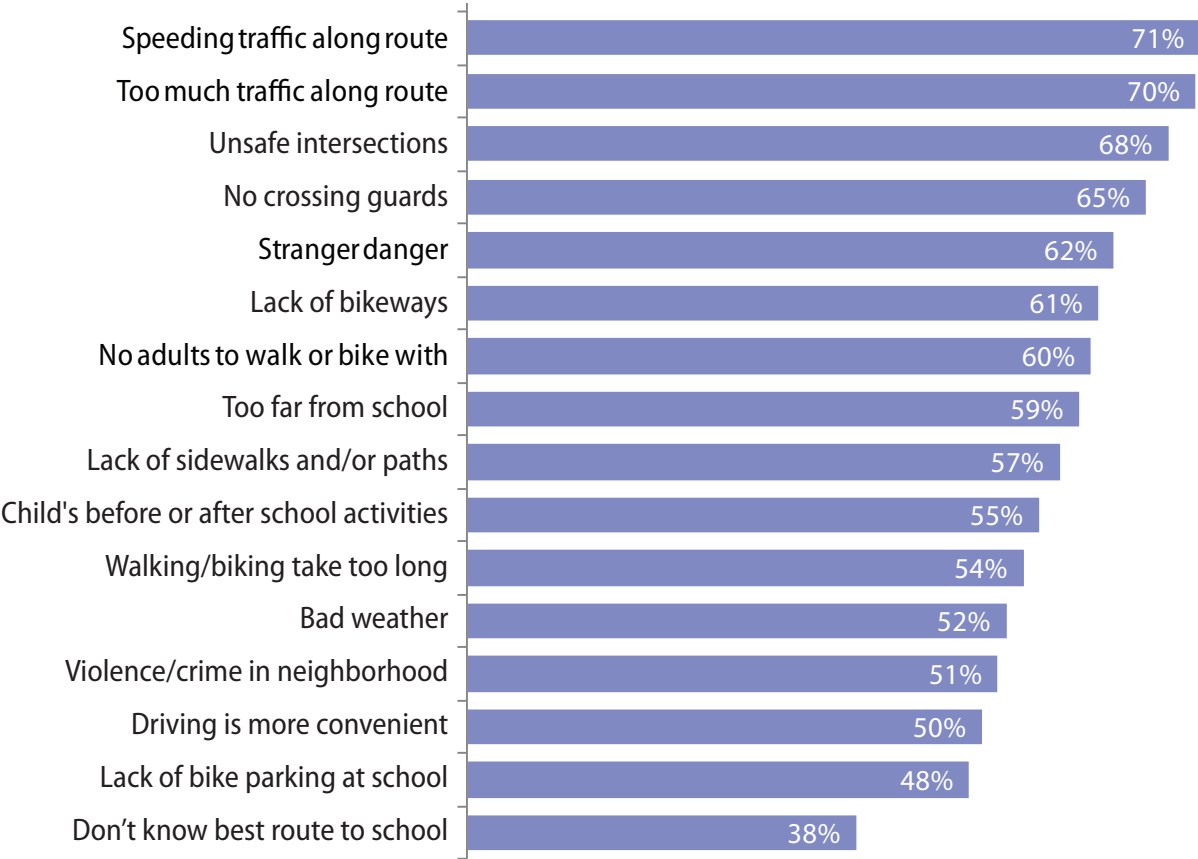


Mode split for all school trips (n= 1,355)



Source MTC Safe Routes to Schools Parent Survey, 2012

Would you allow your children to walk/bike more often if this concerned were addressed?



Walking and Bicycling Audit

A walking and bicycling audit was held on the morning of January 31, 2013. Staff representing the City of Foster City and the San Mateo - Foster City School District attended the audit, along with the school principal and several parents of school attendees.

Audit participants observed the morning arrival period, including travel behavior by pedestrians, bicyclists, and motorists, and transportation infrastructure issues at the school site and surrounding neighborhood. Photos are shown on the following page.

Infrastructure Observations

BEACH PARK BOULEVARD

- ➔ Beach Park Boulevard has two wide travel lanes in each direction.
- ➔ Significant unused capacity on the roadway encourages excessive vehicle speeds.
- ➔ Speed feedback devices and school area signage are currently used to manage traffic flow.
- ➔ Many recreational walkers and bicyclists observed on the multi-use path east of Beach Park Boulevard.

SWORDFISH STREET

- ➔ Curb paint and pavement markings are in excellent condition.
- ➔ Many intersections lack curb ramps.
- ➔ The street does not have lane markings.

TARPON STREET

- ➔ High vehicle volumes were observed on Tarpon Street with motorists entering and exiting the passenger loading area.
- ➔ Parking at the uncontrolled intersection of Tarpon Street and Ribbon Street reduces visibility for motorists and pedestrians.

Behavioral Observations

SCHOOL GROUNDS

- ➔ Congestion in the school loading zone presents obstacles to pedestrians.

BEACH PARK BOULEVARD

- ➔ Students were observed walking, bicycling, skateboarding, and being dropped off on the sidewalk along Beach Park Boulevard.
- ➔ High vehicle speeds were observed along Beach Park Boulevard.

TARPON SREET

- ➔ Students were observed crossing Tarpon Street outside the crosswalk, maneuvering amid high volumes of school drop-off traffic.
- ➔ Bicycle riding along the sidewalk was observed.
- ➔ Tarpon Street is heavily parked, with parked cars observed close to the crosswalk at Ribbon Street.

SWORDFISH STREET

- ➔ Motorists were observed doing U-turns after dropping students off on Swordfish Street.

Improvement Plan

Recommendations for the school area appear in the following pages.

Observations



A key pedestrian crossing connects an off-street path with the school neighborhood.



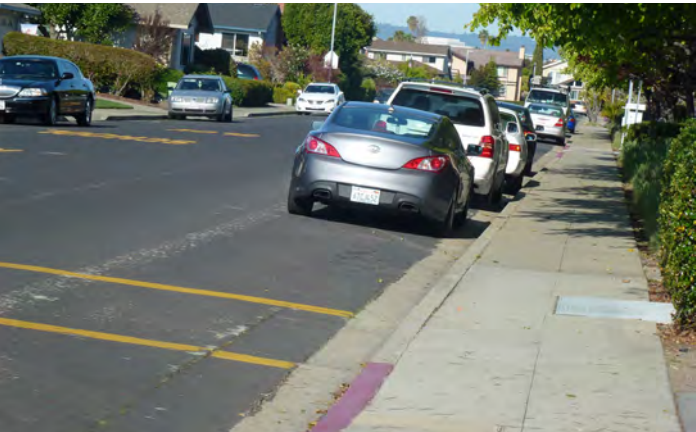
Heavy traffic on Tarpon Street.



Bicycle riding along Tarpon Street's sidewalk.



Vegetation obscuring signage along Swordfish Street.



Curb ramps are missing from several pedestrian crossings adjacent to the school site.



Students walking along Tarpon Street and crossing midblock to access the school site.



Red striping at key locations may discourage motorists from parking at corners and obstructing crosswalks.



Passenger loading zone along Beach Park Boulevard provides access to the back side of Bowditch Middle School.



A student navigating through congested vehicles in the school parking lot.



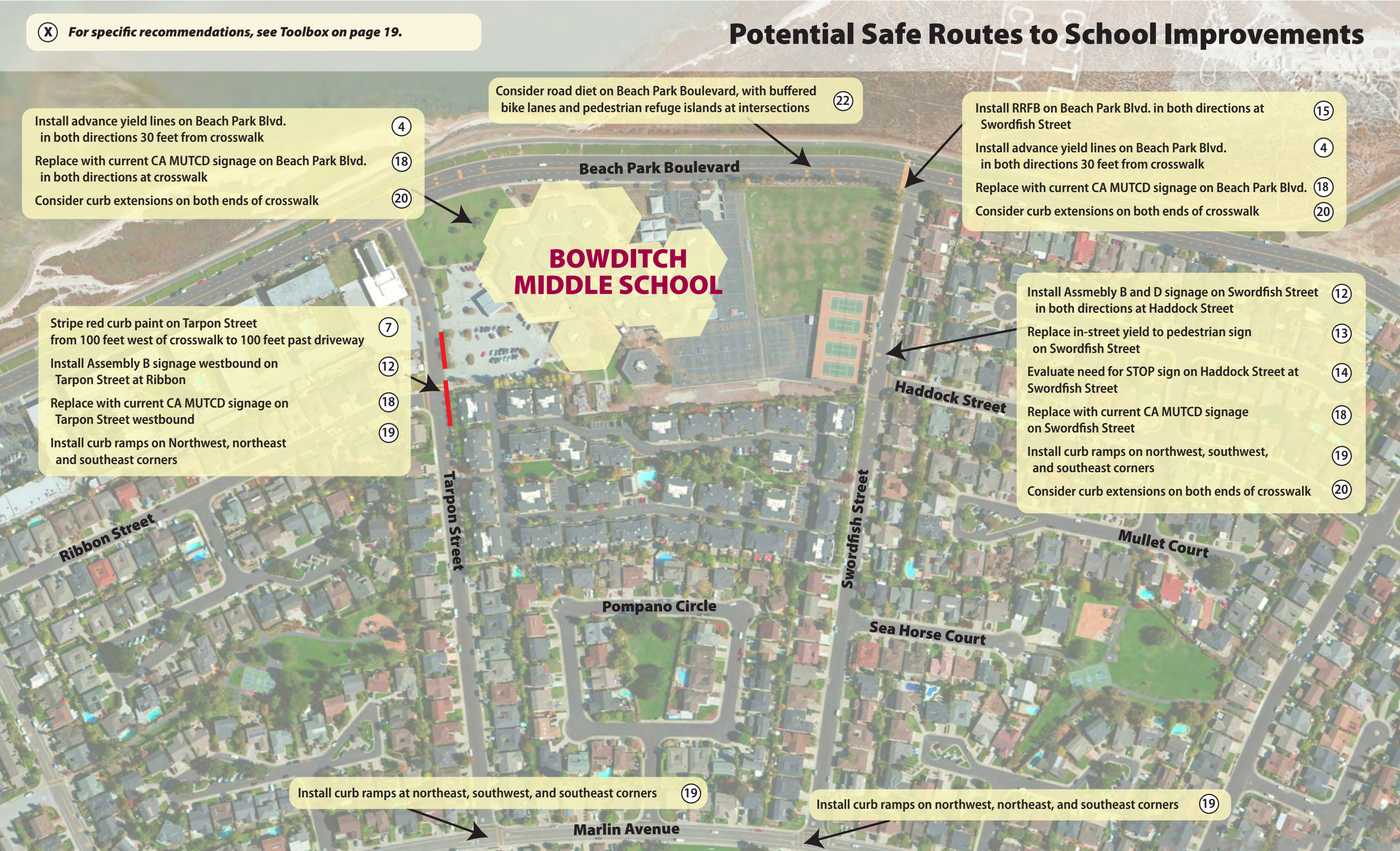
Wide turning radii at intersections can result in higher vehicle speeds.



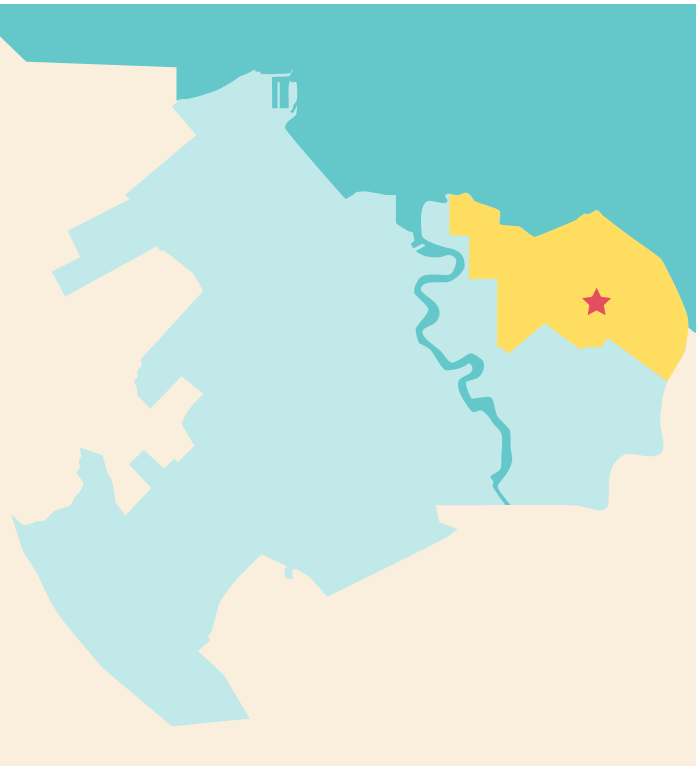
Pedestrian path provides access to the school from the crosswalk on Tarpon Street.



Beach Park Boulevard has four wide lanes and significant unused capacity.



Brewer Elementary School Walking and Biking Audit



School Information

Brewer Island Elementary School is located at 1151 Polynesia Drive in a residential neighborhood of Foster City.

During the 2012–2013 school year, 710 students were enrolled from all over Foster City. The school has numerous access points that shorten walking distance, including pathways connecting to Niantic Drive and Ranger Circle.

Passenger pick-up and drop-off occurs in a formal loading loop on Polynesia Drive and was observed at the two rear gates.

Bell Schedule

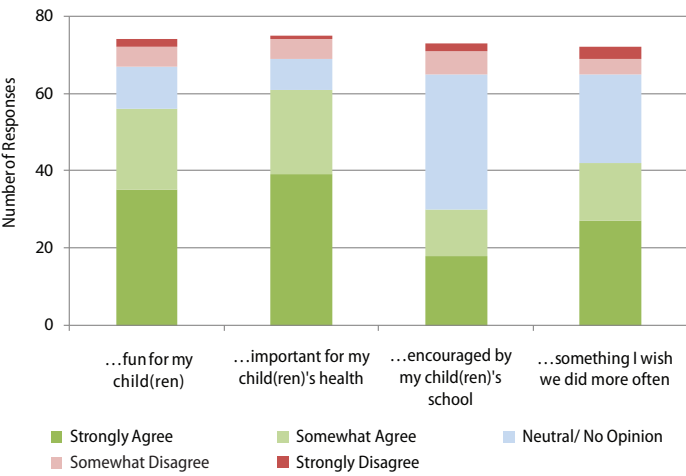
Grade	Morning	Afternoon
Kindergarten	8:00 9:05	11:35 12:40
1 - 3	8:00	2:40
4 - 5	8:20	2:40

Safe Routes to School Survey

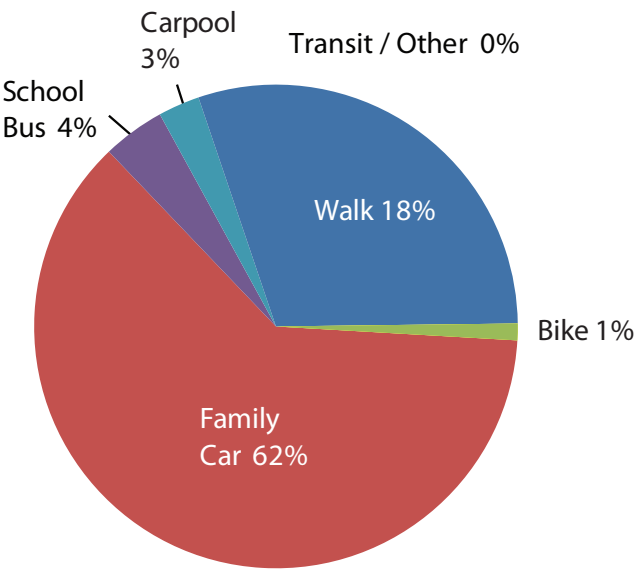
A parent survey was conducted at Brewer Island Elementary School during the Fall 2012 semester; 136 responses were collected. Key findings are reported below:

- ➔ **Riding in family vehicle and walking are the most common modes of travel:** Asked about their travel patterns, 30 percent of parents responded that their child walks to and from school. Sixty-two percent are driven in a family vehicle. School buses are used for about seven percent of afternoon trips, but no morning trips.
- ➔ **Most students live within easy walking and bicycling distance from school:** Thirty-nine percent of students live within a quarter mile from school, and 52 percent within a half mile. Only six percent of students travel more than two miles to school.
- ➔ **There is interest in walking and bicycling to school:** A majority of parents indicated that walking and bicycling to school was something that they did more often, with large majorities citing that walking and bicycling is fun for their children and important for their children's health.
- ➔ **Traffic considerations are a high priority:** Barriers most frequently cited that prevent parents from allowing their children to walk and bike to school more often included "Unsafe intersections" (59 percent), "No adults to walk or bike with" (58 percent), and "Speeding traffic along route" (58 percent).

Walking or biking to school is... (n = 280)

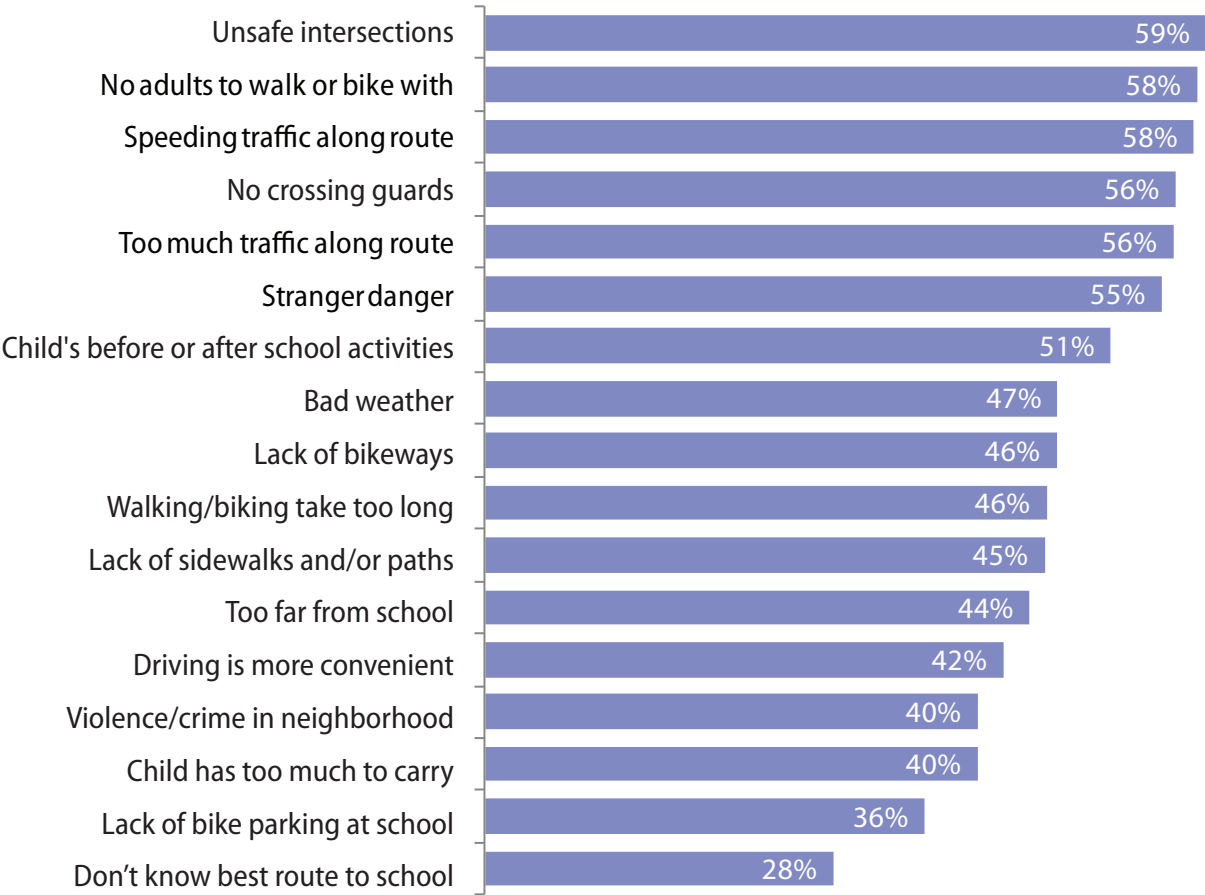


Mode split for all school trips (n= 1,355)



Source MTC Safe Routes to Schools Parent Survey, 2012

Would you allow your children to walk/bike more often if this concerned were addressed?



Walking and Bicycling Audit

A walking and bicycling audit was held on the morning of March 7, 2013. Staff representing the City of Foster City and the San Mateo - Foster City School District attended the audit, along with the school principal and several parents of school attendees.

Audit participants observed the morning arrival period, including travel behavior by pedestrians, bicyclists, and motorists, and transportation infrastructure issues at the school site and surrounding neighborhood. Photos are shown on the following page.

Infrastructure Observations

PARKING LOT/ LOADING ZONE

- ➔ The passenger loading loop functioned with little observed delay. A police officer was present. The principal monitors the loading zone once a week and assigns staff to monitor once or twice per week.
- ➔ Vegetation obstructs visibility for vehicles exiting the west parking lot.

POLYNESIA DRIVE

- ➔ Parents and children were observed jaywalking.
- ➔ Curb ramps are missing along Polynesia Drive. These include intersections with Foster City Boulevard, Comet Drive, Nina Drive, and Niantic Drive.
- ➔ Deteriorating curb paint along Polynesia Drive does not adhere to California Vehicle Code standards. Passenger loading should be indicated with white paint.
- ➔ A multi-use path enters Polynesia Drive from the south with no curb ramp or crossing treatment. Path users either jaywalk or walk to Niantic Drive.

NIANTIC DRIVE

- ➔ A small parking area off Niantic Drive serves Erckenbrack Park. Many parents were observed parking here and using the marked crosswalk to access a back entrance to the school.

POLYNESIA DRIVE AT FOSTER CITY BOULEVARD

- ➔ Foster City Boulevard is uncontrolled.

- ➔ Lane configuration consists of two lanes in each direction, a two-way left turn lane, and a median that is too narrow to serve as a pedestrian refuge.
- ➔ Visibility for vehicles turning onto Foster City Boulevard is obstructed.
- ➔ There are no marked crosswalks or curb ramps at this intersection.

BACK ENTRANCES

- ➔ Rear entrance gates are closed 15 minutes after the last arrival bell.
- ➔ Students approach the Balclutha gate from an uncontrolled crosswalk with an in-street yield paddle.
- ➔ Ranger Circle was heavily parked, ostensibly with school traffic.

Behavioral Observations

PASSENGER LOADING ZONE

- ➔ The passenger loading zone appeared to operate smoothly with most adults pulling forward as requested. A police officer was present.

POLYNESIA DRIVE

- ➔ Many motorists were observed parking on the far side from the school and walking across with their children, usually outside of crosswalks.
- ➔ School community appreciates the crossing guard at Niantic Drive.

POLYNESIA DRIVE AT FOSTER CITY BOULEVARD

- ➔ School staff reported that many pedestrians choose to cross at this location instead of signals at Balclutha Drive and Bounty Drive.
- ➔ Traffic speeds on Foster City Boulevard make pedestrian crossings challenging.

Improvement Plan

Recommendations for the school area appear in the following pages.

Observations



Students and parents were both observed crossing Polynesia Drive outside of crosswalks.



A crossing guard assists students crossing Polynesia Drive at the intersection with Niantic Drive.



A visible police presence during passenger pick-up and drop-off can encourage good driver behavior.



Without additional treatments to increase crosswalk visibility, drivers may not always yield to pedestrians in the crosswalk.



Outdated signage at schools throughout Foster City.



Many crosswalks around Brewer Island Elementary School are missing curb ramps.



The school uses traffic cones to prevent encroachment on the bus stop.



Students attempting to cross Foster City Boulevard at the uncontrolled location on Polynesia Drive.



Faded curb paint does not clearly communicate parking restrictions on the curb.



In-street signage at the uncontrolled crossing on Niantic Drive increases visibility.



Nina Lane is on the walking route for many students. There are currently no marked crosswalk or curb ramps.



Students crossing the wide plaza in front of the school.



Foster City Elementary School Walking and Biking Audit



School Information

Foster City Elementary School is located at 461 Beach Park Boulevard in a residential neighborhood of Foster City. Edgewater Boulevard, a four-lane roadway with a wide median, borders the school on the east.

During the 2012-2013 school year, 771 students were enrolled from all over Foster City. The school is located adjacent to a park and its facilities are the newest in Foster City.

Passenger pick-up and drop-off occurs in two formal loading loops on Edgewater Boulevard and Beach Park Boulevard and the school has instituted a student number system to improve efficiency of passenger pick-up.

Bell Schedule

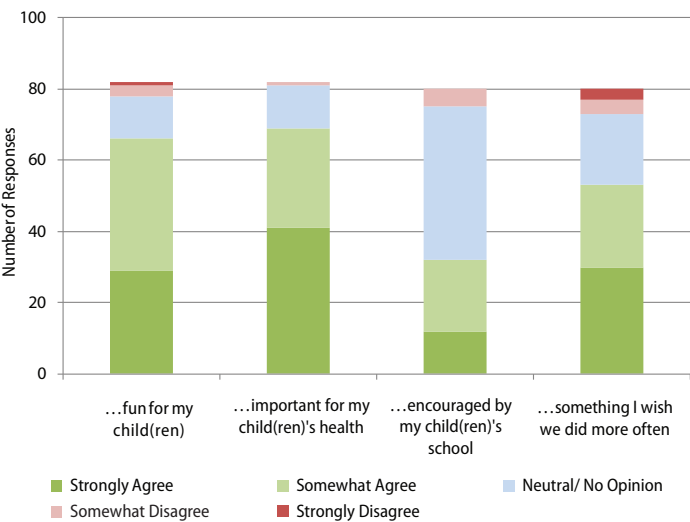
Grade	Morning	Afternoon
Kindergarten	8:20	12:30
1 - 3	8:20	2:40
4 - 5	8:05	2:45

Safe Routes to School Survey

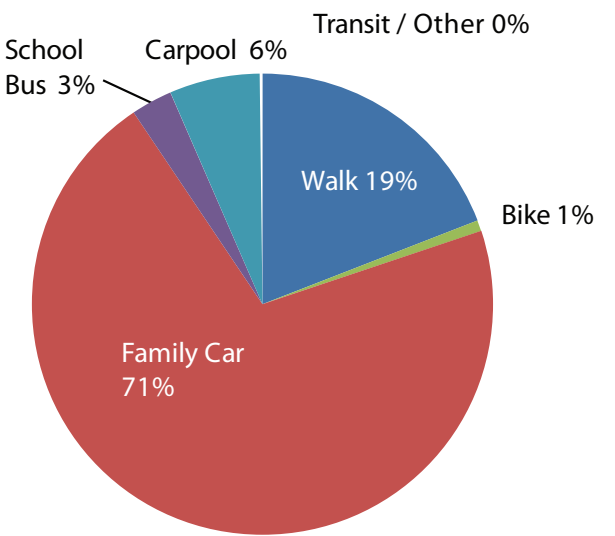
A parent survey was conducted at Foster City Elementary School during the Fall 2012 semester; 161 responses were collected. Key findings are reported below:

- ➔ **Riding in family vehicle and walking are the most common modes of travel:** Asked about their travel patterns, 19 percent of parents responded that their child walks to and from school. Seventy-one percent are driven in a family vehicle. Carpooling accounts for nine percent of trips, especially afternoon trips.
- ➔ **Students are spread throughout Foster City, but most live within easy bicycling distance from school:** Forty-four percent of students live within a half mile from school, and 76 percent within a mile. Only two percent of students travel more than two miles to school.
- ➔ **There is interest in walking and bicycling to school:** A majority of parents indicated that walking and bicycling to school was something that wished they did more often, with large majorities citing that walking and bicycling is fun for their children and important for their children's health.
- ➔ **Traffic considerations are a high priority:** The six barriers most frequently cited preventing parents from allowing their children to walk and bike to school are traffic related, with large majorities indicating they would allow their child to walk or bike more often if speed and volume of traffic were addressed.

Walking or biking to school is... (n = 82)

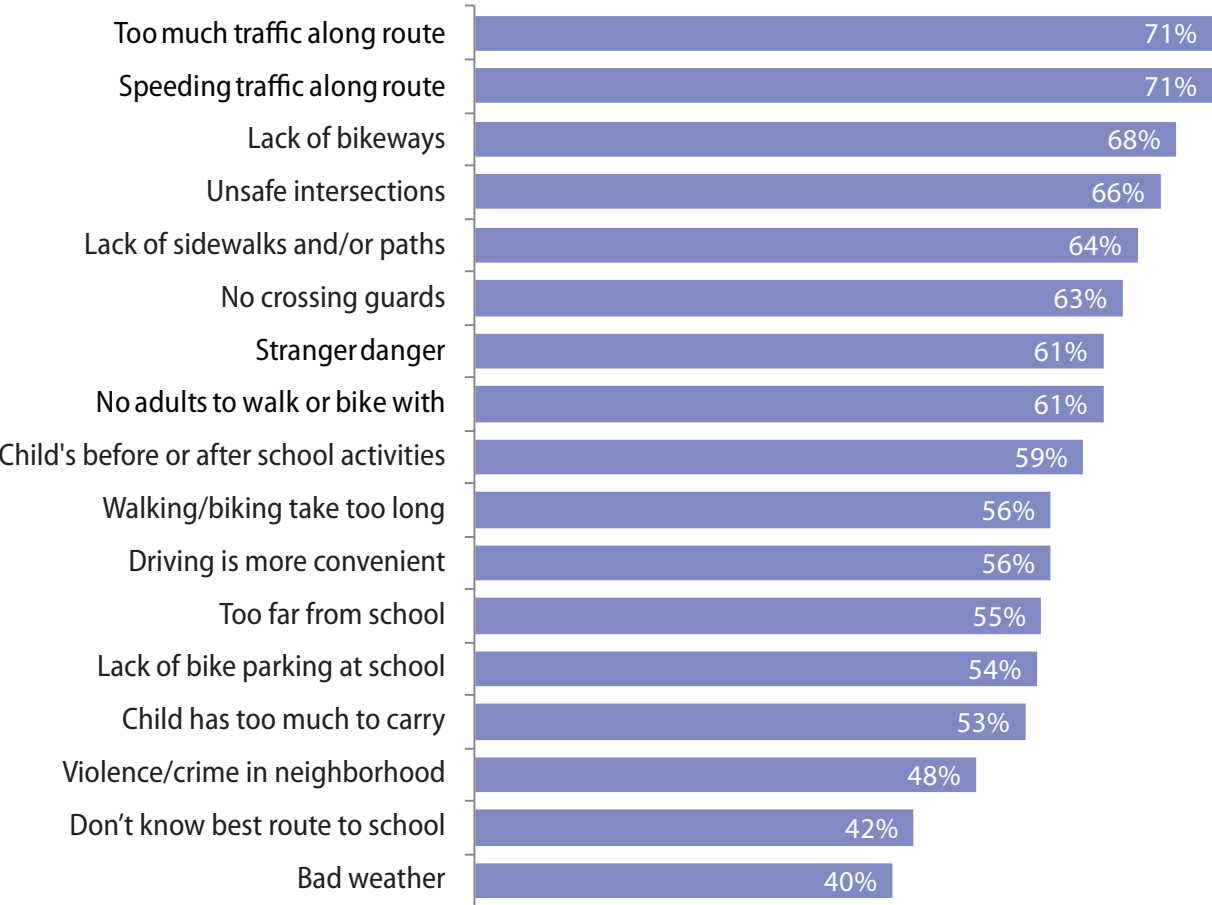


Mode split for all school trips (n = 1,561)



Source MTC Safe Routes to Schools Parent Survey, 2012

Would you allow your children to walk/bike more often if this concerned were addressed?



Walking and Bicycling Audit

A walking and bicycling audit was held on the morning of February 26, 2013. Staff representing the City of Foster City and the San Mateo - Foster City School District attended the audit, along with the school principal and several parents of school attendees.

Audit participants observed the morning arrival period, including travel behavior by pedestrians, bicyclists, and motorists, and transportation infrastructure issues at the school site and surrounding neighborhood. Photos are shown on the following page.

Infrastructure Observations

PARKING LOT/LOADING ZONE

- ➔ There are two passenger loading loops. One is accessed from Edgewater Boulevard and the other from Beach Park Boulevard. During afternoon pick-up, parents display a number that matches a particular student to improve the efficiency of passenger loading. Parents are not allowed to enter the loading area without a number.
- ➔ Signage and curb paint is in excellent condition.

EDGEWATER BOULEVARD

- ➔ Major congestion was observed at the intersection of Edgewater Boulevard and Beach Park Boulevard.

BACK ENTRANCE

- ➔ An additional loading zone was recently opened on Polaris Avenue (it was not open during the audit).
- ➔ A midblock crossing on Polaris Avenue is difficult to see when approaching from the south.
- ➔ Intersections for the path approaching the school lack curb ramps.

Behavioral Observations

BEACH PARK BOULEVARD

- ➔ Multiple motorists were observed pulling into the opposite lane of traffic to pass cars stopped at the entrance to the passenger loading zone.
- ➔ Jaywalking was observed across Beach Park Boulevard.
- ➔ Many students do not dismount when crossing Beach Park Boulevard at Catamaran Avenue. These were likely Bowditch Middle School Students.

BEACH PARK BOULEVARD AT CASTOR STREET

- ➔ The pedestrian crossing of Beach Park Boulevard is uncontrolled.
- ➔ Turning left into or out of Castor Street is challenging.

BEACH PARK BLVD. AT EDGEWATER BLVD.

- ➔ School staff reported that some motorists ignore the crossing guard stationed at the intersection of Beach Park Boulevard and Edgewater Boulevard.
- ➔ Westbound motorists were observed not clearing the intersection during the green cycle and obstructing cross traffic.

EDGEWATER BOULEVARD

- School staff reported that students and parents sometimes cross Edgewater Boulevard outside of a marked crossing near the intersection of Ram Lane.
- ➔ School staff reported that some students cross Edgewater Boulevard at Port Royal Avenue south of the school.
 - ➔ A large pack of adult bicyclists was observed traveling south on Edgewater Boulevard.

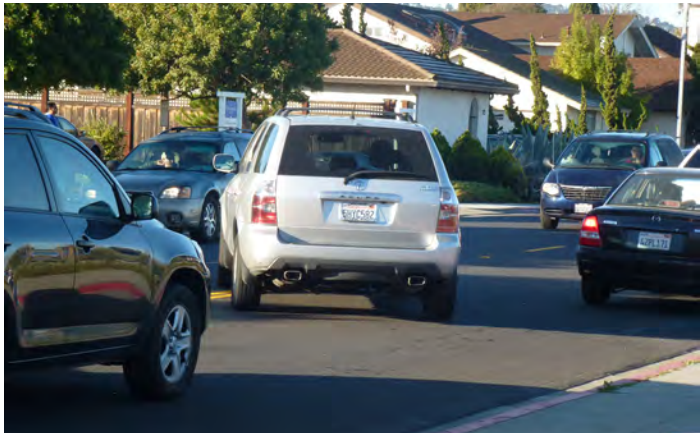
Improvement Plan

Recommendations for the school area appear in the following pages.

Observations



Many parents were observed accompanying their children to school.



Frustrated motorists on Beach Park Boulevard move into the oncoming traffic lane to get around stopped traffic.



Congestion along Beach Park Boulevard backs up into the intersection with Edgewater Boulevard.



A crossing guard monitors the intersection of Edgewater Boulevard and Beach Park Boulevard.



Edgewater Boulevard is a popular route among bicyclists.



Some parents were observed parking in the church lot across the street to walk their children into school.



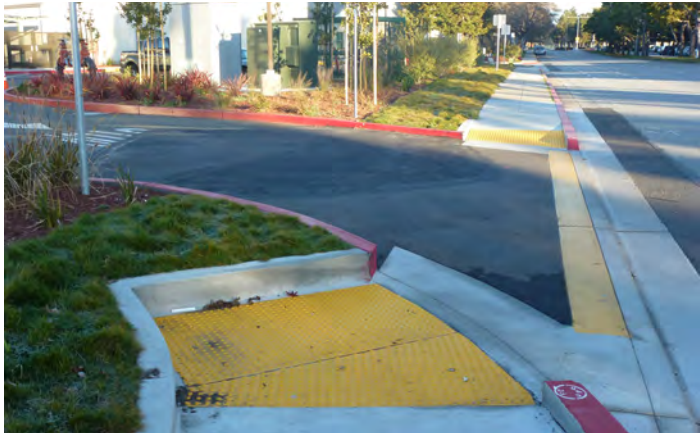
Some students were observed crossing Beach Park Boulevard outside the crosswalk amid the traffic shown here.



Uncontrolled transverse crosswalks can be difficult for motorists to see without additional crossing treatments.



A family crossing Beach Park Boulevard at the intersection with Castor Street.



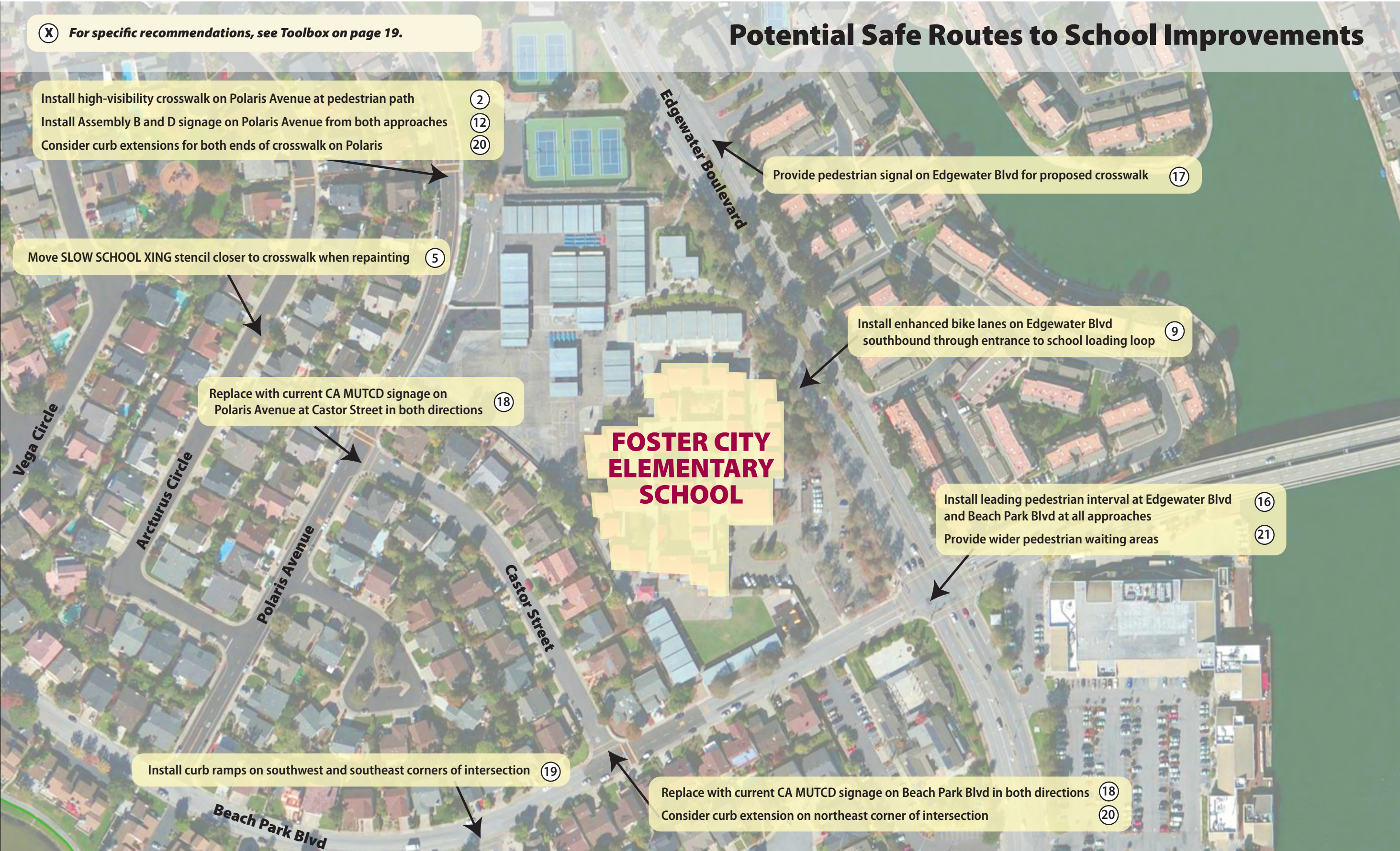
Transportation infrastructure at Foster City Elementary School is newer and more up-to-date than at other elementary schools.



Edgewater Boulevard is a wide street that includes four lanes, bike lanes, and a landscaped median.



A dirt path along the median suggests that this location is already being used as a midblock crossing.



Toolbox of Potential Improvements



School crosswalks are appropriate for lower volume crossing locations near school sites.



High-visibility school crosswalks make it easier for motorists to see crossing pedestrians.



Advance stop bars provide more space for pedestrians and increase visibility.



Advance yield lines/sharks teeth instruct motorists where to yield at uncontrolled crosswalks.



SLOW SCHOOL XING pavement stencils signal that an uncontrolled crosswalk is ahead.



Double yellow centerlines discourage U-turns by motorists.



Red curb paint delineates areas where parking is prohibited.



White curb paint signifies appropriate areas for passenger loading, and not parking.



Enhanced bike lanes can be used for conflict zones, where motorist and bicycle paths cross.



Restriping traffic, bicycle, and parking lanes that have faded can assist school traffic operations.



Assembly C signage can reduce traffic speeds around schools.



Assembly B and D signage alert motorists to an uncontrolled crosswalk ahead.

Toolbox of Potential Improvements, cont.



In-street yield to pedestrians signs increase crosswalk visibility.



STOP signs may be installed where pedestrian volumes or other safety considerations warrant.



Rectangular Rapid Flash Beacons increase yield compliance at uncontrolled crossings.



Leading pedestrian interval phasing allows pedestrians a head start crossing the street.



Signalized pedestrian crossings provide opportunities for pedestrians to cross safely.



Replace obsolete or inappropriate school area signs to keep school traffic control up to date.



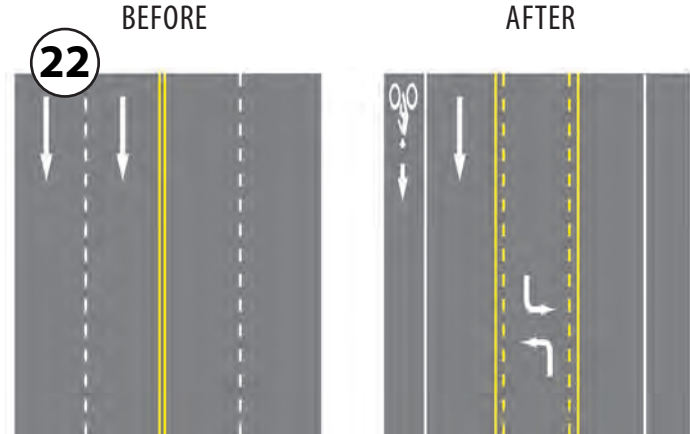
Curb ramps provide access to disabled pedestrians and parents walking with strollers.



Curb extensions shorten pedestrian crossing distance and enhance visibility.



Increasing the size of the pedestrian waiting area can keep sidewalks accessible.

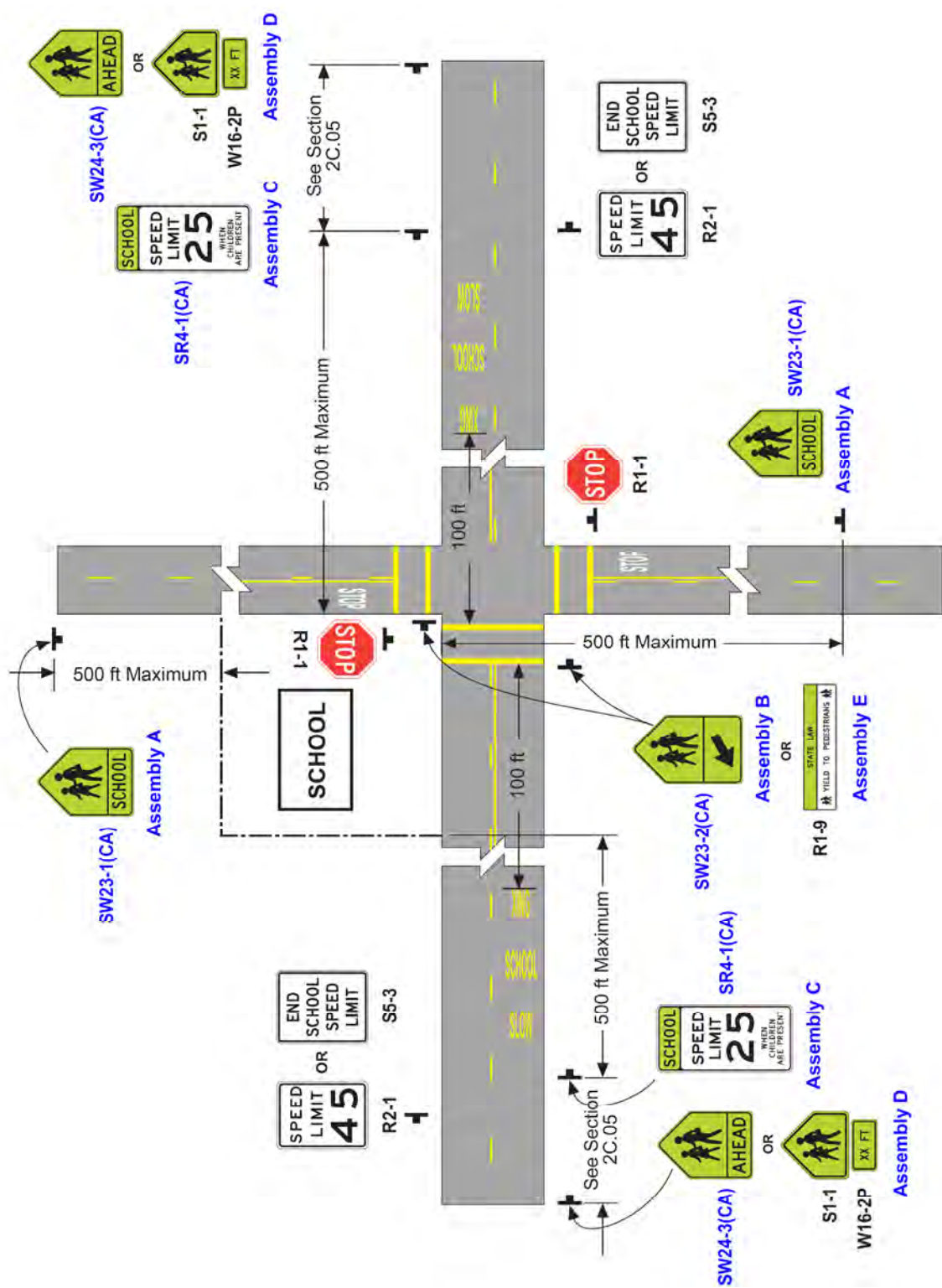


Road diets calm traffic provide space for bicyclists, and can provide pedestrian refuges.

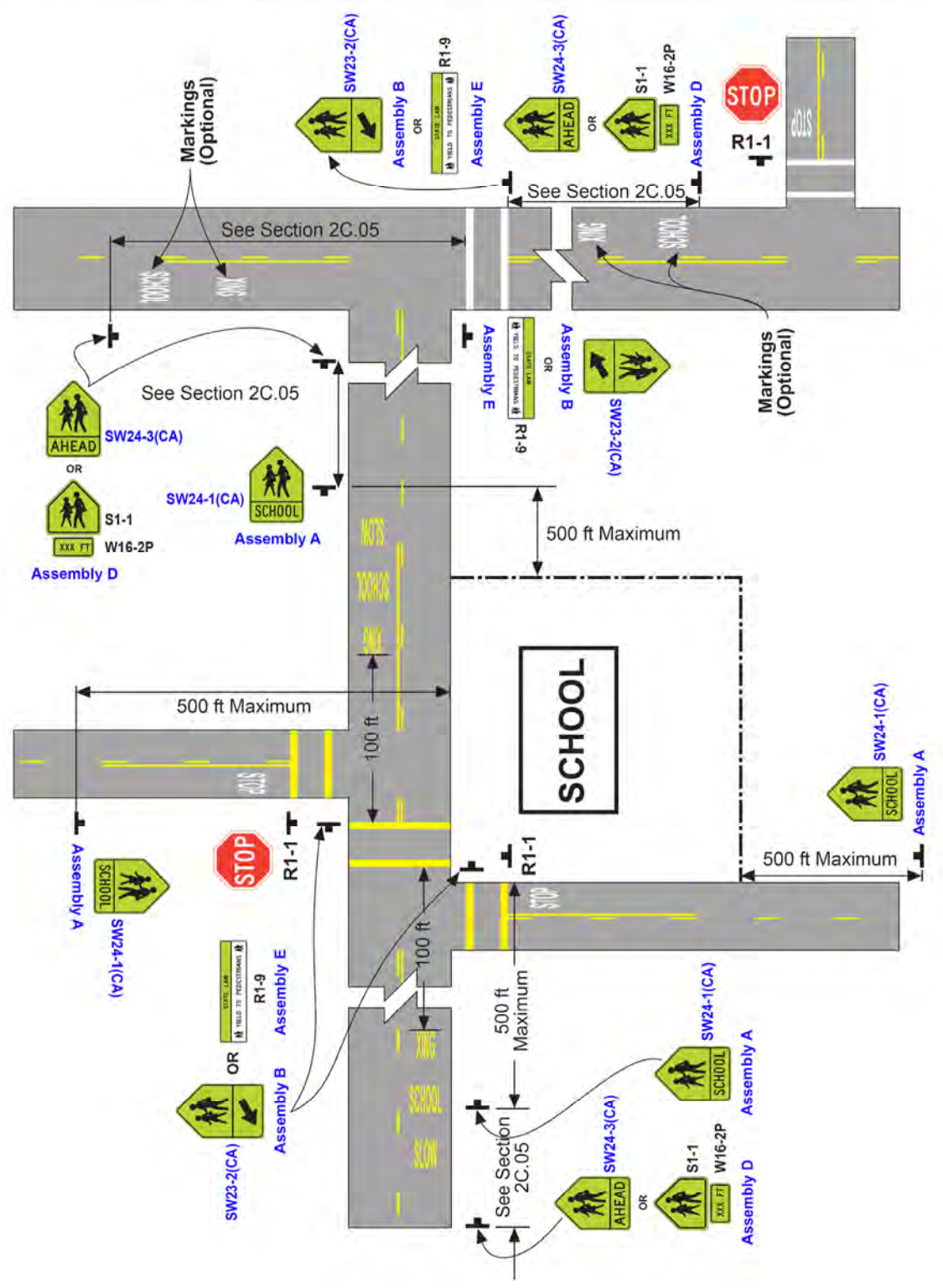


15 or 20 MPH school speed limit ordinances can further reduce traffic speeds in school areas.

Example of Signing for School Zone with a School Speed Limit and a School Crossing



Example of Signing for School Crosswalk Warning Assembly



California MUTCD 2012 Edition
(FHWA's MUTCD 2009 Edition, as amended for use in California)
Chapter 7B – Signs, page 1274. Figure 7B-5(CA). Part 7 – Traffic Control for School Areas . January 13, 2012

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Chapter 7B – Signs, page 1279. Figure 7B-104(CA). Part 7 – Traffic Control for School Areas . January 13, 2012