

Essex Junction Fleming and Summit Street Schools

DRAFT Technical Assistance Report

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***Chittenden County
Metropolitan Planning
Organization***

*Communities working together
to meet Chittenden County's
transportation needs*



**Chittenden County
Metropolitan Planning
Organization**

30 Kimball Avenue, Suite 206
South Burlington, Vermont 05403-6825
T 802-660-4071
F 802-660-4079
www.ccmppo.org
info@ccmpo.org

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CCMPO Staff

Paul Craven, Project Manager
Bernadette Ferenc, Administrative Assistant
Christine Forde, Sr. Transportation Planner
Peter Keating, Sr. Transportation Planner

William Knight, Executive Director
David Roberts, Sr. Transportation Planner
Susan Smichenko, Sr. Transportation Planner
Daryl Benoit, Transportation Planner

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Problem Overview

Introduction

The Chittenden County Metropolitan Planning Organization (CCMPO) received a request for technical assistance from the Village of Essex Junction in December 2002 regarding traffic congestion and safety issues at Fleming and Summit Street schools when students arrive and depart from the school.

CCMPO staff attended several meetings of an ad-hoc safety committee at Fleming School and arranged to have outside experts audit the pedestrian routes near the schools as part of a Walkable Communities workshop in June 2003. A draft report was prepared in August 2003 and circulated for comment. CCMPO has prepared this revised draft of the study in response to several comments received on the previous draft and new interest from the Village of Essex Junction.

This report highlights several recommendations to reduce congestion in the vicinity of the Fleming and Summit St schools.

School Traffic Background

The School day begins at 8:00 am and ends at 3:00 pm at both the Fleming and Summit St Schools. The streets in the neighborhood experience high levels of congestion at these peak times. Many students choose to walk or ride bicycles in favorable weather conditions. School staff estimates about 70% of Fleming students are driven, and the remaining 30% walk or ride bicycles. The Village does not provide bus service to students, so busing is not an option for school trips at the present time.

Inclement weather increases the number of parents driving children to school, and hence congestion is worse in the winter months when the possibility of rain or snow and cold temperatures is more likely. Figure 1 on the following page illustrates the congested areas in the neighborhood of the schools.

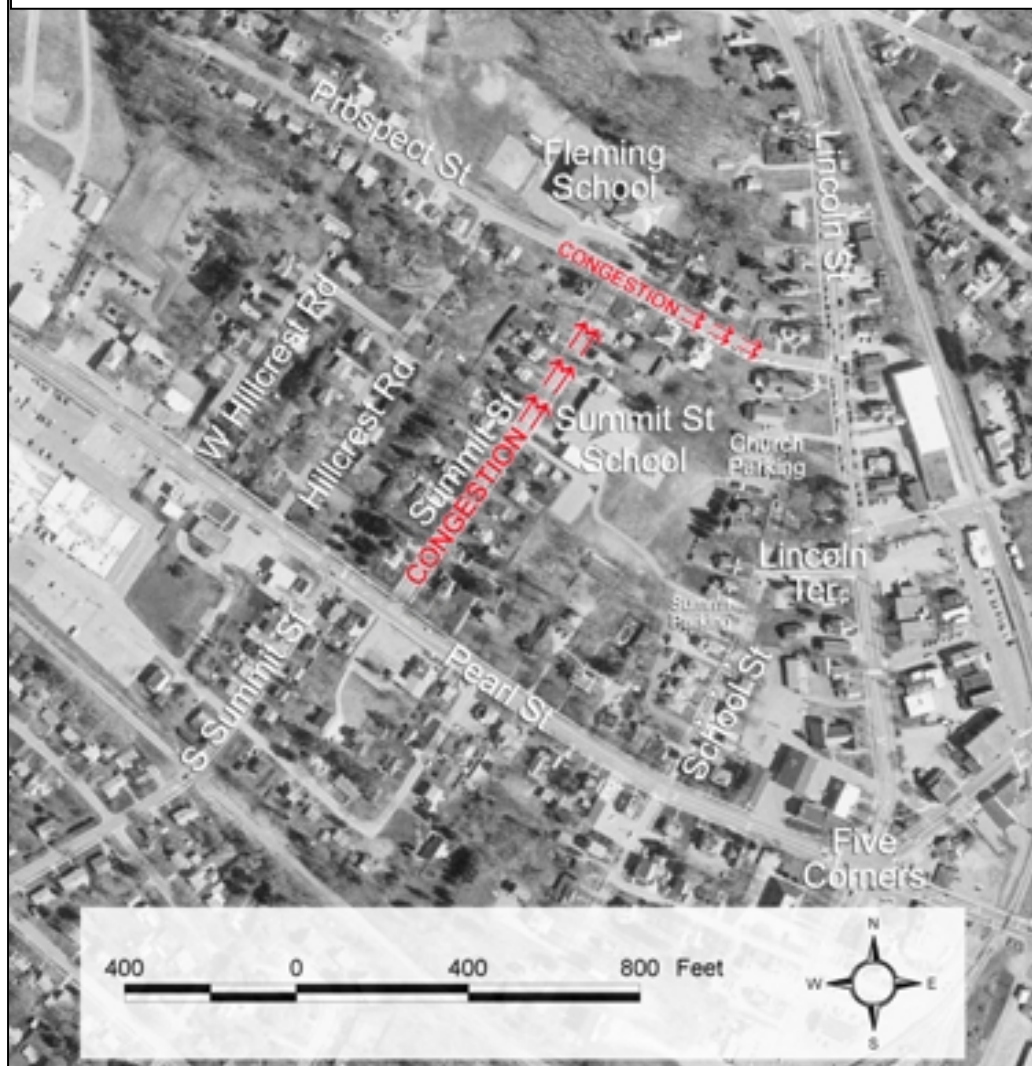
In the morning hours, parents are able to quickly drop off students and then move on without causing severe delays. Congestion is higher at afternoon dismissal times due to parents waiting to pick up children. The highest level of congestion was formerly on Summit Street in the area in front of the Summit Street School. The Summit Street school instituted a new policy of pick-up at the rear of the school from the Holy Family Church parking lot in 2003 which has greatly reduced the congestion on Summit St.

Fleming School congestion has backed up through the Summit St / Prospect St intersection at times. The gridlock is considered a relatively critical safety issue due to the inability of emergency service providers to negotiate these roads at school dismissal periods. In response to this issue, the Village instituted a no parking policy on Prospect Street in front of Fleming School to reduce the potential for gridlock. This measure seems to be reducing the potential for gridlock, but has not completely solved the problem.

Crossing guards are present in the vicinity of the schools to ensure pedestrian safety, but there are concerns the congested conditions can restrict drivers' ability to see small children weaving between cars parked in the roadway. In 2003, the Fleming School started directing cars around the rear of the school for the pick-up period, rather than allowing cars to line up in the front of the building. This has also had a beneficial effect on traffic flow.

While the congestion is a significant problem, it should be noted the duration of congestion is relatively short (20-40 minutes) in the afternoon pick-up period.

Figure 1-Fleming and Summit Street School Neighborhoods



Traffic Count Information

To gain a better understanding of the congestion problems, CCMPO conducted a traffic count and license plate survey on June 5, 2003 to analyze the vehicle travel routes through the neighborhood at the afternoon pick-up time. The results of this count are summarized in Tables 1 and 2 on the following page. Unfortunately, this count coincided with field day for 5th grade students, which somewhat reduced the number of parents picking students up on that particular day. Also, due to staffing limitations we were not able to count the number of parents using the Church parking lot to pick their children up from Summit Street School. We would expect the number of parents picking up students to be significantly higher in mid-winter inclement weather, but the relative patterns of movement should be similar to what was counted.

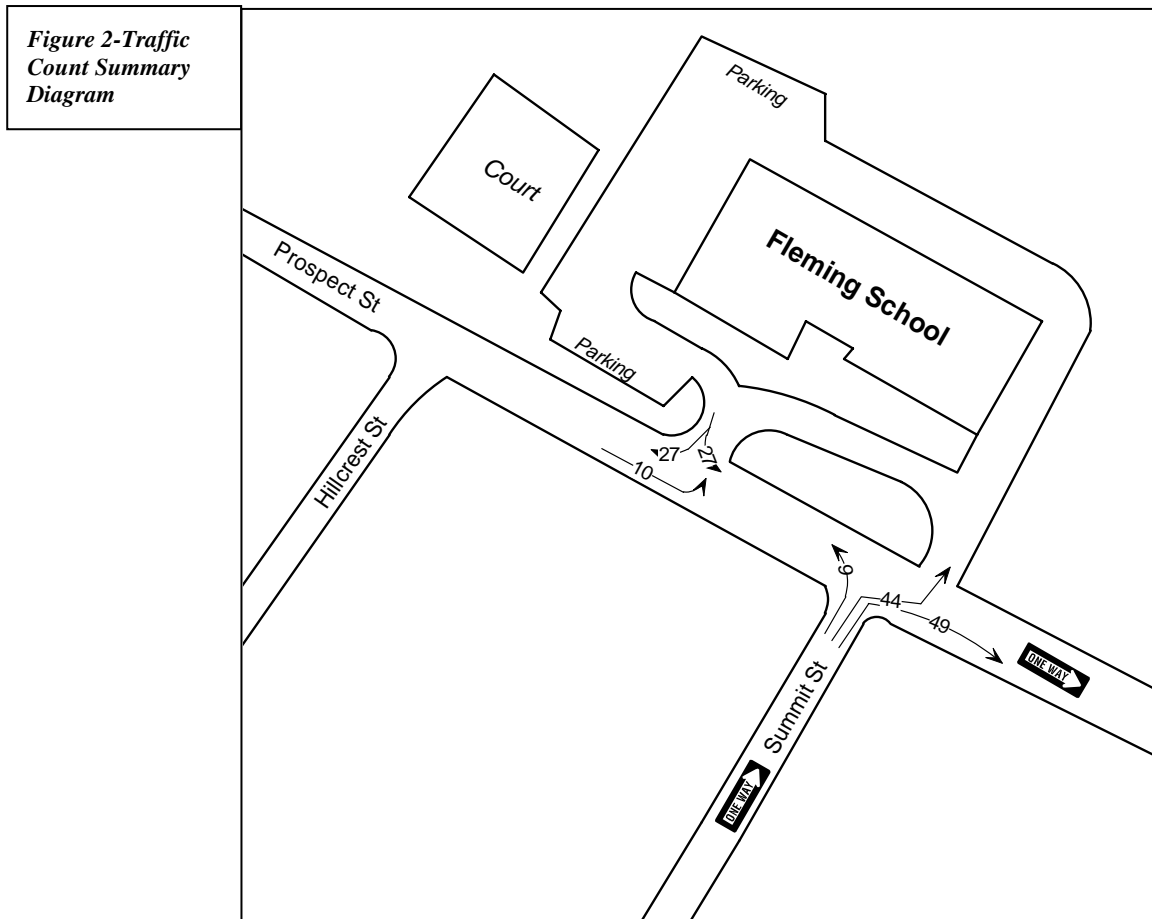
Table 1: Fleming School Pick-up Travel Patterns

Street	Getting to Fleming School		Leaving Fleming School	
	via Summit St	via Hillcrest St	via Prospect St	via Hillcrest St
Number of Vehicles Surveyed	44	10	27	27
Percentage of Vehicles	81.5%	18.5%	50.0%	50.0%

Table 2: Summit Street Pick-up Travel Patterns

School / Street	On Summit Street			Leaving Summit St School	
	To Summit School	To Fleming School	To Both Schools	Prospect St	Hillcrest St
Number of Vehicles Surveyed	55	36	8	54	9
Percentage of Vehicles	55.6%	36.4%	8.1%	85.7%	14.3%

Figure 2 below summarizes the school related traffic at the Summit / Prospect / Fleming School intersections. Approximately 81% of parents picking up their children from Fleming come up Summit Street. The remaining pick-up vehicles come from Hillcrest St. Leaving the Fleming School, there is an even split between taking Hillcrest or Prospect out of the neighborhood. Leaving Summit Street School, about 86% take Prospect while the remaining 14% take Hillcrest.

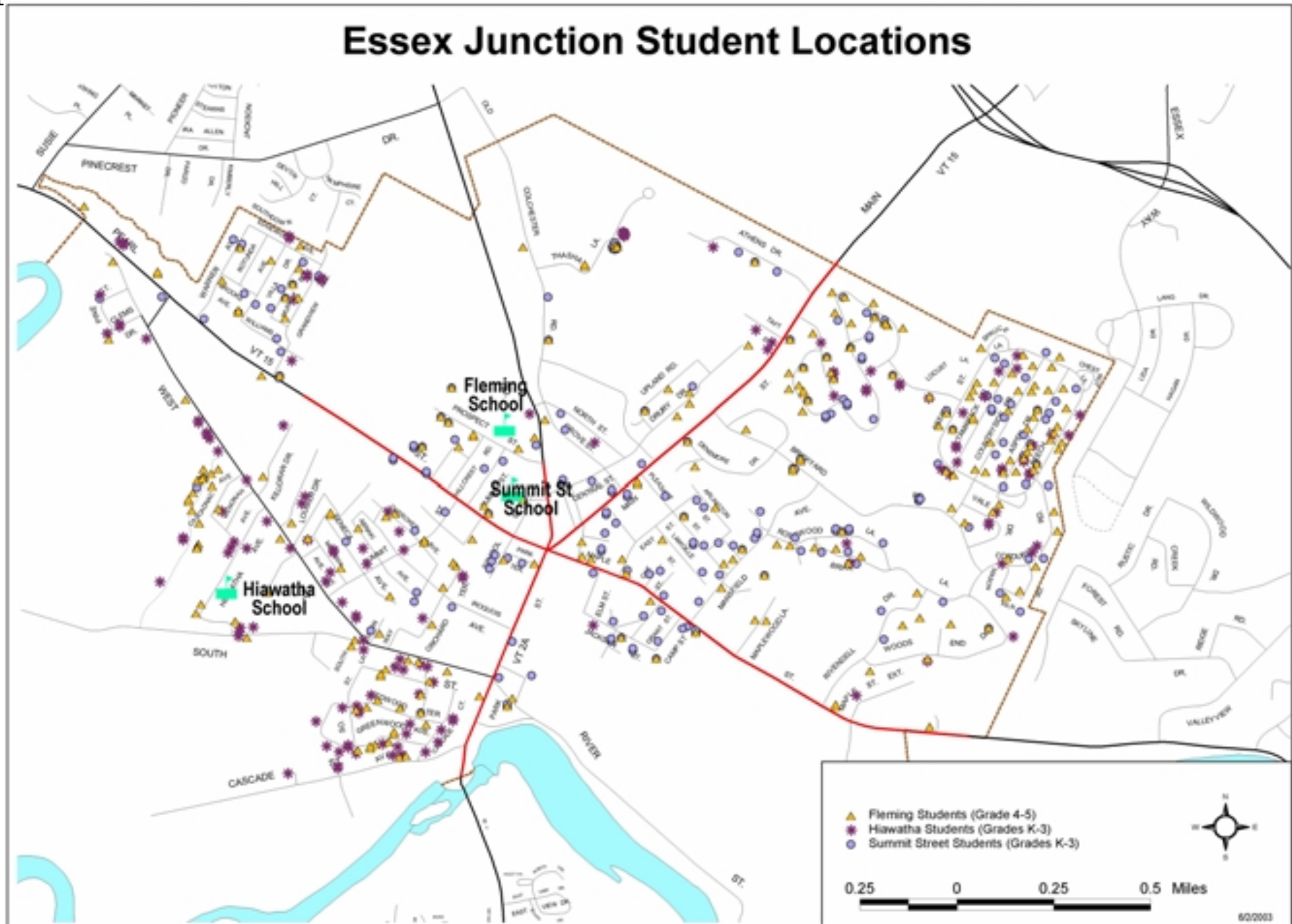


To obtain a better understand of the student travel patterns throughout the Village, CCMPO requested the addresses of all the students attending Hiawatha, Summit, and Fleming schools (without any identifying information to ensure privacy). These databases were then matched to street addresses in a Geographic Information System. The results of this effort are illustrated in Figure 3 on the following page, which maps the student locations for each of the three schools. Table 3 below summarizes the total number of students attending each school. The map illustrates a fairly equally distributed pattern of students in the Village. One clear issue is the large numbers of students coming from the Juniper Ridge and Countryside areas in the northeast corner of the Village. The decision against building an elementary school in that neighborhood has unfortunately made it more difficult for those students to walk or bike to school by increasing the distance of the trip and also forcing pedestrians to cross to arterial roads through the village - Main St and Lincoln St.

Table 3: Essex Junction 2002 - 2003 School Enrollment

School (grades)	Number of Students
Hiawatha (K-3)	196
Summit Street (K-3)	217
Fleming (4-5)	250

Figure 3-Map of Student Locations



Recommendations

There are many possible approaches to alleviate the congestion issues at these schools. CCMPO has broken these into short-term items of little or no cost, medium term solutions of more substantial costs, and long term solutions which would take many years to implement.

Short Term Recommendations (1-2 years)

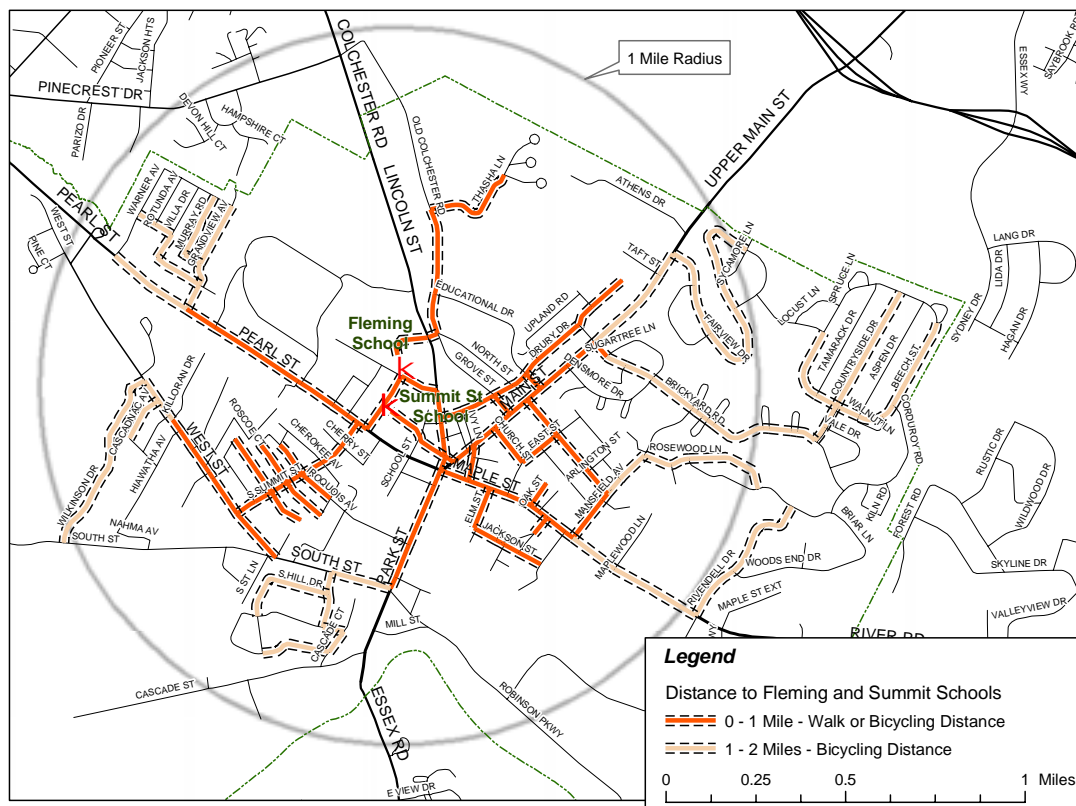
Walking / Cycling Schoolbus

Encouraging more kids to walk or bike to school would reduce the number of vehicles on the roads. Several communities across the country have organized “Walking Schoolbuses” to provide parent chaperones to children walking to and from school. These are groups of children who walk designated routes to school under adult supervision, picking up kids along the way just like a bus. Some areas create a casual group walk, while others set up a formal plan with adults scheduled to walk on certain days and pulling a wagon for book bags. The schools could work with parent-teacher groups to establish a program in the next school year.

The goals of this program would include the following:

- To get children and adults more physically active by walking to and from school.
- To make it safer for children and adults to walk in the neighborhood.
- To reduce traffic in the village and neighborhoods around the schools.
- To prevent crime by getting more people outside keeping an eye on the neighborhood.
- To help neighbors get to know one another better.

Figure 4 Potential Walk / Bike Routes to Fleming and Summit St Schools



CCMPO has worked with a broad coalition of interest groups to initiate a Safe Routes to School program in Chittenden County. Three schools have been selected as pilots for the program, and the coalition hopes to extend this work to other interested schools in the region. More information on the program can be found on the CCMPO website at:

<http://www.ccmpto.org/SR2S/index.html>

Another source of information on walking schoolbuses is the Walking Schoolbus Information Website at: <http://www.walkingschoolbus.org/>

Figure 4 on the previous page is a map of potential walking and cycling routes for children. The orange (darker) routes are 0-1 miles long, which are potentially suitable for all ages. A 1 mile walk would take a 9 year old approximately 20 minutes to complete. Routes in peach (lighter) are 1-2 miles long and would be suitable as bicycle routes.

The school district could work with the Village and parent-teacher groups to set specific routes, similar to the train lines which are designated by colors (e.g. the purple route from Thasha Lane to Fleming School). The schools could work with area businesses to develop incentives to walking or cycling to school.

Carpooling

Many students attending the schools could participate in a carpool program. This would benefit the community through decreased traffic congestion, but could also benefit parents who would no longer need to concern themselves with picking up children every day of the week. The school system could prepare rosters of students living in the neighborhoods and provide contact information so parents could set up carpools on a voluntary basis. The school could mail this information to homes prior to the start of the next school year, and encourage more carpooling before parents adjust schedules to accommodate picking up children. Walking schoolbus groups could become carpools on days with inclement weather.

One potential impediment to greater carpooling is the necessity of child safety seats for children in carpool vehicles. The National Highway Traffic Safety Administration (NHTSA) recommends all children under the age of 12 ride in the back seat of vehicles, and young children between 4 and 8 years old ride in forward facing booster seats. This may make it more difficult for Summit Street School (K-3) parents to develop carpools, but Fleming Students (4-5 grades, 10-11 years old) should be old enough to ride in back seats without specialized safety seats.

The federal government has established programs to provide incentives to commuters using non-single occupant vehicles to get to work. The school district would implement a program to take advantage of the benefits established under federal law. More information on this programs is available at this internet link: <http://www.fta.dot.gov/library/policy/tvbp.html> .

Both the Carpooling and Walking/Cycling Schoolbus programs will require a significant effort to get underway and maintain. A dedicated coordinator working part-time on these programs would greatly increase the likelihood of success. The coordinator could provide carpool matching services and education on the walking schoolbus routes. The high rate of annual turnover at the Fleming School would make it difficult to maintain a volunteer pool to educate parents on the programs.

Staggered School Dismissal Times

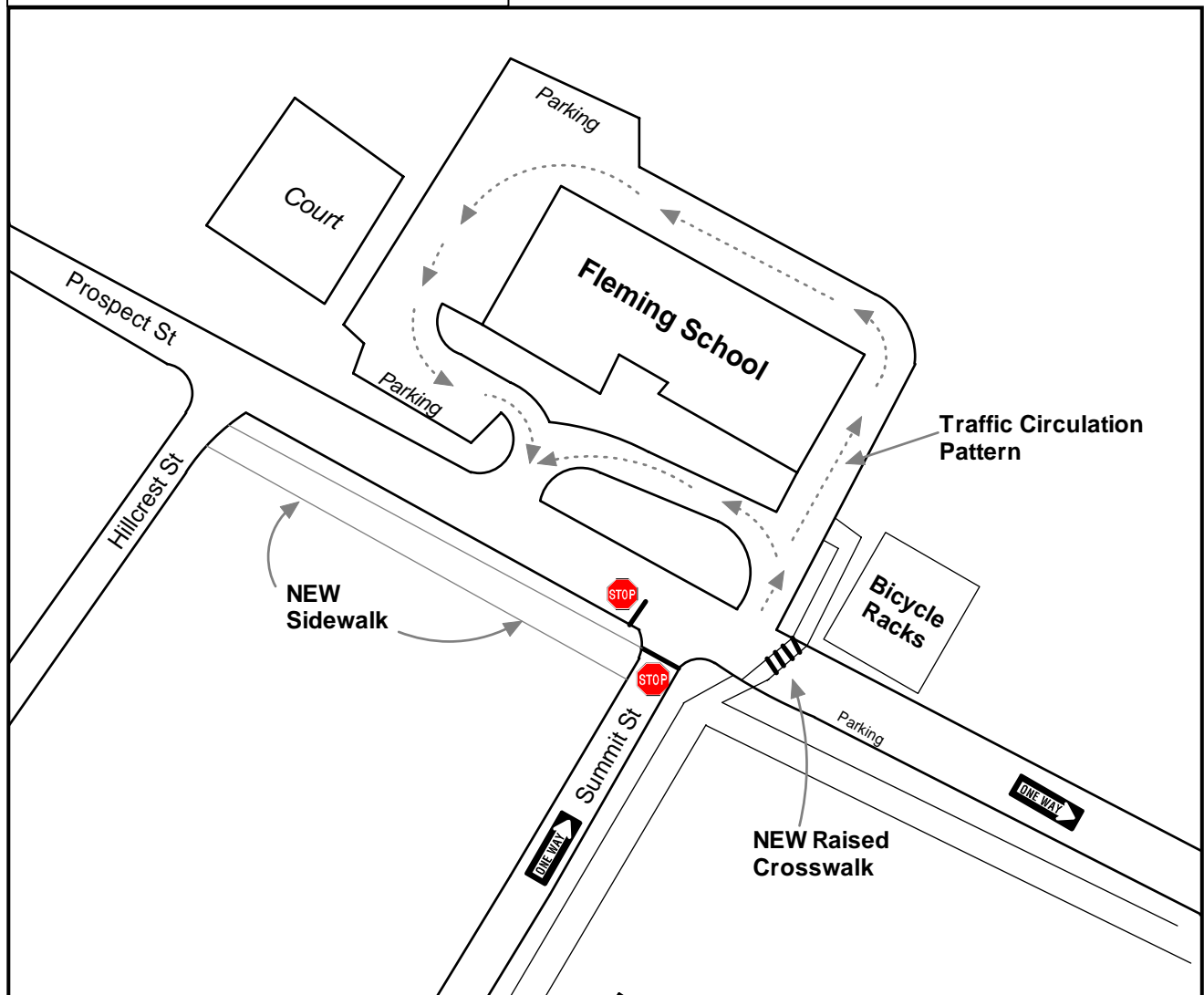
Both Fleming and Summit schools are currently on the same schedule of classes beginning at 8:00 am and releasing at 3:00 pm. The joint dismissal time compounds the congestion issues in the neighborhood. One of the schools could shift dismissal forward or back by as little as 15 minutes to substantially reduce congestion problems. Due to union issues with the teachers and coordination with parents having children in both schools, this may be difficult to implement. If the walking schoolbus and carpool

programs are not effective in reducing congestion, then the school management could discuss the issue with the teacher's union.

Prospect Street Crosswalk Improvements

The Walkability Workshop conducted on June 2, 2003 identified several possible improvements to sidewalks and crossings in the vicinity of the schools. The Village staff has maps with several potential improvements highlighted. One improvement which would serve both school populations is a better crosswalk to Fleming school at the corner of Summit and Prospect. The diagram below shows the proposed improvements. The crosswalk could be slightly raised and textured to reduce vehicle speeds. If possible, a "bulb-out" could be created on the north side of the intersection to reduce the crossing distance. Another recommendation would be to extend the sidewalk on Prospect Street in front of the school. If the Village moves forward with these projects, then more detailed designs would be necessary to ensure the necessary drainage is included in the design. Several other intersections in the Village could benefit from this kind of treatment.

Figure 4- Proposed Fleming Crosswalk



Medium Term Recommendations (2-5 years)

School Busing

Schools in the Village currently have no school bus service. If parents do not want their children to walk to school, then they must drive them or make arrangements for them to be picked up. While busing could still cause minor congestion problems on the neighborhood streets, it would likely solve the bulk of the problems identified. The School District has considered busing students in the past, but the costs have prevented action from moving forward. The school district may want to seriously reconsider busing as an attractive solution to congestion problems, particularly as the community continues to grow.

Improved Walking and Cycling Routes in Village

The Village of Essex Junction is currently working on expanding bicycle and pedestrian routes throughout the Village and making existing routes safer. Anything that makes it easier to walk or bicycle to the Fleming and Summit schools will increase the possibility that children will not get to school via automobiles and cause congestion. Specific recommendations included in this category would be:

- Constructing the proposed traffic signal at Main Street (Route 15) and Educational Drive. This would make it easier to cross the street and would enhance access to the high schools as well as the Summit / Fleming school area.
- Creating a multi-use path running behind the Fleming School down to Lincoln St. This route could have a lower slope than the hill going down Prospect St and would enhance safety for students getting down the hill.
- Providing extra attention to snow removal on school walking routes in the winter months.

Increase Parking at Holy Family Church

The School District has an agreement with Holy Family Catholic Church on Lincoln St to allow parents to park there while picking up their children from Summit Street School. Figure 1 on page 3 includes a "church parking" label highlighting this area. In exchange for this service, the School District plows the church parking lot in the winter months. To encourage greater use of the this lot, the school district could attempt to negotiate with the church to increase the parking capacity of the lot. This recommendation could be particularly important if Summit St requires parents to pick up students from the rear in this parking area.

Provide Enhanced Pickup Lanes at Schools

In an effort to reduce crowding along Prospect St in front of Fleming School, a no parking zone recently went into effect. To provide more parking for parents picking up their children, the Fleming School has turned the tennis court area into a staff parking lot. Parents are now able to circulate around the front of the school and queue up there or around the back of the school and queue up along the western side of the school. While this has improved the flow of traffic, it has unfortunately taken away the court area as play space for the students. A possible solution to this would be to create a loop roadway around the playground or tennis court area to allow parents to line up and wait for children. Figure 6 below illustrates one possible alignment for such a road at the Fleming School. Figure 7 highlights a possible alignment at the Summit Street School. The cost of these improvements would be substantial.

Figure 6- Fleming School Pickup Loop



Figure 5- Summit School Pickup Loop



The loops would need to be approximately 20 feet wide to allow 8 feet for parked cars and a 12 foot travel lane for passing. Each parallel parking space takes up about 22 feet.

The Fleming school loop shown above would be about 340 feet long with space for about 15 vehicles. Using standard costs for asphalt pavement estimates, the loop would cost about \$10,000. A longer loop around the outside of the play area would be about 735 feet long with space for about 33 vehicles. This is estimated to cost \$22,200. These costs only consider materials and do not include engineering, design, drainage, earthwork, etc. The additional costs could substantially increase the amount of these improvements.

The Summit School loop is estimated to cost \$9,300. This loop would allow parents to circle around the rear of the school to pick up their children. The configuration shown in the diagram would require the cooperation of the Church and could have a negative impact on the school's eastern neighbors.

It should be noted the above estimates do not include any potential costs associated with stormwater drainage improvements which could be necessary due to regrading of the loop roadbeds.

While these loops would improve the traffic flow, they have the very undesirable effect of taking away recreational area from the students' playgrounds. The substantial costs and negative impacts make this alternative more difficult to implement and should be considered only after exhausting other possibilities.

Long Term Recommendations (5+ years)

Locate Schools in Neighborhoods

The Village schools had an opportunity some years ago to locate a new elementary school in the northwest corner of the village off of Brickyard Road. Community concerns prompted the decision to invest money to increase the capacity at existing schools rather than building a new school. If a school was present in the northeastern area of the Village, then more students would be able to walk or bicycle to school on a regular basis due to shorter distances and fewer high traffic crossings. If future conditions warrant consideration of a new school in the Village, then the northwest section should be carefully considered due to the large numbers of students drawn from the area. A possible merger of schools with Essex Town could also impact the distribution of schools in the area. If a merger is completed, then walking and cycling routes should be carefully considered when designating school enrollment areas.