

Safe Routes to School: Steps to Safer School Communities

Pedestrian accidents are the second leading cause of injury-related death for children aged 5 to 14.¹ Busy roads, careless drivers, and kids' size and behavior can make a walk to school a dangerous prospect. Though the actual number of children injured while walking has decreased, this is partly because kids walk less often. In the last 30 years, the percentage of children who walk or bicycle to school from within a two-mile radius has declined from 60 to less than 15 percent.² However, with today's concerns about air pollution, healthy lifestyle, and childhood obesity, we are beginning to see a revival of kids walking and biking to school, and it is more important than ever to ensure they can do so safely. One approach is to change the roads; another is to change people. The Safe Routes to School Program addresses both approaches by providing funds for local bicycle and pedestrian safety projects such as traffic-calming measures and education programs.

One problem that compromises pedestrian safety is the way roads are designed and built. Wide lanes, large turning radii, and passing and turning lanes accommodate the maximum number of vehicles at the highest speeds. These are great ways to keep cars moving, but not so safe for pedestrians. Some roads in residential and schools zones don't even have sidewalks.

Another problem, ironically, is parent drivers. Parents sometimes decide that driving their children to school is safer, but the choice is a double-edged sword. About half of the children struck by cars are hit by parents driving other children to school.³ One reason is that many drive too fast. A study of 27 cities by National Safe Kids Campaign found that 65 percent of drivers in a school zone exceeded the speed limit during the 30 minutes before and after school.⁴ Unfortunately, the fatality rate for a pedestrian hit by a car rises from 5 percent at 20 mph to 40 percent at 30 mph to 80 percent at 40 mph. Over a five-mile drive, an increase from 20 to 30 mph will save five minutes; within a school zone, the time saved is negligible, but a child is eight times as likely to die if hit.

More parents driving their children to school also adds to the number of cars that pedestrians and bicyclists must contend with, and it can compromise safety at drop-off and pick-up points. When these become congested, frustrated drivers make dangerous U-turns, double park their cars, drop off students on the wrong side of the road, and allow students to maneuver between idling cars and oncoming traffic. This is dangerous for all kids.

Finally is the problem of children themselves. Kids are small, so they are harder for drivers to see. And kids are, after all, kids. They're easily distracted, sometimes rash, and tend to hop around like fleas. They have not yet developed the complicated physiological and cognitive systems to make good judgments of safe conditions and behavior. Every adult can remember at least one time during their K-12 career that they did something stupid around cars, yet we tend to overestimate our children's capabilities.⁵

Safe Routes to School began as an international movement to increase the safety of children walking and bicycling to school. In 1998, the United States Congress funded two pilot SRTS projects, which spurred grassroots programs around the country. The success of the SRTS program over the last several years led to state and federally funded programs, and the National Safe Routes to School Program was established in 2005. In California, the state's program was extended indefinitely in 2007. Each

SOME ELEMENTS OF SAFE ROUTES TO SCHOOL

Adequate and unobstructed buildings (no overgrown shrubbery or cracked sidewalks on adjacent streets that connect to the school).

Bus drop-off zones that are separated from automobile drop-off zones to minimize potential conflicts.

Passenger loading and unloading zones with vivid curb markings and signs that read, "*Passenger Loading Only 7-9 AM, 2-4 PM, 3-Minute Limit School Days.*"

One-way traffic flows around loading areas allowing pedestrians and bicyclists to focus on only one direction of approaching traffic.

Crossing points for pedestrians that are clearly marked as well as school signs in advance that read, "*School - Speed Limit 25 - When Children Are Present.*"

¹ National SAFE KIDS Campaign, "Pedestrian Injury Fact Sheet," Washington DC: NSKC, 2004, http://www.preventinjury.org/PDFs/PEDESTRIAN_INJURY.pdf.

² California Department of Transportation, "Safe Routes to School Programs," Division of Local Assistance, <http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm>.

³ C. H. Taft et al. Child Pedestrians at Risk in America: A National Survey of Speeding in School Zones, Washington, DC: National SAFE KIDS Campaign, October 2000, www.usa.safekids.org/tier3_cd.cfm?folder_id=300&content_item_id=474.

⁴ Washington State Department of Transportation; cited in Safe Routes to School, National Highway Transportation & Safety Administration, 2002.

⁵ National SAFE KIDS Campaign, "Pedestrian Injury Fact Sheet."

SAFE ROUTES TO SCHOOL: STEPS TO SAFER SCHOOL COMMUNITIES

SRTS program is unique because it is created by the community it serves. Local, regional, private, and public entities now offer multiple funding opportunities to improve and enhance the safety of schoolchildren.

SRTS funds pay for programs that can be used to improve the safety of a school and its environs and to educate parents and kids about ways to get to school safely. Infrastructure projects are typically capital improvements within two miles of the school. They can be new crosswalks, new or additional bike trails, median islands, and/or signs to slow down traffic. Other projects include education, encouragement, and enforcement activities such as public safety campaigns and installation of bike racks, lockers, and speed-monitoring equipment. The city and elementary school district in Chula Vista, California, which has the highest number of kindergarten to sixth graders in the state, applied for and received grant funds for \$621,000 of infrastructure improvements and \$499,000 for other programs, such as education programs that teachers will integrate into daily lesson plans.⁶

In this **CENTERVIEWS** we will discuss measures to help school districts, facility designers, and local communities create safer routes to school. We have reproduced Partnership for a Walkable America's walkability checklist, which can be used to determine which measures are best suited to a particular situation.

INFRASTRUCTURE ENHANCEMENTS

One approach to increasing safety is through infrastructure enhancements, which physically change the way people interact with the road. The principle behind infrastructure projects is that they favor the flow of bikes and pedestrians instead of cars.

Sidewalks are the first line of defense for pedestrians. The Institute of Transportation Engineers recommends a minimum width of five feet, which allows two people to pass comfortably or walk side by side. Sidewalks should be continuous along both sides of the street and should accommodate wheelchairs. Some kind of buffer zone—for instance, a landscaped strip—should separate pedestrians from the street.

Traffic-calming measures can reduce pedestrian accidents by 18 to 60 percent by changing the ways cars move through a street—slowing them down and/or reducing road capacity. A street that moves slower is also less likely to be used as a shortcut, which further reduces volume. Traffic-calming measures include street realignment, turnarounds, and speed bumps and other barriers. A center island barrier in the middle of the street at a crosswalk is an effective measure because it narrows street

lanes. It is a good midpoint for those who can't cross the whole street at once and it increases pedestrian visibility. The usual cost is between \$8,000 and \$15,000.

Marked crosswalks warn motorists to yield to pedestrians. A "ladder" pattern is more visible to motorists than parallel lines. Crosswalks should be coordinated with ramps so wheelchairs do not have to leave the crosswalk to access the ramp. The estimated cost is \$100 for a regular striped crosswalk, and \$300 for a ladder pattern crosswalk.

Advanced stop lines/limit lines precede pedestrian crosswalks by 15 to 30 feet, which gives pedestrians and drivers a better view of each other while increasing the distance between them, a considerable safety benefit for pedestrians. Pedestrians may advance in the crosswalk before a vehicle turns. There is usually no extra cost when the recessed stop line is installed in conjunction with either new paving or as part of a repaving project.

Speed monitors, cameras, and radar remind drivers to slow down. These measures require coordination with the local police department, which can also be helpful in implementing safety training for children and parents.

EDUCATION AND PARTICIPATION

The other approach of SRTS is programs that teach people how to be safe and involve them in the process. School administration support, parent commitment, student involvement, and police visibility promote pedestrian safety. A common program is creating maps that show the safest routes for walkers, bikers, and parents driving their kids (see case study). The examples here get people involved in keeping their own and others' children safe.

On the designated **Walk to School Day** in the first week of October, children walk to school with parents and school and local officials. This event is the highlight of Walk to School Week and kicks off Walk to School Month to remind the community of the simple joys and healthy benefits of walking to school. Walk to School Day can be a catalyst for ongoing efforts to increase walking and bicycling throughout the year.

The **School Valet Program** teaches parents the proper procedure for dropping off and picking up their children. Teachers greet and direct children to and from their classrooms during drop-off and pick-up times. The program includes written materials identifying approach routes, turn restrictions, and proper use of the drop-off/pick-up zone, which includes no parking, no unattended vehicles, and making sure children are ready to exit the vehicle as quickly as possible.

¹ National Center for Safe Routes to School, "SRTS Case Study: Chula Vista, California," http://www.saferoutesinfo.org/case_studies/pdfs/CA.chulavista.pdf.

In a **Walking School Bus Program**, members of the community (e.g., senior citizens or volunteer parents) act as “walking bus drivers.” They walk a set route, pick up children along the way, and walk them safely to or from school. This is an especially good program for areas that need infrastructure improvement or might be unsafe for other reasons, or where very small children must walk relatively long distances. There are lots of ways to make the program more fun or convenient for the kids:

for example, a pulled trolley or wagon that carries children’s coats or backpacks.

SRTS’s network of public and private entities provides a number of options for participating in safety improvement and education. Each SRTS program is tailored to the unique circumstances of its school, and the projects here are just a small sampling of what is available to school officials and parents.

Walkability Checklist: How safe is your school neighborhood?

CONSIDER...	WHAT YOU CAN DO IMMEDIATELY	WHAT YOU AND YOUR COMMUNITY CAN DO WITH MORE TIME
1. Did you have room?		
<ul style="list-style-type: none"> + Lack of clear beginning and/or end of sidewalks or paths. + Sidewalks broken or cracked. + Sidewalks blocked. + No sidewalks, paths, shoulders, or bike lanes. + Too much traffic. 	<ul style="list-style-type: none"> + Pick another route for now. + Tell local traffic engineering or public works department about specific problems and provide a copy of your completed Bike/Walkability Checklist. 	<ul style="list-style-type: none"> + Solicit assistance from city and county officials and agencies. + Speak up at school board meetings. + Write or petition city for walkways and gather neighborhood signatures. + Make media aware of problems. + Work with a local transportation engineer to develop a plan for a safe biking/walking route.
2. Was it easy to cross the streets?		
<ul style="list-style-type: none"> + Road too wide. + Waited too long for traffic signals. + Traffic signals did not allow enough time to cross. + Crosswalks/traffic signals needed. + View of traffic blocked by parked cars, trees, or plants. + Needed curb ramps or ramps needed repair. 	<ul style="list-style-type: none"> + Pick another route for now. + Share problems and completed Checklist with local traffic engineering or public works department. + Trim your trees or bushes that block the street and ask your neighbors to do the same. + Leave friendly notes on problem cars asking owners not to park there. 	<ul style="list-style-type: none"> + Push for crosswalks/signals/parking changes/curb ramps at city meetings. + Report to traffic engineer where parked cars are safety hazards. + Report illegally parked cars to the police. + Request that the public works department trim trees and/or plants. + Make media aware of problems.
3. Did drivers behave well?		
<ul style="list-style-type: none"> + Backed without looking. + Did not yield. + Turned into walkers. + Drove too fast. + Sped up to make traffic lights or drove through red lights. 	<ul style="list-style-type: none"> + Pick another route for now. + Set an example: slow down and be considerate of others. + Encourage your neighbors to do the same. + Report unsafe driving to the police. 	<ul style="list-style-type: none"> + Petition for more enforcement. + Request protected turns. + Ask city planners and traffic engineers for traffic calming ideas. + Ask schools about getting crossing guards at key locations. + Organize a neighborhood speed watch program.
4. Could you follow safety rules?		
<ul style="list-style-type: none"> + Cross at crosswalks or where possible to see and be seen. + Stop and look left, right, left before crossing. + Walk on sidewalks or shoulders facing traffic. + Bike in lanes with the flow of traffic. + Cross with the light. 	<ul style="list-style-type: none"> + Educate yourself and others about safe biking and walking. + Organize parents in your neighborhood to walk children to school. 	<ul style="list-style-type: none"> + Encourage schools to teach biking and walking safety. + Help schools start safe biking and walking programs. + Encourage corporate support for flex schedules so parents can bike and/or walk children to school.
5. Was your journey pleasant?		
<ul style="list-style-type: none"> + Areas need grass, flowers, trees. + Scary dogs along the way. + Scary people along the way. + Not well lit. + Dirty, litter. 	<ul style="list-style-type: none"> + Point out areas to avoid and promote safe routes. + Ask neighbors to keep dogs leashed or fenced. + Report scary dogs to the animal control department. + Report scary people to the police. + Report lighting needs to the police or appropriate public works department. + Take a walk with a trash bag. + Plant trees, flowers in your yard. 	<ul style="list-style-type: none"> + Request increased police enforcement. + Start a crime watch program in your neighborhood. + Organize a community clean-up day. + Sponsor a neighborhood beautification or tree-planting day. + Begin an Adopt-a-Street program.

Case Study: Roadrunner Elementary School, Phoenix AZ

DEVELOPING A WALKING-ROUTE MAP

This project was the result of collaboration between local school officials, parents, and the City of Phoenix. The school provided walking boundary maps to parent volunteers and school officials to review and identify walking routes for their children. The city provided aerial photographs, quarter-section maps, and some tips about reviewing them. After all the walking routes were identified, city traffic officials reviewed identified areas of concern, and determined how many intersections would need school crossing guards. The city completed final revisions to the map and school officials distributed them to students at the beginning of the year. The maps are kept up to date with an annual review to identify infrastructure changes or new areas of concern.⁷

⁷ http://www.saferoutesinfo.org/guide/case_studies/case_study.cfm?CS_ID=CS647&CHAPTER_ID=C353.

RESOURCES

National Center for Safe Routes to School: www.saferoutesinfo.org

Safe Routes to School National Partnership: <http://www.saferoutespartnership.org/>

Federal Highway Administration, FHWA Safety: <http://safety.fhwa.dot.gov/saferoutes/>

Caltrans: <http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm>

California Department of Public Health: [http://www.cdph.ca.gov/](http://www.cdph.ca.gov/HealthInfo/injviosa/Pages/SafeRoutestoSchool.aspx)

[HealthInfo/injviosa/Pages/SafeRoutestoSchool.aspx](http://www.cdph.ca.gov/HealthInfo/injviosa/Pages/SafeRoutestoSchool.aspx)

Partnership for a Walkable America: <http://www.walkableamerica.org>

Institute of Transportation Engineers, Traffic Calming: <http://www.ite.org/traffic/index.html>

National Center for Bicycling and Walking: <http://www.bikewalk.org>

California Office of Traffic Safety, Grants: <http://www.ots.ca.gov/grants>

Other useful contacts: California Highway Patrol; Parent/Teacher Association; local public works department, planning department, police department, media.

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