

Nashua Regional Planning Commission Ledge Street Elementary School Safe Routes to School Study



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Prepared by the
 **Nashua Regional Planning Commission**



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LEDGE STREET ELEMENTARY SCHOOL SAFE ROUTES TO SCHOOL STUDY

A. BACKGROUND

The purpose of the Ledge Street Elementary Safe Routes to School Pilot Study is to encourage a greater number of students to walk and bicycle to school and from school. This purpose is important because physical exercise, especially biking and walking, can help prevent heart disease (the nation's #1 killer), as well as other chronic diseases such as diabetes, hypertension and depression. Health care officials agree that children need at least thirty minutes of physical activity every day. Unfortunately, only about twenty percent of children nationwide meet this minimum standard.

The Safe Routes program encourages children to bike or walk to school through education and incentives that remind children how much fun biking and walking can be. The program also addresses the safety concerns of parents by encouraging greater enforcement of traffic laws, exploring ways to create safer streets and educating the public about safe biking, walking and driving practices.

B. LEDGE STREET ELEMENTARY SCHOOL

The Ledge Street Elementary School is located in a residential area of Nashua bordered on the south by Kinsley Street, on the north by Mine Falls Park, on the east by Chestnut and Maple Streets and on the west by the FEE Turnpike (Map 1-1). There are also children attending the school from the Westgate neighborhood, which is on the west side of the Turnpike near Exit 6. Most of the area has an urban feel - the lots are small and structures are close to the sidewalk. There is a street grid that is somewhat disconnected. Some streets dead-end, and most of the smaller streets have outlets to only one other major street, such as Ledge Street or Will Street.

The school has a total of 571 students in grades K-5. Approximately 428 students (75%) of the children live within one mile radius of the school. Children living beyond one mile are eligible to ride the bus to school.

Map 1-1: Study Area





C. GOALS OF THE STUDY

There are four major goals of the study:

- To ensure the safety of students on their way to and from school;
- To improve children's fitness and health;
- To provide recreation and fitness opportunities close to home; and
- To protect the environment by reducing auto dependency.



D. STUDY PROCESS

The study process was designed to gather information from students and their parents regarding the trip to and from school. A physical inventory of the existing roadway and sidewalk conditions was also conducted. The specifics of the study process are as follows:



- A show of hands survey at the school was conducted with most of the second through fifth grade students (268 kids) on Wednesday, October 6th, 2004. Students were asked how they got to school that morning. They were also asked if they use the Nashua Heritage Rail Trail.
- A longer written survey was given to one class per grade level in second through fifth grade (75 kids). Principal Desrosiers explained the survey to each class and the teacher conducted the survey. NRPC and the City of Nashua Community Development staff assisted. The purpose of these surveys was to gather more specific information regarding the trip to and from school, as well as children's attitudes regarding the trip.
- The same children who participated in the written survey were given a mapping exercise to work on with their parents as a homework assignment. The map was of the Ledge Street neighborhood and the students were asked to draw their route to school on the map. Sixty-seven of the 75 maps were returned with routes drawn in.
- Parent's surveys were sent home with the same 75 kids and 68 were returned. The parents were asked three questions: 1) How their children get to and from school, 2) How parents got to school as children themselves and 3) how parents would like their children to get to and from school.
- Preliminary findings were presented to the Ledge Street School Parent Teacher Organization on Wednesday evening, November 3rd, 2004.
- NRPC conducted a field survey of the existing road surface and sidewalk conditions within the Ledge Street School Zone with the exception of the neighborhoods west of the F.E. Everett Turnpike. The students in this area are all bussed to school. The inventory area was bound on the west by Simon Street, the south by Kinsley Street, the east by Main and Chestnut Streets and the north by Mine Falls Park. The inventory was conducted during the months of October and November.
- NRPC staff met with Nashua Public Works staff to identify realistic improvements to road surface, sidewalks and crosswalks.
- NRPC staff met with City of Nashua Community Development Division staff in order to coordinate goals and objectives of the Safe Routes project that overlap with those of the Community Development Division.



E. STUDY FINDINGS

1. Travel Patterns

When students were asked how they typically get to school in the morning 20% said they walk, 1% ride a bike, 22% ride the bus and 57% are driven (Figure 1-1). When asked how they get home from school in the afternoon, 32% said they walk, 1% bike, 32% ride the bus and 32% are driven (Figure 1-2).

When students were asked how they would like to get to school (Figure 1-3), 14% said they would prefer to walk, 24% bike, 28% take the bus, 30% would like to be driven and 4% said other (inline skate, skateboard). Only 1% of students ride their bikes to school now as opposed to 24% who say they would like to ride their bikes to school.

Figure 1-1

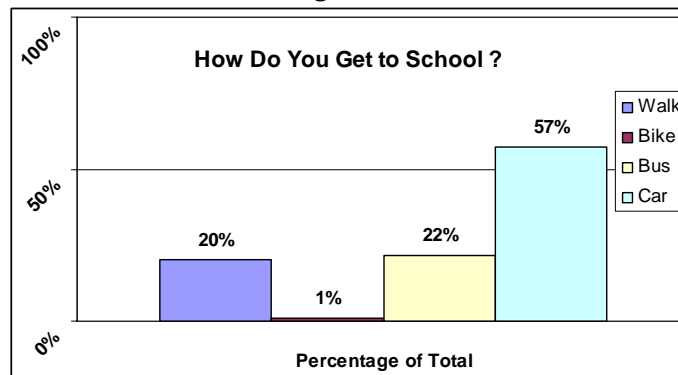
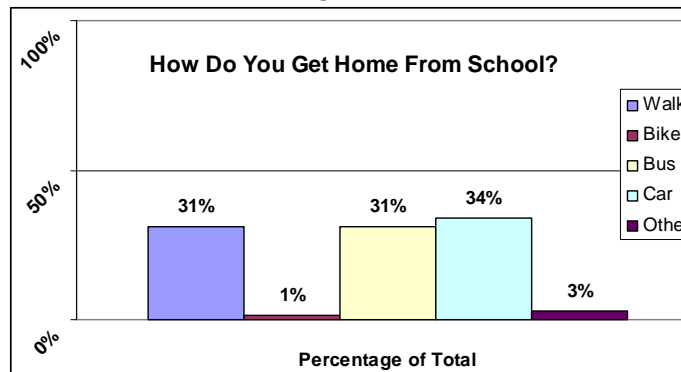


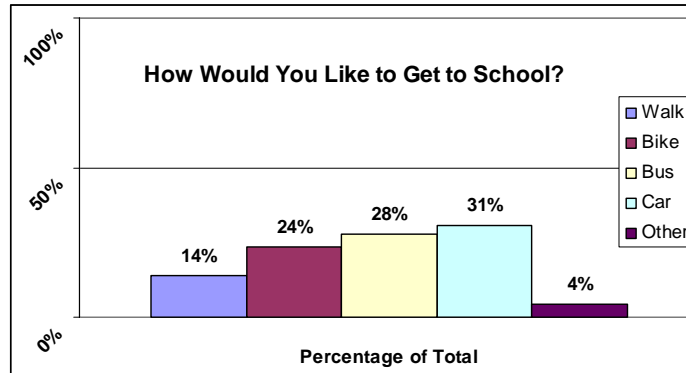
Figure 1-2





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Figure 1-3



When the students were asked how often they exercise when not at school, nearly 60% said they exercise every day (Figure 1-4). This combined with 42% saying they would like to use non-motorized transportation to get to school, is a clear indication that students are willing and able to bike or walk to school more often than they do at this time.

When parents were asked how their children travel to school 18% said their kids walk, 3% bike, 27% take the bus and 52% are driven (Figure 1-5). This is very similar to how children responded to a similar question. Since so many children are driven to school, parents were asked why that is so. Approximately 70% of the parents cited safety concerns (e.g. fear of strangers, busy streets) as the reason for driving kids to school (Figure 1-6).

Figure 1-4

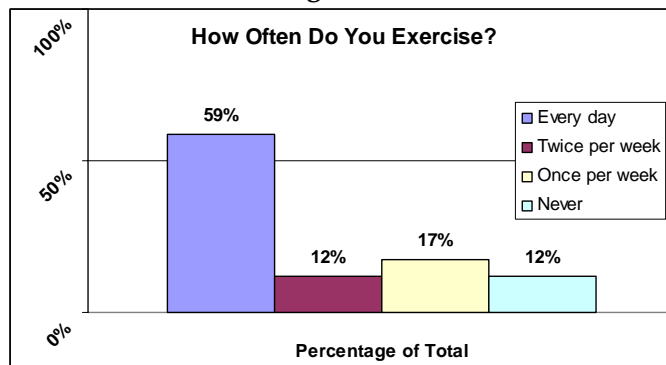
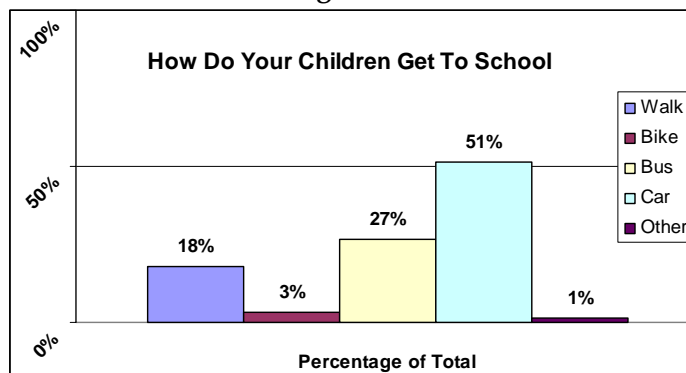
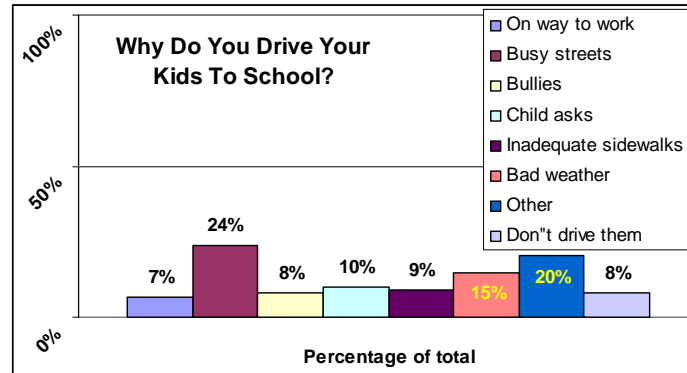


Figure 1-5



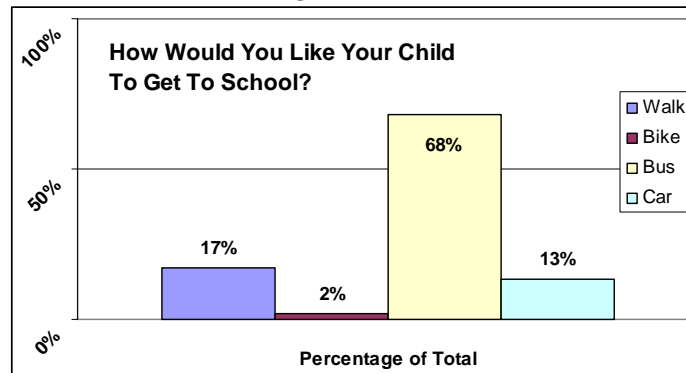
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Figure 1-6



When parents were asked how they would *like* their children to get to school, 17% said they would prefer they walk, 2% would like them to ride a bike, 68% would like them to take the bus and 13% would prefer to drive them (Figure 1-7). This means that although 52% percent of parents currently drive their kids to school, citing safety concerns, 68% percent would prefer their children to take the bus, and only 13% would prefer to drive them. This indicates that parents consider busses to be inherently safe, and it also indicates a latent demand for expanded bus service. It is also interesting to note that when children were asked how they would like to get to school, they strongly indicated a desire to get there using non-motorized transportation. This attitude differs from that of parents, who place a higher value on their kids' getting to school in a more supervised environment (on the bus).

Figure 1-7



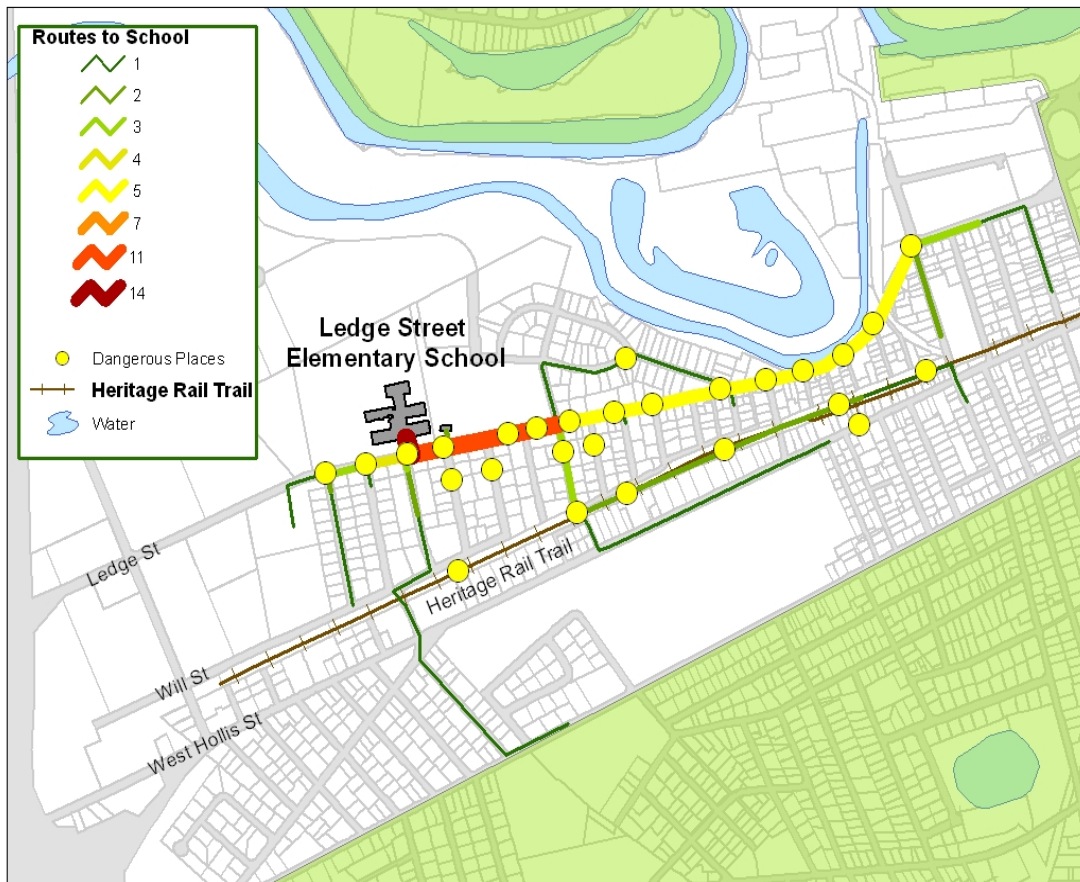
2. Routes Used

Students were given a take-home mapping exercise to work on with their parents. They were asked to draw on the map the route by which they walked or rode their bike to school. Students who were driven or rode the bus to school were also asked to draw their route to school on the map. They were also asked to indicate what they considered dangerous intersections, as well as other dangerous places along the way. Map 1-2 summarizes the most popular routes used by students who walk or ride their bikes. The thicker the line, the more kids that used the route. The circles on the map indicate places that are perceived to be dangerous.

The map indicates that the most common walking route to school is along Ledge Street. However, the students consider a significant number of intersections along Ledge Street to be dangerous. This is helpful information because it shows graphically that efforts to encourage biking and walking

should be concentrated along Ledge Street. The map also shows several locations along the Nashua Heritage Rail Trail that are considered dangerous. Some kids noted in the survey that they were afraid of bullies at some locations along the trail, especially near the foot bridge.

Map 1-2: Walking & Biking Routes to School

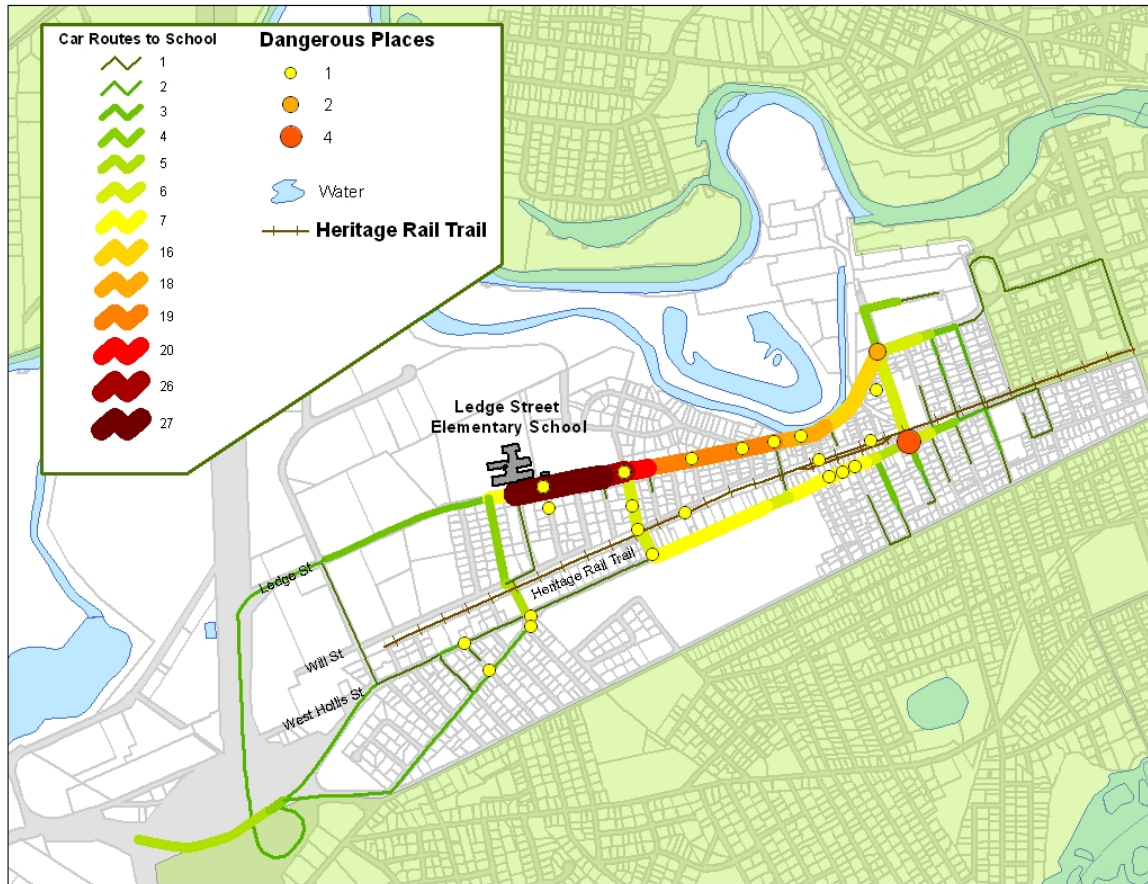


Map 1-3 summarizes the routes taken by students who travel to school in motor vehicles. There are two distinct routes that motor vehicles use to travel to the school. One route is along the length of Ledge Street and the other is along West Hollis Street. It can be seen that the route along Ledge Street is heavily used by motor vehicles and students. This information suggests that improving safety for students who bike or walk to school along Ledge Street will involve dealing with conflicts between them and motor vehicles.

Motor vehicles also travel along West Hollis Street, then north on Twelfth Street to the intersection with Ledge Street, where the school is located. This route is less obvious than the one along Ledge Street. The important aspect of this route is that it enters Ledge Street almost directly across from the school exit. This exit is somewhat dangerous because of limited sight distances caused by parking spaces on Ledge Street. Vehicles exiting the school parking lot also have to deal with a large volume of traffic entering Ledge Street from Twelfth Street during the rush to drop kids off in the morning. This reinforces the need to address traffic issues near the school. There also is a conflict point at the 7th Street-Ledge Street intersection.



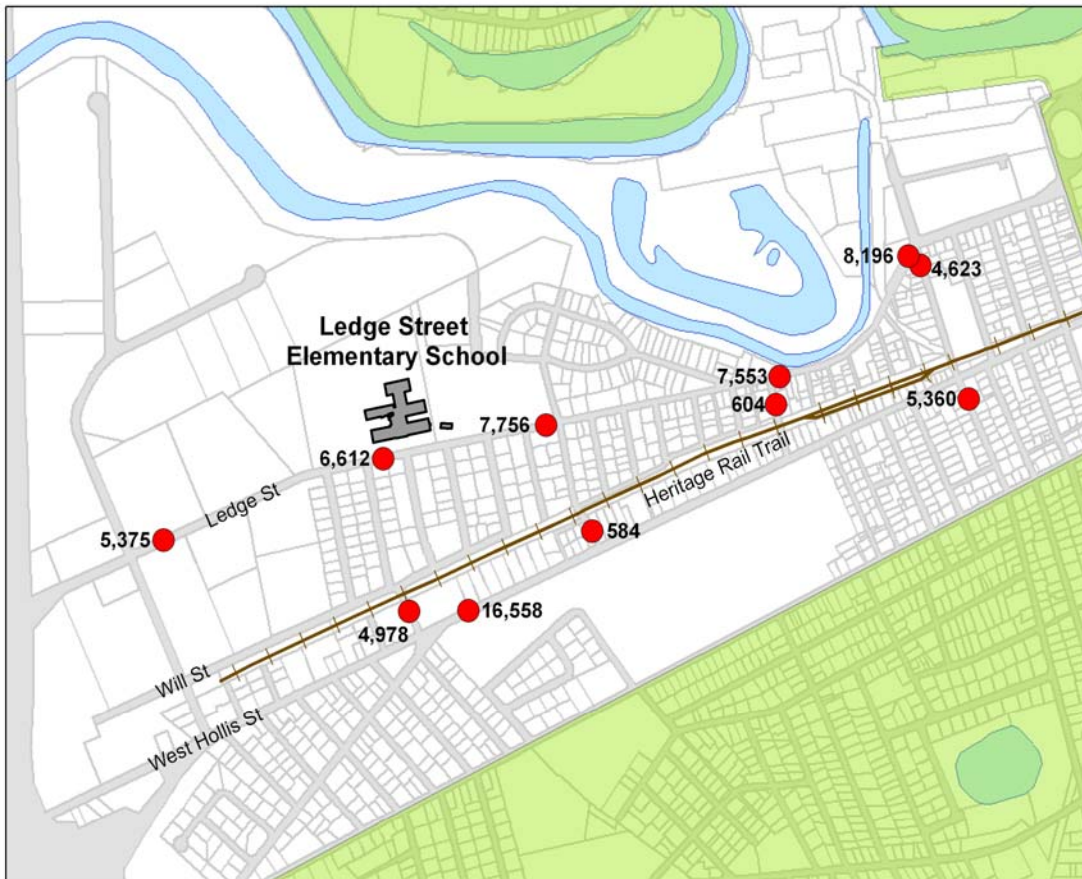
Map 1-3: Motor Vehicle Routes to School



3. Traffic Count History

NRPC maintains a database of 24-hour traffic volume counts throughout the region. The database includes several locations in the vicinity of the school. Map 1-4 documents the locations and the most recent volumes

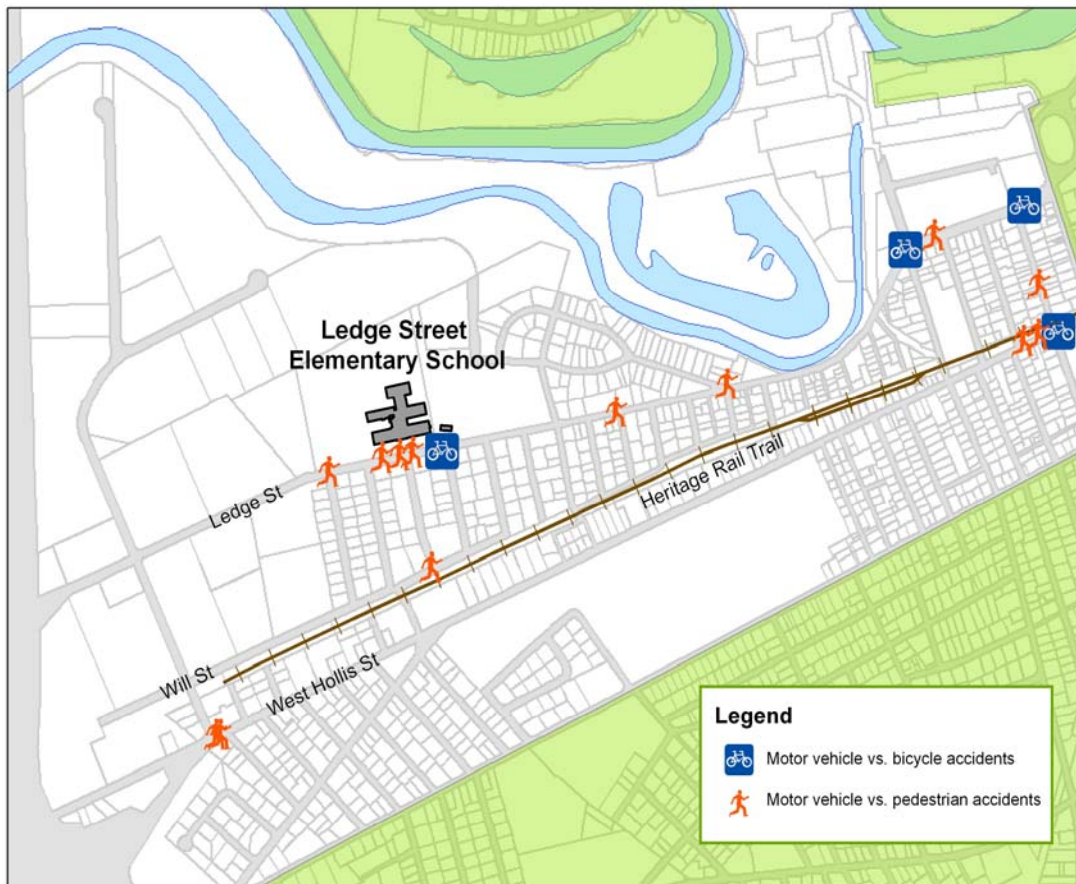
Map 1-4



4. Accident History

NRPC obtained traffic accident data from the City of Nashua Police Department. Map 1-5 displays accidents in the study area that involved motor vehicles and pedestrians as well as those that involved motor vehicles and bicyclists.

Map 1-5



5. Sidewalk Inventory

NRPC staff conducted a field survey of all streets within the Ledge Street School Zone on the east side of the F.E. Everett Turnpike. The students west of the Turnpike are all bussed to school. The inventory area was bound by Simon Street on the west, Kinsley Street on the south, Main and Chestnut Streets on east and Mine Falls Park on the north (Map 1-6).

a. Inventory Parameters

Individual field sheets were completed for each road. Several parameters normally used for sidewalk inventory were left out due to the consistent conditions in the school zone. Sight distance was considered good overall with the exception of the curve on Ledge Street next to the Nashua Power Canal (Map 1-6). Off street parking entrances are problematic due to the quantity and overall condition. Sidewalk maintenance is the responsibility of the property owner. The overall “condition” of each sidewalk segment was determined using the following parameters:



Ledge St. near the canal



- Width of the sidewalk (visual estimate of the segment, wheelchair friendly)
- Obstructions (utility poles, vegetation, signs)
- Ramps at intersections (smooth wheelchair transition from sidewalk to road pavement)
- Sidewalk surface (surface cracking, drainage, roots)
- Crosswalks (presence of crosswalk, condition of paint, signalized pedestrian crossings)

b. Field Observations

i. Width

The American with Disabilities Act (ADA) requires that sidewalks be at least 5 feet in width and be handicapped accessible at intersections. In many of the streets in the study area, it is physically impossible to expand the width due to property lines, utility poles and on street parking. The six streets in the study area whose sidewalks averaged 5 feet are:

- Central Street
- Elm Street
- Walnut Street
- Eleventh Street
- Vine Street
- Twelfth Street



Ledge Street

ii. Obstructions

The type of obstructions varied street by street. Most sidewalks in the study area are not compatible for wheelchairs, but can be negotiated by watchful pedestrians. Objects such as fire hydrants and utility poles are generally difficult or impossible to relocate but they are usually confined to one side of the street. Signage, vegetation and snow can be relocated or removed at a much lower cost than hydrants or poles.

iii. Ramps at Intersections

All intersections were observed for ramps at intersections that allow handicapped persons smooth access between the sidewalk and the road. The following streets did not have adequate ramps at all corners to meet ADA standards:

- Pine Street at Ledge and Kinsley Streets
- Ash Street at Central Street
- Hanover Street at Kinsley Street
- Walnut Street at Kinsley Street
- Elm Street at Kinsley Street
- Palm Street at Central Street
- Steven Street at Ledge Street
- Havana Street at West Hollis Street
- Manilla Street at West Hollis Street
- At Ledge: 1st, 3rd, 4th, 5th, 7th, 8th, 9th, 10th and 11th Streets
- Houde Street at Ledge Street

iv. **Sidewalk Surface**

The type of material and the width of any space between the road and sidewalk (buffer) were noted on the field sheets. The overall condition of the sidewalk surface was rated good, fair or poor. Three criteria were used: cracking, roughness (bumps, depressions), and loose aggregate (sand, stone, trash).

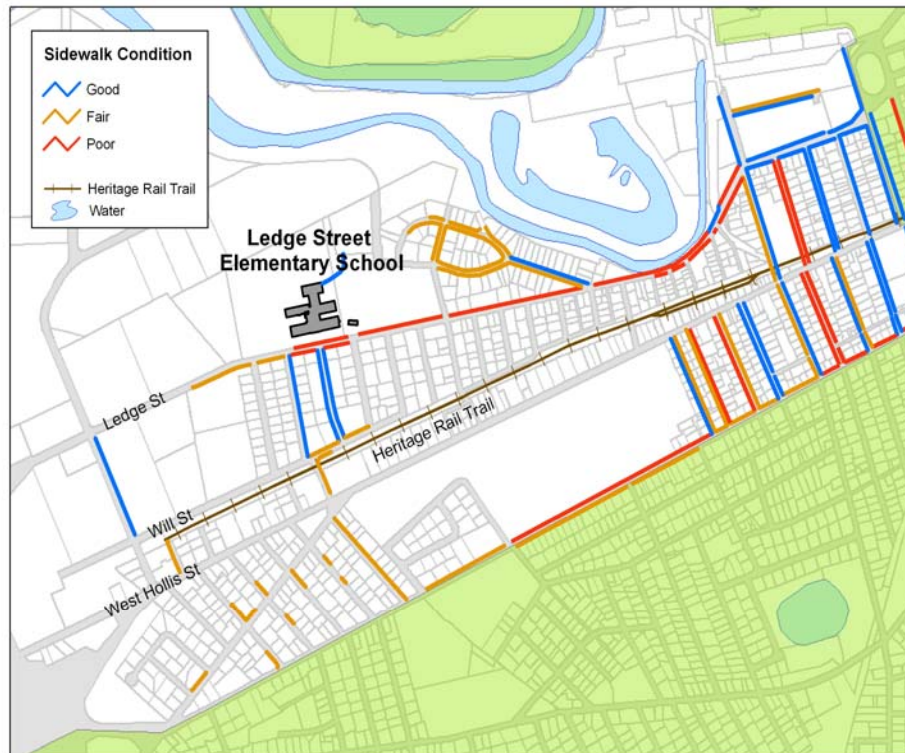
Sidewalks experiencing cracking, pitting, heaving, or drainage problems include the following streets:

- Ledge Street overall but especially between Pine and Grand Streets (the segment along the canal is especially narrow and close to the road).
- The east side of Ash Street between W. Hollis and Kinsley Streets.
- The west side of Maple Street near the intersection of W. Hollis Street.
- The east side of 9th Street near the corner of Ledge Street.
- Various locations on Hanover Street.
- All of Palm Street.
- The east side of 5th Street near the corner of Ledge Street.
- Various locations on W. Hollis Street.
- Gaps in the sidewalk system exist on 7th and 9th Streets.

v. **Overall Sidewalk Condition Assessment**

The overall sidewalk conditions are shown on Map 1-6

Map 1-6



6. Speed of Motor Vehicles

The City of Nashua measured the speed of traffic on Ledge Street from Thursday, October 28th, through Thursday, November 4th, 2004. The speed limit for this segment of roadway is 25 mph. The total number of vehicles counted at this location for the entire week was 15,133. It can be seen in Table 1-1 that 92.5% (13,991) of all the vehicles exceeded the speed limit, and only 7.5% (1,142) did not exceed the speed limit. Figure 1-8 displays the same information graphically. Figure 1-9 shows that 58.9% of the vehicles recorded were traveling between 26 and 35 mph. Table 1-2 shows the hourly breakdown of vehicles and the speed they traveled at.

Table 1-1: Vehicle vs. Speed Limit

Speed (mph)	# of Vehicles	% of Total
< 25 MPH	1,142	7.5%
> 25 MPH	13,991	92.5%
Total	15,133	100%

Figure 1-8: % of Vehicles Above & Below Speed Limit

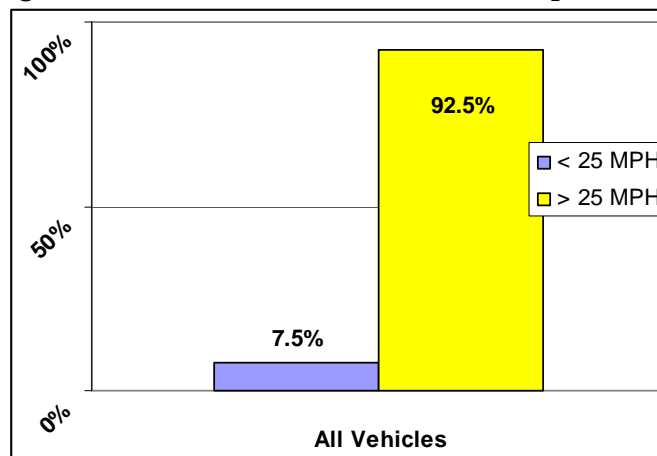


Figure 1-9: % of Vehicles vs. Speed Limit

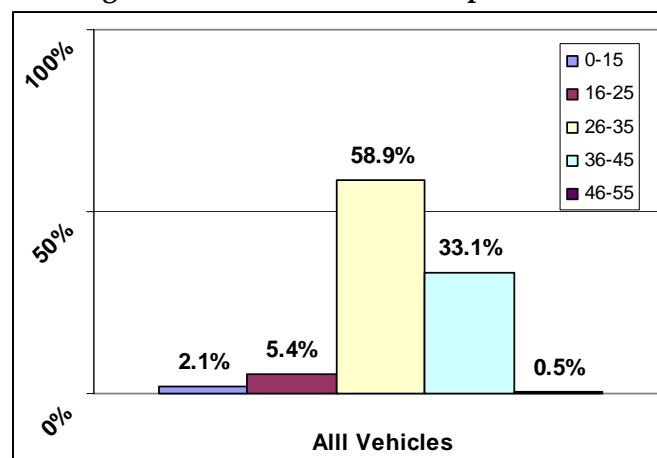




Table 1-2 separates speed and volume information into specific hours of the day.

Table 1-2: Hourly breakdown of vehicle speeds

Time Period	0-15	16-25	26-35	36-45	46-55	56-55	66+	Total
12-1 am	3	8	87	45	1	0	0	144
1-2 am	3	7	51	26	0	0	0	87
2-3 am	2	8	46	22	0	0	0	78
3-4 am	1	1	23	5	0	0	0	30
4-5 am	4	8	41	25	0	0	0	78
5-6 am	7	11	146	109	5	0	0	278
6-7 am	7	23	298	182	1	0	0	511
7-8 am	17	50	485	280	2	0	0	834
8-9 am	15	46	568	288	0	0	0	917
9-10 am	19	46	476	252	4	0	0	797
10-11 am	21	57	453	211	3	0	0	745
11 am -12 pm	16	50	492	270	2	0	0	830
12-1 pm	17	55	588	285	4	0	0	949
1-2 pm	19	65	543	261	6	0	0	894
2-3 pm	21	89	660	281	2	0	0	1,053
3-4 pm	24	65	786	422	5	0	0	1,302
4-5 pm	23	44	643	482	5	0	0	1,197
5-6 pm	21	45	624	449	6	0	0	1,145
6-7 pm	15	37	531	354	6	0	0	943
7-8 pm	15	29	369	244	7	0	0	664
8-9 pm	16	30	342	179	0	0	0	567
9-10 pm	13	21	289	140	5	0	0	468
10-11pm	15	10	194	90	1	0	0	310
11 pm -12 am	9	14	173	112	4	0	0	312
TOTAL	323	819	8,908	5,014	69	0	0	15,133
%	2.1%	5.4%	58.9%	33.1%	0.5%	0.0%	0.0%	100%

F. KEY ISSUES

The key issues identified in the course of this study include:

- Traffic conditions along Ledge Street. There is a significant volume of motor vehicle and pedestrian traffic along Ledge Street, with numerous conflict points between pedestrians and motor vehicles. Parents, teachers and school administration note that a significant number of cars speed along Ledge Street. Speed data collected by the City of Nashua DPW confirms this. There are also intersections where sight distance is limited. One particular example is at the exit from the school opposite 12th Street. Parked cars on the north side of Ledge Street, near the exit, block the view of motorists exiting the parking lot.
- Childrens desire to walk or bike to school. When given the choice, 42% of children surveyed indicate a desire to travel to school in some non-motorized fashion.
- Worries about children’s safety while traveling to school in an unsupervised fashion. Around 60% of parents say that they drive their kids to school because of some safety concern (busy streets, bullies, strangers).
- Sidewalks. Though sidewalks in the area near Ledge Street School are generally adequate, there are sections in disrepair. Those in need of repair are listed in Section 5.b.iv of this report. Additionally, the policy of the Nashua DPW is to clear snow from all sidewalks within 1,000 feet



of the front door of a school as soon as possible. However, sidewalks are not always cleared of snow in a timely fashion because of obstructions in the sidewalks.

- Access to school busses. Parents clearly consider the trip to school via school bus to be inherently safer than walking or biking. In fact, nearly 70% would like their children to travel to school on the bus. The reason that more kids don't take the bus is because school policy requires children who ride the bus to live more than a mile from school.

G. BARRIERS TO CHANGE

Parents clearly prefer that their children get to school in a supervised fashion, either in the family car or on the bus. This is generally due to safety concerns. In order to achieve the goal of increasing biking and walking amongst children at the school it will be necessary to convince parents that their children will be able to do so safely. School administration and teachers generally seem willing to promote increased biking and walking of students, but translating this willingness into policies and programs will require a significant effort. Physical improvements to streets and sidewalks in the neighborhood will require coordination with the City Department of Public Works and to a lesser extent the Community Development Division. The individuals in these departments have historically shown the highest level of dedication to public safety and well being. However, limited funding for physical improvements to City infrastructure will require creativity in order to attract adequate revenue to accomplish the tasks at hand.

H. OPPORTUNITIES

Students expressed a desire to travel to school by walking, biking or some other means of non-motorized travel. This is a likely indicator that students would be interested in programs and curriculum that promote biking and walking.

It was also observed that the school administration, staff and teachers are highly dedicated public servants working towards the goal of providing the best education they can to the students in their care. Their comments show their understanding that kids who get plenty of exercise are happier and more willing to learn than kids who do not exercise. It is therefore likely that administration, staff and teachers will be willing to support the recommendations in this report.

Securing funding for the improvements to City infrastructure that have been identified in this study may prove difficult. However, as noted earlier, the City of Nashua employs staff who have expressed a strong desire to improve conditions for bicycling and walking in the neighborhood. There is also an opportunity to coordinate with an ongoing project that is known as the Nashua Tree and Ledge Street Neighborhoods Livable, Walkable Community Project. The Livable, Walkable project is sponsored by New Hampshire Celebrates Wellness. The goals of this program are to promote physical activity, provide a sense of community, encourage residents to get to know their neighbors and engage institutions, groups and agencies in an effort to coordinate these goals. The Ledge Street Elementary School Safe Routes program is a perfect compliment to this. The Tree Streets project could also help identify creative funding sources.

I. RECOMMENDATIONS

The following recommendations resulted from surveys of students and parents, and discussions with school administration, teachers, and City of Nashua Departments of Public Works and Community Development. The recommendations are grouped into three broad categories. The first is about recommendations that should be administered by a combination of parents, the neighborhood community, school administration and staff. This group has perhaps the most important task of the entire Safe Routes program. That task is to form a steering committee that will be responsible for guiding



the implementation of all the rest of the recommendations of this study. It is important that the steering committee be made up of individuals who are committed to making the decisions that will benefit the Ledge Street School community.

The second category of recommendations is about the physical improvements that need to be made to the streets and sidewalks in the Ledge Street neighborhood and policies and programs that affect bicycling and walking. The steering committee will implement these recommendations by consulting and coordinating with those departments of the City who are responsible for physical improvements to the infrastructure.

The third category recommends encouragement, education and promotion of safe biking and walking.

1. Parents/Community/School Administration

The following recommendation will provide the leadership and structure that will be necessary to implement the Ledge Street Elementary School Action Plan

- A Safe Routes to School Steering Committee should be formed that will oversee the implementation of the Action Plan appearing at the end of this report. The Steering Committee must involve members of the Ledge Street School community and should include parents, teachers, school staff and administration, as well as a representative from the Livable, Walkable communities program.

2. Engineering/Safety Measures

The following recommendations will help to enhance the bicycle and pedestrian friendliness of the Ledge Street neighborhood through physical improvements to the streets and sidewalks. They will also improve safety and therefore encourage parents to consider allowing their children to bike or walk to school more often.

- Sidewalks that are in need of repair are listed in Section 5.b.iv of this report. The sidewalks listed should be reported to City of Nashua DPW for inclusion on their list of priority sidewalk repairs.
- The snow clearing policy of the City of Nashua DPW is to clear all sidewalks within 1,000 feet of the front door of a school as soon as possible after a storm. This is not always done in a timely fashion because of obstructions in the sidewalks such as telephone poles. The steering committee should work with DPW to identify a way to improve clearing of snow from sidewalks.
- Implement traffic calming measures along Ledge Street and elsewhere in study area through improved signage and pavement markings (all signage and pavement markings should conform to the Manual of Uniform Traffic Control Devices [MUTCD]):
 - Signage in the school zone should be upgraded and should be as brightly painted as allowable;
 - Large block letters should be painted on Ledge Street that indicate a school zone is being entered;
 - Large block letters should also be painted on Ledge Street that draw motorist's attention to crosswalks;
 - Crosswalks should be marked with the brightest material allowable and should also include a supplemental crosswalk device (a portable "people in crosswalk" sign);
 - Travel lanes should be as narrow as possible. The pavement that remains between the raised curb and the outside white line should be painted a bright color and chevrons should be added that point in towards the travel lane.
- The two parking spaces that currently exist immediately east of the exit from the school should be removed.



3. Education, Encouragement and Enforcement Measures

The following recommendations will help provide a balanced approach (beyond physical improvements to the roads and sidewalks) to the goals of this plan by providing a strong educational element as well as promoting biking and walking as a fun and healthy way to get to school.

- Educate students about lawful and responsible bicycling and walking.
- Teach youngsters important bicycling skills:
 - Develop a classroom curriculum,
 - Sponsor a safety fair or bike rodeo during bike and walk to school week in October.
- Encourage children to walk or bike to and from school. Encouragement efforts can take the form of events, promotions and programs. These efforts can serve to re-inspire kids who are already interested in biking and walking, as well as encourage new participants.
- National bike to school day takes place every year on the first Wednesday in October. Ledge Street School should develop its own bike and walk to school day to coincide with the national event. Thereafter, there should be a bike and walk to school day each month.
- A “walking bus” program should be developed. A walking bus is where a group of children walk to school by a predetermined route with two parent volunteers. This will give parents the opportunity to share responsibility on a rotating basis. Since the surveys showed that parents want their kids to travel to school in a supervised fashion, this program will address those concerns.
- Recruit parents to assist in managing the morning and afternoon congestion period one day per week. They may serve as traffic monitors, crossing guards and take traffic counts. This calls attention to the issues that occur during the time students are dropped off and picked up, parents invest in the process, and drivers and students are educated about safe drop-off and pick-up procedures.
- Identify and promote the best and safest way to walk or ride bikes to school. Signs, posters and “trail days” can be encouraged to draw attention to the recommended routes.
- Develop programs that children can buy into and have fun participating in. For example, a program called “It all adds up to clean air” could be developed. Kids would document how much air pollution they are preventing by not travelling to school in a motor vehicle. If developed in lesson plan format, this could help the school meet state and federal performance standards.
- Develop a worksheet that will track and record walking and biking activities. Children could be rewarded for reaching certain goals. For example, a prize for walking to school 3 times in one week.
- Develop specific safety initiatives such as a “Watch for Bikes” campaign. This program offers decals that can be attached to side view mirrors that remind drivers to look behind them before opening a car door or pulling away from the curb.
- Support the Nashua Tree Streets Livable, Walkable Communities program. This could be accomplished by designating a member of the Safe Routes Steering Committee to attend the Livable-walkable monthly meetings.

Children, parents and motorists in the Ledge Street Community would benefit from increased awareness and enforcement of bicycle and pedestrian-related rules and regulations. Increased awareness of these rules and regulations will lead to better compliance among bicyclists, pedestrians and motorists. Police and community enforcement programs should be developed and include the following ideas:



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- Enlist the help of the Police Department to aggressively enforce traffic and parking laws (including citations and warnings) during the first two weeks of school each fall, and also develop a strategy for enforcement during the rest of the year.
- Enlist the help of the Police Department to provide safety talks at a bike rodeo during bike and walk to school day.
- Work with Police Department to review and modify youthful violator procedures. For youngsters, crashes between bicycles and motor vehicles most often result from young cyclists violation of basic traffic laws. However, since they have not taken driver training, they seldom know how the traffic system works. As a result, ticketing young children is an unnecessarily harsh approach to handling their violations.
- Work with police department to review and modify procedures for handling bicycle theft and assault on bicyclists. Bicyclists fall pray to certain characteristic types of crimes.
- The City of Nashua Police Department has a mountain bike patrol. Mountain bike patrols should be coordinated with the time periods when kids are going to and from school.

J. LEDGE STREET ELEMENTARY SCHOOL ACTION PLAN

The recommendations that have been identified in this study will combine to create a system of policies, programs and physical improvements that will encourage increased bicycling and walking among the students at Ledge Street School. In order for the goals of this study to be achieved, an Action Plan is necessary. The action plan is an implementation strategy which assumes that the proposed recommendations can be achieved in three phases; short-term (less than 6 months), mid-term (1-2 years), long-term (greater than 2 years).

The Action Plan lists the recommendations as they appear in the text of this plan, and assigns each recommendation to a particular phase in the implementation strategy. The recommendations build on each other to bring about the changes that are necessary to increase the level of bicycling and walking to the school. The Action Plan appears at the end of this report.

Recommendation:

- Use the Action Plan to coordinate implementation of the recommendations in this study.



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ACTION PLAN

Recommendation	Comment	Target Date
<u>Parents, Community, School</u>		
<u>1 Administration</u>		
<ul style="list-style-type: none"> Develop a Ledge Street School Safe Routes Steering Committee 	Steering committee must involve parents, teachers, school staff and administration.	Short-term
<u>Physical Improvement</u>		
<u>2 Measures</u>		
<ul style="list-style-type: none"> Sidewalks listed in 5.b.iv should be reported to Nashua DPW for inclusion on their priority sidewalk repair list 		Short-term
<u>Recommendation</u>		
<ul style="list-style-type: none"> Snow should be cleared from sidewalks in a more timely fashion. DPW policy is to clear snow as quickly as possible 	Work with DPW to clarify policy and strategies for clearing sidewalks more quickly	Short-term
<ul style="list-style-type: none"> Implement traffic calming measures through improved signage and pavement markings 	Examples are listed on page 15 of the study	Short-term
<ul style="list-style-type: none"> Eliminate the two parking spaces immediately east of exit from school parking lot 	These spaces impede visibility and create a dangerous situation	Short-term
<u>Education, Encouragement and Enforcement Measures</u>		
<u>3</u>		
<ul style="list-style-type: none"> Teach youngsters important bicycling skills. <ul style="list-style-type: none"> - develop a classroom curriculum, - sponsor a bike rodeo during bike/walk to school week. 	Studies have shown that children's mistakes tend to involve a limited set of basic errors and these errors can be corrected through education.	Mid-term, then ongoing
Promote a bike-to-school day and week (first week in October)	Should coincide with national bike to school day	Short-term
Develop a "Walking Bus" program.	Gives parents the opportunity to share responsibility on a rotating basis.	Short-term
Recruit parents to assist in managing the morning and afternoon congestion period one day per week.	Parents may serve as traffic monitors, crossing guards and take traffic counts	Mid-term
Identify and promote the best and safest way to walk or ride bikes to school	Develop a map of the routes	Mid-term
Develop programs that children can buy into & have fun participating in.	Example: "It all adds up to clean air"	Short-mid term
Develop a worksheet that will track and record walking and biking activities.	Children could be rewarded for reaching certain goals. For example, a prize for walking to school 3 times in one week.	Mid-term



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ACTION PLAN

Recommendation	Comment	Target Date
Develop specific safety initiatives such as a "Watch for Bikes" campaign.	Decals on side view mirrors hat remind motorists to look before opening car door or pulling away from the curb.	Mid-term
Support the Tree Streets Livable, Walkable Communities program.	This program supports and promotes physical activity and increased safety for children and adults.	Short-term, then ongoing
Enlist the help of the Police Department to aggressively enforce traffic and parking laws during 1 st two weeks of school	Develop strategy for enforcement the rest of the year	Mid-term
Enlist the help of the Police Department to provide safety talks at a bike rodeo	Could be scheduled during bike and walk to school day in October	Short-term
Work with Police Department to review and modify youthful violator procedures	Children have not taken drivers training courses & therefore seldom know how the traffic system works	Short-term
Work with police department to review and modify procedures for handling bicycle theft and assault on bicyclists		Short-term
Mountain bike patrols should be coordinated with the time periods when kids are going to and from school		Short-term

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