

Dakota County
Safe Routes to School

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Safe Routes to School Comprehensive Plan

Greenleaf Elementary School

**City of Apple Valley
Dakota County, MN**

May 2010

Prepared by:



SHIP
Statewide Health Improvement Program

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Project Background

The Statewide Health Improvement Program (SHIP) aims to help Minnesotans live longer, healthier lives by reducing the burden of chronic disease. The Dakota County Public Health Department received SHIP funding to work with community partners to develop and implement programs to improve nutrition, increase physical activity, and reduce tobacco use in schools, workplaces, community settings, and healthcare sites. As part of this effort, comprehensive Safe Routes to School (SRTS) plans have been developed for 10 schools in Dakota County that seek to increase walking and biking to school through the following means:

- **Education** – Teaching children to walk and bike safely.
- **Encouragement** – Developing programs that get children excited about walking or biking to school, such as walk/bike incentive programs or Walk to School Day. May also include methods that help parents and guardians feel comfortable letting their child walk or bike, such as walking school buses or adult crossing guards.
- **Enforcement** – Having law enforcement support, such as speed zone enforcement or increased patrols, along the designated routes to school.
- **Engineering** – Identifying infrastructure barriers to walking and biking, such as sidewalk/trail gaps, hazardous crossings, or the need for secure bicycle parking.
- **Evaluation** – Measuring the effectiveness of the various components of the SRTS project.

The following sections describe the development of a Safe Routes to School Plan for Greenleaf Elementary in the City of Apple Valley, Dakota County, Minnesota.

Existing Conditions

Greenleaf Elementary School is part of Independent School District 196 serving the Rosemount, Apple Valley, and Eagan communities in the Twin Cities suburbs. Greenleaf Elementary School was built in 1975 and was expanded in 2006. The site is located on Galaxie Avenue between County Road 38 (McAndrews Road) and 140th Street and the surrounding area is primarily residential.

Student Data

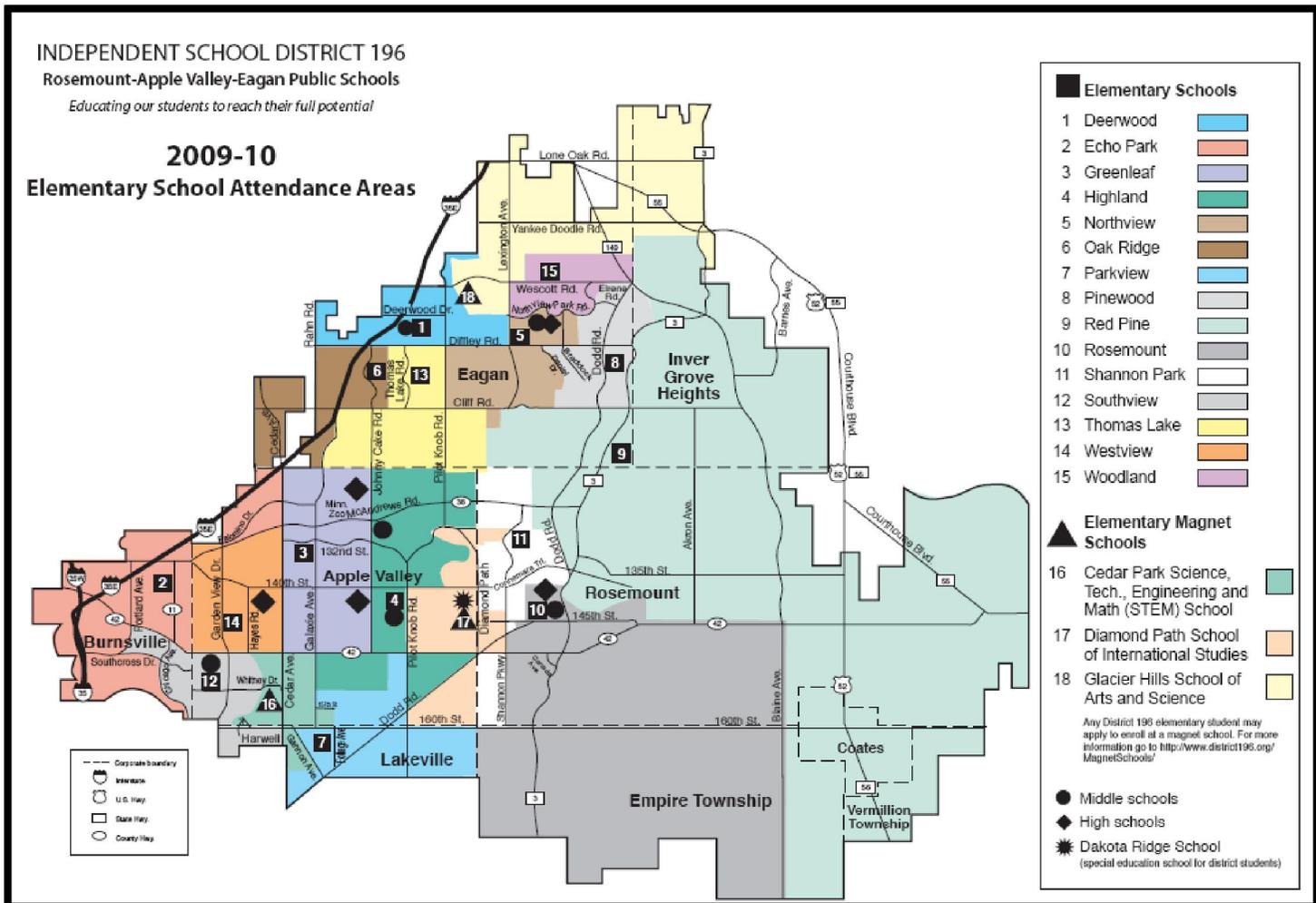
Currently, there are approximately 860 students in kindergarten through 5th grade at Greenleaf Elementary (2009-2010 school year) and the school day is from 9:25 am to 3:45 pm. The elementary school boundary map for District 196 shows that the attendance area for Greenleaf Elementary is

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relatively large, extending from the north city limit to County Road 42 (150th Street) and from Cedar Avenue to Johnny Cake Ridge Road, all within the City of Apple Valley.



Source: www.district196.org

The designated walk area for the school is approximately ½ mile, but Galaxie Avenue and County Road 38 are both designated by the school district as hazardous roadways. Students that would have to cross the hazardous roadway to get to school are provided bus transportation even if they are within the ½-mile walk area. With the school located on Galaxie Avenue, this means that Greenleaf students that live across the street are provided bus transportation across Galaxie Avenue. The entire walk area for Greenleaf Elementary is shown on the map on page 14.

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Safe Routes to School Activities

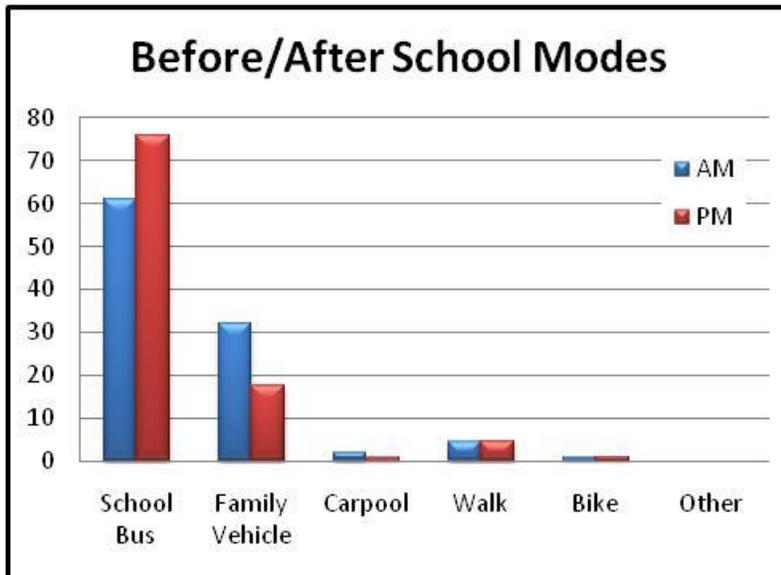
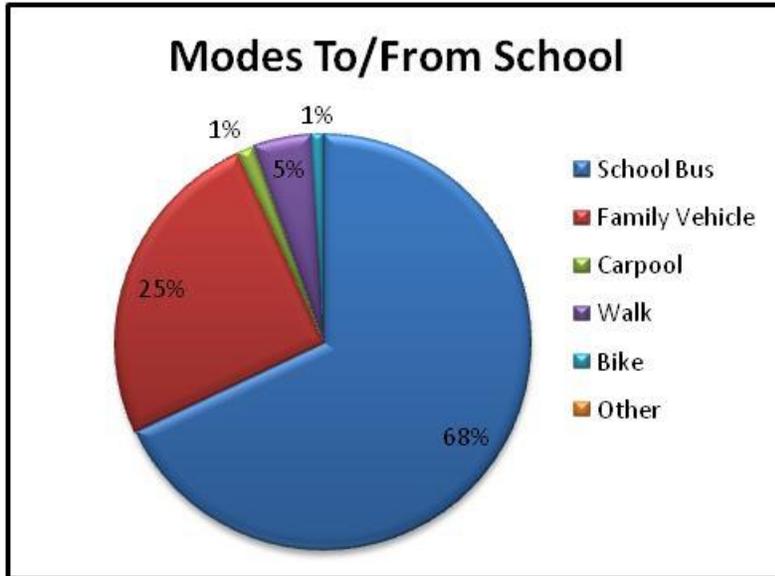
Greenleaf Elementary held a Walk to School Day in the fall of 2009, with an estimated 60 to 75 percent of students walking or biking to school, along with the mayor of Apple Valley and local media and Associated Press. The Safe Routes committee, consisting of 5 to 6 parents and Greenleaf teachers, organized the event for National Walk to School Day in fall 2009, as well as promoting weekly Walking Fridays, making a Safe Routes to School video, recruiting parent volunteers to patrol the crosswalk on Galaxie Avenue, and implementing a Safe Routes to School survey of Greenleaf parents. A SHIP grant was also used to purchase lawn signs for families that walk or bike to Greenleaf and wristbands for students that walk or bike.

Approximately 10 to 15 percent of students currently live within the walk area, but an estimated 20 to 40 percent walk or bike on the weekly Walking Fridays during the spring and fall. Greenleaf started to count the number of walkers and bikers crossing Galaxie Avenue in May 2010, with 73 total pedestrians and bikes on May 21 even in rainy weather.

In-classroom tallies of students' arrival and departure modes were conducted at Greenleaf Elementary during April 2010 during the regular school week (i.e., not on a Walking Friday). As shown in the chart below, an average of 5 percent of students regularly walk to school and an average of 1 percent of students regularly bike to school. The most predominant mode is school bus, but 25 percent of students are driven to school by a parent, resulting in a large volume of parent vehicles during pick-up and drop-off. The tallies also showed that significantly more students rode the bus home from school in the afternoon.

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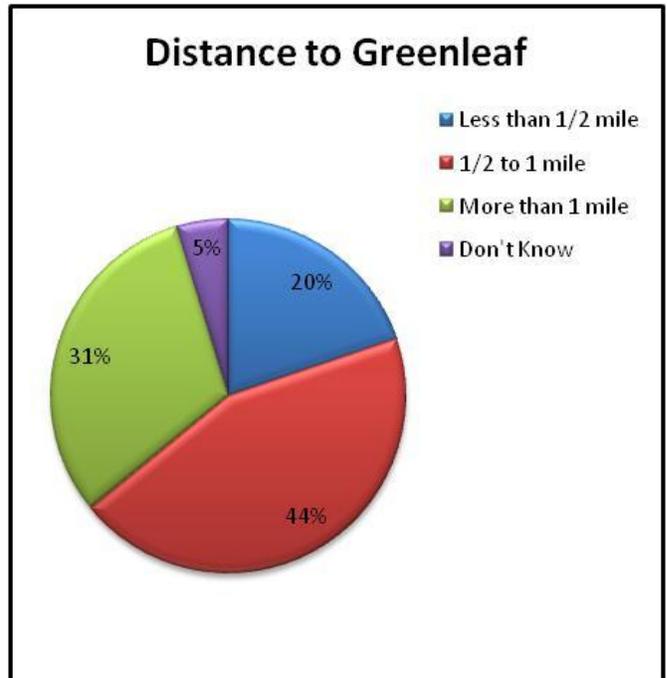
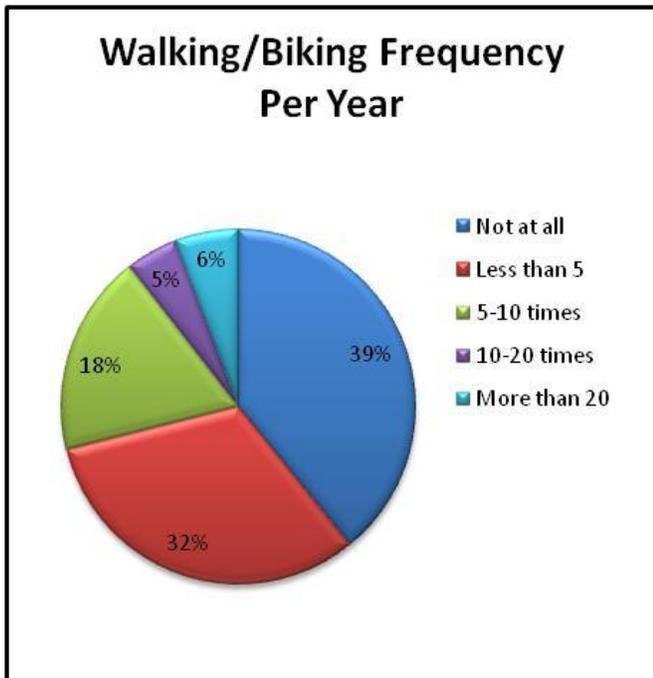
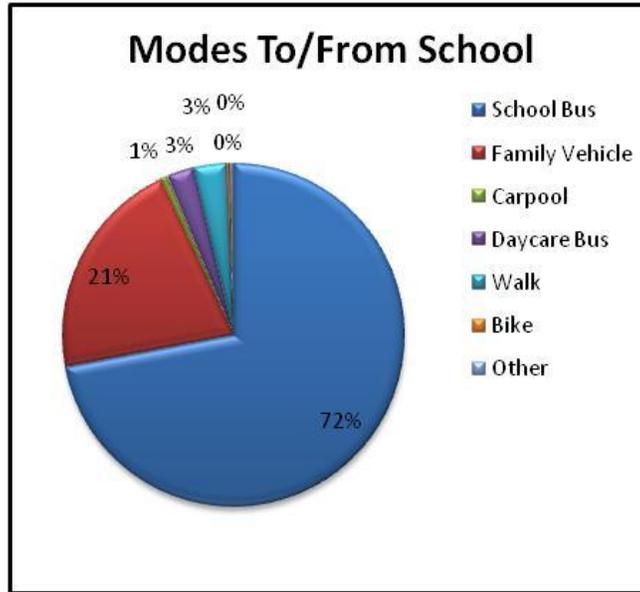
Over 50 percent of Greenleaf families responded to the parent survey conducted in December 2009. The survey results indicated that most students ride the bus to and from school each day. In addition, about 62 percent must cross Galaxie Avenue to get to school, and 28 percent cross County Road 38 to get to school. The primary reason cited for not walking or biking to school was parents that worked. Some of the other key survey results are shown in the charts below. Based on the survey, 21% of families drive to

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school, and with an average of 1.4 Greenleaf students per family, that results in approximately 130 vehicles entering and exiting the site two times a day.



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Infrastructure

The roadways surrounding the school generally have a well-connected system of trails and sidewalks on both sides of the collector and arterial roadways, including Galaxie Avenue, 140th Street, and 132nd Street. County Road 38 has a trail only on the north side of the roadway, west of Galaxie Avenue. There is currently one designated school crossing:

- Galaxie Avenue midblock between 132nd Street and 135th Street, at Greenleaf Elementary

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Existing school crossing on Galaxie Avenue at Greenleaf Elementary.

The crosswalk on Galaxie Avenue at Greenleaf has a small median refuge for pedestrians and also has supplementary STOP FOR PEDESTRIAN IN CROSSWALK signs.

A review of the crash history for the past five years (2004-2008) showed there have been no pedestrian crashes on Galaxie Avenue between 140th Street and County Road 38, but there has been one bicycle crash that occurred at the Galaxie Avenue/132nd Street intersection and another bicycle crash that occurred on Galaxie Avenue between 132nd Street and 133rd Street. Both crashes occurred during the summer. The Galaxie Avenue/135th Street intersection has had 9 reported crashes in the past 5 years, which results in an average crash rate of 0.4 crashes per million entering vehicles, compared to an

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expected rate of 0.2 crashes per million entering vehicles for similar intersections in the metro area.¹ As a comparison, the Galaxie Avenue/132nd Street intersection, which has higher traffic volumes, had only 6 crashes in the past 5 years.

The most common crash type at the Galaxie Avenue/145th Street intersection was a rear-end collision on southbound Galaxie Avenue, but there were also two left-turn crashes involving southbound vehicles on Galaxie Avenue. All but 2 of the crashes occurred before 8 am or after 5 pm. Excluding the Galaxie Avenue/135th Street and Galaxie Avenue/132nd Street intersections, the overall segment crash rate on Galaxie Avenue between County Road 38 and 140th Street is 0.8 crashes per million vehicle-miles compared to the average expected rate of 1.1 crashes per million vehicle-miles.² While the overall crash rate on Galaxie Avenue is slightly below the expected average rate, the Galaxie Avenue/135th Street intersection may warrant further investigation.

Studies conducted on Galaxie Avenue by the City of Apple Valley in 2007 showed that there are approximately 12,000 vehicles per day on Galaxie Avenue between 140th Street and County Road 38. The average vehicle speeds were 36 miles per hour (mph), even though the posted speed limit is 45 mph in this segment. The school speed zone on Galaxie Avenue is posted as 30 mph when children are present. In 2009 and 2010, the City of Apple Valley was working to develop a crosswalk policy that establishes how the need for a crosswalk or crosswalk improvement is determined.



School speed zone on northbound Galaxie Avenue approaching Greenleaf Elementary.

¹ Source: Average crash rate for Urban/Suburban Thru/Stop intersections in Mn/DOT Metro District, Minnesota Department of Transportation, 2004-2006.

² Source: Average crash rate for Urban 4-Lane Undivided Roadway in Mn/DOT Metro District, Minnesota Department of Transportation, 2004-2006.

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In addition to the off-site pedestrian and bike facilities, Greenleaf Elementary has a number of bike racks at the front of the school.



Bike racks located along the sidewalk to the school's main entrance.

Site Evaluation

A site evaluation was completed at Greenleaf Elementary on April 1, 2010, with follow-up visits on, April 16 (morning) and April 20 (afternoon). The site evaluation included walking around the site and observing the arrival and dismissal process on a typical day, as well as on a designated Walking Friday. The north parking lot is relatively small and is designated for parent pick-up/drop-off only. All staff parking and bus loading/unloading occurs in the south parking lot, which is physically separated from the north lot by a section of curb and sidewalk. Due to the volume of traffic entering and exiting the site during school arrival and dismissal, the school has signed the driveway onto Galaxie Avenue as right-turn only during these times, but this restriction is routinely violated.

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Signing at entrances to Greenleaf parking lots.



Signing in parent pick-up/drop-off parking lot.

With the volume of parent traffic in the small parking lot, vehicles are sometimes two or three deep when students enter and exit the vehicle. This results in numerous pedestrian/vehicle conflicts, which even at the very low speeds of a parking lot are a serious safety concern. In addition, the parking lot is not large enough to accommodate the number of vehicles and at times a queue develops on Galaxie Avenue to turn into the parking lot. Galaxie Avenue does not have turn lanes at the driveway, so queued vehicles on Galaxie Avenue are also a concern.

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Parent pick-up at afternoon dismissal.

The school crossing at Galaxie Avenue/Greenleaf Elementary is currently patrolled by a group of parent volunteers, with two adults stationed at the crossing on Walking Fridays. However, even with adult crossing guards, parents still have concerns with the speed of vehicles on Galaxie Avenue and compliance of drivers stopping at the crosswalk. As mentioned previously, because Galaxie Avenue is designated as a hazardous crossing, students that live across Galaxie Avenue from the school are provided bus transportation.

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Adult crossing guards on Galaxie Avenue in front of Greenleaf Elementary

Existing Issues and Challenges

In addition to the data collection and site evaluation completed as part of this project, a Safe Routes Working Group was established for Greenleaf Elementary that included teachers, parent representatives, and the City of Apple Valley. The role of this group was to identify and discuss barriers to walking and biking to school as well as potential ways to overcome the barriers.

The existing challenges to walking and biking to Greenleaf Elementary are summarized in the following bullets, as well as the map on page 14:

- High traffic volumes and speeds on Galaxie Avenue.
- Parking lot and entrance congestion due to parent pick-up and drop-off.
- The volume of traffic on the school site and the resulting congestion contributes to the perception that it is not safe to walk or bike.
- Parents violate No Left Turn restriction out of Greenleaf driveway onto Galaxie Avenue.
- Crossings of four-lane roadways inherently have issues with “double threat”, i.e., one vehicle stops at the crosswalk and blocks the view of a driver in the adjacent lane, who then cannot see the pedestrian and therefore may not stop.
- Driver compliance at crosswalk on Galaxie Avenue.
- Difficult to consistently get volunteers for adult crossing guards. Even adults feel unsafe crossing Galaxie Avenue.

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- More than 60 percent of Greenleaf families live east of Galaxie Avenue, which results in fewer walkers/bikers and more bus/vehicle traffic.



Students walking to school on Walking Friday.

- Cooperation and communication is needed among school, district, and city regarding the school crossing on Galaxie Avenue.
- Police can provide periodic enforcement on Galaxie Avenue, but cannot consistently commit resources.
- Parents would be more willing to let students walk or bike if they knew they would be supervised.
- District budgets may increase the designated walk radius in the future. This provides opportunities for more walking and biking, but could also result in even more parents driving. The walk radius does not impact students provided bus transportation due to a designated hazardous crossing.
- Education about safety and walking/biking to school is needed for the entire community, not just parents.



PARKING LOT CONGESTION DUE TO PARENT PICK-UP/DROP-OFF

GREENLEAF ELEMENTARY

BIKE RACKS

STAFF PARKING AND BUS LOADING

11,800 VEHICLES PER DAY (2007)

NO LEFT TURN
AM: 8:30-9:30
PM: 3:30-4:30

62% OF GREENLEAF FAMILIES LIVE EAST OF GALAXIE AVE

VOLUNTEER ADULT CROSSING GUARD

4-LANE UNCONTROLLED CROSSING WITH MEDIAN REFUGE

LEGEND

-  SCHOOL CROSSING
-  SCHOOL PATROLLED LOCATION
-  MULTI-USE TRAILS
-  SIDEWALKS
-  DESIGNATED HAZARDOUS CROSSING
-  WALK AREA
-  WALK AREA - CURRENTLY BUSSED
-  PUBLIC SCHOOL
-  SCHOOL STAFF PATROLLED AREA
-  ON-SITE SIDEWALKS
-  ON-SITE MULTI-USE TRAILS

NOTE: SIDEWALKS SHOWN ON MAJOR ROUTES ONLY FOR CLARITY.

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Recommendations

Despite some of the current challenges to walking and biking to Greenleaf Elementary, the school's location adjacent to the neighborhoods it draws students from, the existing sidewalk/trail infrastructure, and the enthusiasm of school staff and parents for walking and biking provide tremendous opportunities to significantly increase the numbers of students regularly walking and biking to school. The following recommendations have been developed specifically for Greenleaf Elementary to address the identified challenges to walking and biking. The short-term recommendations are actions that could be implemented prior to or during the 2010-2011 school year, while the long-term recommendations may require policy changes, additional discussion and coordination, or significant funding sources. In addition to the recommendations, the group that should take the lead in implementing the recommendation has also been identified.

Short-Term Recommendations

The short-term recommendations included in this section primarily consist of low-cost improvements that can be implemented in the six months, although some are dependent on funding availability. The recommendations are generally prioritized in terms of actions that are easiest or most necessary to complete first. The infrastructure recommendations are also summarized on the map included at the end of this report.

1. Continue the Safe Routes committee at Greenleaf to provide on-going support and organization for Safe Routes activities, including regular Walking Fridays, adult crossing guard volunteers, and special events. The committee, school district, and city staff should regularly communicate and coordinate on walking/biking issues. Implementation lead – Greenleaf, with cooperation from City of Apple Valley and District 196.
2. Purchase or create mobile or permanent signs that can be used in the parent pick-up/drop-off area to better direct parent vehicles to pull forward and reduce the queue in the parking lot. Implementation lead – Greenleaf/District 196.

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Examples of signs that could be used in the parent pick-up/drop-off zone.

3. Conduct weekly pedestrian counts for one hour in the morning and one hour in the afternoon at the Galaxie Avenue crossing to establish the need for crossing improvements. Implementation lead – Greenleaf, with verification from City of Apple Valley.
4. Provide periodic targeted enforcement of the school speed zone on Galaxie Avenue. Implementation lead – City of Apple Valley.
5. Create information for parents and the community that communicates the benefits of walking and biking, as well as the safety responsibilities of parents, drivers, and others in the community. Distribution of the information could be on the city's website, in community newsletters, the local newspaper, and through other media outlets. Implementation lead – Greenleaf, with assistance from City of Apple Valley.
6. Start a walking/biking incentive program that rewards students for walking and biking to school. School-wide incentives could also be offered based on meeting goals for reducing traffic at the school. Implementation lead – Greenleaf.
7. Continue to monitor crashes at the Galaxie Avenue/135th Street intersection to determine if there is a safety issue. Implementation lead – City of Apple Valley.

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8. Organize a walking school bus³ or bike train for student to walk and bike together as a group to and from school. The best potential benefit of this recommendation would be for students that live east of the school and can cross Galaxie Avenue as a group, with adult supervision and adult crossing guards. Implementation lead – Greenleaf.
9. Work with neighborhood associations, senior citizen groups, or others to designate ‘safety houses’ on the school routes and solicit volunteers to supervise students walking from the remote drop-off sites to the school building. Implementation lead – Greenleaf, with assistance from City of Apple Valley and Dakota County Public Health.

Long-Term Recommendations

The long-term recommendations included in this section primarily consist of higher cost improvements or actions that would require a significant policy change, either of which would be expected to take longer than six months to occur. These recommendations are generally prioritized in order of importance, however funding availability may mean that the highest priority recommendations are not the first to be implemented. The infrastructure recommendations are also summarized on the map included at the end of this report.

1. Develop a long-term parking and transportation plan for the Greenleaf site, including staff parking and parent pick-up/drop-off. This step must occur prior to any long-term improvements being developed or constructed for the Galaxie Avenue crossing. Implementation lead – District 196 and Greenleaf.
2. Conduct a study to determine the most appropriate location or locations for school crossings on Galaxie Avenue and the recommended infrastructure for the crossings. This is dependent on the completion of short-term recommendations # 3 and long-term recommendation #1. Implementation lead – City of Apple Valley, with cooperation from District 196 and Greenleaf.
3. Install additional bike racks when the capacity of the existing racks is reached. Implementation lead – Greenleaf.

³ A walking school bus is a group of children walking to school with one or more adults. It can be as informal as two families taking turns walking their children to school to as structured as a route with meeting points, a timetable and a regularly rotated schedule of trained volunteers.

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4. Consider eliminating the bussing of students that live within the walk area on the east side of Galaxie Avenue and reallocating the funding from the buses and drivers to paid adult crossing guards on Galaxie Avenue. This recommendation would need further study and should only occur if improvements are made under long-term recommendation #2. Implementation lead – District 196 Transportation.
5. Construct a sidewalk/trail connection from 132nd Street to the north side of the school to make it more convenient for students to walk and bike to and from the north. Also, the sidewalk/trail connection would mean that students would not have to walk or bike on Galaxie Avenue. Implementation lead – Greenleaf/District 196, with assistance from the City of Apple Valley.
6. Develop a Safe Routes website for Greenleaf Elementary that provides walking/biking route information as well as other information, such as the schedule for walk/bike events and volunteer schedule. Implementation lead – Greenleaf.
7. Designate a Safe Routes at the district level and each of the individual elementary and middle schools in the district, similar to the way bus transportation is currently coordinated. The district-level coordinator would share information and coordinate Safe Routes activities and best practices among all the District 196 schools. The school SRTS coordinator would be responsible for scheduling meetings of the SRTS committee, training adult volunteers, and working with parents and students to address issues or concerns related to walking and biking. Implementation lead – District 196.

- 1 - USE MOBILE SIGNS TO DIRECT PARENTS DURING PICK-UP/DROP-OFF
- 2 - CONTINUE TO STUDY AND COLLECT DATA AT CROSSING
- 3 - TARGET AREA FOR WALKING SCHOOL BUS
- 4 - POTENTIAL FUTURE PARENT PICK-UP/DROP-OFF
- 5 - CONSTRUCT SIDEWALK CONNECTION TO 132ND ST



LEGEND

- SCHOOL CROSSING
- SCHOOL PATROL LOCATION
- SIDEWALKS
- MULTI-USE TRAILS
- DESIGNATED HAZARDOUS CROSSING
- WALK AREA
- WALK AREA - CURRENTLY BUSSED
- PUBLIC SCHOOL
- SCHOOL STAFF PATROLLED AREA
- ON-SITE SIDEWALKS
- ON-SITE MULTI-USE TRAILS

NOTE: SIDEWALKS SHOWN ON MAJOR ROUTE ONLY FOR CLARITY.

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Funding and Implementation

Funding for the various recommended projects may come from a variety of sources depending on the type of project and who is implementing it. Some potential funding opportunities that currently exist and may be used to fund these recommendations include, but are not limited to:

- Statewide Health Improvement Program funds, which are available through several programs administered by Dakota County Public Health:
 - Safe Routes to School mini-grants
 - Active Living grants, which are available to cities in Dakota County, but may be used to fund improvements on school sites
 - Assistance with preparation of infrastructure grant applications. Cities in Dakota County can submit infrastructure projects and the County's consultant will assist in identifying potential funding sources and preparing applications.
- Blue Cross Blue Shield of Minnesota
- Federal Transportation Enhancement (TE) funds through the Metropolitan Council
- Federal Safe Routes to School funds through the Minnesota Department of Transportation ⁴

No one of the E's of Safe Routes to School will by itself increase walking and biking, which emphasizes the need for cooperation among school, city, county and other agencies to implement change.

⁴ The federal Safe Routes to School program was funded through fiscal year 2009. Future funding will be dependent on passage of the Federal Surface Transportation Reauthorization Bill, which is currently being discussed in the United States Congress.