

Mendocino County Safe Routes to School Program Toolkit



April 2014



PREFACE

The Mendocino County Safe Routes to School (SRTS) Program is a new countywide initiative, begun in 2013, to help develop and implement priority projects and programs that will enable school children and families to walk, bicycle, and carpool more often to school. The overall goal is to make Mendocino County a healthier, safer, more sustainable and environmentally sound community by reducing the number of school-related automobile trips.

Early development of the program has included staff input from multiple agencies throughout the education, public health, and transportation fields, and assistance from local jurisdictions and law enforcement.

The intent of the Mendocino County Safe Routes to School Toolkit is to provide a menu of programs and activities that have proven successful in other Safe Routes programs, and informational resources to support implementation of the county's Safe Routes to School Plan. The Toolkit can help inform leaders in schools and agencies; motivate and encourage participation by parents, caregivers, and other school champions; and generate ideas to achieve a vision for sustainable countywide program.

This Toolkit is designed around five major themes: Education, Encouragement, Enforcement, Engineering, and Evaluation. A summary of benefits and priority strategies are provided under each theme, as well as links to additional online resources. Standardized survey materials for evaluating and improving the Safe Routes to School program are also provided in Appendix A.

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1 Introduction

What is Safe Routes to School?

Safe Routes to School (SRTS) is a program that promotes walking and bicycling to school, and improving traffic safety around school areas through education, incentives, law enforcement, and engineering measures.

Among the goals of SRTS programs are improved child safety, integration of physical activity into the everyday routine of children, and decreased traffic and air pollution associated with school drop-offs and pick-ups. A multi-disciplinary effort that requires strong partnerships between municipalities, school districts, parents and law enforcement agencies, the most successful Safe Routes to School programs are a combination of active volunteerism and ongoing funding.

SRTS in Mendocino County

The Mendocino County Safe Routes to School Plan is the first countywide initiative aimed at increased walking and cycling to school. The planning process was funded by the Mendocino County of Governments (MCOG).

History

The first Safe Routes to School programs were developed in Europe during the 1970s and 1980s as communities began to notice that children were no longer walking and bicycling to school. These early efforts inspired similar programs in Australia, New Zealand, and Canada, while in the United States “pilot” SRTS programs began in the late 1990s in New York City, Arlington (MA), and Marin County (CA). California developed its own statewide program in 1999, and in 2005, Congress included a national Safe Routes to School (SRTS)¹ program as part of the reauthorization of federal highway legislation. In the first five years of the federal program, over \$612 million of SRTS funds complemented local and state efforts, such that now all fifty states have a Safe Routes to School coordinator and grant program.

Why Safe Routes?

To understand the many potential benefits of a successful Safe Routes to School program, it is helpful to review the conditions that led to the program’s development in the first place.



- Despite relatively low levels of non-motorized activity, bicycle collisions are the 5th leading cause of hospitalized injuries for kids aged 5-12 in California. Pedestrian collisions are the 4th leading cause of injuries and the 3rd leading cause of fatalities for the same group (California Injury Prevention Network)

As the numbers indicate, there is a health epidemic among U.S. children. This epidemic poses both chronic (disease) and acute (injury) risks, and while composed of various and complex factors, it is clearly linked to reduced physical activity. The rise of Safe Routes to School programs is one indication that things may be changing for the better.

Converting more school trips to walking and biking is also a cost-effective way to reduce peak period congestion and improve local air quality. As much as 20% to 30% of morning rush hour traffic can be attributed to parents driving their children to school in many communities. When many of these same vehicles sit idling for minutes during pick-up and drop-off periods, school children and employees are exposed to higher levels of pollutants associated with increased asthma rates and other respiratory problems. Small children are particularly vulnerable to air pollution since their lungs are still developing and they breathe more frequently relative to older adults.

Beyond traffic safety and public health, there are a number of other equally significant (if difficult to measure) benefits of successful Safe Routes to School programs. Several studies, including a comprehensive study of California students, indicate that there is a strong positive relationship between physical fitness and academic achievement – which is supported by scientific brain research. Also, since SRTS efforts tend to deepen relationships among neighbors and between parents and law enforcement officials, benefits can often extend beyond the school commute into issues such as greater public safety and neighborhood cohesiveness.

Consider these facts:

- Within the span of a single generation, the number of children walking and bicycling to school has dramatically declined. In 1969, nearly half of all children walked or biked to school, including 87% of those living within a mile of their school. Today, fewer than 15% of children nationwide walk or bike to school. (Centers for Disease Control and Prevention - CDC)
- One-quarter of children aged 9-13 lead a sedentary lifestyle, and nearly two-thirds do not participate in any organized physical activity (CDC)
- Rates of severe childhood obesity are three times higher than they were 30 years ago, putting children at higher risk of premature death and several chronic diseases (CDC)

¹Note: The acronym “SRTS” is specific to the federal Safe Routes to School program, as opposed to “SR2S” which is used by the State of California. This difference is generally not important except when applying for potential grant assistance (where various federal and/or state and local eligibility rules and requirements may apply).

Purpose of the Toolkit

This guide has been created as a resource for local parents, teachers, school administrators, public health professionals, city staff, and others looking to develop or expand a Safe Routes to School program or project in Mendocino County. The document provides a menu of strategies and activities to implement various non-infrastructure components of a SRTS program and resources to identify and plan for engineering improvements in order to make walking and bicycling to school a safe and easy choice. The document is organized according to the Five E's of transportation planning - Education, Encouragement, Enforcement, Engineering (and Operations), and Evaluation - all of which are necessary to develop and sustain a successful program. A short summary description of each 'E' is provided at the beginning of the relevant section.

Let's Start Walking & Rolling!

If you are reading this guide it is because you care about the safety and health of students, families and communities in the County. Thank you for your interest and participation in this important and exciting program!



A photograph showing a man in a blue long-sleeved shirt and dark jeans, and a child in a striped shirt, both pointing their right index fingers upwards towards a wall. The wall is composed of light-colored rectangular panels. The scene is set indoors, possibly in a classroom or a community center.

2 | Education

Education programs are an essential component of a Safe Routes to School effort. They generally include outreach to students, parents and guardians, and motorists. Students are taught bicycle, pedestrian, and traffic safety skills both in and out of the classroom. Adults receive information on transportation options and driving safely near schools.

Pedestrian and bicycle safety education helps each child understand basic traffic laws and safety rules, such as sign identification and when and how to use a crosswalk appropriately. Curriculum-based lessons can also help students understand the benefits of non-motorized transportation and be a fun way to apply information learned through health or science lessons.

Bicycle safety training is normally appropriate beginning in or after the third grade and helps children understand how to properly fit and maintain their bike along with riding safely in a variety of traffic situations. These trainings also stress that bicyclists have the same responsibilities as motorists to obey traffic laws.

The following educational activities are “staples” of successful Safe Routes programs and provide a foundation for all future Safe Routes activities and programs.

CLASSROOM CURRICULUM & SKILLS TRAINING

A variety of existing in-classroom lessons and skills training activities are available to help teach students about walking, bicycling, health, and traffic safety. These can include lessons given by law enforcement officers or other trained professionals, or lessons delivered by teachers. Example topic lessons are: Safe Street Crossing, Helmet Safety, Rules of the Road for Bicycles, and Health and Environmental Benefits of Walking and Biking.

Benefits

- One of the quickest and easiest ways to ensure all children receive important information on the safety basics and benefits of walking and bicycling
- Flexible activities can accommodate a variety of time/space constraints and grade levels
- Helps institutionalize pedestrian and bicycle safety as a priority life skill (similar to home economics or driver education)
- Complements environmental lessons and physical fitness/health activities with information and training on the importance of good travel habits

Steps to Take

Assemblies

When incorporating safety education during the school day, there are options. An assembly can provide information to the whole school at once; the challenge is to meet the interest and skill levels of every grade. *If you choose to use assemblies, splitting the grades into K-2 and 3-5 is recommended.* Including funny characters and students to play helpful roles can often make assemblies more engaging and memorable. Sample characters include “Chipper” the California Highway Patrol mascot, “ASIMO, the world’s most advanced humanoid walking robot,” and “Zozo,” a Jim Henson-inspired character who teaches sustainable transportation habits.

In-Classroom Lessons

Lessons offered at different grade levels during class time provide a comprehensive approach to delivering SRTS curriculum. Ideally, safety education builds from year to year, beginning each year with a review of previously covered lessons. Limiting messages to one or two issues



School assemblies are one way to relay important information about safe walking and bicycling habits, and rules of the road. These events often require imaginative props and special characters to keep the program interesting to students.

keeps them clear and concise. Schools with limited time can focus on one or two grades, such as 2nd and 4th grade in elementary school and 6th grade in middle school.

Classroom educational materials should be presented in a variety of formats (safety videos, printed materials, classroom activities, and hands-on drills and practice), and should be continually updated to make use of the most recent educational tools available. Classroom education programs should also be expanded to promote the health and environmental benefits of bicycling and walking.

Applied “On-Street” Skills Training

The most important education program aimed at students is applied training in pedestrian and bicycle safety. This training, sometimes called “driver’s ed for biking/walking” is common in European countries, but is often overlooked in the United States. Walking and biking safety training provides students with skills and confidence they can apply immediately. Training also provides students with an understanding of bicycle and pedestrian behavior that may help them eventually become better drivers. Students also remind their parents about rules and good behavior, reminding parents that their children are observing and imitating their behavior.

When teaching children applied safety lessons, remember that they experience their surroundings differently than

adults. The following list includes things to consider when teaching children under ten years of age:

- They do not have full peripheral vision
- They do not accurately judge speed and distance
- They have not developed a full sense of where sounds originate
- They have not developed an accurate sense of danger

Specific pedestrian safety topics may include:

- Where and when to cross a street
- Crossing at intersections
- Sign identification
- Understanding traffic signals
- Crossing the street with an adult
- Crossing around school buses
- Crossing streets around parked cars
- Walking at night
- Using sidewalks
- Walking where no sidewalks exist
- How to walk near driveways and cars backing up

For more detailed information on bicycle safety topics, see the *Bicycle Rodeos* summary on the following page.

Resources

- SRTS Lesson Plans (Marin County)
<http://www.saferoutestoschools.org/lessonplans.html>
- National SRTS Toolkit: Classroom Activities
<http://www.nhtsa.gov/people/injury/pedbimot/bike/Safe-Routes-2002/classact.html>
- Meet Zozo (StreetEducation, OpenPlans project)
<http://streetseducation.org/zozo/>
- Pedestrian Safety Education Curriculum
<http://www.walknbike.org/pedestrian-safety/>
- Bicycle Safety Education Curriculum
<http://www.walknbike.org/bike-safety/>



A comprehensive approach to bicycle and pedestrian safety curriculum includes both in-classroom lessons and “real life” skills training.

BICYCLE RODEOS

Bicycle Rodeos are family-friendly events that incorporate a bicycle safety check, helmet fitting, instruction about the rules of the road, and an obstacle course. Often preceded by in-class safety lessons or followed by neighborhood rides, bicycle rodeos offer a natural progression for reinforcing key safety practices and building confidence among young bicyclists. Adult volunteers can administer rodeos, they may be led through the local police department, and/or rodeos can be taught by certified League of American Bicyclists (LAB) instructors or members of a bicycle advocacy group (such as Walk & Bike Mendocino).

Bicycle rodeos can be incorporated into health fairs, back to school events and Walk and Bike to School days. Depending on the school, they can be customized to initiate first-time riders or act as refresher courses for older, more experienced students.

Benefits

- Teaches and reinforces the basics of bicycle safety, from helmet use to hand signals
- Provides active learning that engages youth outside the classroom setting and with real-world equipment
- Helps build young riders' confidence and experience within a safe and predictable setting
- Offers a fun activity that can complement numerous other SRTS programs and activities

Steps to Take

The first steps in organizing a bicycle rodeo are to determine when it will take place and if it will be part of a larger school event or program. For example, Oak Knoll Elementary in the Menlo Park City School District schedules a bicycle rodeo as part of a larger Bicycle Safety Education Week program at the beginning of the school year. Bicycle rodeos typically require about an hour or more to complete, depending on school size and participation.

With a date and format in mind, organizers should contract with one or more instructors and work with those individuals to select an appropriate site for the rodeo and identify additional materials (cones, white chalk, whistles, etc.) that may be needed. Large fields or parking lots are often the best locations, and gymnasiums can be a good



back-up in case of inclement weather. The level of effort and responsibilities for organizing a bicycle rodeo largely depend on the expertise of the instructor(s).

While actual bicycle rodeo formats can vary, most include a series of “stations” such as:

- Registration/Sign Up
- Bicycle Inspection (Air, Brakes, Chain, Frame Fit)
- Helmet Check
- Rules of the Road
- Test Course (usually divided into specific movements)

Organizers should consider whether prizes, certificates, and/or any refreshments will be offered upon completion of the course. In many cases these items can be donated or subsidized by local businesses such as bicycle shops or area food establishments.

Resources

- Organizer's Guide to Bicycle Rodeos (Cornell University)
http://www.bike.cornell.edu/pdfs/Bike_Rodeo_404.2.pdf
- Organizing a Bicycle Skills Rodeo (Cascade Bicycle Club)
http://www.coloradodot.info/programs/bikeped/safe-routes/training/bicycle-rodeo/BikeRodeoResources.pdf/at_download/file
- Safe Routes to School Rodeo Manual (Marin County)
<http://www.saferoutestoschools.org/pdfs/lessonplans/RodeoManualJune2006.pdf>

SCHOOL TRAFFIC SAFETY CAMPAIGN

A School Traffic Safety Campaign encourages adult awareness of students walking and bicycling to school and the importance of safe driving behavior. A safety campaign is an effective way to reach the general public and encourage drivers to slow down, and can highlight specific locations where students are walking and biking to school.

Benefits

- Extends beyond school families and students to educate the general public
- Can be targeted (e.g. with banners or lawn signs) at specific “hot spot” safety locations and reinforce school zone speed limits
- Helps develop good travel behavior and habits among students, parents, faculty, and staff - including those who live too far away to walk or bike to school
- Can be funded through traffic safety grants within or outside Safe Routes to School programs

Street Smarts

Several Bay Area communities - including Marin County, Alameda County, and the City of San Jose - have instituted a “Street Smarts” campaign that includes educational brochures and videos, roadside banners and outdoor media, classroom discussions, and much more. These programs share high quality outreach materials and have been effective at reaching a large cross-section of the public in and around participating schools.

Resources

- “Every Step Counts” Marketing Resources (SRTS)
http://www.saferoutesinfo.org/resources/marketing_every_step_counts_materials.cfm
- Street Smarts Campaign (San Jose)
<http://www.getstreetsmarts.org/>
- Safe Kids USA
<http://www.usa.safekids.org/>



Si Vas Caminando A La Escuela:

- A los padres: Escoja la mejor ruta para llegar a la escuela y acompañe a sus hijos.
- Camina con un grupo, con un padre/madre—o con un compañero. Evita caminar solo.
- Obedece las señales de tránsito, los avisos y las marcas en el asfalto, tales como las que señalan el área de cruce para peatones.
- Obedece las direcciones de los Guardias de Cruce y las Patrullas Escolares para la Seguridad.
- Mira en todas direcciones antes de cruzar la calle (izquierda, derecha, al frente y hacia atrás).
- Cruza solamente en la esquina de la calle o en una área marcada para cruce. ¡No cruces en la mitad de la calle!
- Mantente alerta en todo momento – sobre todo cuando hay mal clima.



Si Vas En Bicicleta A La Escuela:

- ¡Usa siempre el casco!
- Pídele a tus padres que te ayuden a escoger la mejor ruta para viajar en bicicleta.
- Obedece todas las señales de tránsito, avisos y marcas en el asfalto.
- Cuando vayas en bicicleta por las calles, maneja al lado derecho de la calle.
- Maneja en la misma dirección del tránsito; no manejes dando la cara al tránsito.
- Los niños menores de 10 años deben manejar sobre la acera.
- Cuando vayas en bicicleta por la acera, maneja despacio y pon atención a los peatones.
- También ten cuidado con autos entrando y saliendo de sus garajes.
- Cruza la calle en la esquina, o usa las zonas de cruce para peatones.
- Cuando cruces sobre un cruce para peatones, hazlo caminando—y lleva al lado tu bicicleta.



Si Vas En Autobus A La Escuela:

- Aléjate de la calle, y no juegues alrededor de la parada de autobús
- Al llegar a la parada donde te bajas, espera por tus padres—no cruces la calle solo.
- Sigue las instrucciones del conductor del autobús.
- Mantente en tu asiento en todo momento y asegúrate que tus pertenencias no obstruyan el pasillo del autobús.
- Mantén la cabeza, brazos y manos dentro del autobús.



Si Vas A La Escuela En Automovil:

- Usa el cinturón de seguridad durante todo el trayecto, aún cuando el viaje sea corto.
- Los niños pequeños (menores de 4 años, o que pesan menos de 40 libras) deben ir en su asiento especial para bebés.
- Niños menores de 6 años o que pesan menos de 60 libras de peso deben ir en un asiento elevado.
- El sitio más seguro para los niños cuando viajan en automóvil, es en el asiento trasero.
- Es contra la ley viajar en la parte trasera de una camioneta pick-up, a menos que tenga una cubierta de acampar (camper).
- Asegúrese que los niños entren y salgan del vehículo por el lado del pasajero, y por el lado de la acera.
- Estacione el auto a una o dos cuadras de la escuela, y camine el resto del trayecto para evitar congestión de tráfico.
- ¡OBEDEZCA TODAS LAS LEYES DE ESTACIONAMIENTO, PEATONALES Y DE VIALIDAD; son para su seguridad y la de sus hijos!
- Este otoño, el Departamento de Policía de San José estará supervisando el cumplimiento de las leyes peatonales y de vialidad para la mayor seguridad de nuestros niños.

City of San José
www.GetStreetSmarts.org



3 | Encouragement

Encouragement programs focus on bringing the fun back to walking and bicycling, thereby increasing public awareness, and increasing the number of students walking, biking, carpooling, and taking transit to school. The activities often include a variety of special events and contests, outreach campaigns, and presentations to school and community groups. Encouragement programs do not need much funding, but their success depends on a school champion or group of volunteers for sustained support.

This guide describes in detail several categories/concepts that typically fall under “Encouragement,” including:

- Walking School Buses and Bike Trains
- Competitions and Incentives
- Back to School Blitz
- Walk and Bike to School Day/Week/Month (including Int’l Walk to School Day in October)
- Park + Walk
- School Route Walking Maps
- After School Clubs

The list is by no means exhaustive and will likely require local input and customization to be as successful as possible.

WALKING SCHOOL BUSES AND BIKE TRAINS

A walking school bus involves a group of children walking to school with one or more adults. The “bus” follows the same route every time and picks up children from their homes at designated times. Children like the walking school bus because it gives them active social time before the school day begins (or, as one participating child put it, “it’s like recess before school!”). Adults like the walking school bus because they feel more comfortable when there are trained, trustworthy adults escorting their children to school. Teachers and principals like the walking school bus because it helps kids arrive ready to concentrate on school.

A bicycle “train” is very similar to a walking school bus; groups of students accompanied by adults bicycle together on a pre-planned route to school. They may operate daily, weekly or monthly. Bike trains also help address parents’ concerns about traffic and personal safety while providing students a chance to socialize, be active, and develop riding skills while under adult supervision.

Benefits

- Directly addresses two of the most common parental fears regarding walking or bicycling to school: stranger danger and traffic safety
- Highly convenient for parents and fun for students
- Scalable program that can increase in frequency and/or coverage as participation grows
- Helps develop bonds among classmates and neighbors, which can extend beyond the school day

Steps to Take

Finding a Coordinator

A walking school bus can be an informal effort begun by a few parents in one neighborhood. For a school-wide program, however, it is important to designate a coordinator. In some cases a dedicated volunteer coordinator can be successful, but schools may want this to be a paid position to ensure consistency and reliability.

The walking school bus coordinator can begin by assessing both resources (such as parent volunteers) and interest. A school-wide survey (paper and/or electronic) distributed



Walking School Bus kickoff event, Fair Oaks Community School in Redwood City (image from www.rwc2020.org)

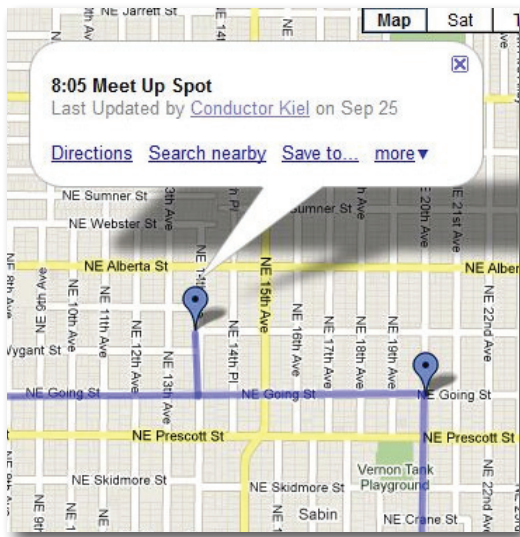
to parents can help to identify interested households and volunteers.

Timing/Frequency

Ideally, a walking school bus or bike train program should run every day so families can count on it. However, it is possible to start small by selecting one or two days per week, and/or by targeting specific neighborhoods (e.g. a housing development close to the school) as a way to begin developing the program. You might even start with a special one-time walking school bus, such as for International Walk (and Roll) to School day in October. Some programs operate in the morning only, since children have after-school programs or go somewhere other than their home after school, or may not have a parent waiting for them at home.

Designating Routes and Stops

Walking routes should be sited on streets with complete pedestrian facilities, prioritizing safe crossings and lower traffic speeds and volumes, as well as low crime streets. In many cases, these streets will also provide the best route for bicycle trains, although coordinators should also identify dedicated bicycle facilities that may lead to the school. Stops may either be at each child’s house (which is more convenient for parents but may take longer) or at gathering points (e.g. one meeting place per block, as well as gathering spaces at parks). Including at least one “stop” with parking facilities is also a good way to increase participation for families who may live far from the school but can drop off children to join the walk. Finalized routes



Online mapping tools, such as Google Maps, are increasingly used to establish walking school bus/bike train routes and stops. This method can help make a program more accessible to new or newly interested parents, facilitate multiple walking or biking routes, and can communicate real-time modifications, such as for construction projects and inclement weather.

and stop locations should be mapped out for parent and volunteer reference.

Finding bus “drivers” and train “conductors”

Once the routes and number of participating children have been determined, the coordinator should decide how many adults will be needed for each route. Experts recommend one adult per three children for children aged 4-6 and one adult for six children for older elementary children aged 7-9.

Bus “drivers” (A.K.A. route leaders) are usually volunteers, but it is important to make sure that the volunteers are dedicated, responsible, and well-supported. Interested parents are natural volunteers. Some communities have also had outstanding success recruiting from a local college or university, where students can receive college credit in exchange for their commitment to the program. An active senior group may also be a good partner organization to find volunteers who are available during the day. It is also an option to pay route leaders a small stipend (as some crossing guard programs do). The school coordinator should screen each potential volunteer through an interview and criminal background check.

Training

All route leaders must also attend a detailed training covering:

- The goals and outline of the walking bus/bike train program
- Expectations for route leaders
- Traffic safety and group management techniques
- Emergency procedures (e.g., injury protocol and what to do if a route leader cannot serve on a given day)
- Alternate school schedule and inclement weather policy
- Late arrival policies and child “code of conduct”
- Any tracking protocols that should be followed (such as a daily attendance worksheet)

The coordinator should also provide first aid kits and safety vests to each volunteer, along with the route map and parent contact information for each participating family.

Promotion

Outreach typically begins two weeks after the start of school. Strategies to promote the program include:

- Sending home information with school orientation materials
- Reaching out to/through PTAs
- Hosting a booth at back to school night
- Creating an easy-to-use website (or page within the school website) where families can sign up online

Liability

Organizers should work closely with the school district to address liability concerns. If the program cannot be covered under an existing policy, partnerships with a third party (such as the PTA or the City) may provide an alternative. Parents should also sign permission slips and liability waivers (the exact language should be determined by the risk manager) as well as provide emergency contact information.

Resources

- International Walk (and Roll) to School Day
<http://www.walktoschool.org/>
- The Walking School Bus Guide: Combining Safety, Fun, and the Walk to School (SafeRoutesInfo.org)
http://guide.saferoutesinfo.org/walking_school_bus/index.cfm

TRIP TRACKING AND COMPETITIONS & INCENTIVES

Contests and incentive programs reward students by tracking the number of times they walk, bike, carpool, or take transit to school. Contests can be individual, classroom, school-wide, or interschool competitions. Local businesses may be willing to provide incentive prizes for these activities. Students and classrooms with the highest percentage of students walking, biking, or carpooling compete for prizes and recognition. Small incentives, such as shoelaces, stickers, and bike helmets, can be used to increase participation. It can also be effective to allow different grades and schools (high school vs. grade school vs. middle school) to compete against each other in a mobility challenge.

Types of Competitions

Pollution Punchcard / Mileage Club

These year-round programs are designed to encourage school children and their families to consider other options for getting to school, such as biking, walking, carpooling, and public transportation. Every time a student walks, bikes or carpools to school, a school representative or student records the activity on a card or tally sheet. After a certain number of points are reached or the card is “complete” the student receives a prize or incentive.

Commute Challenge Week/Month

This week or month-long encouragement event is generally held in conjunction with National Bike Month in May. Students are asked to record the number of times they walk and bike during the program. The results are tallied and competing schools or classrooms compare results. Students who are unable to walk or bike to school can participate by either walking during a lunch or gym period or getting dropped off further away from the school and walking with their parents the last several blocks. More recent examples have included online mapping/tracking and other technology lessons as part of this activity.

Golden Sneaker Award

Each class keeps track of the number of times the students walk, bike, carpool or take the bus to school and compiles these figures monthly. The class that has the highest level of participation gets the Golden Sneaker Award. (The

award can be created by taking a sneaker, mounting it to a board like a trophy, and spray painting it gold.)

Walk Across America/California

This is a year-round program and is designed to encourage school children to track the number of miles they walk throughout the year. Students are taught how to track their own mileage through learning about how many steps or blocks are in a mile and also learn about places in the United States or California on their way. Teacher or volunteer support is required.

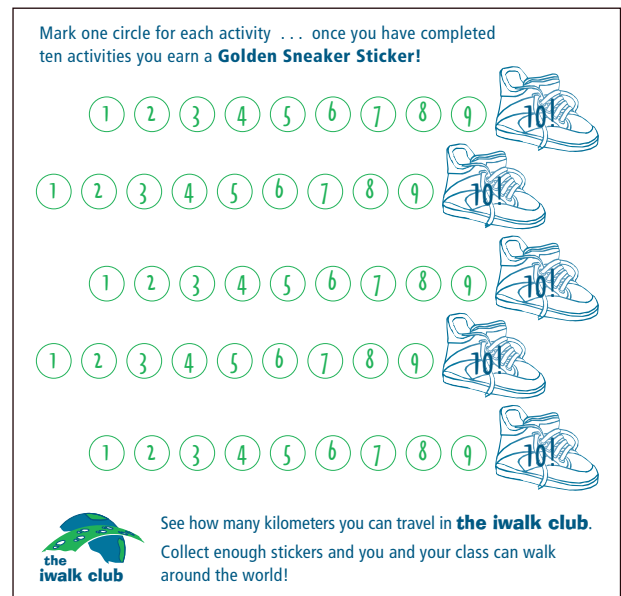
Each of these programs can use incentives to increase participation and reward students for their efforts.

Example incentives include:

- Shoelaces, pedometers, reflective zipper pulls
- Bicycle helmets, lights, or priority bike parking spots
- Raffle tickets for a bicycle from a local bike shop
- Early dismissal, extra recess time, or pizza parties
- School-to-school or staff challenges

Resources

- Golden Sneaker Award Guidebook (Marin County)
<http://www.tam.ca.gov/Modules/ShowDocument.aspx?documentid=494>
- Mileage Clubs and Contests Guide (SafeRoutesInfo.org)
http://www.saferoutesinfo.org/guide/encouragement/mileage_clubs_and_contests.cfm
- Trip Tracking and Competitions Webinar (MnDOT)
<http://www.dot.state.mn.us/saferoutes/toolkit.html>



Sample mileage club card with various levels of incentives (Safe Routes to School Canada - www.saferoutestoschool.ca)

BACK TO SCHOOL 'BLITZ'

Families set transportation habits during the first few weeks of the school year and are often not aware of the multiple transportation options available to them. Because of this, many families will develop the habit of driving to school. A “Back to School Blitz” can be used at the beginning of the school year to promote bus, carpool, walking, and bicycling as school transportation options. The “Back to School Blitz” can include many of the elements described in this guide, including suggested walking route maps, safety education materials, important contact and volunteer opportunity information, a calendar of events, and traffic safety enforcement notices.

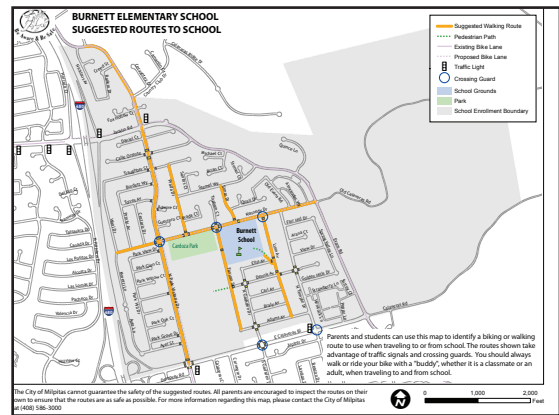
Benefits

- Influences parent driving behavior at beginning of school year before habits and routines are set
- Sets expectations for safe drop-offs and pick-ups by communicating preferred routes by which drivers should access school, parking/no parking policies, and loading/unloading procedures
- Establishes baseline outreach for education and encouragement programs that can build momentum and excitement for activities to occur later in school year
- Leverages and promotes all existing SRTS activities

Steps to Take

At the beginning of the year, the school can distribute to all students a packet of information with a cover letter signed by the principal, encouraging parents to create transportation habits with students that promote physical activity, reduce congestion, increase school safety and improve air quality. The packet could include:

- School transportation maps that include bicycle facilities and suggested walking routes, transit and school bus stops, drop-off and parking area procedures, and existing bike parking locations
- Transit schedules and available carpool information
- Pledge forms about reducing the number of times that families drive to school (entries can be entered in a raffle for a prize donated by local businesses or the PTA)



Having a high-quality suggested walking route map, and sharing it through a “Back to School Blitz” campaign, can be a relatively simple but effective way to encourage parents to seek alternatives to driving their children to school (or engage in a Park + Walk activity).

In addition to the packet, the following strategies can be included as part of the “Blitz”:

- Staff a table at back-to-school night with materials and trained volunteers who can answer questions about transportation issues
- Include an article in the first school newsletter about transportation options and resources
- Coordinate with local law enforcement on enhanced enforcement activities, such as school zone speed and crosswalk enforcement, at the beginning of the school year or after a holiday break
- Send home occasional follow-up “backpack mail” (e.g. after holiday breaks) to remind parents about travel options and policies or upcoming SRTS events (such as National Bike Month)

Resources

- Addressing the Behavior of Parents and Caregivers (SRTS) http://www.saferoutesinfo.org/lawenforcement/resources/parent_ed.cfm
- California Walk to School Headquarters <http://www.cawalktoschool.com/>
- Let’s Move! (White House health encouragement campaign) <http://www.letsmove.gov/>

WALK AND BIKE TO SCHOOL (DAY/WEEK/MONTH)

Walk and Bike to School Day/Week/Month are special events that encourage students to try walking or bicycling to school. The most popular of these is International Walk to School Day, a major annual event that attracts millions of participants in over 40 countries each October. Schools can register for this event, and download free educational and promotional materials, by visiting <http://www.walktoschool.org/>.

These events encourage students and their families to try walking or bicycling to school. Parents and other adults accompany students, and staging areas can be designated along the route to school where groups can gather and walk or bike together. Walk and Bike to School events are often promoted through press releases, backpack/folder/electronic mail, newsletter articles, and posters. In preparation for Walk and Bike to School Day, students can make signs and banners as part of a “safety art” activity that helps promote the event and builds an understanding of the reasons for promoting walking and biking.

Students can earn incentives for participating or there may be a celebration at school following the morning event. International Walk to School Day is great opportunity to kick off an SRTS program for the year.

The momentum from Walk to School Day can be carried forward into regular monthly, or even weekly events depending on the level of support and participation from students, parents and school and local officials. Like Walk and Bike to School Day, incentives or celebrations recognize students’ efforts.

Sample recurring event ideas include:

- “Walk or Wheel on Wednesdays”/Walk or Wheel Once a Week (WOW)
- “Spring into Spring”
- “Winter Walk” or “Polar Bear Walk”



Walk and Bike to School Day encourages families to try something different in their daily routine.

10 Strategies to Promote Recurring Walk and Bike Days

- Poster in every classroom
- Principal email to all parents
- School newsletter
- Backpack mail
- School website
- Loud speaker announcements
- Facebook/Twitter
- PTA meeting
- School assemblies
- Poster art

Benefits

- Increases physical activity, which can combat health problems
- Reduces traffic congestion around the school’s pick-up and drop-off areas
- Alerts parents to potential walking and biking routes available in their area
- Creates a supportive, encouraging environment for parents and kids who do not regularly walk or bike to school

Resources

- International Walk to School Day
<http://www.walktoschool.org/>
- Safe Routes to School - Walk and Roll Wednesdays (Marin County)
http://www.saferoutestoschools.org/w_and_r_wed.html
- South Carolina SRTS - Monthly Walks
<http://www.scsaferoutes.org/resources/encouragement>
- Walk and Bike to School Day Webinar (MnDOT)
<http://www.dot.state.mn.us/saferoutes/toolkit.html>

OTHER ENCOURAGEMENT ACTIVITIES

Park + Walk

Not all students are able to walk or bike to school; some live too far away or their school walking route includes hazardous situations, such as a busy arterial roadway without sidewalks. This year-round campaign (or individual event) is designed to encourage families who drive to stop several blocks from school and walk the rest of the way. By allowing all students and families to participate in a Safe Routes program, Park + Walk is an inclusive campaign that can be matched up with other activities, such as a walking school bus. It also helps reduce traffic congestion in and around the school.

School Route Walking Maps

Suggested walking route maps can help parents overcome fears related to traffic and/or a lack of knowledge of pedestrian facilities. These maps typically show stop signs, signals, crosswalks, sidewalks, trails, overcrossings, and crossing guard locations around a school and can also include information about bicycle facilities and average travel times. Often produced as part of a school walk audit, this resource is best developed in partnership with city, consulting, or other technical experts who have access to Geographic Information Systems (GIS) data and mapping software.

After School Clubs and Programs

An after-school club can take many forms and address many different themes, including bike repair, sport cycling, environmental issues (green teams), and community/civic engagement.

After school programs can engage students in developing outreach materials and content for other programs such as walk to school day or a school safety campaign. Older students can mentor and provide support for younger students in bicycle maintenance and skills.



As part of a Park + Walk (or Park & Stride) campaign, some schools provide self-applied car stickers to develop a sense of pride and connection with the SRTS program for those families who do not have viable biking or walking options from home. (www.brightkidz.co.uk)

Benefits

- Increases physical activity, which can combat health problems
- Reduces traffic congestion around the school's pick-up and drop-off areas
- Improves air quality
- Alerts parents to potential walking and biking routes available in their area
- Creates a supportive, encouraging environment for parents and kids who do not regularly walk or bike to school

Resources

- International Walk to School
<http://www.walktoschool.org/>
- California Active Communities' California Walk to School Project
<http://www.caactivecommunities.org/w2s/>
- Park and Walk Guide (United Kingdom)
http://www.buckscc.gov.uk/bcc/transport/park_walk.page
- Santa Clarita, CA Suggested Routes to School Maps
<http://www.santa-clarita.com/Index.aspx?page=615>
- Santa Cruz, CA SRTS Maps (Google Maps example)
http://www.ecoact.org/Programs/Transportation/Safe_Routes_to_School/maps.htm



4 | Enforcement

Strengthening and sustaining relations with local law enforcement officials and implementing strategies that improve traffic law compliance are essential components of any successful Safe Routes to School program.

The following pages describe the most popular enforcement tools, including:

- Crossing Guard Programs
- Speed Watch / Feedback Signs
- School Safety Patrols
- Crosswalk Stings /Enforcement Campaigns
- School Parking Lot “Citations”

It is important to remember that proper enforcement starts and ends with good behavior from parents, students, and neighbors. To be effective and sustainable, enforcement campaigns should be school and community-driven partnerships that do not overly rely on punitive measures by local law enforcement. To that end, these targeted and “do it yourself” strategies can help engage - but not overwhelm - police departments that are often faced with increasing demands and fewer resources.

CROSSING GUARD PROGRAM

The primary responsibility of an adult school crossing guard is to help children safely cross the street as they walk or bicycle to and from school. The guard stops traffic with hand signals or a STOP paddle, and is always the first person in and the last person out of the street. While an adult crossing guard should not direct traffic unless specifically trained as a traffic control officer, motorists can be cited for an infraction under section 42001 of the California Vehicle Code (CVC Section 2815), if they do not stop for or otherwise ignore a guard's direction.

Benefits

A well-trained adult school crossing guard can:

- Discourage unsafe behavior by children near traffic, such as darting into the street without looking or crossing against a traffic signal - as well as for all pedestrians at the school crossing
- Create temporary gaps in traffic, and utilize existing gaps more efficiently, to help students cross safely
- Increase compliance of motorists who should be stopping for pedestrians in the process of using the school crossing
- Observe and report any incidents or conditions that present a potential safety hazard to the school children or the guard (i.e., add "eyes on the street")

Steps to Take

Program Structure

Adult school crossing guards can be volunteer community members or paid employees. Typically a paid program is preferable since it increases motivation, although many highly-organized volunteer programs exist and have been sustained over time. Regardless of whether or not crossing guards receive compensation, substantial efforts are required from a coordinator to conduct the screening and hiring, perform background checks, handle insurance coverage and equipment purchase/maintenance, and monitor the guards daily. Funding from the County's Safe Routes to School Program currently cannot be used to pay for crossing guard salaries.

Identifying Need and Locations

Although some federal technical guidance exists, the decision of where and when to locate crossing guards is typically the responsibility of local officials and organizers.



Some schools use a formal crossing guard request system, while others organize a committee or hire outside technical assistance to identify appropriate locations. All programs should work closely with their local police and traffic safety departments to administer the program.

Resources

- Crossing Guard Program Guidelines (SRTS)
http://www.saferoutesinfo.org/guide/crossing_guard/index.cfm
- Crossing Guard Training Program (NCDOT)
http://www.ncdot.org/bikeped/about/training/school_crossing_guard/

SPEED WATCH / FEEDBACK SIGNS

Fast-moving traffic is a major deterrent to children and parents walking and biking to school, especially where crossings of arterial roadways are required or where sidewalks are discontinuous. In known speeding problem areas, radar detection can help reduce speeds and enforce speed limit violations. Two common strategies that do not require active police enforcement (i.e., manned patrol vehicles) are setting up mobile radar trailers that display approaching motorists' speed next to a speed limit sign, and loaning radar guns to local residents or school officials in order to document and self-report speed limit violators.

Benefits

- Provides 'hard' data to assist local traffic enforcement and roadway engineering services
- Alerts motorists, who may otherwise not be looking at their speedometer, to their actual driving speeds
- Low-cost, high yield activity to improve both traffic safety and education
- Radar trailers or guns can be shared among several schools

Radar Trailers/Feedback Signs

Speed radar trailers can be used as both an educational and enforcement tool. By itself, the unmanned trailer serves as effective education to motorists about their current speed compared to the speed limit. As an alternative enforcement measure, the police department may choose to station an officer near the trailer to issue citations to motorists exceeding the speed limit.

A permanent speed radar sign can be used to display approaching vehicle speeds and speed limits on roadways approaching the school site. The unit is a fixed speed limit sign with built-in radar display unit that operates similar to a radar trailer. In order to maximize effectiveness for school settings, the radar display unit should be set to only activate during school commute hours. Roadways approaching the school site are the most appropriate location to display speeds, instead of streets along the school frontage that will likely have lower speeds due to pick-up/drop-off traffic.

Resources

- Role of the Enforcement Officer (SRTS)
http://www.saferoutesinfo.org/guide/enforcement/role_of_the_enforcement_officer.cfm

Because they can be easily moved, radar trailers are often deployed on streets where local residents have complained about speeding problems. If frequently left in the same location without officer presence, motorists may learn that speeding in that location will not result in a citation and the strategy can lose its benefits. For that reason, radar trailers should be moved frequently.



OTHER ENFORCEMENT ACTIVITIES

School Safety Patrols

School safety patrols are comprised of trained student volunteers responsible for enforcing drop-off and pick-up procedures. Student safety patrols may also assist with street crossing; they do not stop vehicular traffic, but rather look for openings and then direct students to cross. According to the National Safe Routes Clearinghouse, "student safety patrols... [increase] safety for students and traffic flow efficiency for parents. Having a student safety patrol program at a school requires approval by the school and a committed teacher or parent volunteer to coordinate the student trainings and patrols."

School Crosswalk Stings / Enforcement Campaigns

In a crosswalk sting operation, the local police department targets motorists who fail to yield to pedestrians in a school crosswalk. A plain-clothes "decoy" police officer ventures into a crosswalk or crossing guard-monitored location, and motorists who do not yield are given a citation by a second officer stationed nearby. The police department or school district may alert the media to crosswalk stings to increase public awareness of the issue of crosswalk safety, and news cameras may accompany the police officers to report on the sting. The City of Santa Clarita, CA has an annual "Santa Sting" in which a police officer dresses up as Santa Claus and issues citations to motorists who do not yield to Santa in the crosswalk.

As part of a broader enforcement campaign targeting school safety, the City of Palo Alto Police Department conducts "Operation Safe Passage" three times a year during school commute periods. In addition to motorist

violations (e.g., speeding, talking on cell phone, failure to yield to pedestrians), officers stationed at schools ticket jaywalking and bicycle safety violations to promote safe behavior for all travel modes.

School Parking Lot “Citations”

If on-site parking problems exist at a school, such as parents leaving vehicles unattended in loading zones, school staff may issue parking lot “citations” to educate parents about appropriate parking locations. These “citations” are actually warnings designed to look like actual police tickets, intended to educate parents about how parking in improper zones can create safety hazards or disrupt traffic flow for other parents during the pick-up/drop-off period. Other informal enforcement programs include posting “cell free zone” signs in the school parking lot during drop-off and pick-up, and sending drop-off and pick-up procedures home with students at the beginning of the year and after returning from school vacations.



Benefits

- Increases awareness of laws requiring that motorists yield to pedestrians in crosswalks
- Educates motorists about appropriate parking behavior
- Encourages older students to take on leadership positions and reinforces street crossing, student drop-off, and pick-up procedures
- Leverages/maximizes police enforcement levels that are otherwise difficult to sustain throughout the school-year

Resources

- National Center for Safe Routes to School - SRTS Guide
<http://guide.saferoutesinfo.org/enforcement/>



5 | Engineering & Operations

Engineering improvements to the physical environment around schools are integral to a comprehensive Safe Routes to School Program that ensures walking, biking, and other “green” forms of travel are easy and safe. They are also, typically, the most costly to implement and require traffic engineering expertise and approval. Before seeking to invest in infrastructure, a thorough site evaluation and discussion with community stakeholders are needed to determine the highest priority issues and appropriate range of potential solutions.

This section discusses the all important initial step toward engineering improvements - the walk about, or walk audit - together with related school travel operations and policies. For more information on specific engineering improvements and relevant design guidelines, please contact your local planning, transportation or public works department or use the online resource links as a starting point.

FOCUS ON EASY TO IMPLEMENT IMPROVEMENTS FIRST

Signing and striping are low cost improvements that can greatly improve pedestrian and bicyclist access to school. In California, yellow crosswalks and school specific signage also identify a location as a school zone and warn motorists of potential pedestrian and bicyclist activity. Such improvements are relatively easy to install and will create momentum and support for more intensive infrastructure projects.

OPERATIONS & POLICY

In tandem with or independent from engineering improvements, certain operational strategies and policies can help reduce conflict between vehicle traffic, buses, and students walking and bicycling to school. This section describes various policies with regard to pick-up and drop-off activities that are incredibly important and can often be very low cost. Keep in mind, however, that these activities may involve a greater outlay of staff resources and new procedures often take time and outreach to gain acceptance.

DEVELOP A SCHOOL TRAVEL PLAN

School travel plans are living documents that collect, organize, and share walk audit notes, improvement concepts, travel procedures and policies, and other school information relevant to a Safe Routes to School program. These plans are important tools to assist local task forces and city staff, and to compete for outside grant funding. Ideally, they are also made available to new and returning parents, either online, in a back-to-school packet, or by request. Without a travel plan, good work and effort toward identifying physical school improvements may go unnoticed.

WALKABOUTS (SITE AUDITS)

One primary purpose of this program guide is to provide a resource for local groups to conduct a “school site audit” of their school. A school site audit, sometimes called a walking audit or walkabout, is an assessment of the pedestrian and bicycling conditions around the school area. Typically school site audits are conducted by the local school group or task force on foot, by walking the routes that the students use to get to school. A site audit could also be conducted on bicycle in order to better evaluate bicycling conditions.

The goal of a site audit is to document conditions that may discourage walking and bicycling to school, and to identify solutions to improve those conditions. The audit should involve identification of the built environment around a school (e.g. streets, sidewalks, pathways, crosswalks and intersections, bike routes, traffic controls), the drop-off and pick-up operations (e.g. presence of designated loading areas), as well as behaviors of students, parents, and motorists that could contribute to unsafe conditions for bicyclists or pedestrians (e.g. speeding, jaywalking, failure to yield to pedestrians).

Benefits

- Provides an “on the ground” assessment and set of recommendations to improve school access and safety
- Facilitates local input to identify important issues and engages stakeholders on a range of potential solutions
- Helps document the public planning process for a specific improvement, which is critical to compete for grants and obtain decision-maker approval

Steps to Take

An example School Site Audit Checklist form used in San Mateo, CA is provided in Appendix A of this Program Guide. The checklist ensures detailed information is collected for each of the following topics:

- Student Drop-Off and Pick-Up Areas
- Bus Loading Zones
- Sidewalks and Bicycle Routes
- Intersections Near the School Property
- Sight Distances
- Traffic Signs, Speed Controls & Pavement Markings



Designated students assist with the drop-off process.

The local school task force and/or SRTS coordinator should use the School Site Audit Checklist (or a similar form) as a basis for conducting or planning their walkabouts.

Along with the checklist, an aerial base map of the school area is an essential part of the site audit. These should be handed out to school groups and marked up with identified issues and suggested improvements. These maps, along with the information from the checklist form, can be forwarded to a school community task force, public works staff, or consultant for use in pinpointing and prioritizing improvements in the school area. Audit notes should also be documented within school travel plans.

Resources

- National Safe Routes to School Partnership
http://guide.saferoutesinfo.org/engineering/neighborhood_walkabouts_and_bikeabouts.cfm
- SRTS Online Guide: Engineering
<http://guide.saferoutesinfo.org/engineering/>

PICK-UP / DROP-OFF

School traffic safety begins at the front doorstep - or more accurately, the parking lot and pick-up/drop-off zones. Unlike most public facilities or office buildings, school traffic movements are heavily synchronized around a specific schedule. Left to organize itself, school traffic can easily overburden local roadway facilities and pose unique safety hazards to students. Inefficient drop-offs and pick-ups can also increase local air pollution and strain relationships with adjacent residents and community members.

Types of Operational Strategies

Valet Drop-off

“Valet” is a technique to improve traffic flow within the drop-off and pick-up loop by assisting students into and out of vehicles. This technique eliminates the need for parents to get out of the vehicle to open the door for a child or remove bags and other items, thereby reducing delays and unnecessary idling. The valet system is typically staffed by school teachers, staff, or parent volunteers. Some schools use older students as valets, for example 5th or 6th graders helping younger students in a K-6 school. However, student volunteers must get out of class early to prepare for pickup.

Platooning Drop-off/Pick-up System

In a platooning system, all vehicles unload/load simultaneously, then proceed to the exit. If a vehicle unloads or loads more efficiently than the vehicle in front of it, the rear vehicle must wait for the lead vehicle to finish unloading/loading, then follow it out of the loop. This tool is best used to control the parent inclination to always drop-off and pick-up the student directly in front of the school. Often, additional curb loading available downstream of the school can go underutilized, creating excess congestion and delay prior to entering the lot. At least two monitors are needed to effectively operate the vehicle platoon – one at the loop entrance to direct the maximum number of vehicles into the lot for a single cycle, and a second to ensure that the lead vehicle proceeds to the frontmost loading stall.



With a valet drop-off process, designated (usually older) students assist arriving students and their belongings out of the car, which helps keep parents in their vehicles and lines moving, and reduces idling.

Carpool Priority Parking and Load Zones

Policies that successfully encourage carpooling help limit demand on school facilities and on the local roadways. For older students and faculty/staff, priority parking permits can be awarded to those who commit to carpooling. For elementary school families, express loading can be used as an incentive if picking up more than one child.

Dedicated Bus Zones

Establishing separate areas for vehicular and bus traffic can help improve traffic flows in the pick-up/drop-off area. Conflicts can occur when private vehicles and buses arrive at the same time and in the same location. Separating traffic often necessitates establishing an off-street bus zone, dedicated solely to buses. Private vehicles should not be allowed to load/unload in the bus zone. Bus zones need to be large enough to accommodate all the buses that might be parking there at one time. Sometimes it is possible to stagger the arrival times of the buses, thus requiring less space. The zones must be clearly marked and there should be adequate sidewalk space for students to wait for the bus.

Resources

- School Zone Safety Supplies

<http://schoolzonesafety.com/index1.html>

INFRASTRUCTURE ELEMENTS

This section is intended to provide an introduction to the specific infrastructure improvements commonly used for Safe Routes to School and recommended in this report. Not all treatments are appropriate at every school location. In all cases engineering judgement should be exercised when determining the best infrastructure solution.

Crossings at Signalized Intersections

There are numerous design treatments that can make intersection crossings as safe as possible and improve conditions for students walking to school. Some treatments apply to all crossings, others only at road intersections, and others at midblock crossings. The measures described in the next few pages range from simple signs and striping to more complex interventions that may be appropriate only for problematic or high-volume crossings. Knowing all the options for safe roadway crossings can facilitate good decisions when creating safe routes to school.

These pages illustrate different traffic control treatments that might be used to help bicyclists and pedestrians to safely cross at intersections.



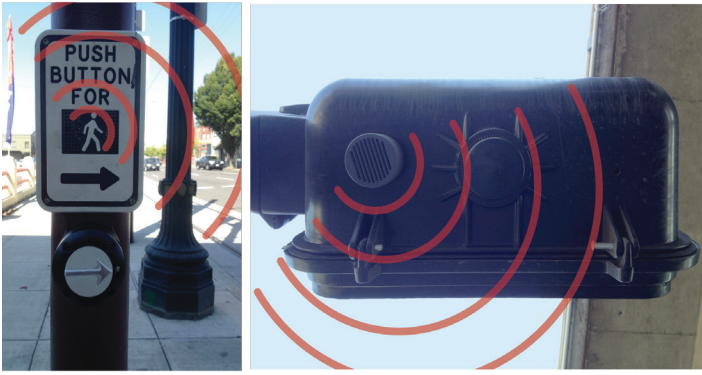
Traffic Signal Timing

Traffic lights must assume that pedestrians walk a certain speed to calculate the time needed to cross at a light, often 4 feet per second. However, children may require more time to cross an intersection than adults. Re-timing signals to 3.5 or even 2.8 feet per second at crossings used by large numbers of students and seniors can ensure that everyone has time to cross the intersection safely.



Pedestrian Countdown Heads

Pedestrian heads are the “walk/don’t walk” signal boxes instructing pedestrians at intersections. A walking person indicates that it is safe to cross the street, followed by a blinking red hand with a number counting down the seconds until the signal changes.



Audible Signals

In addition to the visual cues provided by signal heads, audible signals provide guidance for vision-impaired pedestrians. – Different audible signals should be used for different crossing directions to inform the pedestrian which intersection leg has a walk signal. Sounds should be activated by the pedestrian push-button.



Leading Pedestrian Interval

The Leading Pedestrian Interval (called “LPI”) gives pedestrians a walk signal a few seconds before motorists receive a green light, which makes pedestrians more visible to motorists making right turns.



Advance Stop Lines

Advance stop lines are a painted stripe in the roadway set back from the crosswalk, directing drivers to stop at least 4 feet before the crosswalk. On multi-lane roads advance stop lines increase pedestrian visibility for drivers in other travel lanes, especially important around schools, as students are harder to see than adults. Advance stop lines also discourage encroachment upon the crosswalk at a red light, leaving more free space for pedestrians to cross.



Painted Intersections

Painted intersections, sometimes called street murals or “Intersection Repair” are volunteer driven efforts to transform an intersection into a plaza like community space by painting artistic imagery on the street. Painted intersections generally require permission from the transportation department and majority support from the adjacent neighbors.



Raised Intersections

Raised intersections are a type of traffic calming and placemaking treatment where an entire intersection is elevated to sidewalk height. This acts as a speed table, slowing approaching traffic in all directions.

Pedestrian crossings are improved by remaining level with the sidewalk throughout the crosswalk.

Special paving is often used in raised crosswalks to draw attention to the treatment and create a more plaza like atmosphere.

Crosswalks and Pedestrian Landings

These pages describe crossing treatments at intersections. A legal crosswalk may be unmarked, striped with standard transverse white lines, painted yellow to indicate a school zone, or otherwise striped to increase visibility. Each treatment serves a different role in the pedestrian network. These pages also describe treatments used to enhance a crosswalk to give pedestrians a better sense of safety, such as pedestrian refuge islands.



Transverse Crosswalks

The simplest form of marked crosswalk is two transverse lines, indicating the crossing area. A marked crosswalk signals to motorists that they must stop for pedestrians and encourages pedestrians to cross at designated locations. Installing crosswalks alone will not necessarily make crossings safer especially on multi-lane roadways.



School Zone Crosswalks

Where a crosswalk is painted yellow, it indicates to drivers that they are within 500 feet of a school boundary or on a designated route to school and should be especially attentive to the possibility of smaller people crossing the street.



High Visibility Crosswalks

For locations with higher pedestrian volumes or traffic speeds, crosswalk styles other than transverse crosswalks can be more visible to motorists. These high-visibility crosswalk styles include Continental, Ladder, or Zebra striping.



ADA Compliant Curb Ramps

Curb ramps allow all users, including people in wheelchairs and using mobility aids, to make the transition from the street to the sidewalk. Truncated domes on curb ramps help people with sight impairments find the safest place to cross the street.



Median Refuge Islands

Median refuge islands are protected spaces placed in the center of the street to facilitate bicycle and pedestrian crossings. Crossings of two-way streets are simplified by allowing bicyclists and pedestrians to navigate one direction of traffic at a time. This treatment is most useful on high-volume multi-lane roadways that otherwise would be difficult to cross. Recommended minimum width for pedestrian refuge islands is 6 feet.



Curb Extensions

Curb extensions shorten pedestrian crossing distance, increase visibility, and encourage turning vehicles to slow down. They can be used at any marked crossing where the parking lane can absorb the extension of the curb. Curb extensions may be built with drainage channels that do not impact existing stormwater flow, or with integrated bioswales that filter stormwater and facilitate infiltration. Curb extensions should not encroach on bike lanes.

Midblock Crossings

In addition to the intersection improvements shown in the previous pages, a number of other treatments can help to improve pedestrian safety. These pages illustrate pedestrian crossings at midblock locations or “uncontrolled crossings” where cross traffic would not otherwise be required to stop. A simple mid-block crossing may be sufficient for pedestrian safety at some locations, but stronger treatments, such as Rectangular Rapid Flashing Beacons (RRFBs) or pedestrian bridges or tunnels may be warranted at crossings with multiple travel lanes, high volumes of traffic or high-speed traffic.



In-Street Yield to Pedestrian Sign

In-street pedestrian crossing signs reinforce the presence of crosswalks and remind motorists of their legal obligation to yield for pedestrians in marked or unmarked crosswalks. This signage is often placed at high-volume pedestrian crossings that are not signalized. On streets with multiple lanes in each direction, additional treatments such as median islands or active warning beacons may be more appropriate.



Rectangular Rapid Flash Beacons

Rectangular Rapid Flash Beacons (RRFB) are user actuated illuminated devices designed to increase motor vehicle yielding compliance at crossings of multi lane or high volume roadways. Paired with pedestrian crossing signs, they provide a high-visibility signal of pedestrians in the crosswalk.



Advance Yield Lines

Advance yield lines are similar to the advance stop lines described earlier, except they are used for crosswalks at mid-block crossings. Often called “shark teeth”, these advance yield lines are a row of white isosceles triangles at least four feet away from the crosswalk. Setting these markings further back on multi-lane roadways can reduce the possibility of yielding drivers in one lane obstructing the visibility of the crosswalk for drivers in other lanes.



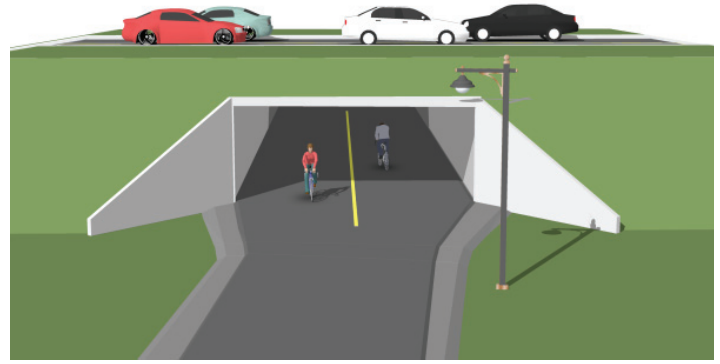
Bicycle and Pedestrian Hybrid Beacons

Hybrid beacons are traffic control signals commonly used to stop traffic along a major street to permit safe crossing by pedestrians or bicyclists. The signals provide very high levels of compliance by using a red signal indication, while offering lower delay to motorized traffic than a conventional signal.



Overpass

Overpasses provide critical non-motorized system links by joining areas separated by barriers such as deep ravines, waterways or major streets or freeways. A Crime Prevention Through Environmental Design (CPTED) lens should be followed when designing the overpass.



Underpass

Underpasses provide critical non-motorized system links by joining areas separated by barriers such as railroads and highway corridors. In most cases, these structures are built in response to user demand for safe crossings where they previously did not exist.



Offset Crosswalk

Offset crosswalks use staggered pavement markings and a median refuge island with a diagonal pathway to direct pedestrians' attention to oncoming traffic before crossing.

Signage, Stencils, and Parking Control

Improving signage can be a relatively simple and inexpensive strategy to enhance pedestrian and bicyclist safety. Especially at mid-block crosswalks or high-volume streets, signage that warns drivers of school-aged pedestrians can increase driver awareness and compliance with safety regulations. School zone signage is used within 500 feet of a school boundary or along a designated walking route to school.

Signs are regulated by the Manual on Uniform Traffic Control Devices (MUTCD), which is created by the Federal Highway Administration (FHWA). California (Caltrans) has its own manual (CA MUTCD), which is a supplement to the federal one. Currently, California has a 2012 version of the CA MUTCD, which is based on the 2009 version of the FHWA MUTCD.



Assembly A



Assembly C

School Zone Signage

The Assembly A sign is used to indicate to motorists that they have entered a school zone, generally defined as 500 feet or less from a school boundary.

School Speed Limit Signage

A special set of street signs can only be used around schools. The “Assembly C” sign indicates a reduced speed limit within the school zone. While school zone speed limits are typically 25 mph, Assembly Bill 321 (2008) allows cities to reduce school zone speeds to 15 mph. Over 95% of pedestrians survive when struck by a car traveling less than 20 mph. At 40 mph, only 15% of struck pedestrians survive.

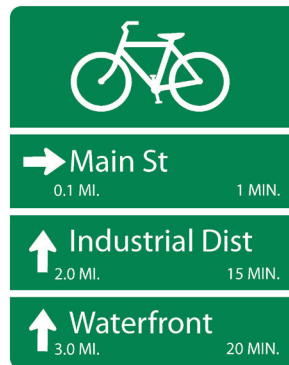


Assembly B

Assembly D

School Crossing Signage

Two other street signs are used to indicate an uncontrolled pedestrian crossing within a school zone. The Assembly B sign is placed right at the crosswalk, and the Assembly D sign is placed in advance to provide warning to motorists to expect children in a crosswalk.



Wayfinding Signage

A bicycle wayfinding system consists of comprehensive signing and/or pavement markings to guide bicyclists to their destinations along preferred bicycle routes.



Stencils

Street markings are another tool to appropriately warn drivers of the presence of school children. Usually stencils consist of markings like “SLOW SCHOOL XING” at least 100 feet in advance of an uncontrolled school crosswalk. Most street markings are done in white paint, but the use of yellow paint for street markings is allowed within school zones.



Curb Color

Cities in California use colors painted on the curb to designate which behaviors are legal for motorists. Red zones indicate areas where it is illegal and unsafe to park. White zones designate passenger loading zones. Green zones indicate temporary parking zones. Ensuring that the appropriate curb color is painted at your school can help motorists behave safely around children.

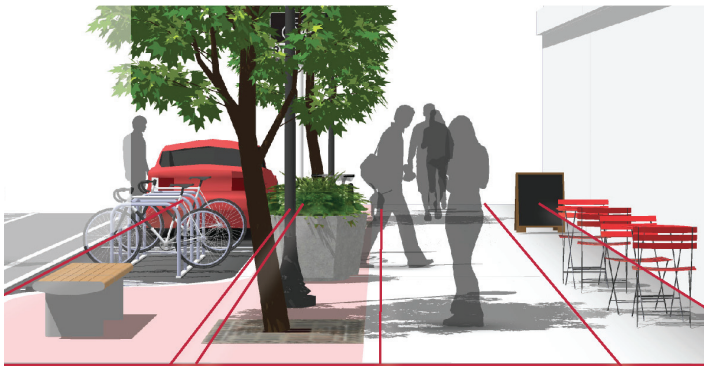
Sidewalks

Sidewalks are the fundamental element of a pedestrian network, providing dedicated space for students and parents walking to school. An effective network of sidewalks includes standards to ensure adequate width and connectivity, dedicated space for landscaping and street furniture as appropriate, and the design elements for crossings described earlier.



A Continuous Network

The most important element of a good sidewalk network is continuity. Closing gaps in sidewalk networks can both significantly improve pedestrian mobility and enhance safety in a community. Pedestrians will use the street most convenient to their destination regardless of whether or not facilities are provided. On school routes, filling key network gaps can reduce instances walking of the students roadway and crossing the street in potentially unsafe locations.



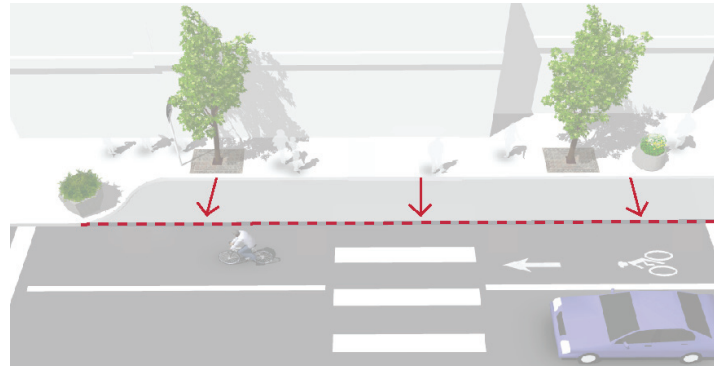
Sidewalk Standards

A usable sidewalk will be at least 4' wide and be free of obstructions, including utility poles, poorly placed street furniture, substandard width, missing curb ramps, overly tilted surfaces, and roots uplifting sidewalk tiles. The Americans with Disabilities Act provides specific standards to make sidewalks accessible to everyone.



Vertical Curb

Vertical curbs clearly differentiate the street from the sidewalk. Unlike rolled curbs, which may be seen by drivers as an invitation to enter the pedestrian zone, vertical curbs present a clear barrier for cars.



Sidewalk Widening

In areas with high pedestrian volumes, widening the sidewalk can increase pedestrian comfort. Sidewalks with substandard width near schools should be retrofitted to accommodate demand at arrival and dismissal.

Traffic Calming

The term “traffic calming” describes a range of improvements that reduce traffic speeds or traffic volumes and improve safety for all road users. Treatments are mostly appropriate for local streets not meant for through traffic. Some traffic calming seeks to slow down traffic, while other traffic calming seeks to divert through traffic and reduce traffic volumes.

Securing community support before proceeding with a traffic calming project can help to make it more successful. Benefits to local residents may include a safer neighborhood to walk and bicycle in, though sometimes at the cost of driving convenience.

Traffic calming measures in the context of a Safe Routes to School program can help reduce driving speeds near schools, discourage dangerous or illegal driving maneuvers, and encourage the use of appropriate routes when driving to or from school. They should be combined thoughtfully with the other improvements described in this toolkit.



Chicanes

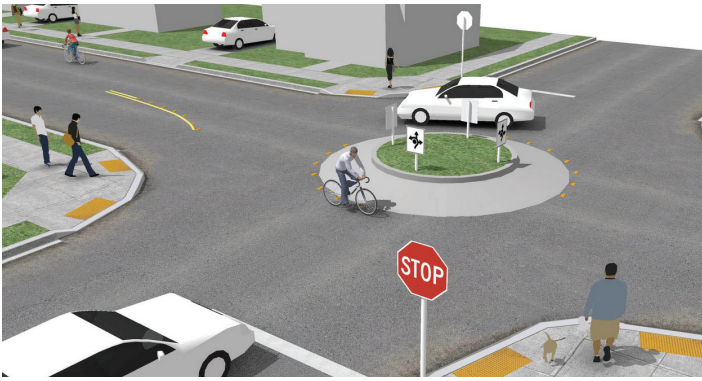
A chicane is a curb extension, usually built in alternating patterns or with intermittent median strips, that creates an S-shaped curve on a street. These minor curves require motorists to proceed with greater caution and slower speeds. They may also provide additional space for landscaping or pedestrians. Some chicanes are concrete curbs, while others are painted on the roadway.



Speed Humps & Speed Tables

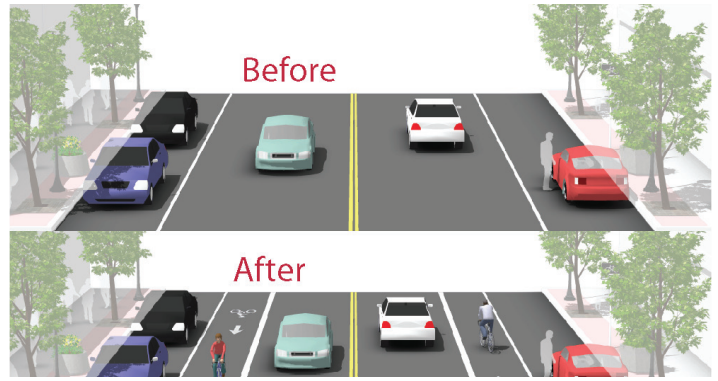
Speed humps are rounded vertical traffic calming features common on residential streets, and may be used to control speed along a corridor.

Speed tables are similar mesa-shaped features that may be configured as raised crossings, as shown above. If configured as a raised crossing, the speed table should be elevated so that it is flush with the sidewalk and/or multi-use trail.



Mini Traffic Circles

Mini traffic circles are generally used to replace a 4-way-stop intersection. Mini traffic circles can improve safety as well as travel times and intersection efficiency. Many drivers are not familiar with traffic circles so signage can help them to navigate the intersection. Mini traffic circles can be built with mountable curbs so that emergency vehicles may quickly and easily proceed through the intersection.



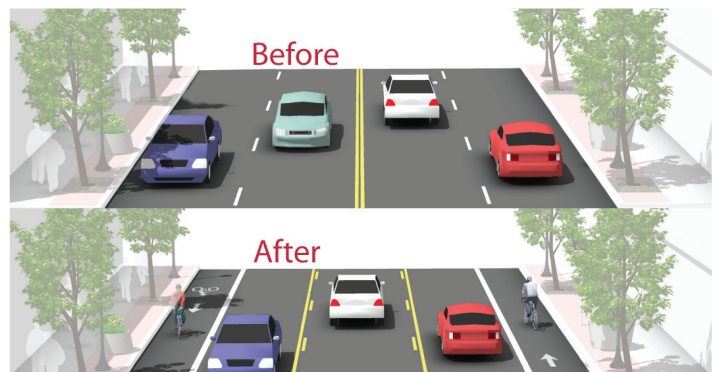
Lane Narrowing

Lane narrowing utilizes roadway space that exceeds minimum standards to provide the space needed for bike lanes. Many roadways have existing travel lanes that are wider than those prescribed in local and national roadway design standards, or which are not marked.



Diverters

A diverter diverts motor vehicle traffic from one street to another while allowing pedestrian and bicycle traffic to proceed normally. They are most common parallel to arterial streets where congestion may lead motorists to seek alternative routes on local streets through a neighborhood. Common on bike routes, diverters are the most intense traffic calming treatment applied and should be implemented only after study and community outreach.



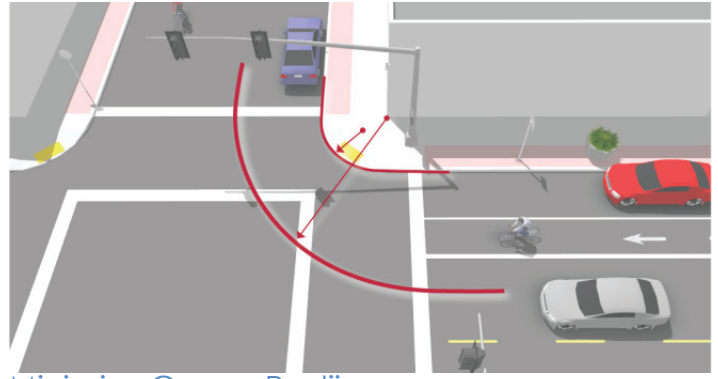
Road Diets

The removal of a single travel lane will generally provide sufficient space for bike lanes on both sides of a street. Streets with excess vehicle capacity provide opportunities for bike lane retrofit projects.



Landscaped Traffic Calming Features

Landscaping adds visual interest to the streetscape and may encourage people to slow down. Plantings with descriptive signage can add an educational element for students walking to school. Native species should be encouraged to promote a sense of place and decrease maintenance needs. Green stormwater features such as bioretention swales, flow-through planters, and pervious pavements may also be integrated into curb extensions and medians.

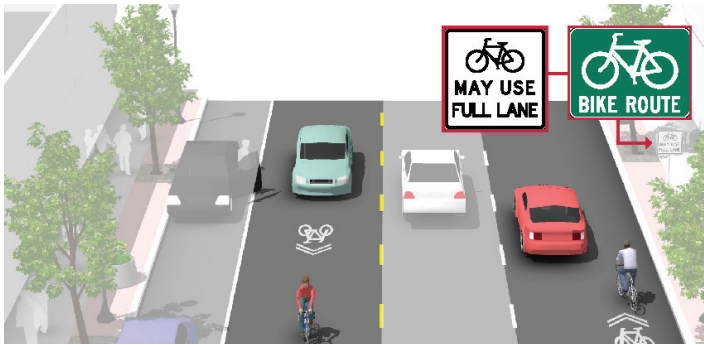


Minimize Corner Radii

The size of a curb's radius can have a significant impact on pedestrian comfort and safety. A smaller curb radius provides more pedestrian area at the corner, allows more flexibility in the placement of curb ramps, results in a shorter crossing distance and requires vehicles to slow more on the intersection approach. During the design phase, the chosen radius should be the smallest possible for the circumstances.

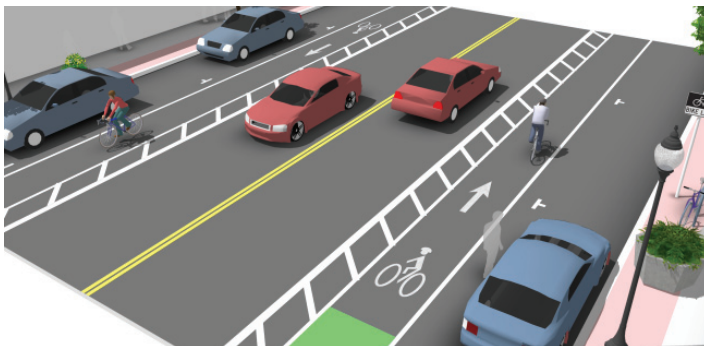
Bicycle Facilities

The following pages describes a range of bikeway types for on-street and off-street application. Bicycle facility selection depends on a variety of factors including motor vehicle speeds and volumes, topography, adjacent land use, available right of way, and expected bicycle user types. Children and their parents/guardians may prefer lower stress bikeways such as bicycle boulevards, buffered bike lanes, cycle tracks, and multi-use paths compared to shared roadways without traffic calming features or conventional bike lanes.



Marked Shared Roadway

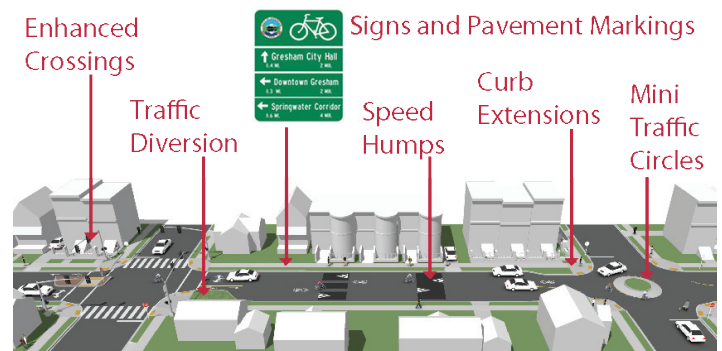
A marked shared roadway is a general purpose travel lane marked with shared lane markings (SLM) used to encourage bicycle travel and proper positioning within the lane.



Bike Lanes & Buffered Bike Lanes

Bicycle lanes designate an exclusive space for bicyclists with pavement markings and signage. The bicycle lane is located adjacent to motor vehicle travel lanes and bicyclists ride in the same direction as motor vehicle traffic.

Buffered bicycle lanes are conventional bicycle lanes paired with a designated buffer space, separating the bicycle lane from the adjacent motor vehicle travel lane and/or parking lane.



Bicycle Boulevard

Bicycle boulevards are low-volume, low-speed streets modified to enhance bicyclist comfort by using treatments such as signage, pavement markings, traffic calming and/or traffic reduction, and intersection modifications. Streets should contain traffic calming enhancements if they are to be considered bicycle boulevards.



Shared-Use Paths

Shared-use paths may be used by pedestrians, skaters, bicyclists, people using wheelchairs, joggers and other non-motorized users. These facilities are frequently found in parks, or as neighborhood cut-throughs to shorten connections and offer an alternative to busy streets. Shared-use paths should be minimum of 8 ft wide for two-way bicycle travel, however 10 ft is recommended in most situations and will be adequate for moderate to heavy use. For more detailed information on multi-use path design see: AASHTO's Guide for the Development of Bicycle Facilities (2012).

Bicycle Parking

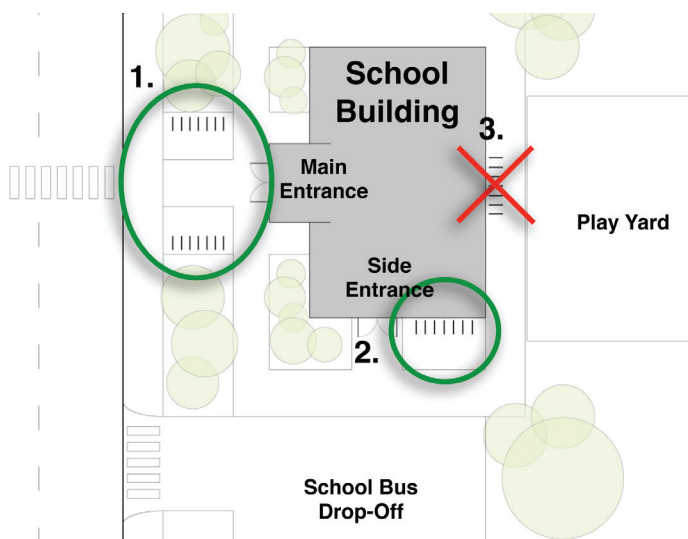
Bicycle parking is an important element for making it more convenient and inviting for students to ride a bicycle to school. Without adequate bicycle parking, students are less likely to choose bicycling as their mode of transportation, even if the facilities along the route are comfortable and convenient. Generally, there are three components to bicycle parking:

- The type or design of the bike rack itself, which supports the bicycle;
- The location of the rack area, and its relationship to the building entrance it serves and the cyclists' approach to that entrance; and,
- The design of the rack area (the "bike parking lot"), which may include several individual bike racks.

The Location and design of the bike rack area:

One of the most important considerations in providing useful and functional bicycle parking is the location of the rack area in relation to the school building. Placing bike racks close to the main entrance makes it more convenient for bicyclists and also increases visibility - which deters theft and can also increase the public profile of a school's Safe Routes to School program. Additionally, rack locations should consider student bike routes and the entrances that students arriving by bike use to enter the school.

Some guidelines for locating the rack area include: **Proximity** (preferably within 50 feet of the school entrance), **Visibility** (clearly visible from the entrance), and **Convenience** (as close or closer to a building's entrance than the nearest car parking space).



The Type of Bike Parking

There are numerous types of bike racks on the market. However, many of these rack types have characteristics that work against their use.

To offer easy, secure and compact bicycle parking, racks need to respond to offer: **Access** (the rack should not require lifting the bicycle into a position), **Support** (the rack should stabilize the bicycle), and **Security** (it should be possible to lock the frame and wheel with a single rigid lock.)

Unfortunately, many schools offer bicycle racks which do not respond to these factors - including the ubiquitous "comb" racks (which fail to meet any of the three factors listed above). Preferred types of bike racks are the "Inverted U" and the "Post and Loop" seen in the images below.



6. Evaluation

Evaluation efforts are essential to developing and sustaining a Safe Routes to School program. By understanding and documenting the effects on travel behavior, parent and student attitudes, and/or the physical conditions around a school, programs can maximize their effectiveness and prioritize new investments. Evaluation efforts are often also required to be eligible or competitive for grant funding. This section discusses student hand tallies and parent surveys, which are the two primary evaluation methods used by most programs.

Other evaluation efforts/programs include:

BICYCLE AND PEDESTRIAN COUNTS

Bicycle and pedestrian counts provide hard data on student travel volumes by mode and can be used to verify or supplement the student hand tally and/or parent survey results. Counts on particular days may also help identify potential program goals. For example, if a school promotes International Walk and Roll to School Day (usually the first Wednesday in October), counts may be conducted during that day to assess how well the event was promoted and how many families took part. Counts are most informative when conducted annually on or near the same day to minimize the influence of unintended factors, such as bad weather, daylight savings time influences, or the school calendar.

BIKE PARKING SURVEY

Bike parking surveys are another way to assess travel behavior by counting the number of students parking their bicycles at school.

STUDENT HAND TALLIES

Student hand tallies are conducted to quickly determine the way students travel to and from school on a particular day. Teachers (or another adult) ask students to raise their hands in response to the mode of transportation that is read aloud from a list (carpool, bicycle, drive alone, etc.). In addition to recording the number of students that use each mode, the tally taker records the weather and any special events occurring that day.

Benefits

- Provides a general sense of mode choice on a typical day
- Provides mode choice data to assess the effectiveness of education, encouragement, and other programs
- Supplies important information for grant applications and other Safe Routes to School Initiatives

Steps to Take

Ideally, student hand tallies should be conducted during the fall and spring on multiple mid-week days to gain the best understanding of mode choice during a typical school day. Two days is the minimum necessary to determine this ‘average’ percentage of modes, although programs are encouraged to conduct tallies for all three mid-week days - Tuesday, Wednesday and Thursday. In order to produce comparable results, hand tallies should not be conducted during the week of International Walk and Roll to School Day (in October) or on the same day(s) as other large-scale events.

Particularly for schools new to the Safe Routes to School program, or for schools expanding their SRTS activities, hand tallies early in the school year are important to measure the “baseline” from which the success of new or additional programs can be measured. In the fall semester, preparation for tallies should begin as soon as the school year starts (if not before) if they are to be conducted before the weather turns and days get noticeably shorter. Preparation activities include printing and distributing the appropriate number of tally sheets (in multiple languages as needed), training teachers or providing written instructions, establishing incentives for teacher participation (e.g., a coffee shop gift card), and coordinating who will collect the completed tally sheets.



Students raising their hands in response to the mode they used to get to school. It is important to conduct these surveys on at least two separate days within the same week to develop an accurate accounting for how children typically get to school.

The National Center for Safe Routes to School provides a hand tally form for which they are willing to collect completed surveys and produce a basic summary analysis. The Center does not provide this service if a different form is used. Appendix A provides a copy of the Center’s hand tally form, and more information is provided in the “Resources” section below for sending and processing the completed tally sheets.

It should be noted that student hand tallies are required for eligibility under several grant programs, including the California Safe Routes to School funding cycles.

Resources

National Center for Safe Routes to School:

- “Ways to Collect Information”
http://guide.saferoutesinfo.org/evaluation/ways_to_collect_information.cfm
- Student Arrival/Departure Hand Tally Form
<http://www.saferoutesinfo.org/program-tools/evaluation-student-class-travel-tally>
- National Center for SRTS Data Collection System
<http://www.saferoutesdata.org/>

PARENT SURVEYS

Parent surveys are a great way to find the reasons why families and/or students choose certain modes to get to/from school. Sometimes offered twice during the school year (similar to the student hand tally), parent surveys should be administered at least once per year in either the fall or spring semester as the primary method for assessing the overall impacts and success of a Safe Routes program.

Benefits

- Provides a second travel mode data set for comparison with student hand tally results
- Supplies more detailed travel and distance information to calculate environmental benefits, including reductions in green-house gases (GHGs) from SRTS activities
- Supplies information on parent attitudes and concerns related to school travel options
- Helps assess existing program impacts and prioritize future program activities/focus areas
- Engages families in a discussion of travel behavior
- Supports grant applications and other opportunities for funding
- Helps identify parent volunteers

Steps to Take

A popular method to distribute parent surveys and/or online survey flyers is by sending them home as “backpack mail” with the student. To maximize response rates and turnaround time, parents should be encouraged to complete the form in 1-2 days. Completed hard copy surveys are then returned to the school, either via a dropbox or to an identified staff person (online surveys will be automatically collected). Depending on the level of parent engagement, student reminders and cross-promotions at school events may also be needed.

Some parents and/or staff may be familiar with the National Center for Safe Routes to School standard parent survey form, which is available online and can be processed for free once completed (making it a popular choice for schools with limited resources). Please note this form was not the survey used during the Mendocino Safe Routes to School Plan process in 2013.



Parent surveys are great opportunities for families to discuss their travel behavior and provide feedback on what issues are most important and what programs are most effective.

Resources

- National Center Parent Survey information
<http://www.saferoutesinfo.org/program-tools/evaluation-parent-survey>

Appendix A: Key Forms

The following pages contain two key forms for use by schools and volunteers participating in a Safe Routes to School Program:

- 1. Student Arrival and Departure Hand Tally Sheet (national form, one page)**
- 2. Example School Site Audit Checklist (eight pages)**

Mendocino County Safe Routes to School Program

SCHOOL SITE AUDIT CHECKLIST

SCHOOL NAME: _____

SCHOOL DISTRICT: _____

INSTRUCTIONS

The following site audit should be conducted to help determine walking and bicycling conditions on/adjacent to school property. This audit will help the school to discover potential areas for design improvements and increased safety. Ideally, the School Principal, a traffic engineer from the County or local jurisdiction and interested parents and teachers should observe conditions during the drop-off and pick-up periods, and fill out the following audit form in order to see how students get to and from school. Audits should be conducted during periods of good weather if possible. Please take a map of school neighborhood with you on the audit for orientation and note taking. Aerial photo maps can be helpful for identifying specific detailed locations, and can be downloaded from internet sources such as Google Earth (<http://earth.google.com>). Please take digital photos of any identified problem areas to accompany your notes.

Audit Date: _____ Day: _____ Time: _____

Weather Conditions: _____

ADDITIONAL NOTES ABOUT AUDIT CONDITIONS:

This Checklist Form was modified from the Florida Safe Ways to School and Solano County SR2S Toolkits

1. Student Drop-Off and Pick-Up Areas

	YES	NO	N/A
a. Is an on-site parent drop-off/pick-up area provided?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. If the drop-off/pick-up area is on-site, is this loading area separated from the rest of the school parking lot?			
c. If pick-up/drop-off occurs on-street, is a marked loading zone provided along the curb?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Do drop-off/pick-up areas, either on-site or on-street, provide sufficient space for vehicles to line up?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Is a school staff person or other monitor present and visible during the drop-off/pick-up period to assist with loading/unloading?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Does morning drop-off traffic move in an orderly fashion without congestion and backup?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Does the afternoon pick-up line form in an orderly fashion, with vehicles waiting in designated areas, not double-parking, not blocking nearby residential driveways, etc.?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Are drop-off/pick-up areas situated so that students exiting or entering cars have a designated pathway to/from school buildings (e.g. do not walk between parked vehicles)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Does drop-off/pick up occur along a raised curb, so that pedestrians unload onto a sidewalk or walkway separate from vehicle traffic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Are there accessible curb ramps for wheelchair access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Are there posted vehicular signs (e.g. "No Parking", "Bus Only", etc)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Is the area adequately lighted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Is there excessive idling of vehicles and buses while they wait to pick up children?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Please describe additional problems within the student drop-off area in the space provided below. Remember to take photos.			

2. Bus Loading Zones

	YES	NO	N/A
a. Are bus driveways physically separated from pedestrian and bicycling routes by raised curbs or bollards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Are bus driveways physically separated from parent pick-up/drop-off areas?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Are measures taken for safety of students needing to cross in front or behind the bus?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Is traffic in the bus loading zone one-way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Does the bus zone meet the minimum width of 24' for drop-off/pull-out lanes?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Is there a continuous curb and sidewalk adjacent to the drop-off/loading area leading into the school site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Is the bus loading/unloading zone lighted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Please describe additional problem areas regarding the bus loading zone in the space provided below. Remember to take photos.			

3. Sidewalks and Bicycle Routes

	YES	NO	N/A
a. Are current pedestrian and bicycle routes separated from motor vehicles by the use of sidewalks or separated pathways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Are the bicycle routes designated by signage?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Are marked bicycle lanes present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Is the bicycle lane network continuous and without gaps?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Are children wearing bicycle helmets?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Are sidewalks and bicycle paths regularly maintained (free of debris, cracks and holes)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Are the sidewalks continuous and without gaps?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Are there accessible ramps for wheelchair access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Do the ramps have tactile warning strips or textured concrete?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Are the sidewalks lighted?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Are the sidewalks used regularly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Please describe additional problem areas regarding the school's sidewalk system and existing bicycle routes in the space provided below. Remember to take photos.			

4. Adjacent Intersections (intersections near school property)

	YES	NO	N/A
a. Are there high volumes of automobile traffic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Are there high volumes of pedestrian traffic?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Are there painted crosswalks for all crossing directions?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Are there curb ramps located at all adjacent intersections?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Is there appropriate vehicle signage?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Is there traffic control, such as a stoplight or stop signs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Are there pedestrian walk signals?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. For midblock crossing locations, are there adequate gaps in traffic to allow pedestrians to cross?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Are pedestrians crossing in marked crosswalks, or are they using unmarked locations or jaywalking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Please describe additional problem areas regarding these intersections in the space provided below. Please identify specific intersections, and any problems associated with each. Remember to take photos.			

5. Sight Distance (clear views between motorists and pedestrians)

	YES	NO	N/A
a. Are desirable sight distances (visibility is free of obstructions) provided at all intersections within the walking zone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Do cars park or wait blocking the vision of other motorists, bicyclists and pedestrians?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Have the placement of fences, walls, dumpsters and the location of parking areas for service vehicles been carefully considered in view of sight distance requirements on the school site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Are there any barriers present that block the viewing of pedestrians and bicyclists (i.e. dumpsters, utility boxes, parking areas, ground mounted signage, building walls)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Is landscaping and vegetation trimmed clear of sidewalks and pathways, and not obstructing sight distance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Please describe additional problem areas that have sight distance obstructions in the space provided below. Remember to take photos.			

6. Traffic Signs, Speed Control, Signals and Pavement Markings

	YES	NO	N/A
a. Are there School Zone signs, School Crossing signs, School Speed Limit signs, flashing beacons, and No Parking or No Standing signs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Are any high visibility (fluorescent yellow-green) signs used in the school zone?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Is there an effective school targeted program of traffic enforcement?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Are there any school pavement markings located on roadways adjacent to or in the vicinity of the school grounds (e.g. "SLOW SCHOOL XING")?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Are there currently traffic/speed control measures used in the area, such as speed humps?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Please describe additional information regarding adjacent traffic signs, speed control, signals and pavement markings in the space provided below. Remember to take photos.			

7. Other Barriers to Walking and Bicycling

Please use the space below to describe any additional problems or issues not identified in the checklist above. These may include policy barriers as well as infrastructure barriers. Be as specific as possible when describing a particular issue or location.