

Final Report and Feasibility Study

Sumner, Iowa



Prepared By:



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Program Partners:

Iowa Department of Transportation
Iowa State University
Trees Forever



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About Design Team

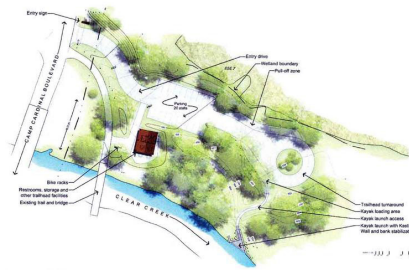


Steve Ford Landscape Architecture

Steve Ford, Professional Landscape Architect, opened SFLA | Steve Ford Landscape Architecture in July of 2016. A Landscape Architect for more than 35 years, Steve has worked for a handful of highly reputable architectural, engineering and landscape architecture firms. His wide ranging experience includes campus and master plan design, urban design, sports facilities, parks and trail design, memorials, and residential landscape design.

He received his training at Iowa State University and worked in city planning and at an architectural firm in South Dakota early in his career. Following that, he worked in the Minneapolis metro area doing residential landscape architecture for a design build firm before moving to the Iowa City area permanently. Some of his local projects include the Iowa Firefighters Memorial and the Clear Creek Trail in Coralville, the University of Iowa Credit Union headquarters and the new entries to Carver Hawkeye Arena and the Fountain Entrance at UIHC.

Steve believes the success of a design project begins early in the visioning phase where all ideas are good and unimagined design options can be explored. He calls this the big picture and uses the technique to understand and the needs of the client and discover all creative possibilities for a project.

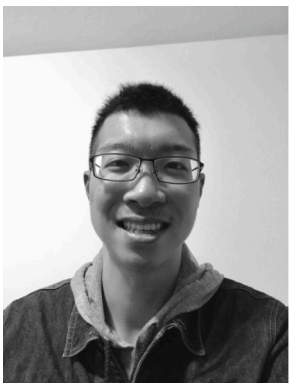


Martin Gardner Architecture

Martin Gardner Architecture P.C. has been providing excellent in architecture, design, master planning, needs assessment, creative placemaking, and other consulting services in eastern Iowa for over 35 years. We have artists, architects, landscape architects, interior designers, community planners, historic preservationists, graphic designers, drafts-people, and construction industry specialists to ensure that every tool is available to meet the challenges of every project. Together we have a dynamic Team with a wide-ranging portfolio of over 2,000 projects.

Michael LeClerc, Assoc. AIA & ASLA, LEED Green Assoc., CDT – Architectural and Landscape Architectural Associate. Michael was born into a fourth generation farming family in NE Iowa. He went on to study design at The University of Iowa and The University of Oregon with a focus on community revitalization, creative placemaking, preservation, and sustainability. During his time at The University of Oregon he was a member of designBridge whose goal is to bring the resources and energy of design students to communities and organizations that need assistance. These interests lead him to first tackle issues of decline in his rural hometown of Coggon, IA. He currently is a member of the Linn County Historic Preservation Commission, volunteer with the Community Design Program through the IA Architectural Foundation and is involved in the Community Visioning Program run jointly through ISU, IA DOT, and Trees Forever. These experiences were fundamental to him in illustrating the effects of making design more visible and accessible as a strategy to enhance street life, stimulate local economies and mitigate decline. He focuses professionally on utilizing the design process to educate, empower, enhance, and sustain healthy communities to make great places to live, work, and play.

Peiming Chen is a Landscape Architecture graduate student at Iowa State University since 2017. He gained a Bachelor degree of Environmental Art Design from Zhengzhou University of Light Industry, China. He focus on studying different digital medias and programs to analyze cases, and visualize design ideas and art graphics. He believes that it's the best to utilize technology as a tool to empower the design idea to create spaces that can impact people's emotions and feelings.



Program Overview

Sumner is one of 10 communities selected to participate in the 2019 Iowa's Living Roadways Community Visioning Program. The program, which selects communities through a competitive application process, provides professional planning and design assistance along transportation corridors to small Iowa communities (populations of fewer than 10,000).

Goals for the Visioning Program include:

- Developing a conceptual plan and implementation strategies with local communities
- Enhancing the natural, cultural, and visual resources of communities
- Assisting local communities in using external funds as leverage for transportation corridor enhancement

Each visioning community works through a planning process consisting of four phases of concept development:

- Program initiation
- Needs assessment and goal setting
- Development of a concept plan
- Implementation and sustained action
- Improved access

Each visioning community is represented by a steering committee of local residents and stakeholders who take part in a series of meetings that are facilitated by field coordinators from Trees Forever. Iowa State University organizes design teams of professional landscape architects, design interns, and ISU faculty and staff. The program is sponsored by the Iowa Department of Transportation.

Community Themes & Goals

The Sumner Visioning Committee identified a number of themes and goals during the visioning process, which are outlined below:

Trails

- Connect parks
- Circle the town
- Connect to trails outside of town
- Trailheads

River

- Celebrate and promote as community feature
- Revise park programming to accommodate recurrent flooding
- Promote water trail designation
- Highlight as a destination

Natural Areas

- Promote and celebrate the natural resources
- Connect new City Park to existing destinations
- Address floodplain on city's South side
- Accommodate all users, ages, abilities, and mobility levels

Safety

- Enhance street crossings for pedestrians and bicyclists
- Improve and add sidewalks
- Stricter standards/ordinance enforcement for sidewalk maintenance
- Hwy 93/Intersection visibility improvement
- ADA access improvements: curb cuts, crossing lights, etc

Identity Projects

- Street bumpouts for Hwy 93
- Establish trailheads/wayfinding signages
- Safe school routes for bicycles and pedestrians
- Street and signage improvements
- Extension of N Walnut Street to 13th Street and new ball park

Capturing the Vision

Based on the needs and desires of the local residents, as well as a detailed inventory of community resources composed by ISU, the design team developed a conceptual transportation enhancement plan. This plan, as well as the inventory information, is illustrated in a set of presentation boards to follow. For the sake of clarity and legibility, the summary text from the reduced scale map pages created by ISU have been pasted next to the map and cited with the following notation: "- ISU: 2019 Community Visioning." Additional observation notes by the design team follows this content at the bottom of the page.

It is the design team's experience, that community members themselves are the best experts to understand what their needs are and what challenges their community faces. However, many of the small cities and towns lack necessary resources, funding, time, or professional experience to utilize existing resources in order to execute desired improvements or visualize and plan for them. In addition, many of these local governments have few full time employees to take these types of projects on. Likewise, many rural government employees and citizens organizations are unfamiliar with the tools, processes, goals, and outcomes of creating a Master Plan. In this regard, your design team would like to champion all that the Community Visioning Program offers under-served communities through out Iowa. Our goal in this program has been to provide your community with a very abbreviated version of a long-range Master Plan and introduce the community to the processes and products of long range planning that look out past our own lifetimes. This can be a difficult task both for designers and residents to plan for what is realistic today and visualize future possibilities as best we can despite many unknowns and the constraints of the present. No one knows exactly what opportunities or challenges the future may hold, but we can plan for future growth with the understanding that over time buildings and infrastructure age and property changes hands. With this in mind, we examine the goals and challenges the community faces today, address what we can in the near future, and look for possible opportunities the future may hold. Our goal has been to provide Sumner with strong visual aids and tools to accompany future grant applications or to give future designers an ample head start in taking these concepts to construction documents in order for the project to be bid and built. It is our intent that portions of this feasibility study and images from this document and the presentation boards can help the community elevate future grant applications to stand out among other applicants. Most grant applications require a project narrative to describe the purpose and goals of a project, and adding sound data and strong visual aids to your grant application will further strengthen it when reviewers are deliberating among other applications.

Although the scope of some of the proposed design interventions may seem impossible today, their scale and complexity are intended to grow with the community through time. Additionally, each intervention can be broken down into more manageable sub-phases. For example, a streetscape improvement plan could be implemented a

Program Overview

few blocks at a time to make the project more financially feasible in the short term. Taking into consideration community input and the priorities established through the focus groups, surveys, and visioning meetings, we have attempted to start with smaller, simpler, and more cost effective design interventions that are easier to execute, and save the more complex ones for later in time in order to start small, gain momentum and public support, demonstrate small successes along the way, and to provide time for fund raising or grant applications in order to undertake larger improvement projects.

To make such a large undertaking and investment more manageable and realistic for a community of this size, starting on page 30, design interventions have been broken down into concepts and each has been assigned a conceptual time-range for implementation. It should be noted that each concept, priority, and time-range are intended to be flexible as ultimately determined by the community themselves. Concepts and timelines are by no means static and are intended only to demonstrate how large-scale improvements and community Master Plans can be realized by implementing small scale projects strategically over time to achieve cohesive broad reaching goals. This document should not in itself be considered a complete Master Plan, but serves only as an abbreviated form of one to help demonstrate how Master Planning helps communities of all shapes and sizes achieve great things. Master Plans ultimately need brought before City Council, approved, and officially adopted. Master Plans of any kind are intended to be living documents that outline a general direction for community growth and development and must be revised periodically to address changing needs, priorities, budgets, challenges, and opportunities.

The design team would like to take this opportunity to encourage Sumner to think strategically over time and to think big! There will always be a million reasons why something can't be done, but good things do not happen by focusing on what can't be done, rather positive change happens by focusing on potential and what things can become. It is often hard and scary to make bold moves when a community is already struggling, but bold moves are necessary to help historically agricultural based economies adapt to offer more opportunities and experiences to a wider range of people in order to remain vibrant and dynamic to enable future growth. As farming changes, technology improves, farms grow larger, become more efficient, and fewer families farm them, bold moves are necessary for communities to adapt and survive. A perfect example is Lanesboro, MN with a population of only 754 which now thrives on tourism by attracting visitors to views of the limestone bluffs surrounding the town nestled next to the Root River. A community of this size strategically adapted their local economy and planned a community vision to take advantage of the river and their location and now supports two theater companies, river and bike trails and recreation companies, over 11 bed and breakfasts, 2 resorts, 15 eating establishments, downtown camping opportunities, and a number of galleries and retail establishments to successfully fill and revitalize every Main Street building. Sumner, has equally great views to the Little Wapsipinicon, some of the best in the state, and there are plenty of recreation opportunities, a historic downtown, and has just as much potential as Lansboro. In the end, the only thing that limits what can be done, is what one is willing to imagine possible and strategically plan for.

Community Visioning Program Overview

Summer is one of ten communities selected to participate in the 2019 Iowa's Living Roadways Community Visioning Program. The program, which selects communities through a competitive application process, provides professional planning and design assistance along transportation corridors to small Iowa communities (populations of fewer than 10,000).

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Community Themes & Goals

The Summer visioning committee identified a number of themes and goals during the visioning process, which are included below:

Trails

- Connect parks
- Circle the town
- Connect to trails outside of town
- Establish trailheads

River

- Celebrate and promote as community feature
- Revise park programming to accommodate recurrent flooding
- Promote water trail designation
- Highlight as a recreational destination

Natural Areas

- Promote and celebrate the natural resources
- Connect new City Park to existing destinations
- Address floodplain on city's south side
- Accommodate all users, ages, abilities, and mobility levels

Safety

- Enhance street crossings for pedestrians and bicyclists
- Improve and add sidewalks
- Stricter standards/ordinance enforcement for sidewalk maintenance

- Hwy 93/intersection visibility improvement
- ADA access improvements: curb cuts, crossing lights, etc

Identity Projects

- Street bumpouts for Hwy 93/Downtown
- Establish trailhead/way-finding signage
- Safe school routes for bicycles and pedestrians
- Street and signage improvements
- Extension of N Walnut Street to Thirteenth Street and location for new ball parks

Capturing the Vision

Based on the needs and desires of the local residents, as well as a detailed inventory of community resources, the design team developed a conceptual transportation enhancement plan. This plan, as well as the inventory information, is illustrated in the following set of presentation boards.

1. Program Overview
- 2 a-g. Bioregional Assessment
- 3 a-c. Transportation Assets and Barriers Assessment
4. Transportation Inventory
- 5 a-b. Concept 1. Immediate Goals-Hwy 93 DOT Improvements, School/Safe Routes, Trailheads, and Pocket Park
- 6 a-b. Concept 2. Short-term Goals-Downtown-Library Loop, River Routes, Trail, and Bridge Replacements
- 7 a-b. Concept 3. Mid-range Goals- Trail Loop Connect to North Woods Trail, and Union/Maple Street Sidewalks
- 8 a-b. Concept 4. Long-term Goals-Inter-Town Rails to Trails Connection
9. Overall Concept Plan



Summer

Program Overview

Design Team

Landscape Architect: Steve Ford/Designer: Michael LeClere
 Intern: Peiming Chen
 Iowa State University | Trees Forever | Iowa Department of Transportation



Bioregional Assessment Settlement Patterns

This board uses maps from A.T. Andreas' Illustrated Historical Atlas of the State of Iowa, 1875 overlaid with present-day town boundaries and water bodies. Published in 1875, Andreas' Atlas is an extraordinary resource showing the post-Civil War landscape of Iowa including settlement features (towns and villages, churches, schools, roads, railroads, etc.) and landscape features (water bodies, vegetated patches such as "timber" and "swamp," and major topographic features.) High-quality scans of the Atlas have been arranged to correspond closely with present-day maps revealing major landscape changes as well as features that have persisted, such as railroad rights-of-way and in some cases remnant vegetation patches.

Sumner in Context

Compare the 1875 boundaries of your town to the current boundaries. How much has your town grown?

Compare the course of the rivers in 1875 to their current course, are there major changes in alignment or location? Are there vegetation patches shown in the 1875 map still in existence?

- ISU: 2019 Community Visioning

Additional Notes from Design Team

It should be additionally noted how Sumner has grown through out time. The east has been largely constrained by the river, which also constrains growth on the southern portion of the town. Growth has largely occurred evenly around the original core of the original town in regard to the city boundaries, but construction on the east and south have been limited by flooding and a high water table.

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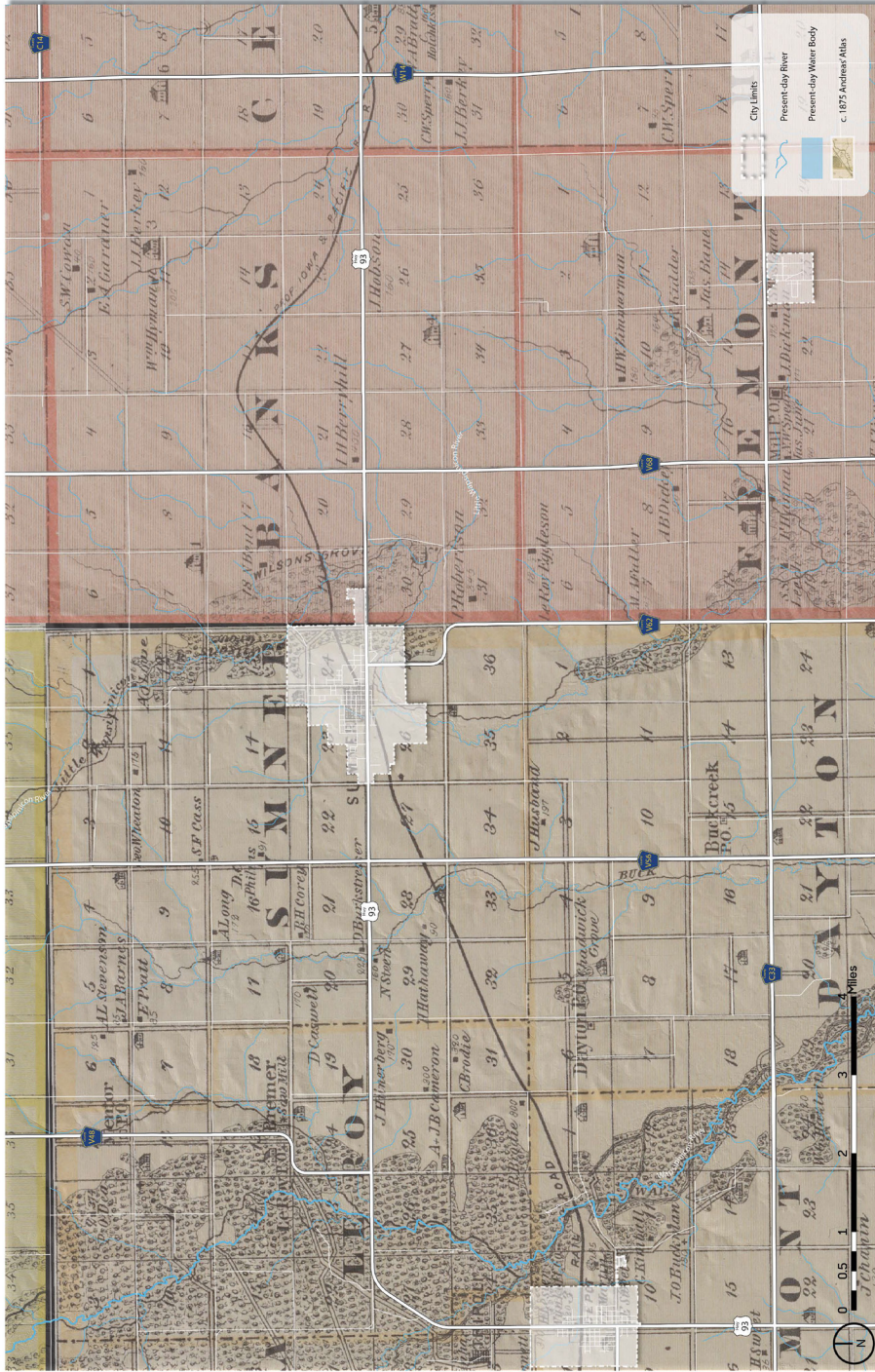
Settlement Patterns

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Summer in Context

Compare the 1875 boundaries of your town to the current boundaries. How much has your town grown?

Compare the course of the rivers in 1875 to their current course. Are there major changes in alignment or location? Are there vegetation patches shown in the 1875 map still in existence?



Map Source: Iowa Department of Natural Resources. Natural Resources Geographic Information Systems Library. <http://www.igsb.uiowa.edu/ngislib/>.



Historical Settlement Patterns

Bioregional Context

Julia Badenhop, Riley Dunn, Emma Georgerf, Timothy Kerkhove, Clare Kiboko, Alysse Kirkman, Giannis Koutsou, Zoey Mauck, Abigail Schaffer
Iowa State University | Trees Forever | Iowa Department of Transportation



Historical Vegetation

The vegetation information shown here is derived from township maps made by the General Land Office (GLO) surveys beginning in 1836 through 1859. The vegetation information was digitized in 1996 as a resource for natural resource management and is useful "...for the study of long term ecological processes and as baseline data for the study of present day communities."¹

The names of plant communities mapped by the GLO surveyors varied. The original terminology used by the surveyors who made maps has been preserved. Not all communities will have all vegetation types.

Early land surveyors mapped the following vegetation of your community:

1. Forest: Tree dominated, with a mostly closed canopy. Ground vegetation tolerant.
2. Marsh: Perennial non-woody plants, water and fire dominated.
3. Prairie: Perennial non-woody plants, fire-dominated.
4. Thicket: A dense growth of perennial woody plants and small trees. Developed under infrequent fire.

1. J.E. Ebinger, "Presettlement Vegetation of Coles County, Illinois," Transactions of the Illinois Academy of Science (1987): 15-24, quoted in Michael Charles Miller, "Analysis of historic vegetation patterns in Iowa using Government Land Office surveys and a Geographic Information System" (master's thesis, Iowa State University, 1995), 8.

2. Michael Charles Miller, "Analysis of historic vegetation patterns in Iowa using Government Land Office surveys and a Geographic Information System" (master's thesis, Iowa State University, 1995), 134-135.

- ISU: 2019 Community Visioning

Additional Notes from Design Team

It should be noted that the historical vegetation map is largely reinforced by the previous map that depicts the Illustrated Historical Atlas of the State of Iowa (1875). These should also be contrasted with present day where the majority of the "Prairie," and some of the "Forest," vegetation has been replaced by agriculture more appropriately represented by the "Field" category.

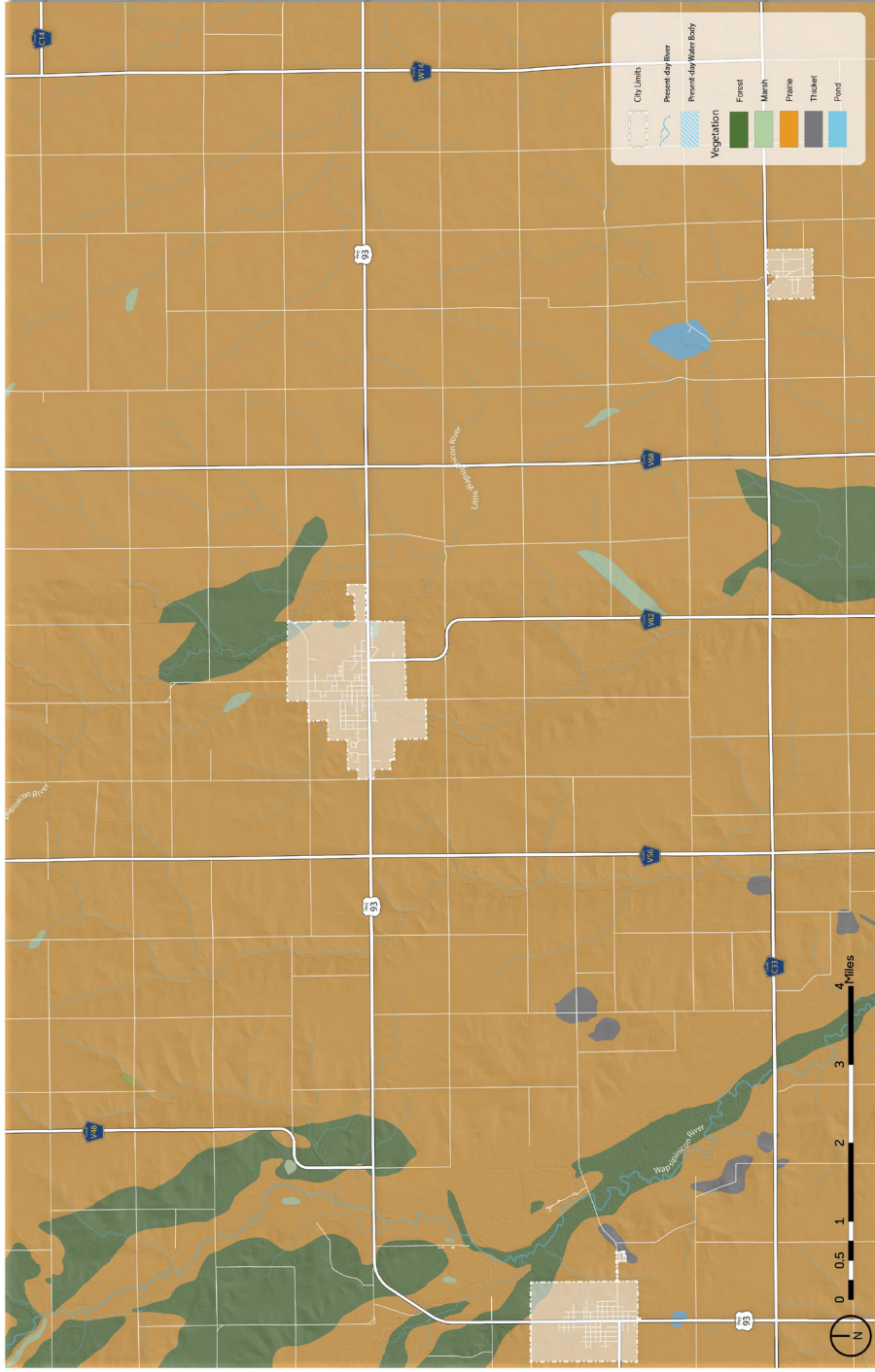
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The names of plant communities mapped by the GLO surveyors varied. The original terminology used by the surveyors who made maps has been preserved in the original data, but we have renamed these types on this map to reflect names used to describe contemporary ecological vegetation communities.

Not all communities will have all vegetation types, because various conditions that effect vegetation—such as geology, exposure to wind, seasonally high water or ground water, and frequency of fire—differ from place to place. Early land surveyors mapped the following vegetation types in the vicinity of your community:

1. **Forest:** Tree dominated, with a mostly closed canopy. Ground vegetation shade tolerant. Developed under infrequent fire.
2. **Marsh:** Perennial non-woody plants, water and fire dominated.
3. **Prairie:** Perennial non-woody plants, fire dominated.
4. **Thicket:** A dense growth of perennial woody plants and small trees. Developed under infrequent fire.



Map Source: Iowa Department of Natural Resources. "Natural Resources Geographic Information Systems Library." <http://www.igsb.uiowa.edu/ngislib/>.

Summer

Historical Vegetation

Bioregional Context

Julia Badenhoop, Riley Dunn, Emma Georgoff, Timothy Kerkhove, Clare Kiboko, Alysse Kirkman, Giannis Koutsou, Zoey Mauck, Abigail Schafer
Iowa State University | Trees Forever | Iowa Department of Transportation

¹E. Bringer, "Preservation of the History of Cass County, Illinois: Transcriptions of the General Land Office Survey Maps of Cass County, Illinois, 1836-1859: An Analysis of Historic Vegetation Patterns in Iowa Using Government Land Office Surveys," M.S. Thesis, Department of Geography, Iowa State University, 1999, 31.



Regional Watershed

A watershed is a defined area or ridge of land with a boundary that separates waters flowing to different rivers, creeks, or basins. Watershed boundaries show the extent of a drainage area flowing to a single outlet point, and determines whether precipitation is directed into one watershed or an adjacent watershed.

It is important to note that there are multiple levels of watersheds, for instance the Iowa River watershed is composed of a dozen smaller watersheds, and the Iowa River watershed is a sub-basin of the Mississippi River watershed.

Where a community is located in relation to its surrounding watershed(s) determines its capacity to manage regional watershed issues such as flooding. For example, a community located near the end of a watershed (close to the outlet point) will have little capacity to reduce the amount of water draining toward it from upland areas.

- ISU: 2019 Community Visioning

Additional Notes from Design Team

Regional watershed data show Sumner is near the central west portion of the Little Wapsipinicon River Watershed. These conditions indicate that a lot of water is processed through the soils and waterways with a lot of watershed outflow occurring on the south side of Sumner. It is reinforced by the following two maps: Depth to Water Table, and Elevation & Flow.

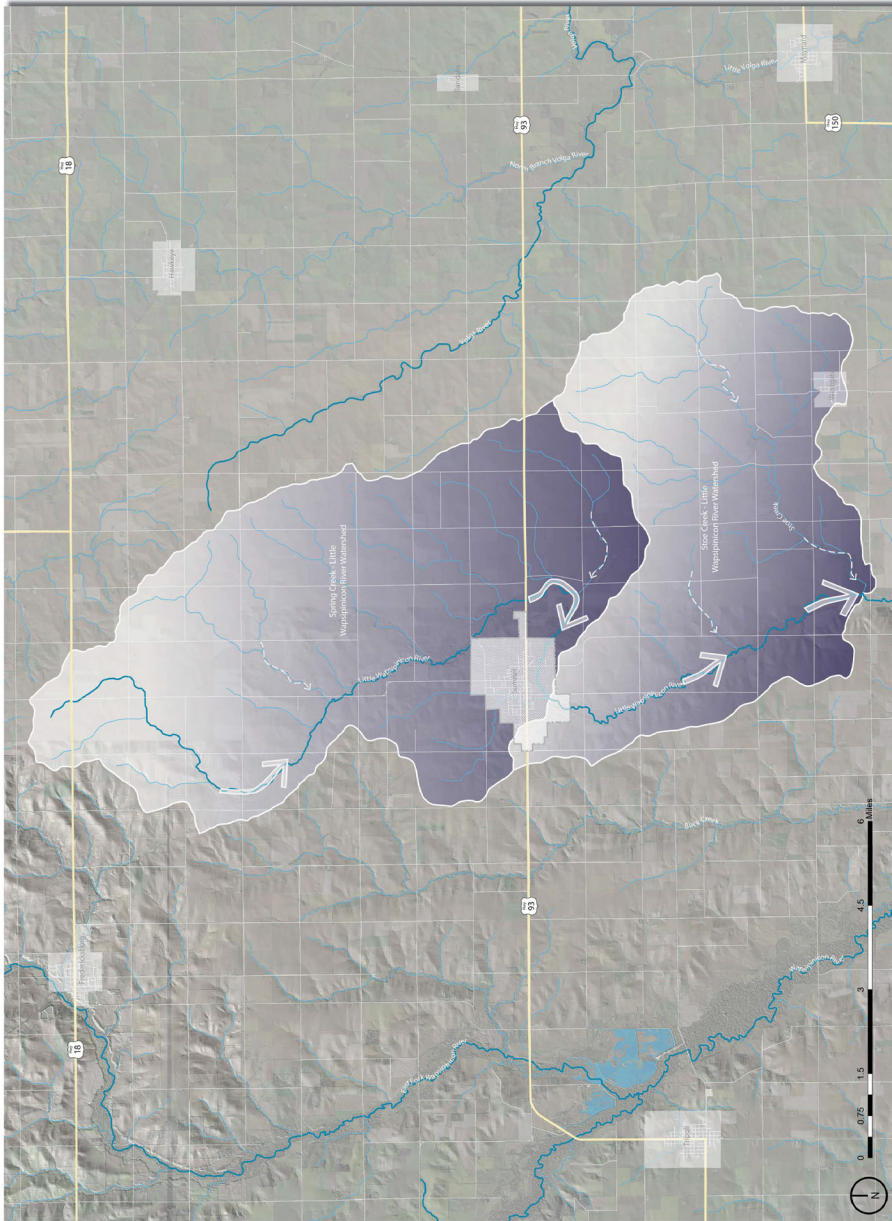
It is important to note that due to the location of Sumner is near the outlet of a watershed, there will be limited capacity to mediate water from top to the bottom. Flooding and staying water can be expected in these areas, which is consistent with recurrent flooding in Cub and City Parks.

Regional Watershed

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Map Source: Iowa Department of Natural Resources. "Natural Resources Geographic Information Systems Library." <http://www.idnr.gov/arcgis/ibx/>

Summer

Regional Watershed

Bioregional Context

Julia Badenhop, Riley Dunn, Emma Georgeff, Timothy Kerkhove, Clare Kiboko, Alyse Kirkman, Giannis Koutsou, Zoey Mauck, Abigail Schafer
Iowa State University | Trees Forever | Iowa Department of Transportation



Depth to Water Table

The water table is defined as the distance below the surface at which the ground is saturated with water. Depth to water table is represented as a range because it varies due to seasonal changes and precipitation volumes. For example, following spring snow-melt an area with a depth to water table ranging from one foot to three feet is likely to be at or near one foot depth.

The map shows how close to the surface groundwater can be. Pavement and foundations are affected by groundwater near the surface. Freezing and thawing, and upward pressure of rising groundwater can cause cracks or "frost boils" in pavement. Foundations can be wet and require "dewatering," which can be expensive.

Where the value is less than 0ft, water can well up out of the ground. This causes localized flooding, even if there is no surface water draining to the area.

- ISU: 2019 Community Visioning

Additional Notes from Design Team

The majority of Sumner has a very shallow depth to water table. As the map indicates, the most of Sumner lies 2 to 5ft. to the water table with the NE and W more shallow at -1ft to 1ft. This largely occurs where existing streams and drainage ditches are located that flow into the Wapsipinicon River.

As noted above, this makes the costs of building and maintaining building foundations more expensive, which makes it less desirable to build there, although by no means impossible. However, where recurrent flooding is a concern construction should be avoided. These areas are best developed as park space or left as natural areas.

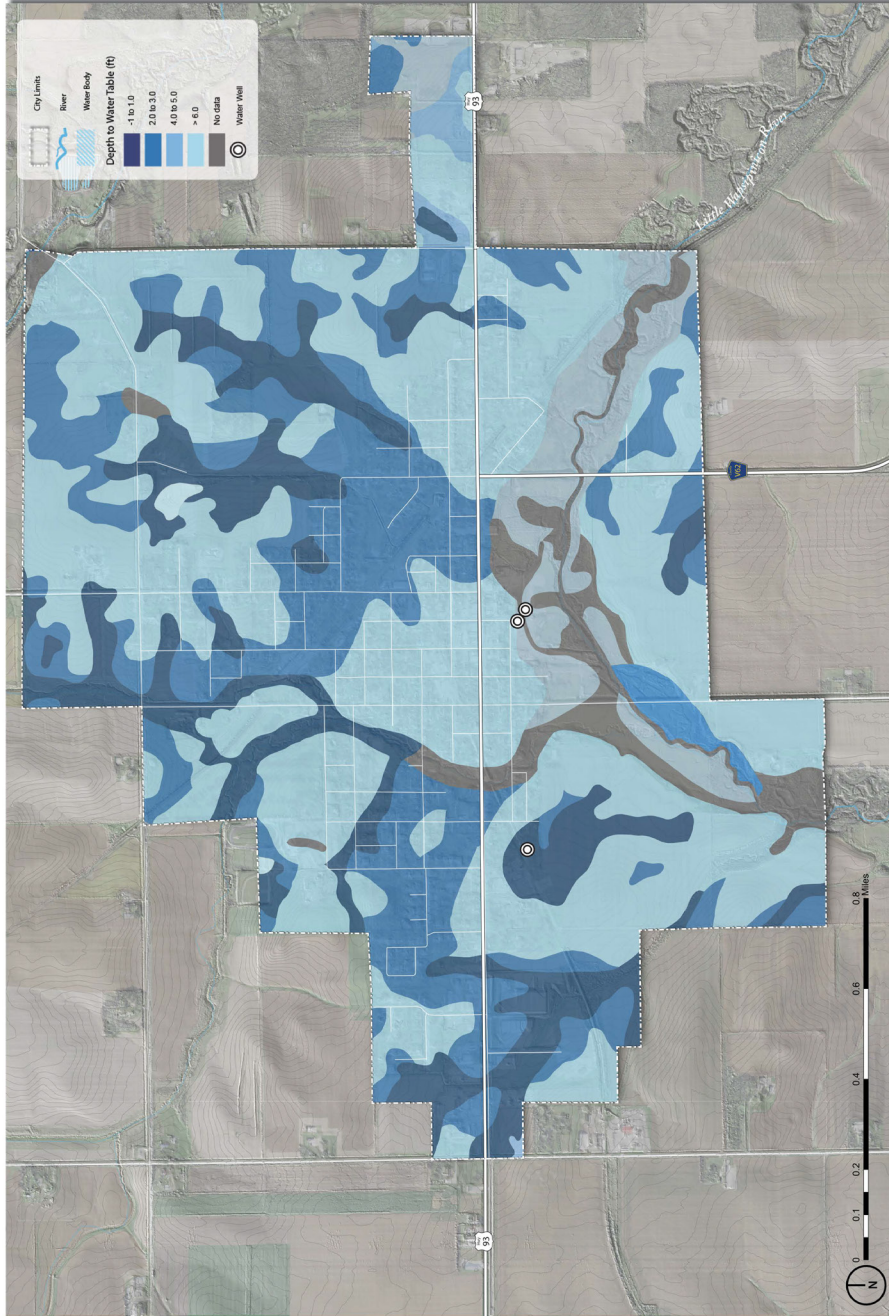
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Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," <http://www.iagb.uiowa.edu/ingislib/>.

Summer

Depth to Water Table

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Elevation and Flow

This map displays topographic differences in elevation using a combination of contour lines and the color gradient depicted in the legend. The high points and low points have also been located.

Note the relationship of your community to the surrounding elevation; is it located in a valley or on high ground, or is it split between the two?

If your community lies within or near a floodplain or floodway, the map reflects these features. Not all communities will have these elements; their absence on this map indicates none are present.

Flood risk is correlated to low-lying land, this map also shows your community's flood risk as defined by the Federal Emergency Management Agency (FEMA) Flood Map Service Center. This map shows the two most important flood zones, the Base Flood and the Regulatory Floodway (consult legend.) Base Flood is the zone having a one percent chance of being equaled or exceeded in any given year, also referred to as the "100-year floodplain." The Regulatory Floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% flood discharge can be accommodated without increasing the base flood elevation.

- ISU: 2019 Community Visioning

Additional Notes from Design Team

As the Regional Watershed map shows above, Sumner is located on the outflow of Wapsipinicon watershed. From the elevation map on the right, the high points of the city are located largely on the west, north, and north-east sides. The concerns with flooding are even more evident when we see that Sumner is nestled in the bend of a low spot where creek drainage connects to the river. Due to the elevations around Sumner, water drainage has no other option than to flow around and through the town.

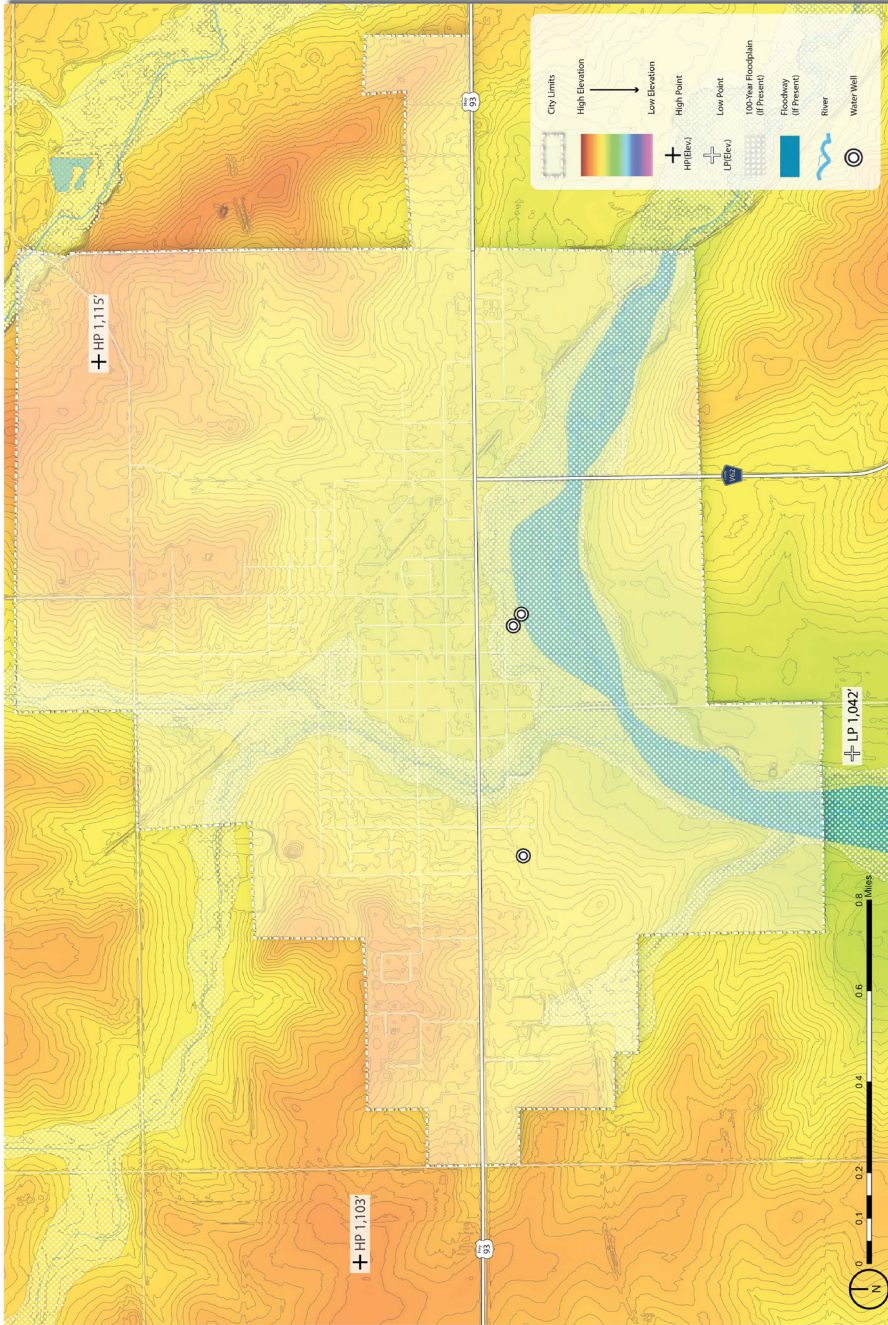
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If your community lies within or near a floodplain or floodway, the map reflects these features. Not all communities will have these elements; if they are absent on this map, none are present.

Flood risk is correlated to low-lying land. This map shows your community's flood risk as defined by the Federal Emergency Management Agency (FEMA) Flood Map Service Center. This map shows the two most important flood zones if they are present: the Base Flood and the Regulatory Floodway (consult legend). Base Flood is the zone having a 1% chance of being equaled or exceeded in any given year, also referred to as the "100-year floodplain." The Regulatory Floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% flood discharge can be accommodated without increasing the base flood elevation.



Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," <http://www.igsb.uiowa.edu/ngislib/>.

Summer

Elevation and Flow

Bioregional Context

Julia Bodenhopfe, Riley Dunn, Emma Georgeff, Timothy Kerkhove, Clare Kiboko, Alysse Kirkman, Glannis Koutsou, Zoey Mauck, Abigail Schafer
 Iowa State University | Trees Forever | Iowa Department of Transportation



Present Day Land Cover

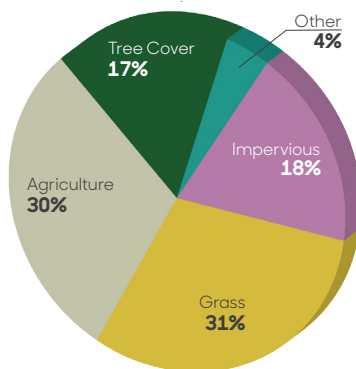
The land cover map depicts both natural and man-made land cover types with aerial imagery. The Iowa DNR created 15 unique classes for this dataset to differentiate land covers. Refer to the legend for a breakdown of land cover types within your community boundaries.

What do you observe about the dominant land cover types in your community?

Where is the tree canopy most concentrated?

Compare the amount of impervious surfaces (e.g., parking lots, roads, buildings) to the other surfaces (e.g, water, grass, and agriculture.) What does this mean for surface water movement?

Tree cover affects microclimate. Are places surrounded by canopy more pleasant in the summer? How do these places feel in the winter?



Percent Land Cover Type

- ISU: 2019 Community Visioning

Additional Notes from Design Team

It would be helpful to note the amount of hard surface that exists in Sumner contrasted with the percentage of tree cover. This indicates that there is plenty of opportunity to utilize some of the paved surfaces for street trees, swales, and natural plantings. According to the Depth to Water Table Map, swales would provide some help with infiltration but remains pretty constrained. However, even slowing the flow of run off to the river helps sediments settle out of the soil before entering the river body, which aids in the overall health of the river as an amenity. Additionally, this map shows that there is largely a complete lack of vegetation in the downtown core. The addition of street trees and planters make a more welcoming downtown core.

Present-day Land Cover

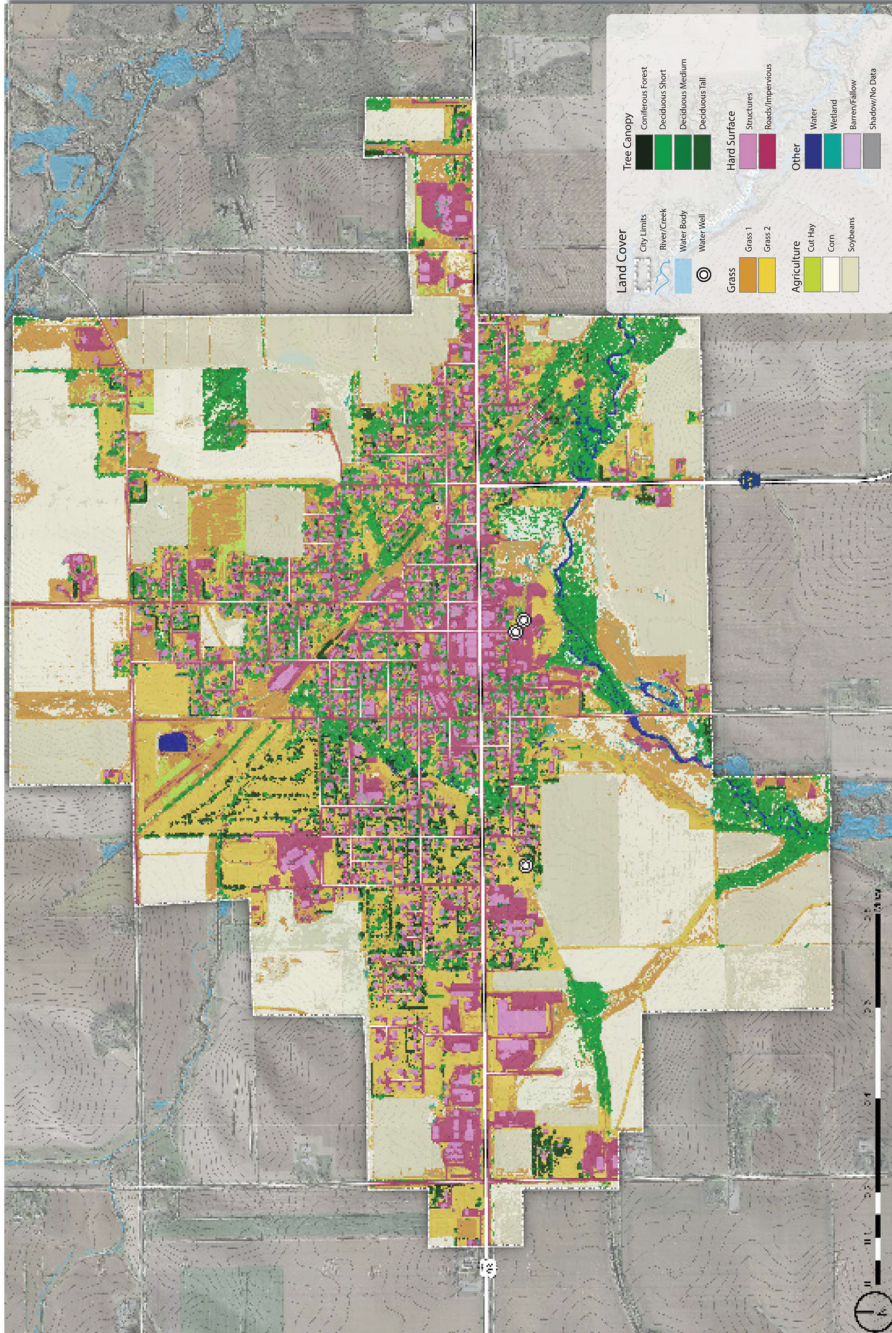
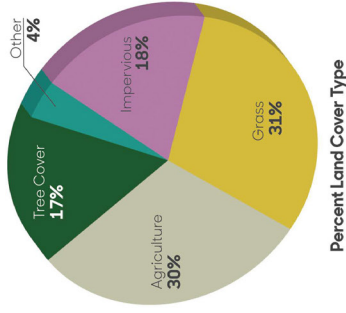
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Tree cover affects microclimate. Are places surrounded by canopy more pleasant in the summer? How do these places feel in the winter?



Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," <http://www.gis.iuiowa.edu/mgislib/>.

Summer

Present-day Land Cover

Bioregional Context

Julia Badenhop, Riley Dunn, Emma Georgeff, Timothy Kerkhove, Clare Kiboko, Alyse Kirkman, Giannis Koutsou, Zoey Mauck, Abigail Schafer

Iowa State University | Trees Forever | Iowa Department of Transportation

Present Day Vegetation

This map shows the present-day vegetation in an aerial image. This map shows where trees, shrubs, and other plants create shade, line streets, buffer edges, and provide other services.

Notice how much the vegetation has been altered since the historic vegetation was mapped by the government land office surveyors. People alter vegetation to produce crops, provide shelter, and for other amenities.

Also notice how the community and its vegetation has changed since the Andrea's Atlas was drawn. Development typically removes vegetation where infrastructure is built and then re-introduces vegetation for its functional and amenity value.

- ISU: 2019 Community Visioning

Additional Notes from Design Team

This map largely represents similar information as the Present Day Land Cover Map, but does so through a satellite aerial view. Here we see how the component pieces of information from the previous maps fit together as we see the town today. All the systems previously noted and analyzed are working concurrently within Sumner's city limits. By isolated certain pieces of information we are able to gain new insights into those components that make up the community.

Present-day Vegetation

The map at the left shows the present-day vegetation in an aerial image. This map shows where trees, shrubs, and other plants create shade, line streets, buffer edges, and provide other services.

Notice how much the vegetation has been altered since the historic vegetation was mapped by the government land office surveyors. People alter vegetation to produce crops, provide shelter, and for other amenities.

Also notice how the community and its vegetation has changed since the Andreas' Atlas was drawn. Development typically removes vegetation where infrastructure is built and then re-introduces vegetation for its functional and amenity value.



Map Source: Iowa Department of Natural Resources, "Natural Resources Geographic Information Systems Library," <http://www.iagsb.uiowa.edu/rngislib/>.

Summer

Present-day Vegetation

Bioregional Context

Julia Badenhop, Riley Dunn, Emma Georgeff, Timothy Kerkhove, Clare Kiboko, Alysse Kirkman, Giannis Koutsou, Zoey Mauck, Abigail Schafer
Iowa State University | Trees Forever | Iowa Department of Transportation



Transportation Assets and Barriers

Overview

Transportation is integral to small-town life and a vibrant economy. In the context of the Community Visioning Program, we recognize walking, biking, and driving as quintessential modes of travel to various destinations important to residents and visitors. Access to these destinations is crucial for many everyday activities—getting to work and school, participating in community events, and providing for basic needs such as food, health care, and healthy activity.

In this participatory assessment, we want to find out which factors and conditions affect transportation use in Sumner, where these factors and conditions are most prevalent, and how they influence route and transportation choices locally. Because residents have the best knowledge of how Sumner's transportation system works, we use focused, small-group conversations, mapping, and photos of the best and worst to understand local transportation.

Different Users = Different Needs

To capture insights about transportation from a variety of perspectives, we invited Sumner residents with different transportation needs to participate in focus groups. A total of 44 residents attended Sumner's workshop. Participants were separated into five user groups and the Sumner steering committee.



Actives

(18 participants): This user group represents those in the community who engage in outdoor recreation, including cycling, walking, running, swimming, skiing, etc. The availability of multiple venues for outdoor recreation matters to this group.



Mobility Impaired

(0 participants): This user group is directly affected by accessibility barriers such as high curbing and uneven sidewalks that make it difficult to operate mobility-aiding equipment effectively. Handicapped parking, curb ramps, and smooth surfaces are critical transportation features.



Older Adults

(9 participants): Accessibility—both in terms of physical access and proximity—is a major concern for this user group. Because some people in this user group do not or are unable to drive, having goods and services within walking distance is important.



Youth

(2 participants): This group uses primarily non-motorized modes of transportation, so pedestrian- and bike-friendly streets and sidewalks are important. These users value the ability to get to destinations on foot or via bicycle and having goods and services within walking distance.



Parents

(4 participants): Safety of their children is a primary concern of this user group. Access to safe and easy routes to school activities is another significant factor to this group. Parents of young children desire smooth, wide surfaces for strollers.



Steering Committee

(11 participants): The common denominator for this user group is that their observations are influenced by special knowledge of the transportation system acquired during the Community Visioning assessment process. As a result, this group is more representative of decision makers.

SPRING 2019 **3a**

What Factors Affect Transportation in Summer?

Transportation is integral to small-town life and a vibrant economy. In the context of the Community Visioning Program, we recognize walking, biking, and driving as quintessential modes of travel to various destinations important to residents and visitors. Access to these destinations is crucial for many everyday activities—getting to work and school, participating in community events, and providing for basic needs such as food, health care, and healthy activity.

In this participatory assessment, we want to find out which factors and conditions affect transportation use in Summer, where these factors and conditions are most prevalent, and how they influence route and transportation choices locally. Because residents have the best knowledge of how Summer transportation system works, we use focused, small-group conversations, mapping, and photos of the best and worst to understand local transportation.

Different Users = Different Needs

To capture insights about transportation from a variety of perspectives, we invited Summer residents with different transportation needs to participate in focus groups. A total of 44 residents attended Summer workshop. Participants were separated into four user groups and the Summer steering committee.



Actives



Mobility Impaired



Older Adults



Youth



Parents



Steering Committee

(18 participants): This user group represents those in the community who engage in outdoor recreation, including cycling, walking, running, swimming, skiing, etc. The availability of multiple venues for outdoor recreation matters to this group.

(0 participants): This user group is directly affected by accessibility barriers such as high curbing and uneven sidewalks that make it difficult to operate mobility-aiding equipment effectively. Handicapped parking, curb ramps, and smooth surfaces are critical transportation features.

(9 participants): Accessibility—both in terms of physical access and proximity—is a major concern for this user group. Because some people in this user group do not or are unable to drive, having goods and services within walking distance is important.

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(4 participants): Safety of their children is a primary concern of this user group. Access to safe and easy routes to school activities is another significant factor to this group. Parents of young children desire smooth, wide surfaces for strollers.

(11 participants): The common denominator for this user group is that their observations are influenced by special knowledge of the transportation system acquired during the Community Visioning assessment process. As a result, this group is more representative of decision makers.

Transportation Assets and Barriers Analysis

Julia Badenhop, Sandra Oberbroeckling, Alyse Kirkman, Casey Cox,

Emily Serchen, Chad Schultz

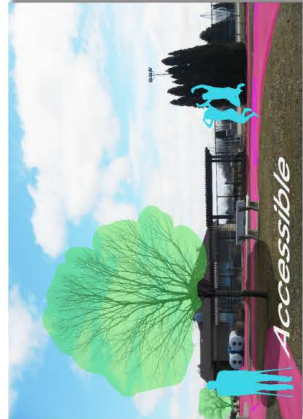
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Shaded trails in area parks make walking enjoyable.



Accessible trails with views to scenery and wildlife were assets.



Summer Aquatic Center accommodates all users, providing accessible parking, walkways, benches, and shade.

Summer

Overview



Crossing this bridge feels unsafe, with fast traffic and narrow walkways.



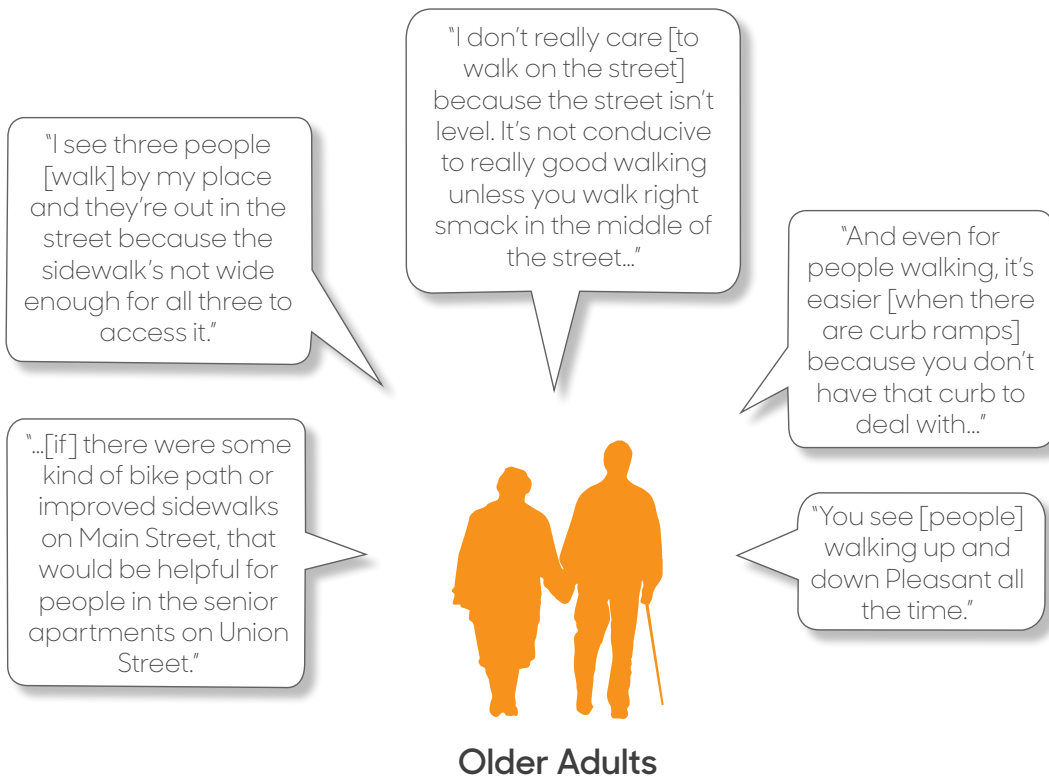
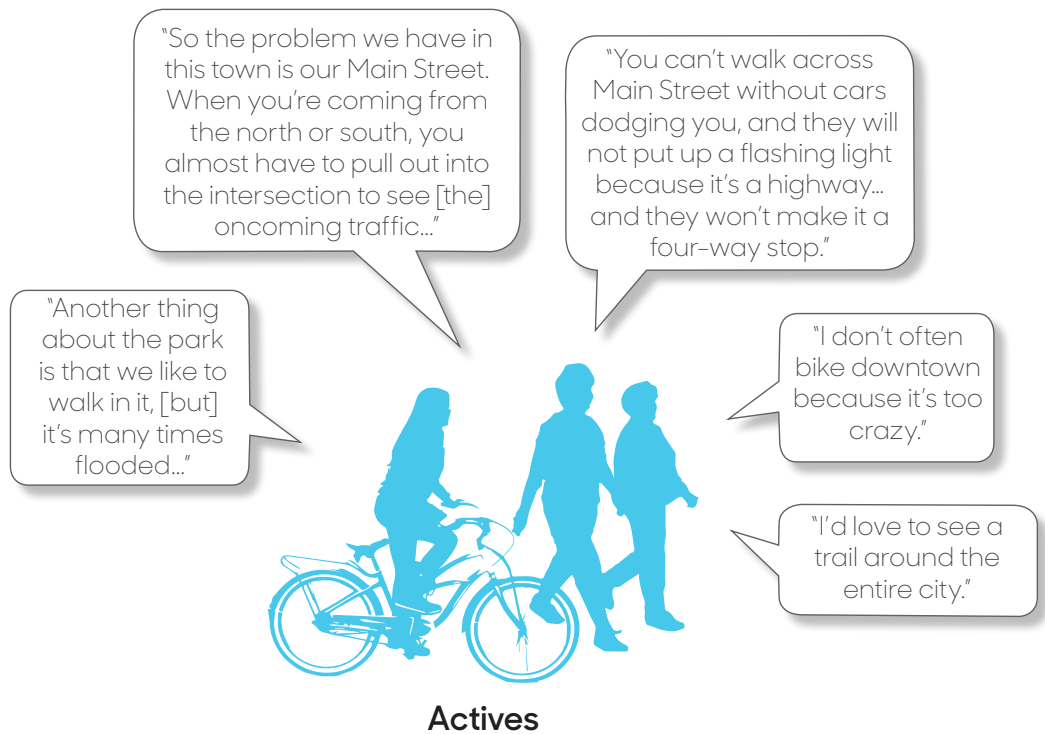
Frequent flooding in low lying areas block movement.



Rough pavement, minimal lighting and lack of sidewalks makes walking across town difficult for some.



What People Said





Parents

"We have a double stroller, so it's pretty wide, because we have three little kids...so it's not always the best on the sidewalks...we go on the street if we go for a walk, and Summer's a small enough town that you can go on the road for a walk."

"...our walking trail is nice, but it needs to be repaired now. There's a big section of it that can't be used because of the flood."

"The city does a pretty good job of keeping [up with] the snow removal on the trails."

"We don't have very many trails."

"It seems like Water Street gets a lot of water on it."

"A lot of people [bike] to Cones and Cups, up and down Main Street, up to Cub Park where the skate park would be. That's...usually where everyone else goes..."

"...before they got wiped out [the bridges] were pretty scary because the wood was almost rotten...it gets kind of scary if you go too fast and you have too much weight on the bridge..."



Youth

"...in the summer we rollerblade and bike, but normally it's just our parents driving us."

"We don't usually ride on Main Street; we just cross over it real quick and ride the back streets..."

"...[my cousin and I] walk [to Cones and Cups] all the time when he comes over in the summer..."

"I think we've got a really good start on some of the trails that are going through and around our park area. I'd certainly like to see more and throughout the rest of town, maybe connecting the high school, connecting to the pool, future development, even the businesses."

"There are parts of town where you'll have 10, 12 blocks of sidewalks, and then you'll have four with absolutely nothing, and then you'll be back on sidewalk..."

"We have two brand-new bikes that we rarely use because we live right on Highway 93, and we have small kids, so it's not real safe for us to come into town on the highway...but if there was a trail, then we would obviously ride them more."



Steering Committee

"...inconsistent sidewalks [are] kind of a big deal, even if you just want to get to the grocery store... you don't want to walk in the street the whole way."

"Our children walk on the streets to get to school... going up...6th and then down Union there [are] no sidewalks...They're wide streets, but they walk in the streets."

Emerging Themes

Active adults walk, bike, and run regularly, either as a component of an activity, to commute, or for recreation/ sports training. Trail expansion and improvements are important to this group.

Older adults drive, walk, and bike to get around town. They appreciate curb ramps for easier access. Safety and lighting are important to older adults as they move through out the community.

Youth walk, bike, run, and roller blade for recreation. They enjoy the aquatic center, the skate park, the trails, and the ball fields. This group is interested in having more outdoor recreation opportunities.

The parents walk, drive, and bike. They are concerned about the safety of their children. They value the trails and parks but are frustrated by the frequent flooding of these amenities.

The steering committee bikes, walks, and drives. Like the youth, committee members want more outdoor recreation venues in Sumner. Better connectivity among important destinations in town is important to this group.

Transportation Inventory

Through meetings, observations and discussions, community concerns and needs were gathered and analyzed. According to the information, the themes and problems focused on are as follows:

Walking Connections

Safe sidewalk connections between Sumner high school and former Elementary are desired. 6th St., Maple St., and 5th St., connects the schools but have no sidewalks or have inconsistent sidewalks. Safe routes between schools and the Public Library are needed.

Safety ¹

Hwy 93 serve as Sumner's Main Street. N/S crossing is hazardous. Street parking filling both sides of the street create dangerous blind spots for pedestrians and drivers. Better visibility and safer crossing conditions are needed.

Safety ²

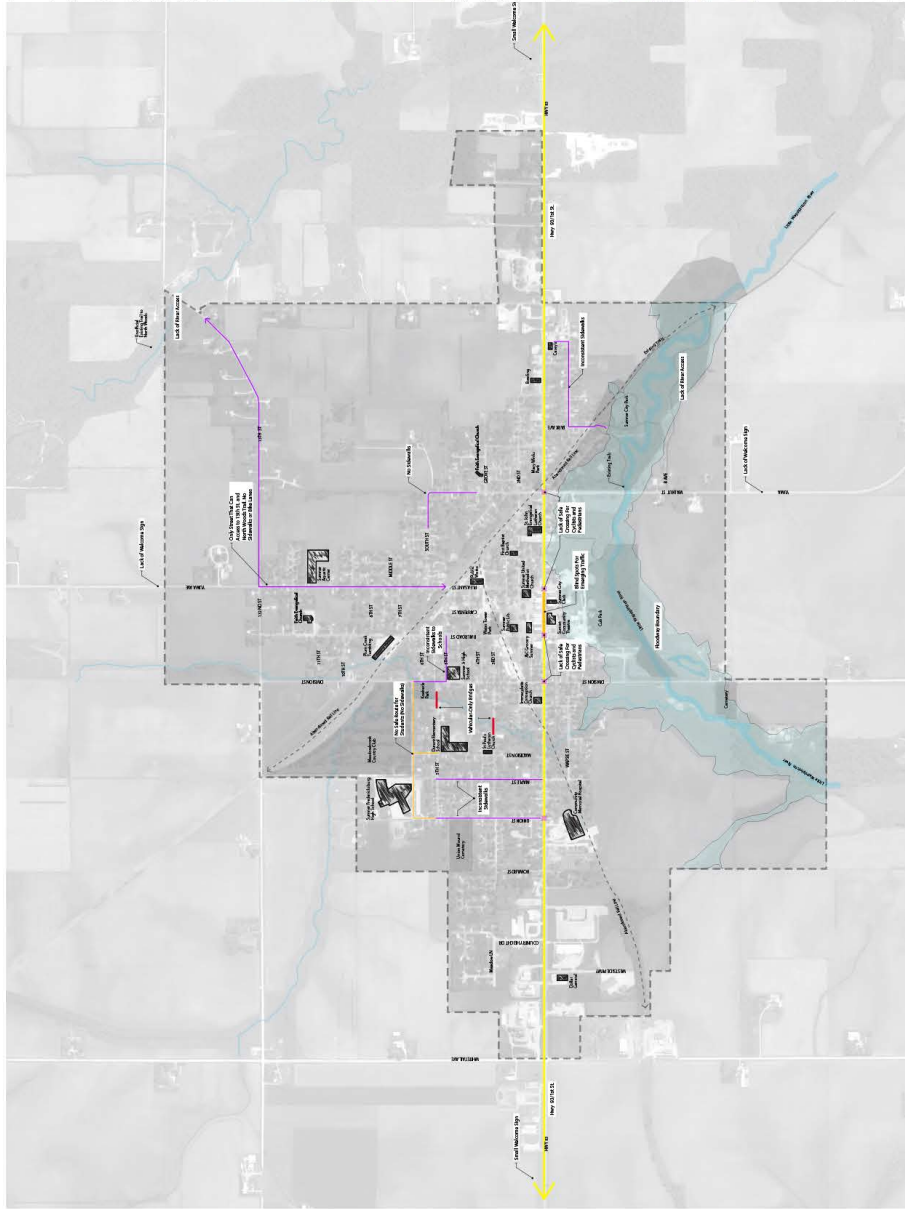
Vehicular bridges on 5th and 3th St. are needing replaced. The wooden bridges only accommodate vehicles but not pedestrians or bicyclists.

Trails

Trails that better connect parks, schools, Main Street, and local destinations are desired. Existing trails are only available in two parks at the south end of the city. Improved trails can provide safer routes, attract visitors, and provide more recreational opportunities.

Recreational Opportunities

A water trail is desired. Two existing parks are located near the Little Wapsi River. Providing access to the river can bring more visitor and provide extra outdoor amenities for citizens.



Transportation Inventory

Through meetings, observations and discussions, community's concerns and needs were gathered and analyzed. According to the information, the themes and problems focused on are as follows:

Walking Connections

Safe sidewalk connections between Summer high school and Elementary are desired. 4th St, Maple St, and 5th St, connects the schools but have no sidewalks or have inconsistent sidewalks. Safe routes between schools and the Public Library are needed. ↓

Safety¹

Hwy 93 serve as Summers, Main Street, N/S crossing is hazardous. Street parking filling both sides of the street create dangerous blind spots for pedestrians and drivers. Better visibility and safer crossing condition are needed. ↓



Safety²

Vehicular bridges on 5th and 3th St, are needing replaced. The wooden bridges only accommodate vehicles but not pedestrians or bicyclists. ↓



Recreational Opportunities

Water trails desired. Two existing parks are located near the Little Wapsi River. Providing access to the river can bring more visitors and provide extra outdoor amenities for citizens. ↓



Trails

Trails that better connect parks, schools, Main Street, and local destinations, are desired. Existing trails are only available in two parks at the south end of the city. Improved trails can provide safer routes, attract visitors, and provide more recreational opportunities. →

Summer

Transportation Inventory

Design Team

Landscape Architect: Steve Ford/Designer: Michael LeClere

Intern: Peiming Chen

Iowa State University | Trees Forever | Iowa Department of Transportation



Design Overview

This accompanying map depicts an overview of all the design strategies together. No community should try to tackle such a plan all at once, nor should it be expected that the full extent of the plan will be implemented in one lifetime. This plan is meant to provide a flexible and adaptable framework for the City of Sumner to use as a guide to prioritize, plan, revise, fund, and implement public improvement projects. No long term planning projects are executed exactly as they were originally drafted, but having a unified framework to work from helps to ensure that every improvement no matter how small or large, contributes cohesively to the greater whole.

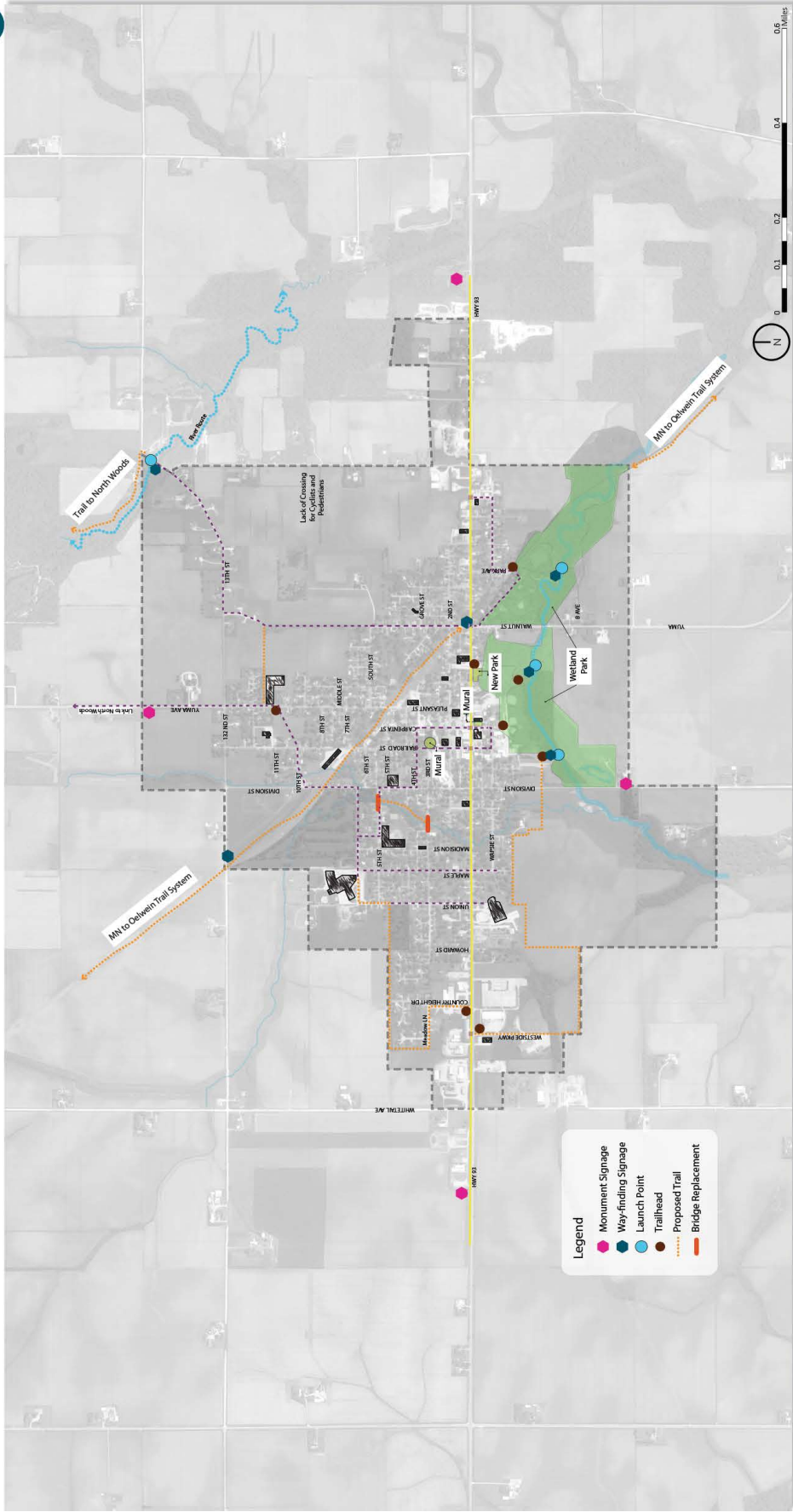
We understand that many who don't regularly work in the planning and design industry, often struggle to see the benefits of long term planning or see proposed improvements as actually feasible in their communities. By working from a cohesive framework, thinking long-term, and starting with smaller simpler projects then working up to larger ones, great things can be achieved by a community of any size. It is important to acknowledge that just because a proposed improvement may look like it affects a particular property, that improvement may not be implemented within this generation and that no proposal can infringe on individual property owner's rights. Any proposed improvements are intended only to explore future opportunities for the community taking into consideration that property changes hands every generation and that most modern construction has an average lifespan of only 70-100 yrs.

How to Use the Boards

To make such a large undertaking and investment more manageable and realistic for a community of this size, design interventions have been broken down into concepts and each assigned a conceptual time range for implementation. Conceptual time lines purposefully overlap as some projects maybe undertaken concurrently or re-prioritized in the future as needed. Each phase is composed of two boards: Board 1 is composed with local photos and illustrations of typical conditions at the top illustrating what that concept focuses on and below that is a keyed map of the design interventions and their locations. The map is keyed to conceptual renderings and plans on Board 2, at the top of which features successful examples and precedents of similar design strategies implemented elsewhere. The design concepts are broken down as follows:

Concept I- **Hwy 93 DOT Improvements, School/Safe Routes, Trailheads, and Pocket Park**, Immediate Goals

Concept II- **Downtown-Lib. Loop, River Routes, Trail, and Bridge Replacements**, Short-term Goals



Summer

Overall Concept Plan

Steve Ford Landscape Architecture
Martin Gardner Architecture
 Landscape Architect: Steve Ford; Designer: Michael LeClere
 Intern: Peimjing Chen
 Iowa State University | Trees Forever | Iowa Department of Transportation



Design Overview

Concept III- **Trail Loop Connect to North Woods Trail, and Union/Maple St. Sidewalks**, Mid-range Goals

Concept IV - **InterTown Rails to Trails Connection**, Long-term Goals

Please note: Each concept, priority, and time line are intended to be flexible and revised as determined by the community. No concept, priority, or time line are static. Concepts and time lines are intended only to help demonstrate how large-scale improvements can be achieved by implementing small projects strategically over time. Design interventions are meant to be flexible and adaptable to accommodate unique opportunities or unforeseen events and conditions. Design interventions should be considered design-opportunities rather than finalized prescriptive designs. Nothing herein has been taken through design development or construction documents for bidding or construction, and each intervention within each concept is meant to be undertaken individually or even further broken down into sub-phases as required to realistically complete the project. Each concept is further described in detail below:

Concept I- **Hwy 93 DOT Improvements, School/Safe Routes, Trailheads, and Pocket Park**

The focus of this concept is to improve the safety of 1st St/Hwy 93. In 2020 IDOT will be making street improvements from Howard St. to Fayette County line. This concept focuses on coordinating with those planned improvements. This phase adds bumpouts on the major intersections off 1st Street to improve vehicular safety, pedestrian safety, and add amenities like shade trees, plants, and benches for a more welcoming downtown experience.

Improvements will be made to the existing monumental signs at the west and east the city limits. Monumental signage will also be added at the north and south entrances off N. Pleasant Street and S. Walnut Street. A new trailhead sign by City Hall will better connect the downtown core to City and Cub Parks. Other wayfinding signage will be added and improved at other trailheads for better destination guidance. Sidewalks will be added from W. Sixth Street to W. Fourth Street to ensure student safety between the High School and Elementary. Pedestrian safety and accessibility will also be addressed by sidewalk improvements between A Ave to Park Ave.

Concept II- **Downtown-Lib. Loop, River Routes, Trail, and Bridge Replacements**

This concept will continue to improve street safety and accessibility on significant connector streets such as, N Division St., N Walnut Street, and a pedestrian loop will connect downtown through Carpenter Street and Railroad Street. Two vehicular bridges will be replaced on Third and Fifth Street to include sidewalks. Trailheads and way-finding signage will be established designating launch points along the Little Wapsi River near S Walnut Street to create more recreation opportunities utilizing the river.

This concept also proposes a new trail through undeveloped property that is owned by the Faith Evangelical Church. This will tie in and extend the connectivity established in Concept 1, so that people will have a safer and shorter route to access Sumner Aquatic Center and softball fields that are planned to be relocated from Cub Park and City Park.

Concept III- **Trail Loop Connect to North Woods Trail, and Union/Maple St. Sidewalks**

This concept will focus on street and sidewalk improvements along N Pleasant Street, Maple Street, Union Street, and extend N Walnut Street to E. 13th Street. Sidewalks and bike lanes on the Northeast 13 Street will provide a safer environment for people to access the North Woods trail. This creates several continuous north-south sidewalk routes for residents and visitors.

This concept also proposes two new trails. One trail connects Union Mound Cemetery to County Heights Drive, and the other connects Cub Park to W. First Street. A more minor connection will also be improved between Third Street and Koeberle Park. Together these will provide more recreation and commuter options throughout town.

Concept IV **InterTown Rails to Trails Connection**

This concept focuses on reprogramming Cub and City Park once the baseball fields have been relocated due to recurrent flooding. As the parks are within the floodplain and are often inundated, a wetland ecological park program is proposed to replace the existing ball fields. This can feature wetland trails, educational and interpretive signage, and recreational opportunities that can withstand flooding events.

This concept also looks long term and proposes repurposing the abandoned railroad line crossing north-west to south-east through the center of the community. Establishing the trail within the city boundaries will help to better connect existing and proposed trail networks. Ultimately, this aims to establish future inter-town trail connections that bring recreational tourism into Sumner. This will be a long term mission requiring collaboration with several other communities and different governmental organizations, but Sumner can

Design Overview

help to initiate such a large project by undertaking the portion that lies within the city limits. There will be numerous benefits brought to Sumner by this trail system. It will enable local businesses and recreational and ecological opportunities and will serve a greater number of people throughout the region.

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Existing Conditions:



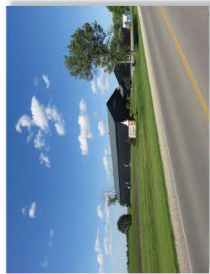
W Sixth Street: No Sidewalks



W First Street



Carpenter Street to South



Monumental Signage on West End

Summer

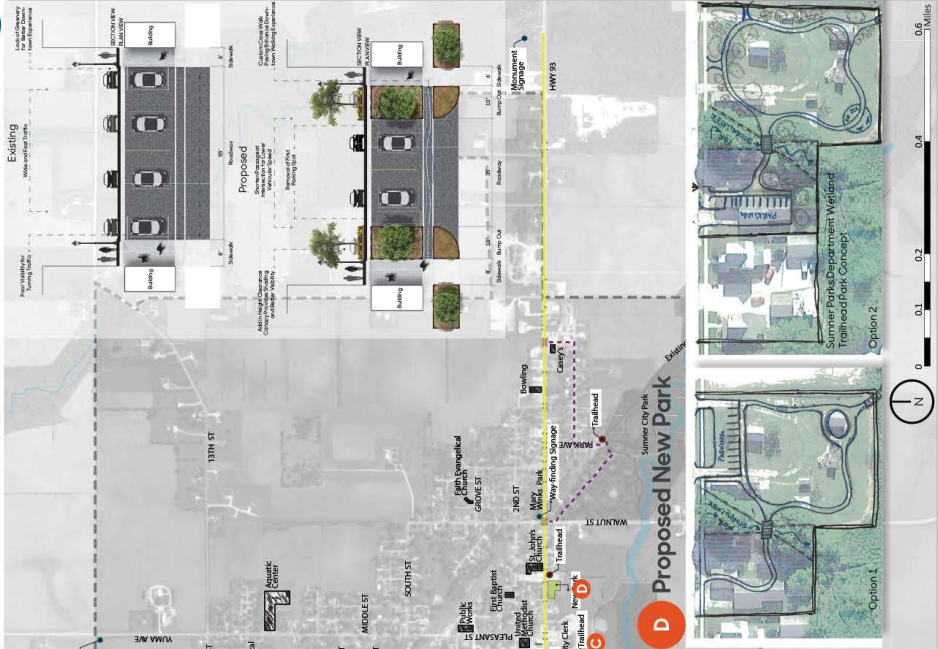
Concept 1

"We don't usually ride on Main Street, we just cross over it real quick and ride the back street..."

The focus of this concept is to improve the safety of 1st Street/Hwy 93. In 2020, Iowa DOT will be making street improvements from Howard St. to the Fayette County line. This concept focuses on coordinating with those planned improvements. This phase adds bump-outs on the major intersections off 1st Street to improve vehicular and pedestrian safety, and to add amenities such as shade trees, plants, and benches for a more immersive downtown experience.

Improvements will be made to the existing monumental signs at the west and east city limits. Monumental signage will also be added at the north and south entrances off N. Pleasant Street and S. Walnut Street. A new trailhead sign by City Hall Parks. Other way-finding signage will be added and improved at other trailheads for better destination guidance. Sidewalks will be added from W. Sixth Street to W. Fourth Street to ensure student safety between the high school and elementary. Pedestrian safety and accessibility will also be addressed by sidewalk improvements between A Ave to Park Ave.

A First St. Improvement 1110



SUMMER 2019 5a

B Monument Sign Improvement



Steve Ford Landscape Architecture
Martin Gardner Architecture

Landscape Architect: Steve Ford; Designer: Michael LeClere
 Intern: Peiming Chen
 Iowa State University | Trees Forever | Iowa Department of Transportation

Immediate Goals:
 Hwy 93 DOT Improvements, School/Safe Routes, Trailheads and Pocket Park



D Proposed New Park



Precedents: Where it has worked before



ADA Sidewalk at Beacon Hill, Seattle



Street Bump-out at Washington, DC



Complete Street in West Jefferson, NC

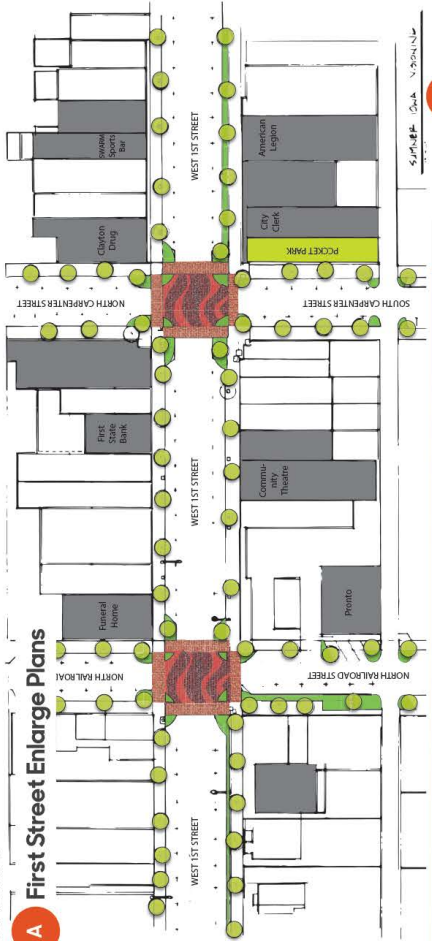


Monumental Sign

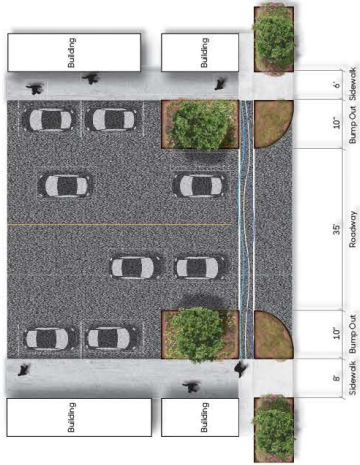
Summer

Concept 1

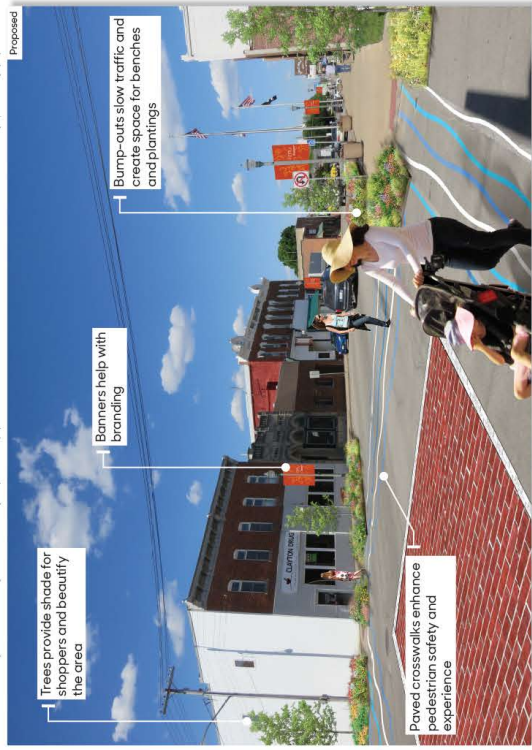
A First Street Enlarge Plans



SUMMER 2019 5b



C Proposed Trailhead at Cub Park



Steve Ford Landscape Architecture
Martin Gardner Architecture
 Landscape Architect: Steve Ford; Designer: Michael LeClerc
 Intern: Peirning Chen
 Iowa State University | Trees Forever | Iowa Department of Transportation

Immediate Goals:
 Hwy 93 DOT Improvements, School/Safe Routes, Trailheads, and Pocket Park



Existing Conditions:



W Sixth Street: No Sidewalks



Vehicular Bridge on Fifth St



Church Land Near Pleasant Street



N Walnut St. to Second St: No Sidewalks

Summer

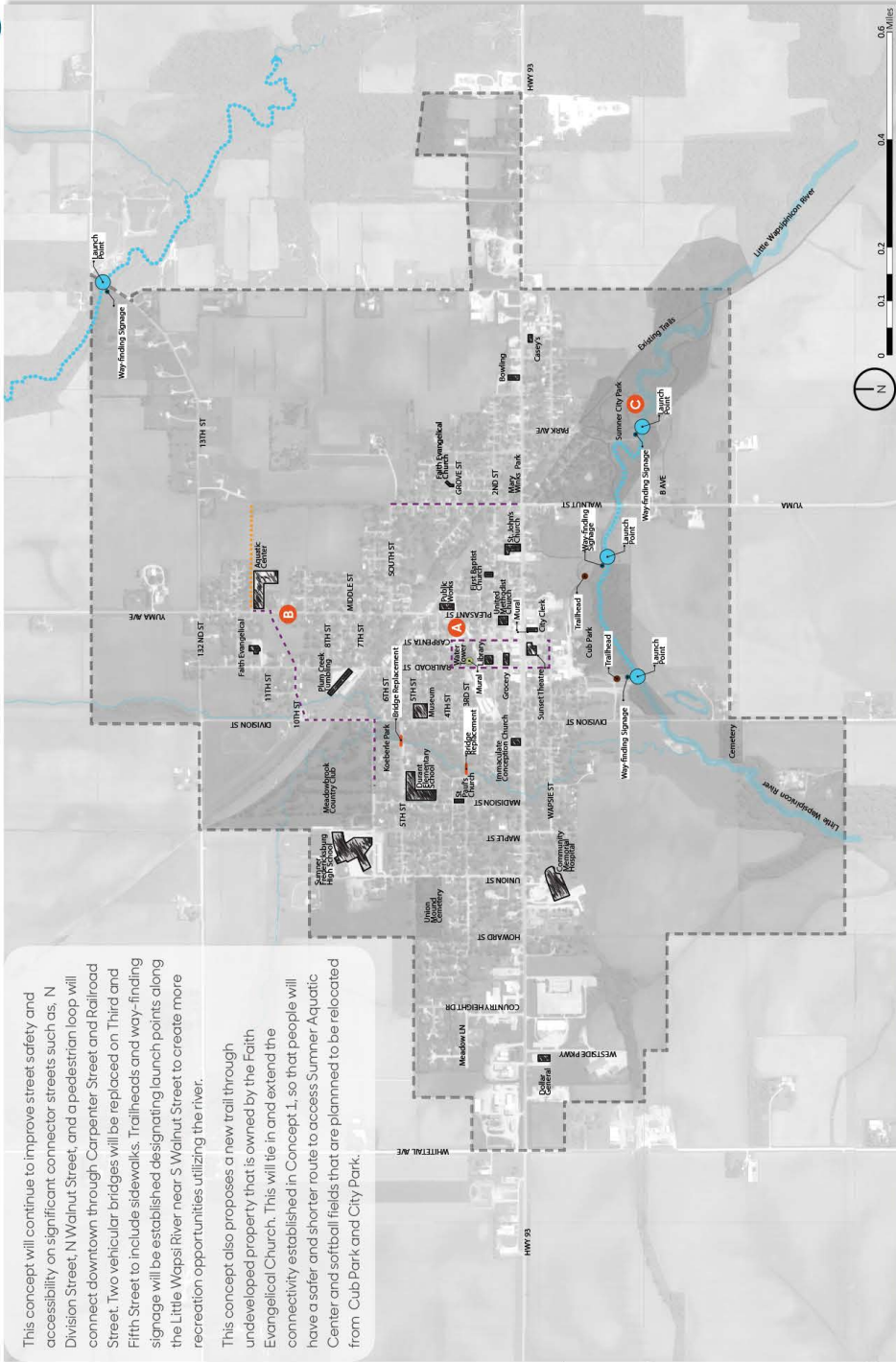
Concept 2

Short-term Goals:
Downtown-Library Loop, River Routes, Trail, and Bridge Replacements

"I'd like to see more and throughout the rest of the town, maybe connecting the high school, connecting to the pool, future development, even the businesses."

This concept will continue to improve street safety and accessibility on significant connector streets such as, N Division Street, N Walnut Street, and a pedestrian loop will connect downtown through Carpenter Street and Railroad Street. Two vehicular bridges will be replaced on Third and Fifth Street to include sidewalks. Trailheads and way-finding signage will be established designating launch points along the Little Wapsi River near S Walnut Street to create more recreation opportunities utilizing the river.

This concept also proposes a new trail through undeveloped property that is owned by the Faith Evangelical Church. This will tie in and extend the connectivity established in Concept 1, so that people will have a safer and shorter route to access Summer Aquatic Center and softball fields that are planned to be relocated from Cub Park and City Park.



Steve Ford Landscape Architecture
Martin Gardner Architecture
Landscape Architect: Steve Ford; Designer: Michael LeClere
Intern: Peiming Chen
Iowa State University | Trees Forever | Iowa Department of Transportation

Precedents: Where it has worked before



Water Tower Mural at Woorim



A Hiking Trail With Wood Post in Colorado



Launch Dock



A Water Tower Mural By The Library

Pre-manufactured Vehicular Bridge Replacement Options



Summer

Concept 2

Short-term Goals:
Downtown-Library Loop, River Routes, Trail, and
Bridge Replacements

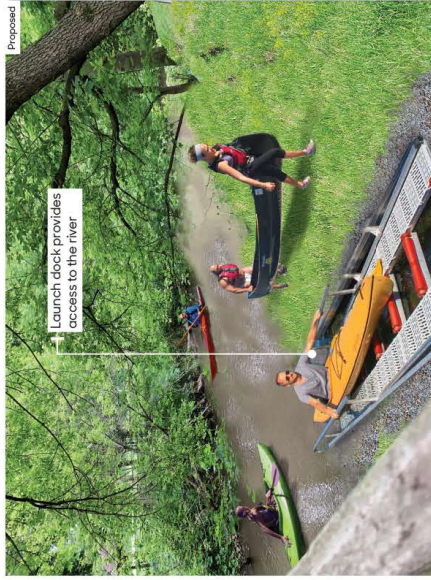
Steve Ford Landscape Architecture
Martin Gardner Architecture
Landscape Architect: Steve Ford; Designer: Michael LeClere
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Iowa State University | Trees Forever | Iowa Department of Transportation

B Proposed Trailhead Near Aquatic Center

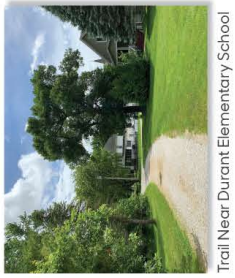
SUMMER 2019 6b



C Proposed Launch Point at City Park



Existing Conditions:



Trail Near Durant Elementary School



Maple Street: No Sidewalks



Road End of S Maple Street



Road End of N Walnut Street

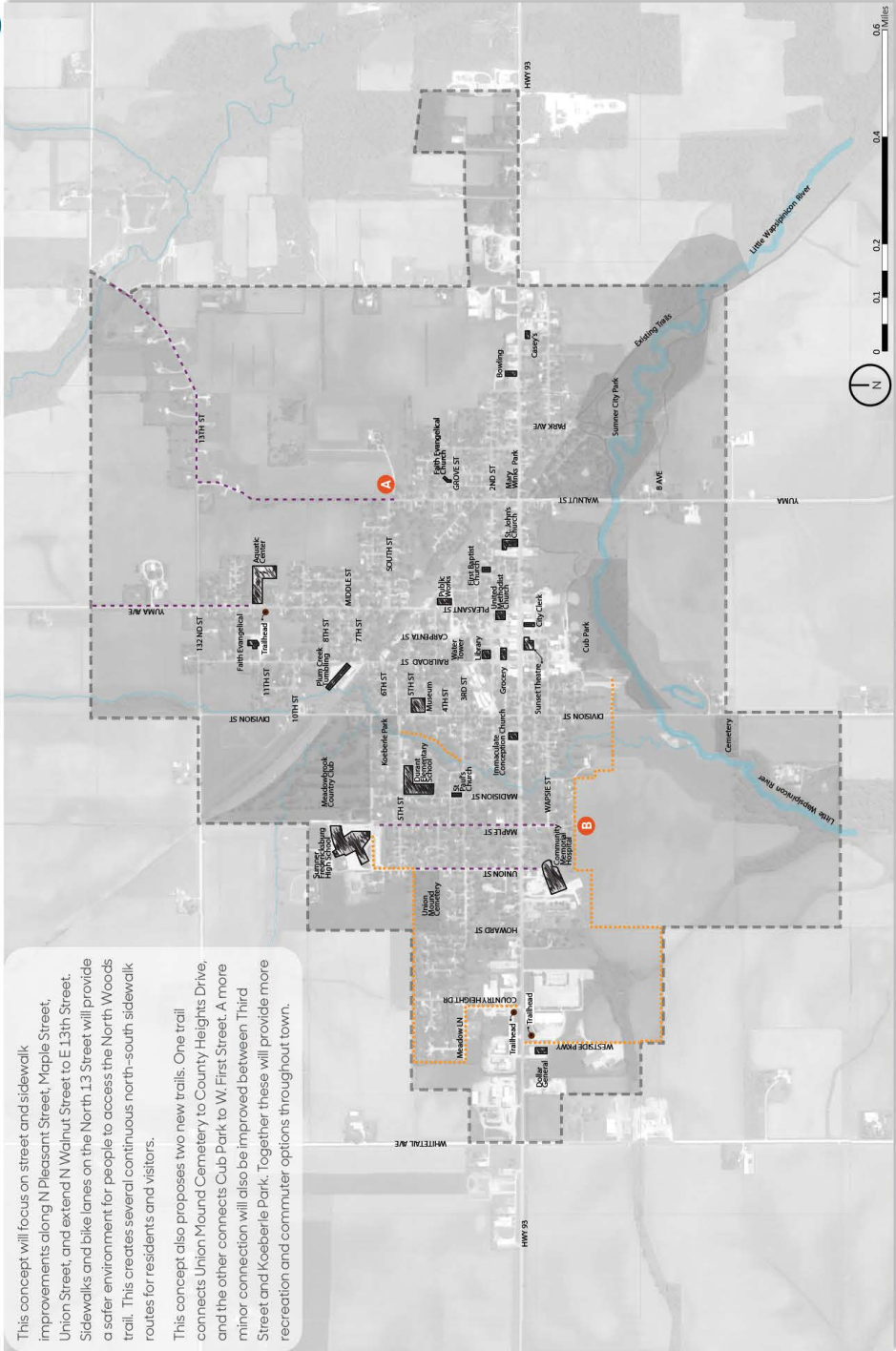
Summer

Concept 3

"There are parts of town where you will have 10, 12 blocks of sidewalks, and then you will have 4 with absolutely nothing, and then you will be back on sidewalk..."

This concept will focus on street and sidewalk improvements along N Pleasant Street, Maple Street, Union Street, and extend N Walnut Street to E 13th Street. Sidewalks and bike lanes on the North 1,3 Street will provide a safer environment for people to access the North Woods trail. This creates several continuous north-south sidewalk routes for residents and visitors.

This concept also proposes two new trails. One trail connects Union Mound Cemetery to County Heights Drive, and the other connects Cub Park to W. First Street. A more minor connection will also be improved between Third Street and Koebeler Park. Together these will provide more recreation and commuter options throughout town.



Steve Ford Landscape Architecture
Martin Gardner Architecture
 Landscape Architect: Steve Ford; Designer: Michael LeClere
 Intern: Peirning Chen
 Iowa State University | Trees Forever | Iowa Department of Transportation

Mid-range Goals:
 Trail Loop Connect to North Woods Trail, and Union/Maple St. Sidewalks

Precedents: Where it has worked before



A New Paved Bike Lane With Sidewalk



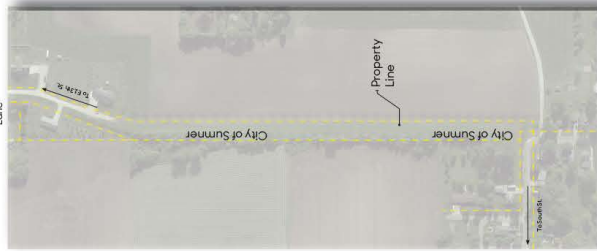
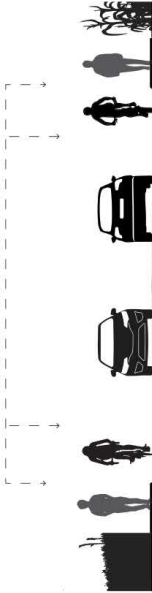
Luscher Farm Trail



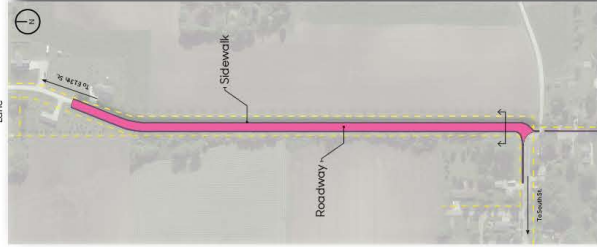
Directional Sign

A Proposed Walnut St. N Extension 1.15

Provided Standard Two-Way Traffic between E 13 St. and Walnut St. Incorporated Bike Lane Ensure Cyclists safety and provide access to the North Woods Trail

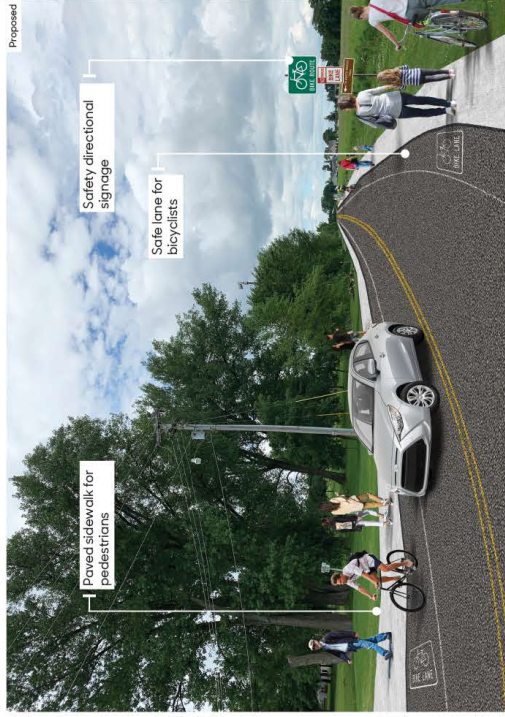


Existing 1150



Proposed 1150

SUMMER 2019 7b



Paved sidewalk for pedestrians

Safe lane for bicyclists

Safety directional signage

B Proposed Trail at South Maple Street



Gravel path trail

Directional signage

Existing

Dead-end road

Summer

Concept 3

Steve Ford Landscape Architecture
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 Intern: Peirming Chen
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Existing Conditions:



Former Rail Track NW of 132nd St.



Former Rail Track near Golf Course



Former Rail Track near Division St.



Former Rail Track S of 132nd St.

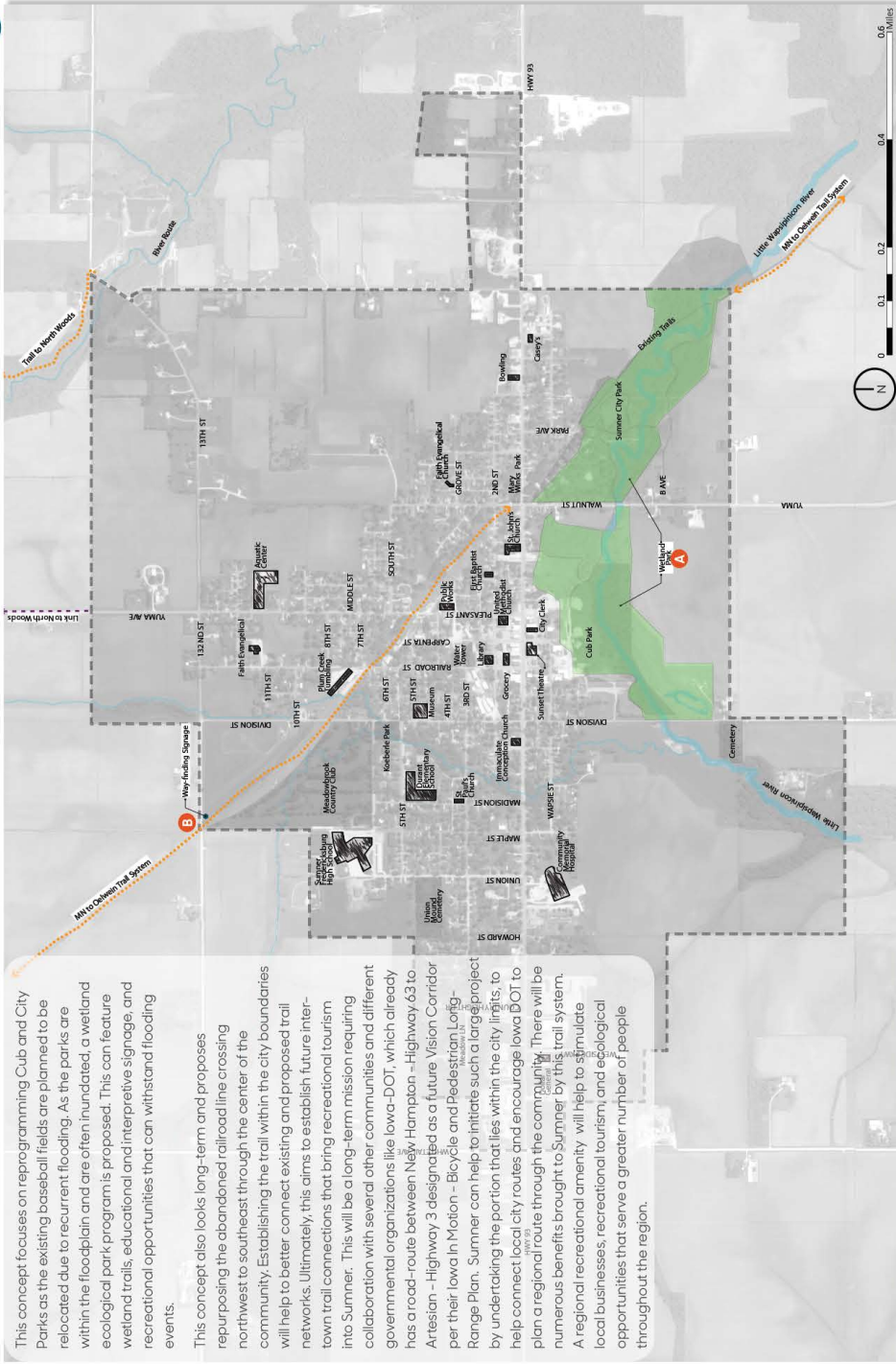
Summer

Concept 4

"I would love to see a trail around the city."

This concept focuses on reprogramming Cub and City Parks as the existing baseball fields are planned to be relocated due to recurrent flooding. As the parks are within the floodplain and are often inundated, a wetland ecological park program is proposed. This can feature wetland trails, educational and interpretive signage, and recreational opportunities that can withstand flooding events.

This concept also looks long-term and proposes repositioning the abandoned railroad line crossing northwest to southeast through the center of the community. Establishing the trail within the city boundaries will help to better connect existing and proposed trail networks. Ultimately, this aims to establish future inter-town trail connections that bring recreational tourism into Summer. This will be a long-term mission requiring collaboration with several other communities and different governmental organizations like Iowa-DOT, which already has a road-route between New Hampton - Highway 63 to Artesian - Highway 3 designated as a future Vision Corridor per their Iowa In Motion - Bicycle and Pedestrian Long-Range Plan. Summer can help to initiate such a large project by undertaking the portion that lies within the city limits, to help connect local city routes and encourage Iowa DOT to plan a regional route through the community. There will be numerous benefits brought to Summer by this trail system. A regional recreational amenity will help to stimulate local businesses, recreational tourism, and ecological opportunities that serve a greater number of people throughout the region.



SUMMER 2019 8a



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Martin Gardner Architecture
 Landscape Architect: Steve Ford; Designer: Michael LeClere
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 Iowa State University | Trees Forever | Iowa Department of Transportation

Long-term Goals:
 InterTown Rails-to-Trails Connection

A Wetland Park Options



Beddaganca Wetland Park



Weiliu Wetland Park, China



Jackson Park, Chicago



Weiliu Wetland Park, China

Summer

Concept 4

B Proposed Intertown Trail to North



SUMMER 2019 **8b**

Steve Ford Landscape Architecture
Martin Gardner Architecture
 Landscape Architect: Steve Ford; Designer: Michael LeClere
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 Iowa State University | Trees Forever | Iowa Department of Transportation

Long-term Goals:
 Intertown Rails to Trails Connection

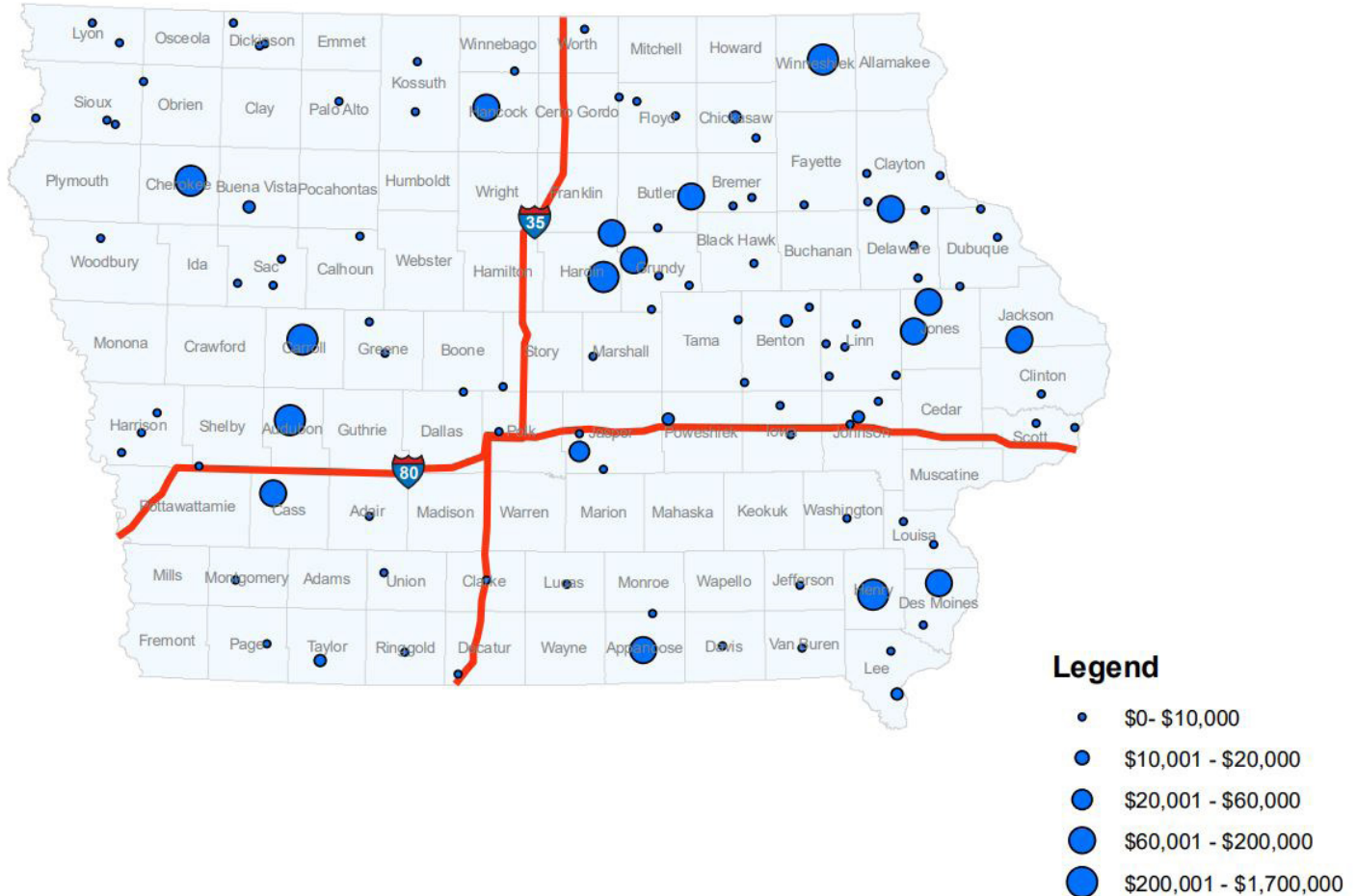


Cost Estimates

Introduction

The following part of this document provides rough cost estimates for portions of the earlier concepts outlined in the report. Often when it comes to tackling large scale projects it is easy for communities to become discouraged and believe that due to their size the associated costs of a project eliminates it as a realistic initiative that can be accomplished. It is true that small and rural communities have limited fundraising and bonding capacity to undertake these projects, but that does not dictate that a small community cannot undertake a large costly project. That is where grant funding comes into play. Users of this document should also reference the Trees Forever Community Project Funding Guide, which is a guide that is updated and maintained annually to assist Iowa communities seeking funding sources for community improvement projects. This document can be found and downloaded at the following link: http://www.treesforever.org/Community_Project_Funding_Guide. This is an excellent resource that lists different grants that are available, provides a short summary regarding what type of projects are eligible, what types of organizations can apply for the grants, and where to find additional information regarding the grants or application process.

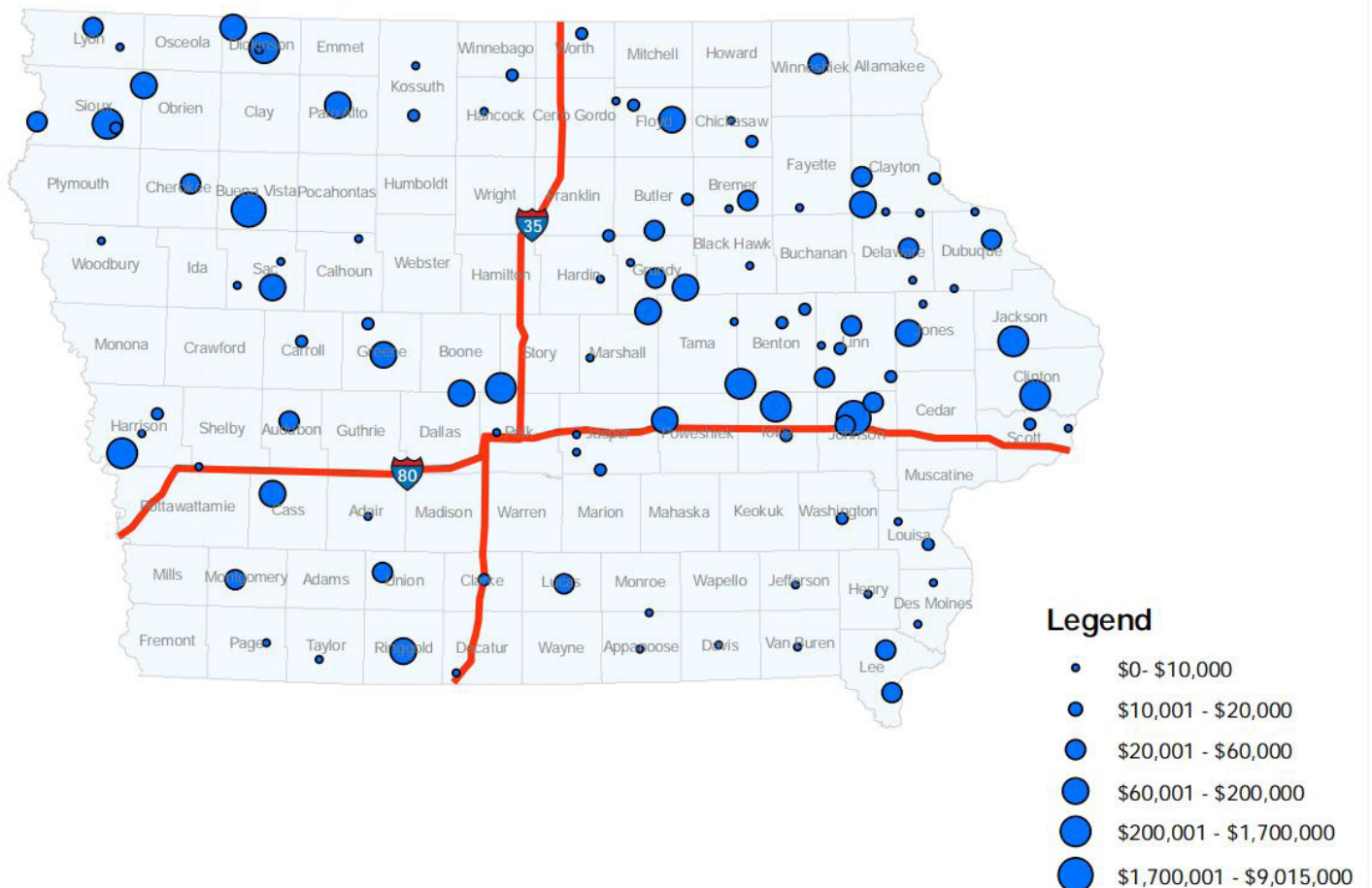
Figure 3. Geographic distribution of funding for non-voicing projects, 1995–2009.



No small or rural community should feel that they are ineligible for any of these grants due to their size or that they don't stand a chance of winning when competing with larger cities or towns. Some grants like the Community Catalyst Grant even specifically target small and rural communities. As for the grants that are not specific to small or rural communities, that is where your involvement in the Community Visioning Program proves advantageous. We have a proven track record of helping smaller communities obtain funding from some of these grants for large impactful community improvement projects even when competing with larger communities.

The two images below map out the geographic distribution and relative grant amounts for communities that have not participated in the Community Visioning Program (on the left) compared with communities that have participated in the Community Visioning Program, on the right. The maps show that more communities that have participated in the Community Visioning Program have received more grant funding between 1995–2009, than those who have not participated. Not only have more been successful at receiving grant funding, but a higher funding

Figure 2. Geographic distribution of funding for visioning projects, 1995–2009.



Cost Estimates

threshold has been received by communities that have participated. More information regarding how communities benefit from participating in the program and examples of successfully built community projects can be found on the community visioning website under the "Resources" tab and "Evaluation Reports" which can be found at the following link: <http://www.communityvisioning.org/resources/>.

It is important to note that all the materials that come out of Community Visioning are intended to help communities plan projects, cultivate local support and consensus, apply for grants, and obtain funding. These materials are intended to, and should, accompany future grant applications. When thinking of your competition, or envisioning yourself as a grant reviewer, more than likely the other projects applying for the grant will have an equally qualified need for their project. However, by including Community Visioning material with your grant application your community is demonstrating ongoing and prior efforts, community buy-in for your project, and planning efforts that tie your project into other long range planning and community improvement goals. In this way, you are able to use this material to stand out from other grant applicants and are more likely to receive funding. That is why it is important to share and distribute this information and resources throughout your community to be utilized by any local group that can make good use of them when applying for grants. It is also important for local organizations and non-profits to work in tandem with your local government. Many grants require funding to be received and distributed through the local government. Of course, many rural governments employ only one or two full time employees and often do not have the capacity to undertake such initiatives alone. That is why local partnerships are crucial to making some of these initiatives a reality. In some cases, a local non-profit organization can help write the grant narrative and take care of the application process on behalf of the local government, and the local government can help to receive and distribute funds for projects. That way not party is overburdened, and explaining and highlighting this partnership in your grant application will reflect positively on your efforts.

Cost Breakdown

It should be noted that each concept depicts multiple initiatives meant to be broken down into separate projects. In planning projects such as this it is not practical to estimate costs for projects that may be 80-100+ years out into the future as the variability in material costs, construction costs, and inflation change year to year and even season to season. We have focused our efforts on estimating costs for several of the design interventions depicted in the early concepts. As there is inherent overlap in portions of each concept, there will be overlap implied in the cost estimates. Where appropriate, these have been broken up to reflect the concepts and individual projects within as best as possible. These costs have not been derived from finished construction documents and specific materials, products,

and manufacturers are unknown. We have tried to be as concise as is appropriate for schematic level design, and have provided allowances where there are multiple options or approaches. In most cases we have tried to err on the high side so that communities can plan for excess funds rather than be surprised with additional costs. Sidewalk costs do not include storm intake as some locations already have a storm sewer while some do not. Whether or not to include storm sewers and where should be determined at the next level of design and in collaboration with a Civil Engineer. Where best we could, we have tried to organize concepts starting with smaller projects that are easier to undertake and demonstrate a success in order to gain momentum for future more complex or costly projects. There may be exception to this approach where local opinion has expressed higher priority for certain projects.

Costs for each Concept section will be summarized below and all costs will be compiled and delineated in more detail in final spreadsheet at the end of this section.

Concept 1- Hwy 93 DOT Improvements, School/Safe Routes, Trailheads, and Pocket Park

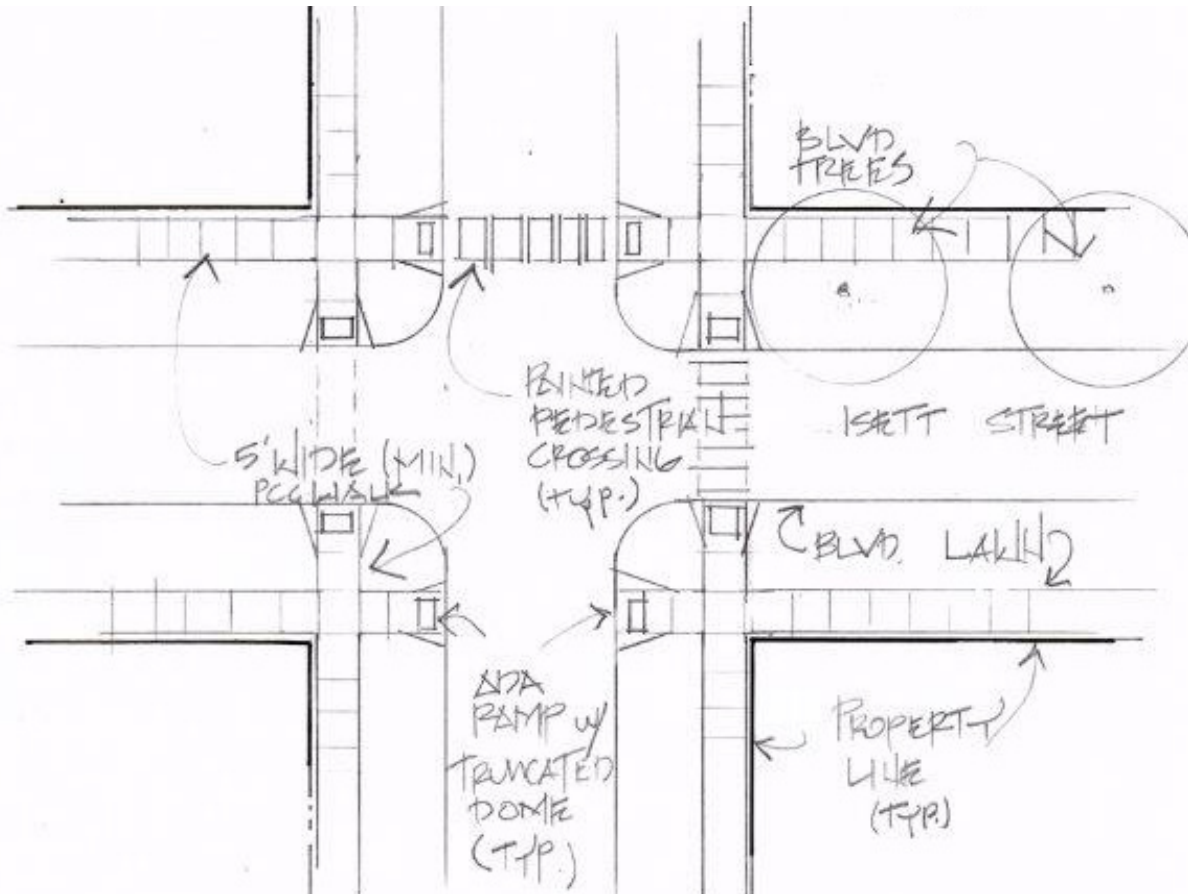
Concept 1 starts with a major Main Street priority that is pretty extensive in scale for an initial project. However, Main Street improvements were moved up in priority due to the IA-DOT planned improvements along Highway 93 anticipated for 2020. Ideally, the improvements described in this report would happen concurrently with the DOT improvements, but they can also be implemented as a separate project afterward.

In order to price Concept 1, we have established costs for a typical Main Street crossing as shown on the following page. For Main Street, the following costs have been determined by the typical four-way street crossing shown below. Itemized amenities like benches, bike racks, and street trees have been included in the final spreadsheets that follows. Line items taken into consideration are as follows:

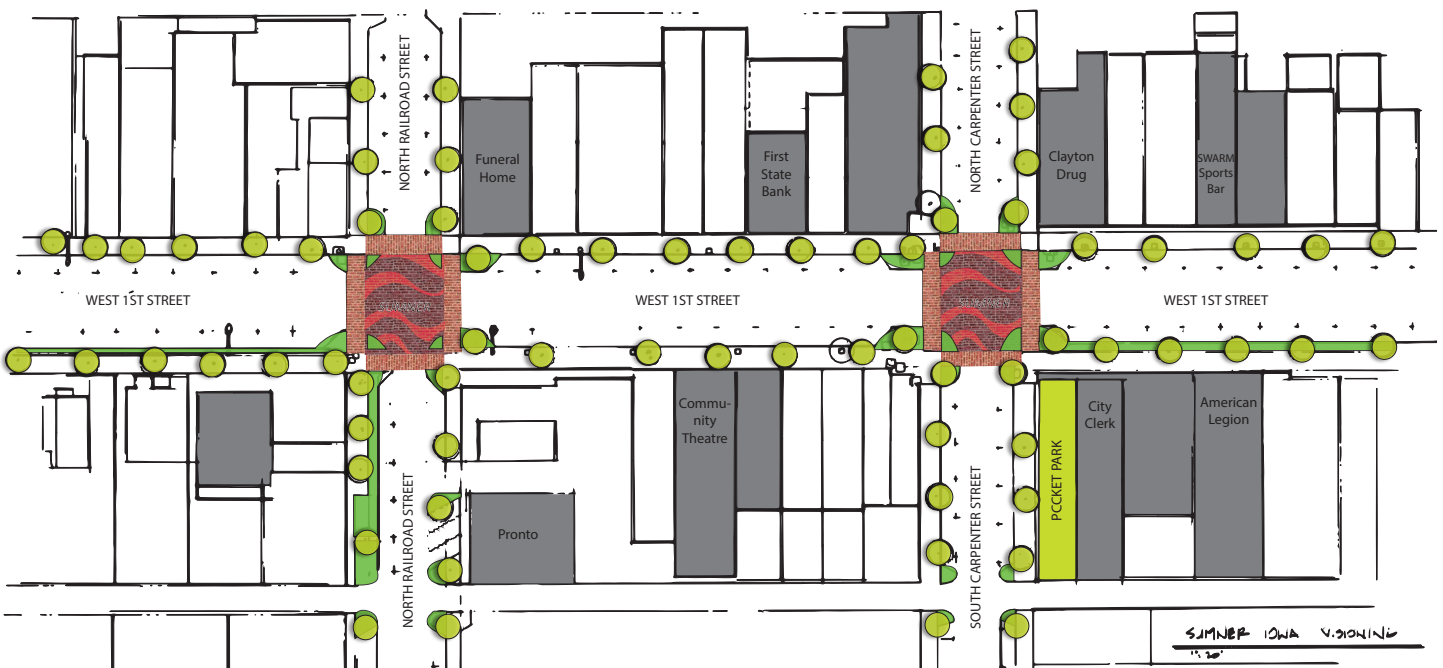
- Remove Existing Sidewalk
- Install new 6ft. walk
- ADA Truncated Dome/Curb Cuts
- Earthwork & Restore
- Paint Crosswalk
- Allowance for Artistic Specialists

Total:	\$7,500- \$10,000/Corner
Costs for Railroad & Carpenter Street Crossing	\$80,000
Costs for Walnut Street Crossing	\$40,000
Costs for Westside Parkway Crossing	\$40,000
Cost for Jackson Street Crossing	\$40,000

Cost Estimates

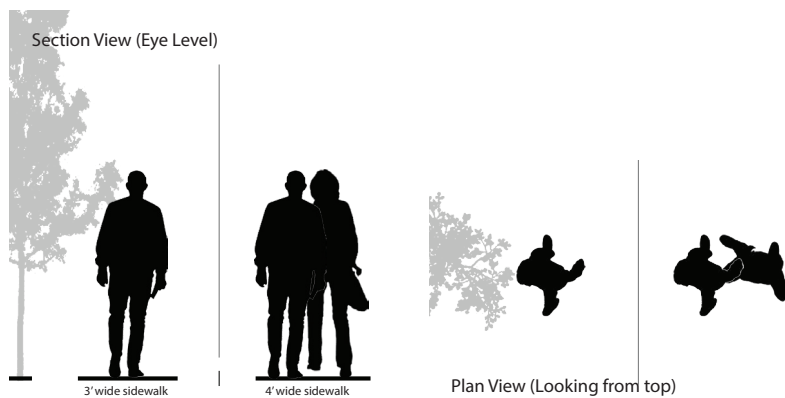


Typical Proposed Street Crossing



Sumner Main Street/Highway 93 Downtown Improvement Plan

Regarding sidewalk improvements between the high school and Water Tower Park, it is most appropriate to establish a square-footage costs for the length and width of proposed sidewalks and trails in order to make the design intervention scalable. This allows sidewalk enhancements to be implemented incrementally and priced linearly within a realistic budget for the community. As illustrated below, three to four foot sidewalks are typical, but do not allow enough space for two people to walk side by side, or to adequately accommodate a cyclist or wheelchair while allowing passage. For this reason in all sidewalk and trail proposals we have gone with a six-foot sidewalk width as illustrated on the following page.

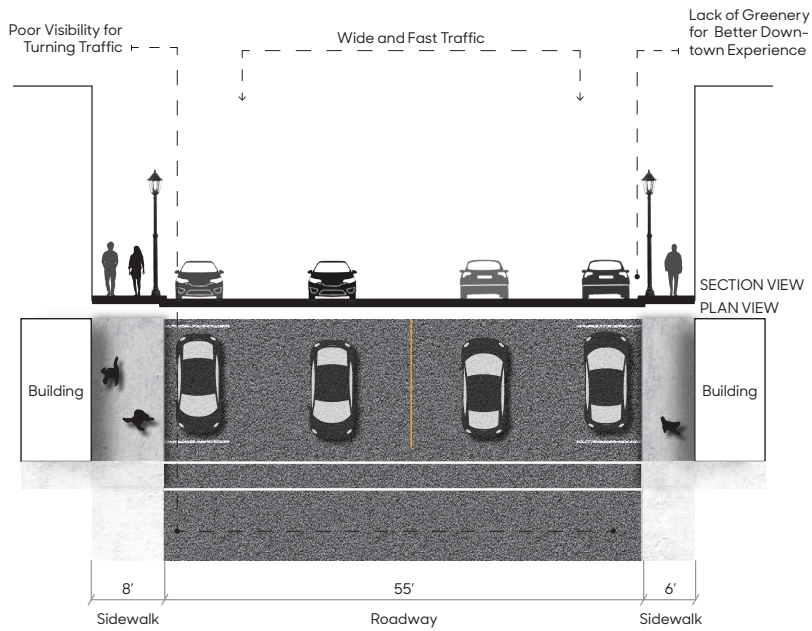


Both of these goals are larger scale, complex projects for first projects. It may be advantageous to focus on the smaller scale and develop the downtown pocket parks or signage improvements as described in Concept 1. These can be designed and installed while the IA-DOT Highway 93 improvements are constructed. The advantage of this approach is that it is a smaller easier project to undertake in order to demonstrate an early success to the community that helps to garner broader support and enthusiasm for larger more complex initiatives.

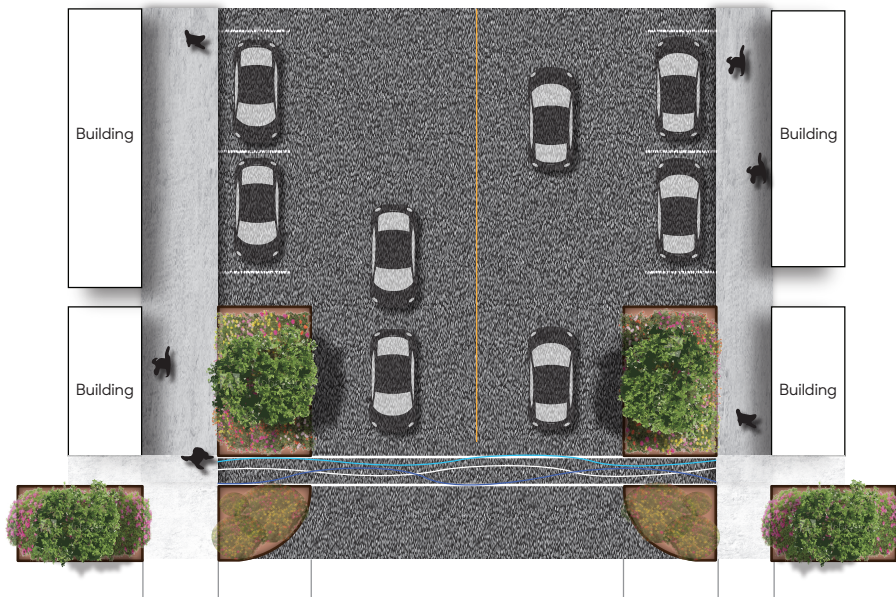
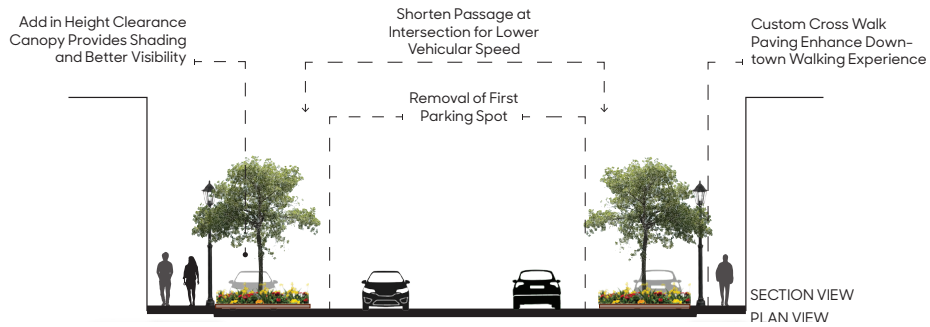
Neither pocket parks have been fully designed. The focus of Community Visioning is on transportation and habitat enhancements. Any visual representations of such spaces are intended only to illustrate the potential of these spaces. These should be developed and detailed further with a design professional. Typical amenity costs have been provided as a starting point.

Wayfinding Signage	\$2,000 Each
Pocket Parks	\$9,000 - \$20,000 Each
Monument Signage	\$15,000 - \$20,000 Ea.
	Approx. \$60,000 Total
High School to Water Tower Park Sidewalks	\$115,000 - \$125,000
Main St - City Park - Casey's Sidewalks	\$100,000 - \$120,000

Cost Estimates



Existing Main Street Section & Plan



Proposed Main Street Section & Plan

Concept 2- Downtown-Library Loop, River Routes, Trail, and Bridge Replacements

Concept 2 focuses on developing more safe connections between key destinations in town. It includes sidewalk improvements from Water Tower Park to the Cub Park Trailhead as well as from the high school to the Aquatic Center and the existing northern length of Walnut Street. These have been calculated in the same manner as previous sidewalk improvements, using a 6 foot sidewalk.

In addition, Concept 2 established a series of launch points along the river to create river routes and corresponding wayfinding signage mapping the routes and highlighting key destinations in town.

A larger scale component to Concept 3 is the replacement of the 3rd and 5th Street bridges that currently leave little room for pedestrians or cyclists. Costs for bridge replacement are hard to estimate without a designed bridge in mind. Therefore, we erred on the high end. It would be beneficial for the city to explore any pre-manufactured options that might help mitigate costs. When undertaking this project it will be essential to consult with a professional engineer who will be able to assist in finding the best most cost effective option.

Wayfinding Signage.....	\$2,000 Each
Water Tower Park - Cub Park Trailhead Sidewalks.....	\$110,000 - \$140,000
High school to Aquatic Center Sidewalks.....	\$120,000 - \$150,000
Existing Walnut Street Sidewalks.....	\$50,000 to \$65,000
River Launch Points.....	\$10,000 Each
	Approx. \$40,000 Total
3rd Street Bridge Replacement.....	\$700,000 - \$850,000
5th Street Bridge Replacement.....	\$700,000 - \$850,000

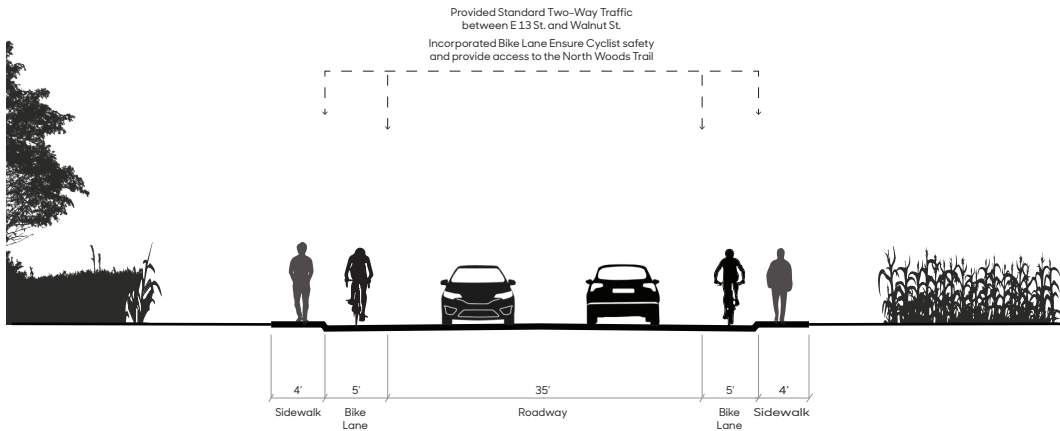
Concept 3- Trail Loop Connect to North Woods Trail, and Union/Maple St. Sidewalks

The following cost estimates relate to Concept 3, and in order to make the design intervention scalable, we have again used the square-footage costs for the length and width of proposed sidewalks and trails taking into account a 6 foot sidewalk. On the dedicated pedestrian bicycle trails a wider trail is recommended. This estimating method allows sidewalk and trail enhancements to be implemented incrementally and priced linearly within a realistic budget for the community.

Concept 3 primarily focuses on tying in multiple loops and safe routes that were established in the earlier concepts. Doing so creates interconnected loops at a variety of scale. This helps accommodate short trips through the neighborhood or longer adventure trips for exercise and recreation.

Cost Estimates

3rd St to 5th St Koeberle Park Connection.....	\$35,000 - \$40,000
High School - Union/Maple Street Loop.	\$175,000 - \$ 190,000
High School to Country Height Drive Trail.....	\$200,000 - \$220,000
Dollar General/Wayside Pkwy to Cub Park Trail	\$235,000 - \$255,000
New Walnut Street to 160th Street.....	\$340,000 - \$375,000



Walnut Street Extension Section

Concept 4- InterTown Rails to Trails Connection

Concept 4 represents such a large scale it is not practical to estimate for the entire scope. It would not be the responsibility of Sumner to undertake this task alone. The city only has purview over what lies within the city limits. Funding such a large project would likely come from state agencies to make it happen.

We are able to put a conceptual trail cost to the length of the trail within the city limits should the city decide to set the stage for the broader project to happen and to demonstrate to state agencies that Sumner is in support of the larger project. Even if the larger project never happened, it is recommended that Sumner still pursue the portion of the trail within the city limit to help interconnect their proposed trail network. At this time however, we can only account for the trail costs similarly to how we estimated other sidewalks and trails in the previous concepts. This estimate therefore, would not account for any property acquisition costs where the railroad easement has already been purchased by adjacent property owners. This project, including estimates and property acquisition would be best coordinated through collaboration with state agencies.

Former Railroad Trail	\$240,000 - \$275,000
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Future Considerations- Extensive Street, Sidewalk, and Lighting Improvements

Another useful way to estimate costs for street and sidewalk improvements at this stage of development would be to look at cumulative costs per block. Often if a road surface or roadway/pedestrian lighting needs replaced, it is most cost effective to bundle all desired improvements along that corridor into one larger project. That way the community can realistically tackle a project like this several blocks at a time or all at once. It should be noted that with inflation, construction costs tend to increase over time. So pros and cons must be weighed in tackling a project over time as opposed to all at once, but ultimately budget constraints realistically determine what is and is not possible. Line items taken into consideration with this approach are as follows:

- Demolition
- Earthwork
- Sub-base Repair
- New Pavement for Streets & Sidewalks
- New Landscaping with Boulevard Trees
- Top Soil & Seed
- Street Lights
- Roadway Tiling
- Drive extensions

Total: \$480,000/Block

A final piece of useful advice for consideration is that when looking at these numbers it is easy to perceive them as daunting because of their amounts. However, it is important to put them into the correct context. \$50,000 to \$100,000 is an extremely significant amount of money when looking from the perspective of a personal or family budget, but that is not that much money in a municipal, county, state, or federal funding context. As you make your way through this feasibility study, we encourage you to go forward with the understanding and belief that these large projects and great aspirations are achievable by small and rural communities as long as they are planned out, cohesive, and undertaken incrementally. Your design team wishes you the best of luck moving forward with your placemaking efforts and are happy to offer assistance or advice whenever it is needed. Keep up the great work, and keep making great places!

Cost Estimates

SUMNER COST ESTIMATES

	Unit	Estimated Unit Cost	Linear Feet	Square Yards
SIDEWALKS & PEDESTRIAN TRAILS				
High School to Water Tower Park	SF	\$6.00	3,200	
Main Street to Cub Park Trailhead	SF	\$6.00	500	
Main St - City Park Trailhead - Casey's	SF	\$6.00	2,800	
Water Tower Park - Cub Park Trailhead Loop	SF	\$6.00	2,450	
High School to Acquatic Center	SF	\$6.00	3,450	
High School - Union/Maple Street Loop	SF	\$6.00	4,900	
Existing Walnut Street	SF	\$6.00	1,600	
Acquatic Center to N. Boundary on Yuma St.	SF	\$6.00	2,150	
3rd St to 5th St Koeberle Park Connection	SF	\$6.00	980	
High School to Country Height Drive Trail	SF	\$6.00	5,500	
Dollar General/Wayside Pkwy - Cub Park Trail	SF	\$6.00	6,500	
Former R.R. Trail	SF	\$6.00	6,660	
New Walnut Street to 160th Street	SF	\$6.00	5,600	
* New Walnut Street Road	SY			4
5th & 3rd ST. BRIDGE REPLACEMENT				
* 3rd St: 2way w. 5 ft. sidewalk both sides				
* 5th St: 2way w. 5 ft. sidewalk both sides				
WAYFINDING SIGNAGE (24"x36"w. posts)				
	EA	\$1,100		
MONUMENTAL SIGNAGE				
	EA	\$14,500		

are

ds Width SF Total Qty. Est. Line Total

	Width	SF Total	Qty.	Est. Line Total
	6 ft	19,200		\$115,200.00
	6 ft	3,000		\$18,000.00
	6 ft	16,800		\$100,800.00
	6 ft	14,700		\$88,200.00
	6 ft	20,700		\$124,200.00
	6 ft	29,400		\$176,400.00
	6 ft	9,600		\$57,600.00
	6 ft	12,900		\$77,400.00
	6 ft	5,880		\$35,280.00
	6 ft	33,000		\$198,000.00
	6 ft	39,000		\$234,000.00
	6 ft	39,960		\$239,760.00

	6 ft	33,600		\$201,600.00
800	24ft			\$136,704.00
				\$338,304.00 Total

	34 ft			
			1	\$751,400.00
			1	\$751,400.00
				\$1,502,800.00 Total

			20	\$22,200.00
			4	\$58,000.00

Cost Estimates

MAIN STREET IMPROVEMENTS				
* Benches	EA	\$1,425.00		
* Trash Receptacles	EA	\$1,200		
* Bike Rack	EA	\$500.00		
* Deciduous Overstory Trees	EA	\$350.00		
* Bump Out Plantings	EA	\$35.00		
* Interpretive/Wayfinding Signage	EA	\$300		
* Pedestrian Scale Light Poles w. Banner/Basket Arms	EA	\$2,040		
- Downtown Core				
- Core Extensions				
* Brick Crosswalks/Square	Per C	\$9,000.00		
- Railroad Street				
- Carpenter Street				
- Walnut Street				
- Jackson Street				
- Westside Parkway				

RIVER LAUNCH POINTS	EA	4		
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MAIN STREET POCKET PARKS				
* Benches	EA	\$1,425.00		
* Trash Receptacles	EA	\$1,200		
* Bike Rack	EA	\$500.00		
* Park Entrance/Identity Signage	EA	\$3,000.00		
* Drinking Fountain	EA	\$3,509		
* Plantings	EA	\$35.00		

			20	\$28,500.00
			12	\$14,400.00
			8	\$4,000.00
			120	\$42,000.00
			650	\$22,750.00
			10	\$3,000.00
			24	\$48,960.00
			48	\$97,920.00
			4	\$36,000.00
			4	\$36,000.00
			4	\$36,000.00
			4	\$36,000.00
			4	\$36,000.00
				\$441,530.00 Total

		\$10,000		\$40,000.00
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			4	\$5,700
			4	\$4,800
			2	\$1,000.00
			2	\$6,000.00
			2	\$7,018
			100	\$3,500
				\$14,009
				\$28,018 Total

Ea.

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EXHIBIT 1:

SMALL TOWN AND RURAL MULTIMODAL NETWORKS

-U.S. Department of Transportation, Federal Highway Administration

This document has been provided to you as a reference for best practices and national design guidelines for rural and small town transportation networks. These guidelines serve as the foundation for your design team's recommendations and proposals for your community. This report will serve as a useful resource as your community targets projects to execute and will help guide you and your consultants as you take those projects to the next level of design development.