CITY OF SALEM

A City to Grow In...

Active Transportation Recommendations

in cooperation with
SOUTH DAKOTA DEPARTMENT OF HEALTH

LANDSCAPE ARCHITECTURE PROGRAM
SOUTH DAKOTA STATE UNIVERSITY

1 May 2015

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Acknowledgements

South Dakota Department of Health
Beth Davis
South Dakota Active Transportation Advisory Team

City of Salem
Lori Heumiller

Robin Rayman, Mayor
George Eichacker, President
Ben Johnson, Vice President
Laura Gessner
Ron Mayrose
Doug Mokros
Robin Westhoff

SDSU Landscape Architecture Program
Shalace Ahlers
Tucker Antonsen
Kaitlynn Berwald
Marika Cieciura
Brandi Hanten
Annaliese Hoffman
Geoffery Langland
Slade Mutchelknaus
Sam Sauer
Joseph Simpson
Tyler Landry (Teaching Assistant)
Professor Don Burger

Introduction

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

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

Recommendations are developed over the course of a 16-week semester by students from the South Dakota State University Landscape Architecture program. In the case of the present study, students traveled to Salem, South Dakota, to conduct interviews with key stakeholders within the community, including city officials, local business leaders, and concerned citizens. Students also conducted an analysis of transportation infrastructure, parks and recreation facilities, and neighborhood composition.

After conducting these interviews and analysis, students developed a series of recommendations touching all aspects of active transportation issues, including pedestrian safety, building a sense of community, and improving access to and diversity of the various destinations in Salem (places of work, commerce, and recreation). By holistically approaching active transportation, it is hoped that a balanced, comprehensive plan for improving public and personal health can be achieved.

These recommendations represent a global shift in how people think of their community. Some recommendations represent a major financial investment. However, by shifting community priorities and actively pursuing existing sources of financial assistance, Salem can continue to be an example of the best that South Dakota has to offer: a City to Grow In.

Section 1: Pedestrian Safety

The current issue Salem, SD is facing is the lack of safety structures for pedestrians. After having conversations with community members and getting their feedback, safety structures are a major concern they want fixed. One of the major benefits of improving pedestrian safety is that it will improve the overall health of citizens. By giving pedestrians proper areas to walk/bicycle, community wellness will increase. According to Costs for Pedestrians and Bicyclist Infrastructure Improvements, a brisk ten minute walk or a short trip on a bicycle can lead to major health benefits such as weight management, increased muscle strength, improved mental health and mood, and increased coordination. In order for people to seek these benefits, there must be pedestrian and bicycle friendly environments planned into the city structures.

Recommendation: Integrating Crosswalks along High Volume Roads

The current issue with high volume roads and intersections in Salem are the few designated areas where pedestrians can safely cross. The ones that are currently there need to be improved so safety is at its highest. At these intersections, the issue may not be the crosswalk itself that lacks safety, but may be the number of vehicles and the speed limit of the vehicles driving on high volume roads.

According to Berkley's Safe Transportation Research and Education Center, 23 percent of fatal pedestrian collisions occur on state highways. Along with that, a recent federal research report identifies the following objectives for improving pedestrian safety: reducing pedestrian exposure to vehicular traffic, improving pedestrians' visibility and sight distances for pedestrians and motorists alike, reducing vehicle speeds, and increasing the safety awareness of motorists and pedestrians[1]. Speed, signage, crosswalks, and traffic lights analysis is required in order to ensure pedestrian safety.

Highway 81

The major issue with Highway 81 is the lack of a safe pedestrian crossing. For pedestrian safety, a pedestrian light must be installed. We recommend installation of a pedestrian light in the middle of the block on Highway 81 between West Essex Avenue and West Vermont Avenue. The reason for having a pedestrian light in this location is proximity near the Catholic school and a block south of the public school. Being in the middle of the block compared to being at an intersection, it will not interfere with traffic. This will allow for an easy and safe route to cross the highway for the children coming and going to school. The picture above displays the location in plain view of where the pedestrian light will be located.

Figure 1. Proposed Crosswalk Access

The following two pictures display a perspective before and after view of the pedestrian light on Highway 81. The pedestrian light allows constant flow on Highway 81 and will only turn red if there are pedestrians present in need of crossing the high volume road. At this location, there will also be

Figure 2. Crosswalk Proposal with Pedestrian Light

Highway 81, Highway 38, and Richard Avenue

At this point, there are pedestrian crossing signs on Highway 81, but the signs currently there do not flash. Flashing beacons need to be implemented on Highway 81, Highway 38, and Richard Avenue especially near the sports complex. The flashing beacons can also be set on timers for busier parts of the day such as school hours or busier parts of the year such as baseball season. These will be beneficial for pedestrian safety, as well as for the people on the road, to help create awareness of the location and the surroundings. The flashing light helps catch the driver's eye more effectively compared to regular pedestrian signs. The picture to the right is an example of what is recommended for the three high volume roads. The simplest solution is to add flashing lights to the current signs and placing flashing pedestrian signs where needed.

Something as simple as reducing speed when vehicles come into town on the highway will be very effective as far as reducing risk to pedestrians. When vehicles are driving slower, it is easier for them to stop quickly if needed. Also, when driving at a slower speed, it is easier to see signs such as flashing beacons and crosswalk/pedestrian crossing signs. This could also be implemented on the high volume road Richard Avenue, near the sports complex, which has a high pedestrian rate, especially in the summer. Another option is to reduce speed limits on Richard Avenue from 25 mph down to 20 mph to replicate a school zone.

We recommend widening Richard Avenue near the sports complex, still keeping two travel lanes while creating a larger shoulder. By doing this, visibility will be increased for pedestrians and drivers and they will be more aware of their surroundings. Along with the other recommendations listed above, this road can be much safer without the need for a lot of funding.

On the high volume roads, Highway 81, Highway 38, and Richard Avenue, a crosswalk needs to be put in place. A High Visibility Crosswalk would be useful because it is larger and has thicker lines in the form of a ladder. This design is more visible because it is bigger and will be seen at a further distance as a pedestrian crossing zone. (As seen in the picture to the right)

Figure 3. High Visibility Crosswalk

A traffic light or a four way stop may be necessary at the intersection of Highway 81 and Highway 38. By doing this, it will start to slow the traffic down on Highway 81 and benefit the travelers on Highway 38. If a traffic light or four way stop was installed at this location, it would provide another safe opportunity for pedestrians to cross the two high volume roads.

From the feedback we received, we understand that you have been denied the flashing lights on Highway 38 & 81 because there are not enough accidents. However, that is not a good reason to not have them. Our recommendation is to not wait for an accident to happen, but to be proactive and prevent accidents from ever happening.

Crosswalk Locations

The picture below represents the streets of Salem. At each intersection, in the future, there will be crosswalks to maximize pedestrian safety. The red and green symbols represent the busier and more important intersections, where there should be crosswalks. The green symbols show where there are currently crosswalks in Salem and the red symbols indicate which intersections do not have crosswalks that are in need of them. The crosswalks are located on Main Street, Highway 81, and the intersections surrounding the public and Catholic schools. There are also crosswalks at the intersections that lead to the Sports Complex as well as Salem's city pool and park. These symbols or crosswalks will allow kids and pedestrians to go to and from the major features of the town safely. All the safety features listed at the beginning are things that could be included at these intersections as well, to increase safety, especially at high volume roads or highly populated areas. We intend for

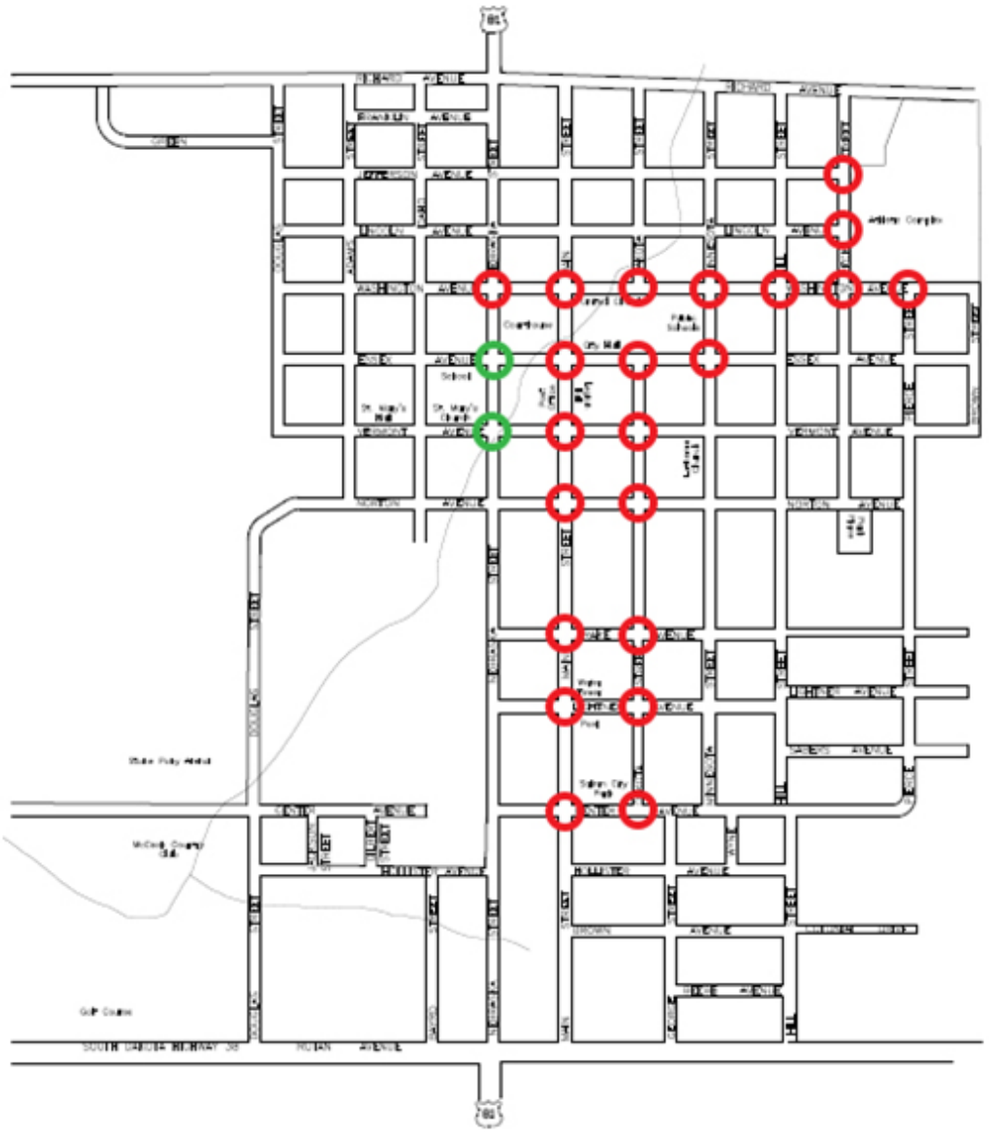


Figure 4. Map of Proposed Crosswalk Locations

Recommendation: Lighting Improvements

Proper forms of lighting such as lights that point down, up at signs, etc. are necessary for the safety of citizens of the community. Street lighting is used to improve visibility and increase visibility of objects on and near the roadway. Within the town of Salem, by adding more lights, safety for drivers, riders, and pedestrians will be increased. The Department of Transportation found that road safety was perceived as a key benefit for street lighting improvement:

- 73% stated that better lighting will improve safety of children
- 63.8% stated that better lighting will lead to less accidents on the roads
- Street lighting reduces crashes at night by approximately 30%[2]

The quality of life is increased by artificially extending the hours of light in which activity can take place. This is applicable to the school playgrounds, the sports complex, the park near the city pool, and walking/exercising on the sidewalks and enjoying the outdoors later in the evening. Adding proper street lighting will enhance the enjoyment of the surrounding environment for the citizens of Salem. With proper lighting, there is less chance of criminal acts being committed in the town as well. Using light in the right ways can make a big difference, as shown in the pictures below. For the most part, there is lighting at every intersection. For longer blocks, we recommend proper lighting in between the intersections so the full length of the street is lit.

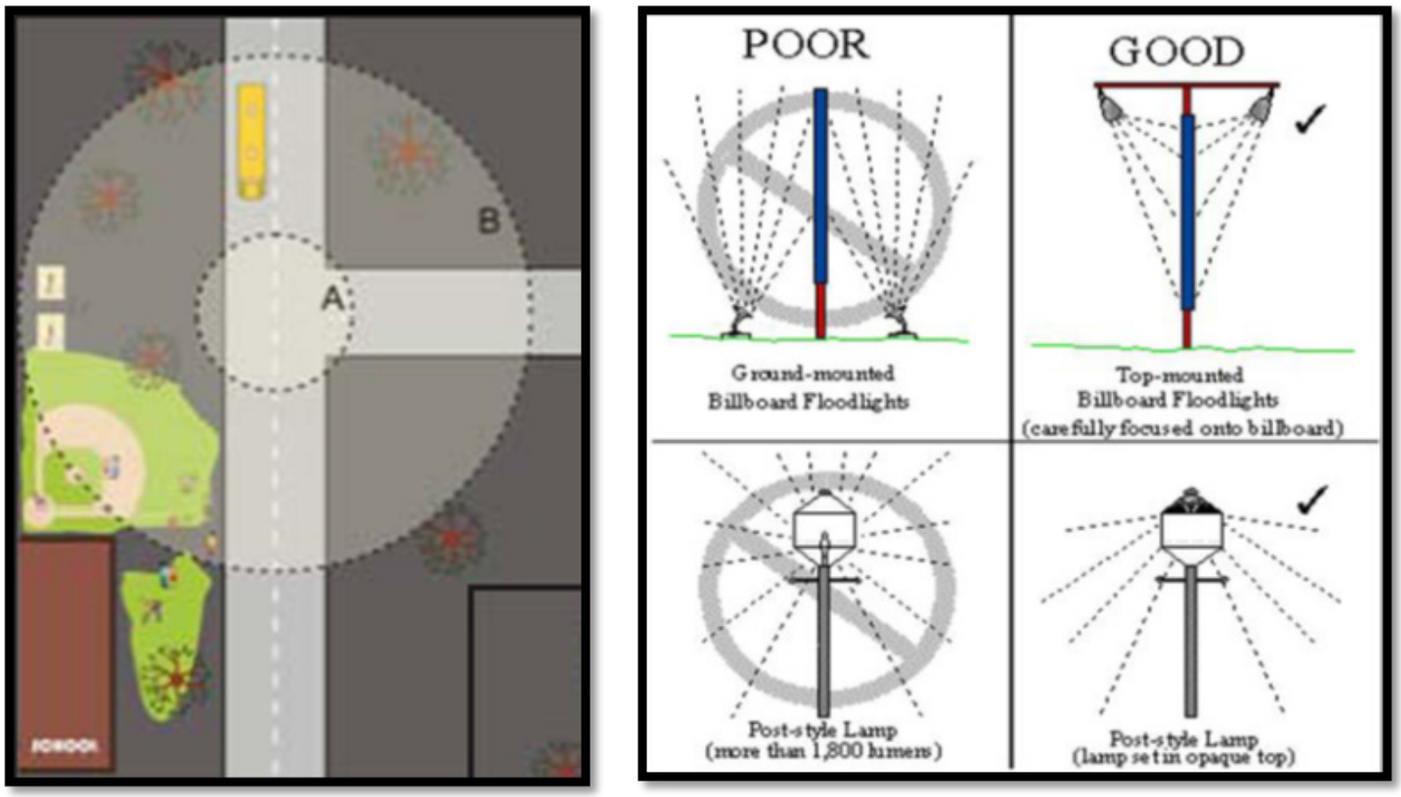


Figure 5. Illustrations of Effective Lighting Solutions

A challenge would be the cost of adding extra lights and wiring, but we feel that it is important and fixing these issues will greatly benefit the city of Salem. By looking at the feedback given, the street lights are owned by Xcel Energy and we are not sure of the agreements, but if a deal could be worked out with them to where the town could educate them on the benefits of why added lighting would benefit your town (safety, decreased crime, increased activity, etc.) it would greatly improve the town of Salem.

From the feedback, we also found out that the lights are not metered on electricity, but from our understanding cost consists of installation and maintenance. Because of this, adding more lights to your streets may not be as big of an issue.

The main street consists of decorative poles, which are city owned. The lights are LED, which ends up saving you $350 per month just from switching to LED. From this information, when replacing the street lights or adding new street lights they need to be LED. We are recommending going straight to LED lights, because in the long run it will save the town money. With this information and the amount of money you are saving, Xcel Energy may be interested in replacing the current bulbs and upgrading Salem's lights to LED. It is a better light and has better longevity. The money saved in the long run could start paying for additional lighting to be installed. Moving forward, we recommend that the current lights be switched to LED lights, especially on busier roads. We recommend that the LED light improvements should first be implemented on the busier roads and the roads with newly proposed sidewalks and bike lanes that connect major facilities to provide safety to those people. We are aware that it can be expensive initially, but as stated above, it will save you money long term. The city would also benefit from LED lighting because as you can see in the picture on the right, the street is better lit and appears to be safer.

Recommendation: Bike Lane Signage and Education

The current issue is that there are no bike lanes on roads. If they are installed in the future, each and every driver needs to be educated on how to share the road with bikers, and to pay attention to the signage indicating that there are bikers in the designated bike lane on the road. The main solution to this problem is proper educational services.

Drivers need to know about how bike lanes work and how they interact with vehicle traffic. According to an article about bicycle lanes in Oklahoma City, drivers are most important to reach out to, because they are driving 2,000 pounds of steel. Public education is the key to acceptance and transition. One of the most effective ways to implement bike lanes among traffic is to educate children. Children need to know how to properly use bike lanes, such as how to ride with traffic as opposed to against. Another way to educate is to have bike lanes be a part of the drivers' license exam. This way, drivers will all get the same information about how to cooperate with bicycle traffic. While drivers are informed about bicycle lanes in drivers' exams, bicyclists need to be aware of how to ride with traffic[3]. We believe it would be beneficial to provide a bicycle safety course, especially for children, on how to properly ride with traffic. This could be done through the summer Park & Recreation by providing a program similar to Brookings "Safety Town".

From the article, Wheels of Progress, bicycles are considered vehicles like any others on the roadways. Some suggestions they give to educate the public include informing drivers that they must respect the rights of cyclists and share the road; they must give at least three feet of clearance when coming up behind bicyclists or passing them and they must yield to bikes that are in or approaching an intersection[4]. These traffic rules could be considered if the city decides to implement bike lanes.

Along with education, signage is very important in helping drivers abide by the rules of bike lanes. One of the major forms of signage is the white line painted for bike lanes that are seen in larger towns or cities as seen below. These lines are typically to the right side of the vehicles. This helps to distance the drivers and keep each person in their own lane.

The section view below represents a city street that has two way traffic with parking on one side and a bicycle lane on the other. There must be proper signage to indicate the existence of bike lanes to motorists. Bike lanes can be implemented in areas that lack sidewalks so there is also room for people walking/running as well. This is a more cost efficient solution than installing numerous sidewalks. Installing bike lanes would move all street parking to the opposite side of the street, which is not an issue since there are not a large number of parked cars on the streets as of now.

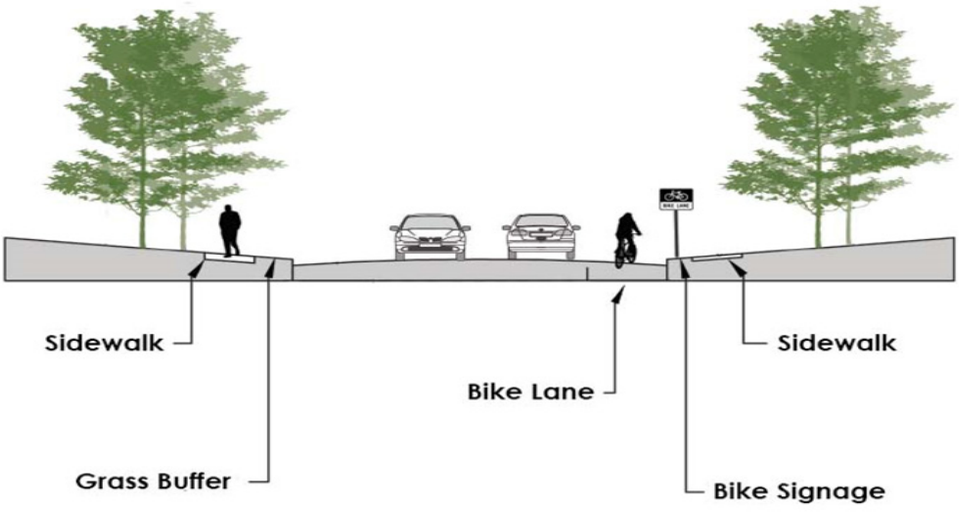
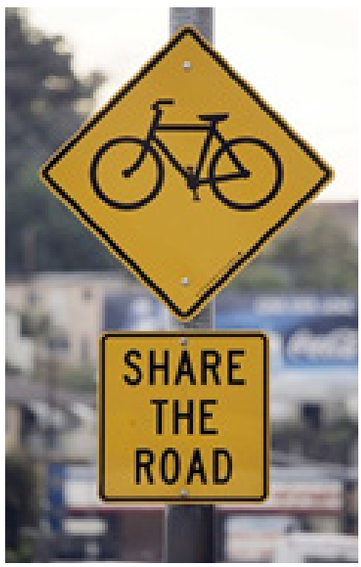


Figure 6. Cross Section of Two-Way Street w/ Bike Lane & Sidewalk



Section 2: Active Transportation Infrastructure

Recommendation: Sidewalk Implementation and Suggested Routes

Salem, SD is an excellent city with a rich past that has created a firm foundation on which people can grow. Well built and maintained institutions and facilities including: McCook Central Schools, St. Mary's Grade School, McCook County Courthouse, Salem Athletic Complex, McCook Country Club, and the City Pool & Park area are all admirable venues. Those venues are exactly what a family or any individual could value and benefit from in numerous ways. With all of these exceptional areas located throughout Salem, the question arises of how to get to each one? While visiting with residents it was evident that there are plenty of individuals who choose to walk, run, or bike to these places. It is also clear that sidewalks/streets are the main routes to each destination. When assessing the streets and sidewalks of Salem, some areas were noted to be more than suitable to safely travel. On the other hand, certain street segments lack connectivity and simple physical/safety elements need for active travel. The various routes to these attractions adequate thus far and require attention. These recommendations will be able to show the improvements that should be made towards the present condition of the routes.

Active transportation recommendations for this city are vital to building a productive system. The urge for access citywide will connect strong spots while advancing weak ones. The main focus for Salem's active transportation aspirations should be to establish access around heavily populated areas. The fundamental approach to achieving this vision is through pathway infrastructure. Salem is and has been for some time "A City to Grow In", however with these recommendations the assured effect will be to enrich the communities' functionality, economy, and aesthetics. Developing a progressive active transportation network of suitable sidewalks is advantageous for a number of reasons. These advantages include:

- Implements and demands for safety
- Promotes healthy lifestyles
- Helps to stimulate the economy
- Better connects popular destinations
- Advance the overall aesthetics of the city
- Possibly saves residents money on the cost of travel
- Provides a cordial area to socialize with community members

Infrastructure Recommendations

1. Addition of sidewalks to enhance the link from the pool/park to stores on Main Street and the McCook Central schools

- Installation of sidewalks on the east side of Main Street from Lighter Avenue to the existing sidewalk on Norton Avenue will create another convenient pathway option for pedestrian travel to popular destinations.

2. Improve the connection from the McCook Central schools to the athletic complex

- Implement sidewalks in the missing gaps along the north side of Washington Avenue. Have the sidewalk continue to run along the fence until reaching the softball field's plaza space. This will give pedestrians the ability to travel to and from the softball fields along a safe path off the street.

3. Further increase connection to other areas of the athletic complex and armory

- At the intersection of Washington Avenue and Peck Street, lay a sidewalk on the east side of Peck Street. It will run north and south parallel to the existing fence until connecting with the current armory sidewalk. This will complete the safe link for pedestrians and students/athletes that travel from the school to the complex regularly.

During the fall season there is a foot worn path in the grass near the fence already so it only makes sense to put a sidewalk where people are already actively travel.

4. Complete connectivity of Nebraska Street

- Continue the sidewalks on Nebraska Street from Lighter Avenue towards the south on both sides of the road. This would set up a possible west side crosswalk over HWY 38 to get to T&C's convenience store which, as of now, is unsafe to travel actively. Continuing those sidewalks would create a safer opportunity to arrive to the well-known business.

5. Implementing sidewalks along Hollister Avenue

- Paving sidewalks along Hollister Avenue would give the chance for a possible bike/walk lane on each side. This recommendation would then accommodate for more active travel to and from the McCook Country Club.

6. Implementing bike lanes on the Nebraska St., Hollister Ave., Lighter Ave., Main St., Washington Ave., and Peck St.

- Each street receiving recommendations of a bike lane would have two lanes of traffic, one on each side to give the possibility to travel in both directions.
- Essentially, people will be able to more safely reaching each edge of the town both North & South as well as East & West.

For the City of Salem, the addition/enhancement (Example: widening spacing) of sidewalks will have a direct and positive impact on the safety of Salem community members[5].The U.S. Department of Transportation explains safety as, "the wider the separation between the pedestrian and the roadway is, the more comfortable the pedestrian facility. By providing facilities that are more comfortable, we can increase the number of trips made by walking, particularly in areas with mixed land uses"[6].

Concerns over safety will also be reduced. The U.S. Department of Transportation declared, "Annually, around 4,500 pedestrians are killed in traffic crashes with motor vehicles in the United States."[7]. These alarming numbers may not have a direct relation to Salem itself; however, it does paint a picture of how relevant the issue is in America. The USDT also states, "Roadways without sidewalks are more than twice as likely to have pedestrian crashes as sites with sidewalks on both sides of the street."[8]. During the road/sidewalk assessments, Salem citizens brought up the fact that people perceive Nebraska Ave., HWY 38, parts of Main St. and the streets connecting the school to the sports complex to be predominately unsafe at times. With these significant concerns, it is essential to address the issues properly. Economically speaking having destinations with facilities to support walkers and bicyclists in turn, each person were calculated spending between $0.96 and $1.92 per trip[9].

Higher emphasis on safety, encouragement of healthier lifestyles, and a possible increase in economic activity are unmistaken benefits that come hand in hand with these recommendations. Other areas that would prove to be beneficial include connections of schools, parks, sporting complexes, and other popular locations. Designing and establishing solid infrastructure on the inside and progressing outwards is essential for a successful active transportation plan. Just like the strong foundation of destinations Salem has built to grow off of the infrastructure has follow the same philosophy. The start of a firm foundation of well-linked sidewalks to prominent areas can provide the opportunity to connect off of those and continue to reach out for future projects.

Regulations and specifications when installing must be examined as well as followed closely throughout the implementation process. A number of features have to be addressed when constructing the sidewalk such as: the width, buffer width, surface, etc. These features are all determined by a number of different surrounding location factors[10]. Street size, type, and if there are

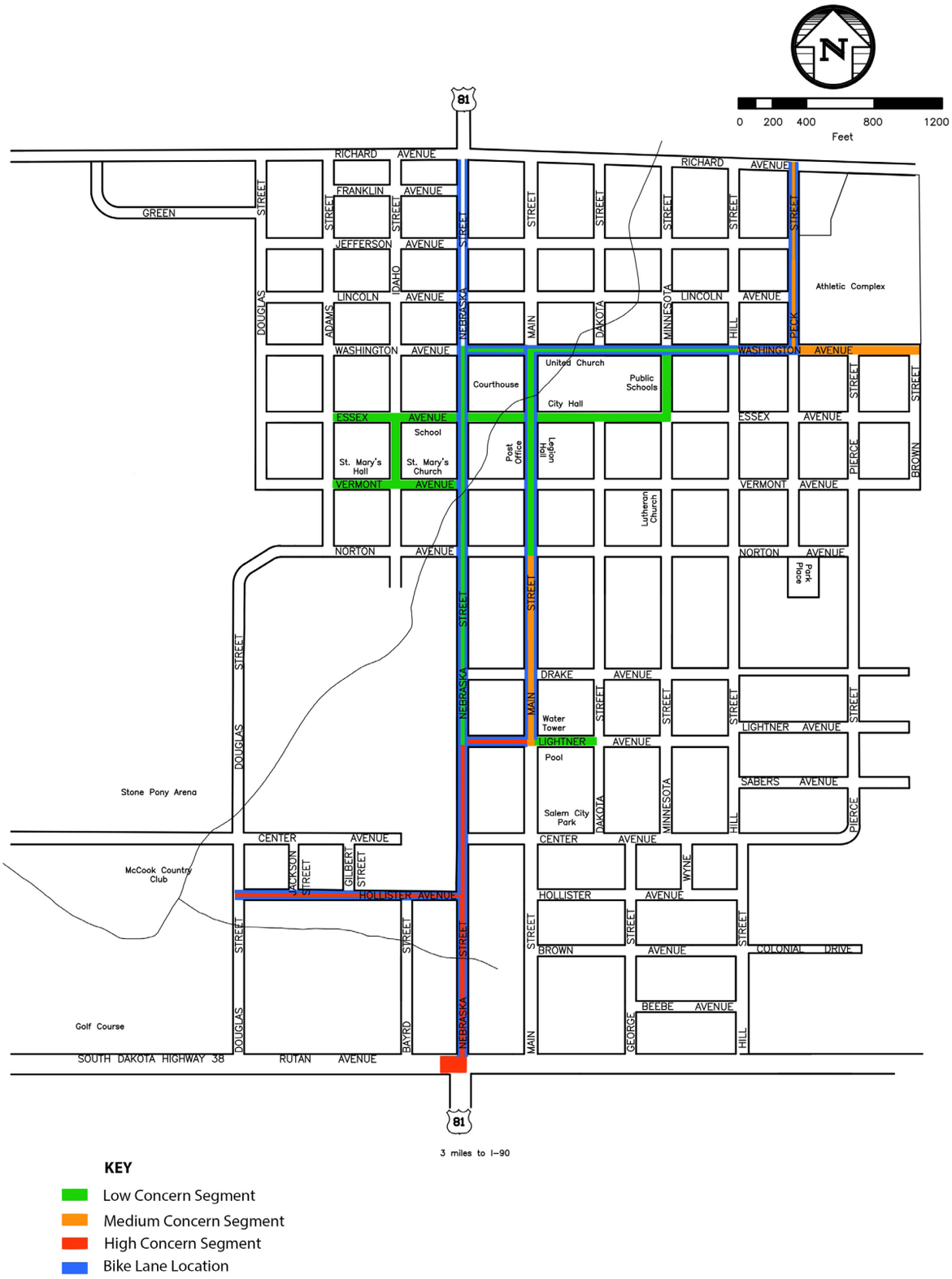
parks, schools or other major pedestrian generators in the area will have a direct connection on all of those previous features[11]. These sidewalk design guidelines have already been tested, perfected, and laid out by the American Association of State Highway and Transportation Officials' (AASHTO) in A Policy on Geometric Design of Highways and Streets a.k.a. "The Green Book"[12].

The city of Portland, Oregon laid out some positive qualities to look for in sidewalk corridors:

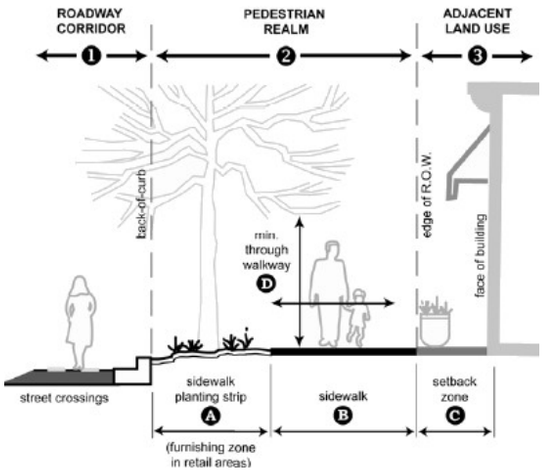
> "**Accessibility** — The sidewalk corridor should be easily accessible to all users, whatever their level of ability.
> **Adequate Travel Width** — In most areas, two people walking together should be able to pass a third person comfortably, and different walking speeds should be possible. In areas of intense pedestrian use, sidewalks should be wider to accommodate the greater volume of walkers.
> **Safety** — sidewalk corridors should allow pedestrians to feel a sense of safety and predictability. Sidewalk users should not feel threatened by adjacent traffic.
> Continuity — The walking route along a sidewalk corridor should be obvious and should not require pedestrians to travel out of their way unnecessarily.
> **Landscaping** — Plantings and street trees in the sidewalk corridor should create desirable microclimates and should contribute to the psychological and visual comfort of sidewalk users.
> **Social Space** — Sidewalk corridors should provide places for people to interact. There should be places for standing, visiting, and sitting. The sidewalk corridor should be a place where children can safely participate in public life.
> **Quality of Place** — Sidewalk corridors should contribute to the character of neighborhoods and business districts, and strengthen their identity." [13]

An apparent concern some may see as a serious conflict to these recommendations would be how and who will be responsible for the funding of the sidewalk projects. This financial burden does raise some serious apprehension. However, there are a number of different ways to overcome this obstacle. If sidewalks are not installed at the time of development, there needs to be clear regulations as to who (developer, property owners, or governmental agency) will pay for the sidewalks[5]. Whoever is paying for the road must pay for the sidewalk. If there is money for a road, there is money for a sidewalk[14]. Developer contributions to sidewalks must be set-aside in an account at the time of development[15]. The AASHTO has paved the way and answered a lot of questions regarding the whole process of implementing sidewalks no matter what character or factors the area holds. Ultimately, the process as a whole relies on the city to take initiative and see that it's finished out properly.

If Salem were to incorporate a substantial active transportations system, it will help the community progress in a number of different constructive ways. Not only will it provide vital safety to popular routes, but will perhaps help spark the local economy, encourage a healthier way of living, and surely enhance the already exceptional image of the city.



The following map shows the City of Salem and the streets, which show the areas of concern for the sidewalk and bike lane recommendations. Low concern locations are areas that have existing sidewalks but should still be maintained because they are vital to active transportation the city. Medium concern locations are streets that have some sidewalks but still have recommendations and room for improvement. High concern locations are the streets that are lacking a great amount of active travel ability. No sidewalks and no paved roads at all are the main reasons for this. The bike lanes are strategically placed to navigate bikers through the city efficiently, safely and for an enjoyable ride.



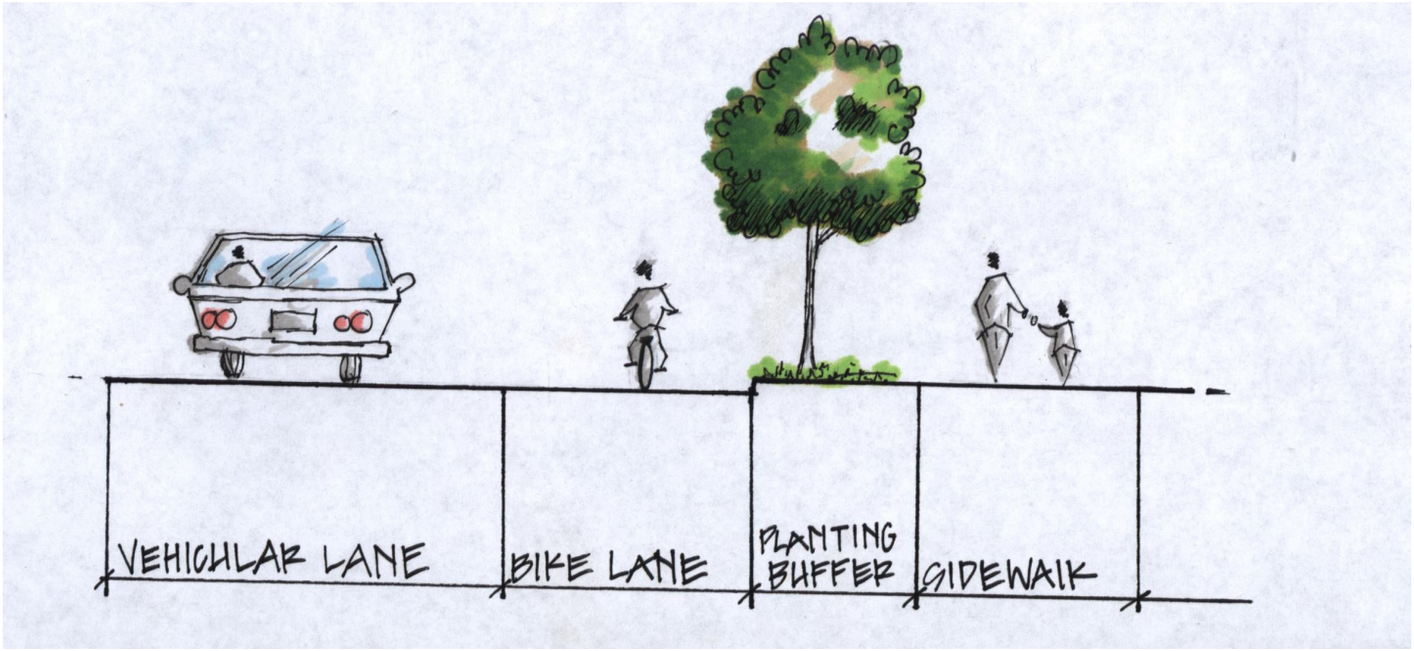


Figure 7. Examples of Pedestrian Access

Section 3: Parks System Distribution and Enhancements

Recommendation: Improvement of Park and Recreational Facilities

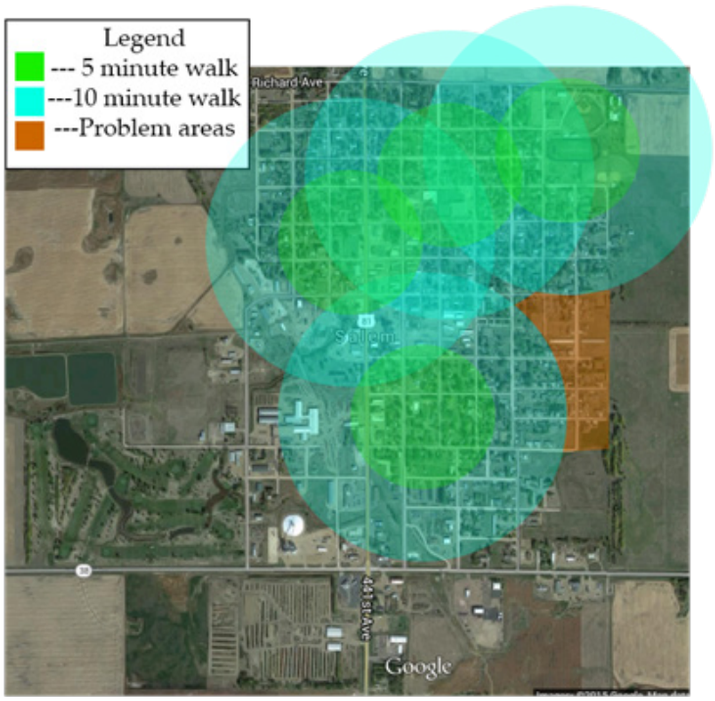


Figure 8. Walkability Map

Currently, Salem's park system is an integral part of the community. As of now Salem's park system is functioning well; the majority of the community is within walking distance of one of the available facilities, as shown in the walking map on the left. The problem areas are small and currently pose no issue. There are however, certain renovations of the park system that will prove to be beneficial the community in the very near future. Studies show that parks are an integral part of the wellbeing of a community. Parks provide economic, social, and environmental benefits. Costs of updating the existing park system may seem high, but studies show that parks actually increase a City's revenue in the long run. According to the National Recreation and Park Association, "Those properties abutting the park may have as much as a 20% increase in tax valuation over a similar house that may be in excess of 600 feet from the park"[16].

Recommendations break down into three categories:

- Pool Park
- School Parks
- Track and Field

Pool Park: Pool Park is a very important part of the community. A recent survey shows that renovations to the Pool Park were consistently found to be of the highest priority. Clearly, it is important to the community to bring this park to peak condition. The first concern that should be addressed is the existing features, the playground, the swings, the Park Shelter Etc. Some features of the park only need to be maintained to increase the park's value. While, other features need to be removed and replaced entirely. The park would benefit from additional seating; both from traditional features such as chairs and benches and unconventional seating such as raised planting bed walls.

Quick Statistics- Salem Park and Pool	
Location	111 E. Lightner
Points of Interest	Central Location
Amenities	Jungle Gym Swings Pool Park Shelter

One key component that should be added in the future is an interactive water feature. This feature would complement the pool in the park by offering children another place to cool off. The best location for this interactive water feature is where the current playground is located. This location is best due to its proximity to the pool and changing rooms, and for its ability to be seen from the road. Relocation of the playground will give a chance to update and repair existing equipment. Additionally, this relocation will place the playground next to play equipment that, as of now, feels completely disconnected with the rest of the park. The proposed location of the playground and water feature can be found in figure 9.

A wide variety of interactive water features are available for installation, but the best feature would be simple and elegant. The top recommended feature is a brick plaza with fountains periodically spraying up from the ground. Not only will this provide children and adults with hours of entertainment, but it will also prove to be quite aesthetically pleasing. An example of this can be seen in figure 1.

Figure 10. Water Feature Example

Figure 9. Proposed Development Locations

School Parks: Salem is home to two school parks, McCook Central, and Saint Mary's. Both parks currently serve the community well However, improvements can be made. The most important change that can be made to both McCook Central and Saint Mary's playgrounds is the addition of a turf grass area. Currently, the majority of McCook Central playground features a large asphalt lot for overflow parking. This is the only large open area for children to play.

Quick Statistics- McCook Central Playground	
Location	200 E Essex Ave
Points of Interest	Large area, new equipment
Amenities	Jungle Gym Swings

Quick Statistics- Saint Mary's Elementary Playground	
Location	205 W Essex Ave
Points of Interest	Long and narrow
Amenities	Jungle Gym Swings

By replacing the majority of this asphalt with turf grass children will have a safer environment to play on. Turf grass will also create a more comfortable environment in hot weather. Parking lost due to the removal of the asphalt shall be remedied by the addition of parking in the city which is discussed in a separate recommendation. A fifty foot strip of asphalt should remain next to the building to allow room for children to play games such as foursquare and hopscotch. The proposed location for the new turf grass area can be seen in figure 11.
The playground at Saint Mary's is smaller than McCook Central's playground, but would receive similar benefits from the addition of turf grass. The proposed location of the turf area can be seen in figure 12.

Figure 11. McCook Central Playground

Figure 12. St. Mary's Playground

Track and field in Salem is an important aspect of the community. A recent interview of Salem's citizens revealed a common complaint from much of the population: a lack of lighting around the complex. Many residents experienced interest in using this facility at night, but found it impractical with the current lighting system. Currently, the street lighting on Peck Street and Washington Avenue is inadequate for pedestrian activity at night. Pedestrian scale lighting should be installed throughout Peck Street and Washington Avenue. This additional lighting will attract night time users, improve the sense of safety, and warn vehicles of the presence of pedestrians. Thus increases the nocturnal use of the complex. Pedestrian lighting should be under 15 feet tall and should utilize LED technology. This type of lighting provides better light quality and lower operating costs compared to traditional lighting. Location of the proposed lighting addition can be found in figure 13.

A wide variety of grants are available to assist in renovations to Salem's Parks including:
The Lowe's Charitable and Educational Foundation, KaBOOM!, and the United States Department of Agriculture Rural Development Community Facility Grants.

Quick Statistics- Salem Sports Complex	
Location	630 E Washington St
Points of Interest	Prominent, Attraction for surrounding communities
Amenities	Track, football field, baseball field, softball field ,and tennis courts

Figure 13. Pedestrian Lighting Proposal

Section 4: Additional School Parking

Recommendation: Develop Additional Parking around McCook Central

During the discussion with members of the community, they stated that the school had a problem with parking when hosting events. The problem is a shortage of land around the school for parking. Due to the shortage of parking around the school, vehicles spill into the playground whenever Salem hosts after school activities.

It has been brought to our attention that Salem has acquired two joining lots at the corner of Essex Avenue and North Dakota Street. These two lots provide the school with almost 22,000 square feet of potential parking lot. Acquiring these lots can create more parking spaces near the school. With the addition of parking spaces it allows areas for improvement in the playground. For people to know about this parking by the school, some way finding and signage is necessary around the school block. To make this lot functional and durable it should be paved with concrete or asphalt. If concrete is chosen it can last for many years to come with minimal maintenance issues. For example, if a concrete slab was used that was 17,754 square feet and 6 inches thick it was take roughly 341 yards of concrete. At around $4.00 to $4.50 a square foot it could cost around $71,016-$79,893 for concrete and labor that would last many years. Another factor that can affect the cost is site accessibility. If the site does not have curb and gutter this would also affect the total price. The price for square footage has been provided from a construction manager from Urevig Construction, which is located in Brookings, South Dakota[17].

A problem when acquiring these lots may be the development of them in the near future. Making a parking lot both functional and aesthetically pleasing can be difficult. Some design elements in planning parking lots include size, location of the lot, relationship to principal and abutting buildings and the land use. One of the most important elements mentioned was size of the parking lot. The size of this particular parking lot creates more space for overflow parking during sporting events as well as additional parking for students and faculty.

An example of a parking lot design is included with this document. The document also contains a Google image of the site and location of the two lots with relation to the school. The functionality of this layout is to maximize the number of parking spaces, while recognizing environmental opportunities. This layout contains 59 parking spots and contains areas on the edges to be used for planting beds. The 59 parking spaces provide for almost half of the student body enrollment in Salem's school[18]. 59 parking spaces should be enough spaces to help with the problem of parking on the playground when events are hosted.

Figure 14. Parking-lot Development Location

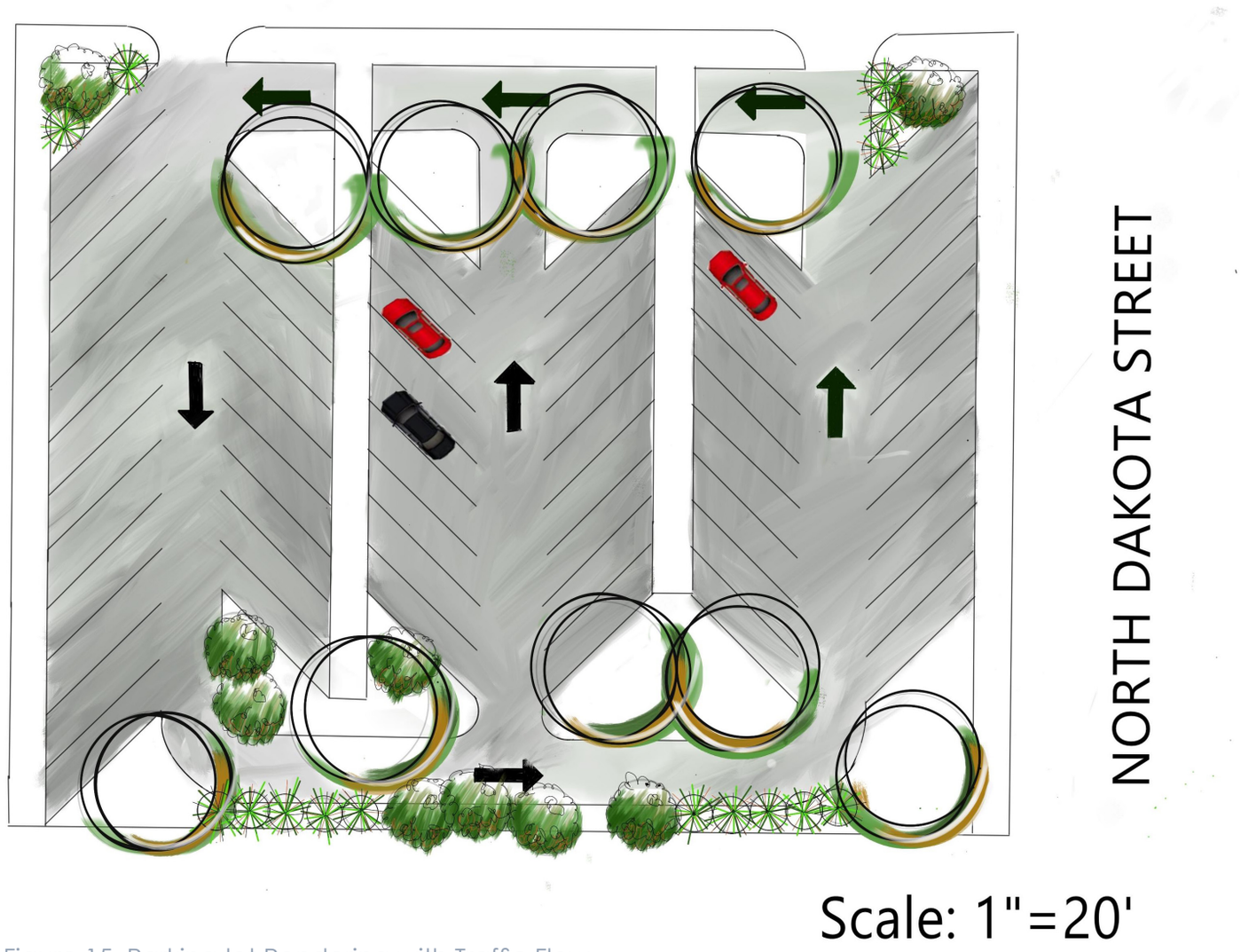


Figure 15. Parking-lot Rendering with Traffic Flow

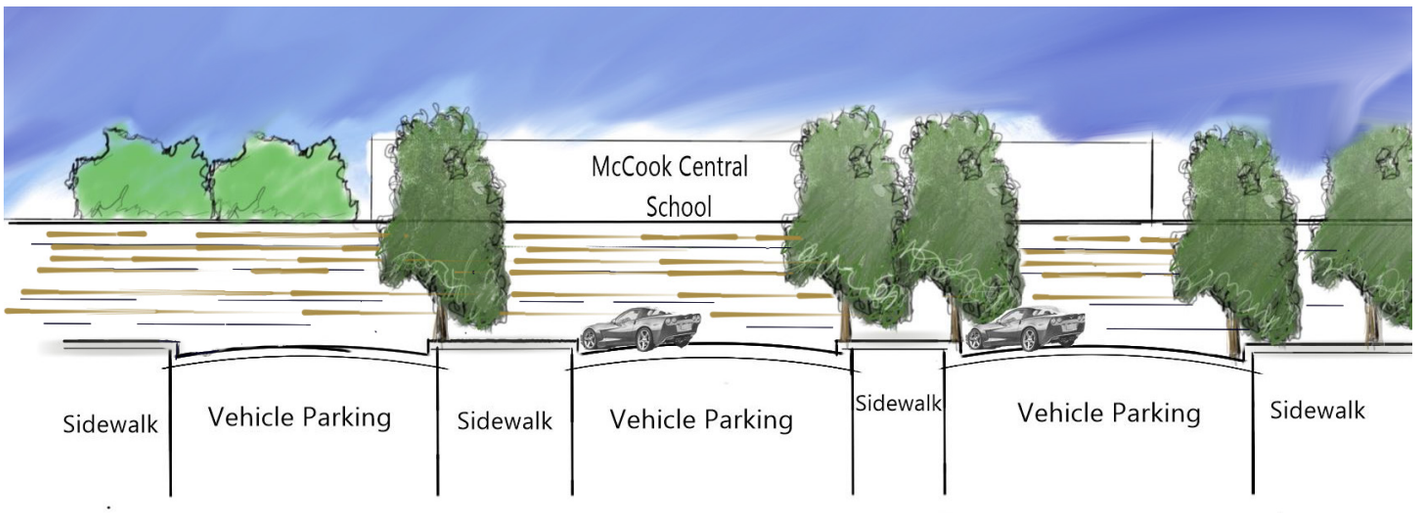


Figure 16. Parking-lot Section Illustration

Section Elevation of Parking Lot

Section 5: Downtown Improvements

Recommendation: Developing the Downtown Corridor

Developing an attractive Downtown in the community of Salem will help reinforce the use of active transportation by welcoming people into Downtown Salem. Quality sidewalks, public spaces, an abundance of trees, seasonal flowers, and bright pedestrian lighting will enable and encourage people to take advantage of what Downtown Salem has to offer. An aesthetically pleasing downtown provides an inviting place that not only will enhance the quality of environment for people to live, work, and play, but also attract new businesses. Improvements to be made are:

- Adding trees
  - Shade and overhead structure creates human scale, making a more pleasant pedestrian environment for walking, socializing, security, and association with ownership.
  - Tree coverage protects pedestrians from rain, sun, heat, and skin protection.
  - Street trees create vertical walls framing streets, providing a defined edge helping motorists guide their movement and assess their speed.
  - Filters, screens, and softens utility poles, light poles, on-street or off-street parking and other features creating visual eyesore to the street.
  - Business on treescaped streets show 12% higher income streams compared to streets that lack treescaping.
- Widening sidewalks to create seating space, as well as bike/walk lanes
  - Pedestrian pathways are easily accessible to everyone
  - Increases foot traffic as a result of people feeling comfortable and safe
- Adding amenities
  - Seating encourages people to sit and linger Downtown, also helps people feel comfortable to form a small social gatherings
  - Tables and chairs in conjunction with cafes are always welcomed by patrons and will bring activity to the streets
  - Seeing people sit outside draws other people into the area
  - Trash receptacles
  - Bicycle racks
- Plant material
  - Adding planting beds to create interest and add color. Can also serve to create boundaries between pedestrian and vehicular travel
  - Property owners also have opportunity for additional landscaping for their business either beds or planters
- Attractive signage
  - Engages way-finding purposes
  - Allows the Downtown area to be legible for people
- Improve pedestrian lighting
  - Creates safety for night time use
  - Building owners are also encouraged to explore lighting their buildings from the outside, using special lighting techniques
- Adding crosswalks
  - Crosswalks create safe connections around the Downtown Area

Pros

- Increases pedestrian traffic downtown
- Supports local businesses by drawing more people in
- Preserving any historic landmarks in the area
- Invites and welcomes visitors to the downtown area
- Can help connect different parts of town by utilizing crosswalks and way finding
- Increased safety through widened sidewalks, barriers, lighting, and crosswalks

Cons

- Upfront costs can be high depending on project
- May force large traffic to use different routes to avoid narrow streets

The improvements would greatly benefit the community by encouraging people to get out and walk. Improving the aesthetics of the main business district can help draw people downtown, thus increasing local business. Improving the downtown area can also help connect other sites in towns, such as parks, schools, and homes.

For example, Brookings, South Dakota is the fourth largest community in South Dakota with nearly 33,000 people and still growing. According to a study, from 1990-2013 Brookings grew by 30 percent due to its appealing business opportunities and lifestyle. In 2005, the Vision Brookings Coalition made a goal to make Brookings a better place to live, invest, and enjoy life. A major change that the City of Brookings invested in was their unique downtown. Since the improvements made to downtown Brookings, the city has provided the community to attract knowledge-based businesses, retained and attracted a solid workforce, and accelerated sustainable economic growth by encouraging entrepreneurism. The downtown not only brings a special pride that community members have but also visitors can appreciate what downtown Brookings has to offer.

Another example of Downtown that set a goal to redevelop and revitalize their downtown was the City of Sioux Falls. Downtown is the heart of Sioux Falls, serving as the main element defining the City's image and is the center for business, finance, government, arts, culture, and historic architecture. A prosperous, safe, attractive, well-maintained destination with easy access and convenient parking is what the city strived to develop. After the redevelopment there has been an increase in the number of jobs expanding, making it one of the city's largest employment centers. Parking is convenient and available, bike and pedestrian circulation is expanding, and the hub of the public transit system maintains its central location all downtown. Additionally, care is devoted to maintaining and increasing sidewalks, streetscaping, outdoor art, and public spaces. Currently there is a rich diverse range of dining, shopping, lodging, housing, education, and entertainment opportunities, and these roles continue to grow.

Although some suggestions are easier to implement than others, such as adding trees and plant materials, as well as other amenities, others can require a larger amount of time and money. To widen sidewalks, improve lighting, and create crosswalks would require major construction. They are proven to be necessary and effective when trying to redevelop a Downtown. Some state and federal grants may help cover the costs:

- Section 108 Loan Guarantee Program to help with revitalization activities
- Local Infrastructure Improvement Program
- Deadwood Fund Grant to help rehabilitate historic buildings or structures
- U.S. Department of Housing and Urban Development
- Urban & Community Forestry Comprehensive Challenge Sub-grant to help fund forestry projects (Grant)

Developing an attractive Downtown in Salem will reinforce active transportation by welcoming people into the Downtown Area, and providing a pedestrian friendly environment. An aesthetically pleasing downtown will provide the city of Salem with a quality environment for people in the community to live, work, and play, economic growth will also be encouraged.

Recommendation: Improving the Downtown Walking Environment

Street furniture and well-chosen vegetation can greatly change the city's image. After studying the City of Salem, we chose several sites showing the changes that can be implemented with suggested materials.

The first change proposes development for the corner of Main Street near The End Zone grill and bar where the site looks empty and lacks character. We recommend creating an extension of the pedestrian walkway on both streets as a gathering space or simply a wider alley with trees and benches. These improvements allow people to stop by and enjoy a good weather. It will also enhance the business district by attracting more people to use the space.

Figure 17. Street Corner Sketch of Downtown Salem

The street will still be wide enough for the cars to easily drive through. The bench spacing should be within 25 feet from each other (or between every second tree). For each strip of vegetation, as shown on the drawing, there should also be two trash cans within the reach of people using the benches as well as the passersby. The space would also benefit from adding shrubs, such as Spirea and Barberry in-between the Japanese Tree Lilac as they are hardy and require little maintenance. We have noticed that there are rarely any crosswalks within the city. Therefore, we recommend painting at least one intersection as depicted in the drawing to improve the safety of pedestrians.

Another site location is the in front of Salem's Volunteer Fire Department. The street is uneven and grass started growing in between the curb and the road. There is a lot of unnecessary sand making it look more worn out. First recommendation for this site is to take care of the sidewalk and road surface. Next step would turn it into a more welcoming space for the pedestrians encouraging social interaction. Being exposed to the sun, there is a large open space and is in need of shade. Providing shade through planting Greenspire Lindens, preferably 3-4 in a row, would enhance the downtown streetscape. These trees have straight trunks, rich foliage which turns into a beautiful yellow color in the fall, and during spring develops pale yellow fragrant flowers consistent. For the understory, or lower layer of vegetation, combining both Spirea and Barberry will not only improve aesthetics but will also withstand the harsh conditions.

Figure 18. Fire Department Sketch Illustrating Downtown Enhancements

The corner of North Main Street and East Norton Avenue also is in need of some improvements. To create more space for social interaction and community, we recommend extending the sidewalk by 3 feet. This small planting bed would house Abbotswood Potentilla and possibly Barberry for their already mentioned features. The proposal for the right side is to plant Japanese Tree Lilac. With large white flowers, the tree is not large enough to cast a shadow on the whole sidewalk under the building but it is large enough to partially screen it from the Norton Avenue and create more private space. Continuing with shrubs under the trees is a good idea to maintain consistency and avoid lawns which

Figure 19. N. Main St. and E. Norton Ave. Sketch

In conclusion, the intention of these changes is to improve the city's growth, economy, social interaction as well as recognizing environmental aspects. Creating gathering spaces is an essential part of city planning, and providing people with a space to interact helps to build community relationships. When people are more encouraged to spend time outdoors and use the streets as pedestrians, they will be more likely to visit the local stores and shops. Salem, although a quaint small town, seems rather empty and would greatly benefit from introducing some vegetation to its main street. Plants are proven to have a calming and restorative effect on people therefore it will not only improve the city's appeal but will create shade for hot summer days. Salem has a big potential for improvements with only a little intervention, simply by extending some sidewalks and making space for vegetation.

Recommendation: Addition of Public Amenities

Benches:
Good-quality street furniture will show that the community values its public spaces and is more cost-effective in the long run. It is important to ensure the proper placement of the benches, as well as any other street furniture, so it does not block pedestrian walkways. The prices of street benches vary greatly depending on size, material, manufacturer and many other conditions. After extensive research, benches from recycled plastic will be the most suitable. They can be found on TheBenchCompany.com.

-Recycled Plastic Benches
+very attractive and looks like wood,
+affordable compared to the other materials,
+available in a lot of colors and styles,
-not very durable,
-the models starting from the lowest prices usually do not have the back rest.
Recommended model:
Classic Park Bench $435.91 - 4 feet and $606.91 - 6 feet.


Trash cans:
They are important to keep the city clean and should be placed in higher quantities around parks, schools, and in places of higher interest. The spacing along the roads should be less frequent, especially in the ones that are used less. The prices depend on the models and materials that they are made of (prices based on TrashContainters.com). Metal trash cans offer durability and the style fits effectively with the bench model.

-Metal Trash Cans $120+
+one of the most durable,
-moderately expensive.
Recommended model:
-Street Basket $215.88 + the Rain Bonnet Receptacle Lid $136.71, 45-gal

SIDEWALKS:
Sidewalks improve mobility for pedestrians and give access for all types of pedestrian travels. They are essential in the city to provide safety for people and they were highly prioritized in the feedback from Salem community.

- Sidewalks are usually made out of concrete but less expensive walkways may be constructed of asphalt, crushed stone, or other materials if they are properly maintained and accessible (firm, stable, and slip resistant),
-Concrete sidewalk costs $11/square foot and the curbing is approximately $15/linear foot,

-Concrete sidewalk costs $11/square foot and the curbing is approximately $15/linear foot, (Recommended)
-Asphalt sidewalk costs approximately $4.50 - $6/square foot and the curbing $6-7 per linear foot,
- Asphalt curbs and walkways are less costly, however are more difficult to walk on. They can also become uneven over time, which can cause problems particularly for older pedestrians and wheelchair users.
The Institute of Transportation Engineers (ITE) guidelines recommend a minimum width of 5 feet for a sidewalk or walkway, which allows two people to pass comfortably or to walk side-by-side, which can also create problems for the city to find enough space.

LIGHTING:
Lighting is strongly advised, especially in the more highly trafficked areas in the city. It provides people safety and enlightens certain spaces. Again, as mentioned with other street furniture, the prices of lamp posts depend of different sizes, materials and manufacturers. Prices start at $220 and the most common material is steel. Some of the most popular manufacturers are Brandon Industries (McKinney, TX), and Mel Northey (Houston, TX).

MARKED CROSSWALKS:
Highway 81 and 38, as well as Richard Street, require traffic control devices to increase pedestrian safety. It is important to make sure that crosswalk markings are visible to the drivers, especially at night. They should not be slippery or create tripping hazards. One of the best materials for this feature is inlay tape, which is installed on the new or repaved roads.
-The cost for the inlay tape is $100 for a regular striped crosswalk and $300 for the ladder crosswalk, $3,000 for the patterned concrete crosswalk,
-Partially ensures the safety of pedestrians,
-It is still not the solution, and should be accompanied by traffic lights and possibly speed bumps, which create additional costs (recycled rubber speed bump costs around $130 each)

VEGETATION:
Syringa reticulata (Japanese Tree Lilac) – small specimen tree bearing creamy white flowers in June and July, deep green leaves, grows up to 25' in height and width.

Tilia cordata 'Greenspire' (Greenspire Linden) – very suitable for street planting, has straight trunk, dark green leaves in summer, turns deep yellow in the fall, and has fragrant pale yellow flowers, grows 35 in width and 50 in height.

Spiraea japonica 'Alpina' (Daphne Spirea) –small leaves on short wiry branches, each tipped with a cluster of pink flowers, grows best in sun, low growing reaching only 12-15" in height and 3 feet in width.

Berberis 'Bailsel' (Golden Carousel Barberry) – consists of golden yellow-green leaves in the warmer seasons and takes on nice orange-red color in the fall.

Potentilla fruticosa 'Abbotswood' (Abbotswood Potentilla) – immune to many diseases and insects, has large pure white flowers from early spring to late fall.





Section 6: Wayfinding

Recommendation: Incorporating Wayfinding for Visitors

As mostly first-time visitors to Salem, the South Dakota State City Planning/Landscape Architectures students found that the city lacked a uniform wayfinding system. During the initial stakeholders meeting with city members, it was clear that by implementing a concise and recognizable wayfinding system, visitors would avoid confusion and misdirection.

By implementing a small-scale wayfinding system, visitors to the city may find it easier to locate the schools, parks, and main business district. Since Salem is a small town, it may not seem like there is much need for a wayfinding system. However, by installing key signs initially, and adding to them as the need arises, the cost of this system would be minimal. This would also help to mitigate the need for continually adding signs and finding places of them.

This wayfinding system must be consistent, clear, and concise in its design as it will then be easy to recognize and understand by those who use it. If these basic principles are adhered to, the wayfinding system will be "legible" as later stated. It should also reduce visual clutter and work in conjunction with the existing signage. This system should not only draw people in, but help them to orient themselves within Salem.

Sharmi Patel is a graphic design company out of Philadelphia that has designed wayfinding signs for many cities in the United States- from large cities to small towns. As more attractions come to Salem, the pre-existing posts will be added to in order to accommodate a continually effective wayfinding system. In order to add another panel to the post, the black post casing is slid down, making more room for another panel. This panel is then braced onto the post and will appear as though it has been part of the sign since it was installed.

If an adequate and appropriate wayfinding system was incorporated into Salem, its visitors would not only benefit from it, but also the business owners throughout the city. Martin Flores (ASLA) and Michael Young explain a few benefits of wayfinding in their article "Wayfinding: The Value of Knowing How to Get There"[19].

Wayfinding is a vital tool of economic development. Cities realize that there is a net benefit to a shared approach to attracting business and capturing resident and tourist dollars. A high-functioning wayfinding system makes the environment "legible" and enhances the visitors' experience as it increases their comfort, builds their confidence, and encourages them to discover unique events, attractions and destinations on their own.

Pros:

- Navigation would be much easier for visitors and those who are not as familiar with Salem. They would not have to rely so greatly on their learned orientation of the city.
- The design of the signage would be aesthetically pleasing due to its clear and concise layout and design.
- Wayfinding would reduce stress, discomfort, and disorientation of those who are unfamiliar with Salem.
- An adequate wayfinding system would be regularly used and would satisfy its users.
- Added wayfinding signage will safely direct traffic to their destination.

Cons:

- Adding wayfinding signage would be an additional cost for Salem and the community (as later explained).
- Not all people use wayfinding aids the same way. What might be comfortable for one person to use may not suit everyone else.

The proposed wayfinding system would initially install 6 posts to direct visitors to the typical city attractions. Two posts would be located at each indicated spot (on both sides of the street) in the image to the left. This would accommodate visitors traveling both directions.

1. Corner of Highway 81 & Washington Ave. (To High school, Sports Complex, McCook Courthouse Janitor)
2. Corner of Highway 81 & Hollister Ave. (To golf course)
3. Corner of Highway 81 & Lightner Ave. (To pool/park)

The initial cost of signs, design, and installation of the 8 signs would be about $20,250. The estimated amount of each sign in all would be approximately $3,500 (this price includes the sign, design, and installation)[20]. As the signs are added to, a single addition to a post would be approximately $500 to $1,000. Although this would be an additional future cost, it would be cheaper than regularly adding new signs and finding space for these signs. With this, adding to the signs will assure a uniform and easily recognizable wayfinding system.

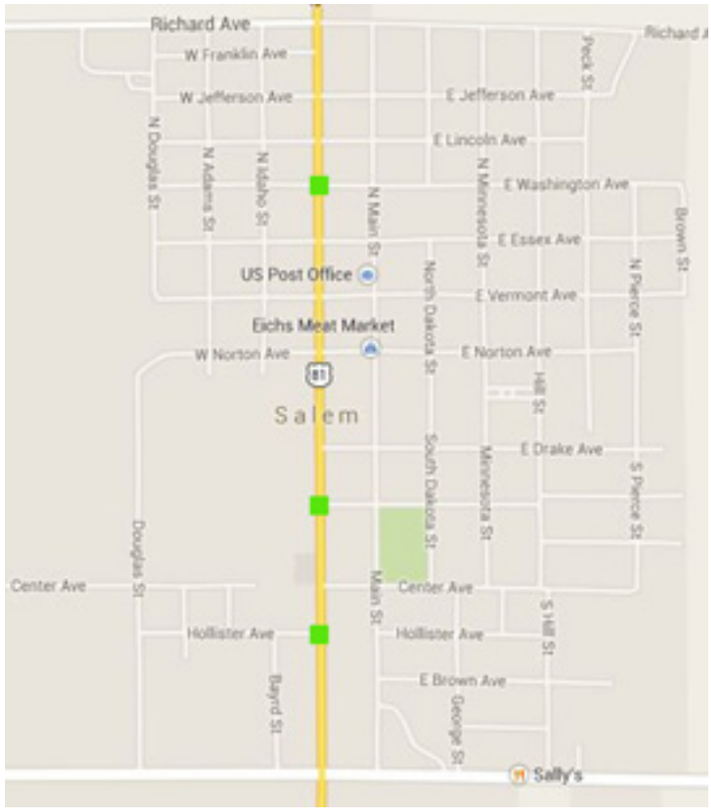


Figure 20. Proposed Wayfinding Locations, Green Squares Indicate Positioning

Figure 21. Sign Illustration for Salem Hotspots

Section 7: City Ordinances

Recommendation: Curb Appeal Ordinance

According to Tides Canada Initiatives Society, "walkability is a quantitative and qualitative measurement of how inviting or un-inviting an area is to pedestrians". Since these measures of walkability may be different for everybody, determining what makes an area more walkable is difficult. Some people may prefer well-maintained sidewalks with many amenities located along storefronts or buildings. Others may prefer shady green spaces that provide quiet, reflective routes to travel[21]. Something both of these scenarios have comfort and safety in common. To promote pedestrian travel a focus on aesthetics and maintenance is critical. An ordinance requiring aesthetic guidelines will help make the community of Salem more comfortable for pedestrian travel.

In order to encourage active transportation, an area needs to feel safe and be aesthetically pleasing. Areas that are rundown typically contain large amounts of litter, or are unkempt causing a place feel dangerous and unattractive. Implementation of an ordinance requiring property maintenance under specific guidelines combats these feelings. These guidelines are basic allowing for easy implementation, while ensuring that the community is a nice place to either walk or bike.

Some areas to address in a curb appeal ordinance include:

- Requiring lawns be maintained and cut at a length no greater than 6 inches
- Requiring weeds be controlled on a property and cut to a length no greater than 6 inches
- Requiring building facades be maintained and not in need of repair
- Requiring property be free of litter and debris
- Requiring broken down and unsightly vehicles and machinery be kept out of sight of the street
- Requiring street trees be planted and maintained along streets and boulevards

Figure 22 (below) shows a property in Salem. With the deteriorating look of the building, along with toys littering the front yard and cars parked in the lawn, this property gives off an uneasy feel for the neighborhood. Implementation of this ordinance will help clean up properties, making places feel safer and more walkable in town.

Figure 22. Property Example

An example of one ordinance from Hibbing, Minnesota is listed below[22].

SEC. 7.05. REGULATION OF GRASS, WEEDS AND TREES IN STREETS.

Su.bd. 1. City to Control Tree Planting (Standards.) The
City shall have control and supervision of planting shrubs and trees upon, or overhanging, all streets or other public property. The City may establish and enforce uniform standards relating to the species and types of trees to be planted, placement and the maintenance and removal thereof. Such standards shall be kept on file in the office of the City Clerk-Treasurer and may be revised from time to time by action of the Council upon the recommendation of the City Clerk-Treasurer.

Su.bd. 2. Permit to Plant or Remove Trees. It is a misdemeanor for any person to plant or remove any tree upon or overhanging streets, without first procuring from the City a permit in writing to do so.

Subd. 3. Duty of Property Owners to Cut Grass and Weeds and Maintain Trees and Shrubs. Every owner of property abutting on any street shall cause the grass and weeds to be cut from the line of such property nearest to such street to the center of such street. If the grass or weeds in such place attain a height in excess of 6 inches it shall be prima facie evidence of a failure to comply with this Subdivision. Every owner of property abutting on any street shall, subject to the provisions herein requiring a permit therefor, trim, cut, remove, and otherwise maintain all trees and shrubs in unhazardous and healthy condition, from the line of such property nearest to such street to the center thereof.

Subd. 4. City May Order Work Done. The City may in cases of failure to comply with this .Section, perform such work with employees of the City, keeping ·an accurate account of the cost thereof for each lot, piece or parcel of land abutting upon such street.

Subd. 5. Assessment. If maintenance work described in the foregoing Subdivision is performed by the City, the City Clerk/Treasurer shall forthwith upon completion thereof ascertain the cost attributable to each lot, piece or parcel of abutting land. The City Clerk/Treasurer shall, at the next regular meeting thereof, present such certificate to the Council and obtain its approval thereof. When such certificate has been approved it shall be extended as to the cost therein stated as a special assessment against such abutting land and such special assessment shall, at the time of certifying taxes to the County Auditor, be certified for collection as other special assessments are certified and collected.

Source: Ordinance No. 6, 2nd Series Effective Date: 3/12/76

Ordinance Subd. 3 states the city requires property owners to maintain grass and weeds at a height no greater than 6 inches. Property owners must also maintain street trees or shrubs located in front of their property. Failure to do so may result in the city performing the required work and billing the property owner. This ordinance also gives the city control over street tree and shrub planting and makes it unlawful for the property owner to remove the tree without a permit (ibid). In order to assess properties, the city would reapportion the work assignment of an existing city employee to perform routine inspections. These inspections would take place monthly during summer months, bi-monthly, or bi-annually. The official duties would include driving down the streets of Salem taking note of any properties not in compliance with the ordinance. Citizens would be free to forward complaints to the city official on non-compliant properties. If violations are found, property owners could be given a designated amount of time to fix the solution. If the problem is not corrected in the set amount of time a city contractor may be assigned to correct the issue. The cost associated with the work done could be charged to the homeowner. In Roswell, New Mexico, there is an ordinance requiring grass and weeds be kept under 12 inches tall. Property owners in violation of this ordinance are given 10 days to fix the violation. If appropriate action is not taken, the homeowners are subject to Municipal Court and can result in a fine of up to $500. The city may also clear grass or weeds if the property

owner fails to do so, with the incurred costs charged to the homeowner[23].

This ordinance also requires planting trees along the street and is to be cared for by property owners. According to Dan Burden, street trees have many environmental benefits such as reducing water runoff, lowering air temperature, and many others. Street trees are also very beneficial in creating safe and aesthetically pleasing walking environments. Street trees help reduce traffic speed by helping motorists guide their movement. Trees create safer walking environments by separating vehicular and pedestrian circulation, as well as promoting an increased sense of security. On top of the safety benefits, trees also make the area more aesthetically pleasing. Street trees create shade, give the space a sense of enclosure, cleaner air, and mitigate sand and dust[24].

The ordinance could also include aspects to do with landscaping on the property. Although an extreme measure, this ordinance would greatly increase the aesthetic value of the area. This portion of the ordinance could be simple and include aspects such as requiring boulevards to integrate landscaping using grass, plants, and mulch. The addition of trees as mentioned earlier also creates aesthetically pleasing environments. These additions to a property may require some investment by the property owner, but this overall improvement will welcome pedestrians. Heber City, Utah has an ordinance similar to this which is listed below[25].

12.20.170 Right-Of-Way Landscaping

The area of the street right-of-way between the curb line, or the proposed curb lines as established by the City Street Standard, and the property line (park strip) shall be landscaped, maintained and kept free of weeds by the abutting property owner with any combination of lawn, shrubs, trees, flowers, growing ground cover, small rocks, bark, and nongrouted/non-bonded pavers. Park strips may not be hard surfaced except for approved driveways, bike trails, equestrian trails and walk areas. No objects or plantings shall be placed within the right of way which would obstruct the visibility of street signs or which would obstruct the intersection visibility triangles. Such objects and plantings are deemed a public nuisance.

Heber City also has an ordinance requiring landscaping on all areas of a property not covered by the building, sidewalk, and driveways. A landscaping plan requires approval by the Planning Department to ensure that the plan complies with local code[26]. Again, this may be an extreme measure, but would create beautiful and safe environments for active transportation. The ordinance is listed below, (ibid).

18.42.080 Landscaping Design

A. Private Landscaping. All areas not covered with buildings, parking, or sidewalks shall be landscaped. Landscaping shall incorporate a combination of trees, flowers beds, shrubbery, lawn, boulders, planted berms and mounds. Landscaping shall be designed to avoid conflict with utilities and other elements. Plantings shall include species native to the area and shall incorporate drought tolerant design. Three Dimensional landscaping shall be incorporated primarily around the perimeter of buildings with pockets of this landscaping scattered throughout the project. All landscape designs shall be reviewed by the Planning Department for compliance to the Code. For suggested native plantings on private property, see "Landscape Plants in Utah: A Guide for High Mountain Valleys". This document is available from the Heber City Planning Department upon request.

1. A strip of land at least ten (10) feet in width, measured from the property line, adjacent to all public street property lines, shall be landscaped except for permitted driveways.

B. Right of Way Landscaping. Planter strips shall be planted in grass and contain one street tree per 30 feet of street frontage and spaced according to Chapter 12.20 of Heber City Code. Choice of species for street trees must avoid evergreens, thorn and fruit bearing

trees, and trees that grow large or have shallow roots pursuant to Chapter 12.20. The trees may be clustered as appropriate but must be planted within the planter strip. Planter strips adjoining the streetscape may be broken up by periodic sections of pavers.

C. Plant Size. Required trees shall be at least two inch (2") caliper or larger. Required shrubbery shall be at least 1 gallon per plant.

D. Existing Trees. Existing street trees and existing large trees on the property shall be to the extent possible preserved into the design of the site unless the trees threaten the integrity of the sidewalk, curb, or utilities. Approval from the Planning Commission or an appointed committee shall be required prior to the removal of any existing trees.
E. Irrigation. All landscaped areas shall be maintained and irrigated with an automatic pressurized irrigation system.

In conclusion, people are more likely to walk or bike in areas they find safe and aesthetically pleasing. An ordinance requiring the property owner to maintain their property would be the first step in ensuring the community of Salem is a safe and beautiful place to walk and bike. An appointed city official should be assigned to make routine inspections of the community to check for violations. Any property owners in violation of the code should be given a written warning and given a designated amount of time to fix the violation. If it is not fixed, the city will have city contractors correct the issue, and charge the property owner for the work done. This ordinance should also require street trees placed along the boulevard and are to be cared for by the property owner. A further step would be to implement requirements on landscaping in the right of way, or even in the property owners yard.

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