

Kerkhoven Murdock Sunburg High School Safe Routes to School Plan

[Introduction: KMS Safe Routes to School Team](#)

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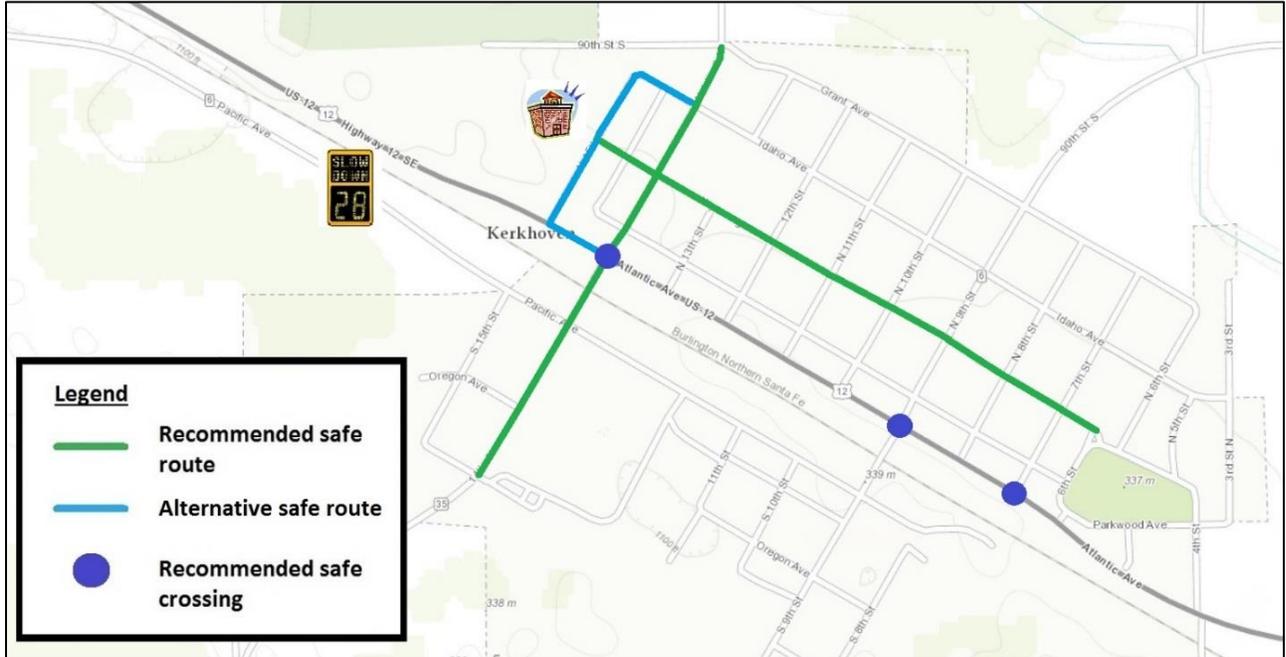
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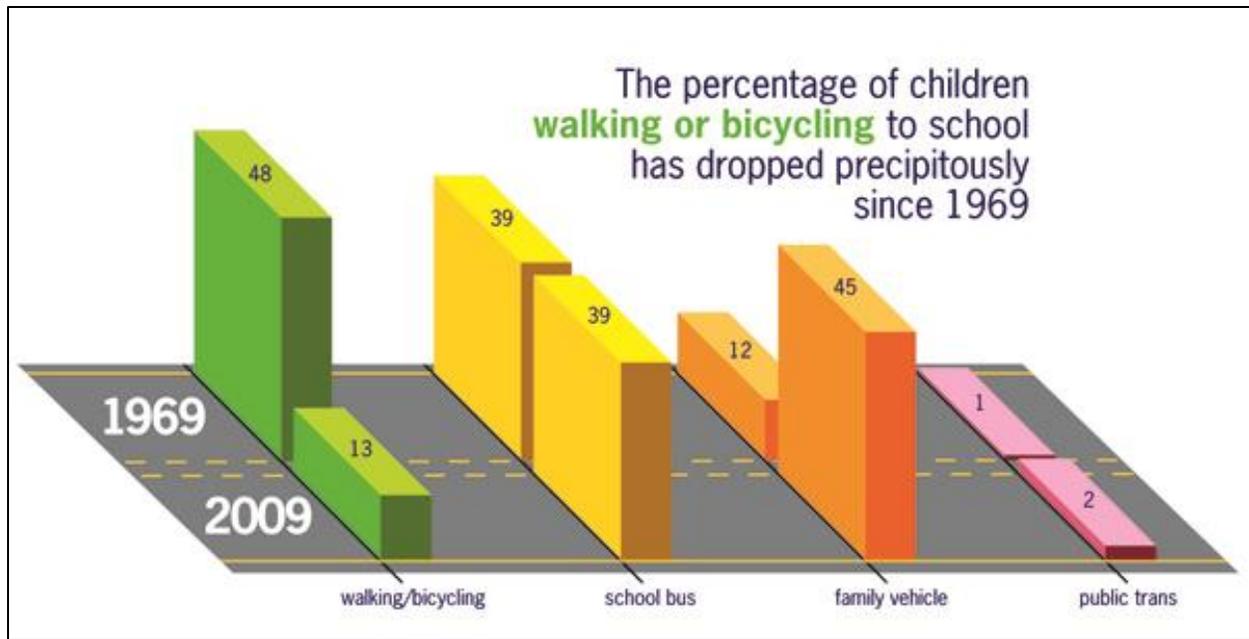
Kerkhoven Safe Routes to School Recommended Path



What Is Safe Routes to School?

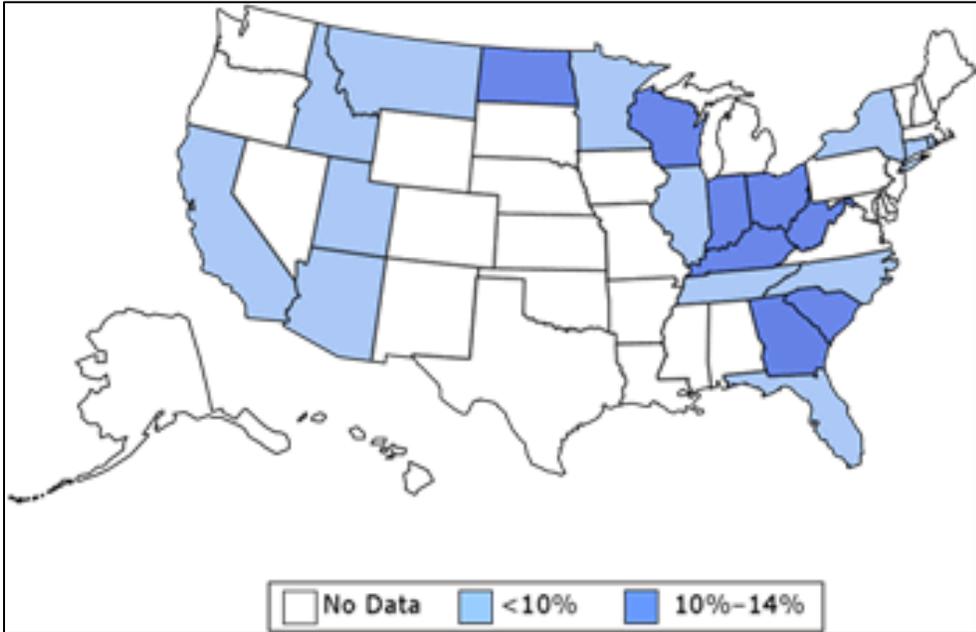
Walking and biking to school was once the way most students arrived at school, but that has since changed dramatically.

Percentage of Children Walking or Bicycling to School 1969 vs. 2009

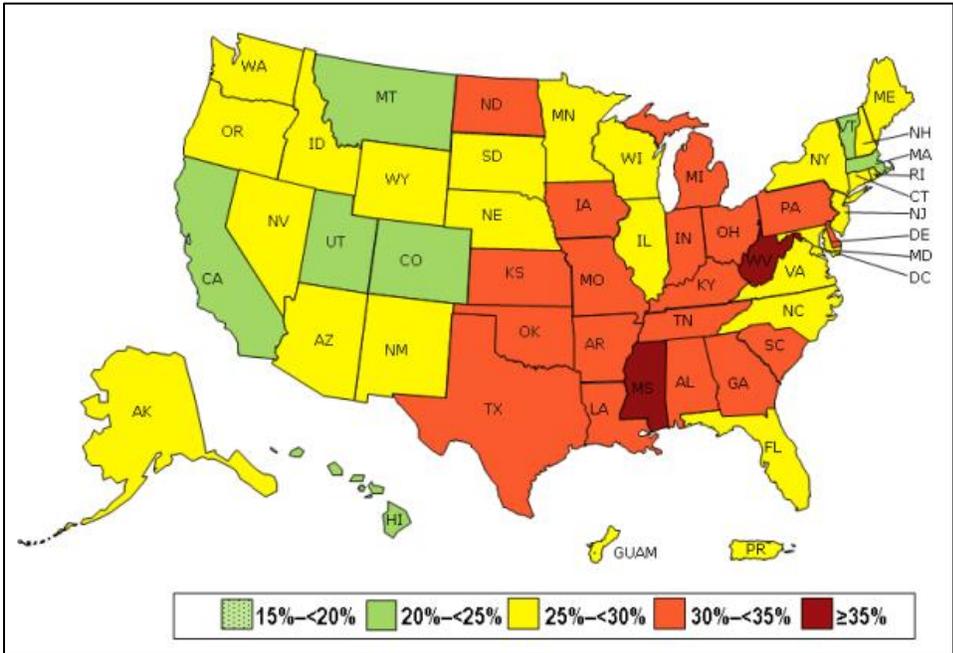


Safe Routes to School was created, in part, to help reverse the alarming nationwide increase in childhood obesity and inactivity.

U.S. Obesity Rates by State in 1985

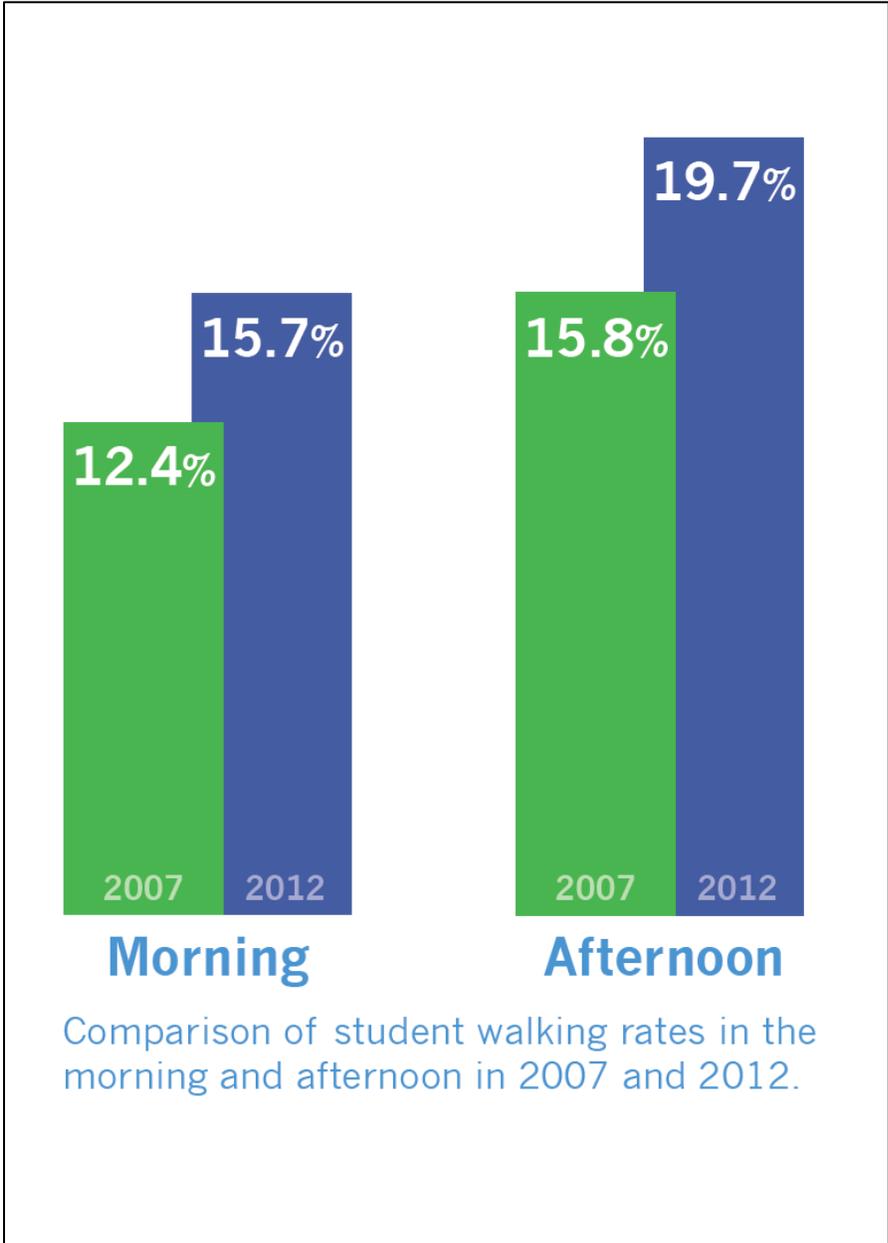


U.S. Obesity Rates by State in 2013



Safe Routes resources and activities help communities: build sidewalks, bicycle paths and pedestrian-friendly infrastructure.

Student Walking Rates After 2005 Creation of Safe Routes to School

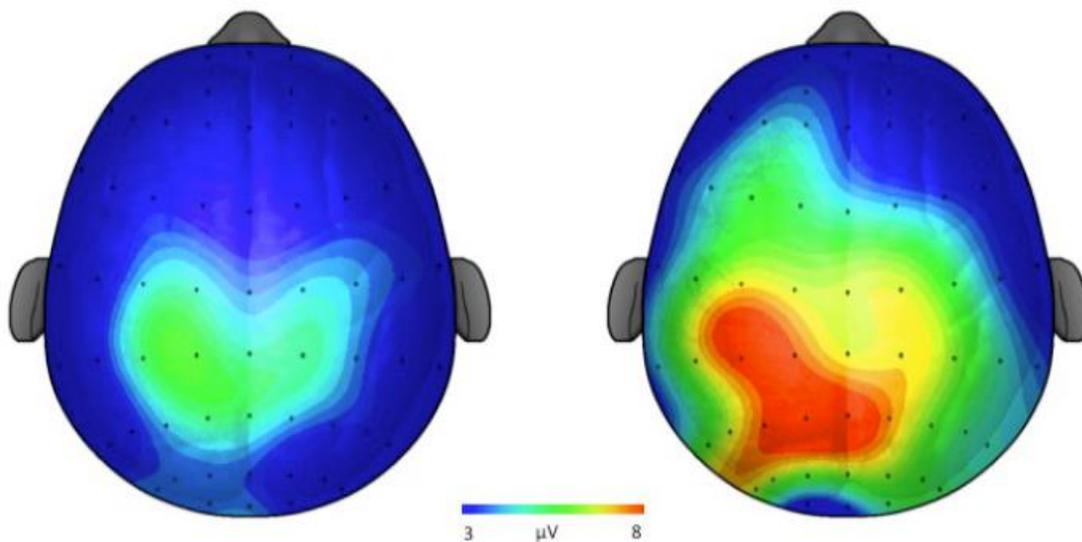


Safe Routes to School has numerous benefits to local communities including reduced traffic congestion, improving air quality and helping kids arrive to school focused and ready to learn.

Brain Images of Students Following Sitting and Walking for 20 Minutes

Composite Attentional Allocation of 20 Students Taking the Same Test

These two brain images, taken from the top of the head, represent the average amount of students' neural activity during a test following sitting and walking for 20 minutes. The color blue represents lower neural activity, while the color red denotes higher brain activity in a given region.



After 20 minutes of sitting quietly

After 20 minutes of walking

Image courtesy of Charles Hillman, University of Illinois at Urbana-Champaign

Key Points in the Safe Routes to School Plan

The key points that will be covered in this plan are:

- A summary of the existing conditions around KMS High School (as discovered by the survey results and walk/bike audit results)
- A list of existing issues identified through the plan process
- The KMS High School Safe Route Map
- The KMS High School Safe Routes Action Plan
- Implementation steps for the KMS High School Safe Routes Action Plan
- The KMS High School Evaluation Plan

Why This Is Important

Safe Routes to School is important for the City of Kerkhoven because if KMS School District is going to encourage children to walk and bike to school, they need a safe community in which to do so. Partnering with the community to design and create better walking and biking options also benefits the entire city's economy as well as their safety.

U.S. Highway 12 that runs the length of the City of Kerkhoven is signed at 30mph through the city, but it is signed at 60mph just outside the city limits. According to a recent literature review performed by the National Association of City Transportation Officials (or NACTO) looking at vehicle traffic speeds, public education and enforcement work well on higher speed roadways, but permanent engineering changes are more effective for improving pedestrian safety in lower speed areas. U.S. Highway 12 does not feature many of the commonly used engineering features designed to slow vehicle traffic, such as curb extensions or narrow road widths. Combined with the findings of a recent NYC DOT study that most traffic deaths are caused by vehicles ignoring existing traffic rules, it becomes clear that U.S. Highway 12 has potential to create unsafe walking and biking conditions and the results of these conditions could potentially be very serious.

The route identified by the KMS Safe Routes to School team makes a conscious effort to remove as much pedestrian and bicycle traffic from U.S. Highway 12 as

possible. Combining the fact that a pedestrian struck by a vehicle traveling at 40mph (just 10mph above the posted limit) only has a 30% chance of survival and the conditions on U.S. Highway 12 are conducive to speeding vehicle traffic, it became obvious to the KMS Safe Routes to School Team that this was the best solution supported by the community of Kerkhoven.

The benefits of creating a designated Safe Routes to School path for KMS High School predominantly 2 blocks removed from U.S. Highway 12 are two-fold. First, there is evidence that streets with protected paths are significantly safer for bicyclists and pedestrians. A 2015 NYC Department of Transportation traffic study found a 43% reduction of injuries on streets with protected paths. Secondly, by concentrating the bicycle and pedestrian traffic onto one specific route, there will be increased visibility of the non-motorized traffic in the City of Kerkhoven. This is especially important in the rural City of Kerkhoven with less population to potentially use this designated route. Former NYC Department of Transportation (DOT) Commissioner Janette Sadik-Kahn astutely observed that when drivers see more bikers, they learn to expect them and to anticipate their movements. They slow down, which also protects those who walk. The proposed designated Safe Route would provide the advantages both of a protected path and increased bike and pedestrian presence.

The larger community of Kerkhoven will also receive similar safety benefits from this designated route. This is especially important for the 18% of Kerkhoven that are 65 or older, as the same NYC DOT traffic study found that although persons 65 or older are less likely to be struck by a vehicle, their resulting injuries are far more likely to be fatal.

The benefits of a protected path to increase and encourage walking and biking extend beyond basic safety. The American Heart Association lists the benefits of walking as: maintaining a healthy weight, preventing or managing various conditions (including heart disease, high blood pressure and type 2 diabetes), strengthening bones and muscles, improving mood, and improving balance and coordination. They also advise that brisk walking contributes to their recommended 150 minutes per week of moderate-intensity aerobic activity for overall cardiovascular health.

The benefits of a protected path to increase and encourage walking and biking also extend beyond health and safety. It can also bring economic benefits to the community. A frequently cited study on the economic benefits of walkability performed by the Victoria Transport Policy Institute lists a wide range of potential economic benefits found in communities found to be more walkable based on travel surveys. Some of the benefits listed were: increased local business activity and employment, increased neighborhood interaction and community cohesion, improved accessibility (particularly for non-drivers), reduced transportation costs, increased parking efficiency, health cost savings from improved exercise, improved accessibility for people who are transport disadvantaged, reduced external transportation costs (crash risk, pollution, etc.), improved opportunities to preserve cultural resources (e.g., historic buildings) and increased exercise.

The Safe Routes to School Team has worked closely with the Kerkhoven community throughout the entire planning process to ensure that the recommendations of the plan are feasible and supported by the larger community. We believe that the changes recommended in this plan will make the City of Kerkhoven a safer, healthier and more prosperous place for the whole community.

Action plan: list of identified strategies with prioritized short and long term action steps

The Plan

Since 2012, MnDOT has worked to develop statewide programs to support Safe Routes to School programs across the state. Nearly 500 schools have been awarded funding through MnDOT. Additionally, the Minnesota Department of Health supports the Statewide Health Improvement Program, which funds work to increase access to physical activity opportunities.

Currently, over 225 schools throughout the state are working to advance SRTS efforts, potentially reaching over 110,000 students in two years. There are countless champions such as parents, teachers, school administrators, local public health staff, community members, state and local advocates, and public safety officials who are making the SRTS movement a reality at the ground level.

Our Approach

Safe Routes to School is based on the 6Es approach to SRTS. The 6Es are strategies of a comprehensive SRTS Program, which include: engineering, enforcement, education, encouragement, evaluation and equity. The most effective Safe Routes to School programs include elements of all of the 6Es:

Evaluation Monitor and document outcomes before and after the intervention

Engineering Create operational and physical improvements surrounding schools

Education Teach children about the broad range of transportation choices

Encouragement Use events and activities to promote walking and bicycling

Enforcement Partner with local law enforcement

Equity Achieve fairness in the distribution of benefits and costs

Engineering

Engineering refers to creating improvements surrounding schools that reduce speeds and potential conflicts with motor vehicle traffic, and establish safer and fully accessible crossings, walkways, trails and bikeways. Many communities in the State of Minnesota were not designed to be safe and comfortable for people walking and bicycling. Once problem areas are identified, communities work with local governments to prioritize local funding for improvements or apply for funding through MnDOT's SRTS grant process or other sources.

Future Actions

[See action plan matrix for details]

Safe Paths

- The KMS Safe Routes Team has identified one east/west path and 2 north/south paths for students walking or biking to school in the City of Kerkhoven. For students on the north side of U.S. Highway 12, it begins at the intersection of Wyoming Avenue and 6th Street and heads northwest to 15th Street, adjacent to the school. Children can feed into the path from any local north/south street. For students on the south side of U.S. Highway 12, it begins at the intersection of County Road 35 and Montana Avenue and

heads northeast on County Road 35 until it intersects with the east/west path along Wyoming Avenue. At that point, students will turn left and walk the remaining block to school. Since County Road 35 is not yet a safe option, students may wish to turn left at U.S. Highway 12 and proceed one block west, where they can then turn right and take 15th Street in the northeast direction for the remaining block to the school campus. The KMS Safe Routes to School Plan provides recommendations for infrastructure improvements to both Wyoming Avenue and County Road 35 based on the Federal Highway Administration's Small Town and Rural Multimodal Networks Guide

- The KMS Safe Routes Team recommends pedestrian and bicycle improvements on County Road 35 from Montana Avenue to Idaho Avenue. This will require widening of the shoulders of this road. The team is recommending a permanent sidewalk be installed on County Road 35
- The KMS Safe Routes Team recommends a sidewalk be installed at U.S. Highway 12 and 15th Street to provide a handicap accessible path between 14th Street and 15th Street along U.S. Highway 12
- The KMS Safe Routes to School Team recommends traffic calming techniques be applied on U.S. Highway 12 and County Road 35 in the City of Kerkhoven to ensure safe travel speeds throughout the city

Crossing Improvements

- The KMS Safe Routes to School Team recommends a protected crossing featuring a pedestrian activated beacon, crosswalk striping and crosswalk signage at the intersection of U.S. Highway 12 and County Road 35 to provide a safe place to cross U.S. Highway 12 on the west end of the city near the school campus.
- The KMS Safe Routes to School Team recommends a protected crossing featuring a pedestrian activated beacon, crosswalk striping and crosswalk signage at the intersection of U.S. Highway 12 and County Road 6 to provide a safe place to cross U.S. Highway 12 on the east end of the city
- The KMS Safe Routes to School Team recommends a protected crossing featuring a pedestrian activated beacon, crosswalk striping and crosswalk signage at the intersection of U.S. Highway 12 and 7th Street to provide a safe place to cross U.S. Highway 12

- The KMS Safe Routes to School Team recommends a marked crosswalk on County Road 35 & Wyoming Avenue to ensure safe crossing of County Road 35 by students utilizing the east/west route along Wyoming Avenue
- The KMS Safe Routes to School Team recommends a marked crosswalk on County Road 6 & Wyoming Avenue to ensure safe crossing of County Road 6 by students utilizing the east/west route along Wyoming Avenue
- The KMS Safe Routes to School Team recommends improved safety on railroad crossing at County Road 35 and U.S. Highway 12 to provide Kerkhoven with a safe place to cross the railroad tracks on the west end of the city near the school campus

Signage

- The KMS Safe Routes to School Team recommends new bus stop signage at every bus stop in Kerkhoven to raise awareness of where buses will stop for boarding and where kids may loiter waiting for the bus
- The KMS Safe Routes to School Team recommends flashing 'School Zone' signage along US Highway 12 west of 15th Street to alert traffic entering the city that they are entering a school zone while school is in session

Education

Education is a key component of comprehensive SRTS programs. Education means teaching children about the broad range of transportation choices, instructing them in important lifelong bicycling and walking safety skills and launching driver safety campaigns in the vicinity of schools.

- The KMS School District believes the health of their students is a central part of their mission. They have a health committee that manages the district's initiatives to ensure the district is encouraging and fostering healthy habits

Future Actions

[See action plan matrix for details]

Establish the Routes

- The KMS Safe Routes Team recommends that district staff teach students the identified Safe Routes to ensure that students are familiar with the

paths identified as most safe for walking and biking within the City of Kerkhoven

- The KMS Safe Routes Team recommends that district staff use outreach to inform parents, community members, and businesses about the Safe Routes to reinforce the recommended paths
- The KMS Safe Routes Team recommends district staff distribute the walk/bike to school map created by the UMRDC during the planning process
- The KMS Safe Routes Team recommends district staff post a high-visibility map of the walk/bike routes in the school

Teach Students Safe Walking and Biking

- The KMS Safe Routes Team recommends developing an ongoing school safety campaign to continue to teach children safe habits, including walking and biking in the community of Kerkhoven
- The KMS Safe Routes Team is recommending that the bike safety program currently offered at KMS Elementary School be offered at KMS High School to reinforce safe bicycling habits and to reinforce the recommended paths by riding with an instructor
- The KMS Safe Routes Team is recommending KMS High School introduce a pedestrian safety class to reinforce safe walking habits and to reinforce the recommended paths

Enforcement

Enforcement in SRTS is usually coordinated with local law enforcement to ensure that traffic laws are obeyed in the vicinity of schools (this includes enforcement of speeds, yielding to pedestrians in crosswalks and proper walking and bicycling behaviors) and initiating community enforcement such as crossing guard programs and student safety patrols. Many parents cite speeding cars or distracted drivers as primary concerns affecting whether or not they allow their child to walk or bicycle to school. Enforcement activities help increase compliance with traffic and parking laws, making the streets safer for all users.

Future Actions

[See action plan matrix for details]

Work with Law Enforcement

- The KMS Safe Routes Team recommends the KMS School District work with local law enforcement to communicate the identified crossings and enforce traffic laws at these intersections. This will be especially important until the recommended infrastructure improvements are made
- The KMS Safe Routes Team recommends that KMS School District, the City of Kerkhoven and local law enforcement work together to enforce traffic laws on U.S. Highway 12, County Road 35, County Road 5 and all local streets
- The KMS Safe Routes Team recommends that the KMS School District work with local law enforcement to enforce no parking areas around the school to ensure identified crosswalks are visibly clear to avoid traffic conflicts
- The KMS Safe Routes Team recommends the KMS School District work with local law enforcement to communicate the identified corridors for Safe Routes to ensure they can work together to keep the paths safe for students

Evaluation

Evaluation means monitoring and documenting outcomes, attitudes and trends through the collection of data before and after the intervention. Evaluation will help demonstrate the impact of the KMS Safe Routes to School program. We've already documented current conditions with baseline surveys- next we will continue this process to measure the results of the KMS Safe Routes to School program.

- The KMS Safe Routes to School Team needed a starting point to measure the success of the Safe Routes program. A travel tally was administrated by KMS School District staff in the classroom to get information on how many children currently walk and bike to school.
- The KMS Safe Routes to School Team also needed a benchmark to determine the success of the engineering improvements. In 2017, a parent survey was administrated to understand parent's concerns with walking and biking in the City of Kerkhoven.

Future Actions

[See action plan matrix for details]

Program Success

- The KMS Safe Routes Team recommends annual follow-up travel tallies to determine if more children are walking and biking to school as a result of the Safe Routes program.
- The KMS Safe Routes Team recommends that KMS School District annually have staff perform pedestrian and bike counts to collect data on how many students are walking and biking to school.

Encouragement

Encouragement refers to using events and activities to promote walking and bicycling and to generate enthusiasm for the program with students, parents, staff and surrounding community.

- KMS School District currently participates in the national Walk & Bike to School Days and has had huge success in participation. The KMS Safe Routes to School plan will continue to grow on this tradition by improving the safety of the routes students use to walk and bike to school.

Future Actions

[See action plan matrix for details]

Provide Structure

- The KMS School District will continue the tradition of encouraging students to walk and bike to school on the national Walk & Bike to School Days. It will use this opportunity to reinforce the recommended routes and foster new walking and biking habits.

Reward and Acknowledge Students

- The KMS Safe Routes to School Team is recommending a mileage club to track the distance students cover while walking and biking to school. Rewards will be given to the highest achievers.

Equity

Equity is a needs-based approach to allocating resources that aims to achieve fairness in the distribution of benefits and costs. Discussion of equity

acknowledges that some communities and populations may require additional resources in order to have the same opportunities as other communities.

- The City of Kerkhoven has a more diverse population than other communities of similar size, with 12% of the population being non-white. It is exceptionally important that the City of Kerkhoven is constantly working to address equity within its community.

Future Actions

[See action plan matrix for details]

Accessibility

- By making the City of Kerkhoven more walkable from every residential area, the Safe Routes to School plan will provide opportunity equally across the community.

Issue identification: key issues emerging from the surveys, audits, and assessment results

Issue Identification

KMS High School is located in the City of Kerkhoven in rural Swift County, MN. KMS High School is located alongside County Road 35 with an average daily traffic of 980 vehicles and 2 blocks north of U.S. Highway 12 with an average daily traffic of 3,950 vehicles. The latest crash data reports that between the years of 2012-2016, three traffic fatalities occurred on Highway 12 in Swift County. KMS High School does not currently separate school bus and family vehicle traffic out in front of the school. There is a turnaround that is part of the large surface parking lot that spans the southern front side of the school building. The school is also located 5 blocks from an unbridged railroad crossing. Students that live south of U.S. Highway 12 must cross both an unbridged railroad crossing as well as the highway to access the school campus. These characteristics introduce several challenges that affect walking and bicycling in the City of Kerkhoven.

Distance to KMS High School

69% of students that attend KMS High School live more than 2 miles from the school. Walking or biking to school from home will likely never be a realistic option for these students. One possible solution to incorporate these children in the Safe Routes to School Program is walking school buses. A walking school bus is a group of children who walk to school on designated routes with adult supervision, while picking up kids along the route, just like a school bus. For some neighborhoods, it's a casual group walk, while others set up a formal plan with adults scheduled to walk on certain days. Children could be dropped off by the bus somewhere along the Safe Route to School and have the option to walk the rest of the way to school. Children who are dropped off at the intersection of 6th Street and Wyoming Avenue would complete 13 minutes of exercise walking the 0.6 miles to school. Walking to and from this point over a five-day week would amount to 130 minutes of physical activity. That is 87% of their weekly recommended physical activity by the American Heart Association.

Speed and Volume of Traffic on U.S. Highway 12

11% of parents surveyed indicated volume of traffic as a concern and 10% indicated speed of traffic as a concern. U.S. Highway 12, a thoroughfare that runs from Washington to Michigan, is the highest volume roadway in the City of Kerkhoven and is located 1 block south of the school. 43% of fatal traffic crashes in Swift County between the years of 2012-2016 occurred on U.S. Highway 12. The community expressed concern in Safe Routes to School planning meetings that pass-through traffic may not slow down to the posted 30mph in the City of Kerkhoven. That is a major concern for students walking and biking in the City of Kerkhoven considering recent studies finding a pedestrian stuck by a vehicle at 40mph has a 30% chance of survival. The KMS Safe Routes to School team has recommended a main corridor for the identified route as Wyoming Avenue, which is 2 blocks removed from U.S. Highway 12. There are students that currently live south of U.S. Highway 12 and must cross this highway to reach the school building. We are recommending these students utilize County Road 35 or U.S. Highway 12 and 15th Street as shown on the Safe Routes map for the City of Kerkhoven. Based on the high speed and high volume of traffic on this roadway, many improvements at this crossing are being recommended.

The speed limit on U.S. Highway 12 is 60mph before it reaches the City of Kerkhoven and the school is located at the westernmost edge that eastbound traffic will reach before it enters the city. For this reason, the KMS Safe Routes Team believes it necessary for engineering improvements to U.S. Highway 12 before you reach the City of Kerkhoven. The KMS Safe Routes Team is recommending signage west of 15th Street along U.S. Highway 12 that is flashing during school hours to alert motorists travelling eastbound along U.S. Highway 12 they are fast approaching a school zone and a recommended safe crossing point for students of the KMS School District.

Kerkhoven Safe Routes to School Recommended Path



Traffic Guides

There are many design guides provided by different organizations that recommend designs for traffic engineering. Two popular organizations are the Federal Highway Administration (FHWA) and the National Association of City Transportation Officials (NACTO). The FHWA guides referenced in this document are the Manual on Uniform Traffic Control Devices (MUTCD) guide and the Small Town and Rural Multimodal Networks (STAR) guide. The NACTO guides are generally regarded as more progressive and updated more rapidly and frequently

than the federal guides. The NACTO guides are explicitly tailored to urban areas but do provide supporting evidence where they agree with the FHWA manuals.

School Areas

The FHWA's Small Town and Rural Multimodal Networks (STAR) guide recommends that it is essential to provide separation for children from motorized traffic in school areas. They recommend that preferred facilities near schools provide as much separation as possible between children and motorized vehicles. They also recommend that facilities such as sidepaths and paved shoulders should be wider than typical facilities. The STAR guide states that sidewalks are preferred over shoulders (in this case referring to a pedestrian lane of any sort in the road). The STAR guide recommends pedestrian lanes in areas near schools as an interim or temporary accommodation for roadways lacking sidewalks. The design recommendations list an 8ft lane as the preferred width and 5ft as the minimum to allow for side-by-side walking. It recommends a double white line for extra emphasis and to discourage motor vehicle encroachment and states a flexible delineator to increase separation can be used.

Design Alternatives

The KMS Safe Routes to School Plan recommends several design alternatives for the established path. The most basic alternative is a striped lane for walking and biking that provides signage. A similar alternative features the same striping and lane width, but includes a flexible delineator to function in a similar manner to rumble strips to alert a motorist they have drifted out of the vehicle travel lane. Both have a similar treatment regarding intersections. Thick, double white lines are to cross the roadway at the intersection to clearly mark the path for passing motorists. The STAR guide recommends 'No Parking' signage on the pedestrian lane and recommends the lane be for pedestrians only. Considering there are no existing bike paths or bike lanes, it may be preferred by the community to allow the lane to accommodate bicycles as well, given the low volumes of pedestrian and cycle traffic expected. The STAR guide also recommends that part of the planning process, agencies should consider: detectability by people with vision disabilities, undesired use by bicyclists, accessible cross-slope requirements and

maintenance strategies, such as sweeping and snow removal. Flexible delineator posts can be temporarily removed to allow for the clearing the roadway in winter months. The STAR guide recommends a pedestrian lane as a temporary or interim solution until a physical sidewalk can be constructed. For sidewalks, the design guide recommends a 5ft sidewalk with a 4-6ft buffer between the sidewalk and the road, referred to as a “Furnishing Zone” and a 1-2ft buffer between the sidewalk and the adjacent property, referred to as a “Frontage Zone”.

Striped Lane with Signage

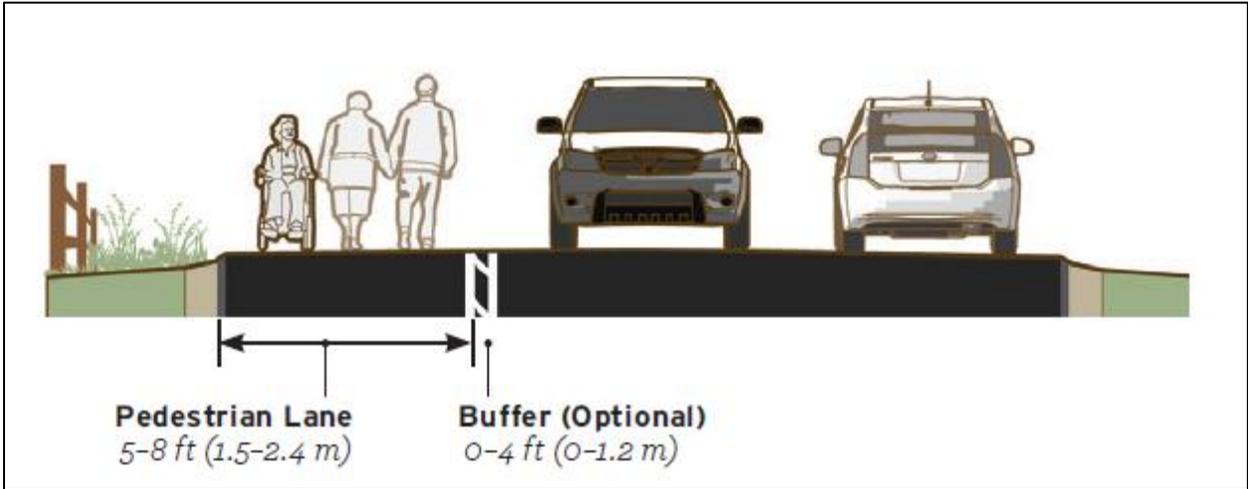
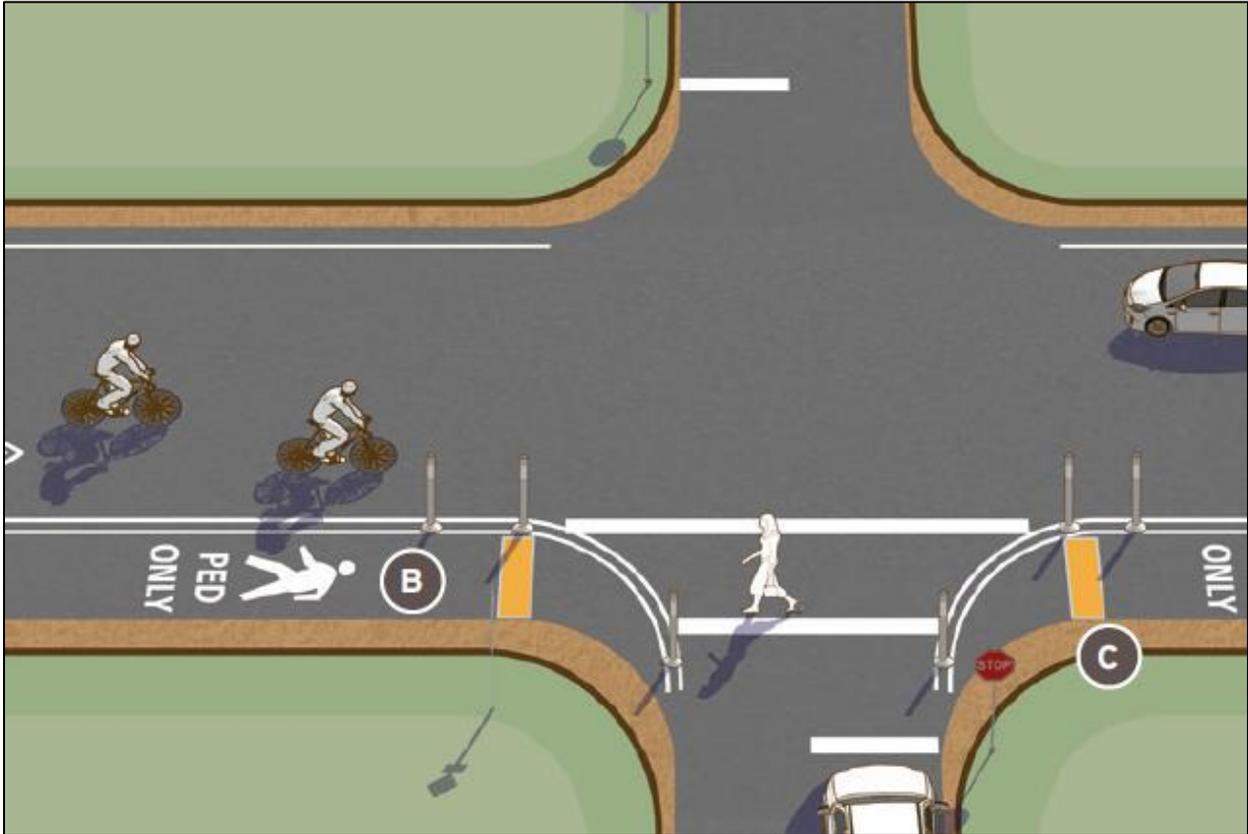


Photo Displaying Recommended Signage



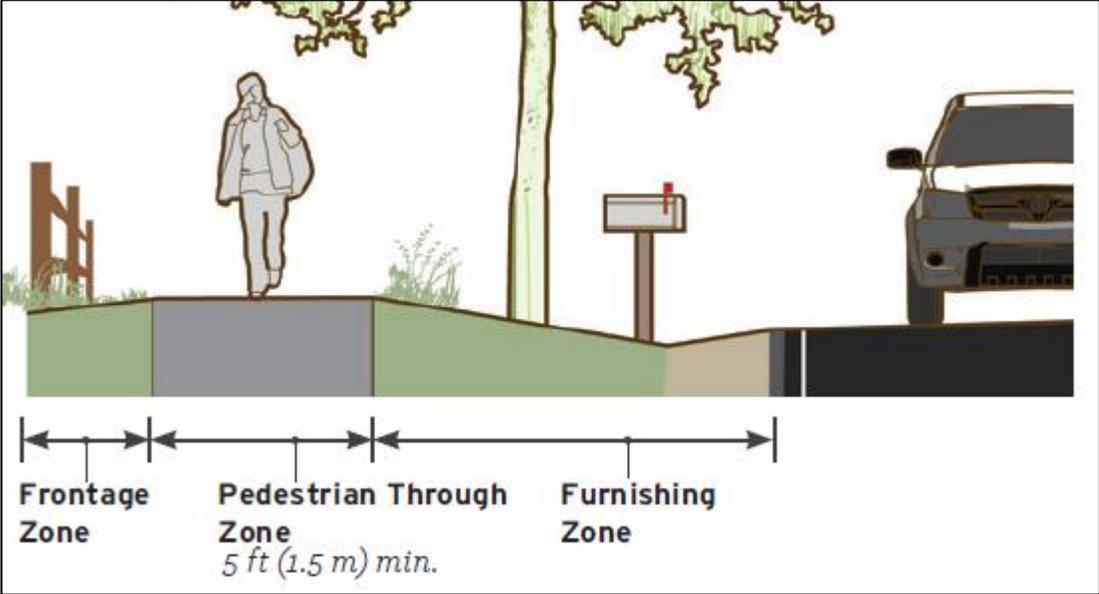
Intersection Treatments



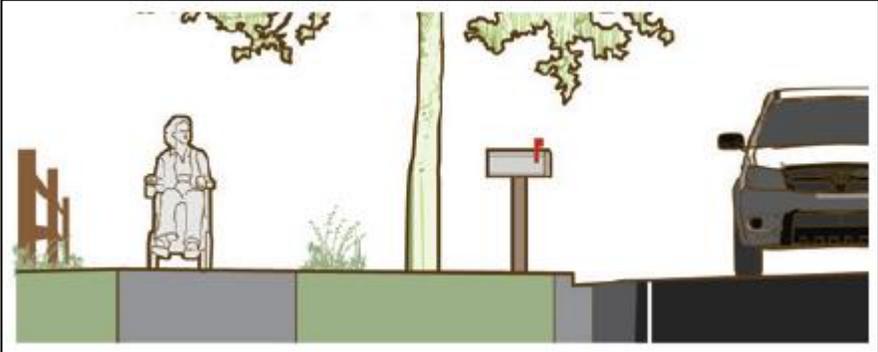
Striped Lane with Flexible Delineator



Five Foot Sidewalk with Frontage and Furnishing Zones



Sidewalk with Wide Furnishing Zone



Sidewalk with Thin Furnishing Zone



Speed and Volume of Traffic on County Road 35

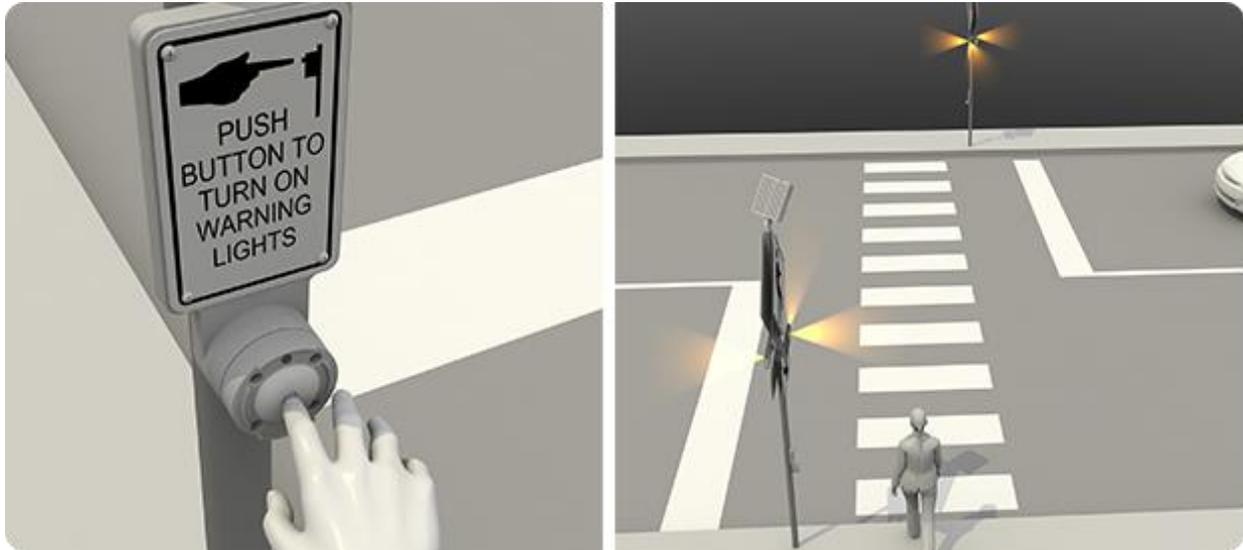
County Road 35 bisects U.S. Highway 12 and runs north to south the entire distance of the City of Kerkhoven. The speed on County Road 35 is 55mph before it reaches the City of Kerkhoven and there are currently no shoulders on the road. Pedestrian and bicycle traffic has no choice but to occupy a vehicle lane. With the average daily traffic of 980 vehicles travelling at 55mph, this has potential for conflict with severe consequences. This is a significant challenge for the walkability of the City of Kerkhoven. This is an obstacle for students who live on the south side of U.S. Highway 12 as well as residents of the city who wish to access the downtown by foot or bicycle.

The KMS Safe Routes Team has identified the need for a pedestrian lane or sidewalk along County Road 35 based on the guidelines above. County Road 35 will need shoulder widening to make any of the federally recommended pedestrian improvements possible. The KMS Safe Routes Team has also identified intersection improvements must be made at the intersection of U.S. Highway 12 and County Road 35.

Design Alternatives

The KMS Safe Routes to School Plan recommends a pedestrian activated flashing beacon for the recommending crossing at County Road 35 and U.S. Highway 12. The KMS Safe Routes Team also believes the City of Kerkhoven could benefit from similar crossing improvements at the intersection of County Road 6 and U.S. Highway 12 and the intersection of 7th Street and U.S. Highway 12. One such example is a Rectangular Rapid Flash Beacon (or RRFB). RRFBs are user-actuated amber LEDs that supplement warning signs at unsignalized intersections or mid-block crosswalks. They can be activated by pedestrians manually by a push button or passively by a pedestrian detection system. RRFBs are a lower cost alternative to traffic signals and hybrid signals that are shown to increase driver yielding behavior at crosswalks significantly when supplementing standard pedestrian crossing warning signs and markings. RRFBs typically receive power by standalone solar panel units, but may also be wired to a traditional power source.

Illustration of a Rectangular Rapid Flash Beacon (or RRFB)



Crossing Guard

To supplement an infrastructure improvement at the recommended crossing of County Road 35 and U.S. Highway 12, the Safe Routes to School Plan also recommends an adult crossing guard. Crossing guards help children safely cross the street at key locations. They also remind drivers of the presence of pedestrians. The presence of adult crossing guards can lead to more parents feeling comfortable about their children walking or bicycling to school. While the primary role of an adult school crossing guard is to guide children safely across the street, children also remain responsible for their own safety. In this manner, a guard plays another key function — a role model helping children develop the skills necessary to cross streets safely at all times.

The design and implementation of an adult school crossing guard program is largely the decision of local communities. Ideally, the development of an adult school crossing guard program involves a community partnership that includes the expertise of law enforcement agencies, traffic engineering or planning departments and school systems. The group establishes crossing procedures for a variety of traffic situations as well as hires, trains and equips the guards and secures long-term funding for the program.

Safety Patrol

To supplement the crossing guard and infrastructure improvement and assist with congestion during peak times, the KMS Safe Routes to School Plan also recommends the establishment of a student safety patrol. Student safety patrols enhance enforcement of drop-off and pick-up procedures at school by increasing safety for students and traffic flow efficiency for parents. Such efforts allow students to participate in promoting traffic safety where they learn skills they can use in their everyday lives. Having a student safety patrol program at a school requires approval by the school and a committed teacher or parent volunteer to coordinate the student trainings and patrols. Before beginning a program, school officials should be contacted for approval of the program and to determine how liability issues will be addressed.

Crosswalk

The KMS Safe Routes to School Team has identified 5 intersections in the City of Kerkhoven where crosswalks should be located: the intersection of County Road 35 and U.S. Highway 12, the intersection of County Road 6 and U.S. Highway 12, the intersection of 7th Street and U.S. Highway 12, the intersection of Wyoming Avenue and County Road 6 and the intersection of County Road 35 and Wyoming Avenue. These crosswalks would allow students and residents of the city multiple opportunities to cross U.S. Highway 12 without having to walk to either end of the town and provide safe intersections for the east/west path on Wyoming Avenue. These are also the currently utilized crossing points, so it would improve the safety of bikers and pedestrians already utilizing these crossings. The Federal Highway Administration's Manual Uniform Traffic Control Devices (MUTCD) guide states that warning signs should be installed at crosswalks and adequate visibility should be provided by parking prohibitions. Signage should be installed to comply with federal recommendations.

Railroad Crossing

There is an unbridged railroad crossing at the intersection of County Road 35 just south of U.S. Highway 12. Stakeholders from the community have identified this

crossing as a safety concern for their children. This railroad must be traversed to reach the school or the downtown for any city residents living south of U.S. Highway 12. The KMS Safe Routes to School Team recommends safety improvements to the railroad crossing at County Road 35 to ensure students and residents from the south side of U.S. Highway 12 can safely navigate to the school campus and the downtown area of Kerkhoven.

Background on the school and the community

Census demographics

Kerkhoven is a small city located in the mostly rural region of Western Minnesota. It is located along U.S. Highway 12 that runs from Aberdeen, Washington to Detroit, Michigan, for almost 2,500 miles. U.S. Highway 12 is a thoroughfare that remains an important road for local and regional travel.

Kerkhoven has seen an overall increase in population of nearly 18 percent from 1960-2010. Kerkhoven is one of only a handful of communities in the region that has experienced a positive overall growth rate since 1960. However, the population held steady with no growth from 2000 to 2010 and is projected to decrease over the next few decades.

The 2010 census data shows that there is a large percentage of the population in the middle aged and 10 and under age cohorts, which is uncommon for communities in the region as many have aging populations. Kerkhoven is more diverse than other communities in the region with over 12% of the population being non-white. This diversity may explain the higher percentages of youth in the population.

Kerkhoven is part of the KMS School District, which has seen a decrease in enrollment over the past decade, however it has had the second slowest rate of decline of all school districts in the region. Note that data is only available for public school districts.

Regional Plans

Bicycle friendly streets and paths were a focal point for the Upper Minnesota Valley Regional Trails Plan written in 2013. It identified the large number of communities within the region being asked for trails, touted the economic benefits of bicycle tourism, identified intra-city trails as the number one regional priority (specifically identifying trails connecting to schools, city parks and other recreational areas), and listed providing connectivity between: schools, parks, employment areas, commercial and downtown districts, neighborhoods and recreation areas as a guiding principle.

Swift County SHIP Data

The Statewide Health Improvement Partnership collects health data by county on school-aged children biannually. Swift County currently has six public schools in operation: Benson High School, Benson Area Learning Center, Northside Elementary School, KMS High School, Appleton Elementary School and KMS Elementary School.

According to the 2016 Minnesota Student Survey, 37% of 8th grade students in Swift County are classified as overweight or obese. 26% of the 11th grade students are also overweight or obese. The study also found that 21% of 5th grade students are not currently meeting the American Heart Association's recommendation for overall cardiovascular health. 20% of 11th graders are also not meeting this minimum requirement.

The survey found that there is a significant percentage of students in Swift County classified as overweight or obese, both of which are associated with health risks such as high blood pressure or type 2 diabetes. It also found there are many students who are not currently getting the minimum recommended amount of daily activity to protect their health.

Existing conditions: survey results

Distance as a major barrier

We received 69 responses to the Parent Survey out of the 267 currently enrolled children. This sample size is large enough to produce results that are statistically significant enough to represent the school. One of the most striking results was

that 69% of students live more than 2 miles from the school. This is a good indication that walking trains or walking school buses are going to have the most impact. 44% of students take the school bus. That indicates that a walking school bus implemented with the bus by the school would also affect a majority of students.

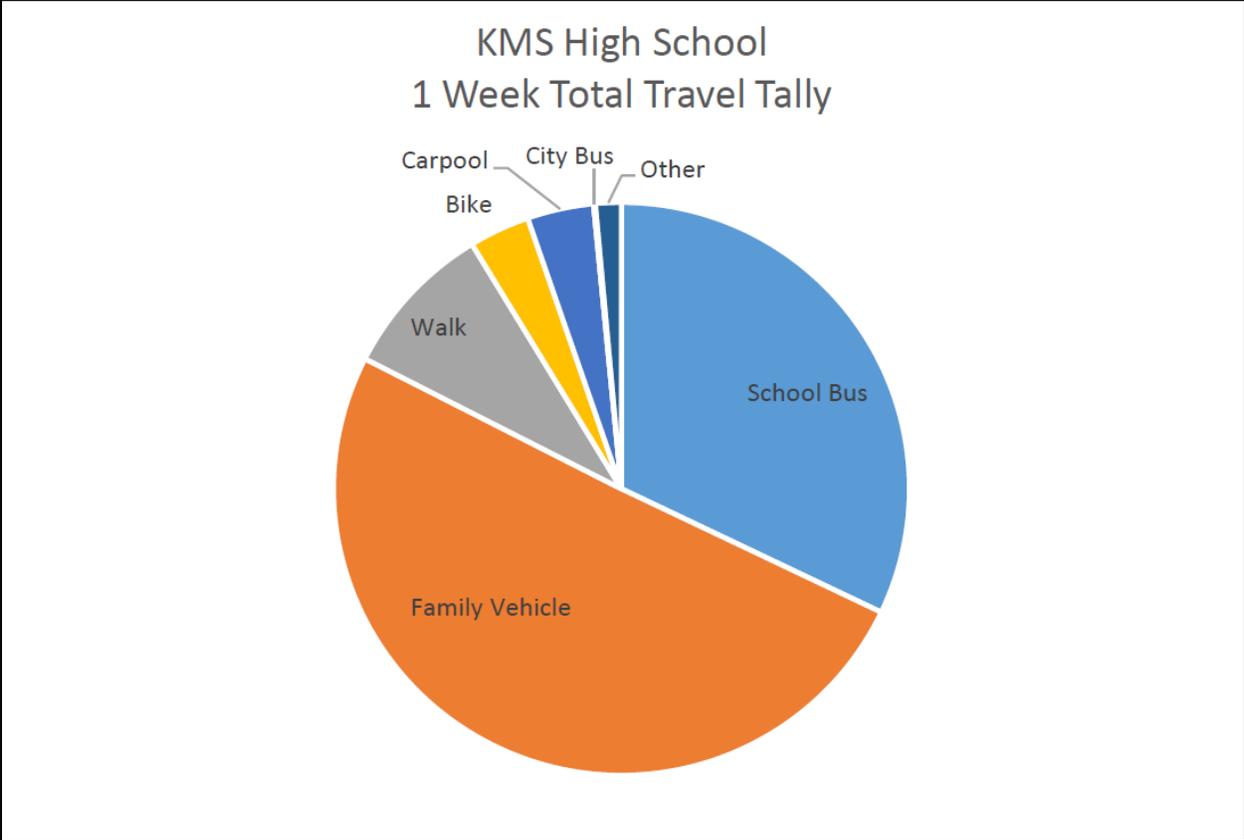
Barriers to walking and biking to school

11% of parents identified amount of traffic along route as an issue that affects their decision to let their child walk or bike to school. 11% say if there was an appropriate improvement to the amount of traffic, they would probably let their child walk or bike to or from school. 9% responded that if there were appropriate improvements made to speed of traffic along the route, they would probably let their child walk or bike to or from school. 9% responded that if there were appropriate improvements made to the safety of intersections, they would probably let their child walk or bike to or from school. 7% responded that if there were either adults to walk with or appropriate sidewalk improvements made, they would probably let their child walk or bike to or from school.

Student Travel Tally

We received 15 Student Travel Tally responses from 15 unique classrooms over a period of four days (10/3-10/6), which yielded information on 966 trips. Mean temperatures were mild- between 46 and 65 degrees each day. The findings from the surveys are illustrated in the charts below.

Student Travel Tally Results Pie Chart



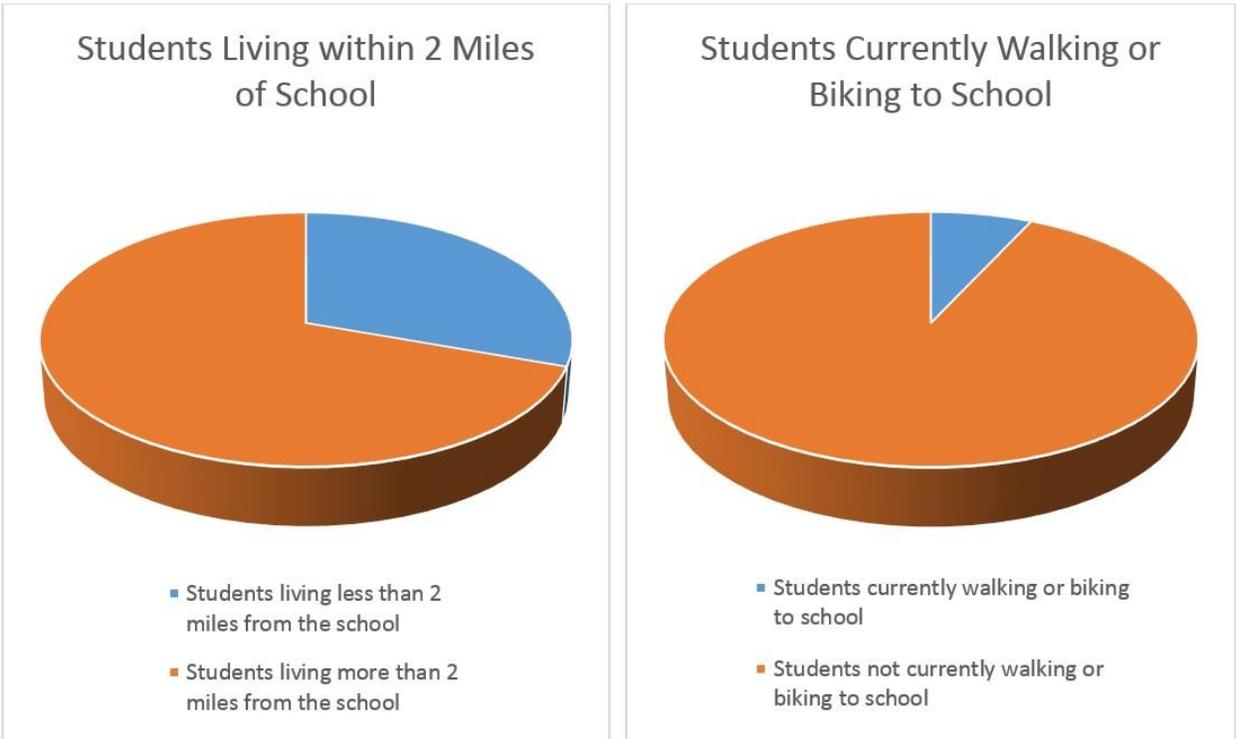
We found the majority students take a family vehicle or the bus to school (a combined 82%). The current share of students walking or biking to school is a combined 12%, with walking comprising 9% and bicycle riding the additional 3%. One trend that emerged from morning and afternoon tallies are students arriving in a family car but utilizing the bus for their trip home in the afternoon. We also noted a much larger share of family vehicle trips compared to the KMS Elementary School. It is practical to assume many high school students are driving themselves to school, which likely contributes to this difference.

Opportunity for mode switch

Our parent survey for the high school found that 31% of students at KMS High School (including the Pre-K students) live within 2 miles of the school. Our survey also found that currently only 7% of children that attend KMS High School currently walk or bike to school (this is significantly lower than the findings of the

student travel tally that indicated 12% of students are currently walking or biking to KMS High School). Our parent survey indicates that there is a potential for a 24% increase of students walking or biking to school for children who live within two miles of the school campus. Based on student population of 267, that amounts to just over 64 students.

Percentage of Children Living in Walk/Bike Zone vs. Children Who Walk/Bike Currently



Key findings regarding mode share:

- It appears that if the amount of traffic near the school was reduced, we could potentially increase the number of students walking to school by up to 11%
 - This would increase the percentage students currently walking or biking to school by more than 1.5 times from 7% to 18%
- Reducing the amount of traffic, reducing the speed of traffic and increasing the safety of intersections have the most potential to increase non-motorized mode share
- It is difficult to tell what (if any) overlap we have between the three groups
- Sidewalks and adults to walk with were also significant areas where improvements could be made
- Increasing the safety of sidewalks or adding the appropriate crossing guards could boost the share of children walking or biking to school to 14% (a 7% increase)

Existing conditions: walk and bike audit results

Walking/Biking Audit

The KMS walking and biking audit was completed by Wayne Hurley, Planning Director from West Central Initiative, Ashlie Johnson, Health Educator from Countryside Public Health, and Laura Ostlie, Economic Development Planner from Upper Minnesota Valley Regional Development Commission on November 10th, 2017. The audit took place in both the cities of Murdock and Kerkhoven. Fortunately, the weather turned out to be mild and sunny on that autumn day. Below are a few of the takeaways from the Kernhoven community:

- The bus stop near the Lutheran church in town had several challenges the team observed during the walking/biking audit:
 - The bus stop did not have visible signage. The sign that was up was a flimsy, laminated piece of paper held up by a thin post in the ground. The team felt it is unlikely this sign will be able to withstand Minnesota weather
 - Street parking was not restricted from the bus stop location. During the walking/biking audit, a truck was parked in front of this location while the team walked by

- The sidewalk only stretched within two homes in front of this bus stop. It abruptly stopped on either side and grass had grown over. This sidewalk also did not meet ADA guidelines
- The team observed significant inconsistency of the sidewalks within Kerkhoven
- The public, multi-family housing the team observed on Clara Avenue did not have ADA sidewalks located in front of it
- In front of the Presbyterian Church, a large tree had grown and uprooted the sidewalk, making it difficult to maneuver around without going onto the street
- The team noted that the Nolan Baker Ford Dealership may be a great location for bump outs on the curbs due to the location within the city and amenities near it
- Due to the traffic near Nolan Baker, the team felt that connecting the sidewalk east of the Kerkhoven Community Center would be beneficial to the walkability/bikeability of Kerkhoven
- The school's summer childcare program is located at the Kerkhoven High School. The park and swimming pool in which they frequent daily has no sidewalk access. The students (as young as preschoolers) are required to travel Wyoming Avenue without the protection sidewalks may provide
- The team felt a visible crosswalk would be valuable from the school sidewalk system to Wyoming Avenue
- The team observed that the city's mobile home park lacked any sidewalks providing connectivity to the adjacent streets
- The team observed that the railroad crossings on County Road 35 along with County Road 6 did not meet ADA requirements
- The team observed no crosswalk markings on Highway 12 from Lamecker's Hardware to Sophie's (the local ice cream shop). This has historically been a high-traffic area, specifically from people traveling from the pool during the summer months
- During the audit, the team identified multiple locations where utility pole spots were missing from sidewalk. This created open gravel or dirt holes within the sidewalk
 - An easy fix may be filling in these with concrete

- A carwash that is located on Hwy 12 and 15th Street. The team believe it could benefit from a sidewalk to the school. Multiple students walked or biked through the nearby alleyway instead
- The team observed traffic flowing onto Idaho Street during pickup and drop off times. A sidewalk there may provide pedestrians a safer route at that point
- Signage referencing a four-way stop was observed on Idaho Ave and County Road 35, yet there were only three signs visible at the intersection

Vision: the vision identified by the KMS Safe Routes to School team

We envision safe communities where students, their most valuable resource, can and do walk and bike to school safely

Because regional partners work together creatively to develop the physical and social environment to promote active transportation

Vision: goals identified by the KMS Safe Routes to School team

Goal 1: Increase the number of students walking and biking to school

Goal 2: Increase the number of bicycle and pedestrian facilities and amenities

Goal 3: Educate parents, students, and community members about safe driving, walking and biking practices

Goal 4: Promote walking and biking to school through educational and encouragement programs and events

Goal 5: Increased partnership with local law enforcement

Evaluation plan: detailed plan to evaluate progress over time

Our action plan identified two evaluation strategies that the KMS Safe Routes to School Team thought would be most effective to measure the progress of the program. These are: administering a student travel tally to measure the number of kids walking and biking to school and having staff perform pedestrian/bike counts to supplement the travel tally. These strategies both received majority support from our stakeholders. The lead agencies, timeline and costs associated with these evaluation strategies can be found in the implementation steps chart and the action steps section.

Implementation steps: identify timeline and lead agencies or individuals to implement action plan

The UMRDC planning staff compiled a list of suggested strategies based upon public engagement and existing Safe Routes to School Plans from the region. The plan was distributed to the following list of stakeholders to document support for each strategy: the KMS School District School Board, the Murdock City Council, the Kerkhoven City Council and Kerkhoven EDA Board, the KMS School District teaching staff, the Swift County Highway Department, KMS School District Community Members, KMS student parents and the local Statewide Health Improvement Partnership (SHIP) coordinator. We received physical responses from: the KMS School District School Board, the Murdock City Council, the Kerkhoven City Council and Kerkhoven EDA Board, the KMS School District teaching staff and the local SHIP coordinator. We have KMS School District Community Members and KMS student parents represented on the school board as well as well as teaching staff. We also consulted with the Swift County Highway Department on the engineering aspects of the plan affecting the county roads in Kerkhoven. Below is a listing of all the identified strategies and the support they received from the stakeholders listed above.

Action	Strategy Type	Description	Timeline	Cost	Lead/ Partners
Teach Students Routes	Education	Teach students the identified Safe Routes for each school	2017	Low	KMS School District
Inform Community	Education	Use outreach to inform parents, community members, and businesses about the Safe Routes	2017	Low	KMS School District
Distribute Map	Education	Distribute a walk/bike to school map	2017	Low	KMS School District
Safety Campaign	Education	Develop a school safety campaign	2017	Low	KMS School District/ SHIP
Bike Safety	Education	Offer bike riding safety training during summer program	2017	Low	KMS School District
Pedestrian Safety	Education	Introduce a pedestrian safety class	2017	Low	KMS School District
High Visibility Map	Education	Post high-visibility map to reinforce the Safe Routes	2017	Low	KMS School District
Walk to School Days	Encouragement	Establish annual walk/bike to school day(s)	2017	Low	KMS School District
Mileage Club	Encouragement	Establish a mileage club to award active students	2017	Low	KMS School District/ SHIP
Enforce Identified Crossings	Enforcement	Enforce traffic laws at identified crossings for improvement	As needed	Medium	City of Kerkhoven/ Local Law Enforcement
Enforce Traffic Laws	Enforcement	Enforce traffic laws on identified state highways and county roads	As needed	Medium	City of Kerkhoven/ Local Law Enforcement
Enforce No Parking	Enforcement	Enforce 'No Parking' areas around the school	As needed	Medium	City of Kerkhoven/ Local Law Enforcement
Establish Safe Routes	Enforcement	Work with law enforcement to establish corridors for Safe Routes	As needed	Medium	KMS School District/ City of Kerkhoven/ Local Law Enforcement
Install Crosswalk	Engineering	Visible crosswalk from school sidewalk to Wyoming Ave across CR 35	As soon as funding is available	Medium	City of Kerkhoven/ MnDOT

Action	Strategy Type	Description	Timeline	Cost	Lead/ Partners
Protected Path	Engineering	Protected path on Wyoming Ave from N 6th to N 15th Streets	2017	High	City of Kerkhoven
Improve Intersection	Engineering	Protected crossing and crosswalk on CR 6 and Highway 12	As soon as funding is available	High	City of Kerkhoven/ MnDOT
Improve Intersection	Engineering	Protected crossing and crosswalk on CR 35 and Highway 12	As soon as funding is available	High	City of Kerkhoven/ MnDOT
Improve Intersection	Engineering	Protected crossing and crosswalk on 7th Street and Highway 12	As soon as funding is available	High	City of Kerkhoven/ MnDOT
Install Crosswalk	Engineering	Marked crosswalk on CR 6 & Wyoming	As soon as funding is available	High	City of Kerkhoven/ Swift County Highway Department
Bus Stop Signage	Engineering	New bus stop signage at every bus stop in Kerkhoven	As soon as funding is available	Medium	City of Kerkhoven/ SHIP/ Local Bus Companies
Sidewalk Infrastructure	Engineering	Sidewalk at carwash on Highway 12 and 15th	As soon as funding is available	High	City of Kerkhoven/ MnDOT
Calm Traffic	Engineering	Calm traffic on state highways and county roads	Ongoing project	High	City of Kerkhoven/ Swift County Highway Department/ MnDOT
Railroad Safety	Engineering	Improved safety on railroad crossing at CR 35 and US Highway 12	As soon as funding is available	High	City of Kerkhoven/ Swift County Highway Department/ Local Railroad Authority
Sidewalk Infrastructure	Engineering	Sidewalk on CR 35 from Montana Avenue to Idaho Avenue	As soon as funding is available	High	City of Kerkhoven/ Swift County Highway Department/ MnDOT

Action	Strategy Type	Description	Timeline	Cost	Lead/ Partners
Calm Traffic	Engineering	Flashing 'School Zone' signage along US Highway 12 west of 15th Street	As soon as funding is available	High	City of Kerkhoven/ Swift County Highway Department/ MnDOT
Travel Tally	Evaluation	Administer student travel tally to benchmark yearly progress	Annually	Low	KMS School District
Pedestrian/ Bike Counts	Evaluation	Have staff perform pedestrian/bike counts to benchmark yearly progress	Annually	Low	KMS School District

Appendix: maps, survey results, assessment data, SRTS funding resources

KMS High School Safe Routes to School Map



Student Travel Tally Results Data Chart

Mode	Morning Tally	Morning Share	Afternoon Tally	Afternoon Share	Total	% of Total
School Bus	134	29%	176	35%	310	32%
Family Vehicle	267	57%	220	44%	487	50%
Walk	42	9%	43	9%	85	9%
Bike	10	2%	23	5%	33	3%
Carpool	17	4%	19	4%	36	4%
City Bus	0	0%	1	0%	1	0%
Other	0	0%	14	3%	14	1%

Assessment Data

School Information and Walk/Bike Zone

KMS High School is in the City of Kerkhoven in Swift County, MN. Swift County is located in rural west central Minnesota with a population of 9,783. KMS High School currently has 267 students enrolled. 193 of these students are evenly distributed through the grades of seventh through twelfth grade. KMS High School also hosts a Pre-K program with 74 enrolled students. Our parent survey found that 31% of the student population lives in the walk/bike zone of the school district (within 2 miles). An unbridged railroad crossing, non-residential streets without sidewalks on both sides, streets with posted speed limits of 40mph or more and streets with gaps in walking biking access can all be found within the town of Kerkhoven. These features all affect the walkability of the City of Kerkhoven.

School Site and Property

KMS High School covers approximately 30 acres and hosts the junior high school, senior high school and Pre-K programs. The school can be accessed from three sides on foot or by bike: the northeast, southwest and southeast sides. The school sits on the intersection of a small local road and a U.S. Highway whose speed limit is 60mph just northwest of the school. The bus loading and unloading are not currently separated from automobile pick-up although the school features an

expansive parking lot in the front of the building that allows ample space for peak times.

Street Profile

Within the City of Kerkhoven there is one U.S. Highway (Highway 12), two county roads (County Road 33 and County Road 6) and many small, low-traffic local roads. All streets in the City of Kerkhoven are two lanes wide. The curb radii are all classified as small (less than or equal to 15 ft), which can reduce automobile traffic speed. The only exception was found at the intersection of 15th Street and U.S. Highway 12. On the southeast side of this intersection a medium curb radius was observed. The average daily traffic on County Road 33 adjacent to the school is 980 vehicles per day.

Pedestrian/Bicycle Facilities and Safety

Kerkhoven does not currently have any bicycle facilities in the form of sharrows, dedicated bicycle lanes, or otherwise. There are no designated bike routes in the school's walk/bike zone. There are also no existing multi-use paths in the school's walk/bike zone to facilitate biking or create a safe path for pedestrians through town. There are some sidewalks, but they are incomplete and completely absent from large areas of the city. The sidewalks directly outside of the school are in good shape but once you leave the school property, sidewalks are in widely varying states of integrity. Most of the sidewalks observed are mostly clear of debris and obstacles. A crosswalk does exist on County Road 35 NE of the school. It is clearly marked with signs and paint. There is also a marked crosswalk across Highway 12 at 9th Street. There are no crossing guards during any time of the day. There were a few 2-per-corner ADA accessible ramps near the school and on Atlantic Avenue where it was recently restored, but most sidewalks in town did not feature them.

Remedial Pedestrian/Bicycle Facilities

There are no pedestrian crossing signals, countdown pedestrian crossing signals, pedestrian hybrid beacons, rectangular rapid flash beacons, raised medians, or

pedestrian refuges in the school's walk/bike zone. There are yellow signs on County Road 35 as you approach the school from the NE direction designating a school speed zone and indicating the speed limit is 20mph when school is in session.

Connectivity and Convenience

Kerkhoven is designed on a traditional grid system that provides direct connectivity. The city is also very compact, dense (926 people per square mile) and features a vibrant downtown located mostly on the north side of U.S. Highway 12. The low traffic volumes on the side streets, combined with the grid system and compact footprint, afford Kerkhoven the opportunity to become a walking and biking friendly town.

Funding Sources:

MnDOT Transportation Alternatives

Infrastructure

The Transportation Alternatives Solicitation is a competitive grant opportunity for local communities and regional agencies to fund projects for pedestrian and bicycle facilities, historic preservation, Safe Routes to School and more.

Minnesota will be soliciting projects for approximately \$7.5 million annually in available grant funding across the state.

Non-Infrastructure

Mini-grants award up to \$2,500 to a school to support SRTS activities. This includes training and supplies for school patrol programs, incentives and materials to support walking and biking encouragement events, bicycle racks, and other items to support walking and biking programs at K-12 schools in Minnesota.

Safe Routes to School

MnDOT's planning assistance grant provides planning expertise and plan development support to schools. Planning is completed by the local regional development organization, metropolitan planning organization, or the statewide SRTS planning consultant team. MnDOT will contract directly with the planning organizations and consultant.

BlueCross BlueShield & Center for Prevention Active Places

Demonstration Projects:

To make neighborhoods more amenable to walking, biking and other forms of physical activity, BCBS and CFP offer funding for temporary, low-cost projects to help illustrate how small changes to our surroundings make it easier for people to be physically active. And, by giving people opportunities to experience their neighborhoods in a new way, these projects also aim to build support and momentum for more permanent, long-term changes within communities.

PeopleForBikes Community Grant Program:

The PeopleForBikes Community Grant Program supports bicycle infrastructure projects and targeted advocacy initiatives that make it easier and safer for people of all ages and abilities to ride.

PeopleForBikes accepts grant applications from non-profit organizations with a focus on bicycling, active transportation, or community development, from city or county agencies or departments, and from state or federal agencies working locally.

PeopleForBikes focuses most grant funds on bicycle infrastructure projects such as: bike paths, lanes, trails, and bridges; mountain bike facilities, bike parks and pump tracks, BMX facilities, end-of-trip facilities such as bike racks, bike parking, bike repair stations and bike storage.

PeopleForBikes will fund engineering and design work, construction costs including materials, labor, and equipment rental, and reasonable volunteer support costs. For advocacy projects, we will fund staffing that is directly related to accomplishing the goals of the initiative.

PeopleForBikes accepts requests for funding of up to \$10,000. We do not require a specific percentage match, but we do look at leverage and funding partnerships very carefully. We will not consider grant requests in which our funding would amount to 50% or more of the project budget.

SHIP: The Statewide Health Improvement Partnership

SHIP works with communities across Minnesota to make healthy choices possible through locally driven solutions to advance active living. As a result, Minnesota has more communities that are making it easier for residents to integrate walking or biking into daily routines, whether it's for transportation or recreation.

One example of how SHIP gets students moving more is through active classrooms, which integrate physical activity into lessons and increase opportunities for movement during class time. These strategies are proven to enhance students' attention, classroom behavior and academic achievement.

State of state and federal support for SRTS

In 2013, the state legislature allocated \$250,000 per year for Safe Routes to School non-infrastructure programs. In 2014, the state legislature allocated \$1 million per year to the SRTS infrastructure grant program and increased the non-infrastructure funds to \$500,000 per year.