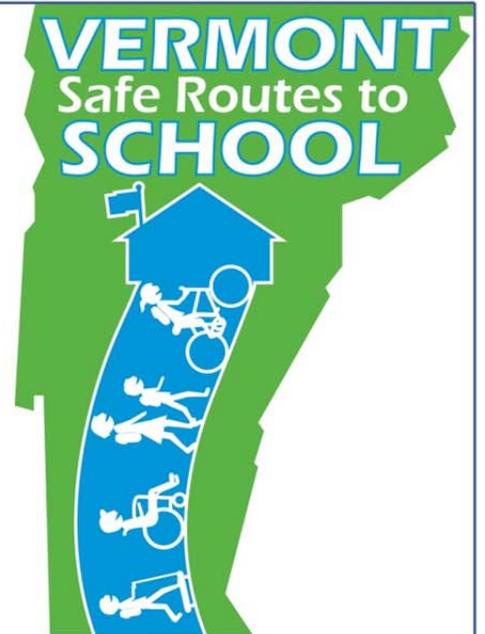


Ferrisburgh Central School



Safe Routes to School Travel Plan July 2012



*Prepared with assistance from the VT SRTS Resource Center
SafeRoutesVT.org*

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INTRODUCTION

This Travel Plan represents the work of the Ferrisburgh Central School Safe Route to School Team. Our school is a Silver-level Partner with the Vermont Safe Routes to School Resource Center with the desire to eventually reach higher partnership levels. We believe this travel plan is a good way to ensure an on-going Safe Routes to School program at our school.

The Ferrisburgh Central School administration assembled a diverse Safe Routes to School (SRTS) team, consisting of parents, teachers, town officials and other community members, which has provided input, guidance and oversight in writing our plan.

Members of the Ferrisburgh Central School Travel Plan Team	
JoAnn Taft-Blakely Principal Ferrisburgh Central School	Carl Cole Community Member
Anne Cohn School Nurse Ferrisburgh Central School	Sheila Schwaneflugel Parent
Bill Wager Fire Chief Town of Ferrisburgh	Megan Lausted District School Liaison Department of Health
Chuck Welch Addison County Safe Kids/Vergennes Rescue	John Weber Parent
Claire Tebbs Addison County Regional Planning Commission	Emily Weber 9 th Grade Student Vergennes Union High School
Kevin Rooney Vergennes Partnership	Nick Patch Parent

The ideas and recommendations developed during this process will guide us in creating a well-balanced approach to building our SRTS program at Ferrisburgh Central School. This document is a resource to plan our encouragement, education, enforcement and evaluation

The Five E's

SRTS combines many different approaches to make it safer for children to walk and bicycle to school and to increase the number of children doing so.

Engineering strategies create safer environments for walking and bicycling to school through improvements to the infrastructure surrounding schools. These improvements focus on reducing motor vehicle speeds and conflicts with pedestrians and bicyclists, and establishing safer and fully accessible crossings, walkways, trails and bikeways.

Education programs target children, parents, caregivers and neighbors, teaching how to walk and bicycle safely and informing drivers on how to drive more safely around pedestrians and bicyclists. Education programs can also incorporate health and environment messages.

Enforcement strategies increase the safety of children bicycling and walking to school by helping to change unsafe behaviors of drivers, as well as pedestrians and bicyclists. A community approach to enforcement involves students, parents or caregivers, school personnel, crossing guards and law enforcement officers.

Encouragement activities promote walking and bicycling to school to children, parents and community members. Events such as Walk to School Day, contests such as a Frequent Walker/Bicyclist challenge, or on-going programs such as a Walking School Bus or Bicycle Train can promote and encourage walking and bicycling as a popular way to get to school.

Evaluation is an important component of SRTS programs that can be incorporated into each of the other E's. Collecting information before and after program activities or projects are implemented allow communities to track progress and outcomes, and provide information to guide program development.

- Excerpted from "Safe Routes to School: A Transportation Legacy", the report of the National Safe Routes to School Task Force

efforts with assistance from the VT SRTS Resource Center. In this way it will be a “living document” to be reviewed and updated each year. The plan also includes recommendations for engineering projects near Ferrisburgh Central School for walking and biking.

The Vermont Agency of Transportation (VTTrans), through the Vermont SRTS Resource Center, has provided technical assistance in producing this plan. With the help of the resource center, we have identified infrastructure improvements that would have a positive impact on walking and biking to school. These infrastructure recommendations are considered planning level and will require further engineering analysis to determine feasibility. It is our hope that our recommendations can be the basis for grants and/or improvements initiated by the Town of Ferrisburgh and/or Addison Northwest Supervisory Union. The end of our plan includes several attachments with additional information to help us get the recommendations of our plan underway.

TEAM VISION

The SRTS program at Ferrisburgh Central School aligns with Ferrisburgh’s efforts towards promoting better mobility for pedestrians and bicyclists. The SRTS program goals of combining engineering, education, enforcement, evaluation and encouragement strategies (also known as the Five E’s) to improve the safety and health of students who walk to school fit our school and town’s values. Our vision for Ferrisburgh Central School and Ferrisburgh is to have:

- Safe traffic patterns for all modes of transportation;
- A community culture where students and families feel safe walking and biking together to school, recreation areas, and other destinations in town;
- Ferrisburgh Central School students prefer walking and biking to school over other means of getting there, even those who live further than two miles away from school, resulting in more students walking, biking, or riding the bus to school than arriving by car;
- Ferrisburgh parents feel comfortable letting their children walk or bike to school and to other destinations in town;
- All-season pathways connect Ferrisburgh Central School and neighborhoods, recreation areas, and other destinations in town; and
- Road users are educated on how to be safe drivers, bikers, and/or pedestrians.

This SRTS Travel Plan outlines our school’s intentions for making walking to and from school more sustainable and safer for students and the community. Through our SRTS program and efforts, we hope to reach a rate of 7% of our students walking or biking to school at least two days a week during the fall and spring seasons of the 2012/2013 school year and 12% during the following school year. We believe this goal is attainable, as slightly more than 17% of our students live within one mile of school.

ABOUT THIS PLAN

Our SRTS team met three times with the Vermont SRTS Resource Center to develop this SRTS Travel Plan and once more on our own to adopt the plan. Each meeting provided education on

the benefits of SRTS and highlighted successful program components and strategies. The “engineering meeting” included a discussion about the areas around our school. We also discussed education, encouragement, enforcement, and evaluation strategies, which helped us to identify needed additions and complimentary programs to support our existing efforts as well as our proposed engineering strategies.

Meeting Date	Content and Outcomes
September 2011	Kick-off Meeting: How the Vermont SRTS Travel Plan Works <ul style="list-style-type: none"> - Award of the planning assistance grant - Overview of the planning process
January 2012	Engineering Meeting <ul style="list-style-type: none"> - Observation of arrival - Team visioning - Opportunity and barrier discussions - Walk and bike audit from aerial photos - Observation of dismissal
February 2012	Plan Review <ul style="list-style-type: none"> - Reviewed the draft plan - Identified roles and immediate steps for non-engineering recommendations
April 2012	Plan Adoption <ul style="list-style-type: none"> - Adopted plan - Began implementation of non-infrastructure recommendations



Our Safe Routes to School Team

TRAVEL PLAN CONTEXT

FERRISBURGH CENTRAL SCHOOL AND FERRISBURGH OVERVIEW

Ferrisburgh Central School is located in the Town of Ferrisburgh, a community in northern Addison County in western Vermont. The town has experienced steady growth since the 1980's.



Ferrisburgh context map.

Ferrisburgh Central School lies approximately 325 feet west of US Route 7 on Little Chicago Road. Ferrisburgh has classified Little Chicago Road as a Class 2 Highway with a posted speed limit of 35 MPH. US Route 7 (Route 7) is the major north-south roadway on the west side of Vermont. Route 7 is heavily traveled; the average annual daily traffic volume is 11,800 vehicles per day. The posted speed limit along Route 7 near the school is 40 MPH.

There are no sidewalks or crosswalks on either Route 7 or Little Chicago Road within two miles of the school. East of Route 7, just offset slightly to the north, Middlebrook Road heads east towards several small residential areas where numerous Ferrisburgh Central School



Little Chicago Road intersection with Route 7 (looking east).

students live.



Ferrisburgh Central School entry from Little Chicago Road - note the parking on right side.

Access to Ferrisburgh Central School from Little Chicago Road is provided via a one-way driveway loop extending into the site from a single access point on the road. The wide end of the loop is at the school's main entrance. Gravel parallel parking lines the sides of the one-way drive. There is a sidewalk along the western half of the front of the school at the edge of the access drive, but there is no sidewalk linking this sidewalk or the front of the school with the Little Chicago Road.

There are play areas and athletic fields on the north and west side of the school.

The school is close to the commercial center of Ferrisburgh on Route 7 and there is low density housing scattered along Little Chicago Road and other nearby roads. There is a small cluster of housing directly to the north of the school on minor roads that intersect with Route 7. The Town Hall lies immediately northeast of the school property, fronting Route 7.



The unused gravel drive from the Town Hall. The northeast corner of the school grounds can be seen through the trees.

The majority of the land near the school is open and mostly used for agriculture. There is an informal trail linking the residences to the north of the school with the school grounds. There is also an unused gravel drive linking the northeast corner of the school grounds with the Town Hall and Community Center on Route 7, as well as two short footbridges over the drainage ditch along the eastern edge of the school property leading to the rear of adjacent properties that front on Route 7.

There is a small, new community recreation area on the western edge of the school grounds.

CURRENT SCHOOL DEMOGRAPHICS

Our school has a total of 208 students enrolled for the 2011-2012 school year. Our school serves kindergarten through sixth grade. Students come from all parts of Ferrisburgh. **Appendix H** includes a map that shows the distribution of the students by grade throughout the town.

Demographic	Count	Percentage of student body
Students with Disabilities	1 full time	< 1%
Limited English proficient students	2	1%
Distance From School		
Students living within 1/4 mile of school	4	2%
Students living within 1/2 mile of school	14	7%
Students living within 1 mile of school	35	17%
Students living within 2 miles of school	62	30%
Students in grades K-3	126	60%
Students in grades 4-6	83	40%

CURRENT STUDENT TRAVEL MODES

Travel Mode	Walk	Bike	School Bus	Family Vehicle	Carpool	Public Transit	Other
Percentage of Student Body in the AM	3%	2%	57%	37%	2%	0%	0%
Percentage of Student Body in the PM	3%	2%	56%	36%	3%	0%	0%

Data based on SRTS Student Tallies administered in November 2011

Ferrisburgh Central School offers busing to all students, no matter how close to the school they may live.

SCHOOL ARRIVAL AND DISMISSAL PROCEDURES

Ferrisburgh Central School relies on policies, practices, and support activities to ensure a safe and orderly process for students to arrive at school, regardless of how they travel to school. Parents are reminded of these procedures in the student handbook and school newsletters that are sent home with students.

The students that currently walk to school enter the school property from the north



Morning drop-off at Ferrisburgh Central School.

across the playfields and proceed around the side of the school to the front entrance. Those coming from the south, walk along Little Chicago Road from the west or the east and continue along the access drive to reach the school entrance.

Parents and the six school buses serving the school use the front entrance drive to Ferrisburgh Central School to drop off elementary students and pick-up high school students in the morning. The buses arrive at approximately 7:50 AM and stop in the one-way access loop close to the front of the school to let children out. A teacher or the school nurse oversees the drop-off procedures and supervises the children coming by bus into the school.



The informal path through the field north of the school now used by students to walk to school from the houses in the background.

Some parents drop their children off from private vehicles in the access drive as well, arriving before, during, and after the bus drop-off times. Those that arrive before the buses do, pull-up to the front of the school via the access drive loop. Those that arrive while the buses are unloading students must stack up in the access drive and sometimes they spill out into the street until the buses all pull out of the access drive. The parents driving these vehicles, as well as those that arrive after the buses leave, pull-up and stop close to the front of the school to let their children out of their vehicles when the buses are gone.

Several high school students also walk or take the bus to the Ferrisburgh Community School and then transfer to a second bus that takes them to the high school.

In the afternoon, the buses line up along the entry drive. At 3:00 PM, the students leave the school and board buses, begin walking or riding home, or head to other waiting vehicles. Parents who drive to pick-up their children pull up to the front of the school after the buses have departed.

The wide entryway of the school driveway encourages some drivers to drive the wrong way around the loop to avoid the backup caused by buses waiting for students to unload in the morning or load in the afternoon.

For those students that ride bicycles to school, the bicycle rack is located just a few feet to the east of the front door of the school in the lawn between the school building and the access driveway loop.



Ferrisburgh Central School entrance (from the southeast).

Arrival		
Travel Mode	Procedure	Time
Walk	Arrive staggered. Enter through the front door.	7:30am-7:45am
Bike	Puts bike in rack and enters through the front door	7:30am-7:45am
School Bus	Arrive generally at the same time. Unload through the front door.	7:40am
Family Vehicle	Arrive staggered. Unload on different side of school than buses.	7:30am-7:50am
Dismissal		
Travel Mode	Procedure	Time
Walk	Leave through the front entrance	3:00pm
Bike	Leave through the front entrance and head to bike rack	3:00pm
School Bus	Bus riders dismissed at front door close to buses	3:00pm
Family Vehicle	Parents line the access drive or park in designated spaces and wait for students at the front door	2:50pm - 3:00pm

EXISTING TRAVEL HABITS

Students from Round Barn and Atkins Farm Roads to the north, use an informal path crossing open fields to reach the school grounds. Most of these students travel in small groups or are escorted by parents.

On the day of our safety audit in January, we did not observe any student bicycling to school and noticed only three students walking to school.

Parents of students living between one half mile and one mile from school and who drive their children to school listed the following reasons that deter them from allowing their children to walk or bike to school:

- The narrow width of the roads;
- The volume and speed of the traffic on the road;
- The safety of intersections and crossings; and
- The overall distance the students must walk.

Those parents that do let their children walk to school were most concerned about the lack of adults who are available to supervise walking and biking groups. Most parents, no matter where they lived or what transportation mode they chose were concerned that there were no sidewalks or pathways leading to the school. **Appendix C** contains a copy of the full parent survey result tally and **Appendix D** shows the distribution of student homes in the area.

We kept these concerns in mind when picking the strategies that we want to accomplish the remainder of this school and the coming school year, 2012-2013.

KEY ISSUES

The team identified the following barriers and opportunities to walking or bicycling during the bicycling and walking audit and from the parent's survey.

Barrier: Difficult crossing of Route 7 at the Little Chicago/Middlebrook Roads intersection or other intersections along Route 7.

With no crosswalk at the intersection of Little Chicago Road and Route 7, it is very difficult for pedestrians, especially students, to feel secure crossing Route 7 at almost any time of day. In general, there is opposition from adults to walking and biking to school unless vehicles on Route 7 are required to stop to allow pedestrians and bicycles to cross.



Route 7 intersection with Little Chicago Road (on left) and Middlebrook Road (on right).

The Average Annual Daily Traffic counts for Route 7 in Ferrisburgh are 11,800. The crossing is even more difficult because the motorists on Route 7 are typically traveling at speeds of at least five to ten mph higher than the posted speed limit of 40 mph, based on observed behavior.

Independent of this SRTS planning process, Ferrisburgh's 5th grade undertook a class project proposing a traffic signal through state legislation. They selected this topic themselves not knowing that our plan was already examining ways to safely get pedestrians and bicyclists across Route 7. As a result of their efforts, the legislators have requested VTrans undertake a study of the intersection to determine if it meets guidelines for a traffic signal. The Addison

County Regional Planning Commission has studied the intersection in the past and found that it did not meet the requirements for installing a traffic signal. Based on observations during our planning process, a pedestrian hybrid signal (also known as a HAWK) may be an appropriate alternative treatment to allow pedestrians and bicyclists to cross Route 7.

Barrier: Lack of shoulders on the local roads that are wide enough to comfortably accommodate bicyclists or pedestrians.

Neither Little Chicago Road nor Middlebrook Road has marked shoulders. The roadways are 22 feet wide with one lane in each direction. Little Chicago Road has gravel shoulders at least two feet wide close to the school, but these narrow to one foot or disappear entirely further west near the Depot Road intersection. Middlebrook Road has minimal or no gravel shoulders. The roads leading to Little Chicago and Middlebrook Roads also do not have adequate shoulders for bicyclists or pedestrians.



Middlebrook Road east of Route 7.

Barrier: Difficult walking and bicycling conditions on Little Chicago Road west of the school due to the grouping of the railroad crossing, a bridge, and the Depot and Creamery roads intersections.



Little Chicago Road looking west to the bridge over Little Otter Creek towards the railroad crossing.

Several variables make traveling on Little Chicago Road just west of the school difficult. The close proximity of an offset intersection on a curve; a drop in elevation; a narrow, old bridge that is approximately 200 feet long and a railroad crossing, create a daunting set of challenges for bikers or walkers. The lack of paved or gravel shoulders, poor sight distances at the curve and the combination of a vertical and horizontal curve in the road compounds the unwelcoming nature of this portion of the roadway for bicyclists and pedestrians of all ages.

Barrier: The excessive speed of vehicles on Little Chicago Road near the school as noted by many parents and teachers.

The speed limit is not currently reduced for a school zone on Little Chicago Road near Ferrisburgh Central School. The latest traffic counts taken on Little Chicago Road show that the 85th percentile vehicle speed is 40 mph. In addition to concerns about the volume and speed of

traffic, the lack of crosswalks in front of the school to allow children to access the correct side of the road for walking increase parents' concerns about walking near the school.

Barrier: No permanent off-road options for students that want to walk or bike to school.



An informal path through the field north of the school.

There is currently an unused gravel driveway between the northeast corner of the school property and the Town Hall and Community Center that was installed when the Town Hall was reconstructed a few years ago. The Town installed it to provide vehicular access to the back of the School property so that the area could be used for overflow parking for the Town Hall. The community ultimately did not endorse the use of the school property for overflow parking so the driveway was never used. There is now a small mowed path heading north to the Atkins

Farm/Round Barn neighborhood from the unused Town Hall driveway; students use the path to walk to and from school. The parents of the students that use it established the route and mow the path to keep it open. The path does not extend further north to reach other clusters of residences where students live. The surface has not been improved and it is sometimes soggy or difficult to use in inclement weather. It is not plowed in the winter. There are no corresponding paths to the west or south of the school. These conditions make it challenging to walk, and especially bike, in inclement weather.

Barrier: The narrowing of the roadways in the winter due to snow banks with the corresponding increase in conflicts between motorists and pedestrians and decrease of the overall visibility of pedestrians.

Ferrisburgh often experiences long periods of continuous snow on the ground. Snow plowing of the roads creates snow banks along the sides of the road, obscuring motorists' long distance views when there is even the slightest curve in the road and at intersections. The current snow plowing practices by the Ferrisburgh road crews is to plow the gravel shoulders of the road along with the roadway, where possible, which helps to create visible spaces for pedestrians at the edges of the road.

Barrier: The lack of a sidewalk for pedestrians or a route for bicyclists across school property to access the school's front door from Little Chicago Road.

There is currently no sidewalk or bicycle travel path between Little Chicago Road and the front of the school. Pedestrians walk along the edge of the driveway on either



2 The front of Ferrisburgh Central School looking west.

side of parked or idling vehicles. This condition is exacerbated by the existing conflict in front of the school between buses and automobiles at student drop-off and pick-up time. There is also no marked crossing on Little Chicago Road in front of the school to allow students to easily cross the road to reach the proper side for walking or bicycling, depending on their direction of travel.

Opportunities: The availability of space and the interest in adding a sidewalk in front of the school, along Little Chicago Road heading west to the adjacent community recreation area.

School representatives previously explored the possibility of adding a sidewalk along Little Chicago Road. They were told that the presence of a water line limited their abilities to do so. The school should continue to work with the Town to explore options to build the sidewalk and to protect the water line and other utilities line from initial or ongoing impacts of a sidewalk.



The area along Little Chicago Road between the front of the school and the community recreation area.

Opportunities: New Bus Stop Location or Arrival and Departure Procedures.

The school administration has been concerned about the conflicts in front of the school between pedestrians, parent vehicles, and buses bringing or taking students to or from school. The administration is open to considering new options that can create easier conditions for students that walk or bike to school as well as a more orderly arrival and departure procedure.

Opportunities: Existing Pedestrian Paths.

The existence of the informal footpath to the school from the neighborhood to the north can serve as the basis of a more accessible path to the school. Part of this path uses a wide gravel access way between the Ferrisburgh Town Hall and Community Center on Route 7 and the north end of the school property, which could also serve as a non-motorized access way to Route 7. Lastly, there is an informal path heading east from a footbridge over the drainage ditch on the east side of the school to the rear of the adjacent Ferrisburgh Bakery and Deli, which currently serves as an off-road pedestrian way to the bakery/deli and Route 7 which could be formalized with an easement and slight improvements to address ADA compliance.

TRAVEL PLAN RECOMMENDATIONS

OVERVIEW

This Travel Plan is comprised of several sections detailing activities and programs for our school to implement now and projects for us to develop over time with local officials and the Supervisory Union.

Non-Engineering Plan

This Travel Plan identifies best practice education, encouragement, enforcement and evaluation activities and programs suitable for our school. **Appendix F** includes information on the basis and considerations for each strategy, the specific terms that are appropriate to use for these strategies and resources to help us implement them.

18-Month SRTS Activity Calendar

Our team will pursue a smaller subset of items in the non-engineering plan during the next 18 months. We will review our work periodically, adding additional activities that will continue the SRTS program momentum.

Engineering Recommendations

With assistance from the Vermont SRTS Resource Center, we have identified short and long-term engineering treatments to make walking and bicycling to school safer for our students.

NON-ENGINEERING TRAVEL PLAN

We identified a number of activities and programs to expand our existing program of promoting safe walking and biking to school. These activities and programs, while grouped primarily by “The Five E’s”, are dependent upon each other for their individual success. We plan to work on our highest priority programs this year, following up with other programs in successive years. We used the timeframe below to determine when to initiate programs:

Type	Short	Long
Encouragement, Education, Enforcement, Evaluation, Policies	What we plan to do this or next school year	What we plan to do in two school years or more

We have identified the activities and programs we expect to work on during the next 18 months in the following section. Long Term strategies are described in subsequent sections. **Appendix A** includes a calendar for our strategies.

SHORT TERM EDUCATION STRATEGIES

The education strategies included in our 18-month activity calendar are aimed at providing all students with pedestrian walking skills. Specifically, we will:

- Provide walking and bicycling educational materials to students to share with their parents;
- Conduct a bicycle rodeo at the school during the spring session;
- Add the use of *Walk Smart/Bike Smart Vermont!* curriculum elements to physical education classes;
- Continue the teaching of the “Stranger Danger” to the second grade and the “Think First and Stay Safe” curriculum to the fifth grade;
- Provide tips and tools from the SRTS Partner Resource CD and in the VT SRTS monthly newsletters to students and the community via the school’s website, the school newsletter, the Town’s website, the *Addison County Independent* newspaper and the Ferrisburgh Front Porch Forum; and
- Share the Bicycle Safety Guide for Parents and other bicycling and walking safety information with parents to increase awareness of safety issues.

SHORT TERM ENCOURAGEMENT STRATEGIES

Encouragement strategies included in our 18-month activity calendar will help students and their parents feel more comfortable and confident about walking and bicycling to school. Our encouragement activities will:

- Use walking field trips to acquaint students with the fun of walking and the safe and secure way to walk on public roads;
- Continue to encourage student participation in the Mileage Club;
- Participate in the Vermont Walk and Roll to School Days and the Way to Go Week;
- Continue to provide free or reduced-cost helmets;
- Expand the SRTS program, through a partnership with Addison County Safe Kids to offer additional items, such as bicycle lights, tall bike flags, bike locks, or other safety gear for bicyclists and pedestrians;
- Begin to work with older students to encourage younger students in their walking and biking activities;
- Bring the SRTS plan to the larger Ferrisburgh community;
- Initiate Saturday morning family bike rides to encourage parent participation in biking and to make biking more familiar to the whole family; and
- Use incentives such as raffles and door prizes to increase parent participation and free bike registration, free bike maintenance or free photo identification to increase student participation at the bicycle rodeo.

SHORT TERM ENFORCEMENT STRATEGIES

Our SRTS enforcement strategies are aimed at both changing the behavior of drivers and making the community safer and more secure for students walking or biking to and from school. Our partners for traffic safety are the Vermont State Police, the Addison County Sherriff and the Vergennes Police Department. Our enforcement activities this year will:

- Engage parents and the community to help exemplify proper walking, driving and bicycling behavior and make safe behavior such as wearing a helmet and reflective visible clothing, walking facing traffic if there is no sidewalk and no random crossing of roads normal actions and by having parents sign a “Safety First” pledge;
- Provide well-advertised speed enforcement on Route 7 and Little Chicago Road concentrated during several days or a week-long effort;
- Communicate the timing of the concentrated speed enforcement events with parents and
- Use a temporary speed feedback trailer at least once a year on Little Chicago Road and Middlebrook Road to encourage slower vehicular speeds.

SHORT TERM EVALUATION STRATEGIES

Evaluation is an important component of our SRTS program. We plan to complete in-classroom student tallies and evaluation tools regularly, such as the student tally and parent survey forms provided by National Center for Safe Routes to School (NCSRTS). We first administered these in October and November of 2011, which provided base line information on student travel behavior. Subsequent student tallies and parent surveys will help us measure the effectiveness of SRTS efforts over time. As part of our evaluation strategy, we plan to:

- Participate annually by submitting student tallies at the same time each year;
- Conduct annual walk audits to evaluate the changes to the existing walking and biking environment as well as monitor the progress of recommended projects;
- Work with the Addison County Regional Planning Commission to get updated information on traffic levels and speeds on Little Chicago Road, Middlebrook Road and Route 7; and
- Distribute parent surveys annually in November to gain a better understanding of the changing attitudes of parents towards allowing their children to walk or ride to school.

Evaluation Tool	Leader	Schedule
Parent Surveys	Anne Cohn School Nurse	Annually in November
Student Tallies	Anne Cohn School Nurse	Annually in November during Evaluation Week
Walk Audits	SRTS Travel Plan Team	Annually, two weeks before school opens in the fall

LONG TERM NON-ENGINEERING STRATEGIES

Our long-term efforts are those that will take more than 18 months to review and implement. They include:

- Develop and distribute Ferrisburgh trail maps and start a “Discover a New Walking Trail” program;
- Promote Ferrisburgh’s ancient roads;
- Create Story Walks along paths to the school;
- Initiate a Walk Your Child to School Day;
- Organize a helmet drive to recycle student helmets that are still in good condition;
- Establish “Park and Walk” locations within two miles of the school and create safe walking routes from these locations to the school;
- Identify walking school bus routes and leaders and initiate an annual walking school bus program to encourage regular and on-going walking activities;
- Create opportunities for families to learn about walking and bicycling together through special exhibits and educational sessions at the library;
- Examine the potential for extending the school zone to Route 7 and reducing the speed limit within the Route 7 school zone to 35 MPH; and,
- Use a temporary speed feedback trailer at least once a year on Route 7 if the school zone with reduced speed limit is created close to the school.

LONG-TERM POLICY CHANGES

The school’s current policy for students is to have buses and parents both use the front entrance drive at the same time to deliver students in the morning and pick them up in the afternoon. This creates a confusing mix of buses and cars that students need to walk through to get to the school. Additionally, the buses currently pick up and deliver students to their houses in the morning and afternoon. In the future, it would be beneficial for the school to consider some modification to current policies, while retaining others. In particular, the school policy could:

- Have the buses continue to use the main access drive for student deliver and pick-up as they do now;
- Relocate parent pick-up and drop-off to the western end of the school property at the recreation area and to the Town Hall once the paths between these areas and the school are installed; and,
- Create central bus stops that provide an opportunity for students to walk part of the way to school in order to get to the bus stop; this will also reduce the overall miles the bus needs to travel and to make the trip to and from school from the bus stops shorter.

ENGINEERING TRAVEL PLAN

OVERVIEW

Our goal for engineering improvements is to improve the physical environment on school property and at critical locations on potential walking routes that students could easily use. Engineering improvements generally fall into four categories:

- Provide sidewalks and paths,
- Upgrade shoulders,
- Improve crossings, and
- Upgrade the safety and efficiency of school drop-off and pick-up locations.

We recognize that infrastructure improvements can take time to complete and are a collaborative effort between the Town of Ferrisburgh, the school district and potentially the Vermont Agency of Transportation (VTTrans) to implement the projects. The following short and long timeframes as a guide for anticipated project completion, but actual timeframes may vary:

Short term	Within 2 years
Long term	Longer than 2 years

The team prioritized the infrastructure improvements according to this time frame. The factors affecting this ranking include:

- Locations with specific safety concerns;
- Location at the school that can assist in arrivals and departures for all students; and
- Locations along potential student walking or bicycling routes, including the walking school bus route.

SHORT TERM INFRASTRUCTURE STRATEGIES

To assist in addressing the key issues, we are also recommending infrastructure changes around the school and in the surrounding area. The following list highlights the basic concept of each recommendation. **Appendix B** includes a table which provides a more complete description of each engineering recommendation along with the need for the change, other considerations and a map showing the locations of proposed recommendations. **Appendix E** provides images and additional descriptions of typical SRTS infrastructure improvements. **Appendix G** provides additional information on how to begin implementing the infrastructure recommendations.

Site A – School Property

Our goal in recommending modification on the school property is to make the approaches on the school grounds to the school entrance as easy and safe for pedestrians and bicyclists to use as possible. Our recommendations include:

- A well-delineated pedestrian and bicycle link on the outer edge of the eastern side of the existing access drive, on the east side of the parking area, between Little Chicago Road and the end of the paved area near the rear of the school;
- A pedestrian space on the northern edge of the paved roadway area in front of the school east of the school's main entrance with a crosswalk linking it to the pedestrian and bicycle link described in the previous bullet;
- An established accessible path between the northeast corner of the school property and the northern end of the pedestrian and bicycle link described in the first bullet;
- An accessible path between the front or west side of the school and the recreation area; and,
- A sidewalk along Little Chicago Road on school property between the school entrance drive and the recreational area to the west of the ball field.

Site B – Little Chicago Road

Make the walking and bicycling environment on Little Chicago Road as inviting and comfortable for students and parents as possible. To accomplish this, our recommended changes include:

- New pedestrian warning and share the road signage along Little Chicago Road, Hawkins Road and Botsford Road;
- A school zone with speed limit reduction on Little Chicago Road near the school;
- A crosswalk and crosswalk warning signs on Little Chicago Road in front of the school and at the western end of the new sidewalk described above to encourage students to walk on the correct side of the road when coming to or going from school, and
- Restriping of Little Chicago Road between Route 7 and at least the intersection with Botsford and Hawkins Roads to create two nine-foot travel lanes with two-foot wide paved shoulders on both outside edges.

Site C – Route 7

Create a pedestrian crossing on Route 7 at the intersection of Little Chicago Road that is comfortable for users of all ages and that parents would consider acceptable for their children. Recommended modifications include:

- The addition of a high visibility crosswalk and pedestrian hybrid beacon on the north side of the intersection with Little Chicago and Middlebrook Roads where there are curbs on both sides of the road; install sidewalks, if needed, on both sides of Route 7 between the intersection and the crosswalk; and add crosswalk advance warning signs on Route 7; this recommendation also includes the sidewalks or paths along Little Chicago and Middlebrook Roads as additional receiving facilities that are discussed in Sites D and E.

Site D – Middlebrook Road

Make the walking and bicycling environment on Middlebrook Road and roads leading into it as inviting and comfortable for students and parents as possible. To accomplish this, our recommended changes include:

- New pedestrian warning and share the road signage along Middlebrook Road, starting on the east side of the Satterly and Shellhouse Mountain Roads intersection especially on either side of the hill that peaks at Rabbit Run Drive, well as on Satterly and Shellhouse Mountain Roads;
- Restriping of Middlebrook Road to create two nine-foot travel lanes with two-foot wide paved shoulders on both outside edges combined with a lowering of the speed limit to 35 mph between Route 7 and the intersection with Shellhouse Mountain and Satterly Roads; and,
- A sidewalk on the north side of the road aligned to meet the proposed crosswalk on Route 7 or the sidewalk on Route 7 leading to the new crosswalk; the sidewalk should extend east on Middlebrook Road as far as needed to reach a point where a crosswalk with appropriate sight distance could be installed to allow access to the wider shoulders on the south side of the road for walking from school (this would be part of the new crosswalk installation on Route 7 described in Site C).

Site E – Off Road

Create pedestrian and bicycle routes through the Town with appropriate landowner permission that do not follow the existing roadway system. To begin this system, our recommendations include:

- A well-maintained, gravel-based accessible trail between Atkins Farm Road and the northeast corner of the school property;
- A well-maintained, gravel-based accessible trail between Round Barn Road and Atkins Farm Road;
- A clearly marked, accessible path along the existing gravel drive between the school property and the Town Hall and Community Center; and
- An accessible pedestrian path along the north side of Little Chicago Road between the school and Route 7 on the Ferrisburgh Historical Society Museum property that would be part of the new crosswalk installation on Route 7 described in Site C.

LONG TERM INFRASTRUCTURE RECOMMENDATIONS

The goals for the various sites identified in the short-term recommendations will remain the same over time, but we have identified several long-term recommendations that will help to continue the achievement of the goals:

Site A – School Property

- A concrete sidewalk between the school entrance and Little Chicago Road.

Site B- Little Chicago Road and Beyond

- Increased width of the shoulders, either paved or unpaved on Botsford and Hawkins Roads;
- A park and walk site with a place for student drop-off and pick-up located between one and two miles from school on the west side of Route 7 and
- A wider bridge over the Little Otter Creek.

Site D: - Middlebrook Road

- Wider shoulders, either paved or unpaved on Middlebrook Road and Shellhouse Mountain Road and
- A park and walk site located between one and two miles from school on the east side of Route 7.

Site E: - Off Road

- A shared use path between the school and Greenbush Road to the north; and
- A shared use path between the school and the park and ride lot just north of Route 22A.

CONSIDERATIONS FOR DESIGN, FUNDING AND IMPLEMENTATION

Design

- Infrastructure recommendations in this plan are considered “planning level” and will require further engineering analysis, design, or public input before implementation.
- Recommended changes to existing traffic patterns (adding a signal, adding a stop sign, changing speed limits, lane patterns, etc.) will require a study to evaluate the potential impact that the recommendation could have on existing traffic conditions.
- Drainage, existing utilities and ADA compliance will need to be evaluated for the recommendations at the time of design. ADA guidelines recommend particular design features to accommodate persons with disabilities. ADA design considerations for curb ramps, sidewalks and paths, include appropriate slopes, landing areas, surface conditions, and use of detectable warning materials for visually impaired pedestrians, among other design features.

- Right-of-way was not evaluated as a part of this project. Recommendations assume that sufficient right-of-way exists or that a method to gain needed right-of-way will be identified as the project progresses.
- VTrans district office staff will need to be involved in the planning and design process for recommendation made on the state system.
- Infrastructure recommendations should comply with federal, state, and local standards including the American Association of State Highway and Transportation Officials' Policy on Geometric Design of Highways and Streets and the Manual on Uniform Traffic Control Devices (MUTCD).
- Design work should be based on the Vermont Pedestrian and Bicycle Facility Planning and Design Manual, which includes details and guidelines on pedestrian and bicycle accommodations.

Funding

A variety of funding sources may be used for the recommendations, including Safe Routes to School sources. For example, projects requiring right-of-way acquisition or existing utilities relocation will not be eligible with SRTS funds, but may be funded through other sources.

More information on the types of projects eligible for SRTS funding through the VTrans is located at http://saferoutes.vermont.gov/getting_started/funding.

Implementation

The Vermont SRTS Resource Center has organized information to assist schools in beginning work on the recommendations of their Travel Plans. **Appendices F and G** present this generalized information.

APPENDICES

- A. Non-infrastructure Strategy Calendar
- B. Location-Specific Engineering Recommendation Details (Maps and Recommendations Table)
- C. October 2011 Student Travel Tally/Parent Survey Reports
- D. Student Distribution Map
- E. Typical Infrastructure Recommendations
- F. Non-Engineering Strategies Resource Guide
- G. Infrastructure Implementation Strategies Resource Guide
- H. Snow Removal Policy Toolkit

Appendix B: Location-Specific Engineering Recommendations

SRTS engineering strategies create safer environments for walking and bicycling to school through improvements to the infrastructure surrounding schools. These improvements focus on reducing motor vehicle speeds and conflicts with pedestrians and bicyclists, and establishing safer and fully accessible crossings, walkways, trails and bikeways.

The following table provides a summary of the engineering strategies recommended for Ferrisburgh Central School. These recommendations were developed by Broadreach Planning & Design and Toole Design Group, LLC based on input from the Ferrisburgh Central School SRTS Team. The table includes an estimate of the amount of time that is likely to be needed to implement the recommended improvements at each site (Estimated Time Frame). The table also indicates the priority of the proposed improvements at each site for the Ferrisburgh Central School SRTS Team (Team Priority).

These recommendations are for planning purposes only and will require further engineering analysis, design, or public input before implementation and shall be in full compliance with the Manual on Uniform Traffic Control Devices for Streets and Highways, (MUTCD) Latest Edition adopted by the state.

The summary table provided below is followed by information about implementation and a map, which shows where the recommendation sites are located in relation to the school.

Description of Streets with Engineering Recommendations

Street name	Classification of Town Highways	Speed Limit	Curb/No curb & Surface
Atkins Farm Road	Private Road		No curb - Gravel
Botsford Road	Class Three	50	No curb - Paved
Hawkins Road	Class Three	50	No curb - Paved
Little Chicago Road (East of bridge)	Class Two	35	No curb - Paved
Little Chicago Road (West of bridge)	Class Two	50	No curb - Paved
Little Chicago Bridge over Little Otter Creek	Class Two	35	No curb - Paved
Middlebrook Road	Class Three	50/35*	No curb - Paved
Round Barn Road	Private Road		No curb - Gravel
Satterly Road	Class Three	50	No curb - Gravel
Shellhouse Road	Class Three	50	No curb - Paved
US Route 7	Principle Arterial - State	40**	Curb north of Little Chicago Road - Paved

* 50 MPH close to Route 7 / 35 MPH near intersection with Shellhouse Mountain and Satterly Roads

** 50 MPH north and south of Ferrisburgh village area



North



SafeRoutes Vermont Safe Routes to School Ferrisburgh Central School Location Key 1 of 2

Ferrisburgh, VT
May 2012



- School Location
- Segment Improvement
- Intersection/Spot Improvement
- School Arrival/Dismissal Locations

BROADREACH
Planning & Design





North



Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
<p>A School Property</p> <p>Ferrisburgh Central School is accessed via a one-way driveway loop extending into the site from a single access point on Little Chicago Road. The wide end of the loop is at the Schools main entrance.</p> <p>The east side of the inbound drive is lined with parallel parking spaces; the outbound side has head-in parking spaces on either side of the travel way.</p>	<p>There is no clear route for pedestrian or bicyclists from Little Chicago Road to the school entrance.</p> <p>The sidewalk in front of the school only extends to the west from the front door; there is no sidewalk heading east for the eastern half of the drop off area or the existing handicap parking space at the eastern end of the school.</p> <p>There is no clear path from the northern portion of the school property to the school entrance for students walking or biking to school from the north.</p> <p>There is no pedestrian link between the school and the adjacent community recreation area.</p>	<p>A-1: Delineate a pedestrian and bicycle route with pavement markings on the eastern edge of the existing, paved drive between Little Chicago Road and the end of the paved area near the rear of the school. Shift the existing parking to the west.</p>	<p>Short term</p>	<p><input checked="" type="checkbox"/> <i>Safety concerns.</i></p> <p><input checked="" type="checkbox"/> <i>Existing walking or bicycling routes.</i></p> <p><input checked="" type="checkbox"/> <i>Priorities for the school community.</i></p>	
		<p>A-2: Designate a pedestrian space with pavement markings on the northern edge of the paved roadway area in front of the school east of the school's main entrance . Connect it to the route described in A-1with a crosswalk across the drive at the eastern side of the school.</p>	<p>Short Term</p>		
		<p>A-3: Establish a clear accessible paved or gravel path across the existing lawn area between the northeast corner of the school property and the pedestrian areas at the front of the school.</p>	<p>Short Term</p>		
		<p>A-5: Establish a clear accessible paved or gravel path across the existing lawn area between the front or west side of the school building and the recreation area in the southwest corner of the school property.</p>	<p>Short Term</p>		

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
<p>A School Property (continued)</p> <p>There is a sidewalk along the western half of the front of the school at the edge of the access drive but there is no sidewalk linking this sidewalk or the front of the school with the Little Chicago Road.</p>		<p>A-4: Add a sidewalk along Little Chicago Road on school property between the school entrance drive and the recreational area to the west of the ball field.</p>	<p>Long Term</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Safety concerns.</i> <input checked="" type="checkbox"/> <i>Existing walking or bicycling routes.</i> <input checked="" type="checkbox"/> <i>Priorities for the school community.</i> 	
		<p>AL-1: Add a concrete sidewalk between the front of the school and Little Chicago Road.</p>	<p>Long term</p>		
		<p>AL-1: Add a concrete sidewalk between the front of the school and Little Chicago Road.</p>	<p>Long term</p>		

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
<p>B Little Chicago Road and Other Roads West of the School.</p> <p>Little Chicago Road is a Class 2 town road about 22 feet wide with two 11-foot travel lanes and, close to the school, two to three feet of gravel shoulder.</p> <p>The posted speed limit is 35 mph.</p> <p>Little Chicago Road intersects with Creamery Road and Depot Road approximately 1,500 feet west of the school. Slightly beyond these intersections, the road crosses a stream via a 24-foot wide two-lane bridge and then crosses an active railroad track.</p>	<p>There are currently few facilities for pedestrians or bicyclists and only minimal signage alerting motorists to their presence on the shared roadway. This is especially important for that section of the road west of the school with grade change, bridge, railroad crossing and curve close together.</p> <p>Little Chicago Road is the only direct walking or biking route for students coming from the west and is also regularly used by motorists in the mornings and the evenings.</p> <p>There are no crosswalk markings on Little Chicago Road in front of the school to allow students to safely cross the street to get to the proper side of the road for walking.</p> <p>Current width of the paved shoulders does not meet recommended State Standards.</p>	<p>B-1: Install pedestrian and bicycle ‘SHARE THE ROAD’ plaques (MUTCD W11-15) on Little Chicago Road between Route 7 and at least the intersection with Hawkins Road.</p> <p>B-2: Create a school zone with speed limit reduction and denote it with flashing yellow lights on school zone signs to flash during arrival and dismissal school hours (7:30-8:00am and 2:45-3:15pm) and “SCHOOL” pavement markings painted north and south of the school.</p> <p>B-3: Install crosswalks in the ladder style with reflective, durable material in front of the school connecting to the new pedestrian link recommended in A-1 and at the western end of the sidewalk recommended in A-4 to encourage students to walk on the correct side of the road when coming to or going from school.</p>	<p>Short Term</p> <p>Short Term</p> <p>Short Term</p>	<p><input checked="" type="checkbox"/> <i>Safety concerns.</i></p> <p><input checked="" type="checkbox"/> <i>Existing walking or bicycling routes</i></p> <p><input checked="" type="checkbox"/> <i>Priorities for the school community.</i></p>	<p>5</p>

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
<p>B Little Chicago Road and Other Roads West of the School. (continued)</p> <p>Beyond the railroad, Little Chicago Road narrows to approximately 20 feet wide with minimal gravel shoulders. It intersects Avery Road, Botsford Road, and Walker Road before ending approximately three miles west of the school at Sand Road.</p>		<p>B-4: Add a reflective, durable fog line striping to the edges of Little Chicago Road to create nine-foot travel lanes and two foot paved shoulders on either side of the centerline between Route 7 and Hawkins Road.</p>	<p>Short Term</p>	<p><input checked="" type="checkbox"/> <i>Safety concerns.</i></p> <p><input checked="" type="checkbox"/> <i>Existing walking or bicycling routes</i></p> <p><input checked="" type="checkbox"/> <i>Priorities for the school community.</i></p>	
		<p>B-5: Install pedestrian and bicycle 'SHARE THE ROAD' plaques (MUTCD W11-15) on Hawkins and Botsford Roads.</p>	<p>Short Term</p>		
		<p>BL-1: Increase the width of the shoulders, either paved or unpaved on Botsford and Hawkins Roads.</p>	<p>Long Term</p>		
		<p>BL-2: Widen the bridge over Little Otter Creek to accommodate bicyclists and pedestrians when it needs to be replaced.</p>	<p>Long Term</p>		

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
<p>C Route 7</p> <p>Route 7 is a heavily travelled two lane road. Near the school, the travel lanes are each 12 feet wide. There is also an 11-foot wide left turn lane at the north and south approaches to the Little Chicago Road/Middlebrook Road intersection as well as paved shoulders a bit wider than two feet.</p> <p>Route 7 is curbed on all but the southwest corner of the intersection.</p>	<p>The heavy traffic, 40 mph speed limits, and wide pavement cross section makes it very difficult for students or any pedestrians to cross Route 7.</p>	<p>C-1: Install a high visibility crosswalk with reflective, durable material and a pedestrian hybrid beacon north of the intersection with Little Chicago and Middlebrook Roads where there are curbs on both sides of the road; install sidewalks on both sides of Route 7, if needed, between the intersection and the crosswalk and add crosswalk advance warning signs on Route 7. (This work is to be done in conjunction with sidewalks or paths along Little Chicago and Middlebrook Roads: Recommendations D-3 & E-4.)</p>	<p>Short Term</p>	<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Safety concerns.</i> <input checked="" type="checkbox"/> <i>Existing walking or bicycling routes</i> <input type="checkbox"/> <i>Priorities for the school community.</i> 	

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
<p>C Route 7 (continued)</p> <p>North of the intersection, curbs line both sides of the road; south of the intersection, curbs line only the east side of the road and the paved shoulders are each approximately four feet wide.</p> <p>The posted speed limit near the school is 40 mph.</p>				<ul style="list-style-type: none"> <input checked="" type="checkbox"/> <i>Safety concerns.</i> <input checked="" type="checkbox"/> <i>Existing walking or bicycling routes</i> <input type="checkbox"/> <i>Priorities for the school community.</i> 	

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
<p>D Middlebrook Road and Other Roads East of Route 7</p> <p>Middlebrook Road is a town road about 22 feet wide east of Route 7 with two 11-foot travel lanes but minimal gravel shoulders.</p> <p>The posted speed limit is 50 mph.</p>	<p>Middlebrook Road is the primary walking and bicycling route numerous students living east of Route 7. The lack of paved or gravel shoulders combined with the high speeds makes the road difficult for pedestrian and bicyclist to use.</p>	<p>D-1: Install pedestrian and bicycle 'SHARE THE ROAD' plaques (MUTCD W11-15) on Middlebrook Road</p> <p>D-2: Add reflective, durable fog line striping to the edges of Middlebrook Road to create nine-foot travel lanes and two - foot minimum paved shoulders on either side of the centerline as far east of Route 7 as the road width allows. Initiate a speed study to see if it is possible to reduce the speed limit from 50 MPH to 35 MPH between Route 7 and the Satterly and Shellhouse Mountain Roads intersection.</p> <p>D-3: Add a sidewalk on the north side of the road aligned to meet the proposed crosswalk on Route 7, or a sidewalk on Route 7 leading to the new crosswalk; the Middlebrook Road sidewalk should extend east as far as needed to reach a point where a crosswalk with appropriate sight distances could be installed. (Installed as part of Recommendation C-1 and E-4.)</p>	<p>Short Term</p> <p>Short Term</p> <p>Short Term</p>	<p><input checked="" type="checkbox"/> <i>Safety concerns.</i></p> <p><input checked="" type="checkbox"/> <i>Existing walking or bicycling routes</i></p> <p><input type="checkbox"/> <i>Priorities for the school community.</i></p>	

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
<p>E Off-Road</p> <p>The area around the school is not heavily developed and the potential for creating off-road bicycle and pedestrian facilities leading to or near the school are an opportunity if easements for the trails can be procured.</p>	<p>There are no off-road pedestrian or bicycle facilities leading to or near the school.</p>	<p>E-1: Create a well maintained, accessible gravel based trail with appropriate landowner permission between Atkins Farm Road and the northeast corner of the school property.</p> <p>E-2: Create a well maintained, accessible gravel based trail with appropriate landowner permission between Round Barn Road and Atkins Farm Road.</p> <p>E-3: Create a clearly marked accessible path along the existing gravel drive between the school property and the Town Hall and Community Center.</p> <p>E-4: Create an accessible pedestrian path along the north side of Little Chicago Road between the school and the new crosswalk on Route 7, or a new sidewalk leading to the crosswalk, with appropriate permission from the Ferrisburgh Historical Society Museum (Installed in conjunction with Recommendation C-1 and D-3.)</p>	<p>Short Term</p> <p>Short Term</p> <p>Short Term</p> <p>Short Term</p>	<p><input checked="" type="checkbox"/> <i>Safety concerns.</i></p> <p><input checked="" type="checkbox"/> <i>Existing walking or bicycling routes</i></p> <p><input type="checkbox"/> <i>Priorities for the school community.</i></p>	

Site	Need	Recommendation	Time Frame	Ranking Factors	Team Priority
E Off-Road (continued)		EL-1: Create a paved shared use path between the school and Greenbush Road to the North. EL-2: Create a paved shared use path between the school and the park and ride lot just north of Route 22A south of the school.	Long Term Long Term	<input checked="" type="checkbox"/> <i>Safety concerns.</i> <input checked="" type="checkbox"/> <i>Existing walking or bicycling routes</i> <input type="checkbox"/> <i>Priorities for the school community.</i>	

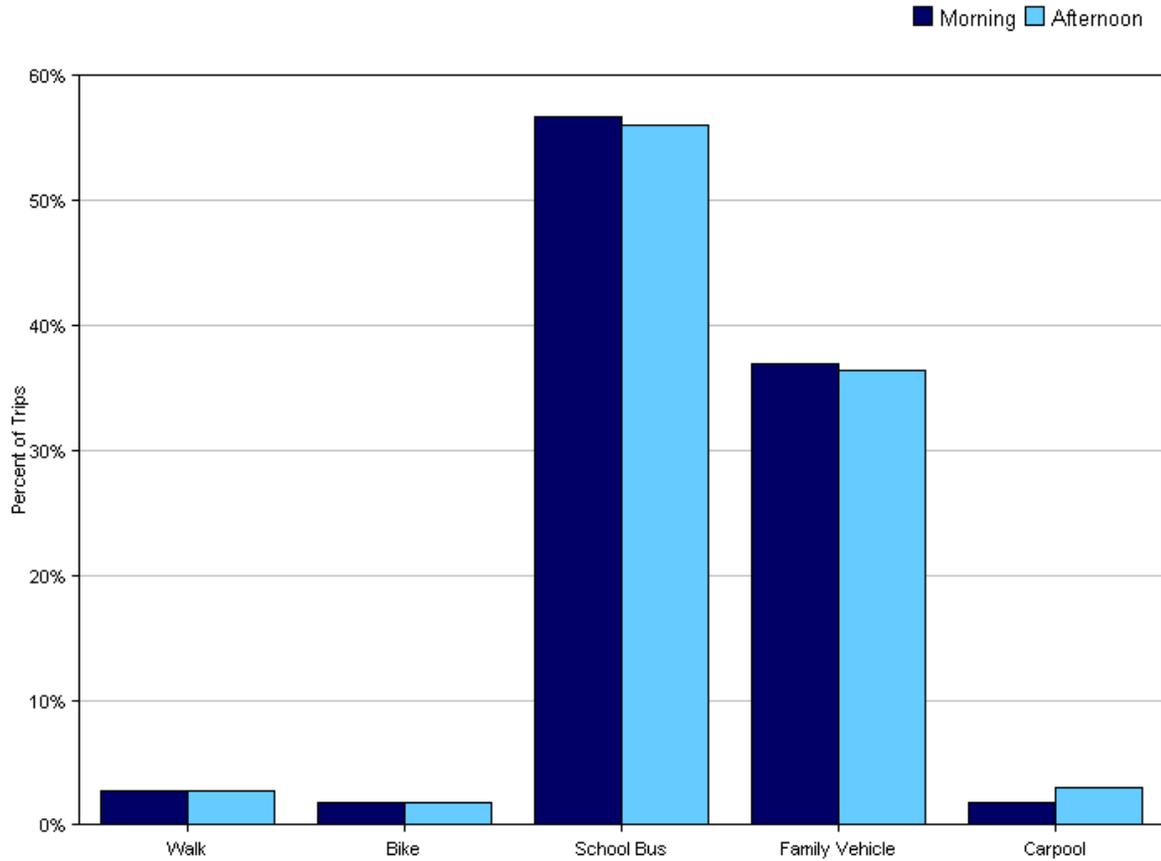
**APPENDIX C: OCTOBER 2011 STUDENT TRAVEL TALLY/PARENT SURVEY
REPORTS**

Tally Report Summary

Program Name:	Ferrisburgh Elementary	Month and Year Collected:	November 2011
School Name:	Ferrisburgh Elementary	Set ID:	7898
School Enrollment:	208	Date Report Generated:	01/03/2012
Enrollment within Grades Targeted by SRTS Program:	208	Number of Classrooms Included in Report:	12
Number of Classrooms in School:	11		

This report contains information from parents about their children's 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

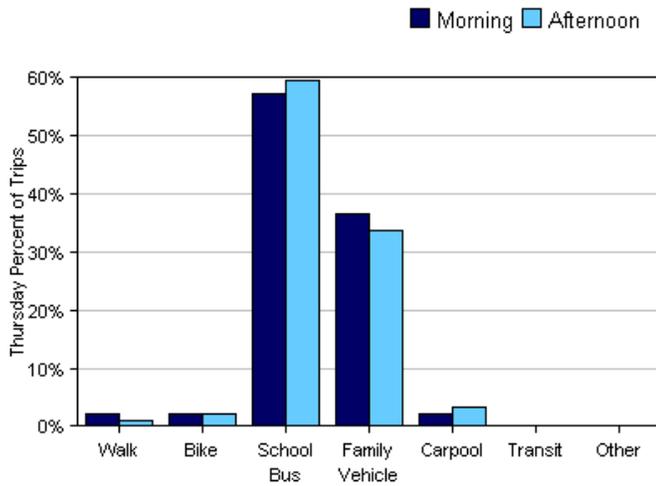
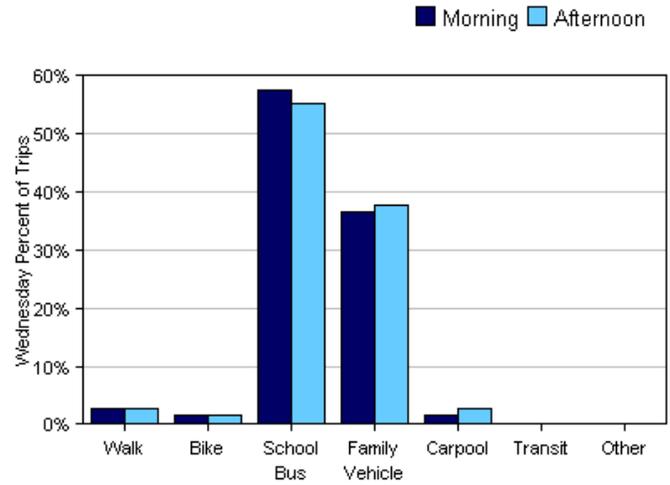
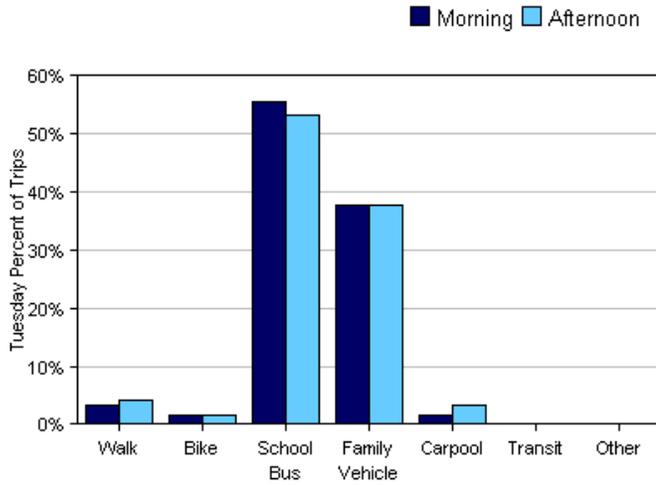


Morning and Afternoon Travel Mode Comparison

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	560	3%	2%	57%	37%	2%	0%	0%
Afternoon	558	3%	2%	56%	36%	3%	0%	0%

Percentages may not total 100% due to rounding.

Morning and Afternoon Travel Mode Comparison by Day

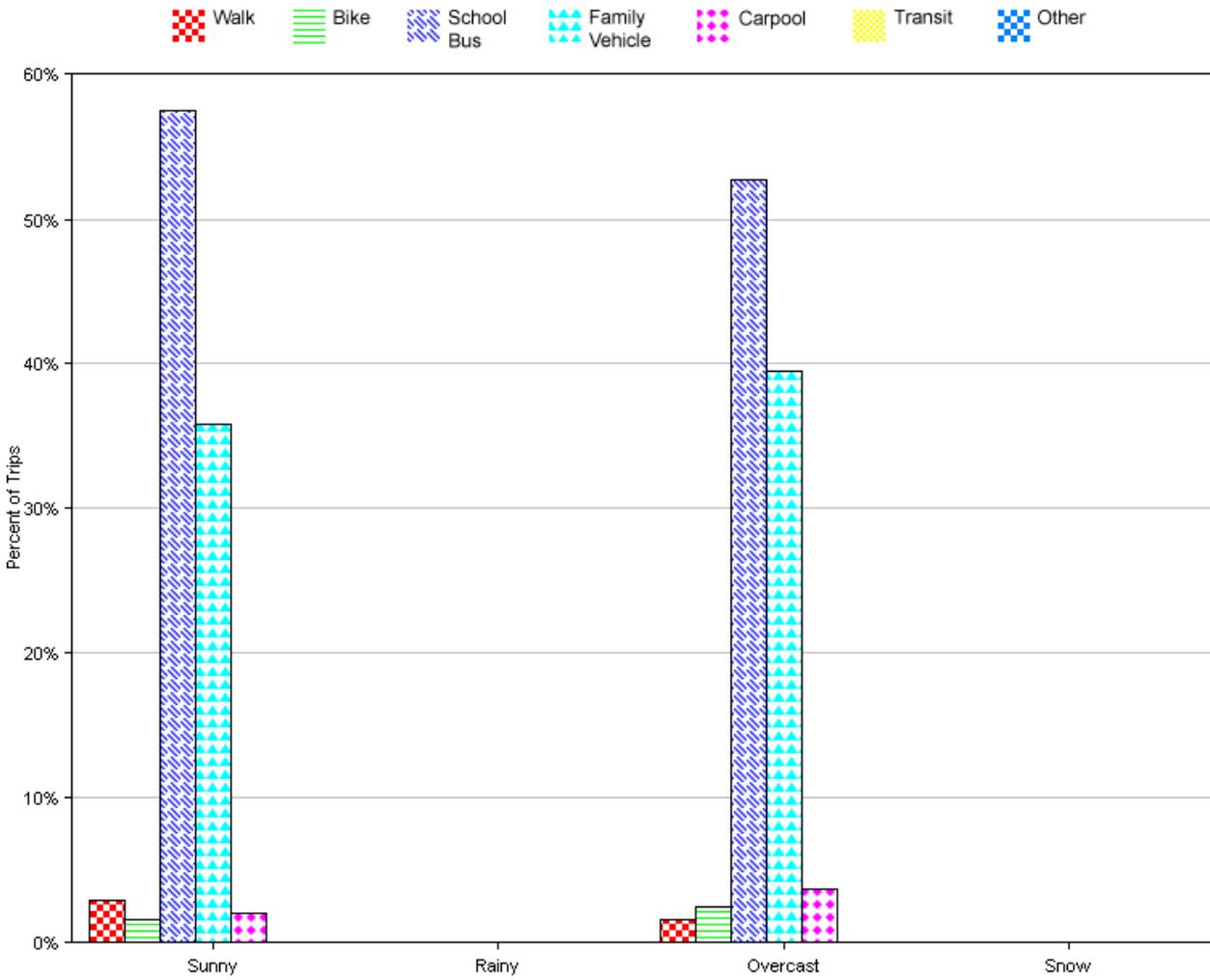


Morning and Afternoon Travel Mode Comparison by Day

	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Tuesday AM	185	3%	2%	56%	38%	2%	0%	0%
Tuesday PM	186	4%	2%	53%	38%	3%	0%	0%
Wednesday AM	186	3%	2%	58%	37%	2%	0%	0%
Wednesday PM	186	3%	2%	55%	38%	3%	0%	0%
Thursday AM	189	2%	2%	57%	37%	2%	0%	0%
Thursday PM	186	1%	2%	60%	34%	3%	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	875	3%	2%	57%	36%	2%	0%	0%
Rainy	0	0%	0%	0%	0%	0%	0%	0%
Overcast	243	2%	2%	53%	40%	4%	0%	0%
Snow	0	0%	0%	0%	0%	0%	0%	0%

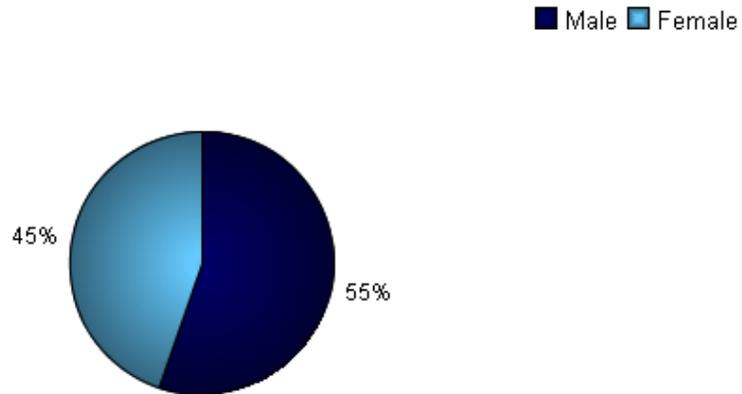
Percentages may not total 100% due to rounding.

Parent Survey Summary

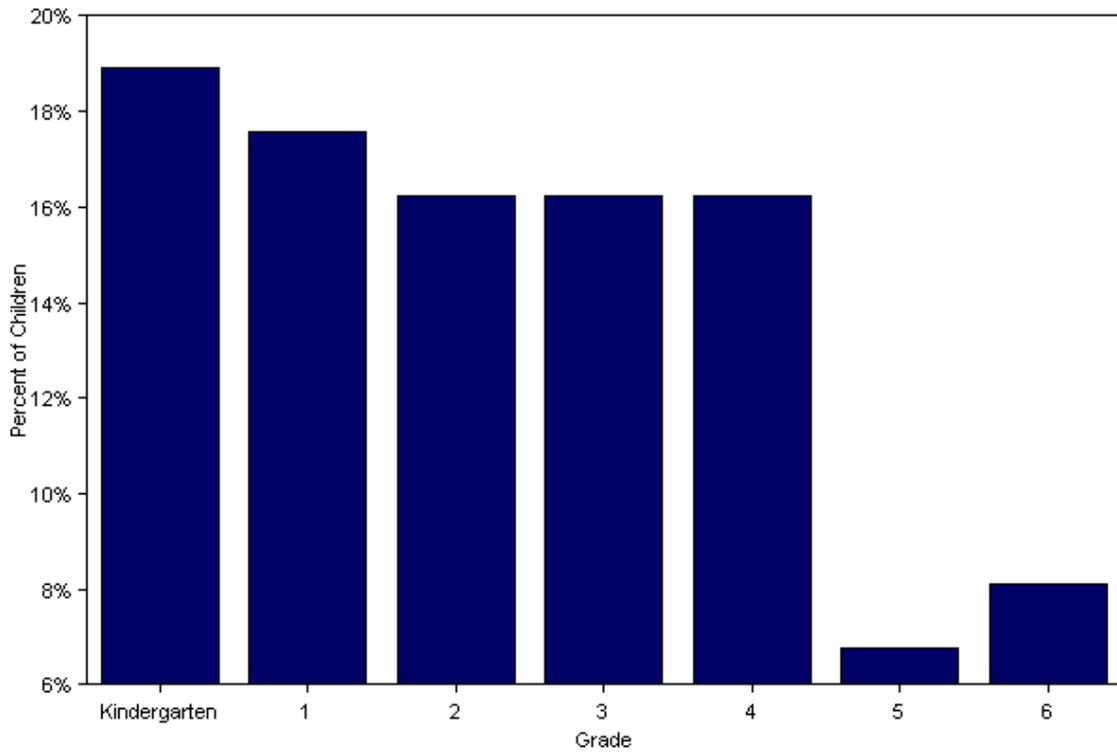
Program Name:	Ferrisburgh Elementary	Month and Year Collected:	October 2011
School Name:	Ferrisburgh Elementary	Set ID:	6714
School Enrollment:	208	Date Report Generated:	01/03/2012
Enrollment within Grades Targeted by SRTS Program:	208	Number of Questionnaires Analyzed for Report:	74
Number of Questionnaires Distributed:	208		

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

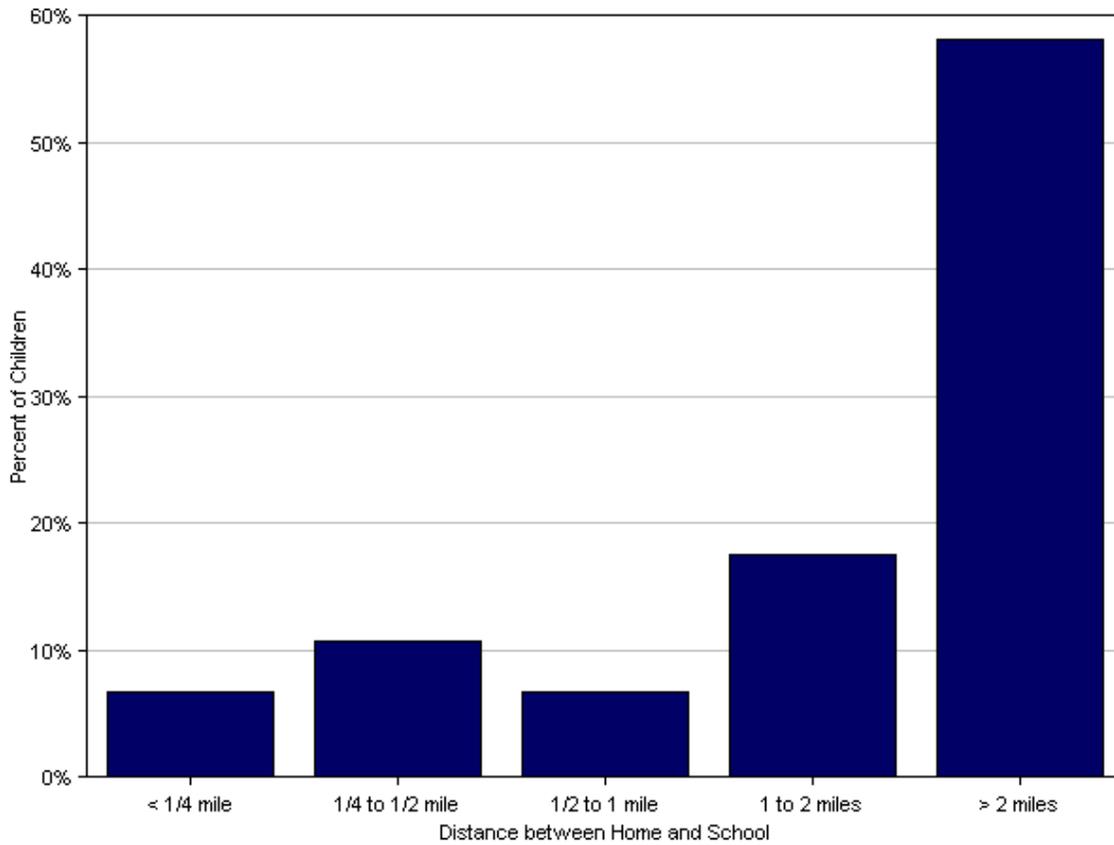


Grade levels of children represented in survey

Grade in School	Responses per grade	
	Number	Percent
Kindergarten	14	19%
1	13	18%
2	12	16%
3	12	16%
4	12	16%
5	5	7%
6	6	8%

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

Parent estimate of distance from child's home to school

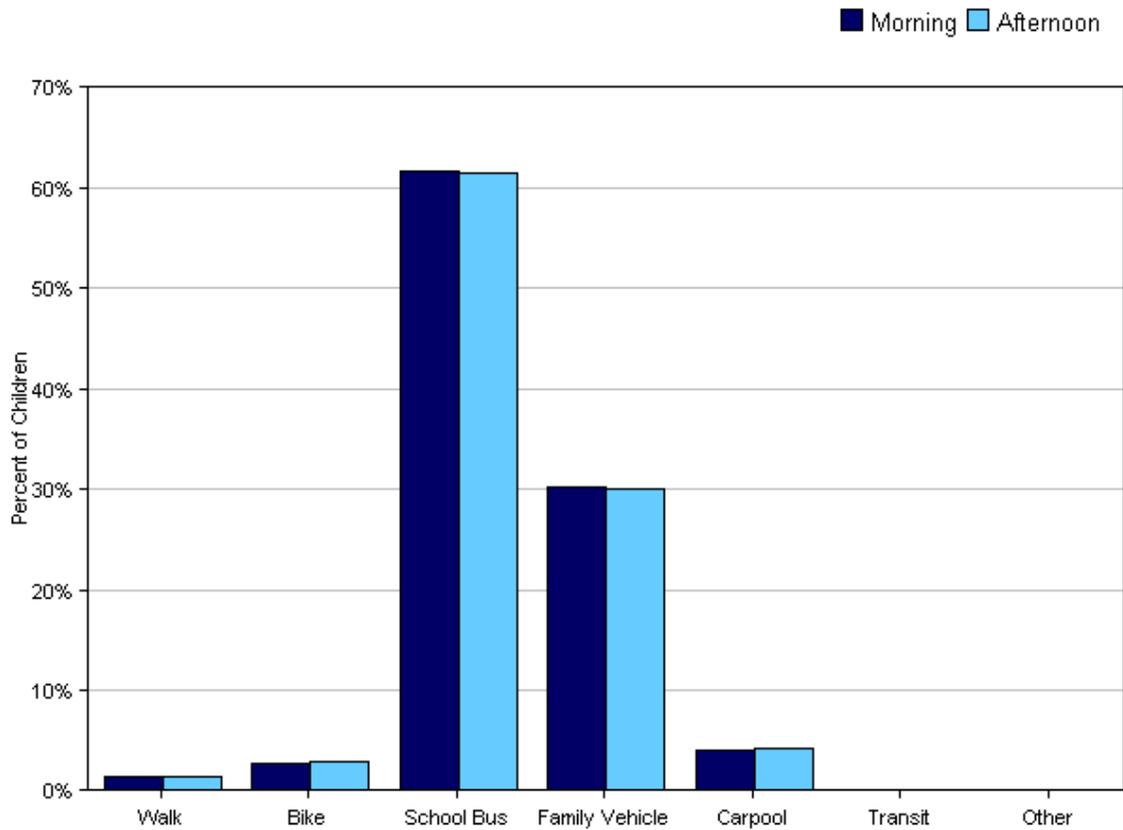


Parent estimate of distance from child's home to school

Distance between home and school	Number of children	Percent
Less than 1/4 mile	5	7%
1/4 mile up to 1/2 mile	8	11%
1/2 mile up to 1 mile	5	7%
1 mile up to 2 miles	13	18%
More than 2 miles	43	58%

Don't know or No response: 0
 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

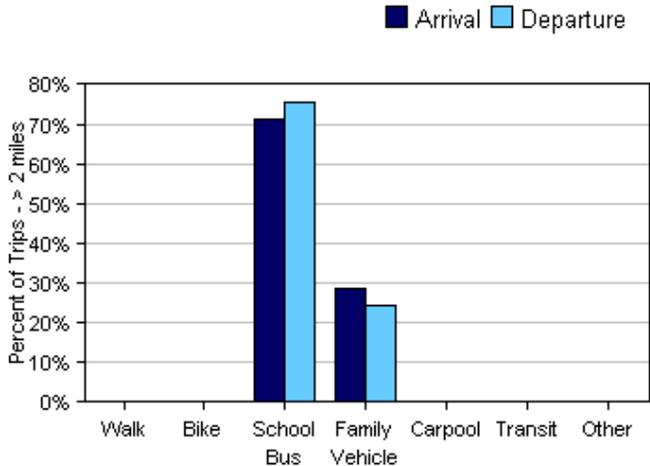
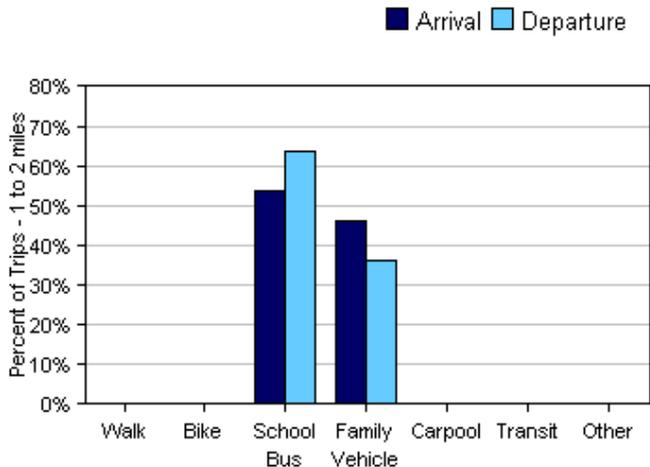
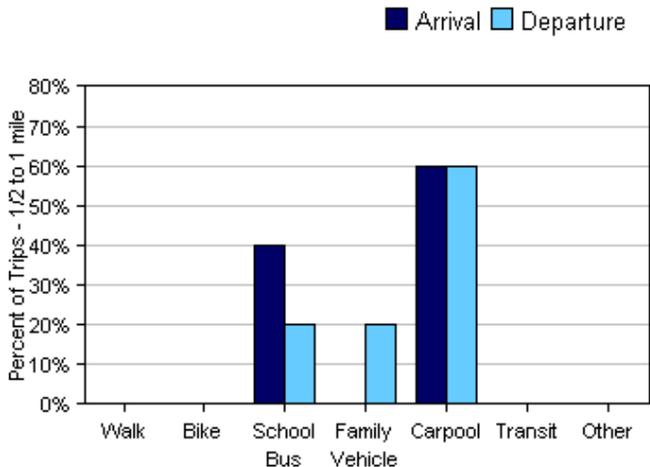
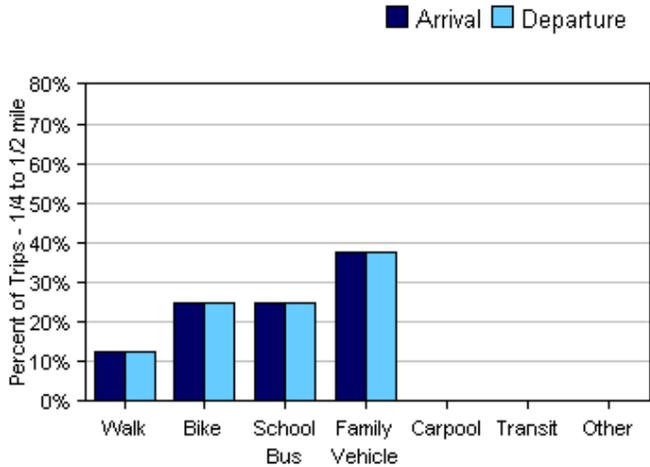
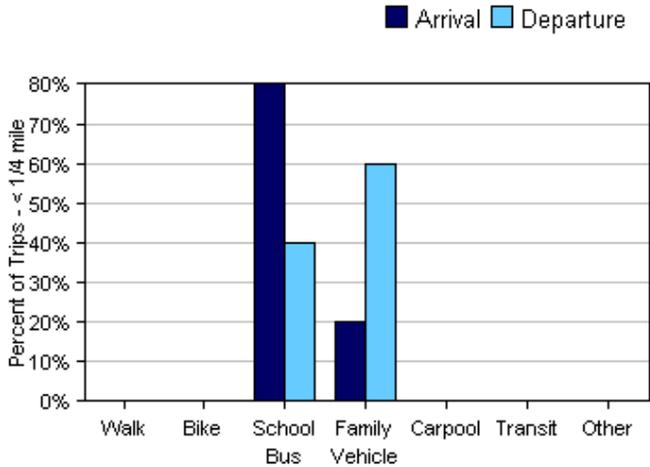
Time of Trip	Number of Trips	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Morning	73	1%	3%	62%	30%	4%	0%	0%
Afternoon	70	1%	3%	61%	30%	4%	0%	0%

No Response Morning: 1

No Response Afternoon: 4

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	5	0%	0%	80%	20%	0%	0%	0%
1/4 mile up to 1/2 mile	8	13%	25%	25%	38%	0%	0%	0%
1/2 mile up to 1 mile	5	0%	0%	40%	0%	60%	0%	0%
1 mile up to 2 miles	13	0%	0%	54%	46%	0%	0%	0%
More than 2 miles	42	0%	0%	71%	29%	0%	0%	0%

Don't know or No response: 1

Percentages may not total 100% due to rounding.

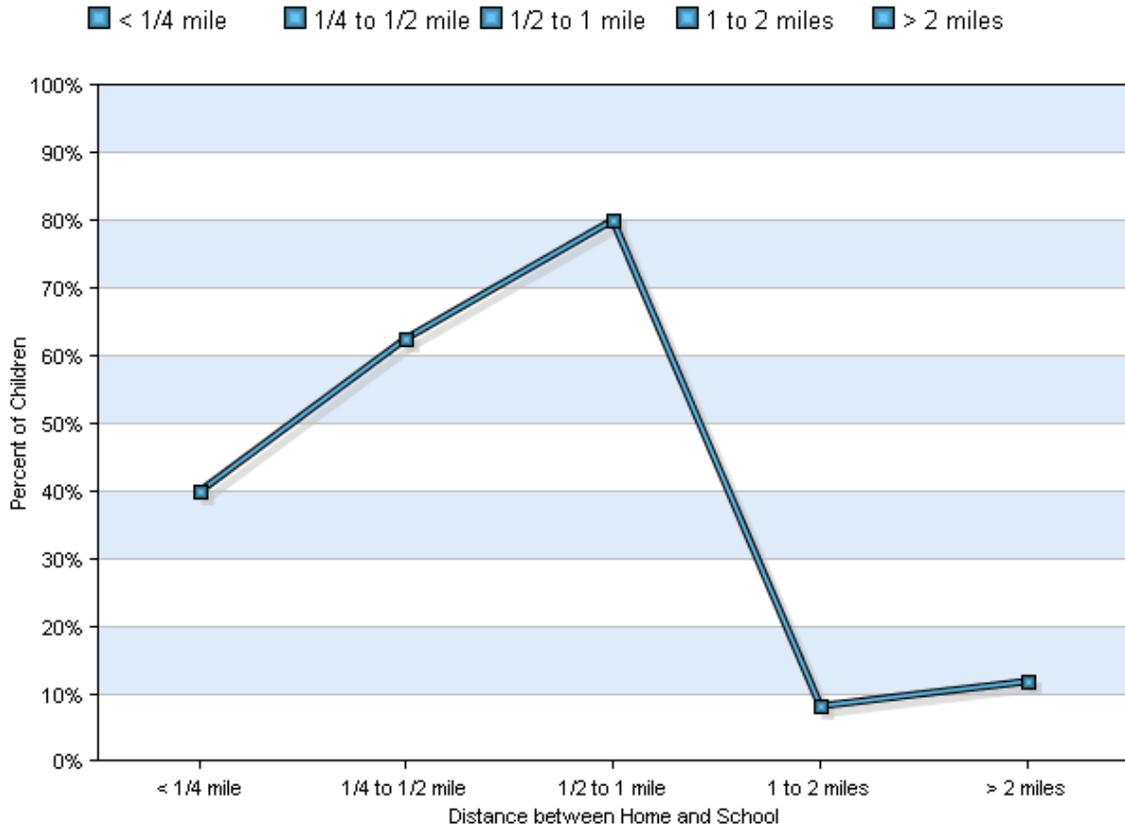
School Departure

Distance	Number within Distance	Walk	Bike	School Bus	Family Vehicle	Carpool	Transit	Other
Less than 1/4 mile	5	0%	0%	40%	60%	0%	0%	0%
1/4 mile up to 1/2 mile	8	13%	25%	25%	38%	0%	0%	0%
1/2 mile up to 1 mile	5	0%	0%	20%	20%	60%	0%	0%
1 mile up to 2 miles	11	0%	0%	64%	36%	0%	0%	0%
More than 2 miles	41	0%	0%	76%	24%	0%	0%	0%

Don't know or No response: 4

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

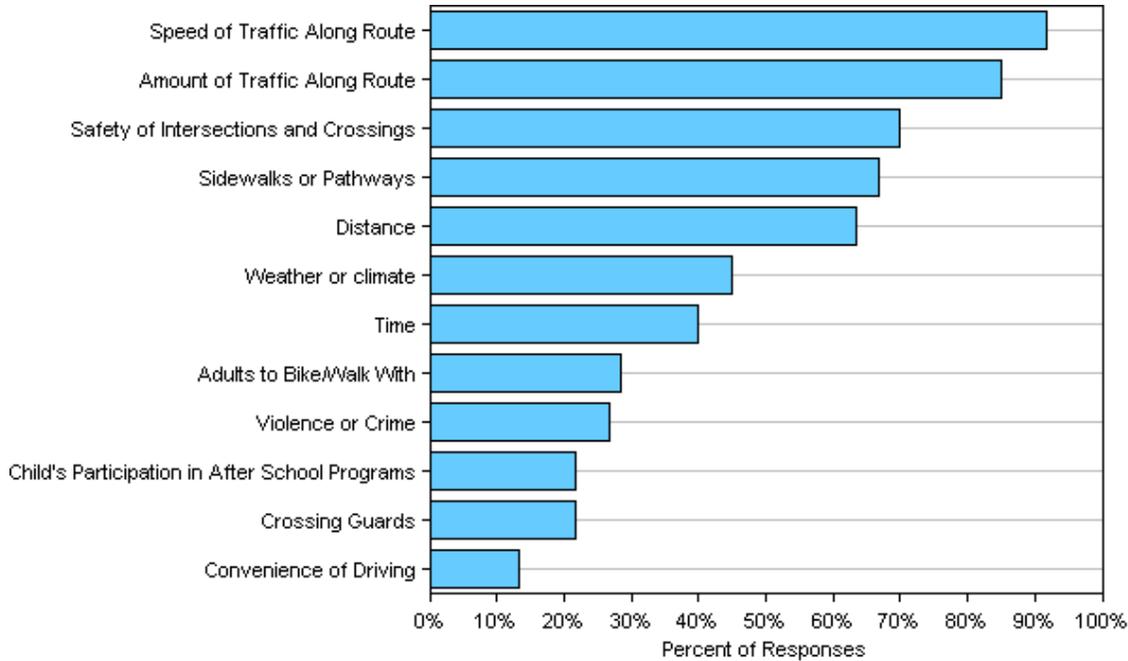


Percent of children who have asked for permission to walk or bike to/from school by distance they live from school

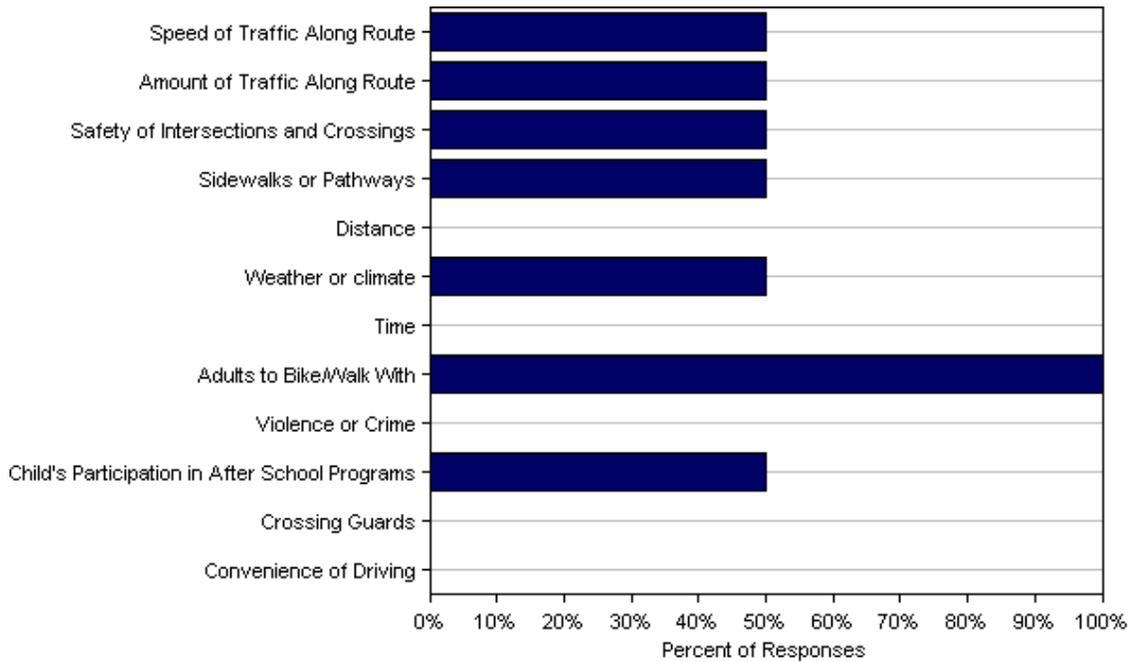
Asked Permission?	Number of Children	Less than 1/4 mile	1/4 mile up to 1/2 mile	1/2 mile up to 1 mile	1 mile up to 2 miles	More than 2 miles
Yes	17	40%	63%	80%	8%	12%
No	55	60%	38%	20%	92%	88%

Don't know or No response: 2
 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
Speed of Traffic Along Route	92%	50%
Amount of Traffic Along Route	85%	50%
Safety of Intersections and Crossings	70%	50%
Sidewalks or Pathways	67%	50%
Distance	63%	0%
Weather or climate	45%	50%
Time	40%	0%
Adults to Bike/Walk With	28%	100%
Violence or Crime	27%	0%
Child's Participation in After School Programs	22%	50%
Crossing Guards	22%	0%
Convenience of Driving	13%	0%
Number of Respondents per Category	60	2

No response: 12

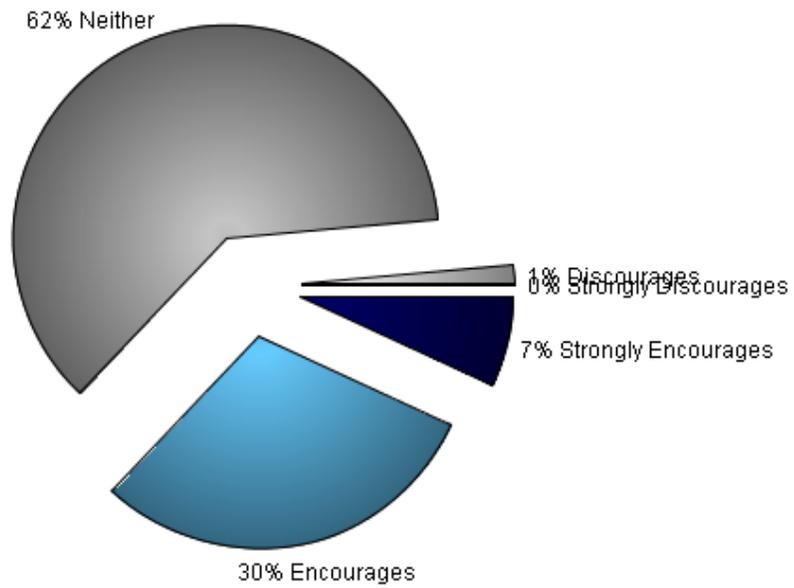
Note:

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

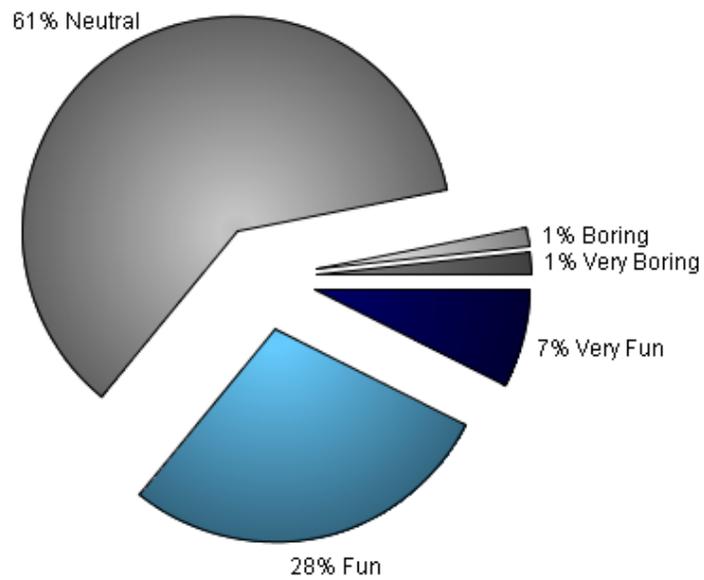
--Each column may sum to > 100% because respondent could select more than issue

--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.

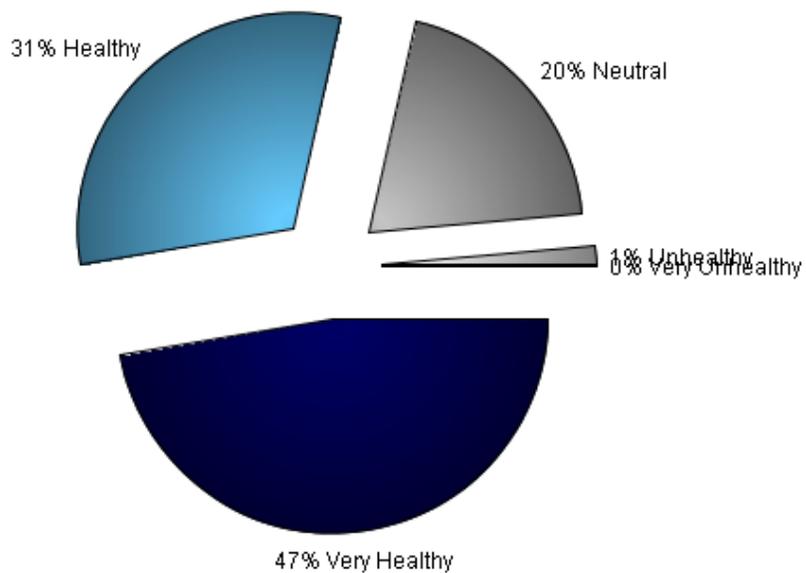
Parents' opinions about how much their child's school encourages or discourages walking and biking to/from school



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

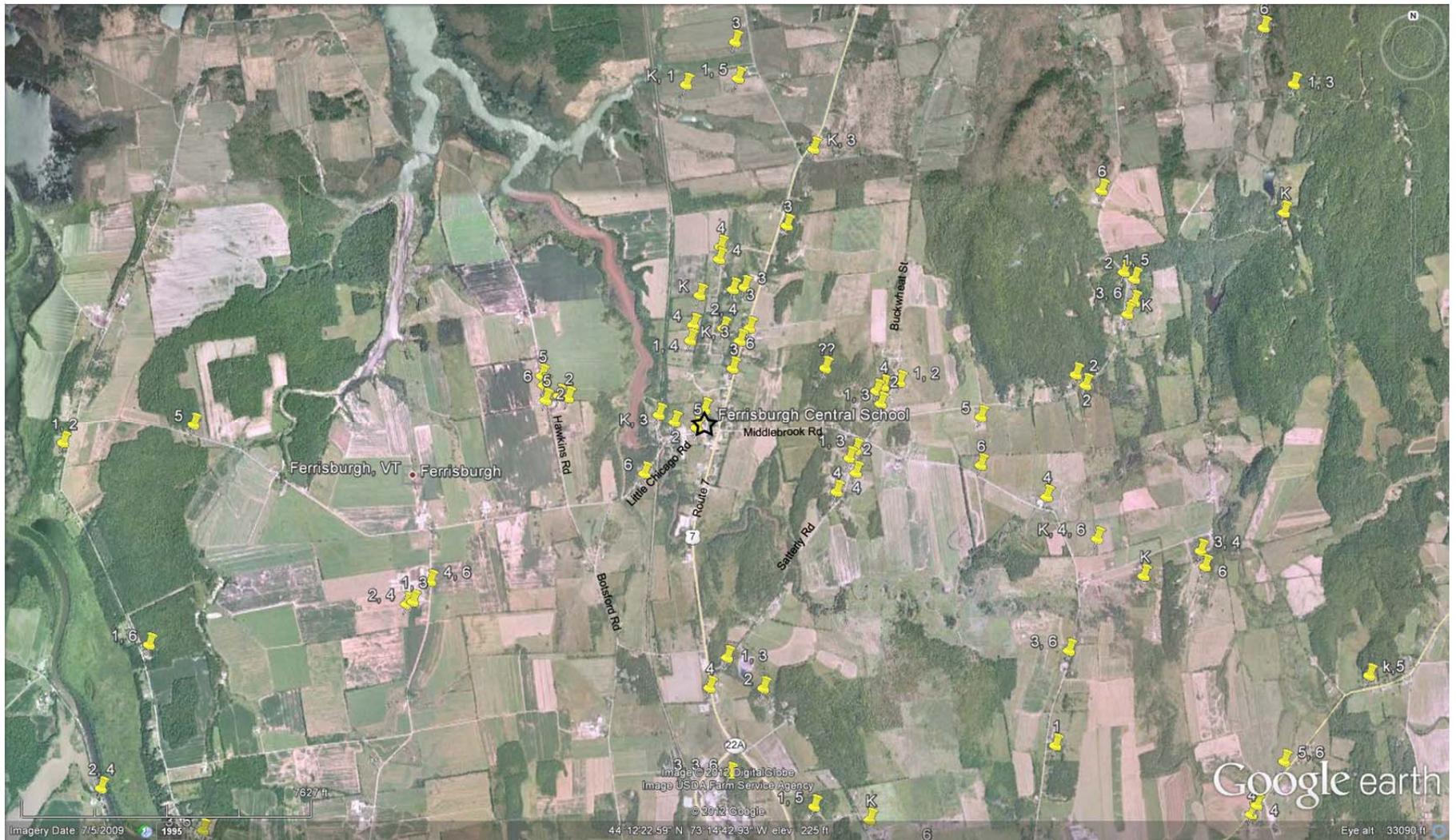


Comments Section

SurveyID	Comment
751136	THE ROUTE AND DISTANCE IS IMPOSSIBLE FOR MY CHILD TO A BIKE OR WALK TO SCHOOL.
751142	THERE WOULD HAVE TO BE MAJOR CONSTRUCTION TO MAKE IT SAFE FOR MY KIDS TO BE ABLE TO WALK OR BIKE TO SCHOOL. QUESTION #15 - WHAT DIFFERENCE DOES THIS MAKE
751146	I WOULD ALLOW MY 2ND GRADER BIKE/WALK TO SCHOOL/HOME BUT SHE HAS TO CROSS ROUTE 7 AND ALSO PEOPLE DRIVE TO FAST AROUND HERE.
751159	IF THERE WERE AN ADULT TO BIKE WITH AND A SAFE CROSSING FROM MIDDLEBROOK ACROSS RT 7 TO FCS I WOULD BE WILLING TO ENCOURAGE BIKING TO SCHOOL. POSSIBLY A CROSSING GUARD LIGHT OR A BRIDGE OVER RTE 7. ALSO I'D LIKE TO SEE A SAFE BIKE PATH BETWEEN VATTS AND FCS.
751166	MY 4 GRADER AS WELL AS MY HIGH SCHOOL FRESHMAN DAUGHTER ALREADY RIDE TO SCHOOL HOWEVER BIKE TRAIL INFRASTRUCTURE REQUIRES EXTENSIVE IMPROVEMENT. NO BIKE PATHWAYS CURRENTLY EXIST IN FERRISBURGH.
751167	IF THERE WAS A MOVE ACCESSIBLE WALKING/BIKING PATH BETWEEN ROUND BARN ATKINS FARM & THE SCHOOL I WOULD LET THE KIDS WALK/BIKE TO SCHOOL. RIGHT NOW THERE IS NO DIRECT PATH - WE NEED TO ZIGZAG IN MANY DIRECTIONS. NEIGHBORS HAVE NOT ALWAYS BEEN VERY COOPERATIVE.
751197	MY DAUGHTER WOULD NEVER WALK OR BIKE FROM SCHOOL AS WE LIVE WAY TOO FAR AWAY
751145	INTERSECTION OF MIDDLEBROOK RD TO CROSS RTE 7 IS FAR TOO DANGEROUS TO SEND A CHILD. THE SPEED OF TRAFFIC IS TOO UNPREDICTABLE
751149	A BIKE PATH WOULD OPEN MANY POSSIBILITIES FOR MY 3 CHILDREN. WE WOULD LOVE TO ENCOURAGE A WALKING/BATH PATH TO SCHOOL!
751152	IF THERE WERE A PATH CONNECTING GREENBUSH RD TO LITTLE CHICAGO RD WE WOULD USE IT VERY OFTEN!
751163	THE ONLY REAL REASON MY CHILDREN DON'T REGULARLY WALK OR BIKE TO SCHOOL IS BECAUSE THERE IS NOT A SAFE PUBLIC ROUTE (NO SIDEWALK OR PUBLIC PATH)
751198	WE LIVE OVER 15 MILES FROM SCHOOL
751139	QUESTION #9 - PROBABLY NOT UNTIL 9TH GRADE BUT WON'T BE IN THAT SCHOOL THEN
751154	CROSSING ROUTE 7 IS THE BIGGEST DETERRENT FOR US.
751135	OUR AREA IS NOT A GOOD CHOICE FOR WALKING/BIKING TO SCHOOL DUE TO RURALNESS.
751144	GIVEN HOW FAR WE LIVE FROM SCHOOL MY KIDS WON'T EVER WALK OR RIDE TO SCHOOL.
751157	I WON'T EVEN LET MY SON WAIT FOR THE BUS AT THE END OF THE DRIVE WAY ALONE HERE ON RT 7 TOO MANY FREAKS IN THIS WORLD! YOU NEVER KNOW WHAT CAN HAPPEN.
751173	IT WOULD BE DIFFICULT TO ALLOW MY CHILD TO GO TO SCHOOL ON BIKE BECAUSE IF FRIENDS WOULD INVITE HIM TO GO BIKE RIDING SOMEWHERE ELSE INSTEAD OF COMING STRAIGHT HOME I THINK HE'D GO.
751203	QUESTION #9 - NOT ALONE ALONG W/ OTHER CHILDREN
751153	REALITY IN TODAYS WORLD: CHILDREN WALKING TO SCHOOL IS NOT A PRUDENT OPTION. THERE ARE HEALTHIER AND AFER OPTIONS FOR PHYSICAL FITNESS.
751174	WE LIVE IN WEST FERRISBURG SO I FEEL THIS SURVEY DOES NOT DIRECTLY APPLY TO US. I THINK WALKING OR BIKING IS A WONDERFUL FOR SOME STUDENTS ESPECIALLY STUDENTS WHO DON'T HAVE TO RIDE ON OR CROSS ROUTE 7 (VERY DANGEROUS).
751196	WE LIVE TO FAR FOR THE KIDS TO WALK OR BIKE.
751148	VERY LARGE DISTANCE TO SCHOOL 5 MILES. ROUTE 7 DANGEROUS HIGHWAY TO BE WALKING OR BIKING EVEN FOR ADULTS!!
751155	SOME COLLEGE COURSES

751186	I THINK WALKING/BIKING IS A GREAT IDEA BUT BECAUSE OF OUR DISTANCE FROM THE SCHOOL AND ROUTE 7 TRAFFIC IT'S NOT A REALISTIC IDEA AND HAVING OUR CHILD TAKE THE BUS IS QUICKER AND SAFER
751192	SOME COLLEGE COURSES
751140	WE LIVE 15 TO 20 MINUTES AWAY FROM SCHOOL (DRIVING) SO MY YOUNG CHILDREN WILL NOT BE WALKING OR BIKING TO FCS.
751164	THIS SURVEY IS NOT APPLICABLE AS WE LIVE TOO FAR TO DRIVE THERE ARE NO SIDEWALKS AND THE CARS ON OUR ROAD AND RT 7 GO TOO FAST.

ATTACHMENT D: STUDENT DISTRIBUTION MAP



APPENDIX E TYPICAL INFRASTRUCTURE RECOMMENDATIONS

The following infrastructure recommendations are typical treatments used in SRTS projects. These recommendations may or may not be included in this travel plan. The basic information is provided to give an overall understanding and implementation guidance on each treatment.

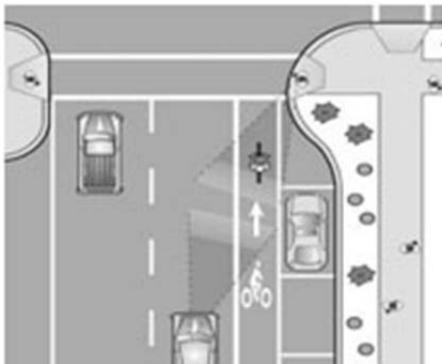


Rectangular Rapid Flashing Beacons:

Rectangular rapid flashing beacons (RRFB), as shown to the left, are warning beacons used to increase visibility of students and all pedestrians as they cross the roadway at uncontrolled crosswalks. This type of signal is pedestrian-activated, i.e., the signal will only flash if a pedestrian has pushed a button, indicating that they need to cross the street. Any proposed RRFB locations need to meet current guidance provided in the interim approval of the MUTCD. For proposed uncontrolled crosswalks on state maintained roads, VTrans approval and justification are needed.

Curb Extensions:

Curb extensions, as shown below, are recommended to reduce pedestrian crossing distances (and thus exposure to traffic) and to slow motor vehicle turning speeds at intersections. Curb extensions located along school bus routes should effectively calm traffic, but not impede buses from making the turn. Design considerations should include the appropriate design vehicle, maintenance concerns, and snow plow accommodations depending on the roadway jurisdiction.



Curb Radius Reductions:

Curb radius reductions are recommended to slow motor vehicle turning speeds and to reduce pedestrian crossing distances (and thus exposure to traffic). Curb radius reductions involve tightening the motor vehicle turning radius at an intersection, as

shown to the left, without extending the curb line into a parking lane. Curb radius reductions located along school bus routes should effectively calm traffic but not impede buses from making the turn. Design considerations for curb radius reductions include the appropriate design vehicle depending on the roadway jurisdiction and ADA compliance.

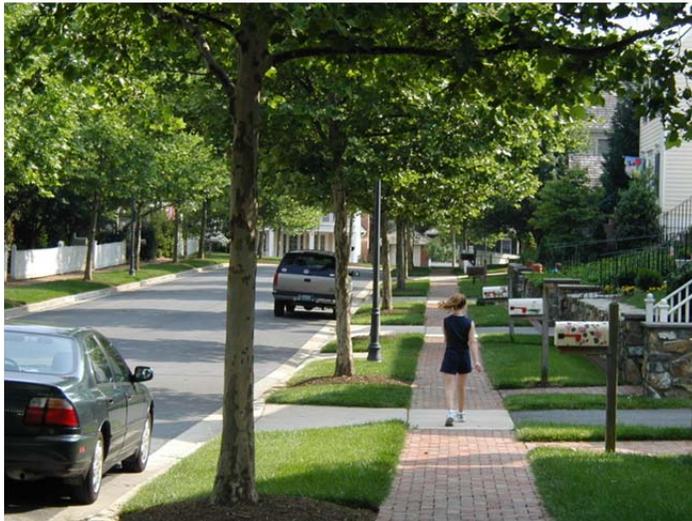
High Visibility Crosswalks:

High visibility crosswalk striping improves the visibility of pedestrians to motorists. Different striping patterns can be used and the most common patterns are variations of the ladder style, shown right. Reflective durable materials should be used to resist decay.



Sidewalks and buffers:

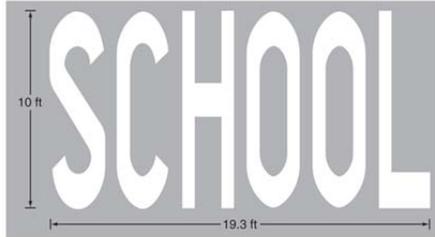
One of our long-term goals is to establish a well-connected sidewalk network throughout the neighborhoods so that families can walk for more of their daily trips, rather than drive. Sidewalks are the most effective when they include a buffer. This buffer increases pedestrian comfort and safety and can also serve as a place for pedestrian “overflow”, especially closer to the school where groups of walkers are largest. Based on Vermont Pedestrian and Bicycle



Facility Planning and Design Manual, the preferred design for sidewalks is a minimum six foot wide sidewalk with a minimum two foot wide buffer for local roadways with curbs. For downtowns and village centers on roadways with curbs, the preferred design for sidewalks is a minimum eight foot wide sidewalk with a minimum four foot wide buffer. For roadways without curbs, the buffer should be a minimum of five feet. Available right of way will impact the ultimate design of the sidewalk.

School Zone Identification:

School pavement markings are recommended to alert motorists that they are entering a school zone where pedestrians may be present both along and crossing the roadway. New pavement markings can work with existing school zone signs to reinforce the message to motorists about the school zone. The detail provided in the figure below is an excerpt of the MUTCD.



Speed Feedback Signs:

Communities may use a mobile “speed trailer” that can be placed in locations where motorists exceed the speed limit often enough that passive enforcement is appropriate. Permanently installed feedback signs, shown right, provide ongoing information to motorists about the speed at which they are traveling. SRTS recommended any potential feedback signs be strategically located at main access points.



For towns interested in reducing the speed limit of a roadway, an engineering study needs to be conducted by the town. Approval from VTrans is needed for state maintained roads.

Pedestrian Refuge Island:

A Pedestrian refuge island, as shown right, may be used to narrow the roadway, reduce motor vehicle speeds, and improve pedestrian crossings. In locations with crosswalks, these islands improve pedestrian safety and access by reducing crossing distances and enable pedestrians to cross roadways in two stages. Pedestrian refuge islands should be used on multi-lane roadways or roadways with insufficient vehicular gaps to pedestrians to safely cross. Prior to design, a gap study should be conducted. Other considerations for pedestrian refuge islands include ADA compliance, maintenance concerns, and snow plow accommodations.



APPENDIX F: NON-ENGINEERING STRATEGIES RESOURCE GUIDE

Strategy	E's	Advantages	Considerations	Resources
<p>Walking and Biking Safety Curriculum and/or Assembly</p> <p>These lessons can be held in the fall to promote Walk to School Day. Guest speakers teach the students pedestrian and bicycle safety skills that they can use when walking and biking to school.</p> <p>Instruction as a part of school curriculum is also vital to ensuring on-going learning of bicycle and pedestrian safety and development of skills.</p>	<p>Education, Encouragement</p>	<ul style="list-style-type: none"> • Assures all children learn bicycle and pedestrian safety skills • Establishes habits that benefit children throughout their lives, regardless of whether they currently walk or bike to school • Establishes consistent messages for young pedestrians and bicyclists • Provides a refresher for parents if take home materials are provided in conjunction with the assembly. It's never too late to correct bad habits. • Events can make learning fun, and help strengthen community ties with event organizers and participants. 	<ul style="list-style-type: none"> • Best taught using a combination of methods, including one-time instruction (e.g. assemblies), multi-lesson classroom curricula, and skills practice (e.g. bicycle safety fairs). • Requires able and willing instructors • Should be age-appropriate • Bicycle safety education may require an outside instructor, e.g. a police officer. 	<ul style="list-style-type: none"> • Walk Smart/Bike Smart Vermont! http://healthandlearning.org/documents/WalkSmartBikeSmartFINAL2008_001.pdf • National Highway Traffic Safety Administration Pedestrian Safety Lessons http://www.nhtsa.gov/ChildPedestrianSafetyCurriculum • WalktoSchool.org - Classroom activities that encourage walking and biking. www.walktoschool.org/eventideas/classroom.cfm • Willie Whistle - The National Highway Traffic Safety Association has created a video to help teach children pedestrian safety skills. http://www.nhtsa.gov/people/injury/willie/willie.zip • See Partner Resource CD for more materials

Strategy	E's	Advantages	Considerations	Resources
<p>Continue to Participate in Walk to School Day</p> <p>Walk to School Day is a one-day event that celebrates walking and biking to school.</p> <p>Generally this event is scheduled for the first full week in October. Why not use this strategy multiple times a year?</p>	<p>Education, Encouragement</p>	<ul style="list-style-type: none"> • Excellent kick-off event for Safe Routes to School program • Generates enthusiasm for walking and biking • Way to raise community awareness about safety issues • Can be as simple as a few kids and parents meeting to walk to school or very elaborate celebrations • Can be folded into studies of international cultures as it is an international event • Date is flexible- to be counted by the National Center for Safe Routes to school the event need only take place before Dec 1. 	<ul style="list-style-type: none"> • Preparations for elaborate celebrations must begin several months in advance to allow time to identify partners, plan activities, and promote the event • Should provide bicycle and pedestrian safety information to children and parents • International Walk to School Day takes place in October but some schools organize multiple Walk to School Day (or “Walk and Roll Day”) events over the course of the school year (e.g. one in the fall and one in the spring). 	<ul style="list-style-type: none"> • U.S. Walk to School Day website (provides resources and event registration): www.walktoschool.org • International Walk to School Day website: www.iwalktoschool.org/ • Plan and promote your Walk to School Day event http://saferoutes.vermont.gov/sites/saferoutes/files/PDFs/How%20To%20-%20Special%20Events.pdf • Include students when it is too far or unsafe http://saferoutes.vermont.gov/sites/saferoutes/files/Including%20Students%20When%20It%27s%20Too%20Far%20or%20Unsafe%20VT.pdf • See Partner Resource CD for more materials
<p>Frequent Walker/Bicyclist Program or Walking Wednesdays</p> <p>Track and reward students who walk and bicycle to school. Can be an individual competition or a competition among classes.</p>	<p>Encouragement</p>	<ul style="list-style-type: none"> • Provides positive reinforcement for walking and bicycling. • Children respond to incentives. • Can include all students. • Can include walking and bicycling beyond the trip to school. 	<ul style="list-style-type: none"> • Necessary to identify a coordinator. • Establish a simple record-keeping system. • Establish age-appropriate goals. • Consider giving rewards to parents as well, since parents are often involved in the commute to school. 	<ul style="list-style-type: none"> • Frequent Walker Punch card template http://saferoutes.vermont.gov/sites/saferoutes/files/PDFs/VT_SRTS_Punchcard_v2_110825-1.png • Vermont Challenge: Walk Across America http://saferoutes.vermont.gov/sites/saferoutes/files/PDFs/The%20VT%20Challenge%20-%20Walk%20Across%20Vermont%21.pdf • Tips for creating a walking and bicycling route map http://saferoutes.vermont.gov/sites/saferoutes/files/PDFs/Tips%20for%20Creating%20Walking%20and%20Bicycling%20Route%20Maps.pdf • See Partner Resource CD for more materials

Strategy	E's	Advantages	Considerations	Resources
<p>Traffic Enforcement (Staff/Crossing Guards)</p> <p>This can be an ongoing program for school staff and crossing guards. This works well if the school has an existing reward point program.</p>	<p>Education, Enforcement, Encouragement</p>	<ul style="list-style-type: none"> • Crossing guards play an important role in helping children cross the street at key locations, reminding drivers of the presence of pedestrians, and making parents feel more comfortable about letting their children walk and bicycle to school. • Staff and crossing guards can also reward students who are “caught being good” by issuing School Reward Points. 	<ul style="list-style-type: none"> • Requires some training and coordination with crossing guards 	<ul style="list-style-type: none"> • Adult School Crossing Guard Guidelines (NCSRTS) http://guide.saferoutesinfo.org/crossing_guard/pdf/crossing_guard_guidelines_web.pdf • Florida School Crossing Guard Training Guidelines http://saferoutesinfo.org/program-tools/florida-school-crossing-guard-training-guidelines • Lessons from Florida’s Crossing Guard Program http://saferoutesinfo.org/events-and-training/srts-webinars/lessons-floridas-crossing-guard-program • See Partner Resource CD for more materials

Strategy	E's	Advantages	Considerations	Resources
<p>Bicycle Safety Fair</p> <p>This is a single-day event that promotes bicycle safety. At the bicycle safety fair, students can borrow bicycles or bring their own.</p>	<p>Education, Encouragement</p>	<ul style="list-style-type: none"> • Events like bike safety fairs make learning fun and can help strengthen community ties with event organizers and participants. • At the bicycle safety fair students learn safety skills such as how to properly wear a helmet and how to behave while bike riding. The bicycle safety fair can also have a closed “test course” for the students to ride along. This helps the students to practice in a safe environment and gain confidence in their decision-making skills. • One possible partner for this is the local police department. 	<ul style="list-style-type: none"> • Requires able and willing instructors • Should be age-appropriate • Bicycle safety education may require an outside instructor, e.g. a police officer. • These events require planning and materials to share with students 	<ul style="list-style-type: none"> • Teaching a Bicycle Safety Fair in Vermont http://www.vtbikeped.org/what/VT_Safety_Fair_Curriculum.pdf • Bicycling Life page on bicycle safety fairs: http://www.bicyclinglife.com/SafetySkills/BicycleRodeo.htm • An organizer’s guide to bicycle safety fairs http://www.bike.cornell.edu/pdfs/Bike_Rodeo_404.2.pdf • Easy steps to properly fit a bicycle helmet http://www.nhtsa.gov/people/injury/pedbimot/bike/EasyStepsWeb/
<p>Walk Audit/Parent Surveys / Student tallies</p> <p>The team will meet annually (ideally in August before school starts) to review the accomplishments from the previous year and set new goals for the upcoming school year.</p>	<p>Evaluation</p>	<ul style="list-style-type: none"> • Establishes baseline information on student travel behavior and perceived barriers to walking and biking • Helps determine existing needs • Helps determine success of SRTS efforts and identify needed adjustments 	<ul style="list-style-type: none"> • Best to conduct initial surveys before SRTS measures have been implemented • Requires teacher buy-in and administrative organization • Getting parents to fill out and return surveys can be a challenge. Follow up is necessary. Consider a contest among classes for highest rate of return. 	<ul style="list-style-type: none"> • Student In-Class Travel Tally Form: http://www.saferoutesinfo.org/resources/evaluation_student-in-class-travel-talley.cfm • Parent Survey Form: http://www.saferoutesinfo.org/resources/evaluation_parent-survey.cfm • Instructions for Survey Administration: http://www.saferoutesinfo.org/resources/evaluation_instructions.cfm • Instructions for Data Entry: http://www.saferoutesinfo.org/resources/evaluation_cover-sheets.cfm

Strategy	E's	Advantages	Considerations	Resources
<p>Walking School Buses/ Bicycle Trains</p> <p>Walking school buses and bicycle trains are adult supervised groups of students walking and/or bicycling to school.</p>	<p>Education, Encouragement</p>	<ul style="list-style-type: none"> • Adult supervision on the walk to school • Can be loosely structured or highly organized • Can include a meeting point in a parking lot so children and parents who must drive can participate. • Adults can rotate who will lead each time. 	<ul style="list-style-type: none"> • Need to identify routes where conditions support walking and there is sufficient demand for supervised walking • Requires parents willing to walk with children and learn about how Walking school buses are organized and conducted. • More organized structure requires considerable planning 	<ul style="list-style-type: none"> • How to start a walking school bus or bike train http://guide.saferoutesinfo.org/walking_school_bus/pdf/wsb_guide.pdf
<p>Drive Safe Campaigns</p> <p>Some parents are not aware of how their driving behavior can put walking students at risk. This teaches parents how their unsafe driving habits can put their children in danger.</p>	<p>Education</p>	<ul style="list-style-type: none"> • Has the ability to positively effect change in and community around the school • Improves the safety of the walking environment • Good drivers can help to set the example for good behavior. This is especially true for helping to control speeds. 	<ul style="list-style-type: none"> • This requires a person to organize and administer the campaign. • May not be effective at schools where parent/teacher organizations are weak • Law enforcement officers would be great at speaking at the campaign events. Sometimes, due to their heavy schedules that can be difficult to pin down. • A good way to contact parents is at back to school night and PTA meetings. Starting at the beginning of the year helps to prevent bad habits from starting. Law enforcement officers (or other teachers) can hold a brief assembly to explain the dangers of unsafe driving in school areas. • Law enforcement officers can provide a demonstration of how difficult it is to quickly stop a moving vehicle at 50, 40 and 30 mph. The National Center has information on how the speed of the vehicle can affect the severity of injury that the pedestrian experiences in a crash. 	<ul style="list-style-type: none"> • Driving Around Schools: Keeping Children Safe http://apps.saferoutesinfo.org/lawenforcement/resources/driving_tips.cfm • Parents, Avoid Becoming a Traffic Hazard http://www.aaamidatlantic.com/FetchFile.ashx?id=e55bfa26-a70d-4e17-afde-073b86cc9975

Strategy	E's	Advantages	Considerations	Resources
<p>Crossing Guard Appreciation Day</p> <p>Crossing guards help our children cross the road safely in the mornings and afternoons, in all weather conditions. Remind them that you appreciate their service and dedication. Students can create thank you cards that they deliver themselves during their walks home, or teachers and administrators can honor them formally during a school assembly.</p>	<p>Encouragement</p>	<ul style="list-style-type: none"> • Maintains a positive relationship between the crossing guards and the school/community. • Can inspire crossing guards to continue to be reliable, safety figures. • Creates an opportunity to remind students why it is important to practice safe walking skills. 	<ul style="list-style-type: none"> • Requires coordination between the crossing guards, school administrators and school instructors. • May require materials to create the thank-you cards. • Is most effective with newsletter and in-school announcements. • Relatively inexpensive strategy 	<ul style="list-style-type: none"> • Active Transportation Alliance webpage for Crossing Guard Appreciation Day http://www.activetrans.org/crossingguard

APPENDIX G: INFRASTRUCTURE STRATEGIES RESOURCE GUIDE

Strategy	Advantages	Considerations	Resources	Actions
<p>Wide Paved Shoulders</p> <p>Wide paved shoulders are created by striping a roadway to provide space for a shoulder and a travel way for motor vehicles. Wide paved shoulders can be created by adding pavement to one or both sides of the paved roadway or by narrowing travel lanes.</p> <p>Current Vermont State Standards recommend ten-foot minimum travel lanes for state and local roads.</p>	<ul style="list-style-type: none"> • Provide room for pedestrians when there is no sidewalk or other facility. • Provide a clear space for bicyclists that is separated from the motor vehicle travel way. • Research has shown that by narrowing travel lanes, motor vehicle speeds might also be reduced. 	<ul style="list-style-type: none"> • Lane markings need to be bright and maintained to clearly delineate the motor vehicle travel lane. When lane markings fade, the travelway for motor vehicles appears to be wider, which tends to encourage motorists to travel at higher speeds. • When adding pavement to widen the roadway and accommodate shoulders, the base material for the shoulder needs to be integrated well with the base material under the existing road to minimize the potential for pavement cracking and settling that would create hazardous conditions for bicyclists and motorist. • The <i>Vermont State Standards</i> provide detailed information on appropriate travel lane and paved shoulder widths for different classifications of state roads. These standards also provide a guide for appropriate lane and shoulder widths for town roads. • Other considerations include right-of-way, drainage, grading, existing signs and structures, and utilities. 	<ul style="list-style-type: none"> • Vermont State Standards http://www.aot.state.vt.us/progdev/standards/statabta.htm 	<ul style="list-style-type: none"> • For town roads, start with discussions with the appropriate, Selectboard, Board of Trustees, or City Council (municipal legislators) and town officials, such as road commissioner and/or town engineer to determine the municipality’s policies on travel lanes widths. Provide background information on the benefits of narrower travel lanes for speed reduction and safer conditions for pedestrians and bicyclists. • Review shoulder widening proposals with municipal officials. If sufficient pavement exists, suggest conducting an experiment with temporary striping to provide wider shoulders. • Follow up the experiment with feedback and request for comments from municipal officials and community.

Strategy	Advantages	Considerations	Resources	Actions
<p>Speed Feedback Signs</p> <p>Speed feedback signs, either temporary or permanent, show motorists how fast they are traveling as calculated by radar.</p>	<ul style="list-style-type: none"> Speed feedback signs tend to slow motorists and remind motorists of the posted speed limits. 	<ul style="list-style-type: none"> Speed feedback signs on state roads must follow the State’s placement guidelines for state roads. Installing a feedback sign requires a highway access permit from the State. Permanent signs may be appropriate at school zones; elsewhere temporary signs, set up for short periods at various locations, can be more effective. 	<ul style="list-style-type: none"> <i>Guidelines for the Use of Radar Speed Feedback Signs on the State Highway System</i> http://www.aot.state.vt.us/documents/3014_Guidelines_on_the_Use_of_Radar_Speed_Feedback_Signs.pdf <i>Classification of Vermont Roads</i> http://maps.vermont.gov/imf/sites/ANR_NATRESViewer/jsp/ 	<ul style="list-style-type: none"> Review the State’s speed feedback sign guidelines to be sure the proposed location is acceptable. Contact the municipality to determine the appropriate person to contact regarding the placement of speed feedback signs, either temporary or permanent. Check with the local police or sheriff to see if they have a portable trailer that can be used on a temporary basis as a trial. Contact the responsible party to understand their process for the placement of speed feedback signs and whether the sign should be temporary or permanent. Follow the process for installation of the speed feedback sign. If a temporary feedback sign was installed, review the results with the municipality to determine if it has been successful. If successful, suggest the municipality install a permanent speed feedback sign. Permanent feedback signs are an eligible use for SRTS funds. Check with the regional planning commission about this and other potential funding sources.

Strategy	Advantages	Considerations	Resources	Actions
<p>High-visibility Crosswalks</p> <p>High-visibility crosswalks are roadway markings designating a location for pedestrians to cross a roadway.</p> <p>High-visibility crosswalks are typically in locations that are convenient to pedestrians and visible to motorists. High-visibility crosswalks must be installed with reflective durable material.</p>	<ul style="list-style-type: none"> • Crosswalks provide notification to both pedestrians and motorists to where pedestrians may be crossing the roadway. • Pedestrians have the right-of-way when in a crosswalk and motorists are supposed to stop their vehicles until the pedestrian has cleared the roadway. 	<ul style="list-style-type: none"> • Pedestrians should assume that a motorist may not see them or stop. • Crosswalks should have a receiving facility, such as a path, sidewalk, or adequate shoulder for use by pedestrians on either end. • Crosswalks may be marked with different striping patterns but the most common pattern is the ladder style. Further considerations may be needed for crosswalks at unsignalized intersections and at mid-block locations to determine if the crosswalk is warranted. • Crosswalks are not appropriate for every location as they may give the pedestrian a perceived sense of safety that may not exist. 	<ul style="list-style-type: none"> • <i>Vermont Pedestrian and Bicycle Facility Planning and Design Manual</i> http://www.aot.state.vt.us/progdev/Sections/LTF%20Info/BikePedTOC.html • <i>Vermont's Guidelines for the Installation of Crosswalk Markings and Pedestrian Signing at Marked and Unmarked Crossings</i> http://www.aot.state.vt.us/progdev/sections/highway%20info/DocumentsRoadwayPages/TrafficOpsCrosswalk%20Guidelines%202004.pdf <i>Safety Effects of Marked Versus Unmarked Crosswalks at Uncontrolled Locations</i> http://www.fhwa.dot.gov/publications/research/safety/04100/04100.pdf • <i>Classification of Vermont Roads</i> http://maps.vermont.gov/imf/sites/ANR_NATRESViewer/jsp/ 	<ul style="list-style-type: none"> • For all classifications of roadways, state and local, consult with the regional planning commission about the appropriateness of the proposed location for a crosswalk. • Follow-up with the municipal road commissioner, planner, or engineer to seek their guidance and support. • For non-state roads, after gaining appropriate endorsements, work with the appropriate local official or employee to get the high-visibility crosswalk installed in the proper and safe location. • For state roads, work with the regional planning commission to get a formal study to determine if a crosswalk is warranted and safe.

	Advantages	Considerations	Resources	Actions
<p>Shared-use Paths</p> <p>Shared-use paths are separate facilities for non-motorized users such as bicyclists and pedestrians. Typically these facilities have their own right-of-way rather than sharing a right-of-way with a roadway.</p>	<ul style="list-style-type: none"> • Provides a safe place for non-motorized users that are typically separated from motor vehicles. • Shared-use paths appeal to users of all different skill levels, particularly those with basic or beginner skills. 	<ul style="list-style-type: none"> • Shared-use paths should typically be a minimum of ten feet wide and paved with asphalt. • Guidelines for the construction of shared-use paths can be found in the <i>Vermont Pedestrian and Bicycle Facility Planning and Design Manual</i>. • Further considerations are needed at intersections of the shared-use path and roadways to ensure safety for all users. 	<ul style="list-style-type: none"> • <i>Vermont Pedestrian and Bicycle Facility Planning and Design Manual</i> http://www.aot.state.vt.us/progdev/Sections/LTF%20Info/BikePedTOC.html 	<ul style="list-style-type: none"> • Work with the municipal planning office, road commissioner, administrator, or other municipal officials to gain their support for the proposed shared-use path. • Work with municipal partners to engage the regional planning commission with the project in terms of funding or other support for an initial alignment study to determine the appropriate shared-use path alignment and end points. This study will help the community understand where the shared-use path may be located as well as the issues that will need to be addressed, the types of permits that will be needed, and the potential cost for developing the shared-use path as proposed. This study, done with community input, will help the community decide if they want to proceed further with the project. • If the community wishes to continue to pursue a shared-use path, work with the municipal partner to understand potential funding sources and the various requirements involved in obtaining them.

Strategy	Advantages	Considerations	Resources	Actions
<p>Bicycle Routes/ Bicycle Pedestrian Warning Signs</p> <p>Bicycle route signs are officially designated routes for bicyclists through municipalities; they are typically used to focus bicycle travel onto roadways most suited for it.</p> <p>Bicycle and/or Pedestrian present warning signs (with an image of a bicycle and a pedestrian) provide a notice to motorists, that bicyclists or pedestrians are likely to be present.</p>	<ul style="list-style-type: none"> • Bicycle route signs assist bicyclists in determining the best route for their travel. • Warning signs raise safety conditions for bicyclists due to greater awareness by motorists of bicyclists on the road. 	<ul style="list-style-type: none"> • The number and location of bicycle routes and signs should be carefully studied by the community prior to implementation. Measures should be taken to reduce sign clutter. • Bicycle route signs and warning signs must meet the guidelines provided in the <i>Manual on Uniform Traffic Control Devices</i> (MUTCD). • In cases where there are on-road sections of bicycle connecting nearby trails, where a bike lane ends or a paved shoulder is reduced at a bridge, a “Share the Road Sign” may be appropriate. The “Share the Road” sign should be used to indicate a relatively brief special condition. 	<ul style="list-style-type: none"> • <i>Vermont Pedestrian and Bicycle Facility Planning and Design Manual</i> http://www.aot.state.vt.us/progdev/Sections/LTF%20Info/BikePedTOC.html • <i>Manual on Uniform Traffic Control Devices, latest edition (MUTCD)</i>, http://mutcd.fhwa.dot.gov/kno_2009r1r2.htm 	<ul style="list-style-type: none"> • Review guidelines provided in the latest edition of the MUTCD to make sure signs are compliant. • Work with the municipal planning office, road commissioner, administrator, or other municipal officials to gain their support for the creation of bicycle routes. • Follow the recommendations of the local official or employee as to the appropriate way to proceed, which could include: <ul style="list-style-type: none"> - Presenting the idea to the municipal legislators; - Implementing existing recommendations in a bicycle plan for the community; - Undertaking the development of a bicycle plan for the community to make sure that the specific recommendations still work within the context of the entire municipality; and - Working with the regional planning commission.

Strategy	Advantages	Considerations	Resources	Actions
<p>Sidewalks</p> <p>Sidewalks are paths separated from other roadway users along the sides of the roadway reserved for pedestrians.</p>	<ul style="list-style-type: none"> • Sidewalks provide a relatively safe location for pedestrians along the sides of a roadway. • They help to separate other roadway users and pedestrians within the same right-of-way. 	<ul style="list-style-type: none"> • The availability of sufficient right-of-way to install sidewalks, including the travel way for vehicles and standards for sidewalk width, must be assessed. • Sidewalks are most effective when they include a buffer from the paved surface of the road that is at least five feet wide. • When sufficient right-of-way is not available for a buffer, a curb can provide some degree of separation between the roadway and the sidewalk. • Other considerations include drainage, grading, existing signs, structures, and utilities. • Sidewalks can be constructed of various materials including concrete, asphalt, or stone dust. 	<ul style="list-style-type: none"> • <i>Vermont Pedestrian and Bicycle Facility Planning and Design Manual</i> http://www.aot.state.vt.us/progdev/Sections/LTF%20Info/BikePedTOC.html • <i>Designing Walkable Urban Thoroughfares: A Context Sensitive Approach</i> (Institute of Transportation Engineers - Publication #RP 036A) http://www.ite.org/modules/scriptcontent/olders/ProductDetail.cfm?pc=RP-036A-E 	<ul style="list-style-type: none"> • Review the State's <i>Pedestrian and Bicycle Facility Planning and Design Manual</i> to determine the appropriate dimensions based on roadway classification. • Work with the municipal planning office, road commissioner, administrator, or other municipal officials to gain their support for the proposed sidewalk. • Work with municipal partners to determine the appropriate sidewalk location based on available right-of-way. • Review the sidewalk location to determine if any additional issues will need to be addressed, the types of permits that will be needed, and the potential cost for developing the proposed sidewalk. This review, done with community input, will help the community decide if they want to proceed further with the project. • If the community wishes to continue work on the proposed sidewalk, work with the municipal partners to understand potential funding sources and the various requirements involved in obtaining them.

Strategy	Advantages	Considerations	Resources	Actions
<p>School Zones</p> <p>A school zone is an identified location on the roadway abutting a school which extends several hundred feet in each direction. It is identified with signs and pavements markings and sometimes includes a reduced speed zone.</p>	<ul style="list-style-type: none"> School zones increase motorists' awareness to look for students on or near the road and to drive with more caution. 	<ul style="list-style-type: none"> The creation of a school zone typically needs the approval of the municipality, either from the Selectboard, Board of Trustees, or City Council, unless they have passed on this approval to the road commissioner. School zones created on state roads need VTrans approval. Sight distances and other roadway conditions should inform the location of signs and pavement markings noting the limits of the school zone, within MUTCD guidelines. With few exceptions, school zones are located on the roadway adjacent to the school's main entrance. Must comply with State sign laws and laws for setting speed limits. 	<ul style="list-style-type: none"> <i>Manual on Uniform Traffic Control Devices, latest edition (MUTCD)</i>, http://mutcd.fhwa.dot.gov/kno_2009r1r2.htm Refer to <i>Vermont Statute 23, Section 1007</i> for guidance on assigning local speed limits http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=23&Chapter=013&Section=01007 	<ul style="list-style-type: none"> Work with the municipal planning office, road commissioner, administrator, or other municipal officials to gain their support for the proposed school zone. Discuss the creation of a school zone with local Selectboard, Board of Trustees, or City Council to gain their support. For a school zone on a state road, work with municipal officials and/or the regional planning commission to contact VTrans to propose a school zone. Work with the municipal planning office, road commissioner, administrator, or other municipal officials to determine the specific limits of the school zone and the methods to be used to notify motorists of its presence, including signage, warning lights during arrival and dismissal times, pavement markings, or other methods. Work with municipal partners to determine the most appropriate way to provide funding for the notifications as appropriate and work with them to secure funding.

Strategy	Advantages	Considerations	Resources	Actions
<p>Road Signs</p> <p>Road signs provide information on road conditions, direction, advisories, or mandatory actions. Road signs may be regulatory, warning, or guide signs.</p>	<ul style="list-style-type: none"> • Signs notify road users about road conditions, other users, regulations, or conditions that may not be immediately apparent. • Many signs are not typically an expensive installation and can be approved and installed quickly. 	<ul style="list-style-type: none"> • The number and type of existing signs can influence the effectiveness of new signs. Sign “clutter” can diminish the impact of new signs. • Permanent signs can become part of the background and their perception by regular road users can diminish over time. • Changing conditions, such as temporary flashing lights or periodic flags, can help to continually draw attention to a sign. • Adding new signs to a local road typically needs the approval of the municipality, either from the Selectboard, Board of Trustees, or City Council, unless they have passed on this approval to the road commissioner. • Signs added to state roads need VTrans approval. • Any proposed signage must meet the guidelines provided in the <i>Manual on Uniform Traffic Control Devices</i> (MUTCD). 	<ul style="list-style-type: none"> • <i>Vermont Pedestrian and Bicycle Facility Planning and Design Manual</i> http://www.aot.state.vt.us/progdev/Sections/LTF%20Info/BikePedTOC.html • <i>Manual on Uniform Traffic Control Devices, latest edition (MUTCD)</i>, http://mutcd.fhwa.dot.gov/kno_2009r1r2.htm • <i>Classification of Vermont Roads</i> http://maps.vermont.gov/imf/sites/ANR_NATRESViewer/jsp/ 	<ul style="list-style-type: none"> • Work with the municipal planning office, road commissioner, administrator, or other municipal officials to gain their support for the placement of new signs. • Discuss the placement of new signs with local Selectboard, Board of Trustee or City Council to gain their support. • Work with the municipal planning office, road commissioner, administrator, or other municipal officials to determine the appropriate place for the signs while meeting guidelines provided in the MUTCD. • If proposed on a state road, work with the municipal officials and the regional planning commission to contact VTrans to gain their approval and any necessary permitting for the proposed signs.

APPENDIX H SNOW REMOVAL TOOLKIT

Prompt and effective snow, ice, and slush clearance on sidewalks along Safe Routes to School is critical for maintaining safe biking and walking conditions. Snow removal of bicycle and pedestrian accommodations that are designated school routes should be planned for. According to the VT Pedestrian and Bicycle Facility Design Manual Section 10.5.1, local policies should treat the clearance of snow from walkways as equally important as clearance of snow from roadways in order to maintain year-round accessibility.

Guidelines

The responsibility of all snow and ice clearance generally falls upon the property owner of the facility. A municipality's highway department is typically responsible for snow and ice removal on roads and sidewalks on public property. Private roads and sidewalks on private property are the responsibility of the property owner.

A clear, unobstructed pathway at a minimum of 48" wide should be provided on all sidewalks, curb ramps, and through crosswalks. Snow, slush, and ice should be cleared from sidewalks, to provide a clear path of 48", ideally, within 12 hours after a storm event. Designated portions of the roadway for bicycle use should also be cleared since, even in winter, some experienced bicyclists commute by bicycle.

Pedestrian walkways, curb ramps, and crosswalks or bicycle facilities should not be used for areas of snow storage. Additional consideration should also be taken to maintain adequate sight distances at all intersections and to prevent snow storage from building up too close to walkways.

Paved shared-use paths that are designated routes to school should be kept clear of snow so that students can walk to school year-round. Snow clearance is not a consideration for natural surface paths that are used for winter activities which also allow students to cross-country ski or snow-shoe to school.

Recommendations

The following six basic recommendations can assist a community in developing a strategy to improve sidewalk snow and ice clearance.

1. Create a norm of snow and ice clearance through social awareness campaigns.
2. Identify a municipal point person for snow removal.
3. Determine priority sidewalks and paths for snow clearance.
4. Improve monitoring and enforcement.
5. Design sidewalks for easier snow removal.

6. Train municipal and private snow plowing personnel on the guidelines for pedestrian and bicycle facility clearance (i.e., 48" clear path and priority routes.)

Monitoring and Enforcement

There are three primary ways in which the clearance of sidewalks can be monitored and enforced;

1. Identify who monitors and enforces.
2. Define penalties and how they will be enforced.
3. Implement a social awareness campaign.