

### Safe Routes to School Comprehensive Plan

**Rosemount High School** 

City of Rosemount Dakota County, MN

June 2010

Prepared by:







### **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 Rosemount High School in the City of Rosemount, Dakota County, Minnesota.

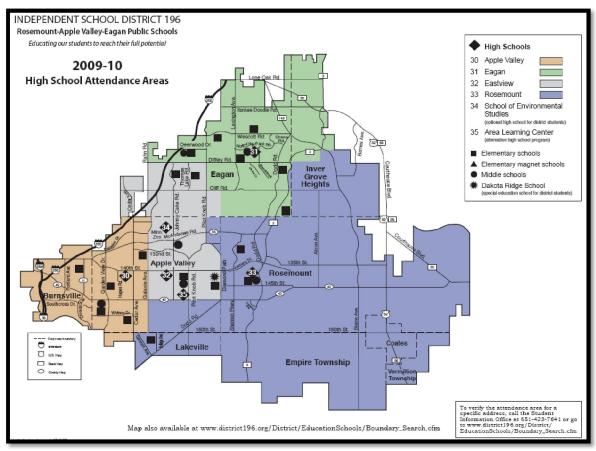
### **Existing Conditions**

Rosemount High School is part of Independent School District 196 serving the Rosemount, Apple Valley, and Eagan communities in the Twin Cities suburbs. Rosemount High School is located on 142<sup>nd</sup> Street between Minnesota Trunk Highway (TH) 3 (Robert Trail) and Chili Ave, in the City of Rosemount. Rosemount High School is adjacent to the Rosemount Community Center and is part of the same campus with Rosemount Elementary School and Rosemount Middle School. The area surrounding the school is primarily residential or park land.

### Student Data

In the 2009-2010 school year, there are approximately 2,110 students in 9th through 12th grades at Rosemount High School. The school day for all students starts at 7:30 am and ends at 2:20 pm, however with many before- and after-school sports and activities that take place between 5:30 am and 6 pm, there are students at the high school throughout the day.

The attendance area Rosemount High School covers roughly the southeastern half of District 196, with an estimated 25 percent of the students from Lakeville, less than 5 percent from Inver Grove Heights, and the remaining 70 percent from Rosemount, Empire Township, Vermillion Township, or Coates. The walk area for the high school is a 1-mile radius around the school, however the school district designates hazardous roadways beyond which students are bussed even if they are within the one-mile walk area. At Rosemount High School, the designated hazardous roads are TH 3 (Robert Trail) and County Road 42 (150<sup>th</sup> Street). The walk area for Rosemount High School is shown on the map on page 14.



Source: www.district196.org

### Safe Routes to School Activities

Rosemount High School has an "Irish Green Team" that has been actively working on projects to reduce energy consumption, including reducing the number of vehicles driven to the school. The Green Team has been working on ideas and incentives to accomplish their goal of a 10 percent reduction in the number of student cars driven to school. Counts conducted in April 2010 showed 452 vehicles in the student parking lot. A walk to school event was held on May 20, 2010, with approximately 75 students walking to school with the principal.

In-classroom tallies of students' arrival and departure modes were not conducted as part of this study, but the current mode split at Rosemount High School is estimated as:

- 35% school bus
- 25% driven by parent
- 20% drive themselves
- 20% walk or bike

In 2009, the City of Rosemount was awarded a \$35,000 federal Safe Routes to School grant to implement encouragement, education and evaluation activities at Rosemount Elementary, Rosemount Middle, and Shannon Park Elementary. The City is currently working to determine how to best use the grant funding. The grant did not include Rosemount High School because the federal grant funds are only eligible for use at schools with some combination of kindergarten to 8<sup>th</sup> grade students.

### Infrastructure

The roadways surrounding the school generally have a good system of sidewalks and trails, but don't necessarily have good connections within the school district complex. The primary pedestrian routes are on Chili Avenue, 145<sup>th</sup> Street, and Chippendale Avenue. TH 3 (Robert Trail) has sidewalk or trail on both sides of the roadway from County Road 42 (150<sup>th</sup> Street) to 142<sup>nd</sup> Street, but only on the east side of the roadway between 142<sup>nd</sup> Street and Connemara Trail, which is adjacent to the high school and community center. There are also trail/sidewalk gaps on or near the high school site:

- Trail from Connemara Trail ends at softball field no connection to high school entrances or to trail on 142<sup>nd</sup> Street
- No trail connections through the school district site
- Trail through Carroll's Woods Park loops just north of high school, but no connection
- Existing sidewalk from middle school to high school is indirect



View from east side of Rosemount High School, looking towards the Rosemount Community Center. The existing sidewalks and trails do not connect to the other trails north and west of the high school site.



Student walking on the shoulder of southbound TH 3 (Robert Trail) where there is a trail gap on the west side of the roadway.

### Dakota County Safe Routes to School





Existing pedestrian routes between the high school site and surrounding trails are evident by the worn foot paths.

Other multi-use trails are located in Schwarz Pond Park and on Connemara Trail, Evermoor Parkway, Shannon Parkway, Chippendale Avenue, Dodd Boulevard, and County Road 42 (150<sup>th</sup> Street). There are currently six designated school crossings on the roadways surrounding the school, most of which are for Rosemount Elementary School and/or Rosemount Middle School:

- 145<sup>th</sup> Street/Canada Avenue
- 145<sup>th</sup> Street/Cameo Avenue
- 144<sup>th</sup> Street/Cameo Avenue
- 144<sup>th</sup> Street/Rosemount Elementary School (mid-block between Canada Avenue and Cameo Avenue)
- 143<sup>rd</sup> Street/Cameo Avenue
- 142<sup>nd</sup> Street/TH 3 (Robert Trail)

The Rosemount City Council also recently established school speed zones near the elementary/middle/high school campus on 145<sup>th</sup> Street, Cameo Avenue, and Canada Avenue that lower the speed limit to 20 miles per hour (mph) when students are present.





The trail and stairs between the high school and Cantata Avenue are narrow and in poor condition.



Existing crossing on 142<sup>nd</sup> Street from the parking lot to Rosemount High School.

In addition to the off-site pedestrian and bike facilities, Rosemount High School has two bike racks located in front of the building and in an alcove on the east side of the building.





Bike racks located along 142<sup>nd</sup> Street (top photo) and next to a side entrance (bottom photo).

# Dakota County Safe Routes to School

The City of Rosemount's 2030 Comprehensive Transportation Plan identifies the need for a future signal at the TH 3 (Robert Trail)/142<sup>nd</sup> Street intersection due to the traffic volumes on TH 3 (Robert Trail) and the high school traffic. The signal would not be considered for installation until the signal warrants in the Minnesota Manual of Uniform Traffic Control Devices (MnMUTCD) were met, and funding participation from the Minnesota Department of Transportation (Mn/DOT) and School District 196 since neither of the intersecting roadways is a city street.



Existing TH 3 (Robert Trail)/142<sup>nd</sup> Street intersection (looking northwest from TH 3).

A review of the crash history for the past five years (2004-2008) showed several high crash locations near Rosemount High School:

- 12 crashes at the 143<sup>rd</sup> Street/Chili Avenue intersection, 11 of which were rear-end crashes that occurred between 2:20 and 2:50 pm (high school dismissal time)
- 6 crashes at the 144<sup>th</sup> Street/Chili Avenue intersection, 4 of which were rear-end crashes that occurred between 2:30 and 2:40 pm on a weekday (high school dismissal time)
- 9 crashes at the 145<sup>th</sup> Street/Chili Avenue/Chippendale Avenue intersection. None of the crashes occurred at high school dismissal, but one involved a pedestrian and one involved a bicycle.
- 9 crashes on 142<sup>nd</sup> Street/Chili Avenue between TH 3 (Robert Trail) and 143<sup>rd</sup> Street.
- 7 crashes at the TH 3/Robert Trail intersection, 5 of which were right-angle or rear-end crashes that occurred between 7:10 and 7:30 am (high school arrival time).

Of these locations, the segment of 142<sup>nd</sup> Street/Chili Avenue in front of the high school, the Chili Avenue/143<sup>rd</sup> Street intersection, and the Chili Avenue/144<sup>th</sup> Street intersection all have crash rates that significantly exceed the expected rate for similar intersections in the Twin Cities metro area.<sup>1</sup> In addition to the reported crashes for 2004-2008, there were two pedestrian/vehicles collisions in the high school parking lot in 2009.

The parking lot configuration at Rosemount High School includes a small parking lot on the north side of 142<sup>nd</sup> Street that is used for bus loading/unloading, visitor, and reserved parking. The larger parking lot is south of 142<sup>nd</sup> Street with two driveways on 142<sup>nd</sup> Street, a crosswalk on 142<sup>nd</sup> Street from the high school building to the parking lot, and a sidewalk through the center of the parking lot. This means that pedestrians must cross nearly all vehicles entering or exiting the site. Of the 680 available spaces, 180 are assigned to staff and 500 are available to students at a cost of \$180 per year, which will be increased to \$240 for the 2010-2011 school year. A previous study of parking and circulation on the high school site recommended \$1.8 million in improvements to project to improve safety and operations. However, none of the improvements from the study have been funded.

The Comprehensive Plan also identifies several other future study or improvement needs near Rosemount High School:

- Study the need for turn lanes on Chippendale Avenue between County Road 42 (150<sup>th</sup> Street) and 145<sup>th</sup> Street.
- Study the need for signalization of the 145<sup>th</sup> Street/Chili Avenue/Chippendale Avenue intersection.
- Study the need for capacity and safety improvements on Chili Avenue between 145<sup>th</sup>
   Street and Rosemount High School.

### Site Evaluation

A site evaluation was completed at Rosemount High School on March 15, 2010 that included walking around the site and observing the dismissal process on a typical day. All buses load in the parking lot next to the school building, and parent pick-up also occurs in that lot. The larger traffic volumes, however, are generated by students leaving the south lot, generating conflicts with school buses as well as students that are walking home or just walking to the parking lot.

<sup>&</sup>lt;sup>1</sup> Source: Minnesota Department of Transportation Crash Summary 2004-2006.



Students crossing traffic flow entering and exiting the parking lot after dismissal. The crosswalk striping is not very visible and there are no pedestrian ramps for the crossing.

Congestion occurs during both the morning arrival and afternoon dismissal, with the greatest congestion on Chili Avenue. With only concentrated periods of time when the heavy traffic exists, the current traffic controls at the TH 3 (Robert Trail)/142<sup>nd</sup> Street and Chili Avenue/145<sup>th</sup> Street intersections are still appropriate and no changes are recommended at this time.



Congestion on Chili Avenue between 143<sup>rd</sup> Street and 145<sup>th</sup> Street after the high school dismissal.



Queue of vehicles and buses waiting to turn onto  $142^{nd}$  Street/Chili Avenue after dismissal. There are currently no stop signs at the intersection of the north and south parking lots at  $142^{nd}$  Street.

### **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 Rosemount High School that included the assistant school principal, school staff, the City of Rosemount, and a parent representative. 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 Rosemount High School are summarized in the following bullets, as well as on the issues map following this section:

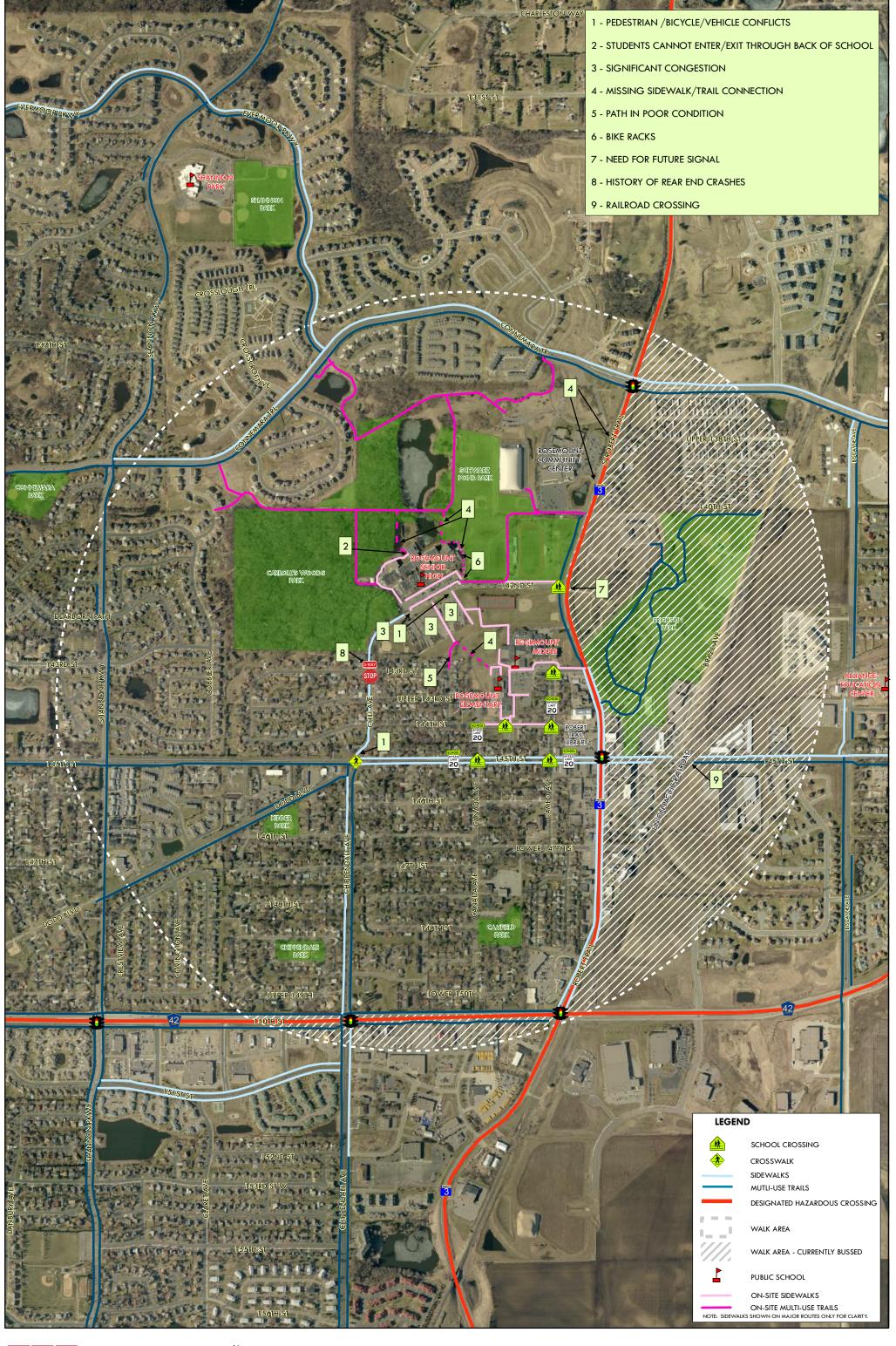
- Vehicle/pedestrian conflicts on 142<sup>nd</sup> Street between the parking lot and the building.
- Crosswalk markings on 142<sup>nd</sup> Street are not visible and there are no pedestrian ramps.
- Doors on the north side of the school are not open during arrival or dismissal, increasing the travel distance for students walking or biking from the north.
- Parents reluctant to allow students to walk or bike due to vehicle traffic and congestion.
- Lack of connections from the school to surrounding trail network, especially north of the school.
- Students walk on the shoulder of TH 3 (Robert Trail) where there is no sidewalk or trail
  on the west side.
- No sidewalk on many of the residential streets.
- Pedestrian/bicycle connectivity through the school district campus.
- Path from the high school to 143<sup>rd</sup> Street/Cantata Avenue is in poor condition.
- Winter maintenance of trails and sidewalks.
- Bike racks are in poor condition and located too close to the roadway or in locations that aren't visible.
- Increasing traffic on TH 3 (Robert Trail) makes left turns onto 142<sup>nd</sup> Street more difficult during peak hours.
- History of crashes at TH 3 (Robert Trail)/142<sup>nd</sup> Street and Chili Avenue/143<sup>rd</sup> Street during school arrival and dismissal.
- Crossing the railroad tracks, even though they are gated, is perceived as being more dangerous than crossing TH 3 (Robert Trail).
- Signing on the high school site needs to be updated to current standards.







School crossing signs should be upgraded to fluorescent yellow-green and standard speed limit and other signs should be used on the site.







### **Recommendations**

At the same time the Safe Routes Comprehensive Plan was being completed for Rosemount High School, the City of Rosemount was also in the process of developing a Pedestrian and Bicycle Master Plan for the city. The following sections discuss the findings and recommendations of the Master Plan, as well as the specific short- and long-term Safe Routes recommendations for the high school.

### Rosemount Pedestrian and Bicycle Master Plan

The planning included a walking/biking needs assessment, stakeholder meetings, and a public open house. A pedestrian-bicycle questionnaire was completed by 41 community members as part of the needs assessment, with the following key findings:

- Downtown Rosemount was identified as the number one destination for convenient walking/biking access in the city (95 percent of respondents), followed by Rosemount Middle and High School (80 percent), Shannon Park Elementary School and the Rosemount Community Center (each 72 percent), and Rosemount Elementary School (69 percent).
- Vehicle traffic volumes and speeds were the biggest deterrents to walking and biking (44 percent of respondents), followed by a lack of on-street bike lanes (42 percent).
- Intersection and street crossings were identified as the most significant improvement that could be made for both biking and walking conditions in the city (54 percent and 44 percent of respondents, respectively).

As of the time that this plan was completed, a draft Pedestrian and Bicycle Master Plan had been developed and was under review. The draft plan identifies the downtown area and Rosemount elementary/middle/high school campus as a focal point for pedestrian and bicycle activity because it provides convenient and safe routes to and through Rosemount's central core of schools, neighborhoods, and businesses. Recognizing the importance of this area, the draft plan includes a number of recommendations that are near the school campus or would directly benefit students walking or biking to school:

- Create Trail and Bikeway Connections in the School and Park Campus
  - Build trail on east side of Chili Avenue from 145<sup>th</sup> Street to Rosemount High School
  - Create pedestrian-bike plaza in front of Rosemount High School and divert traffic to the parking lot drives

- Connect existing trails in Schwarz Pond Park and school campus
- Improve pedestrian and bike access to the Community Center
- Build Underpasses at TH 3 and CSAH 42
  - Build TH 3 underpass and rest area (between Connemara Trail and 142<sup>nd</sup> Street)
  - Engage Dakota County in a discussion about acquiring land for a grade separated crossing on CSAH 42
- Install Wayfinding Signage in a Pilot Area in the Downtown and School Zone
- Create Trail Heads and Rest Areas
  - Create trail heads with bike parking, benches and water at Central Park and Schwarz Pond Park
  - Create rest areas with bike parking and benches and water on the Rosemount Elementary/Middle/High School campus and on Shannon Parkway north of 133<sup>rd</sup> Court W near Shannon Park Elementary

### **Rosemount High School Safe Routes Recommendations**

The following recommendations have been developed specifically for Rosemount High School 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 recommendations has also been identified. Many of the Safe Routes recommendations on the high school site are also interrelated to the Rosemount Pedestrian and Bicycle Master Plan and close coordination with the City of Rosemount will be necessary as both plans move forward into implementation.

### **Short-Term Recommendations**

The short-term recommendations in this section primarily consist of low-cost improvements that can be implemented in six months, although some are depending on funding availability. The recommendations are generally prioritized in terms of actions that are easiest or most necessary to complete first. The infrastructure improvements are also summarized on the map included on page 22.

1. Open the back or side doors of the school during arrival so that students walking or biking from the north can take the shortest route and enter the building at the most convenient door. Implementation lead – Rosemount High School.

- Install stop signs to control vehicle right-of-way at the parking lot entrances/exits onto 142<sup>nd</sup> Street. Implementation lead – Rosemount High School/District 196.<sup>2</sup>
- 3. Install new bike racks in more prominent and accessible locations on the site. Implementation lead Rosemount High School.<sup>2</sup>
- 4. Provide incentives to students for walking and biking, such as water bottles, gift cards, or getting out of class early. Implementation lead Rosemount High School.<sup>3</sup>



Walk to School Day held at Rosemount High School in May 2010. The event was organized by the Green Team, and students that walked to school received water bottles.

5. Install a test of traffic rerouting in the main parking lot to reduce pedestrian/vehicle conflicts. 142<sup>nd</sup> Street in front of the high school would be blocked at the parking lot entrances on each end and traffic would flow along the outside of the lot. This improvement would require the installation of concrete barrier, barricades, or delineators to close the roadway, new signing to direct drivers approaching the parking lot, restriping of the parking lot, and the design of the signing and striping plan.

Safe Routes to School Comprehensive Plan Rosemount High School

<sup>&</sup>lt;sup>2</sup> The City of Rosemount has already taken steps to implement this recommendation by applying for a \$25,000 Active Living grant from Dakota County. A portion of the grant application, including new bike racks, was selected for funding.

<sup>&</sup>lt;sup>3</sup> Rosemount High School has already taken steps to implement this recommendation using a \$1,000 Safe Routes mini-grant to purchase bike/walk incentives.

Implementation lead – Rosemount High School/District 196 with assistance from the City of Rosemount.  $^4$ 

- 6. Construct pedestrian ramps at the 142<sup>nd</sup> Street crossing to upgrade the crossing to meet accessibility standards.
- 7. Continue to conduct counts of pedestrians, bikes, and parked vehicles to monitor progress towards the goal of reducing the number of student vehicles. This could be done through the Green Team or as part of a class. Implementation lead Rosemount High School.
- 8. Continue the activities of the Green Team to provide on-going support and organization for walking and biking activities. Plan yearly activities for International Walk to School Month in October and National Bike Month in May. Implementation lead Rosemount High School.
- 9. Hold regular (e.g., quarterly) coordination meetings with the City of Rosemount, District 196, Rosemount Elementary School, and Rosemount Middle School regarding walking and biking activities, funding opportunities, and planning for infrastructure improvements. Implementation lead City of Rosemount, Rosemount Elementary, Middle, and High Schools, and District 196.

### **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 maps included on pages 22 and 23.

<sup>&</sup>lt;sup>4</sup> The City of Rosemount has already taken steps to implement this recommendation by applying for a \$25,000 Active Living grant from Dakota County. The traffic rerouting portion of the grant application was not selected for funding.

- Pursue recognition for Rosemount as a Bicycle Friendly Community through the League of American Bicyclists. Implementation lead – City of Rosemount, with support from Dakota County and District 196.
- 2. Enact a Safe Routes to School policy to guide future walking/biking programs and projects. Implementation lead District 196, City of Rosemount, and Dakota County.
- 3. Designate a Safe Routes coordinator at the district level and each of the individual elementary 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. Implementation lead District 196.
- 4. If traffic rerouting is not done (short term recommendation #6), upgrade the school crossing signing to fluorescent yellow-green signing and upgrade the crosswalk markings to zebra or ladder style, which are more visible. Install new flasher systems on 142<sup>nd</sup> Street that are pedestrian-activated or time-based to flash only during limited time periods when pedestrians are present. Implementation lead Rosemount High School/District 196.



Example of midblock zebra crosswalk with pedestrian-activated flashers.

- 5. Construct paved multi-use paths to connect the existing trails in Schwarz Pond Park to the high school/middle school/elementary school campus. Implementation lead District 196.
- Reconstruct and widen approximately 220 feet of existing trail between the top of the parking lot stairs and Cantata Avenue. Implementation lead – Rosemount High School and District 196.
- 7. Construct approximately 1,500 feet of trail on the west side of TH 3 (Robert Trail) between existing trail endpoints at Connemara Trail and 140<sup>th</sup> Circle. Implementation lead City of Rosemount.
- 8. Construct trail on the east side of Chili Avenue between 145<sup>th</sup> Street and Rosemount High School. Implementation lead City of Rosemount.
- 9. Install pedestrian/bicycle wayfinding signing through the school district campus to provide better connectivity to the rest of the community and sidewalk/trail network. Implementation lead City of Rosemount.
- 10. Continue to monitor the need for a traffic signal at the TH 3 (Robert Trail)/142<sup>nd</sup> Street intersection. Implementation lead –City of Rosemount.
- Continue to monitor safety and capacity on Chili Avenue and at the Chili Avenue/Chippendale Avenue/145<sup>th</sup> Street intersection. Implementation lead – City of Rosemount.
- 12. Consider adding walking and bicycling curriculum to physical education classes and a bicycle repair shop as an after school club, or as part of a course offering in the Technical Education curriculum. Implementation lead Rosemount High School/District 196.
- 13. Conduct a bike/walk mapping project with the high school students around the high school/middle school/elementary school. Students collect information about available routes and develop maps of routes to and from school, as well as other key "safe" locations like libraries, police station, other schools, or community center. This project could be done as part of a class, by the Green Team, by the National Honor Society, or other groups. Implementation lead Rosemount High School.

14. Establish a Rosemount High School Bicycle club in partnership and coordination with the Rosemount Cycling Club – Rosemount High School.

### **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:

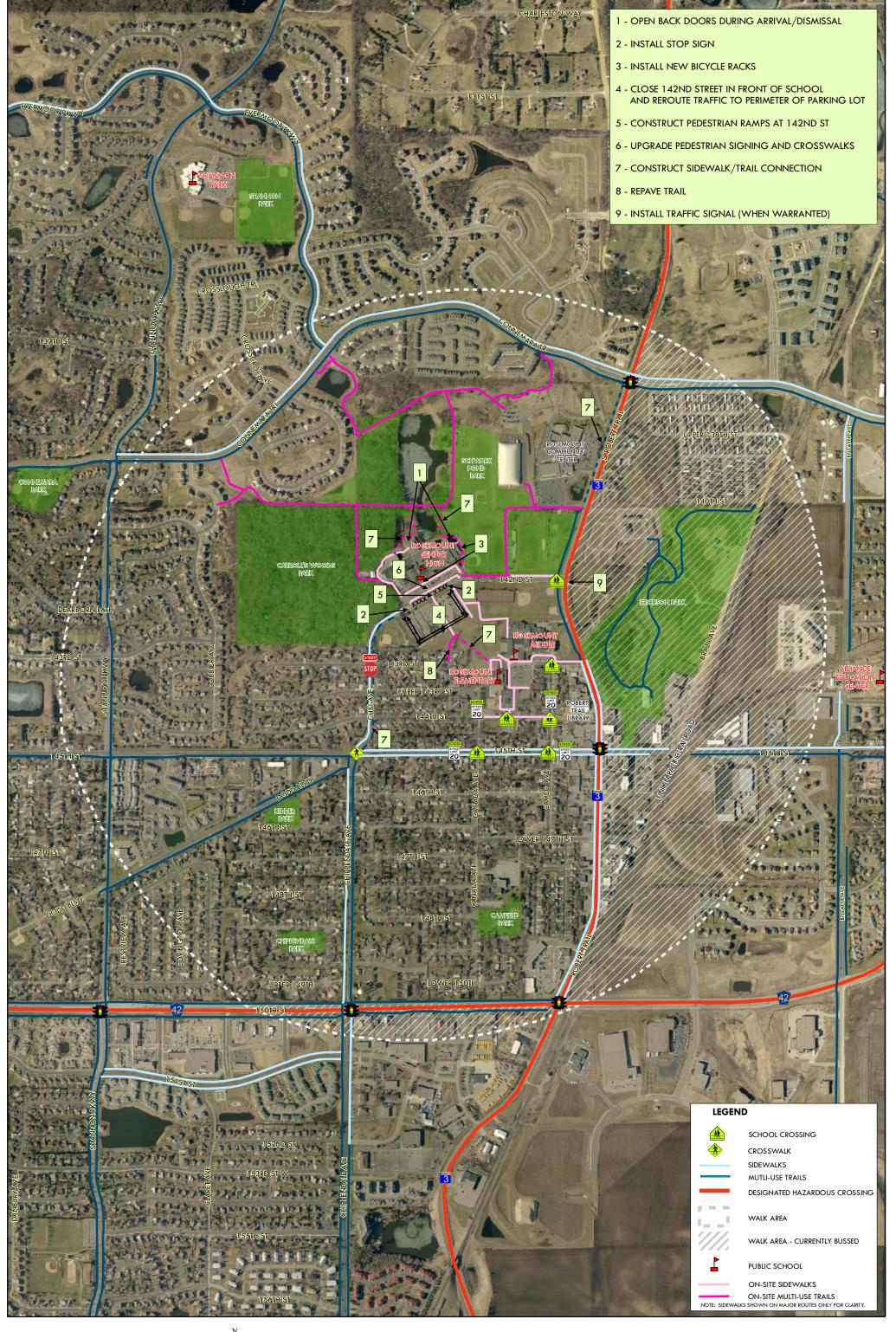
- Statewide Health Improvement Program funds, which are available through several programs administered by Dakota County Public Health:
  - Safe Routes to School mini-grants
  - Active Living grants, which are available to cities in Dakota County, but may be used to fund improvements on school sites
  - 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 applications submitted to the Metropolitan Council on a two-year cycle (next cycle will be in 2011 for funds to be used in 2015-2016)
- Federal Safe Routes to School funds through the Minnesota Department of Transportation <sup>5</sup>

Other sources of funding, as identified in the City of Rosemount's Pedestrian and Bicycle Master Plan include:

Partnerships Partnerships with public and private organizations to provide assistance with design, outreach and maintenance. Potential partnership organizations, in addition to the City of Rosemount and Rosemount High School that participated in the development of this plan, may include Dakota County, Dakota County Active Living Partnership, Rosemount Cycling Club, and area businesses.

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<sup>&</sup>lt;sup>5</sup> The federal Safe Routes to School program was funded via SAFETEA-LU legislation 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.









### ROSEMOUNT HIGH SCHOOL RECOMMENDATIONS -PARKING LOT REROUTING







# Dakota County Safe Routes to School

### Donations

Private donations from individuals or area corporations or donations of labor from recreation clubs or use agreements or trail easements from landowners. Programs such as "adopt-a-trail" by an organization, business, or individual provide have successfully been used in many communities to help with maintenance tasks and raise awareness.

### Grants

Grants are often available to governmental agencies (city and county), but may also be available directly to Rosemount High School and District 196. As priority projects are identified, the City of Rosemount, Rosemount High School, District 196, and Dakota County will need to closely coordinate their efforts to maximize potential grant funding opportunities. For a full listing of potential grant sources, refer to the City of Rosemount Pedestrian and Bicycle Master Plan.

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.