

Active Transportation Recommendations

for

Huron South Dakota



South Dakota State University
Landscape Architecture Program

In cooperation with

South Dakota Department of Health

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Introduction

Over the past thirty years, a growing dichotomy has been exhibiting itself in America. On one hand, many Americans have become more environmentally conscious. The term 'sustainability' has crept into the everyday vernacular to the point where it has become a catchword for the green movement. Sustainable or green industries, infrastructure, conferences and other initiatives receive press, funding, and other resources which highlight their importance to today's society. On the whole, humans are concerned with the health of the planet as never before.

On the other hand, for many Americans a sedentary lifestyle has become the norm. No longer are most Americans engaged in physical labor as a regular part of their daily vocation. In addition, the technologically rich environment in which children are being raised has led to a dramatic decrease in physical activity for the youngest groups of Americans. This lack of physical activity on the part of Americans, coupled with a surfeit of high-calorie, low-nutrition foods, has brought on an obesity crisis. The Centers for Disease Control and Prevention estimate that in 2010, 36% of the adult population and 15% of the youth population of America were obese or morbidly obese. It seems that while Americans have become more earth-conscious and concerned about environmental health, we have lost track of our personal health status.

To help combat the rising wave of obesity, several agencies, including the US Department of Agriculture, the National Institutes of Health, and the Centers for Disease Control and Prevention, have developed programs, studies, and recommendations for increasing physical activity levels for all segments of American society. For example, the surgeon general has recommended that every individual under the age of 18 participate in at least 60 minutes of moderate physical activity each day, while adults should spend at least 20 minutes each day in similar disposition.

The built environment can do much to facilitate Americans' meeting these recommendations. Multiple studies have shown that the way in which a community is designed has a direct impact on how individuals choose to navigate that space. In an auto-centric society, making strides to decrease dependence on cars and encourage alternative modes of transportation can be difficult, but it is possible. Portland, Oregon, is known as one of the most bike-friendly cities on Earth. Boston, Manhattan, and Washington are all very pedestrian-oriented, and have become more so in recent years. Increasing physical activity through active transportation (walking or cycling as a means of conducting normal business) will help many Americans to fit moderate exercise into an already busy schedule.

The desire to create more user-friendly communities is not limited to the large urban centers of the nation. The South Dakota Department of Health has created an Active Transportation Advisory Team (ATAT) to help even the smallest communities in one of the most rural states in America implement sound active transportation practices. As part of their outreach, the ATAT has developed a pilot program to pair design students with willing communities to develop recommendations for implementing active transportation strategies. This document represents the results of the first partnership, between the City of Huron and students from South Dakota State University's landscape architecture program.

At the beginning of 2013, the students traveled to Huron to conduct analyses regarding the relative walkability of the community. These analyses took the form of two previously-vetted metrics, the Pedestrian Environmental Data Scan (PEDS) and Physical Activity Resource Assessment Instrument (PARA). These metrics have been produced to provide a breakdown of the built environment into definable chunks that can then be assessed objectively. The students received training on how to use the metrics, and then were each assigned segments of the City of Huron in which to complete their assessments. While in Huron, students also met with stakeholders who helped to identify challenges and opportunities within the current framework and provide relevant background information regarding the community. Finally, students met with staff from the Parks and Recreation department who provided an in-depth look at the current parks and trails system in Huron.

After the assessments and site visit were completed, students worked for the next three months to develop a set of recommendations to help the City of Huron incorporate active transportation measures. A comprehensive approach was taken, incorporating policy development and enforcement, cultural development, infrastructure investment, and potential funding sources. Those recommendations have been incorporated into this document.

It is hoped that these recommendations will provide a framework for community development efforts over the next several years. Every effort has been made to create feasible and workable suggestions, but political will and strong private-public partnerships will be essential for successful implementation of any portion of this document.

Recommendation 1: Community and Policy Development

The following are recommendations for community development for the City of Huron. These recommendations relate specifically to community development through city beautification, safety, and policy enforcement while creating more active transportation for pedestrians. By following the concept of CPTED (Crime Prevention through Environmental Design) and through design and successful concepts, we aim to make the city of Huron a safer and more walkable city.

City Beautification

Providing pedestrians with a walkable city is very important because with obesity on the rise, more and more families are trying to become more active. Without an attractive and safe alternative, many community members are choosing to drive instead of walk or cycle. What influence does this have on a community?

Walking is beneficial to people's health, to community vitality, and to the environment. Walking improves community interactions as people are more likely to talk with neighbors and shop in local stores when on foot. Walking provides an easy, inexpensive and low-impact exercise that can improve the overall health of individuals. It also protects environmental quality by reducing vehicular emissions and local dependence on non-renewable energy sources.

Walkable communities also provide economic benefits. According to a 1999 study by the Urban Land Institute of four new pedestrian-oriented communities, homebuyers were willing to pay \$20,000 more for homes in walkable areas compared to similar homes in vehicle-oriented neighborhoods. New Urbanist (walkable) communities benefit from considerably higher housing values than traditional suburban developments. In a growing number of small and medium sized cities, downtown condominium and townhouse prices and apartment rents earn more over similar suburban, auto-dependent real estate.

Walkable downtowns offer a combination of restaurants, offices and housing that promote interaction. Interaction is imperative because today's economy thrives on ease of access, networking, and ingenuity. Research in California has documented the high costs to workers and employers of commuting and traffic congestion. These costs include lost hours, fuel, traffic accidents and environmental damage. While traffic volume usually is not an issue in small towns and rural communities, travel time from long-distance commuting costs often are significant. According to Walkable Communities, Inc., walking remains the cheapest form of transportation. The construction of a walkable community provides the most affordable transportation system any community can plan, design, construct and maintain (Ryan, 2003).

Walkable communities and their downtowns also take advantage of tourist dollars as visitors are interested in experiencing community life. Places where visitors and residents alike feel community pride and activity are increasingly likely to be strong economically. Places like Vermont have experienced a rise in tourists coming to walk and cycle in the scenic, human-scale towns, and pedestrian-friendly town centers have proved to be an economic boon (Ryan, 2003).

Huron is part of a beautiful rolling prairie where culture is rich and the prairie represents the past, present, and future of the people of Huron. The City of Huron needs to provide residents and visitors alike with a sense of place or character. Designing with CPTED principles in mind will improve the safety and active transportation of the Huron community.

CPTED Principles

The City of Huron should incorporate select Crime Prevention through Environmental Design principles to enhance the aesthetic and safety value of the community, as follows:

1. The first principle of CPTED is natural surveillance. According to CPTED Security, a person is less likely to commit a crime if they think someone will see them. Lighting and landscape are both important roles in CPTED. With adequate lighting and landscaping that provides visibility, enclosure, and aesthetics, criminals are less likely to commit a crime.
2. Natural access control utilizes the use of walkways, fences, lighting, signage and landscape to clearly guide people and vehicles to and from the proper entrances. The goal with this CPTED principle is not to keep intruders out, but to direct the flow of people while decreasing the opportunity for crime.
3. A third factor in decreasing crime is maintenance. The "Broken Window Theory" suggests that one "broken window" or incivility, if allowed to persist, will lead to others and could eventually be the demise of an entire neighborhood. Neglected and poorly maintained properties are breeding grounds for criminal activity. People are less likely to vandalize or commit crimes in well-taken care of properties (CPTED).

Dakota Avenue

The area with perhaps the greatest potential return on investment with regard to CPTED integration is Dakota Avenue. In particular, four intersections have been identified for renewal: 3rd, 9th, 15th, and 18th Streets. These popular intersections are prime locations for pedestrians and cyclists to cross the busy street. The presence of traffic lights makes it easier to cross safely. Three of the four intersections currently have painted cross walks. However, the physical environment surrounding Dakota Avenue does little to encourage active transportation. Many parts of the street do not have curbs; instead continuous curb cuts flow from off-street parking lots into Dakota Avenue (see Figures 1 & 2).

Narrow sidewalks, approximately four to five feet in width, are immediately adjacent to the road or no sidewalks exist. When sidewalks are not present, pedestrians are required to walk through



Figure 1: Proposed Locations for CPTED Improvements

parking lots or even through the drive-thru of a fast-food restaurant. Few businesses are landscaped or seldom have trees present. At a select few locations patches of grass are present, but otherwise the street is barren of plant material (see Figures 3 and 4).



Figure 2: Dakota Avenue at 15th Street



Figure 3: Dakota Avenue at 18th Street

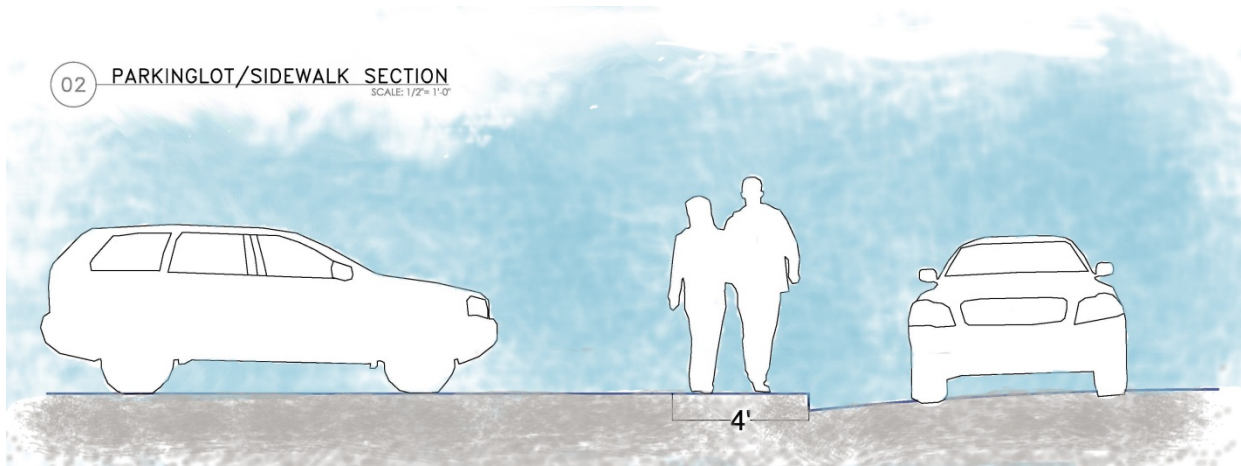


Figure 5: Typical Existing Sidewalk Condition



Figure 4: Typical Street Segment along Dakota Avenue

Unifying the city and making it an extension of the prairie is also important. City beautification provides many positive side effects to creating a walkable city. Not only will people get outside more, they will spend more time with their families, go more places they would not normally visit, spend money at local businesses, and meet other people in their community.

A four foot boulevard should be constructed between the Dakota Avenue and the adjacent sidewalk. This boulevard would be planted with native prairie grasses and flowers that will be drought tolerant, winter-hardy, and aesthetically pleasing. Prairie grasses would be seeded in and once weeds were controlled, flowers could be transplanted into the landscape. Along with the plant material, small boulders and seating on selected corners should be added. These small plazas can act as a resting

area for pedestrians, congregation areas, focal points, and real estate for potential street vendors. Trash and recycling receptacles could be placed there to deter littering.

Colored, stamped concrete will distinguish these areas from the surrounding context. Completing the sidewalks and adding boulevards between these intersections is also advised. By completing sidewalks, adding plant material, and separating the sidewalk from the curb, pedestrians can feel protected from one

of Huron's busiest streets. The addition of human-scale street lights would make walking at later hours safe, attractive, and comfortable. It is important that crosswalks are painted and marked with a sign to remind drivers that pedestrians have the right-of-way. The right-of-way is restructured thus from the centerline of the road: two lanes of traffic, four-foot boulevard of prairie plants, an eight foot sidewalk, then if space allows, a secondary two foot buffer strip between the parking lot/business fronts. All plants in the boulevard must be no taller than three feet, as to not create a blind spot for vehicular traffic.

Prairie plants that would be successful here include: little bluestem,



Figure 8: Typical Perspective of Proposed Sidewalk Improvements

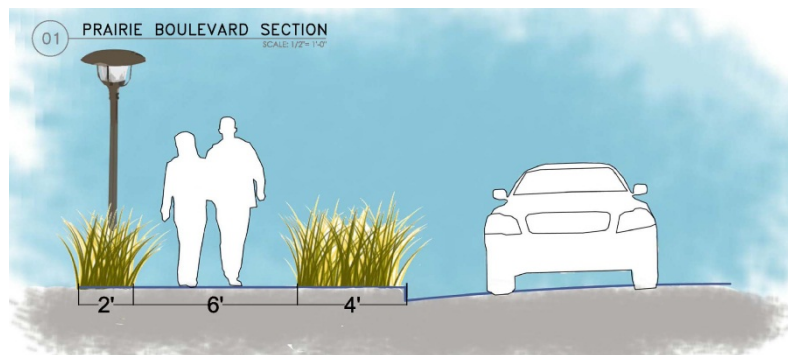


Figure 7: Typical Cross-Section of Proposed Boulevards



Figure 6: Typical Boulevard Design

buffalo grass, blue fescue, blue grama, june grass, prairie coneflower, purple coneflower, meadow blazing star, penstemon, and prairie clover. The use of prairie plants is symbolic and functional. These prairie plants are adapted to the South Dakota climate, soil, and rainfall, therefore are drought tolerant once established.

They will also help to filter the stormwater that runs off the parking lots and sidewalks before reaching the sewer system. The incorporation of prairie plants will remind visitors of Huron's strong ties to the prairie.

Phasing

The four intersections mentioned (3rd, 9th, 15th, and 18th) would be the first phase in redeveloping Dakota Avenue. The city could break the first stage into pieces as well, to offset initial costs, constructing one or two corners at a time would be advised. The second phase would be incorporating prairie boulevards to the sections between the intersections. Improving the curb appeal could increase business' revenue and increase the value of the surrounding property while creating interest. One to two



Figure 9: Typical Intersection Improvements



Figure 10: Recommended Plant Species for Boulevards--Blue Grama, Purple Coneflower, and Little Bluestem

additional parks employees would be needed, especially in establishing the prairie boulevards. Weeds would need to be trimmed to prevent them from going to seed as

well as the boulevard being mowed at the end of the season each year. 18th Street and Dakota Avenue should be the first intersection to receive this treatment.

Policy Development

A “no turn on red” policy needs to be incorporated along Dakota Avenue and other intersections where pedestrian activity is prevalent. Turning on a red light might not seem important but for nineteen year old victim Cleo Thiberge, a “no turn on red” sign may have saved Cleo’s life. As a foreign exchange student from France, Cleo was studying in the St. Paul, Minnesota, area. On her second day in the United States she was involved in an accident in an area deemed St. Paul’s most walkable. Cleo was crossing at a crosswalk when a car turned on the red light and hit her. Cleo later died from injuries sustained that day. Studies show that most accidents occur at intersections, and most accidents at intersections occur with vehicles turning corners at speed. Corners at intersections should be the focus of attention for cities thinking about improving their sidewalks. A “no turn on red” sign is a much cheaper other traffic calming devices and allows the pedestrian to truly have the right-of-way (Glover).

Conclusion

City beautification not only provides a community with economic and social benefits but also benefits the environment. People are interested in walking but currently do not have an environment conducive to such activity. These recommendations can act as a vehicle to improve the City of Huron.

Recommendation 2: Cultural Investments

The city of Huron has a great need for cultural integration. Recently, there has been a large inflow of Karen refugees into Huron. Cultural differences can often be misinterpreted and resolution can be daunting if there are not appropriate opportunities to explore and reach out in a safe environment.

The city of Huron has already taken positive steps towards integrating the Karen into the community. Educational, housing, language and other programs to help these individuals adapt to their new surroundings have been instituted. However, additional steps can be taken to help further the integration of this minority population with the surrounding cultural matrix. The provision of an open learning environment for all of the cultural elements within Huron—Asian, Hispanic, Anglo, and others—is one such step.

A museum and cultural center would provide a unique opportunity to create such a learning environment. Both the history and cultural capital of Huron could be exhibited. In addition, a permanent center would provide a space for classes, workshops, and other community events. There are many obstacles that would need to be overcome in order to provide such a center. Some of these obstacles include funding, location, physical infrastructure, public support, and maintenance.

Funding and Public Support

There are numerous options to obtain funding, but it is important that the city of Huron fully support the idea of a learning center and museum in order for it to be feasible or successful. One approach to obtaining funding would be to tap the National Trust Preservation Fund (NTPF). The NTPF provides matching grants to renovate historical buildings, up to \$5,000 (\$10,000 total funds). A historical building would be an excellent venue for a museum of history and culture, as the space could act both as facility and exhibit.

Another option for funding would be to have a temporary tax. This method has been widely used in a variety of communities to fund such projects as the Denver Botanical Gardens in Colorado and Zoo Montana in Billings, Montana. In both cases, a very modest increase in property taxes helped to fund construction and maintenance of the community facilities. Denver also utilizes sales taxes to support some of its cultural and science institutions. A number of communities within Denver volunteered to pay a 0.1% sales tax on every \$10 they spent for a set number of years. This money supports cultural and science institutions based on a tier system.

The biggest financial support for the establishment will potentially come from the community itself. As already demonstrated by the successful public funding efforts for Splash Central, there are financial resources available from within the community to help support ventures of this type.

Location:

There are two different sites options that could be considered for the museum and cultural center, based on the available funding and desired uses of the community.

Option 1:

One of the potential sites identified is located at 65 Dakota Avenue North. The large abandoned building at this location would make an ideal site for a cultural facility. The



Figure 11: 65 Dakota Avenue North, Huron

The fortuitous location of this building in downtown Huron would lend itself to the success of the facility. Dakota Avenue is a main vehicular artery, aiding in visibility and access. The location is also within close proximity to a suggested bike trail (see recommendation 4) and could easily be

incorporated as a destination along that path. The building is also

located within close proximity to the railroad tracks. This is beneficial because the railroad plays a critical role in the history of Huron. The incorporation of Huron's railroad history into the museum would make it more relevant to the residents of Huron whose families have been there for generations.

The building would require extensive repair and remodeling, and the grounds outside would require considerable redevelopment. The building is fairly large and could accommodate a variety of activities and functions. The main level would serve as a museum with permanent exhibit space, and would also include a staff office. The next level would include classrooms and a larger lecture hall or auditorium.

Another benefit of this particular site is the larger lot that it sits on. The lot is easily large enough to accommodate parking needs for the Cultural Center. In addition, the grounds surrounding the parking lot and building could be developed as a mini park, providing an appropriate setting for the Center, and offering social and ecological benefits to the City's heart. Such development would also improve the entry experience into the City from the north, improving Huron's image for visitors and residents alike.

Option 2:

An alternative site to the large building at 65 Dakota Avenue would be the upper levels



Figure 12: Example of repurposed downtown buildings



in multiple adjacent buildings downtown. A building that has a vacant upper level and an owner who would be willing to sell or lease would be ideal. Locating the Cultural Center over existing businesses would assist in promoting greater activity downtown, including economic activities. This site is also within close proximity to the new recommended bike trail and would serve as an interesting destination.

Many of the buildings in the downtown have upper levels which appear to be shut off and unused. These vacant spaces could be repurposed and serve a new function as a cultural center. The adjacent buildings shown above could be opened up and combined to provide a space for the Cultural Center. The three buildings would serve as a museum, library and classrooms. The smaller space would be easier to maintain and the initial cost would be much less than the previously discussed site. The timeframe for the opening at this location would also be much sooner since the Center would be much smaller and entail less intensive programs. Some of the drawbacks of this site location include lack of space, lack of parking, accessibility for larger groups, and no outdoor space.

Programming

Cultural education would be offered in the form of exhibits, classes, workshops and public performances. These would be tied to the proposed museum that would be established in Huron for community usage. Below are points that go into more detail on certain subject areas associated with the classes and cultural events to take place in Huron.

Cultural performances could be widely varied, including relevant dances, songs or plays. These could be from any nationality that would be willing to put on a performance for the community. These performances would be held in a bigger room in the museum or in a city auditorium depending on the space needed. Performers could be paid professionals or volunteers from the community or surrounding areas that would donate their time and talent for cultural education, school groups, or other interested individuals.

Lectures could also be given using the same format. The lectures could incorporate history, religion, myths and folklore, or current events for a particular culture. This would help Huron citizens to gain factual knowledge on different cultures around the world and tap local expertise and sources.

Workshops will be put on during weeknights and weekends and can include ethnic arts and crafts, dance lessons, language lessons or cuisine. These events could occupy a



Figure 13: Ethnic dance class celebrating Karen New Year

single evening, or be a more formalized course lasting an extended period of time. Workshop costs, including teaching and materials, would be covered through registration fees. Some workshops could be used for volunteer work such as community improvements or projects used for fundraising in Huron. Surplus arts and crafts created in workshops could be sold at farmers' markets or in the Center's exhibit space to provide additional funding for the facility. As well, performances could be given by the students of the classes for the community. A good model to learn from is the Frontier Culture Museum in Staunton, Virginia, which features workshops on forging, sewing, cooking, and applied agriculture.

Workers for the performances and workshops would be a combination of volunteers and part- to full-time employees. Depending on funding, the number of full-time employees will be low with the majority of the workers being volunteer or part-time. This will help to reserve resources for workshop leaders and professional performers. Of primary importance is a full-time coordinator who would schedule and collect money and inventory for workshops and performances, secure performers and workshop leaders, and advertise events to the community. Volunteers would be able to sign up to work at the various events as needed.



Figure 14: Frontier Culture Museum

In conclusion, a Cultural Center would provide several benefits to the City of Huron. Not only would it provide educational and outreach programs, but it would serve as a forum to bridge the cultural gap that exists between residents of various ethnicities in the community. Moreover, it would enhance the active transportation network by becoming a hub to which people would easily walk or bike.

Recommendation 3: Park System Development and Enhancement

With population growth and physical expansion comes an increased demand for parks and open space. Huron is no exception to this trend. With the rapid growth Huron has and continues to face due to a variety of factors, there is a greater need than ever before to develop new parks and maintain or repurpose older facilities.

Continuing to improve the park system through enhancement and development provides several benefits to the community of Huron. Developing new parks in underserved areas would allow more people to walk or bike, rather than drive, to these locations, thus boosting active transportation and physical activity levels within the community.

To determine which areas could benefit from a future park, the existing parks were first inventoried and analyzed. These facilities were then categorized by size and service area. A new classification system is suggested below. Classifying the parks is important because the number of individuals serviced by a given park depends on the size and design of the park in question. For instance, a mini park is designed to serve a smaller segment of the community than a community park. Based upon this classification system, in any part of town, people should be within a five to ten minute walking distance (1/4 to 1/2 mile) of some type of green space. This is because most people are willing to walk no more than five to ten minutes to get to a particular destination. By examining the distribution of parks according to these criteria, it is a relatively easy task to identify underserved areas.

Park Classification System

(Listed in ascending order of size)

Mini Parks (4 acres or less)

Mini parks are the smallest type of park and are found throughout a community. A mini park will often include benches, playgrounds, small ball courts, open grassed areas, or picnic shelters. A 1/4 mile service area surrounds the mini parks. These parks are essential because they allow people to walk a short distance to get to a community asset. Also, mini parks are the easiest type of park to fit into an existing neighborhood because of their small size.

Neighborhood Parks (4-10 acres)

Neighborhood parks are larger than mini parks, and are designed to benefit larger sections of a community. Neighborhood parks have a designed service area of 1/2 mile. Typically a neighborhood park may have a playground, multi-use fields, sports courts, picnic areas, skateboarding, restrooms and a parking lot. A neighborhood park is also typically connected to a city's bike trail system.

Community Parks (10-80 Acres)

Community parks encompass many different features and are designed to serve the majority of the community. Community parks are large and are known for their outdoor athletic complexes, indoor recreational facilities, or courts for sport activities. These parks may also include picnic and shelter areas, playgrounds, concession facilities, open play areas, restrooms and parking. They can also be wetlands or nature preserve

areas. Nature activities at a community park may include hiking, biking, fishing, boating, swimming and viewing of wildlife. There may also be trails, swimming areas, and picnic areas at the park.

Special-Use Parks

Special-use parks vary in size, and may fall into other categories as appropriate. Each park is unique and has a specific use, which may include: a skate park, off-leash dog park, golf course, archery range, or country club. There are no acreage standards for special-use parks.

Community Athletic Complexes (10-80 Acres)

Community athletic complexes serve a common purpose of athletic sports and can be considered a subset of the community park class. Community athletic complexes range between 10-80 acres. Soccer fields, baseball diamonds, little league fields, and arenas are important to the town. They provide a space for children and adults to be active and be a part of a team sport.

Table 1: Parks Classification and Inventory

Mini Parks	
Campbell Park	3.5
Crown Park	1.5
West Water Tower Park	1.5
Winter Park	4
Mini Park Total Acres	10.5
Neighborhood Parks	
Riverside Park	6
Neighborhood Park Total Acres	6
Special Use Parks	
Broadland Creek Golf Course	250
Reilly Dog Park	20
Special Use Total Acres	270

Athletic Complexes	
State Fairgrounds	152.5
Pepsi Soccer Fields	32.5
Kunhardt Softball Fields	43.5
Little League Complex	17
Athletic Complex Total Acres	245.5
Community Parks	
Gibbs Park	160
James River Fishing Area	51
Memorial Park	62
Prospect Park	15
Ravine Lake Park	32
Community Park Total Acres	320
TOTAL PARKLAND PROVISION	852

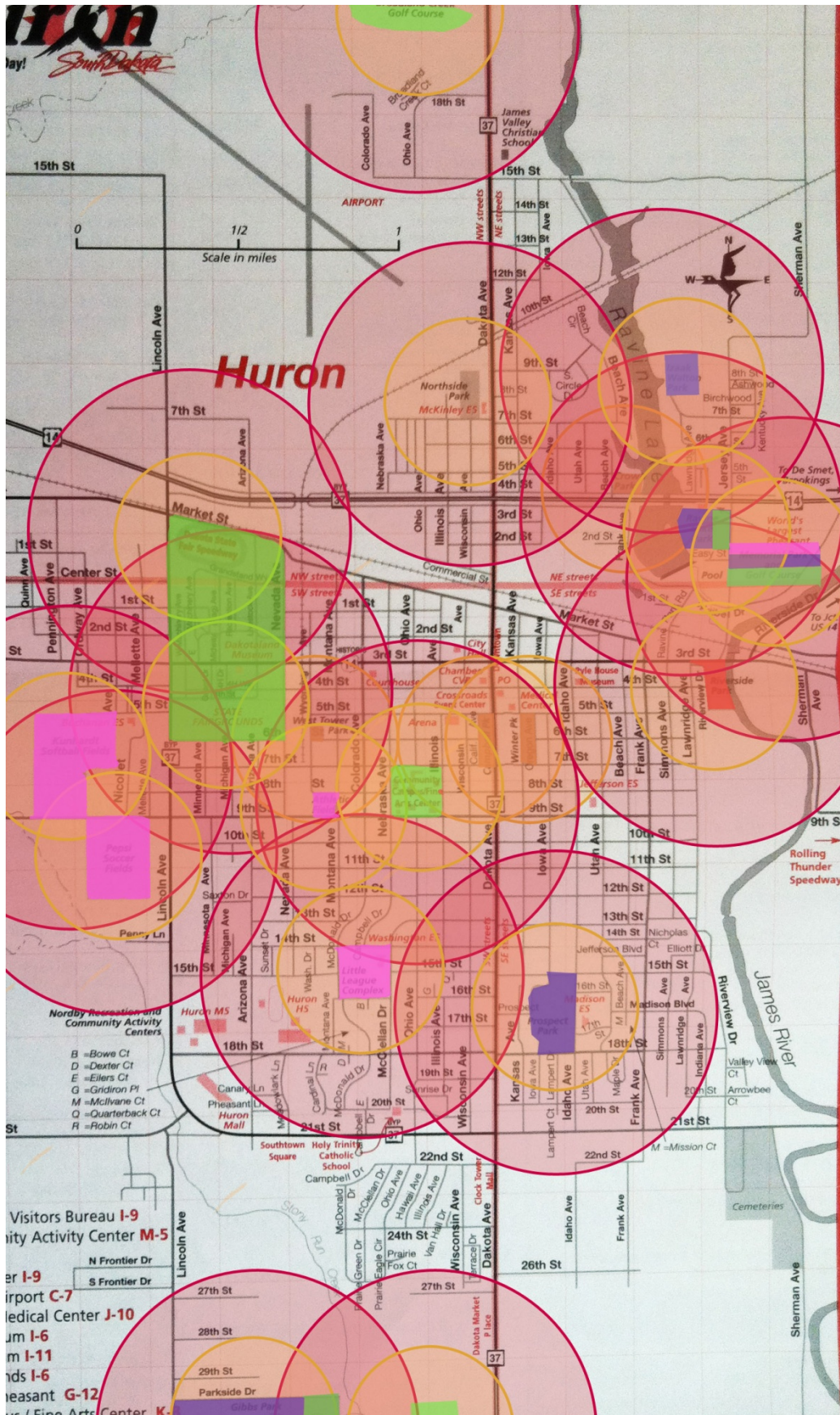


Figure 16: Park service areas (1/4 mile and 1/2 mile)



Figure 17: Mini Parks (1/4-mile Service Area)

Current Mini Parks (4 acres or less):

Campbell Park is a historic park of Huron, developed when Huron was vying to be the state capitol. The band-stand at the park hosts summer concerts and is a focal point of the park. The park is well lit and has a variety of flower beds and trees.

Crown Park has a picnic shelter, 6 picnic tables, a swing set and an ADA accessible fishing area. This park was developed as a private enterprise and deeded over to the City several years ago.

West Water Tower Park has several play activities for children, including a swing set, slide, and merry-go-round.

Winter Park is located near Campbell Park and downtown, and was designed to complement Campbell Park to form a grand avenue leading to the state capitol

building. Winter Park has a playground, tennis courts, restrooms, lighting, and new flower beds, and is intended to take the place of Riverside Park as the prime photo location in the City's parks system.

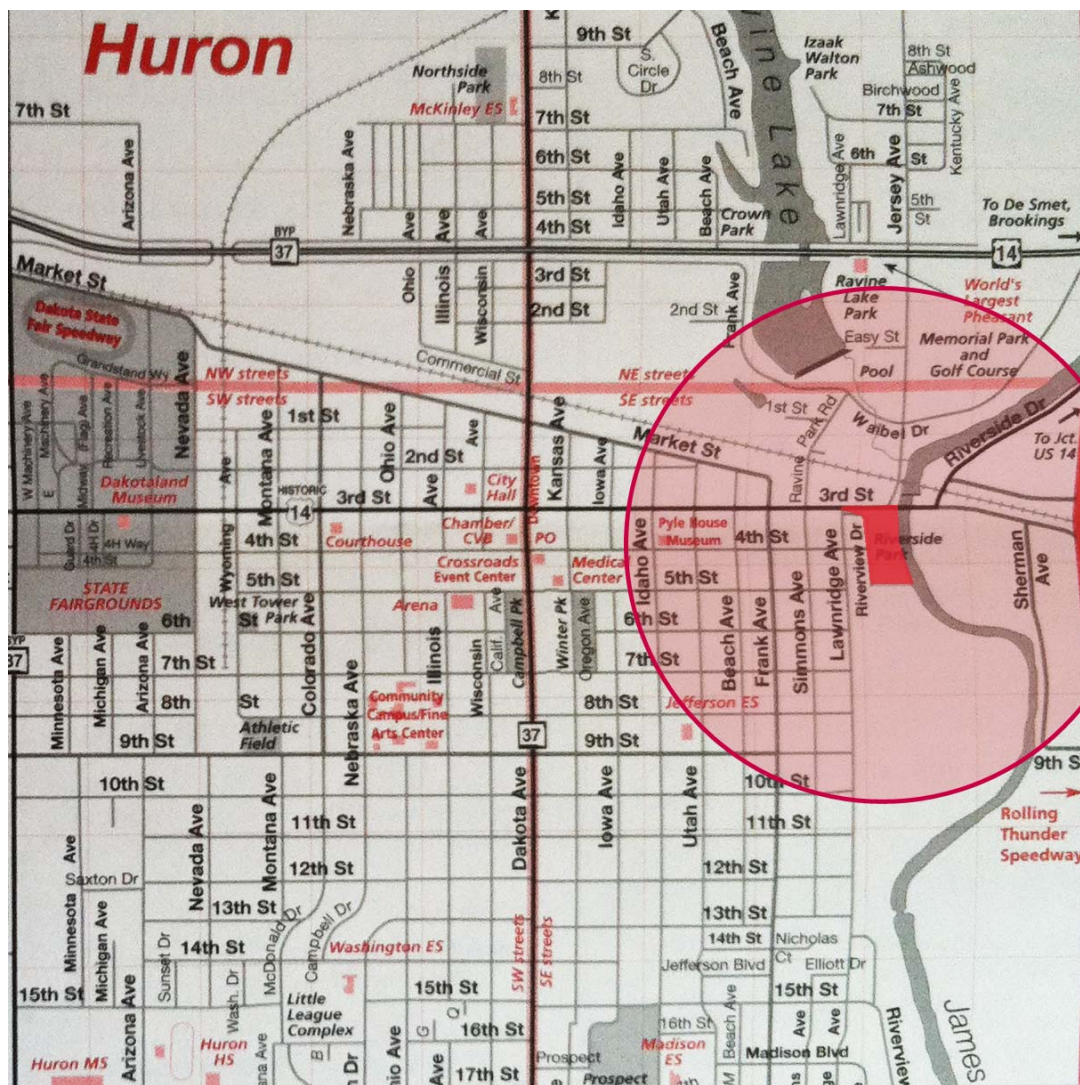


Figure 18: Neighborhood Parks (1/2-mile Service Area)

Neighborhood Park (4-10 acres):

Riverside Park is the former jewel of the Huron parks system, housing a Depression-era stone wall that served as a picturesque backdrop for wedding photos and other special events. However, major flooding has resulted in the loss of all major vegetation in the park, and the space is now under-utilized and in poor repair.

Community Parks (10-80 acres):

Gibbs Park is an underdeveloped parcel of parkland south of Huron. It boasts an archery range and is in a prime location to serve community members as Huron expands to the south.

James River Fishing Area is a popular facility and is home to a variety of fish species. Anglers can come free of charge to fish and relax. However, the park does host a dangerous dam which is in need of reconstruction.

Memorial Park has picnic areas, horseshoe pits, picnic grills, two baseball backstops, an expansive trail, and a campground. The municipal golf course is also housed within the boundaries of this park.

Prospect Park is home to the iconic Astro City Playset, a skate park, a picnic shelter with electricity, twenty-four picnic tables, and two tennis courts. Residents of all generations have fond memories of playing at this park, especially the playground equipment.

Ravine Lake Park is one of the most recognizable and well-loved parks in Huron. It hosts many outdoor activities, including paddle-boats, handicap accessible fishing nodes, a beach, inner-tubing, shelters and a walking trail. The famous Putters and Scoops miniature golf and ice cream shop is also located in this park.

Existing Park Improvements

These improvements are listed in descending order of importance.

1. Riverside Park) This park is an excellent area to develop into a sustainable community park. Due to its propensity to flooding, redeveloping this park in the traditional method (i.e. grass, playgrounds, and flower beds) would be a misguided effort. Instead, the low-lying nature of the property could be maximized to create a wetland park filled with a variety of plants to attract wildlife. Children could explore and learn about plants and animals native to Huron. Adding a playscape or adventure playground would also bring

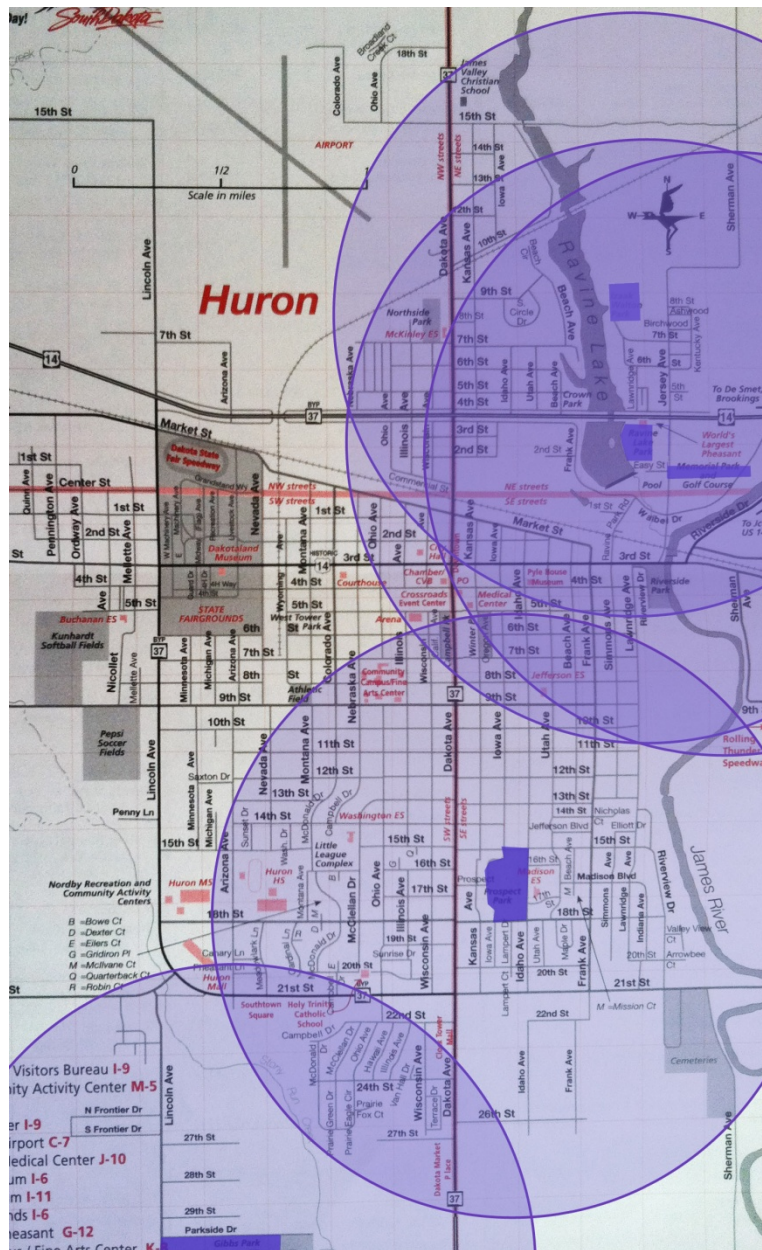


Figure 19: Community Parks (2-mile Service Area)

children closer to nature (a playscape is a natural play area filled with logs, plants, rocks, and other natural features for children to explore and learn about natural processes).

2. Campbell Park and Winter Park were historically intended to complement each visually. It is recommended that the sidewalks on 5th and 7th Streets between Dakota and Kansas Avenues be given additional features, such as signage, benches and water fountains, and street trees and boulevards. This will help to increase walking traffic between the two parks and help to remind visitors and residents of the historic nature of them.
3. Development of a green space in connection with the Cultural Center (recommendation 2) is necessary to enhance the image visitors first receive upon entering Huron. A case study in Philadelphia showed the benefits of green space on the city, which can also apply to Huron.

According to the study:

- a. Green spaces provide a habitat for a variety of wildlife, while also providing corridors and greenways to link habitats.
 - b. They prevent soil erosion and absorb rainwater, thereby improving drainage.
 - c. Trees have been shown to absorb pollutants; as few as 20 trees can offset the pollution from a car driven 60 miles per day.
 - d. The urban heat island effect occurs often in urbanized areas, where buildings, asphalt, and concrete absorb solar radiation and then reemit it as heat, causing the air temperature of the city to rise. Plants have been shown to reduce the urban heat island effect, both directly by shading heat absorbing surfaces, and indirectly through evapotranspiration. In one study, vegetation was shown to lower wall surface temperatures by 17°C (63°F), which led to a 50% reduction in air conditioner use (McPherson, 1994).
 - e. Green spaces can also reduce noise pollution via dense screens of trees and shrubs, and can cleanse partially-treated wastewater.
 - f. Green spaces introduce the natural environment into urban spaces.
 - g. Green spaces soften urban architecture and infrastructure and provide sensory stimulation to urban denizens (Dorward, 1990; Miller, 1997).
 - h. Green spaces foster a connection between community residents and the natural environment that surrounds them, thus creating a more livable city. This is essential in order for a community to be sustainable.
4. Sustainable landscaping is a benefit to the land and the community by reducing the expenditure of natural and financial resources and improving the ecological services provided by parks.
 - a. Park maintenance is an expensive necessity. The amount of maintenance which occurs is based upon several factors: size, park function, turf coverage, and exposure. Parks which have large grass fields require higher maintenance, including frequent irrigation, re-seeding, and mowing. One solution to this is a reduction of turf grass and an increase in more natural planting areas filled with hardy native species. Native species tolerate the region's summer and winter conditions better and provide aesthetic value. In addition, carefully monitoring irrigation systems for leaks and coverage issues and incorporating drip irrigation in planting beds will help to eliminate irrigation runoff on

sidewalks and roads. Another way to reduce water use is to incorporate drought-tolerant turf-grass mixes into the sports fields.

- b. Sustainable parks also provide health, environment, and social benefits. According to A Need for Change, "Natural resources provide many "activities" that require little to no effort, yet provide ways to restore a person's health and mental well-being (Creating Sustainable Community Parks, 2012)." The Athletic Fields, Ravine Lake Park, and Prospect Park all have areas where children can explore nature, run, and have free-play. Ravine Lake Park has many available activities that include nature
 - c. A rain garden would help to solve water runoff issues, and it would help areas prone to flooding. The benefit of a rain garden is that the plants slowly filter the water and hold onto the water better than impermeable surfaces such as concrete. This reduces the amount of storm water and can save the city money. Riverside Park would especially benefit from rain gardens which could absorb excess storm runoff. Ravine Lake Park and the James River Fishing Park are also areas of potential excess water issues. Therefore, these parks would also be good locations for rain gardens.
5. Park signage should be replaced. The signs should include the park hours (both opening and closing times), and any rules governing park usage. For instance, Winter Park's signs are not legible and visitors cannot tell when to leave the park, or the rules for the tennis courts. The signs should at a minimum be repainted to be easily read by anyone. A great way to involve the community in the repainting of the signs is to have a day where Boy Scout and Girl Scout troops get together and paint the signs as a volunteer service. The best way to begin the transition to newer signage is to start in the heart of the city near the downtown area. This would help to begin the revitalization of the downtown area and should start at Winter Park and Campbell Park, followed by Prospect Park and West Water Tower Park, gradually moving outwards.
6. Additional seating should be provided in parks. Adding more benches to the parks will provide more options for parents to sit and watch their children play. The number of benches at each park would positively correlate with the size of the park and the number of playground spaces. The benches should be made of the same material as the current benches to maintain design fluidity. To help the city afford the benches, commemorative inscriptions could be placed on the benches, and citizens can pay to have their name or a loved one's name inscribed on it. The metric for adding benches should be based on the location and need. The community athletic complexes would all benefit from more sitting space, to allow more spectators to watch the sports games. Also, Winter Park would benefit from a couple of benches near the play equipment or by the new planting beds.
7. Playgrounds should be incorporated at the Athletic Complex. A great abundance of playgrounds is important for a growing city. There are several great parks in Huron which have playgrounds. Improving the playground at the Pepsi Soccer Field could be a great opportunity for the community. When families attend their children's athletic games at the Pepsi Soccer Field, the children who are not playing need somewhere to stay busy. It is of great help to the parents to have a large playground to entertain their kids while another child is playing soccer or another

sport. An example of this is Kuehn Park in Sioux Falls, SD. The park has multiple baseball fields, a trail, and a playground. That playground is highly used by children during baseball games.

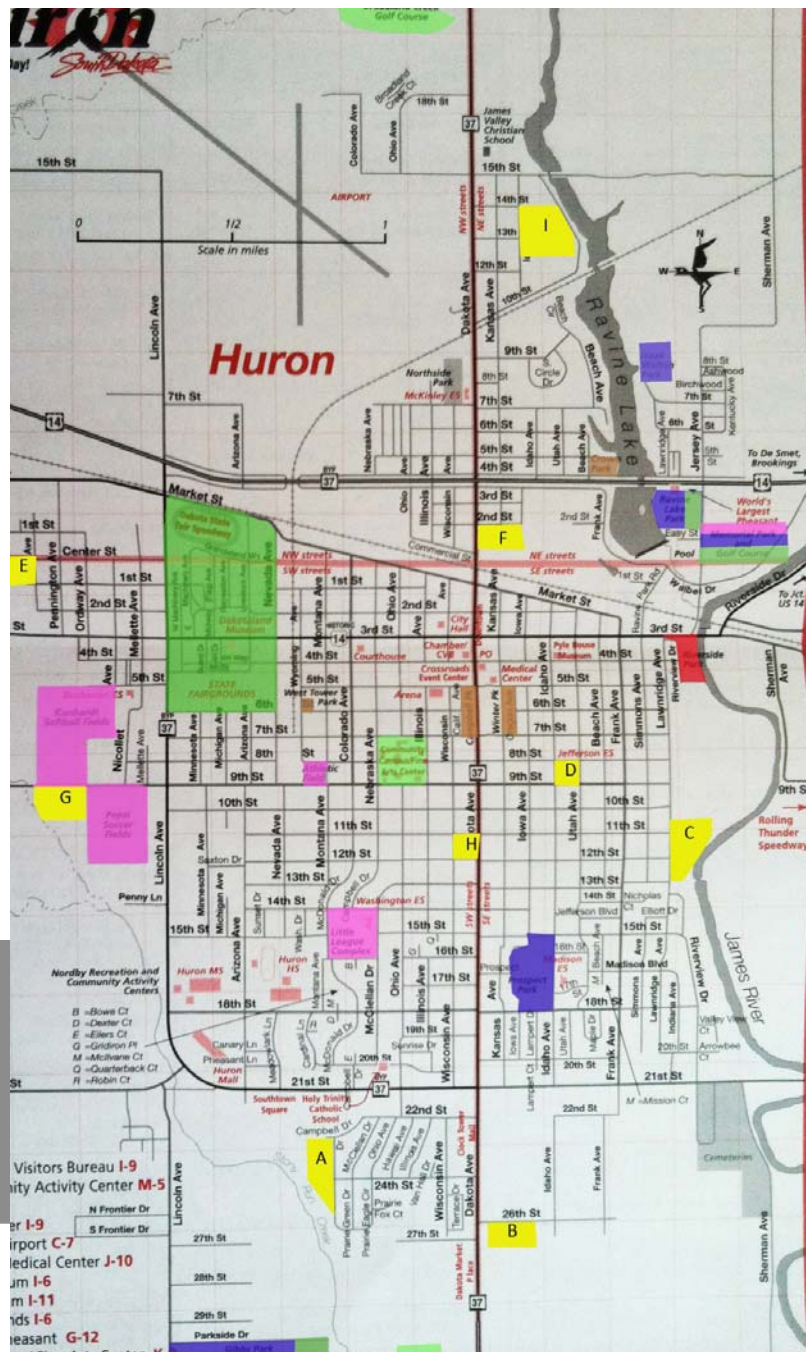
8. Winter activities should be incorporated, especially at Riverside Park. Parks and green space in the Midwest go through many changes of the seasons. Warmer seasons attract people of the community to these areas more often than that of the colder seasons. In many cases during the colder season parks and green space receive much less to no activity at all, creating year round activities and events is a great way to keep the people in a community happily active in green spaces and parks. Summer time activities in a park area are more available than outdoor winter activities. However, there are plenty of outdoor winter activities for people of all ages to become involved in. Much like the scheduled activities in the summer time available with the Recreation team in the Parks and Recreation Department, it would be beneficial to the community to start a winter activity schedule.
 - a. Ice skating at either Riverside Park or Ravine Lake Park may be a great opportunity for the community. The rink would be created and run by the Parks and Recreation department during the cold winter months. It would encourage outdoor activity during the winter and help to keep children busy during winter break.
 - b. Snowshoes would be a positive winter activity which could be run by the Parks and Recreation department. Similar to the bike rentals in the summer, snowshoes could be rented for a day, with a deposit. Individuals renting snowshoes could be given a map of popular parks and trails to walk, such as Ravine Lake Park or the Gibbs Park. Wearing snowshoes is a great way for Huron residents and visitors of Huron to enjoy some exercise and the sport of snowshoeing.
 - c. Bird watching is an activity which can be led in groups or individuals at the parks. Bird watching allows people to view some of the wildlife in the local parks and green spaces. This activity can be performed in any season and at any park. As a public activity, bird watching group could be led by a volunteer once a month. The group could travel to a different park each month and have handouts of birds in the Huron area to watch for. This could also be transformed into a scavenger hunt for children during a favorable time of the year.
 - d. Nearby lakes or rivers may be used to go ice fishing. If a park such as Ravine Lake Park or the James River Fishing Area held an ice fishing competition, it would attract people to the water, even in the winter.
 - e. Putting on some warm winter wear and heading outdoors to build snow sculptures and snow forts is a fun activity for all to enjoy. People would bring their own tools and have fun. Children could paint the snow with either snow paint or food coloring to get creative. Snow painting or snow sculptures could be made into a community contest during a winter weekend. Each adult entering in the snow sculpture contest could pay a minimum fee and the entry fee would be used to purchase a small prize for the winner. This activity would be best in an open area such as the Pepsi Soccer Fields.
9. Other seasonal activities should be offered through the Recreation Department. These activities can help to generate a greater sense of community and provide participants with a great

learning experience while having fun. Activities could include a fall clean-up where participants could rake leaves into piles and jump into them or fill “Pumpkin” garbage bags. Fall clean-up is also a great opportunity to learn more about why the seasons change and why leaves fall off of some trees. Creating arts and crafts using bits and pieces of nature in the park is a great idea for all seasons, especially during the summer when many parents are trying to find fun activities for their children. The arts and crafts activities' price range could be free or a few dollars, depending on the expense of the materials. Events during the summer such as family movie nights in the park, and puppet or magic shows would bring families together. A spring 5K marathon around the Huron trail system would draw athletes from around the area to Huron and the entry fee could go towards a charity or towards a community goal such as a new playground or other public item.

Development of Additional Parkland

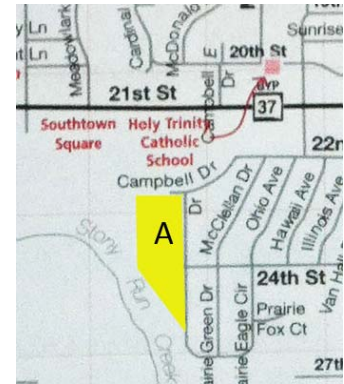
Figure 6 shows the current service areas of the Huron parks system. From this map, it is evident that there are several underserved portions of the community. It is proposed that financial support be generated to fill these gaps with new parkland. Recommended acquisitions or potential park sites are discussed in this section. These parks are listed in descending order of importance to build. The locations given are preliminary suggestions and the final locations should be determined before beginning construction of the parks.

Key	
Mini Park Color=	
Neighborhood Park Color=	
Community Park Color=	
Special Use Park Color=	
Community Athletic Complex Color=	
Future Parks Color=	



**Figure 20: Recommended Additions
to the Huron Parks System**

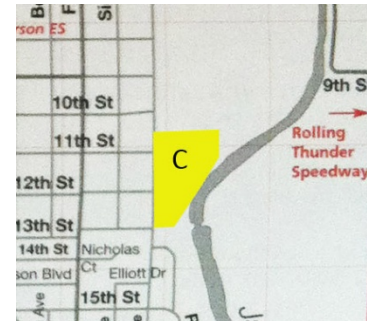
PARK A is expanding particularly quickly. Because of the increase in housing and business development, Park A has been proposed as a neighborhood park to serve this area. The park should include a sports court, a playground, benches, picnic tables, and a picnic shelter. If the area is relatively flat, it could be a prime location for an ice-skating rink during the winter. It is near Stony Run Creek, so when winter is over, the water from the ice rink could be allowed to naturally drain into the creek.



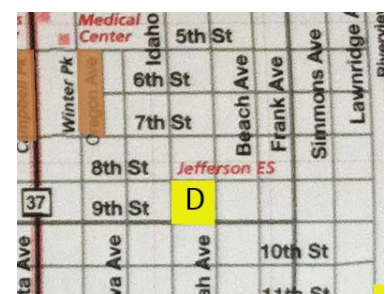
PARK B is also located on the south side of town where new development is occurring. This is a mini park which would serve the neighborhood around it on either side of Dakota Avenue. Its proximity to the business areas is another great reason to build the park in this location. People can run errands and take their children to the park, all within a quarter mile walking radius. The park design could include native plant species, a small playground, and seating.



PARK C is located near the James River, and would serve a large number of people in eastern Huron. This community park would be designed in mind of possible flooding issues and the plant selection would reflect this as well. The park's overall design would be to resemble a natural area, where people could spend time bird watching or fishing. The park would possibly connect to the future trail system and be a resting point for people. Several stretching and exercise stations near the entrance to the trail would be a great attraction for individuals exercising on the trail and would draw people into the park from the trail. A type of exercise station is a Fit Trail System which provides 10 unique stations to promote exercise. The park would be filled with many varieties of trees, and would include a rain garden strip near the river which would collect and filter up to a certain amount of water overflow.



PARK D is a mini park in place of Jefferson Elementary School which has been marked for demolition. The playground would be kept, but the rest of the area would be converted into an educational park. Features of the educational park could include: class vegetable gardens, a butterfly garden where students learn about insects, rain barrels to demonstrate water conservation, and a sensory

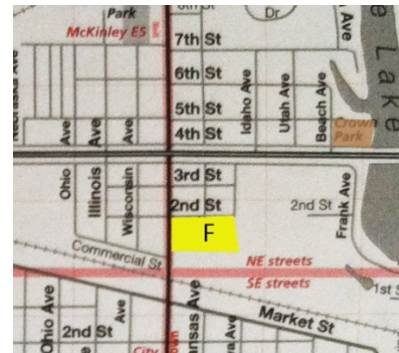


garden filled with unique plants. Elementary classes from the other community schools could take fieldtrips to the park and learn about many aspects of nature. A large gazebo would also be built to shade the visitors. The native flowering plants and grasses that surround the gazebo would also serve as a great photo spot and attract attention to the educational park.

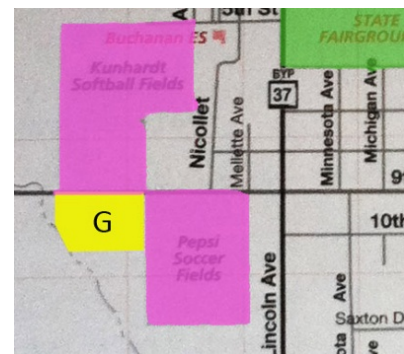
PARK E is a mini park which would serve the neighborhood west of the fairgrounds. Its location in this part of town was chosen because of the lack of parks in the neighborhood area. The mini park would include drought-hardy native plants because of the southern exposure. This area would be a great location for a swing set or other play equipment, benches, and a small shelter.



PARK F is a neighborhood park north of the railroad tracks near Dakota Avenue. To entertain children and teens in the 1/2 mile radius, the park should be designed with a sports court, a playground, a skate park, and several picnic areas. The park will be planted with deciduous trees for shade in the hot summer and a line of evergreen trees on the north side. The evergreens will give privacy to the neighborhood adjacent to the park and also protect visitors from the harsh north winds.

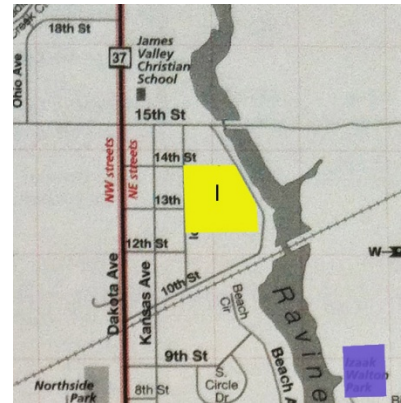


PARK G is situated to connect the Kunhardt Softball Fields and the Pepsi Soccer Fields. It is also located near the State Fairgrounds, and is designed as a fenced dog park. Having a dog park closer to the main hubs of Huron would serve a greater number of people than if it were placed on the outskirts of town. The park should include water fountains designed for both humans and canines and animal waste disposal stations. A playground outside of the fenced in areas should also be included to entertain children during sporting events at the softball fields or soccer fields. A vegetated buffer between the dog park and the surrounding area is also important. This park would also be a prime location to connect to the future trail system and have a stretching area for people to stop and take a break from exercising on the trail.



neighborhood. The park would include a play area and an open field for free play. To combat the noise, a buffer of trees and shrubs would be planted, and a pedestrian crossing light would be installed to help children and adults safely cross the street. This park would be used in the winter as an ice-skating rink. A small booth where visitors could rent ice skates and purchase hot beverages is another recommendation for the park. A long row of benches and trash receptacles on one side of the park would be installed so that parents could sit while watching their children skate.

PARK I is a community park on the north side of the tracks near Ravine Lake. It should include playgrounds, picnic shelters with tables, and an open field for free play and activities. It will also have a retention pond for potential river overflow and the planting beds will be sustainable. The plant selection will be native species which do best in wet conditions, such as river birches and willow trees. This area would be planted with many of these trees, and filled with perennial native plants which do well with little maintenance.



These recommendations are intended to help the City of Huron introduce enhancements to the excellent existing parks system. These improvements will help to encourage Huron's residents to maintain a healthier lifestyle and incorporate active transportation as a part of daily life.

Recommendation 4: Active Transportation Infrastructure

Over the past several years, Huron city council has sought to make their community a better place. The city has already received help from Design SD in providing solutions to improve the aesthetics and function of their city center. Another large step in positive development is the establishment of Splash Central Water Park, Huron's newest attraction. In addition to city administration's desire to improve Huron, the city officials collaborated with South Dakota State University Landscape Architecture students in recommending a comprehensive Active Transportation (AT) system. The goal of these recommendations is to provide a plausible, if ambitious, plan to continue to increase the quality of life and establishment of Huron as a South Dakota destination. The central part of any AT system is a comprehensive network of trails and bike facilities.

Development of Additional Cycling Facilities

The city of Huron currently has 5 miles of multi-use trails within the city limits. The trails concentrate on Ravine Lake Park, Memorial Park, and another connects the Pepsi Soccer Fields to the shopping district south of town. There are currently no bike-exclusive facilities. The current biking and walking system does not accommodate for city-wide travel. It would be in the best interest for Huron to further develop a more extensive multi-use trail and bike lane system that would allow the population to commute to major city centers and recreation areas as pedestrians. This would complement Huron's commitment to active living and city development.

Benefits of a new and extensive trail and bike lane system include access to recreation, opportunities for healthy living, and community improvement. More multi-use trails offer opportunities for recreation for the community and visitors. Vehicular traffic would be reduced because of the accessibility the trail system provides to city centers and recreation facilities for pedestrians. In return, reduced vehicle use will lower the amount the amount of money spent on fuel. The trail system would also provide opportunities for exercise and improve the community's health and well-being.

An ideal active transportation (AT) system would connect all major city and recreation centers while providing a safe route for pedestrians and cyclists. It would also allow for future expansion and include areas not yet developed. AT would also accommodate for the recent increased Karen population, whose primary mode of transportation is walking or biking. Trails and paths that run through the interior of the city will also make the new Splash Central water park easily accessible for pedestrians and bike traffic. An extensive trail system would further create opportunities for exercise and encourage healthy living in the city of Huron. Along with more bike trails, adequate amenities such as lighting, seating, rest stops and repair stations should be included.

Bike and pedestrian traffic sharing the same path could pose a dangerous problem with collisions and injury. Bike lanes on the streets would ease any congestion created by cyclists and walkers on the sidewalks. Huron should designate bike lanes on its current street layout to reduce or eliminate any dangerous of pedestrian/cyclist collisions. Bike lanes may be created by eliminating roadside parking on certain streets and designating a bike lane with street signs and pavement markings. Major streets acting as arteries for traffic circulation should have incorporated bike lanes. Addition of

bike lanes would also add to the existing biking and walking trails. Street signs and new policy would prevent and reduce potential accidents on a shared road.

Active Transportation System

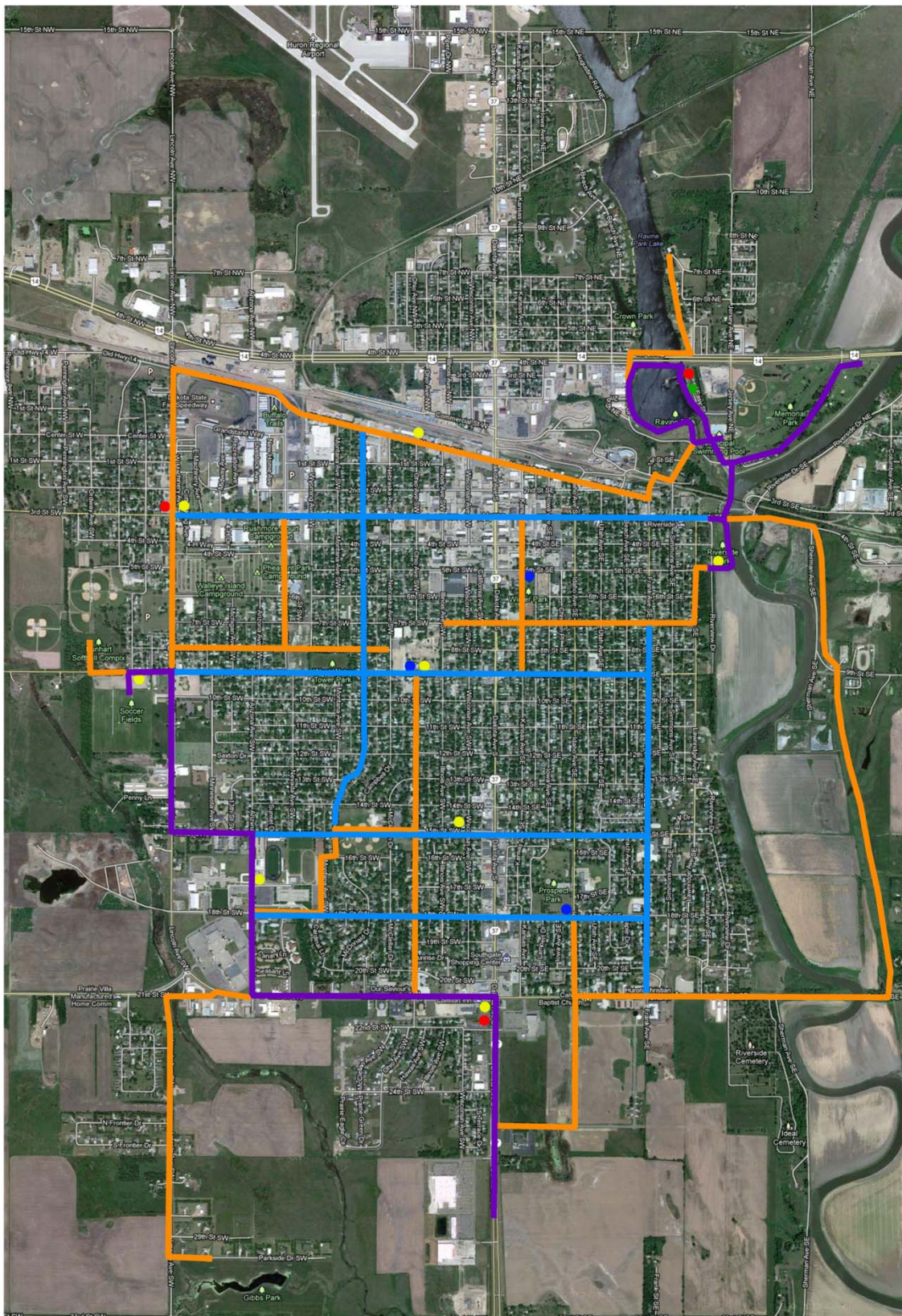
Trails and bike lanes should be in areas that will make them easily accessible to the community. In a spoke-and-wheel plan, a paved multi-use trail would circle the city, with several bike lanes and smaller trails entering the city and converging at a central location. Important destinations such as core commercial areas, employment centers, parks, schools and other community centers should be linked by this multi-modal system. Utilizing the right of way on the street would provide enough space for any widening or additional lanes or features required for multi-use trails or bike lanes.

New trails should be constructed with a cost effective material. Concrete or asphalt is the recommended pavement for trails because of ease of installation and cost, standard life span, and user accommodation. Bike lanes on roads should be indicated by signage and pavement marking. Road paint is ideal for marking bike lanes because of ease of installation, durability, and low cost compared to other methods of road marking. Trail furnishings, such as benches, shade structures, and drinking fountains, should be installed at key points along the trail and bike lanes. Cost will vary on quantity, and quantity of features. Furnishings should be kept consistent along all trails and bike lanes and with city design standards.

Safety is a major concern when considering bike lanes and multi-use trails. A study conducted in 2012 found that bike specific infrastructure reduces the amount of accidents involving vehicles and cyclists. Quiet streets are the safest, but bike lanes and other bike specific infrastructure (e.g. bike lanes) reduce incidents. Adequate signage and road markings will help make motorists aware of the new mode of transportation on the roads. The addition of bike lanes narrow vehicular lanes, narrower lanes prompt drivers to reduce speed, according to a Texas Transportation Institute study conducted in 2000. Reduced speeds reduce the risk of accidents with cyclists in on-road bike lanes. Enforcing new city policy protecting pedestrians and cyclists will assist in establishing a safe bike lane system.

Proposed Routing

1. Bike lane following 3rd Street from Lincoln Avenue to Riverview Drive and Memorial Park; eliminate on-street parking near downtown area.
2. Bike lane following 9th Street from Lincoln Avenue to Frank Avenue; eliminate on-street parking.
3. Bike lane following 15th Street from established multi-use trail to and through Little League Complex and continuing to Frank Avenue.
4. Bike lane on 18th Street originating at the Nordby Center and connecting Prospect Park to Frank Avenue.
5. Bike lane on Frank Avenue from 21st Street to Market Street.
6. Bike lane that originates at Market Street and runs on Colorado Avenue and McDonald Drive to Little League Complex



Map 1: Huron active transportation system map.

Legend

Existing Trails



Proposed trails



Proposed bike lanes



Existing Share Stations



Proposed Share Stations



Existing repair stations



Proposed Repair Stations



Multi-Use Trail Routes

1. Extension of trail on Lincoln Avenue from 9th Street, north from Lincoln Avenue to Market Street
2. Connect multi-use trail along Market Street to Ravine Lake Park trails
3. Create trail along Ohio Avenue from 21st Street to Central Park
4. New trail along 8th street from Lincoln Avenue to Central park, and Nevada Avenue connecting the fairgrounds
5. New trail along 7th Street from Frank Avenue to Central Park
6. New trail along Lincoln Avenue from 21st Street to Gibbs Park
7. Highway 14 trail crossing next to Beach Avenue; convert 4th Street NE to a pedestrian bridge
8. East Huron trail connects at the south shopping district from 26th Street at Idaho Avenue to 21st Street, across the bridge and to a new trail on the east side of the James River north to 3rd Street.

Case Studies:

The best information obtained about active transportation systems is the planning and implementation that other cities and communities have done in developing their own systems. Researching cities with similar size, resources, and history that have successfully implemented AT systems are good examples on which to base the Huron AT system.

Case Study #1 (Arlington VA, bike system)

In Arlington, Virginia, a steady evolutionary change in biking policy during the last three decades has yielded some of the nation's best biking assets. It has a comprehensive, well-connected, highly integrated, well-mapped, and well-signed system of multi-use paved trails, bike lanes, bike routes, and other biking assets. Understanding the conditions that led to Arlington's current biking system can provide lessons in the strategy and tactics of active-living politics.

One potentially effective political strategy that was successful in Arlington is for activists to pressure elected officials to select professional managers who see bikeways as crucial to the overall transportation system. It is important to formalize the government-citizen relationship through an advisory panel. Also in Arlington, the incremental creation of biking assets helped create demand for more and better facilities. In turn, this created political support for expanding and upgrading. Finally, Arlington used potentially negative circumstances (e.g., the building of highway corridors, the introduction of the Metro) as opportunities to change the built environment in ways that have encouraged more active living.

The Huron city council is already in support of active transportation and active living. Connecting the city council and the community to further advocate for active transportation facilities is a key step in establishment of a successful active transportation system. Facilitating demand for new infrastructure from the community may be achieved by promoting active living through effective means. School programs, youth activities, and community organizations are valuable assets for advocating active transportation.

Case Study #2 (Planned Pre-Retirement Communities)

Active transportation is most commonly aimed at younger aged people, however new generations of retirees are choosing communities with more opportunities for recreation, physical activity, and enjoyment. Carillon Lakes Crest Hill, Illinois; Warwick Grove Warwick, New York; Great Island Plymouth Massachusetts; and Sun City Lincoln Hills Lincoln, California; are some of these new retirement communities that emphasize active transportation. These communities are based on new urban design which emphasizes ease of access to city centers via walking or biking. These communities have more walking paths, multi-use trails and biking lanes than conventional retirement communities. Younger baby-boomers are more attracted to hiking and biking trails than shuffleboards and checker benches. Providing facilities that promote healthy living improves the attractiveness of a community. Bike-lanes and multiuse trails that access recreation and city centers provide the greatest opportunity for people to walk or bike instead of drive.

Implementation

Implementation will be a costly endeavor in both time and money. Because of the cost and time associated with installing new bike lanes and multi-use trails, it is recommended that Huron chose an implementation plan that takes the form of phases based on urgency and available funds.

Phase 1 should connect the established trail system in Ravine Lake Park to the athletic fields on the west side of town, via the proposed Lincoln Ave and Market Street trails. The section of expanding trail along Market Street offers a unique opportunity to utilize Huron's railroad history. The trail could feature several stops, providing signage and information of the importance of the railroad industry on Huron's history and development as well as the railroads influence on the city today. The 9th street bike lane should also be included in the first phase to establish the presence of bike lanes and adapt the city to the new form of on-road traffic. Completed by 2016

Phase 2 should expand on road bike lanes, connecting 9th street to Frank Ave bike lanes. Frank Ave. is an essential circulation route for Huron and providing opportunities for bicycle traffic will encourage the population to utilize these bike lanes if they are connected to major routes and city centers. Completed by 2018

Phase 3 connects the trails on the east side of Huron. One side bridge over the James River on 21st street and a new trail will take a significant amount of time and fund to construct. The phase will require significantly more funding than other phases. Complete by 2025.

Phase 4 consists of designating 3rd St. 15th St. 18th St. and Colorado Ave bike lanes. These lanes will complete an extensive bike lane system in Huron making bicycle traffic an effective mode of transportation for the population of Huron. This phase is an appropriate phase after the third phase because of cost. Bike lanes will be less costly than bridges and new asphalt or concrete. Complete by 2027.

Phase 5 includes the installation of multi-use trails that enter the interior of the city. This phase may be split up into smaller phases depending on funds available and time

required building. These trails will complete the spokes of the wheel-and-spoke design of a city wide multi-use and bike lane system. Complete by 2030.

Conclusion

In conclusion, active transportation is a comprehensive system of bike lanes and multi-use trails that caters to pedestrians and cyclists and alternative modes of transportation for the purpose of recreation, exercise and transport. A wheel-and-spoke design for Huron's AT system will allow access from many points in the city, while being safe and useable system. Funding opportunities may be found through federal grants and projects as well as private donations and public-private partnerships. Implementations must be done in phases based on funds available and time required to complete a designated section.

Bike Facility Image References

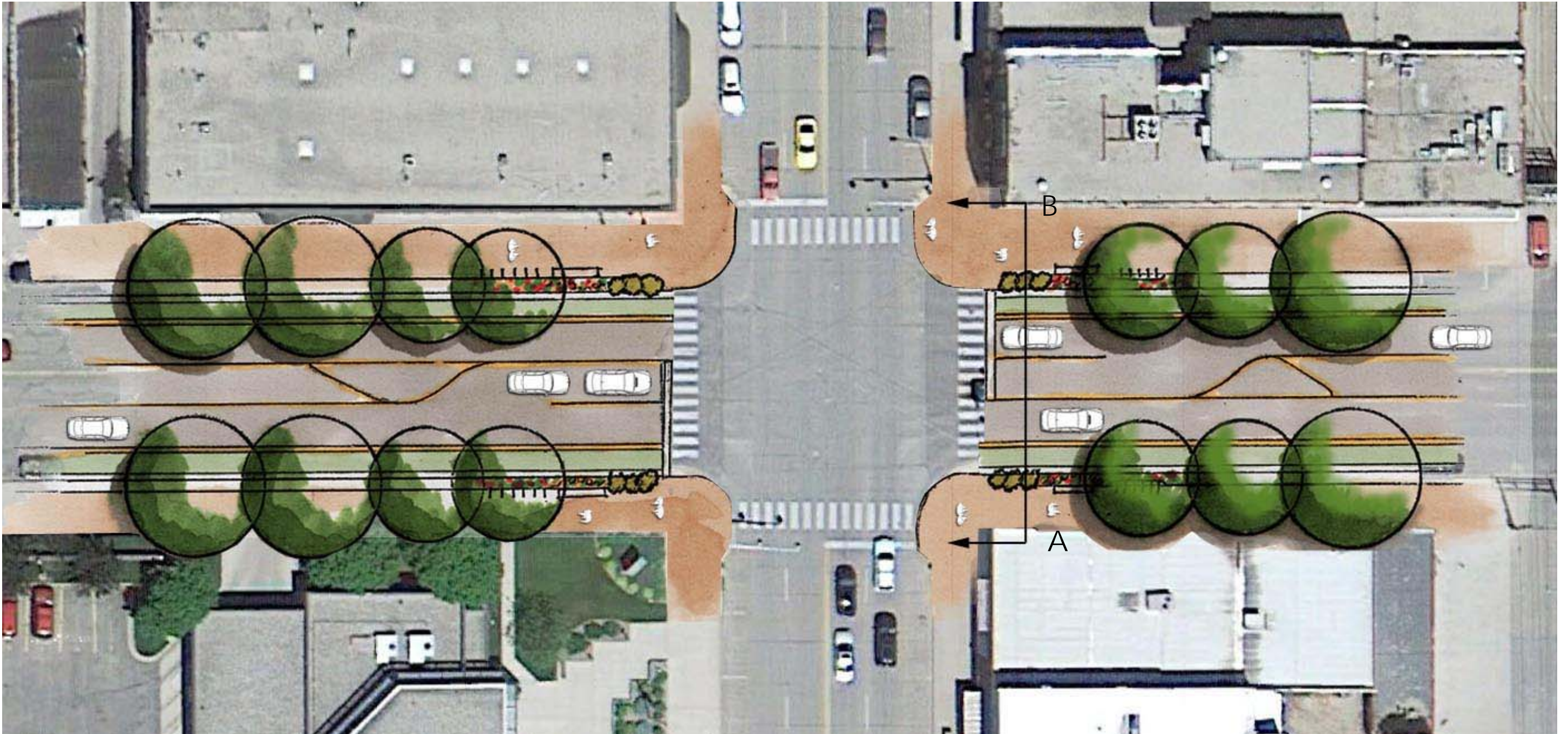


Figure 21: 3rd Street and Dakota Avenue Intersection with Bike Lanes



Figure 22: Typical residential multi-use trail layout.

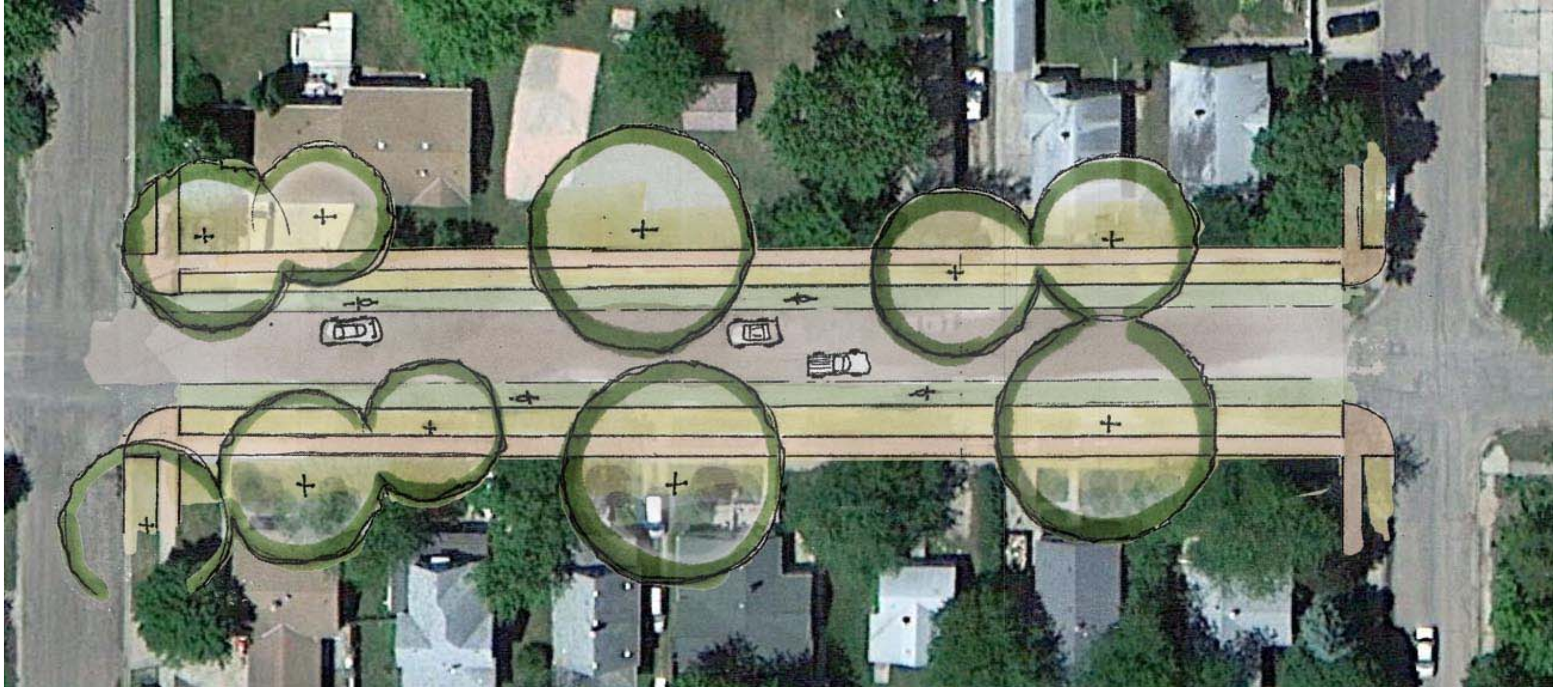


Figure 23: Typical Residential Street with Bike Lanes



Figure 24 Highway, 14 intersection with stop-lights and converted road to multi-use trail

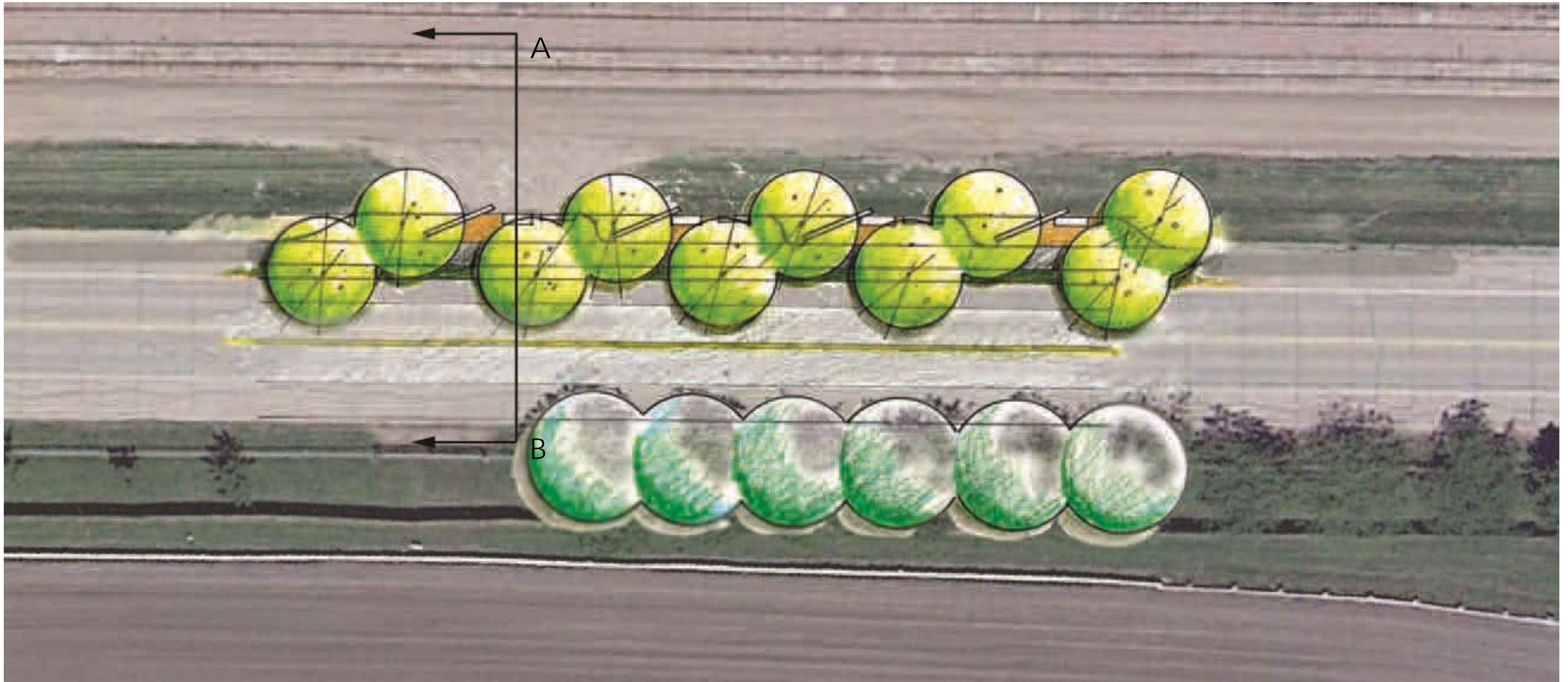


Figure 25 Market Street multi-use trail with culture point

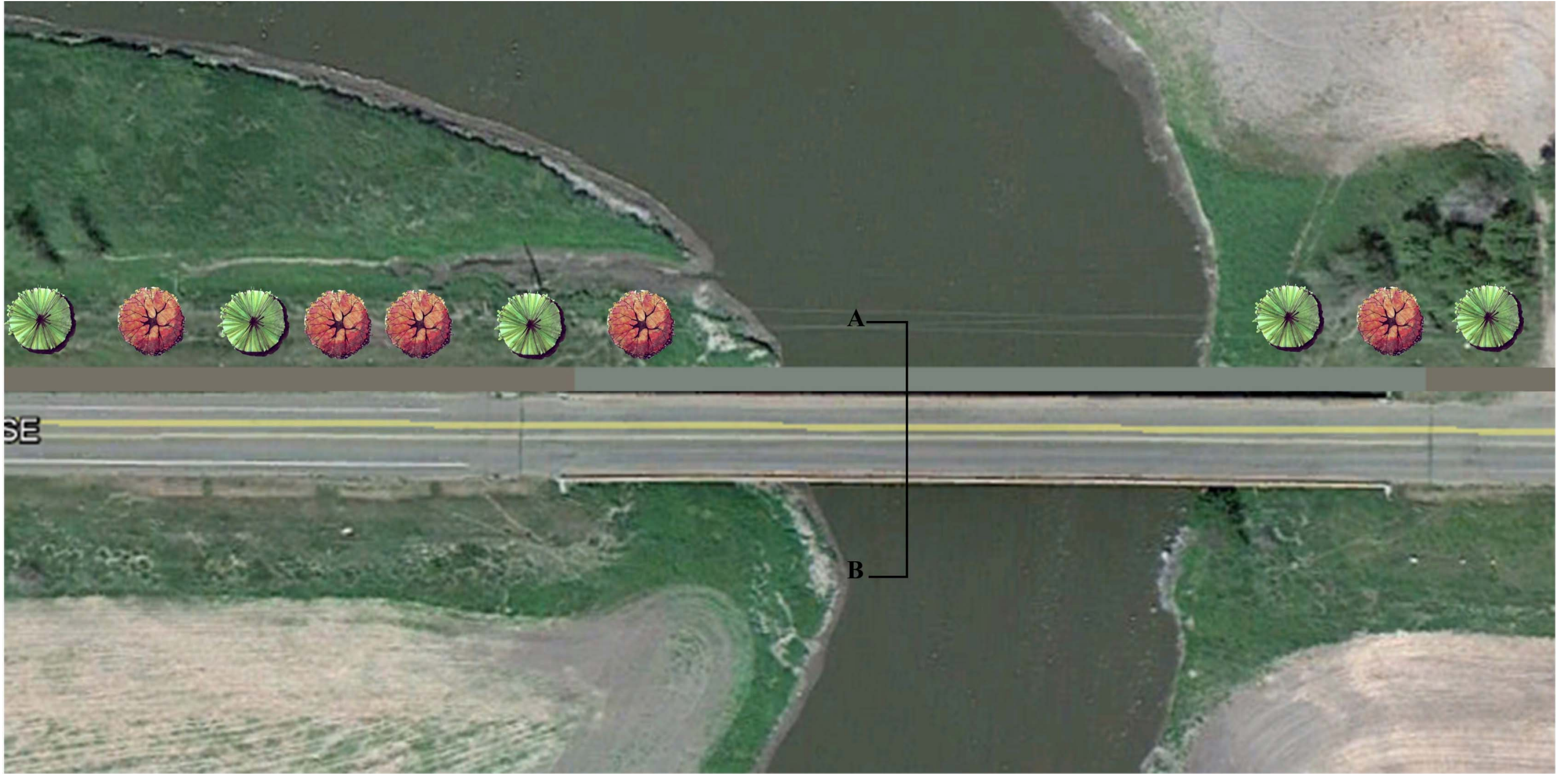


Figure 26 21st Street Bridge with multi-use trail and side-bridge

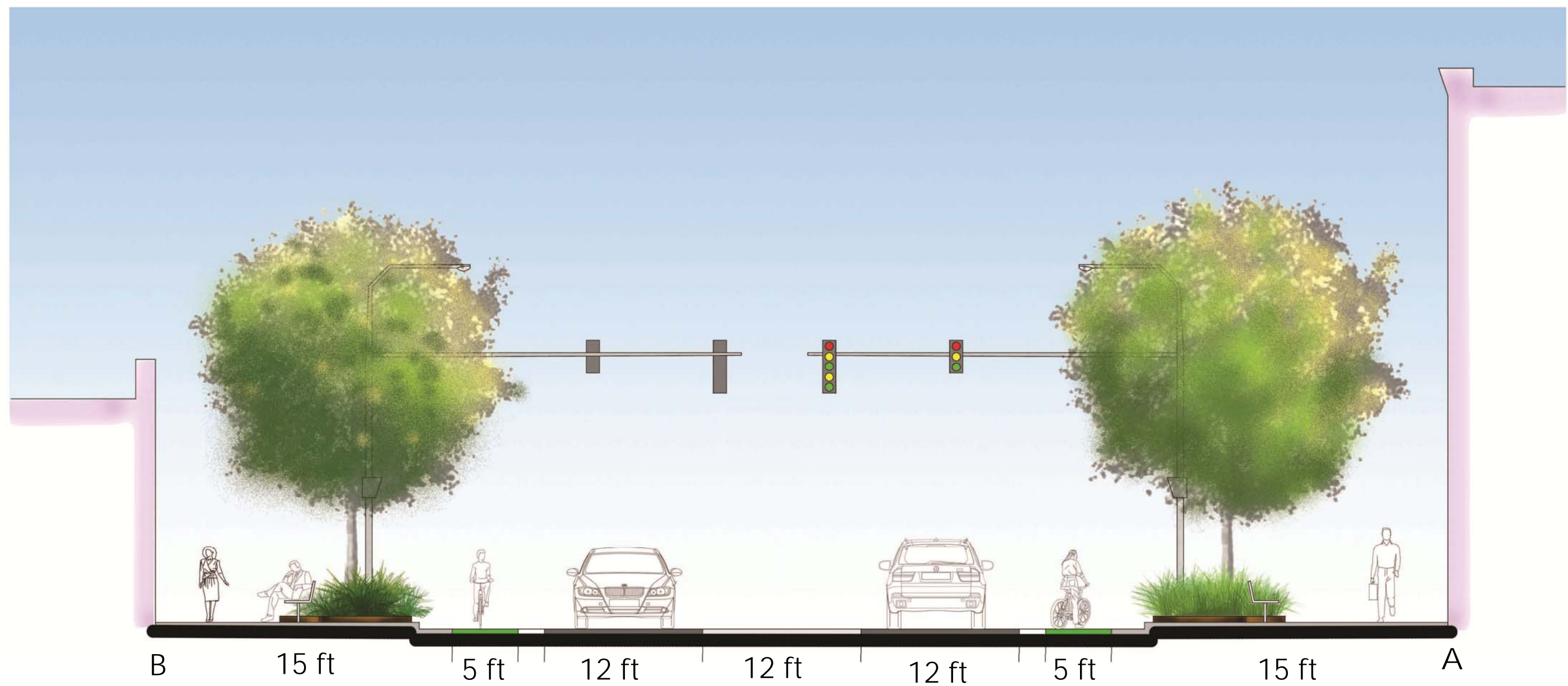


Figure 27 3rd Street section view with bike lanes, traffic lanes, and turning lanes

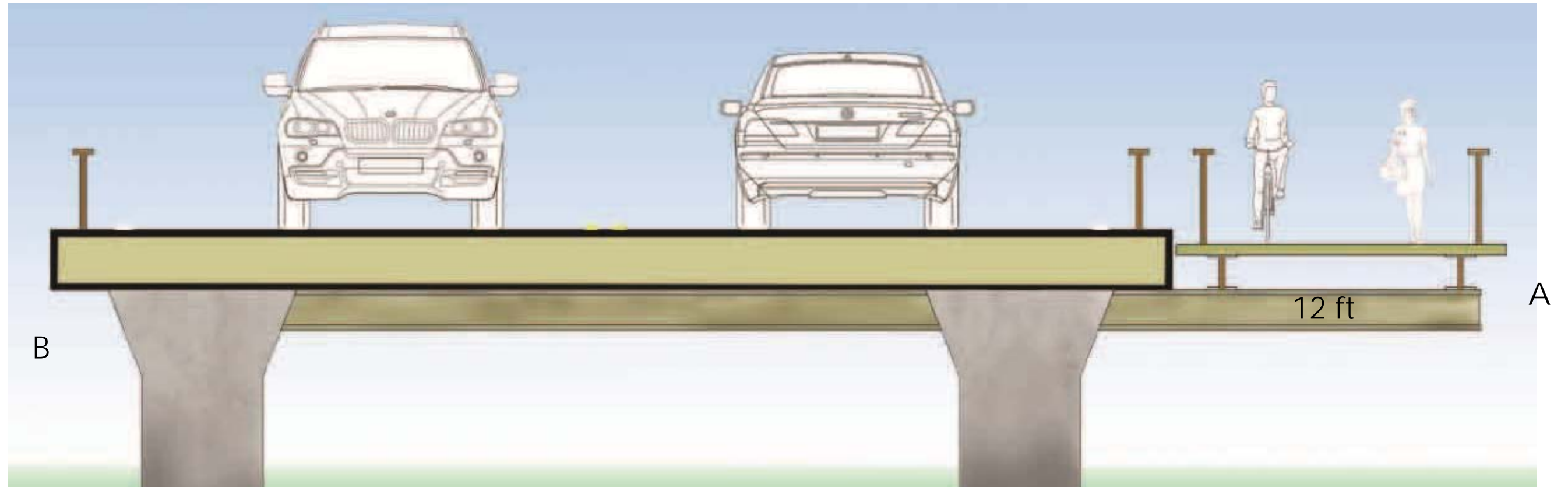


Figure 28 -21st Street Bridge and side bridge section

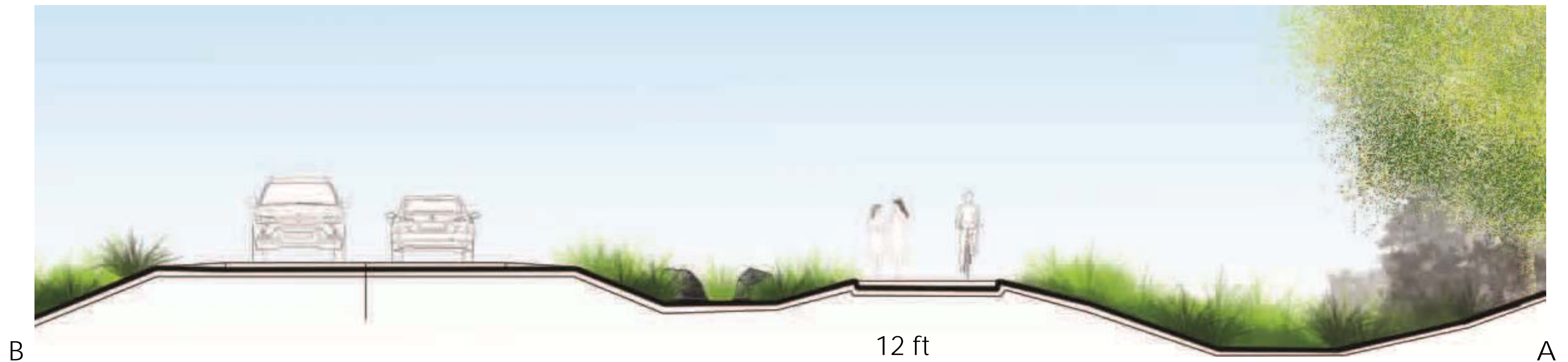


Figure 29 - 21st Street section with multi-use trail

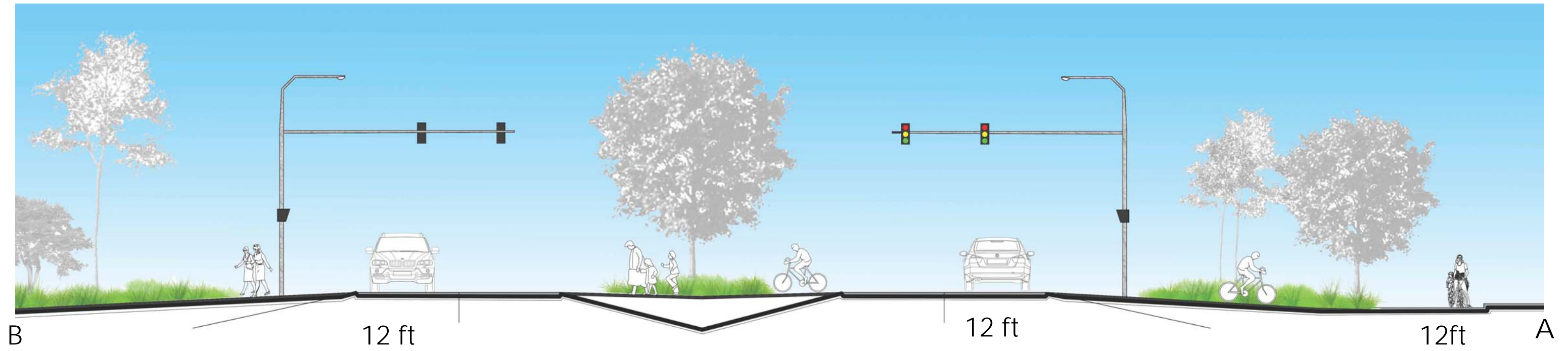


Figure 30. Highway 14 trail intersection

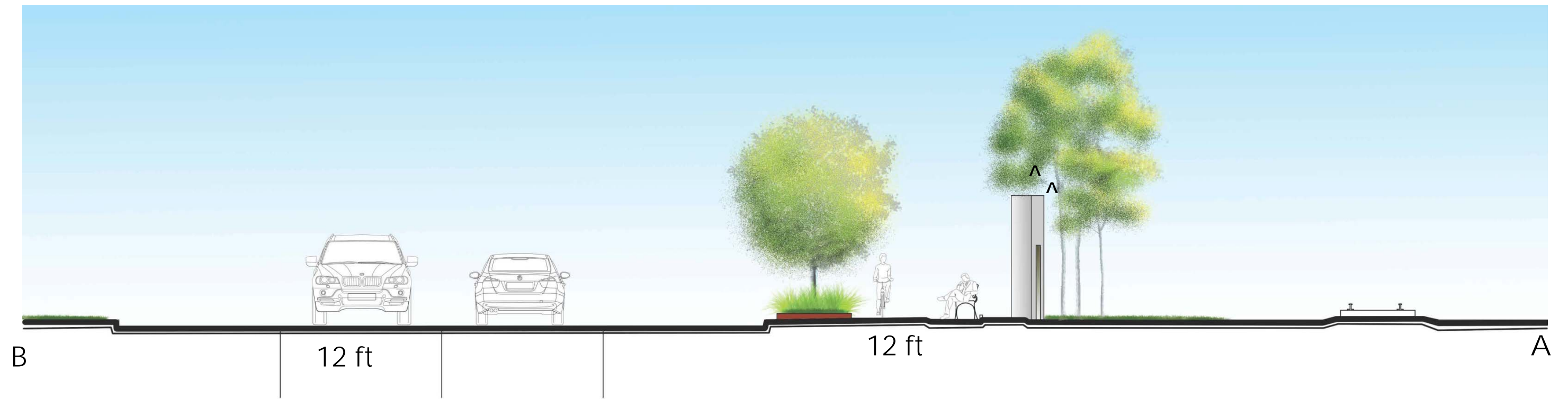


Figure 31. Market Street multi-use trail with culture point

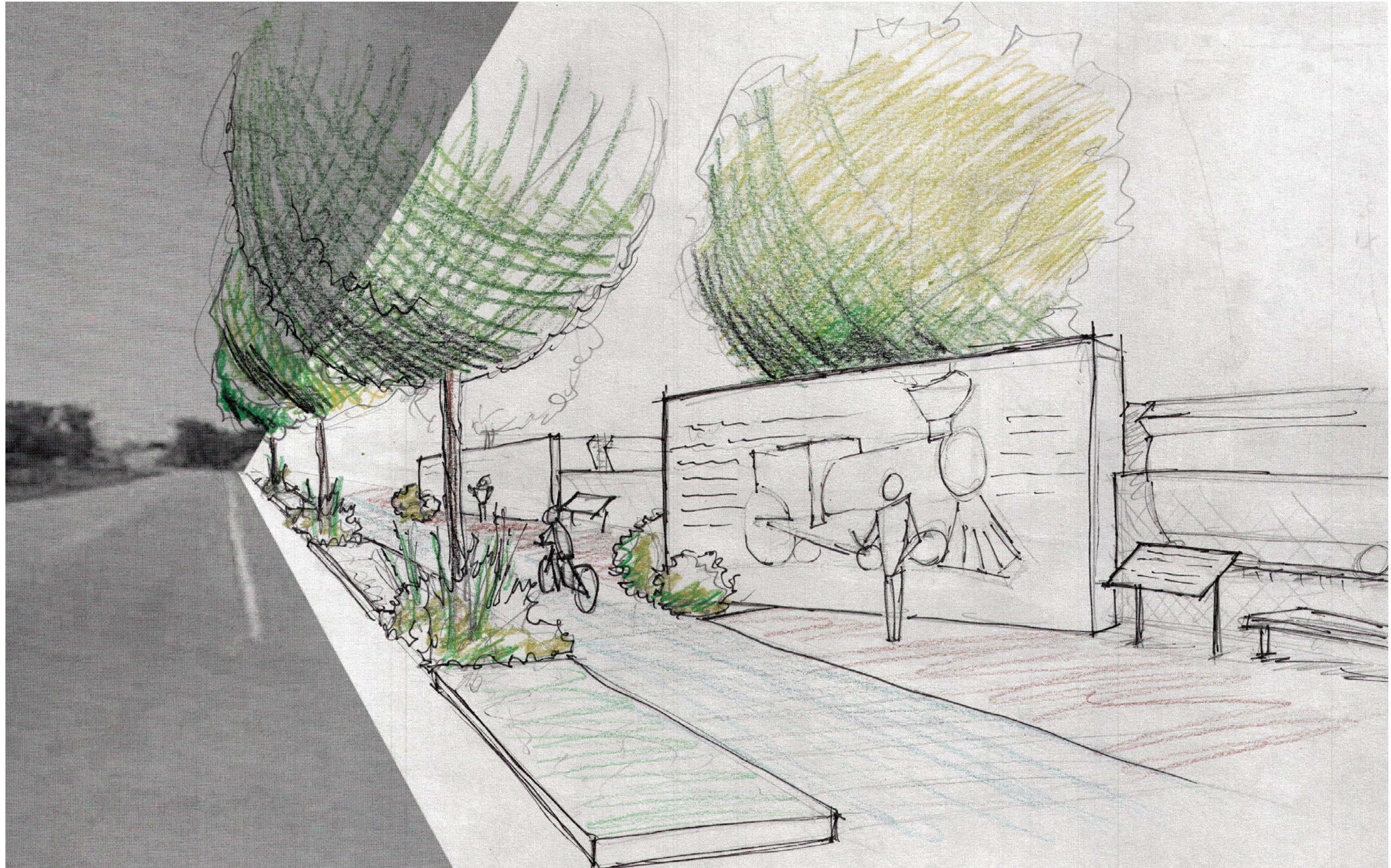


Figure 32 Market Street trail and culture point concept

Recommendation 5: Continue growing bike share program

The Spokes for Folks bike program has developed into a beneficial and reliable resource for community members. Due to the interest in the program, an expansion of it is recommended. Benefits of a bike share program is providing a safe and reliable way to get to work, run errands, visit friends and family, fitness, and recreation. In this chapter we discuss the recommendation to help ensure maximum usage of the program. The first part of the recommendation covers different funding options that may help offset the cost of the program. This leads into the design of the bikes and the bike stations. The third section covers the location and importance of where they stations should be placed. Next, a case study shows how another smaller city's bike share program is operated. Lastly, installation of the stations including when and where to build them will be discussed.

Design of bike stations and bikes

The next aspect of the recommendation includes a proposed design and set up of the bike stations. The bike stations can include bike docks which release and lock the bikes at the beginning and end of rides, the bike share bikes, a power source (typically solar), a payment interface if chosen, and signage to make the bike stations visible and easy to navigate. The stations themselves range from 40 to 70 feet long and six feet wide. Typically to provide space for people to check out and return the bikes, bike stations will have twice as many spots to dock bikes as there are actually bikes kept permanently at that station. The current bikes in the bike share program are a bright color and that is important because it makes them distinctive and highly visible. This also helps prevent theft.

As the bike program continues to develop additional security devices can be implemented to insure that the bikes are not stolen. The bike station docks account for the amount of time that the bike had been used and when they bike was return can be the most successful security. Bikes can also be equipped with technology such as GPS and RFID (radio-frequency identification) for tracking. If a bike is not returned in 24 hours then the customer is notified and charged a certain amount until it is returned. Another component of the bike design is they are easily adjustable to accommodate users. Bikes can also include baskets in the front to hold bags and luggage support or child seats in the rear for those people who wish to use the bikes to run errands, go to the grocery store, or take a small child along with them. Chain guards, fenders, and cable covers are also recommended to be including in the bikes for additional safety precautions.

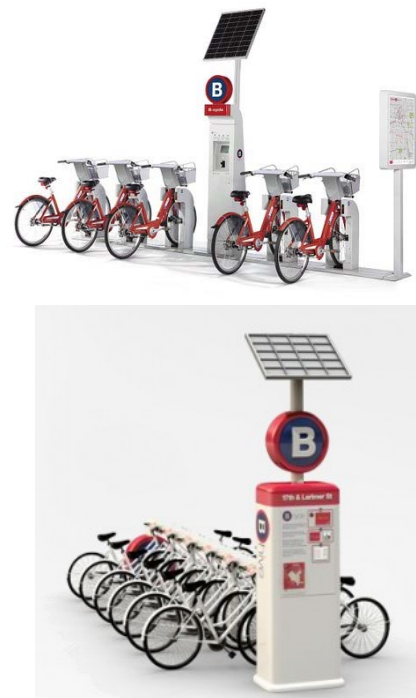


Figure 34: Typical Self-Contained Bike Station

With an increase in bikes and bike stations it is important that maintenance procedures are continued. Maintenance of the bikes may include checking wire and chain tension and lubrication. The station locking systems and electronic processes should also be checked. These additional features added to the bikes and bike stations will help the program to grow.

Location

An important aspect of a bike share program is the location of the stations. Bike share programs have the most potential to succeed if they are placed in high demand locations. Many other communities have integrated this concept by placing stations at important destinations such as workplaces, schools, recreation centers, tourist attractions, and shopping districts. As the bike program grows, additional stations may be added in other areas as demand increases.

In addition to these bike stations there should be additional bike repair stations. The three current locations are at the corners of the city. It would be beneficial to have at least three more stations located toward the center of the city. With the development of Splash Central and the trails around it, a bike station should be placed there due to the high amount of people in the area especially during the summer. Another beneficial location for a bike station would be in the downtown area in Winter Park. This allows people to utilize the trails and lanes in the downtown area and help to decrease congestion. There should also be a station in the southeast corner of Prospect Park. This provides people in the SE corner of the city with a nearby station ready to use.

Case Study

Collingswood, New Jersey has a population of 13,926 people making it very similar to the City of Huron. This case study shows the different components of their bike share program. One reason Collingswood chose to implement a bike share program was to reduce congestion, emissions, and transportation cost. To help stay within the budget of the bike share programs, the bikes that are used in the program are repurposed bikes that have been unclaimed in the police stations or bikes that have been donated. The bikes are painted a bright green so they can easily be identified. Volunteers help to operate the program by restoring and painting bikes.

One difference to the Huron program is that in Collingswood, bikes are loaned out to riders for long term use at a minimal fee, allowing riders to keep the bikes at their homes rather than on a bike rack. There are a few guidelines the riders must follow, and riders must sign an agreement and liability waiver by the Borough of Collingswood Department of Recreation. The bikes can be picked up at central locations and returned at the same station or another station. This program also provides a bike clinic where volunteer mechanics provide knowledge to help riders learn to fix and keep bikes running well. Collingswood has had a growth in the amount of people using their stations exceeding the community's expectation.

Implementation and Phasing

The last part of this recommendation includes a proposed timeframe for incorporating additional bike stations into the city. The bike stations and repair stations will be implemented as the bike lanes and multi-uses trails are developed (see

recommendation 4 for the timeframe of the multiuse trails and bike lanes). This implementation includes five phases. The timeframe is dependent on the availability of funding and the amount of time required developing the multiuse trails and bike lanes. It is expected that the project take between 10 and 15 years to complete.

Phase 1 includes the installation of a bike and repair station at Central Park. A complete bike share station costs around \$11,000. Due to the fact that Central Park will become a popular site, it is important to have a bike station where people can rent or return bikes. Also due anticipated usage it is important to have a bike repair in the same location. An additional repair station should also be placed on the corner of Market Street and Ohio Ave SW adjacent to the proposed multiuse trail routed there. It is anticipated that this trail will be used often and therefore it is important to have a repair station if someone has an issue with their bike when they are in that area. There will also be a repair station placed across from the track on Arizona Ave. This is important because currently there is no repair station on that path. The cost of a bike repair stations is \$5,000-\$7,000. The total cost of phase one will be \$21,000-\$25,000.

Phase 2 would include a bike repair station at Riverside Park, Pepsi Soccer Fields, and on the corner of Dakota Ave S and 22nd Street. Also in this phase the bike station on the corner of corner of Dakota Ave S and 22nd Street will be replaced with an undated version. This will allow for people to rent bikes and encourages people in the area to bike to work more. The total cost of phase two is \$26,000-\$32,000.

Phase 3 includes the installation of a new bike station at Ravine Lake. Many people have taken bikes out from this area and will be more adaptable to the two other new stations. A new bike and repair station at corner of 3rd Street and Lincoln Ave S. The total cost of phase three is \$27,000 to \$29,000.

Phase 4 includes the installation of a bike station at Prospect Park on the corner of Idaho Ave and 18th Street, and a bike repair station at the Little League Complex. A bike station at Prospect Park will provide people in the SE corner of Huron with a station to get too conveniently. Due to the proposed development of a bike lane on 15th Street and the usage the Little League Complex receives in the summer, it is important to have a repair station in that area. The total cost of phase four is \$27,000-\$29,000.

Phase 5 includes the installation of a bike station at Winter Park on the corner of 5th Street and Kansas Ave. This bike station will complete the new bike share program and all stations will now be compatible with one another. The total cost of phase five is \$11,000.

Conclusion

The expansion of the Spokes of Folks bike share program will be beneficial to the city of Huron and its community members. There are numerous steps that need to be taken to ensure that the program is usable for all. There are many funds that Huron can apply for which will help to offset the cost of the expansion including bike stations and more bikes. An increase in the bike stations at specific locations will increase the amount of people using them.

Additional features added onto the bikes and the stations will ensure security for the bike share program and help to reduce theft. In addition to an increase in bike stations,

we also recommended that there be additional self-repair stations. These stations are located along many of the main trails and ensure riders can have a safe ride even. The Spokes for Folks program has gained much interest in Huron so far and increasing community support and infrastructure will ensure continued use and benefit to community members.

Financial Requirements & Funding

Costs

When communities plan to construct bike lanes or multi-use trails, financial budgeting should be based on surface pavement type, trail dimensions and other features. Pavement surfaces should be a three way balance between cost, durability, and usability.

Concrete and asphalt are the two primary pavements recommended for multi-use trails. Concrete on average is more expensive to install than asphalt, however the maintenance cost of concrete tend to be much lower than asphalt. Frequency of maintenance is also a factor in recommending pavement for trails. Asphalt will require more frequent maintenance than concrete. Asphalt performs well during winter conditions, most salts and sand do not deteriorate asphalt like it does concrete. Using snow removal equipment has an equal effect on both concrete and asphalt. Finally user accommodation is a factor when selecting pavement. Asphalt is softer and provides smoother travel than concrete.

Road paint is the most cost effective means of marking new on road bike lanes. It is less expensive than plastic, thermoplastic and epoxy. It is easily applied with spray trucks for lines and stencils for on street symbols. Road paint will last for several years without wear, and can be easily reapplied.

Funding

There are many forms of funding available for pedestrian and cyclist orientated projects. Many come in the form of federal and state grants as well as private donations and special assessment or project taxes. In all cases, requesting funds for specific purposes (multi-use trails and bike lanes) is more favorable than requesting funds for general needs.

Grants

There are many funding opportunities through federal and state agencies. The Federal Department of Transportation in particular has several financial aid programs for projects that involve pedestrian and bicycle traffic. Below is a non-exhaustive list of potential federal and state aid programs and projects that could provide funding for pedestrian and bicycle traffic promotion. Most programs and funding opportunities will need to go through the state government to access funds.

National Highway System

Funds apportioned to a State for the NHS may be obligated for:

Construction, reconstruction, resurfacing, restoration, and rehabilitation of segments of the NHS;

- Operational improvements for segments of the NHS;
- Highway safety improvements for segments of the NHS;
- Transportation planning in accordance with 23 U.S.C. 134 and 135;
- Bicycle transportation and pedestrian walkways in accordance with 23 U.S.C. 217.

Recreational Trails Program

The Recreational Trails Program (RTP) is an assistance program of the U.S. Department of Transportation's Federal Highway Administration (FHWA). The RTP provides funds to individual states to develop and maintain recreational trails and trail-related facilities for motorized and non-motorized recreational trail uses. This program is eligible to only recreation facilities. Each state:

- receives funds apportioned by statutory formula
- administers its own program, usually through a state resource or park agency
- develops its own procedures to solicit and select projects for funding
- has a State Recreational Trail Advisory Committee to assist with the program that must meet at least one time each fiscal year
 - in some States, the committee selects the projects
 - in others, the committee is advisory only

Surface Transportation Program

The Surface Transportation Programs is a federal assistance program to state, regional, and community projects involving ground transportation. Pedestrian and bicycle transportation application fall under this category and are eligible for funds.

Safe Routes to School

Funds are made available for infrastructure and non-infrastructure projects, and to administer Safe Routes to School programs that benefit elementary and middle school children in grades K -8. Eligible infrastructure-related projects include the planning, design, and construction of infrastructure-related projects that will substantially improve the ability of students to walk and bicycle to school, including:

- sidewalk improvements
- traffic calming and speed reduction improvements
- pedestrian and bicycle crossing improvements
 - on-street bicycle facilities
 - off-street bicycle and pedestrian facilities
- secure bicycle parking facilities
- traffic diversion improvements in the vicinity of schools

Special Assessment Tax

A special assessment tax is an increased levy on property or sales tax rates to fund projects or programs that benefit a designated district. Huron may utilize this to help fund new construction for trails and bike lanes. Special Assessment taxes often are useful income sources to fund public works projects or projects that benefit the communities requesting improvement. It may take several years of increased tax rates

to acquire the funds to build new infrastructure. Community support for projects will also increase support for a special assessment tax.

Public & Private Partnership

Funding for trails and bike lanes may be found in private donations or matched funding agreements between private investors and public offices. The City council should continue seeking private donations from local businesses, individuals, and clubs. Matched funding agreements would increase the likelihood of private donations. A displayed effort from the city council and city officials to improve the community in a positive way will encourage private donors to contribute funds to build new multi-use trails and designate bike lanes. Private grants from non-profit organizations would also contribute to funding. Bikes Belong offers a private grant for facilitating or advocating biking, often public municipalities team up with a local or regional advocacy groups to ensure that biking and AT requirements are met.

Bike Share Program Funding

Currently the Spokes for Folks bike program is funded institutionally. However, in order for the program to grow and develop, additional funds are needed. Neither the city nor the Transportation Board should be additionally committed to purchase equipment or operate the bike program but rather be involved in managing the grants awarded and facilitating the selection of vendors to operate the program.

The federal-aid highway programs, federal transit programs, and the highway safety programs offer funding and grants for bike programs; however they must be primarily for transportation use rather than recreational purposes. With the increase in the Karen population and the population in Huron in general, the bike program will be beneficial or those who currently walk to work and can be earmarked first for transportation use with recreational use secondary.

One of the federal-aid programs includes the National Highway System. National Highway System funds may be used to construct bicycle transportation facilities and pedestrian walkways on land adjacent to any highway on the National Highway System, including Interstate highways (*23 USC Section 217 (b)*). *Another federal-aid program is the Surface Transportation Program (STP).* These funds may be used for either the construction of bicycle transportation facilities and pedestrian walkways, or non-construction projects (such as maps, brochures, and public service announcements) related to safe bicycle use and walking. TEA-21 added "the modification of public sidewalks to comply with the Americans with Disabilities Act" as an activity that is specifically eligible for the use of these funds (*23 USC Section 217 (a).*) *The STP can be used to create maps to hand out to community members and to place on the bike stations. Each year, ten percent of the South Dakota's STP funds are set-aside for Transportation Enhancement Activities (TEAs).*

The law provides a specific list of activities that are eligible TEAs and this includes "provision of facilities for pedestrians and bicycles, provision of safety and educational activities for pedestrians and bicyclists," and the "preservation of abandoned railway corridors (including the conversion and use thereof for

pedestrian and bicycle trails)" (23 USC Section 109 (a) (35)). In addition to this, another ten percent of South Dakota's STP funds are set-aside for the Hazard Elimination and Railway-Highway Crossing programs, which address bicycle and pedestrian safety issues. Each state is required to implement a Hazard Elimination Program to identify and correct locations which may constitute a danger to motorists, bicyclists, and pedestrians. Funds may be used for several activities, including a survey of hazardous locations, projects on any publicly owned bicycle or pedestrian pathway or trail, or any safety-related traffic calming measure. Improvements to railway-highway crossings "shall take into account bicycle safety" (23 USC Section 152).

Job Access and Reverse Commute Grants are available to support projects, including bicycle-related services, designed to transport welfare recipients and eligible low-income individuals to and from employment (TEA-21 Section 3037). High Priority Projects and Designated Transportation Enhancement Activities identified by Section 1602 of TEA-21 include numerous bicycle, pedestrian, trails, and traffic calming projects in communities throughout the country. Alongside federal funds, private sponsorships could help to cover some of the costs of the program. Local businesses should be encouraged to help offset the cost. The businesses would help to pay for the bike stations near their businesses. With the development of the turkey plant, the company should consider having a bike station outside of their building to encourage people to bike to work. It also provides a safe place to leave the bikes during the day and pick up at the end of the work day. It will also encourage riders to visit these different companies and has the potential to help boost the local economy.

The city can also generate money to help offset the cost if they sell space on the bikes for advertisements. Local businesses can pay a small fee to have their logo or name painted onto the bike. This also encourages people to travel to these businesses helping the local economy. Another option is to have a bike share membership and user fees. Currently the Spokes for Folks bike program lends out bike free of charge for community members to use. With an expansion of the program it is recommended to consider a fee for using the service. The majority of bike programs throughout the country have memberships that can range from \$5 to \$7 per day or from \$50 to \$85 per year. Many of these bike programs are in larger cities and therefore the city of Huron should develop a membership can that is appropriate for their community and the people who would be using the program the most. An acceptable charge would be roughly \$24 for a year membership for adults and \$12 for a year membership for children. That money would be put towards buying more bike stations, building more repair stations, and repurposing bikes that can then be used in the program.

Recommendation 6: Additional Funding Sources and Initiatives

Grant-writing and other fundraising endeavors are very important to the success of these recommendations. Monies from federal and state programs will not likely suffice, but they can be a great place to start. In addition to grant writing, city officials need to be continually involved in developing strong public-private partnerships and tapping other funding sources.

Part-Time Grant Writer

The City needs to hire a part-time employee whose sole function is to coordinate and complete grant applications. These grant applications should serve the entire community, including the school district, parks, streets and infrastructure, and community and cultural development. Often, grant applications include space for administrative or other overhead costs. The salary of the part-time employee could be largely paid out of these funds. In addition, hiring a part-time employee would eliminate the requirement for a benefits package.

The federal government has grants available for communities interested in improving physical health. With America's obesity and other health concerns, there are many incentives provided to encourage communities to improve active transportation. Below are some grants that will help with active transportation and other community development initiatives.

1. Grants to USA Teachers' Organizations to Promote and Implement New Literacy. This grant is to help further education and after school use of local teachers. Grants of up to \$250,000 are available for USA Teachers' Organizations to support members' successful introduction of core subjects into their classrooms. The grants will be awarded to organizations whose effective programs will reach large numbers of the nation's middle and high school teachers. This will not only help with the education of the general population of Huron but it will also help with the independent education of minorities.
2. Awards of \$25,000 and \$75,000 to recognize individuals, organizations and companies worldwide that use innovative technology solutions to address humanity's most pressing problems. These awards are intended to inspire global engagement in applying technology to profoundly improving the human lifestyle. This will not only be beneficial to Huron but it can also be used as a learning tool for many of the people that are willing to learn.
3. Grants to US non-profit organizations to support and encourage youth outdoor participation. This grant is up to \$2,500 to USA non-profit organizations providing quality programs that encourage youth outdoor participation, with a focus on activities that connect children with nature, increase access to both front- and back-country recreation and provide education for both personal and school uses. This can also be used for the Spokes for Folks program to help with repairs and the purchase of new bikes.
4. Grants of up to \$1,000 to USA organizations and individuals (such as teachers, school district personnel, community health providers and other health and human service providers) that implement new, evidence-based projects

targeting the social-emotional health of children and families. Now although this may be a small grant it will help out with small project or classes.

5. Grants ranging from \$5,000-\$25,000 will be awarded to non-profit organizations in multiple states to support environmentally sound agricultural practices. Funds are intended for projects that: Build and maintain healthy and resilient soil and protect and conserve clean and abundant water. With the city of Huron expanding to the south west this grant would go towards helping sustain or redevelop wetlands (for example, Riverside Park or Gibbs Park).
6. Award and prizes to USA non-profits to recognize exemplary services. Awards, accompanied by a first-place prize of \$100,000 and smaller prizes for runners up will be given to USA non-profit organizations in recognition of existing programs that have made a difference in the lives of the people they serve. This is a very achievable grant with the rising Karen population. Current efforts to make a difference in the lives of these and other individuals.

These resources are only a small sampling of the many grants available from a variety of sources and programs. An important part of successful grant-writing is developing a database of available funds. Online and other resources can be used effectively to create this database.

Community Fundraising and Private Partnerships

The city of Huron should hold another community fundraiser. Having already done this for the new pool facility they have proven their ability to find support from the community. An important aspect of creating a successful active transportation system is to help community members and stakeholders catch the vision of the desired improvements. Once the vision has been effectively communicated, residents can take ownership of the project through memorial programs, commemorative bricks or plaques, or other measures.

One form the fundraiser could take is a cultural festival. During this event, performances could be held to celebrate Huron's cultural diversity. In addition, a street market with vendors selling culturally-relevant souvenirs and products could be held. Money raised through entrance fees, product sales, or booth rentals could feed back into city coffers and be earmarked for some of the improvements recommended here.

In tandem with the community fundraiser, city officials could seek out private funders that would match any money raised. Large business owners and other highly visible members of the Chamber of Commerce are likely candidates.

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Potential Grant Sources

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<http://southdakota.grantwatch.com/grant/133717/grants+to+usa+non+profits+to+support+and+++encourage+youth+outdoor+participation.html>

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