Liberty Elementary, Independence Elementary & Big Lake Middle Schools

Safe Routes to School Plan

Big Lake School District | Big Lake, Minnesota | December 2015

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Introduction

What is Safe Routes to School?

Safe Routes to School (SRTS) is a program with a simple goal: helping more children get to school by walking and bicycling. Envision active kids using safe streets, helped by engaged adults (from teachers to parents to police officers), surrounded by responsible drivers.

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 "Five Es."

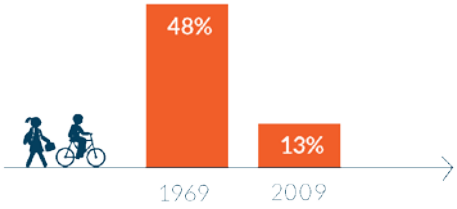
- Education: programs designed to teach children about traffic safety, bicycle and pedestrian skills, and traffic decision-making.
- Encouragement: programs that make it fun for kids to walk and bike. These programs may be challenges, incentive programs, regular events (e.g., "Walk and Bike Wednesdays") or classroom activities.
- Engineering: physical projects that are built to improve walking and bicycling conditions.
- Enforcement: law enforcement strategies to improve driver behavior near schools.
- Evaluation: strategies to help understand program effectiveness, identify improvements, and ensure program sustainability.

The Challenge

Although most students in the United States walked or biked to school pre-1980's, the number of students walking or bicycling to school has sharply declined. This decline is due to a number of factors, including urban growth patterns, school siting requirements, increased traffic, busy student schedules, and parental concerns about safety. The situation is self-perpetuating: as more parents drive their children to school, there is increased traffic at the school site, resulting in more parents becoming concerned about traffic and driving their children to school.

Why Safe Routes to School?

Within the span of one generation, the percentage of children walking or bicycling to school has dropped precipitously.



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
- Get most of their recommended daily physical activity during the trip to school
- Are more likely to be a healthy body weight
- Demonstrate improved test scores and better school performance
- Are less likely to suffer from depression and anxiety[1]

The downward cycle of traffic and reduced walking and bicycling

[1] More information, including primary sources, can be found at http://guide.saferoutesinfo.org.

Benefits of Walking and Bicycling to School

Safe Routes to Schools programs directly benefit schoolchildren, parents and teachers by creating a safer travel environment near schools and by reducing motor vehicle congestion at school drop-off and pick-up zones. Students that choose to bike or walk to school are rewarded with the health benefits of a more active lifestyle, with the responsibility and independence that comes from being in charge of the way they travel, and learn at an early age that bicycling and walking can be safe, enjoyable and good for the environment.

Safe Routes to Schools programs offer ancillary benefits to neighborhoods by helping to slow traffic and by providing infrastructure improvements that facilitate bicycling and walking for everyone. Identifying and improving routes for children to safely walk and bicycle to school is also one of the most cost-effective means of reducing weekday morning traffic congestion and can help reduce auto-related pollution.

In addition to safety and traffic improvements, an SRTS program helps integrate physical activity into the everyday routine of school children. Health concerns related to sedentary lifestyles have become the focus of statewide and national efforts to reduce risks associated with being overweight. Children who bike or walk to school have an overall higher activity level than those who are driven to school, even though the journey to school makes only a small contribution to activity levels. Active kids are healthy kids. Walking or bicycling to school is an easy way to make sure that children get daily physical activity.

SRTS benefits children:

- Increased physical fitness and cardiovascular health
- Increased ability to focus on school
- A sense of independence and confidence about their transportation and their neighborhood

SRTS benefits neighborhoods:

- Improved air quality as fewer children are driven to school
- Decreased crashes and congestion as fewer children are driven to school
- More community involvement as parents, teachers and neighbors get involved and put "eyes on the street"

SRTS benefits schools:

- Fewer discipline problems because children arrive "ready to learn"
- Fewer private cars arriving to drop off and pick up children
- Opportunities to integrate walking, bicycling and transportation topics into curriculum (e.g. "Walk & Bike Across America")
- Increased efficiency and safety during drop-off and pick-up times

How to Use this Plan

This SRTS plan provides an overview of Safe Routes to School with specific recommendations for a 5 E's approach to improve the safety and the health and wellness of students. The specific recommendations in this plan are intended to support infrastructure improvements and programs over the next 5 years.

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.

This plan includes recommendations for infrastructure projects both long- and short-term as well as programmatic recommendations. 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. The following paragraphs highlight the unique contributions of key partners in Safe Routes to School.

Parents lead students on walking school bus from a park and walk site

Parents can use this report to understand the conditions at their children's school and to 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.

Parents waiting in queue for students at pick up play a significant role in student transportation safety

School district and school administrative 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.

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.

Enforcement is a key component of successful SRTS programs. Safety officers can become a key ally of students walking and cycling to school

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.

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.

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.

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Vision and Planning Background

"Safe Routes to School initiatives will improve safety and encourage more students and families in Big Lake to walk, bike or roll to school. The program will result in less traffic congestion, higher levels of physical activity, and an enhanced quality of life in our neighborhoods.

The program will connect students and their families with year-round opportunities for active transportation through education, encouragement, and use of a safe on-street and trail network. Safe Routes to School will foster a culture of healthy and active families by encouraging non-motorized forms of transportation as a safe, comfortable and normal way of getting to and from school."

The vision of walking and bicycling around Independence Elementary School, Liberty Elementary School and Big Lake Middle School will help frame the Safe Routes to School planning process and inform recommended improvements to pedestrian and bicycle infrastructure and programs.

Relevant Planning Background

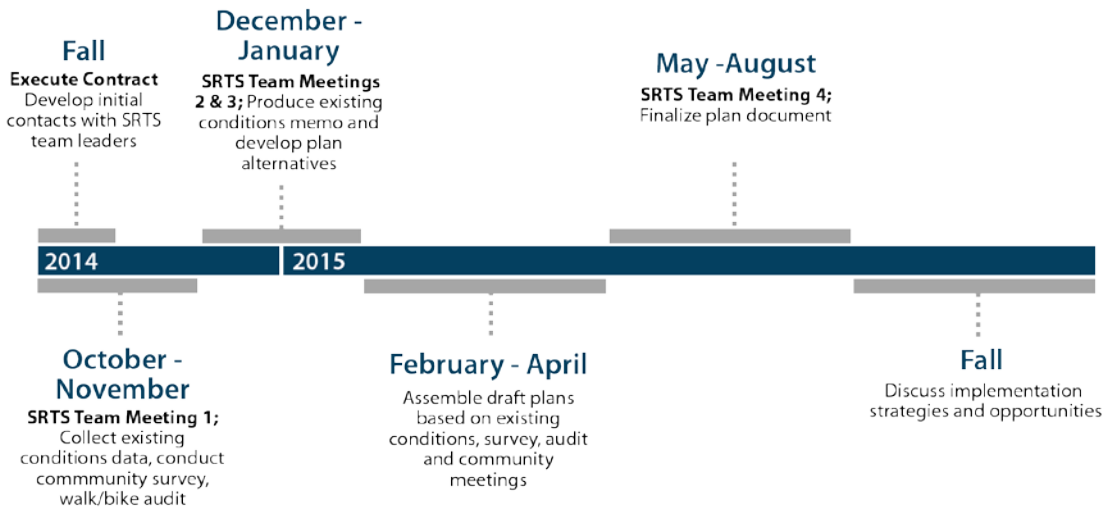
The City of Big Lake adopted a Complete Streets policy ordinance in 2010 that states "streets and roadways should be designed and operated to be safe and accessible for all transportation users." The specific policy recommendation states "bicyclist and pedestrian transportation users shall be included in street construction, re-construction, re-paving and re-habilitation projects." The policy goes on to explain that significant destinations, such as schools, be given high priority for project development.

The Big Lake School District is committed to encouraging students to engage in physical activity, as is described in the district-wide wellness policy. The wellness policy, adopted in 2006, states "it is the goal of Big Lake School District to ensure that the students of Big Lake receive the nationally recommended amount of daily physical activity (at least 60 minutes per day) and for students to understand that regular physical activity is a personal behavior, and that they need physical activity beyond physical education class." The policy also states the importance of encouraging parents to understand the benefits of an active lifestyle, stating "schools should provide information to parents to help them promote and incorporate physical activity and healthy eating into their children's lives." The District currently has a one-mile walk zone for elementary schools, and a two-mile walk zone for its middle and high schools. Walking Route Maps for students interested in walking to school are available on school websites.

In 2015, Sherburne County selected various strategies for implementing the Minnesota Statewide Health Improvement Program (SHIP). One strategy is Active Schools, a framework for implementing policies and practices that increase opportunities for physical activity throughout the school day. Included in this strategy is the promotion of active transportation to and from school through the implementation of a Safe Routes to School program.

Planning Process

The year-long planning process for this SRTS plan included building an SRTS team, gathering data and information about existing conditions, developing recommendations for the 5 E's, and developing a written document that set forth a path for the SRTS program. The graphic below depicts key milestones in the planning process.

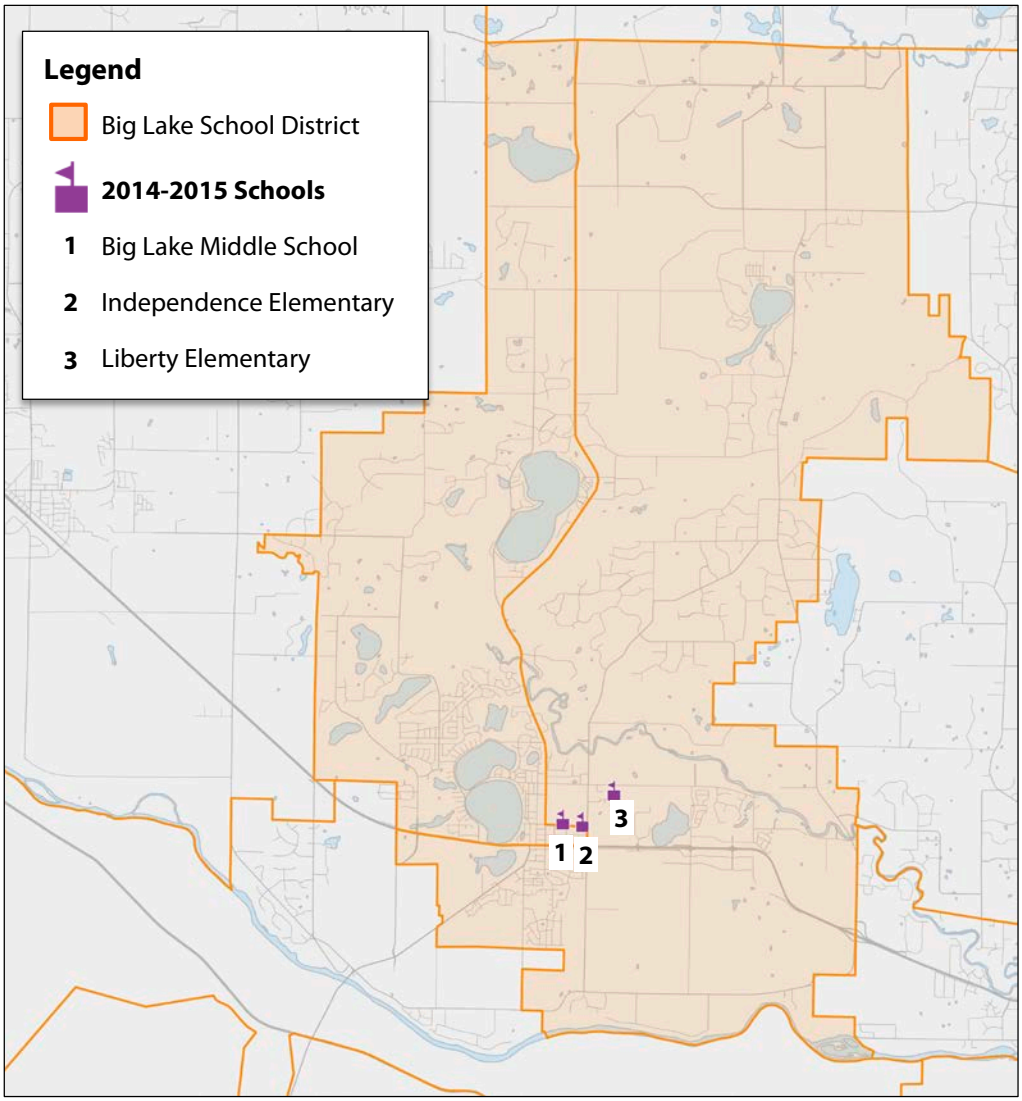


Existing Conditions

School Context

Three Big Lake schools are participating in the 2014-2015 SRTS planning process: Big Lake Middle School, Independence Elementary School, and Liberty Elementary School.

Big Lake School District Enrollment Boundary



Independence Elementary School & Big Lake Middle School

Surrounding Land Use

Independence Elementary School is bound by County Road 43 on the east and Minnesota Avenue on the south. Big Lake Middle School is located on the same campus directly west of Independence, and Big Lake High School is located directly to the north. US Highway 10 is located just over a quarter-mile south of the school, and County Road 5 / Eagle Lake Road is located nearly a half-mile to the west. County Road 5 also borders a portion of the west side of the school campus block.

Several students live in the apartment complexes directly south of the school, across Minnesota Avenue. Senior housing is also located on the south side of Minnesota Avenue. Single-family residential development is located along and north of 205th Avenue Northwest, along and west of County Road 5, and to the northeast across County Road 43. A public library is located across the street on the corner of Minnesota Avenue and County Road 43. Strip mall commercial development is located two blocks south of the school, including a grocery store and fast food

Student Walking and Bicycling Conditions

Sidewalks are present on the north side of Minnesota Avenue East, on the east side of Eagle Lake Road south of Minnesota Avenue East, on the south side of Martin Avenue, and on the west side of County Road 43. They are present on one side of some residential streets west of the school.

Flashing school crossing beacons accompany high visibility crosswalks along Minnesota Avenue at Phyllis Street and Fern Street. A third set of flashing beacons are located on County Road 5 at Minnesota Avenue. Flashing beacons automatically activate during arrival and dismissal, and are dark the remainder of the time. School crossing signage is abundant along Minnesota Avenue; however the posted speed limit is 30 miles per hour with no indication of a school speed zone

Multi-family housing is located on the south side of Minnesota Avenue (left). A pedestrian path is located on the north side of the street.

County Road 5 was recently converted from a two-lane road with wide shoulders into a three-lane road without shoulders, eliminating a popular walking route for students.

Adult patrols facilitate driveway and street crossings at three locations along Minnesota Avenue.

School Layout

Independence Elementary School's main entrances are on the south side of the school. Walkers are released with students being picked up from Door J. Students may also exit doors near the main office on the southeast side of the building. Students who receive busing exit on the north side of the school. The school parking lot and parent loop are located on the south side of the property. Parents enter the parent loop/parking lot through the east driveway on Minnesota Avenue. Parents may exit from the eastern driveway, or enter the Big Lake Middle School parking lot and exit from the west driveway onto Minnesota Avenue at Phyllis Street. Parents who use the pick-up loop are more likely to use the west driveway due to the parking lot configuration.

Student patrols facilitate a two-stage crossing of the parent loop and the northernmost parking aisle.

Buses pick up on the north side of the school. They enter through the high school parking lot and exit onto County Road 43 East. Outdoor recreation space is located north of the school, and south of the bus access road. High school athletic fields take up remaining space north of the bus loop.

Parents form a curbside pick-up lane, and a bypass lane. Parking is located south of the parent loop (left). Student patrols facilitate crossings to the parking lot, and on-campus pedestrian path.

An on-campus path leads from the J Door to the sidepath on Minnesota Avenue.

Liberty Elementary School

Surrounding Land Use

Liberty Elementary School is bound by 205th Avenue Northwest on the north. County Road 43 is located less than half a mile west of the school, and US Highway 10 is located less than one mile south of the school. Two low-density single-family residential culs-de-sacs are located west of the school. Additional residential development is located to the northwest, north of 205th Avenue Northwest. Independence Elementary School, Big Lake Middle School, and Big Lake High School are located on the west side of County Road 43 on a shared campus. Land north, east, and south of Liberty Elementary is used for agricultural purposes, or is wooded open space.

Flashing beacons at County Road 43 and 205th Avenue Northwest make it easier for students to safely cross the road. During winter, snow builds up in vegetative buffers, making it difficult for people living across the street to access the path from their homes.

Student Walking and Bicycling - Existing Conditions

There is a sidepath on the south side of Glenwood Avenue East (the continuation of 205th Avenue), and on the west side of County Road 43. Sidewalks are not present on nearby neighborhood residential streets. A user-activated flashing school crossing beacon is located on County Road 43 at the intersection of 205th Avenue Northwest. There is an unofficial pedestrian path, or cow path, that connects 203rd Avenue to the southwest corner of the Liberty Elementary School property. A custodial staff person maintains the path in the winter so that students who live along 203rd Avenue may continue to use this route throughout the year.

Students who live on 203rd Avenue use this utility right-of-way to access the southwest corner of the school property.

School Layout

Liberty Elementary School's primary parking lot, parent loop, and main entrance are located on the north side of the building. A curb separates the primary parking lot from a two-lane drop-off/pick-up area in front of the school. A designated bus loop with an exclusive driveway is located on the east side of the school. Students who take the bus enter and exit through bus doors, also located on the east side of the school. A small

Two student patrols facilitate pedestrian crossings between the primary parking lot and Liberty Elementary School's main entrance.

faculty lot is located on the west side of the building. All vehicles must access the school from 205th Avenue Northwest.

Comb-style bicycle parking is located on the north side of the school, in the grass just west of the main entryway. The bus loop doubles as outdoor recreation space. Additional paved outdoor space is located south of the school building. Grassy athletic fields are located on the east side of the school property.

The parent loop includes a drop-off lane and a bypass lane, and is separated from the parking lot by a curb. Buses use a designated lot on the opposite side of the school.

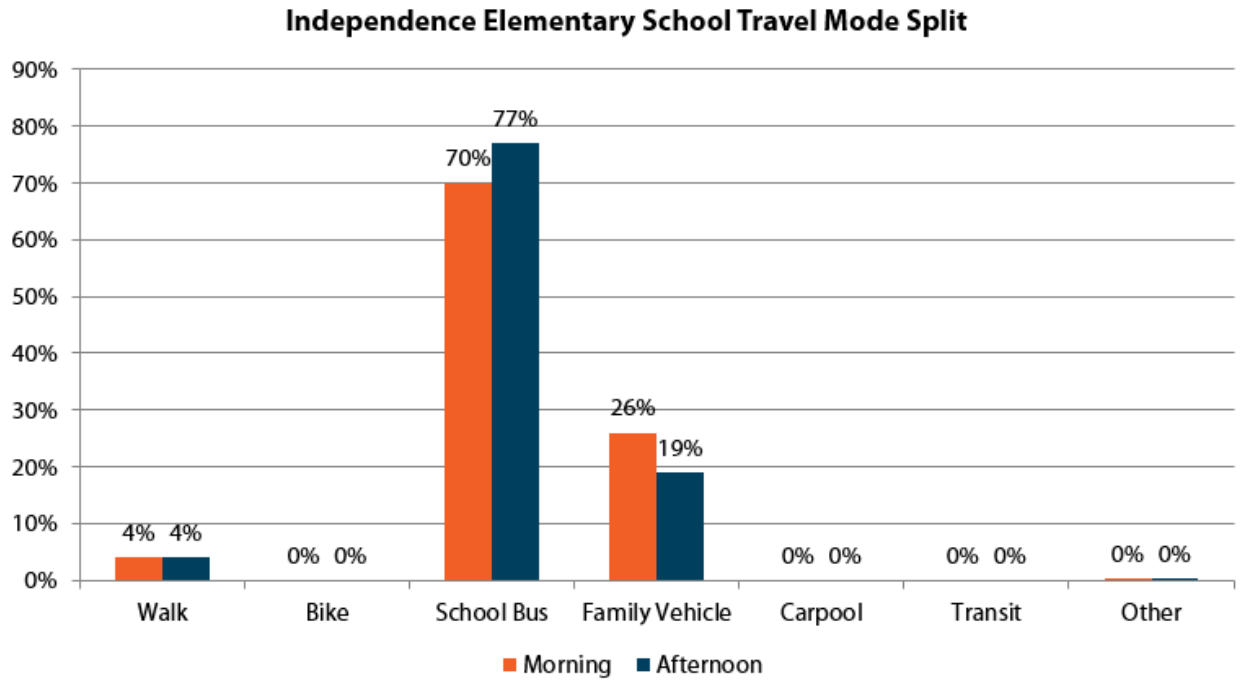
School Travel Patterns

Independence Elementary School

In-classroom tallies of students' arrival and departure travel modes were conducted at Independence Elementary School in October 2014. A total of 1,557 trips were tallied in the morning and 1,555 trips were tallied during the afternoon.

Overall, 73% of students traveled to and from school by school bus and 23% by family vehicle. Four percent of students walked to and from school, 0% carpooled and 0% traveled by bike. As shown in the chart, the mode split was fairly consistent during the morning and afternoon, with slightly more students taking the bus home in the afternoon and fewer being driven home in the family vehicle.

Student Travel Survey Summary



Parent Survey Summary

In December 2014, Independence Elementary School parents were asked to fill out a short survey about how their children travel to and from school, perceived barriers to walking and biking to and from school, and their own attitudes related to walking and biking. Administrators received 104 total surveys relative to a school enrollment of 857 students.

Current Travel Patterns: Mode and Distance

The vast majority of Independence Elementary School students travel to and from school by school bus or family vehicle. However, survey results indicate that students who live closer to school (within a ¼ mile) are more likely to walk to school. All of the students who walked to or from school live within a ¼ mile of the school.

Proximity to School vs. Children's Walk & Bike to School Rate

24% of respondents live within a 30 minute walk of the school (up to one mile away)

4% of respondents' children "usually" walk to/from school

51% of respondents live within a 30 minute bike ride of the school (up to two miles away)

0% of respondents' children "usually" bike to/from school

Barriers to walking and bicycling

Despite the fact that 24% of respondent's children could walk to school in 30 minutes or less, and 51% of respondent's children could bike to school in 30 minutes or less, parents who responded to the survey rarely reported that their children usually walked to/from school and none reported that their children usually biked to school. Parents may be reluctant to allow children to walk and bike to school for a variety of reason, though many students seem interested in walking or bicycling. The survey reveals that 56% of students who live within one mile the school and 47% of students who live within two miles of the school have asked permission to walk or bike to school.

The parent survey also asked specifically about barriers to walking and biking to school. More than half of respondents who do not allow their children to walk or bike to school reported that the following issues affected their decision:

- Distance (75%)
- Speed of Traffic Along Route (74%)
- Amount of Traffic Along Route (72%)
- Weather or Climate (62%)
- Safety of Intersections and Crossings (56%)
- Sidewalks or Pathways (54%)

Other reasons given by respondents for not allowing children to walk or bike include the additional time required compared to other modes (31%), violence or crime (31%), a lack of available adults to walk/bike with (18%), a lack of crossing guards (18%), child's participation in after school programs (9%), and the convenience of driving (6%).

Parent attitudes about walking and bicycling

Eighty-five percent of parents who answered the survey think that Independence Elementary School neither encourages nor discourages walking and biking to and from school. Seventeen percent of parents responded

that they believe Independence Elementary School encourages or strongly encourages walking and biking to/from school and 2% of the respondents believe that the school discourages walking and biking to/from school.

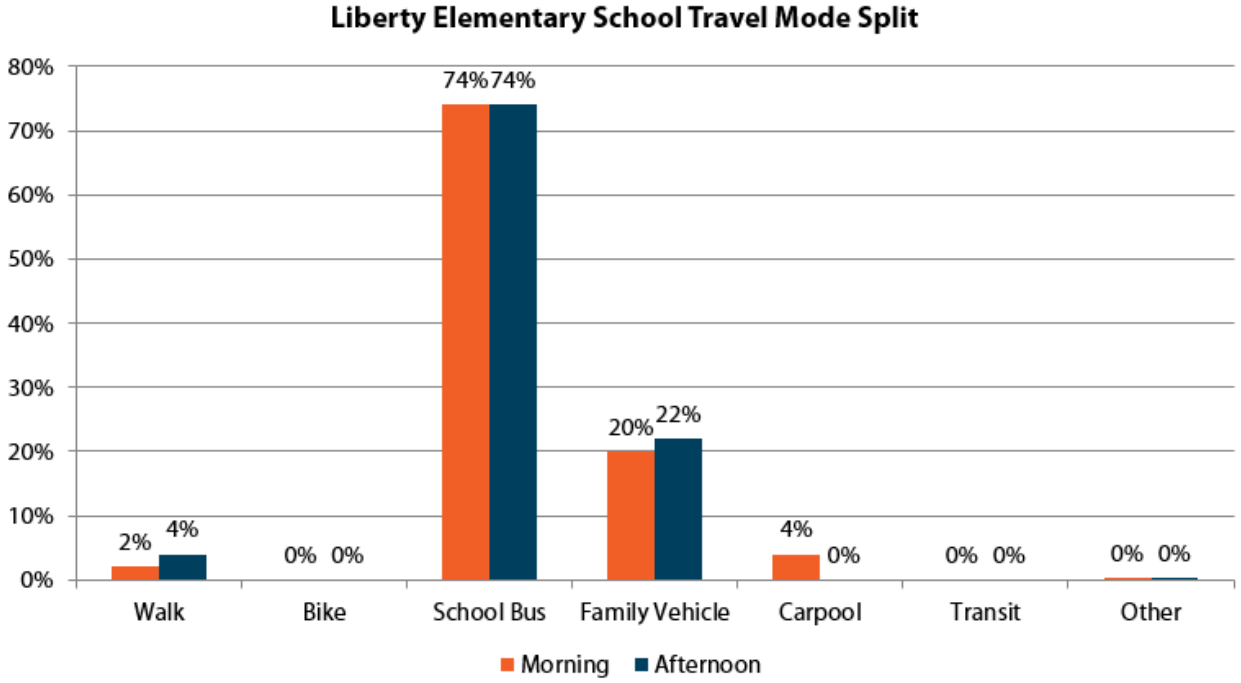
The survey also revealed parent opinions about how much fun walking and bicycling is for their children, and how healthy walking and bicycling is for their children. Sixty-five percent of parents felt that walking and bicycling to school was very healthy or healthy for their children, while 23% think riding bikes or walking to and from school is fun or very fun for their child.

Liberty Elementary School

In-classroom tallies of students' arrival and departure travel modes were conducted at Liberty Elementary School in October 2014. A total of 1,343 trips were tallied in the morning and 1,338 trips were tallied during the afternoon.

Overall, 74% of students traveled to and from school by school bus and 21% by family vehicle. Three percent of students walked to and from school, 2% carpooled and 0% traveled by bike. As shown in the chart, the mode split was fairly consistent during the morning and afternoon.

Student Travel Survey Summary



Parent Survey Summary

In December 2014, Liberty Elementary School parents were asked to fill out a short survey about how their children travel to and from school, perceived barriers to walking and biking to and from school, and their own attitudes related to walking and biking. Administrators received 58 total surveys relative to a school enrollment of 725 students.

Current Travel Patterns: Mode and Distance

The vast majority of Liberty Elementary School students travel to and from school by school bus or family vehicle. However, survey results indicate that students who live closer to school (within 1 mile) are more likely to walk to school. All of the students who walked to or from school live within 1 mile of the school.

Proximity to School vs. Children's Walk & Bike to School Rate

14% of respondents live within a 30 minute walk of the school (up to one mile away)

3% of respondents' children "usually" walk to/from school

47% of respondents live within a 30 minute bike ride of the school (up to two miles away)

0% of respondents' children "usually" bike to/from school

Barriers to walking and bicycling

Despite the fact that 14% of respondent's children could walk to school in 30 minutes or less, and 47% of respondent's children could bike to school in 30 minutes or less, parents who responded to the survey rarely reported that their children usually walked to/from school and none reported that their children usually biked to school. Parents may be reluctant to allow children to walk and bike to school for a variety of reason, though many students seem interested in walking or bicycling. The survey reveals that 45% of students who live within one mile the school and 40% of students who live within two miles of the school have asked permission to walk or bike to school.

The parent survey also asked specifically about barriers to walking and biking to school. More than half of respondents who do not allow their children to walk or bike to school reported that the following issues affected their decision:

- Amount of Traffic Along Route (83%)
- Speed of Traffic Along Route (80%)
- Distance (80%)
- Weather or Climate (63%)
- Safety of Intersections and Crossings (61%)
- Sidewalks or Pathways (61%)

Other reasons given by respondents for not allowing children to walk or bike include violence or crime (41%), the additional time required compared to other modes (41%), a lack of available adults to walk/bike with

(28%), a lack of crossing guards (22%), the convenience of driving (20%) and child's participation in after school programs (20%).

Parent attitudes about walking and bicycling

Eighty-one percent of parents who answered the survey think that Liberty Elementary School neither encourages nor discourages walking and biking to and from school. Sixteen percent of parents responded that they believe Liberty Elementary School encourages or strongly encourages walking and biking to/from school and 0% of the respondents believe that the school discourages walking and biking to/from school.

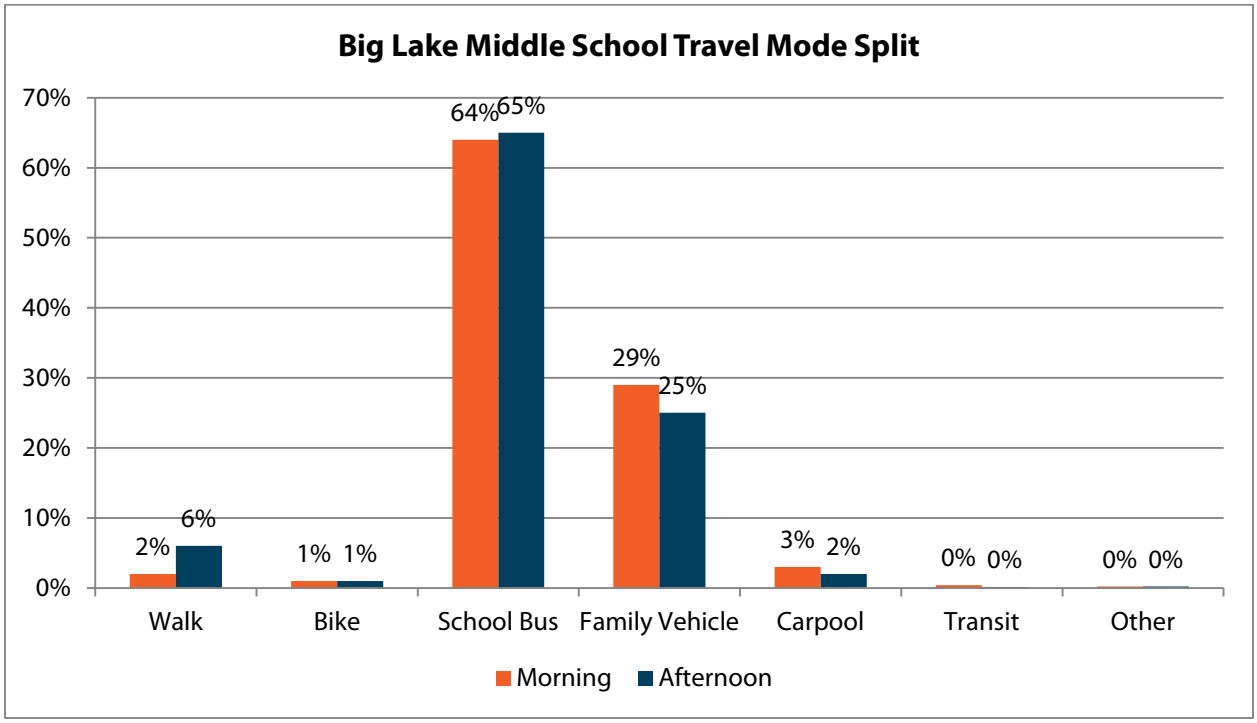
The survey also revealed parent opinions about how much fun walking and bicycling is for their children, and how healthy walking and bicycling is for their children. Sixty-eight percent of parents felt that walking and bicycling to school was very healthy or healthy for their children, while 11% think riding bikes or walking to and from school is fun or very fun for their child.

Big Lake Middle School

In-classroom tallies of students' arrival and departure travel modes were conducted at Big Lake Middle School in October 2014. A total of 1,297 trips were tallied in the morning and 1,265 trips were tallied during the afternoon.

Overall, 65% of students traveled to and from school by school bus and 27% by family vehicle. Four percent of students walked to and from school, 3% carpooled and 1% traveled by bike. As shown in the chart, the mode split was fairly consistent during the morning and afternoon, with slightly more students taking the bus home in the afternoon and fewer being driven home in the family vehicle.

Student Travel Survey Summary



Parent Survey Summary

In December 2014, Big Lake Middle School parents were asked to fill out a short survey about how their children travel to and from school, perceived barriers to walking and biking to and from school, and their own attitudes related to walking and biking. Administrators received 106 total surveys relative to a school enrollment of 724 students.

Current Travel Patterns: Mode and Distance

The vast majority of Big Lake Middle School students travel to and from school by school bus or family vehicle. However, survey results indicate that students who live closer to school (within 1 mile) are more likely to walk to school. All of the students who walked to or from school live within 1 mile of the school.

Proximity to School vs. Children's Walk & Bike to School Rate

17% of respondents live within a 30 minute walk of the school (up to one mile away)

5% of respondents' children "usually" walk to/from school

49% of respondents live within a 30 minute bike ride of the school (up to two miles away)

0% of respondents' children "usually" bike to/from school

Barriers to walking and bicycling

Despite the fact that 17% of respondent's children could walk to school in 30 minutes or less, and 49% of respondent's children could bike to school in 30 minutes or less, parents who responded to the survey rarely reported that their children usually walked to/from school and none reported that their children usually biked to school. Parents may be reluctant to allow children to walk and bike to school for a variety of reason, though many students seem interested in walking or bicycling. The survey reveals that 60% of students who live within one mile the school and 57% of students who live within two miles of the school have asked permission to walk or bike to school.

The parent survey also asked specifically about barriers to walking and biking to school. More than half of respondents who do not allow their children to walk or bike to school reported that the following issues affected their decision:

- Amount of Traffic Along Route (71%)
- Speed of Traffic Along Route (68%)
- Distance (67%)
- Weather or Climate (61%)

- Safety of Intersections and Crossings (60%)
- Sidewalks or Pathways (52%)

Other reasons given by respondents for not allowing children to walk or bike include the additional time required compared to other modes (27%), violence or crime (27%), child's participation in after school programs (24%), a lack of crossing guards (19%), a lack of available adults to walk/bike with (18%) and the convenience of driving (11%).

Parent attitudes about walking and bicycling

Eighty-five percent of parents who answered the survey think that Big Lake Middle School neither encourages nor discourages walking and biking to and from school. Ten percent of parents responded that they believe Big Lake Middle School encourages or strongly encourages walking and biking to/from school and 0% of the respondents believe that the school discourages walking and biking to/from school.

The survey also revealed parent opinions about how much fun walking and bicycling is for their children, and how healthy walking and bicycling is for their children. Seventy-two percent of parents felt that walking and bicycling to school was very healthy or healthy for their children, while 30% think riding bikes or walking to and from school is fun or very fun for their child.

Traffic Conditions and Crash Analysis

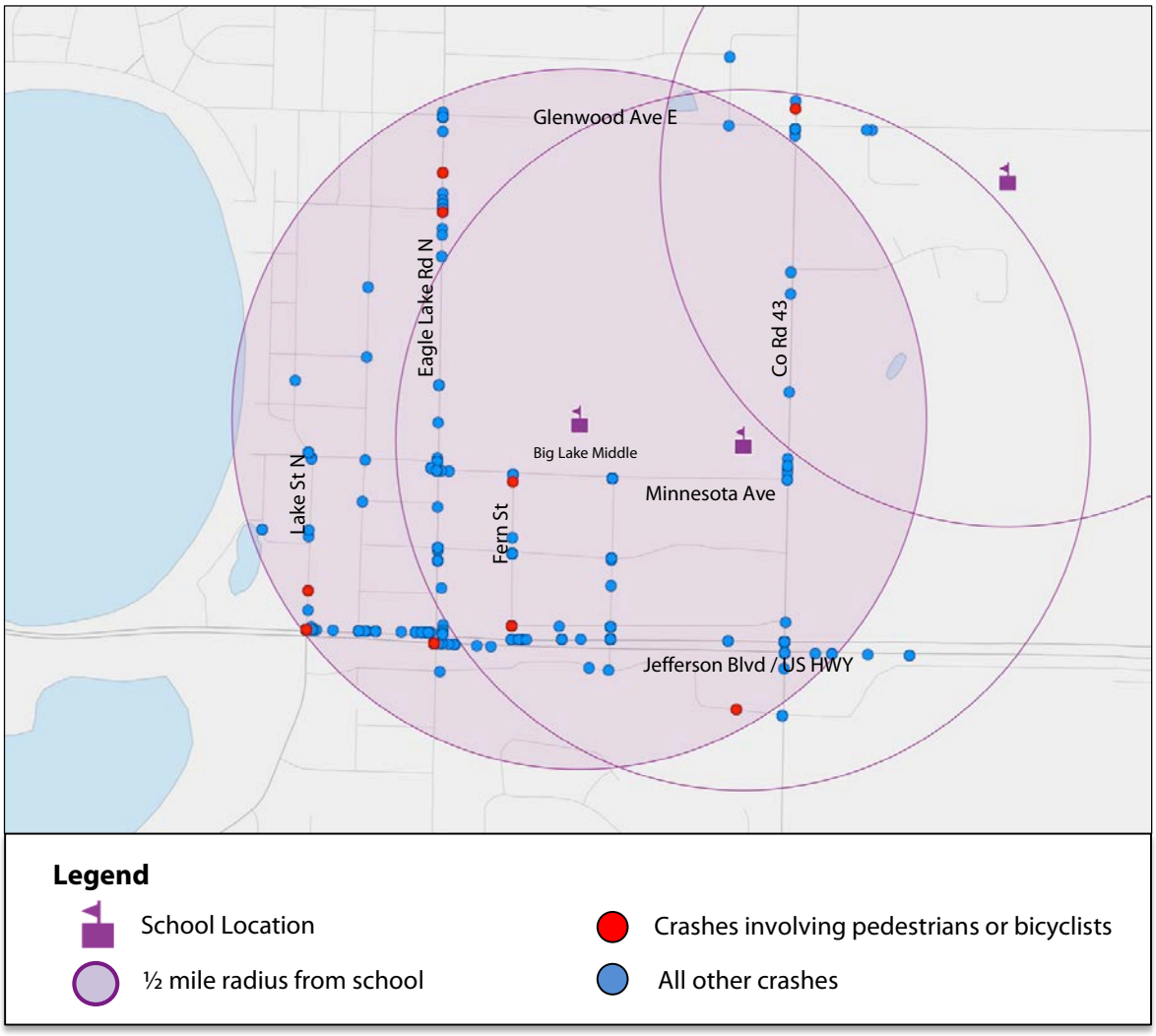
Big Lake Middle School

An assessment of collisions surrounding the campus of Big Lake Middle School was completed using Minnesota Department of Transportation (MnDOT) crash data from 2004 - 2013. A primary objective in analyzing this data is to identify crash patterns and particular locations or corridors that have been unsafe for pedestrians and bicyclists over a period of time.

Data from 2004 - 2013 reported a total of 393 collisions within ½ mile of Big Lake Middle School. Of these collisions, twelve involved pedestrians or bicyclists. Eight of those collisions involved a pedestrian or bicyclist under the age of 18.

Nearby pedestrian and bicycle collisions were located on Eagle Lake Road North, and at the intersections of Fern Street and Minnesota Avenue, Lake Street and Jefferson Boulevard, and Eagle Lake Road and Jefferson Boulevard.

Big Lake Middle School Area Crash Locations 2004-2013



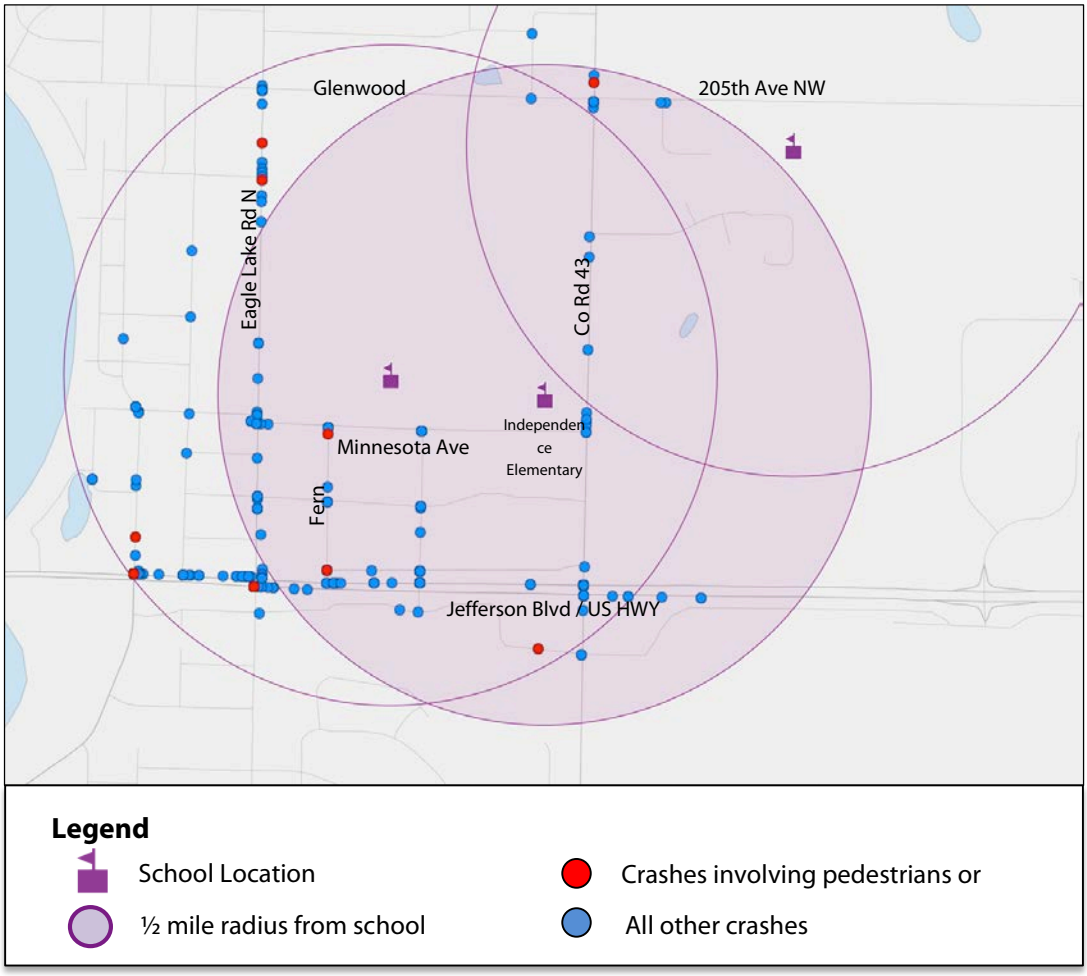
Independence Elementary School

An assessment of collisions surrounding the campus of Independence Elementary School was completed using Minnesota Department of Transportation (MnDOT) crash data from 2004 - 2013. A primary objective in analyzing this data is to identify crash patterns and particular locations or corridors that have been unsafe for pedestrians and bicyclists over a period of time.

Data from 2004 - 2013 reported a total of 188 collisions within ½ mile of Independence Elementary. Of these collisions, four involved pedestrians or bicyclists. Two of those collisions involved bicyclists under the age of 18.

One pedestrian collision occurred near the intersection of County Road 43 and Glenwood Avenue northeast of Independence Elementary School, and two bicycle collisions occurred along Fern Street, near the intersection of Minnesota Avenue East, and at Rose Drive Northwest. Another bicycle collision took place on Humboldt Drive Northwest south of Jefferson Boulevard.

Independence Elementary School Area Crash Locations 2004 – 2013

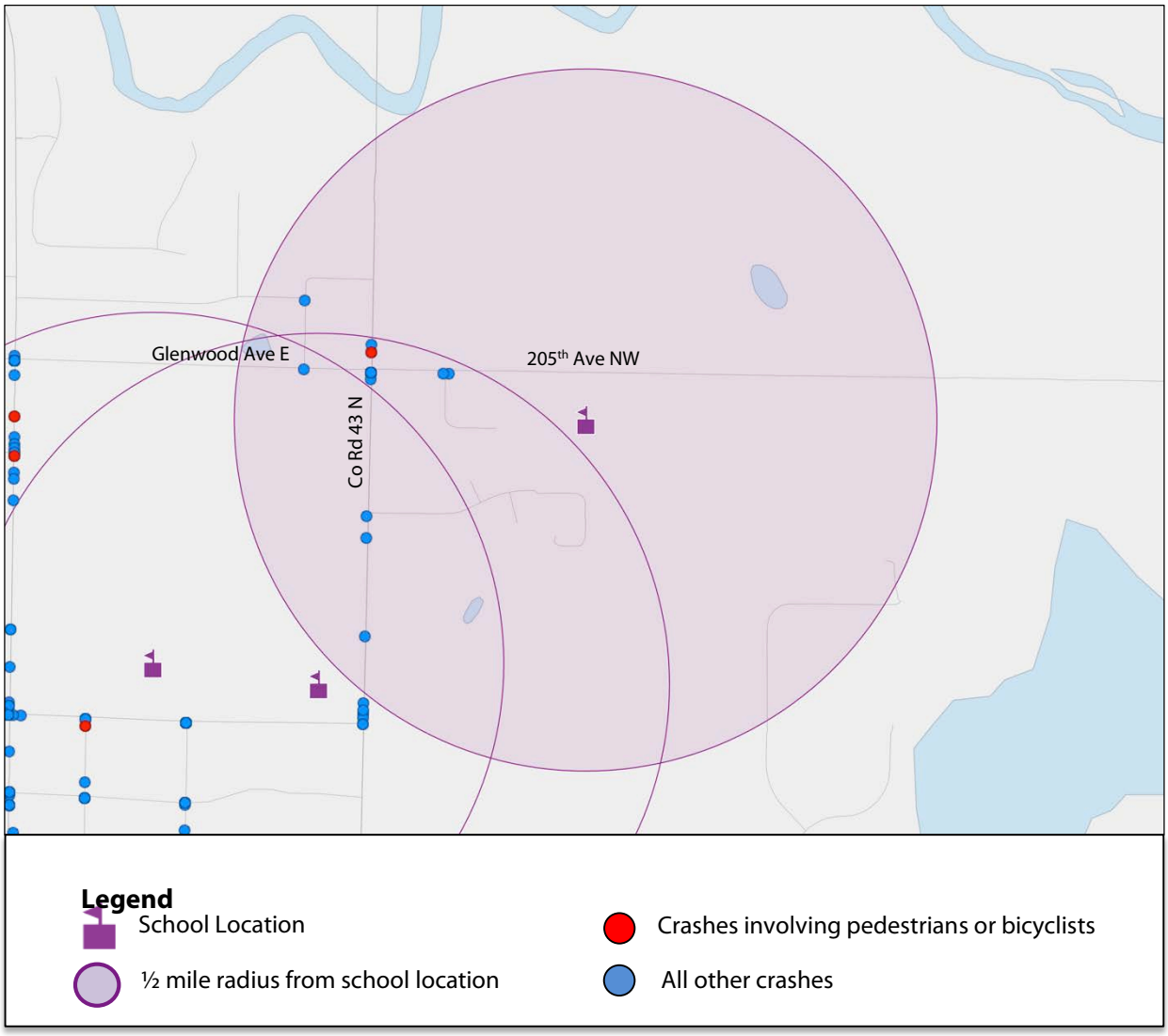


Liberty Elementary School

An assessment of collisions surrounding the campus of Liberty Elementary School was completed using Minnesota Department of Transportation (MnDOT) crash data from 2004 - 2013. A primary objective in analyzing this data is to identify crash patterns and particular locations or corridors that have been unsafe for pedestrians and bicyclists over a period of time.

Data from 2004 - 2013 reported a total of 21 collisions within ½ mile of Liberty Elementary. One of these collisions involved a collision with a pedestrian. These collisions, including the one involving a pedestrian, were located along County Road 43 and Glenwood Avenue, and near the intersection of these two streets.

Liberty Elementary School Area Crash Locations 2004 – 2013



Site Audit

The audits took place during school arrival and dismissal on November 19, 2014. The weather was cold (20°F) and partially sunny. Two members of the consultant team conducted the audit, with assistance from several community members including representatives of the Big Lake Township, Big Lake Police and Sherburne County Public Health, as well as adult crossing guards and school faculty members.

Families who live in the Minnesota Avenue apartments climb over the snowbank at the end of the on-campus pedestrian path and cross mid-block.

Independence Elementary School and Big Lake Middle School

Walking and Bicycling

Students walking to the apartments across the street on Minnesota Avenue used the on-campus crosswalk and pedestrian path, and then tended to cross Minnesota Avenue mid-block. Students were also observed crossing at Phyllis Street and walking south (where no sidewalk is present), and walking west along Minnesota Avenue. There is one bike rack near the path just south of Door J. No bicyclists were observed at the time of dismissal.

School buses pick up on the north side of the school on a limited access road. They exit onto County Road 43 East.

Bus

School buses line up on the north side of the school and exit onto County Road 43. No other traffic is permitted in this area. There are about 11-12 regular buses.

Car

Private cars enter from Minnesota Avenue at the driveway closest to County Road 43. Upon entering, they keep right to pick up students along the curb, or keep left to enter the parking lot. Cones are placed in the curbside lane on the east side of the loop to discourage parents from stopping at the beginning of the loop to pick up their students. Cars exit onto Minnesota Avenue at Phyllis Street (Big Lake Middle School driveway); some were observed looping back through the parking lot and exiting from the east driveway. There were comments about parents who occasionally park in the loop and back up traffic. Students were observed darting across the pick-up loop to reach parents who parked cars in the main lot. School faculty members are present outside the main entrance (during arrival (2 people) and dismissal (3 people).

Parents line up along the curb and move forward when space opens up. Students wait near the J Doors and watch for their parent's vehicle.

Liberty Elementary School

Walking and Bicycling

Several walkers were observed accessing the school from the sidewalk on the south side of 205th Avenue Northwest / Glenwood Avenue East. A sidewalk on the school property connects them directly to the main entrance. The adult crossing guard at County Road 43 and 205th Avenue Northwest crossed two students on the day of the observation, but said that in the fall and spring, she crosses around six or eight students. Several walkers were observed using the utility right-of-way between 203rd Avenue and the faculty/delivery lot on the west side of the school. The bicycle rack was partially buried in snow at the time of the audit; no bicyclists were observed.

A sidepath connects students directly from 205th Avenue Northwest to the main entrance.

Bus

School buses have a designated loop on the east side of the school. They enter and exit through a bus-only driveway east of the parent loop driveways. There were no conflicts between buses and private vehicles, or with walkers

Buses drop off students in a designated loop on the east side of the school building.

Car

Private cars enter the parking lot through the western driveway. Most exit the loop from the east driveway, but some parents loop around the parking lot and exit on the west side as well. A high visibility crosswalk is located between the southern row of parking and the main entrance.

Two student patrols facilitated crossings during the arrival. Parents were observed parking and walking with their students into school via the crosswalk, pulling up along the curb in the designated parent loop to unload students, and pulling through the southernmost parking aisle to unload students at the crosswalk. Parents sometimes got out of cars while in the parent loop to open doors for their students. The only vehicle observed parking curbside did so on the east end of the loop, and did not disrupt traffic flow

Parents drop off students along the curb in the parent loop, and near the crosswalk in the southern parking aisle. Once student patrols leave their post, parents are inclined to stop in the crosswalk to unload students.

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Infrastructure Issues and Recommendations

The initial field review and subsequent meetings yielded specific recommendations to address the key identified barriers to walking and bicycling at Independence Elementary School, Liberty Elementary School and Big Lake Middle School. 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. Short-term projects that should be addressed in the 2015-2016 school year are noted as such in the Implementation Strategy section of this plan. Some of the more significant recommendations for changes to streets and intersections may require policy changes, additional discussion and coordination, engineering, and significant funding sources.

All engineering recommendations are described in Tables 1 and 2 with locations shown on the Recommended Improvements Maps. 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.

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.

Because walking and cycling diminish during the cold winter months, it is particularly important to prioritize snow removal and maintenance of school routes. 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.

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Table 1. Independence Elementary School and Big Lake Middle School Infrastructure Issues and Recommendations

A	Minnesota Avenue and on-campus path to Door J	Students who live in the apartments on the south side of Minnesota Avenue cross at a mid-block unmarked location where the on-campus sidewalk reaches Minnesota Avenue.	Construct a median refuge island, curb extension and marked crossing of Minnesota Avenue.	City of Big Lake
B	SE Corner of Minnesota Avenue and Phyllis Street	Existing marked crosswalk leads to unimproved corner lacking tactile warning devices or paved landing.	Construct an ADA compliant landing at the SE corner of Phyllis and Minnesota. Perform an engineering study to determining if the corner radius should be adjusted. If needed, do not enlarge corner radius more than is absolutely necessary.	City of Big Lake
C	Phyllis Street from Martin Ave to Minnesota Ave.	Existing marked crosswalk leads to no walking facility along Phyllis Street. Walking on-street is uncomfortable.	Install Sidewalk on East side of Phyllis street from Martin Ave to Minnesota Ave. Also consider a marked crossing of Martin Ave to complete the connection.	City of Big Lake
D	Minnesota Avenue from Phyllis Street to existing sidewalk.	There is no clear walking route in the gap between the existing marked crosswalk and the existing sidewalk along Minnesota Avenue.	Complete the sidewalk on the south side of Minnesota Avenue.	City of Big Lake
E	County Rd 43 North - between 203rd and school bus drive access	There is no path/sidewalk on the east side of County Rd 43 and on-highway travel is stressful for those in the residential development on east side.	Construct a path to the school drive access and install an enhanced crossing to make crossing to the west side safe and comfortable.	Sherburne County
F	County Rd 43 North at the school bus drive access	This potential crossing is uncomfortable to make.	Construct a median refuge island and marked crossing on the south side of the intersection to connect to the proposed path.	Sherburne County
G	School Bus Drive	This potential walking route is free of passenger car traffic, but lacks a walking path separated from the road.	Construct a path on the south side of the street to create a back route connecting all schools.	City of Big Lake
H	Minnesota Ave	Speed Limit on Minnesota Ave is 30, which is considered by students and parents as too fast for comfortable, safe crossings.	Impalement a time or beacon based school zone speed limit on Minnesota Ave.	City of Big Lake
I	Co Rd 5	The speed zone 'when children are present' is difficult to apply and enforce	Change to a time-based system.	Sherburne County

Infrastructure **Recommendations**

Project #	Solution/Recommendation
A	Construct a median refuge island, curb extension and marked crossing of Minnesota Avenue.
B	Construct an ADA compliant landing at the SE corner of Phyllis and Minnesota. Perform an engineering study to determine if the corner radius should be adjusted. If needed, do not enlarge corner radius more than is absolutely necessary.
C	Install Sidewalk on East side of Phyllis Street from Martin Ave to Minnesota Avze. Also consider a marked crossing of Martin Ave to complete the connection.
D	Complete the sidewalk on the south side of Minnesota Avenue.
E	Construct a path to the school drive access and install an enhanced crossing to make crossing to the west side safe and comfortable.
F	Construct a median refuge island and marked crossing on the south side of the intersection to connect to the proposed path.
G	Construct a path on the south side of the internal school access to create a back route connecting all schools.
H	Implement a time or beacon based school zone speed limit on Minnesota Ave.
I	Change to a time-based system.

Note: A sidewalk/path Eagle Lake Rd/County Road 5 is funded and planned for construction in 2016. The project includes a sidewalk along both sides of the street from Minnesota Ave to Glenwood Ave, and continues north as a trail on one side of the road.

Existing Conditions

- School Grounds
- Sidewalks/Paths
- Standard Crosswalk
- High Visibility Crosswalk
- School/Pedestrian Warning Sign
- School/Pedestrian Crossing Sign
- Traffic Signal
- Stop Sign
- Rapid Flash Beacon
- Bike Parking
- Parent / Bus Loading
- Crossing Guards

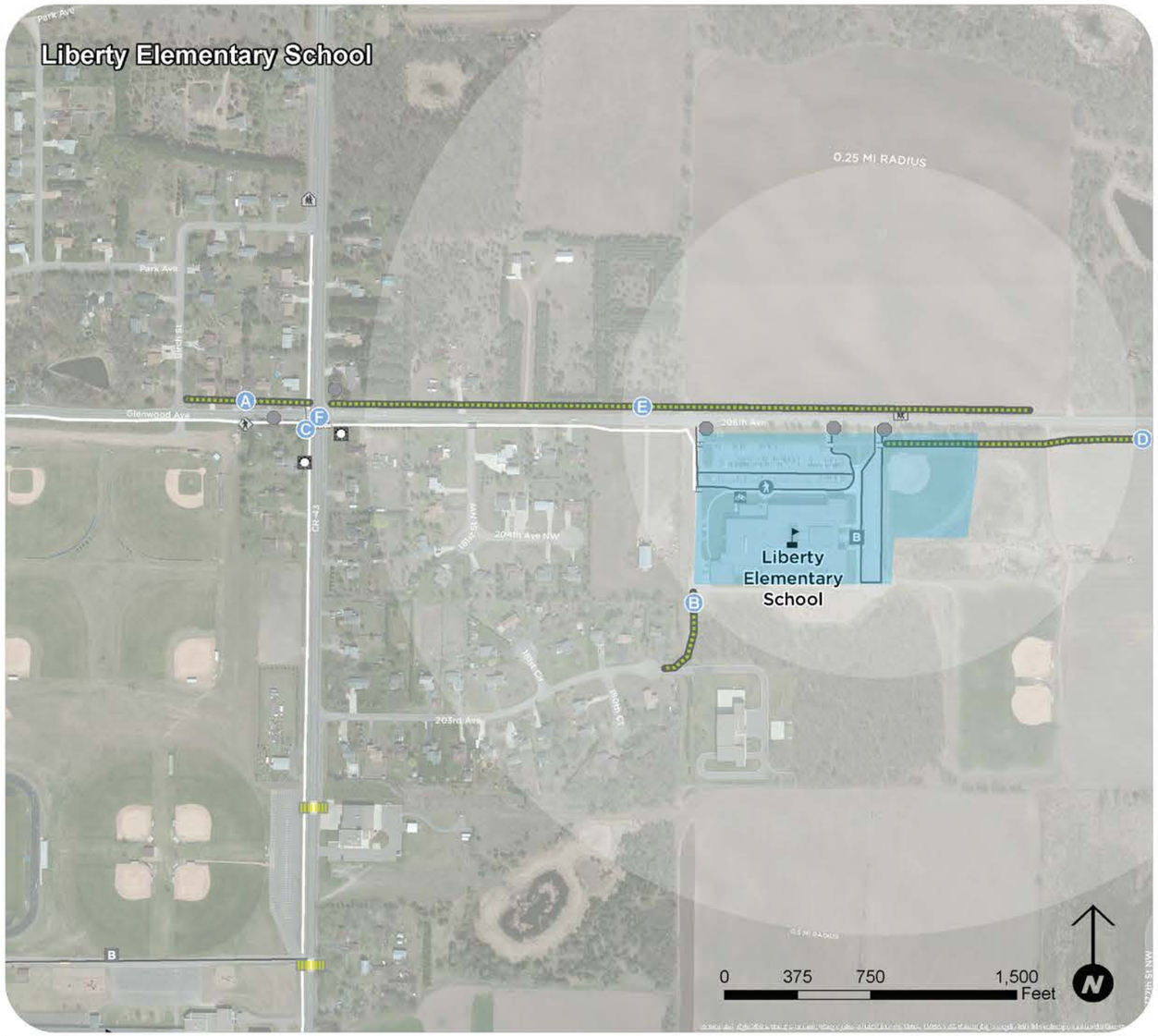
Recommendations

- Road Reconfiguration
- Sidewalks/Paths
- Enhanced Crosswalk
- School Speed Zone
- ADA Curb Ramp and Landing

Table 2. Liberty Elementary School Infrastructure Issues and Recommendations

Project #	Location	Problem/Issue	Solution/Recommendation	Lead Agency
A	Glenwood Ave E, from Birch Ave to County Road 43 N.	On-roadway travel on the north side of Glenwood Ave E is stressful for those in the residential development on north side.	Construct sidewalk or path on north side of Glenwood Ave E, from Birch Ave to County Road 43 N to allow for access by the residential neighborhood to the north.	City of Big Lake
B	203rd Ave Cul-de-Sac	The existing walking route from the back of school to 203rd Ave cul-de-sac is informal and unimproved.	Construct a multi-use path from the 203rd Ave to the rear of the school. Mark crosswalks through the school lot to formalize a walking route.	Big lake School District
C	County Road 43 E and 205th Ave NW	The existing flashing beacon button on southwest corner is difficult/unintuitive to reach because it is not along natural walking path for pedestrians	Relocate pedestrian pushbutton to an ADA compliant and easily accessible location along the walking path.	Sherburne County
D	205th Avenue NW from School to 172nd St	Walking/Biking along the south side of 205th Ave NW is unsafe and uncomfortable for residents traveling from the residential development to the east.	Extend path along 205th Avenue NW from School to 172nd St	City of Big Lake
E	205th Avenue Northwest	Walking/Biking along the north side of 205th Ave NW is uncomfortable.	Support the construction of a multi-use path on north side of 205th NW when new development comes in.	City of Big Lake
F	County Road 43 East and 205th Avenue Northwest	205th Avenue has three-lane approach; County Road 43 has four-lane approach	Consider a study for reconfiguration of the intersection to improve crossing conditions for pedestrians, including a potential compact roundabout.	City of Big Lake

Infrastructure **Recommendations**



	Solution/Recommendation
A	Construct sidewalk or path on north side of Glenwood Ave E, from Birch Ave to County Road 43 N to allow for access by the residential neighborhood to the north.
B	Construct a multi-use path from 203rd Ave to the rear of the school. Mark crosswalks through the school lot to formalize a walking route.
C	Relocate pedestrian pushbutton to an ADA compliant and easily accessible location along the walking path.
D	Extend existing path on south side of the street to 172nd St.
E	Support the construction of a multi-use path on north side of 205th NW when new development comes in.
F	Consider a study for reconfiguration of the intersection to improve crossing conditions for pedestrians, including a potential compact roundabout.

Existing Conditions

- School Grounds
- Sidewalks/Paths
- Standard Crosswalk
- High Visibility Crosswalk
- School/Pedestrian Warning Sign
- School/Pedestrian Crossing Sign
- Traffic Signal
- Stop Sign
- Rapid Flash Beacon
- Bike Parking
- Parent / Bus Loading
- Crossing Guards

Recommendations

- Road Reconfiguration
- Sidewalks/Paths
- Enhanced Crosswalk
- School Speed Zone

Programs Recommendations

The Safe Routes to School movement has been a leader in acknowledging that infrastructure changes are a necessary but insufficient condition for shifting school travel behavior. While engineering improvements like sidewalks, crosswalks, and bikeways are important, equally important are education programs to make sure children and families have 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.

Recommended Programs

- International Walk to School Day and Bike to School Day
- SRTS walk and bike maps
- School Safety Campaign
- Classroom lessons (Minnesota Walk! Bike! Fun! Curriculum)
- Walking School Bus and Bike Train

The following programs were identified as priority programs for Independence Elementary School, Liberty Elementary School and Big Lake Middle School 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). The programs are recommended to serve both schools and can be implemented in tandem, however programs can be tailored and implemented to meet the age group and interests of the school and students.

For each program concept, the recommendation includes the primary intended outcomes, potential lead and partners, a recommended timeframe for implementation, resources and sample programs, and a short description.

School Community Programs

International Walk and Bike to School Day

Primary Outcomes	Increased walking and bicycling; youth empowerment
Potential Lead	School Administrators
Potential Partners	Big Lake Schools; Big Lake PTO, Big Lake Police Department, students; local businesses; local celebrities
Recommended Timeframe	Twice a year - Annually on or around International Walk and Bike to School Day in October and in May around Bike to School Day.
Getting Started	• Form an event planning team • Consider the scale and format of the event and assess volunteer capacity • Set a date early • Determine incentive structure
Planning Resources	International Walk to School: http://www.iwalktoschool.org/ Walk Bike to School: http://www.walkbiketoschool.org/ MnDOT Walk and Bike to School Day Webinar: http://www.dot.state.mn.us/saferoutes/toolkit.html
Sample Program	Oregon Safe Routes to School: http://www.walknbike.org/schools

Walk and Bike to School Day is an international event that attracts millions of participants in over 30 countries in October. 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 can be held for one or more days.

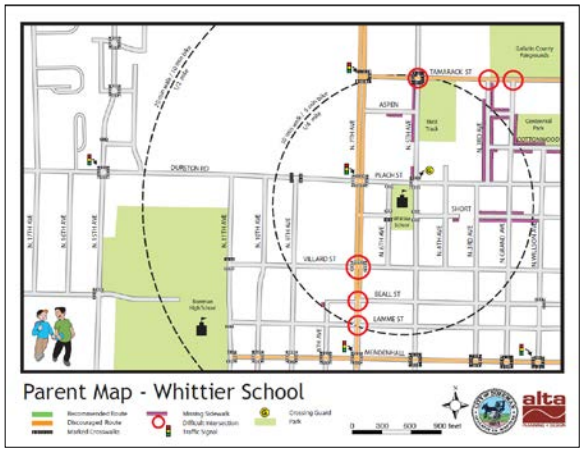
International Walk to School Day draws large numbers of students and families to walk to school

Walk and Bike to School Day events are often promoted through press releases, backpack/folder/electronic mail, newsletter articles, and posters. Students often earn incentives for participating, such as healthy snacks, buttons, or stickers. The event planning team can work with local businesses, such as grocery stores, to provide donations to students participating in the events. There can also be a celebration at school following the morning event, such as an awards ceremony, lunch time party, or a raffle. This can require substantial coordination time, as well as time to develop promotional materials and secure donations. Walk and Bike to school can be combined with other programs such as Park and Walk for those students that live too far from school to walk or bike.

Walk and Bike to School Route Maps

Primary Outcome	Improved walking and bicycling safety, knowledge of supportive infrastructure
Potential Lead	City of Big Lake Planning Department or School District
Potential Partners	School administrators; teachers and crossing guards, parents, students
Recommended Timeframe	Distribute when students and families are adjusting to new habits, e.g., back-to-school, following winter/spring break, as weather gets warmer. Revise and redistribute annually, if possible.
Getting Started	• Determine format of map • Identify resources to produce and distribute map • Collaborate with parents to identify key routes
Planning Resources	National Center for Safe Routes to School's Map-a-Route Tool: http://maps.walkbiketoschool.org/ MnDOT Walk and Bike to School Maps Webinar http://www.dot.state.mn.us/saferoutes/toolkit.html
Sample Maps	Bozeman, MT: http://www.bozeman.k12.mt.us/schools/safe_routes/ Santa Clarita, CA: http://www.santa-clarita.com/index.aspx?page=177 Rochester, NY: http://www.walkinginfo.org/pedsafe/casestudy.cfm?CS_NUM=33

Walk and Bike to School Maps, sometimes called Suggested Route to School maps, help families choose the best route for walking or bicycling to school. Maps show stop signs, signals, crosswalks, sidewalks, bikeways, paths/trails, school entrances, bike parking, and crossing guard locations around a school. Maps may also show transit routes and stops, school enrollment areas, pick-up/drop-off zones, and important destinations, such as community centers and parks. Some less objective elements to consider include recommended routes, good walking/biking routes, and hazardous locations.



Walk and Bike to School Maps show the safest streets and crossings for getting to school.

The team leading the mapping effort should decide in advance whether the maps will be distributed electronically or in paper form, as this can inform how the map is produced. Maps may be produced using mapping or drawing technologies, such as GIS or Adobe Illustrator, but can also be as simple as hand drawn maps or marked up Google maps. Students may also be engaged in the making of maps through classroom or after-school activities. The City of Big Lake in partnership with school district staff can take leadership in developing maps that serve all three schools. School administers should collaborate on development of suggested routes and addition of information that supports other education and encouragement programs.

School Safety Campaign

Primary Outcomes	Will depend on campaign focus, but may include improved walking/biking safety behavior, improved driving safety behavior, and youth empowerment
Potential Lead	City of Big Lake Police Department; Big Lake School District
Potential Partners	Teachers/administrators/staff; PTO/parents; City of Big Lake Planning or Public Works; local groups/advocates/volunteers; local businesses
Recommended Timeframe	Annual or semi-annual; when habits, traffic patterns, or seasons change: upon returning to school in the fall, when the weather gets warmer, when daylight saving time ends
Getting Started	• Form a team to lead the development of the campaign • Identify the key issue(s) to focus the message of the campaign • Decide on the preferred format (signs, posters, billboards, etc.) • Identify funding for promotional material production and distribution.
Planning Resources	City of Portland: http://www.portlandoregon.gov/transportation/article/272948
Sample Programs	San Jose (CA) Street Smarts Program: http://www.getstreetsmarts.org/ MnDOT Share the Road (broad community focus): http://www.dot.state.mn.us/sharetheroad/

A safety campaign is an effective way to build awareness around students walking and bicycling to school and to encourage safe driving behavior among parents and passersby. A School Traffic Safety Campaign can use media at or near schools—such as posters, business window stickers, yard signs, or street banners—to remind drivers to slow down and use caution in school zones. This type of campaign can also address other specific hazards or behaviors, such as walking or bicycling to school, school bus safety, and parent drop-off and pick-up behavior.

Campaigns may have significant costs to produce promotional materials and collateral, though these items can often be covered through grants. Advertising can also be an important part of safety campaigns to inform the community and expand the reach of the messaging. A collaborative effort between the police department and the district can pool resources and expand the reach of the campaign. A campaign that coordinates with all schools in the area can be very effective. School administrators can work together to develop a comprehensive campaign that targets the three age groups, their families and the broader community.

A School Traffic Safety Campaign can use media at or near schools to remind drivers to use caution in school zones

Classroom Lessons (Minnesota Walk! Bike! Fun! Curriculum)

Primary Outcomes	Improved walking and bicycling safety behavior; youth empowerment
Potential Lead	Teachers/administrators at Big Lake Schools
Potential Partners	Big Lake School District; PTO/parents; City of Big Lake
Timeframe	Regularly integrated as viable. Safety training and skills elements twice per year.
Getting Started	• Download and review curriculum • Identify interested teachers • Have a key teachers attend a Bike Minnesota training session • Teachers plan for integration of curriculum
Planning Resources	Minnesota Walk! Bike! Fun! Curriculum http://www.dot.state.mn.us/saferoutes/ http://www.bikemn.org/education/srts-education-curriculum
Sample Programs	Oregon Safe Routes to School: http://walknbike.org/pedestrian-safety/ National Highway Traffic Safety Administration: http://www.nhtsa.gov/ChildPedestrianSafetyCurriculum

A variety of existing in-classroom lessons and skills training activities are available to help teach students about walking, bicycling, health, and traffic safety.

Pedestrian safety training teaches basic lessons such as, "look left, right, and left again".

Benefits

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

In-class lessons introduce the topic of pedestrian and bicycle safety to children, including what types of situations they may encounter on the road, how to follow street signs, and how to interact with drivers. Rhymes, songs, and videos can be used to help children remember how to walk and cross streets safely.

The new **Minnesota Walk! Bike! Fun! Pedestrian and Bicycle Safety Curriculum** is a two-part curriculum designed specifically for Minnesota's schools and is structured to meet Minnesota education standards. The Minnesota Walk! Bike! Fun! Pedestrian and Bicycle Safety Curriculum was developed by the Bicycle Alliance of Minnesota in collaboration with the Minnesota Department of Transportation and the Center for Prevention at Blue Cross and Blue Shield of Minnesota. The curriculum was designed to help children ages five to thirteen learn traffic rules and regulations, the potential hazards to traveling, and handling skills needed to bike and walk effectively, appropriately and safely through their community. This curriculum is free for anyone to download and use.

Walking School Bus or Bike Train

Primary Outcomes	Improved walking and bicycling safety behavior; youth empowerment
Potential Lead	Parents or other school volunteers, SHIP staff
Potential Partners	Teachers/administrators/staff; PTO/parents; local businesses
Recommended Timeframe	Can be first associated with an event and build to weekly and daily depending on interest and volunteer capacity.
Getting Started	• Consider a simple survey to determine interest in promoting as a school-wide or neighborhood program • Identify a coordinator • Coordinate with Walk and Bike to School Maps
Planning Resources	The Walking School Bus Guide: Combining Safety, Fun, and the Walk to School (SafeRoutesInfo.org) http://guide.saferoutesinfo.org/walking_school_bus/index.cfm
Sample Programs	Portland, Oregon http://www.biketrainpdx.org/ http://www.portlandoregon.gov/transportation/article/232532

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

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

Benefits

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

Evaluation

Why evaluate?

Evaluation is an important component of any Safe Routes to School effort. Not only does evaluation measure a program's reach and impact on a school community, it can also ensure continued funding and provide a path forward for ongoing and future efforts. Evaluation can measure participation and accomplishments, shifts in travel behavior, changes in attitudes toward bicycling and walking, awareness of the Safe Routes to School program, and/or the effectiveness of processes or programs.

Safe Routes to School evaluation is beneficial in the following ways:

- Indicates whether your SRTS efforts are paying off. Evaluation can tell you what's working well, what's not, and how you can improve your program in the future.
- Allows you to share your program's impact with others. Evaluation can demonstrate the value of continuing your program, with school faculty and administration, the district, parents, and elected officials.
- Provides a record of your efforts to serve as institutional memory. The nature of Safe Routes to School teams is that they change over time, as parents and their children move on to other schools and as staff turns over. Recording and evaluating your efforts provides vital information to future teams.
- Tells you if you are reaching your goals. Evaluation can confirm that you are accomplishing or working towards what you set out to do. On the other hand, evaluation efforts can reveal that there is a mismatch in your efforts and your goals or that you need to correct course.
- Encourages continued funding for Safe Routes to School programs. Data collected and shared by local programs can influence decisions at the local, state and national level. In part, today's funding and grant programs exist because of the evaluations of past programs.

Basics of Evaluation

At a minimum, SRTS evaluation should include the standard classroom hand tallies and parent surveys expected in order to be consistent with the national Safe Routes to School program. Evaluating the programs can - and should where possible - delve beyond this, but it need not be burdensome. Evaluating the program can be as simple as recording what you did and when you did it, and counting or estimating the number of students who participated or were reached. Recording planning efforts and taking photos is also helpful for the legacy of the program. In most cases, it is beneficial to measure more, such as school travel mode split and miles walked/biked, from which the school, district or city can estimate environmental, health, and other impacts.

There are two kinds of information that can be collected: quantitative data (numbers, such as counts, logs, and survey results) and qualitative data (words and images, such as observations, interviews, and records). Further, there are several different ways to collect information. This includes the following:

1. Conducting tallies/counts
2. Keeping logs (such as for mileage tracking)
3. Conducting surveys and interviews
4. Conducting observations and audits
5. Keeping planning and process records

Regardless of how elaborate you make your evaluation, it is important to plan ahead for measuring and tracking results. When you are designing your program, consider how you are going to evaluate it from the beginning, so that you can build in mechanisms for collecting the necessary data. For example, if showing changes in travel behavior over time is important to your effort, you will need to start by collecting baseline data so you know how students are getting to school currently in order to be able to demonstrate any change later.

Below is a series of basic steps to take in designing and executing your program evaluation:

1. Establish your goals and plan the specific program.
2. Decide what, how, and when to measure.
3. Collect baseline information, if necessary.
4. Conduct the program and monitor progress.
5. Conduct any post-program data collection, if necessary.
6. Interpret your data.
7. Use and share your results.

More resources for evaluation can be found on the National Center for Safe Routes to School's website here: http://guide.saferoutesinfo.org/evaluation/index.cfm.

Before and After Study of Infrastructure

It's also helpful to understand the impact of the specific infrastructure projects on travel behavior and patterns. When planning to improve the built environment to serve school travel, a simple before and after study can be completed with minimal resources and in some cases little more than volunteer support.

Document baseline conditions before the project and evaluate a few months after completion.

- A complete traffic count is very helpful but may be cost prohibitive. At a minimum, complete a count of pedestrians and bicyclists and note any large vehicles. For information on how to conduct a pedestrian and bicycle count refer to the National Bicycle and Pedestrian Documentation Project, which can be found online at http://bikepeddocumentation.org/
- Document motorist compliance with traffic laws, such as yielding at crosswalks and obeying the speed limit.
- Note pedestrian and bicyclist behavior that may cause safety concerns, such as wrong-way riding or crossing outside of crosswalks.

Annual Evaluation Tasks

At the beginning of each year establish which programs and improvements will be made and what needs to be done to complete basic steps 1-3.

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Implementation Strategy

The following section outlines an estimated implementation timeline for both the infrastructure and programmatic recommendations. This strategy identifies programs that can be started in first year of plan implementation and summarizes the estimated timing of infrastructure improvements.

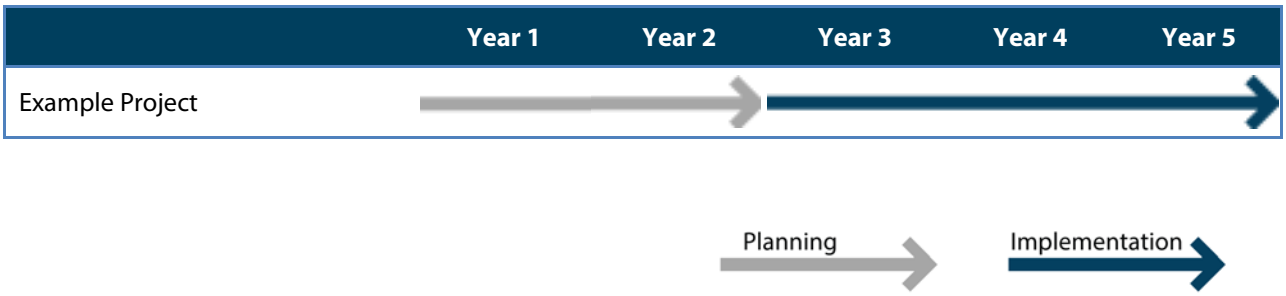
Year One

The programs identified for year one implementation will require the leading organization to take some immediate actions to make progress and follow this timeline. See the **Recommended Programs** chapter for detailed descriptions of each program, including a list of steps to get started on implementation.

Year one programs were selected based on existing capacity and interest identified during the planning process. Most education, encouragement and enforcement programs will be ongoing and once started can be integrated into school programs year after year.

Future Actions

While some recommendations may not be implemented in year one, it is still important to plan and prepare for future programmatic and infrastructure projects. These future actions are displayed in simplified timeline, illustrating a potential approach to phasing in certain activities.



Programs Action Plan

Planning → Implementation →

Table 3. Programs to implement at all schools

Type	Program	Potential Lead	Key Partner	Year 1	Year 2	Year 3	Year 4	Year 5
Encouragement	Walking school bus and/or bike train	Parents	School Administrators					
Encouragement	International Walk to School Day and Bike to School Day	SHIP Staff	School Administrators					
Education	SRTS walk and bike maps	District Staff	School Administrators, County Planning Staff					
Education	School Safety Campaign	District Staff	SHIP					
Education	Classroom Lessons (Minnesota Walk! Bike! Fun! Curriculum)	District Staff	School Teachers					

Infrastructure Action Plan

Independence Elementary School and Big Lake Middle School

See the **Infrastructure Issues and Recommendations** chapter for detailed discussion of the infrastructure projects listed here.

Table 4. Independence Elementary School and Big Lake Middle School Implementation Plan

Project #	Solution/ Recommendation	Lead Agency	Priority	Year 1	Year 2	Year 3	Year 4	Year 5
A	Construct a median refuge island, curb extension and marked crossing of Minnesota Avenue.	City of Big Lake	Medium					
B	Construct an ADA compliant landing at the SE corner of Phyllis and Minnesota. Perform an engineering study to determine if the corner radius should be adjusted. If needed, do not enlarge corner radius more than is absolutely necessary.	City of Big Lake	High					
C	Install sidewalk on East side of Phyllis street from Martin Ave to Minnesota Ave. Also consider a marked crossing of Martin Ave to complete the connection.	City of Big Lake	Medium					
D	Complete the sidewalk on the south side of Minnesota Avenue.	City of Big Lake	High					
E	Construct a path to the school drive access along County Rd 43 and install an enhanced crossing to make crossing to the west side safe and comfortable.	Sherburne County	Low					
F	Construct a median refuge island and marked crossing on the south side of the intersection of County Rd 43 and the school bus drive to connect to the proposed path.	Sherburne County	High					
G	Construct a path on the south side of the school bus drive to create a back route connecting all schools.	Big Lake Schools	Low					
H	Implement a time or beacon based school zone speed limit on Minnesota Ave.	City of Big Lake	High					
I	Change to a time-based school speed zone system along Co Rd 5.	Sherburne County	Medium					

Planning → Implementation →

Liberty Elementary School

See the **Infrastructure Issues and Recommendations** chapter for detailed discussion of the infrastructure projects listed here.

Table 5. Liberty Elementary School Implementation Plan

Project #	Solution/ Recommendation	Lead Agency	Priority	Year 1	Year 2	Year 3	Year 4	Year 5
A	Construct sidewalk or path on north side of Glenwood Ave E, from Birch Ave to County Road 43 N to allow for access by the residential neighborhood to the north.	City of Big Lake	Medium					
B	Construct a multi-use path from the 203rd Ave to the rear of the school. Mark crosswalks through the school lot to formalize a walking route.	Big lake Schools	High					
C	Relocate pedestrian pushbutton to an ADA compliant and easily accessible location along the walking path.	Sherburne County	Low					
D	Extend existing path on south side of the street to 172th St.	City of Big Lake	Low					
E	Support the construction of a multi-use path on north side of 205th NW when new development comes in.	City of Big Lake	High					
F	Consider a study for reconfiguration of the intersection of County Road 43 East and 205th Avenue NW to improve crossing conditions for pedestrians, including a potential compact roundabout.	·City of Big Lake	High					

Planning → Implementation →