

Chapter One: Introduction



“Why not walk to school?”

Introduction

What is Safe Routes to School?

Safe Routes to School (SRTS) was implemented in August 2005 during the authorization of the current federal transportation legislation. The Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) devoted \$612 million for the SRTS program for the years 2005-2009. According to Public Law 109-59¹ Section 1404, the purposes of the program shall be – (1) to enable and encourage children, including those with disabilities, to walk and bicycle to school; (2) to make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and (3) to facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity of schools. The program is intended to increase safety and promote walking and bicycling to school for students in kindergarten through 8th grade.

The Federal Highway Administration (FHWA) recommends that SRTS efforts in the United States incorporate – directly or indirectly – five components, often referred to as the “5 E’s”.² They are as follows:

- Engineering – Creating operational and physical improvements to the infrastructure surrounding schools that reduce speeds and potential conflicts with motor vehicle traffic, and establish safer and fully accessible crossings, walkways, trails and bikeways.
- Education – Teaching children about the broad range of transportation choices, instructing them in important lifelong bicycling and walking safety skills, and launching driver safety campaigns in the vicinity of schools.
- Enforcement – Partnering with local law enforcement to ensure traffic laws are obeyed in the vicinity of schools (this includes enforcement of speeds, yielding to pedestrians in crossings, and proper walking and bicycling behavior), and initiating community enforcement such as crossing guard programs.
- Encouragement – Using events and activities to promote walking and bicycling.
- Evaluation – Monitoring and documenting outcomes and trends through the collection of data, including the collection of data before and after the intervention(s).

¹ Public Law 109-59

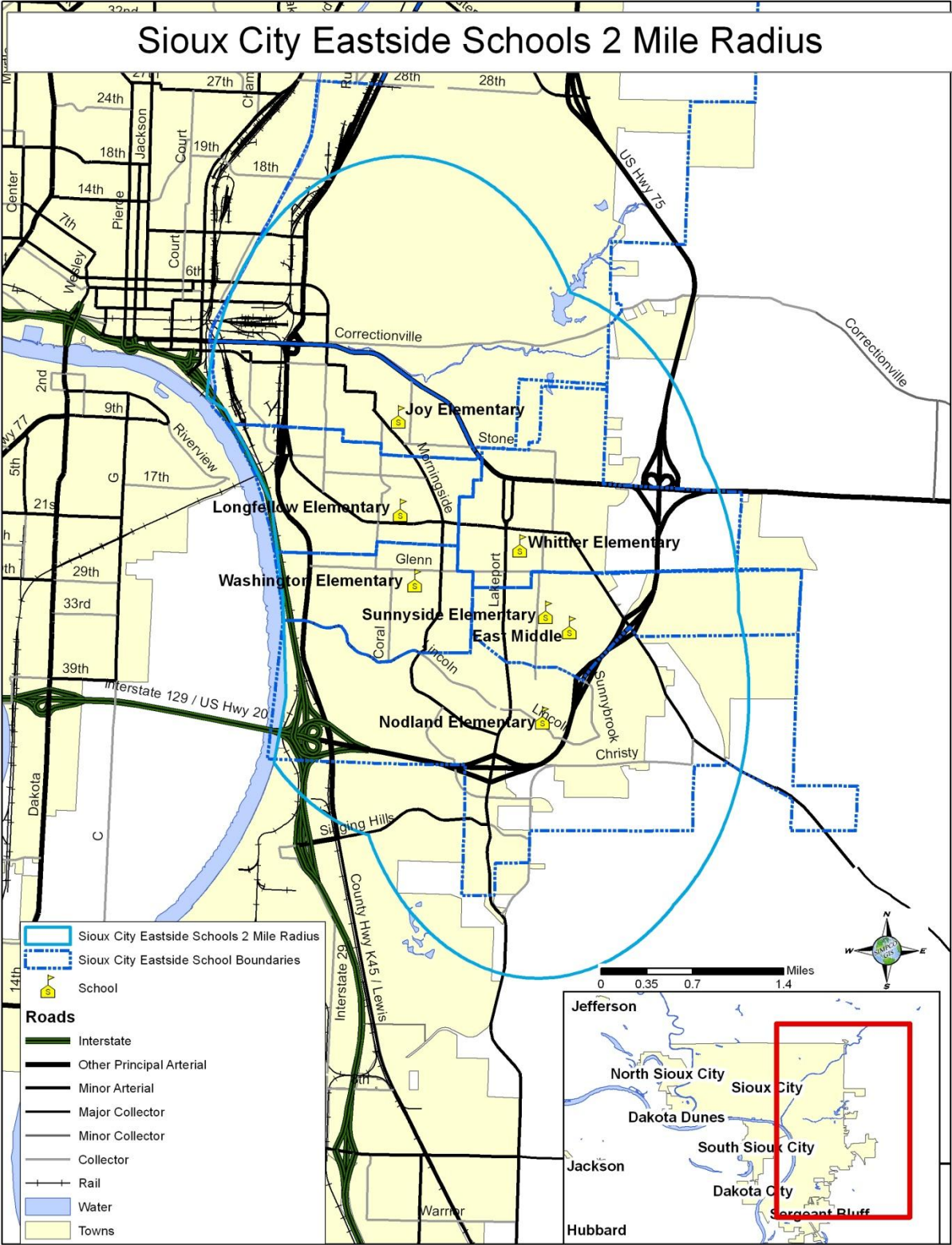
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=109_cong_public_laws&docid=f:publ059.109

² Safe Routes to School Final Policy <http://www.saferoutespartnership.org/media/file/SRTS-09-FinalPolicy.pdf>

Purpose of the Sioux City Community School District Eastside Schools Safe Routes to School Plan

The purpose of the Safe Routes to School Plan is to identify the deficiencies in the transportation system within a two mile radius of each school by surveying students and parents, involving the school administration, developing solutions that can be implemented in the future, and to continue educating and involving the public. The goal of this project is to evaluate the current transportation system and provide evaluation and recommendations to overcome the barriers of walking and bicycling to school whether they are infrastructure or non-infrastructure solutions. The Eastside School study encompasses the following schools: Joy Elementary; Nodland Elementary; Longfellow Elementary; Sunnyside Elementary; Washington Elementary; Whittier Elementary; and East Middle School. Map 1.1 represents the two mile study area around the schools.

Map 1.1: Study Area



National Trends

While this plan is identifying comprehensive measures to enable and encourage children to walk and bicycle to school, the Safe Routes to School program also identifies other benefits to walking and bicycling. Safe Routes to School, as outlined in the second and third objectives, is to encourage a healthy and active lifestyle and facilitate projects and activities that improve safety and better the environment.

Health

According to national data from the 2007-2008 National Health and Nutrition Examination Survey (NHANES), an estimated 16.9 percent of children and adolescents between the ages of two and 19 are obese. Table 1.1 shows the trends from the 1971-1974 NHANES to the current study while Figure 1.1 provides a graphical representation of the data.

Table 1.1: Obesity Prevalence

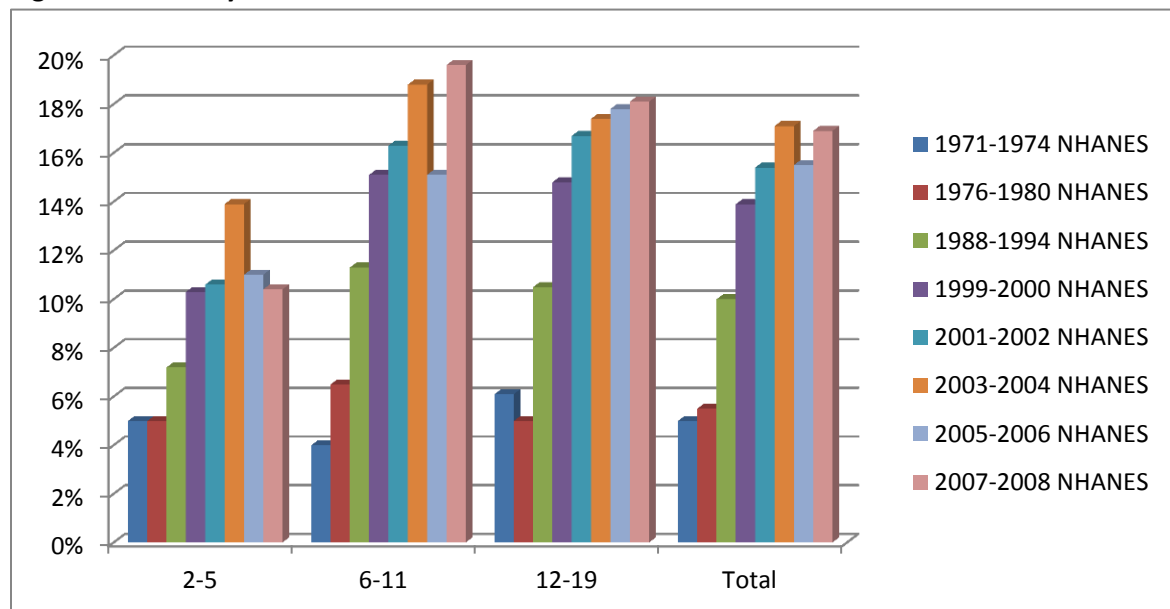
Age in Years*	NHANES 1971-1974	NHANES 1976-1980	NHANES 1988-1994	NHANES 1999-2000	NHANES 2001-2002	NHANES 2003-2004	NHANES 2005-2006	NHANES 2007-2008
2-5	5.0%	5.0%	7.2%	10.3%	10.6%	13.9%	11.0%	10.4%
6-11	4.0%	6.5%	11.3%	15.1%	16.3%	18.8%	15.1%	19.6%
12-19	6.1%	5.0%	10.5%	14.8%	16.7%	17.4%	17.8%	18.1%
Total	5.0%	5.5%	10.0%	13.9%	15.4%	17.1%	15.5%	16.9%

Source: National Health and Nutrition Examination Survey (NHANES) website accessed on 4/18/11

http://www.cdc.gov/nchs/data/hestat/obesity_child_07_08/obesity_child_07_08.pdf

*Excludes pregnant females

Figure 1.1: Obesity Prevalence



Obese children have a higher risk of physical diseases and disorders, such as: Type 2 diabetes; Metabolic syndrome; high cholesterol and high blood pressure; asthma and other breathing problems; sleep disorders, like sleep apnea; and early puberty or menstruation. Children also suffer from the psychosocial risks of low self-esteem, bullying, behavior and learning problems, and depression.

While genetic predisposition may play a part in childhood obesity, behavioral and environmental factors also contribute. Many children spend less time playing outdoors and participating in school activities. To help curb childhood obesity, programs are being developed to encourage children to be physically active for at least 60 minutes a day.

According to a Center for Disease Control and Prevention (CDC) study in 2005, fewer kids are biking and walking to school.³ In 1969, 42 percent of students walked or biked to school compared to 16 percent in 2001. The same study showed 87 percent of students in 1969 living within one mile of school walked each day compared to 63 percent who walked to school in 2001.

Safety

In 2009, the National Highway Traffic Safety Administration (NHTSA) published a study that stated there were a total of 4,092 pedestrian fatalities.⁴ Of those fatalities, 244 (six percent) were 14 or younger. An estimated 59,000 pedestrians were injured in 2009, while 13,000 (22 percent) 14 or younger.

In 2009, the NHTSA published that there were a total of 630 pedalcyclists (riders of bicycles – two-wheel non-motorized cycles – and other cycles powered solely by pedals) fatalities.⁵ Of those fatalities, 74 (12 percent) were 14 or younger. An estimated 51,000 pedalcyclists were injured in 2009, of which 8,000 (seven percent) were 14 or younger.

The safety and security of bicyclists and pedestrians is an important aspect of the planning process which should not be overlooked. Both the planning of the bicycle and pedestrian system and educating users of the bicycle and pedestrian system can help to ensure that a user is safe and secure. Safety and security of the bicycle and pedestrian system can be heightened by installing lighting, emergency call boxes, keeping trail or sidewalks clear from encroachment by any structure, vegetation or other obstructions, and providing buffers (trees, planting strips, parked cars) between moving vehicles and pedestrians where feasible.

³ CDC Kids Walk-to-School: Resource Materials http://www.cdc.gov/nccdphp/dnpa/kidswalk/then_and_now.htm

⁴ NHTSA Traffic Safety Facts 2009 Data Pedestrians: <http://www-nrd.nhtsa.dot.gov/Pubs/811394.pdf>

⁵ NHTSA Traffic Safety Facts 2009 Data Bicyclists and Other Cyclists:
<http://www-nrd.nhtsa.dot.gov/Pubs/811386.pdf>

Users of the bicycle and pedestrian system should also be educated on safety and security issues. This can be achieved through a public service announcement, outreach programs, and/or educational opportunities. The following guidelines are safety and security suggestions bicyclists and pedestrians can implement to increase safety and security of the bicycle and pedestrian system:

- Obey traffic signs and laws;
- Pass on the left;
- Respect the rights of property owners;
- Travel with someone;
- Watch out for other pedestrians/bicyclists;
- Listen for cars and other trail users;
- Bicyclists should always wear a helmet;
- Equip bicycles with headlights, taillights, and reflectors; and
- Wear bright colored clothing and reflectors.



The design of the bicycle and pedestrian system, in addition to the education of bicyclists and pedestrians, can help ensure that the bicycle and pedestrian system is safe and secure for all users.

Environment

The Environmental Protection Agency (EPA) notes that as much as 95 percent of carbon monoxide in a typical urban area comes from mobile sources.⁶ Children are vulnerable to air pollution since they inhale more air per pound of body weight compared to adults. The effects of carbon monoxide include impairments to exercise capacity, visual perception, manual dexterity, learning functions, and the ability to perform complex tasks. Elevated ozone levels can perpetuate choking, coughing, stinging eyes, damages to lung tissue, aggravates respiratory disease, and leaves people at risk for respiratory infections.

Since parents driving their children to school accounts for 20-25 percent of morning traffic, vehicles idling around the schools during drop-off and pick-up time could potentially help to create an environment of toxic air pollutants around the school. This scenario could create an unsafe setting for those children that are actively participating in walking and bicycling to school.

Reducing the amount of vehicles around the school by encouraging more students to walk and bike to school not only improves the child's physical health but can help improve the air quality around the school.

⁶ EPA: Carbon Monoxide <http://www.epa.gov/oms/inventory/overview/pollutants/carbonmon.htm>

Vision for the Sioux City Eastside Schools Safe Routes to School Plan

The development of the Sioux City Eastside Schools Safe Routes to School Plan is significant in providing overall goals for the community to achieve a successful Safe Routes to School program. These goals are as follows:

- Create a safe transportation network through enhancements to existing infrastructure and constructing logical connections;
- Increase parent's comfort letting children walk or bike to school;
- Initiate traffic control measures around schools;
- Educate parents, students and the community-at-large on traffic safety, bicycle and pedestrian safety, and living a healthy lifestyle; and
- Encourage children to walk or bike to school by creating a safe environment.

The objective of the Safe Routes to School Plan is for the Sioux City Eastside Schools to use this plan as a guiding document in the development of Safe Routes to School projects within each school, district-wide and within the community.