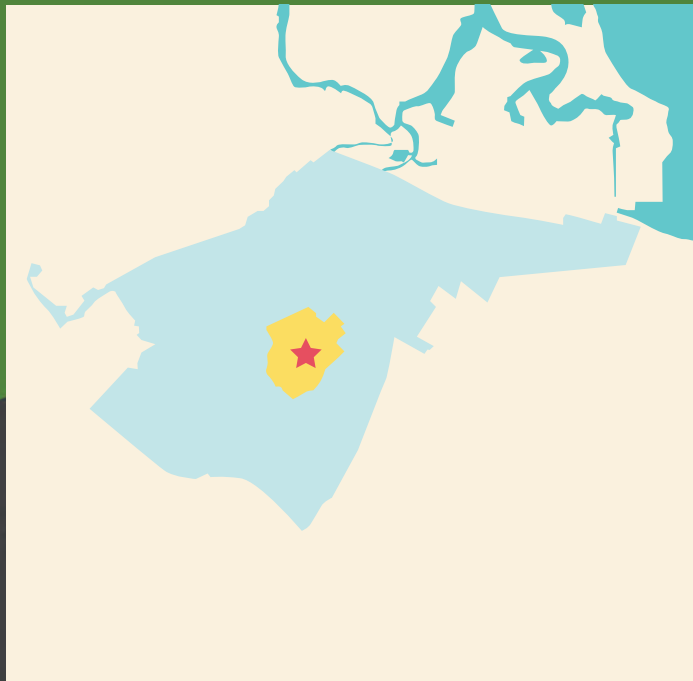
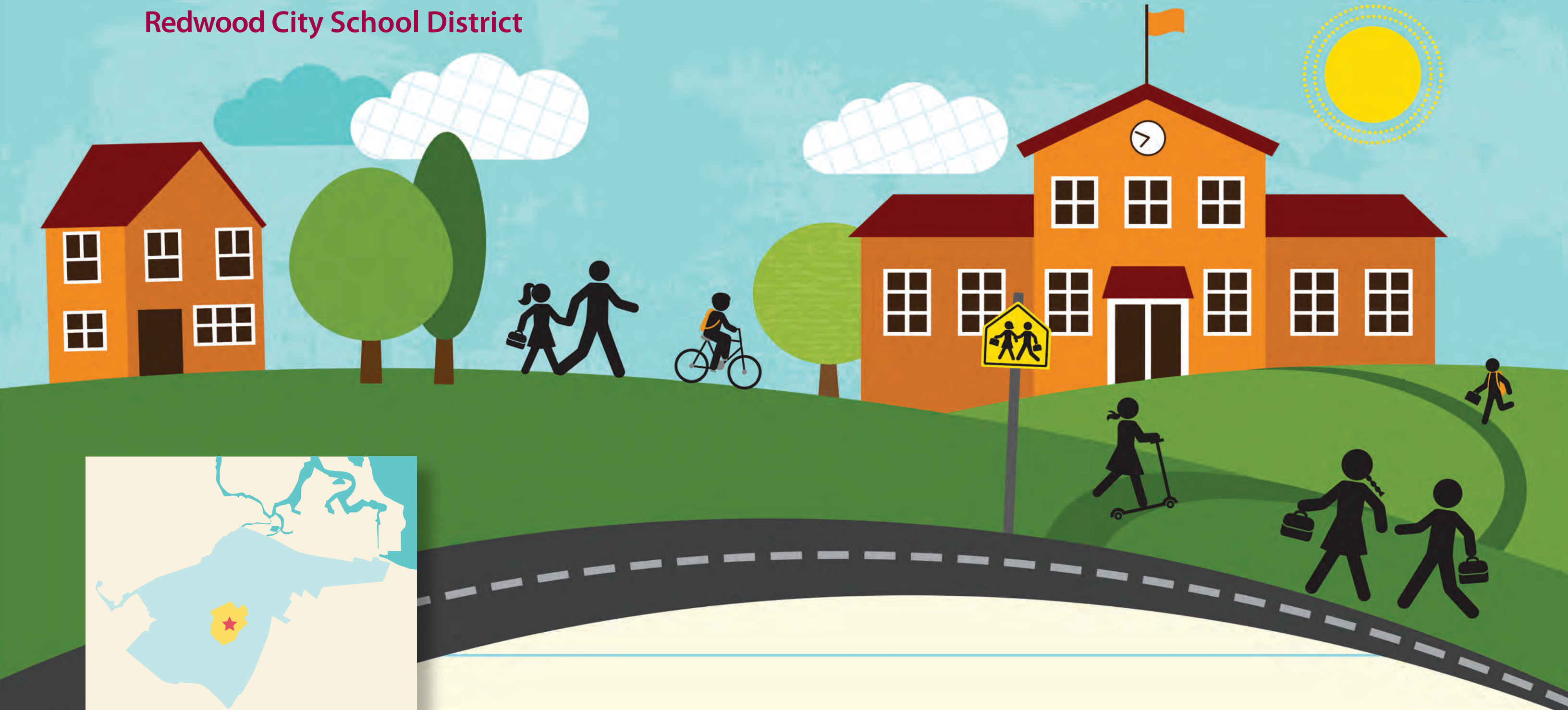


Kennedy Middle School Walking and Bicycling Audit

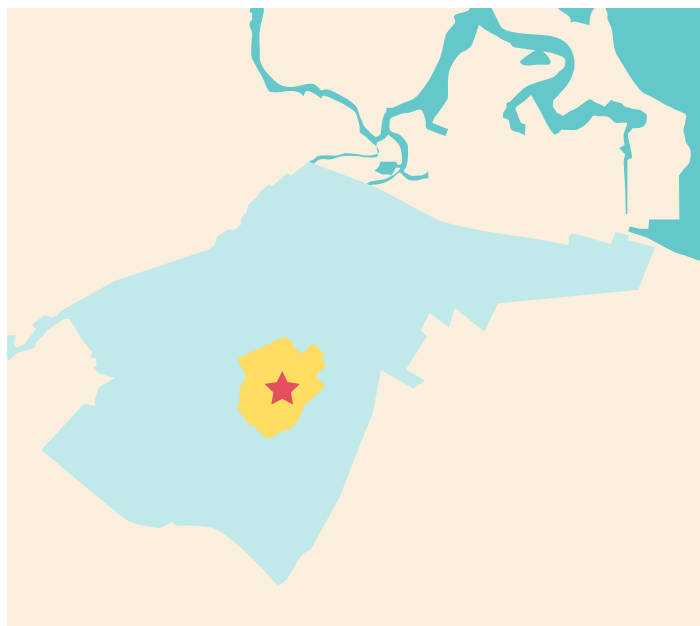
Redwood City School District



San Mateo County
SAFE ROUTES TO SCHOOL
Healthy Kids • Green Communities • Safe Journeys



Kennedy Middle School Walking and Biking Audit



School Information

Kennedy Middle School is located at 2521 Goodwin Avenue in a residential neighborhood of Redwood City. All streets immediately surrounding the school are two-lane roadways with on-street parking. Alameda de las Pulgas is a nearby collector street.

During the 2012-2013 school year, 818 students were enrolled in 5th through 8th grade.

Passenger pick-up and drop-off occurs curbside on Connecticut Avenue and Washington Avenue and in a parking loop on Goodwin Avenue.

Bell Schedule

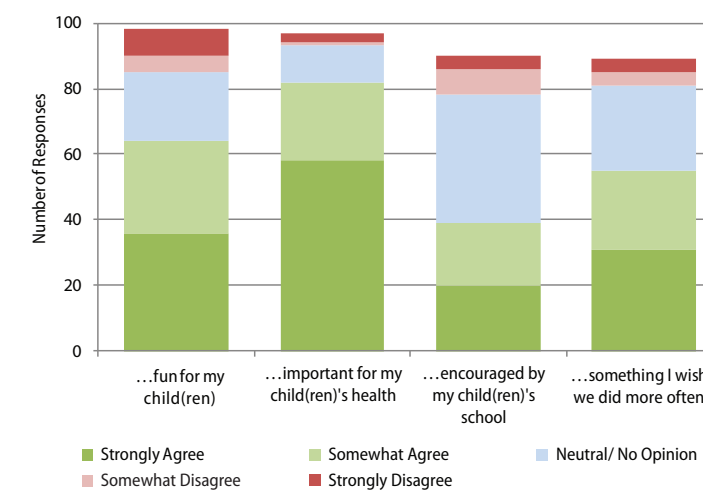
Grade	Morning	Afternoon
Regular	8:25	3:05
Minimum	8:25	1:50

Safe Routes to School Survey

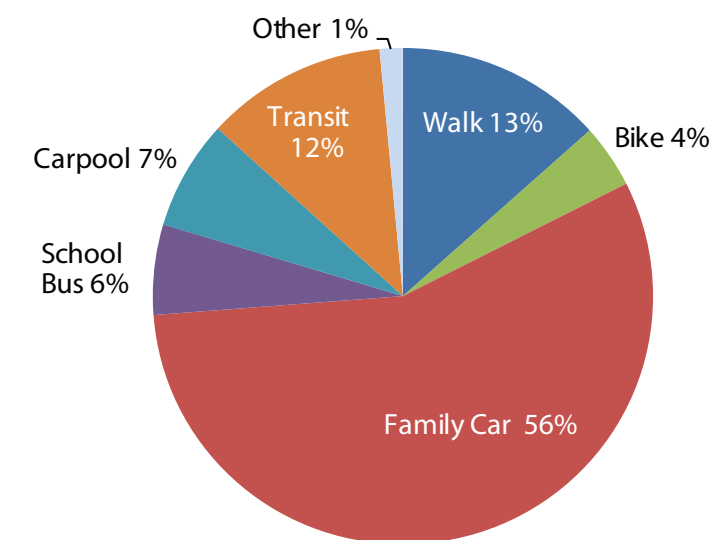
A parent survey was conducted at Kennedy Middle School during the Fall 2012 semester; 135 responses were collected. Key findings are reported below:

- ➔ **Riding in family vehicle, walking, and transit are the most common modes of travel:** 56 percent of children are driven in a family vehicle, while 13 percent of parents responded that their child walks to and from school. Transit accounts for approximately 12 percent of trips.
- ➔ **Many students live far from the school site:** Only 13 percent of students live within a half mile of the school site. Sixty-three percent live at least a mile away, including 34 percent of students who 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 "Too much traffic along route" as a primary barrier preventing them from allowing their children to walk and bike to school more often. The other three most frequently cited barriers are related to traffic.

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

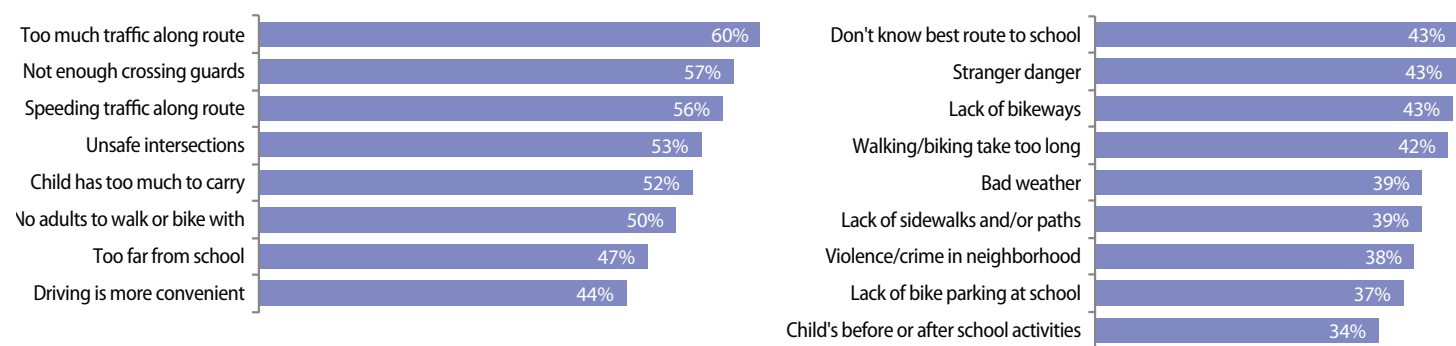


Mode split for all school trips (n= 1,355)



Source MTC Safe Routes to Schools Parent Survey, 2012

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



Education and Encouragement Programs

Kennedy Middle School has been active integrating Safe Routes to School education and encouragement programs. The school conducts regular Safe Routes to School meetings. Recent meetings occurred in October and December 2012 and could be more closely integrated with earlier school orientation activities and distribution of First Day Packets as travel patterns are formed and solidified early in the school year.

The school participates in International Walk to School Day every October and additional special events to celebrate and promote walking and bicycling. The school's last Walk to School Day was held on April 19, 2013 and pedestrian and motorist safety tips were circulated to the school community. The school may consider an ongoing monthly or even weekly event to encourage more frequent walking and bicycling. Events could include competitions among classrooms for the highest participation rate or furthest distances traveled. Outreach should ensure that parents are advised of these events.

Safe Moves, a non-profit organization, works with the Redwood City School District to provide education and encouragement programs for students interested in walking and bicycling. The most recent "Family Fun Day: Safe Routes to School Celebration!" was held on June 22, 2013 at Kennedy Middle School. The free event included a Bicycle and Pedestrian Safety Obstacle Course, bicycle-powered blender, "World's Slowest Bike Race", and Safe Routes to School parent workshops.

Student education efforts should be expanded to include pedestrian skills as well, such as traffic sign identification and traffic scanning. Parent education workshops can ensure that parents provide good examples and practice safe driving behaviors around schools.

An additional encouragement tool could be the establishment of a SchoolPool program that matches neighbors traveling to the same school to facilitate walking school buses, bike trains, and carpooling. The program could be managed online and promoted early in the school year. Redwood City 2020 provides a Carpool to School Day even toolkit.

Each school in Redwood City has a traffic officer that provides a point of contact for parents and staff and sometimes assists during drop-off and pick-up.

Walking and Bicycling Audit

A walking and bicycling audit was held on the morning of April 24, 2013. Parents of school attendees were in attendance, along with representatives of the school and the City of Redwood City.

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. A follow-up afternoon visit was conducted on Friday, May 24th. Photos are shown on the following page.

Infrastructure Observations

SCHOOL GROUNDS:

- Bike parking near the north entrance to the school was well utilized by students.
- Many students were observed boarding at the bus stops on Washington Avenue, causing crowding on the sidewalk.

GOODWIN AVENUE AT MADDUX DRIVE

- The intersection is uncontrolled on all approaches.
- Assembly B signage indicates school crosswalks, but visibility could be increased.

CONNECTICUT AVENUE

- School crossing signage is used appropriately in most instances, but signs are not always visible, often obscured by trees.
- Additional crossing treatments may increase yielding compliance.

ALAMEDA DE LAS PULGAS

- An uncontrolled school crossing at Goodwin Avenue can be challenging for pedestrians.
- The street is generally wide. A large tree obstructs visibility at Goodwin Avenue.

Behavior Observations

CONNECTICUT AVENUE

- Many students were observed crossing outside the crosswalk at Oregon Avenue. They were emerging from parked cars in the morning and playing in the street in the afternoon.
- High traffic speeds were observed.
- Yielding compliance was inconsistent at the intersection with Washington Avenue.

GOODWIN AVENUE AT CONNECTICUT AVENUE

- Goodwin Avenue is a popular walking and bicycling route for students approaching from the northeast.
- Two ice cream trucks were observed parking right at the intersection on the northeast corner. This led to less predictable pedestrian movements and reduced visibility.

MADDUX DRIVE

- Motorists were observed making U-turns between Alameda de las Pulgas and Goodwin Avenue.
- Maddux Park may provide an opportunity for remote drop-off.

ALAMEDA DE LAS PULGAS AT GOODWIN AVENUE

- Some motorists accelerate quickly to cross Alameda de las Pulgas and do not necessarily slow down to proceed carefully through the uncontrolled intersection at Maddux Drive.
- High traffic speeds were observed on Alameda de las Pulgas.

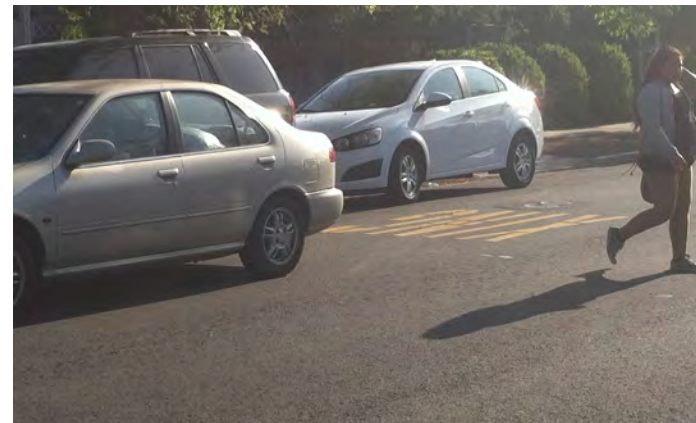
Improvement Plan

Recommendations for the school area appear in the following pages.

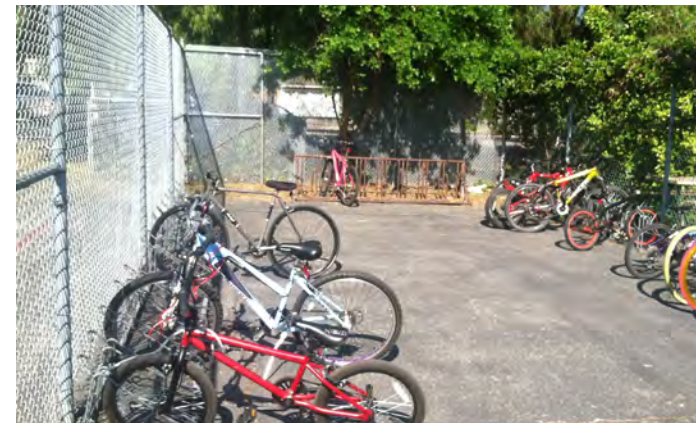
Observations



Small bus drop-off area on Washington Avenue.



Crossing outside the crosswalk on Connecticut Avenue is common.



Bike parking is well located and used, though racks are not recommended varieties.



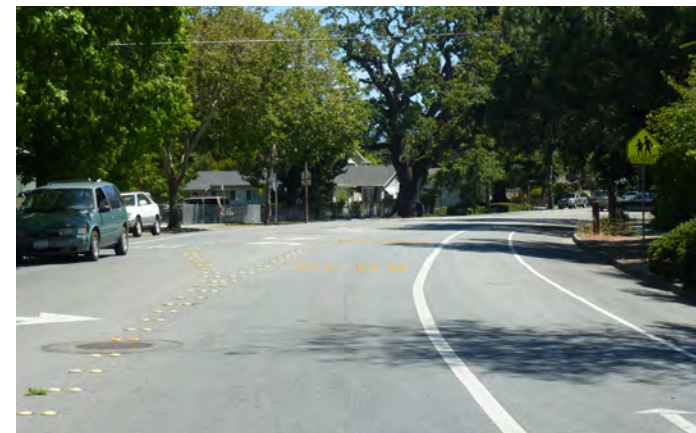
The crossing at Oregon Avenue does not lead to a gate, discouraging pedestrians from using the facility.



Assembly D and Assembly B signage is generally well-placed at school crossings.



Vehicles must pull out into Alameda de las Pulgas because visibility is obstructed.



Crossing Alameda de las Pulgas can be challenging for pedestrians and bicyclists.



Ice cream trucks parked right at the corner of Connecticut and Goodwin obstruct visibility.



A student entering a vehicle stopped on the sidewalk at the parking lot.



Unique traffic calming signage on Virginia Avenue.



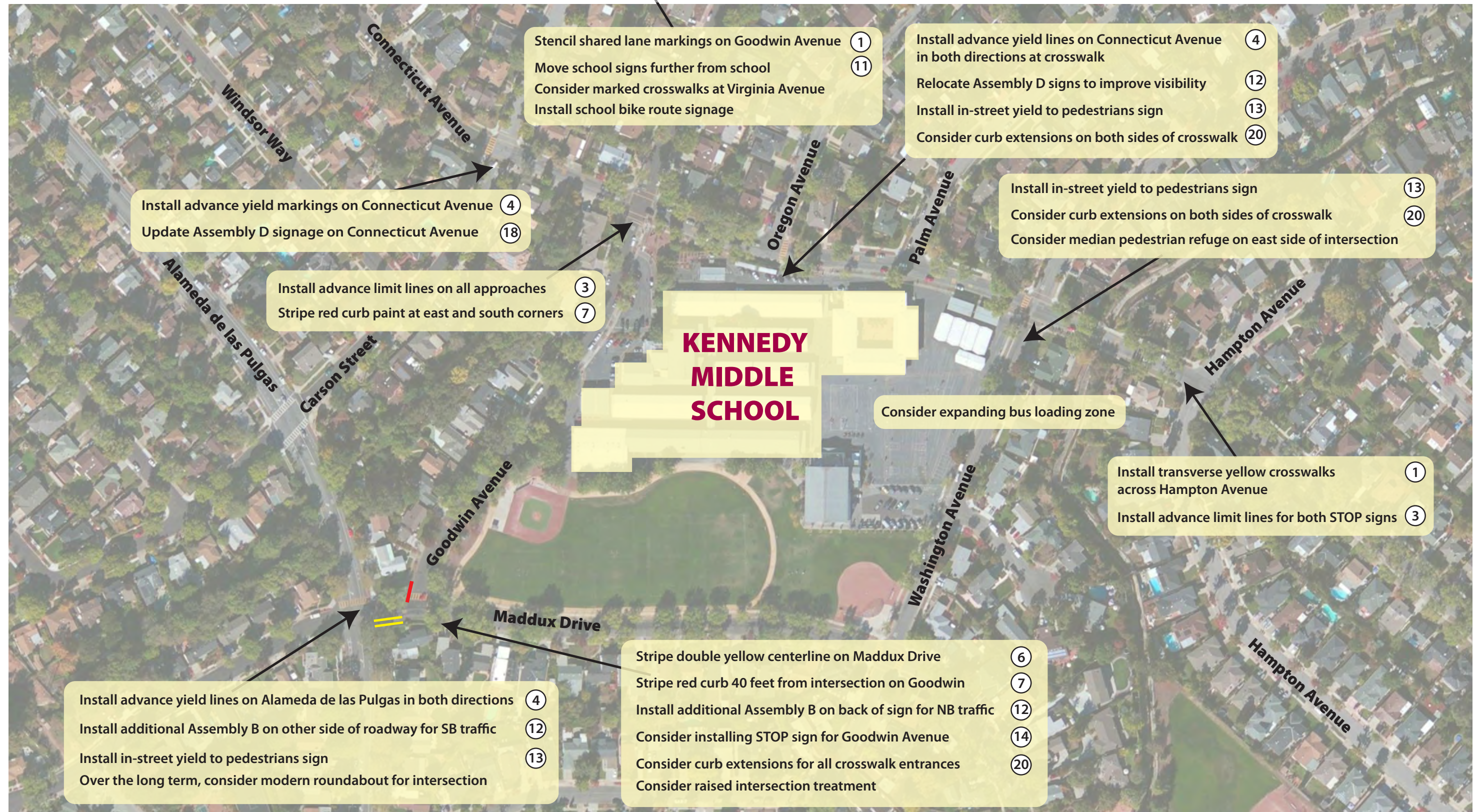
A short block on Goodwin Avenue between a controlled intersection at Alameda de las Pulgas and the uncontrolled intersection at Maddux.



Passenger loading area on Connecticut is currently striped as commercial loading.

(X) For specific recommendations, see Toolbox on the next two pages.

Potential Safe Routes to School Improvements



Toolbox of Potential Improvements



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



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



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



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



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



6 *Double yellow centerlines discourage U-turns by motorists.*



7 *Red curb paint delineates areas where parking is prohibited.*



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



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



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



11 *Assembly C signage can reduce traffic speeds around schools.*



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

Toolbox of Potential Improvements, cont.



13 *In-street yield to pedestrians signs increase crosswalk visibility.*



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



15 *Rectangular Rapid Flash Beacons increase yield compliance at uncontrolled crossings.*



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



17 *Signalized pedestrian crossings provide opportunities for pedestrians to cross safely.*



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



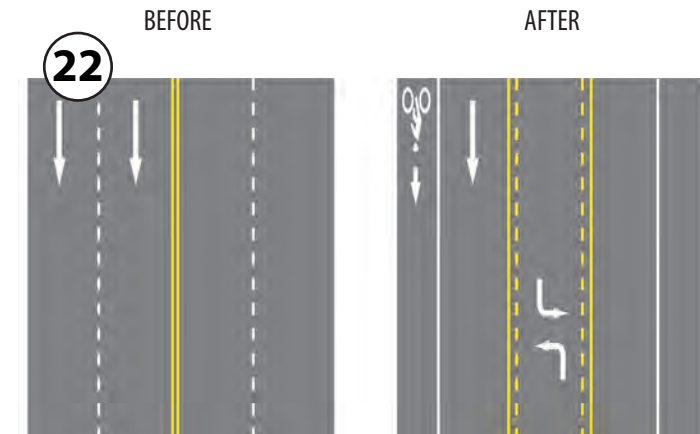
19 *Curb ramps provide access to disabled pedestrians and parents walking with strollers.*



20 *Curb extensions shorten pedestrian crossing distance and enhance visibility.*



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

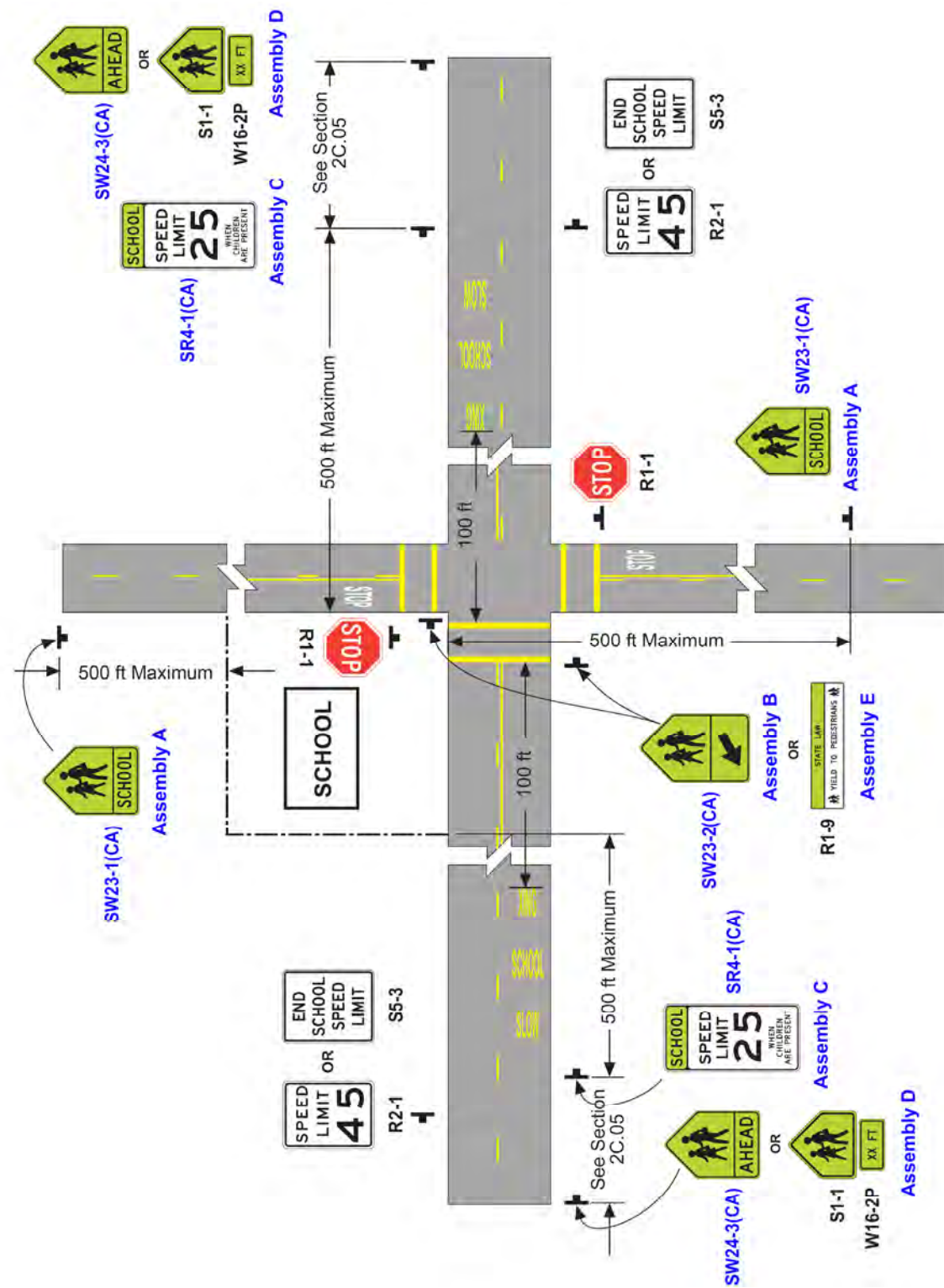


22 *Road diets calm traffic provide space for bicyclists, and can provide pedestrian refuges.*



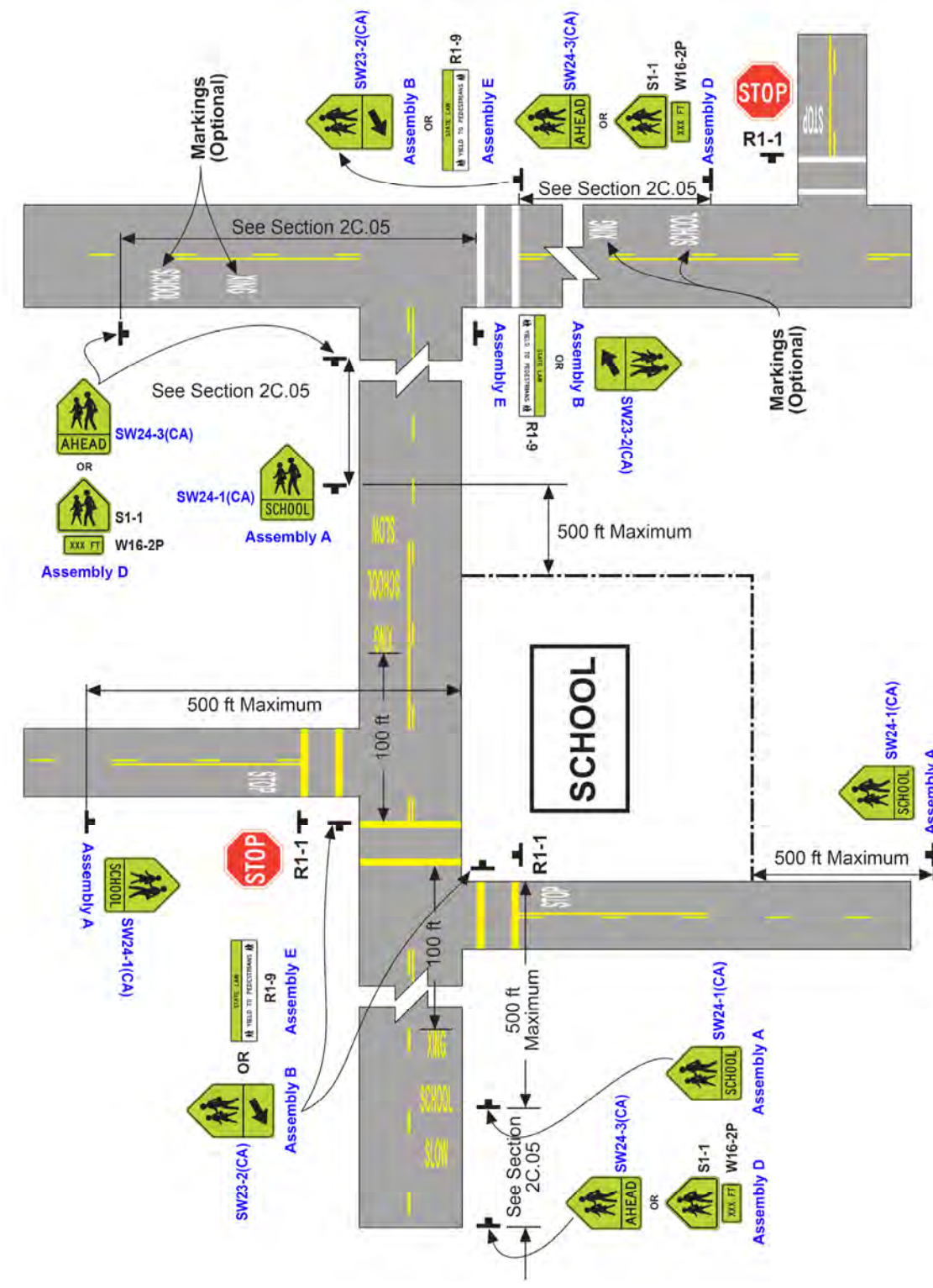
23 *15 or 20 MPH school speed limit ordinances can further reduce traffic speeds in school areas.*

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



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

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