

SAFE ROUTES TO SCHOOL



City of Pine Bluff
200 E. 8th Avenue
Pine Bluff, AR

INTRODUCTION

ABOUT THE CITY OF PINE BLUFF

The City of Pine Bluff is a small urban city located in the southeastern quarter of the State. Known as the Gateway to Southeast Arkansas, Pine Bluff is located on the escarpment between the gently rolling coastal plain to the west, the flat alluvial plain to the east, and the dominance of riverside-sculptured features of the Arkansas River on the north. This setting has provided Pine Bluff with a diversity of environmental resources, economic base, and social characteristics, and has been the key determinant in the pattern of growth and development of the City and surrounding area.

The rich alluvial plain gave the area its first economic footing, that of agriculture (principally cotton). Around this base developed many of the early social characteristics of the area, which in large part, still remain today. With the development of the City, industries associated with timber, paper products, and other wood products also developed in response to the abundance of land to the west that could support stands of managed pine. This economically inclined the area toward split natural land resources, agricultural and forestry.

Until World War II, the regional economy continued to be based almost exclusively on agriculture. With the war, the Pine Bluff Arsenal was located northwest of Pine Bluff, and an aviation training facility was established at Grider Field. Together, these facilities provided jobs for 3,500 to 3,700 local residents. Further expanding the population of the City, in the mid-1950's the St. Louis-Southwestern Railroad built its gravity yards in Pine Bluff and transferred several employees from Tyler, Texas. Also during this period, a state-operated vocational-technical school and a regional hospital were built in the city to serve Jefferson County and adjacent counties.

In the 1960's, the Pine Bluff-Jefferson County Port Authority was created in anticipation of the Arkansas River becoming a major inland water transportation corridor into Oklahoma. With the McClellan-Kerr Arkansas River Navigation Project, which made the river navigable from Oklahoma to the Mississippi River, the Arkansas River became a major transportation corridor in the county and has attracted new industries to the Port of Pine Bluff and the Jefferson Industrial Park.

Reaching a population high of over 57,000 in 1970, Pine Bluff was the fourth largest City in Arkansas. Since that time, however, the population of the City has been slowly declining to its 2010 population of 49,083, an experience similar to that of other cities in the Delta region of the United States. Pine Bluff, though, is fighting back. Its residents determined that they must take it upon themselves to improve the City to attract both new residents and new industry. To that end, in 2011, Pine Bluff approved a ballot issue for a one-cent sales tax to finance a number of city projects including street improvements,

increased police protection, new and remodeled fire stations and new rolling stock, new park facilities, and an improved animal shelter.

As a part of this re-growth effort, the City has a number of plans in the works including developing a multi-modal complex in the downtown area, preparation of a new streetscape-economic redevelopment plan for the central business district, development of a trails system connecting the University Park neighborhood with downtown Pine Bluff, developing a Civil War/heritage trail throughout the City, upgrading youth baseball fields, constructing a new splash park at Lake Saracen, and now creating a Safe Routes to School plan to promote a healthy lifestyle for our children.

SAFE ROUTES TO SCHOOL (SRTS) BACKGROUND

The term “Safe Routes to School” was first used in Denmark in the late 1970s as part of an initiative to reduce the number of children killed while walking and bicycling to school. Denmark had Europe’s highest child pedestrian accident rate at that time, and through implementation of the first Safe Routes to School program, planners identified specific road dangers along with other measures that could be addressed to reduce the number of children killed or injured while walking and bicycling to school. Since 1970, the child pedestrian crash rate in Denmark decreased by 80 %.

In addition to the safety factors SRTS can bring to the table, research indicated that starting an active lifestyle at an early age is crucial for children. By providing the necessary facilities, education programs, and encouragement for students to walk and bicycle to school, local communities, parents, and educators can help combat the upward trend of childhood obesity and help to develop active, healthy, independent adults.

The idea spread internationally and programs started throughout Europe, Australia, New Zealand, and Canada. With this information in hand, in 1998, the United States Congress funded two pilot SRTS programs through the National Highway Traffic Safety Administration (NHTSA). The NHTSA provided \$50,000 each to Marin County, California and Arlington, Massachusetts to start SRTS programs. Recognizing the value and success of these “grass-roots” programs at the local level throughout the country, the U.S. Congress in 2005 authorized legislation that would provide federal funding to communities to create, implement, and administer Safe Routes to School Programs. These Federal funds can be used for a variety of projects, including infrastructure, enforcement, educational programs, and more within two miles of an elementary or middle school (grades K through 8).

The three primary purposes of the national SRTS program include:

- To enable and encourage children, including those with disabilities, to walk and bicycle to school.
- To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy, active lifestyle and community from an early age.

- 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.

There are multiple benefits derived from implementing a SRTS program:

- **Health**

According to a 2008 National Health and Nutritional Examination Survey, in less than 25 years, the percentage of children ages 6 to 11 considered overweight has tripled from 6.5 percent to 19.6 percent. Also, the number of overweight children aged 12 to 19 has more than tripled in that time, increasing from 5.0 to 18.1 percent. Even among children ages 2 to 5, the rate of severely overweight children has doubled from 5 percent to 10.4 percent in the last 30 years.

Obese children are at a higher risk of the effects of Type II diabetes, aggravated asthma, sleep apnea, and decreased physical functioning. Many of these children experience social stigmas and discrimination as part of their health condition. This leads to other issues including low self-esteem and depression. Behaviors ingrained during childhood often translate into lifelong habits leaving obese children twice as likely to become obese adults. Obese adults are at a greater risk of premature death and other chronic diseases.

Additional studies have indicated that most children are not getting the required amount of daily exercise further compounding the obesity epidemic. Experts recommend that children get at least 60 minutes of physical activity on most, if not every day of the week. Among children ages 9 to 13, 61.5 percent do not engage in organized physical activity during non-school hours and 22.6 percent do not participate in any free-time physical activity at all. As age increases, participation in physical activity decreases. Engaging in a Safe Routes to School program will assist these children in becoming more active and staying more active.

- **Safety**

According to the National Highway Traffic Safety Administration (NHTSA), over the past 25 years, the number of miles traveled on highways has doubled from 1.5 billion to 3 billion. Part of this increase is from parents dropping off and picking their children up from school. As vehicular traffic increases, parents become more convinced that it is unsafe for their children to walk or bicycle to school exacerbating the problem. As more parents drive their children to school, the amount of traffic increases justifying their perception.

According to 2006 figures from the National Center for Health, motor vehicle crashes were the leading cause of death for children aged 3 to 14. Not all of the crashes were vehicle to vehicle crashes, some included bicyclists or pedestrians struck by vehicles. According to the Fatality Analysis Reporting System Encyclopedia kept by the

NHTSA, in 2008 a total of 4,378 pedestrians and 716 bicyclists were reported killed in vehicle crashes in the United States. These deaths accounted for 13.7 percent of all the motor vehicle deaths nationwide that year.

Implementation of a Safe Routes to School plan can reduce the incidences of vehicle crashes with youthful pedestrians and bicycles through development of safer streets, education, and enforcement.

- **Environment**

According to the Environmental Protection Agency (EPA), transportation is the fastest growing source of greenhouse gas emissions in the United States. Greenhouse gases are components of the atmosphere that contribute to the greenhouse effect that warms the planet. In 2008, the transportation sector accounted for 27 percent of total U.S. greenhouse emissions. School drop-offs and pick-ups as well as outdated and inefficient bus fleets contribute to an increase in transportation and the increase in greenhouse gas emissions. The EPA's "Clean School Bus USA" program identified idling school buses as major contributors to air pollution outside and inside of schools. Idling school bus engines burn approximately a half gallon of fuel per hour. The idling is also mirrored by parents as they wait to pick up their children after school. These emissions enter the school buildings through air intakes, doors, and windows.

Children are particularly vulnerable to emissions pollution because they breathe faster than adults, inhaling more air per pound of body weight. Exposure to these emissions is associated with an increase in the frequency of childhood illnesses including asthma, the most common chronic illness in children.

Enabling children and youths to participate in the Safe Routes to Schools program can reduce the number of vehicle trips to and from schools, resulting in lowering greenhouse gas emissions.

- **Land Use Patterns**

Traditionally, schools were located at the center of a community. The surrounding residential areas contributed to high rates of walking or bicycling to school. As communities grew outward into suburban and rural areas, school districts grew, new districts were formed in outlying areas, and new schools were built. This allowed for the accommodation of expanding populations, but the newer schools were not well connected to the core community with sidewalks and the number of children that were able to safely walk or bicycle to school was reduced. Further compounding the problem was the fact that the additional schools and their location near the periphery of the city led to more buses and private vehicles traveling to these school facilities. Not only have schools built in outlying areas created increased automobile use, the dispersal of new housing away from traditional neighborhoods has created greater dependency on the automobile to bring children in from these outlying areas. This

congestion has made it increasingly difficult for children who do not live close to a school to be able to walk or bicycle. The congestion also reinforces the parent's fear that it is not safe for their children to walk or bicycle to school.

While the Safe Routes to Schools program won't by itself stop urban sprawl, it can make existing neighborhoods more attractive for infill development. It can also provide the impetus for cities to require street and bicycle improvements in new developments that make walking and riding bicycles safer and more prevalent.

This SRTS plan is a document that outlines a plan for making pedestrian and bicycle travel to and from school more sustainable and safe, and is a major step in preparing Pine Bluff to make important changes in its travel environment that will lead to creating a more livable community.

INVENTORY OF K – 8TH GRADE SCHOOLS IN PINE BLUFF

SCHOOL SNAPSHOTS

The following are brief summaries of the kindergarten through 8th grade schools that are involved in and will be affected by the Pine Bluff Safe Routes to School plan.

<i>Jack Robey Junior High School</i>	4101 South Olive
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Pine Bluff School District

Grades: 8 and 9

Number of Students: 685

Grade 8: 343

Grade 9: 342

79% of students at Jack Robey are eligible for free or reduced price school lunch



<i>Belair Middle School</i>	1301 Commerce Road
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Pine Bluff School District

Grades: 6 and 7

Number of Students: 338

Grade 6: 173

Grade 7: 165

87% of students at Belair are eligible for free or reduced price school lunch



Broadmoor Elementary School

1800 East 11th Avenue

Pine Bluff School District

Grades: Kindergarten through 5

Number of Students: 393

Kindergarten: 59

Grade 1: 62

Grade 2: 57

Grade 3: 77

Grade 4: 68

Grade 5: 70

9% of students at Broadmoor are eligible for free or reduced price school lunch



Greenville Elementary School

2501 West 10th Avenue

Pine Bluff School District

Grades: Kindergarten through 5

Number of Students: 325

Kindergarten: 60

Grade 1: 48

Grade 2: 51

Grade 3: 55

Grade 4: 60

Grade 5: 51

98% of students at Greenville are eligible for free or reduced price school lunch



Oak Park Elementary School

3010 South Orange Street

Pine Bluff School District

Grades: Kindergarten through 5

Number of Students: 413

Kindergarten: 80

Grade 1: 76

Grade 2: 69

Grade 3: 59

Grade 4: 71

Grade 5: 58

94% of students at Oak Park are eligible for free or reduced price school lunch



34th Avenue Elementary School

801 East 34th Avenue

Pine Bluff School District

Grades: Kindergarten through 5

Number of Students: 398

Kindergarten: 60

Grade 1: 58

Grade 2: 62

Grade 3: 70

Grade 4: 87

Grade 5: 61

91% of students at 34th Avenue are eligible for free or reduced price school lunch



Pine Bluff School District

Grades: Kindergarten through 5

Number of Students: 353

Kindergarten: 63

Grade 1: 53

Grade 2: 54

Grade 3: 64

Grade 4: 66

Grade 5: 53

86% of students at Southwood are eligible for free or reduced price school lunch



Pine Bluff School District

Grades: 6 and 7

Number of Students: 372

Grade 6: 195

Grade 7: 177

88% of students at Southeast are eligible for free or reduced price school lunch



W.T. Cheney Elementary School

2206 Ridgway Road

Pine Bluff School District

Grades: Kindergarten through 5

Number of Students: 366

Kindergarten: 60

Grade 1: 59

Grade 2: 52

Grade 3: 69

Grade 4: 68

Grade 5: 58

77% of students at W.T. Cheney are eligible for free or reduced price school lunch



Matthews Elementary School

4501 Dollarway Road

Dollarway School District

Grades: Kindergarten and 1

Number of Students: 372

Kindergarten: 113

Grade 1: 88

98% of students at Matthews are eligible for free or reduced price school lunch



Robert F. Morehead Middle School

2602 Fluker Avenue

Dollarway School District

Grades: 6, 7, and 8

Number of Students: 336

Grade 6: 101

Grade 7: 124

Grade 8: 111

83% of students at Robert F. Morehead are eligible for free or reduced price school lunch



Townsend Park Elementary School

2601 Fluker Avenue

Dollarway School District

Grades: 2 through 5

Number of Students: 354

Grade 2: 101

Grade 3: 85

Grade 4: 85

Grade 5: 83

95% of students at Townsend Park are eligible for free or reduced price school lunch



L.L. Owen Elementary School

3605 Oakwood Road

Watson Chapel School District

Grades: 2 and 3

Number of Students: 389

Grade 2: 180

Grade 3: 209

76% of students at L.L. Owen are eligible for free or reduced price school lunch



Watson Chapel Junior High School

3900 Camden Road

Watson Chapel School District

Grades: 7, 8, and 9

Number of Students: 794

Grade 7: 256

Grade 8: 275

Grade 9: 273

72% of students at Watson Chapel Junior High are eligible for free or reduced price school lunch



Coleman Intermediate School

4600 West 13th Avenue

Watson Chapel School District

Grades: 4, 5, and 6

Number of Students: 703

Grade 4: 204

Grade 5: 242

Grade 6: 257

75% of students at Coleman are eligible for free or reduced price school lunch



Edgewood Elementary School

4100 West 32nd Avenue

Watson Chapel School District

Grades: Kindergarten and 1

Number of Students: 441

Kindergarten: 215

Grade 1: 226

80% of students at Edgewood are eligible for free or reduced price school lunch



SIDEWALKS IN SCHOOL VICINITY

The following paragraphs present a brief synopsis of the sidewalk system, if any, in the immediate vicinity of each of the schools in the City that provide kindergarten through 8th grade classes. Sidewalk inventory maps are contained in Appendix A.

- **Jack Robey Junior High School - 4101 South Olive Street:** The school has sidewalks on a part of its property along 38th Avenue and Main Street. There is not an extensive network of local streets in the vicinity of the school; however, the existing streets all lack sidewalks, except on Olive Street and Main Street located north of the school.
- **Southeast Junior High School - 20th Avenue and Ohio Street:** The school has a sidewalk running along Ohio Street from Harding Avenue to 38th Avenue. A sidewalk should be installed on Ohio Street between Harding Avenue and 8th Avenue. Pedestrian crossing improvements should be installed at the intersection of Harding Avenue and Ohio Street. There is not an extensive network of local streets in the vicinity of the school; however, the existing streets all lack sidewalks.
- **Belair Elementary School - 1301 Commerce Road:** The school has a sidewalk on its property adjacent to Commerce road; the only portion missing is along Commerce Road between the school driveway entrances. All the streets in the vicinity have sidewalks.
- **Broadmoor Elementary School - 1800 East 11th Avenue:** This school is located in the Broadmoor Subdivision which has an extensive sidewalk network. The only place where no sidewalks are located is on school property adjacent to the public streets.
- **Greenville Elementary School - 2501 West 10th Avenue:** The school is located in a neighborhood that does not have any sidewalks, but sidewalks are located on the streets adjacent to the school - on Fir Street between 8th and 13th Avenues and on 10th Avenue from Fir Street to Hazel Street.
- **Oak Park Elementary School - 3010 South Orange Street:** There are no sidewalks on the school property adjacent to the streets, nor are there any sidewalks on any of the streets within the adjoining neighborhoods. Most of the streets in the neighborhood are 18 feet or less in pavement and shoulders with open ditches.
- **34th Avenue Elementary School - 34th Avenue and Missouri Street:** The school has a sidewalk on Missouri Street the length of the school property. There is also a sidewalk on the south side of 34th Avenue between the school and Main Street.
- **Southwood Elementary School – 4200 Fir Street:** Southwood School has a sidewalk on the northwest side of the property. There are no other sidewalks in the area with the exception of a sidewalk on 42nd Avenue that begins two or three blocks

from the school and continues to Hazel Street. There is only one crosswalk on the streets adjacent to the school, and it is located on Fir Street south of the school. There is not one on the north side or the east side of the school. The streets in the neighborhood are curbed, but there are no sidewalks serving the neighborhood with the exception of the one on 42nd. The two streets serving the area become very congested at pick-up and drop-off times.

- **W. T. Cheney Elementary School – 2206 Ridgway:** There are no sidewalks on Ridgway Road, which is a minor arterial street that carries a lot of residential and cut-through traffic as well as school and church traffic. There is not a residential subdivision adjacent to the school on any side; however, there are several subdivisions on Ridgway Road in the general vicinity. None of these subdivisions, which were developed in the late 1970's and after, contain sidewalks. There is a crosswalk near the school at the intersection of Ridgway and Hazel Streets, although there are no sidewalks to connect it to.
- **Robert F. Morehead Middle School/Townsend Elementary School – 2602/2601 Fluker Avenue:** Fluker Avenue is a major east-west transportation link. These two schools are located on the opposite sides of the street from each other. The students are required to cross the street for various activities. There is a school crossing flasher sign at the pedestrian crossing. Sidewalks are located on both sides of the school property adjacent to the street. The sidewalks are located from the Townsend Park main entrance road to U. S. Highway 79, and on the south side of Fluker Avenue. The streets in the neighborhood east of the school do not have curb and gutter or sidewalks. A traffic engineering study should be conducted to determine if the existing school street crossing is located properly and meets safety standards for pedestrian crossings.
- **James Matthews Elementary School – 4501 Dollarway Road:** There are sidewalks on both sides of Dollarway Road. There is a sidewalk located across from the school on Cottonwood Street. This sidewalk is substandard in width and in need of repair. It should be extended north to the Cottonwood Housing Development.
- **Watson Chapel Junior High School - 3900 Camden Road:** There are no sidewalks on the school property adjacent to the two highways or on any of the streets within the neighborhood. Sidewalks should be installed along State Highway 54 from the school site to East Lake Drive and along Oakwood Road from the school to near the U. S. Highway 65 overpass. This should definitely be included future street widening plans. A traffic engineering study should be conducted to determine what other pedestrian improvements need to be implemented to meet safety standards for pedestrians.
- **Coleman Elementary School - 4600 West 13th Avenue:** The school site has facilities on both the north and south sides of 13th Avenue and on the east and west side of Redbud Street. Redbud Street is barricaded during school hours. 13th Avenue is a major east-west transportation link. The students are required to cross 13th

Avenue for various activities. There is a school crossing flasher sign at the pedestrian crossing. Sidewalks are located on both sides of the school property adjacent to 13th Avenue and continue east to the intersection of Blake Street. The streets within the neighborhood are narrow and have no curb, gutter, sidewalks, or shoulders.

- **Edgewood Elementary School - 4100 West 32nd Avenue:** There are no sidewalks on the school property adjacent to the streets. There is a pedestrian walkway connecting Taylor Drive with the school. A sidewalk should be installed in front of the school adjacent to 32nd Avenue.
- **L.L. Owen Elementary School - 3605 Oakwood Road:** There are no sidewalks along Oakwood Road, which is the only street adjacent to school property. The recommendations are similar to those for Watson Chapel Junior High School, since the two schools are about a block from each other. Sidewalks need to be constructed on Arkansas Highway 54 and on Oakwood from Highway 54 to a point near the U. S. Highway overpass.

DEVELOPMENT OF THE SAFE ROUTES TO SCHOOL PLAN

STEERING COMMITTEE

A Steering Committee comprised of a various citizens and groups whose interests, concerns, and local knowledge are invaluable to implementing a plan based on needs of the community was created. It is necessary to have City administrators (Mayor's office, City Council members) on board to help create city policy and to recommend that the City provide matching funds or budget for SRTS improvements. It is also important to have school representative in order to determine the status quo and to gain their input on what SRTS activities they feel should be incorporated into their curriculum. Parental input is imperative since they can relate to many of the deterrents to walking and bicycling to school and on the types of activities the parents themselves will support and help implement. Including city departments is a must, as they are the ones who will do the plan preparation, grant writing, and often the construction activities. Involving other important organizations in the community is also important, because many times, they will be the ones promoting the plan, incorporating the plan into their own programs, and paying for facets of the plan.

The Steering Committee members of the City of Pine Bluff Safe Routes to School plan are:

- Pine Bluff Mayor's Office Personnel
- Frank Anthony, Dollarway Schools Superintendent
- Barbara Hubanks, Teacher
- Thelma Walker, Pine Bluff Alderwoman
- Pine Bluff Police Chief
- J.T. Golden, Pine Bluff Street Department
- Lori Walker, Pine Bluff Economic and Community Development Department
- Janet Ross, Watson Chapel School District Parent
- Jerre George, Southeast Arkansas Regional Planning Commission
- Alex Koenig, Southeast Arkansas Regional Planning Commission
- Angela Parker, Pine Bluff Parks and Recreation Department
- Trudy Redus, Saracen Landing Coordinator
- Joy Blankenship, Pine Bluff Downtown Development
- Lakishia Hill, Pine Bluff School District Parent
- Ernestine Roberts, Townsend Park Elementary School Principle
- Yolanda Prim, Robert F. Morehead Middle School Principle

KEY ISSUES

Key issues that need to be addressed to create a successful SRTS program were identified. The two most pressing issues are the general reluctance of children and/or their parents to walk or bicycle to school and the lack of street improvements to provide for a comfort level for children walking and bicycling to school. In many respects, these two issues are like the chicken and the egg: would children be walking or bicycling to school if they were provided with a sidewalk system and streets with bike routes/lanes? Or are they not walking or bicycling to school because they currently have no reason to, i.e., they don't understand the benefits or they need incentives? It was determined that these two issues were so intertwined that providing one and not the other would not promote children walking and bicycling to school.

Providing a sidewalk grid between neighborhoods and the school facilities is one of the best ways to begin a SRTS plan, as until there is a "safe" route to school to promote, many of the SRTS activities can only be implemented on the *promise* of a safe route. Implementing the first sidewalk grid by filling in the gaps between existing sidewalks is one of the easier ways to showcase the new "safe" route. This and the other issues that it was determined must be addressed in implementing an SRTS plan are briefly described below:

- There is a lack of sidewalks or gaps in sidewalk coverage. Older areas of the City that were developed when the land was inside the city limits years ago have a fairly good sidewalk network. In addition, some of the subdivisions that were outside the City limits but developed under city subdivision regulations prior to the late 1970's were also developed with sidewalks. However, most areas annexed and subdivisions developed after 1980 do not have sidewalks. Occasionally, the City has constructed a sidewalk near a school facility, but in many cases, these sidewalks have no connectivity because of the lack of sidewalks in the area. Inventory maps showing all sidewalks in the City of Pine Bluff are located in Appendix A. It was felt that filling in the gap between existing sidewalks should be one of the first activities accomplished under the plan in order to present a "brick and mortar" result of the SRTS plan.
- Existing sidewalks are in a state of disrepair. When there is a sidewalk network within a neighborhood, much if it is in disrepair. This is particularly true in the older part of the City and in sparsely developed or low income areas with sidewalks. In many instances, due to erosion and lack of upkeep, dirt has covered the sidewalks and they are unusable. In other instances, segments of the sidewalk are cracked and uneven, and a dangerous to walkers and youthful bikers alike. While the city code requires property owners adjacent to a sidewalk to keep the sidewalks in good order, this has never been enforced and would be difficult to begin enforcing because of that.
- There is a lack of bike lanes and bike routes. There are no designated bike lanes in the City. There used to be a couple of streets with on-street bike lane markings, but

they have not been kept up. They were also being used as parking lanes, which makes it difficult for them to be used by bicyclists. Many of the streets in the City that are developed are narrow with open ditches, making development of bike lanes difficult, plus many also have limited right-of-way further compounding the problem. While older cyclists can and should bike on the road and off-street bicycle facilities, sidewalks are recognized as the safest travel lane for young school-aged cyclists. As such, the lack of sidewalk infrastructure within the City is a particular hindrance to students who might otherwise choose to bike to school. Appendix B contains a map showing all streets in the city that have curbs. These streets may present possibilities to develop bike lanes, shared roadways, or easier sidewalk installation.

- There is a general reluctance of children as well as parents to walk/bicycle to school. Currently, most children do not have to walk or bicycle to school. School bus routes cover the City. Only one of the three school districts requires alternative transportation if the child lives within one mile of the school, and often they are allowed to take the bus even then. Furthermore, many parents work, and since schools allow children to be dropped off as early as 7:30 a.m., the parents find it convenient to drop off their child at school. The lack of adequate street improvements (sidewalks, bike lanes and routes, etc) along with the lack of child education and crime and safety issues also add to the reluctance to walk/bicycle to school.
- There is a limited police force for patrolling school neighborhoods. While the Pine Bluff Police Department does a good job of making its presence known around a school site and often provides assistance at major street crossings, there are times when police patrols must leave the school site and attend elsewhere in the community. In addition, there simply are not enough patrol officers – or funding to hire them – to provide the needed monitoring.
- Presence of crime and safety issues in the community is a major hindrance in walking and bicycling to school. Crime and safety issues are ranked very highly as deterrents for walking or biking to school. Personal safety is an issue that must be addressed to encourage students and parents to feel comfortable walking or biking to school. Crime statistics in the City present both real and perceived threats to children and must be dealt with in order to have a successful SRTS program.
- There is a lack of knowledge on bicycling etiquette. Bicycle riding presents more safety issues than walking. Bicyclists travel faster, have more mechanical parts to negotiate, and require balance for operation. Encouraging students to bike to school then presents more safety considerations than encouraging students to walk to school. Additionally, students generally have less experience biking than adults. Extra steps have to be taken both to prepare students to bike and to create an environment that is safer for them to bike in. The lack of opportunities for students to learn about and practice bike safety issues is a major hindrance to gaining youthful bike riders. Busy intersections are a particular concern for students and parents on bicycles.

- There is a lack of pedestrian education. There is currently no formal education on pedestrian safety at the schools or in the community. There are occasional special presentations on pedestrian and bicycle safety, but these programs are offered infrequently and do not have an overall impact on the conditions.
- Crossing the street is dangerous near school sites. While there are crosswalks near the school sites, many are not bright enough or distinct enough, or they may need to be relocated for safety or visibility purposes. In addition, when parents are lined up for pick-up and drop-off, the lack of designated walking routes allows children to run in between vehicles where they are hard to see. There may or may not be crossing guards, depending on the perception of the hazard of the intersection.
- Motorist/automobile education is needed. There is currently no program or campaign aimed at raising motorist awareness of other users (i.e. pedestrians or bicyclists). Conflicts often arise when all of these users are sharing the same system. Two of the biggest complaints pedestrians and bicyclists tell the police department regarding motor vehicle operation are speeding and failure to yield at intersections.
- Drop-off/pick-up zones are too congested. Before schools start and after they are dismissed, a line of family vehicles builds up along the streets adjacent to the schools. The line of idling vehicles may remain for 15 to 20 minutes. During this idling period, fuel efficiency is almost zero and vehicle emissions are increased in the immediate vicinity of schools. The increase of traffic congestion and vehicle emissions along these streets during drop-off/pick-up times necessitates a creative solution.
- There is a lack of enforcement of local regulations. Zoning and subdivision ordinances and other city codes already provide for numerous street and sidewalk improvements, and also provide an avenue to enact new regulations for the benefit of pedestrians and bicyclists. However, many of these codes have not been enforced in many years (repair of sidewalks), and some regulations are routinely waived in order to facilitate new development (installation of sidewalks).
- Poor weather conditions frequently interrupt pedestrians and bicyclists. It goes without saying that with any community, particularly in Arkansas, the weather plays a large part in whether or not students walk or bicycle to school. However, as the saying goes, if you don't like the weather in Arkansas, must wait a minute, and rain in the morning could become sunny and mild in the afternoon. Currently, there are no incentives to get students to walk or bicycle to school when the weather is less than optimum.

THE FIVE “E’S”

In order to develop a successful SRTS program and act on the issues identified as being major deterrents to a successful program, the “5 E’s” - Engineering, Enforcement, Education, Encouragement, and Evaluation - must be addressed. As is apparent from the previous listing and explanation of key issues confronting the City when implementing the SRTS program, all of the “5 E’s” are necessary in order to provide safe pedestrian and bicycle facilities and to encourage the community and students to have healthier lifestyles. Programs can be established to educate students, parents, and the larger community of the benefits of walking and bicycling to school and provide safety tips when they are participating in these activities. The following pages summarize the “5 E’s” and set forth a number of activities and provide examples for each topic that can be implemented when putting the Safe Routes to School plan into action.

EDUCATION

Education for students, parents, and the community is essential when implementing a SRTS program. Students walking or biking to school need to know how to safely cross roadways and what routes are the best ones for them to take to and from school. Effective education on bicycle safety is extremely important for students. Community events can be fun and teach students and parents proper bicycling safety tips. Adults learn best when they feel the topic is relevant to them. Parents should be provided with information how to create and promote safe walking and bicycling behaviors and environments for their children, and community members should be reminded of the importance of yielding to pedestrians, and slowing down in and near school zones. Having billboards or public service announcements regarding pedestrian/bicycle safety issues is another way a SRTS task force can make the community aware of pedestrian and bicyclist issues in and around school zones.

Education Programs

Children benefit from a combination of educational methods such as classroom curriculum, assembly activities, and hands-on skill building. Some of the pedestrian and bicyclist safety skills that children need require practical experience. Hands-on activities such as simulated street crossings and bicycle handling drills provide children with the opportunity to watch and apply safety skills. The following activities are ways that walking and biking education can be made fun for students and incorporate teachers and other community members into the learning process.

- **Lessons integrated into classroom subjects (Grades K-6).** Safety education can be integrated into traditional classroom subjects to meet education standards in many ways. Examples include:

Physical Education (PE): Safe walking, street crossing and cycling lessons combined with outdoor practice on the streets children use around their school and neighborhood is highly recommended. One possibility is to work with district PE teachers that have already developed this type of training and make it a district-wide program, promoting its use by all elementary and middle school PE teachers, every year. Other popular activities promote physical conditioning such as learning walking warm-ups and stretches, doing progressively longer walks in class to prepare for Walk to School Day, or having schools sponsor marathon clubs before or after schools.

Art, Computer Class: Students can create posters promoting Walk to School Day and safe driving and walking messages.

Geography: Students can survey and create maps of walking routes to school and can track students' walking and bicycling mileage and plot it on a map.

Health: Learning about the cardiovascular system, and why activity is good for health are in-class lessons that teach the benefits of walking and bicycling to school. Students can use pedometers to measure steps, or simply measure walking time accumulated by students.

Mathematics: Students can keep logs of walking time or steps; calculate speeds and distances; individual and group averages; trends; and statistical analyses.

Physics: Students can study the biomechanics of walking. For example, they can measure stride lengths and if they vary with height, weight, age, leg length or how walking speed depends on step speed and stride length.

Biology: Teachers can teach students to look for specific plant or animal species, or inventory indigenous species along walking routes, or catalogue seasonal changes in the flora and fauna.

English: Students can write press releases and public service announcements to promote Walk to School Day and write essays or keep a diary about their experiences walking.

History: Students can study historical locations in the city by walking to them.

Social Sciences: Students can photograph important things about the city they observe while walking to school and write about the things they would like to change and how they would do it.

- **Annual School Assembly:** Conduct a one-time annual instruction with exciting characters. Such an event offers an opportunity to reach many children quickly. The event builds school-wide excitement about walking and biking while offering a way

to introduce safety education in schools where competing demands for class time do not allow for more extensive instruction.

- **Reinforcement Measures:** One-time methods can be made more effective by reinforcing them throughout the year by inserting messages in school-wide announcements, signs and newsletter articles. Newsletters are also a good way of reaching out to parents.
- **Bicycle Rodeo:** Bicycle rodeos are one-time/annual events for children to practice basic bicycling techniques. They can also serve as an opportunity to check children's bicycles for fit and functioning and to provide instruction on proper helmet use. Settings may be playgrounds or parking lots set up with stop signs, traffic cones, and other props that can teach children how to stop and look for oncoming traffic among other things.
- **Walking and Bicycle Safety Training:** Safety training can be taught over several sessions and includes information on both walking and bicycle safety. Subjects can include how to cross the street safely, “stranger danger”, and how to let drivers know your intentions. At the end of the course participants apply their knowledge and skills in simulated or actual on-road settings.

In order for an SRTS program to be successful, city officials and law enforcement must become involved. City officials may need to enact ordinances to install signage, to apply for grants, or to appropriate funds for various facets of SRTS. Law enforcement involvement is an integral part of any SRTS plan in order to provide for enforcement around schools and to educate students on traffic laws and other safety measures.

ENCOURAGEMENT

Encouragement programs are needed in conjunction with engineering, education, and enforcement initiatives in the SRTS program. Convincing children and parents that biking or walking to school is a safe, fun, and healthy activity can be difficult. A strong encouragement program is essential in overcoming these difficulties. Such programs promote walking and bicycling to students and the community and assist them in applying what they have learned. They may include incentives to students who walk a certain number of days or accumulate a number of miles walked over time, for example. Programs can also get parents and the community involved by conducting a community-wide “Walk to School Day,” or local businesses could contribute by sponsoring signs or running promotions for walkers. Students, the schools, and the community often find that the encouragement facet of an SRTS program is the most fun and creative component of the SRTS process, and can include annual events, ongoing activities, contests, and clubs.

Annual Events

An annual event is usually a one-day activity to celebrate walking and bicycling to school. Families can walk or bicycle from home or from a group meeting area, or students can bike in groups to or from school to a special designation. Signs, balloons

and banners can be used to create an air of excitement and celebration. When the groups arrive at the destination, participants might be greeted by the school principal or a city official and receive snacks and small gifts like stickers. A press conference, songs, flag salute or other group activity round out the event.

- **International Walk to School Day** gives children, parents, school teachers and community leaders an opportunity to be part of a global event as they celebrate the many benefits of walking. In 2009, millions of walkers from around the world walked to school together, hoping to create communities that are safe places to walk.
- **National Bike to School Day** encourages children to safely bicycle to school. National Bike to School Day provides an opportunity for schools across the country to join together to celebrate.
- **Walking for Water** is an awareness and fundraising initiative that takes place around World Water Day. School children are sponsored by friends and family to walk while carrying water in a backpack to symbolize the children in developing countries around the world who walk an average of 3.7 miles every day to get clean water).
- **Earth Day** is a great time to promote walking and biking to school while celebrating the environment.
- **Halloween** can be a day for children to parade to school in their costumes.
- **Election Day** is a great educational opportunity for students to walk to the polls.
- **First Day of School** is a time where neighborhoods gather and walk together with parents and children on the first day of school.

Daily, Weekly, or Monthly Events

- **Walking School Bus** - Parents taking turns walking with groups of children to school. A Walking School Bus is just like a regular school bus, but without the walls and seats, and instead of wheels, we use our feet. A walking school bus can operate on a daily, weekly, or once per month basis, depending on interest. It can be as informal as two families taking turns walking their children to school to as structured as a route with meeting points, a timetable and a regularly rotated schedule of trained volunteers.
- **Bike Train** - A Bike Train is an organized group of students who ride into school together (with adult supervision). Based on the Walking School Bus model, the Bike Train is an easy way to get a group of kids in your neighborhood more active.
- **“Park and Walk” or “Stop and Walk”** - For “Park and Walk”, parents park at a designated spot (such as a community park) and walk their children the rest of the way to school, allowing all students to participate. Another variation is “Stop and

Walk” which encourages parents driving to school to drop-off their children 2-4 blocks away from school. These programs also can reduce traffic congestion at schools.

- **Locally Designated Walk/Bike Day** - Any day of the week can be designated as a walk/bike day, such as “Walk and Roll Fridays” or “Walking Wednesdays”.

Contests/ Programs/Clubs

- **Mileage Clubs** - Mileage clubs and contests encourage children either to begin walking and bicycling to school or to increase their current amount of physical activity by making it fun and rewarding. Generally, children track the amount of miles they walk or bicycle and get a small gift or a chance to win a prize after a certain mileage goal is reached. Mileage Club options include individual competitions, classroom vs. classroom competition, and school vs. school competition.
- **Frequent Walker/Rider Punch Card Program or “Walk and Roll” Club** – With a “Frequent Walker Program”, parent volunteers and teachers meet children to punch a “punch card” that awards prizes or certificates to students participating in Walk to School day.
- **“Walk or Bike Across America” programs** – Some resources encourage students to log the feet they have walked, and they can virtually walk across an area of the United States.



Rewards are key to success, as most mileage clubs and contests involve incentives like prizes or small gifts, or recognition. In order to be most effective, incentives need to be provided in concert with other strategies over a period of time. This is one way local businesses or service organizations can support the SRTS program. For instance, a business can give away tee-shirts or water bottles that signify the event the student participated in while also listing the name of the business. Local newspapers and radio stations can publish and air winning students’ names. Schools can recognize participants in assemblies or school newsletters.

ENGINEERING

The engineering component focuses on the physical environment of sidewalks, paths, safe crossings, and traffic calming. Engineering recognizes a balanced roadway system is important to serve all modes of transport, not just motor vehicles, and engineering changes may be needed to create safe routes for students to get to and from school. Infrastructure improvements alone may not make a successful SRTS program, but they help alleviate parents’ fears and concerns for the safety of students, which, in itself is a major obstacle to a successful walking or bicycling program. Engineering solutions may include adding new sidewalks or fixing damaged ones, off-road bicycle trails, medians,

traffic islands, traffic signals, adjusting an intersection to make pedestrians more visible, or implementing infrastructure changes on a roadway to decrease traffic speeds.

Sample engineering activities for a SRTS program toolbox include:

- Use signage and pavement markings consistently to convey the same message throughout the community. Signage in school zones should follow the same conventions as elsewhere in the community and convey a clear message. For example, if the intention of a “No Parking” sign is that no vehicle is to be stopped, then the sign should reflect that. Otherwise, drivers may interpret the sign to mean they can temporarily wait in the location. Some schools may not have “school zone” signs on all streets surrounding the school. These signs remind drivers of the increased likelihood of children being present and allow for the enforcement of reduced speed zones.



- Connect to destinations; a complete sidewalk network is one of the most important SRTS tools.

- Install, enhance, or repair crosswalks, because they define the area of the street where automobile drivers can expect to see pedestrians. High visibility crosswalks can be used to improve safety and to emphasize the recommended path for crossing an intersection.



- Utilize pedestrian crossing delineators or traffic cones in crosswalks or street center lines to warn vehicle operators that pedestrians are in the area. These signs are moveable.



- Install bump outs or curb extensions located at intersections to reduce the crossing distance on streets.
- Install or improve street lighting. The school day can start before dawn and end around dusk during the winter months.
- Install bicycle lanes that are 3 to 5 feet wide located next to the curb or between the parking lane and the travel lanes on the street. Define the edge by a 4 inch white line to help communicate to bicyclists and drivers how the road functions.
- Build bicycle paths that are a minimum of 10 feet wide. Bicycle paths have their own right-of-way and can be built on abandoned rail lines, utility corridors, or along riverfronts.
- Install bicycle parking near school entrances. The location of the bicycle racks on the school grounds can encourage the use of bicycles as transportation. Locating them

near the main entrance where bicycles can be seen from inside the building discourages theft and makes parents more likely to allow their child to ride to school.

- Install traffic calming measures such as traffic circles, raised crosswalks, narrowing lanes, etc. Studies have shown that well designed traffic calming measures can reduce speeds considerably.
- Restrict turning movements at key access points such as only allowing right turns out of or into school properties.

ENFORCEMENT

Driving behaviors and safety campaigns do not ensure the success of a SRTS program. Therefore, the SRTS task force should partner with local law enforcement agencies to make sure that proper traffic laws are obeyed (i.e. speed regulations, driver behavior, and appropriate walking and biking behavior) and initiate safety programs such as safety patrol or crossing guard programs. Enforcement presence can discourage dangerous behaviors for pedestrians, bicyclists, and drivers on and off school campuses. The first step in developing an enforcement program is to identify unsafe behavior near school.

Law Enforcement Activities

A variety of law enforcement methods can help change unsafe behaviors, making walking and bicycling safer and more attractive for children and their parents. Law enforcement includes a variety of methods that use both technology and personnel to raise awareness and educate motorists about their driving behaviors and how they relate to the safety rules. An effective law enforcement program is more about providing visible police presence for improved behavior than writing tickets. The intent of enforcement is to get people to change dangerous behaviors that could cause a crash and subsequent injury or fatality.

- **Speed Trailers or Monitors** - Portable speed trailers visually display drivers' real-time speeds compared to the speed limit. Active speed monitors are permanent devices to keep drivers aware of their speeds and the need to slow down near schools. These devices may be effective in reducing speeds and increasing awareness of local speed limits.



- **Traffic Complaint Hotlines** - A traffic complaint hotline allows community members to report traffic problems directly to police. It is used to identify the worst traffic problem areas and the most frequent traffic complaints. Police follow up with enforcement in the identified area and schedule additional enforcement if needed.
- **Increased Speeding Enforcement** - Issuing tickets is the strongest strategy of an enforcement program. Strict enforcement of speed laws in school zones is one law enforcement tool that can improve the safety for children walking and bicycling to

school as well as motorists. A ‘zero tolerance’ policy for speeders in school zones and even an increase in fines for drivers who violate the posted school zone speed limit are potential approaches. While effective, issuing tickets is a resource consuming form of enforcement, and draws local police away from other duties. Issuing an increased number of warnings is another option. This allows police to contact up to 20 times as many non-compliant motorists than the writing of citations does. In addition, the high frequency of stops ensures not only that many people directly make contact with law enforcement, but also that many others witness these stops and are prompted to start to obey the rules.

Community Enforcement Activities

All adults in a community need to set good examples for their children and others by crossing streets in crosswalks when they are available and following other traffic rules. Representatives of communities and schools can improve safety behaviors in many ways.

- **Student Safety Patrols** - Older students can become safety patrol members and help during drop-off and pick-up times at the schools. Such efforts allow students to participate in promoting traffic safety where they learn skills they can use in their everyday lives. Having a student safety patrol program at a school requires approval by the school, as well as a committed teacher or parent volunteer to coordinate the student trainings and patrols.
- **Sidewalk Stencils** - Families who live along identified school routes will see a visual reminder that the sidewalk in front of their home is part of a route and it would encourage students to walk to school along the designated routes. 
- **Volunteer Crossing Guards** - Adult school crossing guards can be parent volunteers, school staff, or paid personnel. Adults can volunteer to become crossing guards to enforce safe behaviors at crossings. Annual classroom and field training for adult school crossing guards as well as special uniforms or equipment to increase visibility are recommended. Crossing Guard work can be difficult since it can be wet, cold, hot, and often dark, not to mention the safety factor of working around passing vehicles
- **Neighborhood Speed Watch Programs** - Neighborhood speed watch programs can provide opportunities for residents to educate drivers about their driving speeds while making drivers aware that the neighborhood is concerned about safety. The neighborhood watch group, or just a concerned resident, can request the city to place traffic counters on a street that also records speeds. When the results show a speeding problem in the neighborhood, the city can increase traffic patrols in the area.

- **School Zone Campaign** – During the School Zone Campaign, volunteers, parents and students, are outside of the school holding banners to remind drivers to slow down in school zones.
- **Corner Captains** - Parents or adult volunteers station themselves at corners along a walking route. They can be given walkie-talkie or cell phones to report unusual behavior.

EVALUATION

The evaluation component involves identifying problems, finding workable solutions and determining if solutions corrected the problem. Evaluation of local programs can improve the individual program but can also lead to improvements at the state or national level. Evaluation data is key to determining the scope and the success of a Safe Routes to School program. The student tally sheet and parent survey are the two most popular methods of program evaluations. These surveys are administered before and after a SRTS programs starts. Surveys of parents help to reveal why parents are driving their children to school, and what changes might result in a shift in their behavior. Student surveys elicit the attitudes of the youth, and help to show how to craft a program that will be appealing to the younger generation. Travel surveys include a record of the weather and time of year. Another important component of evaluation is reviewing crash data to map where vehicle-pedestrian or vehicle-bicycle collisions are occurring so that these trouble areas can be improved. Monitoring changes in demographics, housing, and other statistical categories is also of importance. Lastly, most funding organizations require evaluation has a component of their financial contribution.

Outcome	Measure Before/After	Measurement Tools
Change in behavior of children	<ul style="list-style-type: none"> • Number of children walking to and from school. • Number of children bicycling to and from school. • Physical activity of children outside of travel to/from school. • Skills/knowledge for walking and bicycling safely. 	<ul style="list-style-type: none"> • Student Survey • Observation in front of school • Pre and post test
Change in behavior of drivers	<ul style="list-style-type: none"> • Number of vehicles arriving and departing school at morning drop-off and evening pick-up times. • Speed of vehicles in and around school area. • Aggressive driving behavior (not yielding to pedestrians, etc. • Number of driving trips by parents and length of morning and evening commute. 	<ul style="list-style-type: none"> • Observation of streets near school. • Observation/speed board.
Community facilities	<ul style="list-style-type: none"> • Quality of walking 	<ul style="list-style-type: none"> • Observation of pre or post

	<p>environment; amount of sidewalk; provision of other pedestrian features</p> <ul style="list-style-type: none"> • Quality of bicycling environment (bike lanes, etc.) • Safely designed intersections (lighting, crosswalks, etc.) 	walking and bicycling audits.
Crashes and injuries	<ul style="list-style-type: none"> • Number of traffic crashes involving children walking or biking to or from school. • Severity of injuries of children from traffic on their way to and from school. • Number of conflicts between motorists and pedestrians/bicyclists. 	<ul style="list-style-type: none"> • City crash data and count of traffic stops.
Community buy-ins	<ul style="list-style-type: none"> • Different groups/ agencies involved in SRTS. • Parents' attitudes toward allowing their children to walk or bike to school. • Children's' perception on walking or biking as a form of travel. • Walking and bicycling integrated into curriculum. 	<ul style="list-style-type: none"> • Observation. • Pre and post surveys.
Environmental quality	<ul style="list-style-type: none"> • Level of air and noise pollution in school areas. • Land devoted to drop-off/pick-up areas. 	<ul style="list-style-type: none"> • Pre and post travel surveys and analysis • Observation. • Mechanical monitoring device.

GOALS, OBJECTIVES, AND RECOMMENDATIONS

The primary goal of this Safe Routes to School plan is to provide a framework for creating safer infrastructure and community-based programs to increase the number of students walking and bicycling to school. The City envisions a partnership among its departments, law enforcement, parents, and school districts to create an environment where students can safely walk or bicycle to and from school in order to encourage a healthy lifestyle while minimizing transportation expenses and reducing vehicle-related air pollution.

GOALS

Broad goals of the plan are:

- Improve pedestrian and bicycle facilities, particularly along routes children and youth use travel to school.
- Develop strategies to reduce hazardous road crossing conditions and improve bicycle and pedestrian safety at intersections
- Identify and prioritize short- and long-term engineering projects that will improve the walking and bicycling environments near the schools.
- Create city and school based programs that educate students and their parents about safe walking and bicycling practices and encourage parents to allow their children to walk and bike to school.
- Increase parental activity/support for the SRTS program.
- Ensure that proposals submitted by developers include street connections, sidewalks and/or trails, and other features that enable and encourage students to walk and bike to school.
- Formulate enforcement programs that maximize compliance with laws that apply to motorists, bicyclists, and pedestrians
- Improve the perception of community safety for walking and bicycling

OBJECTIVES

General objectives to implement these goals include:

- Construct sidewalks that provide connectivity to surrounding neighborhoods and to the existing and proposed trail system.
- Replace sidewalks that are in poor condition.
- Install crosswalks along major roadways.
- Install crosswalks on school sites and at high traffic volume intersections.
- Evaluate pedestrian traffic signals and adjust accordingly.
- Include infrastructure improvements in all site and capital improvement projects.
- Require new construction to include sidewalks and ADA accommodations.

- Provide children with visual or reading materials on pedestrian/bicycle safety.
- Incorporate pedestrian/bicycle safety as part of the regular education curriculum in either physical education or health classes.
- Provide children with hands-on learning experiences through expert guest speakers and physical activities.
- Implement a rewards/program to entice children to walk/ bicycle to school.
- Host walk/bicycle events including National Walk to School Day.
- Steering Committee members should attend parent-teacher organization meetings, community meetings, and parent teacher conferences to increase awareness of the SRTS program.
- Recruit adults to serve as “drivers” of walking school buses and crossing guards.
- Implement a school zone safe driving enforcement program.

RECOMMENDATIONS FOR IMPROVEMENTS

The following recommendations are activities that can be implemented in the short term (1 – 6 years) to further the goals and objectives presented earlier. The recommendations address the 5 E’s (Engineering, Encouragement, Education, Enforcement, and Evaluation) and identify actions under each category that the City and other SRTS partners should implement. When the listed activities are completed, or as a substitute or additional activity, items listed in the “5 E’s” section not listed here should be considered. In addition, grant funds that will aid in implementing the various aspects of the 5 E’s should be applied for whenever they become available.

Responsible entities include the various schools and school districts in the City, Parent-Teacher Associations, and the City of Pine Bluff. It is recommended that the City act as the responsible party for infrastructure improvements while the schools and other organizations act as the responsible party for non-infrastructure improvements.

Engineering

For the most part, engineering projects and improvements will begin with creation of various plans, programs, and inventories set forth below. These plans, programs, and inventories can be implemented in the first one to two years after initial execution of the SRTS plan. Construction projects, other than a pilot/demonstration project, should begin in the second through sixth years.

- Implement a pilot/demonstration project that will provide visual confirmation of and a talking point for a “safe” route to school and an SRTS program. Such a project should include the construction of a sidewalk to fill in the gap between existing sidewalks that will form a sidewalk grid within a neighborhood without a sidewalk system.
- Create a Sidewalk Repair and Maintenance Plan that will schedule repair and replacement of sidewalks in poor condition. The plan may include requiring property owners with sidewalks along the street to contribute to the repair and maintenance as required by ordinance.

- Identify and mark specific “safe routes” through the City for students to use. Begin in those areas already having a good sidewalk system and expand the “safe routes” marking program as new, vital sidewalks are constructed.
- Create a five-year sidewalk construction plan that will construct sidewalks that link other sidewalks together, prioritizing those sidewalk segments that are vital links in the route system. Estimate the costs of the implementation and program construction into the annual street improvement budgets.
- Create a cost-share program to help homeowners and businesses build new sidewalks in front of their homes/facilities as needed.
- Identify dangerous crosswalks and recommend marking, signage, or traffic calming improvements to be implemented in the short term.
- Create a street light inventory overlaid onto the sidewalk system and proposed routes, and identify locations where new street lights need to be installed.
- Plan sidewalk improvements on major streets when road reconstruction projects are implemented.
- Develop a trails plan using existing recreational trails, on-street trail projects, trails within power line easements, trails along major city drainage systems, and existing and proposed sidewalks. Such a plan can serve schools as well as other destination walkers and bike riders, and can take advantage of the several trails grant programs available.
- Amend the Subdivision Regulations to ensure that sidewalks will be constructed in new housing developments under certain circumstances instead of routinely waiving the requirement for sidewalks.
- Amend the Zoning Regulations to require that when new commercial development occurs or major improvements to existing commercial structures occur curb, gutter, and sidewalks are installed. This could be expanded to include major changes in uses.
- Develop a bike rack inventory schools and at other frequented sites (library, parks), and determine where new or increased bicycle racks need to be installed.
- Implement traffic calming techniques in street reconstruction projects and new subdivision development, and on collector or minor arterial streets that would further the SRTS route system.

Encouragement

The following activities or similar ones should be implemented in the first year after initial plan execution. Programs that get parents and the community involved and those that aid in convincing children and parents that biking or walking to school is a safe, fun, and healthy activity should be the first to be implemented. After beginning programs have been initiated, other activities, such as those presented in the “Five E’s” Encouragement section, should be added to the program. They could also be used in place of the list below

- Have a contest to design a “Safe Routes to School” stencil to be painted on the sidewalks near the school.

- Submit a newspaper article explaining the Safe Routes to School Plan and its goals and objectives.
- Designate a walk or bike to work day each week or month.
- Designate a walk to school with your child day each month.
- Distribute SRTS newsletters during Parent-Teacher conferences.
- Obtain business and industry support for schools to create clubs or punch card programs where rewards for meeting certain walking or bicycling goals are given.

Education

The following activities or similar ones should be implemented in the first year after initial plan execution. Programs that provide students with the knowledge of safely crossing streets, proper bicycling behavior, how much fun it is to engage in healthy activities, and that provide parents with information that promote safe walking and bicycling environments are essential when implementing a SRTS program. After beginning programs have been initiated and are shown to be successful, other activities, such as those presented in the “Five E’s” Education section, should be added to the program.

- Engage school speakers for assemblies or classes that are age appropriate speak to the students on walking and bicycling to school.
- Have students track the distances they walk or bike and research the benefits.
- Get students and parents engaged by involving them in conducting walking and bicycling audits.
- Have students can create posters promoting Walk to School Day and safe driving and walking messages.
- Involve the police department in establishing bicycle rodeos or safe walking and bicycling fun days.

Enforcement

The first step in developing an enforcement program is to identify unsafe behavior near school. Local law enforcement agencies should be involved at the beginning of the program to make sure that proper traffic laws are obeyed and initiate safety programs such as the School zone Campaign. Most of the activities listed below can begin near the onset of the program, and can be expanded as warranted.

- Create a speed trailer rotation to set out trailers at select schools.
- Increase police patrols near schools during morning and afternoon hours.
- Increase traffic violation fines in school zones.
- Educate neighborhood watch groups on SRTS.
- Create a School Zone Campaign where volunteers, parents and students, are outside of the school holding banners to remind drivers to slow down in school zones.
- Coordinate with the Police Department to evaluate the crime data around the various schools in order to lessen the perception of lack of personal safety along designated walk/bike routes.

Evaluation

The evaluation process, which should be accomplished at least annually, involves identifying problems, finding workable solutions and determining if solutions corrected the problem. Evaluation data is the key to determining the scope and the success of a Safe Routes to School program. The following list includes some of the evaluation techniques recommended for inclusion in the program. The review team should be established at the beginning along with the survey forms, questionnaires, audits, and other types of data to be collected. Pre and post surveys should be accomplished.

- Create a review team to annually evaluate the successes and challenges of implementing the Plan and revise goals as needed.
- Compare results of walking and bicycling audits over several years.
- Measure participation and volunteers.
- Conduct post-project surveys.
- Conduct walking and bicycling attitudes surveys.
- Monitor participation in walk or bike to school days.

Examples of surveys can be found in Appendix C and examples of facility audits can be found in Appendix D.

FUNDING OPPORTUNITIES

PUBLIC FUNDING SOURCES

Grant Programs

There are a number of grant opportunities that can be used to fund road, sidewalk, trail, signage, and marking improvements. Each grant addresses different needs and requires varying financial commitments. Most of the grants that are for physical improvements require the City or County to be the applicant or at a minimum, agree to maintain the facilities or provide the right-of-way for the facilities.

- **Safe Routes to School Program** – The SRTS program is administered by the Arkansas Highway and Transportation Department (AHTD), and is usually offered every two to three years at AHTD’s and/or the Federal Highway Administration’s (FHWA) discretion. The SRTS Program’s goal is to improve the safety of children walking and biking to school and to improve access for children with physical disabilities. Individual schools, school districts, local government agencies, state agencies, and metropolitan planning organizations (MPOs) are eligible to receive funds. While there is no required local match, it is a reimbursable grant which requires monies to be spent up front. Eligible infrastructure projects can include: installation/replacement of sidewalks, crosswalks, pedestrian countdown signals, curbs, ramps, bike lanes, off-street paths, bicycle parking facilities, and traffic calming improvements. Non-infrastructure projects can include education and encouragement activities.
- **Enhancement Grant** - Transportation Enhancement (TE) grants are administered by the AHTD. Applicants compete with other applicants for funding. Eligible projects include sidewalk enhancement, bike paths, landscaping, historic preservation, rail corridor preservation, outdoor advertising control, and other activities that “expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic, and environmental aspects of transportation infrastructure”. AHTD makes these grant funds available at their and FHWA’s discretion, usually every other year. These funds can be used for sidewalk and bikeway improvements, but should be directed at collector or arterial streets rather than local streets.
- **Recreational Trails Program** – This program provides funding for land acquisition for or development of recreational trails and trail amenities. The program is administered by AHTD, and for the past several years has been offered annually. Applicants compete with other applicants for funding. There are specific guidelines for trail construction, and usually are implemented along natural areas and/or to link other trails together.

- **Trails** – This competitive application program is offered by the Arkansas Department of Parks and Tourism
- **Wildlife Observation Trails Grant Program** - This program, which is competitive, is administered by the Arkansas Department of Parks and Tourism Outdoor Recreation Grant Program. It provides funding for trails and facilities located and designed so that they are optimally attractive for wildlife observation. This program is a relatively new program offered by the State for the past two years, and funding is contingent upon Parks and Tourism and the Arkansas Game and Fish Commission continuing to support the program.
- **Community Development Block Grant Program (CDBG)** – The City of Pine Bluff is an Entitlement community, meaning that they receive a CDBG grant annually from the Department of Housing and Urban Development without having to compete with other entities. Sidewalks and street improvements are eligible activities as long as they are located in a low and moderate income area. Usually, the City uses the funding for a variety of projects, and includes street and sidewalk improvements when a specific area is being targeted for new housing development, economic development, or handicapped access is needed.

Other Public Sources

Other public sources include a variety of methods for financing public improvements such as street and sidewalk improvements. Some methods levy fees on property owners or developers while others are paid for by the City.

- **City Capital Improvements Program** – With this method, a city can program certain street and sidewalk improvements to be accomplished on a certain schedule and paid for out of the regular funding a city department, such as the street department, receives.
- **Sales Taxes** – Under this method, a city can dedicate a certain amount of a sales tax to be collected for a specific project, such as street improvements. The improvements can be a pay-as-you-go project or bonds can be issued to pay for the street improvements immediately, and the taxes used to pay for the bonds over a set period of time.
- **Impact Fees** – With this financing tool, new development pays their fair share of new capital improvements. Fees can be used for sidewalk or trail development. Most cities with limited development occurring in the area choose not to apply impact fees to new development. However, new developments can be required to install curb, gutter, and sidewalks through their Subdivision Regulations.
- **Special Assessments** – This financing tool is usually an assessment the property owners place upon themselves through a local improvement district. An improvement district can be organized by property owners to widen, curb, and gutter

streets and install new sidewalks. Project costs for sidewalk improvements are assessed back to the property owners.

PRIVATE SECTOR FUNDING

SRTS programs can also solicit funding from non-governmental resources within their own communities. The multiple benefits of SRTS programs including safety, health, environment, and community livability often aligns with the interests of the local business and non-profit community.

Corporations and Businesses - Local corporations and businesses often support children and youth programs with cash, prizes, and/or donations such as printing services. It can also be beneficial to ask parent leaders to help obtain funds from their businesses and industry.

Foundations - Institutions throughout the country provide funding to non-profit organizations. The Foundation Center is an excellent source of potential funding sources. Funding possibilities can be narrowed by first searching for geographic region of giving and looking under categories for transportation, health, environment, and community building.

Individuals - Statistically, individuals give more money than corporations and foundations combined. A local fund drive can be started by working within the existing network of team leaders, and reaching out to the larger community.

Events - Special events using the SRTS theme can be held to obtain contributions for SRTS purposes, such as walk-a-thons or bicycling events. More traditional fundraising efforts, such as bake sales, concerts, talent shows, etc. can also be used.

Parent Teacher Organizations (PTOs) and School Districts - Many PTOs have funds to distribute to school programs and often schools have safety funding.