

R.L. STEVENSON ELEMENTARY

Fridley Public Schools, Fridley, MN





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The following key people/entities participated in the Safe Routes to School (SRTS) plan efforts for Fridley Public Schools. Their creativity, energy, and commitment were critical to the success of this effort.

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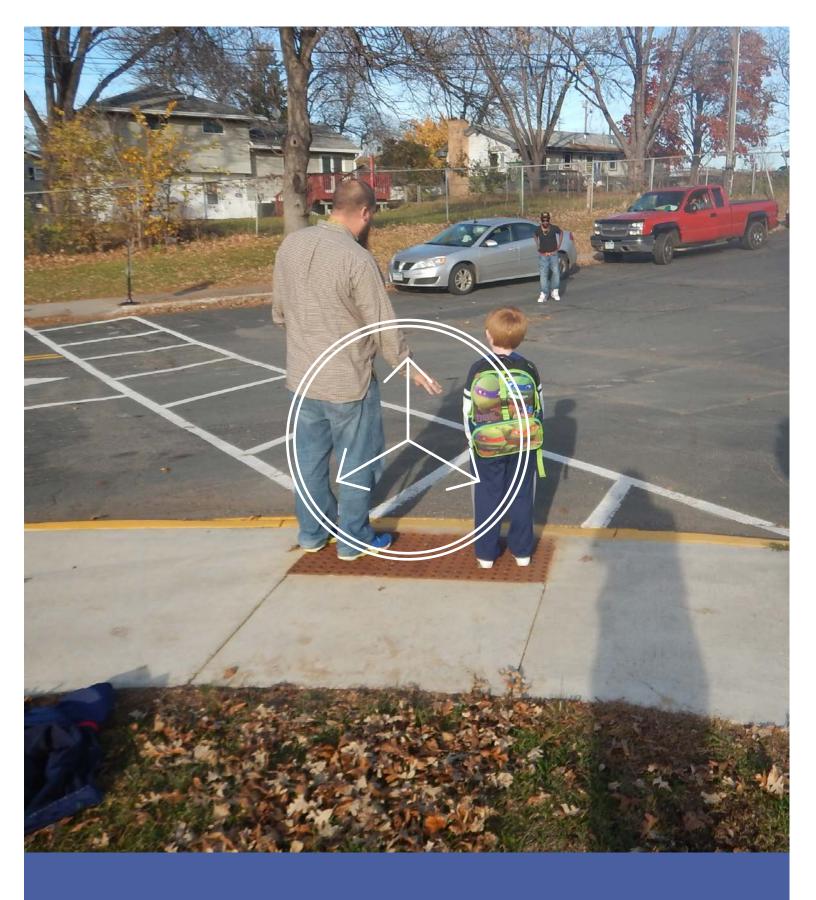




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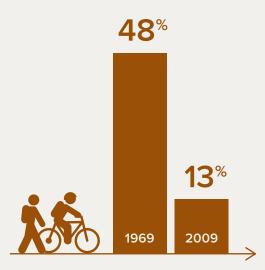
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01

INTRODUCTION + CONTEXT

Why Safe Routes to School?



THE PERCENTAGE OF CHILDREN WALKING OR BIKING TO SCHOOL HAS DROPPED PRECIPITOUSLY WITHIN ONE GENERATION



MOST KIDS ARE NOT GETTING ENOUGH PHYSICAL ACTIVITY



ROADS NEAR SCHOOLS ARE CONGESTED, DECREASING SAFETY AND AIR QUALITY FOR CHILDREN

KIDS WHO WALK OR BIKE TO SCHOOL:



Arrive alert and able to focus on school



Are more likely to be a healthy body weight



Are less likely to suffer from depression and anxiety



Get most of the recommended 60 minutes of daily physical activity during the trip to and from school



Demonstrate improved test scores and better school performance*

THE VICIOUS CYCLE OF INCREASED TRAFFIC LEADING TO REDUCED WALKING AND BICYCLING:

Fewer students walking & biking to school

More parents driving children to school



Rising concern about safety of walking & biking Increased traffic at and around school



The Six Es

Safe Routes to School programs use a variety of strategies to make it easy, fun and safe for children to walk and bike to school. These strategies are often called the "Six Es."



Education

Programs designed to teach children about traffic safety, bicycle and pedestrian skills, and traffic decision-making.



Encouragement

Programs that make it fun for kids to walk and bike, including incentive programs, regular events or classroom activities.



Engineering

Physical projects that are built to improve walking and bicycling conditions.



Enforcement

Law enforcement strategies aimed at improving driver behavior near schools and ensuring safe roads for all users.



Evaluation

Strategies to help understand program effectiveness, identify improvements, and ensure program sustainability.



Equity

Is an overarching concept that applies to all of the E's, ensuring that all residents have access to and can take advantage of the resources provided through the program.



Navigating this Plan

Below is a roadmap for navigating the way through this plan. Use it to find all the information you need for helping students be safer and more active!



Programs

Getting kids to walk and bike to school requires fun and engaging programs for schools and families. Turn to this section for recommended events, activities, and strategies that will get students moving.



Infrastructure

Ensuring the safety of students on their trips to and from school means upgrading the streets. See this section for suggestions to improve the safety, comfort and convenience of walking and biking, including paint, signage, and signals.



How to get involved

The more people involved with a local Safe Routes to School process, the more successful it will be! Use this section to find out how you can be a part of this important initiative.



Appendices

There is more information available than could fit in this plan. For additional resources, turn to this section.





ADDITIONAL SRTS PLANNING IN THE AREA

FURTHER READING

Fridley and Columbia Heights have engaged in SRTS planning over the past few years. In 2013, SRTS plans were completed for Columbia Academy Middle School, Highland Elementary School, and Valley View Elementary School in Columbia Heights. Additionally, a plan was completed for North Park Elementary School in Fridley.

The Vision

In the spring of 2016, Fridley Public Schools (ISD 14) was awarded a Minnesota Department of Transportation (MnDOT) Safe Routes to School (SRTS) planning assistance grant to develop an SRTS Plan. In addition to Stevenson Elementary, Hayes Elementary and Fridley Middle School were selected to receive this planning assistance.

This plan was made possible by support from MnDOT and developed in coordination with the city and the school district. It is the product of several meetings and visits to Fridley, plus discussions with city employees, teachers, school staff, students, and community members. The plan offers recommendations on how to make it easy, fun and safe for children to walk and bike to school.

The following pages offer both program and infrastructure suggestions - all of which fall under the 6 E's model described on page 6. All recommendations are intended to be on an approximate five-year timeline. While not all of these recommendations can be implemented immediately, it is important to achieve shorter-term successes while laying the groundwork for progress toward some of the larger and more complex projects.



APPENDIX

FURTHER READING

The main body of this plan is intended to be concise in an effort to provide the most pertinent information to the reader. There are several resources in the appendix section for those interested in learning more about SRTS, including specific roles for implementing SRTS, the SRTS planning process at a glance, existing conditions, and talking points to effectively communicate messages related to SRTS.





Stevenson Elementary in Context

R. L. Stevenson Elementary sits on the west side of Fridley along East River Road, a key artery through Fridley. Directly to the west of campus flows the Mississippi River. During the 2016-2017 school year, there were 545 students enrolled. The school draws students from within the City of Fridley as well as students who reside within the Northwest Suburban Integration School District (NWSISD) who may choose to open enroll within the eight district consortium.

Based on the parent surveys, the majority of parents report their children traveling to and from school by school bus (62.5%) or family vehicle (35.4%), while a very small portion walk (2.1%) and none bike. These percentages vary by distance from school. 10% of students living within a half mile of school report walking, 30% report receiving a ride in a family vehicle, 60% take the school bus, and no students generally ride their bikes. As the distance from school increases to one mile or greater, the share of walking trips decreases, and family vehicle and school bus trips increase (37% and 63%, respectively). See the appendix for in-person observations about student travel modes.

East River Road and the railroad are significant barriers to walking and biking to R. L. Stevenson Elementary. Between 2006 and 2015, no crashes involving vehicles and a bicyclist or pedestrian were reported within a one-half mile radius of the school. Seventy-five percent and 70% of parents reported the safety of intersections and crossings and the amount of traffic affected their decision to allow their children to walk or bike to school.



APPENDIX

FURTHER READING

The summary on this page takes information from a more detailed existing conditions report found in the appendix. There you'll find a report that talks about how students and parents report traveling to and from school, a map showing pedestrian and bicyclist-involved crashes, and a map of residences of students who attend Stevenson Elementary. This information helped planners and community stakeholders develop the best strategies for increasing safety and comfort for students walking and biking to school.



02 PROGRAMS



Introduction to Programs

The Safe Routes to School movement acknowledges that infrastructure changes are a necessary but insufficient condition for shifting school travel behavior. Programs are a necessary component of any successful SRTS plan.

While engineering improvements such as sidewalks, crosswalks, and bikeways are important, equally important are **education** programs to give children and families basic safety skills, **encouragement** programs to highlight walking and bicycling to school as fun and normal, **enforcement** against unsafe and illegal motorist behavior, and **evaluation** of the impact of investments and non-infrastructure efforts. Often, programs that help to get more kids walking and biking lead to increased public support for infrastructure projects - they can be an important first step towards building out the physical elements that make walking and biking safer and more comfortable. And relative to certain infrastructure projects, most programs are very low cost.



Existing Programs

Fridley Public Schools and Stevenson Elementary have actively been working towards providing safe and inviting spaces around the school campus for students. This foundation of encouraging student travel safety is valuable for expanding programs to encourage more students to walk and bike. Here are a few programs that already exist in Fridley and at Stevenson Elementary:

- Police Department provides a bike helmet clinic and sells bike helmets at a discount
- Wellness programs and encouragement from school staff
- Summer safety camp with police and fire departments
- Partnership with Free Bikes 4 Kidz and Alina Health for bike giveaways
- Targeted enforcement by Fridley Police Department
- Crossing guards (on campus)
- Safety communication sent home to parents (see www.fridley.k12.mn.us/page.cfm?p=2799)
- City prioritizes snow maintenance on sidewalks near schools
- Bike Rodeo for seniors (not at the school)

Program Recommendations

The following programs were identified as priority programs for Stevenson Elementary during the SRTS planning process. These programs were selected to meet the interest and needs of the school community in the near term (one to five years).

Each recommended program shows the "E" it falls under, plus suggested lead, support, and priority.



APPENDIX

FURTHER READING

For a complete list of all potential programs and descriptions, see (link to online tool forthcoming)

Recommended Programs List



PROGRAM	WHICH "E"?	PROGRAM LEADER	PROGRAM SUPPORT	PRIORITY
Bus Drop and Walk/Park and Walk ¹	Encouragement	Fridley Public Schools	School staff	Short term
Walk to School Day	Encouragement	Fridley Public Schools	Parents, school staff	
Walking School Bus	Encouragement	Fridley Public Schools	Parents, school staff	
Bike Rodeo ²	Education	Fridley Community Education	Fridley Police Department	
Walking route maps	Education/ Encouragement	Fridley Planning Department	Fridley Public Schools	Medium term
Walk! Bike! Fun! Curriculum	Education	Fridley Public Schools	School staff	

REFERENCES AND NOTES

- 1 Identified as a priority by School District transportation director
- 2 A program similar to a student bike rodeo is currently offered to seniors in the city

Program Descriptions

The following descriptions provide more information about the recommended programs found in the table on the previous page.

Bus Drop and Walk/Park and Walk

This program is designed to give those who ride the bus or commute with a parent a chance to get physical exercise before school. School administration should choose a location a quarter to half mile away from school where drop off from buses and parent vehicles can occur on a single day. Not all students are able to walk or bike the whole distance to school; they may live too far away or their route may include hazardous traffic situations. This program allows students who are unable to walk or bike to school a chance to participate in Safe Routes to School programs.

Additional Resources

National Safe Routes to School Guide: http://guide.saf-eroutesinfo.org/encouragement/park_and_walk.cfm

Walk/Bike to School Day

Walk and Bike to School Day is an international event that attracts millions of participants in over 30 countries in the fall. The event encourages students and their families to try walking or bicycling to school. Parents and other adults accompany students, and staging areas can be designated along the route to school where groups can gather and walk or bike together. These events are often promoted through press releases, backpack/folder/electronic mail, newsletter articles, and posters. Students can earn incentives for participating or there is a celebration at school following the morning event. These events can be held for more than a day,

Additional Resources

MnDOT Walk and Bike to School Day: http://www.dot.state.mn.us/mnsaferoutes/programs/walk_to_school_day.html

Bike Rodeo

Bicycle Rodeos are events that offer bicycle skills and safety stations for children - and sometimes parents - to visit (e.g., obstacle course, bicycle safety check, helmet fitting, instruction about the rules of the road, etc.). Bicycles rodeos can be held as part of a larger event or on their own, and either during the school day or outside of school. Adult volunteers can administer rodeos, or they may be offered through the local police or fire department.

Additional Resources

An Organizer's Guide to Bicycle Rodeos: http://www.bike.cornell.edu/pdfs/Bike_Rodeo_404.2.pdf









Walking Route Maps

Route maps show signs, signals, crosswalks, sidewalks, paths, crossing guard locations, and hazardous locations around a school. They identify the best way to walk or bike to school. Liability concerns are sometimes cited as reasons not to publish maps; while no route will be completely free of safety concerns, a well-defined route should provide the greatest physical separation between students and traffic, expose students to the lowest traffic speeds, and use the fewest and safest crossings.

Additional Resources

National Safe Routes to School Guide: http://guide.saf-eroutesinfo.org/engineering/school_route_maps.cfm

Walking School Bus

A Walking School Bus is a group of children walking to school with one or more adults. Parents can take turns leading the bus, which follows the same route every time and picks up children from their homes or designated bus stops at designated times. Ideally, buses run every day or on a regular schedule so families can count on it, but they often begin as a one-time pilot event. A Walking School Bus can be as informal as a few parents alternating to walk their children to school, but often it is a well-organized, PTA-led effort to encourage walking to school.

Additional Resources

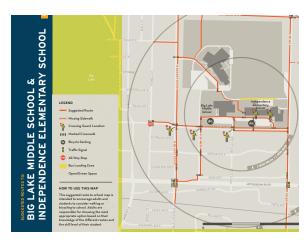
http://www.saferoutespartnership.org/sites/default/files/resource_files/step-by-step-walking-school-bus.pdf

Walk! Bike! Fun! Curriculum

Pedestrian safety education aims to ensure that every child understands basic traffic laws and safety rules. It teaches students basic traffic safety, sign identification, and decision-making tools. Training is typically recommended for first- and second-graders and teaches lessons such as "look left, right, and left again". Curriculum often includes three parts: in-class lessons, mock street scenarios, and on-street practice. Walk! Bike! Fun! includes lessons for both safe walking and biking, although the latter is recommended for students in fifth grade and older. This curriculum was developed by The Bicycle Alliance of Minnesota with support from the Minnesota Department of Transportation and Blue Cross Blue Shield of Minnesota. It teaches safe traffic behavior through classroom activities and onthe-streets skills practice.

Additional Resources

Minnesota Walk! Bike! Fun!: http://www.dot.state.mn.us/saferoutes/pdf/toolkit/walk-bike-fun-curriculum. pdf





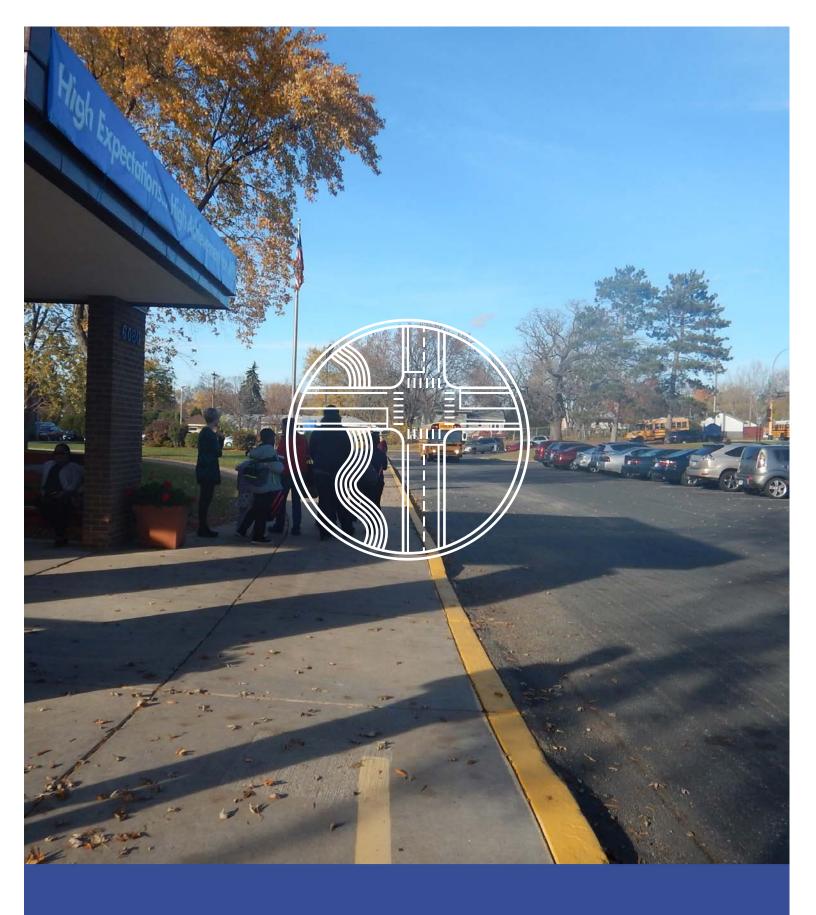














Introduction to Infrastructure

In addition to program recommendations, changes to the streetscape are essential to making walking and biking to school safer and more comfortable.

The initial field review and subsequent meetings yielded specific recommendations to address the key identified barriers to walking and bicycling at Stevenson Elementary.

This plan does not represent a comprehensive list of every project that could improve conditions for walking and cycling in the neighborhood, but rather the key conflict points and highest priority infrastructure improvements to improve walking and cycling access to the school. The recommendations range from simple striping changes and school signing to more significant changes to the streets, intersections and school infrastructure.

All engineering recommendations are shown on the Recommended Infrastructure Improvements Map on page 19 and described in the table on page 20. It should be noted that funding is limited and all recommendations made are planning-level concepts only. Additional engineering studies will be needed to confirm feasibility and final costs for projects.



APPENDIX

FURTHER READING

For a complete list of infrastructure to increase bicyclist and pedestrian safety and comfort, turn to Appendix H. The toolkit found here will help you brainstorm additional improvements for Fridley.



WINTER MAINTENANCE

FURTHER READING

In colder climates, it is important to consider how winter can affect the safety and comfort for youth walking and biking to school. See Appendix J for information related to winter maintenance that will allow kids to stay active and healthy year round.

EXISTING INFRASTRUCTURE



View of pedestrian pathway on south side of school connecting to the Mississippi River Regional Trail. This trail leads to Anna Ave, which provides access to housing directly south of school.



View of entrance/exit to school grounds from East River Road.



View of pedestrian pathway at the north side of school grounds (see location D on the following page).



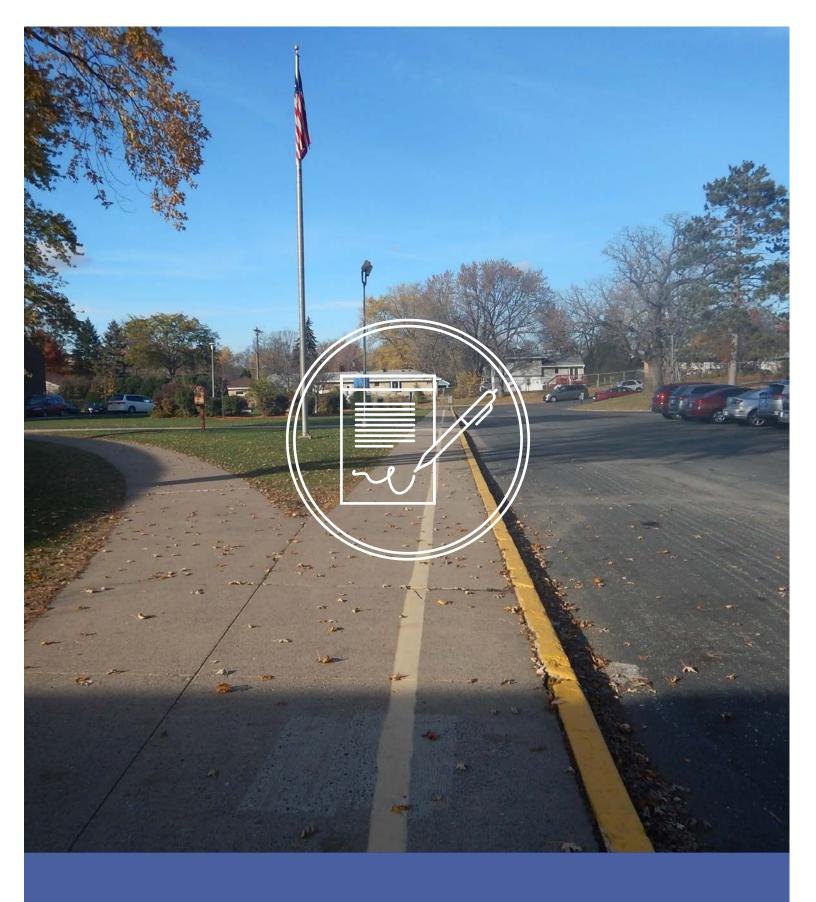
View of East River Road looking north past 61st Way NE. Pedestrians must cross seven lanes of traffic to reach the opposite side of the street. No median refuge large enough to safely and comfortably accommodate pedestrians.



Infrastructure Recommendations

	LOCATION	PROBLEM/ISSUE	POTENTIAL SOLUTION/ RECOMMENDATION	ANTICIPATED OUTCOME	LEAD	PRIORITY
A	East River Rd, west side of street, north of 61st Way NE	Gap in sidewalk at various locations	Complete sidewalk network; ; coordinate with future East River Road (CSAH 1) corridor improvements	Increased safety and comfort for peo- ple walking north of school	Anoka County	Medium
В	East River Rd, at 61st Way NE	Long crossing distance and high vehicle speeds	Install pedestrian median to wide enough to comfortably accommodate several people	Increased visibility of people crossing East River Rd; safe resting area for people	Anoka County	High
С	Driveway exiting school grounds at East River Rd and 61st Way NE	Large driveway apron does not adequately identify space for pedestrians, parking, and vehicle travel	Reconfigure driveway space to provide a prioritized path for people walking from the intersection to the school; narrow the remaining apron and regulate parking	Increased comfort and safety for peo- ple walking and biking to the school from East River Rd	Fridley Public Schools with the City of Fridley	High
D	Pedestrian path extend- ing from the north west side of campus to 62nd Way NE	The current path is established but not well defined or described for users; portions of the route are shared with vehicles and others are dark and uninviting	Formalize path with lighting and signage; clear brush; paint shared street space markings to formalize pedestrian space	Safer, more comfortable, and more recognized route to school	City of Fridley with Fridley Public Schools	High
E	Chases Island Rd, at Anna Ave NE	Regional trail access to campus is often obscured by cars and brush	Formalize access point using signage, lighting; install wide, high visibility crosswalk; increase sightlines by maintaining and clearing vegetation and restricting motor vehicle parking approaching the crossing	Increased safety and comfort for peo- ple walking and biking to campus via the regional trail	City of Fridley	Medium
F	Proposed redevelop- ment land immediately south of campus	The neighborhood south of campus is planned to be redeveloped; biking and walking conditions can be improved throughout the area	Coordination as development continues to provide safe and comfortable environment for people walking and on bikes	Increased trips to school by walking and biking from this area once redeveloped	City of Fridley	High (depends on timing of redevelopment)
G	61st Ave NE, at Main St	N/A	Potential Bus Drop and Walk location	Increased physical activity before/after school for students; an opportunity for students to walk to school who live too far away to walk from home	Fridley Public Schools	
Н	Stevenson Elementary campus, near primary entrance/exit on East River Rd	No bicycle parking present	Install bicycle parking that meets the guidance shown in the Appendix	More people bicycling to school	Fridley Public Schools	High





04

HOW TO GET INVOLVED

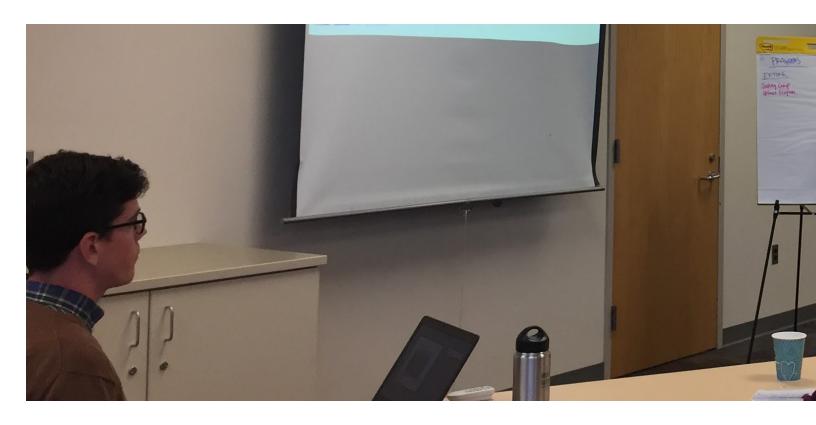


Using this Plan

At the heart of every successful Safe Routes to School comprehensive program is a coordinated effort by parent volunteers, school staff, local agency staff, law enforcement and community advocates, such as public health.

This plan provides an overview of Safe Routes to School with specific recommendations for a 6 E's approach to improve the safety and the health and wellness of students. The specific recommendations in this plan are intended to support improvements and programs over the next 5 years. These recommendations include both long- and short-term infrastructure improvements as well as programmatic recommendations.

It should be noted that not all of these projects and programs need to be implemented right away to improve the environment for walking and bicycling to school. The recommended projects and programs listed in this plan should be reviewed as part of the overall and ongoing Safe Routes to School strategy. Some projects will require more time, support, and funding than others. It is important to achieve shorter-term successes while laying the groundwork for progress toward some of the larger and more complex projects.



Who are You?

As mentioned earlier, successful programs are achieved through the coordinated efforts of parent volunteers, school staff, local agency staff, law enforcement and community advocates, such as public health. Each of these key partners has a role to play according to their specific role. The following paragraphs highlight the unique contributions of key partners in Safe Routes to School.

I AM A PARENT

Parents can use this report to understand the conditions at their children's school and become familiar with the ways an SRTS program can work to make walking and bicycling safer. Concerned parents or city residents have a very important role in the Safe Routes to School process. Parent groups, both formal and informal, have the ability and the responsibility to help implement many of the educational and encouragement programs suggested in this plan. Parent groups can also be critical to ongoing success by helping to fundraise for smaller projects and programs that are implementable without serious effort on behalf of the district or local agency.

I WORK FOR THE SCHOOL DISTRICT

School district staff can use this report to prioritize improvements identified on District property and develop programs that educate and encourage students and parents to seek alternatives to single family commutes to school.

District officials are perhaps the most stable of the stakeholders for a Safe Routes to School program and have the responsibility for keeping the program active over time. District staff can work with multiple schools sharing information and bringing efficiencies to programs at each school working on Safe Routes.

I AM A SCHOOL ADMINISTRATOR

School administrators have an important role in implementing the recommendations contained within this SRTS plan. The impetus for change and improvement must be supported by the leadership of the school.

School administrators can help with making policy and procedural changes to projects that are within school grounds and have the responsibility to distribute informational materials to parents within school publications. Please read the SRTS Facts for School Communication and Newsletters in Appendix A.



I WORK FOR THE CITY OR COUNTY

City and County staff can use this report to identify citywide issues and opportunities related to walking and bicycling and to prioritize infrastructure improvements. City staff can also use this report to support Safe Routes to School funding and support opportunities such as:

- MnDOT Safe Routes to School (SRTS) grants
- Federal Safe Routes to School (SRTS) grants
- Statewide Health Improvement Program (SHIP)

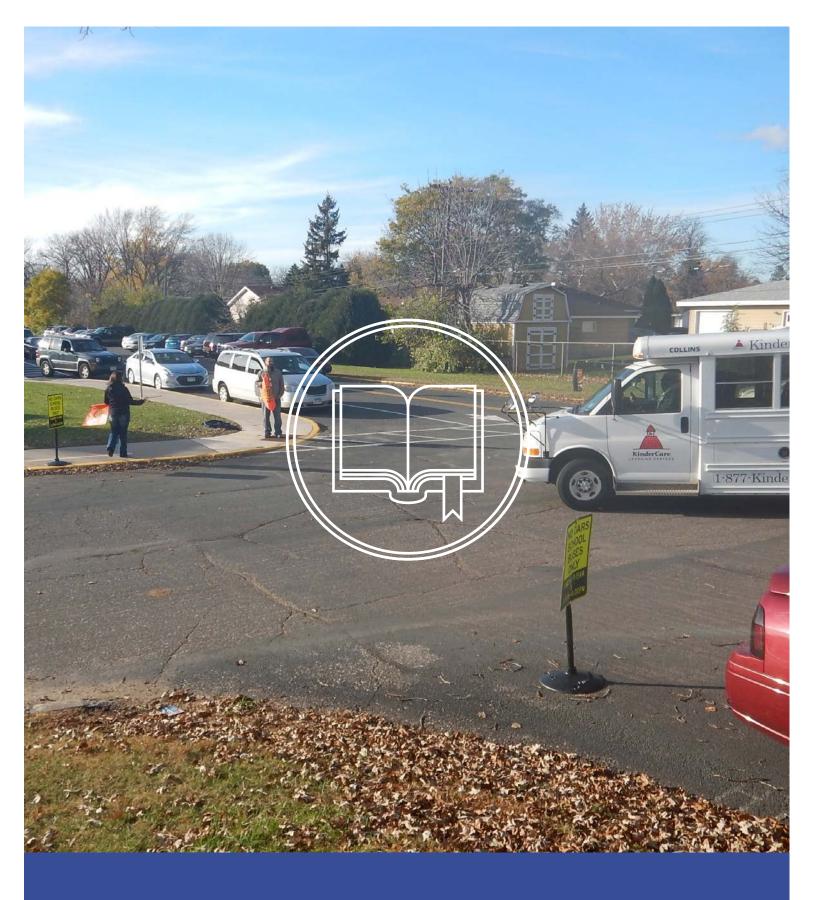
For all infrastructure recommendations, a traffic study and more detailed engineering may be necessary to evaluate project feasibility, and additional public outreach should be conducted before final design and construction. For recommendations within the public right-of-way, the responsible agency will determine how (and if) to incorporate suggestions into local improvement plans and prioritize funding to best meet the needs of each school community.

I WORK FOR THE POLICE DEPART-MENT

Police department staff can use this report to understand issues related to walking and bicycling to school and to plan for and prioritize enforcement activities that may make it easier and safer for students to walk and bike to school. The Police Department will be instrumental to the success of the enforcement programs and policies recommended in this plan. The Police Department will also have a key role in working with school administrations in providing officers and assistance to some of the proposed education and encouragement programs.

I WORK IN PUBLIC HEALTH

Public health staff can use this report to identify specific opportunities to collaborate with schools and local governments to support safety improvements and encourage healthy behaviors in school children and their families.



A

APPENDICES

Appendix A. For More Information



This appendix provides contact information for local, state, and national SRTS program resources as well as school partners.

NATIONAL RESOURCES

Safe Routes to School Data Collection System http://www.saferoutesinfo.org/data-central

Pedestrian and Bicycle Information Center http://www.pedbikeinfo.com/

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

Safe Routes to School Policy Guide
http://www.saferoutespartnership.org/sites/default/filles/pdf/Local_Policy_Guide_2011.pdf

School District Policy Workbook Tool
http://www.changelabsolutions.org/safe-routes/wel-come

Safe Routes to School National Partnership State Network Project

http://www.saferoutespartnership.org/state/network

Bike Train Planning Guide
http://guide.saferoutesinfo.org/walking_school_bus/bicycle_trains.cfm

10 Tips for SRTS Programs and Liability http://www.saferoutesinfo.org/sites/default/files/liabilitytipsheet.pdf

STATE RESOURCES

Dave Cowan, Minnesota SRTS Coordinator 395 John Ireland Blvd St. Paul, MN 55155 651-366-4180 dave.cowan@state.mn.us

Mao Yang, State Aid for Local Transportation 395 John Ireland Blvd St. Paul, MN 55155 651-366-3827 mao.yang@state.mn.us

MnDOT Safe Routes to School Resource Website http://www.dot.state.mn.us/saferoutes/

Walk!Bike!Fun! Pedestrian and Bicycle Safety Curriculum

 $\underline{\text{http://www.bikemn.org/education/walk-bike-fun}}$

School Siting and School Site Design http://www.dot.state.mn.us/mnsaferoutes/planning/school_siting.html

LOCAL RESOURCES

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Appendix B. SRTS Facts for School Communication

The following facts and statistics have been collected from national sources. They are intended to be submitted for use in individual school newsletters, emails or other communication with parents and the broader school community.

Except where otherwise noted, the following are based on research summarized by the National Center for Safe Routes to School. More information, including primary sources, can be found at http://guide.saferoutesinfo.org.

TRAFFIC: COSTS, CONGESTION, AND SAFETY

- In 1969, half of all US schoolchildren walked or biked to school; by 2009, that number had dropped to just 13 percent.
- In the United States, 31 percent of children in grades K–8 live within one mile of school; 38 percent of these children walk or bike to school. You can travel one mile in about 20 minutes by foot or six minutes by bicycle.
- In 2009, school travel by private family vehicle for students in grades K through 12 accounted for 10 to 14
 percent of all automobile trips made during the morning peak travel and two to three percent of the total annual
 trips made by family vehicle in the United States.
- Among parents who drove their children to school, approximately 40 percent returned home immediately after dropping their children at school. If more children walked or bicycled to school, it would reduce the number of cars near the school at pick-up and drop-off times, making it safer for walkers and bicyclists through reduced traffic congestion and improved air quality.
- Over the past few decades, many school districts have moved away from smaller, centrally located schools and have instead built schools on the edge of communities where land costs are lower and acreage has been more available. As a result, the percentage of students in grades K through 8 who live less than one mile from school has declined from 41 percent in 1969 to 31 percent in 2009.
- Personal vehicles taking students to school accounted for 10 to 14 percent of all personal vehicle trips made during the morning peak commute times. Walking, bicycling, and carpooling to school reduces the numbers of cars dropping students off, reducing traffic safety conflicts with other students and creates a positive cycle—as the community sees more people walking and biking, more people feel comfortable walking and bicycling.
- Conservatively assuming that 5% of today's school busing costs are for hazard busing, making it safe for those
 children to walk or bicycle instead could save approximately \$1 billion per year in busing costs.
- In 2009, American families drove 30 billion miles and made 6.5 billion vehicle trips to take their children to and from schools, representing 10-14 percent of traffic on the road during the morning commute.
- Reducing the miles parents drive to school by just 1% would reduce 300 million miles of vehicle travel and save an estimated \$50 million in fuel costs each year.
- Did you know that as more people bicycle and walk, biking and walking crash rates decrease? This is also known as the 'safety in numbers' principle. As more families walk and bike to school, streets and school zones become safer for everyone.



HEALTH: PHYSICAL ACTIVITY AND OBESITY

- The U.S. Department of Health and Human Services recommends that children do one hour or more of physical activity each day. Walking just one mile each way to and from school would meet two-thirds of this goal.
- Studies have found that children who get regularly physical activity benefit from healthy hearts, lungs, bones and muscles, reduced risk of developing obesity and chronic diseases, and reduced feelings of depression and anxiety. Teachers also report that students who walk or bike to school arrive at school alert and "ready to learn."
- Researchers have found that people who start to include walking and biking at part of everyday life (such as the school commute trip) are more successful at sticking with their increased physical activity in the long term than people who join a gym.
- One recent study showed that children who joined a "walking school bus" ended up getting more physical
 activity than their peers. In fact, 65% of obese students who participated in the walking program were no longer
 obese at the end of the school year.
- Childhood obesity has increased among children ages 6 to 11 from 4% in 1969 to 19.6% in 2007. Now 23 million children and teens—nearly one-third of all young people in the U.S.—are overweight or obese.
- The 2010 Shape of the Nation report from the National Association for Sport and Physical Education found that, nationwide, less than one-third of all children ages 6 to 17 participate in physical activity for at least 20 minutes that made the child sweat and breathe hard.
- Children aren't exercising enough AND 78% of children aren't getting the 30 to 60 minutes a day of regular exercise plus 20 minutes of more vigorous exercise that doctors recommend.
- Children are increasingly overweight. 20% of children and 33% of teens are overweight or at risk of becoming overweight. This is a 50% to 100% increase from 10 years ago.
- According to a Spanish study of 1,700 boys and girls aged between 13 and 18 years, cognitive performance
 of adolescent girls who walk to school is better than that of girls who travel by bus or car. Moreover, cognitive
 performance is also better in girls who take more than 15 minutes than in those who live closer and have a
 shorter walk to school.
- One hundred calories can power a cyclist for three miles, but it would only power a car 280 feet. If you have a bowl of oatmeal with banana and milk for breakfast, you could bike more than nine miles. How far is the trip to school from your house?
- A 2004 study in the American Journal of Preventive Medicine found that, for every hour people spend in their cars, they are 6% more likely to be obese.
- Because of the health benefits, the cost of walking is actually negative.
- Childhood obesity rates have more than tripled in the past 30 years, while the number of children walking and biking to school has declined. According to the 2009 National Household Travel Survey, 13 percent of students between the ages of 5 and 14 walked or biked to or from school, compared to 48 percent in 1969.

ENVIRONMENT: AIR QUALITY, CLIMATE CHANGE AND RESOURCE USE

- Did you know? When you walk, bike, or carpool, you're reducing auto emissions near schools. Students and adults with asthma are particularly sensitive to poor air quality. Approximately 5 million students in the U.S. suffer from asthma, and nearly 13 million school days per year are lost due to asthma-related illnesses.
- Did you know that modern cars don't need to idle? In fact, idling near schools exposes children and vehicle occupants to air pollution (including particulates and noxious emissions), wastes fuel and money, and increases unnecessary wear and tear on car engines. If you are waiting in your car for your child, please don't idle you'll be doing your part to keep young lungs healthy!
- Families that walk two miles a day instead of driving will, in one year, prevent 730 pounds of carbon dioxide from entering the atmosphere.
- The United States moved into the 21st century with less than 30% of its original oil supply remaining.
- Americans drive more than 2 trillion vehicle miles per year.
- Short motor-vehicle trips contribute significant amounts of air pollution because they typically occur while an engine's pollution control system is cold and ineffective. Thus, shifting 1% of short automobile trips to walking or biking decreases emissions by 2 to 4%.
- There is more pollution inside a stationary car on a congested road than outside on the pavement.
- From 30% to 60% of urban America is given over to the car; two-thirds in Los Angeles.
- The transportation sector is the second largest source of CO2 emissions in the U.S. Automobiles and light-duty trucks account for almost two-thirds of emissions from the transportation sector. Emissions have steadily grown since 1990.
- In a year, a typical North American car will add close to five tons of CO2 into the atmosphere. Cars account for an estimated 15% to 25% of U.S. CO2 emissions.
- Transportation is the largest single source of air pollution in the United States. In 2006 it created over half
 of the carbon monoxide, over a third of the nitrogen oxides, and almost a quarter of the hydrocarbons in our
 atmosphere.
- Disposal of used motor oil sends more oil into the water each year than even the largest tanker spill.
- Going by bus instead of car cuts nitrogen oxide pollution by 25%, carbon monoxide by 80% and hydrocarbons by 90% per passenger mile.
- Eight bicycles can be parked in the space required for just one car.

Appendix C. Summary of Planning Process



The following is a brief summary of the planning process completed for the formation of this plan. The timeline below accompanies the narrative.



Planning for the SRTS plans began in the spring of 2016, after the City of Fridley successfully applied and was awarded a planning assistance grant from MnDOT. On July 28, 2016, consultant and MnDOT staff met in Fridley with the Fridley team leaders - local SRTS team members who identified themselves as the core group. An informal training was given to the team leaders on the background and principles of SRTS. This was followed by a brief walking tour of neighborhoods surrounding the schools. At the end of the meeting, consultant and MnDOT staff toured the city, made note of potential barriers, collected photos, and observed the local flow of traffic.

In September of 2016, data collection of student travel patterns and parent perceptions of walking and biking was completed by the local team. The three Fridley schools sent electronic surveys to parents that asked them about how comfortable they were with their children walking and biking to school. In addition, the survey asked the distance from school families live, whether they feel like their school promotes biking and walking, and what changes would make them feel more confident about allowing their children to walk or bike. In addition to the surveys sent home to parents, students were asked by school staff about their travel patterns to and from school. This student tally collected data on travel to and from school during three weekdays in September. Both the student tally and parent survey were designed by the National Center for Safe Routes to School. Results from both were uploaded to the Data Collection System, allowing for comparison when future surveys and tallies are completed.

RAPID PLANNING SESSION

In November of 2016, a broad group of stakeholders met for an intensive day-and-a-half meeting called a



Rapid Planning Session. This charrette-style event brought together school, district, and city and county staff to discuss the challenges and opportunities for walking and biking to school in Fridley. Broadly, the Rapid Planning Session was made up of three parts. In the morning of the first day, attendees learned about SRTS, discussed upcoming projects and existing conditions that may affect biking and walking, and brainstormed potential programs that could help make biking and walking to school more appealing to students and families.

In the afternoon, the team met with a group of students (at Hayes Elementary) to tell them about the SRTS plan and discuss their feelings towards walking and biking. Large format maps were used for students to show neighborhood destinations, walking routes and biking routes, and barriers. Following this, consultant staff led stakeholders on a walk assessment - the process of walking the streets of an area and evaluating the experiences a pedestrian would have. It allowed for the group to understand what walking to school is like.

Following the walk assessment, meeting participants split up and observed the dismissal of students at each of the three Fridley schools. During this time, one member of the consultant team set up maps and informational materials outside one of the elementary schools in order to engage parents arriving to pick up their children. Finally, after dismissal was observed, all stakeholders reconvened and discussed what was observed during the walk assessment and dismissal. Walking and bicycling routes, bus loading, parent pick up, issues and opportunities were recorded on large format maps and later were referenced by the consultant team when making recommendations.

On the morning of day two, consultants presented the local team with the recommendations formulated the previous night. The local team provided useful initial feedback for the consultant team.

ENGINEERING MEETING

The consultant team then took information gathered at the Rapid Planning Session and met with Fridley engineers in December of 2016. The integration of these recommendations with other capital projects programmed for the area was discussed. The feedback received was critical in finalizing the infrastructure recommendations shown in this plan.





Appendix D. Existing Conditions



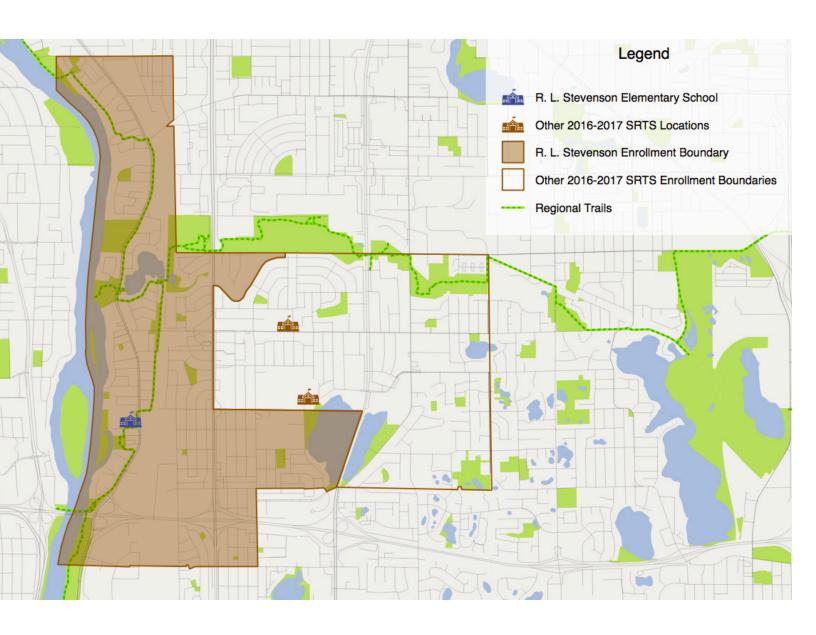
The following is a brief summary of the existing conditions in the area of Stevenson Elementary School.

SCHOOL CONTEXT

Basic Information

Principal: Daryl Vossler Grades: PK-4 Number of Students: 545 Arrival Time: 9:00 AM Dismissal Time: 3:45 PM

School Enrollment Boundary



Surrounding Land Use

Stevenson Elementary School is bound by East River Road on the east and 61st Way NE on the north. Chase Island Road and the Mississippi River Regional Trail create the southern border. The Mississippi River and the River Edge Way Park run along the western edge of the school boundary. River Edge Way and Chases Island Road both have pedestrian shortcuts to the school property. Fridley Middle School and Fridley High School are both located a mile east of Stevenson Elementary School, however, with the train tracks running north-south just east of the school, getting to the middle and high schools would be challenging by foot. The only place to cross these tracks by car is a half-mile north at Mississippi Street NE.

Stevenson Elementary School is located within a Transit Oriented Development District. Single-family residential development is located north of Stevenson Elementary School. Multi-family homes are located to the south of the school. There are more single-family homes and townhomes located to the east of the railroad, however, these are difficult to travel to by foot. Commercial areas including convenience stores and fast food are located a half-mile southeast of the school, but the only convenient access is by highway.

Infrastructure/Existing Conditions for Walking and Biking

The only sidewalks located along the school property are at the 61st Way NE and East River Road intersection. These sidewalks only continue for one block to allow for a waiting area for transit stops. The Mississippi River Regional Trail is located along the eastern border of the school. The only striped pedestrian crossing is at 61st Way NE and East River Road which is a signaled intersection.

Facilitated Crossing Locations

The Fridley Public Schools district provides walking and biking safety tips and information on its website under "Transportation" information in addition to conducting a walk to the stop campaign. The campaign encourages students to walk to a stop sign in order to cross the adjacent street since buses make stops are street corners, but the campaign has been difficult.

SCHOOL/CAMPUS LAYOUT

Stevenson Elementary School renovations were done in 2016 to add an expansion to the school. The school has one driveway that leads to both the parking lot and the bus drop-off and pick-up zone. All vehicles enter through this driveway and private vehicle pick-up and drop-offs occur in the north parking lot. This prevents kids from having to run between buses.

Buses utilize the eastern parking lot to drop off and pick up students from campus. Students enter the building from easternmost entrance. Staff and faculty parking is also located in this parking lot. All other vehicles are prohibited from using this loop during arrival and dismissal times.

Parent drop-off and pick-up vehicles utilize the north parking lot, where vehicles circulate counterclockwise. Both the north and east parking lots share the same access point onto East River Road.

SCHOOL TRAVEL PATTERNS

Current Mode Share (Hand Tallies)

Twenty-nine classrooms submitted walk and bike numbers during the month of September 2016. From the numbers submitted by participating classrooms, it was determined that 4% of students walk and 1% of students bike to school. Students who bike and walk to school also bike and walk home while more students walk home. Most students (94%) arrive to campus by school bus (70%) or by family vehicle (24%) and depart from campus by school bus (71%) or family vehicle (23%).

Parent Survey Summary

Twenty-four parent survey questionnaires were returned. According to the responses received, 79% of survey respondents reported that their students reside within an estimated two miles of campus with the greatest proportion of students residing between one-half and one mile from campus (38%). About one-third of survey respondents reported that their students arrive (67%) and depart (58%) campus by bus while half of students arrive (33%) and depart (38%) campus by family vehicle. Survey respondents reported that no students bike from

school, no students walk to school, and only one student walks home from school.



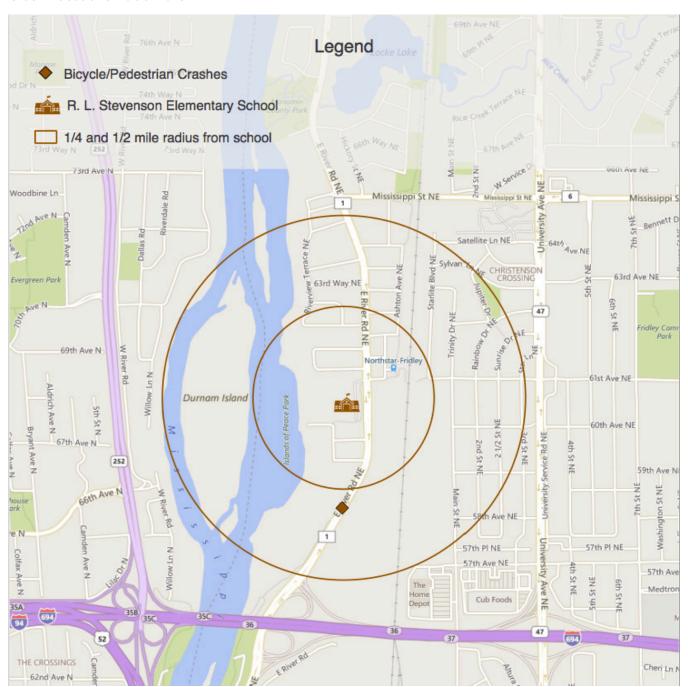
In general, students arrive and depart from school using the same mode for both trips. More students have not asked for permission to walk or bike to and from school than those who have asked.

Survey respondents of students who do not currently walk or bike to school cited safety of intersections and crossings, speed or amount of traffic, crossing guards, and presence of sidewalks or pathways as the main reasons that affect their decision to not allow their students to walk or bike to and from school.

Generally, parents are concerned about the safety of students walking due to lack of adult supervision as well as busy streets and intersections. If safer walking conditions in the form of infrastructure and crossing guards were provided at busier streets, such as University Avenue or 61st Avenue NE, parents would feel more comfortable allowing their students to walk to campus.

TRAFFIC CONDITIONS AND CRASH ANALYSIS

Crash Locations 2006-2015



ASSETS AND CHALLENGES

Assets

- Parent interest in safe walking infrastructure and programming
- Potential future sidewalks and trails along East River Road
- Planned Mississippi River Trail extension from southwest corner of campus to multifamily housing developments
- Support for wellness initiatives from teachers and staff
- Potential redevelopment south of campus presents opportunities for better and/or increased connectivity

Infrastructure Challenges

- Parent interest in safe walking infrastructure and programming
- Potential future sidewalks and trails along East River Road
- Planned Mississippi River Trail extension from southwest corner of campus to multifamily housing developments
- Support for wellness initiatives from teachers and staff
- Potential redevelopment south of campus presents opportunities for better and/or increased connectivity

WALK AUDIT SUMMARY

Walk Audit Conditions

Date: 11/01/2016

Day of the Week: Tuesday

Time: Afternoon Weather Conditions: -

Participants: Rapid Planning Charrette Attendees

Walk Audit Summary

Pedestrian Circulation

Some parents park their vehicles along Chases Island Road or Anna Avenue NE to walk their students, generally pre-kindergarteners, along the Mississippi River Regional Trail to connecting sidewalks on campus. Other students have access to school from of campus and east of East River Road by way of two pedestrian paths that have been constructed between private residential properties. However, these pedestrian paths are narrow with poor sightlines, especially for younger students who are generally shorter. The private residential properties along these paths have also employed privacy landscaping and fencing that contributes to a sense of seclusion for people using this infrastructure. Approximately five students were observed utilizing these paths after school.

Crossing East River Road at street level is still difficult, even with marked crosswalks and priority signalized timing for pedestrians. Although a tunnel exists just east of East River Road under the Northstar railroad tracks, students are scared of using the tunnel and parents, often walking with strollers, have difficult accessing the tunnel. There is also a lack of bike ramps for walking bikes up the stairs connecting the tunnel to street level.

For students and parents residing east of East River Road and north of the Fridley Train Station, there is a lack of walking infrastructure to cross the railroad tracks. Additionally, official policy is to discourage students living to the north of campus from walking along Mississippi Street NE east of East River Road.

Bike Circulation

No students were observed riding bikes to or from school during the walk audit.

Crossing Guards and Patrols

There is parent interest and demand for crossing guards at East River Road and 61st Avenue NE despite lack of sidewalks along the east side of East River Road.

Bus Circulation

Buses utilize the east parking to circulate counterclockwise through campus.

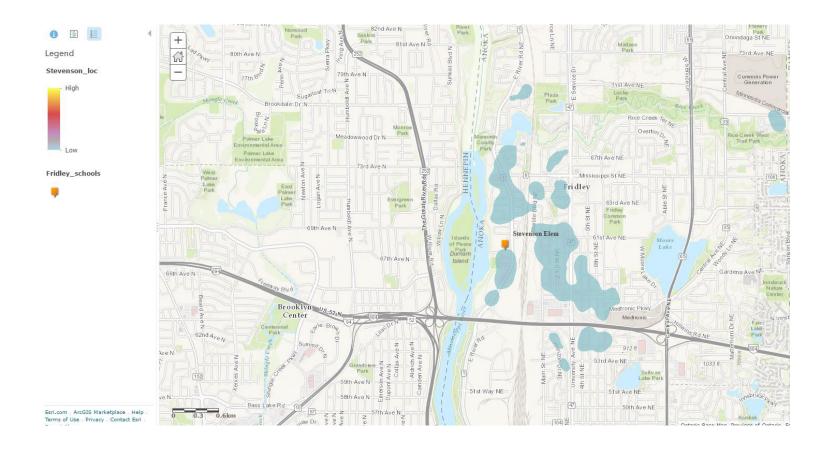
Car Circulation

The posted speed limit along East River Road is 40 miles per hours, although parents report that drivers frequently speed along this stretch. With only one entrance and exit to the parent vehicle loop, there is potential for vehicles to back up off school property along East River Road.

Appendix E. Student Residences



The map below shows the location of students attending Stevenson Elementary in the 2016-2017 school year. There may be additional students outside the extent of the map.



Appendix F. Parent Survey

The following is a summary of the a survey sent home to parents of children attending Stevenson Elementary School in the fall of 2016. It asks parents their feelings about walking and biking and is a direct export from the National Safe Routes to School Data Collection System, which processed the survey responses and generated this report.

Parent Survey Report: One School in One Data Collection Period

School Name: Stevenson Elementary School Set ID: 15397

School Group: Fridley SRTS Month and Year Collected: November 2016

School Enrollment: 0 Date Report Generated: 10/31/2016

% Range of Students Involved in SRTS: Don't Know Tags:

Number of Questionnaires Distributed: 0 Number of Questionnaires

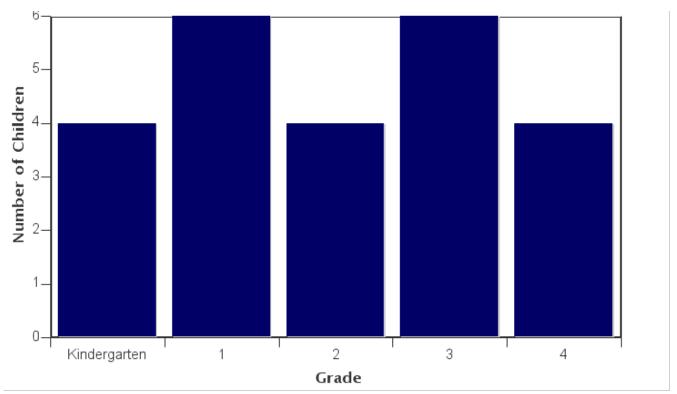
Analyzed for Report: 24

This report contains information from parents about their children's trip to and from school. The report also reflects parents' perceptions regarding whether walking and bicycling to school is appropriate for their child. The data used in this report were collected using the Survey about Walking and Biking to School for Parents form from the National Center for Safe Routes to School.

**Because less than 30 questionnaires are included in this report, each graph and table display counts rather than percentage information.



Grade levels of children represented in survey

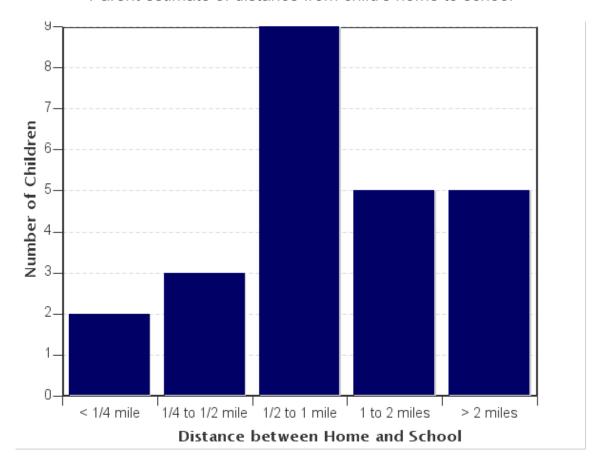


Grade levels of children represented in survey

Grade in School	Responses per grade
Grade in School	Number
Kindergarten	4
1	6
2	4
3	6
4	4

No response: 0

Parent estimate of distance from child's home to school



Parent estimate of distance from child's home to school

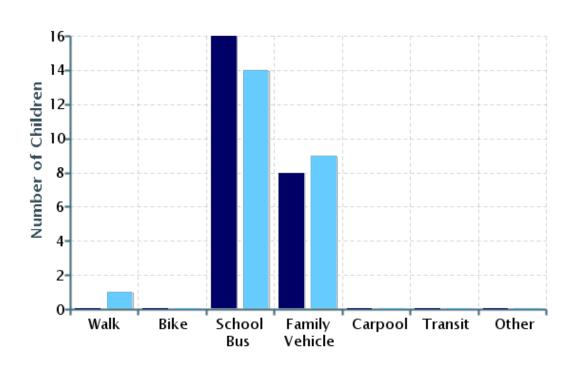
Distance between home and school	Number of children
Less than 1/4 mile	2
1/4 mile up to 1/2 mile	3
1/2 mile up to 1 mile	9
1 mile up to 2 miles	5
More than 2 miles	5

Don't know or No response: 0

Typical mode of arrival at and departure from school







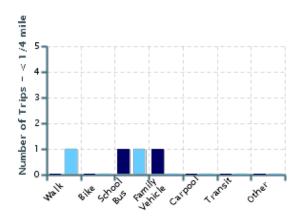
Typical mode of arrival at and departure from school

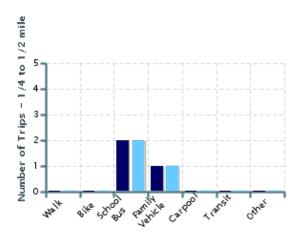
Time of Trip	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	24	0	0	16	8	0	0	0
Afternoon	24	1	0	14	9	0	0	0

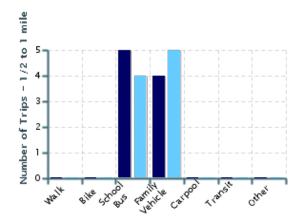
No Response Morning: 0 No Response Afternoon: 0

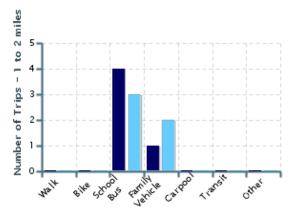


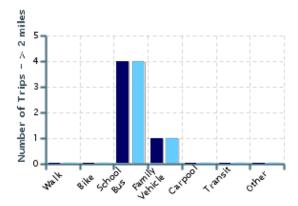
Afternoon













Typical mode of school arrival and departure by distance child lives from school

School Arrival

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	2	0	0	1	1	0	0	0
1/4 mile up to 1/2 mile	3	0	0	2	1	0	0	0
1/2 mile up to 1 mile	9	0	0	5	4	0	0	0
1 mile up to 2 miles	5	0	0	4	1	0	0	0
More than 2 miles	5	0	0	4	1	0	0	0

Don't know or No response: 0

Numbers rather than percents are displayed because the number of respondents for this question was less than 30.

School Departure

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	2	1	0	1	0	0	0	0
1/4 mile up to 1/2 mile	3	0	0	2	1	0	0	0
1/2 mile up to 1 mile	9	0	0	4	5	0	0	0
1 mile up to 2 miles	5	0	0	3	2	0	0	0
More than 2 miles	5	0	0	4	1	0	0	0

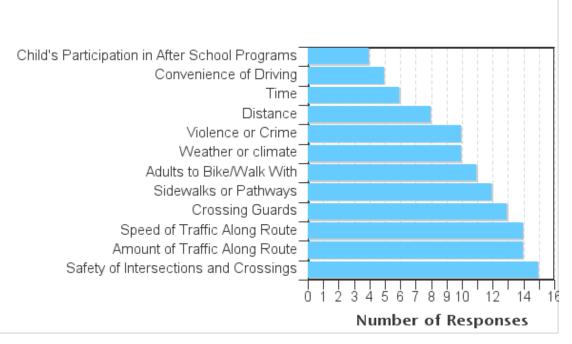
Don't know or No response: 0

Number of children who have asked for permission to walk or bike to/from school by distance they live from school

Asked Permission?	Number of Children	Less than 1/4 mile	1/4 mile up to 1/2 mile	1/2 mile up to 1 mile	1 mile up to 2 miles	More than 2 miles
Yes	7	1	1	5	0	0
No	16	1	1	4	5	5

Don't know or No response: 1

Issues reported to affect the decision to not allow a child to walk or bike to/from school parents of children who do not walk or bike to/from school



Issues reported to affect the decision to allow a child to walk or bike to/from school by parents of children who already walk or bike to/from school

Issue	Child does not walk/bike to school	Child walks/bikes to school
Safety of Intersections and Crossings	15	0
Amount of Traffic Along Route	14	0
Speed of Traffic Along Route	14	0
Crossing Guards	13	0
Sidewalks or Pathways	12	0
Adults to Bike/Walk With	11	0
Weather or climate	10	0
Violence or Crime	10	0
Distance	8	0
Time	6	0
Convenience of Driving	5	0

Child's Participation in After School Programs	4	0
Number of Respondents per Category	20	0

No response: 4

Note:

⁻⁻Factors are listed from most to least influential for the 'Child does not walk/bike to school' group.



Parents' opinions about how much their child's school encourages or discourages walking and biking to/from school

Level of support	Number of children
Strongly Encourages	1
Encourages	1
Neither	19
Discourages	1
Strongly Discourages	2

Parents' opinions about how much fun walking and biking to/from school is for their child

Level of fun	Number of children
Very Fun	6
Fun	6
Neutral	11
Boring	0
Very Boring	0

Parents' opinions about how healthy walking and biking to/from school is for their child

How healthy	Number of children
Very Healthy	11
Healthy	9
Neutral	3
Unhealthy	0
Very Unhealthy	0

Comments Section

SurveyID	Comment
1471363	If there's anything that can be done to promote walking/biking, I'm all for it, but I would not allow it without supervision both for reasons of both traffic and threat of abduction.
1472498	Would love to see a safe way to cross University Avenue.
1471303	crossing guards at east river and 61 is a need for walking
1471382	I believe that if there were bike/walking paths that went over University and East River road the parents of students who attend both Stevenson and FMS from my neighborhood would be more apt to allow them to walk or ride their bikes to school
1471688	I do not feel comfortable with my 6 year olds son walking to and from school by himself. It's not safe.
1475939	I love the idea of walking to school. We have great paths near our home. The problem is that there are not a group of kids to walk to school If there were lots of kids (like when I was a kid) and some crossing guards I would be more willing. I also might be interested in something like a parent relay on the way to school I walk 4 blocks, pick up more kids, hand off to the next parent, walk a few blocks, etc That would be fun and a great way to meet parents and get kids meeting each other. The fear of kids being alone on very desolate walking paths (not high traffic or visiblityconcerns me)
1471384	I'm not comfy that's my daughter be alone by her self at the stop sign in the morning, and I asked the school if the bus can pick her up from are driveway, anyway the bus pass our house so I don't know why it is problem to pick her up from the front of our house?? I really looking for a different school to move her to, cuz I leave at work at 7 in the morning so I can't watch her, and winter is coming I will not gonna put her in danger. Thank you
1471284	My older boys go to Fridley Middle school and I do allow them to walk/bike sometimes, and after sports. I am fearful of 61st as the cars speed by and run stop signs. There have also been many accidents at University and Mississippi. It is a little unsettling.
1471647	My daughter walks to FMS, and most of the time is dropped by her father to his way to work. She asks me constantly to bike to school, but I fear the safety and the traffic by 61 street. As far as my son is concerned, he's little and 1st grader. His school has assigned him a bus.
1471426	NA
1471742	I don't feel my child is responsible enough to get himself to school on time.



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Appendix G. Student Hand Tally

The following is a summary of a hand tally of student transportation behavior. In the fall of 2016, students at Stevenson Elementary were asked how they traveled to and from school on a number of midweek school days. This report is a direct export from the National Safe Routes to School Data Collection System, which processed the tallies and generated this report.

Student Travel Tally Report: One School in One Data Collection Period

School Name: Stevenson Elementary School Set ID: 21800

School Group: Fridley SRTS Month and Year Collected: September 2016

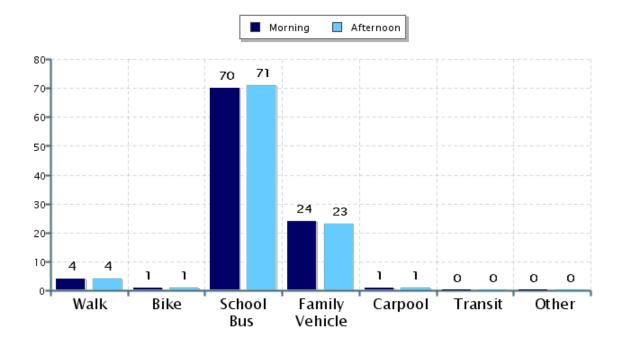
School Enrollment: 0 Date Report Generated: 10/27/2016

% of Students reached by SRTS activities: Don't Know Tags:

Number of Classrooms Included in Report: 29

This report contains information from your school's classrooms about students' trip to and from school. The data used in this report were collected using the in-class Student Travel Tally questionnaire from the National Center for Safe Routes to School.

Morning and Afternoon Travel Mode Comparison



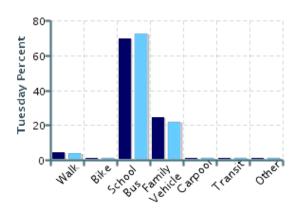
Morning and Afternoon Travel Mode Comparison

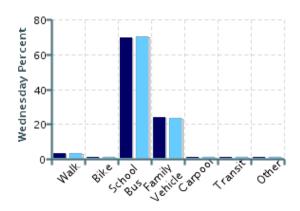
	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	1673	4%	0.5%	70%	24%	1%	0.2%	0.4%
Afternoon	1657	4%	0.6%	71%	23%	1%	0.2%	0.4%

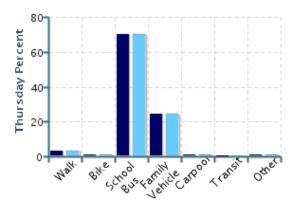
Morning and Afternoon Travel Mode Comparison by Day









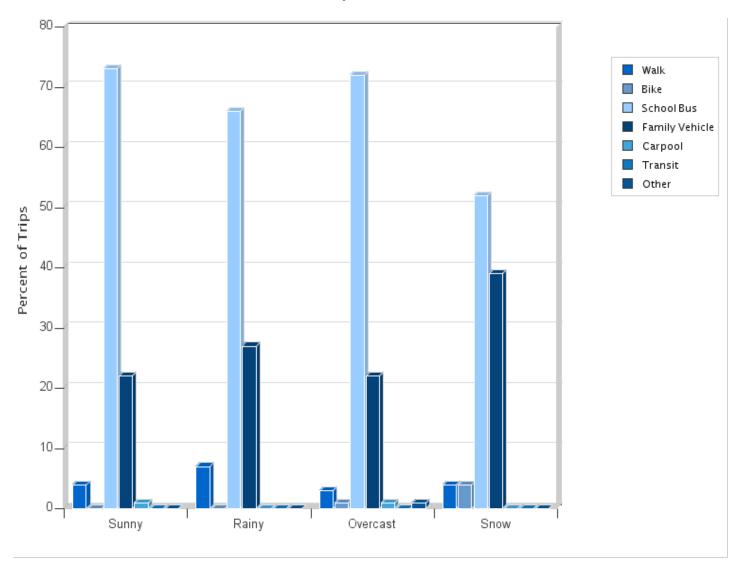


Morning and Afternoon Travel Mode Comparison by Day

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Tuesday AM	543	4%	0.4%	69%	24%	0.9%	0.2%	0.6%
Tuesday PM	548	4%	0.7%	72%	22%	1%	0.4%	0.2%
Wednesday AM	581	3%	0.9%	70%	24%	1%	0.5%	0.3%
Wednesday PM	550	3%	0.9%	70%	23%	1%	0.4%	0.5%
Thursday AM	549	3%	0.4%	70%	25%	1%	0%	0.4%
Thursday PM	559	3%	0.2%	70%	25%	1%	0%	0.4%

Percentages may not total 100% due to rounding.

Travel Mode by Weather Conditions



Travel Mode by Weather Condition

Weather Condition	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Sunny	694	4%	0.3%	73%	22%	0.6%	0.4%	0.1%
Rainy	241	7%	0%	66%	27%	0.4%	0%	0.4%
Overcast	1788	3%	0.5%	72%	22%	0.7%	0.3%	0.6%
Snow	23	4%	4%	52%	39%	0%	0%	0%

Percentages may not total 100% due to rounding.



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Appendix H. Infrastructure Toolbox

This infrastructure toolbox provides an overview of different infrastructure projects. Each infrastructure project includes a pictorial representation, a brief description, and a list of resources for more specific engineering guidelines.

ADVANCED STOP BAR

Description

An advanced stop bar is a solid white line painted ahead of crosswalks on multi-lane approaches to alert drivers where to stop to let pedestrians cross. It is recommended that advanced stop bars be placed twenty to fifty feet before a crosswalk. This encourages drivers to stop back far enough for a pedestrian to see if a second motor vehicle is approaching, reducing the risk of a hidden-threat collision. Advanced stop bars can also be used with smaller turning radii to create a larger effective turning radius to accommodate infrequent (but large) vehicles.



Resources

- Reducing Conflicts Between Motor Vehicles and Pedestrians: The Separate and Combined Effects of Pavement Markings and a Sign Prompt
- FHWA Signalized Intersections: Informational Guide Pages: 192-193
- MN MUTCD: Part 3. Markings Page: 3B-32
- NACTO Urban Street Design Guide Pages: 109-116, 144

CROSSING GUARD

Description

Facilitated crossings are marked crossing locations along student routes where adult crossing guards or trained student patrols are stationed to assist students with safely crossing the street. Facilitated crossings may be located on or off campus. Determining whether a location is more appropriate for an adult crossing guard or student patrol may be based on location including distance from school, visibility, and traffic characteristics. Adult crossing guards and student patrols receive special training, and are equipped with high-visibility traffic vests and flags when on duty.



- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety Pages: 25-26
- MnDOT Minnesota Safe Routes to School: School Crossing Guard Brief Guide
- MN MUTCD: Part 7. Traffic Controls for School Areas Pages: 7D-1-2

CURB EXTENSION/BULB OUT



Description

Curb extensions extend the sidewalk and curb into the motor-vehicle parking lanes at intersection locations. Also called bump-outs, these facilities improve safety and convenience for people crossing the street by shortening the crossing distance and increasing visibility of people walking or biking to those driving.

Resources

- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety – Pages: 11-12
- FHWA Effects of Traffic Calming Measures on Pedestrian and Motorist Behavior – Pages: 6-11
- FHWA Signalized Intersections: Informational Guide Pages: 190-192
- NACTO Urban Street Design Guide Pages: 45-59

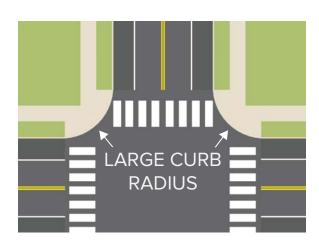


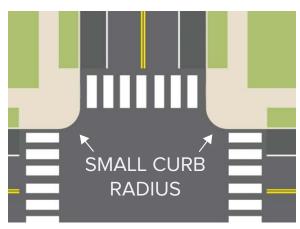
CURB RADIUS REDUCTION

Description

Curb radii designs are determined based on the design vehicle of the roadway. In general, vehicles are able to take turns more quickly around corners with larger curb radii. Minimizing curb radii forces drivers to take turns at slower speeds, making it easier and safer for people walking or biking to cross the street. An actual curb radius of five to ten feet should be used wherever possible, while appropriate effective turning radii range from 15 to 30 feet, depending on the roadway and land use context.

- FHWA Signalized Intersections: Informational Guide Pages: 187-189
- NACTO Urban Street Design Guide Pages: 117-120, 144-146





CURB RAMPS

Description

Curb ramps provide access for people between roadways and sidewalks for people using wheelchairs, strollers, walkers, crutches, bicycles or who have mobility restrictions that make it difficult to step up or down from curbs. Curb ramps must be installed at intersections and mid-block crossings where pedestrian crossings are located, as mandated by federal law. Separate curb ramps should be provided for each direction of travel across the street.



Resources

- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety – Pages: 1-2
- FHWA Signalized Intersections: Informational Guide Pages: 47-50
- United States Access Board Proposed Accessibility Guidelines for Pedestrian Facilities in Public Right-of-Way Pages: 66-67, 78-83

HAWK SIGNALS

Description

The High-Intensity Activated Crosswalk Beacon (HAWK), also referred to as a Pedestrian Hybrid Beacon System by MnDOT, remains dark until activated by pressing the crossing button. Once activated, the signal responds immediately with a flashing yellow pattern which transitions to a solid red light, providing unequivocal 'stop' guidance to motorists. HAWK signals have been shown to elicit high rates of motorist compliance.



- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety – Pages: 13-15
- FHWA Safety Effectiveness of the HAWK Pedestrian Crossing Treatment
- FHWA Evaluation of Pedestrian and Bicycle Engineering Countermeasures: Rectangular Rapid-Flashing Beacons, HAWKs, Sharrows, Crosswalk Markings, and the Development of an Evaluation Methods Report – Pages: 19-28

HIGH-VISIBILITY CROSSWALK



Description

High-visibility crosswalks help to create a continuous route network for people walking and biking by alerting motorists to their potential presence at crossings and intersections. Crosswalks should be used at fully controlled intersections where sidewalks or shared-use paths exist.

Resources

- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety – Pages: 3-8
- MnDOT Guidance for Installation of Pedestrian
 Crosswalks on Minnesota State Highways Page: 3
- MN MUTCD: Part 3. Markings Pages: 3B-34-38
- MN MUTCD: Part 7. Traffic Controls for School Areas Pages: 7A-1-3, 7B-5-8, 7C-1
- NACTO Urban Street Design Guide Pages: 109-116



Description

A Leading Pedestrian Interval (LPI) provides pedestrians with a three to seven second head start when entering an intersection with a corresponding green signal in the same direction of travel. LPIs enhance the visibility of pedestrians in the crosswalk, and reinforce their right-of-way over turning vehicles. LPIs are most useful in areas where pedestrian travel and turning vehicle volumes are both high.

- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety – Pages: 20-22
- NACTO Urban Street Design Guide Page: 128





MEDIAN REFUGE ISLAND

Description

Median refuge islands (also known as median crossing islands) make crossings safer and easier by dividing them into two stages so that pedestrians and bicyclists only have to cross one direction of traffic at a time. Median refuges can be especially beneficial for slower walkers including children or the elderly. Crossing medians may also provide traffic calming benefits by visually narrowing the roadway.

Resources

- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety – Pages: 9-10, 43-44
- FHWA Effects of Traffic Calming Measures on Pedestrian and Motorist Behavior Pages: 17-20
- FHWA Proven Safety Countermeasures: Medians and Pedestrian Crossing Islands in Urban and Suburban Areas
- MN MUTCD: Part 3. Markings Page: 31-2
- NACTO Urban Street Design Guide Page: 116

RAISED CROSSWALKS

Description

Raised crosswalks are wide and gradual speed humps placed at pedestrian and bicyclist crossings. They are typically as high as the curb on either side of the street, eliminating grade changes for people crossing the street. Raised crosswalks help to calm approaching traffic and improve visibility of people crossing.

- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety – Pages: 3-4
- FHWA Effects of Traffic Calming Measures on Pedestrian and Motorist Behavior – Pages: 12-15
- MN MUTCD: Part 3. Markings Pages: 3B-46-49
- NACTO Urban Street Design Guide Page: 54



RECTANGULAR RAPID FLASHING BEACON (RRFB)

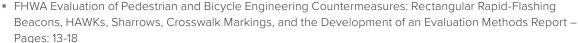


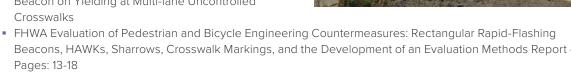
Description

An RRFB uses an irregular stutter flash pattern with bright amber lights (similar to those on emergency vehicles) to alert drivers to yield to people waiting to cross. The RRFB offers a higher level of driver compliance than other flashing yellow beacons, but lower than the HAWK signal.

Resources

- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety – Pages: 16-17
- FHWA Effects of Yellow Rectangular Rapid-Flashing Beacon on Yielding at Multi-lane Uncontrolled Crosswalks





ROAD DIET

Description

A classic road diet converts an existing four-lane roadway to a three-lane cross-section consisting of two through lanes and a center two-way left turn lane. Road diets improve safety by including a protected left-turn lane, calming traffic, reducing conflict points, and reducing crossing distance for pedestrians. In addition, road diets provide an opportunity to allocate excess roadway for alternative uses such as bike facilities, parking, transit lanes, and pedestrian or landscaping improvements.

- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety - Pages: 29-31
- FHWA Road Diet Desk Reference
- FHWA Road Diet Informational Guide
- NACTO Urban Street Design Guide Page: 14



SCHOOL SPEED ZONE

Description

School speed zones reduce speed limits near schools, and alert motorists that they are driving near a school. School speed zones are defined as the section of road adjacent to school grounds, or where an established school crossing with advance school signs is present. Each road authority may establish school speed zone limits on roads under their jurisdiction. In general, school speed limits shall not be more than 30 mph below the established speed limit, and may not be lower than 15 mph. Speed violations within school speed zones are subject to a double fine.



Resources

- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety – Pages: 48-51
- MnDOT School Zone Speed Limits
- MN MUTCD: Part 7. Traffic Controls for School Areas Section: 7E

SHARED USE PATH

Description

Shared-use paths provide off-road connections for people walking and biking. Paths are often located along waterways, abandoned or active railroad corridors, limited access highways, or parks and open spaces. Shared-use paths may also be located along high-speed, high-volume roads as an alternative to sidewalks and on-street bikeways; however, intersections with roadways should be minimal. Shared-use paths are generally very comfortable for users of all ages and abilities.

- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety – Page: 2
- MnDOT Bikeway Facility Design Manual Pages: 123-168
- AASHTO Guide for the Development of Bicycle Facilities Chapter 5



SIDEWALKS



Description

A well-connected sidewalk network is the foundation of pedestrian mobility and accessibility. Sidewalks provide people walking with space to travel within the public right-of-way that is separated from roadway vehicles. Sidewalks are associated with significant reductions in motor vehicle / pedestrian collisions.

Resources

- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety – Pages: 1-2
- AASHTO Guide for the Planning, Design, and Operation of Pedestrian Facilities
- NACTO Urban Street Design Guide Pages: 37-44
- United States Access Board Proposed Guidelines for Pedestrian Facilities in Public Right-of-Way



TRAFFIC CIRCLES (MINI ROUNDABOUTS)

Description

Traffic circles are raised circular islands constructed in the center of residential intersections. They may take the place of a signal or four-way stop sign, and calm vehicle traffic speeds by forcing motorists to navigate around them without requiring a complete stop. Signage should be installed with traffic circles directing motorists to proceed around the right side of the circle before passing through or making a left turn.

- MnDOT Minnesota's Best Practice for Pedestrian and Bicycle Safety – Pages: 43-44
- FHWA Technical Summary: Mini-Roundabouts
- FHWA Technical Summary: Roundabouts Page: 7 (mention of school area siting)
- MN MUTCD: Part 3. Markings Pages: 3C1-15
- NACTO Urban Street Design Guide Page: 99



Appendix I. Bike Parking for Schools

Bicycle parking at schools does more than just provide space for storage during the school day. Depending on design, bicycle parking can actually encourage students and staff to choose to ride their bikes to school. Here are some things to think about when planning bicycle parking at school.

HOW MUCH PARKING SHOULD BE PROVIDED?

The amount of bike parking needed will depend on the capacity of your scrioor, the age of students, and the number of staff. But remember: be aspirational! Provide parking for the classrooms, space for so bicycles should be provided. Don't forget to add some for faculty

25 percent of the maximum student capacity of the school.

Additional parking to encourage staff and faculty to bike to school

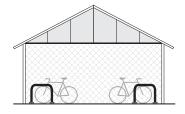
WHERE SHOULD PARKING BE LOCATED?

Well-located bike parking will be:

- visible to students, staff, and visitors
- near the primary school entrance/exit
- easily accessed without dismounting
- clear of obstructions which might limit the circulation of users and their bikes
- easily accessed without making a rider cross bus and car circulation
- installed on a hard, stable surface that is unaffected by weather
- often found near kindergarten and daycare entrance, which allows parents to conveniently pick up their children on their bikes

CAN MY SCHOOL PROVIDE ADDI-**TIONAL AMENITIES?**

Bike parking shelters and lockers provide extra comfort and security for those choosing to ride to school. They're also a great project for a shop class. Both can be very simple in construction and go a long way towards making biking attractive and prioritized!





WHICH RACKS ARE NOT RECOMMENDED?

For example, if each class-

room has a max capacity of

20 students and there are 10

WHICH RACKS ARE BEST?



POST & RING

These racks provide two points of contact with the bicycle, accommodate varying styles of bike, allow for at least one wheel to be U-locked, and are intuitive to use!



WHEELWELL SECURE





SPIRAL



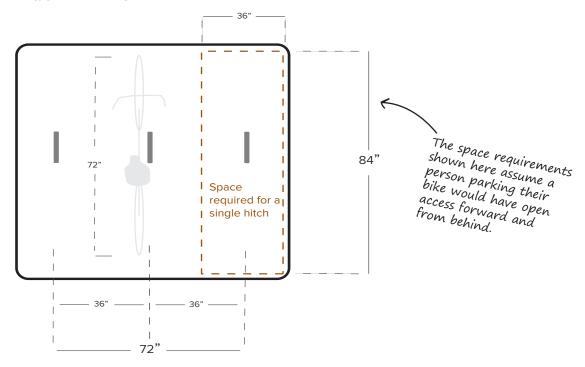
COMB

These racks do not provide support at two places on the bike, can damage the wheel, do not provide adequate security, and are not intuitive to use!

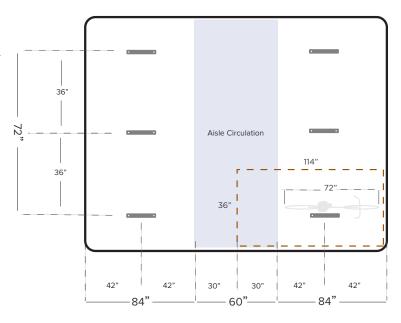
Graphics courtesy of Association of Pedestrian and Bicycle Professionals Essentials of Bike Parking report (2015).

SPACE REQUIREMENTS





The space requirements shown here assume the area is confined on either side (left and right). Access is located at the top and bottom of the image, requiring a center aisle for circulation.



Space required for a single hitch

RESOURCES FOR EQUIPMENT

<u>Dero</u> <u>Sportworks</u> <u>Urban Racks</u>

MORE INFORMATION

APBP Essentials of Bike Parking Bike Shelter Development Guide -Portland Public Schools

Appendix J. Maintenance Planning

ANNUAL MAINTENANCE

School routes and crosswalks should be prioritized for maintenance. To ensure high visibility crosswalks maintain their effectiveness, review all crosswalks within one block of the school each year. If there is notable deterioration, crosswalks should be repainted annually. In addition, crosswalks on key school walk routes should be evaluated annually and repainted every other year or more often as needed.

SEASONAL PLANNING AND MAINTENANCE

Walking and cycling generally diminish during the cold winter months as poorly maintained infrastructure and unpleasant weather conditions create barriers for pedestrians and bicyclists. However, maintaining infrastructure and planning inviting winterscapes for students can facilitate the convenience of biking and walking as well as provide new opportunities to encourage students to be outside more.

Snow removal and maintenance of school routes should be prioritized. Snow removal is a critical component of pedestrian and bicycle safety. The presence of snow or ice on sidewalks, curb ramps, or bikeways will deter pedestrian and cyclist use of those facilities to a much higher degree than cold temperature alone. Families with children will avoid walking in locations where ice or snow accumulation creates slippery conditions that may cause a fall. Curb ramps that are blocked by ice or snow effectively sever access to pedestrian facilities. Additionally, inadequately maintained facilities may force pedestrians and bicyclists into the street. Identified routes to school should be given priority for snow removal and ongoing maintenance.

While it is important to prioritize maintenance, additional planning should be employed to create new opportunities to encourage students to be outside more through design. According to the City of Edmonton's Winter Design Guidelines, the five main design principles for designing cities that are inviting and functional for outdoor public life year-round include blocking wind, capturing sunshine, using color, lighting, and providing infrastructure that supports desired winter activities.

Strategies to block wind in the winter include grading land that blocks cold winds from the north and northwest. Other strategies include planting trees and/or piling snow along the north and west sides of streets, properties, parks, and trails to provide shielding from the wind. Buildings along streets can also use canopies, colonnades, and setbacks to block wind and create more inviting street-level walking conditions.

Another way to create an inviting pedestrian and bicycle environment is to employ strategies that maximize limited winter sunshine. Deciduous trees that drop their leaves in winter allow sunshine to filter down to streets and sidewalks. Building setbacks can also allow more sunshine to reach pedestrian areas in the form of wider sidewalks. Creative public art can also capture and reflect sunlight that also provides fun and engaging elements on walks and bicycle trips for students to enjoy their travel.

Using warm colors and warm building materials can also contribute to a sense of warmth for the winter pedestrian or bicyclist. When people feel warmer, their attitude improves and they have a greater resilience for being outside in temperatures that they may not normally consider as comfortable. For students with creative imaginations or who need extra stimuli to engage their interest in biking or walking, colorful building facades, public art elements, and wayfinding may encourage them to walk or bike not only in the winter, but year-round.

Lighting is also an element that is important year-round, but becomes increasingly important in the winter for creating more inviting winterscapes for pedestrians and bicyclists. Lighting can contribute to inducing a sense of warmth and safety, as well as be used for wayfinding and as passive public art displays.

Lastly, providing infrastructure that supports desired winter activities can also encourage more active transportation. Some particularly encouraging strategies beyond providing ice skating rinks that have been employed in Edmonton, Canada include harnessing plowed snow piles and stored snow to create new play opportunities for students. These snow piles can be strategically placed in parks along walking routes and mounded into winter slides. Other practices have included regularly compacting snow to make it malleable enough for students to construct their own snow house structures, with maintenance crews compacting the snow every few days to prevent it from forming into denser ice.

Resources

Winter Design Guidelines: Transforming Edmonton into a Great Winter City https://www.edmonton.ca/city_government/documents/PDF/WinterCityDesignGuidelines_draft.pdf

Appendix K. Equity in SRTS Planning



When planning and implementing your SRTS programming, it is important to design events and activities that are inclusive of students of all backgrounds and abilities. The population of the City of Fridley is approximately 70% Caucasian with 30% of the population identifying as people of color. Poverty levels are similar to the national rate. This appendix identifies potential obstacles to participation and suggests creative outreach, low-cost solutions, and flexible program implementation to address language barriers, students with disabilities, personal safety concerns, and barriers related to school distance.

LANGUAGE AND/OR CULTURAL BARRIERS

To encourage families that do not speak English, are learning English, or have recently immigrated to participate in Safe Routes to School programs, it is important to communicate how the program can benefit families and address parental concerns. Hiring a bilingual staff person is the best way to communicate and form relationships with a community.

Provide Materials in Multiple Languages

Some concepts can lose their meaning and be confusing when translated literally. Also, words may have different meanings depending on the regional dialect.

- Ask families with native speakers to help communicate the message to others.
- Use images to supplement words so that handouts are easy to read and understand.

Use a Variety of Media

In schools where families speak different languages, it can be a good idea to present information in multiple ways.

- Use a variety of mechanisms to communicate the benefits of walking and bicycling to parents.
- Have students perform to their parents, such as through a school play.
- Encourage youth-produced PSAs to educate parents on why biking and walking are fun and healthy events.
- Provide emails, print materials, etc., in multiple languages.
- Use a phone tree, PTA, or events to reach parents.
- Engage an assistant who speaks multiple languages to reach out to parents at events.
- Employ staff from similar ethnic backgrounds to parents at the school.
- Parents increasingly use texting more than emails. Find out how parents communicate with each other and use their methods.

Meet People Where They Are

Some families may not feel comfortable coming to your events or participating in formal PTA and organizations.

- Attend established meetings to reach groups who may not participate in school PTAs or other formal meetings.
- State required English Learner Advisory Committees (ELACs) are good partners.
- Conduct outreach or table at school events (such as: Movie nights, family dance nights, Back to School nights, etc.).

Residents are often aware of traffic and personal safety issues in their neighborhoods, but don't know how to address them.

- Provide a safe place for parents to voice concerns to start the conversation about making improvements.
 Listen to their concerns, help parents prioritize, and connect them with the responsible agency to address the concerns.
- Encourage staff or parent volunteers to host house meetings, in which a small group gathers at the home of someone they know to voice concerns and brainstorm solutions.
- Seek common goals for community improvement that can be addressed through collaborative efforts with all parent groups.
- Consider inviting law enforcement or public works staff to build a better relationship between officers and
 residents so they feel comfortable voicing future concerns. Note that some groups may have complex
 relationships of police mistrust, such as among undocumented communities. Again, asking for police
 representatives who are from the community works best.
- When looking for volunteers, start by looking to friends and neighbors to build your base group.
- Be creative; consider going to community events like Farmer's Markets and neighborhood gathering spots to recruit. Try different ways of engaging with participants; the City as Play Design Workshops have creative ideas

for asking attendees to build their visions.

Look for small victories: adding a crossing guard, signage and paint gives parents confidence that their issues
can be addressed.

Host Parent Workshops

All parents desire for their children to be successful. Workshops are a good opportunity to articulate how services and programs can reduce barriers to students' success and help them be successful.

- Create simple ways for parents to get involved and help put on events and activities with their children, who can often help navigate the situation.
- Hold a "Parent University," or workshops where parents can voice their concerns.
- · Listen to and act on parents' suggestions to build trust in the community and address concerns.
- Include an icebreaker activity to introduce yourself and to make the participants more comfortable sharing their thoughts and opinions.

Establish Flexible Programs

Create a trusting and welcoming environment by not requiring participants to provide information about themselves, which could be a deterrent to undocumented immigrants.

• Establish a training program for volunteers that does not require background checks or fingerprints since some parents who would like to volunteer may not be able to pass background checks.

Often working parents have limited time to volunteer with their children's schools. The hours and benefits associated with many jobs can make it challenging for parents to be available for school activities and take paid time off.

- Host meetings and events at varying times to accommodate differing work schedules.
- Make specific requests and delegate so no single person has to do the majority of the work.

Communicate Health Benefits

Families who are less well-connected to the school community may not be as aware of the benefits of SRTS programming.

- Publicize to parents that walking and biking to school is exercise and to children that it is fun, like an additional recess.
- Health fairs can highlight biking and walking to create an association between those commute options and their benefits. Encouragement competitions such as the Golden Sneaker Award and Pollution Punch Card can show how many calories students have burned.

STUDENTS WITH DISABILITIES

Some students may not be able to walk or bike to school because of physical or mental disabilities, but they can still be included in SRTS programs.

- Invite children with physical disabilities to participate in school infrastructure audits to learn how to improve school access for all.
- Students with mental disabilities may have differing capacities for retaining personal and traffic safety
 information, but programs like neighborhood cleanups and after-school programs can be fun ways to socialize
 and participate with other students.
- Involve special education instructors and parents of disabled students in the planning and implementation of these programs to better determine the needs of children with disabilities.
- Create SRTS materials that recognize students with disabilities. Include pictures of students with disabilities in program messaging to highlight that SRTS programs are suitable for all students.

Additional Resources

- National Center for SRTS's Involving Students with Disabilities http://saferoutesinfo.org/sites/default/files/resources/Involving_students_with_disabilities.pdf
- SRTS National Partnership's: Students with Disabilities http://www.saferoutespartnership.org/sites/default/files/ pdf/Serving_Students_with_Disabilities_SRTSNP_11_4_09_FINAL.pdf

PERSONAL SAFETY CONCERNS

In some communities, personal safety concerns associated with crime activity is a significant barrier to walking

and bicycling. These can include issues of violence, dogs, drug use, and other deterrents that can take precedence over SRTS activities in communities. These neighborhoods may lack sidewalks or other facilities that offer safe access to school, and major roads may be barriers.



Neighborhood Watch Programs

Establishing neighborhood crime watches, parent patrols, and safety zones can involve the community in addressing personal safety concerns as supervision reduces the risk of bullying, crime, and other unsafe behavior.

- Set up parent patrols to roam areas of concern. Safe Passages or Corner Captain programs station parent or community volunteers on designated key street corners to increase adult presence to watch over children as they walk and bicycle to school.
- Issue special hats, vests, or jackets to give the volunteers legitimacy and identify them as patrol leaders.
- Walkie-talkies allow parents to radio for help if they are confronting a situation they have not been able to resolve.
- Work to identify "safe places" like a home along the route where children can go to in the event of an
 emergency, or create a formal program with mapped safe places all children can go to if a situation feels
 dangerous.

SchoolPool with a Group

SchoolPool, or commuting to school with other families and trusted adults, can address personal safety concerns about traveling alone.

- Form Walking School Buses, Bike Trains, or carpools. For information about how to set up a SchoolPool at your school, read the Spare the Air Youth SchoolPool guidebook. http://www.sparetheairyouth.org/schoolpool-guidebook
- SchoolPools are a great way of building community. See resources online at www.sparetheairyouth.org/ walkingschool-buses-bike-trains for more information.

Sponsor Neighborhood Beautification Projects

Clean neighborhoods free of trash and graffiti can create a sense of safety and help reduce crime rates.

- Host neighborhood beautification projects around schools, such as clean-up days, graffiti removal, and tree planting to help make families feel more comfortable and increase safety for walking or biking to school.
- Host a community dialogue about positive and negative uses of public space.

Education Programs

Teach students and their families about appropriate safety issues. Parents may not want students to walk or bike if they are not confident in their child's abilities.

Safety Information for Students

- Use time at school, such as during recess, PE, or no-cost after school programs, to teach children how to bike and walk safely.
- Utilize either existing curricula or bring in volunteer instructors from local advocacy groups and non-profit organizations.
- Teach children what to do in the event of an emergency and where to report suspicious activity or bullying.
- Provide helmets and bikes during the trainings will allow all students to participate regardless of whether or not they have access to these items.
- Open Streets events such as San Francisco's Sunday Streets, Oakland's Oaklavia, and others are also a great way of creating safe zones to teach new skills in the street.

Safety Information for Parents

- Provide information about how to get to around safely.
- Develop and distribute suggested routes to school maps that highlight streets with amenities like sidewalks, lighting, low speeds, and less traffic.
- Identify informal shortcuts and cutthroughs that students may take to reduce travel time. Consider whether
 these routes may put students at risk (for example, by cutting through a fence, across a field, or near railroad
 tracks) and work with your city planners to improve the route.
- Provide flyers for parents about how to find other families groups to commute with or what to do in the event of

- an emergency to educate themselves and their children.
- Offer pedestrian safety training walks. Make these fun and interactive and address parents' safety concerns as well as provide tips for them to teach their children to be safe while walking.

Resources

 SRTS National Partnership's Implementing Safe Routes to School in Low-Income Schools and Communities http://www.saferoutespartnership.org/sites/default/files/pdf/LowIncomeGuide.pdf

BARRIERS RELATED TO SCHOOL DISTANCE

Some students simply live too far from school to reasonably walk or bike. However, there are programs that may be implemented to include these students in healthy physical activities, such as walking or biking.

Remote Drop-off

- Suggest remote drop-offs for parents to drop their children off a couple blocks from the school so they can walk
 the rest of the way. Volunteers wait at the drop-off and walk with students at a designated time to ensure they
 arrive to school safely and on time
- Remote drop-off sites can be underutilized parking lots at churches or grocery stores that give permission for their property to be used this way.
- Identify potential park and walk areas on route maps.

Walk to School Bus Stops

- Incorporate physical activity into students' morning schedule by encouraging them to walk to bus stops.
- Utilize walking school bus programming to organize nearby students to walk in groups to a more centrally
 located bus stop, which may translate into fewer bus stops because more students will be boarding at each
 stop.

Frequent Walker Programs

- Students who still arrive to school by bus and parent vehicle do not have to miss out on the physical benefits
 provided by walking if programming is implemented
- Implement programs that identify walking opportunities on campus, which can be defined in terms of routes or by amount of time spent walking.

Additional Resources

- Rural Communities: Making Safe Routes Work
- http://www.saferoutespartnership.org/sites/default/files/pdf/Lib_of_Res/SR2S_Rural_making%20SR%20 work_20150331.pdf
- Rural Communities: Best Practices and Promising Approaches for Safe Routes
- http://www.saferoutespartnership.org/sites/default/files/pdf/Lib_of_Res/SR2S_Rural_best%20 practices_2015033.pdf
- Rural Communities: A Two Pronged Approach for Improving Walking and Bicycling
- http://www.saferoutespartnership.org/sites/default/files/pdf/Lib_of_Res/SR2S_Rural_2pronged%20 approach_20150331.pdf



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Appendix L. Existing School Maps

WALK ZONE MAP



