MINNESOTA SAFE ROUTES TO SCHOOL

6/1/2017

Laura MacArthur Elementary Safe Routes to School Plan

Prepared by the:

Arrowhead Regional Development Commission (ARDC) and the Duluth-Superior Metropolitan Interstate Council (MIC)

Duluth Laura MacArthur Elementary

Safe Routes to School Plan

June 2017

Prepared for:

Laura MacArthur Elementary School &

Independent School District 709

Prepared by:

The Arrowhead Regional Development Commission

&

The Metropolitan Interstate Council

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Introduction

SRTS Program Overview

The Safe Routes to Schools Program is a Federal-Aid program of the U.S. Department of Transportation's Federal Highway Administration (FHWA). The Program was created by Section 1404 of the *Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users Act* (SAFETEA-LU). The SRTS Program is administered by State Departments of Transportation (DOTs).

The Program provides funds to the States to substantially improve the ability of primary and middle school students to walk and bicycle to school safely. The purposes of the program are:

- To enable and encourage children, including those with disabilities, to walk and bicycle to school
- To make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and
- To facilitate the planning, development, and implementation of projects and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity (approximately 2 miles) of primary and middle schools (Grades K-8).

Each State administers its own program and develops its own procedures to solicit and select projects for funding. The program establishes two distinct types of funding opportunities: infrastructure projects (engineering improvements such as sidewalk improvements and street crossings) and non-infrastructure related activities (such as education, enforcement and encouragement programs).

Plan Development: Why Develop SRTS Plans?

The SRTS program addresses a number of issues at and around schools including traffic safety, children's health, education, and funding. Without an adopted vision and plan to improve these problems, obtaining funding for improvement projects and programs would be difficult. A SRTS plan can help a school district and community to plan for and address issues that hinder biking and walking opportunities to school. Additionally, having a SRTS plan in place better positions a school to pursue and be awarded related funding opportunities for project implementation when they become available.

Following is an overview of factors which support the importance of planning for Safe Routes to School.

National Trends

In the 1960s, more than 65% of children walked or rode their bikes to school. Today, that figure is closer to 10%. The impacts of this change are quite dramatic:

Almost half of young people are not vigorously active on a regular basis; one in eight is overweight or obese. More than 10% of all trips are "escort" trips, children being driven around by adults; this rises to almost one-third of trips in the morning rush hours. Children today have much less independence, freedom to move around, and opportunities to "discover" their world than any previous generation.

Children in the U.S. spend an average of more than one hour in a car every day and between three and four hours a day watching television. Parents report the primary barriers to their children aged 5-18 years walking to or from school as (1) distance to school and (2) traffic-related danger. To address these issues, comprehensive Safe Routes to School (SRTS) initiatives focus on behavioral, environmental and policy strategies in an effort to increase the percentage of children who walk and bike to school.

Obesity

During the past 20 years there has been a dramatic increase in obesity in the United States. The Centers for Disease Control and Prevention estimates that 34% of Americans over the age of 20 are obese. Obesity is a serious health concern for children and adolescents. Data from National Health and Nutrition Examination surveys (1976–1980 and 2003–2006) show that the prevalence of obesity has increased: for children aged 2–5 years, prevalence increased from 5.0% to 12.4%; for those aged 6–11 years, prevalence increased from 6.5% to 17.0%; and for those aged 12–19 years, prevalence increased from 5.0% to 17.6%.

Obese children and adolescents are at risk for health problems during their youth and as adults. For example, during their youth, obese children and adolescents are more likely to have risk factors associated with cardiovascular disease (such as high blood pressure, high cholesterol, and Type 2 diabetes) than are other children and adolescents. The 2008 Trust for America's Health and the Robert Wood Johnson Foundation report ranks Minnesota 30th, with 24.8 percent of its adults being clinically obese. That's up from 23.7 percent in the 2007.

Physical Activity

The United States has seen a decrease in the number of children who are physically active and an increase in the number of children who are overweight. Statistics from the Centers for Disease Control (CDC) report nearly half of young people aged 12-21 years in the U.S. are not vigorously active on a regular basis and 14% of young people report no recent physical activity. In turn, overweight children are more likely to become obese adults at risk for a variety of diseases.

Based on successes in Europe and the drastic decline in the number of U.S. students who are walking and biking to school as their parents once did, the CDC and other groups across the nation have been promoting "Kids Walk-to-School" programs that encourage physical activity as an integral part of a child's daily routine. It assumes that teaching children the importance and pleasure of walking and bicycling to and from school may help to increase the likelihood that they will engage in other forms of physical activity. In

addition to the physical benefits, data shows that physical activity may improve academic performance and alertness in youth.

Traffic Safety

The number one reason parents do not allow their children to walk to school is a fear for their safety. The safety of children as pedestrians is a real concern. Data from the National Highway Traffic Safety Administration's 2011 *Traffic Safety Facts* report show that children aged less than 5 up to 15 years old had high rates of injuries or fatalities occurring in non-intersection areas. Following is data on the non-intersection injuries or deaths pulled from Table 96 - Pedestrians Killed or Injured, by Age and Location (see Figure 1).

Age Group	Number of Cases	Percent
>5 years	50 cases	71.4%
5-9 years	44 cases	69.8%
10-15 years	91 cases	69.5%

Table 100 – Pedestrians Killed, By Related Factors (see Figure 2) reflected that the top factor in pedestrian deaths was "Failure to yield right of way", accounting for 25% of fatalities.

This data points to the critical need to teach on-going good pedestrian skills to children and young adults, stressing the importance to cross at intersections and at identified crosswalks when provided. The younger children in this age group have not developed the skills and experience to navigate traffic safely, including the ability to judge speed and distance. It is important to teach and practice safe pedestrian skills with our children as well as provide responsible adult supervision as they travel to and from school.

Figure 1. Source: National Highway Traffic Safety Administration

Table 96
Pedestrians Killed or Injured, by Age and Location

Age (Years)	Location						Total	
	Intersection		Non-Intersection		Other			
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
Pedestrians Killed								
<5	10	14.3	50	71.4	9	12.9	**70**	**100**
5-9	14	22.2	44	69.8	5	7.9	**63**	**100**
10-15	27	20.6	91	69.5	13	9.9	**131**	**100**
16-20	34	13.5	185	73.4	29	11.5	**252**	**100**
21-24	42	13.8	236	77.4	26	8.5	**305**	**100**
25-34	70	11.2	495	79.2	56	9	**625**	**100**
35-44	73	12.9	432	76.6	50	8.9	**564**	**100**
45-54	172	19.2	624	69.6	94	10.5	**896**	**100**
55-64	148	22.6	447	68.1	50	7.6	**656**	**100**
65-74	118	28.9	242	59.2	46	11.2	**409**	**100**
>74	145	33.3	243	55.7	45	10.3	**436**	**100**
Unknown	5	20	18	72	1	4	**52**	**100**
Total	**858**	**19.4**	**3,107**	**70.1**	**424**	**9.6**	***4,432**	**100**
Pedestrians Injured								
<5	1,000.0	47.1	1,000.0	47.0	**	5.9	**2,000.0**	**100.0**
5-9	1,000.0	32.5	2,000.0	64.7	**	2.7	**4,000.0**	**100.0**
10-15	3,000.0	39.0	4,000.0	53.6	**	4.0	**7,000.0**	**100.0**
16-20	5,000.0	51.4	3,000.0	37.3	1,000.0	8.2	**9,000.0**	**100.0**
21-24	3,000.0	57.6	2,000.0	34.6	**	7.3	**6,000.0**	**100.0**
25-34	5,000.0	56.8	3,000.0	31.0	1,000.0	10.9	**10,000.0**	**100.0**
35-44	3,000.0	37.7	4,000.0	51.9	1,000.0	10.3	**8,000.0**	**100.0**
44-54	4,000.0	40.7	4,000.0	47.2	1,000.0	9.3	**9,000.0**	**100.0**
55-64	4,000.0	49.8	3,000.0	37.8	1,000.0	9.6	**8,000.0**	**100.0**
65-74	3,000.0	73.1	1,000.0	20.4	**	6.5	**4,000.0**	**100.0**
>74	2,000.0	55.4	1,000.0	25.4	1,000.0	19.2	**3,000.0**	**100.0**
Total	**34,000.0**	**48.7**	**28,000.0**	**41.0**	**6,000.0**	**8.6**	***69,000**	**100.0**

* Includes 43 pedestrians killed at unknown locations

** Less than 500

*** Includes 1,000 pedestrians injured at unknown locations

SRTS "5-E" Planning

The Safe Routes to School planning approach to pedestrian and bicycle safety is effective because it is done comprehensively and covers five key areas, referred to as the "5-Es": Engineering, Education, Enforcement, Encouragement and Evaluation. Research has shown the most successful way to increase bicycling and walking is through a comprehensive approach that includes the "5-Es" directly or indirectly. Following is an overview of each of the "5-Es".

Engineering

The engineering approach of SRTS addresses operational and physical improvements to the infrastructure surrounding schools that reduce speeds and potential conflicts with motor vehicle traffic, and establish safe and fully accessible crossings, walkways, trails, and bikeways.

Addressing school zone traffic separation and traffic calming is a common engineering application in SRTS planning. Schools now face the demands of students arriving by bus and an increasing number of parents who choose to drop off their children at the school entrance. Traffic separation and calming around schools addresses the functionality of traffic circulation as well as improves critical safety measures for pedestrians and bicyclists. Examples of this engineering approach for traffic volume and speed can include establishing school speed zones and separating bus and parent drop-off/ pick-up zones.

For streets that are wide, a narrowing approach can be used to both slow down traffic speeds and lessen the street crossing distance for pedestrians. Engineering applications for narrowing can include things such as bump outs of sidewalk corners to constrict a roadway or installing a pedestrian island for a safe half way point for crossing a road.

Encouragement

Encouragement and education combine to increase the number of children who walk and bicycle to school safely. Promotion activities also play an important role moving the overall SRTS program forward because they build interest and enthusiasm, which can maintain support for changes that might require more time and resources, such as constructing a new sidewalk.

Using events and activities to promote walking and bicycling encourages these as exciting choices for students. For example, many schools participate in organized events such as a walking school bus in the community or partake in International Walk to School Day on an annual basis. Some communities may highlight a day out of the week to celebrate biking and walking to school (e.g., "Walk & Wheel Wednesdays").

Enforcement

Examples of enforcement measures can include partnering with local law enforcement to ensure traffic laws are obeyed in the vicinity of schools (this includes enforcement of speeds, yielding to pedestrians in crossings, and proper walking and bicycling behaviors), and initiating community enforcement such as crossing guard programs. Enforcement can also occur at the school level, with Principals and teachers requiring that students abide by safe pedestrian and bicyclist behavior (i.e., crossing at designated crosswalks to get to school, wearing a bicycle helmet). School staff can also enforce any rules established for traffic control such as making sure parents abide by rules of the vehicle drop-off/pick-up zone.

The importance of enforcement should not be overlooked in developing and implementing a SRTS plan. The process of engaging law enforcement, school personnel, and community members to emphasize the seriousness of school safety to the community is key to improving walking and biking for students (and in fact, everyone!).

Evaluation

Evaluation is important to the SRTS program in order to make certain that the previously described approaches are having the desired effect of more active children, less traffic, cleaner air and fewer injuries because of efforts within the community. Evaluation does not have to be complicated, but it should be done on a regular basis so changes can be made in the SRTS program as needed.

Evaluation also consists of monitoring and documenting outcomes and trends through the collection of data, including the collection of data before and after improvements are made. For example, if bicycle racks are installed, the school can count the number of bicycles per day to gauge student use or if rules for parent drop-off/pick-up zones are changed, parents might be quickly interviewed during the transport times to gather their feedback on the changes.

Status of State and Federal Support for SRTS

In July 2012, Congress passed a federal two-year transportation bill, *Moving Ahead for Progress in the 21st Century* (MAP-21). MAP-21 established a consolidated program that provides funding for a variety of alternative transportation projects, including SRTS that were previously separate programs. The SRTS program was combined with other bicycling and walking programs into the Transportation Alternatives Program (TAP).

In December 2015, the new transportation bill *Fixing America's Surface Transportation Act (FAST Act)* was signed. The FAST Act is a five year surface transportation law that provides long-term funding certainty for federal fiscal years 2016-2020. With the signing of the new bill, TAP has become a set-aside program of the Surface Transportation Block Grant Program and has been renamed as Transportation Alternatives (TA).

Minnesota has an established a SRTS program with State allocated funding in addition to the federal TA funds for non-infrastructure and infrastructure projects. The Minnesota Department of Transportation (MnDOT) has also facilitated the creation of the

Minnesota Safe Routes to School Resource Center which provides various resources of information to plan, create, and implement SRTS efforts and programs in Minnesota. The Resource Center can be accessed at the following website: https://www.dot.state.mn.us/mnsaferoutes/.

Community Profile and Goals

Laura MacArthur Elementary School is located at 720 N. Central Avenue in Duluth, Minnesota's Denfeld neighborhood. The school, built 2011, and is directly across the street of the original Laura MacArthur Elementary School. There are nearly 500 students enrolled in grades in pre-kindergarten through fifth. It is included within Independent School District's (ISD) 709's Student Transportation Eligibility Policy that students are eligible for transportation if they live .7 miles or further from school. Also, within the Wellness Policy, it is recognized that the School District will work with the City, County, or other groups to remove any barriers to make it safer and easier for students to walk and bike to school.

The school hosts extended programs such as the K.E.Y. Zone and the Valley Youth Center. These programs are neighborhood based after school programs to help kids stay physically active through a variety of indoor and outdoor games and adventures. Students also learn leadership skills and how to make positive contribution to their community.

General Goals and Planning Process

2017 General Laura MacArthur Elementary School Goals

The SRTS planning team is comprised of the Metropolitan Interstate Council (MIC), St. Louis County Public Health, and the Arrowhead Regional Development Commission (ARDC). As the planning process progressed, three goals were identified as the following:

1. Laura MacArthur Elementary School will work to increase the education opportunities and support for walking, biking and SRTS with the school, parents, and the community.
2. Address pedestrian and bicycle safety concerns and physical improvement opportunities within a one-mile radius of the school.
3. Laura MacArthur Elementary will complete and continue ongoing evaluations of SRTS efforts.

Plan Process

The MIC, in partnership with St. Louis County Public Health and ARDC initiated the SRTS planning process. There was a total of *four meetings during the process.*

The first meeting was held in September 2015, the planning team met with the school's principal, informing him about the SRTS planning background, the objectives of the "5-E's", and the planning timeline. At this first meeting, initial existing barriers and concerns for students safely walking and biking to school were identified. Towards the end of the

meeting, a plan of action was formed to hold a site observation during peak arrival and dismissal times as well as the distribution of parent surveys and classroom tallies.

The second meeting was held in March 2016, in which the planning presented the parent survey and classroom tally results, as well as some existing conditions material to the participants at the party. This meeting was an essential way to bring attention to the SRTS planning efforts to the meeting participants as a way to formulate the 5' E strategy recommendations.

A third meeting was held with K.E.Y. Zone on April 11th, 2017 students to help identify desired locations and trouble areas that they encountered during when walking or biking in the neighborhood.

A fourth meeting was held in *on May 11th, 2017*. Staff manned a table which presented all of the information during a local open house, and a brief presentation was made to the Parent Teacher Association who held a meeting later that night. The planning team presented education, encouragement, enforcement, evaluation, and engineering recommendations that were reviewed and prioritized for potential implementation.

Assessment of Existing Conditions

Assessment methods used to assess the existing conditions for students to walk and bike to school included a review of existing plan documents, upcoming roadway projects, crash data analysis, school site observations, parent surveys/students classroom tallies, and current programs or activities related to SRTS.

Neighborhood Assessment & Field Observation

The SRTS planning team observed activity at Laura MacArthur Middle School on October 22, 2015, between 7:15-7:50 a.m. and 2:15-3:00 p.m. Traffic behaviors, the functionality of the bus loading and parent zones, and the ease of students walking and biking to school were examined. Overall the planning team reviewed the existing conditions at the school site and the surrounding area.

Laura MacArthur Elementary School can be accessed from Central Avenue, Elinor Street, Central Place, and N. 54th Avenue W. Many of these streets surrounding the school area primarily residential with a relatively low Annual Average Daily Traffic (AADT) volume of 832 vehicles, with the exception of Central Avenue and Grand Avenue as these are busy collector and arterial streets. Central Avenue is a major collector street with two lanes of traffic which as an AADT of 3,704 vehicles. Grand Avenue is a main arterial street with three lanes of traffic and is posted 30 miles per hour (mph). Its AADT near the school is 12,813 vehicles which serves a crossing barrier for students walking and bicycling.

Laura MacArthur's main entrance is located off the parent vehicle pick-up and drop-off zone, consisting of a traffic circle, connected to the visitor/staff parking lot and provides an outlet to Central Avenue. The pick-up/drop-off zone allows for curbside drop-off and loading from students.

About Classroom Tallies and Parent Surveys

One of the main activities of this planning process was to administer classroom tallies and parent surveys of student at Laura MacArthur Elementary School. The student and parent survey tools were developed by the National Center for Safe Routes to School. Students participated in classroom tallies, which asked them how they traveled to and from school for two consecutive days. Parents/guardians completed a 16-question survey distributed to students in all kindergarten through fifth grade classrooms. Parent surveys were sent home with students, as they asked for information regarding current travel mode behavior and safety perceptions.

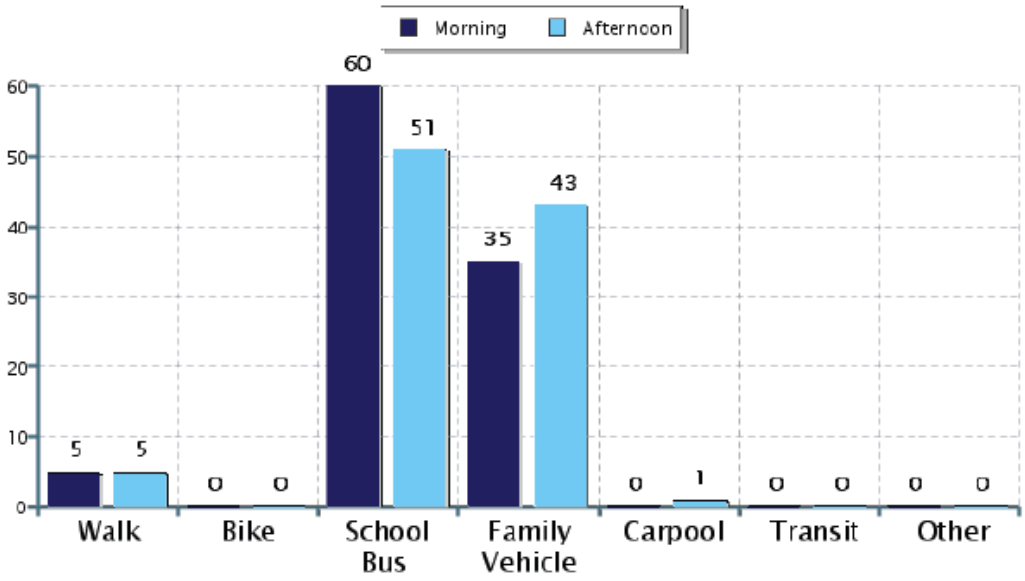
The purpose of these surveys was to obtain a baseline of information to identify and measure student travel behaviors and parental attitudes. The results also helped the SRTS planning team identify strategy to increase the number of children walking and biking to school. This section shows the results of selected survey responses. A copy of the student and parent surveys for this analysis can be found in Appendix A. Copies of the completed survey reports can be found in Appendix B.

Classroom Tally Results

Teachers administered a classroom tally in which nine classrooms from kindergarten through fifth grade students during the week of October 2015. Students were asked to report how they traveled to school for two consecutive days midweek, including any differences between mode of travel for arrival to school and departure from school.

Students answered questions: "How did you arrive at school today?" and "How do you plan to leave for home after school?" The majority of students indicated that they traveled to and from school by school bus and family vehicles. 60% of students were tallied that they utilize the school bus for morning arrival, while 51% take the bus home after dismissal. Also, 35% arrive to school by family vehicle while 43% use their family vehicle to go home after dismissal. 5% of students indicated that they walk to and from school in both the morning and afternoon.

Morning and Afternoon Travel Mode Comparison



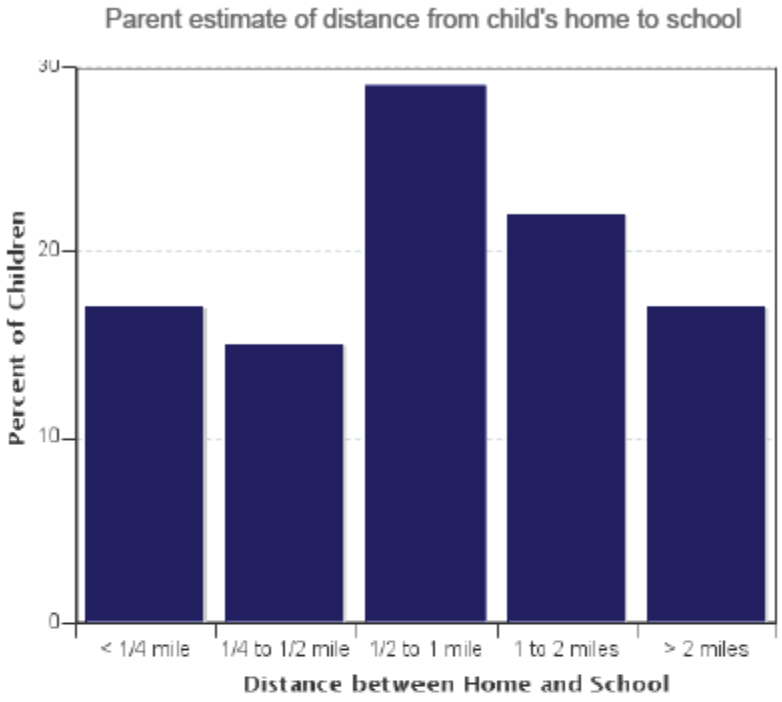
Morning and Afternoon Travel Mode Comparison

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	240	5%	0%	60%	35%	0%	0.4%	0%
Afternoon	251	5%	0%	51%	43%	0.8%	0.4%	0%

Percentages may not total 100% due to rounding.

Parent Survey Results

Parent surveys were distributed in October 2015 in which 90 surveys were completed. Of the respondents, the highest number of returns came from parents/guardians that lived ½ mile to 1 mile away from school (29%). 22% of the survey respondents that lived 1 mile up to 2 miles away from Laura MacArthur.

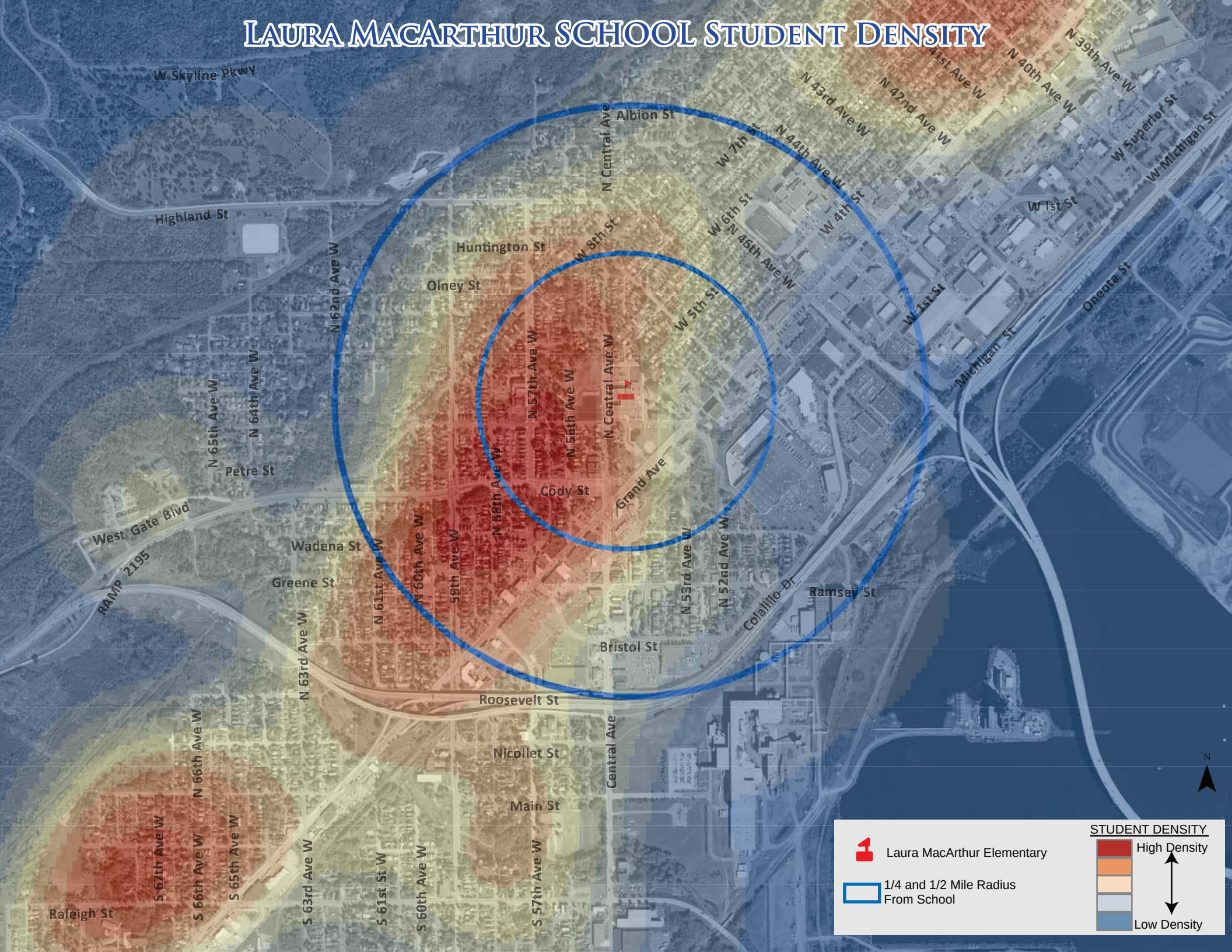


Parent estimate of distance from child's home to school

Distance between home and school	Number of children	Percent
Less than 1/4 mile	15	17%
1/4 mile up to 1/2 mile	13	15%
1/2 mile up to 1 mile	25	29%
1 mile up to 2 miles	19	22%
More than 2 miles	15	17%

17% of parents reported that their family lived less than ¼ mile away from school. 73% of those who lived less than ¼ mile from the school said they walked to school in the morning and 60% walked in the afternoon. The survey results indicated that these are the only students that walked to school, as anyone else that lived further than ¼ of a mile do not walk.

Laura MacArthur SCHOOL Student Density



Laura MacArthur SCHOOL Existing Conditons

Laura MacArthur Elementary School "5-E "Recommended Strategies

The Laura MacArthur Elementary School SRTS Plan is meant to guide the implementation of their SRTS Program. The barriers to walking and bicycling to school were identified in the parent surveys and during the existing conditions assessment, illustrate the need for a set of comprehensive strategies to reach their SRTS goals. The recommendations encompass the "5-E" approach areas and vary by implementation effort level.

The engineering recommendations are intended to improve the safety of the school site and the community with both short and long-term recommendations. Education and encouragement recommendations focus on raising community awareness and targeted training on walking/biking skills and safe parent drop-off and bus loading zones conduct. Community enforcement recommendations emphasize street intersection safety and traffic speed monitoring. Finally, the evaluation recommendations include routine SRTS meetings, and conduct parent surveys and classroom tallies to monitor changes in travel behavior and awareness for safe routes to school as strategies are implemented.

Problem Statements

- There is a perception of crime and fear of walking alone
- Ice/snow is a barrier around the neighborhood
- Need for more education and encouragement activities for students & parents
- It is difficult to cross Grand Avenue to and from school
- Lack of local advocate to encourage & carryout bicycling activities
- 46th Ave W is wide and creates concerns for students crossing
- Cody Avenue provides an uncomfortable pedestrian environment
- The 54th Ave W./W. 5th Street/Central Place intersection is concerning to students walking and bicycling in regards to cars being parked near the intersection resulting in limited visibility and vehicles cutting corners.

Education

Education includes identifying safe routes safe routes, teaching students to look both ways at intersections, and how to handle potentially dangerous situations. These strategies are often closely tied to Encouragement strategies which encourage students to begin/continue walking and biking to school.

Currently, there is a lack of education for young people for biking and walking. Lack of education for drivers about observing pedestrian and bicyclist rights is also an issue. In addition to the education about safe travel, increased education about the health benefits of active living may encourage it. There is concern that all road users, pedestrians, bicyclists and motorists are unclear as to how to safely share the road. Drivers generally do not yield to pedestrians at street intersections and don't always give bicyclists proper space on major roads with limited shoulders. There is a lack of education on how pedestrians and bicyclists should correctly use streets without sidewalks safely.

Goal 1: Education, Encouragement, & Enforcement Goal – Laura MacArthur Elementary School will work to increase the education opportunities and support for walking, bicycling and SRTS with the school and community.

Laura MacArthur Elementary School SRTS Education Strategies

Strategy 1.1: Implement the *Walk! Bike! Fun!* Curriculum.

The *Walk! Bike! Fun!* Curriculum was developed by the Bicycle Alliance of Minnesota through a federal Safe Routes to School grant provided by the Minnesota Department of Transportation (MnDOT) and in collaboration with the Center of Prevention at Blue Cross and Blue Shield of Minnesota. It is a two-part curriculum designed specifically for Minnesota's schools and is structured to meet Minnesota education standards.

Walk! Bike! Fun! will help children ages five to thirteen develop life-long skills through fun classroom activities and on-foot and on-bike skills practice. Students will 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.

Decisions should be made about how the curriculum will be implemented. Instructors can be sent to Bike Minnesota curriculum trainings as well as participation in a local Traffic Skills 101 class. Once instructors have been trained, the curriculum may be implemented by utilizing the bicycle fleet. The bicycle fleet was awarded to the Duluth YMCA, courtesy of MnDOT's Bicycle Fleet solicitation.

Strategy 1.2: Organize and hold bicycle rodeos.

Plan and hold bicycle rodeos, utilizing the bicycle fleet. Bicycle rodeos offer bicycle skills and safety stations for children and sometimes parents to visit.

Strategy 1.3: Develop and create a Walk & Bike to School Route Map.

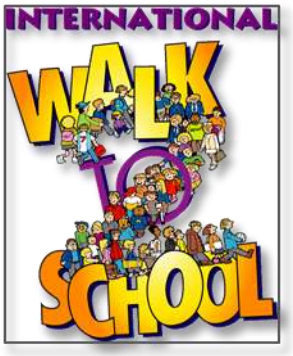
Mapping basic information about the neighborhoods surrounding the school can be a great tool for selecting a route and also may be useful in identifying and prioritizing needed pedestrian and bicycling improvements. Developing a route map can show signs, signals, crosswalks, sidewalks, paths, crossing guard locations, and hazardous locations around the school. This information may be available from the school district or local planning or traffic engineering departments. In some cases it may be necessary to gather more information thought walk and bike audits or other assessment methods.

Encouragement

Encouragement combines the results to the other "E's" to improve knowledge, facilities, and enforcement to encourage more students to walk or ride safely to school. Most importantly, encouragement activities build interest and enthusiasm. Programs may include "Walk to School Days" or mileage clubs and contests with awards to motivate students. Encouragement will be a powerful tool to get students walking and biking to Laura MacArthur Elementary School. Due to barriers such as Grand Avenue, Cody Street as well as other identified barriers, it will be important to continue encouragement of a healthy walking and biking lifestyle.

Laura MacArthur Elementary School SRTS Encouragement Strategies

Strategy 1.4: Participate in the International Walk to School Day event.



International Walk to School Day is a global event that is held every year in October. It began in 1997 as a one-day event in the United States to build awareness for walkable communities. Over time, it has progressed into a mass celebration of active transportation and its related issues, used to introduce communities to SRTS.

Strategy 1.5: Organize and implement a walking school bus.

A walking school bus is a group of children walking and biking to school with one or more adults. The same route is followed every time and children are picked up from their houses or designated bus stops at designated times on a pre-planned route to school. Organize walking groups for different neighborhood and assign an adult with each group. Parents can take turns leading the bus.

Strategy 1.6: Organize and implement a Borrow a Bicycle Lock Program.

This program allows students to check-out a high-quality bike lock in order to secure their bicycle to the school's bike racks. Offering students that do not have or forgotten a bike lock to an alternative to leaving their bikes unsecured.

Strategy 1.7: Incorporate SRTS activities with school newsletters.

Incorporate blurbs about walking and biking activities, events, and information into the School's newsletter. It can be an effective way to reach out to each student's parents.

Strategy 1.8: Organize and create a Snow Removal Campaign.

Coordinate a Snow Removal Campaign and identify potential partners to include for implementation. A snow removal campaign recognizes neighbors who remove snow from sidewalks and driveways. This is a very positive message campaign, thanking people for shoveling through the use of yard signs, postcards and flyers.

Enforcement

Enforcement includes policies and activities that address safety issues such as speeding or illegal turning, but also includes getting community members to work together to promote safe walking, bicycling, and driving. Enforcement is critical in establishing a community that is perceived as safe for those bicycling and walking.

Laura MacArthur Elementary School SRTS Enforcement Strategies

Strategy 1.9: Continue the presence speed monitors and trailers.

Portable speed trailers visually display drivers' real-time speeds compared to the speed limit. Active speed monitors are permanent devices to keep drivers aware of their speeds and the need to slow down near schools. These devices are effective in reducing speeds and increasing awareness of local speed limits. It is recommended that the School work in coordination with the City of Duluth to erect the speed monitor and/or trailer. This should include determining the feasibility and cost of the project as well as identifying potential funding sources. Recommended location: Grand Avenue, near Memorial Park.

Strategy 1.10: Deploy crossing guards at various intersections.

Crossing guards are trained adults, paid volunteers, who are legally empowered to stop traffic to assist students with crossing the street. Identify which intersections crossing guards should be positioned at and recruit and assign adults to guard those intersections on regularly scheduled basis.

Strategy 1.19: Continue the presence of Law Enforcement.

It is recommended that the School meet with police to determine strategies for continued routine presence. The presence of law enforcement helps reduce poor driving behavior such as speeding, failing to yield to pedestrians, turning illegally, parking illegally, or other violations. Working with local neighborhood watch groups can be a more feasible way to provide this sort of presence, as currently, local police presence is in high demand.

Engineering

Engineering can improve children's safety to enable more children to walk and bike to school safely. The relationship of the School building to sidewalks and street crossings can determine the level of comfort and safety a pedestrian or bicyclist experiences. It is important to note that all of these elements are interconnected: the street is connected to the sidewalk and the sidewalk is connected to the building. Engineering strategies are best used in conjunction with education, encouragement, and enforcement activities, as they complement these strategies. Additional detail for each of the following action items can be found in Appendix C.

Goal 2: Engineering Goal - Laura MacArthur will address pedestrian and bicycle safety concerns and physical improvement opportunities with a one-mile radius of the School.

Laura MacArthur Elementary School Engineering Strategies

Strategy 2.1: Install sidewalks where gaps exist and repair poor sidewalks

- Along W 4th and W 5th Streets from Laura MacArthur Elementary to Denfeld High School
- Along the northern portion of Memorial Park on the southern side of Elinor St (along the parking lot)

Strategy 2.2: Increase pedestrian safety along 46th Ave W. Some typical treatments the SRTS committee looked at include the following:

- Install curb extensions/Bulb-outs at N 46th Ave W crossing on north side of W 4th St
- Install curb extensions/Bulb-outs at N 46th Ave W and W 6th St crossing at all corners
- Calm traffic speeds

Strategy 2.3: Clear sidewalks of obstructions

- Brush and overgrown shrubs obstruct pathways and blocks sightlines for both pedestrians and motorists.

Strategy 2.4: Increase pedestrian safety along N Central Ave. Some typical treatments the SRTS committee looked at include the following:

- Install bulb-outs at the intersections of N Central Ave & Elinor St and at N Central Ave & 6th St.
- Create a mid-block crossing from the parent drop-off along the West side of N Central Ave across to just south of the main parking lot entrance. Add bump-outs and in-street crosswalk signage here as well.
- Calm traffic speeds

Strategy 2.5: Install an ADA curb ramp behind the school at N 54th Ave W. and Central Pl. on the eastern side of N 54th Ave W

Strategy 2.6: Mark "No Parking" in front of curb ramps along N 54th Ave W near Elinor St

Strategy 2.7: Build a shared-use path along N Central Ave adjacent to Memorial Park from Grand Ave to Elinor St

Strategy 2.8: Make crossings along N 59th Ave W safer (trim lower branches on trees for sight lines)

Strategy 2.9: Make crossings along Cody St safer

Strategy 2.10: Conduct Intersection Control Evaluations at the intersections of Central Ave & Grand Ave and Central Ave & Cody St to determine what appropriate safety measure should be taken to make it safer to walk and bike through

Strategy 2.11: Update Elinor St. and Grand Ave intersection to be fully ADA compliant

Strategy 2.12: Add lighting in dark areas around the school and nearby

Strategy 2.13: Replace curb ramps with ADA compliant curb ramps

Strategy 2.14: Make Cody St safer for all modes, ages, and abilities. Some typical treatments the SRTS committee looked at include the following:

- Convert Cody St from a four-lane street into single-lanes in both directions and add bike lanes. The path would connect the cross-city trail to Memorial Park/Laura MacArthur.

Evaluation

Evaluation is instrumental to the success of Laura MacArthur Safe Routes to School goals. Evaluation includes reviewing the implementation of strategies and addressing new concerns and issues as they arise, and continuing to promote planning for safe walking and biking.

Goal 3: Evaluation Goal – Laura MacArthur will complete ongoing evaluations of Safe Routes to School efforts.

Laura MacArthur Elementary School Evaluation Strategies

Strategy 3.1: Form an active Safe Routes to School team.

It is recommended that Laura MacArthur Elementary School form an active Safe Routes to School team and hold regular meetings. Meetings should be held at least on an annual basis or more if additional meetings are needed.

Strategy 3.2: Review progress of Safe Routes to School implementation.

It is recommended that the Safe Routes to School Plan be reviewed annually to track the progress of implementation. An annual meeting should be scheduled to conduct an action plan review. Strategies should be updated as needed. Conducting annual classroom tallies and monitoring bicycle counts is part of the evaluation tracking process.

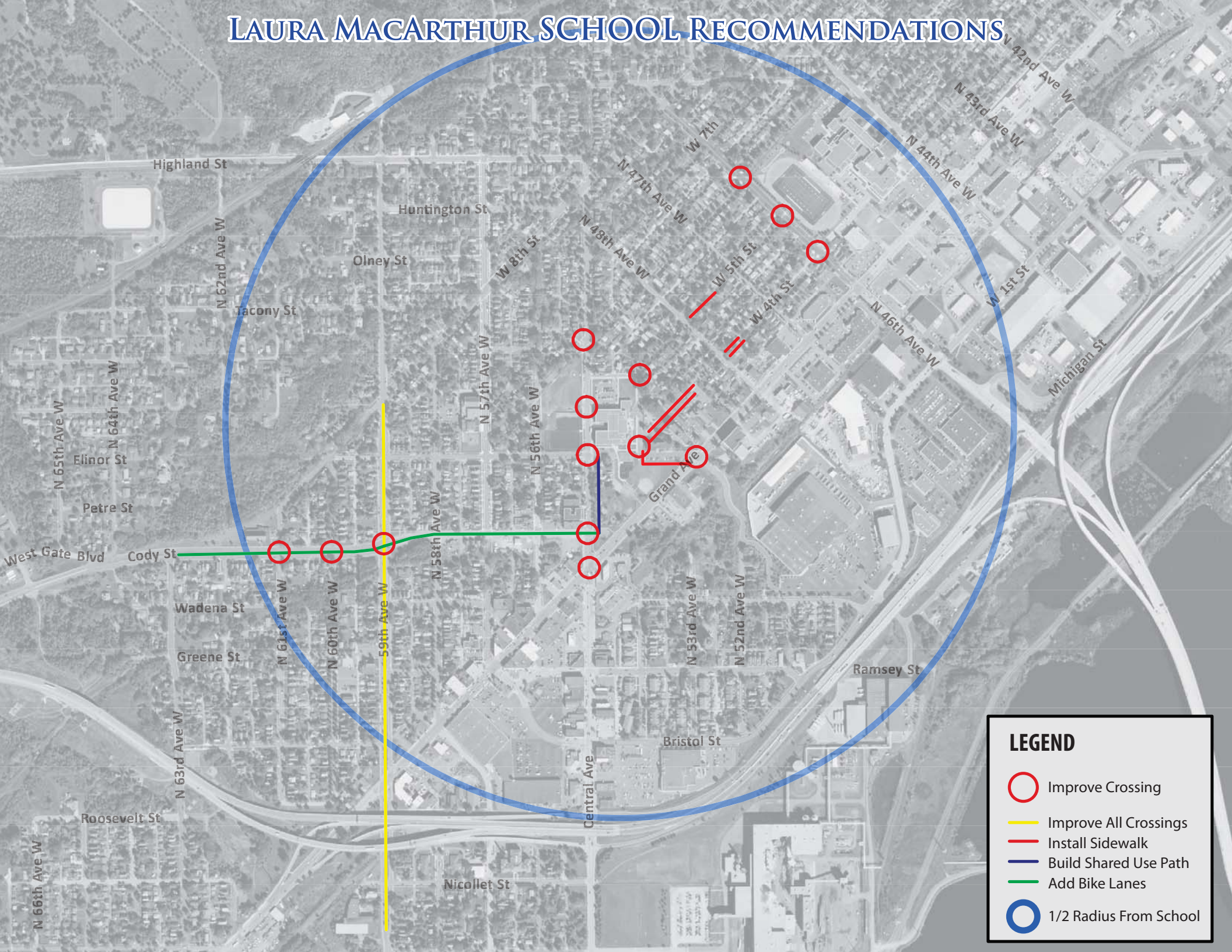
Strategy 3.3: Hold and annual meeting/workshop between SRTS partners.

It is recommended that an annual meeting/workshop be held between SRTS partners. The information sharing and discussion session will involve stakeholders such as government entities (MnDOT, MIC, St. Louis County, cities) school district administration, and representatives from participating schools. Topic should include information on the latest funding opportunities, prioritizing updates and an overview of the 5E programs and activities that are being implemented currently and in the future for evaluation.

Strategy 3.4: Metropolitan Interstate Council (MIC) review of the Safe Routes to School Plan.

The MIC will review the Safe Routes to School Plan every five years to evaluate bicycle and pedestrian counts, policies, and programs in place after completion of the Safe Routes to School Plan.

Laura MacArthur SCHOOL Recommendations



Appendix A: Safe Routes to School Classroom Tallies and Parent Surveys Example

Safe Routes to School Students Arrival and Departure Tally Sheet

CAPITAL LETTERS ONLY – BLUE OR BLACK INK ONLY

School Name:

Teacher's First Name:

Teacher's Last Name:

Grade: (PK,K,1,2,3...) 0 2

Monday's Date (Week count was conducted) M M D D Y Y Y Y

Number of Students Enrolled in Class: 1 5

- Please conduct these counts **on two of the following three days Tuesday, Wednesday, or Thursday. (Three days would provide better data if counted)**
- **Please do not conduct these counts on Mondays or Fridays.**
- Before asking your students to raise their hands, please read through all possible answer choices so they will know their choices. Each Student may only answer once.
- Ask your students as a group the question "**How did you arrive at school today?**"
- Then, reread each answer choice and record the number of students that raised their hands for each. **Place just one character or number in each box.**
- Follow the same procedure for the question **"How do you plan to leave for home after school?"**
- You can conduct the counts once per day but during the count please ask students both the school arrival and departure questions.
- Please conduct this count regardless of weather conditions (i.e., ask these questions on rainy days, too).

Step 1.
Fill in the weather conditions and number of students in each class

Step 2.
AM – "**How did you arrive at school today?**" Record the number of hands for each answer.
PM – "**How do you plan to leave for home after school?**" Record the number of hands for each answer.

Key	**Weather** S= sunny R= rainy O=overcast SN=snow	**Student Tally** Number in class when count made	**Walk** -	**Bike** -	**School Bus** -	**Family Vehicle** Only with Children from your family	**Carpool** Riding with children from other families	**Transit** City bus, subway, etc.	**Other** Skate-board, scooter, etc.
Sample AM	S N	2 0	2	3	8	3		3	1
Sample PM	R	1 9	3	3	8	1	2	2	
Tues. AM									
Tues. PM									
Wed. AM									
Wed. PM									
Thurs. AM									
Thurs. PM									

Please list any disruptions to these counts or any unusual travel conditions to/from the school on the days of the tally.

Parent Survey About Walking and Biking to School

Dear Parent or Caregiver,

Your child's school wants to learn your thoughts about children walking and biking to school. This survey will take about 5 - 10 minutes to complete. We ask that each family complete only one survey per school your children attend. If more than one child from a school brings a survey home, please fill out the survey for the child with the next birthday from today's date.

After you have completed this survey, send it back to the school with your child or give it to the teacher. Your responses will be kept confidential and neither your name nor your child's name will be associated with any results.

Thank you for participating in this survey!

+ CAPITAL LETTERS ONLY – BLUE OR BLACK INK ONLY +

School Name:

1. What is the grade of the child who brought home this survey? ☐☐ Grade (PK,K,1,2,3…)

2. Is the child who brought home this survey male or female? ☐ Male ☐ Female

3. How many children do you have in Kindergarten through 8th grade? ☐☐

4. What is the street intersection nearest your home? (Provide the names of two intersecting streets)

and

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box.

5. How far does your child live from school?

- ☐ Less than ¼ mile
- ☐ ¼ mile up to ½ mile
- ☐ ½ mile up to 1 mile
- ☐ 1 mile up to 2 miles
- ☐ More than 2 miles
- ☐ Don't know

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box. +

6. On most days, how does your child arrive and leave for school? (Select one choice per column, mark box with X)

Arrive at school	Leave from school
☐ Walk	☐ Walk
☐ Bike	☐ Bike
☐ School Bus	☐ School Bus
☐ Family vehicle (only children in your family)	☐ Family vehicle (only children in your family)
☐ Carpool (Children from other families)	☐ Carpool (Children from other families)
☐ Transit (city bus, subway, etc.)	☐ Transit (city bus, subway, etc.)
☐ Other (skateboard, scooter, inline skates, etc.)	☐ Other (skateboard, scooter, inline skates, etc.)

+ Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box +

7. How long does it normally take your child to get to/from school? (Select one choice per column, mark box with X)

Travel time to school	Travel time from school
☐ Less than 5 minutes	☐ Less than 5 minutes
☐ 5 – 10 minutes	☐ 5 – 10 minutes
☐ 11 – 20 minutes	☐ 11 – 20 minutes
☐ More than 20 minutes	☐ More than 20 minutes
☐ Don't know / Not sure	☐ Don't know / Not sure

+ +

8. Has your child asked you for permission to walk or bike to/from school in the last year? ☐ Yes ☐ No

9. At what grade would you allow your child to walk or bike to/from school without an adult?

(Select a grade between PK,K,1,2,3…) ☐☐ grade **(or)** ☐ I would not feel comfortable at any grade

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box

10. What of the following issues affected your decision to allow, or not allow, your child to walk or bike to/from school? (Select ALL that apply)

11. Would you probably let your child walk or bike to/from school if this problem were changed or improved? (Select one choice per line, mark box with X)

	My child already walks or bikes to/from school		
☐ Distance	☐ Yes	☐ No	☐ Not Sure
☐ Convenience of driving	☐ Yes	☐ No	☐ Not Sure
☐ Time	☐ Yes	☐ No	☐ Not Sure
☐ Child's before or after-school activities	☐ Yes	☐ No	☐ Not Sure
☐ Speed of traffic along route	☐ Yes	☐ No	☐ Not Sure
☐ Amount of traffic along route	☐ Yes	☐ No	☐ Not Sure
☐ Adults to walk or bike with	☐ Yes	☐ No	☐ Not Sure
☐ Sidewalks or pathways	☐ Yes	☐ No	☐ Not Sure
☐ Safety of intersections and crossings	☐ Yes	☐ No	☐ Not Sure
☐ Crossing guards	☐ Yes	☐ No	☐ Not Sure
☐ Violence or crime	☐ Yes	☐ No	☐ Not Sure
☐ Weather or climate	☐ Yes	☐ No	☐ Not Sure

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box

12. In your opinion, how much does your child's school encourage or discourage walking and biking to/from school?

☐ Strongly Encourages ☐ Encourages ☐ Neither ☐ Discourages ☐ Strongly Discourages

13. How much fun is walking or biking to/from school for your child?

☐ Very Fun ☐ Fun ☐ Neutral ☐ Boring ☐ Very Boring

14. How healthy is walking or biking to/from school for your child?

☐ Very Healthy ☐ Healthy ☐ Neutral ☐ Unhealthy ☐ Very Unhealthy

Place a clear 'X' inside box. If you make a mistake, fill the entire box, and then mark the correct box

15. What is the highest grade or year of school you completed?

☐ Grades 1 through 8 (Elementary)
☐ Grades 9 through 11 (Some high school)
☐ Grade 12 or GED (High school graduate)
☐ College 1 to 3 years (Some college or technical school)
☐ College 4 years or more (College graduate)
☐ Prefer not to answer

16. Please provide any additional comments below.

Appendix B: Safe Routes to School Classroom Tallies and Parent Survey Results

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

School Name: Laura MacArthur Elementary

School Group: Duluth SRTS

School Enrollment: 500

% of Students reached by SRTS activities: 0-25%

Number of Classrooms Included in Report: 9

Set ID: 18955

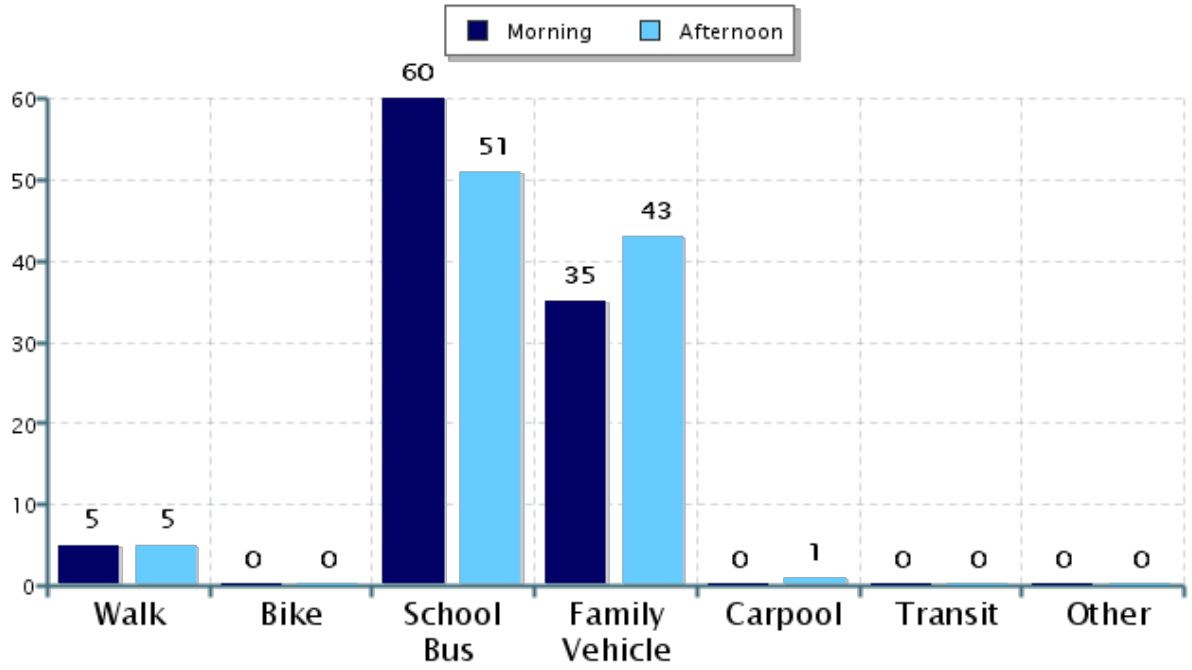
Month and Year Collected: October 2015

Date Report Generated: 03/21/2016

Tags:

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

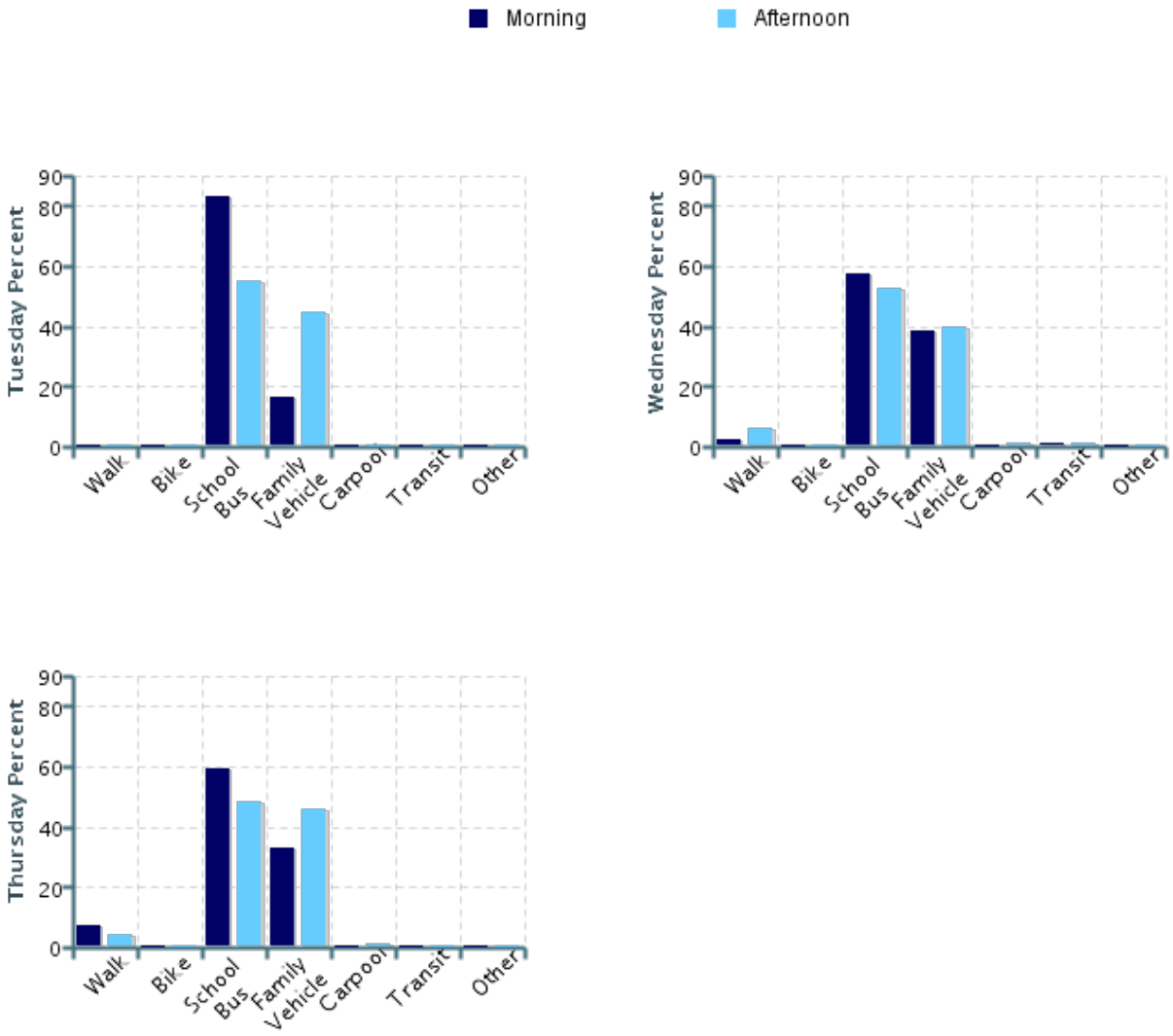


Morning and Afternoon Travel Mode Comparison

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	240	5%	0%	60%	35%	0%	0.4%	0%
Afternoon	251	5%	0%	51%	43%	0.8%	0.4%	0%

Percentages may not total 100% due to rounding.

Morning and Afternoon Travel Mode Comparison by Day

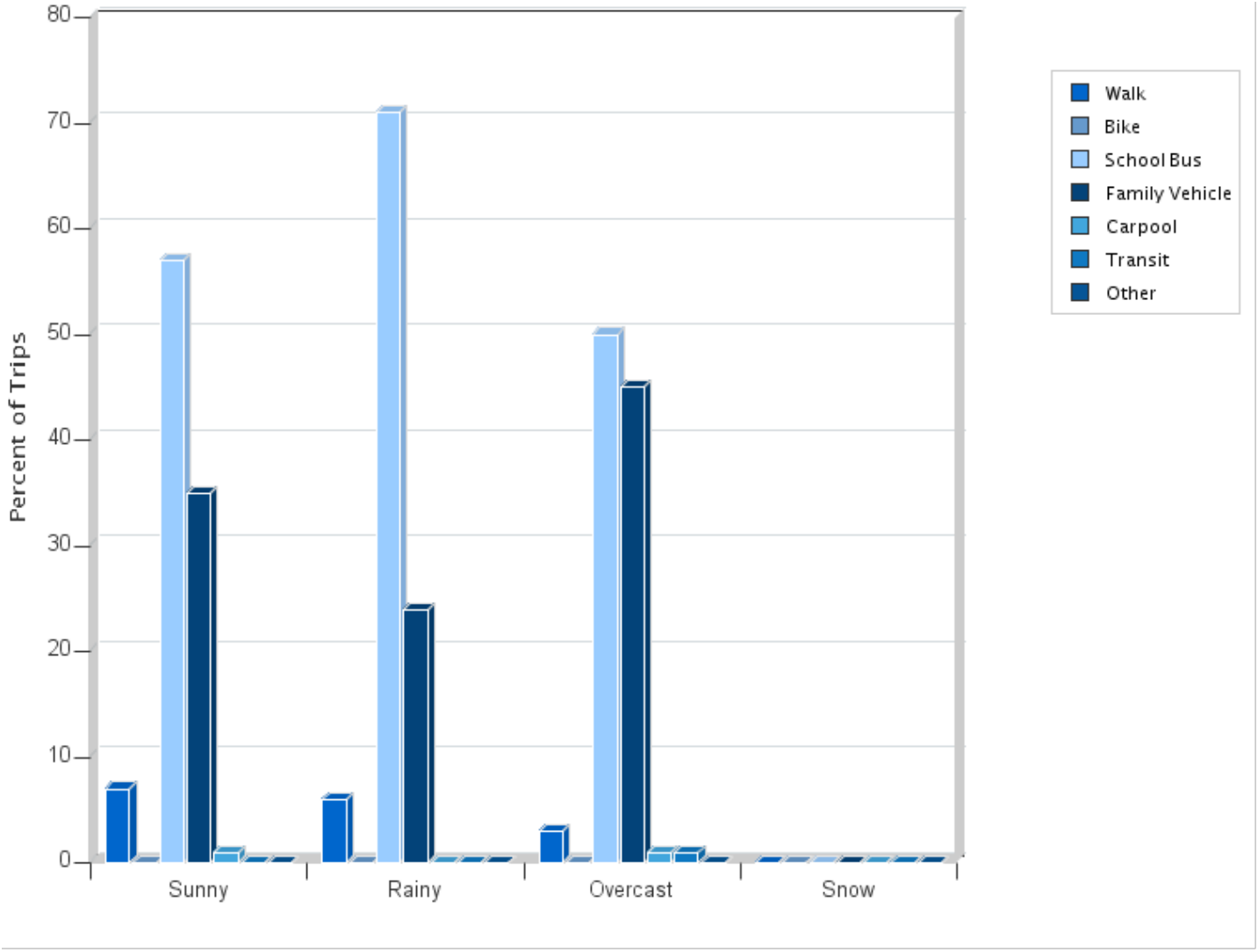


Morning and Afternoon Travel Mode Comparison by Day

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Tuesday AM	18	0%	0%	83%	17%	0%	0%	0%
Tuesday PM	20	0%	0%	55%	45%	0%	0%	0%
Wednesday AM	116	3%	0%	58%	39%	0%	0.9%	0%
Wednesday PM	120	6%	0%	53%	40%	0.8%	0.8%	0%
Thursday AM	106	8%	0%	59%	33%	0%	0%	0%
Thursday PM	111	5%	0%	49%	46%	0.9%	0%	0%

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	147	7%	0%	57%	35%	0.7%	0%	0%
Rainy	68	6%	0%	71%	24%	0%	0%	0%
Overcast	166	3%	0%	50%	45%	0.6%	1%	0%
Snow	0	0%	0%	0%	0%	0%	0%	0%

Percentages may not total 100% due to rounding.

Parent Survey Report: One School in One Data Collection Period

School Name: Laura MacArthur Elementary

Set ID: 13875

School Group: Duluth SRTS

Month and Year Collected: October 2015

School Enrollment: 0

Date Report Generated: 03/21/2016

% Range of Students Involved in SRTS: 26%-50%

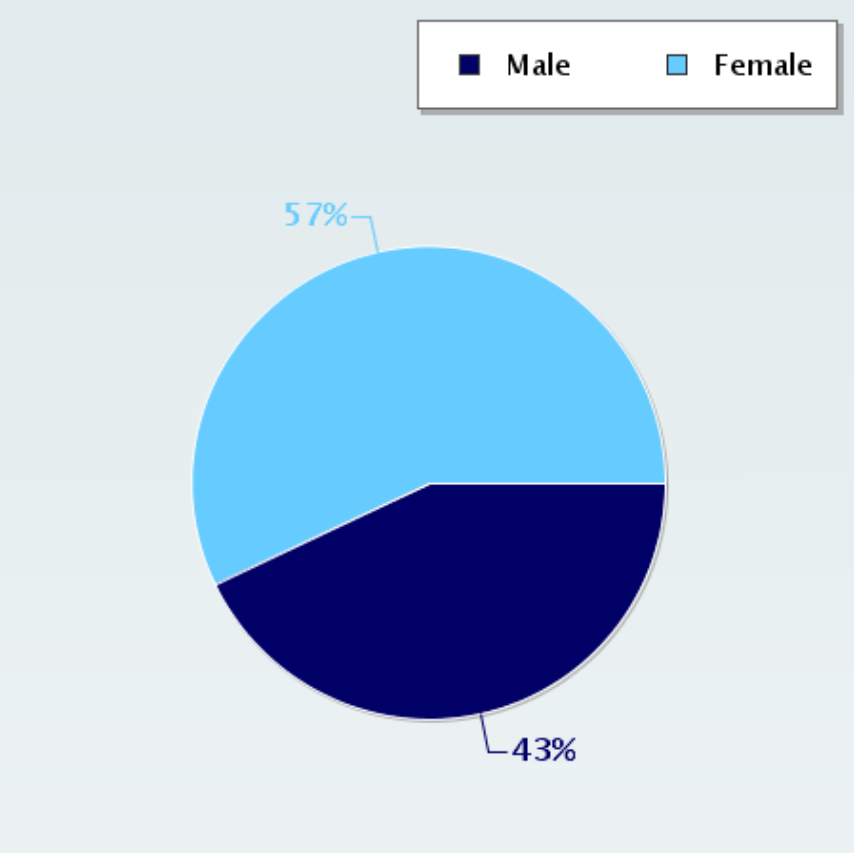
Tags:

Number of Questionnaires Distributed: 500

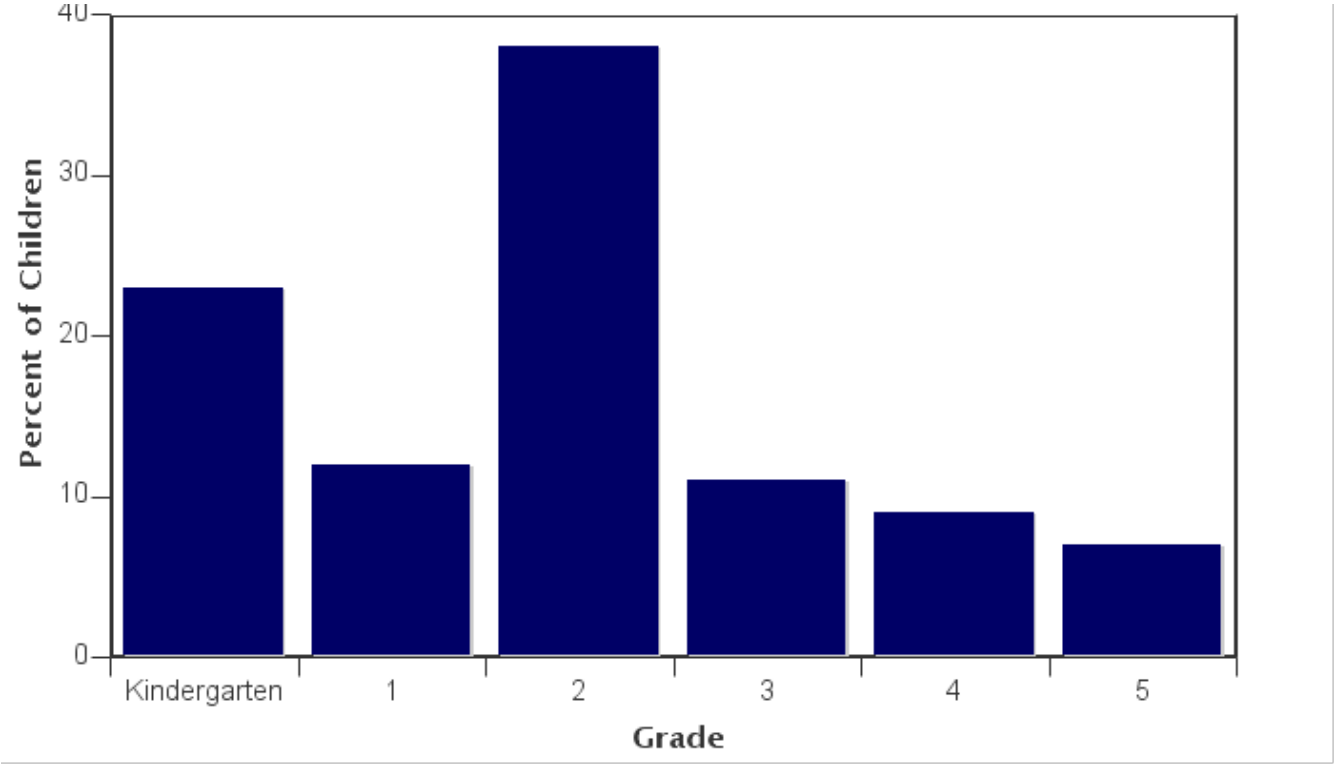
Number of Questionnaires Analyzed for Report: 90

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.

Sex of children for parents that provided information



Grade levels of children represented in survey

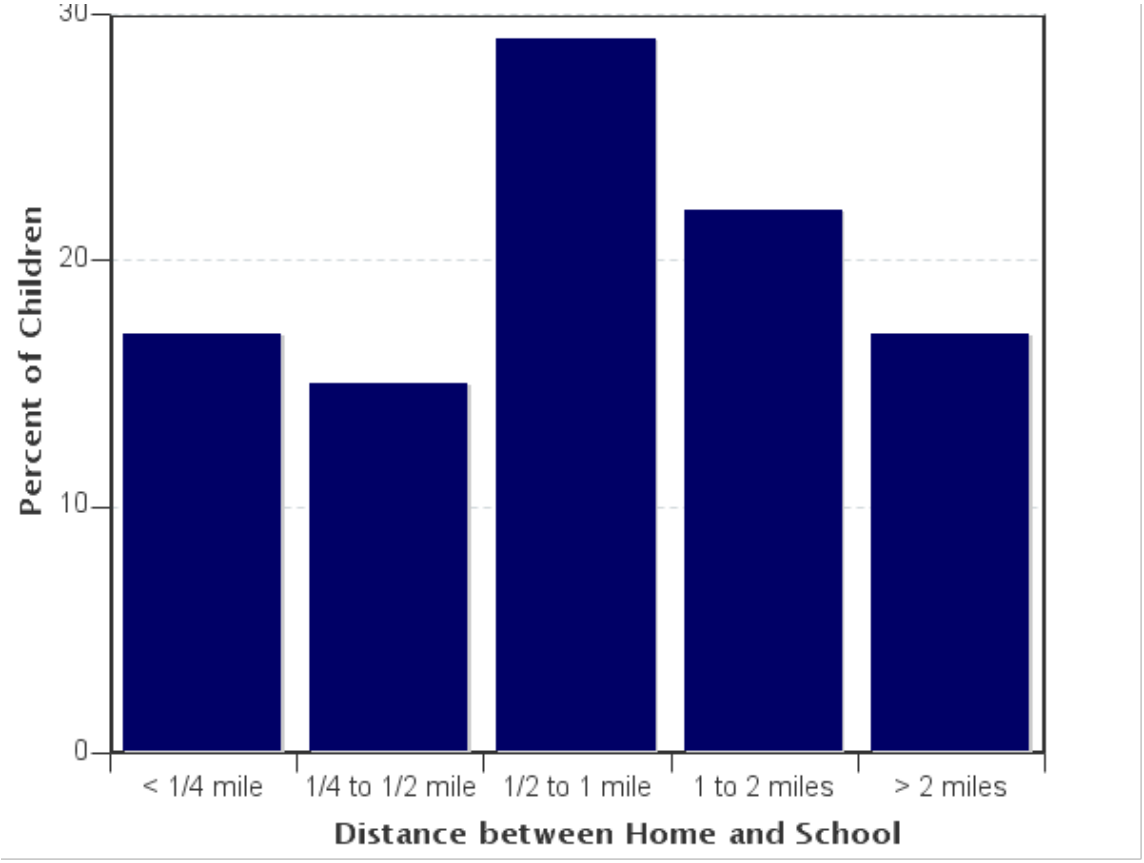


Grade levels of children represented in survey

Grade in School	Responses per grade	
	Number	Percent
Kindergarten	21	23%
1	11	12%
2	34	38%
3	10	11%
4	8	9%
5	6	7%

No response: 0
Percentages may not total 100% due to rounding.

Parent estimate of distance from child's home to school

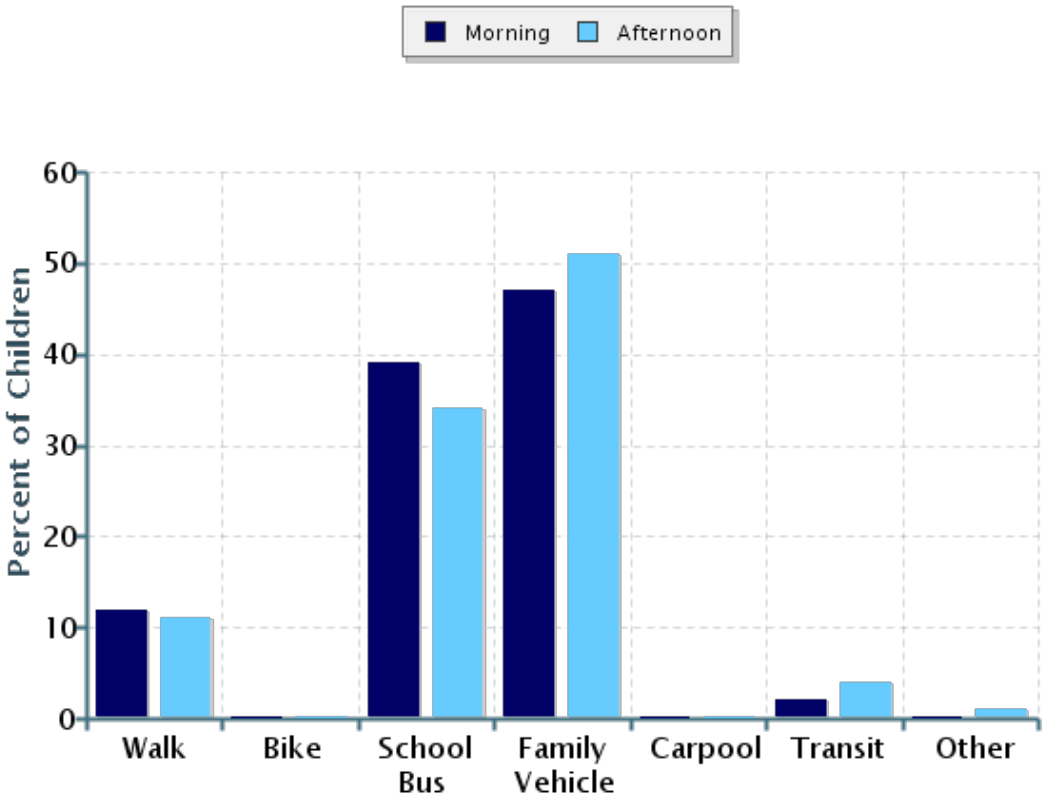


Parent estimate of distance from child's home to school

Distance between home and school	Number of children	Percent
Less than 1/4 mile	15	17%
1/4 mile up to 1/2 mile	13	15%
1/2 mile up to 1 mile	25	29%
1 mile up to 2 miles	19	22%
More than 2 miles	15	17%

Don't know or No response: 3
Percentages may not total 100% due to rounding.

Typical mode of arrival at and departure from school

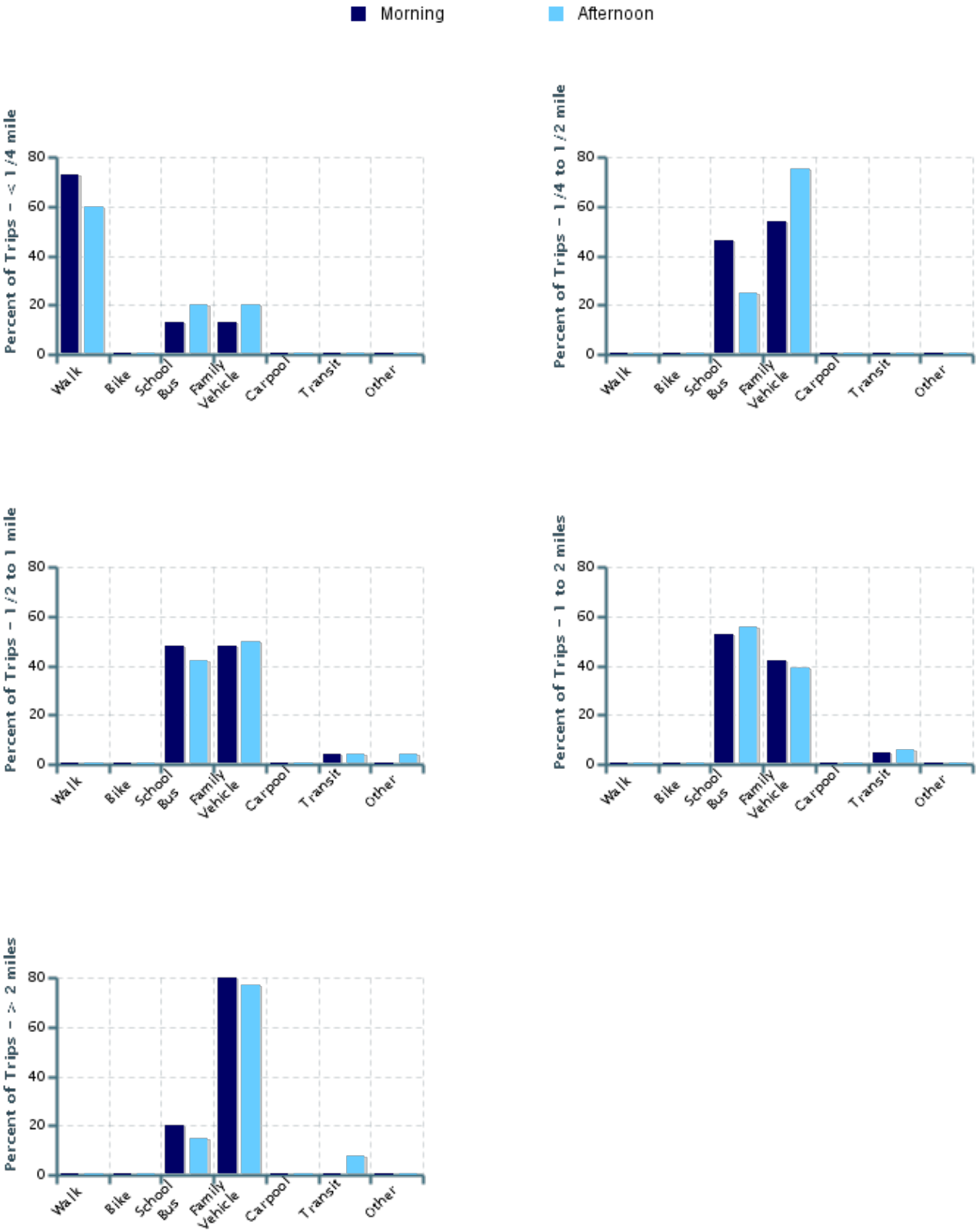


Typical mode of arrival at and departure from school

Time of Trip	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	90	12%	0%	39%	47%	0%	2%	0%
Afternoon	85	11%	0%	34%	51%	0%	4%	1%

No Response Morning: 0
No Response Afternoon: 5
Percentages may not total 100% due to rounding.

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



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	15	73%	0%	13%	13%	0%	0%	0%
1/4 mile up to 1/2 mile	13	0%	0%	46%	54%	0%	0%	0%
1/2 mile up to 1 mile	25	0%	0%	48%	48%	0%	4%	0%
1 mile up to 2 miles	19	0%	0%	53%	42%	0%	5%	0%
More than 2 miles	15	0%	0%	20%	80%	0%	0%	0%

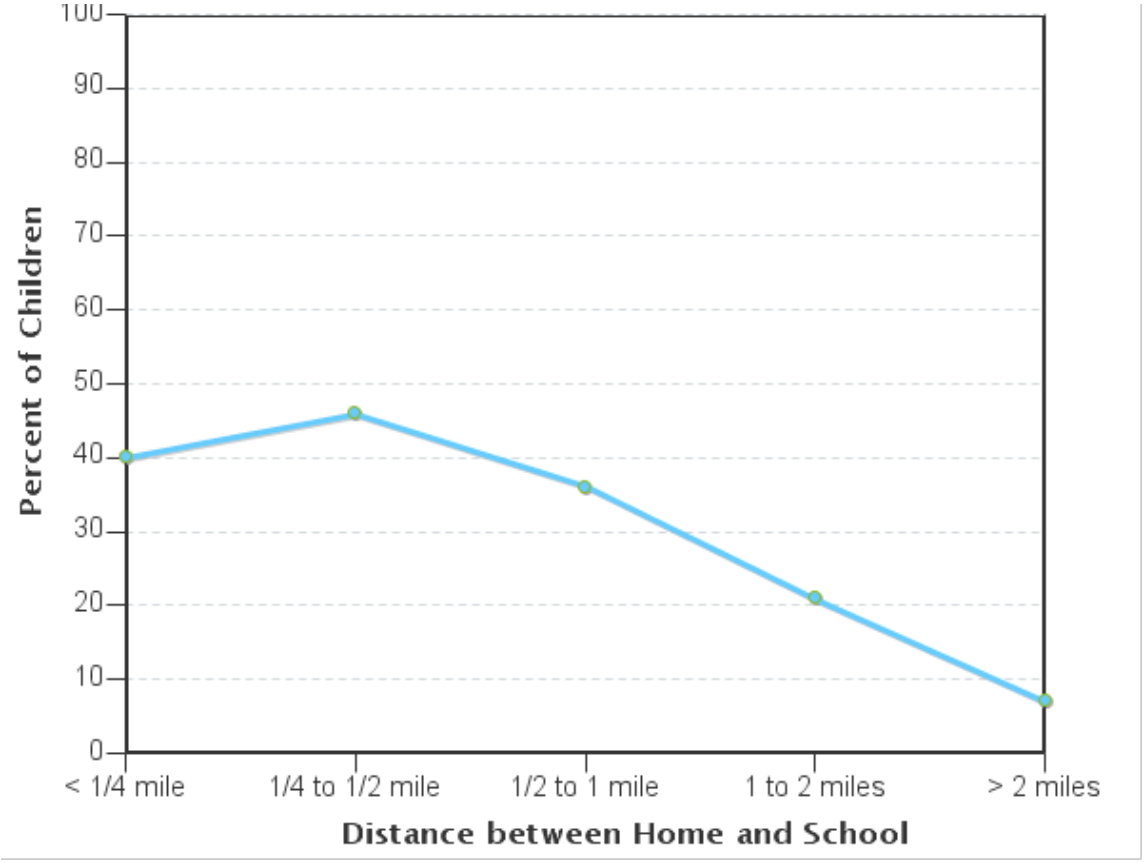
Don't know or No response: 3
Percentages may not total 100% due to rounding.

School Departure

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	15	60%	0%	20%	20%	0%	0%	0%
1/4 mile up to 1/2 mile	12	0%	0%	25%	75%	0%	0%	0%
1/2 mile up to 1 mile	24	0%	0%	42%	50%	0%	4%	4%
1 mile up to 2 miles	18	0%	0%	56%	39%	0%	6%	0%
More than 2 miles	13	0%	0%	15%	77%	0%	8%	0%

Don't know or No response: 8
Percentages may not total 100% due to rounding.

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

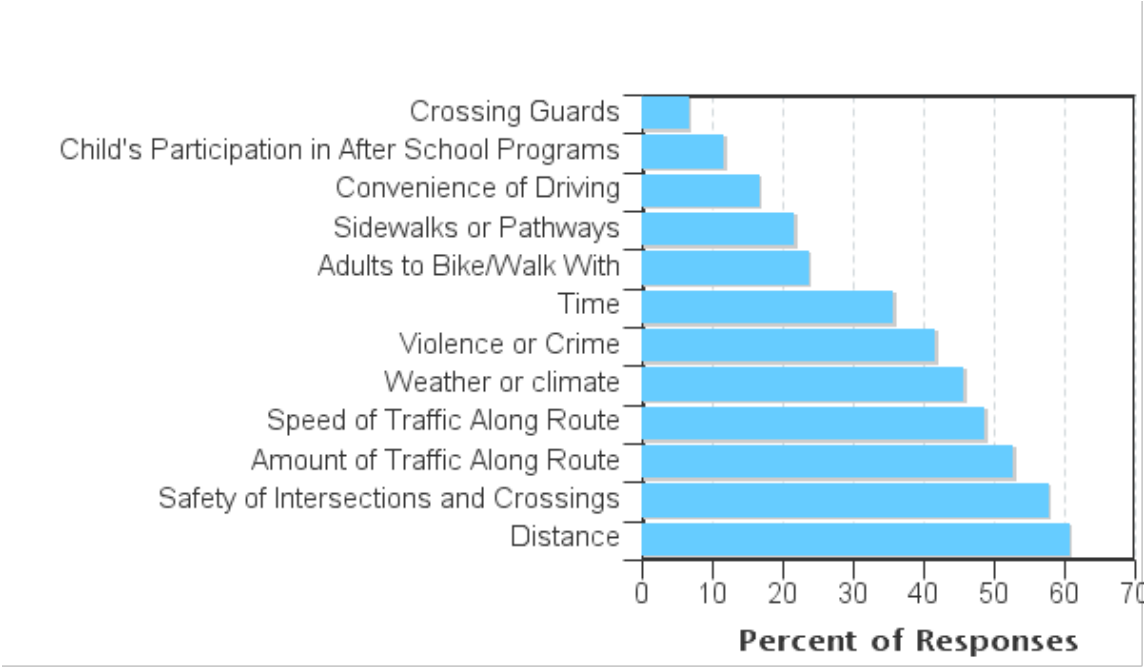


Percent of children who have asked for permission to walk or bike to/from school by distance they live from school

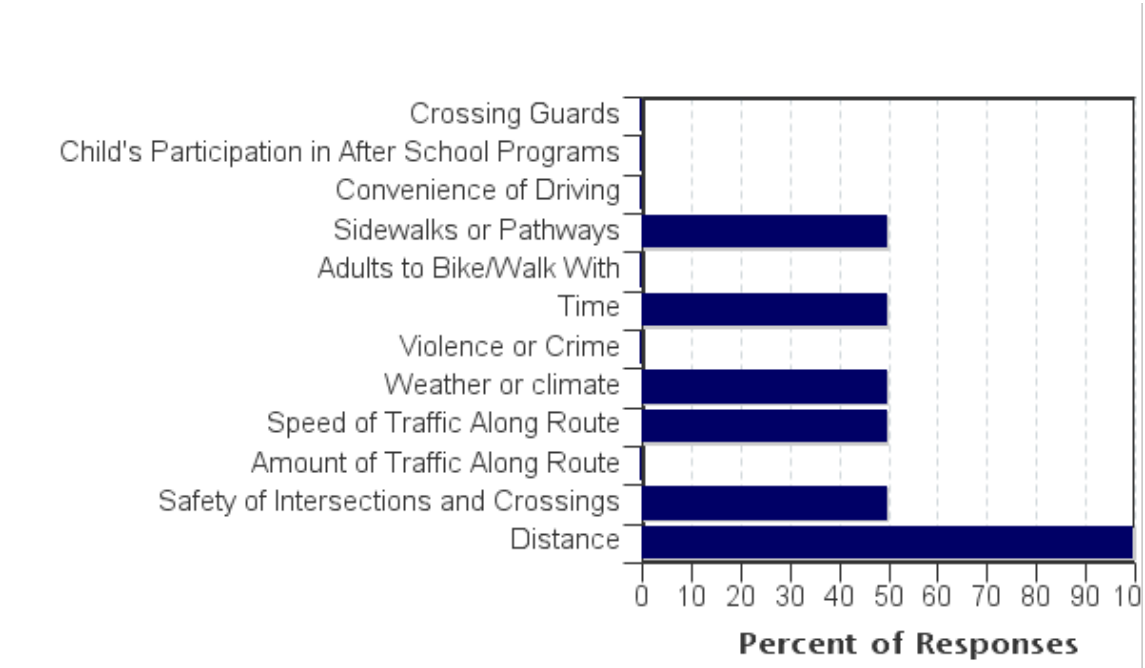
Asked Permission?	Number of Children	Less than 1/4 mile	1/4 mile up to 1/2 mile	1/2 mile up to 1 mile	1 mile up to 2 miles	More than 2 miles
Yes	26	40%	46%	36%	21%	7%
No	61	60%	54%	64%	79%	93%

Don't know or No response: 3
Percentages may not total 100% due to rounding.

Issues reported to affect the decision to not allow a child to walk or bike to/from school by 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

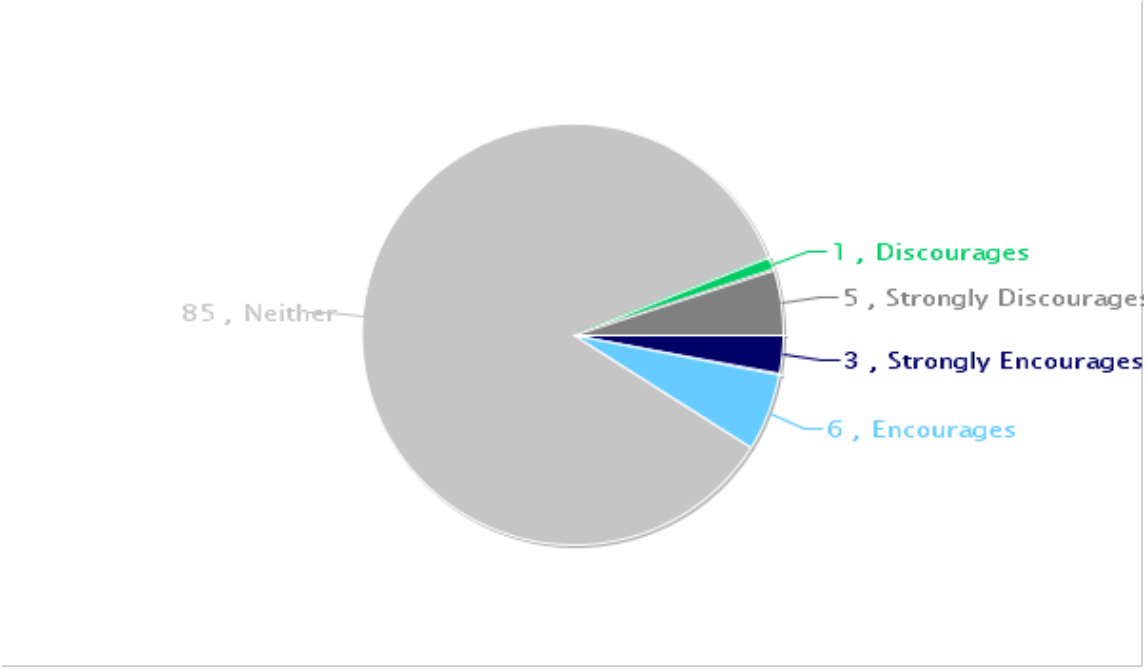


Issues reported to affect the decision to allow a child to walk or bike to/from school by parents of children who already walk or bike to/from school

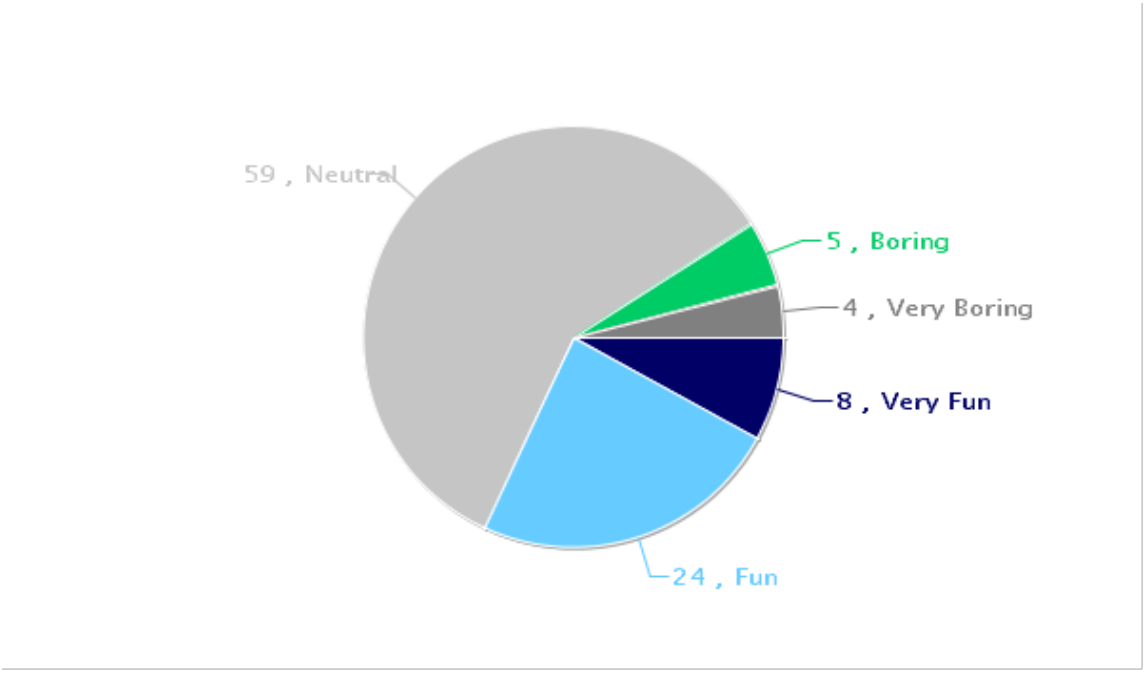
Issue	Child does not walk/bike to school	Child walks/bikes to school
Distance	61%	100%
Safety of Intersections and Crossings	58%	50%
Amount of Traffic Along Route	53%	0%
Speed of Traffic Along Route	49%	50%
Weather or climate	46%	50%
Violence or Crime	42%	0%
Time	36%	50%
Adults to Bike/Walk With	24%	0%
Sidewalks or Pathways	22%	50%
Convenience of Driving	17%	0%
Child's Participation in After School Programs	12%	0%
Crossing Guards	7%	0%
Number of Respondents per Category	**59**	**2**

No response: 29
Note:
--Factors are listed from most to least influential for the 'Child does not walk/bike to school' group.
--Each column may sum to > 100% because respondent could select more than issue
--The calculation used to determine the percentage for each issue is based on the 'Number of Respondents per Category' within the respective columns (Child does not walk/bike to school and Child walks/bikes to school.) If comparing percentages between the two columns, please pay particular attention to each column's number of respondents because the two numbers can differ dramatically.

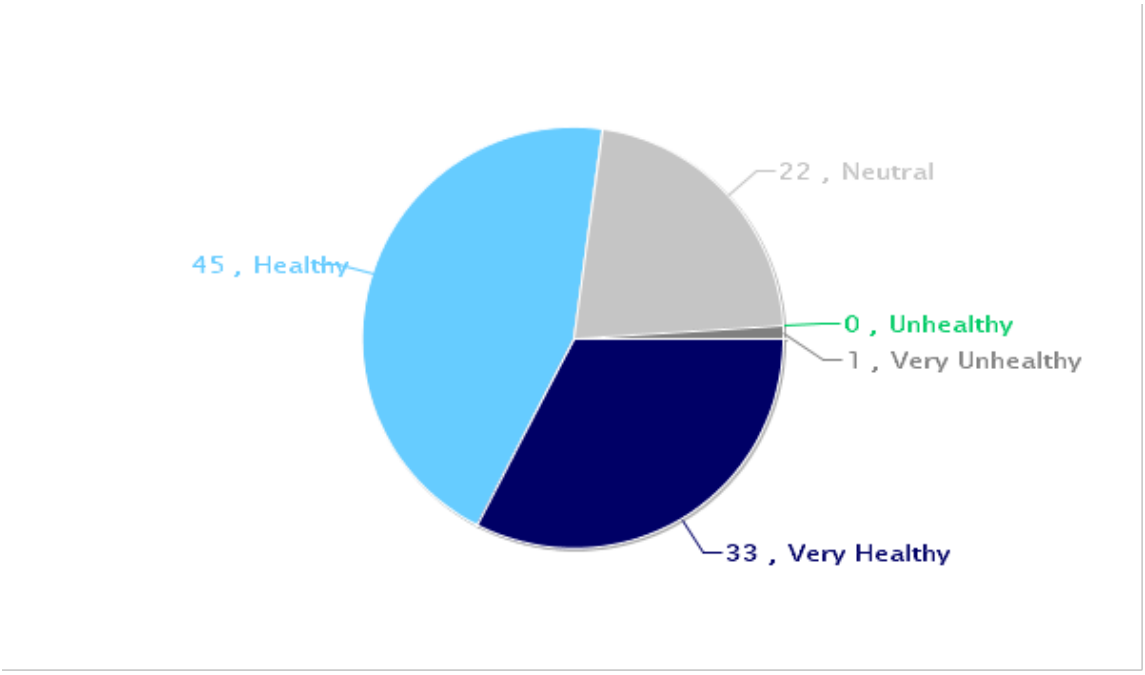
Parents' opinions about how much their child's school encourages or discourages walking and biking to/from school



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



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



Comments Section

SurveyID	Comment
1373340	Safety would be my main concern. Cold weather. Making it all the way without getting distracted. It would certainly make a healthy choice.
1359350	Kids live so far from school now. Its not like the 50's and 60's when there were neighborhood schools. Two high schools two middle schools how can most of these kids walk to school. I don't think its safe for grade school age to walk to school unless its a large group or an adult is with.
1373331	Really Great that there is stop signs all ways on Elanor and Central Ave now which helps the crossing guards and the walkers that walk.
1373336	Like the idea, but our family lives almost 3 miles from the school.
1359408	Drop off at Laura MacArthur is very congestive. NO PARKING!!! I walk my daughter into school. Finding a parking spot is very difficult at times...
1359442	If my child was in a higher grade I would let her walk or bike to school if she wanted. 6 Grade.
1359462	I think its ridiculous you expect a elementary student to walk along 59yh Ave W and cross 8th street by themselves! Crime is way higher then kids walked to school before! Its nuts you expect my 5yr old to walk that far w/no crossing guards!!! (on main streets!)
1359492	Crossing Grand ave from the lights near dd subway also windy road behind Menards seems unsafe no walkway otherwise she'd have to go 1/2 mile out of the way to stay on sidewalks.
1373329	We choose to transport to a school outside our district. Many of these answers might change if we lived closer to our school.
1373350	I walk my kids to school every chance I gt. It's healthy and gives us time to talk. I don't think I would be comfortable letting them walk by themselves. Maybe with a large group of kids or an adult.
1373352	Once you get past about 1/2 miles from school, it is hard to let a very young child take the responsibility to walk to school safely and on-time.
1359449	My son is in 2nd grade. If he was not walking with his older friend I would not feel safe with him on his own. Probably not until next year. The intersection of Cody and 57th is dangerous.
1373327	We have no choice but for him to walk most days. We both work and there's nobody to help us. The cars DO drive way too fast and never look through intersections. Scary but... my son pays attention and goes from point a-b.
1373347	I know at age 7 my son is not responsible enough to walk or bike, and I'm not sure when he will be.
1373358	If we lived within 5 city blocks of school, I would allow my son to bike/walk to school.
1359328	Directly down a few blocks is an apartment complex with unsafe activity got my elementary student to be around. Also the traffic is high and drivers drive to fast even during pick/drop off times. Too risky, too unsafe.
1359378	My Granddaughter takes the bus due to where we live, but I do agree safety routes should be put in place for bikers/walkers due to traffic and safety issues, strangers ect.

1359382	I don't trust many people, so I always have a fear of my child being kidnapped or something worse.
1359400	I do not like children to walk or bike to school because that not safety for traffic.
1359426	We live too far from school for walking/biking to be an option.
1359438	I prefer to drive my children to and pick them up after school.
1373341	Special Ed. busing.
1359333	In the winter the sidewalks along Cody are not shoveled or plowed. I am the parent with only 1 child in kindergarten. My view is probably different than a parent with 3 kids. I have the time and resources to pick up and drop off. This is a luxury, not every parent can do so.
1359506	We live well outside the Laura Mac school district so I don't knowhow helpful filling this survey out actually is. I would let my kids walk to school if we lived much closer to the school, within 5 blocks or so.
1359519	It would be a safety issue if a student patrol could be at the corner of 56th Ave. W. and 6th St. Traffic from the east drives quite fast.
1359365	Response to Q13- Safety First Response to Q14- That's not the issue (crime and violence)!
1359432	Side note to Q6- IEP Autsim

Appendix C: Safe Routes to School Engineering Project Pages

Engineering Recommendations

1. Install sidewalks where gaps exist and repair poor sidewalks
    - Along W 4th and W 5th Streets from Laura MacArthur Elementary to Denfeld High School
    - Along the northern portion of Memorial Park on the southern side of Elinor St (along the parking lot)
2. Increase pedestrian safety along 46th Ave W. Some typical treatments the SRTS committee looked at include the following:
    - Install curb extensions/Bulb-outs at N 46th Ave W crossing on north side of W 4th St
    - Install curb extensions/Bulb-outs at N 46th Ave W and W 6th St crossing at all corners
    - Calm traffic speeds
3. Clear sidewalks of obstructions
    - Brush and overgrown shrubs obstruct pathways and blocks sightlines for both pedestrians and motorists.
4. Increase pedestrian safety along N Central Ave. Some typical treatments the SRTS committee looked at include the following:
    - Install bulb-outs at the intersections of N Central Ave & Elinor St and at N Central Ave & 6th St.
    - Create a mid-block crossing from the parent drop-off along the West side of N Central Ave across to just south of the main parking lot entrance. Add bump-outs and in-street crosswalk signage here as well.
    - Calm traffic speeds
5. Install an ADA curb ramp behind the school at N 54th Ave W. and Central Pl. on the eastern side of N 54th Ave W
6. Mark “No Parking” in front of curb ramps along N 54th Ave W near Elinor St
7. Build a shared-use path along N Central Ave adjacent to Memorial Park from Grand Ave to Elinor St
8. Make crossings along N 59th Ave W safer (trim lower branches on trees for sight lines)
9. Make crossings along Cody St safer
10. Conduct Intersection Control Evaluations at the intersections of Central Ave & Grand Ave and Central Ave & Cody St to determine what appropriate safety measure should be taken to make it safer to walk and bike through
11. Update Elinor St. and Grand Ave intersection to be fully ADA compliant
12. Add lighting in dark areas around the school and nearby
13. Replace curb ramps with ADA compliant curb ramps
14. Make Cody St safer for all modes, ages, and abilities. Some typical treatments the SRTS committee looked at include the following:
    - Convert Cody St from a four-lane street into single-lanes in both directions and add bike lanes. The path would connect the cross-city trail to Memorial Park/Laura MacArthur.

Engineering Project No. 1

Install Sidewalks Where Gaps Exist / Repair Sidewalks That are in Poor Condition

Goal:

To improve the connections of the existing sidewalk network so that it is navigable, safe, and convenient for students.

Recommendations:

- Fill in the gaps where sidewalks should continue. Currently there are areas where sidewalks abruptly end without connections to nearby sidewalk.
- Repair or replace damaged and/or aging sidewalks in the network to meet/exceed ADA standards.

Benefits:

A continuous and seamless sidewalk network has numerous benefits with the most significant being increased safety from motorized vehicle traffic. Where there are gaps in the network, beaten paths into the ground have been formed due to high foot traffic. While it may be passable for some, it is more difficult for those with limited mobility and is not maintained in the winter as sidewalks are.

Details

Project Priority:

Cost Estimate: $$$

Locations:

- W 4th St between N 54th Ave W and N46th Ave W
- W 5th St just east of N 48th Ave W
- Above Memorial Park along Elinor St.

Jurisdiction/Owner: City of Duluth

Figure 1 A photo on Google Earth of students walking along West 4th St

Engineering Project No. 2

Increase Pedestrian Safety along N 46th Ave W

Goal:

To improve the safety of crossing 46th Ave W. This is a key connector between Laura MacArthur and Denfeld High School.

Details

Project Priority:

Cost Estimate: $$$

Locations:

- W 4th St Crossing – North Side
- W 6th St Crossing – All Corners

Jurisdiction/Owner: City of Duluth

Recommendations:

Some typical treatments the SRTS committee looked at include the following:

- Construct painted (interim solution) or concrete curb extensions/bulb-outs at the three key intersections (W 4th and 6th St.)
- Calm traffic on N 46th Ave W by painting white edge lines along the driving lanes (using an appropriate width) and planting trees in the boulevard from Grand Ave to W 8th St.

Figure 2: A Google Earth image of students crossing North 46th Ave W

Benefits:

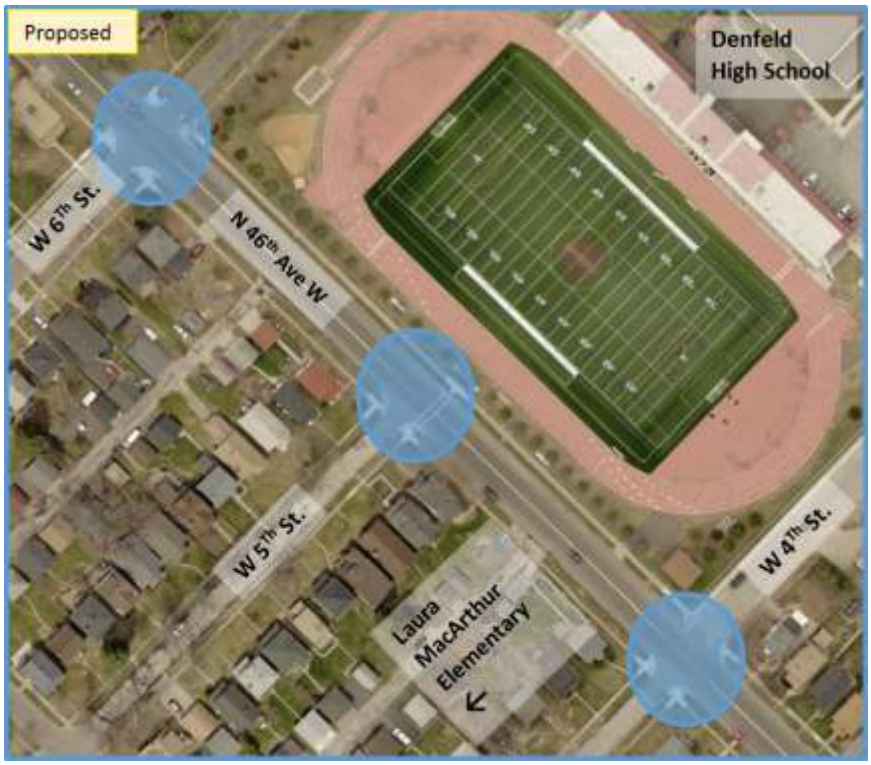
Bulb-outs or curb extensions are intended to reduce pedestrian crossing distances and make a pedestrian more visible to motorists. They can also slow traffic making turns at intersections.

Calming street traffic speeds by implementing known traffic calming techniques can influence drivers to drive at slower speeds – thus reducing severity/risk of injury or fatality.

This portion of N 46th Ave W is a barrier mentioned by parents due to its traffic speeds and long crossing distances.

N 46th Ave W is a designated bikeway.

The mentioned crossings are also DTA bus stop locations.



Engineering Project No. 3

Clear Sidewalks of Obstructions

Goal:

Maintain sidewalk areas in the neighborhood by trimming overgrown vegetation and brush that obstructs a clear path and obstructs visibility between pedestrian and motorist.

Details

Project Priority:

Cost Estimate: $

Locations: Along sidewalks around the school's neighborhood that have trees/shrubs growing over the sidewalk area and have sediment buildup.

Jurisdiction/Owner: City of Duluth, adjacent property owners

Action Steps:

- Assemble a volunteer group that could tend to areas that have issues. Some households in the neighborhood may be occupied by someone who doesn't have the means to maintain the sidewalk area. Volunteer groups could assist those households by doing some clearing of overgrowth. Clear overgrown vegetation and sediment buildup on and over the sidewalk.
- Where applicable, enforce city ordinance requiring pathway obstructions to be cleared.

Benefits:

A sidewalk network without obstructions, that would otherwise limit mobility of pedestrians/byciclists along the paths, creates a more inviting space away from the roadway. Additionally, this would improve visibility by clearing sightlines for both motorists and pedestrians. Maintaining sidewalks is also a benefit to neighborhood asthetics.

Engineering Project No. 4

Increase Pedestrian Safety along N Central Ave.

Goal:

To improve the safety at crossings and make crossings more predictable.

Action Steps:

Some typical treatments the SRTS committee looked at include the following:

Details

Project Priority:

Cost Estimate: $$$

Locations:

- Intersection of Elinor St. and Central Ave.
- Intersection of W 6th St. and Central Ave.

Jurisdiction/Owner: City of Duluth

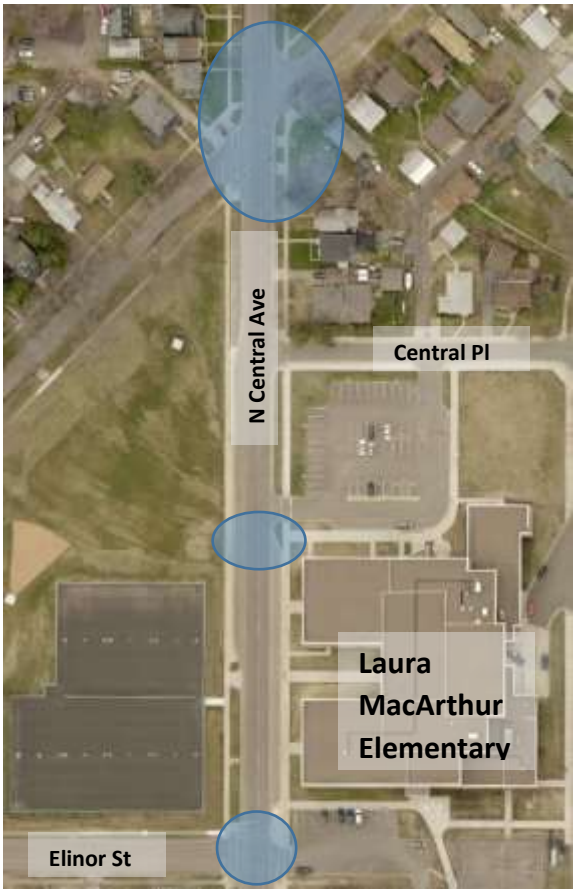
- Construct painted (interim solution) or concrete curb extensions/bulb-outs at the three key intersections (Elinor St and W 6th St)
- Create a mid-block crossing from the parent pick-up/drop-off lane to the sidewalk, just below the main entrance to the main parking lot, that leads to the main entrance. Add bump-outs here as well. Install an In-street crosswalk sign to make the crosswalk more visible and increase driver yielding.
- Calm traffic on N Central Ave by painting white edge lines along the driving lanes (using an appropriate width) (often few people park on the West side, making the lanes look much larger) and planting trees around the school area (while keeping children visible)

Benefits:

Increased road safety by increasing visibility, reducing the speed of turning vehicles, reducing the number of vehicles parked on corners, and shortening the distance pedestrians must cross.

The crossings at N Central Ave and W 6th St can be extra-long due to irregular angles.

The mid-block crossing would create another safe location for students to cross which would reduce the random street crossings in front of the school. Currently parents and students cross the street where they park their car which can make the situation less predictable. Adding crossing guards to this location would further increase safety.



Engineering Project No. 5

Install ADA Curb Ramp Behind School on N 54th Ave W

Goal:

Make it safer and more convenient for all students to cross the street to get to school

Action Steps:

- Install a curb ramp on the east side of N 54th Ave W at the intersection of Central Pl

Details

Project Priority:

Cost Estimate: $

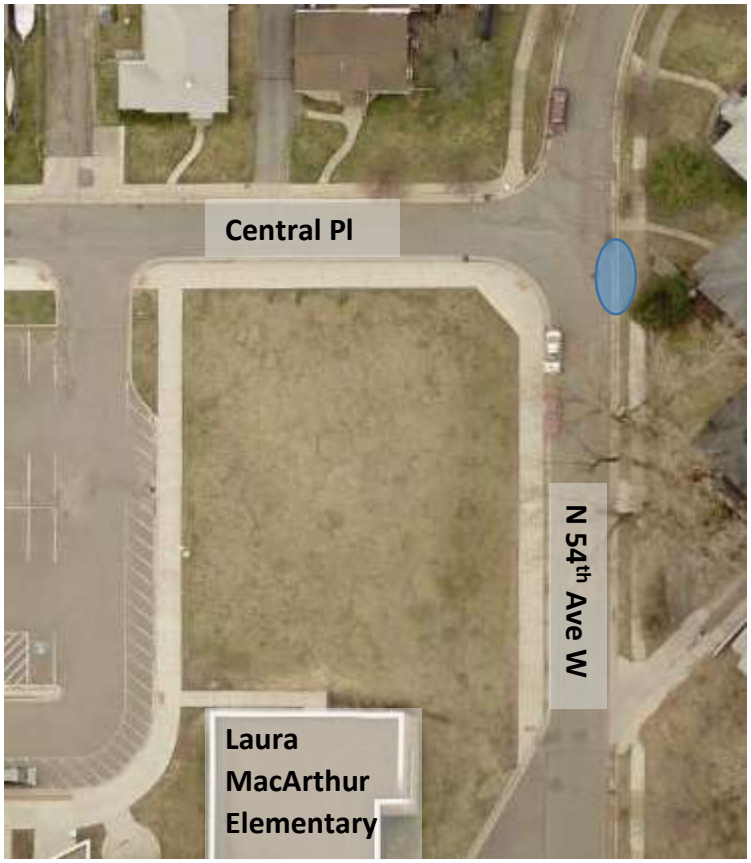
Locations:

- W 5th St/N 54th Ave W & Central Pl. on the eastern side of N 54th Ave W

Jurisdiction/Owner: City of Duluth

Benefits:

Curb ramps provide pedestrians a smooth transition entering and exiting the street. Additionally, curb ramps allow pedestrians in assistive mobility devices access to crossing the street safely and more conveniently.



Engineering Project No. 6

Mark "No Parking" in Front of Curb Ramps on N 54th Ave W near Elinor St

Goal:

Stop people from parking their cars in front of important curb ramps for all users.

Action Steps:

- Mark "no parking" so that cars do not block the two curb ramps to the school on N 54th Ave W near Elinor St
- Bring the northern curb ramp up to ADA standards

Details

Project Priority:

Cost Estimate: $

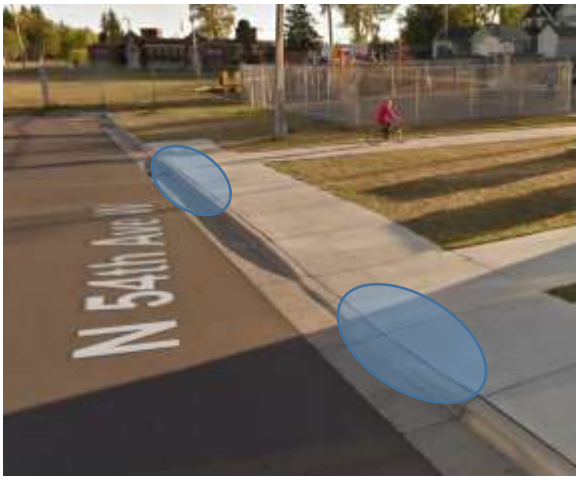
Locations:

- Two curb ramps on the west side of N 54th Ave W near Elinor St

Jurisdiction/Owner: City of Duluth

Benefits:

Curb ramps provide pedestrians a smooth transition entering and exiting the street. Additionally, curb ramps allow pedestrians in assistive mobility devices access to crossing the street safely and more conveniently. When cars block ramps, it makes it hard or even impassable for some students to get onto the sidewalk.



Engineering Project No. 7

Build a Shared-Use Path on N Central Ave

Goal:

To create a wide, safe, and separated trail that is off street for children to ride a bicycle or walk to school.

Action Steps:

- Build an off-street shared-use path along N Central Ave on the East side from Grand Ave to Elinor St.

Benefits:

A separated shared-use path provides transportation links to Laura MacArthur Elementary, recreation areas, and more for a variety of users, such as bicyclists and pedestrians. Additionally, this will reduce the risk of accidents involving motorist and bicyclists/pedestrians by separating the different modes. Separation makes sense here due to the traffic volumes, especially at peak times, and the ages of who this would be designed for.

Details

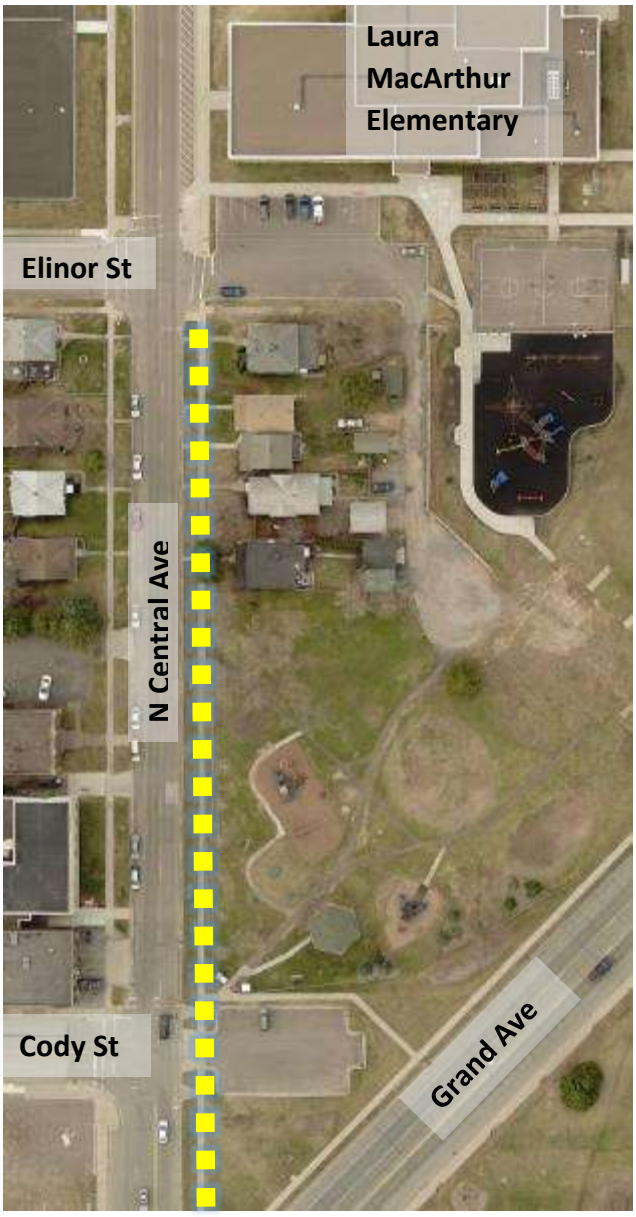
Project Priority:

Cost Estimate: $$$

Locations:

- Along N Central Ave on the east side of the street from Grand Ave to Elinor St.

Jurisdiction/Owner: City of Duluth



Engineering Project No. 8

Make Crossings Along N 59th Ave W Safer

Goal:

To create safe and convenient crossings across N 59th Ave W

Action Steps:

Some typical treatments the SRTS committee looked at include the following:

- Build a pedestrian refuge island in the large boulevard/medians along N 59th Ave W
- Trim trees for improved sight lines

Benefits:

Pedestrian Refuge Islands reduce exposure time for pedestrians in the intersection, while giving pedestrians confidence to cross larger roadways. Having them located at every crossing makes sense since pedestrians tend to cross when they feel they have an opportunity/preference/or for no reason at all and not necessarily at a designated point.

Some of the trees along the boulevard/medians haven't been trimmed which can block sightlines and make it harder to see cars and pedestrians. Trimming them will restore some of the visibility.

Details

Project Priority:

Cost Estimate: $$

Locations:

- Where crossing points intersect with the large boulevard/medians on N 59th Ave W

Jurisdiction/Owner: City of Duluth

N 59th Ave W

Engineering Project No. 9

Make Crossings Along Cody St Safer

Goal:

To create safe and convenient crossings across Cody St.

Action Steps:

Some typical treatments the SRTS committee looked at include the following:

- Build a pedestrian refuge island in the large boulevard/medians along Cody St at the intersections of N 61st Ave W, N 60th Ave W, and N 59th Ave W.
- Consider installing RRFB's at Cody St and N 59yh Ave W

Details

Project Priority:

Cost Estimate: $

Locations:

- Central Ave. & Grand Ave.
- Central Ave & Cody St

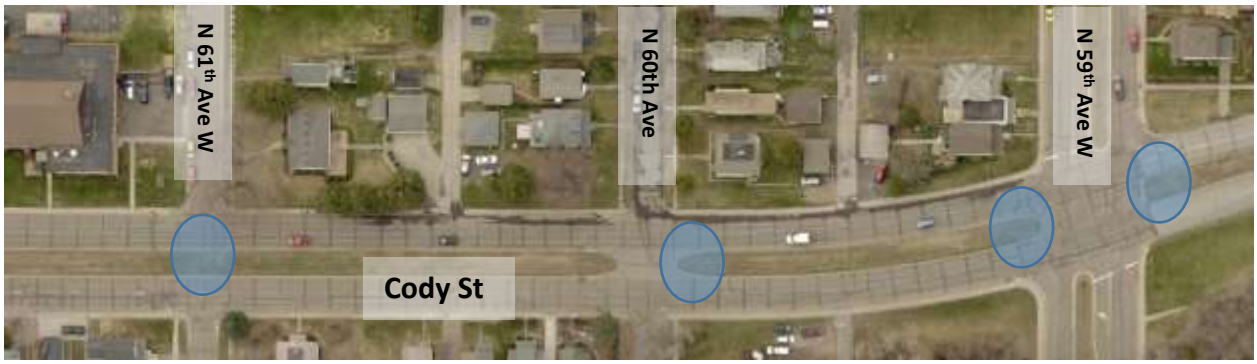
Jurisdiction/Owner: City of Duluth

Benefits:

Pedestrian Refuge Islands reduce exposure time for pedestrians in the intersection, while giving pedestrians confidence to cross larger roadways. Having them in these locations allows for a student to cross and get into the neighborhood streets instead of walking along Cody St, a street parents are nervous about letting their child near.

Installing an RRFB at Cody St and N 59yh Ave W maybe a good idea due to the increased awareness it can bring to someone who is crossing the street. This is a busier intersection than the others and is currently uncontrolled by traffic devices.

Engineering Project No. 10



Intersection Control Evaluations

Goal:

Determine what safety improvements could be done at both intersections that would increase pedestrian safety and comfort

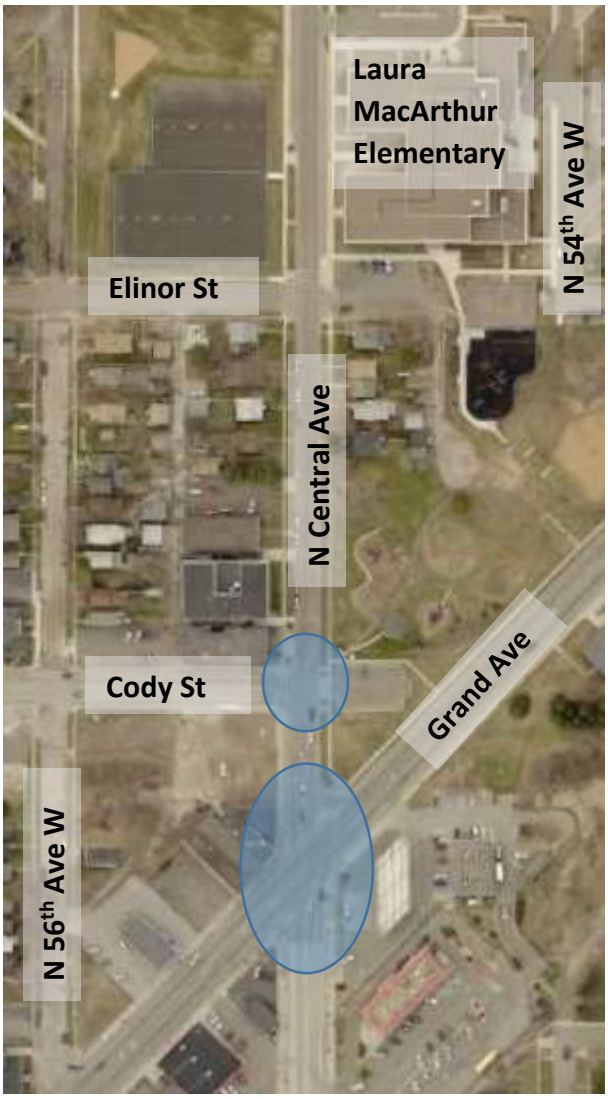
Action Steps:

Some typical treatments the SRTS committee looked at include the following:

- Complete an Intersection Control Evaluation at the intersections of Central Ave. & Grand Ave and Central Ave & Cody St

Benefits:

Both intersections are complex and have characteristics that would need a more in depth study to determine the appropriate solutions to the well-known problems these intersections have for safety and comfort of people crossing.



Engineering Project No. 11

Update Elinor St. and Grand Ave intersection

Goal:

Make the Elinor St. and Grand Ave intersection safer and more comfortable for all users and abilities to cross

Action Steps:

Some typical treatments the SRTS committee looked at include the following:

- Update the Elinor St. and Grand Ave. intersection to be fully ADA compliant

Benefits:

An improved intersection that is safer and more comfortable can make the experience of crossing less intimidating and can encourage more usage via active modes of transportation. ADA compliant intersections aid pedestrians who may have visual impairments or limited mobility.

Details

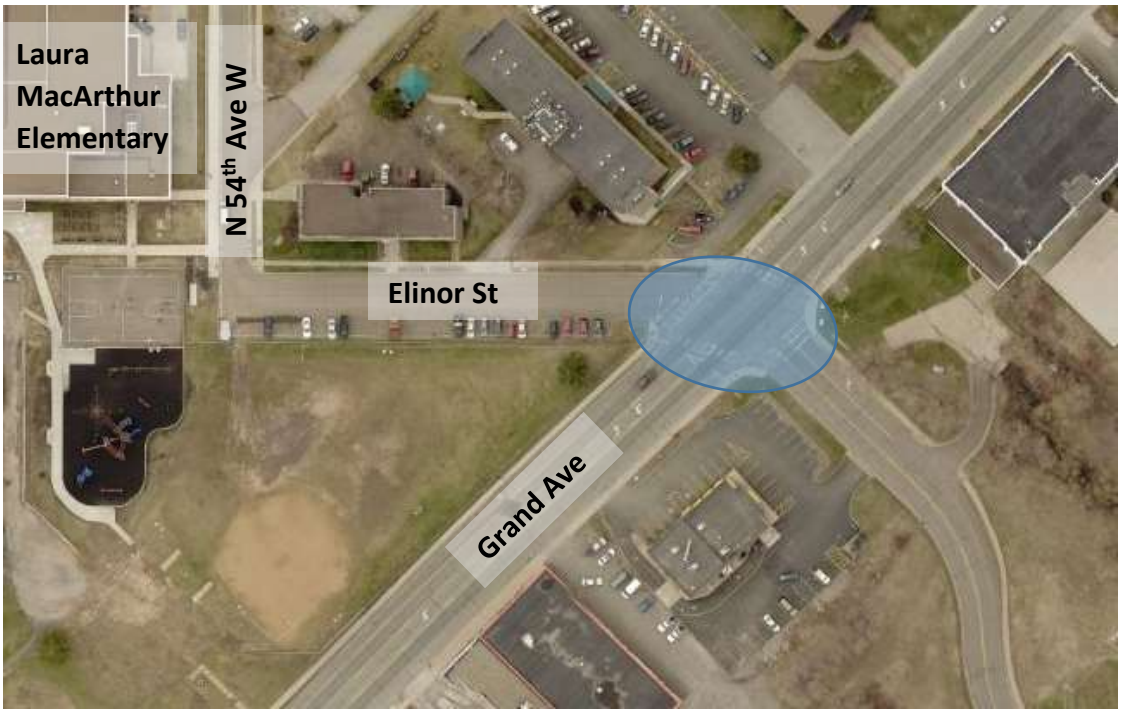
Project Priority:

Cost Estimate: ?

Locations:

- Elinor St. and Grand Ave.

Jurisdiction/Owner: City of Duluth



Engineering Project No. 12

Add Lighting in Dark Areas

Goal:

To illuminate pathways for more visibility, safety, and comfort.

Action Steps:

Some typical treatments the SRTS committee looked at include the following:

- Add lighting in dark areas
- Consider adding human/neighborhood scaled lighting
- Some priority areas/corridors are
- South entrance of the school/by the basketball courts
- Along the school's property along N Central Ave
- Along Elinor St/Memorial Park
- Along designated routes labeled as "Safe Routes to School"

Details

Project Priority:

Cost Estimate: $$

Locations:

- Around the school and along designated routes

Jurisdiction/Owner: City of Duluth/ISD 709

Benefits:

Adding lighting to pathways has many benefits to all users of the roadway. Lighting aluminates pathways making any obstacle or danger more visible. Lighting can deter crime and make areas more pleasant. Lighting also adds additional illumination to the sides of the road where car headlights may not shine. Try not to place lamps too close to trees as they can block some of the light.

Figure 3- Street Lamp Image from University of Florida

Engineering Project No. 13

Bring all Intersections and Crossings up to ADA Standards Around the School's Neighborhood

Goal:

To illuminate pathways for more visibility, safety, and comfort.

Details

Project Priority:

Cost Estimate: NA

Locations:

- In the surrounding neighborhood where ramps are non-compliant

Jurisdiction/Owner: City of Duluth

Action Steps:

Some typical treatments the SRTS committee looked at include the following:

- Bring all intersections and crossings up to ADA standards around the school's neighborhood that currently do not meet standards.

Benefits:

Curb ramps provide pedestrians a smooth transition entering and exiting the street. Additionally, curb ramps allow pedestrians in assistive mobility devices access to crossing the street safely and more conveniently.

The Duluth-Superior Metropolitan Interstate Council has a database with ADA compliant ramps in this area. This can be used as a reference to which may ramps may need an upgrade.

Figure 4 An image of a typical ADA compliant curb ramp (credit Witman Engineers)

Engineering Project No. 14

Make Cody St Safer For all Modes, Ages, and Abilities

Goal: Make Cody St. a Safer Street for all Modes and Abilities

Action Steps:

Some typical treatments the SRTS committee looked at include the following:

- Convert Cody St. to a single traffic lane in both directions with bike accommodations.
- Consider a demonstration/piolet project of the changes

Benefits: The path would be a neighborhood connection to the cross-city trail, Memorial Park/Laura MacArthur, and more. Cody St was mentioned by parents and students as an unsafe street and a barrier to walking and bicycling to school. Having a calmer street with bike accommodations would help to alleviate the barriers and may encourage higher usage by other modes of transportation. Because of the destinations on both ends, a wide right-of-way, relatively low Average Daily Traffic counts (4800 to 2950 AADT), and its barrier label – this seems to be an appropriate location for these changes.

Details

Project Priority:

Cost Estimate: NA

Locations:

- Cody St.

Jurisdiction/Owner: City of Duluth