



# ACTIVE TRANSPORTATION RECOMMENDATIONS

FOR THE

# CITY OF TRIPP, SD

*presented by the*

Landscape Architecture Program

*at*

South Dakota State University

*in cooperation with the*

South Dakota Department of Health

**27 APRIL 2018**

## **Table of Contents**

<b>Acknowledgements</b>	ii
<b>Introduction</b>	iii
<b>Circulation and Wayfinding Infrastructure</b>	
Recommendation 1: Improve Entry and Arrival Signage	1
Recommendation 2: Develop a Comprehensive Circulation Plan	3
Recommendation 3: Enhance Infrastructure on Active Transportation Routes	13
<b>Recreational Opportunities</b>	
Recommendation 4: Improve Existing Downtown Recreation	20
Recommendation 5: Update Current Park and Recreational Facilities	25
Recommendation 6: Develop Recreation Infrastructure in Vacant Lots	31
<b>Community Building</b>	
Recommendation 7: Promote Community Engagement and Fundraising	39
Recommendation 8: Establish a Foundation for Future Economic Growth	41
<b>References</b>	43

## **Acknowledgements**

South Dakota Department of Health

*Beth Davis*

*South Dakota Active Transportation  
Advisory Team*

City of Tripp

*Bryan Bietz, Community Contact*

SDSU Landscape Architecture Program

*Eion Donelan*

*Kyle Engesser*

*Joshua Goeden*

*Bailey Hoines*

*Stephany Jamison*

*Payton Schafers*

*Dalton Smeins*

*McKayla Stark*

*Jayden Tschimperle*

Faculty Advisor

*Don Burger*

Teaching Assistant

*Thomas Schneider*

## **Introduction**

The built environment affects public and personal health. This fact has been proven and re-proven through studies, interviews, surveys, and mockups the world over. In addition to physical indicators of health, like measuring obesity, calorie intake, and steps walked in a day, there are less-tangible indicators of a community's health. These include perceived friendliness, sense of community, and livability. The built environment impacts all of these indicators.

In 2012, the South Dakota Department of Health initiated the Active Transportation Advisory Team (ATAT) to facilitate change in the built environment of South Dakota. In particular, an effort has been made to help communities encourage using alternative means of transportation (such as walking or cycling) for completing one's daily routine. An outgrowth of the ATAT work is the Active Transportation Collaboration project. This project provides resources and expertise to one or two South Dakota communities each year in developing strategies to improve active transportation.

Recommendations are developed over the course of a 16-week semester by students from the South Dakota State University Landscape Architecture program. In the case of the present study, students traveled to Tripp, South Dakota, in early February 2018 to conduct interviews with key stakeholders within the community. Students also conducted an analysis of transportation infrastructure, parks and recreation facilities, and neighborhood composition.

After conducting these interviews and analyses, students developed a series of recommendations touching all aspects of active transportation issues, including the further development of active transportation infrastructure such as bike paths, on-street bike lanes, and sidewalks; improvement of community engagement and fundraising; and enhancement of existing parks facilities. By approaching active transportation in this holistic way, a balanced, comprehensive plan for improving public and personal health can be achieved.

These recommendations represent a global shift in how people think of their community. Some recommendations represent a major financial investment. However, by shifting community priorities and identifying existing resources within the community, Tripp can become an example of the best that South Dakota has to offer: a small-town feel with big-city amenities, a place that is "Easy to Find, Hard to Leave".

## **Wayfinding and Circulation Infrastructure**

### **Recommendation 1: Improve Entry and Arrival Signage**

#### *Entrance Signage*

The town of Tripp needs adequate signage bringing people into the city. An entrance sign helps to create a sense of place and community spirit. It helps to welcome residents and visitors alike while defining a town's character and values. The intersections of Hwy-37 at North Tower Road and Hwy-37 at West Dakota Street, and the approaches to the community on Hwy-37A on both the north and south sides of Tripp, are excellent locations for updated entry signs. The sign on Dakota Street (Figure 1) should be welcoming but not as grand in size. The sign on the north end of town on Hwy-37A will be a key feature (Figure 2). This entry into town is striking, with the tunnel effect from tree-lined Main Street leading directly into the commercial heart of Tripp. This sign should welcome the community back home and create an invitation for others to join the city.



*Figure 1: West Entrance Sign*



*Figure 2: North/South Entrance Sign (South Entrance Depicted)*

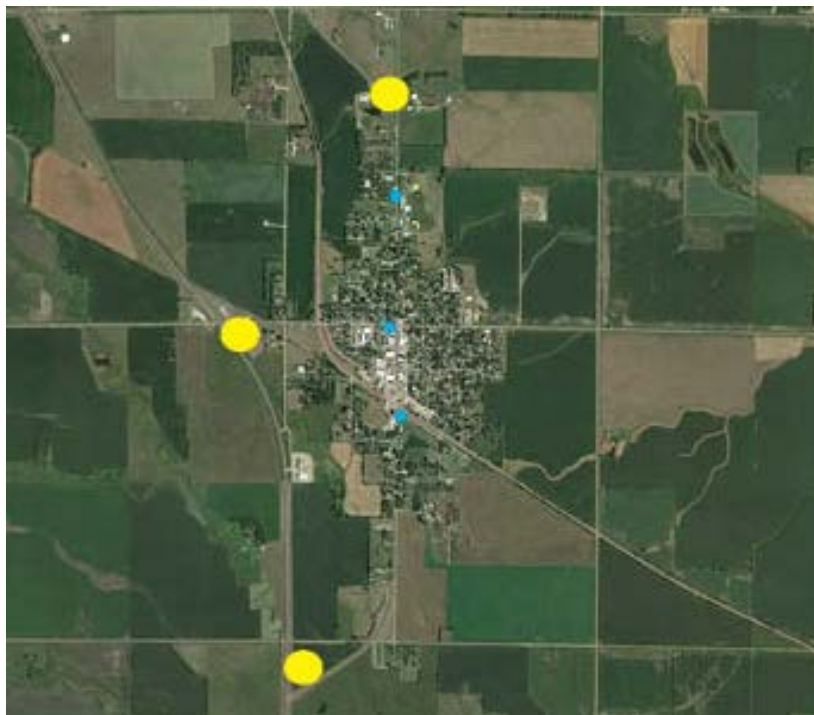


### Wayfinding Aids

Tripp has an insufficient amount of signage in the town for new visitors. Most of the people in the town of Tripp know their way around, but for new visitors coming to the town it can become stressful trying to find certain areas such as the ball fields or the local pool. Placing wayfinding aids in strategic locations to orient visitors to key local attractions will be very helpful. Simple signs indicating 'Main Street', 'Park/Baseball Fields', and 'Tripp-Delmont School District' along with the location of these signs can create an easy way for locating these essential spaces.



Figure 3: Wayfinding Signage



### Map Legend

- Entrance Sign Placement
- Wayfinding Sign Placement



Figure 4: Proposed Signage Locations

## Recommendation 2: Develop a Comprehensive Circulation Plan

Active transportation is the ability for people to actively get around the city. Transportation can take the form of vehicles, bikes, electric mobility aides, scooters, skateboards, rollerblades, or walking. The “active” part of *active transportation* refers to how people get around without a motorized device. Encouraging active transportation over vehicular transportation promotes healthier lifestyles and improves a community’s sense of place and friendliness. In Tripp, promoting active transportation can be accomplished by connecting key destinations in town with a variety of circulation infrastructure, including roads, trails and sidewalks, supported by improved storm water drainage and pedestrian crossing facilities.



Figure 5: Map of Current Road Conditions

## Roads

Roads are important infrastructure that allow for the circulation of vehicles. The condition of the road influences the ability of motorists to get around and shapes opinions of a town. Well-made roads are smooth and need a slight to medium slope. It is important to have slope to drain water off the road to prevent water build up, icing, erosion and hydroplaning. Well-maintained roads encourage activity. Good roads to local shops will enable people from out of town to visit and shop. When combined with sidewalks and connected to recreational trails, roads become a comprehensive amenity for a thriving town<sup>2</sup>.

### Phases One and Two (2018-2019)

Main Street is already undergoing a complete overhaul from High Street to Depot Street. When the road reconstruction is completed, the centerline of Main Street should be adjusted five feet to the east between High Street and Dakota Street to accommodate an on-street bike lane. Between Dakota and 1<sup>st</sup> Street, the centerline should be moved an additional two feet east to accommodate a traffic-separated bike lane (see Bike Trail Section). Phasing the implementation of the bike lane

at this point will take advantage of the already-needed road repairs, thus improving cost-effectiveness. To understand how this section will be designed refer to the bike trails section. The first phase needs to be re-graded and re-paved, with the installation of a subsurface drainage system on Main Street from Dakota to Depot Street.



Figure 6: Phase 1 and 2 Road Repairs and Bike Trail



The second phase continues the repaving and re-painting on Main Street from Dakota to High Street. The street centerline will be moved toward the east side by five feet. The road will be paved, and the two-lane width with the two-foot centerline adjustment will be added on the east side of the road. This road is important because it provides the main route for vehicular transportation for people to the ballpark, park, and businesses of the town.

### Phases Three & Four (Summer 2020-2024)

Major vehicular roads should be replaced next to ensure safe and smooth travel. In Phase Three, Dakota Street from Dobson to Main Street should be replaced. This is a high traffic area, and requires a high level of service.

Phase Four includes the repair of Depot Street from Dobson to Main Street. This street is heavily used by both commercial trucks and regular vehicles and should be maintained in good condition.

### Phases Five & Six (2024-2028)

Roads that connect the residential areas to the school are important for safe transportation of children to school. In phase five, 1<sup>st</sup> Street from Dobson to Main Street should be repaired or replaced. Additionally, Wilder Street and Sloan Street between Iowa and Dakota



Figure 7: Phase 3-4 Road Repairs



Figure 8: Phase 5-6 Road Repairs

Streets should be replaced. These roads are important in connecting the residential area to the school area.

Phase Six finishes these connections by updating Iowa Street from Main to Shannon.

#### Phase Seven (2028-2030)

It is important for a community to enable residential access by roads to recreation, nursing homes, and churches. To enable this, Dobson Street from the Good Samaritan building to Depot Street should be repaired from the dead end to 3<sup>rd</sup> Street and replaced from 3<sup>rd</sup> Street to Depot Street.



Figure 9: Phase 7 Road Repairs

#### *Bike Trails*

On-street bike lanes will be six feet wide everywhere except for downtown where it will be eight feet wide. This will allow for bikers to go both directions on the bike path. To enforce this, a dotted centerline on bike path should be incorporated<sup>3</sup>. This will allow for a bike lane on only

one side of road. On-street painting should commence in accordance with the road repair phases indicated in the previous section.

On the section of Main Street from Dakota to 1<sup>st</sup> Street, the eight-foot-wide bike path should be located immediately adjacent to the sidewalks, and will include a 1' wide planter separating the bike lane from on-street parking. The planters should be a minimum of two feet long and reach a total height of two feet (including



Figure 10: Bike Lane Locations

plant foliage), and are to be placed only where on-street parking is available. The planters provide not only a separation from the bike path and the vehicles but allow for beautification of the area in a manner that can be changed with the season.

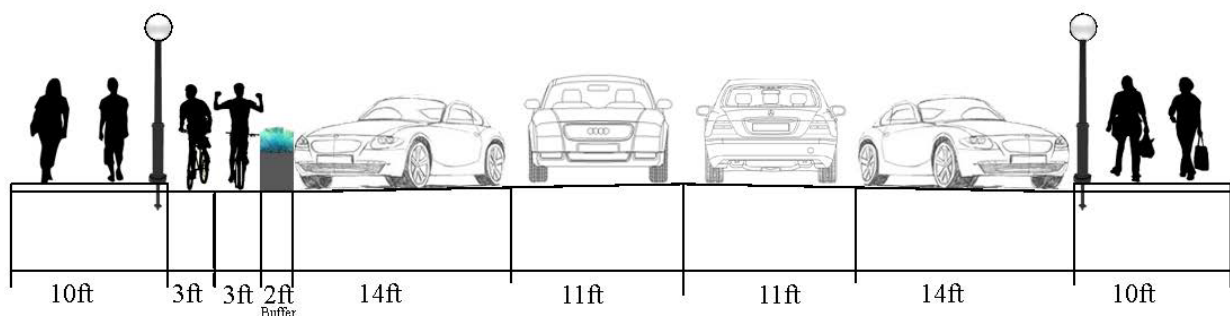


Figure 11: On-Street Bike Lane (Main Street)

Next, the bike trail should be painted on the north side on 1<sup>st</sup> Street from Wilder to Dobson. Then, the east side on Dobson Street from 1<sup>st</sup> Street to the dead end past Wisconsin Street needs a bike path painted. After that, the south side on Iowa Street from Main to Shannon Road needs to be painted. Finally, the east side on Wilder from 1<sup>st</sup> to Iowa Street needs to be painted. The total for bike trails is \$6,762.99 and will have to be replaced every five to

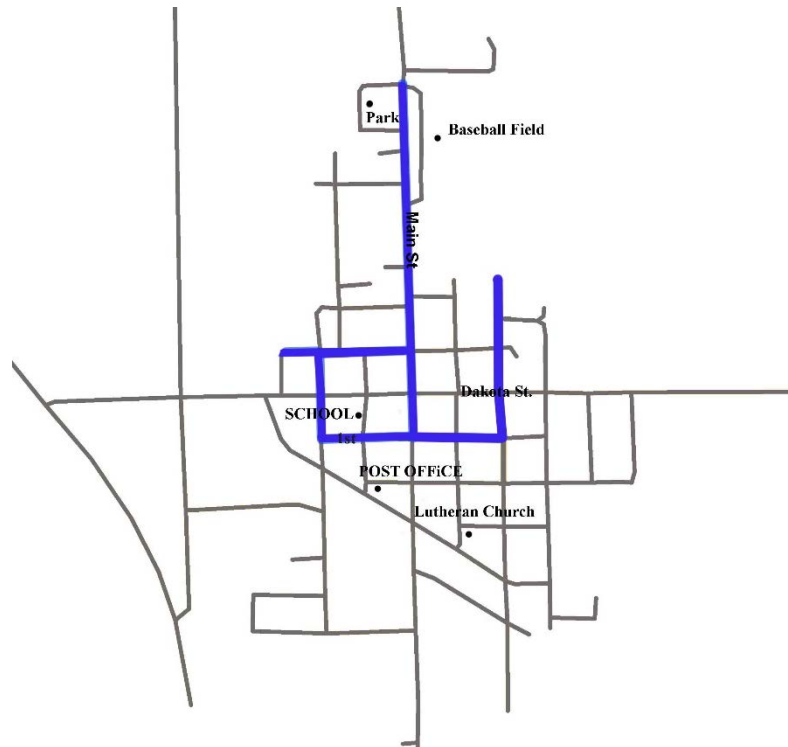


Figure 12: Proposed Bike Infrastructure

ten years depending on wear and tear<sup>3</sup>. Intermittent maintaining of the path would reduce the need for replacement. Figure 7 shows a diagram of the bike trails on the roads.

### *Sidewalks & Drainage*

The sidewalk, curb, and gutter are key components for enabling active transportation within the town. Sidewalks that connect the town together encourage walking and other active forms of getting around rather than a reliance on automobiles. Walking is important not only to promote health and wellbeing of the town's population, but also to promote the interaction between residents. This is crucial for a community to grow together. Active transportation also increases social interaction between the residents while providing a safe means of transportation.

Sidewalks are meant for people, whether they are walking, pushing strollers, rollerblading, or skateboarding. However, sidewalks are not meant for bikes; cycling should be done using the on-

street amenities already addressed. To keep transportation for pedestrians available, sidewalks need to be repaired or added in several locations.



Figure 13: Current Sidewalk Conditions

## Phase One

The most important sidewalks are those near and around the school, as they allow protect children arriving and departing the building each day:

- Add sidewalks on the east side of Wilder Street from Dakota to 1<sup>st</sup> Street.
- Connect and complete the existing sidewalk on the north side of 1<sup>st</sup> Street.
- Add sidewalks on both sides of Wilder from 1<sup>st</sup> to Depot.
- Build sidewalks to complete the sidewalks on the south side of Dakota Street from Main to Sloan.
- Replace the sidewalk on Dakota Street from Dobson to Carpenter Street.



Figure 14: Sidewalk Plan Phase 1



## Phase Two

Following the school sidewalk plan, the downtown is the next area to improve the sidewalks. Downtown is where everyone in town shops, gathers and interacts. This area is important due to the high volume of pedestrians and its ability to attract out-of-town guests. A well designed downtown encourages people to socialize, shop, participate in community activities and promote

local spending. The sidewalks on both sides on Main Street from Depot to Dakota are currently planned to be replaced with new ADA-compliant sidewalks. Replacing these sidewalks through the current grant will enable easy pedestrian transportation. In addition, install a new curb and gutter on Main Street from Depot to Dakota.



Figure 15: Sidewalk Plan Phase 2 (Includes Curb and Gutter)

## Phase Three & Phase Four

After Downtown, the next most important section of active transportation connects parks and recreation areas. Construct new sidewalks on Main Street from Dakota to High Street. Because this is a long stretch of road, the installation of the sidewalk should be split into two phases. Phase Three entails replacing sidewalks on the west side of Main Street between Dakota and 305 North Main, where there is poor sidewalk.



Figure 16: Sidewalk Plan Phase 3-4

Phase Four adds new sidewalk to rest of the street, which has none. The west side of Main should be implemented first to allow easy travel directly to the park.

### Phase Five & Phase Six

These phases connect additional community amenities with the growing active transportation network, including church facilities. Having the ability to walk to church increases the attendance to church and promotes local gathering. Phase Five provides a north-south connector on the east side of town via Dobson Street between 2<sup>nd</sup> Street and Iowa Street on both sides. Also in Phase Five, the sidewalk is replaced on Dobson from 3<sup>rd</sup> Street to Depot Street.

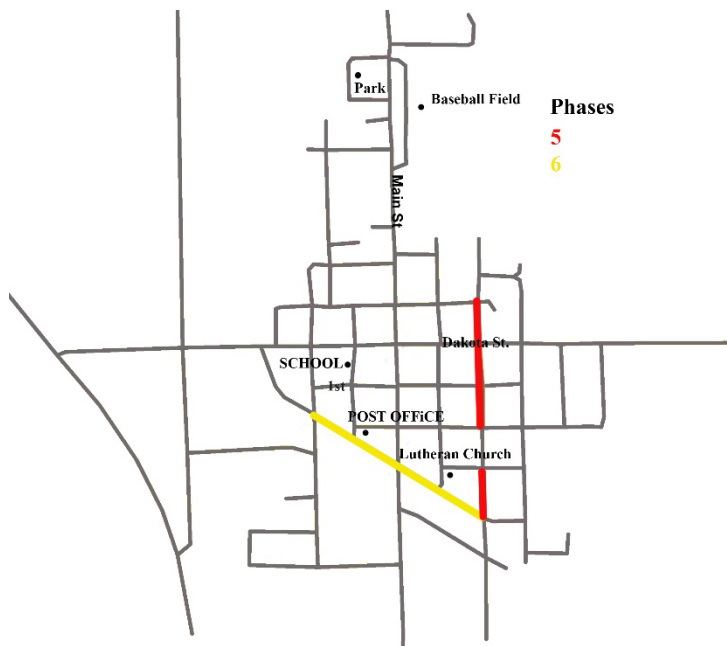


Figure 17: Sidewalk Plan Phase 5-6

Phase Six creates a connection of all the major roads with sidewalks. A sidewalk added on the north side of Depot Street from Wilder to Dobson finishes the connection of the town via sidewalks.

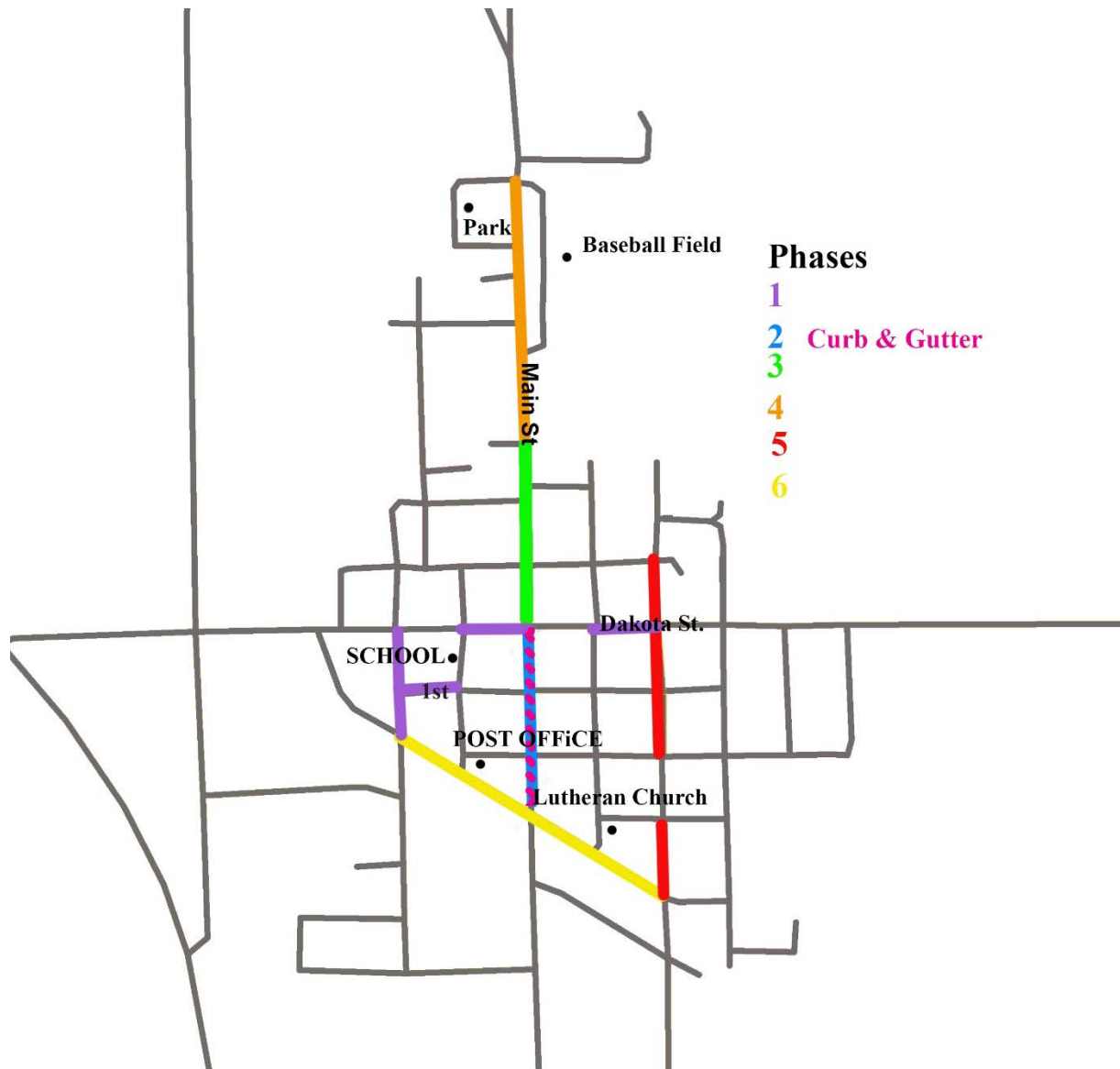


Figure 18: Comprehensive Sidewalks Plan

## Crosswalks

Crosswalks provide safety and awareness where people will cross the street regularly. The first priority for crosswalks is around the school. Two intersections near the school require crosswalks

to provide a safe place for children to cross: Dakota at Sloan and Dakota at Wilder. Each of these crosswalks should include pedestrian warning signs to notify drivers of the possibility of crossing pedestrians.

A third intersection is Main Street at High Street, between the park and ballpark. This crosswalk should also have a pedestrian warning sign. This is a high traffic area for

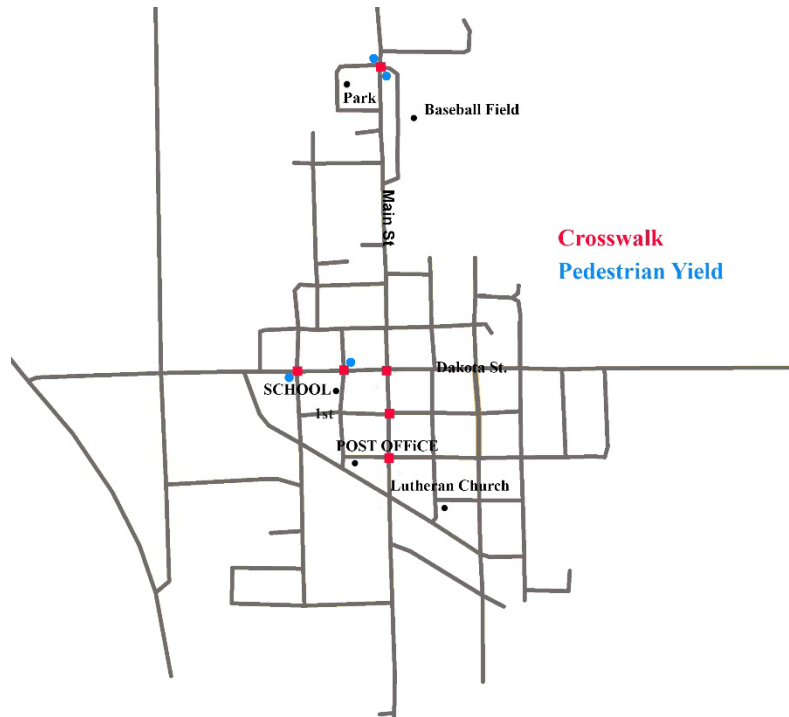


Figure 19: Proposed Crosswalk Locations

vehicles as well as children who will run across the street to access both the park and ballpark.

The downtown requires three crosswalks, all located on Main Street (at Dakota, 1<sup>st</sup>, and 2<sup>nd</sup> Streets). Crosswalks in this region of town will encourage pedestrian traffic, which in turn will increase commercial activity.

Each crosswalk will cost approximately \$200, and should be repainted every three to five years. In the area of the schools and parks, pedestrian crossing signs cost approximately \$100 per cross walk. In total it will cost \$1,500 for all the crosswalks and signage. The first stage to be painted and signed would be the two intersections by school, which will be about \$600. Then a year



Figure 20: Crosswalk and Associated Signage

later, the crosswalk between park and ballpark should be completed which will be \$300. Another year later the three crosswalks should be painted on Main Street downtown when the roadwork is completed, costing around \$600.



### Recommendation 3: Enhance Infrastructure on Active Transportation Routes

#### *Lighting*

The lighting in the town of Tripp needs to be updated to accommodate pedestrian walking from the downtown to the north park. Along with the passageway from the north to the south of town, there also needs to be efficient lighting throughout the downtown.

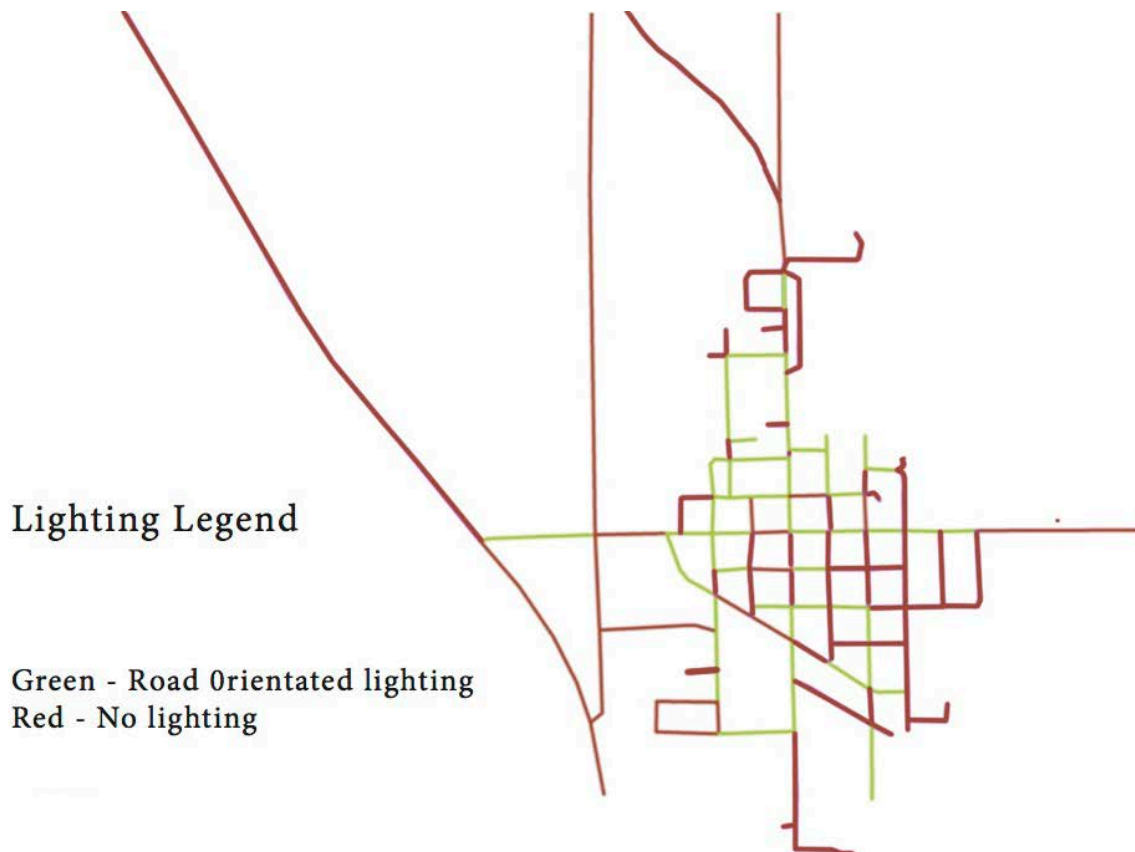


Figure 21: Existing Lighting Conditions

The large amount of red on the map indicates a general lack of lighting in some neighborhoods in town. The first step to increase lighting would be to start with road-oriented lighting along with pedestrian scale lighting throughout the Main Street. Connecting the Main Street to the north park is something that needs to happen first. Creating lighting for roads along with pedestrian lighting can create a much safer walking area for all ages when using this road. The community using the pool and the ballparks will be safer when going to and from these