



# **SAFE ROUTES**

## **A Walk to School Community Partnership**

**Final Report**  
**Pilot Program**  
**Safe Routes to School Planning**



**Hamilton Elementary School**  
**Mooreland Elementary School**  
**Newville Elementary School**

January 2009



# Safe Routes

## A Walk to School

### Community Partnership

Commissioned by  
Carlisle Area Health & Wellness Foundation

Prepared by  
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## FOREWARD

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While improvement of the healthcare system and reformed public policy are critical components of the Carlisle Area Health & Wellness Foundation, our programs also continue to touch people on a very personal level. We support and develop targeted, evidence-based programs to meet the needs of seniors, youth and employees where they live, work and play. People need to be educated, motivated and assisted to make good choices around health – Be Active, Eat Right, and Do Not Smoke. Simple-sounding advice, but challenging to do in our complex westernized world of fast food, television and stress.

One study of Pennsylvania youth found that nearly 18% were overweight, a figure higher than the national average of 15%. While genetics and exposure to environmental toxins can influence the development of chronic disease, for most people, behavior is the primary contributor to chronic disease. In response, CAHWF promotes healthy communities and lifestyles to address that challenge. Initiating participation in “Safe Routes to School” is one component of better community design and promotion of healthy habits that encourage people to engage in routine physical activity. By changing the built environment and offering support and education, increased numbers of students will walk/bike to school for a needed and beneficial change.

The school environment is ideal for promoting health prevention messages to our children and CAHWF continues to develop regular contacts with many schools in our area. Even with all the current hype surrounding youth obesity levels, schools are hard-pressed to carve out funds for Safe Routes to Schools or even find grant writers to seek funds elsewhere. Fortunately, CAHWF was able to provide resources for three local schools to assess and plan for a comprehensive Safe Routes to School program. This groundwork coincides with several other environmental design projects in the region as the school and community work in partnership for implementation.

CAHWF program services encourage a healthier region:

**CRANA** (Carlisle Regional Advocates for Nutrition and Activity): In 2005, CAHWF established a regional collaboration to champion and monitor local nutrition and activity strategies. CRANA is a task force with broad-based representation on youth/school, community and workplace teams.

**Wellness at Work:** This workplace project provides opportunities to support and enhance employee health in the areas of nutrition, activity and tobacco cessation.

**CAHWF Grants:** Local grants support a variety of endeavors in schools and local non-profit organizations to instruct youth, teens and adults with good fitness practices and sensible nutrition in order to improve both health and self-esteem.

**Simply Moving Guide:** CAHWF partnered with the Cumberland County Planning Commission to publish a guide to outdoor recreation in Cumberland and Perry Counties.

**Clean Air Advocate:** In coordination with the Clean Air Board in Carlisle a part-time staff position focuses on environmental policy development in local schools and formation of a stakeholders group.



## Section 1

# A Community Partnership to Promote and Encourage Walking

Over the last 12 months, the Carlisle Area Health & Wellness Foundation (CAHWF) in partnership with Hamilton, Mooreland and Newville Elementary Schools in its service area have been working to identify specific ways in which its communities and schools can take action to create Safe Routes to School (SRTS) programs with the goal of increasing the numbers of children walking and biking to school on a regular basis.

SRTS refers to a variety of multidisciplinary programs aimed at promoting walking and biking by improving the built environment and traffic safety in school neighborhoods through education, incentives, increased traffic safety enforcement and engineering measures. Programs are aligned along five “E’s” or pillars of SRTS: Education, Encouragement, Engineering/Design,

Enforcement and Evaluation (see Figure 1.1). SRTS programs help to integrate physical activity into the daily routine of school children and also address the safety concerns of parents by encouraging greater enforcement of traffic laws, educating the driving public and exploring ways to create safer streets.

CAHWF endowed this pilot SRTS planning project based on its recognition that physical fitness and nutrition are both essential in curbing adolescent obesity, often deemed a precursor to chronic disease. The Foundation recognized that school districts can play an important role with efforts to reduce childhood obesity by promoting walkable neighborhood schools and by working with local municipalities to create and maintain safe walking environments, which ultimately allow more children the opportunity to walk to school on a daily basis.



After putting out a invitation to participate in the pilot SRTS project, the Foundation selected three schools in its service area and hired a local community planning consultant, Land Logics Group of Camp Hill, to assist with facilitating a year long strategic planning process to develop local Safe Routes to School plans for each of the school communities.

## Why Care About Walking?

Everyone walks in some form every day as a way to travel from one location to another. Perhaps you only walk or you walk in conjunction with other transportation forms such as a bus ride, car ride or mass transit. We were born to walk and have been wonderfully designed to enable our mobility by our very own two feet. Neighborhood environments that encourage people to walk provide safe, pleasant places to walk and easy, convenient access to places people want to or need to go. Not taking advantage of our naturally built-in transportation abilities reduces our physical activity on a daily basis. Physical inactivity causes numerous physical and mental health problems and contributes to the obesity epidemic.

In addition, the quality of life of a place is often ranked in part by its ability to support pedestrian modes of travel. Walkability is becoming an important quality for a community to maintain and enhance as both residents and potential employers look for communities that support patterns of sustainable development. More information related to recommended patterns of development and design guidelines when designing or upgrading infrastructure that accommodates pedestrians is found in both Section 2 and the Appendix.

In reversing the childhood obesity epidemic, a collaborative and comprehensive, multi-component approach is required. Everyone has a role to play from health care providers to public health organizations and foundations, governments at all levels to local schools and communities.

*“We must keep in mind that 1/3 of American children and youth are either obese or at risk of becoming obese. This trend can lead to serious health problems in the future. A Safe Routes to School program encourages children to adopt healthy habits and integrate activity into daily routine.”*

Doris Ditzler  
Carlisle Area Health &  
Wellness Foundation

## Report Overview

This report presents the results of the SRTS strategic planning efforts in the piloted three school communities. It is based on the work of the three local task force committees as detailed in Section 4 and reflected in the companion report *Safe Routes Action Strategies: A CAHWF Walk to School Partnership*.

This report is organized into the following sections:

- ◀ Section 1: Introduction
- ◀ Section 2: Why Safe Routes To School
- ◀ Section 3: Vision, Goals & Policies
- ◀ Section 4: SRTS Action Strategies
- ◀ Section 5: Funding Opportunities
- ◀ Section 6: Evaluation

Answers to **Frequently Asked Questions (FAQs)** are provided at the end of this introductory section to help assist the users of this report. This report also includes references to the existing wealth of publicly available information on the World Wide Web about improving pedestrian safety and access.

## Companion School SRTS Action Plans



In addition to this report, a companion document titled *Safe Routes Action Strategies: A CAHWF Walk to School Partnership* was developed. These action strategies are intended to aid the local school communities in the further development and implementation of their SRTS programs. Additional information describing the Safe Routes action strategies is addressed in Section 4 of this report.

These strategies can be found on CAHWF's website ([www.cahwf.org](http://www.cahwf.org)) or by contacting the Foundation at 717.960.9009.

## Needs Assessment Reports



Needs Assessment reports were also created and are available by contacting the Task Force chairs. The study area of focus for each of the school neighborhoods is approximately a ½ to ¾ mile radius from each school

location. Walking route maps, found in the Appendix A, delineate the study area for improving routes to school.

The School Needs Assessment reports provided the following information which supported the development of local vision, goals and action plans:

- ◀ A snapshot of existing conditions for pedestrians within the school neighborhoods;
- ◀ An accounting of institutional and local obstacles that hinder improvement of the pedestrian environment;
- ◀ Results of transportation and attitudinal surveys conducted with each school; and
- ◀ A vision of what a Safe Routes to School program in the CAHWF community service area could look like in the future, and goals for realizing this vision.



- ◀ *Equipped with a Walkability Assessment field guide, a SRTS Task Force member photo-documents and records a missing sidewalk in Carlisle.*

## Brief History of Safe Routes to School

SRTS is an international program, first developed as a program resulting from the efforts of residents in Odense, Denmark in response to the high numbers of child pedestrian fatalities. The City of Odense developed a network of pedestrian and bicycle paths near schools, narrowed roads and built traffic islands to facilitate the mobility of children. The SRTS concept caught the attention of communities in the United States in the early 1990's first in New York and then in California. Among the early leaders was a local program in the Bronx, NY which like Denmark began in response to an alarmingly high number of fatal child pedestrian crashes. In 2000, the National Highway Traffic Safety Administration funded the first of two pilot SRTS projects in the US, one in Marin County, California and the other in Arlington, Massachusetts. The early efforts of these communities have led to a greater awareness and emphasis on SRTS programming around the country.

### Federal Support

SRTS support at the federal level became a reality with the passing of the highway and transit reauthorization bill (P.S. 109-59) in the summer of 2005. The Safe, Accountable, Flexible, Efficient Transportation Equity Act - A Legacy for Users (SAFETEA-LU), as the law is named, established the first national Safe Routes to School Program (Section 1404) and designated \$612 million in federal transportation funds for the new program. Of the funds established, Pennsylvania receives a share of approximately 11 million dollars budgeted through 2010. See Section 5 for more information on funding of SRTS programs.

## Figure 1.1 The Five E's of SRTS

SRTS combines many different approaches to make it safer for children to walk and bicycle to school. The most successful SRTS programs incorporate the five E's: Evaluation, Education, Encouragement, Engineering, and Enforcement.



**EDUCATION** programs target children, parents, caregivers and neighbors, teaching how to walk and bicycle safely and informing drivers how to drive more safely around pedestrians and bicyclists. Education programs also focus on incorporating health and environmental messages.



**ENCOURAGEMENT** activities promote walking and bicycling to school to children, parents and community members. Events such as Walk to School Day or ongoing programs such as a Walking School Bus can promote and encourage walking and bicycling as a popular way to get to school.



**ENGINEERING/DESIGN** strategies create safer environments for walking and bicycling through design improvements to the infrastructure surrounding schools. These improvements focus on reducing motor vehicle speeds and conflicts with pedestrians and bicyclists, and establishing safer and fully accessible crossings, walkways, trails and bikeways.



**ENFORCEMENT** strategies increase the safety of children bicycling and walking to school by helping to change unsafe behaviors of drivers, as well as pedestrians and bicyclists. A community approach to enforcement involves students, parents or caregivers, school personnel, crossing guards and law enforcement officers.



**EVALUATION** is an important component of SRTS programs that can be incorporated into each of the other E's. Collecting information before and after program activities or projects are implemented allow communities to track progress and outcomes, and provide information to guide program development.



## The Planning Process

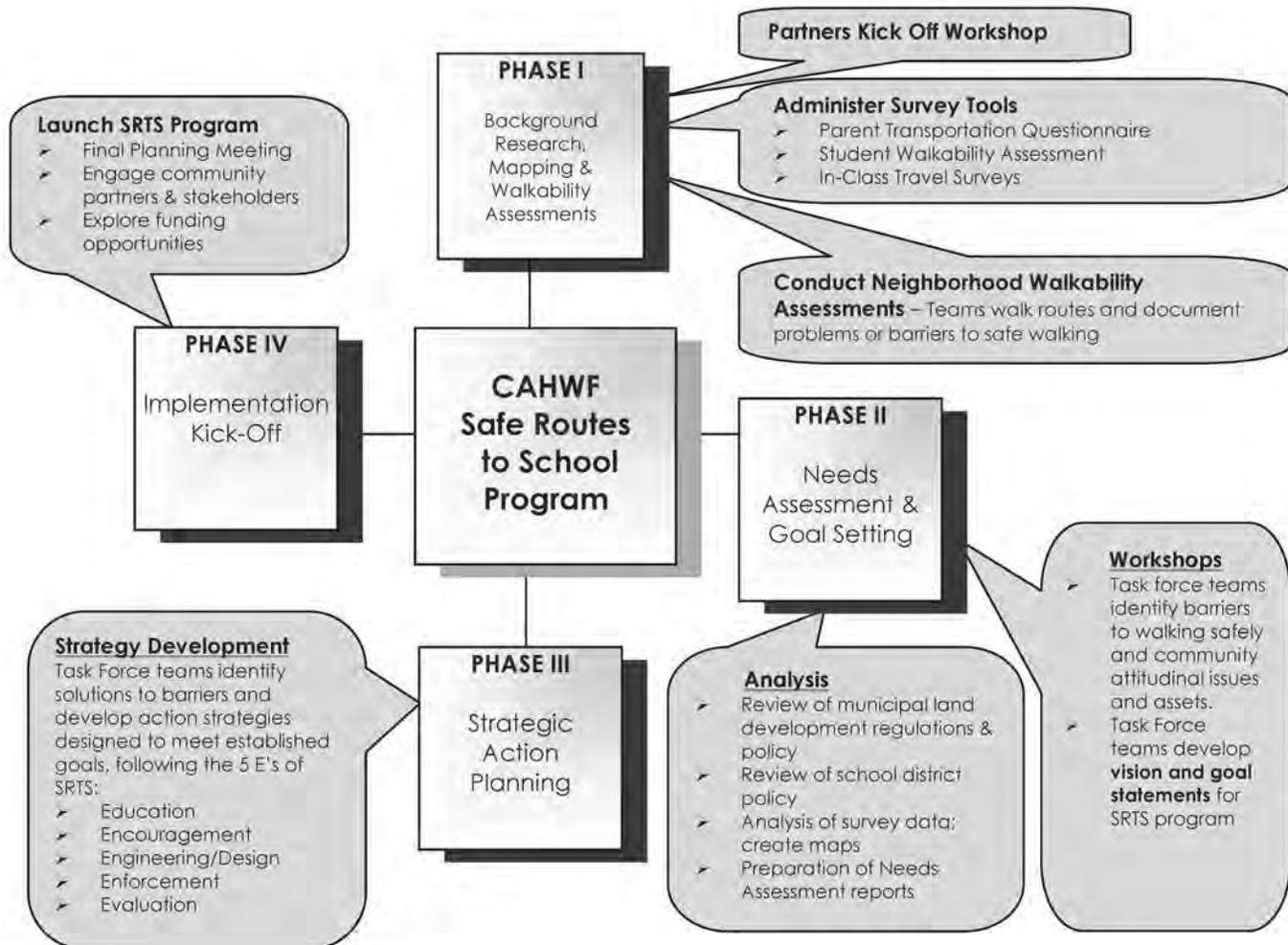
A strategic planning process was used to develop a blueprint for moving from dreams and goals, to action plans, to positive outcomes for promoting Safer Routes to School and encouraging both students and their parents to support pedestrian modes of travel to and from school.

This report presents the results of the planning process that included a background inventory and neighborhood walkability assessments of existing conditions. Its recommendations and action plans focus on developing

and improving the pedestrian infrastructure in school neighborhoods and providing for encouragement and education activities. Its purpose is to engage multiple stakeholders in a community to increase the numbers of children walking to school and in turn realize the many benefits for both the individual and the community from SRTS efforts.

Preparation of this report and companion documents was accomplished in four main phases as illustrated in Figure 1.2.

**Figure 1.2 CAHWF Safe Routes to School Planning Process**





## Frequently Asked Questions

The following questions are answered in hopes of providing additional supporting information to guide the users of this report and those interested in implementation of SRTS action plans and development of SRTS plans for other schools.

### **Q Where can I find more information about the tools used during the Carlisle Area Safe Routes to School initiative?**

Planning and assessment tools and SRTS resource information have been provided to the participating pilot schools and the Carlisle Area Health & Wellness Foundation in electronic formats. Assessment tools, such as the parent Transportation Questionnaire, student Walkability Checklist and Walkability Field Assessment Guide, can be used by any school interested in developing a SRTS program. Contact the school principals at Mooreland, Hamilton or Newville Elementary Schools or call CAHWF at (717)960-9009. Also check the Carlisle Area and Big Spring School District websites for specific school information related to Safe Routes to School.

### **Q Will this program affect busing of students to school?**

The only busing potentially affected by the SRTS program is what is known as “hazard” busing -- busing within walkable distances due solely to conditions considered too dangerous for walking or biking to school. If dangerous conditions are corrected, then a school may decide to eliminate a bus route in this area. Generally speaking, SRTS programs are designed to encourage more walking within a 1/2 to 1 mile distance from school where there is no bus service and to encourage more students to take the bus (rather than being driven to school in a car) if living outside the walkable limits. In Pennsylvania, walkable limits are based on grade level: K- Grade 5 – up to ¾ mile; 6th grade and up – 1 ½ miles.

### **Q How can I get involved in promoting the SRTS program at my child’s school?**

If you are a parent of a child attending Hamilton, Mooreland or Newville Elementary Schools, you can familiarize yourself with the strategies developed for each school community. Leaf through the action plans and find one that catches your interest. Attend informational meetings your school may hold to educate and engage parents in the SRTS program. Start small and help out with one activity. The program will grow if parents support different strategies in ways both big and small. Most importantly, walk to school with your child and enjoy every moment! Think twice before you decide to drive your child to school. Consider the health and wellness benefits of walking for both you and your child.

If your school hasn’t yet initiated a SRTS program, recommend the idea to your school principal or PTO. There are many ready-made presentations and how-to manuals about Safe Routes to School that can help your school get started.

### **Q I like the concept of kids walking to school, but I want my child to be with an adult at all times. Will any of the SRTS activities provide adult supervision?**

Parents with younger children in particular support walking to school if supervision is provided. A number of strategies offer some degree of adult supervision for those parents who cannot walk their children to school themselves. The Walking School Bus uses adult volunteers to walk a designated route to and/or from school, picking up children along the way. Certain stops are designated as places for students to join the group. Eyes on the Kids and Porch Parents are two other variations of a neighborhood watch program, in which parents and neighbors commit to being outside or on front porches keeping a watchful eye out for students along designated walking routes.



## **Q Why is it necessary to organize a SRTS program? Walking to school is a simple thing to do.**

Walking to school was once considered a typical behavior, but our children have grown accustomed to being driven to school even when living in close proximity to school property. Concerns over too much vehicular traffic, poor driving habits and fears about strangers and crime activity have also made walking to school unpopular. By organizing a SRTS program, communities can combat identified barriers and make walking to school a safe and typical behavior once again.

## **Q What role does my municipality play in the implementation of a SRTS program?**

Municipalities are not required to implement SRTS programs; however, they are often partners, and sometimes the leaders, in program planning and implementation. Municipalities can lead by:

- ◀ supporting improvements to sidewalks, streets and intersections identified as high priority sites within each school's walking zones;
- ◀ providing added police protection by directing officers to patrol at key locations where traffic safety issues have been identified;
- ◀ adopting land development policies and regulations that support complete streets and pedestrian-friendly design;
- ◀ working with property owners along walking routes to repair walkways and prevent the obstruction of sidewalks; and
- ◀ seeking grant funding from state and federal agencies and private organizations to help implement strategies.

## **Q Why should we care about our weight?**

Because, as a nation, we've been getting steadily heavier. The number of adults who are obese has increased dramatically and children have been getting heavier as well. Extra pounds have long-term consequences for both adults and children and are scientifically linked to increased risk of heart disease, type II diabetes, high blood pressure, high cholesterol, certain cancers and other chronic conditions.

## **Q Is it really a good idea to encourage children to walk or bicycle to school? Wouldn't they be safer in a car or on a school bus?**

Statistics show that children are generally safe from traffic injury inside a school bus. However, motor vehicle crashes are the leading cause of death for school-age children. And, whether in a car or bus, children do not get the physical activity benefits of walking or bicycling. Nor do they learn to feel independent and move confidently about their communities. Studies show that children who walk and bicycle are alert and ready to learn when they get to school, and they more easily achieve Centers for Disease Control and Prevention's healthy goal of one hour of physical activity each day, a habit they would do well to keep. Those who continue to be active throughout their lives are at lower risk of various chronic illnesses.

## **Q We have heard about the five Es – but don't know which one we should concentrate on. Is it better to educate people about SRTS or to encourage changes? Or should we build (engineer) safe routes to school or work on enforcement?**

Review Section 4 and the companion document *Safe Routes Action Strategies: A CAHWF Walk to School Partnership*, and check which strategies have been identified as a high priority. Contact your local SRTS coordinator and ask what actions they have already started to work on and which ones they are targeting in the short term. If there is a strategy that is of particular interest to you personally, consider offering your support in leading the implementation effort for a particular strategy.

## Section 2

# Why Safe Routes to School?

In just one generation's time, we have drastically changed the way we travel to school. In 1969, 42 percent of elementary students walked to school. By 2001, that figure dropped to 16 percent. (CDC, 2005)

There are a number of reasons for this dramatic shift in transportation. Distance to school, fear of criminal activity, lack of pedestrian and bicycle facilities, and unsafe driving behaviors top the list. But should we allow these barriers to walking to school – real or perceived – keep our children from experiencing what most of today's adults once experienced during that daily trek to school?

The common mission of Safe Routes to School projects both nationally and locally is to increase the number of children walking (and biking) to school. Safe Routes to School advocates believe that most barriers can be either eliminated or managed through a myriad of school and community-based strategies. It is important, however, to first understand how we have reached the point where parents find it difficult, if not impossible, to send their children to school on foot.

*To understand the need for a SRTS movement, it is important to know and understand why there has been a decline in just one generation of children walking and biking to school and its consequences to health and wellness.*

## A National Trend in School Siting and Community Design

Neighborhoods built prior to the 1950's were generally built with the pedestrian in mind, not the automobile. Older neighborhoods generally have shorter blocks, trees, and good sidewalk connectivity. In general, they provide a more pleasant walking environment compared to their later counterparts in which the mobility of pedestrians was all but forgotten in their design.

Over the past four decades, small neighborhood schools have given way to large schools built on the edges of towns and cities in an effort to serve both older urban areas and surrounding suburbanizing areas. These newer schools are often isolated campuses, surrounded by parking lots and lacking pedestrian connections to neighboring communities.

Overall, the pattern of suburban development has made the walk to school nearly impossible. Since the 1950's, land use practices have favored the segregation of land uses, such as homes, commercial centers, schools and employment areas. Suburban housing developments are disconnected from one another and from community services, making cars and buses essential for transportation. Corridors are designed to accommodate the automobile, unintentionally giving pedestrians a "back seat" when designing streets and intersections.



- *Today, schools are built to accommodate a far larger number of students and are being built on large pieces of fringe land on the periphery of towns and cities. This means that neighborhoods often aren't connected to schools. The reasons for this change include current land use patterns, school siting standards, lack of coordination between planners and school officials and lower up-front costs for land.*

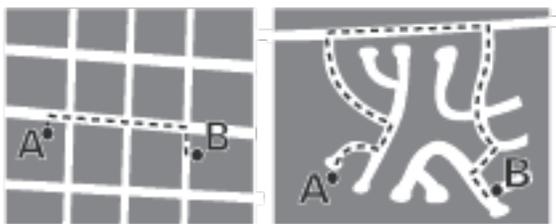
In more rural or low density housing developments, sidewalks and pedestrian pathways are often missing and large yard setback requirements force homes to be spread apart, encouraging residents to jump in the car rather than walking to a local destination. In short, land use policies and regulations often work against compact, mixed use forms of development which encourage people to walk.

## Local Community Design Characteristics

How do Carlisle and Newville's land use policies measure up in terms of promoting built environments that encourage walkability? Are areas around schools zoned for higher density development? Are new streets designed with pedestrians in mind? What policies and enforcement are in place to properly maintain sidewalks and cross walks?

An audit of local land use plans and regulations found both positive and negative features. All three elementary schools in the pilot SRTS project contain portions of neighborhoods within their walkable limits (1/2 mile from the school) that were built prior to the 1950's.

The existing street systems of Newville Borough and Carlisle Borough provide a terrific base to build upon to increase walking because of high levels of connectivity of streets. Sidewalks are an absolute necessity along all through-streets serving developed areas. Research has found that pedestrian accidents are more likely on street sections without sidewalks than those with them -- two and one-half times more likely according to one study (Tobey et al., 1983; Knoblauch et al., 1988).



► *Figure 2.1 - Grid street networks create more direct routes and make walking easier compared to street networks with cul-de-sacs.*

Carlisle's Comprehensive Plan (2002) strongly encourages traditional neighborhood development that is oriented to pedestrians. (A Comprehensive Plan is a general policy guide for the physical development of a municipality.) The Plan recognizes the need to make it easier for pedestrians to cross downtown streets. In future street reconstruction, additional crosswalks should be constructed with patterned, textured concrete to make them stand out. The Plan also encourages "bulb-outs" that involve extending the curb outward at corners so that pedestrians have a reduced width of street cartway to cross. The Comprehensive Traffic Study for Downtown Carlisle (2008) makes numerous recommendations to promote pedestrian and bicycle travel, including the addition of bicycle lanes, curb extensions, speed cushions, and the conversion of 4-lane to 3-lane roads.

Through ordinance, Carlisle Borough requires construction and repair of sidewalks throughout almost all neighborhoods. Regulations are in place to prohibit obstructions along sidewalks and to maintain sidewalks by property owners.

Newville Borough's requirements for new development provide for sidewalk construction and street design standards that support pedestrian mobility. Newville's challenge is the lack of sidewalks, narrow sidewalks, parking obstructions on sidewalks, and dangerous intersections in older, established areas of the Borough.

Outside Newville Borough, North Newton Township's zoning and subdivision regulations warrant a closer look within the walking zone of Newville Elementary. Here, the regulations require residential development with wide streets and wider curb radii that enable faster vehicle speeds. In addition, streets are often approved without sidewalks or are not required to include sidewalks. According to a recent study, narrower streets were found to be the safest (Swift & Associates, 2002). As the Township considers zoning, it may want to consider allowing a higher density of housing units within the school walking zone or adopt a mixed use zoning district that mimics the flavor of traditional neighborhoods in Newville Borough. In this way, a greater number of school-aged children could walk to school.

## It's Not Just Distance - Transportation Choices Favor the Car

One of the most striking changes in school transportation is the increased number of students being driven to school, even when living in close proximity to school property. Students who live within one mile of their school -- a distance considered “walkable” – are generally being driven to school by their parents or guardian.

Based on a parent transportation survey completed during the project, 61% of Mooreland Elementary School and 72% of Hamilton Elementary School students could walk to school. In both cases, less than 25% do so. In more rural Newville Elementary, 18 percent of its student body are designated as walkers, but only 4 percent routinely walk or bike to school. Figure 2.2 shows the results of the parent transportation questionnaire conducted in spring 2008 at the three participating schools.

So why do parents drive their kids to school instead of allowing them to walk 10-20 minutes each way? The suggestion that your child should be walking to school

because he or she lives close enough to walk is not always a popular notion.

The barriers cited most commonly throughout the nation are traffic danger and adverse weather. These two barriers

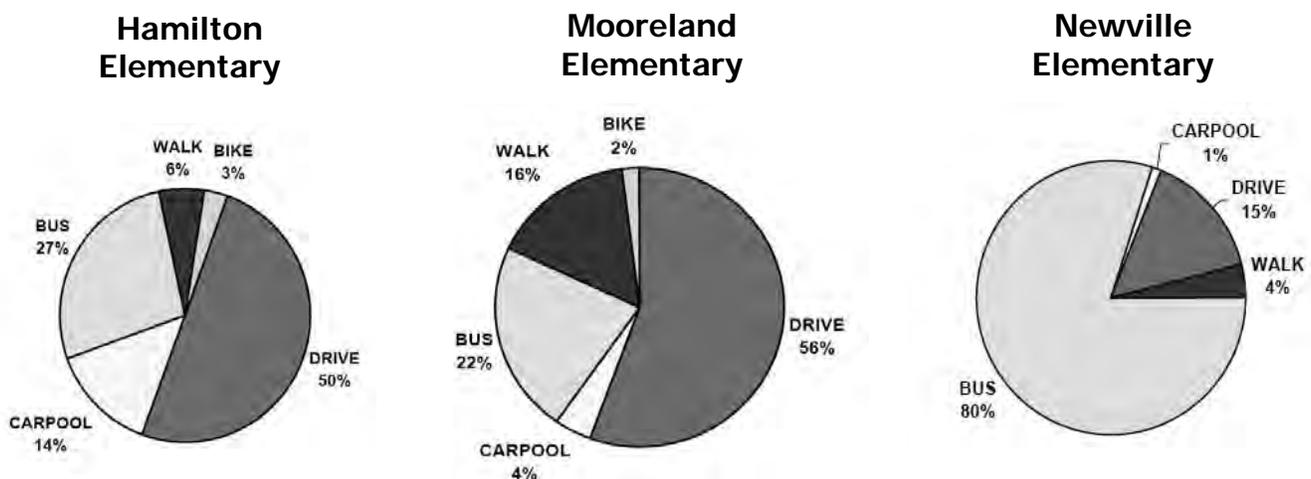
also made the top of the list in the Carlisle and Newville parent transportation

*It takes about 5 to 10 minutes for children to walk a quarter of a mile or bicycle an entire mile.*

survey. Other top concerns raised by parents in the pilot study included convenience, safety concerns, after-school activities and the age of children.

While some of these barriers reflect real issues that need to be carefully addressed, others are based on misperceptions or ingrained attitudes and behaviors or habits. Adverse weather, for instance, did not stop children from walking to school 25 years ago. You simply dressed for the weather. The fear of “stranger danger” may be more perception than fact – child abduction is an extremely infrequent occurrence. However, in some neighborhoods, legitimate safety concerns related to local criminal activity must be taken into account.

**Figure 2.2 Morning Travel Method to Pilot Elementary Schools**



Only about one-third of children who live within one mile of their school walk or bike there, compared to 70% of their parents who walked or biked to school. (Public Health & the Built Environment, ATA 2005)



Traffic danger is a catch-22. The perception that automobiles are a risk to a child walking to school only leads to more parents choosing to drive. The result is more cars clogging local roads and lining up at school which only heightens the risk of a child being injured by a vehicle. A separate study found that 50% of children hit by cars near schools are hit by cars driven by parents of students (Kallins, SR2S).

Perhaps the compromise and answer to this dilemma is more adult supervision on the street and an increase of adult crossing guards in combination with stepped up enforcement of traffic safety laws (see Section 4 for more solutions identified).



- ▶ *As much as 25% of morning rush hour traffic can be school-related (Kallins, 2003). Traffic can lead to even less walking or bicycling. As more children are driven, more parents become convinced that traffic conditions make it unsafe for walking or bicycling and they join the line of cars at school.*

## Health Impacts on Children

CAHWF's mission as a healthcare foundation focuses it in part on the issue of obesity in the Carlisle area. Its 2007 Health Status Assessment found an alarming 66 percent of Carlisle area residents as being either overweight or obese.

Nationwide, there are nearly twice as many overweight children and almost three times as many overweight adolescents as there were in 1980. According to the most recent data, 19 percent of children aged 6 to 11 years old are overweight. (Trust for America's Health, 2006). And

*Most kids are not getting the recommended 60 minutes of physical activity each day. Evidence suggests that individuals gain health benefits if this exercise is accumulated in 10 minute intervals – roughly the same amount of time it would take many children to walk to school. (Public Health and the Built Environment, 2006)*

research shows that overweight children are at increased risk of becoming overweight adults.

Overweight children have an increased risk of type II diabetes, low self esteem, decreased physical functioning, and many other negative emotional and physical effects.

No single theory has sufficiently explained all of the factors contributing to the obesity epidemic in this country. Researchers have begun to examine the relationship between being overweight and the built environment. The built environment includes community design factors, land use, available public transportation, and available activity options.

Studies on the impact of community design on levels of physical activity are revealing strong correlations between “walkability” and obesity. In one study for instance, residents of low walkability neighborhoods tended to report higher mean body mass indexes (BMIs) and have higher rates of overweight than high-walkability neighborhood residents. Residents in high-walkability neighborhoods walked significantly more than their low-walkability neighborhood counterparts – a difference of 52 minutes per week of moderate to vigorous physical activity. (Obesity & the Built Environment paper - American Dietetic Association, 2005).

A less compact built environment also increases the level of air pollution from automobiles as cars are started more frequently, traveling farther, and idling more in traffic. Breathing higher concentrations of carbon monoxide, volatile organic compounds, fine particulate matter and other emissions has repeatedly been linked to poor cardiovascular and respiratory health.

Children are especially vulnerable to air pollutants since they spend more time outdoors and their developing lungs cause them to breathe more rapidly and therefore inhale more pollutants. Particular risks come from ozone and particular matter, both of which have been linked with higher incidences of asthma and impaired lung growth in numerous studies. (Public Health and the Built Environment, 2006)

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*Walking to school is an opportunity to explore, to meet neighbors and business owners, and to have fun with friends along the way. It's an experience that is sadly missing from many children's younger years as they are chauffeured from home to school. Research is revealing that a child's mental health is impacted by the diminished ability to independently experience and learn about the world around them.*

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## Benefits of Walking to School

Benefits to a child who walks or bikes to school include:

- ▶ Richer connection and appreciation for a child's community
- ▶ More alert behavior in school
- ▶ Improved self image and independence
- ▶ Better health (helps prevent obesity and promotes healthy hearts and lungs)
- ▶ Lower chance of traffic-related accident (fewer cars traveling near school)
- ▶ An opportunity for "quality time" between parent or guardian and child

Benefits to the community and to parents include:

- ▶ Reduced traffic congestion around schools
- ▶ Reduced air pollution from fewer cars on local roads
- ▶ More time for a parent or guardian otherwise spent driving to school
- ▶ Cost savings for schools that can find ways through SRTS planning to reduce "hazard" busing – busing within walkable distances due solely to conditions considered too dangerous for walking or biking
- ▶ Stronger community connections as residents and businesses learn to watch out for children walking and biking to school

## Section 3

# Vision, Goals and Policies



▲ *Mooreland Elementary Walk to School Day  
October 2008*

As part of its philosophy to address healthcare needs and policies over the next 25 years, CAHWF supports Safe Routes to School programs as an important element of a healthy community, one that encourages physical activity and sensibly cuts down on traffic.

Under this pilot SRTS project, the individual school task force teams worked on shaping local vision statements and goals for their school neighborhoods. Additionally, the teams learned about national and statewide policy adopted in recent years to increase the safety and availability of local pedestrian facilities. The following section presents visions and goals and instrumental national and statewide policies recently adopted that provide needed support for local SRTS initiatives.

## The Federal Response

Achieving development and improvements that accommodate pedestrians is not always an easy task especially if policies are working at odds against intended goals. Pedestrian supported development emanates from transportation, education and land use planning policies that consider the needs of pedestrians alongside the needs of motorists, bicyclists, transit users and others.

**“Preventing childhood obesity is a collective responsibility. The key will be to implement changes from many directions and at multiple levels.”**

*- Preventing Childhood Obesity: Health in the Balance (IOM, 2004)*

## Transportation

SRTS support at the federal level was achieved with the passing of the highway and transit reauthorization bill (P.S. 109-590) in the summer of 2005. The Safe, Accountable, Flexible, and Efficient Transportation Equity Act - A legacy for Users (SAFETEA-LU) established the first national Safe Routes to School Program (Section 1404) and designated \$612 million in Federal Transportation funds for the new program. Of the funds established, Pennsylvania receives a share of approximately 11 million dollars budgeted through 2010.

Although the federal Safe Routes to School program is relatively new, all 50 states and the District of Columbia now have SRTS programs in various stages of implementation. In July 2008, a national SRTS Task Force established by Congress, issued a national strategy to support and advance SRTS program nationwide based on the following vision:

*Safe Routes to School programs will improve safety and encourage more American youth to walk and bicycle to school, thereby resulting in higher levels of physical activity, less traffic congestion, a cleaner environment, and enhanced quality of life in our communities.*

The National Task Force recommends that the SRTS program become a permanent feature of future transportation legislation. Among its five key strategies for improving SRTS programs nationwide, the report recommends that the federal program support the involvement of a wider variety of stakeholders in local programs. Non-transportation agencies and community groups with missions related to health, nutrition, environmental protection and recreation should all be at the table, and performance measures should likewise reflect these disciplines.

## Public Health

Public health agencies at the federal level including the U. S. Department of Health and Human Services (DHHS), the National Institutes of Environmental Health Sciences (NIEHS) and the Centers for Disease Control and Prevention (CDC) are committed to their common goal to identify and implement strategies to reverse weight problems among Americans, especially obesity in children. The 2004 *Preventing Childhood Obesity: Health in Balance* report calls for obesity prevention to be a national public health priority with government at all levels providing coordinated leadership. Their commitment to implementing change in childhood obesity prevention strongly advocates for community walkability and safe walking routes to school for children. Dr. Allen Deary of the NIEHS sees the strong need for an environmental design component to reverse the obesity trends in youth. He states, “We need to provide an environment that is supportive of the individual behavior change we want to see take place, and that allows people to have access to opportunities for physical activity and affordability of a healthy diet.”

## State Supporting Goals & Policy Transportation

Pennsylvania’s statewide long-range transportation plan (2006-2030), known as the Pennsylvania Mobility Plan, serves as a framework for highways, transit facilities, passenger and freight railroads, air and water ports, bicycle and pedestrian trails, and the interrelationships of those systems. In its attempt to be truly multi-modal, the Mobility Plan promotes the implementation of “smart transportation” initiatives to implement projects at an appropriate scale and improve the transportation’s compatibility with its surrounding environment. When planning projects, attention should be focused equally on pedestrian-friendly and motor vehicle design.

In addition, a change in policy in 2007 by the Pennsylvania Department of Transportation now requires the evaluation and integration of pedestrian and bicycle user needs in all highway and bridge transportation corridors. The revised policy clarified that bicycle users are vehicles and that pedestrians are classified as traffic, thereby bolstering the importance of pedestrian and bicycle travel as a viable mode of transportation. In March 2008, the PA Department of Transportation released an excellent “Smart Transportation Guidebook”

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*The revised PennDOT policy clarified that bicycle users are vehicles and that pedestrians are classified as traffic, thereby bolstering the importance of pedestrian and bicycle travel as a viable mode of transportation.*

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in an attempt to integrate the planning and design of streets and highways in a manner that fosters development of sustainable and livable communities. Applicable to rural, urban and suburban areas, the guidebook provides roadway guidelines for intersections, medians, sidewalks, curbs, bike facilities, and many other design elements that promote a safe pedestrian and bicycling environment. Municipalities are encouraged to review this guidebook and incorporate recommended design elements in local development regulations.

## School Location

Today, Pennsylvania buses more than 75 percent of our public school students at enormous cost. State agencies and non-profit organizations are examining strategies to reverse the trend of building schools miles away from towns, cities and boroughs and bringing back walkable neighborhood schools. A recent report *Renovate or Replace? The Case for Restoring and Reusing Older*



▲ **Hamilton Elementary (L) and Mooreland Elementary (R) -- Neighborhood Schools Can Help Keep Older Communities Vibrant --** *A thriving elementary school, with lots of pedestrian activity surrounding it, says that people care about their neighborhood and take pride in their community. Although the feelings evoked may be intangible, the benefits - higher property values, safe streets, stable taxes are significant and unmistakable.*



*School Buildings* walks readers through a set of factors to consider when locating schools. The report encourages school officials to look beyond bricks and mortar costs to the many community-enhancing benefits that neighborhood schools can provide.

Older school buildings are a significant community asset that is not always recognized in the decision making process as a means to strengthen their community's development and quality of life. As school buildings age and educational needs change, school boards may leave behind established schools and build new ones.

The Department of Education's PlanCon process was revamped in the last two years so that local districts received their first boost in reimbursement rates in nearly 20 years and now have incentives to reuse existing school facilities. This is a big change in policy as previous financial state reimbursements incentivized school districts to locate outside of core communities and build new school complexes on large tracts of land, in fact even requiring large tracts of land for schools in order to receive reimbursement funds from the state. The Pennsylvania Public School Code amended in 2005 removed acreage requirements for schools or for athletic fields, and the Department of Education no longer makes recommendations on acreage to local school boards. For detailed information on Department of Education policies and procedures see [www.pde.state.pa.us](http://www.pde.state.pa.us).

### A Local Collective Vision

In the CAHWF service area, the stars seem to be aligning in support of more walkable communities. The Letort Regional Authority's Trail/Urban Greenway Feasibility Study (May 2008) promotes the modification of streets and railroad right-of-ways to enhance trail connections, and it encourages the coordination of a proposed Carlisle Borough urban trail with the SRTS initiative. The 2008 Comprehensive Traffic Study for Downtown Carlisle makes numerous recommendations to promote pedestrian and bicycle travel, including the addition of bicycle lanes, curb extensions, speed cushions, and the conversion of 4-lane to 3-lane roads.

In Newville Borough, the police department recently increased enforcement of traffic laws at key locations

to enhance the safety of students walking to and from school, and efforts are underway to restrict traffic at an alley near school to pedestrian and bike travel only.

In addition, Cumberland County's Land Partnerships: A Countywide Strategy for Open Space Preservation and Smart Growth encourages the support of transportation enhancements that add to the attractiveness, connectivity, and safety of a community – features like street trees, sidewalks, crosswalks, bike paths and transit linkages.

In October 2007, CAHWF sponsored a workshop by Mark Fenton, a national expert and advocate for the creation of more livable, walkable communities. Fenton's mantra was "*We must build communities where people are intrinsically more active.*" To do so, he outlined 11 ways to build a more walkable community. One of those approaches is the development of comprehensive Safe Routes to School plans.

From that workshop sprouted this piece of work -- the CAHWF pilot SRTS planning effort for Hamilton and Mooreland Elementary Schools in the Carlisle Area School District and Newville Elementary School in the Big Spring School District.

School Districts are encouraged to incorporate SRTS in their wellness policies. Wellness policies are important to Safe Routes to School programs because they provide guidance and support to programs on a district-wide basis. Such support adds community backing to requests for federal and state SRTS funding.

### Pilot Schools Set Local Goals

An important part of the SRTS strategic planning process for Mooreland, Hamilton and Newville Elementary Schools was the adoption of local vision and goal statements. The vision statement defines what the Safe Routes to School Plan ultimately seeks to accomplish and states a positive image to achieve in the community. Goals are broad statements of purpose that reflect the community's collective vision of the future. On the next page (Figure 3.1) is a summary of each participating school's vision and goal statements for their SRTS programs.

## Figure 3.1 A Collective Vision for the Future Pilot SRTS Project Goals

### Hamilton Elementary School

Vision Statement: To create a safe and community-supported walking and bicycling environment for students attending Hamilton Elementary School.

#### Goals:

- ▲ To promote the benefits of walking and bicycling to school.
- ▲ To increase the number of children walking and biking to school on a daily basis.
- ▲ To address non-traffic related safety concerns of parents, such as stranger danger.
- ▲ To create safe walking and biking routes to school.
- ▲ To develop a strategy to increase student safety during Car Show week.
- ▲ To secure funding for implementation of goals.
- ▲ To improve the enforcement of traffic laws so drivers will drive more safely along routes to school.

### Mooreland Elementary School

Vision Statement: To create and maintain a walking and bicycling friendly environment in the Mooreland Elementary School area in order to promote a healthy and safe community.

#### Goals:

- ▲ To encourage parents to choose active transportation (walking and biking) for their children to and from school.
- ▲ To encourage students to walk and bike to school.
- ▲ To improve the student's health through walking and biking.
- ▲ To raise the awareness of, and respect for, pedestrian traffic.
- ▲ To develop a partnership between Carlisle Borough, Borough Police, and the School District to support Safe Routes to School.
- ▲ To improve pedestrian and bike safety skills.
- ▲ To improve traffic safety in the Mooreland community.
- ▲ To improve air quality around the school by reducing the number of vehicles commuting to school.

### Newville Elementary School

Vision Statement: Walking and biking will be enhanced and increased in our community through public and private partnerships.

#### Goals:

- ▲ To enhance safety and design.
- ▲ To increase walking in the community and walking to school.
- ▲ To decrease the number of buses and cars.
- ▲ To increase the public awareness of the importance of sidewalks.
- ▲ To provide education for the whole community – town meetings.
- ▲ To provide education to children on pedestrian safety and incorporate education on the value of walking in school curriculum.
- ▲ To expand the walking area defined by the district/ eliminate hazardous busing.
- ▲ To secure funding to implement plan.
- ▲ To encourage Newville Borough, West Pennsboro Township, North Newton Township, the Police Departments and Big Spring School District to coordinate efforts to support walking and biking for our students and residents.
- ▲ To develop a safety patrol program.
- ▲ To expand the number of adult guards.

## Section 4

# Implementation

Creating Safe Routes to School programs is important to the local communities of Newville and Carlisle, but we need to be strategic about it. That's what the CAHWF SRTS Action Plan is all about: creating policy for better routes and walking to school, educating parents, teachers and students alike about the benefits of walking to school, designing complete streets and maintaining existing routes, using enforcement for compliance with traffic safety laws and encouraging parents and their children to travel to school on foot.

Strategies are simply a set of actions that enable an organization to achieve results. They are the backbone of the three pilot schools' Safe Routes to School plan. Task force teams carefully selected and shaped strategies that address each community's specific needs, barriers and assets.

The following tables list the strategies crafted by each of the three pilot school communities. They are organized according to four E's of SRTS: Education, Encouragement, Engineering, and Enforcement. (Evaluation is addressed under each strategy.)

A companion report *Safe Routes Action Strategies: A CAHWF Walk to School Partnership* provides details for each strategy, including specific steps to implement so that existing and new volunteers will know how to get started and where to go for help; identification of responsible parties; helpful resources and community partners; and tips on how strategies can be evaluated for success. A complete set of strategies for each school can be obtained at each school office or downloaded from the CAHWF website at [www.cahwf.org](http://www.cahwf.org).

**Table 4.1 HAMILTON ELEMENTARY Action Strategies**

EDUCATION	ENCOURAGEMENT	ENGINEERING	ENFORCEMENT
Ed - 1 SRTS Student Education	Enc - 1 Walking School Bus - General	Eng - 1 Crosswalk Improvements Strategy	Enf - 1 Police Street Presence
Ed - 2 SRTS Walking Routes Map	Enc - 2 Walking School Bus -- Car Show Weeks	Eng - 2 Pedestrian Network Improvement Program	Enf - 2 Corner Captain & Crosswalk Watch Program
Ed - 3 Safety Patrol Program	Enc - 3 Eyes on the Kids Program	Eng - 3 School Site Drop-Off & Pick-Up Circulation Plan	
Ed - 4 SRTS Outreach & Education (adult education & awareness)	Enc - 4 School Pool Program		
	Enc - 5 Walk to School Day		

***Preventing childhood obesity is a collective responsibility. The key will be to implement changes from many directions and at multiple levels.***

Preventing Childhood Obesity: Health in the Balance (IOM, 2004).

**Table 4.2 MOORELAND ELEMENTARY  
Action Strategies**

EDUCATION	ENCOURAGEMENT	ENGINEERING	ENFORCEMENT
Ed - 1 Education Message Development	Enc - 1 Walking School Bus	Eng - 1 Complete the Streets Program	Enf - 1 Progressive Enforcement
Ed - 2 SRTS Outreach & Education	Enc - 2 School Pool Program	Eng - 2 Walnut Bottom Road Corridor Study	Eng - 2 Targeted Crosswalk Enforcement Operation
Ed - 3 Safety Patrol Program	Enc - 3 Walk to School Day	Eng - 3 Pedestrian & Bicycle Routes Improvement Program	
Ed - 4 SRTS Handbook		Eng - 4 School Site Circulation Improvement Plan	
Ed - 5 Safety Education Program Coordinator		Eng - 5 Park 'n Walk Program	

**Table 4.3 NEWVILLE ELEMENTARY  
Action Strategies**

EDUCATION	ENCOURAGEMENT	ENGINEERING	ENFORCEMENT
Ed - 1 Adult Crossing Guard Development Program	Enc - 1 Walking School Bus - Porch Parents	Eng - 1 Complete the Streets Program	Enf - 1 Police Street Presence
Ed - 2 Safety Patrol Program	Enc - 2 School Pool Program	Eng - 2 Intersection Design for Pedestrians	Enf - 2 Targeted Crosswalk Enforcement Operation
Ed - 3 Streetscape Awareness	Enc - 3 Walk to School Day	Eng - 3 School Traffic Flow Improvement Plan	Enf - 3 Neighborhood Speed & Crosswalk Watch
Ed - 4 SRTS Student Education		Eng - 4 Sidewalk & Crosswalks Improvement Program	Enf - 4 Progressive Ticketing
Ed - 5 SRTS Walking Routes Map		Eng - 5 Keller Street Alley Conversion	Enf - 5 School Resource Officer
		Eng - 6 Park 'n Walk Program	
		Eng - 7 Way-finding Signage Program	

## Community Stakeholders...

### A Call to Action

A safe environment for walking and bicycling to school takes the cooperation and involvement of the entire community. Leadership for SRTS programs in communities comes in all shapes and sizes and from a variety of professional and experiential backgrounds. Residents, businesses, police officers, and community groups and agencies can all play a role. Your part may involve helping to organize an initiative, supporting construction practices that make for safe walking and bicycling routes, funding a specific project, or simply offering to keep a watchful eye out for our young students walking to school. Please take a few minutes to examine where you can lend a hand.

### Education and Encouragement

go hand-in-hand to inform and promote walking and bicycling to school. It is not enough to educate and excite children about walking to school; it's just as important to reach out to parents and caregivers so that they will feel comfortable in their decision to allow their children to walk or bike to school.



Simple but effective strategies include walking maps and handbooks so that parents can teach their young students how to travel to school in the safest manner. See Appendix B for helpful SRTS resources.

- ▲ *Providing incentives for 4th and 5th graders to participate as student crossing guards can help build interest in the walk to school.*

## BUILDING BLOCKS



### Celebrate Walk to School Day - the annual

event can become a catalyst for on-going efforts to increase walking and bicycling.

**Take it beyond a day** -- many communities are using health and fitness messages or special events, pedestrian and driver safety training, neighborhood walkability assessments and daily "walking school buses" to maintain the momentum and keep people walking.

**Make it Permanent** - efforts centered around Walk to School Day and Safe Routes to School are about changing individual attitudes about walking and transportation choices and eventually changing community culture. With sustained efforts, the built environments evolve so that they are more inviting for every walker, young and old.

**Teach Walking Skills** - Learning walking skills will not only make children become better pedestrians and build their self esteem and independence, they will make better drivers when they reach the age of 16.

**Change Driver Behavior** - Speeding cars and traffic congestion can make the area around schools a dangerous place for students walking or biking to school. Drivers are encouraged to slow down, abide by pedestrian state laws and parent drivers are encouraged to drive less and use alternate Park and Walk sites to increase safety and reduce traffic in front of schools.

### Work for Safe Routes to School

Numerous stakeholder groups and individuals are working to make neighborhood environments and the streets along school routes permanently safer for walking and bicycling. PTOs, community organizations, neighborhood groups, police departments, school personnel are working together to reach a common goal - to provide Safe Routes to School.



**Enforcement** strategies increase the safety of children bicycling and walking to school by helping to change unsafe behaviors of drivers, as well as pedestrians and bicyclists. A community approach to enforcement involves students, parents or caregivers, school personnel, crossing guards and law enforcement officers.

### Role of Local Police



Often times, schools located in neighborhoods on small sites have drop-off and pick-up locations on public streets located in front of school buildings

in the neighborhoods in which they serve. Traffic congestion from a large volume of private vehicles hinders and impedes the safety of these drop-off and pick-up sites for school students. In keeping with the goal to promote high levels of participation in walking and biking to school, local law enforcement officers play a vital role in assuring the safety of all students.

Local traffic safety enforcement of pedestrians, bicycles and motor vehicles is paramount to the success of SRTS programs. Local police can support the implementation of SRTS programming efforts by providing officers at key locations to assist in not only enforcing local and state traffic laws but also in educating students on pedestrian laws, such as how to cross a street lawfully, where not to cross a street (i.e. jaywalking), etc.



## Tips for Parents

Parents, if you're interested in jump starting your school's Safe Routes to School plans consider leafing through the action plans and finding one that catches your interest. Here are a few tips to get you started:

- ▲ **Recognize that you have more control than you might think.** You can choose to walk to school with your children instead of driving your child to school. Plan ahead and try it so you have plenty of time to enjoy your walk. Both parent and child can reap the benefits of regular exercise.
- ▲ **Think about the immediate benefits of your actions.** If reducing your child's future risk of heart disease seems a bit abstract, focus on the good things that can happen right now with a daily walk to or from school. You won't feel so stressed trying to maneuver in the morning traffic congestion around the school, you and your child will achieve some of your doctor's recommendations for daily exercise (one hour for children and ½ hour for adults).
- ▲ **Make small, easy changes over time.** If you are willing to try walking to school and never really considered it an option for your children, start out slowly. For example, try walking every Friday or Wednesday. Suggesting to your children that you are going to start walking to school every day will probably get you lots of no-thank-you's. It's easier and more appealing to start out with a smaller goal of one to two days and then work up from there as the joy of walking takes hold.



## Engineering and Design

Design has always been important to health. How we shape our communities, neighborhoods, schools and homes ultimately impacts our ability to stay healthy. Design issues related to health however, are complex. The solutions to reverse the deterioration in our communities' health and spiraling healthcare costs lie at the intersection of disciplines like landscape architects, urban design professionals, public health providers and engineers.

The Engineering and Design element of a SRTS plan focuses on designing complete streets, calming motor vehicle speeds where conflicts exist with pedestrians and bicyclists, and establishing safer and fully accessible crossings, walkways, trails and bikeways.

## Complete Streets Policy

Complete streets are designed and operated to enable safe access for all users. Pedestrians, bicyclists, motorists and bus riders of all ages and abilities are able to safely move along and across a complete street.

Complete streets improve safety. They reduce crashes through safety improvements. One study found that designing for pedestrian travel by installing raised medians and redesigning intersections and sidewalks reduced pedestrian risk by 28%. A complete streets policy ensures that the entire right of way is routinely designed and operated to enable safe access for all users.

## Crossing Distances

Minimizing the crossing distance at intersections can improve pedestrian safety by reducing crossing time, improving visibility for motorists as well as pedestrians, and enhancing a driver's awareness of the crosswalk. A street that is 32 feet or less in width is a comfortable crossing distance for pedestrians. Crossing distances can be reduced by the use of curb extensions/bulb-outs or median/refuge islands.



▲ *Median refuge islands make crossing a busy street safer for pedestrians and bicyclists.*

When traffic lights are not in place or in operation at a roadway intersection by Pennsylvania State law, the driver of a vehicle shall yield the right-of-way to a pedestrian crossing the roadway within any marked crosswalk or within any unmarked crosswalk at that intersection (Title 75).



▲ *An artist's rendering of a "complete street." Creating complete streets means changing the policies and practices of transportation agencies and local municipalities. A sample resolution to support a local Complete Streets Policy is provided in Appendix C.*

## Crosswalks

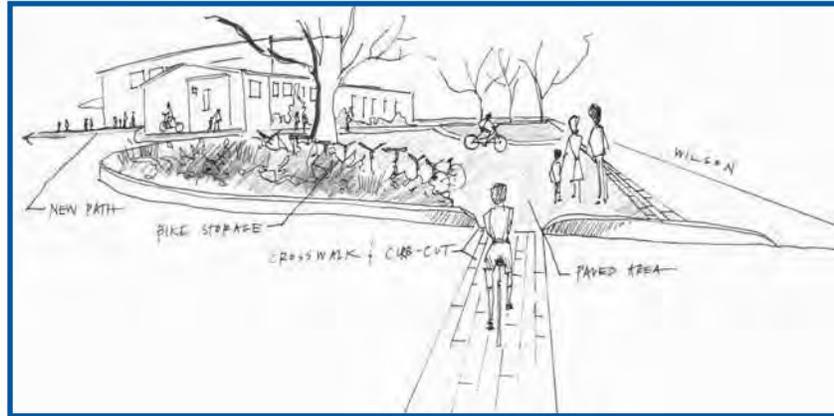
Marked crosswalks indicate the portion of the roadway for use by pedestrians. A desirable crosswalk width is 10 feet; however, the PennDOT criteria for minimum crosswalk width is 6 feet. Continental style markings emphasize the presence of the crosswalk. This is beneficial when crosswalks are widely spaced or when there is a high level of distraction. Other high-visibility treatments in crosswalks include Yield to Pedestrian sign paddles that are either embedded in the center of the road at the crosswalk or mounted to a heavy rubber base; in-pavement crosswalk lighting and textured crosswalk surfaces.

## Corner Radius

A street's curb radius is the radius of the imaginary circle drawn by continuing the curve of a curb along a street corner. A smaller curb radius (20 feet or less) is best for pedestrians because it provides more pedestrian area at the corner, decreases the pedestrian crossing distance, slows vehicular speeds and allows more flexibility in the placement of curb ramps.



- ▲ *An example of a very large curb radius is found at the intersection of Corporation and Steelstown roads in Newville. This curb radius was modified by PennDOT to help facilitate the turning movement of large trucks onto Steelstown Road, which produced a negative impact on pedestrian movement by increasing the crossing distances from 30 feet to 90 feet. In addition, the larger curb radius promotes higher vehicular speeds at this intersection.*



- ▲ *At Mooreland Elementary School, an improved crosswalk across the driveway to the rear parking lot, additional bike storage, and a pedestrian pathway to the rear parking lot were among the engineering strategies discussed by the Task Force .*

## Curb Ramps

Curb ramps are necessary for people who use wheelchairs and also very helpful for children on bikes and adults pushing strollers. Curb ramp components include the ramp itself, a landing at the top of each ramp, approaches on either side of the landing, flares or sloped transitions between the curb and sidewalk, and the gutter between the ramp and the street. At corner intersections, two curb ramps are recommended to allow a direct path into the crosswalks. Current PennDOT policy requires the construction of new curb ramps, or the correction of any substandard elements in existing curb ramps, when located within PennDOT project construction limits including resurfacing projects. Any PennDOT resurfacing projects, where crosswalks are designated on a street section, must also be improved to meet compliance with the Americans with Disability Act (ADA).

The ADA requires curb ramps at all intersections with sidewalk provisions. ADA compliant ramps must be 36 inches wide and have detectable warning systems, such as truncated domes, extending the full width and depth of the curb ramp. The maximum slope for a curb ramp is 1:12 or 8.33%. There are a number of different types of curb ramp design schemes. See ADA guidelines for additional information regarding slope, grade, design schemes and other requirements (<http://www.access-board.gov/adaag/about/index.htm>).

## Section 5

# Funding & Partnership Opportunities

Implementation of the SRTS action strategies will require a mix of volunteer sweat equity and direct financial support from government and private grant providers. This section provides information on where to go for financial help. Sources of federal, state, and local funding are covered, as well as organizations that may be interested in partnering with your community to either enhance a grant application or support a strategy in a non-financial manner.

Both infrastructure projects and non-infrastructure programs are elements of most established Safe Routes to School programs. Infrastructure funds (also called “capital” funds) are used to assess and make improvements to the walking and bicycling physical environment around schools. Examples include installing sidewalks or crosswalks, fixing hazardous facilities, or slowing traffic near schools with traffic calming measures. Infrastructure funds almost always come from governmental sources, including many federal programs.

Non-infrastructure funds (sometimes called “program” funds) are used to educate or encourage children to walk or bike to school. These activities might consist of in-school safety education, public outreach activities, traffic enforcement, and other related activities. Non-infrastructure funds are also sometimes used for program overhead, including paying for any necessary staff. Many federal and state safety-related funding mechanisms allow a portion of the funds to be used for ‘non-infrastructure-related’ programs, such as hiring a coordinator and providing safety training. Additionally, local governments might choose to fund these efforts on their own or draw support from donors. Some non-profit entities such as Parent/Teacher Associations (PTA) and churches are willing to fund SRTS because the programs improve the entire community by relieving traffic congestion, improving the environment, creating alternative transportation routes, and improving the health of children and the community.

Safe facilities and safe behaviors are needed to successfully encourage and increase the number of children walking and biking to school. Both infrastructure and non-infrastructure funds are available from numerous sources, including the new federal Safe Routes to School program.

### Federal Funding

The primary federal source of surface transportation funding is the Safe, Accountable, Flexible, Efficient, Transportation Equity Act: A Legacy for Users Act (SAFETEA-LU). The \$286.5 billion SAFETEA-LU was passed in 2005 and authorizes federal surface transportation programs for the period 2005-2009. SAFETEA-LU funding is administered through state and regional planning agencies; programs emphasize intermodal transportation connections and the reduction of trips by automobile.

In August, 2005, the federal-aid SRTS Program was created by Section 1404 of this federal transportation bill. Housed in the U.S. Department of Transportation’s Federal Highway Administration (FHWA) Office of Safety, the SRTS Program is funded at \$612 million over five federal fiscal years (FY 2005-2009).

FHWA apportions SRTS funding annually to each state in conjunction with federal-aid highway apportionments. Pennsylvania has received the following appropriations over the past 4 years:

2005:	\$1,000,000
2006:	\$3,345,128
2007:	\$4,430,549
2008:	\$5,436,148
Projected 2009:	\$6,799,263

See information under State Funding for state administration of the federal SRTS funding.



In addition to the federal funds specifically earmarked for Safe Routes to School, bicycle and pedestrian projects are broadly eligible for funding from almost all of the major federal-aid highway, transit, and safety programs in Pennsylvania. Bicycle projects must be principally for transportation, rather than recreation purposes and must be designed and located pursuant to the transportation plans required of states and Metropolitan Planning Organizations.

#### *Community Development Block Grants*

Federal Community Development Block Grants provide money for streetscape revitalization, which include pedestrian improvements. Eligible activities include acquiring real property, building public facilities and improvements to streets, sidewalks, and recreational facilities. In Oakland, California, DCBG funds were used to fund crossing guards called “Safe Walk to School Monitors.”

## State Funding

In 2004, Governor Rendell initiated the Home Town Streets/Safe Routes to School Program to administer funding provided by the Federal Highway Administration through the Transportation Enhancement Program and other Surface Transportation Program funds.

The Pennsylvania Safe Routes to School Coordinator is Chris Metka, who is located in the Office of Planning, Pennsylvania Department of Transportation. Mr. Metka’s contact information is:

400 North Street  
6th Floor  
Harrisburg, PA 17120  
Phone: (717) 787-8065  
Email: cmetka@state.pa.us

Pennsylvania’s second federal Safe Routes to School infrastructure funding round closed in fall 2008. During the first application cycle, 98 applications were received from around the Commonwealth, requesting \$56 million in federal funding. Project selection was announced in late fall 2008.

## Local Matching Requirements

In general, the federal share of the costs of transportation projects is 80 percent with a 20 percent state or local match. However, there are a number of exceptions:

- ◀ Federal Lands Highway projects and Section 402 Highway Safety funds are 100 percent federally funded.
- ◀ Bicycle-related Transit Enhancement Activities are 95% federally funded.
- ◀ Hazard elimination projects are 90% federally funded. Bicycle-related transit projects (other than Transit Enhancement Activities) may be up to 90% federally funded.
- ◀ Individual Transportation Enhancement Activity projects under the Surface Transportation Program can have a match higher or lower than 80%.

However, the overall federal share of each state’s Transportation Enhancement Program must be 80 percent.

The state and/or local funds used to match federal-aid highway projects may include in-kind contributions (such as donations). Funds from other federal programs may also be used to match Transportation Enhancement, Scenic Byways, and Recreational Trails program funds. A federal agency project sponsor may provide matching funds to Recreational Trails funds provided the federal share does not exceed 95%.





## State SRTS Mini-Grants

The Penn State Hershey Center for Nutrition and Activity works on a statewide scale through Pennsylvania Advocates for Nutrition and Activity (PANA) to deliver programs and events that support healthy eating and physical activity in schools, recreation, healthcare, and the community. Under this partnership, the Safe Routes to School Academy provides training and a mini-grant program to support partnership development and coordinate planning and evaluation of SRTS efforts around schools that include grades K- 8th.

The mini-grant program includes:

### Capacity Building Mini-Grant (\$5,000)

- ◀ Includes seed money plus a technical assistance provider to guide partnerships through the development of a thorough SRTS action plan.

### Education and Encouragement Mini-Grant (\$5,000)

- ◀ Includes seed money for communities with a basic infrastructure already in place that need assistance promoting and educating parents, kids and community members on walking and biking to school easily and safely.

For information on grant deadlines and details, go to [www.srtsacademy.com](http://www.srtsacademy.com)

## Private Funding

Contact local corporations and businesses to ask if they will support your program with cash, prizes, and/or donations such as printing services. It's good to ask your parent leaders where they work; they often can help you get a "foot in the door." When contacting a company, ask for information about their "community giving programs."

## Foundations / Organizations

Check with local foundations and non-profit organizations that provide grants or could help acquire grants in the areas of transportation, health, environment, and community building.

## Individuals

Statistically, individuals give more money than corporations and foundations combined. You can begin a local fund drive by working within your existing network of team leaders, and outreaching to the larger community.

## Events

Many programs have raised funds by holding special events. Use the SRTS theme to attract funding. Hold a walkathon or a bicycling event. You also can choose more traditional fundraising efforts, such as concerts, talent shows, etc.

## Local Government

**Capital improvement projects (CIPs)** are new infrastructure projects implemented using public funds. These projects are identified through a capital improvement planning process which is tied to the local budget. During the planning process, the local government identifies and prioritizes capital improvements such as new roads and sidewalks, and then allocates funding for construction at least one year before the project is implemented. A local transportation planner or engineer serving on a SRTS taskforce or committee could assist in identifying infrastructure projects and including them in the capital improvement planning process.

**Local operating budgets** may provide avenues for non-infrastructure programs and infrastructure maintenance and repair. Transportation budgets may include funding for pedestrian and bicycle programs or school zone improvements. Police or public safety budgets may include funding for traffic law enforcement or school crossing guards.

**Public school budgets** may include opportunities for safety education or walking and bicycling encouragement programs. Recreation budgets may include funding for after school programs. Most local operating budgets include funding for general maintenance and repair of infrastructure. Depending on the size of the budget, these funds can be used for inexpensive projects such as striping crosswalks or installing signage, or more costly projects such as installing curb ramps.

## Section 6

# A Word about Evaluation

The task of building an ongoing, comprehensive, and community-changing SRTS program requires a great deal of collaboration, money and time. How does a community know its efforts are successful?

There are many indicators of success that every SRTS program should think about before it implements action strategies. Success can be measured numerically for some strategies, but qualitative evaluations are also important to conduct since SRTS programs aim to change human behaviors. Evaluation is often critical when pursuing grants from the public and private sector. Table 6.1 identifies key indicators that can be used as a measuring stick of your success.

Collecting data at the beginning of the process is

important to evaluating success down the road. The collection of baseline data was an important aspect of CAHWF's SRTS project. Through a variety of surveys and field assessments, each school started with a solid understanding of local needs, attitudes and participation levels of walkers and car and bus riders. Such baseline information that shows local need and incremental progress to funding agencies is critical to successfully competing for funds.

The pie charts in Section 2 illustrate the current transportation methods for Mooreland, Hamilton and Newville Elementary Schools. Following the implementation of selected strategies, the same questionnaire that produced these findings should be repeated on a regular basis to show changes over time in travel methods. Such survey tools are important in evaluating whether more children are walking and fewer are being driven to and from school on a routine basis.

<b>Outcome</b>	<b>Measure Before and After</b>	<b>Desired Direction of Change</b>
Behavior of children	<ul style="list-style-type: none"> <li>• Numbers of children walking to and from school</li> <li>• Numbers of children bicycling to and from school</li> <li>• Skills for walking and bicycling safely</li> </ul>	↑ More ↑ More ↑ Better
Behavior of drivers	<ul style="list-style-type: none"> <li>• Numbers of vehicles arriving and departing school at morning drop-off and evening pick-up times</li> <li>• Speed of vehicles in and around school area</li> <li>• Aggressive driving behavior (e.g., not yielding to pedestrians)</li> <li>• Number of driving trips by parents and length of morning and evening commute</li> </ul>	↑ Fewer ↑ Slower ↑ Less ↑ Less
Community facilities	<ul style="list-style-type: none"> <li>• Quality of walking environment: number and usefulness of sidewalks and bike lanes</li> <li>• Safely designed intersections (lights, crosswalks, etc.)</li> </ul>	↑ Better ↑ More
Crashes and Injuries	<ul style="list-style-type: none"> <li>• Number of traffic crashes involving children walking or biking to and from school</li> <li>• Severity of injuries to children from traffic on their way to and from school</li> <li>• Number of conflicts between vehicles and pedestrians/bicyclists which would be likely to lead to crashes (i.e., "near misses")</li> </ul>	↑ Lower ↑ Less severe ↑ Lower
Community buy-in	<ul style="list-style-type: none"> <li>• Number of different types of people involved in the SRTS effort</li> <li>• Level of commitment and energy displayed by the SRTS collaborators</li> <li>• Parent enthusiasm about SRTS and allowing their children to walk or bike</li> </ul>	↑ More ↑ Higher ↑ Higher
Environmental quality	<ul style="list-style-type: none"> <li>• Level of air and noise pollution in school area</li> <li>• Land devoted to parking and drop-off/pick-up areas</li> </ul>	↑ Lower ↑ Less



# APPENDIX



*Walking to Newville Elementary School*



# Hamilton Elementary Walking Routes and Pedestrian Pathways

CAHWF Safe Routes to School Project  
Partnership Initiative

## Legend

- Crossing Guards**
- ▲ Adult Crossing Guard
  - Student Patrol
- Walking Routes**
- Primary Route
  - - - - - Secondary Route
  - Other Streets
  - · - · - Pedestrian Pathway
- Other Symbols**
- Railroad
  - Parks
  - 1/2 Mile Walk Radius

This map shows the preferred routes for walking to school safely. Please show your child the safest route and teach her/him good safety habits, such as:

- 1) Stop at every corner and look all ways for on-coming vehicles before crossing.
- 2) Walk quickly, but do not run.
- 3) Use crosswalks, stop signs, traffic signals, school patrols, and adult crossing guards, and
- 4) If no walkways are provided, walk on the left-side of the roadway as far off the roadway as possible, facing the approaching traffic.

December 2008



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# Mooreland Elementary Walking Routes and Pedestrian Pathways

CAHWF Safe Routes to School Project  
Partnership Initiative

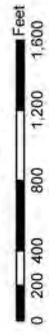
## Legend

- Crossing Guards**
- ▲ Adult Crossing Guard
  - Student Patrol
- Walking Routes**
- Primary Route
  - ..... Secondary Route
  - Other Streets
  - - - - Pedestrian Pathway
- Crossing Guards**
- Railroad
  - Parks
  - 1/2 Mile Walk Radius

This map shows the preferred routes for walking to school safely. Please show your child the safest route and teach her/him good safety habits, such as:

- 1) Stop at every corner and look all ways for on-coming vehicles before crossing;
- 2) Walk quickly but do not run;
- 3) Use crosswalks, stop signs, traffic signals, school patrols, and adult crossing guards; and
- 4) If no walkways are provided, walk on the left-side of the roadway, as far off the roadway as possible, facing the approaching traffic.

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# Newville Elementary Walking Routes and Pedestrian Pathways

CAHWF Safe Routes to School Project  
Partnership Initiative

## Legend

- Crossing Guards**
- ▲ Adult Crossing Guard
  - Student Patrol
- Walking Routes**
- Primary Route
  - Other Streets
  - - - - Pedestrian Pathway
- 1/2 Mile Walk Radius**
- Parks
  - 1/2 Mile Walk Radius
- Railroad**
- Railroad

This map shows the preferred routes for walking to school safely. Please show your child the safest route and teach her/him good safety habits, such as:

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## Helpful SRTS Resources

Listed below is a variety of links to sites that cover topics ranging from general safety to obesity, energy and ethics. In one way or another they all address issues related to how we get around safely, the choices we make and how they affect us. Some have “teacher pages,” some are sites kids could use when they have finished their work.

### **TriMet/MAX – school tools for teachers**

<http://www.tri-met.org/schools/index.htm>

### **OHSU Trauma Nurses Think First Program**

[http://www.ohsu.edu/hosp-thinkfirst/tf\\_programs.shtml](http://www.ohsu.edu/hosp-thinkfirst/tf_programs.shtml) Programs for grades 1-3 and 4-6. Teacher pages included.

### **ThinkFirst for Kids Injury Prevention**

[http://www.thinkfirst.org/National Injury Prevention Program](http://www.thinkfirst.org/National%20Injury%20Prevention%20Program) – separate curricula and programs for kids and for teens.

### **The Otto Club – AAA**

<http://www.ottoclub.org/> Games and information about driving and safety. Can be extremely slow to run but it has good tips and games younger kids will like. (Includes teacher pages.)

### **Safe-A-Rooni™**

<http://www.safe-a-rooni.org/> Minnesota, North Dakota, etc. Safety Councils – Wonderfully engaging, fun cartooney site for younger kids to teach all aspects of safety.

### **Safety City**

<http://www.nhtsa.dot.gov/kids/safeschool/teachers/index.html> (NHTSA) National Highway Transportation Safety Admin. – Engaging lessons for teaching many aspects of safety. (Teacher’s pages included.)

### **Energy Uses in Transportation**

<http://www.eia.doe.gov/kids/consumption/transportation.html> Department of Energy’s site for kids. Cricket is the character that teaches them about energy’s relationship with transportation. Games, fun links, fun facts, etc. (Teacher’s pages included.)

### **Energy Quest**

<http://www.energyquest.ca.gov/> California Energy Commission’s award winning site – interactive and visually fun site for everyone. Topics include: Energy Story, Energy links, Weekly Energy News, Saving Energy, Alternative Fuel (Transportation), Alternative Fuel links, Science Projects, How It Works, Super Scientists, Art Gallery, Homework Help, Puzzles and Games. (Teacher’s pages included.)

### **Energy Education (Alternative Fuels/Vehicles)**

[http://www.eere.energy.gov/education/lesson\\_plans.html](http://www.eere.energy.gov/education/lesson_plans.html) U.S. Department of Energy, Energy Efficiency and Renewable Energy - Links to curricula, programs, science activities and competitions, student resources for writing reports, etc. These sites have just about everything and anything that will assist a teacher in covering any energy issue.

### **The Science of Energy**

[http://www.nsta.org/energy/National Science Teachers Assoc. “You Decide – Interactive Simulation”](http://www.nsta.org/energy/National%20Science%20Teachers%20Assoc.%20-%20You%20Decide%20-%20Interactive%20Simulation) – Focus is on driving speeds, opinions and values of stakeholders, etc. Students can try different speeds and see what the results are. (Teacher’s pages included.)

**Bike Safety**

<http://www.ou.edu/oupd/bikesafe.htm> University of Oklahoma Police Department, Police Notebook – All the bike safety rules in easy to understand language with appealing illustrations.

**Rad Rider**

<http://www.radrider.com/> Cool (not cute) site where cartoon character, Rad Rider, is involved in an adventure that is used as vehicle for teaching bicycling safety skills.

**The Great Green Web Game**

<http://www.ucsusa.org/game/thanks.html> Union of Concerned Scientists – Game questions based on the Union of Concerned Scientists’ book “The Consumers Guide to Effective Environmental Choices”. There is a little meter that shows how each choice effects air, water, climate and habitat. It is a web board game format.

**How Stuff Works**

<http://auto.howstuffworks.com/> Cool site for kids and adults about just what it says – How Stuff Works. It explains how hybrid cars work and everything else you would want to know about how a vehicle works, how air bags work, how jaws of life work, etc. etc. etc.

**Air, Water, Land – Coloring Book**

<http://www.tnrcc.state.tx.us/admin/topdoc/gi/270.pdf> Texas Natural Resources Conservation Commission – This coloring book covers all aspects of pollution. Although little kids would like to color this, they might need help reading the text. It touches on how vehicles affect air and water quality.

**Tiki the Penguin – One World.net Kids Channel**

<http://www.oneworld.net/article/search/?SectionIDOverride=7&SearchText=tiki+the+penguin> OneWorld.net Kids Channel – Tiki the Penguin teaches kids about sustainability, bio-diversity, the environment, etc. This link takes you to the page where all of the Tiki sites are linked.

**Center for Disease Control**

[http://www.cdc.gov/ncipc/pub-res/tbi\\_toolkit/patients/preventing.htm](http://www.cdc.gov/ncipc/pub-res/tbi_toolkit/patients/preventing.htm) How to prevent brain injuries. When to call a doctor. Signs and symptoms of brain injuries.

**National Bicycle Safety Network**

<http://www.cdc.gov/ncipc/bike/> Everything to do with bicycle safety. Pitched at adults.

**Child Passenger Safety**

<http://www.nhtsa.dot.gov/people/injury/childps/> (NHTSA) National Highway Transportation Safety Admin. – Everything you would ever want to know about car seats.

**Carpool Match NW**

[www.carpoolmatchnw.org/schools1.asp](http://www.carpoolmatchnw.org/schools1.asp) Matches you up with others who want to carpool in the Portland Area.

**Kids Walk to School**

[http://www.cdc.gov/nccdphp/dnpa/kidswalk/fact\\_sheet.htm](http://www.cdc.gov/nccdphp/dnpa/kidswalk/fact_sheet.htm) Center for Disease Control - This is the site for “Kids Walk to School” programs and issues. It is a “what-it-is and how-to-do” kind of site.

**Walking Bus**

<http://www.walkingbus.org/> This is the British version of America’s “Kids Walk to School” program. It is a “what-it-is and how-to-do” kind of site.

**Way to Go**

<http://www.waytogo.icbc.bc.ca/> Way to Go is a promoter of the International Walk to School Day. It is a British Columbia based program for schools to help encourage kids to walk to school. This includes traffic safety education.

**America Walks**

<http://www.americawalks.org/resources/toolbox/> America Walks, Toolbox for Pedestrian Advocates – tools to help people work to improve the walking accessibility and safety in their community. This is a Portland based national coalition of local advocacy groups.

**National Safety Council**

<http://www.nsc.org/ehc/kidscorn.htm> Pages designed to help kids learn about environmental safety and health issues.

**Alternatively Fueled Vehicles**

<http://www.nsc.org/ehc/mobile/alternat.htm> National Safety Council – electric vehicles, pros and cons.

**Car Talk**

<http://cartalk.cars.com/About/Eco/> Car Talk's Eco Area - or How You Can Save Mother Earth, Assuage Your Guilt, and Have Enough Money Left Over for a Few Extra Bags of Granola – lots of useful information

**Mobile Source Emissions**

<http://www.nsc.org/ehc/mse.htm> National Safety Council's Environmental Health Center – List of links regarding any issues involving the effect vehicles have on the quality of our air, water and life. Includes lists of what you can do, fact sheets, etc. etc. etc. Includes outreach and education on air quality, climate change and transportation – youth initiatives.

**Sustainability Portland**

<http://www.sustainableportland.org/> City of Portland, Office of Sustainable Development – This is an adult site but could help parents understand sustainability issues so they can talk to their kids about them.

**Aerial Photos –Zoom In**

<http://www.terraserver.microsoft.com/> Microsoft's aerial maps – zoom in to the exact location you want.

**Nike Go**

<http://www.nike.com/nikebiz/nikego/> This is Nike's effort to get kids off the couch and moving. It includes a lot of painful and disturbing facts about obesity as well as many informative links.

**Financial Fitness for Life**

<http://fffl.ncee.net/> Comprehensive economic and financial literacy program. This could be useful in teaching about the cost of transportation choices if one were to extrapolate. Created by the National Council on Economic Education.

**Institute for Global Ethics**

<http://www.globalethics.org/edu/default.html> Ethics educational materials to help teach how good people need to make tough choices about their environment.



*Growing A Healthy  
Community*

**Carlisle Area Health & Wellness Foundation**

274 Wilson Street  
Carlisle, PA 17013

717.960.9009 (phone)

717.960.9992 (fax)

[www.cahwf.org](http://www.cahwf.org)

**MISSION STATEMENT**

Carlisle Area Health & Wellness Foundation identifies and addresses health care needs and policies, promotes responsible health practices, and enhances access to and delivery of health services.